



**Cracow University
of Technology**



**Faculty of Civil
Engineering**

**Tadeusz Kościuszko Cracow University of Technology
Faculty of Civil Engineering
Wind Engineering Laboratory (L-14)**

Aleksander Pistol, MSc, Eng.

**Influence of terrain roughness on boundary layer simulation in
wind tunnel**

Wpływ chropowatości terenu na symulację warstwy przyziemnej w tunelu
aerodynamicznym

Attachment 1 – Windflow.m

Załącznik nr 1 – Windflow.m

Kraków, 2023


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1 function Results_full=Windflow(xxx,yyy)
2
3 close all
4 tic
5
6 % All of the comments, descriptions and plots are in English. Input the data
7 % for each experimental case in the INPUT DATA section to correspond with the
8 % measurement setup. The subroutine should (in theory) be compatible with any
9 % even (due to the layout of the figures) number of wind profile probes.
10
11 %% INPUT DATA
12 day=xxx; %day of tests
13 cn=yyy; %tested case
14
15 n=12; %number of measurement points
16 plot_colours=zeros(n,3); %plot colours
17 for i=1:n
18     plot_colours(i,:)=[(i/n)^2,i/n,1/i];
19 end
20 fs=250; %[Hz] - sampling frequency
21 Tm=60; %[s] - measurement time
22 scanners=[1 2 3 4 5 6 7 8 9 10 11 12]; %connected pressure scanners
23 k_L=1/250; %geometrical scale
24 Mheights=[0.07 0.12 0.17 0.22 0.27 0.32 0.37 0.42 0.47 0.52 0.57 0.62]; %measurement
heights in the model scale
25 n_ref=n; %reference height/velocity, the highest probe by default
26 k_v=1/2; %velocity scale
27
28 %% BASIC PARAMETERS
29 ro=1.225; %[kg/m^3] - air density
30 m=fs*Tm; %number of samples
31 ts=1/fs; %time step
32 Pheights=Mheights/k_L; %wind profile heights in real-life scale
33 Zref=Pheights(n_ref); %reference height in real-life scale
34 time_=(ts:ts:Tm); %vector of time steps
35 NpWelch=2^nextpow2(m)/8; %number of points for discrete Fourier transform in the Welch
spectral analysis
36 k_t=k_L/k_v; %time scale
37 k_f=1/k_t; %frequency scale
38
39 case_number=zeros(3,150); %data for the automation of the results processing for these
particular tests
40 case_number(1,1:25)=1:25;
41 case_number(2,:)=26:175;
42 case_number(3,1:120)=176:295;
43 c_num=case_number(day,cn);
44
45 %% LOADING AND VALIDATION OF THE DATA
46 disp(['Calculations for CASE-' num2str(day) '-' num2str(cn)])
47 data_raw=xlsread(['CASE-' num2str(day) '-' num2str(cn) '.CSV']);
48 pressures_th=zeros(m,n);
49 for i=1:m
50     for j=1:n
51         pressures_th(i,j)=data_raw(3+i,27+scanners(j));
52     end
53 end
54
55 pressures_check=0;
56 for i=1:m
57     for j=1:n
58         if pressures_th(i,j)<0
59             pressures_check=pressures_check+1;
60         else

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61     pressures_check;
62     end
63 end
64 end
65 if pressures_check>0 && pressures_check<2
66     disp('There is a single negative pressure value in the measurement.')
67 elseif pressures_check>=2 && pressures_check<5
68     disp(['There are ' num2str(pressures_check) ' negative pressure values in the
measurement.'])
69 elseif pressures_check>=5
70     disp(['WARNING: there are ' num2str(pressures_check) ' negative pressure values in
the measurement.'])
71 else
72     disp('The measurement is correct - no negative pressure values.')
73 end
74
75 f0=figure('Name','Wind pressure time series','NumberTitle','off');
76 f0.Position=[100 -10 800 1800];
77 annotation('rectangle',[0 0 1 1],'Color','w')
78 annotation('textbox',[0.45 0.57 0.4 0.4],'String',['CASE-' num2str(day) '-' num2str(
(cn)],'FitBoxToText','on','FontWeight','bold')
79 for i=1:n
80     subplot(n/2,2,i)
81     plot(time_,pressures_th(:,i),'Color',plot_colours(i,:))
82     xlabel('Time [s]')
83     ylabel('Pressure [Pa]')
84     title(['Measured pressures time series at ' num2str(Mheights(i)) ' [m] height'])
85     grid on
86 end
87
88 exportgraphics(f0,['Results-' num2str(day) '-' num2str(cn) '.
pdf'],'ContentType','vector')
89 close all
90
91 %% DATA FILTERING
92 Fpass=0.48*fs; %Passband Frequency [Hz]
93 Fstop=0.5*fs; %Stopband Frequency [Hz]
94 Apass=0.1; %Passband Ripple [dB]
95 Astop=80; %Stopband Attenuation [dB]
96 match='passband'; %Band to match exactly
97 Chebyshev1_filter=fdesign.lowpass(Fpass,Fstop,Apass,Astop,fs);
98 Signal_Filter=design(Chebyshev1_filter,'cheby1','MatchExactly',match); %Chebyshev I
filter
99 pressures_filt=filter(Signal_Filter,pressures_th); %filtering of pressure time series
100
101 %% CALCULATION OF WIND VELOCITY VALUES, MEAN WIND SPEEDS AND TURBULENCE INTENSITIES
102 velocity_th=zeros(m,n);
103 for i=1:m
104     for j=1:n
105         if pressures_filt(i,j)<0
106             velocity_th(i,j)=0;
107         else
108             velocity_th(i,j)=(2*abs(pressures_filt(i,j))/ro)^(0.5);
109         end
110     end
111 end
112
113 v_mean=zeros(n,1); %mean wind speed at each level
114 for i=1:n
115     v_mean(i)=mean(velocity_th(:,i));
116 end
117
118 v_std=zeros(n,1); %standard deviation at each level

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119 for i=1:n
120     v_std(i)=std(velocity_th(:,i));
121 end
122
123 v_var=zeros(n,1); %variation at each level
124 for i=1:n
125     v_var(i)=var(velocity_th(:,i));
126 end
127
128 Iv=zeros(n,1); %turbulence intensity at each level
129 for i=1:n
130     Iv(i)=v_std(i)/v_mean(i);
131 end
132
133 Vref=v_mean(n_ref); %reference wind speed
134 Iv_ref=Iv(n_ref); %reference turbulence intensity
135
136 f1=figure('Name','Wind velocity time series','NumberTitle','off');
137 f1.Position=[1000 -10 800 1800];
138 annotation('rectangle',[0 0 1 1],'Color','w')
139 for i=1:n
140     subplot(n/2,2,i)
141     plot(time_,velocity_th(:,i),'Color',plot_colours(i,:))
142     xlabel('Time [s]')
143     ylabel('Velocity [m/s]')
144     ylim([0 Inf])
145     title(['Velocities time series at ' num2str(Mheights(i)) ' [m] height'])
146     grid on
147     hold on
148     yline(v_mean(i),'Color',[1,0,0],'LineWidth',2)
149     text(10,0.7*v_mean(i),['V_{mean}=' num2str(v_mean(i),3) ' [m/s]'],'Color',[1,0,0])
150 end
151
152 exportgraphics(f1,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
153 close all
154
155 %% MEAN WIND SPEED AND TURBULENCE INTENSITY PROFILES
156 Z_=(Pheights/Zref)'; %dimensionless height values normalised to 1.0
157 z_30=30/Zref; %30 m height in the dimensionless scale
158 V_=v_mean/Vref; %dimensionless wind velocity values normalised to 1.0
159
160 [xData,yData]=prepareCurveData(Z_,V_); %power law curve fitting
161 ft=fittype('power1');
162 opts=fitoptions('Method','NonlinearLeastSquares');
163 opts.Display='Off';
164 opts.Lower=[-Inf -Inf];
165 opts.StartPoint=[1 0.23];
166 opts.Upper=[Inf Inf];
167 [fitresult,gof]=fit(xData,yData,ft,opts);
168 alfa=fitresult.b; %[-] - alfa exponent
169 a_w=fitresult.a; %correctional factor - power law function multiplier
170 GoF_power_law=[gof.rsquare,gof.adjrsquare,gof.rmse]; %level of fitting - Nonlinear least
square method: R^2, Adjusted R^2, RMSE
171 z_discrete=(0:0.01:1); %data on Y
172 v_power_law=zeros(length(z_discrete),1); %data on X
173 for i=1:length(z_discrete)
174     v_power_law(i)=a_w*z_discrete(i)^alfa;
175 end
176
177 [xData,yData]=prepareCurveData(Z_,Iv); %turbulence intensity power law curve fitting
178 ft=fittype('power1');
179 opts=fitoptions('Method','NonlinearLeastSquares');
180 opts.Display='Off';

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181 opts.Lower=[-Inf -Inf];
182 opts.StartPoint=[Iv_ref -0.3];
183 opts.Upper=[Inf Inf];
184 [fitresult,gof]=fit(xData,yData,ft,opts);
185 beta=fitresult.b; %[-] beta exponent
186 a_Iv=fitresult.a; %correctional factor - power law function multiplier
187 GoF_power_law_Iv=[gof.rsquare,gof.adjrsquare,gof.rmse]; %level of fitting - Nonlinear
least square method: R^2, Adjusted R^2, RMSE
188 Iv_power_law=zeros(length(z_discrete),1); %data on X
189 for i=1:length(z_discrete)
190     Iv_power_law(i)=a_Iv*z_discrete(i)^beta;
191 end
192
193 [xData,yData]=prepareCurveData(Pheights',v_mean); %logarithmic curve fitting
194 ft=fittype('vref*log(x/a)/log(zref/a)','independent','x','dependent','y');
195 opts=fitoptions('Method','NonlinearLeastSquares');
196 opts.Display='Off';
197 opts.Lower=[0 -Inf Zref];
198 opts.StartPoint=[1 Vref Zref];
199 opts.Upper=[Inf Inf Zref];
200 [fitresult,gof]=fit(xData,yData,ft,opts);
201 z0=fitresult.a; %[m] - z0 in real-life scale, as real-life scale data is input here
202 Vref_log=fitresult.vref; %[m/s] - correction to mean wind speed
203 Zref_log=fitresult.zref; %[m] - reference height
204 GoF_log=[gof.rsquare,gof.adjrsquare,gof.rmse]; %level of fitting - Nonlinear least square
method: R^2, Adjusted R^2, RMSE
205 v_log=zeros(length(z_discrete),1); %data on X
206 z0_=z0/Zref_log; %z0 from full-scale normalised to 1.0
207 for i=1:length(z_discrete)
208     v_log(i)=Vref_log/Vref*log(z_discrete(i)/z0_)/log(1/z0_);
209 end
210
211 [xData,yData]=prepareCurveData(Pheights',Iv); %turbulence intensity logarithmic curve
fitting
212 ft=fittype('a/log(x/b)','independent','x','dependent','y');
213 opts=fitoptions('Method','NonlinearLeastSquares');
214 opts.Display='Off';
215 opts.Lower=[0 0];
216 opts.StartPoint=[1 1];
217 opts.Upper=[Inf Inf];
218 [fitresult,gof]=fit(xData,yData,ft,opts);
219 z0T=fitresult.b; %[m] - z0T in real-life scale, as real-life scale data is input here
220 a_Iv2=fitresult.a; %[m/s] - correctional factor
221 GoF_log_Iv=[gof.rsquare,gof.adjrsquare,gof.rmse]; %level of fitting - Nonlinear least
square method: R^2, Adjusted R^2, RMSE
222 Iv_log=zeros(length(z_discrete),1); %data on X
223 z0T_=z0T/Zref_log; %z0T from full-scale normalised to 1.0
224 for i=1:length(z_discrete)
225     Iv_log(i)=a_Iv2/log(z_discrete(i)/z0T_);
226 end
227
228 z30_dif=abs(z_discrete-z_30);
229 min_z30=min(z30_dif);
230 z_30_index=find(z30_dif(:)==min_z30);
231 Iv30=Iv_power_law(z_30_index);
232
233 %% ROUGHNESS CATEGORY ASSIGNMENT
234 %Data from codes and literature
235 alfa_PNEN=[0.11 0.13 0.17 0.19 0.24]; %Tab. 3.11 in the thesis (PN-EN 1991-1-4 NB.3)
236 z0_PNEN=[0.003 0.01 0.05 0.3 1]; %Tab. 3.10 in the thesis (PN-EN 1991-1-4)
237
238 cr_factor_PNEN=[1.27 1.18 1 0.81 0.62]; %Tab. 3.11 in the thesis (PN-EN 1991-1-4 NB.3)
239 kr_PNEN=[0.156 0.17 0.19 0.215 0.234]; %Tab. 3.10 in the thesis (PN-EN 1991-1-4)

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240 zmin_PNEN=[1 1 2 5 10]; %Tab. 3.10 in the thesis (PN-EN 1991-1-4)
241
242 Iv30_ref=[0.097 0.11 0.125 0.175 0.294]; %Fig. 3.8 in the thesis (Davenport (1984), Flaga
A. (2008))
243 beta_ref=[-0.11 -0.13 -0.17 -0.19 -0.24]; %Tab. 3.11 in the thesis (PN-EN 1991-1-4 NB.3),
assuming beta ~=- alfa
244
245 alfa_ISO=[0.1 0.14 0.21 0.32 0.38]; %Tab. 3.8 in the thesis (ISO 4354)
246 z0_ISO=[0.005 0.05 0.3 1 2.5]; %Tab. 3.9 in the thesis (ISO 4354)
247 k1_ISO=[1.2 1 0.8 0.5 0.39]; %Tab. 3.8 in the thesis (ISO 4354)
248 k2_ISO=[0.16 0.19 0.23 0.27 0.29]; %Tab. 3.9 in the thesis (ISO 4354)
249 HminISO=[0 2 6 15 25]; %Tab. 3.8 in the thesis (ISO 4354)
250
251 alfa_ASCE=[1/10 1/7 1/4.5 1/3]; %Tab. 3.13 in the thesis (ASCE/SEI 7)
252 zg_ASCE=[213 274 366 457]; %Tab. 3.13 in the thesis (ASCE/SEI 7)
253
254 Delta=zeros(8,1); %relative errors of various wind speed profile and turbulence intensity
profile parameters
255
256 % Terrain category selection according to PN-EN 1991-1-4:
257
258 alfa_dif=abs(alfa_PNEN-alfa);
259 min_alfa_dif=min(alfa_dif);
260 index_alfa=find(alfa_dif(:)==min_alfa_dif);
261 Delta(1)=min_alfa_dif/alfa_PNEN(index_alfa);
262
263 z0_dif=abs(z0_PNEN-z0);
264 min_z0_dif=min(z0_dif);
265 index_z0=find(z0_dif(:)==min_z0_dif);
266 Delta(2)=min_z0_dif/z0_PNEN(index_z0);
267
268 TC_PNEN={'0';'I';'II';'III';'IV'};
269
270 if index_z0==index_alfa
271     index_category=index_alfa;
272     disp(['Simulated boundary layer was assigned to ' char(TC_PNEN(index_category)) '
category according to PN-EN 1991-1-4 based on both alfa and z0. Relative error of the alpha
parameter is ' num2str(Delta(1),3) ' and of z0 is ' num2str(Delta(2),3) '.'])
273 else
274     if Delta(1)<Delta(2)
275         index_category=index_alfa;
276         disp(['Simulated boundary layer was assigned to ' char(TC_PNEN(index_category)) '
category according to PN-EN 1991-1-4 based on alfa. Relative error of the alpha parameter is '
num2str(Delta(1),3) ' and of z0 is ' num2str(Delta(2),3) '.'])
277     else
278         index_category=index_z0;
279         disp(['Simulated boundary layer was assigned to ' char(TC_PNEN(index_category)) '
category according to PN-EN 1991-1-4 based on z0. Relative error of the alpha parameter is '
num2str(Delta(1),3) ' and of z0 is ' num2str(Delta(2),3) '.'])
280     end
281 end
282
283 Terrain_category_PNEN=index_category-1;
284
285 zmin=zmin_PNEN(index_category);
286 zmin_=zmin/Zref;
287 zmin_dif=abs(z_discrete-zmin_);
288 min_zmin=min(zmin_dif);
289 zmin_index=find(zmin_dif(:)==min_zmin);
290
291 Delta(3)=abs((beta_ref(index_category)-beta)/beta_ref(index_category));
292 Delta(4)=abs((z0_PNEN(index_category)-z0T)/z0_PNEN(index_category));
293 Delta(5)=abs((Iv30_ref(index_category)-Iv30)/Iv30_ref(index_category));

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294
295 % Terrain category selection according to ISO 4354:
296 alfa_ISO_dif=abs(alfa_ISO-alfa);
297 min_alfa_ISO_dif=min(alfa_ISO_dif);
298 index_alfa_ISO=find(alfa_ISO_dif(:)==min_alfa_ISO_dif);
299 Delta(6)=min_alfa_ISO_dif/alfa_ISO(index_alfa_ISO);
300
301 z0_ISO_dif=abs(z0_ISO-z0);
302 min_z0_ISO_dif=min(z0_ISO_dif);
303 index_z0_ISO=find(z0_ISO_dif(:)==min_z0_ISO_dif);
304 Delta(7)=min_z0_ISO_dif/z0_ISO(index_z0_ISO);
305
306 if index_z0_ISO==index_alfa_ISO
307     index_ISO=index_alfa_ISO;
308     Terrain_category_ISO=index_ISO;
309     disp(['Simulated boundary layer was assigned to ' num2str(Terrain_category_ISO) ' category according to ISO 4354 based on both alfa and z0. Relative error of the alpha parameter is ' num2str(Delta(6),3) ' and of z0 is ' num2str(Delta(7),3) '.'])
310 else
311     if Delta(6)<Delta(7)
312         index_ISO=index_alfa_ISO;
313         Terrain_category_ISO=index_ISO;
314         disp(['Simulated boundary layer was assigned to ' num2str(Terrain_category_ISO) ' category according to ISO 4354 based on alfa. Relative error of the alpha parameter is ' num2str(Delta(6),3) ' and of z0 is ' num2str(Delta(7),3) '.'])
315     else
316         index_ISO=index_z0_ISO;
317         Terrain_category_ISO=index_ISO;
318         disp(['Simulated boundary layer was assigned to ' num2str(Terrain_category_ISO) ' category according to ISO 4354 based on z0. Relative error of the alpha parameter is ' num2str(Delta(6),3) ' and of z0 is ' num2str(Delta(7),3) '.'])
319     end
320 end
321
322 Hmin=HminISO(index_ISO);
323 Hmin_=Hmin/Zref;
324 Hmin_dif=abs(z_discrete-Hmin_);
325 min_Hmin=min(Hmin_dif);
326 Hmin_index=find(Hmin_dif(:)==min_Hmin);
327
328 Delta(8)=abs((-alfa_ISO(index_ISO)-beta)/(-alfa_ISO(index_ISO)));
329 Delta(9)=abs((alfa_ISO(index_ISO)-Iv30)/alfa_ISO(index_ISO));
330
331 % Terrain category selection according to ASCE/SEI 7 (power law wind profile):
332 alfa_ASCE_dif=abs(alfa_ASCE-alfa);
333 min_alfa_ASCE_dif=min(alfa_ASCE_dif);
334 index_ASCE=find(alfa_ASCE_dif(:)==min_alfa_ASCE_dif);
335 Delta(10)=min_alfa_ASCE_dif/alfa_ASCE(index_ASCE);
336 TC_ASCE=['D';'C';'B';'A'];
337 Terrain_category_ASCE=5-index_ASCE;
338 disp(['Simulated boundary layer was assigned to ' TC_ASCE(index_ASCE) ' category according to ASCE/SEI 7 power-law profile. Relative error of the alpha parameter is ' num2str(Delta(10),3) '.'])
339
340 Delta(11)=abs((-alfa_ASCE(index_ASCE)-beta)/(-alfa_ASCE(index_ASCE)));
341 Delta(12)=abs((alfa_ASCE(index_ASCE)-Iv30)/alfa_ASCE(index_ASCE));
342 %% WIND SPEED AND TURBULENCE INTENSITY PROFILES AFTER THE CORRECTION
343 z_full=z_discrete*Zref;
344 v_power_law2=zeros(length(z_discrete),1); %data on X with regard to z_min
345 for i=1:zmin_index
346     v_power_law2(i)=a_w*z_discrete(zmin_index)^alfa;
347 end
348 for i=zmin_index:length(z_discrete)

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349     v_power_law2(i)=a_w*z_discrete(i)^alfa;
350 end
351
352 v_log2=zeros(length(z_discrete),1); %data on X with regard to z_min
353 for i=1:zmin_index
354     v_log2(i)=Vref_log/Vref*log(z_discrete(zmin_index)/z0_)/log(1/z0_);
355 end
356 for i=zmin_index:length(z_discrete)
357     v_log2(i)=Vref_log/Vref*log(z_discrete(i)/z0_)/log(1/z0_);
358 end
359
360 Iv_power_law2=zeros(length(z_discrete),1); %data on X with regard to z_min
361 for i=1:zmin_index
362     Iv_power_law2(i)=a_Iv*z_discrete(zmin_index)^beta;
363 end
364 for i=zmin_index:length(z_discrete)
365     Iv_power_law2(i)=a_Iv*z_discrete(i)^beta;
366 end
367
368 Iv_log2=zeros(length(z_discrete),1); %data on X with regard to z_min
369 for i=1:zmin_index
370     Iv_log2(i)=a_Iv2/log(z_discrete(zmin_index)/z0T_);
371 end
372 for i=zmin_index:length(z_discrete)
373     Iv_log2(i)=a_Iv2/log(z_discrete(i)/z0T_);
374 end
375 for i=1:length(z_discrete) %correction necessary due to logarithmic curve characteristic
376     if Iv_log2(i)>=Iv_power_law2(zmin_index)
377         for j=1:i
378             Iv_log2(j)=Iv_power_law2(zmin_index);
379         end
380     end
381 end
382
383 %Model profiles according to PN-EN 1991-1-4
384
385 Vref_PNEN1=cr_factor_PNEN(index_category)*(Zref/10)^alfa_PNEN(index_category);
386 Vref_PNEN2=kr_PNEN(index_category)*log(Zref/z0_PNEN(index_category));
387
388 v_PNEN_power=zeros(length(z_discrete),1);
389 v_PNEN_log=zeros(length(z_discrete),1);
390 for i=1:zmin_index
391     v_PNEN_power(i)=cr_factor_PNEN(index_category)*(z_full(zmin_index)/10)^alfa_PNEN
(index_category)/Vref_PNEN1;
392     v_PNEN_log(i)=kr_PNEN(index_category)*log(z_full(zmin_index)/z0_PNEN(index_category))
/Vref_PNEN2;
393 end
394 for i=zmin_index:length(z_discrete)
395     v_PNEN_power(i)=cr_factor_PNEN(index_category)*(z_full(i)/10)^alfa_PNEN
(index_category)/Vref_PNEN1;
396     v_PNEN_log(i)=kr_PNEN(index_category)*log(z_full(i)/z0_PNEN(index_category))
/Vref_PNEN2;
397 end
398
399 %Model profiles according to ISO 4354
400
401 Vref_ISO1=k1_ISO(index_ISO)*(Zref/10)^alfa_ISO(index_ISO);
402 Vref_ISO2=k2_ISO(index_ISO)*log(Zref/z0_ISO(index_ISO));
403
404 v_ISO_power=zeros(length(z_discrete),1);
405 v_ISO_log=zeros(length(z_discrete),1);
406 for i=1:Hmin_index
407     v_ISO_power(i)=k1_ISO(index_ISO)*(z_full(Hmin_index)/10)^alfa_ISO(index_ISO)

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/Vref_ISO1;
408 v_ISO_log(i)=k2_ISO(index_ISO)*log(z_full(Hmin_index)/z0_ISO(index_ISO))/Vref_ISO2;
409 end
410 for i=Hmin_index:length(z_discrete)
411 v_ISO_power(i)=k1_ISO(index_ISO)*(z_full(i)/10)^alfa_ISO(index_ISO)/Vref_ISO1;
412 v_ISO_log(i)=k2_ISO(index_ISO)*log(z_full(i)/z0_ISO(index_ISO))/Vref_ISO2;
413 end
414
415 %Model power-law profile according to ASCE/SEI 7
416 Vref_ASCE=(zg_ASCE(2)/10)^alfa_ASCE(2)*(Zref/zg_ASCE(index_ASCE))^alfa_ASCE(index_ASCE);
417 v_ASCE=zeros(length(z_discrete),1);
418 for i=1:length(z_discrete)
419 v_ASCE(i)=(zg_ASCE(2)/10)^alfa_ASCE(2)*(z_full(i)/zg_ASCE(index_ASCE))^alfa_ASCE
(index_ASCE)/Vref_ASCE;
420 end
421
422 z_10=10/Zref;
423 z10_dif=abs(z_discrete-z_10);
424 min_z10=min(z10_dif);
425 z_10_index=find(z10_dif(:)==min_z10);
426 v10=v_power_law(z_10_index)*Vref/k_v;
427 v_b=(a_w*v10/cr_factor_PNEN(index_category)); %basic wind velocity
428 sigma_v=kr_PNEN(index_category)*v_b;
429 Iv_PNEN=zeros(length(z_discrete),1); %turbulence intensity according to PN-EN 1991-1-4,
Eq. (3.66) in the thesis
430 for i=1:length(z_discrete)
431 Iv_PNEN(i)=sigma_v/(Vref_log*v_PNEN_log(i)/k_v);
432 end
433
434 Iv_ESDU=[12.8 14.8 17 24.5 33.2
435 12 13.8 15.8 22.6 29.4
436 11.4 13.1 15 21.4 27.6
437 10.8 12.4 14.4 20.4 26.2
438 10.4 12 13.8 19.6 25
439 10 11.6 13.4 19.1 24.3
440 9.6 11.2 13 18.6 23.6
441 9.2 10.8 12.6 18.1 23
442 8.8 10.4 12.2 17.6 22.4
443 8.6 10.1 11.8 17.2 21.8
444 8.4 9.8 11.4 16.9 21.4
445 8.2 9.6 11.2 16.6 21]; % [%] - Turbulence intensities at the heights corresponding to
measurement levels for
446 % different terrain categories according to Fig. 1 in ESDU 85020
447
448 %RMSE values between fit and model wind speed profiles according to different codes
449 RMSE_full=zeros(5,1);
450 ISO_min=max(Hmin_index,zmin_index);
451 RMSE_full(1,:)=sqrt(sum((v_power_law2(zmin_index:length(z_discrete))-v_PNEN_power
(zmin_index:length(z_discrete))).^2)/length(z_discrete));
452 RMSE_full(2,:)=sqrt(sum((v_log2(zmin_index:length(z_discrete))-v_PNEN_power(zmin_index:
length(z_discrete))).^2)/length(z_discrete));
453 RMSE_full(3,:)=sqrt(sum((v_power_law2(ISO_min:length(z_discrete))-v_ISO_power(ISO_min:
length(z_discrete))).^2)/length(z_discrete));
454 RMSE_full(4,:)=sqrt(sum((v_log2(ISO_min:length(z_discrete))-v_ISO_power(ISO_min:length
(z_discrete))).^2)/length(z_discrete));
455 RMSE_full(5,:)=sqrt(sum((v_power_law(:)-v_ASCE(:)).^2)/length(z_discrete));
456
457 %RMSE values between fit and model turbulence intensity profiles according to PN-EN 1991-
1-4 and ESDU 85020
458 RMSE_PNEN_log=sqrt(sum((Iv_power_law2(zmin_index:length(z_discrete))-Iv_PNEN(zmin_index:
length(z_discrete))).^2)/length(z_discrete));
459 RMSE_PNEN_power_law=sqrt(sum((Iv_log2(zmin_index:length(z_discrete))-Iv_PNEN(zmin_index:
length(z_discrete))).^2)/length(z_discrete));

```

```

460 RMSE_ESDU=sqrt(sum((Iv(:)-(Iv_ESDU(:,index_category)/100)).^2)/n);
461
462 %% PLOTS FOR WIND SPEED AND TURBULENCE INTENSITY PROFILES
463 f2=figure('Name','Vertical wind speed and turbulence intensity
profiles','NumberTitle','off');
464 f2.Position=[100 100 1600 900];
465 annotation('rectangle',[0 0 1 1],'Color','w')
466 subplot(1,2,1)
467 plot(V_,Z_,'.','Color',[1,0,0],'MarkerSize',20,'LineStyle','none')
468 xlabel('V/V_{ref} [-]')
469 ylabel('Z/Z_{ref} [-]')
470 title('Mean wind speed profile')
471 xlim([0 1.1])
472 ylim([0 1.1])
473 grid on
474 hold on
475 plot(v_power_law2,z_discrete,'Color',[0,204/255,0],'LineWidth',2)
476 hold on
477 plot(v_log2,z_discrete,'Color',[0,128/255,1],'LineWidth',2)
478 hold on
479 plot(v_PNEN_power,z_discrete,'Color',[0,204/255,0],'LineWidth',1,'LineStyle','--')
480 hold on
481 plot(v_PNEN_log,z_discrete,'Color',[0,128/255,1],'LineWidth',1,'LineStyle','--')
482 legend('Measured wind profile','Fit with power law wind profile','Fit with logarithmic
wind profile','Power law model (PN-EN 1991-1-4)','Logarithmic model (PN-EN 1991-1-
4)','Location','northwest')
483
484 subplot(1,2,2)
485 plot(100*Iv,Z_,'.','Color',[1,0,0],'MarkerSize',20,'LineStyle','none')
486 xlabel('I_{v} [%]')
487 ylabel('Z/Z_{ref} [-]')
488 title('Turbulence intensity profile')
489 xlim([0 50])
490 ylim([0 1.1])
491 grid on
492 hold on
493 plot(100*Iv_power_law2,z_discrete,'Color',[0,204/255,0],'LineWidth',2)
494 hold on
495 plot(100*Iv_log2,z_discrete,'Color',[0,128/255,1],'LineWidth',2)
496 hold on
497 plot(80*Iv_PNEN(:),z_discrete,'Color',[1,0,0],'LineStyle','--','LineWidth',1)
498 hold on
499 plot(0.8*Iv_ESDU(:,index_category),Z_,'Color',[0,0,0],'LineStyle','--','LineWidth',1);
500 hold on
501 plot(120*Iv_PNEN(:),z_discrete,'Color',[1,0,0],'LineStyle','--','LineWidth',1)
502 hold on
503 plot(1.2*Iv_ESDU(:,index_category),Z_,'Color',[0,0,0],'LineStyle','--','LineWidth',1);
504 legend('Measured turbulence intensity profile','Power law turbulence intensity
profile','Logarithmic turbulence intensity profile','PN-EN 1991,1-4','ESDU
85020','Location','northeast')
505
506 exportgraphics(f2,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
507 close all
508
509 %% CALCULATION OF TURBULENCE LENGTH SCALE (AUTOCORRELATION) FOR EACH POINT
510 Rvi=zeros(length(velocity_th),length(velocity_th),n); %[m^2/s^2] - autocorrelation
function estimators for every time step and every point
511 for i=1:size(Rvi,1)
512     for j=1:size(Rvi,2)
513         for k=1:n
514             if i+j<=size(Rvi,1)
515                 Rvi(i,j,k)=(velocity_th(i,k)-v_mean(k))*(velocity_th(i+j,k)-v_mean(k));
516             else

```

```

517         Rvi(i,j,k)=0;
518     end
519 end
520 end
521 end
522
523 Rvx=zeros(length(velocity_th),n); %[m^2/s^2] - mean autocorrelation function
524 for j=1:size(Rvx,1)
525     for k=1:n
526         Rvx(j,k)=mean(Rvi(:,j,k));
527     end
528 end
529
530 ro_vx=zeros(length(Rvx),n); %[-] - normalised autocorrelation function (divided by
variation)
531 for j=1:size(ro_vx,1)
532     for k=1:n
533         ro_vx(j,k)=Rvx(j,k)/v_var(k);
534     end
535 end
536
537 T_scale_i=zeros(length(Rvx),n); %[s] - partial time scales for each step
538 for k=1:n
539     T_scale_i(1,k)=(ro_vx(1,k)+1)/2*ts;
540 end
541 for j=2:size(T_scale_i,1)
542     for k=1:n
543         T_scale_i(j,k)=(ro_vx(j,k)+ro_vx(j-1,k))/2*ts;
544     end
545 end
546
547 index_time=zeros(n,1); %vector for the point of crossing the X axis, where the condition
is 3 subsequent negative values in the series
548 for k=1:n
549     for j=1:(size(T_scale_i,1)-2)
550         if ((T_scale_i(j,k)<0) && (T_scale_i(j+1,k)<0) && (T_scale_i(j+2,k)<0))
551             index_time(k,1)=j;
552             break
553         end
554     end
555 end
556
557 Tx=zeros(n,1); %[s] - time scale up to the point of crossing the X axis
558 for k=1:n
559     Tx(k,1)=sum(T_scale_i(1:index_time(k),k));
560 end
561
562 Lx_ESDU=[110 103 93
563 142 133 120
564 165 154 139
565 183 171 154]; %ESDU 7431, for open terrain, suburban terrain and urban terrain
566 z_ESDU=[50 100 150 200]/Zref;
567
568 L_model=Tx.*v_mean; %[m] - model turbulence length scale
569 L_proto=L_model/k_L; %[m] - real-life turbulence length scale
570
571 f3=figure('Name','Autocorrelation and Turbulence Length Scales','NumberTitle','off');
572 f3.Position=[100 100 1600 600];
573 annotation('rectangle',[0 0 1 1],'Color','w')
574 subplot(1,2,1)
575 for i=1:n
576     plot(time_,ro_vx(:,i),'DisplayName',[num2str(Pheights(i)) ' [m]'],'Color',
plot_colours(i,:), 'Linewidth',1)

```

```

577     grid on
578     hold on
579 end
580 xlabel('Time \tau [s]')
581 ylabel('Correlation \rho_{v}(z,\tau) [-]')
582 xlim([0 time_(max(index_time))])
583 ylim([-0.2 1.0])
584 legend('Location', 'Northeast')
585 title('Time correlation at different heights')
586 subplot(1,2,2)
587 plot(L_proto,Z_,'.','Color',[0,128/255,1],'MarkerSize',20,'LineStyle','-','LineWidth',2)
588 for i=1:n
589     text(L_proto(i)-0.08*max(1.1*max(L_proto),1.3*max(Lx_ESDU(:,1))),Z_(i)+0.01,num2str(
(L_proto(i),4))
590 end
591 grid on
592 hold on
593 if index_category>2
594     plot(0.7*Lx_ESDU(:,index_category-2),z_ESDU,'Color',↵
[0,0,0],'LineStyle','--','LineWidth',1)
595     hold on
596     plot(1.3*Lx_ESDU(:,index_category-2),z_ESDU,'Color',↵
[0,0,0],'LineStyle','--','LineWidth',1)
597 else
598     %do nothing
599 end
600 xlabel('Turbulence length scale L_{x}(Z) [m]')
601 ylabel('Z/Z_{ref} [-]')
602 xlim([0 max(1.1*max(L_proto),1.3*max(Lx_ESDU(:,1)))]])
603 ylim([0 1.1])
604 title('Turbulence length scales at different heights')
605
606 exportgraphics(f3,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
607 close all
608
609 % CALCULATION OF SPATIAL VERTICAL LENGTH SCALE - UPWARD AND DOWNWARD
610 Rvzz_u=zeros(m,n); %[m^2/s^2] - vertical correlation function estimator, upward
611 Rvzz_d=zeros(m,n); %[m^2/s^2] - vertical correlation function estimator, downward
612 for i=1:m
613     for j=1:n
614         Rvzz_u(i,j)=(velocity_th(i,1)-v_mean(1))*(velocity_th(i,j)-v_mean(j));
615         Rvzz_d(i,j)=(velocity_th(i,n)-v_mean(n))*(velocity_th(i,j)-v_mean(j));
616     end
617 end
618
619 Rvzz_up=zeros(n,1); %[m^2/s^2] - mean vertical correlation function estimator, upward
620 Rvzz_down=zeros(n,1); %[m^2/s^2] - mean vertical correlation function estimator, downward
621 for j=1:n
622     Rvzz_up(j,1)=mean(Rvzz_u(:,j));
623     Rvzz_down(j,1)=mean(Rvzz_d(:,j));
624 end
625
626 Delta_z_up=zeros(n,1);
627 Delta_z_down=zeros(n,1);
628 for j=1:n
629     Delta_z_up(j,1)=Pheights(j)-Pheights(1);
630     Delta_z_down(j,1)=Pheights(n)-Pheights(j);
631 end
632
633 ro_vzz_up=zeros(n,1); %[-] - normalised correlation function, upward
634 ro_vzz_down=zeros(n,1); %[-] - normalised correlation function, downward
635 for j=1:n
636     ro_vzz_up(j,1)=Rvzz_up(j)/(v_std(1)*v_std(j));

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```

637     ro_vzz_down(j,1)=Rvzz_down(j)/(v_std(n)*v_std(j));
638 end
639
640 Lz_up_step=zeros(n-1,1);
641 Lz_down_step=zeros(n-1,1);
642 for j=2:n
643     Lz_up_step(j-1,1)=((ro_vzz_up(j)+ro_vzz_up(j-1))/2)*(Delta_z_up(j)-Delta_z_up(j-1));
644     Lz_down_step(j-1,1)=((ro_vzz_down(j)+ro_vzz_down(j-1))/2)*(Delta_z_down(j-1)-
Delta_z_down(j));
645 end
646
647 Lz_up=sum(Lz_up_step); %[m] - upward vertical correlation scale, real-life scale
648 Lz_down=sum(Lz_down_step); %[m] - downward vertical correlation scale, real-life scale
649
650 f4=figure('Name','Vertical correlation','NumberTitle','off');
651 annotation('rectangle',[0 0 1 1],'Color','w')
652 plot(Delta_z_up,ro_vzz_up,'.','Color',[0,204/255,0],'MarkerSize',4
20,'LineStyle','-','LineWidth',2)
653 grid on
654 hold on
655 plot(flip(Delta_z_down),flip(ro_vzz_down),'.','Color',[1,0,0],'MarkerSize',4
20,'LineStyle','-','LineWidth',2)
656 xlabel('Height difference \Deltaz [m]')
657 ylabel('Correlation \rho_{vv}(\Deltaz) [-]')
658 xlim([0 max(Delta_z_up)])
659 ylim([0 1.0])
660 legend(['\uparrow ' num2str(Pheights(1)) ' [m]'],['\downarrow ' num2str(Pheights(n)) '
[m]'],'Location','Northeast')
661 title('Vertical spatial correlation at different height differences')
662
663 exportgraphics(f4,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
664 close all
665
666 %% POWER SPECTRAL DENSITIES FOR EACH POINT
667 z_10=10/Zref;
668 z10_dif=abs(z_discrete-z_10);
669 min_z10=min(z10_dif);
670 z10_index=find(z10_dif(:)==min_z10);
671
672 f_PSD=0:0.001:fs-0.001; %[Hz] - frequency range
673 fn=length(f_PSD);
674 L_Davenport=1200; %[m] - length scale
675 v_Davenport=v_power_law(z10_index)*Vref/k_v; %[m/s] - wind speed at 10 m height
676 m_Davenport=zeros(fn,1);
677
678 for i=1:fn
679     m_Davenport(i)=(f_PSD(i)*L_Davenport)/v_Davenport;
680 end
681 Davenport=zeros(fn,1);
682 for i=1:fn
683     Davenport(i)=2/3*(m_Davenport(i)^2)/((1+m_Davenport(i)^2)^(4/3)); %formula for
Davenport spectrum in non-Dimensional form
684 end
685
686 k_Karman=1/(0.437+0.153*log(z0));
687 LxVx_Karman=zeros(n,1);
688 for i=1:n
689     LxVx_Karman(i)=300*(Pheights(i)/350)^(1/k_Karman);
690 end
691 xx_Karman=zeros(fn,n);
692 for i=1:fn
693     for j=1:n
694         xx_Karman(i,j)=LxVx_Karman(j)*f_PSD(i)/(v_mean(j)/k_v);

```

```

695     end
696 end
697 Karman=zeros(fn,n);
698 for i=1:fn
699     for j=1:n
700         Karman(i,j)=(4*xx_Karman(i,j))/((1+70.7*xx_Karman(i,j)^2)^(5/6)); %formula for
von Karman spectrum in non-Dimensional form
701     end
702 end
703
704 ax_Kaimal=0.0144;
705 x_Kaimal=zeros(fn,n);
706 for i=1:fn
707     for j=1:n
708         x_Kaimal(i,j)=f_PSD(i)*Pheights(j)/(v_mean(j)/k_v);
709     end
710 end
711 Kaimal=zeros(fn,n);
712 for i=1:fn
713     for j=1:n
714         Kaimal(i,j)=(0.164*x_Kaimal(i,j)/ax_Kaimal)/(1+0.164*(x_Kaimal(i,j)/ax_Kaimal)^(
(5/3)));
715     end
716 end
717 fzref_vref_P=f_PSD*Zref/(Vref/k_v);
718
719 velocity_norm=zeros(m,n);
720 for i=1:m
721     for j=1:n
722         velocity_norm(i,j)=(velocity_th(i,j)-v_mean(j));
723     end
724 end
725
726 n_PSD=NpWelch/2+1; %number of frequency samples - frequency resolution for PSD
calculation
727 spectrumPwelch=zeros(n_PSD,n); %power spectral density calculated directly through Welch
method
728 frequencyPwelch=zeros(n_PSD,1);
729 for j=1:n
730     [spectrumPwelch(:,j), frequencyPwelch]=pwelch(velocity_norm(:,j),[],[],NpWelch,fs);
731 end
732
733 FourierPSD=zeros(m,n);
734 for j=1:n
735     FourierPSD(:,j)=fft(velocity_norm(:,j))/m;
736 end
737
738 Fourier_step=fs/m;
739 Freq_Range=0+Fourier_step:Fourier_step:0.5*fs;
740 Svi=zeros(m/2,n);
741 for j=1:n
742     Svi(:,j)=[2*abs(FourierPSD(2:m/2,j)).^2; abs(FourierPSD(m/2+1,j)).^2];
743 end
744
745 Gvi=zeros(m/2,n);
746 for j=1:n
747     Gvi(:,j)=Svi(:,j)/Fourier_step; %one-sided power density spectrum
748 end
749
750 fzref_vref_M=zeros(n_PSD,1);
751 for i=1:n_PSD
752     fzref_vref_M(i)=frequencyPwelch(i)*Zref*k_L/Vref; %normalised frequency f*zref/vref
753 end

```

```

754 PSD_th=zeros(n_PSD,n); %normalised one-sided power density spectrum f*G(f)/sigma_v^2 - ✓
Welch method
755 for i=1:n_PSD
756     for j=1:n
757         PSD_th(i,j)=(spectrumPwelch(i,j)*frequencyPwelch(i))/v_var(n);
758     end
759 end
760
761 fzref_vref_M_FFT=zeros(m/2,1);
762 for i=1:m/2
763     fzref_vref_M_FFT(i)=Freq_Range(i)*Zref*k_L/Vref;
764 end
765
766 PSD_FFT=zeros(m/2,n); %normalised one-sided power density spectrum f*G(f)/sigma_v^2 - FFT ✓
method
767 for i=1:m/2
768     for j=1:n
769         PSD_FFT(i,j)=(Gvi(i,j)*Freq_Range(i))/v_var(n);
770     end
771 end
772
773 f5=figure('Name','Power density spectra - log scale','NumberTitle','off');
774 f5.Position=[1000 -10 800 1800];
775 annotation('rectangle',[0 0 1 1],'Color','w')
776 for i=1:n/3
777     subplot(n/3,1,i)
778     plot(fzref_vref_M_FFT,PSD_FFT(:,i),'Marker','.', 'Color',[0,204/255, ✓
0],'LineStyle','none','DisplayName','From FFT')
779     hold on
780     plot(fzref_vref_M,PSD_th(:,i),'Marker','.', 'Color', ✓
[0,0,0],'LineStyle','none','DisplayName','Welch method')
781     hold on
782     plot(fzref_vref_P, Davenport(:,i),'DisplayName','Davenport', 'Color', ✓
[1,0,0],'LineWidth',1);
783     hold on
784     plot(fzref_vref_P, Karman(:,i),'DisplayName','Kármán', 'Color',[1,0,0],'LineWidth', ✓
1,'LineStyle','-');
785     hold on
786     plot(fzref_vref_P, Kaimal(:,i),'DisplayName','Kaimal', 'Color',[1,0,0],'LineWidth', ✓
1,'LineStyle','-');
787     xlim([0.01 10])
788     ylim([0.01 1])
789     set(gca,'XScale','log')
790     set(gca,'YScale','log')
791     ylabel('(fG_{v}(f))/\sigma_{v}^{2}')
792     xlabel('fz_{ref}/v_{ref}')
793     title(['PSD at ' num2str(Pheights(i)) ' [m] in full scale'])
794 end
795 legend('Orientation','horizontal','Box','off','Position',[0.4 0.87 0.2 0.2])
796
797 f6=figure('Name','Power density spectra - log scale','NumberTitle','off');
798 f6.Position=[1000 -10 800 1800];
799 annotation('rectangle',[0 0 1 1],'Color','w')
800 for i=n/3+1:2*n/3
801     subplot(n/3,1,i-n/3)
802     plot(fzref_vref_M_FFT,PSD_FFT(:,i),'Marker','.', 'Color',[0,204/255, ✓
0],'LineStyle','none','DisplayName','From FFT')
803     hold on
804     plot(fzref_vref_M,PSD_th(:,i),'Marker','.', 'Color', ✓
[0,0,0],'LineStyle','none','DisplayName','Welch method')
805     hold on
806     plot(fzref_vref_P, Davenport(:,i),'DisplayName','Davenport', 'Color', ✓
[1,0,0],'LineWidth',1);

```



```

807     hold on
808     plot(fzref_vref_P, Karman(:,i), 'DisplayName', 'Kármán', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-.');
809     hold on
810     plot(fzref_vref_P, Kaimal(:,i), 'DisplayName', 'Kaimal', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '--');
811     xlim([0.01 10])
812     ylim([0.01 1])
813     set(gca, 'XScale', 'log')
814     set(gca, 'YScale', 'log')
815     ylabel('(fG_{v}(f))/\sigma_{v}^{2}')
816     xlabel('fz_{ref}/v_{ref}')
817     title(['PSD at ' num2str(Pheights(i)) ' [m] in full scale'])
818 end
819 legend('Orientation', 'horizontal', 'Box', 'off', 'Position', [0.4 0.87 0.2 0.2])
820
821 f7=figure('Name', 'Power density spectra - log scale', 'NumberTitle', 'off');
822 f7.Position=[1000 -10 800 1800];
823 annotation('rectangle', [0 0 1 1], 'Color', 'w')
824 for i=2*n/3+1:n
825     subplot(n/3,1,i-2*n/3)
826     plot(fzref_vref_M_FFT, PSD_FFT(:,i), 'Marker', '.', 'Color', [0,204/255, 0], 'LineStyle', 'none', 'DisplayName', 'PSD from FFT')
827     hold on
828     plot(fzref_vref_M, PSD_th(:,i), 'Marker', '.', 'Color', [0,0,0], 'LineStyle', 'none', 'DisplayName', 'PSD from Welch method')
829     hold on
830     plot(fzref_vref_P, Davenport(:,i), 'DisplayName', 'Davenport', 'Color', [1,0,0], 'LineWidth', 1);
831     hold on
832     plot(fzref_vref_P, Karman(:,i), 'DisplayName', 'Kármán', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-.');
833     hold on
834     plot(fzref_vref_P, Kaimal(:,i), 'DisplayName', 'Kaimal', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '--');
835     xlim([0.01 10])
836     ylim([0.01 1])
837     set(gca, 'XScale', 'log')
838     set(gca, 'YScale', 'log')
839     ylabel('(fG_{v}(f))/\sigma_{v}^{2}')
840     xlabel('fz_{ref}/v_{ref}')
841     title(['PSD at ' num2str(Pheights(i)) ' [m] in full scale'])
842 end
843 legend('Orientation', 'horizontal', 'Box', 'off', 'Position', [0.4 0.87 0.2 0.2])
844
845 exportgraphics(f5, ['Results-' num2str(day) '-' num2str(cn) '.pdf'], "Append", true)
846 exportgraphics(f6, ['Results-' num2str(day) '-' num2str(cn) '.pdf'], "Append", true)
847 exportgraphics(f7, ['Results-' num2str(day) '-' num2str(cn) '.pdf'], "Append", true)
848 close all
849
850 f8=figure('Name', 'Power density spectra - linear scale', 'NumberTitle', 'off');
851 f8.Position=[1000 -10 800 1800];
852 annotation('rectangle', [0 0 1 1], 'Color', 'w')
853 for i=1:n/3
854     subplot(n/3,1,i)
855     plot(fzref_vref_M_FFT, PSD_FFT(:,i), 'Marker', '.', 'Color', [0,204/255, 0], 'LineStyle', 'none', 'DisplayName', 'From FFT')
856     hold on
857     plot(fzref_vref_M, PSD_th(:,i), 'Marker', '.', 'Color', [0,0,0], 'LineStyle', 'none', 'DisplayName', 'Welch method')
858     hold on
859     plot(fzref_vref_P, Davenport(:,i), 'DisplayName', 'Davenport', 'Color', [1,0,0], 'LineWidth', 1);

```

```

860     hold on
861     plot(fzref_vref_P, Karman(:,i), 'DisplayName', 'Kármán', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-. ');
862     hold on
863     plot(fzref_vref_P, Kaimal(:,i), 'DisplayName', 'Kaimal', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-- ');
864     xlim([0 7])
865     ylim([0 0.4])
866     ylabel('(fG_{v}(f))/\sigma_{v}^{2}')
867     xlabel('fz_{ref}/v_{ref}')
868     title(['PSD at ' num2str(Pheights(i)) ' [m] in full scale'])
869 end
870 legend('Orientation', 'horizontal', 'Box', 'off', 'Position', [0.4 0.87 0.2 0.2])
871
872 f9=figure('Name', 'Power density spectra - linear scale', 'NumberTitle', 'off');
873 f9.Position=[1000 -10 800 1800];
874 annotation('rectangle', [0 0 1 1], 'Color', 'w')
875 for i=n/3+1:2*n/3
876     subplot(n/3,1,i-n/3)
877     plot(fzref_vref_M_FFT, PSD_FFT(:,i), 'Marker', '.', 'Color', [0,204/255, 0], 'LineStyle', 'none', 'DisplayName', 'From FFT')
878     hold on
879     plot(fzref_vref_M, PSD_th(:,i), 'Marker', '.', 'Color', [0,0,0], 'LineStyle', 'none', 'DisplayName', 'Welch method')
880     hold on
881     plot(fzref_vref_P, Davenport(:,i), 'DisplayName', 'Davenport', 'Color', [1,0,0], 'LineWidth', 1);
882     hold on
883     plot(fzref_vref_P, Karman(:,i), 'DisplayName', 'Kármán', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-. ');
884     hold on
885     plot(fzref_vref_P, Kaimal(:,i), 'DisplayName', 'Kaimal', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-- ');
886     xlim([0 7])
887     ylim([0 0.4])
888     ylabel('(fG_{v}(f))/\sigma_{v}^{2}')
889     xlabel('fz_{ref}/v_{ref}')
890     title(['PSD at ' num2str(Pheights(i)) ' [m] in full scale'])
891 end
892 legend('Orientation', 'horizontal', 'Box', 'off', 'Position', [0.4 0.87 0.2 0.2])
893
894 f10=figure('Name', 'Power density spectra - linear scale', 'NumberTitle', 'off');
895 f10.Position=[1000 -10 800 1800];
896 annotation('rectangle', [0 0 1 1], 'Color', 'w')
897 for i=2*n/3+1:n
898     subplot(n/3,1,i-2*n/3)
899     plot(fzref_vref_M_FFT, PSD_FFT(:,i), 'Marker', '.', 'Color', [0,204/255, 0], 'LineStyle', 'none', 'DisplayName', 'PSD from FFT')
900     hold on
901     plot(fzref_vref_M, PSD_th(:,i), 'Marker', '.', 'Color', [0,0,0], 'LineStyle', 'none', 'DisplayName', 'PSD from Welch method')
902     hold on
903     plot(fzref_vref_P, Davenport(:,i), 'DisplayName', 'Davenport', 'Color', [1,0,0], 'LineWidth', 1);
904     hold on
905     plot(fzref_vref_P, Karman(:,i), 'DisplayName', 'Kármán', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-. ');
906     hold on
907     plot(fzref_vref_P, Kaimal(:,i), 'DisplayName', 'Kaimal', 'Color', [1,0,0], 'LineWidth', 1, 'LineStyle', '-- ');
908     xlim([0 7])
909     ylim([0 0.4])
910     ylabel('(fG_{v}(f))/\sigma_{v}^{2}')

```

```

911 xlabel('fz_{ref}/v_{ref}')
912 title(['PSD at ' num2str(Pheights(i)) ' [m] in full scale'])
913 end
914 legend('Orientation','horizontal','Box','off','Position',[0.4 0.87 0.2 0.2])
915
916 exportgraphics(f8,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
917 exportgraphics(f9,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
918 exportgraphics(f10,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
919 close all
920
921 %% PARSEVAL IDENTITY CHECK FOR CALCULATED PSD
922 Parseval=zeros(3,n);
923 for j=1:n
924     Parseval(1,j)=v_var(j);
925     Parseval(2,j)=trapz(frequencyPwelch,spectrumPwelch(:,j));
926     Parseval(3,j)=sum(Svi(:,j));
927 end
928 PSD_SE=zeros(2,n);
929 for j=1:n
930     PSD_SE(1,j)=(Parseval(1,j)-Parseval(2,j))^2;
931     PSD_SE(2,j)=(Parseval(1,j)-Parseval(3,j))^2;
932 end
933 PSD_MSE=zeros(2,3); %mean, max and min squared error between the results of Parseval's
identity for all points and both methods
934 for i=1:2
935     PSD_MSE(i,1)=mean(PSD_SE(i,:));
936     PSD_MSE(i,2)=max(PSD_SE(i,:));
937     PSD_MSE(i,3)=min(PSD_SE(i,:));
938 end
939 disp(['Mean squared error for Parceval identity is ' num2str(PSD_MSE(1,1),2) ' for Welch
method and ' num2str(PSD_MSE(2,1),2) ' for Fourier calculation.'])
940
941 %% VERTICAL COHERENCE
942 v_fluctuations=detrend(velocity_th)/k_v; %detrending the velocity time series, leaving
only the fluctuations components
943 window_CPSD=round(m/30); %window for the cross-spectrum calculation
944 noverlap_CPSD=round(m/60); %number of overlapped samples for the cross-spectrum
calculation
945 NFFT_CPSD=round(m/30); %number of DFT points for the cross-spectrum calculation
946
947 num_cpsd=nchoosek(1:1:n,2); %pairs of points
948 coh_num=nchoosek(n,2);
949 delta_z_coh=zeros(coh_num,1); %distance between the points
950 vm=zeros(coh_num,1); %mean wind speed for each pair of points
951 zm=zeros(coh_num,1); %mean height for each pair of points
952 for i=1:coh_num
953     delta_z_coh(i)=Pheights(num_cpsd(i,2))-Pheights(num_cpsd(i,1));
954     vm(i)=(v_mean(num_cpsd(i,1))+v_mean(num_cpsd(i,2)))/2/k_v;
955     zm(i)=(Pheights(num_cpsd(i,1))+Pheights(num_cpsd(i,2)))/2;
956 end
957 coh_sets=cat(2,num_cpsd,delta_z_coh,vm,zm); %all of the combinations of pairs of the
points in the vertical axis and the relative distances between each pair
958
959 f_coh=(0:fs/2/noverlap_CPSD:fs/2)/k_f;
960 f_dzvm=zeros(noverlap_CPSD+1,coh_num); %normalised frequency f*delta z/vm
961 for i=1:noverlap_CPSD+1
962     for j=1:coh_num
963         f_dzvm(i,j)=f_coh(i)*delta_z_coh(j)/vm(j);
964     end
965 end
966
967 cross_spectrum=zeros(noverlap_CPSD+1,coh_num); %vertical cross-spectrum between each pair
of measurement points (at different heights)

```

```

968 for i=1:coh_num
969     cross_spectrum(:,i)=cpsd(v_fluctuations(:,(coh_sets(i,1))),v_fluctuations(:,(coh_sets
(i,2))),window_CPSD,noverlap_CPSD,NFFT_CPSD,fs);
970 end
971
972 pds_z=zeros(noverlap_CPSD+1,n); %power density spectra for each point
973
974 for i=1:n
975     pds_z(:,i)=cpsd(v_fluctuations(:,i),v_fluctuations(:,i),window_CPSD,noverlap_CPSD,
NFFT_CPSD,fs);
976 end
977
978 cocohereance=zeros(noverlap_CPSD+1,coh_num); %co-coherence
979 quadcoherence=zeros(noverlap_CPSD+1,coh_num); %quad-coherence
980 for i=1:noverlap_CPSD+1
981     for j=1:coh_num
982         cocohereance(i,j)=real(cross_spectrum(i,j)/sqrt(pds_z(i,coh_sets(j,1))*pds_z(i,
coh_sets(j,2))));
983         quadcoherence(i,j)=imag(cross_spectrum(i,j)/sqrt(pds_z(i,coh_sets(j,1))*pds_z(i,
coh_sets(j,2))));
984     end
985 end
986
987 Cz=zeros(coh_num,1); %exponential decay for Davenport model
988 for i=1:coh_num
989     [xData,yData]=prepareCurveData(f_coh,cocohereance(:,i));
990     ft=fitttype('exp(-Cz*x*deltaz/v_m)','independent','x','dependent','y');
991     opts=fitoptions('Method','NonlinearLeastSquares');
992     opts.Display='Off';
993     opts.Lower=[0 delta_z_coh(i) vm(i)];
994     opts.Robust='LAR';
995     opts.StartPoint=[5 delta_z_coh(i) vm(i)];
996     opts.Upper=[100 delta_z_coh(i) vm(i)];
997     [fitresult,gof]=fit(xData,yData,ft,opts);
998     Cz(i)=fitresult.Cz;
999 end
1000
1001 Davenport_coherence=zeros(noverlap_CPSD+1,coh_num); %Davenport model for co-coherence
1002 for i=1:noverlap_CPSD+1
1003     for j=1:coh_num
1004         Davenport_coherence(i,j)=exp(-Cz(j)*f_coh(i)*delta_z_coh(j)/vm(j));
1005     end
1006 end
1007
1008 c1=zeros(coh_num,1); %exponential decay c1 for Bowen model
1009 c2=zeros(coh_num,1); %exponential decay c2 for Bowen model
1010 for i=1:coh_num
1011     [xData,yData]=prepareCurveData(f_coh,cocohereance(:,i));
1012     ft=fitttype('exp(-c1*x*deltaz/v_m)*exp(-(2*c2*x*deltaz^2)/((z1+z2)
*v_m))','independent','x','dependent','y');
1013     opts=fitoptions('Method','NonlinearLeastSquares');
1014     opts.Display='Off';
1015     opts.Lower=[0 0 delta_z_coh(i) vm(i) Pheights(coh_sets(i,1)) Pheights(coh_sets(i,
2))];
1016     opts.Robust='LAR';
1017     opts.StartPoint=[10 5 delta_z_coh(i) vm(i) Pheights(coh_sets(i,1)) Pheights(coh_sets
(i,2))];
1018     opts.Upper=[100 100 delta_z_coh(i) vm(i) Pheights(coh_sets(i,1)) Pheights(coh_sets(i,
2))];
1019     [fitresult,gof]=fit(xData,yData,ft,opts);
1020     c1(i)=fitresult.c1;
1021     c2(i)=fitresult.c2;
1022 end

```

```

1023
1024 Bowen=zeros(noverlap_CPSD+1,coh_num); %Bowen model for co-coherence
1025 for i=1:noverlap_CPSD+1
1026     for j=1:coh_num
1027         Bowen(i,j)=exp(-c1(j)*f_coh(i)*delta_z_coh(j)/vm(j))*exp(-(2*c2(j)*f_coh(i)
*delta_z_coh(j)^2)/((Pheights(coh_sets(j,1))+Pheights(coh_sets(j,2)))*vm(j)));
1028     end
1029 end
1030
1031 c1m=zeros(coh_num,1); %exponential decay c1 for modified Bowen model
1032 c2m=zeros(coh_num,1); %exponential decay c2 for modified Bowen model
1033 c3m=zeros(coh_num,1); %exponential decay c3 for modified Bowen model
1034 for i=1:coh_num
1035     [xData,yData]=prepareCurveData(f_coh,cocoherence(:,i));
1036     ft = fittype( 'exp(-(deltaz/v_m*sqrt((c1m*x)^2+c3m^2))*exp(-(2*c2m*x*deltaz^2)/
((z1+z2)*v_m))', 'independent', 'x', 'dependent', 'y' );
1037     opts = fitoptions( 'Method', 'NonlinearLeastSquares' );
1038     opts.Display = 'Off';
1039     opts.Lower = [0 0 0 delta_z_coh(i) vm(i) Pheights(coh_sets(i,1)) Pheights(coh_sets(i,
2))];
1040     opts.Robust='LAR';
1041     opts.StartPoint = [10 5 5 delta_z_coh(i) vm(i) Pheights(coh_sets(i,1)) Pheights
(coh_sets(i,2))];
1042     opts.Upper = [100 100 100 delta_z_coh(i) vm(i) Pheights(coh_sets(i,1)) Pheights
(coh_sets(i,2))];
1043     [fitresult,gof]=fit(xData,yData,ft,opts);
1044     c1m(i)=fitresult.c1m;
1045     c2m(i)=fitresult.c2m;
1046     c3m(i)=fitresult.c3m;
1047 end
1048
1049 Bowen_mod=zeros(noverlap_CPSD+1,coh_num); %Bowen model for co-coherence
1050 for i=1:noverlap_CPSD+1
1051     for j=1:coh_num
1052         Bowen_mod(i,j)=exp(-delta_z_coh(j)/vm(j)*sqrt((c1m(j)*f_coh(i))^2+c3m(j)^2))*exp
(-(2*c2m(j)*f_coh(i)*delta_z_coh(j)^2)/((Pheights(coh_sets(j,1))+Pheights(coh_sets(j,2)))*vm
(j)));
1053     end
1054 end
1055
1056 f11=figure('Name','Co-coherence function','NumberTitle','off');
1057 f11.Position=[100 0 1800 1200];
1058 annotation('rectangle',[0 0 1 1],'Color','w')
1059 t1=tiledlayout((coh_num/6+1)/4,(coh_num/6+1)/3);
1060 for i=1:coh_num/6
1061     nexttile
1062     plot(f_dzvm(:,i),cocoherence(:,i),'Color',[0,0,1],'DisplayName','Co-coherence from
measurements')
1063     hold on
1064     plot(f_dzvm(:,i),Davenport_coherence(:,i),'Color',
[1,0,0],'LineStyle','--','LineWidth',2.5,'DisplayName','Davenport model')
1065     hold on
1066     plot(f_dzvm(:,i),Bowen(:,i),'Color',[0,204/255,0],'LineStyle','--','LineWidth',
1.5,'DisplayName','Bowen model')
1067     hold on
1068     plot(f_dzvm(:,i),Bowen_mod(:,i),'Color',
[1,0,1],'LineStyle','--','DisplayName','Modified Bowen model')
1069     xlim([0 f_dzvm(noverlap_CPSD+1,i)])
1070     ylim([-0.5 1])
1071     ylabel(['(\gamma_{vv}(z,\Delta z=' num2str(coh_sets(i,3)) ',f) [-]'])
1072     xlabel('f|\Delta z|/v_m [-]')
1073     title(['Co-coherence between z_1=' num2str(Pheights(coh_sets(i,1))) ' [m] and z_2='
num2str(Pheights(coh_sets(i,2))) ' [m]'])

```

```

1074     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.85,['C_z=' num2str(Cz(i),3)],'Color',[0,0,0])
1075     text(0.55*f_dzvm(noverlap_CPSD+1,i),0.65,['c_1=' num2str(c1(i),3)],'Color',[0,0,0])
1076     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.65,['c_2=' num2str(c2(i),3)],'Color',[0,0,0])
1077 end
1078 lgd=legend;
1079 lgd.Layout.Tile=(coh_num/6+1);
1080
1081 f12=figure('Name','Co-coherence function','NumberTitle','off');
1082 f12.Position=[100 0 1800 1200];
1083 annotation('rectangle',[0 0 1 1],'Color','w')
1084 t2=tiledlayout((coh_num/6+1)/4,(coh_num/6+1)/3);
1085 for i=coh_num/6+1:2*coh_num/6
1086     nexttile
1087     plot(f_dzvm(:,i),cocoherence(:,i),'Color',[0,0,1],'DisplayName','Co-coherence from
measurements')
1088     hold on
1089     plot(f_dzvm(:,i),Davenport_coherence(:,i),'Color',[
1,0,0],'LineStyle','--','LineWidth',2.5,'DisplayName','Davenport model')
1090     hold on
1091     plot(f_dzvm(:,i),Bowen(:,i),'Color',[0,204/255,0],'LineStyle','--','LineWidth',
1.5,'DisplayName','Bowen model')
1092     hold on
1093     plot(f_dzvm(:,i),Bowen_mod(:,i),'Color',[
1,0,1],'LineStyle','--','DisplayName','Modified Bowen model')
1094     xlim([0 f_dzvm(noverlap_CPSD+1,i)])
1095     ylim([-0.5 1])
1096     ylabel(['(\gamma_{vv}(z,\Delta z=' num2str(coh_sets(i,3)) ',f) [-]'])
1097     xlabel('f|\Delta z|/v_m [-]')
1098     title(['Co-coherence between z_1=' num2str(Pheights(coh_sets(i,1))) ' [m] and z_2='
num2str(Pheights(coh_sets(i,2))) ' [m]'])
1099     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.85,['C_z=' num2str(Cz(i),3)],'Color',[0,0,0])
1100     text(0.55*f_dzvm(noverlap_CPSD+1,i),0.65,['c_1=' num2str(c1(i),3)],'Color',[0,0,0])
1101     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.65,['c_2=' num2str(c2(i),3)],'Color',[0,0,0])
1102 end
1103 lgd=legend;
1104 lgd.Layout.Tile=(coh_num/6+1);
1105
1106 f13=figure('Name','Co-coherence function','NumberTitle','off');
1107 f13.Position=[100 0 1800 1200];
1108 annotation('rectangle',[0 0 1 1],'Color','w')
1109 t3=tiledlayout((coh_num/6+1)/4,(coh_num/6+1)/3);
1110 for i=2*coh_num/6+1:3*coh_num/6
1111     nexttile
1112     plot(f_dzvm(:,i),cocoherence(:,i),'Color',[0,0,1],'DisplayName','Co-coherence from
measurements')
1113     hold on
1114     plot(f_dzvm(:,i),Davenport_coherence(:,i),'Color',[
1,0,0],'LineStyle','--','LineWidth',2.5,'DisplayName','Davenport model')
1115     hold on
1116     plot(f_dzvm(:,i),Bowen(:,i),'Color',[0,204/255,0],'LineStyle','--','LineWidth',
1.5,'DisplayName','Bowen model')
1117     hold on
1118     plot(f_dzvm(:,i),Bowen_mod(:,i),'Color',[
1,0,1],'LineStyle','--','DisplayName','Modified Bowen model')
1119     xlim([0 f_dzvm(noverlap_CPSD+1,i)])
1120     ylim([-0.5 1])
1121     ylabel(['(\gamma_{vv}(z,\Delta z=' num2str(coh_sets(i,3)) ',f) [-]'])
1122     xlabel('f|\Delta z|/v_m [-]')
1123     title(['Co-coherence between z_1=' num2str(Pheights(coh_sets(i,1))) ' [m] and z_2='
num2str(Pheights(coh_sets(i,2))) ' [m]'])
1124     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.85,['C_z=' num2str(Cz(i),3)],'Color',[0,0,0])
1125     text(0.55*f_dzvm(noverlap_CPSD+1,i),0.65,['c_1=' num2str(c1(i),3)],'Color',[0,0,0])
1126     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.65,['c_2=' num2str(c2(i),3)],'Color',[0,0,0])

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```

1127 end
1128 lgd=legend;
1129 lgd.Layout.Tile=(coh_num/6+1);
1130
1131 f14=figure('Name','Co-coherence function','NumberTitle','off');
1132 f14.Position=[100 0 1800 1200];
1133 annotation('rectangle',[0 0 1 1],'Color','w')
1134 t4=tiledlayout((coh_num/6+1)/4,(coh_num/6+1)/3);
1135 for i=3*coh_num/6+1:4*coh_num/6
1136     nexttile
1137     plot(f_dzvm(:,i),cocoherence(:,i),'Color',[0,0,1],'DisplayName','Co-coherence from
measurements')
1138     hold on
1139     plot(f_dzvm(:,i),Davenport_coherence(:,i),'Color',[1,0,0],
'LineStyle','--','LineWidth',2.5,'DisplayName','Davenport model')
1140     hold on
1141     plot(f_dzvm(:,i),Bowen(:,i),'Color',[0,204/255,0],'LineStyle','--','LineWidth',
1.5,'DisplayName','Bowen model')
1142     hold on
1143     plot(f_dzvm(:,i),Bowen_mod(:,i),'Color',[1,0,1],
'LineStyle','--','DisplayName','Modified Bowen model')
1144     xlim([0 f_dzvm(noverlap_CPSD+1,i)])
1145     ylim([-0.5 1])
1146     ylabel(['(\gamma_{vv}(z,\Delta z=' num2str(coh_sets(i,3)) ',f) [-]')])
1147     xlabel('f|\Delta z|/v_m [-]')
1148     title(['Co-coherence between z_1=' num2str(Pheights(coh_sets(i,1))) ' [m] and z_2='
num2str(Pheights(coh_sets(i,2))) ' [m]'])
1149     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.85,['C_z=' num2str(Cz(i),3)],'Color',[0,0,0])
1150     text(0.55*f_dzvm(noverlap_CPSD+1,i),0.65,['c_1=' num2str(c1(i),3)],'Color',[0,0,0])
1151     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.65,['c_2=' num2str(c2(i),3)],'Color',[0,0,0])
1152 end
1153 lgd=legend;
1154 lgd.Layout.Tile=(coh_num/6+1);
1155
1156 f15=figure('Name','Co-coherence function','NumberTitle','off');
1157 f15.Position=[100 0 1800 1200];
1158 annotation('rectangle',[0 0 1 1],'Color','w')
1159 t5=tiledlayout((coh_num/6+1)/4,(coh_num/6+1)/3);
1160 for i=4*coh_num/6+1:5*coh_num/6
1161     nexttile
1162     plot(f_dzvm(:,i),cocoherence(:,i),'Color',[0,0,1],'DisplayName','Co-coherence from
measurements')
1163     hold on
1164     plot(f_dzvm(:,i),Davenport_coherence(:,i),'Color',[1,0,0],
'LineStyle','--','LineWidth',2.5,'DisplayName','Davenport model')
1165     hold on
1166     plot(f_dzvm(:,i),Bowen(:,i),'Color',[0,204/255,0],'LineStyle','--','LineWidth',
1.5,'DisplayName','Bowen model')
1167     hold on
1168     plot(f_dzvm(:,i),Bowen_mod(:,i),'Color',[1,0,1],
'LineStyle','--','DisplayName','Modified Bowen model')
1169     xlim([0 f_dzvm(noverlap_CPSD+1,i)])
1170     ylim([-0.5 1])
1171     ylabel(['(\gamma_{vv}(z,\Delta z=' num2str(coh_sets(i,3)) ',f) [-]')])
1172     xlabel('f|\Delta z|/v_m [-]')
1173     title(['Co-coherence between z_1=' num2str(Pheights(coh_sets(i,1))) ' [m] and z_2='
num2str(Pheights(coh_sets(i,2))) ' [m]'])
1174     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.85,['C_z=' num2str(Cz(i),3)],'Color',[0,0,0])
1175     text(0.55*f_dzvm(noverlap_CPSD+1,i),0.65,['c_1=' num2str(c1(i),3)],'Color',[0,0,0])
1176     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.65,['c_2=' num2str(c2(i),3)],'Color',[0,0,0])
1177 end
1178 lgd=legend;
1179 lgd.Layout.Tile=(coh_num/6+1);

```

```

1180
1181 f16=figure('Name','Co-coherence function','NumberTitle','off');
1182 f16.Position=[100 0 1800 1200];
1183 annotation('rectangle',[0 0 1 1],'Color','w')
1184 t6=tiledlayout((coh_num/6+1)/4,(coh_num/6+1)/3);
1185 for i=5*coh_num/6+1:coh_num
1186     nexttile
1187     plot(f_dzvm(:,i),cocoherence(:,i),'Color',[0,0,1],'DisplayName','Co-coherence from
measurements')
1188     hold on
1189     plot(f_dzvm(:,i),Davenport_coherence(:,i),'Color',[
1,0,0],'LineStyle','--','LineWidth',2.5,'DisplayName','Davenport model')
1190     hold on
1191     plot(f_dzvm(:,i),Bowen(:,i),'Color',[0,204/255,0],'LineStyle','--','LineWidth',
1.5,'DisplayName','Bowen model')
1192     hold on
1193     plot(f_dzvm(:,i),Bowen_mod(:,i),'Color',[
1,0,1],'LineStyle','--','DisplayName','Modified Bowen model')
1194     xlim([0 f_dzvm(noverlap_CPSD+1,i)])
1195     ylim([-0.5 1])
1196     ylabel(['(\gamma_{vv}(z,\Delta z=' num2str(coh_sets(i,3)) ',f) [-]'])
1197     xlabel('f|\Delta z|/v_m [-]')
1198     title(['Co-coherence between z_1=' num2str(Pheights(coh_sets(i,1))) ' [m] and z_2='
num2str(Pheights(coh_sets(i,2))) ' [m]'])
1199     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.85,['C_z=' num2str(Cz(i),3)],'Color',[0,0,0])
1200     text(0.55*f_dzvm(noverlap_CPSD+1,i),0.65,['c_1=' num2str(c1(i),3)],'Color',[0,0,0])
1201     text(0.75*f_dzvm(noverlap_CPSD+1,i),0.65,['c_2=' num2str(c2(i),3)],'Color',[0,0,0])
1202 end
1203 lgd=legend;
1204 lgd.Layout.Tile=(coh_num/6+1);
1205
1206 exportgraphics(f11,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1207 exportgraphics(f12,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1208 exportgraphics(f13,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1209 exportgraphics(f14,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1210 exportgraphics(f15,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1211 exportgraphics(f16,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1212 close all
1213
1214 %% FREQUENCY SCALES
1215 fz_int=zeros(coh_num,1); %frequency scales directly from integration of the co-coherence
function
1216 fz_approx=zeros(coh_num,1); %frequency scales from approximation using the Cz exponential
decay from the Davenport model
1217 Tz_int=zeros(coh_num,1); %approximation period based on fz_int
1218 Tz_approx=zeros(coh_num,1); %approximation period based on fz_approx
1219
1220 for i=1:coh_num
1221     fz_int(i)=trapz(f_coh,cocoherence(:,i));
1222     fz_approx(i)=vm(i)/Cz(i)/delta_z_coh(i);
1223     Tz_int(i)=1/fz_int(i);
1224     Tz_approx(i)=1/fz_approx(i);
1225 end
1226
1227 fscale_z1_nums=find(coh_sets(:,1)==1);
1228 fscale_z2_nums=find(coh_sets(:,2)==12);
1229 fscale_z1=zeros(n-1,2);
1230 fscale_z2=zeros(n-1,2);
1231 for i=1:n-1
1232     fscale_z1(i,1)=fz_int(fscale_z1_nums(i));
1233     fscale_z1(i,2)=fz_approx(fscale_z1_nums(i));
1234     fscale_z2(i,1)=fz_int(fscale_z2_nums(i));
1235     fscale_z2(i,2)=fz_approx(fscale_z2_nums(i));

```



```
1236 end
1237
1238 f17=figure('Name','Vertical frequency scales','NumberTitle','off');
1239 f17.Position=[200 200 1400 800];
1240 annotation('rectangle',[0 0 1 1],'Color','w')
1241 subplot(1,2,1)
1242 plot(flip(fscaled_z1(:,1)),flip(delta_z_coh(1:n-1)),'.','Color',[1,0,0],'MarkerSize',\
20,'LineStyle','-','LineWidth',2,'DisplayName','\gamma_{vv} integration')
1243 for i=1:n-1
1244     text(fscaled_z1(i,1)-0.11*max(fscaled_z1(:,1)),delta_z_coh(i),num2str(fscaled_z1(i,1),\
3))
1245 end
1246 grid on
1247 grid minor
1248 hold on
1249 plot(flip(fscaled_z1(:,2)),flip(delta_z_coh(1:n-1)),'o','Color',[1,0,0],'MarkerSize',\
5,'LineStyle','-','LineWidth',2,'DisplayName','Davenport model approximation')
1250 xlabel('Frequency length scale f^{*}_{z} [Hz]')
1251 ylabel('Height difference \Delta z [m]')
1252 xlim([0 1.1*max(fscaled_z1(:,1))])
1253 ylim([0 1.1*max(delta_z_coh)])
1254 legend('Location','Northeast')
1255 title('Frequency length scales for the lowest point at different height differences')
1256
1257 subplot(1,2,2)
1258 plot(fscaled_z2(:,1),flip(delta_z_coh(1:n-1)),'.','Color',[0,204/255,0],'MarkerSize',\
20,'LineStyle','-','LineWidth',2,'DisplayName','\gamma_{vv} integration')
1259 for i=1:n-1
1260     text(fscaled_z2(n-i,1)-0.11*max(fscaled_z2(:,1)),delta_z_coh(i),num2str(fscaled_z2(n-i,\
1),3))
1261 end
1262 grid on
1263 grid minor
1264 hold on
1265 plot(fscaled_z2(:,2),flip(delta_z_coh(1:n-1)),'o','Color',[0,204/255,0],'MarkerSize',\
5,'LineStyle','-','LineWidth',2,'DisplayName','Davenport model approximation')
1266 xlabel('Frequency length scale f^{*}_{z} [Hz]')
1267 ylabel('Height difference \Delta z [m]')
1268 xlim([0 1.1*max(fscaled_z2(:,1))])
1269 ylim([0 1.1*max(delta_z_coh)])
1270 legend('Location','Northeast')
1271 title('Frequency length scales for the highest point at different height differences')
1272
1273 exportgraphics(f17,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1274 close all
1275
1276 % ADDITIONAL WIND SPEED PROFILES FOR COMPARISON WITH ISO 4354 AND ASCE/SEI 7 STANDARDS
1277 f18=figure('Name','Vertical wind velocity profile','NumberTitle','off');
1278 f18.Position=[100 100 1600 900];
1279 annotation('rectangle',[0 0 1 1],'Color','w')
1280 subplot(1,2,1)
1281 plot(V_z,.'.','Color',[1,0,0],'MarkerSize',20,'LineStyle','none')
1282 xlabel('V/V_{ref} [-]')
1283 ylabel('Z/Z_{ref} [-]')
1284 title('Mean wind velocity profile - comparison with ISO 4354')
1285 xlim([0 1.1])
1286 ylim([0 1.1])
1287 grid on
1288 hold on
1289 plot(v_power_law2,z_discrete,'Color',[0,204/255,0],'LineWidth',2)
1290 hold on
1291 plot(v_log2,z_discrete,'Color',[0,128/255,1],'LineWidth',2)
1292 hold on
```

```
1293 plot(v_ISO_power,z_discrete,'Color',[0,204/255,0],'LineWidth',1,'LineStyle','--')
1294 hold on
1295 plot(v_ISO_log,z_discrete,'Color',[0,128/255,1],'LineWidth',1,'LineStyle','--')
1296 legend('Measured wind profile','Fit with power law wind profile','Fit with logarithmic
wind profile','Power law model (ISO 4354)','Logarithmic model (ISO
4354)','Location','northwest')
1297
1298 subplot(1,2,2)
1299 plot(V,Z,'.','Color',[1,0,0],'MarkerSize',20,'LineStyle','none')
1300 xlabel('V/V_{ref} [-]')
1301 ylabel('Z/Z_{ref} [-]')
1302 title('Mean wind velocity profile - comparison with ASCE/SEI 7')
1303 xlim([0 1.1])
1304 ylim([0 1.1])
1305 grid on
1306 hold on
1307 plot(v_power_law2,z_discrete,'Color',[0,204/255,0],'LineWidth',2)
1308 hold on
1309 plot(v_ASCE,z_discrete,'Color',[0,204/255,0],'LineWidth',1,'LineStyle','--')
1310 legend('Measured wind profile','Fit with power law wind profile','Power law model
(ASCE/SEI 7)','Location','northwest')
1311
1312 exportgraphics(f18,['Results-' num2str(day) '-' num2str(cn) '.pdf'],'Append',true)
1313 close all
1314
1315 %% SAVING THE DATA
1316 Results_full=[Zref Vref alfa z0 beta z0T Iv30 Terrain_category_PNEN Terrain_category_ISO
Terrain_category_ASCE Delta' RMSE_full' RMSE_PNEN_power_law RMSE_PNEN_log RMSE_ESDU a_w a_Iv
Vref_log GoF_power_law GoF_log GoF_power_law_Iv GoF_log_Iv L_proto' Lz_up Lz_down v_mean' Iv'
fz_int' PSD_MSE(1,:) PSD_MSE(2,:) max(Gvi) max(spectrumPwelch) max(PSD_FFT) max(PSD_th)
pressures_check];
1317 xlswrite('Experimental cases.xlsx', Results_full, 'Results', ['B' num2str(c_num+1)]);
1318
1319 timeElapsed=toc;
1320 disp(['Calculations finished in the time of ' num2str(timeElapsed,3) ' [s].'])
1321 xlswrite('Experimental cases.xlsx', timeElapsed, 'Results', ['GY' num2str(c_num+1)]);
1322
1323 end
```



**Cracow University
of Technology**



**Faculty of Civil
Engineering**

**Tadeusz Kościuszko Cracow University of Technology
Faculty of Civil Engineering
Wind Engineering Laboratory (L-14)**

Aleksander Pistol, MSc, Eng.

**Influence of terrain roughness on boundary layer simulation in
wind tunnel**

Wpływ chropowatości terenu na symulację warstwy przyziemnej w tunelu
aerodynamicznym

Attachment 2 – Results.xlsx

Załącznik nr 2 – Results.xlsx

Kraków, 2023

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
1-1	None	None	None	20	20	12.94	1.02
1-2	None	None	None	15	20	12.73	1.00
1-3	None	None	None	10	20	12.68	0.99
1-4	None	None	None	5	20	12.56	0.99
1-5	None	None	None	0	20	12.51	0.98
1-6	None	None	None	0	15	12.58	0.99
1-7	None	None	None	5	15	12.69	1.00
1-8	None	None	None	10	15	12.85	1.01
1-9	None	None	None	15	15	13.03	1.02
1-10	None	None	None	20	15	13.26	1.04
1-11	None	None	None	20	10	13.37	1.05
1-12	None	None	None	15	10	13.20	1.04
1-13	None	None	None	10	10	12.88	1.01
1-14	None	None	None	5	10	12.64	0.99
1-15	None	None	None	0	10	12.51	0.98
1-16	None	None	None	0	5	12.61	0.99
1-17	None	None	None	5	5	12.77	1.00
1-18	None	None	None	10	5	12.98	1.02
1-19	None	None	None	15	5	13.23	1.04
1-20	None	None	None	20	5	13.44	1.05
1-21	None	None	None	20	0	13.44	1.06
1-22	None	None	None	15	0	13.26	1.04

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
1-1	0.59	8.59	-0.45	3.05	31.3%	4	5	A
1-2	0.56	7.89	-0.43	2.76	29.8%	4	5	A
1-3	0.57	8.34	-0.44	2.87	29.1%	4	5	A
1-4	0.57	8.27	-0.44	2.85	27.6%	4	5	A
1-5	0.57	8.19	-0.44	2.83	26.9%	4	5	A
1-6	0.45	5.33	-0.51	4.00	23.0%	4	5	A
1-7	0.48	6.16	-0.54	4.38	24.2%	4	5	A
1-8	0.48	6.15	-0.52	4.08	24.6%	4	5	A
1-9	0.48	6.07	-0.51	4.08	26.3%	4	5	A
1-10	0.50	6.70	-0.50	3.89	27.1%	4	5	A
1-11	0.39	3.93	-0.54	4.70	21.7%	4	5	A
1-12	0.36	3.15	-0.57	5.05	20.2%	4	5	A
1-13	0.36	3.34	-0.62	5.81	19.5%	4	5	A
1-14	0.37	3.57	-0.64	5.96	19.1%	4	5	A
1-15	0.33	2.69	-0.63	5.96	17.9%	4	4	A
1-16	0.21	0.58	-0.85	8.92	11.9%	3	3	B
1-17	0.22	0.68	-0.75	7.73	12.6%	4	3	B
1-18	0.24	0.87	-0.65	6.36	13.8%	4	4	B
1-19	0.25	1.01	-0.57	5.29	15.1%	4	4	B
1-20	0.29	1.68	-0.52	4.47	16.8%	4	4	A
1-21	0.23	0.66	-0.41	2.62	13.4%	4	3	B
1-22	0.18	0.21	-0.47	3.65	11.2%	3	3	C

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_{α}	Δ_{z0}	Δ_{β}	Δ_{z0T}	Δ_{IV30}	$\Delta_{\alpha ISO}$	$\Delta_{z0 ISO}$	$\Delta_{\beta ISO}$
1-1	1.455	7.593	0.859	2.054	0.064	0.551	2.437	0.174
1-2	1.327	6.894	0.788	1.763	0.014	0.470	2.158	0.129
1-3	1.394	7.338	0.832	1.875	0.010	0.512	2.335	0.157
1-4	1.391	7.267	0.825	1.845	0.062	0.510	2.307	0.153
1-5	1.362	7.190	0.821	1.829	0.085	0.492	2.276	0.150
1-6	0.856	4.327	1.142	2.997	0.219	0.172	1.131	0.353
1-7	0.987	5.163	1.238	3.384	0.179	0.255	1.465	0.413
1-8	0.994	5.154	1.162	3.082	0.163	0.259	1.462	0.366
1-9	0.983	5.065	1.139	3.083	0.106	0.253	1.426	0.351
1-10	1.090	5.700	1.091	2.893	0.078	0.320	1.680	0.321
1-11	0.621	2.927	1.261	3.698	0.262	0.024	0.571	0.428
1-12	0.489	2.154	1.359	4.053	0.312	0.060	0.262	0.490
1-13	0.502	2.336	1.588	4.810	0.338	0.051	0.335	0.634
1-14	0.530	2.571	1.667	4.957	0.352	0.034	0.428	0.684
1-15	0.383	1.685	1.642	4.963	0.392	0.037	0.074	0.981
1-16	0.118	0.931	3.457	28.743	0.320	0.011	0.931	3.033
1-17	0.074	0.324	2.139	6.731	0.570	0.059	0.324	2.587
1-18	0.002	0.126	1.690	5.363	0.531	0.145	0.126	1.018
1-19	0.053	0.010	1.368	4.294	0.486	0.203	0.010	0.776
1-20	0.223	0.678	1.153	3.474	0.429	0.083	0.678	0.615
1-21	0.029	0.338	0.700	1.623	0.544	0.110	0.338	0.942
1-22	0.043	0.308	1.456	11.177	0.361	0.134	0.308	1.222

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
1-1	0.177	0.768	0.339	0.062	0.193	0.191	0.093	0.076
1-2	0.216	0.676	0.288	0.106	0.181	0.179	0.082	0.067
1-3	0.234	0.724	0.319	0.126	0.185	0.184	0.085	0.069
1-4	0.274	0.721	0.314	0.173	0.182	0.180	0.082	0.065
1-5	0.292	0.700	0.311	0.193	0.176	0.174	0.075	0.058
1-6	0.396	0.337	0.542	0.311	0.112	0.115	0.021	0.013
1-7	0.364	0.430	0.611	0.275	0.127	0.129	0.033	0.019
1-8	0.353	0.436	0.557	0.262	0.129	0.131	0.035	0.022
1-9	0.309	0.428	0.540	0.212	0.132	0.134	0.037	0.026
1-10	0.286	0.504	0.506	0.186	0.147	0.148	0.050	0.037
1-11	0.429	0.167	0.628	0.349	0.085	0.089	0.009	0.018
1-12	0.468	0.072	0.698	0.393	0.065	0.069	0.024	0.033
1-13	0.488	0.082	0.863	0.416	0.060	0.067	0.035	0.042
1-14	0.498	0.101	0.920	0.428	0.061	0.068	0.041	0.047
1-15	0.442	0.005	0.902	0.464	0.043	0.051	0.029	0.033
1-16	0.433	0.044	2.811	0.464	0.031	0.039	0.039	0.042
1-17	0.399	0.000	2.390	0.432	0.047	0.047	0.031	0.034
1-18	0.569	0.082	1.906	0.379	0.024	0.027	0.068	0.071
1-19	0.528	0.137	1.557	0.320	0.008	0.016	0.050	0.054
1-20	0.475	0.120	0.551	0.496	0.034	0.037	0.018	0.025
1-21	0.362	0.049	0.835	0.397	0.003	0.011	0.020	0.022
1-22	0.467	0.273	2.267	0.217	0.010	0.013	0.025	0.025

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
1-1	0.139	0.140	0.141	0.077	0.99	0.15	11.93	0.972
1-2	0.126	0.122	0.124	0.077	0.99	0.15	11.79	0.974
1-3	0.131	0.120	0.122	0.081	1.00	0.14	11.78	0.974
1-4	0.127	0.107	0.109	0.084	1.00	0.13	11.74	0.971
1-5	0.121	0.100	0.102	0.086	1.01	0.13	11.82	0.972
1-6	0.056	0.037	0.041	0.113	1.02	0.10	12.33	0.976
1-7	0.071	0.053	0.057	0.110	1.03	0.10	12.41	0.976
1-8	0.074	0.056	0.060	0.106	1.02	0.10	12.51	0.975
1-9	0.076	0.068	0.071	0.097	1.01	0.11	12.56	0.979
1-10	0.091	0.082	0.085	0.093	1.01	0.12	12.66	0.979
1-11	0.028	0.032	0.035	0.117	1.02	0.09	13.13	0.985
1-12	0.012	0.046	0.049	0.128	1.02	0.08	13.07	0.983
1-13	0.020	0.056	0.058	0.138	1.04	0.07	12.99	0.977
1-14	0.027	0.058	0.061	0.143	1.05	0.07	12.89	0.968
1-15	0.034	0.077	0.079	0.147	1.04	0.06	12.76	0.971
1-16	0.047	0.124	0.113	0.134	1.05	0.03	13.14	0.916
1-17	0.037	0.177	0.179	0.180	1.04	0.04	13.22	0.944
1-18	0.018	0.152	0.153	0.167	1.03	0.05	13.20	0.981
1-19	0.017	0.129	0.130	0.155	1.02	0.06	13.22	0.988
1-20	0.029	0.089	0.090	0.140	1.00	0.07	13.19	0.985
1-21	0.012	0.142	0.142	0.155	0.99	0.07	13.15	0.964
1-22	0.033	0.106	0.107	0.118	1.00	0.05	13.19	0.977

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
1-1	0.970	0.040	0.890	0.880	1.021	0.640	0.603	0.064
1-2	0.972	0.037	0.899	0.889	0.936	0.618	0.579	0.062
1-3	0.971	0.038	0.898	0.888	0.957	0.606	0.567	0.063
1-4	0.968	0.041	0.893	0.882	0.978	0.601	0.561	0.061
1-5	0.970	0.040	0.900	0.890	0.946	0.599	0.559	0.059
1-6	0.974	0.033	0.934	0.927	0.686	0.631	0.594	0.054
1-7	0.974	0.034	0.930	0.923	0.744	0.655	0.620	0.056
1-8	0.973	0.035	0.926	0.919	0.772	0.641	0.605	0.057
1-9	0.977	0.032	0.929	0.922	0.755	0.675	0.643	0.055
1-10	0.977	0.032	0.925	0.917	0.813	0.671	0.638	0.057
1-11	0.983	0.024	0.954	0.949	0.553	0.742	0.716	0.040
1-12	0.981	0.024	0.957	0.953	0.501	0.734	0.708	0.040
1-13	0.975	0.029	0.960	0.956	0.485	0.731	0.704	0.042
1-14	0.965	0.035	0.956	0.952	0.515	0.695	0.664	0.046
1-15	0.968	0.031	0.962	0.958	0.441	0.726	0.699	0.039
1-16	0.907	0.039	0.940	0.934	0.418	0.849	0.834	0.022
1-17	0.938	0.032	0.959	0.955	0.353	0.813	0.795	0.024
1-18	0.979	0.020	0.980	0.978	0.259	0.805	0.786	0.024
1-19	0.987	0.016	0.975	0.972	0.298	0.804	0.785	0.024
1-20	0.983	0.019	0.959	0.954	0.427	0.786	0.765	0.026
1-21	0.961	0.025	0.935	0.928	0.450	0.643	0.607	0.025
1-22	0.975	0.016	0.961	0.957	0.283	0.740	0.714	0.018

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
1-1	0.531	0.484	0.073	4.84	5.03	5.62	6.36	7.47
1-2	0.513	0.464	0.070	4.94	5.10	5.77	6.46	7.64
1-3	0.499	0.449	0.071	4.84	4.93	5.63	6.29	7.55
1-4	0.493	0.443	0.068	4.90	4.92	5.61	6.28	7.49
1-5	0.492	0.441	0.067	4.90	4.93	5.67	6.38	7.62
1-6	0.510	0.462	0.062	5.76	5.94	6.79	7.58	8.77
1-7	0.531	0.484	0.065	5.54	5.70	6.56	7.38	8.63
1-8	0.520	0.472	0.066	5.61	5.80	6.61	7.38	8.63
1-9	0.555	0.510	0.065	5.65	5.84	6.71	7.49	8.74
1-10	0.552	0.508	0.066	5.51	5.70	6.57	7.37	8.65
1-11	0.620	0.582	0.049	6.49	6.91	7.83	8.65	9.79
1-12	0.609	0.570	0.048	6.79	7.21	8.12	8.86	9.97
1-13	0.597	0.556	0.051	6.56	7.02	7.97	8.77	9.95
1-14	0.558	0.514	0.055	6.37	6.80	7.78	8.64	9.85
1-15	0.591	0.550	0.048	6.69	7.12	8.12	8.92	10.00
1-16	0.709	0.680	0.030	7.89	8.80	9.95	10.81	11.75
1-17	0.673	0.640	0.032	8.03	8.82	9.79	10.57	11.55
1-18	0.675	0.643	0.031	8.04	8.71	9.60	10.24	11.09
1-19	0.687	0.656	0.030	8.09	8.69	9.48	10.04	10.86
1-20	0.676	0.644	0.032	7.70	8.22	8.95	9.55	10.44
1-21	0.551	0.506	0.028	8.77	9.07	9.60	10.02	10.72
1-22	0.640	0.604	0.021	9.40	9.79	10.31	10.68	11.31

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
1-1	8.44	9.34	10.23	11.18	11.78	12.46	12.94	30.6%
1-2	8.56	9.33	10.11	11.03	11.59	12.27	12.73	28.5%
1-3	8.51	9.33	10.12	11.05	11.59	12.21	12.68	27.6%
1-4	8.46	9.29	10.08	11.07	11.62	12.23	12.56	25.8%
1-5	8.56	9.38	10.17	11.19	11.70	12.27	12.51	25.2%
1-6	9.65	10.34	11.02	11.77	12.11	12.44	12.58	22.4%
1-7	9.55	10.31	11.03	11.84	12.21	12.54	12.69	24.4%
1-8	9.58	10.39	11.10	11.92	12.30	12.67	12.85	24.4%
1-9	9.62	10.37	11.08	11.88	12.32	12.79	13.03	26.5%
1-10	9.57	10.33	11.07	11.94	12.43	12.93	13.26	27.2%
1-11	10.59	11.21	11.80	12.45	12.80	13.17	13.37	23.4%
1-12	10.72	11.34	11.90	12.48	12.75	13.03	13.20	22.0%
1-13	10.76	11.39	11.95	12.44	12.61	12.78	12.88	21.6%
1-14	10.74	11.42	11.95	12.38	12.47	12.57	12.64	20.9%
1-15	10.80	11.39	11.87	12.26	12.34	12.45	12.51	20.0%
1-16	12.22	12.37	12.39	12.48	12.47	12.54	12.61	16.1%
1-17	12.11	12.40	12.53	12.64	12.63	12.70	12.77	15.8%
1-18	11.67	12.09	12.42	12.72	12.80	12.91	12.98	16.4%
1-19	11.43	11.89	12.32	12.75	12.92	13.10	13.23	17.4%
1-20	11.06	11.58	12.07	12.62	12.94	13.26	13.44	18.8%
1-21	11.26	11.75	12.22	12.76	13.02	13.30	13.44	13.9%
1-22	11.76	12.13	12.51	12.88	13.01	13.17	13.26	12.3%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
1-1	34.9%	34.2%	31.7%	26.7%	24.0%	19.6%	17.2%	14.1%
1-2	33.2%	32.9%	31.4%	25.0%	22.5%	19.1%	17.6%	14.0%
1-3	33.0%	32.2%	31.0%	24.8%	21.9%	18.1%	16.1%	13.3%
1-4	31.8%	30.6%	29.1%	23.2%	20.8%	17.6%	15.8%	12.2%
1-5	31.0%	29.7%	28.6%	22.1%	20.8%	17.2%	15.3%	11.8%
1-6	27.1%	26.2%	23.3%	18.3%	16.1%	13.3%	11.6%	8.6%
1-7	28.4%	26.7%	24.1%	19.0%	16.9%	13.7%	12.0%	8.5%
1-8	28.8%	27.6%	25.1%	19.5%	17.3%	14.0%	12.4%	9.1%
1-9	30.8%	28.4%	26.1%	20.4%	18.3%	15.2%	13.4%	10.4%
1-10	31.5%	29.8%	27.1%	21.5%	18.8%	15.5%	13.9%	10.9%
1-11	24.8%	22.7%	20.2%	16.2%	14.6%	12.1%	10.9%	8.5%
1-12	23.1%	21.3%	19.3%	15.1%	13.4%	11.1%	9.6%	7.1%
1-13	22.8%	20.8%	18.4%	14.3%	12.4%	9.8%	7.8%	5.3%
1-14	22.7%	20.9%	18.6%	14.5%	12.3%	9.2%	6.7%	3.9%
1-15	20.8%	19.3%	16.9%	13.4%	11.3%	8.7%	6.6%	4.1%
1-16	14.4%	12.1%	9.7%	6.4%	4.1%	2.4%	2.1%	2.0%
1-17	15.0%	13.2%	11.1%	8.0%	6.0%	4.0%	2.8%	2.2%
1-18	15.7%	13.7%	12.0%	9.9%	8.7%	6.9%	5.2%	3.5%
1-19	16.5%	14.7%	13.4%	11.2%	10.2%	8.6%	7.4%	5.5%
1-20	18.1%	16.6%	15.2%	12.6%	11.8%	10.1%	9.2%	7.3%
1-21	13.4%	13.3%	13.1%	11.9%	11.4%	9.9%	8.8%	6.8%
1-22	11.5%	10.8%	10.5%	9.2%	8.8%	7.6%	6.5%	4.9%

Case No.	Longitudinal							
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
1-1	11.3%	8.7%	6.5%	58.3	59.8	54.1	59.5	68.1
1-2	11.3%	8.5%	6.4%	44.2	47.6	51.4	58.4	67.0
1-3	10.8%	8.2%	5.6%	59.7	61.0	53.0	56.5	65.9
1-4	9.9%	7.4%	5.7%	43.8	45.5	46.5	51.4	62.1
1-5	9.6%	7.0%	5.9%	41.3	44.9	44.2	48.1	59.0
1-6	6.2%	4.1%	3.6%	57.7	50.9	55.4	63.4	66.8
1-7	6.1%	4.0%	3.2%	76.3	51.3	50.1	55.7	65.6
1-8	6.6%	4.6%	3.5%	45.5	50.4	53.5	55.2	63.4
1-9	7.9%	5.6%	4.1%	62.7	67.2	58.1	58.8	67.8
1-10	8.5%	6.5%	4.6%	60.5	58.8	57.9	64.9	79.7
1-11	6.4%	4.5%	3.4%	72.1	87.9	65.0	72.5	82.4
1-12	5.2%	3.7%	2.8%	61.2	63.2	63.5	72.2	80.3
1-13	3.8%	2.8%	2.3%	54.2	55.1	58.7	61.8	70.8
1-14	2.7%	2.2%	2.2%	52.8	50.8	54.3	58.6	83.6
1-15	3.0%	2.4%	2.5%	53.3	53.8	55.8	57.4	66.1
1-16	2.0%	2.2%	2.2%	77.0	102.5	126.0	186.9	210.2
1-17	2.1%	2.2%	2.3%	74.7	80.8	88.5	112.6	145.1
1-18	2.8%	2.3%	2.2%	104.8	136.8	71.8	75.9	89.3
1-19	4.2%	3.2%	2.6%	77.6	72.3	79.8	74.8	81.2
1-20	5.7%	4.1%	3.1%	72.7	78.7	72.0	69.2	83.5
1-21	5.2%	3.8%	3.0%	97.3	95.0	82.8	91.6	93.7
1-22	3.8%	3.0%	2.7%	98.1	95.2	89.9	93.7	97.7

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
1-1	74.5	80.9	78.6	89.2	103.4	105.8	85.7	32.1
1-2	69.6	79.2	76.7	86.8	100.5	101.5	89.5	34.4
1-3	65.5	74.1	73.2	78.7	88.1	93.7	79.0	35.9
1-4	64.7	74.1	76.0	82.3	90.5	97.2	89.7	28.3
1-5	63.3	75.1	74.2	88.2	105.1	113.9	111.4	29.2
1-6	67.8	73.8	73.4	83.1	94.4	90.9	81.2	28.8
1-7	69.4	83.6	86.7	101.0	108.9	114.3	91.5	30.7
1-8	66.6	80.6	81.3	88.2	105.1	102.2	95.8	32.6
1-9	65.5	74.4	85.6	96.7	105.7	98.5	98.5	28.9
1-10	74.4	84.9	86.5	108.2	120.8	124.5	105.3	31.6
1-11	86.5	104.6	108.4	115.6	131.1	133.3	98.2	33.0
1-12	75.4	89.3	90.7	103.8	110.3	99.4	90.7	32.7
1-13	68.6	85.1	97.8	106.7	116.4	109.9	105.7	29.8
1-14	98.4	114.2	122.8	133.3	130.9	122.5	245.9	28.5
1-15	67.8	98.5	105.5	118.1	117.4	100.8	89.8	24.6
1-16	140.2	154.5	115.0	115.4	110.6	104.2	109.7	31.7
1-17	139.8	160.4	133.8	126.0	123.3	109.0	98.8	33.5
1-18	94.8	125.9	131.0	200.7	255.9	244.8	270.1	30.2
1-19	74.8	96.8	101.2	110.1	114.6	110.6	125.0	33.0
1-20	82.1	93.4	93.4	103.8	104.4	102.8	97.8	31.8
1-21	89.0	97.5	92.0	101.8	99.0	91.6	83.4	32.6
1-22	91.8	104.9	101.8	103.8	111.1	126.1	150.7	33.7

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
1-1	12.5	0.179	0.149	0.113	0.066	0.100	0.064	0.068
1-2	16.9	0.181	0.151	0.120	0.074	0.079	0.054	0.053
1-3	13.6	0.181	0.157	0.123	0.081	0.102	0.064	0.075
1-4	18.5	0.191	0.165	0.120	0.077	0.087	0.058	0.071
1-5	14.9	0.204	0.145	0.127	0.063	0.092	0.060	0.079
1-6	16.3	0.152	0.120	0.085	0.054	0.071	0.045	0.066
1-7	13.1	0.156	0.118	0.104	0.053	0.087	0.047	0.077
1-8	16.8	0.165	0.129	0.091	0.068	0.063	0.037	0.051
1-9	14.0	0.158	0.120	0.084	0.062	0.071	0.048	0.049
1-10	16.6	0.153	0.115	0.104	0.080	0.072	0.059	0.051
1-11	15.8	0.144	0.101	0.087	0.055	0.065	0.043	0.048
1-12	18.7	0.146	0.109	0.068	0.042	0.049	0.044	0.066
1-13	18.4	0.139	0.095	0.059	0.053	0.048	0.038	0.066
1-14	28.9	0.136	0.110	0.085	0.069	0.064	0.045	0.066
1-15	20.7	0.124	0.094	0.084	0.047	0.064	0.043	0.068
1-16	38.7	0.143	0.085	0.064	0.048	0.070	0.050	0.083
1-17	33.9	0.113	0.074	0.063	0.051	0.069	0.053	0.085
1-18	26.9	0.130	0.092	0.054	0.056	0.056	0.050	0.055
1-19	21.2	0.125	0.079	0.068	0.034	0.053	0.035	0.054
1-20	20.6	0.139	0.094	0.090	0.048	0.050	0.039	0.065
1-21	20.2	0.137	0.114	0.081	0.058	0.063	0.050	0.047
1-22	21.6	0.139	0.088	0.071	0.055	0.060	0.035	0.056

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
1-1	0.056	0.038	0.043	0.062	0.195	0.101	0.096	0.072
1-2	0.048	0.054	0.069	0.054	0.174	0.126	0.082	0.058
1-3	0.054	0.055	0.057	0.074	0.187	0.104	0.101	0.062
1-4	0.070	0.048	0.072	0.070	0.175	0.122	0.103	0.058
1-5	0.057	0.047	0.069	0.059	0.184	0.126	0.091	0.074
1-6	0.059	0.050	0.063	0.060	0.169	0.093	0.075	0.054
1-7	0.056	0.057	0.073	0.070	0.161	0.103	0.071	0.054
1-8	0.051	0.038	0.064	0.066	0.155	0.094	0.085	0.057
1-9	0.050	0.038	0.047	0.063	0.168	0.101	0.069	0.054
1-10	0.039	0.028	0.061	0.074	0.163	0.106	0.069	0.057
1-11	0.048	0.037	0.056	0.043	0.164	0.087	0.064	0.036
1-12	0.058	0.038	0.062	0.055	0.159	0.076	0.081	0.025
1-13	0.065	0.045	0.068	0.068	0.139	0.083	0.066	0.048
1-14	0.071	0.047	0.083	0.073	0.155	0.086	0.080	0.055
1-15	0.063	0.060	0.072	0.075	0.155	0.086	0.060	0.045
1-16	0.080	0.067	0.081	0.071	0.129	0.067	0.071	0.059
1-17	0.067	0.055	0.083	0.065	0.149	0.069	0.071	0.057
1-18	0.045	0.049	0.061	0.054	0.144	0.074	0.071	0.038
1-19	0.062	0.045	0.064	0.059	0.155	0.090	0.073	0.044
1-20	0.035	0.049	0.049	0.051	0.152	0.088	0.065	0.040
1-21	0.047	0.039	0.052	0.056	0.174	0.092	0.068	0.045
1-22	0.042	0.032	0.043	0.038	0.175	0.104	0.085	0.051

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
1-1	0.061	0.031	0.038	0.033	0.045	0.045	0.184	0.095
1-2	0.052	0.036	0.037	0.043	0.044	0.041	0.183	0.103
1-3	0.083	0.056	0.051	0.072	0.050	0.069	0.199	0.080
1-4	0.052	0.062	0.073	0.055	0.051	0.057	0.182	0.100
1-5	0.070	0.062	0.056	0.065	0.072	0.066	0.191	0.085
1-6	0.062	0.039	0.042	0.063	0.064	0.055	0.171	0.077
1-7	0.056	0.043	0.042	0.050	0.053	0.079	0.183	0.081
1-8	0.065	0.063	0.057	0.053	0.052	0.070	0.171	0.104
1-9	0.053	0.042	0.038	0.037	0.040	0.050	0.185	0.093
1-10	0.067	0.053	0.039	0.043	0.034	0.044	0.186	0.104
1-11	0.035	0.036	0.033	0.037	0.053	0.046	0.168	0.070
1-12	0.041	0.034	0.043	0.045	0.055	0.058	0.189	0.084
1-13	0.052	0.034	0.042	0.050	0.049	0.078	0.180	0.088
1-14	0.050	0.046	0.047	0.057	0.070	0.085	0.172	0.098
1-15	0.041	0.042	0.049	0.053	0.068	0.066	0.170	0.068
1-16	0.073	0.049	0.062	0.062	0.083	0.071	0.177	0.076
1-17	0.064	0.041	0.063	0.073	0.062	0.078	0.173	0.067
1-18	0.052	0.041	0.048	0.064	0.055	0.061	0.181	0.081
1-19	0.053	0.046	0.030	0.042	0.040	0.062	0.186	0.091
1-20	0.039	0.018	0.044	0.044	0.055	0.052	0.181	0.093
1-21	0.061	0.033	0.054	0.036	0.040	0.044	0.197	0.085
1-22	0.063	0.049	0.033	0.051	0.054	0.067	0.215	0.109

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
1-1	0.085	0.062	0.038	0.041	0.028	0.042	0.034	0.161
1-2	0.074	0.066	0.067	0.036	0.044	0.050	0.032	0.158
1-3	0.069	0.064	0.063	0.052	0.041	0.053	0.048	0.160
1-4	0.080	0.064	0.047	0.055	0.040	0.045	0.048	0.171
1-5	0.083	0.064	0.056	0.050	0.051	0.041	0.038	0.141
1-6	0.065	0.050	0.037	0.045	0.040	0.050	0.033	0.162
1-7	0.071	0.069	0.068	0.052	0.050	0.052	0.061	0.163
1-8	0.080	0.043	0.051	0.045	0.043	0.057	0.065	0.156
1-9	0.079	0.042	0.048	0.043	0.027	0.025	0.045	0.163
1-10	0.068	0.064	0.051	0.035	0.036	0.026	0.041	0.157
1-11	0.050	0.039	0.036	0.013	0.025	0.048	0.042	0.166
1-12	0.065	0.053	0.064	0.050	0.036	0.044	0.046	0.167
1-13	0.055	0.049	0.038	0.040	0.030	0.050	0.066	0.177
1-14	0.064	0.053	0.039	0.047	0.036	0.061	0.064	0.169
1-15	0.071	0.053	0.044	0.055	0.053	0.074	0.063	0.165
1-16	0.073	0.056	0.068	0.059	0.051	0.069	0.058	0.170
1-17	0.060	0.046	0.087	0.075	0.062	0.067	0.052	0.175
1-18	0.066	0.050	0.041	0.048	0.045	0.054	0.046	0.187
1-19	0.067	0.058	0.053	0.041	0.045	0.062	0.053	0.181
1-20	0.070	0.048	0.050	0.048	0.055	0.039	0.061	0.157
1-21	0.081	0.057	0.059	0.046	0.032	0.040	0.052	0.178
1-22	0.092	0.070	0.064	0.044	0.040	0.049	0.053	0.208

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
1-1	0.105	0.080	0.046	0.050	0.038	0.035	0.042	0.162
1-2	0.096	0.058	0.050	0.045	0.043	0.040	0.040	0.147
1-3	0.098	0.084	0.059	0.053	0.036	0.043	0.056	0.162
1-4	0.105	0.078	0.065	0.069	0.045	0.042	0.049	0.143
1-5	0.082	0.058	0.067	0.055	0.039	0.044	0.039	0.140
1-6	0.086	0.062	0.057	0.044	0.029	0.049	0.045	0.156
1-7	0.094	0.071	0.064	0.052	0.036	0.042	0.062	0.142
1-8	0.093	0.056	0.054	0.033	0.025	0.037	0.035	0.156
1-9	0.097	0.057	0.051	0.042	0.039	0.044	0.045	0.149
1-10	0.088	0.071	0.055	0.040	0.037	0.051	0.042	0.153
1-11	0.085	0.052	0.036	0.051	0.033	0.044	0.033	0.161
1-12	0.084	0.067	0.061	0.050	0.031	0.046	0.044	0.185
1-13	0.081	0.066	0.061	0.043	0.036	0.042	0.068	0.157
1-14	0.092	0.055	0.054	0.054	0.042	0.051	0.070	0.176
1-15	0.088	0.085	0.057	0.046	0.052	0.056	0.055	0.168
1-16	0.079	0.053	0.057	0.070	0.065	0.077	0.072	0.173
1-17	0.082	0.063	0.064	0.068	0.051	0.056	0.064	0.187
1-18	0.095	0.073	0.058	0.053	0.043	0.070	0.064	0.177
1-19	0.102	0.081	0.065	0.055	0.056	0.060	0.047	0.178
1-20	0.094	0.077	0.050	0.061	0.047	0.046	0.062	0.161
1-21	0.099	0.084	0.078	0.065	0.038	0.045	0.055	0.174
1-22	0.116	0.098	0.075	0.061	0.046	0.050	0.065	0.214

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
1-1	0.092	0.043	0.053	0.034	0.034	0.037	0.186	0.091
1-2	0.082	0.054	0.049	0.040	0.033	0.033	0.191	0.099
1-3	0.088	0.059	0.047	0.049	0.042	0.030	0.169	0.096
1-4	0.114	0.080	0.068	0.057	0.052	0.034	0.182	0.088
1-5	0.087	0.049	0.053	0.044	0.029	0.042	0.190	0.097
1-6	0.099	0.051	0.039	0.051	0.045	0.035	0.192	0.099
1-7	0.093	0.051	0.052	0.063	0.036	0.051	0.202	0.102
1-8	0.088	0.063	0.035	0.048	0.030	0.033	0.187	0.094
1-9	0.090	0.052	0.039	0.048	0.038	0.044	0.183	0.087
1-10	0.089	0.054	0.054	0.032	0.038	0.043	0.183	0.103
1-11	0.099	0.048	0.047	0.039	0.021	0.046	0.221	0.110
1-12	0.097	0.044	0.061	0.053	0.064	0.052	0.210	0.097
1-13	0.083	0.053	0.061	0.048	0.042	0.056	0.207	0.115
1-14	0.114	0.066	0.042	0.045	0.046	0.073	0.221	0.102
1-15	0.099	0.080	0.025	0.036	0.044	0.043	0.217	0.103
1-16	0.070	0.048	0.092	0.081	0.090	0.083	0.179	0.129
1-17	0.103	0.063	0.066	0.072	0.063	0.077	0.201	0.115
1-18	0.122	0.070	0.061	0.054	0.070	0.053	0.231	0.134
1-19	0.091	0.060	0.041	0.040	0.044	0.042	0.222	0.119
1-20	0.120	0.063	0.068	0.053	0.048	0.040	0.217	0.109
1-21	0.112	0.085	0.058	0.052	0.063	0.069	0.217	0.130
1-22	0.127	0.074	0.054	0.066	0.047	0.063	0.237	0.109

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
1-1	0.069	0.047	0.039	0.038	0.156	0.087	0.054	0.042
1-2	0.055	0.046	0.041	0.030	0.156	0.080	0.086	0.058
1-3	0.072	0.043	0.042	0.013	0.168	0.086	0.064	0.051
1-4	0.077	0.051	0.052	0.032	0.159	0.092	0.065	0.049
1-5	0.064	0.044	0.042	0.023	0.158	0.084	0.068	0.057
1-6	0.073	0.034	0.035	0.039	0.172	0.089	0.066	0.038
1-7	0.066	0.045	0.034	0.034	0.182	0.095	0.067	0.020
1-8	0.058	0.047	0.040	0.038	0.179	0.073	0.076	0.041
1-9	0.053	0.043	0.050	0.047	0.162	0.076	0.067	0.047
1-10	0.064	0.039	0.038	0.021	0.190	0.099	0.067	0.046
1-11	0.072	0.048	0.041	0.023	0.167	0.100	0.067	0.047
1-12	0.062	0.041	0.045	0.045	0.195	0.100	0.075	0.046
1-13	0.069	0.035	0.036	0.049	0.184	0.086	0.047	0.054
1-14	0.053	0.020	0.038	0.043	0.191	0.072	0.052	0.061
1-15	0.054	0.036	0.046	0.040	0.176	0.086	0.061	0.049
1-16	0.129	0.087	0.116	0.107	0.234	0.172	0.171	0.146
1-17	0.097	0.063	0.068	0.072	0.219	0.137	0.113	0.100
1-18	0.062	0.019	0.064	0.070	0.215	0.115	0.083	0.053
1-19	0.071	0.057	0.049	0.041	0.202	0.109	0.076	0.049
1-20	0.076	0.059	0.057	0.030	0.197	0.118	0.072	0.054
1-21	0.085	0.061	0.050	0.045	0.204	0.107	0.090	0.058
1-22	0.081	0.057	0.052	0.038	0.214	0.105	0.060	0.060

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
1-1	0.022	0.170	0.094	0.066	0.015	0.235	0.099	0.023
1-2	0.036	0.167	0.085	0.075	0.039	0.229	0.111	0.039
1-3	0.043	0.174	0.079	0.075	0.022	0.225	0.110	0.030
1-4	0.042	0.174	0.085	0.065	0.046	0.232	0.115	0.049
1-5	0.050	0.163	0.078	0.064	0.019	0.217	0.102	0.026
1-6	0.026	0.167	0.070	0.056	0.028	0.218	0.064	0.052
1-7	0.033	0.177	0.082	0.042	0.035	0.225	0.066	0.055
1-8	0.035	0.180	0.089	0.047	0.033	0.220	0.107	0.044
1-9	0.051	0.185	0.097	0.054	0.036	0.231	0.086	0.044
1-10	0.026	0.174	0.085	0.059	0.033	0.229	0.093	0.032
1-11	0.024	0.181	0.096	0.046	0.013	0.275	0.090	0.027
1-12	0.048	0.196	0.107	0.051	0.047	0.226	0.113	0.061
1-13	0.042	0.188	0.083	0.045	0.045	0.238	0.092	0.095
1-14	0.071	0.143	0.055	0.043	0.073	0.216	0.130	0.123
1-15	0.058	0.181	0.054	0.074	0.078	0.223	0.132	0.117
1-16	0.141	0.311	0.166	0.167	0.144	0.295	0.192	0.187
1-17	0.113	0.272	0.142	0.132	0.132	0.288	0.177	0.173
1-18	0.072	0.210	0.089	0.083	0.074	0.258	0.136	0.125
1-19	0.064	0.199	0.092	0.067	0.044	0.255	0.112	0.068
1-20	0.057	0.199	0.096	0.065	0.045	0.256	0.105	0.072
1-21	0.042	0.192	0.093	0.072	0.043	0.252	0.094	0.046
1-22	0.054	0.182	0.089	0.066	0.053	0.275	0.137	0.094

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
1-1	0.186	0.051	0.051	3.13E-03	8.37E-03	8.09E-06	4.03E-08	7.44E-08
1-2	0.199	0.032	0.035	2.05E-03	8.61E-03	2.77E-06	3.67E-08	7.48E-08
1-3	0.183	0.019	0.046	2.82E-03	8.36E-03	9.04E-05	3.08E-08	6.47E-08
1-4	0.194	0.074	0.088	4.28E-03	1.69E-02	1.19E-05	2.47E-08	4.95E-08
1-5	0.190	0.059	0.076	2.19E-03	7.15E-03	7.60E-07	2.34E-08	4.89E-08
1-6	0.195	0.060	0.109	3.60E-03	1.26E-02	3.71E-05	1.82E-08	4.41E-08
1-7	0.172	0.077	0.123	1.01E-03	6.43E-03	1.79E-06	1.93E-08	4.45E-08
1-8	0.203	0.065	0.127	3.69E-03	2.36E-02	5.57E-07	2.21E-08	5.20E-08
1-9	0.202	0.062	0.070	4.34E-03	2.17E-02	1.79E-06	2.87E-08	6.45E-08
1-10	0.196	0.050	0.063	3.42E-03	1.53E-02	3.13E-06	3.16E-08	7.03E-08
1-11	0.217	0.068	0.093	2.97E-03	2.14E-02	6.55E-06	1.98E-08	4.46E-08
1-12	0.217	0.099	0.165	1.61E-03	8.05E-03	8.32E-06	1.65E-08	3.95E-08
1-13	0.245	0.144	0.190	5.48E-04	1.69E-03	4.09E-06	1.28E-08	3.37E-08
1-14	0.252	0.194	0.231	1.73E-04	5.99E-04	3.57E-06	1.16E-08	3.09E-08
1-15	0.260	0.157	0.232	4.19E-04	1.84E-03	2.16E-07	9.69E-09	2.67E-08
1-16	0.258	0.205	0.237	5.96E-04	4.65E-03	8.91E-07	3.31E-09	1.15E-08
1-17	0.273	0.201	0.211	2.19E-03	1.30E-02	1.24E-09	4.24E-09	1.36E-08
1-18	0.262	0.165	0.208	2.19E-04	1.64E-03	4.24E-07	5.57E-09	1.55E-08
1-19	0.226	0.122	0.146	5.26E-04	2.44E-03	3.60E-05	7.93E-09	1.89E-08
1-20	0.197	0.075	0.129	9.05E-04	3.36E-03	4.27E-07	1.07E-08	2.19E-08
1-21	0.208	0.075	0.143	2.82E-04	2.18E-03	8.20E-07	7.20E-09	1.33E-08
1-22	0.263	0.115	0.164	3.98E-04	1.38E-03	2.00E-06	3.80E-09	7.90E-09

Case No.	ck
	$\Delta_{\min,FFT}$
1-1	2.21E-09
1-2	1.92E-09
1-3	1.11E-09
1-4	1.18E-09
1-5	1.36E-09
1-6	1.78E-10
1-7	1.17E-10
1-8	1.80E-10
1-9	3.75E-10
1-10	5.89E-10
1-11	1.99E-10
1-12	8.67E-11
1-13	3.41E-11
1-14	2.69E-11
1-15	3.83E-11
1-16	1.76E-11
1-17	2.28E-11
1-18	3.03E-11
1-19	6.01E-11
1-20	1.35E-10
1-21	1.20E-10
1-22	7.53E-11

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
1-23	None	None	None	10	0	13.04	1.02
1-24	None	None	None	5	0	12.87	1.01
1-25	None	None	None	0	0	12.74	1.00
2-1	None	80 cm	None	0	0	13.16	1.03
2-2	None	80 cm	None	5	0	13.20	1.04
2-3	None	80 cm	None	10	0	13.29	1.04
2-4	None	80 cm	None	15	0	13.38	1.05
2-5	None	80 cm	None	20	0	13.45	1.06
2-6	None	80 cm	None	20	5	13.35	1.05
2-7	None	80 cm	None	15	5	13.29	1.04
2-8	None	80 cm	None	10	5	13.23	1.04
2-9	None	80 cm	None	5	5	13.03	1.02
2-10	None	80 cm	None	0	5	13.02	1.02
2-11	None	80 cm	None	0	10	12.73	1.00
2-12	None	80 cm	None	5	10	12.82	1.01
2-13	None	80 cm	None	10	10	12.98	1.02
2-14	None	80 cm	None	15	10	13.05	1.02
2-15	None	80 cm	None	20	10	13.12	1.03
2-16	None	80 cm	None	20	15	12.74	1.00
2-17	None	80 cm	None	15	15	12.67	0.99
2-18	None	80 cm	None	10	15	12.61	0.99
2-19	None	80 cm	None	5	15	12.51	0.98

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
1-23	0.16	0.11	-0.56	5.21	9.8%	2	2	C
1-24	0.13	0.02	-0.69	7.23	8.1%	1	2	C
1-25	0.09	0.00	-0.88	9.66	7.0%	0	1	D
2-1	0.20	0.30	-0.40	2.76	10.7%	3	3	B
2-2	0.21	0.46	-0.38	2.38	11.8%	3	3	B
2-3	0.23	0.62	-0.37	2.19	12.7%	4	3	B
2-4	0.24	0.78	-0.36	1.96	13.6%	4	3	B
2-5	0.27	1.17	-0.34	1.66	14.7%	4	4	B
2-6	0.33	2.33	-0.44	3.20	18.2%	4	4	A
2-7	0.32	2.11	-0.47	3.74	17.4%	4	4	A
2-8	0.30	1.84	-0.49	3.94	16.9%	4	4	A
2-9	0.30	1.77	-0.50	4.22	16.2%	4	4	A
2-10	0.29	1.60	-0.53	4.63	15.8%	4	4	A
2-11	0.40	4.03	-0.49	3.78	21.0%	4	5	A
2-12	0.40	4.17	-0.50	3.91	21.0%	4	5	A
2-13	0.41	4.34	-0.52	4.38	22.3%	4	5	A
2-14	0.40	4.10	-0.49	3.89	21.4%	4	5	A
2-15	0.41	4.23	-0.45	3.19	22.7%	4	5	A
2-16	0.49	6.26	-0.46	3.25	27.7%	4	5	A
2-17	0.50	6.46	-0.46	3.23	27.1%	4	5	A
2-18	0.48	5.90	-0.43	2.83	26.1%	4	5	A
2-19	0.48	6.00	-0.45	3.03	25.1%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	Δ_α^{ISO}	Δ_{z0}^{ISO}	Δ_β^{ISO}
1-23	0.057	1.109	2.281	103.135	0.214	0.144	1.109	2.985
1-24	0.026	1.247	4.299	722.416	0.263	0.096	3.494	3.921
1-25	0.198	0.711	6.966	3217.869	0.281	0.118	0.827	7.763
2-1	0.032	0.003	1.103	8.188	0.388	0.066	0.003	0.903
2-2	0.128	0.531	1.000	6.920	0.328	0.021	0.531	0.810
2-3	0.042	1.080	0.561	1.192	0.569	0.095	1.080	0.784
2-4	0.014	0.223	0.505	0.960	0.539	0.158	0.223	0.720
2-5	0.132	0.172	0.423	0.663	0.502	0.151	0.172	0.067
2-6	0.370	1.332	0.835	2.203	0.381	0.027	0.067	0.376
2-7	0.316	1.111	0.972	2.739	0.408	0.013	0.155	0.479
2-8	0.256	0.844	1.030	2.935	0.424	0.058	0.262	0.523
2-9	0.237	0.769	1.102	3.219	0.448	0.072	0.292	0.577
2-10	0.195	0.598	1.199	3.627	0.462	0.104	0.598	0.649
2-11	0.658	3.030	1.044	2.780	0.286	0.047	0.612	0.291
2-12	0.675	3.170	1.064	2.905	0.284	0.058	0.668	0.303
2-13	0.700	3.340	1.184	3.383	0.241	0.074	0.736	0.380
2-14	0.664	3.100	1.044	2.885	0.272	0.051	0.640	0.291
2-15	0.699	3.234	0.873	2.185	0.229	0.073	0.693	0.183
2-16	1.045	5.261	0.913	2.249	0.057	0.291	1.505	0.208
2-17	1.077	5.462	0.912	2.227	0.079	0.312	1.585	0.207
2-18	1.001	4.896	0.807	1.826	0.111	0.264	1.358	0.141
2-19	0.995	5.001	0.856	2.033	0.146	0.260	1.401	0.172

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
1-23	0.299	0.122	2.905	0.313	0.021	0.023	0.013	0.026
1-24	0.421	0.114	3.822	0.433	0.023	0.023	0.031	0.029
1-25	0.302	0.118	7.763	0.302	0.040	0.038	0.031	0.029
2-1	0.490	0.118	0.798	0.518	0.015	0.020	0.008	0.012
2-2	0.440	0.036	0.710	0.471	0.029	0.035	0.014	0.019
2-3	0.397	0.035	0.686	0.430	0.009	0.014	0.025	0.027
2-4	0.355	0.095	0.625	0.390	0.017	0.020	0.036	0.037
2-5	0.542	0.223	0.537	0.341	0.036	0.037	0.020	0.028
2-6	0.431	0.014	0.321	0.454	0.066	0.067	0.015	0.018
2-7	0.456	0.053	0.420	0.478	0.052	0.054	0.002	0.014
2-8	0.471	0.096	0.462	0.492	0.041	0.044	0.011	0.019
2-9	0.493	0.109	0.514	0.513	0.035	0.039	0.017	0.023
2-10	0.505	0.140	0.583	0.525	0.028	0.032	0.024	0.029
2-11	0.447	0.194	0.472	0.370	0.093	0.095	0.006	0.015
2-12	0.446	0.206	0.486	0.369	0.095	0.098	0.007	0.014
2-13	0.413	0.224	0.573	0.330	0.098	0.100	0.009	0.013
2-14	0.436	0.198	0.472	0.358	0.095	0.097	0.006	0.014
2-15	0.404	0.223	0.349	0.320	0.105	0.106	0.015	0.016
2-16	0.270	0.472	0.377	0.168	0.145	0.145	0.049	0.037
2-17	0.287	0.495	0.377	0.187	0.147	0.147	0.051	0.038
2-18	0.312	0.441	0.301	0.216	0.142	0.141	0.047	0.037
2-19	0.340	0.437	0.336	0.247	0.138	0.138	0.042	0.031

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
1-23	0.012	0.092	0.076	0.073	1.02	0.04	13.16	0.981
1-24	0.033	0.121	0.080	0.070	1.02	0.03	13.12	0.958
1-25	0.031	0.212	0.110	0.064	1.02	0.02	13.02	0.843
2-1	0.016	0.097	0.098	0.117	0.99	0.06	12.85	0.976
2-2	0.009	0.080	0.081	0.109	0.99	0.06	12.84	0.973
2-3	0.018	0.146	0.146	0.157	0.98	0.07	12.88	0.968
2-4	0.029	0.129	0.129	0.150	0.98	0.07	12.89	0.960
2-5	0.051	0.102	0.102	0.140	0.98	0.08	12.88	0.951
2-6	0.009	0.053	0.054	0.125	0.99	0.09	12.80	0.978
2-7	0.010	0.069	0.070	0.133	1.00	0.08	12.92	0.984
2-8	0.021	0.081	0.082	0.137	1.00	0.08	12.92	0.988
2-9	0.027	0.091	0.091	0.143	1.00	0.07	12.81	0.987
2-10	0.036	0.100	0.101	0.147	1.01	0.07	12.85	0.990
2-11	0.035	0.024	0.028	0.116	1.01	0.09	12.38	0.977
2-12	0.037	0.024	0.028	0.115	1.01	0.09	12.47	0.982
2-13	0.040	0.030	0.034	0.112	1.01	0.09	12.64	0.982
2-14	0.037	0.024	0.028	0.112	1.01	0.09	12.68	0.982
2-15	0.047	0.025	0.028	0.101	1.00	0.11	12.57	0.980
2-16	0.089	0.085	0.087	0.083	1.00	0.13	12.09	0.973
2-17	0.091	0.082	0.084	0.086	1.01	0.13	12.04	0.973
2-18	0.086	0.071	0.073	0.086	1.00	0.13	11.92	0.969
2-19	0.081	0.062	0.064	0.091	1.01	0.12	11.94	0.975

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
1-23	0.979	0.014	0.976	0.974	0.199	0.815	0.796	0.015
1-24	0.954	0.017	0.968	0.965	0.191	0.896	0.885	0.010
1-25	0.827	0.025	0.862	0.849	0.304	0.930	0.923	0.008
2-1	0.974	0.017	0.955	0.950	0.316	0.805	0.786	0.013
2-2	0.970	0.020	0.947	0.942	0.367	0.769	0.746	0.015
2-3	0.964	0.023	0.938	0.932	0.424	0.690	0.659	0.019
2-4	0.956	0.027	0.925	0.918	0.488	0.700	0.670	0.020
2-5	0.947	0.032	0.910	0.901	0.587	0.663	0.629	0.022
2-6	0.975	0.025	0.939	0.933	0.547	0.764	0.740	0.027
2-7	0.983	0.020	0.954	0.949	0.467	0.784	0.763	0.025
2-8	0.986	0.018	0.962	0.958	0.409	0.778	0.756	0.026
2-9	0.986	0.018	0.964	0.960	0.391	0.793	0.773	0.024
2-10	0.989	0.015	0.972	0.969	0.335	0.812	0.793	0.023
2-11	0.975	0.029	0.936	0.930	0.623	0.693	0.663	0.041
2-12	0.981	0.026	0.944	0.938	0.594	0.718	0.690	0.039
2-13	0.980	0.027	0.944	0.938	0.608	0.742	0.716	0.040
2-14	0.981	0.026	0.944	0.938	0.600	0.738	0.712	0.037
2-15	0.978	0.027	0.935	0.929	0.647	0.698	0.668	0.040
2-16	0.971	0.036	0.912	0.903	0.828	0.664	0.631	0.055
2-17	0.971	0.036	0.911	0.902	0.837	0.653	0.619	0.055
2-18	0.966	0.038	0.904	0.894	0.839	0.631	0.594	0.053
2-19	0.972	0.034	0.917	0.909	0.778	0.649	0.614	0.050

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
1-23	0.705	0.675	0.019	9.56	10.03	10.59	10.97	11.62
1-24	0.784	0.762	0.014	9.86	10.49	11.13	11.53	12.12
1-25	0.862	0.849	0.011	10.16	11.19	11.95	12.23	12.52
2-1	0.724	0.697	0.015	8.92	9.46	9.95	10.31	10.83
2-2	0.688	0.657	0.017	8.71	9.14	9.70	10.05	10.67
2-3	0.605	0.565	0.022	8.59	8.95	9.51	9.86	10.58
2-4	0.615	0.576	0.022	8.51	8.77	9.35	9.72	10.46
2-5	0.581	0.539	0.025	8.23	8.42	8.99	9.36	10.17
2-6	0.661	0.627	0.032	7.21	7.59	8.40	8.91	9.85
2-7	0.677	0.645	0.031	7.30	7.75	8.60	9.14	10.09
2-8	0.668	0.635	0.031	7.40	7.88	8.78	9.31	10.24
2-9	0.680	0.649	0.030	7.39	7.81	8.69	9.28	10.22
2-10	0.697	0.666	0.029	7.43	7.97	8.86	9.44	10.36
2-11	0.577	0.535	0.048	6.27	6.44	7.33	7.97	9.12
2-12	0.602	0.562	0.046	6.18	6.44	7.40	8.07	9.19
2-13	0.622	0.584	0.049	6.20	6.46	7.40	8.11	9.28
2-14	0.623	0.585	0.044	6.31	6.60	7.53	8.23	9.38
2-15	0.589	0.547	0.047	6.27	6.53	7.41	8.08	9.20
2-16	0.552	0.508	0.063	5.53	5.57	6.40	7.05	8.28
2-17	0.541	0.495	0.063	5.45	5.48	6.32	6.98	8.19
2-18	0.524	0.477	0.060	5.61	5.65	6.44	7.02	8.14
2-19	0.540	0.494	0.057	5.49	5.58	6.42	7.06	8.24

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
1-23	12.04	12.36	12.61	12.84	12.90	12.98	13.04	11.5%
1-24	12.43	12.59	12.65	12.75	12.75	12.81	12.87	10.4%
1-25	12.59	12.59	12.57	12.64	12.62	12.68	12.74	10.5%
2-1	11.22	11.58	11.98	12.45	12.68	12.96	13.16	11.9%
2-2	11.11	11.50	11.88	12.40	12.66	12.98	13.20	12.8%
2-3	11.05	11.47	11.87	12.43	12.71	13.06	13.29	13.2%
2-4	10.95	11.36	11.81	12.42	12.74	13.15	13.38	13.9%
2-5	10.72	11.18	11.69	12.39	12.75	13.21	13.45	14.8%
2-6	10.44	10.95	11.46	12.16	12.55	13.05	13.35	19.1%
2-7	10.67	11.18	11.66	12.30	12.62	13.07	13.29	18.6%
2-8	10.80	11.25	11.72	12.32	12.62	13.01	13.23	18.2%
2-9	10.79	11.23	11.66	12.23	12.49	12.85	13.03	17.6%
2-10	10.91	11.32	11.73	12.27	12.51	12.84	13.02	17.5%
2-11	9.88	10.47	11.08	11.78	12.12	12.55	12.73	21.3%
2-12	9.91	10.51	11.12	11.82	12.19	12.65	12.82	21.7%
2-13	10.07	10.67	11.27	11.97	12.33	12.79	12.98	23.6%
2-14	10.11	10.69	11.30	12.02	12.39	12.87	13.05	22.2%
2-15	9.92	10.50	11.12	11.87	12.28	12.84	13.12	22.6%
2-16	9.12	9.83	10.55	11.38	11.88	12.51	12.74	26.9%
2-17	9.06	9.74	10.48	11.35	11.86	12.47	12.67	26.2%
2-18	8.95	9.66	10.40	11.26	11.75	12.38	12.61	25.1%
2-19	9.08	9.76	10.45	11.27	11.72	12.30	12.51	24.2%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
1-23	10.2%	9.5%	8.7%	7.7%	6.9%	5.6%	4.5%	3.3%
1-24	8.8%	7.7%	6.7%	5.2%	4.2%	2.9%	2.4%	2.1%
1-25	8.3%	5.7%	3.6%	2.3%	2.1%	2.0%	2.1%	2.1%
2-1	10.8%	10.1%	9.6%	8.6%	8.4%	7.6%	7.1%	5.9%
2-2	11.9%	11.1%	10.7%	9.8%	9.5%	8.6%	8.0%	6.8%
2-3	12.8%	12.4%	12.2%	10.9%	10.5%	9.4%	8.8%	7.1%
2-4	14.1%	13.5%	12.9%	11.3%	11.0%	10.1%	9.6%	7.8%
2-5	15.0%	14.6%	14.3%	12.7%	12.5%	11.2%	10.5%	8.5%
2-6	20.1%	18.4%	17.0%	14.1%	13.3%	11.6%	10.9%	9.0%
2-7	19.5%	17.5%	15.9%	13.0%	12.1%	10.7%	9.9%	8.2%
2-8	19.1%	17.0%	15.4%	12.8%	11.7%	10.4%	9.5%	7.6%
2-9	18.4%	16.5%	14.7%	11.8%	10.8%	9.5%	8.5%	7.0%
2-10	18.0%	16.0%	14.2%	11.3%	10.1%	8.9%	8.0%	6.4%
2-11	24.2%	22.6%	21.1%	16.5%	14.4%	12.2%	10.7%	8.4%
2-12	24.4%	21.9%	20.4%	16.1%	14.7%	12.4%	11.0%	8.8%
2-13	26.1%	23.1%	21.3%	16.7%	14.7%	12.5%	11.1%	8.8%
2-14	25.0%	22.4%	20.2%	16.0%	14.7%	12.6%	11.4%	9.1%
2-15	26.0%	24.2%	22.2%	18.2%	16.2%	13.7%	12.5%	10.5%
2-16	32.6%	30.1%	28.6%	21.8%	19.4%	16.3%	14.8%	12.0%
2-17	31.8%	29.6%	27.8%	21.9%	19.1%	16.1%	14.4%	11.7%
2-18	29.6%	28.2%	27.4%	21.9%	19.7%	16.6%	14.7%	11.9%
2-19	29.2%	26.9%	25.8%	20.5%	18.5%	15.7%	14.0%	11.3%

Case No.	Longitudinal							
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
1-23	2.6%	2.4%	2.4%	86.0	103.1	82.2	89.4	101.0
1-24	2.1%	2.2%	2.3%	161.5	148.4	142.1	145.4	153.4
1-25	2.2%	2.3%	2.4%	208.2	342.9	332.6	212.5	141.4
2-1	5.0%	4.0%	3.4%	92.9	103.3	87.1	85.9	88.0
2-2	5.6%	4.5%	3.7%	124.6	133.7	115.7	119.1	126.9
2-3	5.8%	4.6%	3.6%	130.9	100.4	105.0	102.2	107.5
2-4	6.5%	5.3%	4.1%	100.6	99.9	125.9	136.5	109.7
2-5	7.1%	5.8%	4.9%	84.3	83.4	84.8	86.2	90.7
2-6	7.5%	6.0%	5.0%	74.0	84.9	90.9	102.3	98.1
2-7	6.8%	5.2%	4.5%	76.9	93.3	104.6	102.1	102.6
2-8	6.2%	4.9%	3.9%	114.2	110.7	109.8	122.4	142.9
2-9	5.8%	4.5%	4.2%	79.0	91.2	102.9	120.1	136.8
2-10	5.4%	4.4%	3.8%	110.3	94.7	142.4	149.8	162.5
2-11	6.9%	5.5%	4.8%	60.8	62.2	70.3	81.2	93.3
2-12	6.9%	5.2%	4.7%	64.7	63.8	72.3	99.6	135.9
2-13	7.0%	5.4%	4.6%	82.6	90.9	95.6	105.8	118.0
2-14	7.4%	5.9%	5.3%	67.1	67.9	73.0	83.1	90.9
2-15	8.8%	7.0%	5.8%	69.1	78.0	90.5	103.4	109.0
2-16	10.1%	8.0%	7.1%	65.1	76.6	80.3	85.4	101.1
2-17	9.7%	7.7%	6.5%	61.4	58.8	72.1	94.8	107.8
2-18	9.6%	7.3%	6.5%	56.4	63.5	66.0	76.0	92.8
2-19	9.2%	7.0%	6.1%	62.3	69.2	68.0	80.2	103.4

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
1-23	99.0	111.4	113.4	136.8	136.5	123.0	193.8	32.7
1-24	134.8	139.9	125.8	126.5	124.1	110.9	112.8	32.2
1-25	121.5	133.3	121.5	119.1	120.3	105.1	131.9	33.3
2-1	88.5	99.1	100.0	111.0	119.3	118.4	96.4	36.2
2-2	112.3	124.3	119.4	137.6	177.4	189.8	137.6	40.8
2-3	103.5	111.3	107.7	116.9	125.4	142.2	101.2	40.4
2-4	103.5	123.0	113.3	110.5	123.0	129.6	89.6	38.9
2-5	89.9	107.8	109.1	101.9	109.8	109.4	105.7	38.4
2-6	91.2	100.0	96.5	106.0	120.7	122.9	96.2	35.9
2-7	104.8	118.8	109.2	111.9	122.7	118.5	141.1	37.8
2-8	130.6	132.1	130.5	142.0	145.1	137.1	109.0	39.1
2-9	137.8	145.4	130.7	124.5	134.9	129.9	100.3	38.0
2-10	124.9	144.0	130.4	117.9	134.7	141.6	128.3	38.7
2-11	88.1	101.4	111.2	128.8	140.4	125.5	97.4	32.5
2-12	109.3	125.3	117.2	143.0	137.2	202.4	121.3	34.9
2-13	118.5	137.7	114.0	125.3	126.2	124.0	104.5	40.6
2-14	89.0	103.4	95.9	121.6	156.3	103.9	99.1	34.2
2-15	102.0	163.7	115.7	92.3	102.7	136.4	90.2	32.8
2-16	95.4	112.8	112.5	117.6	115.6	113.7	135.9	42.4
2-17	91.7	96.1	98.4	112.5	125.7	138.6	105.3	38.2
2-18	96.7	123.3	119.4	136.2	143.4	135.0	327.8	36.2
2-19	116.1	128.4	117.7	116.7	118.5	116.0	111.2	35.4

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f^*_{z,1-2}$ [Hz]	$f^*_{z,1-3}$ [Hz]	$f^*_{z,1-4}$ [Hz]	$f^*_{z,1-5}$ [Hz]	$f^*_{z,1-6}$ [Hz]	$f^*_{z,1-7}$ [Hz]	$f^*_{z,1-8}$ [Hz]
1-23	26.1	0.129	0.094	0.081	0.051	0.062	0.043	0.064
1-24	31.8	0.145	0.071	0.097	0.063	0.089	0.065	0.085
1-25	37.8	0.108	0.097	0.070	0.053	0.089	0.063	0.076
2-1	25.2	0.143	0.111	0.097	0.060	0.071	0.059	0.059
2-2	29.5	0.145	0.099	0.092	0.055	0.079	0.063	0.071
2-3	24.3	0.143	0.112	0.083	0.063	0.074	0.047	0.073
2-4	23.1	0.165	0.118	0.085	0.059	0.079	0.037	0.057
2-5	18.5	0.146	0.096	0.108	0.063	0.076	0.055	0.067
2-6	24.0	0.153	0.108	0.083	0.061	0.078	0.040	0.061
2-7	23.9	0.148	0.100	0.108	0.061	0.065	0.062	0.062
2-8	27.3	0.146	0.105	0.083	0.064	0.085	0.037	0.065
2-9	27.0	0.145	0.098	0.081	0.064	0.058	0.063	0.078
2-10	31.6	0.149	0.115	0.069	0.060	0.079	0.054	0.069
2-11	24.6	0.163	0.117	0.089	0.062	0.073	0.040	0.063
2-12	23.5	0.158	0.126	0.105	0.072	0.075	0.055	0.074
2-13	26.2	0.177	0.125	0.094	0.058	0.070	0.051	0.060
2-14	20.1	0.138	0.111	0.091	0.072	0.064	0.052	0.065
2-15	20.4	0.173	0.117	0.096	0.065	0.072	0.042	0.054
2-16	22.4	0.187	0.167	0.128	0.110	0.097	0.063	0.067
2-17	24.0	0.188	0.161	0.122	0.087	0.109	0.066	0.069
2-18	22.5	0.181	0.146	0.118	0.087	0.085	0.051	0.060
2-19	21.7	0.186	0.159	0.131	0.090	0.085	0.065	0.091

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
1-23	0.068	0.053	0.060	0.063	0.176	0.098	0.084	0.070
1-24	0.090	0.058	0.087	0.070	0.157	0.082	0.082	0.067
1-25	0.083	0.051	0.061	0.054	0.148	0.079	0.074	0.064
2-1	0.064	0.052	0.062	0.060	0.160	0.110	0.084	0.078
2-2	0.073	0.046	0.059	0.066	0.180	0.110	0.075	0.059
2-3	0.058	0.047	0.042	0.056	0.166	0.116	0.080	0.063
2-4	0.061	0.040	0.037	0.054	0.178	0.097	0.074	0.050
2-5	0.056	0.040	0.056	0.045	0.168	0.102	0.085	0.065
2-6	0.060	0.051	0.064	0.062	0.162	0.095	0.069	0.065
2-7	0.058	0.025	0.054	0.044	0.162	0.094	0.087	0.060
2-8	0.072	0.047	0.055	0.064	0.166	0.099	0.075	0.064
2-9	0.071	0.054	0.073	0.064	0.152	0.096	0.084	0.054
2-10	0.077	0.058	0.072	0.072	0.162	0.101	0.082	0.054
2-11	0.062	0.049	0.067	0.061	0.158	0.098	0.076	0.057
2-12	0.073	0.053	0.072	0.069	0.172	0.111	0.079	0.063
2-13	0.066	0.053	0.063	0.059	0.167	0.093	0.068	0.046
2-14	0.068	0.059	0.070	0.057	0.149	0.106	0.080	0.052
2-15	0.061	0.038	0.056	0.064	0.171	0.110	0.087	0.042
2-16	0.077	0.060	0.075	0.068	0.191	0.131	0.121	0.070
2-17	0.074	0.061	0.079	0.072	0.197	0.136	0.094	0.075
2-18	0.067	0.050	0.064	0.073	0.186	0.136	0.111	0.069
2-19	0.080	0.068	0.079	0.065	0.172	0.130	0.111	0.077

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
1-23	0.066	0.040	0.064	0.044	0.069	0.063	0.204	0.113
1-24	0.072	0.070	0.064	0.065	0.074	0.078	0.214	0.112
1-25	0.071	0.081	0.084	0.075	0.077	0.085	0.203	0.100
2-1	0.075	0.062	0.065	0.065	0.065	0.069	0.213	0.112
2-2	0.088	0.054	0.071	0.075	0.058	0.069	0.202	0.093
2-3	0.070	0.056	0.071	0.044	0.053	0.064	0.214	0.099
2-4	0.057	0.041	0.055	0.062	0.056	0.046	0.201	0.099
2-5	0.055	0.067	0.051	0.057	0.041	0.038	0.211	0.109
2-6	0.063	0.040	0.046	0.030	0.047	0.049	0.190	0.088
2-7	0.064	0.043	0.051	0.041	0.051	0.041	0.174	0.093
2-8	0.062	0.039	0.047	0.048	0.050	0.052	0.180	0.092
2-9	0.068	0.058	0.059	0.051	0.063	0.060	0.181	0.082
2-10	0.057	0.051	0.059	0.053	0.062	0.065	0.190	0.100
2-11	0.065	0.059	0.059	0.049	0.055	0.072	0.169	0.088
2-12	0.063	0.055	0.063	0.065	0.053	0.063	0.174	0.086
2-13	0.062	0.058	0.060	0.071	0.062	0.062	0.169	0.096
2-14	0.051	0.042	0.047	0.056	0.049	0.049	0.179	0.074
2-15	0.066	0.037	0.042	0.062	0.054	0.046	0.185	0.095
2-16	0.072	0.066	0.057	0.056	0.068	0.063	0.201	0.132
2-17	0.083	0.064	0.071	0.066	0.069	0.067	0.192	0.101
2-18	0.088	0.077	0.068	0.079	0.067	0.063	0.183	0.130
2-19	0.086	0.067	0.067	0.085	0.079	0.059	0.197	0.102

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
1-23	0.099	0.067	0.067	0.052	0.037	0.067	0.050	0.205
1-24	0.093	0.062	0.071	0.072	0.067	0.070	0.065	0.205
1-25	0.123	0.093	0.127	0.123	0.087	0.089	0.098	0.219
2-1	0.106	0.073	0.085	0.063	0.054	0.065	0.059	0.183
2-2	0.101	0.066	0.078	0.068	0.057	0.076	0.064	0.198
2-3	0.084	0.067	0.082	0.071	0.061	0.070	0.065	0.192
2-4	0.085	0.076	0.062	0.062	0.042	0.048	0.052	0.188
2-5	0.094	0.050	0.056	0.050	0.044	0.049	0.044	0.193
2-6	0.076	0.043	0.041	0.033	0.036	0.040	0.046	0.159
2-7	0.064	0.048	0.059	0.042	0.037	0.054	0.035	0.176
2-8	0.081	0.062	0.054	0.052	0.049	0.060	0.058	0.171
2-9	0.071	0.065	0.059	0.063	0.038	0.044	0.053	0.180
2-10	0.079	0.059	0.064	0.056	0.036	0.073	0.059	0.180
2-11	0.075	0.046	0.055	0.051	0.045	0.059	0.055	0.170
2-12	0.089	0.069	0.073	0.055	0.044	0.054	0.046	0.166
2-13	0.066	0.054	0.035	0.050	0.041	0.056	0.046	0.159
2-14	0.076	0.057	0.046	0.050	0.053	0.053	0.047	0.148
2-15	0.062	0.057	0.050	0.059	0.045	0.063	0.048	0.173
2-16	0.107	0.067	0.060	0.067	0.051	0.058	0.068	0.195
2-17	0.098	0.078	0.071	0.068	0.048	0.072	0.059	0.172
2-18	0.089	0.084	0.070	0.056	0.038	0.056	0.069	0.174
2-19	0.083	0.069	0.067	0.074	0.069	0.069	0.075	0.195

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
1-23	0.121	0.086	0.085	0.065	0.047	0.065	0.067	0.209
1-24	0.131	0.097	0.084	0.100	0.078	0.093	0.074	0.224
1-25	0.157	0.137	0.141	0.121	0.112	0.108	0.119	0.250
2-1	0.112	0.101	0.075	0.066	0.067	0.065	0.059	0.199
2-2	0.116	0.096	0.087	0.077	0.065	0.064	0.054	0.182
2-3	0.114	0.075	0.085	0.072	0.054	0.063	0.066	0.185
2-4	0.093	0.073	0.076	0.074	0.050	0.060	0.058	0.182
2-5	0.112	0.074	0.053	0.059	0.047	0.045	0.051	0.182
2-6	0.096	0.063	0.048	0.051	0.031	0.037	0.055	0.163
2-7	0.102	0.076	0.071	0.058	0.059	0.063	0.051	0.181
2-8	0.107	0.083	0.068	0.044	0.052	0.056	0.052	0.173
2-9	0.117	0.085	0.084	0.058	0.070	0.062	0.049	0.183
2-10	0.114	0.083	0.069	0.066	0.057	0.053	0.061	0.165
2-11	0.092	0.074	0.067	0.053	0.060	0.061	0.053	0.165
2-12	0.108	0.074	0.071	0.060	0.044	0.055	0.041	0.164
2-13	0.080	0.083	0.052	0.037	0.050	0.049	0.065	0.164
2-14	0.098	0.067	0.066	0.051	0.046	0.064	0.046	0.162
2-15	0.078	0.063	0.056	0.052	0.048	0.051	0.043	0.162
2-16	0.120	0.086	0.068	0.046	0.040	0.053	0.058	0.169
2-17	0.106	0.080	0.069	0.067	0.059	0.059	0.064	0.162
2-18	0.125	0.082	0.075	0.063	0.049	0.065	0.067	0.164
2-19	0.108	0.083	0.072	0.058	0.068	0.077	0.046	0.164

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
1-23	0.127	0.066	0.068	0.049	0.051	0.070	0.229	0.118
1-24	0.119	0.085	0.094	0.101	0.107	0.103	0.213	0.152
1-25	0.185	0.158	0.148	0.136	0.115	0.139	0.285	0.237
2-1	0.136	0.093	0.071	0.074	0.065	0.071	0.232	0.150
2-2	0.133	0.087	0.085	0.056	0.064	0.058	0.225	0.132
2-3	0.108	0.085	0.062	0.085	0.076	0.069	0.220	0.141
2-4	0.100	0.069	0.052	0.058	0.037	0.062	0.218	0.124
2-5	0.117	0.079	0.066	0.051	0.049	0.044	0.228	0.110
2-6	0.092	0.068	0.050	0.048	0.056	0.049	0.196	0.104
2-7	0.108	0.074	0.066	0.055	0.043	0.017	0.217	0.112
2-8	0.116	0.086	0.059	0.053	0.052	0.058	0.214	0.109
2-9	0.099	0.073	0.071	0.067	0.071	0.053	0.214	0.133
2-10	0.105	0.081	0.068	0.069	0.063	0.068	0.214	0.125
2-11	0.104	0.060	0.054	0.054	0.056	0.060	0.211	0.096
2-12	0.117	0.072	0.061	0.048	0.051	0.051	0.211	0.098
2-13	0.110	0.063	0.061	0.049	0.039	0.060	0.198	0.107
2-14	0.100	0.063	0.054	0.047	0.055	0.048	0.195	0.096
2-15	0.098	0.072	0.048	0.059	0.052	0.050	0.200	0.115
2-16	0.110	0.060	0.059	0.049	0.048	0.048	0.187	0.085
2-17	0.110	0.061	0.067	0.054	0.037	0.060	0.188	0.114
2-18	0.113	0.069	0.044	0.055	0.056	0.052	0.217	0.117
2-19	0.107	0.082	0.059	0.061	0.037	0.034	0.191	0.118

Case No.								
	$f_{z,6-9}^*$ [Hz]	$f_{z,6-10}^*$ [Hz]	$f_{z,6-11}^*$ [Hz]	$f_{z,6-12}^*$ [Hz]	$f_{z,7-8}^*$ [Hz]	$f_{z,7-9}^*$ [Hz]	$f_{z,7-10}^*$ [Hz]	$f_{z,7-11}^*$ [Hz]
1-23	0.068	0.052	0.072	0.053	0.226	0.103	0.080	0.063
1-24	0.122	0.090	0.111	0.096	0.233	0.160	0.130	0.108
1-25	0.179	0.098	0.116	0.122	0.247	0.165	0.132	0.100
2-1	0.104	0.074	0.068	0.050	0.205	0.122	0.106	0.076
2-2	0.103	0.074	0.071	0.064	0.208	0.110	0.100	0.098
2-3	0.109	0.061	0.061	0.043	0.200	0.122	0.097	0.068
2-4	0.100	0.064	0.052	0.046	0.199	0.108	0.094	0.077
2-5	0.074	0.043	0.068	0.036	0.180	0.100	0.075	0.072
2-6	0.071	0.051	0.042	0.053	0.182	0.092	0.070	0.063
2-7	0.078	0.062	0.068	0.051	0.201	0.109	0.085	0.059
2-8	0.071	0.057	0.074	0.051	0.184	0.097	0.069	0.065
2-9	0.083	0.070	0.062	0.046	0.191	0.104	0.094	0.075
2-10	0.090	0.070	0.074	0.055	0.188	0.102	0.088	0.077
2-11	0.081	0.066	0.060	0.050	0.165	0.102	0.081	0.059
2-12	0.079	0.054	0.064	0.046	0.181	0.095	0.075	0.072
2-13	0.059	0.049	0.027	0.050	0.194	0.089	0.072	0.043
2-14	0.068	0.055	0.062	0.034	0.180	0.091	0.074	0.057
2-15	0.071	0.055	0.053	0.039	0.190	0.090	0.077	0.065
2-16	0.064	0.061	0.058	0.045	0.179	0.092	0.084	0.060
2-17	0.082	0.052	0.053	0.062	0.171	0.093	0.074	0.058
2-18	0.079	0.054	0.076	0.046	0.174	0.091	0.078	0.069
2-19	0.074	0.056	0.062	0.041	0.166	0.090	0.084	0.055

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
1-23	0.080	0.213	0.087	0.077	0.072	0.261	0.140	0.110
1-24	0.123	0.277	0.140	0.147	0.129	0.298	0.174	0.171
1-25	0.142	0.288	0.132	0.152	0.138	0.283	0.185	0.170
2-1	0.063	0.201	0.122	0.092	0.067	0.243	0.120	0.074
2-2	0.052	0.206	0.108	0.086	0.061	0.257	0.115	0.073
2-3	0.067	0.213	0.118	0.089	0.055	0.256	0.116	0.082
2-4	0.054	0.213	0.114	0.093	0.048	0.239	0.109	0.056
2-5	0.036	0.189	0.081	0.073	0.041	0.238	0.116	0.041
2-6	0.056	0.190	0.111	0.083	0.056	0.262	0.118	0.050
2-7	0.041	0.208	0.107	0.089	0.054	0.255	0.117	0.054
2-8	0.049	0.181	0.089	0.087	0.059	0.256	0.120	0.082
2-9	0.054	0.192	0.128	0.075	0.062	0.279	0.142	0.064
2-10	0.066	0.201	0.111	0.100	0.071	0.247	0.151	0.069
2-11	0.069	0.177	0.103	0.070	0.059	0.234	0.117	0.067
2-12	0.044	0.163	0.113	0.081	0.052	0.226	0.123	0.061
2-13	0.066	0.180	0.101	0.062	0.040	0.258	0.109	0.059
2-14	0.037	0.186	0.106	0.067	0.039	0.240	0.122	0.053
2-15	0.023	0.180	0.112	0.084	0.043	0.266	0.124	0.047
2-16	0.047	0.176	0.100	0.078	0.035	0.234	0.103	0.049
2-17	0.061	0.181	0.112	0.067	0.039	0.231	0.107	0.054
2-18	0.043	0.179	0.106	0.071	0.049	0.226	0.120	0.053
2-19	0.054	0.184	0.103	0.083	0.062	0.223	0.119	0.062

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
1-23	0.252	0.160	0.183	3.50E-04	1.26E-03	4.57E-07	2.20E-09	6.50E-09
1-24	0.241	0.194	0.209	5.32E-05	2.99E-04	4.64E-08	1.13E-09	4.97E-09
1-25	0.287	0.180	0.207	1.14E-04	1.02E-03	5.61E-08	8.60E-10	5.66E-09
2-1	0.228	0.099	0.112	5.71E-04	2.06E-03	7.44E-05	2.80E-09	5.61E-09
2-2	0.223	0.094	0.126	3.77E-04	9.46E-04	5.21E-06	3.98E-09	6.77E-09
2-3	0.231	0.066	0.086	9.87E-04	3.15E-03	3.78E-05	5.40E-09	9.20E-09
2-4	0.224	0.074	0.080	5.13E-04	2.38E-03	6.77E-06	6.85E-09	1.13E-08
2-5	0.212	0.055	0.085	8.51E-04	3.71E-03	9.20E-09	8.95E-09	1.44E-08
2-6	0.202	0.054	0.073	8.04E-04	3.77E-03	9.45E-06	1.30E-08	2.52E-08
2-7	0.209	0.070	0.095	3.67E-03	1.37E-02	8.57E-05	1.10E-08	2.30E-08
2-8	0.221	0.096	0.098	4.31E-04	1.41E-03	6.17E-07	1.03E-08	2.27E-08
2-9	0.223	0.097	0.102	6.63E-04	2.67E-03	2.17E-05	8.17E-09	1.91E-08
2-10	0.224	0.108	0.111	2.53E-03	8.85E-03	6.58E-05	7.51E-09	1.88E-08
2-11	0.207	0.082	0.101	1.07E-03	2.99E-03	7.63E-05	1.49E-08	3.54E-08
2-12	0.207	0.062	0.096	3.23E-03	9.33E-03	1.08E-06	1.49E-08	3.29E-08
2-13	0.202	0.088	0.070	1.58E-03	1.64E-02	8.35E-08	1.80E-08	3.97E-08
2-14	0.213	0.062	0.073	3.12E-03	2.12E-02	8.32E-07	1.69E-08	3.58E-08
2-15	0.199	0.066	0.071	2.61E-03	9.32E-03	5.08E-05	2.23E-08	4.61E-08
2-16	0.201	0.055	0.086	9.49E-03	3.35E-02	2.57E-04	3.20E-08	7.34E-08
2-17	0.204	0.061	0.071	1.25E-03	4.02E-03	1.20E-05	2.84E-08	6.32E-08
2-18	0.204	0.065	0.090	1.56E-03	5.91E-03	2.22E-05	2.76E-08	6.13E-08
2-19	0.201	0.070	0.081	1.82E-03	1.09E-02	2.82E-05	2.26E-08	4.86E-08

Case No.	ck
	$\Delta_{\min,FFT}$
1-23	4.17E-11
1-24	2.44E-11
1-25	1.70E-11
2-1	1.87E-10
2-2	2.67E-10
2-3	2.27E-10
2-4	4.22E-10
2-5	8.48E-10
2-6	9.00E-10
2-7	5.46E-10
2-8	3.29E-10
2-9	3.93E-10
2-10	2.61E-10
2-11	6.04E-10
2-12	5.99E-10
2-13	5.82E-10
2-14	1.03E-09
2-15	1.53E-09
2-16	3.03E-09
2-17	2.08E-09
2-18	1.99E-09
2-19	1.53E-09

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V _{ref} [m/s]	Wind speed ratio [-]
2-20	None	80 cm	None	0	15	12.47	0.98
2-21	None	80 cm	None	0	20	12.11	0.95
2-22	None	80 cm	None	5	20	12.22	0.96
2-23	None	80 cm	None	10	20	12.21	0.96
2-24	None	80 cm	None	15	20	12.30	0.97
2-25	None	80 cm	None	20	20	12.31	0.97
2-26	None	80 cm	30 cm triangles	0	0	11.73	0.92
2-27	None	80 cm	30 cm triangles	5	0	11.60	0.91
2-28	None	80 cm	30 cm triangles	10	0	11.79	0.93
2-29	None	80 cm	30 cm triangles	15	0	11.83	0.93
2-30	None	80 cm	30 cm triangles	20	0	11.83	0.93
2-31	None	80 cm	30 cm triangles	20	5	11.78	0.92
2-32	None	80 cm	30 cm triangles	15	5	11.79	0.93
2-33	None	80 cm	30 cm triangles	10	5	11.69	0.92
2-34	None	80 cm	30 cm triangles	5	5	11.54	0.91
2-35	None	80 cm	30 cm triangles	0	5	11.57	0.91
2-36	None	80 cm	30 cm triangles	0	10	11.36	0.89
2-37	None	80 cm	30 cm triangles	5	10	11.49	0.90
2-38	None	80 cm	30 cm triangles	10	10	11.66	0.92
2-39	None	80 cm	30 cm triangles	15	10	11.65	0.91
2-40	None	80 cm	30 cm triangles	20	10	11.80	0.93
2-41	None	80 cm	30 cm triangles	20	15	11.70	0.92

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
2-20	0.48	5.94	-0.43	2.82	24.6%	4	5	A
2-21	0.55	7.66	-0.37	1.91	28.5%	4	5	A
2-22	0.54	7.40	-0.39	2.18	28.2%	4	5	A
2-23	0.55	7.57	-0.39	2.17	29.5%	4	5	A
2-24	0.57	7.97	-0.38	1.88	29.1%	4	5	A
2-25	0.55	7.50	-0.40	2.27	30.2%	4	5	A
2-26	0.15	0.06	-0.09	0.00	17.4%	2	2	C
2-27	0.16	0.08	-0.08	0.00	17.5%	2	2	C
2-28	0.17	0.14	-0.08	0.00	17.9%	2	2	C
2-29	0.19	0.20	-0.09	0.00	18.0%	3	3	B
2-30	0.19	0.24	-0.09	0.00	18.1%	3	3	B
2-31	0.27	1.10	-0.19	0.20	22.0%	4	4	B
2-32	0.26	0.98	-0.17	0.09	21.5%	4	4	B
2-33	0.25	0.87	-0.18	0.14	21.8%	4	4	B
2-34	0.23	0.62	-0.17	0.09	21.6%	4	3	B
2-35	0.22	0.50	-0.18	0.14	21.3%	4	3	B
2-36	0.30	1.71	-0.23	0.44	26.7%	4	4	A
2-37	0.32	2.08	-0.23	0.39	26.0%	4	4	A
2-38	0.32	2.11	-0.26	0.66	26.1%	4	4	A
2-39	0.33	2.39	-0.26	0.64	26.9%	4	5	A
2-40	0.32	2.16	-0.23	0.41	25.4%	4	4	A
2-41	0.41	4.06	-0.29	0.95	31.2%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
2-20	0.995	4.944	0.799	1.819	0.162	0.260	1.378	0.136
2-21	1.308	6.663	0.562	0.915	0.031	0.458	2.065	0.014
2-22	1.257	6.401	0.625	1.179	0.040	0.426	1.960	0.027
2-23	1.285	6.567	0.627	1.170	0.002	0.443	2.027	0.028
2-24	1.367	6.967	0.564	0.884	0.011	0.495	2.187	0.012
2-25	1.277	6.499	0.651	1.266	0.026	0.438	2.000	0.043
2-26	0.102	0.294	0.498	0.990	0.390	0.090	0.294	0.391
2-27	0.063	0.688	0.541	0.998	0.403	0.137	0.688	0.443
2-28	0.013	1.710	0.503	0.994	0.434	0.230	1.710	0.396
2-29	0.025	0.323	0.506	0.997	0.028	0.118	0.323	0.553
2-30	0.007	0.200	0.539	0.998	0.032	0.089	0.200	0.583
2-31	0.110	0.099	0.197	0.804	0.253	0.168	0.099	0.398
2-32	0.079	0.016	0.300	0.910	0.268	0.233	0.016	0.475
2-33	0.040	0.129	0.251	0.863	0.260	0.189	0.129	0.438
2-34	0.040	1.066	0.296	0.905	0.266	0.097	1.066	0.195
2-35	0.092	0.672	0.258	0.865	0.274	0.038	0.672	0.151
2-36	0.244	0.712	0.028	0.560	0.092	0.067	0.712	0.271
2-37	0.327	1.081	0.054	0.614	0.115	0.004	0.168	0.290
2-38	0.330	1.105	0.068	0.341	0.111	0.003	0.158	0.199
2-39	0.393	1.391	0.070	0.363	0.084	0.045	0.043	0.325
2-40	0.352	1.158	0.038	0.590	0.137	0.014	0.137	0.278
2-41	0.706	3.063	0.206	0.049	0.060	0.077	0.625	0.238

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
2-20	0.352	0.436	0.295	0.261	0.139	0.139	0.044	0.034
2-21	0.250	0.662	0.124	0.146	0.177	0.174	0.078	0.063
2-22	0.257	0.625	0.170	0.153	0.172	0.170	0.074	0.059
2-23	0.225	0.645	0.172	0.116	0.175	0.172	0.076	0.061
2-24	0.235	0.704	0.126	0.127	0.185	0.182	0.085	0.069
2-25	0.206	0.639	0.189	0.095	0.176	0.173	0.077	0.063
2-26	0.241	0.068	0.403	0.216	0.019	0.022	0.036	0.041
2-27	0.253	0.115	0.454	0.228	0.023	0.027	0.044	0.049
2-28	0.280	0.206	0.408	0.255	0.030	0.035	0.054	0.060
2-29	0.144	0.166	0.578	0.191	0.029	0.031	0.022	0.024
2-30	0.140	0.139	0.606	0.187	0.035	0.038	0.026	0.028
2-31	0.314	0.198	0.133	0.012	0.039	0.040	0.021	0.029
2-32	0.327	0.165	0.244	0.031	0.035	0.037	0.024	0.032
2-33	0.320	0.124	0.191	0.021	0.022	0.025	0.032	0.038
2-34	0.028	0.037	0.239	0.029	0.012	0.016	0.029	0.030
2-35	0.016	0.019	0.198	0.040	0.011	0.015	0.015	0.017
2-36	0.166	0.104	0.300	0.199	0.045	0.047	0.009	0.019
2-37	0.187	0.044	0.319	0.219	0.058	0.059	0.007	0.016
2-38	0.183	0.043	0.231	0.216	0.061	0.062	0.011	0.017
2-39	0.291	0.003	0.230	0.192	0.071	0.072	0.015	0.029
2-40	0.207	0.027	0.307	0.239	0.072	0.072	0.023	0.026
2-41	0.180	0.228	0.132	0.065	0.111	0.110	0.022	0.023

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
2-20	0.083	0.059	0.061	0.091	1.00	0.12	11.84	0.973
2-21	0.122	0.114	0.115	0.069	1.00	0.15	11.26	0.967
2-22	0.117	0.108	0.109	0.071	1.00	0.15	11.38	0.969
2-23	0.120	0.118	0.120	0.069	1.00	0.15	11.37	0.969
2-24	0.130	0.122	0.124	0.071	0.99	0.16	11.36	0.966
2-25	0.121	0.123	0.125	0.068	0.99	0.16	11.42	0.969
2-26	0.034	0.026	0.026	0.028	0.97	0.15	11.27	0.924
2-27	0.041	0.031	0.031	0.031	0.97	0.15	11.11	0.919
2-28	0.051	0.038	0.038	0.033	0.97	0.16	11.28	0.921
2-29	0.023	0.028	0.029	0.032	0.96	0.15	11.25	0.919
2-30	0.024	0.026	0.026	0.030	0.96	0.16	11.20	0.917
2-31	0.053	0.035	0.035	0.065	0.97	0.16	11.20	0.957
2-32	0.049	0.041	0.041	0.066	0.97	0.16	11.21	0.955
2-33	0.035	0.047	0.047	0.065	0.98	0.16	11.24	0.964
2-34	0.021	0.060	0.060	0.065	0.98	0.16	11.13	0.960
2-35	0.008	0.072	0.072	0.068	0.99	0.16	11.27	0.975
2-36	0.019	0.019	0.019	0.038	0.99	0.18	10.98	0.973
2-37	0.007	0.024	0.024	0.042	0.99	0.18	11.06	0.967
2-38	0.008	0.022	0.022	0.045	0.99	0.17	11.18	0.972
2-39	0.013	0.035	0.036	0.042	0.98	0.18	11.11	0.967
2-40	0.017	0.024	0.024	0.047	0.97	0.17	11.15	0.962
2-41	0.053	0.097	0.098	0.040	0.99	0.19	11.06	0.963

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
2-20	0.970	0.036	0.912	0.903	0.795	0.638	0.602	0.049
2-21	0.963	0.042	0.887	0.876	0.943	0.586	0.544	0.056
2-22	0.966	0.040	0.893	0.883	0.913	0.610	0.571	0.055
2-23	0.966	0.041	0.892	0.881	0.925	0.608	0.569	0.057
2-24	0.963	0.043	0.883	0.871	0.985	0.559	0.515	0.061
2-25	0.965	0.041	0.891	0.880	0.930	0.625	0.587	0.057
2-26	0.916	0.025	0.897	0.887	0.346	0.790	0.769	0.005
2-27	0.911	0.027	0.890	0.879	0.367	0.819	0.801	0.004
2-28	0.913	0.029	0.890	0.879	0.397	0.766	0.742	0.006
2-29	0.911	0.031	0.886	0.874	0.430	0.773	0.750	0.006
2-30	0.908	0.032	0.881	0.869	0.449	0.746	0.720	0.006
2-31	0.953	0.029	0.918	0.910	0.476	0.792	0.771	0.014
2-32	0.950	0.030	0.916	0.907	0.474	0.766	0.742	0.013
2-33	0.960	0.026	0.930	0.923	0.420	0.788	0.766	0.013
2-34	0.956	0.026	0.928	0.920	0.397	0.764	0.741	0.013
2-35	0.973	0.019	0.951	0.946	0.314	0.821	0.803	0.011
2-36	0.970	0.026	0.937	0.931	0.445	0.705	0.675	0.026
2-37	0.964	0.030	0.926	0.919	0.511	0.684	0.653	0.026
2-38	0.969	0.027	0.932	0.926	0.494	0.750	0.725	0.024
2-39	0.963	0.031	0.921	0.913	0.549	0.704	0.674	0.029
2-40	0.958	0.032	0.915	0.907	0.560	0.672	0.639	0.026
2-41	0.959	0.037	0.903	0.894	0.701	0.663	0.630	0.041

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
2-20	0.532	0.485	0.056	5.50	5.57	6.38	6.98	8.13
2-21	0.490	0.439	0.062	4.91	4.84	5.59	6.11	7.30
2-22	0.512	0.463	0.061	4.98	4.97	5.76	6.29	7.46
2-23	0.510	0.461	0.064	4.95	4.91	5.66	6.23	7.43
2-24	0.464	0.411	0.067	4.91	4.80	5.52	6.11	7.34
2-25	0.524	0.477	0.065	4.98	5.00	5.71	6.25	7.46
2-26	0.774	0.751	0.005	8.67	8.88	9.23	9.36	9.77
2-27	0.810	0.791	0.004	8.48	8.67	9.02	9.17	9.58
2-28	0.746	0.721	0.006	8.46	8.61	8.98	9.16	9.64
2-29	0.752	0.727	0.006	8.27	8.44	8.82	8.98	9.49
2-30	0.726	0.698	0.006	8.17	8.34	8.72	8.88	9.39
2-31	0.745	0.719	0.016	7.14	7.36	7.95	8.26	8.96
2-32	0.723	0.695	0.014	7.26	7.42	8.00	8.32	9.01
2-33	0.745	0.719	0.014	7.28	7.54	8.15	8.48	9.17
2-34	0.722	0.694	0.014	7.49	7.68	8.22	8.54	9.20
2-35	0.782	0.760	0.013	7.59	7.89	8.51	8.83	9.44
2-36	0.643	0.607	0.029	6.57	6.73	7.42	7.84	8.66
2-37	0.624	0.586	0.028	6.49	6.63	7.24	7.69	8.56
2-38	0.685	0.654	0.027	6.49	6.67	7.38	7.82	8.65
2-39	0.636	0.599	0.032	6.38	6.51	7.17	7.65	8.50
2-40	0.609	0.570	0.029	6.53	6.67	7.31	7.73	8.59
2-41	0.586	0.545	0.045	5.77	5.89	6.53	6.96	7.91

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
2-20	8.98	9.66	10.36	11.18	11.64	12.21	12.47	23.7%
2-21	8.17	8.90	9.65	10.56	11.11	11.85	12.11	25.9%
2-22	8.30	8.99	9.77	10.68	11.23	11.93	12.22	26.3%
2-23	8.30	9.00	9.72	10.65	11.21	11.93	12.21	27.3%
2-24	8.16	8.89	9.68	10.62	11.22	11.98	12.30	25.8%
2-25	8.33	9.04	9.79	10.68	11.24	11.98	12.31	28.2%
2-26	10.03	10.25	10.50	10.91	11.16	11.57	11.73	17.5%
2-27	9.82	10.06	10.31	10.74	11.01	11.44	11.60	17.7%
2-28	9.91	10.15	10.44	10.88	11.18	11.62	11.79	17.8%
2-29	9.79	10.06	10.36	10.83	11.12	11.62	11.83	18.1%
2-30	9.70	9.98	10.30	10.75	11.07	11.58	11.83	18.1%
2-31	9.39	9.73	10.10	10.65	11.00	11.54	11.78	21.7%
2-32	9.45	9.77	10.16	10.66	10.99	11.53	11.79	21.1%
2-33	9.53	9.80	10.17	10.73	11.07	11.56	11.69	21.5%
2-34	9.57	9.84	10.17	10.63	10.97	11.44	11.54	21.1%
2-35	9.79	10.08	10.35	10.80	11.06	11.49	11.57	21.2%
2-36	9.16	9.54	9.91	10.46	10.76	11.20	11.36	25.5%
2-37	9.14	9.54	9.94	10.52	10.85	11.34	11.49	24.6%
2-38	9.20	9.63	10.04	10.59	10.93	11.44	11.66	25.4%
2-39	9.03	9.45	9.90	10.51	10.90	11.47	11.65	25.8%
2-40	9.11	9.48	9.92	10.54	10.94	11.49	11.80	24.1%
2-41	8.59	9.16	9.75	10.45	10.89	11.51	11.70	29.7%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
2-20	28.1%	26.5%	25.5%	20.6%	18.3%	15.8%	14.1%	11.5%
2-21	32.5%	31.2%	30.6%	24.4%	22.3%	19.1%	17.6%	14.7%
2-22	32.2%	29.7%	30.3%	24.0%	22.0%	18.9%	17.1%	14.0%
2-23	33.6%	31.8%	31.5%	24.8%	22.4%	19.6%	17.9%	15.1%
2-24	33.7%	32.6%	31.9%	24.5%	22.6%	19.4%	17.8%	15.1%
2-25	34.7%	32.6%	31.5%	25.3%	23.3%	19.8%	17.8%	14.7%
2-26	17.3%	17.5%	17.4%	16.1%	16.1%	15.3%	16.1%	15.4%
2-27	17.8%	17.4%	17.5%	16.0%	16.1%	15.6%	16.1%	15.9%
2-28	18.1%	18.2%	17.9%	16.6%	16.8%	16.1%	16.3%	16.0%
2-29	18.1%	17.8%	17.8%	16.4%	16.9%	16.3%	16.7%	16.0%
2-30	18.3%	17.8%	17.9%	16.5%	16.9%	16.5%	17.0%	16.4%
2-31	23.2%	22.0%	21.4%	19.0%	18.7%	17.7%	17.7%	16.6%
2-32	22.6%	21.8%	21.3%	18.9%	18.9%	17.7%	17.6%	16.8%
2-33	22.8%	22.0%	21.4%	18.7%	18.8%	17.7%	17.8%	16.4%
2-34	22.6%	21.9%	21.6%	19.0%	18.8%	17.7%	17.5%	16.7%
2-35	22.7%	21.4%	20.7%	18.4%	18.2%	17.0%	17.0%	16.3%
2-36	28.7%	27.7%	27.0%	23.3%	22.1%	20.3%	20.0%	18.2%
2-37	27.9%	27.4%	26.6%	22.6%	21.5%	19.8%	19.3%	18.1%
2-38	28.4%	26.7%	26.1%	22.1%	20.9%	19.1%	18.8%	17.3%
2-39	29.0%	28.1%	27.1%	23.1%	22.2%	20.0%	19.6%	17.8%
2-40	26.8%	26.1%	26.3%	22.6%	21.5%	19.5%	19.0%	17.4%
2-41	33.1%	32.7%	32.2%	27.3%	25.7%	23.0%	21.5%	18.9%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
2-20	9.2%	7.1%	6.1%	56.6	54.4	58.3	63.5	78.2
2-21	12.5%	10.0%	8.7%	61.8	58.4	58.2	58.2	74.0
2-22	11.8%	9.7%	8.2%	56.7	55.5	61.0	64.4	78.3
2-23	12.5%	9.9%	8.4%	56.0	70.3	70.4	62.0	79.7
2-24	12.6%	10.0%	8.5%	42.9	48.8	56.9	61.0	72.3
2-25	12.8%	10.4%	9.1%	52.4	53.4	64.8	69.9	82.5
2-26	14.8%	14.8%	15.1%	104.8	104.3	107.0	109.9	121.3
2-27	15.4%	15.2%	15.6%	116.8	131.2	134.4	132.3	137.1
2-28	15.4%	15.2%	15.2%	131.4	143.8	147.9	149.3	157.0
2-29	15.3%	14.8%	14.6%	135.4	115.2	107.4	106.9	114.0
2-30	15.6%	15.2%	14.6%	113.2	116.8	109.1	110.5	118.1
2-31	15.6%	14.9%	14.6%	136.0	160.2	140.5	127.9	150.8
2-32	16.1%	15.2%	15.4%	95.0	106.4	115.1	116.6	129.0
2-33	15.7%	15.2%	15.4%	118.8	123.9	147.5	130.0	143.4
2-34	15.8%	15.5%	15.6%	132.2	130.8	160.8	145.3	165.1
2-35	15.7%	15.3%	15.5%	115.5	126.1	132.5	135.0	141.6
2-36	17.0%	16.5%	16.1%	78.0	82.7	96.7	108.7	125.7
2-37	16.8%	16.2%	16.1%	77.3	90.2	97.3	105.3	119.2
2-38	16.4%	15.8%	15.0%	82.3	87.9	95.4	102.0	114.4
2-39	16.4%	15.6%	14.9%	85.3	93.8	98.8	105.8	117.6
2-40	16.2%	15.5%	14.6%	85.3	93.6	108.0	124.5	127.8
2-41	17.2%	16.0%	15.2%	71.0	80.2	88.6	89.1	103.3

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
2-20	83.6	102.6	100.8	110.7	124.8	119.1	95.3	34.9
2-21	83.4	107.5	114.7	115.1	130.4	153.5	115.3	35.7
2-22	84.6	95.4	96.1	100.0	115.3	124.6	104.8	36.7
2-23	85.2	97.0	93.5	108.2	133.4	146.8	135.3	40.0
2-24	76.0	83.7	85.9	97.2	105.8	107.1	106.0	34.9
2-25	84.2	97.0	95.1	107.9	139.1	148.2	101.4	34.5
2-26	126.2	124.6	109.0	103.0	107.2	107.7	106.3	43.9
2-27	119.5	134.4	103.7	106.1	112.0	113.6	110.2	47.2
2-28	160.0	153.5	106.3	111.7	118.8	119.6	112.4	46.1
2-29	112.7	114.4	99.2	103.2	108.2	108.6	109.8	48.2
2-30	112.0	125.7	117.5	113.0	117.0	119.4	111.6	44.9
2-31	138.5	109.6	104.1	106.8	112.3	112.4	113.4	41.7
2-32	124.7	125.0	112.9	114.5	119.6	119.6	120.0	41.0
2-33	118.7	123.3	117.1	112.8	120.8	119.1	107.2	45.7
2-34	120.4	126.4	119.2	118.8	122.2	121.0	119.3	46.6
2-35	133.9	135.7	120.4	123.7	126.5	122.1	112.7	49.2
2-36	117.9	128.9	123.0	125.4	127.0	117.6	110.6	42.0
2-37	113.5	117.7	115.9	123.5	125.8	115.9	104.5	41.4
2-38	115.7	133.4	117.8	116.0	125.0	127.4	101.6	44.3
2-39	121.7	134.4	127.7	115.0	109.6	109.2	106.6	46.9
2-40	123.0	130.7	112.6	111.7	116.9	116.1	112.8	42.2
2-41	106.1	119.8	119.6	125.1	130.4	124.9	110.4	42.2

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f^*_{z,1-2}$ [Hz]	$f^*_{z,1-3}$ [Hz]	$f^*_{z,1-4}$ [Hz]	$f^*_{z,1-5}$ [Hz]	$f^*_{z,1-6}$ [Hz]	$f^*_{z,1-7}$ [Hz]	$f^*_{z,1-8}$ [Hz]
2-20	22.3	0.180	0.155	0.137	0.087	0.103	0.069	0.073
2-21	20.3	0.219	0.190	0.162	0.112	0.105	0.080	0.085
2-22	20.6	0.207	0.169	0.151	0.100	0.119	0.081	0.096
2-23	28.5	0.218	0.179	0.157	0.110	0.118	0.070	0.100
2-24	21.7	0.211	0.190	0.158	0.103	0.109	0.074	0.087
2-25	23.7	0.202	0.179	0.138	0.090	0.096	0.070	0.095
2-26	36.5	0.167	0.118	0.114	0.074	0.081	0.060	0.050
2-27	39.4	0.168	0.114	0.101	0.071	0.083	0.057	0.062
2-28	39.4	0.171	0.118	0.110	0.080	0.079	0.055	0.053
2-29	38.9	0.174	0.118	0.098	0.079	0.076	0.075	0.055
2-30	39.5	0.159	0.129	0.106	0.080	0.078	0.054	0.053
2-31	35.0	0.152	0.125	0.095	0.086	0.091	0.069	0.081
2-32	45.3	0.168	0.112	0.103	0.072	0.070	0.068	0.073
2-33	37.4	0.166	0.119	0.085	0.076	0.076	0.065	0.057
2-34	40.3	0.168	0.112	0.096	0.068	0.077	0.067	0.073
2-35	42.7	0.173	0.111	0.085	0.083	0.061	0.053	0.055
2-36	41.4	0.180	0.124	0.102	0.075	0.082	0.042	0.053
2-37	39.1	0.176	0.124	0.099	0.068	0.077	0.063	0.066
2-38	39.2	0.191	0.139	0.105	0.089	0.079	0.059	0.070
2-39	39.4	0.182	0.140	0.117	0.078	0.088	0.060	0.064
2-40	39.8	0.172	0.130	0.120	0.088	0.076	0.082	0.088
2-41	32.3	0.184	0.130	0.112	0.085	0.070	0.068	0.075

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
2-20	0.079	0.072	0.074	0.078	0.188	0.121	0.120	0.063
2-21	0.087	0.063	0.084	0.062	0.192	0.130	0.113	0.079
2-22	0.089	0.068	0.077	0.096	0.195	0.148	0.114	0.087
2-23	0.099	0.071	0.087	0.067	0.199	0.140	0.118	0.085
2-24	0.081	0.072	0.067	0.066	0.195	0.144	0.113	0.087
2-25	0.083	0.081	0.088	0.081	0.203	0.140	0.110	0.071
2-26	0.068	0.035	0.034	0.036	0.182	0.116	0.095	0.068
2-27	0.060	0.041	0.029	0.036	0.188	0.125	0.095	0.068
2-28	0.046	0.035	0.028	0.056	0.192	0.112	0.103	0.070
2-29	0.065	0.052	0.040	0.054	0.186	0.119	0.095	0.074
2-30	0.047	0.049	0.052	0.034	0.177	0.108	0.089	0.067
2-31	0.051	0.055	0.052	0.034	0.187	0.109	0.098	0.071
2-32	0.052	0.037	0.042	0.034	0.200	0.114	0.090	0.076
2-33	0.053	0.042	0.051	0.043	0.177	0.111	0.082	0.066
2-34	0.067	0.031	0.050	0.032	0.166	0.106	0.094	0.064
2-35	0.073	0.037	0.049	0.045	0.178	0.122	0.098	0.064
2-36	0.053	0.046	0.056	0.043	0.177	0.128	0.105	0.071
2-37	0.058	0.046	0.046	0.039	0.188	0.127	0.083	0.071
2-38	0.062	0.067	0.058	0.043	0.177	0.134	0.099	0.077
2-39	0.062	0.040	0.053	0.055	0.196	0.123	0.092	0.066
2-40	0.061	0.030	0.040	0.050	0.184	0.117	0.100	0.080
2-41	0.059	0.055	0.070	0.048	0.185	0.122	0.097	0.085

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
2-20	0.082	0.059	0.065	0.066	0.067	0.072	0.183	0.114
2-21	0.078	0.053	0.074	0.074	0.060	0.067	0.239	0.131
2-22	0.078	0.062	0.069	0.066	0.063	0.082	0.202	0.119
2-23	0.090	0.065	0.087	0.092	0.081	0.074	0.210	0.130
2-24	0.084	0.057	0.045	0.067	0.064	0.064	0.221	0.143
2-25	0.072	0.087	0.078	0.067	0.065	0.054	0.225	0.132
2-26	0.071	0.060	0.060	0.044	0.030	0.041	0.223	0.103
2-27	0.080	0.052	0.044	0.066	0.050	0.041	0.215	0.090
2-28	0.081	0.059	0.048	0.043	0.047	0.044	0.222	0.104
2-29	0.057	0.079	0.060	0.053	0.047	0.046	0.218	0.118
2-30	0.052	0.044	0.053	0.055	0.037	0.040	0.208	0.115
2-31	0.070	0.049	0.062	0.044	0.036	0.027	0.212	0.100
2-32	0.058	0.070	0.049	0.050	0.058	0.040	0.197	0.106
2-33	0.073	0.056	0.052	0.039	0.037	0.029	0.196	0.105
2-34	0.052	0.053	0.064	0.058	0.042	0.042	0.207	0.116
2-35	0.051	0.052	0.056	0.065	0.049	0.041	0.198	0.102
2-36	0.053	0.063	0.060	0.042	0.035	0.041	0.192	0.106
2-37	0.074	0.067	0.055	0.045	0.044	0.042	0.207	0.115
2-38	0.072	0.059	0.070	0.066	0.052	0.050	0.186	0.114
2-39	0.072	0.054	0.064	0.057	0.055	0.043	0.218	0.103
2-40	0.067	0.065	0.052	0.048	0.028	0.038	0.209	0.106
2-41	0.072	0.063	0.043	0.048	0.044	0.030	0.196	0.106

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
2-20	0.101	0.069	0.077	0.069	0.056	0.084	0.062	0.179
2-21	0.115	0.085	0.069	0.069	0.048	0.070	0.058	0.163
2-22	0.111	0.080	0.072	0.071	0.041	0.062	0.066	0.191
2-23	0.097	0.067	0.075	0.073	0.063	0.061	0.062	0.185
2-24	0.106	0.074	0.072	0.059	0.058	0.064	0.057	0.181
2-25	0.110	0.063	0.079	0.063	0.061	0.055	0.075	0.184
2-26	0.105	0.064	0.067	0.060	0.038	0.043	0.031	0.190
2-27	0.098	0.078	0.072	0.054	0.039	0.032	0.041	0.203
2-28	0.091	0.066	0.074	0.055	0.043	0.040	0.032	0.198
2-29	0.093	0.075	0.059	0.068	0.046	0.044	0.046	0.194
2-30	0.096	0.055	0.066	0.054	0.040	0.045	0.025	0.185
2-31	0.094	0.069	0.062	0.047	0.030	0.047	0.047	0.192
2-32	0.092	0.067	0.070	0.066	0.055	0.050	0.036	0.185
2-33	0.091	0.069	0.064	0.057	0.047	0.046	0.035	0.184
2-34	0.084	0.068	0.061	0.070	0.062	0.062	0.036	0.206
2-35	0.072	0.065	0.050	0.042	0.033	0.046	0.055	0.192
2-36	0.078	0.059	0.054	0.045	0.042	0.043	0.036	0.180
2-37	0.085	0.078	0.068	0.057	0.059	0.056	0.047	0.187
2-38	0.063	0.058	0.060	0.054	0.059	0.051	0.035	0.188
2-39	0.083	0.058	0.052	0.056	0.041	0.056	0.051	0.175
2-40	0.087	0.075	0.074	0.068	0.041	0.049	0.045	0.192
2-41	0.093	0.075	0.064	0.052	0.044	0.041	0.039	0.179

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
2-20	0.094	0.075	0.064	0.055	0.064	0.063	0.069	0.171
2-21	0.124	0.082	0.075	0.083	0.057	0.060	0.048	0.158
2-22	0.123	0.086	0.077	0.075	0.073	0.061	0.052	0.171
2-23	0.109	0.078	0.089	0.070	0.050	0.068	0.046	0.158
2-24	0.121	0.084	0.069	0.055	0.068	0.058	0.048	0.174
2-25	0.113	0.086	0.068	0.059	0.067	0.062	0.054	0.152
2-26	0.109	0.074	0.077	0.056	0.046	0.046	0.048	0.179
2-27	0.117	0.091	0.064	0.062	0.049	0.058	0.035	0.184
2-28	0.090	0.075	0.071	0.059	0.062	0.054	0.050	0.181
2-29	0.104	0.082	0.073	0.062	0.066	0.060	0.056	0.176
2-30	0.120	0.074	0.065	0.080	0.056	0.049	0.027	0.186
2-31	0.112	0.091	0.068	0.066	0.050	0.043	0.034	0.175
2-32	0.111	0.086	0.079	0.066	0.060	0.059	0.034	0.168
2-33	0.114	0.084	0.072	0.068	0.056	0.055	0.026	0.193
2-34	0.101	0.088	0.058	0.057	0.061	0.053	0.049	0.185
2-35	0.097	0.083	0.068	0.058	0.054	0.052	0.045	0.188
2-36	0.104	0.050	0.055	0.052	0.035	0.029	0.017	0.179
2-37	0.098	0.094	0.068	0.059	0.060	0.072	0.045	0.159
2-38	0.110	0.085	0.070	0.083	0.062	0.068	0.045	0.176
2-39	0.105	0.065	0.067	0.060	0.055	0.037	0.029	0.191
2-40	0.119	0.093	0.079	0.058	0.060	0.061	0.040	0.194
2-41	0.110	0.079	0.071	0.059	0.045	0.039	0.037	0.182

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
2-20	0.103	0.078	0.073	0.073	0.057	0.045	0.196	0.124
2-21	0.112	0.075	0.059	0.050	0.060	0.041	0.206	0.120
2-22	0.104	0.081	0.060	0.070	0.047	0.068	0.195	0.117
2-23	0.113	0.084	0.075	0.062	0.068	0.059	0.196	0.112
2-24	0.123	0.053	0.048	0.063	0.052	0.044	0.195	0.114
2-25	0.112	0.076	0.057	0.063	0.051	0.069	0.191	0.109
2-26	0.109	0.101	0.075	0.052	0.053	0.049	0.222	0.109
2-27	0.126	0.082	0.061	0.058	0.040	0.030	0.220	0.112
2-28	0.114	0.088	0.056	0.048	0.053	0.043	0.221	0.112
2-29	0.109	0.090	0.058	0.062	0.051	0.056	0.199	0.119
2-30	0.113	0.076	0.065	0.058	0.045	0.032	0.220	0.128
2-31	0.130	0.097	0.066	0.060	0.042	0.049	0.190	0.110
2-32	0.099	0.077	0.063	0.064	0.054	0.054	0.203	0.118
2-33	0.119	0.068	0.063	0.074	0.061	0.037	0.220	0.107
2-34	0.098	0.051	0.070	0.060	0.059	0.033	0.213	0.127
2-35	0.116	0.082	0.068	0.048	0.047	0.052	0.221	0.105
2-36	0.120	0.080	0.055	0.047	0.052	0.030	0.200	0.111
2-37	0.112	0.082	0.053	0.057	0.055	0.039	0.205	0.114
2-38	0.115	0.082	0.055	0.049	0.042	0.037	0.198	0.102
2-39	0.106	0.067	0.056	0.053	0.049	0.050	0.188	0.101
2-40	0.133	0.076	0.072	0.066	0.044	0.047	0.212	0.123
2-41	0.121	0.068	0.058	0.042	0.032	0.041	0.195	0.103

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
2-20	0.096	0.080	0.061	0.060	0.168	0.103	0.092	0.077
2-21	0.090	0.064	0.051	0.049	0.177	0.084	0.077	0.068
2-22	0.066	0.062	0.065	0.049	0.166	0.097	0.072	0.072
2-23	0.076	0.060	0.063	0.038	0.173	0.104	0.076	0.063
2-24	0.060	0.041	0.063	0.050	0.152	0.096	0.067	0.052
2-25	0.078	0.046	0.054	0.049	0.166	0.094	0.078	0.062
2-26	0.089	0.073	0.061	0.048	0.201	0.092	0.080	0.060
2-27	0.062	0.064	0.035	0.040	0.189	0.113	0.078	0.063
2-28	0.082	0.063	0.067	0.053	0.182	0.107	0.094	0.070
2-29	0.093	0.065	0.054	0.042	0.202	0.117	0.090	0.070
2-30	0.089	0.067	0.049	0.058	0.191	0.111	0.093	0.066
2-31	0.084	0.056	0.046	0.032	0.172	0.100	0.080	0.063
2-32	0.076	0.060	0.067	0.046	0.196	0.098	0.073	0.069
2-33	0.077	0.071	0.051	0.042	0.176	0.097	0.095	0.065
2-34	0.081	0.050	0.054	0.024	0.179	0.093	0.083	0.069
2-35	0.085	0.051	0.056	0.043	0.207	0.103	0.078	0.066
2-36	0.075	0.047	0.039	0.033	0.182	0.092	0.079	0.058
2-37	0.076	0.042	0.051	0.030	0.172	0.099	0.068	0.065
2-38	0.084	0.063	0.050	0.048	0.187	0.097	0.082	0.057
2-39	0.075	0.059	0.055	0.027	0.182	0.098	0.080	0.049
2-40	0.069	0.063	0.071	0.054	0.203	0.108	0.086	0.060
2-41	0.073	0.065	0.053	0.041	0.170	0.099	0.070	0.049

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
2-20	0.046	0.196	0.103	0.063	0.041	0.233	0.107	0.073
2-21	0.055	0.177	0.082	0.067	0.043	0.218	0.098	0.046
2-22	0.055	0.193	0.112	0.072	0.058	0.234	0.107	0.047
2-23	0.058	0.191	0.096	0.078	0.031	0.233	0.110	0.059
2-24	0.046	0.180	0.106	0.076	0.030	0.236	0.090	0.039
2-25	0.029	0.179	0.104	0.090	0.041	0.236	0.129	0.045
2-26	0.053	0.187	0.112	0.101	0.057	0.246	0.126	0.065
2-27	0.068	0.183	0.115	0.074	0.053	0.241	0.109	0.065
2-28	0.043	0.183	0.107	0.076	0.066	0.258	0.118	0.061
2-29	0.053	0.188	0.105	0.089	0.063	0.238	0.130	0.067
2-30	0.060	0.187	0.115	0.092	0.068	0.255	0.127	0.062
2-31	0.043	0.170	0.106	0.086	0.056	0.236	0.128	0.051
2-32	0.062	0.184	0.134	0.086	0.057	0.244	0.118	0.066
2-33	0.056	0.184	0.119	0.086	0.067	0.228	0.125	0.064
2-34	0.045	0.197	0.092	0.089	0.042	0.231	0.112	0.058
2-35	0.051	0.191	0.102	0.079	0.051	0.256	0.120	0.063
2-36	0.029	0.164	0.090	0.060	0.040	0.215	0.099	0.050
2-37	0.050	0.179	0.114	0.077	0.047	0.235	0.108	0.058
2-38	0.031	0.178	0.091	0.072	0.057	0.232	0.113	0.056
2-39	0.045	0.170	0.105	0.076	0.064	0.235	0.109	0.076
2-40	0.057	0.190	0.093	0.080	0.054	0.241	0.120	0.069
2-41	0.034	0.182	0.105	0.061	0.029	0.221	0.115	0.050

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
2-20	0.214	0.052	0.081	1.14E-03	3.68E-03	7.31E-05	2.12E-08	4.47E-08
2-21	0.184	0.052	0.059	8.11E-04	3.17E-03	1.72E-05	2.99E-08	5.44E-08
2-22	0.205	0.047	0.068	3.30E-03	9.69E-03	5.72E-04	2.96E-08	5.89E-08
2-23	0.189	0.058	0.063	4.26E-03	1.24E-02	3.80E-04	3.41E-08	6.60E-08
2-24	0.187	0.062	0.067	1.77E-03	9.71E-03	1.48E-06	3.26E-08	6.37E-08
2-25	0.190	0.052	0.058	3.39E-03	1.35E-02	8.35E-06	3.72E-08	6.71E-08
2-26	0.213	0.080	0.093	2.21E-03	7.78E-03	3.12E-05	3.16E-08	4.36E-08
2-27	0.188	0.087	0.085	1.72E-03	8.44E-03	1.16E-06	3.17E-08	4.83E-08
2-28	0.199	0.075	0.093	1.41E-03	5.84E-03	8.44E-05	3.46E-08	4.62E-08
2-29	0.207	0.082	0.088	8.61E-04	2.56E-03	1.35E-06	3.23E-08	3.99E-08
2-30	0.221	0.087	0.075	3.80E-03	1.35E-02	1.23E-05	3.29E-08	4.28E-08
2-31	0.225	0.068	0.085	2.69E-03	9.45E-03	3.89E-05	3.93E-08	4.53E-08
2-32	0.180	0.088	0.086	2.79E-03	5.33E-03	2.28E-05	4.09E-08	4.79E-08
2-33	0.200	0.083	0.104	1.02E-03	2.24E-03	1.48E-05	4.20E-08	4.85E-08
2-34	0.205	0.079	0.083	2.79E-03	1.03E-02	1.06E-06	4.27E-08	5.11E-08
2-35	0.202	0.088	0.106	6.92E-04	2.43E-03	5.78E-06	4.26E-08	4.92E-08
2-36	0.191	0.081	0.082	7.48E-04	2.02E-03	1.91E-06	6.27E-08	8.94E-08
2-37	0.184	0.064	0.098	4.24E-03	2.40E-02	3.90E-07	5.69E-08	7.83E-08
2-38	0.210	0.074	0.097	4.63E-03	1.10E-02	3.55E-08	5.39E-08	7.68E-08
2-39	0.198	0.066	0.087	2.46E-03	1.22E-02	4.76E-05	5.73E-08	8.18E-08
2-40	0.185	0.073	0.086	2.47E-03	6.25E-03	1.04E-06	5.19E-08	7.57E-08
2-41	0.205	0.059	0.057	1.84E-03	5.33E-03	3.48E-05	7.50E-08	1.13E-07

Case No.	ck
	$\Delta_{\min,FFT}$
2-20	1.49E-09
2-21	5.60E-09
2-22	4.55E-09
2-23	5.04E-09
2-24	5.41E-09
2-25	7.04E-09
2-26	2.35E-08
2-27	2.27E-08
2-28	2.27E-08
2-29	2.21E-08
2-30	2.12E-08
2-31	2.55E-08
2-32	2.43E-08
2-33	2.66E-08
2-34	2.77E-08
2-35	2.97E-08
2-36	3.49E-08
2-37	2.89E-08
2-38	3.31E-08
2-39	3.24E-08
2-40	2.73E-08
2-41	3.83E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V _{ref} [m/s]	Wind speed ratio [-]
2-42	None	80 cm	30 cm triangles	15	15	11.40	0.89
2-43	None	80 cm	30 cm triangles	10	15	11.42	0.90
2-44	None	80 cm	30 cm triangles	5	15	11.35	0.89
2-45	None	80 cm	30 cm triangles	0	15	11.21	0.88
2-46	None	80 cm	30 cm triangles	0	20	11.06	0.87
2-47	None	80 cm	30 cm triangles	5	20	11.30	0.89
2-48	None	80 cm	30 cm triangles	10	20	11.39	0.89
2-49	None	80 cm	30 cm triangles	15	20	11.34	0.89
2-50	None	80 cm	30 cm triangles	20	20	11.49	0.90
2-51	None	80 cm	30 cm rectangle	0	0	11.66	0.92
2-52	None	80 cm	30 cm rectangle	5	0	11.67	0.92
2-53	None	80 cm	30 cm rectangle	10	0	11.68	0.92
2-54	None	80 cm	30 cm rectangle	15	0	11.71	0.92
2-55	None	80 cm	30 cm rectangle	20	0	11.68	0.92
2-56	None	80 cm	30 cm rectangle	20	5	11.78	0.92
2-57	None	80 cm	30 cm rectangle	15	5	11.61	0.91
2-58	None	80 cm	30 cm rectangle	10	5	11.69	0.92
2-59	None	80 cm	30 cm rectangle	5	5	11.62	0.91
2-60	None	80 cm	30 cm rectangle	0	5	11.54	0.91
2-61	None	80 cm	30 cm rectangle	0	10	11.42	0.90
2-62	None	80 cm	30 cm rectangle	5	10	11.45	0.90
2-63	None	80 cm	30 cm rectangle	10	10	11.47	0.90

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
2-42	0.41	4.14	-0.27	0.68	30.8%	4	5	A
2-43	0.41	4.01	-0.28	0.79	31.8%	4	5	A
2-44	0.38	3.52	-0.27	0.73	30.6%	4	5	A
2-45	0.36	3.03	-0.27	0.78	30.8%	4	5	A
2-46	0.44	4.74	-0.28	0.79	34.4%	4	5	A
2-47	0.46	5.29	-0.27	0.74	34.6%	4	5	A
2-48	0.46	5.18	-0.28	0.84	34.0%	4	5	A
2-49	0.45	5.05	-0.26	0.59	34.1%	4	5	A
2-50	0.48	5.67	-0.29	0.97	33.8%	4	5	A
2-51	0.15	0.07	-0.07	0.00	19.6%	2	2	C
2-52	0.16	0.09	-0.08	0.00	20.2%	2	2	C
2-53	0.17	0.14	-0.08	0.00	20.6%	2	2	C
2-54	0.17	0.12	-0.08	0.00	20.8%	2	2	C
2-55	0.19	0.22	-0.07	0.00	20.4%	3	3	B
2-56	0.28	1.26	-0.18	0.15	25.4%	4	4	A
2-57	0.25	0.90	-0.17	0.09	24.5%	4	4	B
2-58	0.24	0.69	-0.16	0.06	24.0%	4	3	B
2-59	0.25	0.78	-0.17	0.10	23.5%	4	3	B
2-60	0.23	0.63	-0.16	0.07	24.2%	4	3	B
2-61	0.30	1.71	-0.21	0.24	28.3%	4	4	A
2-62	0.31	1.90	-0.22	0.31	29.2%	4	4	A
2-63	0.33	2.27	-0.24	0.47	29.6%	4	4	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_{α}	Δ_{z0}	Δ_{β}	Δ_{z0T}	Δ_{IV30}	$\Delta_{\alpha}ISO$	$\Delta_{z0}ISO$	$\Delta_{\beta}ISO$
2-42	0.718	3.135	0.107	0.320	0.048	0.085	0.654	0.301
2-43	0.701	3.008	0.151	0.213	0.082	0.074	0.603	0.273
2-44	0.600	2.521	0.123	0.268	0.039	0.011	0.408	0.291
2-45	0.516	2.029	0.139	0.224	0.047	0.042	0.212	0.281
2-46	0.824	3.739	0.157	0.211	0.171	0.152	0.896	0.269
2-47	0.922	4.288	0.140	0.255	0.178	0.214	1.115	0.280
2-48	0.909	4.185	0.181	0.155	0.156	0.206	1.074	0.254
2-49	0.888	4.050	0.081	0.405	0.159	0.193	1.020	0.317
2-50	0.991	4.669	0.221	0.031	0.151	0.258	1.268	0.229
2-51	0.091	0.377	0.612	0.999	0.570	0.103	0.377	0.528
2-52	0.053	0.728	0.528	0.997	0.612	0.149	0.728	0.427
2-53	0.022	1.761	0.513	0.994	0.649	0.241	1.761	0.409
2-54	0.003	1.399	0.548	0.998	0.661	0.218	1.399	0.452
2-55	0.001	0.252	0.626	1.000	0.165	0.094	0.252	0.661
2-56	0.165	0.261	0.233	0.855	0.137	0.126	0.261	0.425
2-57	0.060	0.102	0.304	0.913	0.165	0.211	0.102	0.478
2-58	0.009	0.312	0.350	0.942	0.185	0.133	0.312	0.257
2-59	0.024	0.216	0.298	0.904	0.199	0.170	0.216	0.198
2-60	0.031	1.112	0.327	0.930	0.176	0.108	1.112	0.231
2-61	0.260	0.714	0.139	0.757	0.037	0.055	0.714	0.354
2-62	0.307	0.901	0.101	0.692	0.007	0.020	0.240	0.326
2-63	0.384	1.271	0.014	0.532	0.006	0.038	0.092	0.260

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
2-42	0.189	0.237	0.203	0.076	0.109	0.108	0.019	0.019
2-43	0.163	0.225	0.171	0.046	0.110	0.109	0.020	0.022
2-44	0.196	0.152	0.191	0.083	0.093	0.093	0.005	0.018
2-45	0.190	0.092	0.180	0.076	0.082	0.082	0.006	0.022
2-46	0.094	0.313	0.167	0.033	0.120	0.119	0.028	0.023
2-47	0.088	0.384	0.179	0.039	0.137	0.135	0.044	0.036
2-48	0.106	0.375	0.150	0.019	0.134	0.132	0.040	0.033
2-49	0.104	0.360	0.222	0.022	0.133	0.131	0.040	0.034
2-50	0.109	0.434	0.121	0.015	0.144	0.142	0.050	0.040
2-51	0.401	0.081	0.538	0.373	0.027	0.029	0.046	0.050
2-52	0.440	0.126	0.439	0.411	0.033	0.037	0.054	0.058
2-53	0.472	0.216	0.421	0.442	0.039	0.044	0.062	0.068
2-54	0.483	0.194	0.462	0.453	0.048	0.052	0.070	0.075
2-55	0.029	0.144	0.680	0.082	0.043	0.045	0.033	0.035
2-56	0.207	0.161	0.448	0.239	0.059	0.060	0.024	0.031
2-57	0.233	0.144	0.249	0.104	0.036	0.038	0.026	0.033
2-58	0.141	0.071	0.298	0.078	0.030	0.032	0.047	0.048
2-59	0.121	0.106	0.242	0.060	0.028	0.030	0.047	0.048
2-60	0.154	0.047	0.273	0.090	0.019	0.022	0.036	0.037
2-61	0.115	0.093	0.380	0.150	0.053	0.054	0.010	0.019
2-62	0.088	0.059	0.353	0.125	0.066	0.066	0.019	0.024
2-63	0.076	0.003	0.290	0.113	0.075	0.074	0.024	0.026

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
2-42	0.051	0.098	0.098	0.040	0.99	0.20	10.85	0.960
2-43	0.052	0.103	0.104	0.042	0.99	0.20	10.80	0.958
2-44	0.034	0.083	0.084	0.038	1.00	0.20	10.88	0.964
2-45	0.022	0.076	0.076	0.038	0.99	0.20	10.76	0.962
2-46	0.063	0.134	0.135	0.054	1.00	0.22	10.52	0.958
2-47	0.081	0.146	0.147	0.056	0.99	0.22	10.59	0.959
2-48	0.077	0.138	0.138	0.053	0.99	0.21	10.71	0.956
2-49	0.077	0.141	0.141	0.054	0.99	0.22	10.64	0.956
2-50	0.088	0.142	0.143	0.050	0.99	0.21	10.76	0.958
2-51	0.043	0.051	0.051	0.051	0.96	0.18	11.10	0.906
2-52	0.052	0.056	0.056	0.054	0.96	0.18	11.03	0.884
2-53	0.060	0.064	0.064	0.057	0.96	0.18	11.06	0.896
2-54	0.068	0.067	0.067	0.060	0.94	0.18	10.94	0.864
2-55	0.031	0.027	0.028	0.015	0.95	0.18	10.94	0.888
2-56	0.028	0.019	0.018	0.038	0.95	0.19	10.96	0.935
2-57	0.050	0.024	0.023	0.041	0.96	0.19	10.97	0.943
2-58	0.041	0.034	0.033	0.044	0.96	0.18	11.05	0.944
2-59	0.041	0.034	0.034	0.049	0.97	0.18	11.05	0.943
2-60	0.029	0.037	0.036	0.043	0.97	0.19	11.03	0.950
2-61	0.015	0.040	0.039	0.029	0.98	0.20	10.92	0.955
2-62	0.015	0.052	0.052	0.026	0.97	0.20	10.82	0.950
2-63	0.018	0.060	0.060	0.028	0.98	0.20	10.84	0.951

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
2-42	0.956	0.039	0.900	0.890	0.705	0.616	0.577	0.042
2-43	0.954	0.039	0.897	0.887	0.706	0.627	0.589	0.043
2-44	0.961	0.035	0.913	0.904	0.627	0.637	0.601	0.040
2-45	0.958	0.035	0.911	0.902	0.602	0.652	0.617	0.039
2-46	0.954	0.042	0.894	0.883	0.734	0.606	0.567	0.049
2-47	0.955	0.042	0.889	0.878	0.780	0.588	0.546	0.051
2-48	0.951	0.044	0.885	0.874	0.802	0.594	0.553	0.051
2-49	0.952	0.043	0.886	0.874	0.788	0.561	0.517	0.051
2-50	0.954	0.044	0.884	0.873	0.830	0.635	0.598	0.048
2-51	0.897	0.028	0.878	0.866	0.378	0.734	0.708	0.005
2-52	0.872	0.033	0.851	0.836	0.435	0.841	0.826	0.005
2-53	0.885	0.033	0.861	0.848	0.446	0.823	0.805	0.005
2-54	0.850	0.037	0.827	0.810	0.493	0.788	0.767	0.006
2-55	0.877	0.037	0.849	0.834	0.498	0.725	0.698	0.006
2-56	0.929	0.037	0.887	0.876	0.574	0.702	0.672	0.020
2-57	0.937	0.033	0.901	0.891	0.498	0.754	0.730	0.015
2-58	0.939	0.031	0.906	0.896	0.464	0.764	0.740	0.014
2-59	0.937	0.032	0.903	0.893	0.483	0.786	0.765	0.013
2-60	0.945	0.029	0.914	0.906	0.434	0.726	0.699	0.016
2-61	0.951	0.033	0.910	0.901	0.537	0.638	0.602	0.029
2-62	0.945	0.036	0.900	0.890	0.577	0.679	0.647	0.028
2-63	0.946	0.037	0.899	0.889	0.608	0.708	0.679	0.029

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
2-42	0.544	0.499	0.045	5.70	5.69	6.31	6.78	7.78
2-43	0.552	0.507	0.048	5.72	5.73	6.34	6.80	7.74
2-44	0.566	0.522	0.043	5.87	5.90	6.54	7.00	7.99
2-45	0.579	0.537	0.043	5.99	6.03	6.67	7.08	8.01
2-46	0.531	0.484	0.054	5.37	5.35	5.92	6.37	7.39
2-47	0.514	0.465	0.056	5.25	5.25	5.83	6.26	7.30
2-48	0.518	0.470	0.056	5.36	5.38	5.89	6.33	7.34
2-49	0.491	0.440	0.055	5.35	5.37	5.95	6.38	7.35
2-50	0.557	0.512	0.053	5.24	5.22	5.84	6.29	7.29
2-51	0.721	0.694	0.005	8.53	8.78	9.07	9.23	9.58
2-52	0.832	0.815	0.005	8.49	8.66	8.93	9.03	9.43
2-53	0.810	0.791	0.006	8.31	8.51	8.83	8.94	9.36
2-54	0.772	0.750	0.006	8.35	8.46	8.76	8.86	9.25
2-55	0.710	0.681	0.006	8.08	8.20	8.53	8.64	9.12
2-56	0.654	0.620	0.021	7.00	7.11	7.65	7.93	8.63
2-57	0.712	0.683	0.017	7.23	7.36	7.86	8.14	8.82
2-58	0.724	0.697	0.015	7.42	7.60	8.12	8.40	8.99
2-59	0.747	0.722	0.015	7.35	7.51	8.03	8.29	8.93
2-60	0.684	0.653	0.017	7.44	7.61	8.14	8.43	9.08
2-61	0.581	0.540	0.031	6.69	6.74	7.31	7.66	8.48
2-62	0.620	0.582	0.031	6.55	6.63	7.16	7.49	8.32
2-63	0.646	0.610	0.032	6.42	6.42	6.99	7.38	8.22

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
2-42	8.43	9.00	9.57	10.30	10.71	11.28	11.40	28.4%
2-43	8.37	8.96	9.53	10.23	10.67	11.25	11.42	29.4%
2-44	8.66	9.19	9.73	10.33	10.68	11.21	11.35	28.5%
2-45	8.61	9.11	9.63	10.24	10.59	11.14	11.21	28.8%
2-46	8.08	8.66	9.27	9.97	10.40	11.01	11.06	31.3%
2-47	8.01	8.62	9.25	10.00	10.45	11.07	11.30	31.8%
2-48	8.10	8.77	9.39	10.13	10.60	11.22	11.39	31.2%
2-49	8.02	8.65	9.28	10.06	10.53	11.19	11.34	30.8%
2-50	8.03	8.68	9.33	10.15	10.66	11.32	11.49	31.7%
2-51	9.83	10.03	10.26	10.70	11.00	11.44	11.66	20.0%
2-52	9.68	9.93	10.20	10.65	10.94	11.43	11.67	20.6%
2-53	9.60	9.87	10.20	10.67	10.98	11.46	11.68	20.9%
2-54	9.50	9.74	10.02	10.49	10.84	11.39	11.71	20.8%
2-55	9.41	9.70	10.00	10.50	10.82	11.35	11.68	20.2%
2-56	9.05	9.41	9.78	10.36	10.78	11.38	11.78	24.3%
2-57	9.24	9.57	9.90	10.44	10.79	11.34	11.61	24.0%
2-58	9.35	9.66	10.04	10.54	10.86	11.37	11.69	23.4%
2-59	9.32	9.63	10.00	10.55	10.90	11.43	11.62	23.1%
2-60	9.41	9.70	10.00	10.53	10.87	11.38	11.54	23.4%
2-61	9.03	9.47	9.85	10.38	10.73	11.26	11.42	26.4%
2-62	8.84	9.27	9.70	10.26	10.64	11.20	11.45	27.7%
2-63	8.78	9.24	9.66	10.25	10.66	11.26	11.47	28.3%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
2-42	33.4%	32.7%	32.8%	27.2%	25.7%	23.0%	21.3%	19.2%
2-43	34.8%	33.5%	32.8%	28.4%	27.1%	23.6%	22.1%	19.4%
2-44	33.0%	32.5%	32.7%	26.7%	24.7%	21.9%	20.8%	19.2%
2-45	33.4%	32.4%	32.2%	26.9%	25.3%	22.3%	21.3%	19.0%
2-46	37.8%	37.3%	36.1%	30.3%	28.6%	25.5%	23.6%	21.0%
2-47	36.9%	36.6%	37.4%	31.6%	29.5%	25.7%	24.3%	21.3%
2-48	36.4%	36.3%	36.7%	30.9%	28.4%	24.4%	23.0%	20.6%
2-49	36.3%	36.1%	36.9%	31.4%	29.7%	25.8%	24.3%	21.6%
2-50	36.6%	35.3%	35.6%	29.8%	27.7%	24.8%	23.5%	20.7%
2-51	19.5%	19.2%	19.1%	18.4%	19.2%	18.3%	18.8%	18.0%
2-52	20.3%	19.7%	19.7%	18.5%	18.9%	18.1%	18.9%	18.5%
2-53	20.7%	20.4%	20.5%	18.7%	19.3%	18.6%	19.2%	18.6%
2-54	20.9%	20.6%	20.5%	19.2%	19.7%	18.9%	19.6%	18.9%
2-55	20.8%	20.6%	20.4%	18.9%	19.2%	18.4%	19.1%	18.7%
2-56	26.8%	26.4%	25.9%	22.1%	21.4%	20.0%	20.3%	19.3%
2-57	25.6%	25.1%	24.6%	21.6%	21.2%	20.1%	20.1%	19.1%
2-58	24.8%	24.4%	23.9%	21.4%	21.1%	19.7%	19.7%	19.1%
2-59	24.9%	24.0%	23.1%	20.5%	20.3%	19.0%	19.0%	18.2%
2-60	25.5%	24.6%	24.2%	21.3%	21.4%	20.3%	20.2%	19.2%
2-61	30.1%	29.9%	29.6%	25.5%	24.0%	21.8%	21.8%	20.1%
2-62	30.8%	30.7%	30.0%	25.4%	24.5%	22.8%	22.4%	20.8%
2-63	31.9%	30.7%	30.0%	25.5%	24.5%	22.2%	21.7%	19.9%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
2-42	17.6%	16.6%	16.8%	70.6	89.4	102.0	103.1	143.7
2-43	17.7%	16.8%	16.0%	72.3	75.9	82.2	87.6	93.2
2-44	17.9%	16.8%	16.8%	77.0	83.4	90.3	100.0	109.8
2-45	17.6%	16.5%	17.0%	79.5	75.7	85.4	91.5	113.9
2-46	19.0%	18.1%	17.5%	56.5	64.9	74.8	83.1	102.3
2-47	19.2%	17.8%	16.9%	61.6	68.5	78.6	86.4	103.9
2-48	18.5%	17.1%	16.7%	71.5	74.8	76.9	85.2	97.6
2-49	19.4%	17.7%	17.2%	82.8	93.6	96.0	88.3	102.3
2-50	18.4%	16.3%	16.1%	78.9	85.1	94.5	100.6	138.3
2-51	17.1%	16.8%	17.7%	111.4	143.9	127.2	121.9	114.4
2-52	17.5%	16.9%	17.6%	100.5	125.6	116.9	121.6	143.4
2-53	17.8%	17.5%	17.7%	132.1	135.7	131.4	137.1	158.4
2-54	18.2%	17.9%	17.5%	141.3	161.3	152.4	148.6	141.8
2-55	18.2%	17.5%	17.8%	125.8	137.1	131.6	131.9	132.6
2-56	18.1%	17.6%	17.3%	101.5	112.9	145.6	155.1	181.4
2-57	18.2%	17.5%	17.7%	114.8	104.3	100.3	108.9	114.9
2-58	18.1%	17.7%	17.5%	92.8	98.7	101.1	102.0	110.8
2-59	17.4%	17.0%	17.5%	90.9	101.4	99.9	100.5	118.7
2-60	17.8%	17.1%	17.5%	105.2	108.6	105.3	111.7	119.2
2-61	18.9%	18.1%	18.2%	79.6	88.5	97.9	371.9	268.5
2-62	19.3%	18.4%	18.0%	89.9	90.2	92.6	103.3	118.1
2-63	18.7%	17.9%	18.4%	105.0	84.8	84.7	89.8	108.3

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
2-42	113.8	120.7	119.0	118.7	124.1	122.4	116.8	35.4
2-43	98.4	109.3	101.7	102.9	109.5	116.0	102.3	44.0
2-44	106.4	117.1	106.8	112.5	122.6	120.6	114.2	36.3
2-45	114.2	132.9	129.0	119.6	119.2	121.2	122.2	43.9
2-46	101.7	110.2	107.9	122.1	131.4	139.7	118.6	42.3
2-47	111.2	135.0	139.3	141.5	153.0	139.5	119.4	41.6
2-48	104.8	116.1	109.4	118.2	120.9	113.8	102.5	46.1
2-49	103.9	122.5	119.7	125.6	130.1	126.8	128.1	41.2
2-50	139.3	145.2	122.3	129.9	132.6	131.5	112.1	36.4
2-51	111.2	116.8	108.4	111.2	115.9	115.3	113.3	41.8
2-52	128.3	123.1	112.2	113.2	121.9	117.3	105.6	43.5
2-53	137.6	137.4	106.6	111.6	117.9	115.1	104.5	47.2
2-54	115.8	118.3	109.9	108.7	117.1	118.3	112.9	45.7
2-55	125.5	136.6	109.4	105.1	111.5	112.7	119.7	42.8
2-56	146.5	112.4	94.7	97.5	107.1	109.3	109.8	40.5
2-57	122.9	137.2	110.8	108.9	115.0	114.5	113.7	44.6
2-58	105.6	114.2	114.5	119.6	125.8	124.2	112.8	44.4
2-59	117.9	123.1	109.6	115.2	124.7	122.5	101.5	40.8
2-60	115.5	124.0	118.5	120.6	127.1	122.2	118.9	45.1
2-61	137.9	151.2	152.0	161.5	164.6	151.1	138.8	46.3
2-62	119.1	127.1	118.3	118.0	121.4	123.3	115.1	44.2
2-63	114.9	126.0	121.7	122.4	116.7	113.4	113.3	41.7

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
2-42	40.0	0.178	0.138	0.102	0.075	0.075	0.065	0.057
2-43	37.7	0.191	0.159	0.125	0.088	0.088	0.060	0.065
2-44	35.1	0.187	0.148	0.126	0.091	0.087	0.062	0.058
2-45	35.8	0.191	0.154	0.120	0.079	0.094	0.059	0.058
2-46	37.6	0.207	0.166	0.125	0.084	0.084	0.058	0.066
2-47	29.8	0.216	0.164	0.139	0.111	0.100	0.075	0.067
2-48	33.3	0.218	0.169	0.136	0.098	0.103	0.074	0.090
2-49	36.8	0.204	0.151	0.124	0.085	0.091	0.059	0.077
2-50	33.0	0.206	0.157	0.131	0.083	0.092	0.061	0.071
2-51	34.8	0.164	0.106	0.072	0.071	0.070	0.053	0.057
2-52	34.3	0.176	0.110	0.091	0.082	0.067	0.038	0.053
2-53	38.1	0.181	0.113	0.091	0.064	0.083	0.066	0.047
2-54	39.1	0.170	0.132	0.089	0.060	0.072	0.040	0.048
2-55	37.5	0.170	0.111	0.087	0.075	0.077	0.052	0.048
2-56	34.7	0.170	0.124	0.106	0.063	0.074	0.046	0.050
2-57	36.4	0.165	0.120	0.106	0.078	0.082	0.049	0.057
2-58	42.3	0.155	0.115	0.090	0.074	0.076	0.054	0.039
2-59	32.8	0.161	0.109	0.084	0.070	0.081	0.048	0.041
2-60	34.8	0.174	0.116	0.100	0.071	0.080	0.050	0.054
2-61	40.0	0.185	0.117	0.092	0.078	0.071	0.047	0.062
2-62	35.8	0.167	0.118	0.089	0.072	0.066	0.060	0.055
2-63	36.3	0.175	0.135	0.106	0.061	0.088	0.051	0.066

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
2-42	0.050	0.041	0.051	0.043	0.183	0.134	0.097	0.066
2-43	0.073	0.052	0.052	0.043	0.195	0.142	0.112	0.093
2-44	0.061	0.041	0.052	0.056	0.193	0.128	0.114	0.068
2-45	0.057	0.053	0.063	0.048	0.177	0.122	0.099	0.066
2-46	0.072	0.046	0.031	0.044	0.194	0.142	0.126	0.085
2-47	0.076	0.042	0.054	0.035	0.196	0.139	0.101	0.078
2-48	0.065	0.037	0.063	0.044	0.190	0.146	0.112	0.084
2-49	0.064	0.048	0.061	0.053	0.190	0.155	0.114	0.096
2-50	0.065	0.048	0.054	0.059	0.187	0.147	0.111	0.075
2-51	0.052	0.045	0.038	0.021	0.173	0.095	0.056	0.061
2-52	0.038	0.021	0.019	0.022	0.181	0.109	0.082	0.066
2-53	0.050	0.039	0.036	0.035	0.169	0.110	0.079	0.071
2-54	0.043	0.026	0.040	0.037	0.192	0.097	0.079	0.066
2-55	0.051	0.032	0.041	0.032	0.186	0.100	0.083	0.069
2-56	0.055	0.041	0.044	0.039	0.166	0.114	0.097	0.067
2-57	0.058	0.054	0.056	0.032	0.179	0.107	0.085	0.070
2-58	0.047	0.036	0.026	0.036	0.171	0.109	0.084	0.060
2-59	0.038	0.033	0.052	0.042	0.162	0.107	0.088	0.063
2-60	0.042	0.029	0.046	0.028	0.171	0.111	0.084	0.059
2-61	0.057	0.046	0.055	0.032	0.178	0.120	0.097	0.068
2-62	0.055	0.040	0.044	0.031	0.175	0.109	0.101	0.057
2-63	0.045	0.030	0.040	0.044	0.186	0.113	0.073	0.054

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
2-42	0.074	0.053	0.055	0.042	0.039	0.049	0.205	0.126
2-43	0.070	0.059	0.048	0.050	0.047	0.042	0.203	0.135
2-44	0.067	0.055	0.049	0.039	0.047	0.043	0.189	0.121
2-45	0.070	0.058	0.056	0.054	0.040	0.024	0.198	0.108
2-46	0.075	0.061	0.069	0.060	0.041	0.044	0.223	0.130
2-47	0.078	0.067	0.058	0.052	0.053	0.049	0.184	0.130
2-48	0.081	0.062	0.053	0.060	0.043	0.057	0.212	0.120
2-49	0.074	0.067	0.054	0.050	0.054	0.048	0.228	0.129
2-50	0.072	0.061	0.069	0.047	0.061	0.048	0.199	0.105
2-51	0.053	0.043	0.041	0.045	0.040	0.023	0.227	0.107
2-52	0.053	0.042	0.044	0.043	0.035	0.015	0.218	0.104
2-53	0.051	0.052	0.043	0.063	0.043	0.035	0.231	0.117
2-54	0.074	0.067	0.041	0.040	0.044	0.017	0.184	0.085
2-55	0.061	0.054	0.036	0.034	0.029	0.043	0.205	0.111
2-56	0.073	0.050	0.038	0.043	0.035	0.034	0.208	0.112
2-57	0.069	0.058	0.048	0.041	0.028	0.033	0.189	0.101
2-58	0.064	0.041	0.041	0.037	0.032	0.039	0.203	0.111
2-59	0.063	0.040	0.042	0.049	0.039	0.031	0.181	0.095
2-60	0.052	0.054	0.034	0.041	0.049	0.029	0.190	0.092
2-61	0.057	0.052	0.041	0.042	0.049	0.035	0.196	0.107
2-62	0.068	0.034	0.048	0.032	0.043	0.027	0.191	0.111
2-63	0.065	0.039	0.029	0.021	0.042	0.022	0.204	0.098

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
2-42	0.100	0.072	0.051	0.044	0.030	0.047	0.036	0.194
2-43	0.100	0.081	0.068	0.076	0.046	0.047	0.041	0.184
2-44	0.080	0.063	0.052	0.051	0.046	0.049	0.047	0.179
2-45	0.081	0.081	0.063	0.050	0.046	0.047	0.027	0.181
2-46	0.104	0.077	0.070	0.039	0.049	0.043	0.043	0.181
2-47	0.103	0.082	0.062	0.053	0.051	0.055	0.045	0.203
2-48	0.095	0.085	0.074	0.063	0.058	0.049	0.047	0.189
2-49	0.097	0.089	0.069	0.056	0.053	0.043	0.042	0.193
2-50	0.103	0.062	0.070	0.057	0.049	0.058	0.025	0.177
2-51	0.094	0.052	0.066	0.047	0.037	0.039	0.013	0.197
2-52	0.090	0.065	0.049	0.044	0.033	0.032	0.022	0.180
2-53	0.099	0.062	0.053	0.044	0.043	0.042	0.030	0.200
2-54	0.075	0.060	0.062	0.051	0.038	0.027	0.033	0.188
2-55	0.074	0.058	0.042	0.039	0.034	0.037	0.024	0.183
2-56	0.095	0.068	0.076	0.062	0.049	0.050	0.026	0.182
2-57	0.083	0.076	0.045	0.031	0.028	0.028	0.029	0.187
2-58	0.080	0.058	0.056	0.060	0.049	0.050	0.026	0.191
2-59	0.085	0.059	0.054	0.048	0.042	0.028	0.015	0.192
2-60	0.089	0.077	0.058	0.049	0.050	0.036	0.019	0.183
2-61	0.077	0.046	0.049	0.045	0.037	0.047	0.015	0.163
2-62	0.086	0.073	0.053	0.051	0.052	0.040	0.032	0.180
2-63	0.081	0.060	0.044	0.046	0.035	0.038	0.023	0.167

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
2-42	0.105	0.083	0.053	0.050	0.042	0.044	0.040	0.165
2-43	0.121	0.085	0.075	0.063	0.040	0.040	0.047	0.188
2-44	0.104	0.080	0.066	0.035	0.046	0.051	0.038	0.182
2-45	0.106	0.077	0.060	0.064	0.059	0.040	0.033	0.180
2-46	0.112	0.076	0.073	0.049	0.054	0.037	0.030	0.169
2-47	0.107	0.088	0.063	0.049	0.037	0.042	0.049	0.167
2-48	0.114	0.080	0.079	0.061	0.048	0.045	0.033	0.171
2-49	0.102	0.074	0.057	0.058	0.051	0.050	0.034	0.164
2-50	0.111	0.078	0.059	0.062	0.049	0.050	0.035	0.156
2-51	0.091	0.070	0.060	0.055	0.047	0.045	0.023	0.194
2-52	0.116	0.068	0.054	0.043	0.019	0.034	0.022	0.166
2-53	0.107	0.067	0.053	0.051	0.045	0.023	0.037	0.192
2-54	0.093	0.067	0.061	0.047	0.038	0.022	0.037	0.184
2-55	0.103	0.065	0.043	0.033	0.040	0.034	0.017	0.189
2-56	0.108	0.076	0.061	0.055	0.044	0.033	0.027	0.182
2-57	0.107	0.081	0.063	0.068	0.048	0.036	0.035	0.167
2-58	0.110	0.067	0.068	0.055	0.037	0.037	0.037	0.176
2-59	0.092	0.081	0.054	0.038	0.046	0.029	0.021	0.175
2-60	0.097	0.061	0.058	0.057	0.038	0.036	0.018	0.175
2-61	0.094	0.078	0.058	0.053	0.038	0.040	0.024	0.182
2-62	0.124	0.084	0.046	0.045	0.040	0.047	0.013	0.162
2-63	0.098	0.067	0.052	0.066	0.035	0.043	0.031	0.168

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
2-42	0.089	0.080	0.047	0.058	0.053	0.040	0.202	0.107
2-43	0.108	0.079	0.082	0.057	0.044	0.034	0.212	0.130
2-44	0.112	0.074	0.060	0.048	0.045	0.045	0.211	0.115
2-45	0.111	0.074	0.064	0.063	0.041	0.031	0.197	0.108
2-46	0.123	0.082	0.074	0.055	0.033	0.026	0.197	0.115
2-47	0.113	0.069	0.048	0.035	0.035	0.038	0.202	0.105
2-48	0.116	0.077	0.056	0.053	0.037	0.039	0.187	0.100
2-49	0.107	0.062	0.046	0.043	0.048	0.040	0.195	0.094
2-50	0.098	0.077	0.086	0.041	0.038	0.029	0.204	0.116
2-51	0.100	0.090	0.053	0.061	0.036	0.035	0.222	0.134
2-52	0.099	0.073	0.045	0.051	0.045	0.026	0.192	0.105
2-53	0.109	0.073	0.058	0.045	0.040	0.027	0.209	0.095
2-54	0.118	0.067	0.058	0.061	0.044	0.029	0.208	0.110
2-55	0.109	0.068	0.063	0.041	0.044	0.028	0.214	0.111
2-56	0.105	0.074	0.038	0.049	0.023	0.034	0.187	0.100
2-57	0.117	0.068	0.051	0.048	0.051	0.015	0.182	0.114
2-58	0.106	0.060	0.049	0.059	0.050	0.042	0.226	0.101
2-59	0.122	0.078	0.064	0.040	0.052	0.040	0.201	0.088
2-60	0.096	0.063	0.044	0.039	0.047	0.008	0.212	0.113
2-61	0.112	0.070	0.037	0.030	0.028	0.022	0.194	0.098
2-62	0.120	0.071	0.070	0.050	0.050	0.040	0.197	0.097
2-63	0.112	0.060	0.051	0.042	0.031	0.026	0.215	0.100

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
2-42	0.068	0.044	0.045	0.025	0.210	0.074	0.068	0.049
2-43	0.082	0.051	0.042	0.045	0.168	0.098	0.075	0.058
2-44	0.080	0.047	0.063	0.050	0.184	0.101	0.069	0.066
2-45	0.074	0.058	0.065	0.036	0.169	0.093	0.075	0.054
2-46	0.069	0.066	0.045	0.030	0.162	0.107	0.065	0.055
2-47	0.067	0.043	0.036	0.025	0.177	0.093	0.083	0.045
2-48	0.059	0.038	0.034	0.040	0.158	0.094	0.065	0.055
2-49	0.065	0.059	0.047	0.039	0.181	0.080	0.074	0.062
2-50	0.091	0.050	0.046	0.030	0.166	0.093	0.060	0.051
2-51	0.091	0.059	0.060	0.017	0.180	0.107	0.063	0.070
2-52	0.077	0.051	0.059	0.035	0.187	0.103	0.080	0.056
2-53	0.074	0.057	0.052	0.042	0.187	0.114	0.077	0.062
2-54	0.077	0.053	0.068	0.044	0.187	0.095	0.077	0.067
2-55	0.071	0.042	0.062	0.033	0.191	0.109	0.078	0.060
2-56	0.075	0.060	0.057	0.016	0.178	0.087	0.069	0.060
2-57	0.065	0.050	0.048	0.042	0.179	0.092	0.061	0.064
2-58	0.055	0.059	0.051	0.042	0.173	0.084	0.062	0.059
2-59	0.065	0.057	0.047	0.041	0.196	0.096	0.073	0.050
2-60	0.067	0.047	0.055	0.026	0.178	0.094	0.063	0.048
2-61	0.060	0.043	0.038	0.038	0.178	0.094	0.056	0.044
2-62	0.058	0.055	0.058	0.035	0.173	0.085	0.081	0.057
2-63	0.085	0.059	0.057	0.047	0.169	0.088	0.048	0.047

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
2-42	0.041	0.171	0.105	0.059	0.052	0.227	0.100	0.042
2-43	0.057	0.182	0.103	0.077	0.059	0.249	0.113	0.057
2-44	0.043	0.177	0.110	0.084	0.043	0.230	0.093	0.049
2-45	0.037	0.179	0.095	0.057	0.032	0.231	0.101	0.058
2-46	0.024	0.173	0.093	0.082	0.043	0.227	0.116	0.047
2-47	0.031	0.151	0.083	0.083	0.040	0.233	0.103	0.044
2-48	0.042	0.175	0.092	0.070	0.056	0.214	0.104	0.054
2-49	0.045	0.171	0.104	0.072	0.043	0.231	0.100	0.056
2-50	0.033	0.168	0.098	0.080	0.038	0.227	0.104	0.065
2-51	0.039	0.186	0.099	0.079	0.048	0.232	0.119	0.050
2-52	0.043	0.168	0.107	0.076	0.044	0.245	0.124	0.059
2-53	0.054	0.171	0.097	0.070	0.040	0.246	0.111	0.041
2-54	0.042	0.173	0.100	0.091	0.062	0.229	0.126	0.071
2-55	0.047	0.192	0.104	0.078	0.041	0.219	0.118	0.066
2-56	0.034	0.174	0.119	0.082	0.045	0.251	0.096	0.055
2-57	0.039	0.168	0.098	0.084	0.044	0.224	0.114	0.052
2-58	0.028	0.157	0.090	0.071	0.052	0.244	0.113	0.066
2-59	0.049	0.174	0.102	0.071	0.051	0.230	0.101	0.061
2-60	0.034	0.177	0.087	0.064	0.042	0.230	0.106	0.060
2-61	0.028	0.189	0.090	0.072	0.041	0.235	0.103	0.046
2-62	0.049	0.175	0.096	0.074	0.032	0.227	0.099	0.057
2-63	0.028	0.174	0.078	0.061	0.046	0.224	0.108	0.041

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
2-42	0.177	0.068	0.075	1.36E-02	7.31E-02	7.38E-04	7.18E-08	1.09E-07
2-43	0.189	0.066	0.073	5.49E-03	2.41E-02	2.42E-05	7.81E-08	1.18E-07
2-44	0.178	0.051	0.068	7.75E-03	3.21E-02	2.11E-04	7.38E-08	1.22E-07
2-45	0.199	0.061	0.089	1.22E-02	4.92E-02	1.79E-06	7.55E-08	1.20E-07
2-46	0.198	0.051	0.077	7.79E-03	2.27E-02	7.89E-05	8.92E-08	1.27E-07
2-47	0.188	0.059	0.071	2.47E-02	8.15E-02	4.57E-04	9.16E-08	1.38E-07
2-48	0.190	0.056	0.070	3.83E-03	1.69E-02	2.27E-07	8.53E-08	1.30E-07
2-49	0.185	0.073	0.071	6.21E-03	3.00E-02	5.67E-06	9.44E-08	1.44E-07
2-50	0.185	0.066	0.088	4.08E-03	1.32E-02	8.14E-05	7.91E-08	1.12E-07
2-51	0.196	0.062	0.094	2.48E-03	1.13E-02	3.96E-06	5.23E-08	8.02E-08
2-52	0.203	0.076	0.082	2.86E-03	1.31E-02	1.21E-05	5.32E-08	7.94E-08
2-53	0.194	0.072	0.107	8.47E-03	2.53E-02	1.05E-03	5.64E-08	8.18E-08
2-54	0.201	0.061	0.083	6.26E-03	1.41E-02	1.27E-03	5.72E-08	7.91E-08
2-55	0.203	0.080	0.098	1.16E-02	3.14E-02	6.25E-08	5.26E-08	8.36E-08
2-56	0.190	0.063	0.090	4.52E-03	1.97E-02	1.05E-06	6.49E-08	7.93E-08
2-57	0.198	0.073	0.087	8.99E-03	2.46E-02	1.11E-03	6.44E-08	7.91E-08
2-58	0.189	0.092	0.084	3.10E-03	1.24E-02	3.87E-05	6.52E-08	7.80E-08
2-59	0.177	0.080	0.089	1.61E-02	3.34E-02	6.54E-04	5.71E-08	7.63E-08
2-60	0.186	0.076	0.075	2.31E-02	5.63E-02	7.95E-05	6.70E-08	7.64E-08
2-61	0.183	0.071	0.098	4.68E-03	1.31E-02	3.54E-04	8.54E-08	1.17E-07
2-62	0.185	0.082	0.094	2.68E-03	1.50E-02	1.34E-05	8.73E-08	1.13E-07
2-63	0.196	0.061	0.089	6.72E-03	2.44E-02	9.69E-05	8.18E-08	1.06E-07

Case No.	ck
	$\Delta_{\min,FFT}$
2-42	3.03E-08
2-43	3.56E-08
2-44	3.46E-08
2-45	3.95E-08
2-46	3.56E-08
2-47	3.45E-08
2-48	3.48E-08
2-49	3.29E-08
2-50	3.39E-08
2-51	3.77E-08
2-52	4.13E-08
2-53	4.04E-08
2-54	4.05E-08
2-55	3.14E-08
2-56	3.73E-08
2-57	4.00E-08
2-58	4.08E-08
2-59	3.72E-08
2-60	4.10E-08
2-61	4.33E-08
2-62	4.84E-08
2-63	4.82E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
2-64	None	80 cm	30 cm rectangle	15	10	11.59	0.91
2-65	None	80 cm	30 cm rectangle	20	10	11.64	0.91
2-66	None	80 cm	30 cm rectangle	20	15	11.69	0.92
2-67	None	80 cm	30 cm rectangle	15	15	11.63	0.91
2-68	None	80 cm	30 cm rectangle	10	15	11.44	0.90
2-69	None	80 cm	30 cm rectangle	5	15	11.44	0.90
2-70	None	80 cm	30 cm rectangle	0	15	11.29	0.89
2-71	None	80 cm	30 cm rectangle	0	20	10.99	0.86
2-72	None	80 cm	30 cm rectangle	5	20	11.12	0.87
2-73	None	80 cm	30 cm rectangle	10	20	11.26	0.88
2-74	None	80 cm	30 cm rectangle	15	20	11.37	0.89
2-75	None	80 cm	30 cm rectangle	20	20	11.30	0.89
2-76	None	100 cm	30 cm rectangle	0	0	11.40	0.89
2-77	None	100 cm	30 cm rectangle	5	0	11.42	0.90
2-78	None	100 cm	30 cm rectangle	10	0	11.43	0.90
2-79	None	100 cm	30 cm rectangle	15	0	11.52	0.90
2-80	None	100 cm	30 cm rectangle	20	0	11.56	0.91
2-81	None	100 cm	30 cm rectangle	20	5	11.34	0.89
2-82	None	100 cm	30 cm rectangle	15	5	11.35	0.89
2-83	None	100 cm	30 cm rectangle	10	5	11.35	0.89
2-84	None	100 cm	30 cm rectangle	5	5	11.35	0.89
2-85	None	100 cm	30 cm rectangle	0	5	11.20	0.88

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
2-64	0.34	2.43	-0.23	0.38	29.2%	4	5	A
2-65	0.35	2.53	-0.22	0.31	28.7%	4	5	A
2-66	0.42	4.24	-0.28	0.90	33.0%	4	5	A
2-67	0.43	4.48	-0.27	0.72	35.2%	4	5	A
2-68	0.40	3.70	-0.26	0.62	33.9%	4	5	A
2-69	0.37	3.19	-0.26	0.62	32.8%	4	5	A
2-70	0.37	3.15	-0.23	0.36	32.4%	4	5	A
2-71	0.43	4.46	-0.25	0.51	36.4%	4	5	A
2-72	0.44	4.73	-0.25	0.50	36.7%	4	5	A
2-73	0.44	4.62	-0.24	0.39	35.3%	4	5	A
2-74	0.46	4.94	-0.24	0.39	35.0%	4	5	A
2-75	0.45	4.86	-0.25	0.54	36.3%	4	5	A
2-76	0.16	0.08	-0.08	0.00	20.1%	2	2	C
2-77	0.16	0.09	-0.08	0.00	20.0%	2	2	C
2-78	0.17	0.12	-0.08	0.00	20.5%	2	2	C
2-79	0.18	0.17	-0.11	0.00	21.1%	2	3	C
2-80	0.19	0.22	-0.09	0.00	20.0%	3	3	B
2-81	0.27	1.11	-0.16	0.08	24.6%	4	4	B
2-82	0.25	0.87	-0.17	0.11	25.0%	4	4	B
2-83	0.25	0.83	-0.17	0.09	24.2%	4	4	B
2-84	0.25	0.84	-0.17	0.08	24.0%	4	4	B
2-85	0.22	0.46	-0.16	0.07	24.0%	4	3	B

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
2-64	0.414	1.427	0.046	0.619	0.006	0.061	0.029	0.397
2-65	0.445	1.533	0.087	0.688	0.023	0.084	0.013	0.424
2-66	0.750	3.238	0.186	0.100	0.122	0.106	0.695	0.251
2-67	0.803	3.475	0.131	0.284	0.197	0.138	0.790	0.285
2-68	0.655	2.704	0.086	0.376	0.155	0.045	0.482	0.314
2-69	0.561	2.192	0.073	0.384	0.114	0.014	0.277	0.322
2-70	0.553	2.152	0.056	0.640	0.101	0.019	0.261	0.404
2-71	0.795	3.465	0.033	0.486	0.239	0.134	0.786	0.348
2-72	0.854	3.725	0.034	0.505	0.248	0.171	0.890	0.347
2-73	0.829	3.621	0.017	0.605	0.202	0.155	0.849	0.379
2-74	0.897	3.935	0.020	0.608	0.189	0.198	0.974	0.381
2-75	0.879	3.856	0.045	0.460	0.236	0.187	0.942	0.340
2-76	0.066	0.610	0.505	0.995	0.608	0.134	0.610	0.399
2-77	0.052	0.762	0.502	0.994	0.603	0.151	0.762	0.396
2-78	0.006	1.317	0.516	0.996	0.641	0.207	1.317	0.413
2-79	0.058	2.319	0.373	0.933	0.687	0.144	2.319	0.492
2-80	0.001	0.251	0.522	0.998	0.144	0.094	0.251	0.568
2-81	0.119	0.108	0.313	0.923	0.164	0.161	0.108	0.485
2-82	0.049	0.133	0.277	0.894	0.150	0.199	0.133	0.458
2-83	0.030	0.170	0.298	0.905	0.175	0.177	0.170	0.473
2-84	0.032	0.162	0.311	0.921	0.183	0.180	0.162	0.483
2-85	0.098	0.538	0.330	0.931	0.183	0.031	0.538	0.234

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
2-64	0.231	0.018	0.313	0.123	0.080	0.080	0.014	0.028
2-65	0.244	0.040	0.343	0.138	0.088	0.087	0.015	0.028
2-66	0.132	0.260	0.146	0.010	0.123	0.122	0.034	0.033
2-67	0.074	0.298	0.185	0.055	0.126	0.123	0.035	0.032
2-68	0.107	0.192	0.218	0.018	0.105	0.104	0.017	0.022
2-69	0.138	0.124	0.228	0.017	0.098	0.097	0.015	0.024
2-70	0.148	0.118	0.320	0.029	0.092	0.091	0.008	0.021
2-71	0.042	0.292	0.256	0.092	0.120	0.117	0.028	0.025
2-72	0.034	0.335	0.256	0.101	0.131	0.128	0.038	0.033
2-73	0.070	0.317	0.292	0.060	0.126	0.123	0.034	0.030
2-74	0.080	0.366	0.295	0.049	0.139	0.135	0.046	0.041
2-75	0.044	0.353	0.248	0.090	0.139	0.136	0.047	0.042
2-76	0.435	0.111	0.411	0.407	0.025	0.028	0.045	0.050
2-77	0.432	0.128	0.408	0.403	0.029	0.032	0.050	0.054
2-78	0.465	0.183	0.425	0.436	0.035	0.039	0.058	0.062
2-79	0.004	0.259	0.253	0.476	0.044	0.049	0.026	0.028
2-80	0.047	0.144	0.591	0.099	0.037	0.040	0.028	0.030
2-81	0.232	0.208	0.258	0.105	0.041	0.042	0.020	0.029
2-82	0.219	0.133	0.219	0.124	0.029	0.031	0.028	0.036
2-83	0.242	0.112	0.241	0.091	0.021	0.024	0.033	0.039
2-84	0.249	0.115	0.256	0.081	0.020	0.023	0.033	0.039
2-85	0.144	0.025	0.276	0.081	0.012	0.016	0.021	0.022

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
2-64	0.023	0.062	0.062	0.032	0.97	0.20	10.92	0.954
2-65	0.031	0.064	0.064	0.031	0.97	0.20	10.89	0.945
2-66	0.066	0.118	0.119	0.043	0.98	0.21	10.89	0.955
2-67	0.069	0.141	0.142	0.059	0.98	0.22	10.88	0.946
2-68	0.047	0.118	0.119	0.050	0.99	0.22	10.81	0.952
2-69	0.040	0.101	0.102	0.042	0.98	0.21	10.77	0.954
2-70	0.033	0.101	0.101	0.039	0.99	0.22	10.72	0.952
2-71	0.062	0.153	0.153	0.066	0.99	0.24	10.39	0.948
2-72	0.074	0.161	0.162	0.071	0.99	0.24	10.40	0.941
2-73	0.069	0.150	0.150	0.063	0.99	0.24	10.58	0.946
2-74	0.082	0.154	0.154	0.060	0.98	0.24	10.55	0.940
2-75	0.083	0.161	0.162	0.065	0.98	0.24	10.45	0.943
2-76	0.043	0.053	0.053	0.052	0.96	0.17	10.89	0.896
2-77	0.048	0.054	0.054	0.052	0.96	0.17	10.86	0.895
2-78	0.055	0.062	0.062	0.057	0.96	0.18	10.84	0.882
2-79	0.066	0.068	0.068	0.058	0.96	0.18	10.88	0.889
2-80	0.026	0.022	0.022	0.016	0.96	0.17	10.90	0.891
2-81	0.055	0.021	0.020	0.041	0.97	0.19	10.76	0.945
2-82	0.042	0.023	0.023	0.039	0.97	0.19	10.82	0.945
2-83	0.034	0.030	0.030	0.043	0.98	0.18	10.91	0.960
2-84	0.033	0.032	0.031	0.045	0.98	0.18	10.93	0.960
2-85	0.014	0.049	0.049	0.044	0.98	0.18	10.81	0.948

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
2-64	0.949	0.036	0.901	0.891	0.615	0.625	0.588	0.034
2-65	0.939	0.040	0.886	0.875	0.669	0.625	0.587	0.032
2-66	0.951	0.041	0.889	0.878	0.754	0.674	0.641	0.041
2-67	0.941	0.046	0.875	0.862	0.820	0.590	0.549	0.051
2-68	0.947	0.042	0.890	0.878	0.720	0.600	0.560	0.047
2-69	0.949	0.039	0.895	0.885	0.669	0.641	0.605	0.041
2-70	0.947	0.040	0.894	0.883	0.669	0.616	0.577	0.038
2-71	0.943	0.046	0.879	0.867	0.767	0.589	0.547	0.049
2-72	0.935	0.050	0.865	0.851	0.832	0.547	0.502	0.054
2-73	0.940	0.047	0.873	0.860	0.812	0.524	0.476	0.052
2-74	0.934	0.050	0.861	0.847	0.867	0.532	0.485	0.051
2-75	0.937	0.048	0.865	0.852	0.840	0.596	0.555	0.049
2-76	0.885	0.031	0.864	0.851	0.403	0.747	0.721	0.007
2-77	0.884	0.031	0.863	0.849	0.409	0.781	0.759	0.006
2-78	0.870	0.035	0.847	0.831	0.452	0.810	0.790	0.006
2-79	0.877	0.035	0.852	0.837	0.468	0.842	0.826	0.007
2-80	0.880	0.036	0.852	0.837	0.491	0.805	0.785	0.006
2-81	0.940	0.033	0.902	0.892	0.506	0.693	0.662	0.018
2-82	0.940	0.032	0.905	0.895	0.477	0.714	0.686	0.018
2-83	0.956	0.027	0.925	0.918	0.419	0.765	0.742	0.015
2-84	0.956	0.027	0.925	0.917	0.421	0.709	0.680	0.017
2-85	0.943	0.028	0.915	0.907	0.399	0.740	0.714	0.015

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
2-64	0.563	0.519	0.036	6.38	6.39	7.02	7.41	8.23
2-65	0.564	0.520	0.034	6.36	6.42	6.93	7.26	8.12
2-66	0.598	0.558	0.046	5.72	5.73	6.34	6.76	7.76
2-67	0.516	0.468	0.056	5.75	5.64	6.16	6.59	7.62
2-68	0.530	0.482	0.051	5.89	5.85	6.42	6.82	7.79
2-69	0.571	0.528	0.044	6.01	6.00	6.61	7.00	7.89
2-70	0.553	0.509	0.041	6.02	5.96	6.55	6.97	7.90
2-71	0.521	0.473	0.053	5.45	5.40	5.95	6.33	7.28
2-72	0.480	0.428	0.058	5.50	5.27	5.82	6.17	7.19
2-73	0.459	0.405	0.056	5.55	5.44	6.00	6.38	7.36
2-74	0.468	0.414	0.054	5.47	5.39	5.91	6.22	7.19
2-75	0.527	0.480	0.053	5.43	5.35	5.85	6.19	7.17
2-76	0.728	0.701	0.007	8.38	8.55	8.83	8.95	9.34
2-77	0.762	0.738	0.006	8.33	8.50	8.79	8.90	9.28
2-78	0.792	0.771	0.006	8.26	8.41	8.68	8.78	9.20
2-79	0.820	0.802	0.007	8.16	8.26	8.59	8.73	9.17
2-80	0.787	0.766	0.006	8.05	8.17	8.50	8.62	9.11
2-81	0.649	0.614	0.019	6.94	7.06	7.57	7.87	8.56
2-82	0.669	0.636	0.019	7.14	7.28	7.79	8.06	8.71
2-83	0.725	0.698	0.016	7.15	7.33	7.92	8.20	8.88
2-84	0.666	0.632	0.018	7.18	7.32	7.87	8.19	8.87
2-85	0.699	0.668	0.016	7.47	7.65	8.16	8.38	8.98

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
2-64	8.79	9.27	9.74	10.34	10.74	11.31	11.59	26.8%
2-65	8.69	9.16	9.67	10.31	10.75	11.34	11.64	26.7%
2-66	8.36	8.93	9.53	10.26	10.74	11.36	11.69	31.1%
2-67	8.28	8.93	9.55	10.29	10.77	11.42	11.63	31.8%
2-68	8.45	9.01	9.56	10.24	10.68	11.29	11.44	31.0%
2-69	8.50	9.04	9.55	10.17	10.61	11.18	11.44	30.6%
2-70	8.48	9.00	9.50	10.16	10.59	11.18	11.29	29.9%
2-71	7.92	8.50	9.07	9.86	10.35	10.98	10.99	33.5%
2-72	7.87	8.47	9.10	9.87	10.34	10.95	11.12	32.7%
2-73	8.01	8.62	9.24	10.00	10.54	11.20	11.26	31.4%
2-74	7.86	8.48	9.17	10.00	10.51	11.18	11.37	31.1%
2-75	7.84	8.46	9.11	9.88	10.36	11.00	11.30	33.4%
2-76	9.55	9.81	10.12	10.56	10.82	11.26	11.40	19.9%
2-77	9.54	9.78	10.07	10.49	10.76	11.25	11.42	20.0%
2-78	9.42	9.69	10.00	10.49	10.79	11.27	11.43	20.5%
2-79	9.40	9.66	10.00	10.47	10.80	11.31	11.52	21.1%
2-80	9.38	9.64	9.97	10.50	10.84	11.35	11.56	20.1%
2-81	8.97	9.31	9.70	10.23	10.59	11.16	11.34	23.6%
2-82	9.09	9.44	9.79	10.33	10.68	11.19	11.35	24.1%
2-83	9.26	9.57	9.93	10.42	10.72	11.22	11.35	23.8%
2-84	9.31	9.63	9.99	10.44	10.72	11.20	11.35	23.0%
2-85	9.29	9.57	9.88	10.38	10.66	11.18	11.20	23.3%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
2-64	32.0%	31.1%	30.6%	25.7%	24.4%	22.0%	21.5%	19.8%
2-65	30.4%	30.1%	30.0%	25.8%	25.2%	22.4%	21.7%	20.0%
2-66	36.1%	34.8%	33.8%	28.0%	26.8%	23.9%	22.5%	20.7%
2-67	38.4%	38.3%	37.5%	30.9%	29.4%	26.0%	24.5%	21.9%
2-68	36.5%	36.5%	36.3%	30.3%	28.4%	25.2%	23.8%	21.2%
2-69	35.2%	34.4%	34.2%	29.4%	27.7%	24.3%	23.0%	20.9%
2-70	34.7%	33.8%	34.2%	28.8%	27.9%	24.8%	24.6%	22.4%
2-71	38.6%	38.0%	38.6%	33.2%	32.0%	28.5%	27.1%	23.4%
2-72	39.7%	39.1%	39.9%	33.3%	32.4%	28.5%	26.2%	23.4%
2-73	37.8%	37.3%	38.6%	32.8%	31.7%	28.0%	26.4%	23.6%
2-74	37.4%	37.1%	37.9%	32.4%	31.1%	27.5%	26.3%	22.9%
2-75	38.8%	38.1%	38.7%	32.7%	31.5%	28.1%	26.4%	23.4%
2-76	20.3%	20.2%	20.3%	18.5%	18.9%	18.1%	18.4%	17.8%
2-77	20.3%	19.9%	20.0%	18.7%	19.0%	18.0%	18.4%	17.8%
2-78	20.7%	20.4%	20.1%	18.9%	19.5%	18.8%	19.1%	18.3%
2-79	21.6%	21.0%	20.6%	19.1%	19.5%	18.5%	18.7%	18.2%
2-80	20.2%	20.0%	19.9%	18.2%	18.6%	18.0%	18.3%	17.8%
2-81	25.5%	25.5%	25.1%	22.0%	21.3%	20.1%	20.1%	19.3%
2-82	26.1%	25.7%	25.5%	21.9%	21.7%	20.1%	20.4%	19.0%
2-83	25.4%	24.7%	24.4%	21.2%	20.7%	19.6%	19.4%	18.6%
2-84	25.5%	24.8%	24.2%	21.4%	20.7%	19.6%	19.4%	18.7%
2-85	25.2%	24.4%	24.3%	21.5%	21.0%	19.6%	19.5%	18.7%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
2-64	18.7%	17.9%	17.7%	77.8	80.0	87.4	102.7	121.5
2-65	18.3%	17.5%	17.3%	89.4	97.4	94.6	100.0	118.8
2-66	18.9%	17.6%	16.5%	67.9	80.7	78.6	83.7	102.8
2-67	19.8%	18.4%	18.0%	69.9	68.9	73.8	84.8	104.1
2-68	19.7%	18.4%	18.6%	77.5	85.5	97.6	117.7	131.7
2-69	19.3%	18.6%	18.0%	79.8	93.7	84.9	91.8	107.9
2-70	20.5%	18.9%	19.0%	71.5	76.4	83.5	87.3	105.2
2-71	20.8%	19.8%	19.7%	54.6	61.8	70.2	81.7	105.8
2-72	21.1%	20.0%	19.6%	62.3	60.0	65.4	73.3	89.6
2-73	21.0%	19.2%	18.4%	68.8	78.3	75.3	78.5	104.2
2-74	20.7%	19.3%	18.8%	66.6	73.8	76.4	76.2	93.1
2-75	21.4%	20.3%	18.9%	67.2	77.3	87.8	88.4	108.7
2-76	17.1%	17.0%	17.3%	108.2	114.8	125.0	132.1	145.2
2-77	17.1%	16.9%	17.2%	106.7	110.4	105.4	113.0	119.6
2-78	17.7%	17.3%	17.4%	109.6	115.7	106.0	104.5	113.2
2-79	17.7%	17.2%	17.1%	125.5	127.6	123.7	118.1	123.0
2-80	17.0%	16.6%	17.1%	143.9	173.5	161.6	124.8	121.2
2-81	18.2%	17.2%	17.5%	97.4	101.5	107.7	113.2	120.4
2-82	18.2%	17.9%	17.3%	93.1	96.7	90.6	94.4	107.5
2-83	18.1%	17.5%	17.9%	91.1	104.3	113.6	124.3	144.2
2-84	17.8%	17.2%	17.3%	95.0	108.7	102.5	112.3	124.6
2-85	18.0%	17.6%	17.5%	102.5	105.8	104.8	108.0	115.2

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
2-64	125.2	135.3	162.9	166.3	124.7	114.3	110.7	44.1
2-65	118.2	124.7	110.8	117.9	121.2	119.6	111.1	44.8
2-66	101.6	112.6	115.1	123.5	130.8	124.7	112.3	37.2
2-67	103.9	117.4	115.3	119.7	126.3	123.9	106.9	45.2
2-68	124.7	136.3	127.6	132.2	132.3	127.2	124.0	43.0
2-69	106.7	111.7	110.8	120.7	128.2	122.8	109.5	45.4
2-70	106.9	118.0	120.0	125.4	130.2	123.9	115.9	39.0
2-71	116.2	141.9	139.3	139.7	138.4	130.6	114.0	39.0
2-72	97.2	110.9	114.5	118.1	119.0	111.2	102.3	41.5
2-73	102.1	129.5	109.2	114.2	116.3	111.8	98.3	46.3
2-74	96.4	110.2	105.1	117.4	124.0	119.7	106.5	45.9
2-75	115.9	125.2	118.6	118.5	122.3	122.8	113.1	37.4
2-76	141.9	153.0	118.6	119.6	127.9	130.2	120.5	46.7
2-77	105.2	108.4	104.1	110.7	116.1	113.1	110.5	48.3
2-78	105.2	113.0	105.2	113.5	124.0	124.5	112.0	44.4
2-79	109.0	112.2	107.4	113.3	124.2	122.2	121.4	46.2
2-80	106.1	101.9	96.9	102.2	112.4	109.3	106.9	42.6
2-81	105.0	113.8	110.1	115.1	119.1	113.4	113.9	40.3
2-82	103.9	114.7	120.2	130.4	138.8	127.7	117.3	44.5
2-83	138.3	134.0	116.4	120.1	128.2	128.7	122.7	43.9
2-84	123.6	136.5	126.9	126.3	126.3	117.8	111.5	44.8
2-85	110.8	113.4	107.7	113.0	123.9	120.4	109.5	51.3

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
2-64	37.5	0.180	0.119	0.109	0.080	0.075	0.061	0.063
2-65	36.9	0.189	0.157	0.114	0.078	0.104	0.077	0.066
2-66	34.0	0.182	0.131	0.103	0.088	0.092	0.064	0.053
2-67	32.2	0.200	0.171	0.131	0.081	0.076	0.059	0.065
2-68	36.1	0.189	0.130	0.117	0.073	0.088	0.051	0.060
2-69	30.8	0.193	0.131	0.103	0.072	0.076	0.069	0.063
2-70	37.8	0.182	0.138	0.117	0.083	0.076	0.068	0.058
2-71	34.8	0.177	0.146	0.124	0.099	0.101	0.058	0.073
2-72	34.8	0.188	0.152	0.119	0.085	0.098	0.067	0.056
2-73	36.4	0.188	0.150	0.118	0.098	0.082	0.069	0.077
2-74	38.6	0.183	0.149	0.106	0.096	0.068	0.066	0.078
2-75	39.1	0.180	0.139	0.113	0.092	0.070	0.052	0.058
2-76	35.4	0.166	0.113	0.084	0.061	0.049	0.043	0.048
2-77	39.8	0.183	0.119	0.093	0.087	0.067	0.047	0.060
2-78	39.5	0.162	0.104	0.099	0.074	0.082	0.047	0.049
2-79	39.3	0.178	0.118	0.089	0.078	0.068	0.054	0.066
2-80	36.5	0.174	0.103	0.111	0.063	0.068	0.062	0.056
2-81	37.1	0.167	0.117	0.110	0.085	0.070	0.057	0.046
2-82	38.5	0.165	0.118	0.106	0.075	0.072	0.066	0.043
2-83	36.0	0.154	0.104	0.096	0.086	0.085	0.047	0.059
2-84	35.2	0.168	0.132	0.092	0.064	0.070	0.059	0.073
2-85	39.0	0.147	0.126	0.097	0.062	0.082	0.052	0.055

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
2-64	0.038	0.034	0.042	0.033	0.169	0.112	0.098	0.051
2-65	0.056	0.045	0.053	0.050	0.181	0.119	0.095	0.075
2-66	0.051	0.033	0.034	0.044	0.186	0.119	0.106	0.082
2-67	0.061	0.035	0.046	0.034	0.192	0.130	0.105	0.076
2-68	0.049	0.035	0.041	0.034	0.187	0.114	0.090	0.083
2-69	0.043	0.032	0.038	0.037	0.191	0.114	0.097	0.073
2-70	0.048	0.043	0.027	0.019	0.169	0.122	0.093	0.073
2-71	0.051	0.036	0.030	0.036	0.184	0.117	0.101	0.085
2-72	0.063	0.040	0.051	0.030	0.186	0.122	0.083	0.086
2-73	0.043	0.044	0.043	0.044	0.174	0.128	0.105	0.068
2-74	0.061	0.051	0.057	0.051	0.183	0.123	0.096	0.074
2-75	0.048	0.024	0.037	0.035	0.191	0.134	0.107	0.073
2-76	0.036	0.029	0.039	0.026	0.193	0.090	0.081	0.074
2-77	0.041	0.041	0.040	0.037	0.159	0.113	0.078	0.070
2-78	0.043	0.034	0.034	0.043	0.188	0.124	0.084	0.069
2-79	0.058	0.038	0.039	0.037	0.178	0.108	0.083	0.060
2-80	0.048	0.043	0.037	0.018	0.168	0.115	0.093	0.058
2-81	0.068	0.053	0.045	0.035	0.177	0.143	0.088	0.075
2-82	0.043	0.052	0.044	0.037	0.182	0.117	0.094	0.074
2-83	0.062	0.041	0.042	0.035	0.176	0.114	0.093	0.071
2-84	0.049	0.042	0.040	0.038	0.182	0.112	0.086	0.048
2-85	0.049	0.050	0.033	0.039	0.178	0.099	0.075	0.067

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
2-64	0.064	0.052	0.044	0.047	0.049	0.028	0.180	0.106
2-65	0.075	0.055	0.052	0.037	0.030	0.045	0.208	0.104
2-66	0.059	0.053	0.059	0.054	0.045	0.022	0.193	0.102
2-67	0.068	0.055	0.042	0.042	0.050	0.040	0.227	0.118
2-68	0.071	0.061	0.045	0.041	0.052	0.022	0.229	0.108
2-69	0.072	0.061	0.061	0.040	0.017	0.033	0.219	0.115
2-70	0.067	0.064	0.042	0.058	0.050	0.039	0.187	0.119
2-71	0.070	0.050	0.052	0.047	0.040	0.032	0.195	0.120
2-72	0.060	0.041	0.052	0.045	0.034	0.016	0.206	0.110
2-73	0.067	0.054	0.049	0.043	0.056	0.041	0.188	0.144
2-74	0.085	0.041	0.062	0.056	0.037	0.047	0.187	0.108
2-75	0.065	0.048	0.048	0.038	0.029	0.027	0.213	0.112
2-76	0.063	0.049	0.053	0.051	0.037	0.038	0.222	0.117
2-77	0.056	0.059	0.046	0.032	0.027	0.044	0.213	0.110
2-78	0.060	0.053	0.047	0.038	0.032	0.025	0.189	0.091
2-79	0.062	0.054	0.048	0.047	0.027	0.029	0.201	0.112
2-80	0.072	0.054	0.059	0.033	0.029	0.016	0.205	0.096
2-81	0.069	0.061	0.051	0.041	0.037	0.035	0.203	0.098
2-82	0.066	0.045	0.050	0.035	0.031	0.048	0.205	0.105
2-83	0.050	0.059	0.041	0.045	0.026	0.028	0.195	0.113
2-84	0.061	0.053	0.037	0.048	0.036	0.026	0.186	0.107
2-85	0.069	0.056	0.050	0.053	0.038	0.024	0.209	0.111

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
2-64	0.082	0.083	0.048	0.056	0.055	0.045	0.038	0.183
2-65	0.075	0.060	0.059	0.050	0.041	0.038	0.028	0.166
2-66	0.089	0.084	0.068	0.062	0.044	0.041	0.026	0.177
2-67	0.097	0.062	0.058	0.042	0.048	0.037	0.021	0.179
2-68	0.093	0.069	0.052	0.047	0.034	0.041	0.030	0.190
2-69	0.086	0.080	0.063	0.056	0.050	0.051	0.040	0.187
2-70	0.089	0.059	0.060	0.044	0.051	0.047	0.033	0.175
2-71	0.101	0.070	0.066	0.052	0.035	0.041	0.033	0.180
2-72	0.105	0.070	0.073	0.045	0.037	0.055	0.026	0.194
2-73	0.096	0.084	0.055	0.029	0.027	0.044	0.037	0.176
2-74	0.091	0.075	0.064	0.054	0.044	0.049	0.036	0.178
2-75	0.094	0.069	0.060	0.061	0.042	0.040	0.038	0.181
2-76	0.087	0.059	0.069	0.042	0.047	0.048	0.033	0.200
2-77	0.092	0.074	0.076	0.072	0.038	0.026	0.039	0.190
2-78	0.082	0.076	0.061	0.041	0.045	0.033	0.037	0.194
2-79	0.096	0.052	0.051	0.065	0.031	0.029	0.032	0.184
2-80	0.087	0.056	0.070	0.042	0.032	0.028	0.025	0.194
2-81	0.074	0.061	0.054	0.044	0.043	0.030	0.036	0.188
2-82	0.075	0.056	0.053	0.045	0.044	0.037	0.025	0.186
2-83	0.084	0.064	0.073	0.054	0.039	0.039	0.046	0.178
2-84	0.069	0.056	0.050	0.067	0.050	0.051	0.026	0.181
2-85	0.083	0.080	0.068	0.035	0.047	0.042	0.036	0.175

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
2-64	0.109	0.075	0.064	0.046	0.047	0.049	0.031	0.169
2-65	0.098	0.074	0.065	0.057	0.044	0.044	0.040	0.170
2-66	0.113	0.076	0.058	0.063	0.051	0.043	0.031	0.165
2-67	0.103	0.072	0.065	0.053	0.040	0.042	0.039	0.179
2-68	0.100	0.070	0.063	0.048	0.044	0.035	0.011	0.168
2-69	0.108	0.097	0.070	0.046	0.049	0.046	0.036	0.186
2-70	0.109	0.076	0.056	0.068	0.041	0.035	0.018	0.166
2-71	0.124	0.083	0.077	0.061	0.040	0.034	0.037	0.164
2-72	0.105	0.082	0.082	0.067	0.044	0.054	0.020	0.175
2-73	0.097	0.080	0.059	0.060	0.046	0.043	0.034	0.169
2-74	0.118	0.087	0.067	0.051	0.044	0.044	0.033	0.149
2-75	0.096	0.079	0.067	0.054	0.028	0.043	0.037	0.177
2-76	0.114	0.065	0.066	0.043	0.048	0.047	0.036	0.181
2-77	0.110	0.081	0.058	0.041	0.035	0.032	0.049	0.195
2-78	0.099	0.075	0.089	0.068	0.062	0.053	0.040	0.194
2-79	0.105	0.079	0.080	0.051	0.035	0.049	0.033	0.186
2-80	0.094	0.080	0.065	0.045	0.029	0.040	0.015	0.185
2-81	0.101	0.089	0.060	0.042	0.042	0.042	0.028	0.181
2-82	0.113	0.083	0.066	0.052	0.044	0.046	0.042	0.197
2-83	0.094	0.058	0.065	0.051	0.049	0.047	0.040	0.183
2-84	0.091	0.075	0.077	0.053	0.046	0.035	0.015	0.187
2-85	0.111	0.079	0.066	0.054	0.034	0.044	0.033	0.183

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
2-64	0.109	0.065	0.052	0.049	0.043	0.019	0.199	0.104
2-65	0.091	0.074	0.059	0.042	0.039	0.040	0.197	0.108
2-66	0.113	0.081	0.070	0.059	0.044	0.036	0.202	0.105
2-67	0.095	0.078	0.059	0.048	0.033	0.036	0.186	0.098
2-68	0.095	0.077	0.042	0.038	0.035	0.019	0.193	0.103
2-69	0.108	0.058	0.050	0.063	0.043	0.016	0.181	0.102
2-70	0.102	0.098	0.065	0.039	0.030	0.035	0.201	0.098
2-71	0.125	0.091	0.063	0.066	0.027	0.040	0.181	0.107
2-72	0.119	0.067	0.051	0.053	0.037	0.022	0.181	0.107
2-73	0.103	0.089	0.051	0.041	0.030	0.035	0.193	0.095
2-74	0.128	0.052	0.058	0.050	0.046	0.023	0.174	0.095
2-75	0.102	0.068	0.068	0.054	0.033	0.040	0.188	0.115
2-76	0.098	0.089	0.061	0.056	0.042	0.041	0.219	0.108
2-77	0.101	0.076	0.054	0.046	0.055	0.042	0.205	0.121
2-78	0.125	0.081	0.062	0.045	0.049	0.026	0.218	0.128
2-79	0.109	0.084	0.061	0.053	0.039	0.040	0.202	0.101
2-80	0.103	0.069	0.063	0.057	0.036	0.038	0.205	0.106
2-81	0.108	0.086	0.059	0.051	0.054	0.029	0.198	0.111
2-82	0.114	0.047	0.049	0.047	0.028	0.037	0.218	0.099
2-83	0.102	0.087	0.078	0.062	0.059	0.041	0.215	0.111
2-84	0.102	0.073	0.052	0.060	0.024	0.023	0.192	0.102
2-85	0.101	0.071	0.060	0.036	0.045	0.032	0.207	0.109

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
2-64	0.064	0.057	0.035	0.029	0.155	0.080	0.079	0.059
2-65	0.084	0.045	0.069	0.036	0.177	0.098	0.069	0.039
2-66	0.078	0.048	0.053	0.041	0.163	0.086	0.083	0.051
2-67	0.072	0.046	0.027	0.028	0.170	0.091	0.059	0.041
2-68	0.090	0.063	0.034	0.035	0.176	0.084	0.071	0.058
2-69	0.073	0.043	0.037	0.013	0.171	0.101	0.088	0.060
2-70	0.069	0.069	0.046	0.036	0.170	0.100	0.070	0.046
2-71	0.071	0.032	0.043	0.032	0.167	0.087	0.068	0.046
2-72	0.073	0.046	0.050	0.013	0.161	0.100	0.067	0.056
2-73	0.074	0.040	0.043	0.032	0.168	0.091	0.082	0.042
2-74	0.060	0.056	0.038	0.026	0.167	0.099	0.076	0.067
2-75	0.075	0.053	0.043	0.038	0.158	0.114	0.070	0.056
2-76	0.069	0.055	0.048	0.030	0.186	0.097	0.083	0.065
2-77	0.074	0.063	0.057	0.033	0.188	0.073	0.067	0.068
2-78	0.092	0.065	0.066	0.038	0.196	0.117	0.085	0.058
2-79	0.078	0.063	0.043	0.041	0.173	0.093	0.088	0.057
2-80	0.083	0.072	0.077	0.037	0.178	0.080	0.074	0.069
2-81	0.073	0.066	0.055	0.039	0.183	0.095	0.080	0.065
2-82	0.058	0.047	0.056	0.053	0.177	0.117	0.066	0.055
2-83	0.088	0.051	0.063	0.037	0.169	0.100	0.066	0.056
2-84	0.069	0.052	0.060	0.029	0.175	0.094	0.084	0.060
2-85	0.076	0.064	0.060	0.023	0.197	0.080	0.073	0.046

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
2-64	0.031	0.182	0.107	0.082	0.051	0.227	0.123	0.058
2-65	0.023	0.179	0.103	0.069	0.048	0.225	0.115	0.058
2-66	0.046	0.152	0.098	0.065	0.045	0.219	0.104	0.053
2-67	0.039	0.176	0.096	0.058	0.035	0.217	0.095	0.038
2-68	0.029	0.164	0.086	0.065	0.045	0.213	0.107	0.048
2-69	0.024	0.171	0.100	0.069	0.028	0.210	0.096	0.076
2-70	0.033	0.155	0.083	0.079	0.024	0.222	0.093	0.055
2-71	0.034	0.161	0.093	0.054	0.019	0.215	0.094	0.060
2-72	0.042	0.155	0.088	0.061	0.034	0.207	0.098	0.043
2-73	0.038	0.156	0.075	0.076	0.043	0.225	0.094	0.048
2-74	0.043	0.160	0.100	0.052	0.034	0.233	0.103	0.055
2-75	0.040	0.167	0.103	0.067	0.043	0.230	0.122	0.065
2-76	0.045	0.173	0.094	0.077	0.054	0.239	0.113	0.066
2-77	0.038	0.173	0.110	0.076	0.050	0.239	0.105	0.082
2-78	0.046	0.169	0.097	0.072	0.062	0.229	0.098	0.082
2-79	0.047	0.195	0.116	0.088	0.051	0.227	0.107	0.078
2-80	0.025	0.173	0.095	0.064	0.034	0.230	0.112	0.054
2-81	0.050	0.163	0.100	0.086	0.054	0.234	0.098	0.080
2-82	0.053	0.174	0.095	0.074	0.047	0.228	0.117	0.059
2-83	0.047	0.176	0.110	0.078	0.046	0.205	0.119	0.046
2-84	0.038	0.175	0.097	0.072	0.054	0.236	0.121	0.052
2-85	0.032	0.180	0.094	0.081	0.060	0.243	0.103	0.071

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
2-64	0.202	0.070	0.078	7.07E-03	1.49E-02	2.09E-05	8.18E-08	1.17E-07
2-65	0.194	0.057	0.086	3.56E-03	9.49E-03	1.12E-05	7.74E-08	1.02E-07
2-66	0.187	0.060	0.061	1.71E-02	5.41E-02	3.77E-05	8.75E-08	1.21E-07
2-67	0.182	0.059	0.062	2.08E-02	6.29E-02	7.29E-06	1.15E-07	1.66E-07
2-68	0.196	0.058	0.071	4.82E-03	1.98E-02	9.10E-05	1.10E-07	1.67E-07
2-69	0.187	0.075	0.064	1.63E-02	5.98E-02	1.85E-05	1.00E-07	1.46E-07
2-70	0.171	0.064	0.072	1.43E-02	3.61E-02	4.51E-04	1.07E-07	1.43E-07
2-71	0.190	0.080	0.069	1.08E-02	3.36E-02	1.82E-03	1.23E-07	1.82E-07
2-72	0.183	0.067	0.092	1.07E-02	5.25E-02	9.17E-05	1.23E-07	1.87E-07
2-73	0.175	0.060	0.084	4.26E-02	9.92E-02	1.04E-03	1.22E-07	1.83E-07
2-74	0.185	0.068	0.070	4.47E-02	1.99E-01	2.05E-05	1.11E-07	1.59E-07
2-75	0.191	0.051	0.082	4.86E-03	2.22E-02	1.11E-04	1.18E-07	1.66E-07
2-76	0.205	0.067	0.081	1.63E-03	4.85E-03	2.83E-05	4.89E-08	6.80E-08
2-77	0.179	0.068	0.106	8.42E-03	3.76E-02	1.24E-04	4.76E-08	6.59E-08
2-78	0.179	0.085	0.089	3.49E-03	1.18E-02	1.01E-04	5.15E-08	7.02E-08
2-79	0.191	0.075	0.085	2.42E-03	5.41E-03	2.13E-05	5.15E-08	6.69E-08
2-80	0.199	0.090	0.079	3.12E-03	1.16E-02	1.60E-04	4.43E-08	6.73E-08
2-81	0.188	0.087	0.093	1.15E-03	4.87E-03	1.58E-04	5.84E-08	6.94E-08
2-82	0.191	0.070	0.093	2.47E-03	8.05E-03	6.18E-06	6.40E-08	7.87E-08
2-83	0.189	0.072	0.094	8.45E-03	6.46E-02	1.32E-04	6.05E-08	7.55E-08
2-84	0.191	0.070	0.087	1.07E-02	3.33E-02	4.79E-05	5.92E-08	6.91E-08
2-85	0.198	0.081	0.097	8.90E-03	1.93E-02	1.52E-04	6.22E-08	7.66E-08

Case No.	ck
	$\Delta_{\min,FFT}$
2-64	3.81E-08
2-65	3.71E-08
2-66	4.48E-08
2-67	5.00E-08
2-68	4.96E-08
2-69	5.07E-08
2-70	4.68E-08
2-71	4.96E-08
2-72	4.67E-08
2-73	4.10E-08
2-74	3.73E-08
2-75	4.81E-08
2-76	3.46E-08
2-77	3.40E-08
2-78	3.68E-08
2-79	3.90E-08
2-80	3.02E-08
2-81	3.18E-08
2-82	3.88E-08
2-83	3.70E-08
2-84	3.29E-08
2-85	4.08E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
2-86	None	100 cm	30 cm rectangle	0	10	11.24	0.88
2-87	None	100 cm	30 cm rectangle	5	10	11.16	0.88
2-88	None	100 cm	30 cm rectangle	10	10	11.26	0.88
2-89	None	100 cm	30 cm rectangle	15	10	11.37	0.89
2-90	None	100 cm	30 cm rectangle	20	10	11.49	0.90
2-91	None	100 cm	30 cm rectangle	20	15	11.40	0.89
2-92	None	100 cm	30 cm rectangle	15	15	11.33	0.89
2-93	None	100 cm	30 cm rectangle	10	15	11.10	0.87
2-94	None	100 cm	30 cm rectangle	5	15	11.09	0.87
2-95	None	100 cm	30 cm rectangle	0	15	10.95	0.86
2-96	None	100 cm	30 cm rectangle	0	20	10.97	0.86
2-97	None	100 cm	30 cm rectangle	5	20	11.01	0.86
2-98	None	100 cm	30 cm rectangle	10	20	10.86	0.85
2-99	None	100 cm	30 cm rectangle	15	20	11.00	0.86
2-100	None	100 cm	30 cm rectangle	20	20	11.22	0.88
2-101	None	100 cm	None	0	0	12.61	0.99
2-102	None	100 cm	None	5	0	12.64	0.99
2-103	None	100 cm	None	10	0	12.79	1.00
2-104	None	100 cm	None	15	0	12.80	1.00
2-105	None	100 cm	None	20	0	12.74	1.00
2-106	None	100 cm	None	20	5	12.58	0.99
2-107	None	100 cm	None	15	5	12.64	0.99

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
2-86	0.29	1.54	-0.24	0.48	28.6%	4	4	A
2-87	0.30	1.65	-0.18	0.11	27.1%	4	4	A
2-88	0.31	1.93	-0.21	0.27	28.5%	4	4	A
2-89	0.33	2.32	-0.24	0.49	29.3%	4	4	A
2-90	0.34	2.38	-0.23	0.41	28.6%	4	5	A
2-91	0.40	3.85	-0.26	0.58	33.1%	4	5	A
2-92	0.40	3.86	-0.23	0.37	31.1%	4	5	A
2-93	0.38	3.35	-0.25	0.50	33.2%	4	5	A
2-94	0.38	3.31	-0.28	0.81	34.0%	4	5	A
2-95	0.37	3.08	-0.25	0.56	33.5%	4	5	A
2-96	0.43	4.52	-0.26	0.62	36.4%	4	5	A
2-97	0.43	4.38	-0.24	0.44	35.1%	4	5	A
2-98	0.44	4.50	-0.24	0.47	35.2%	4	5	A
2-99	0.44	4.67	-0.26	0.57	37.0%	4	5	A
2-100	0.46	5.11	-0.26	0.59	35.3%	4	5	A
2-101	0.19	0.27	-0.33	1.75	10.7%	3	3	B
2-102	0.21	0.41	-0.33	1.72	11.3%	3	3	B
2-103	0.23	0.59	-0.33	1.63	12.1%	4	3	B
2-104	0.24	0.69	-0.31	1.21	13.3%	4	3	B
2-105	0.26	1.02	-0.30	1.11	14.4%	4	4	B
2-106	0.32	2.03	-0.41	2.82	18.0%	4	4	A
2-107	0.31	1.88	-0.43	3.09	17.2%	4	4	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
2-86	0.214	0.542	0.011	0.523	0.028	0.090	0.542	0.258
2-87	0.252	0.651	0.256	0.887	0.077	0.061	0.651	0.442
2-88	0.311	0.935	0.119	0.733	0.031	0.017	0.226	0.339
2-89	0.385	1.320	0.007	0.512	0.002	0.039	0.072	0.255
2-90	0.407	1.377	0.038	0.594	0.026	0.055	0.049	0.393
2-91	0.686	2.850	0.064	0.416	0.125	0.065	0.540	0.328
2-92	0.680	2.865	0.046	0.633	0.058	0.061	0.546	0.397
2-93	0.593	2.354	0.029	0.497	0.129	0.006	0.341	0.350
2-94	0.587	2.310	0.153	0.191	0.157	0.003	0.324	0.272
2-95	0.528	2.079	0.050	0.436	0.138	0.035	0.231	0.337
2-96	0.802	3.523	0.085	0.380	0.237	0.138	0.809	0.315
2-97	0.776	3.382	0.001	0.557	0.193	0.122	0.753	0.369
2-98	0.816	3.498	0.013	0.525	0.196	0.147	0.799	0.360
2-99	0.846	3.670	0.071	0.429	0.260	0.166	0.868	0.323
2-100	0.904	4.106	0.073	0.414	0.201	0.202	1.042	0.322
2-101	0.013	0.099	0.734	4.832	0.386	0.083	0.099	0.569
2-102	0.104	0.380	0.750	4.726	0.352	0.001	0.380	0.583
2-103	0.053	0.951	0.390	0.633	0.588	0.082	0.951	0.588
2-104	0.011	0.311	0.276	0.211	0.546	0.130	0.311	0.459
2-105	0.094	0.023	0.245	0.109	0.510	0.250	0.023	0.066
2-106	0.313	1.030	0.719	1.816	0.387	0.015	0.188	0.289
2-107	0.276	0.878	0.796	2.089	0.415	0.043	0.249	0.347

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
2-86	0.107	0.126	0.288	0.142	0.043	0.044	0.011	0.021
2-87	0.152	0.098	0.464	0.186	0.050	0.050	0.008	0.019
2-88	0.110	0.056	0.366	0.145	0.060	0.060	0.012	0.019
2-89	0.083	0.003	0.285	0.120	0.069	0.069	0.017	0.020
2-90	0.246	0.013	0.308	0.141	0.076	0.076	0.013	0.028
2-91	0.130	0.214	0.234	0.008	0.112	0.111	0.024	0.026
2-92	0.181	0.210	0.313	0.067	0.109	0.108	0.020	0.023
2-93	0.127	0.147	0.259	0.004	0.096	0.095	0.010	0.020
2-94	0.105	0.143	0.170	0.020	0.094	0.093	0.007	0.020
2-95	0.119	0.100	0.244	0.004	0.081	0.081	0.006	0.022
2-96	0.043	0.298	0.219	0.091	0.120	0.118	0.029	0.025
2-97	0.077	0.279	0.281	0.052	0.115	0.113	0.024	0.021
2-98	0.074	0.307	0.270	0.055	0.124	0.120	0.032	0.028
2-99	0.026	0.329	0.229	0.111	0.128	0.125	0.036	0.031
2-100	0.071	0.371	0.228	0.059	0.134	0.132	0.041	0.034
2-101	0.488	0.134	0.482	0.517	0.013	0.019	0.009	0.013
2-102	0.460	0.056	0.496	0.490	0.023	0.029	0.009	0.015
2-103	0.423	0.022	0.501	0.454	0.007	0.013	0.022	0.023
2-104	0.365	0.068	0.378	0.400	0.016	0.019	0.034	0.035
2-105	0.549	0.182	0.345	0.351	0.031	0.033	0.024	0.032
2-106	0.437	0.055	0.238	0.459	0.056	0.057	0.007	0.016
2-107	0.462	0.082	0.293	0.484	0.047	0.049	0.006	0.017

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
2-86	0.022	0.029	0.029	0.030	0.99	0.19	10.84	0.964
2-87	0.016	0.035	0.034	0.029	0.98	0.20	10.70	0.946
2-88	0.010	0.046	0.046	0.030	0.98	0.20	10.75	0.952
2-89	0.011	0.056	0.056	0.027	0.99	0.20	10.87	0.960
2-90	0.019	0.055	0.055	0.031	0.98	0.20	10.88	0.950
2-91	0.055	0.116	0.117	0.045	0.98	0.22	10.69	0.950
2-92	0.051	0.103	0.103	0.037	0.99	0.21	10.70	0.955
2-93	0.037	0.108	0.108	0.046	0.99	0.22	10.54	0.950
2-94	0.035	0.109	0.110	0.048	0.99	0.21	10.55	0.948
2-95	0.021	0.101	0.101	0.045	1.00	0.22	10.56	0.957
2-96	0.063	0.151	0.152	0.065	0.99	0.24	10.37	0.950
2-97	0.058	0.141	0.142	0.057	1.00	0.24	10.46	0.950
2-98	0.066	0.146	0.146	0.057	0.99	0.23	10.22	0.939
2-99	0.071	0.161	0.162	0.072	0.99	0.24	10.31	0.940
2-100	0.078	0.152	0.153	0.059	0.99	0.23	10.53	0.951
2-101	0.018	0.096	0.097	0.112	0.99	0.06	12.30	0.970
2-102	0.007	0.084	0.085	0.108	0.99	0.07	12.34	0.970
2-103	0.014	0.151	0.151	0.158	0.99	0.07	12.43	0.962
2-104	0.027	0.131	0.131	0.147	0.98	0.08	12.31	0.950
2-105	0.046	0.107	0.107	0.138	0.98	0.09	12.19	0.947
2-106	0.009	0.060	0.060	0.122	0.99	0.09	12.11	0.974
2-107	0.016	0.073	0.073	0.130	1.00	0.08	12.28	0.978

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
2-86	0.960	0.029	0.925	0.917	0.473	0.716	0.688	0.027
2-87	0.941	0.036	0.898	0.888	0.559	0.613	0.574	0.025
2-88	0.947	0.035	0.904	0.894	0.564	0.631	0.594	0.030
2-89	0.956	0.033	0.912	0.904	0.566	0.723	0.695	0.028
2-90	0.945	0.038	0.896	0.886	0.626	0.666	0.633	0.030
2-91	0.946	0.042	0.885	0.874	0.736	0.614	0.575	0.043
2-92	0.950	0.041	0.893	0.882	0.708	0.585	0.543	0.039
2-93	0.945	0.041	0.890	0.879	0.683	0.595	0.555	0.044
2-94	0.942	0.042	0.886	0.875	0.693	0.652	0.617	0.044
2-95	0.953	0.038	0.905	0.896	0.615	0.631	0.594	0.041
2-96	0.945	0.045	0.881	0.869	0.762	0.595	0.555	0.050
2-97	0.945	0.045	0.883	0.871	0.753	0.583	0.542	0.046
2-98	0.933	0.050	0.864	0.850	0.809	0.597	0.557	0.046
2-99	0.934	0.050	0.864	0.850	0.825	0.558	0.514	0.055
2-100	0.947	0.046	0.879	0.866	0.810	0.585	0.543	0.050
2-101	0.967	0.019	0.947	0.942	0.323	0.863	0.849	0.009
2-102	0.967	0.021	0.944	0.939	0.357	0.821	0.803	0.011
2-103	0.958	0.025	0.931	0.924	0.427	0.748	0.723	0.014
2-104	0.945	0.029	0.913	0.905	0.494	0.665	0.632	0.018
2-105	0.942	0.033	0.905	0.896	0.555	0.687	0.655	0.018
2-106	0.972	0.026	0.936	0.930	0.516	0.797	0.777	0.022
2-107	0.976	0.024	0.944	0.939	0.477	0.800	0.780	0.022

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
2-86	0.655	0.620	0.030	6.66	6.74	7.37	7.76	8.54
2-87	0.564	0.520	0.027	6.63	6.67	7.16	7.51	8.29
2-88	0.572	0.530	0.032	6.51	6.50	7.08	7.45	8.28
2-89	0.660	0.626	0.031	6.31	6.43	7.05	7.46	8.28
2-90	0.603	0.564	0.033	6.39	6.44	6.97	7.36	8.19
2-91	0.544	0.498	0.047	5.78	5.73	6.37	6.76	7.66
2-92	0.521	0.473	0.042	5.76	5.70	6.32	6.73	7.69
2-93	0.527	0.480	0.047	5.85	5.84	6.39	6.75	7.66
2-94	0.577	0.535	0.048	5.90	5.84	6.41	6.79	7.66
2-95	0.563	0.519	0.045	5.89	5.91	6.48	6.89	7.80
2-96	0.525	0.477	0.055	5.41	5.39	5.91	6.25	7.25
2-97	0.517	0.469	0.050	5.49	5.47	6.00	6.38	7.33
2-98	0.530	0.483	0.049	5.44	5.30	5.83	6.16	7.09
2-99	0.488	0.437	0.059	5.43	5.31	5.81	6.16	7.13
2-100	0.514	0.465	0.054	5.36	5.23	5.84	6.24	7.26
2-101	0.804	0.784	0.010	8.62	9.11	9.60	9.90	10.38
2-102	0.752	0.727	0.013	8.45	8.86	9.38	9.68	10.29
2-103	0.670	0.637	0.017	8.37	8.67	9.19	9.54	10.22
2-104	0.591	0.550	0.020	8.26	8.49	9.01	9.31	9.99
2-105	0.611	0.572	0.020	7.91	8.11	8.64	8.95	9.66
2-106	0.702	0.672	0.027	7.02	7.33	8.08	8.53	9.39
2-107	0.701	0.671	0.027	7.15	7.51	8.26	8.74	9.60

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
2-86	9.05	9.41	9.81	10.33	10.63	11.12	11.24	27.4%
2-87	8.78	9.21	9.64	10.21	10.59	11.13	11.16	25.2%
2-88	8.79	9.23	9.65	10.24	10.57	11.13	11.26	26.4%
2-89	8.77	9.22	9.69	10.32	10.71	11.28	11.37	28.4%
2-90	8.74	9.22	9.73	10.33	10.73	11.33	11.49	27.0%
2-91	8.25	8.79	9.38	10.11	10.57	11.24	11.40	30.3%
2-92	8.35	8.91	9.46	10.10	10.53	11.17	11.33	28.3%
2-93	8.31	8.81	9.33	9.99	10.43	11.05	11.10	30.4%
2-94	8.27	8.80	9.37	10.03	10.47	11.08	11.09	31.9%
2-95	8.44	8.97	9.43	10.06	10.43	10.95	10.95	31.0%
2-96	7.93	8.52	9.11	9.85	10.30	10.90	10.97	33.4%
2-97	8.00	8.62	9.23	9.93	10.36	11.02	11.01	32.2%
2-98	7.72	8.29	8.94	9.73	10.20	10.86	10.86	32.3%
2-99	7.82	8.33	8.99	9.76	10.28	10.99	11.00	33.2%
2-100	7.95	8.57	9.18	9.95	10.42	11.11	11.22	32.0%
2-101	10.72	11.05	11.44	11.89	12.15	12.52	12.61	11.9%
2-102	10.71	11.05	11.45	11.91	12.17	12.55	12.64	12.2%
2-103	10.64	11.04	11.46	11.97	12.27	12.70	12.79	12.5%
2-104	10.43	10.82	11.29	11.85	12.18	12.66	12.80	13.5%
2-105	10.16	10.61	11.10	11.68	12.06	12.59	12.74	14.3%
2-106	9.94	10.38	10.90	11.52	11.88	12.42	12.58	19.0%
2-107	10.14	10.61	11.11	11.70	12.04	12.53	12.64	18.2%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
2-86	30.9%	29.8%	28.7%	25.0%	23.2%	21.2%	20.5%	19.4%
2-87	28.7%	28.9%	28.4%	24.2%	23.4%	21.6%	21.8%	20.5%
2-88	30.6%	29.8%	29.6%	25.3%	24.8%	22.4%	21.9%	19.9%
2-89	31.1%	30.2%	29.6%	25.5%	24.5%	22.1%	21.9%	19.8%
2-90	30.6%	30.1%	29.5%	24.9%	24.0%	21.9%	21.2%	20.1%
2-91	36.2%	34.7%	34.3%	29.0%	28.2%	25.4%	24.2%	21.9%
2-92	33.3%	33.1%	33.1%	28.2%	26.9%	23.9%	23.2%	21.4%
2-93	35.2%	35.7%	35.3%	30.1%	27.9%	25.3%	23.9%	21.6%
2-94	36.6%	36.4%	34.8%	29.8%	28.2%	25.1%	23.4%	21.2%
2-95	36.2%	35.7%	35.1%	29.5%	27.8%	24.9%	23.9%	21.5%
2-96	38.9%	38.1%	39.2%	32.7%	31.0%	27.5%	26.1%	23.2%
2-97	37.1%	36.9%	37.2%	32.1%	31.1%	27.4%	25.8%	23.1%
2-98	37.8%	36.8%	36.8%	31.6%	30.9%	28.0%	25.7%	23.0%
2-99	39.8%	39.9%	40.0%	33.2%	31.5%	29.3%	26.6%	23.8%
2-100	38.5%	37.1%	37.3%	31.6%	30.7%	27.1%	25.8%	22.7%
2-101	10.7%	9.9%	9.5%	8.7%	8.6%	7.9%	7.7%	7.0%
2-102	11.6%	10.7%	10.3%	9.2%	9.1%	8.4%	8.2%	7.2%
2-103	12.5%	12.0%	11.4%	10.1%	9.9%	9.0%	8.6%	7.4%
2-104	13.5%	13.1%	13.0%	11.7%	11.5%	10.6%	10.0%	8.4%
2-105	14.8%	14.6%	14.4%	12.6%	11.9%	10.9%	10.6%	9.3%
2-106	19.8%	18.0%	16.7%	14.0%	13.1%	11.8%	10.9%	9.4%
2-107	19.2%	17.2%	15.7%	13.2%	12.2%	10.7%	10.2%	8.8%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
2-86	18.2%	17.6%	18.0%	90.7	95.1	96.8	102.2	115.5
2-87	19.6%	18.5%	18.1%	91.4	86.8	87.4	99.2	115.0
2-88	18.7%	17.8%	17.6%	87.8	91.2	100.1	116.3	141.9
2-89	18.4%	17.7%	17.7%	85.5	93.0	101.1	113.8	127.4
2-90	18.6%	17.4%	16.5%	76.6	98.3	102.8	98.5	109.7
2-91	19.8%	17.9%	17.0%	77.3	85.1	91.5	99.7	113.1
2-92	19.7%	18.1%	17.4%	60.8	66.7	76.7	83.8	97.9
2-93	20.1%	18.3%	18.3%	82.1	89.7	88.7	91.7	104.3
2-94	19.2%	17.7%	18.0%	123.8	85.4	88.7	89.5	101.3
2-95	19.9%	19.3%	19.0%	70.9	84.5	92.1	100.4	125.4
2-96	20.8%	19.6%	18.7%	62.5	68.5	76.2	82.7	95.6
2-97	21.2%	19.6%	18.9%	61.2	70.7	73.2	75.9	89.2
2-98	21.0%	19.3%	19.4%	59.4	69.8	76.0	77.9	101.5
2-99	21.0%	19.3%	18.9%	78.6	90.1	87.9	88.7	107.6
2-100	20.6%	18.7%	17.7%	57.9	63.5	76.1	81.5	97.0
2-101	6.1%	5.3%	4.6%	113.9	124.6	113.6	111.7	118.4
2-102	6.2%	5.3%	4.7%	97.6	96.1	96.4	92.3	100.5
2-103	6.4%	5.3%	4.7%	99.2	107.7	103.1	102.6	108.5
2-104	7.2%	5.9%	5.1%	108.2	130.4	97.7	101.8	130.9
2-105	8.1%	6.9%	5.9%	98.8	103.6	104.0	106.4	110.0
2-106	8.2%	7.0%	6.1%	93.0	101.4	96.2	91.1	103.9
2-107	7.6%	6.4%	5.4%	82.1	90.5	100.1	100.3	104.4

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
2-86	121.0	132.0	169.4	130.6	133.0	134.0	115.4	45.4
2-87	113.1	130.8	130.3	133.2	145.5	142.1	134.2	41.8
2-88	137.0	147.1	127.8	126.0	125.0	125.4	111.3	43.5
2-89	127.4	134.0	134.9	137.3	144.6	140.0	121.3	45.1
2-90	105.4	110.4	110.9	115.7	120.5	123.5	113.8	42.0
2-91	109.9	119.1	118.2	127.1	133.7	129.7	118.6	42.5
2-92	103.1	113.4	114.2	116.1	122.2	116.0	106.5	33.7
2-93	110.6	121.7	129.4	132.0	130.3	132.8	115.4	42.9
2-94	100.3	112.4	116.7	120.6	126.4	116.1	110.1	42.2
2-95	126.9	138.4	134.2	135.5	146.5	147.5	133.2	46.5
2-96	96.9	114.9	122.5	137.7	150.1	142.0	124.8	41.7
2-97	98.4	117.6	117.9	121.6	142.1	138.1	123.5	39.7
2-98	125.1	143.2	101.5	108.2	116.2	108.4	109.4	38.1
2-99	121.2	143.2	137.9	146.0	153.3	138.3	110.1	46.6
2-100	100.2	112.7	118.8	132.8	143.6	138.6	144.0	44.0
2-101	119.6	136.2	118.2	131.7	157.4	160.3	124.3	43.6
2-102	101.7	109.7	108.3	118.6	205.1	121.3	96.2	39.8
2-103	104.5	112.0	106.8	116.7	120.3	117.3	119.0	41.2
2-104	143.3	119.9	116.7	156.5	173.8	157.8	122.1	46.5
2-105	104.9	112.1	107.7	123.5	131.5	119.8	157.5	40.2
2-106	96.5	112.4	116.3	121.9	129.5	122.6	101.4	39.3
2-107	96.1	110.9	155.5	132.5	197.3	197.6	147.8	38.9

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
2-86	38.3	0.166	0.132	0.104	0.083	0.070	0.060	0.068
2-87	44.3	0.173	0.127	0.099	0.067	0.073	0.060	0.056
2-88	37.2	0.180	0.135	0.110	0.079	0.099	0.055	0.051
2-89	42.8	0.177	0.131	0.095	0.077	0.086	0.071	0.064
2-90	37.0	0.173	0.133	0.116	0.066	0.080	0.065	0.060
2-91	36.2	0.196	0.141	0.115	0.084	0.069	0.060	0.061
2-92	33.7	0.198	0.134	0.109	0.082	0.080	0.054	0.061
2-93	34.8	0.171	0.137	0.125	0.087	0.083	0.061	0.072
2-94	32.1	0.183	0.128	0.120	0.095	0.081	0.059	0.047
2-95	36.1	0.180	0.140	0.118	0.090	0.088	0.059	0.068
2-96	34.0	0.193	0.163	0.119	0.085	0.085	0.073	0.060
2-97	38.4	0.196	0.132	0.110	0.083	0.084	0.059	0.054
2-98	34.6	0.189	0.137	0.124	0.082	0.081	0.049	0.076
2-99	36.4	0.197	0.150	0.131	0.102	0.102	0.078	0.062
2-100	36.5	0.210	0.151	0.143	0.098	0.083	0.078	0.070
2-101	33.2	0.150	0.126	0.111	0.072	0.097	0.074	0.082
2-102	30.7	0.133	0.114	0.096	0.067	0.081	0.061	0.086
2-103	25.6	0.164	0.122	0.105	0.079	0.077	0.056	0.064
2-104	28.9	0.162	0.134	0.110	0.079	0.089	0.061	0.082
2-105	24.6	0.151	0.132	0.112	0.085	0.077	0.059	0.066
2-106	25.6	0.158	0.129	0.107	0.077	0.086	0.055	0.074
2-107	28.7	0.161	0.131	0.103	0.077	0.078	0.058	0.075

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
2-86	0.060	0.043	0.038	0.038	0.176	0.109	0.096	0.062
2-87	0.062	0.035	0.051	0.024	0.198	0.135	0.092	0.065
2-88	0.038	0.051	0.037	0.036	0.182	0.111	0.085	0.076
2-89	0.055	0.043	0.035	0.035	0.180	0.104	0.090	0.071
2-90	0.056	0.029	0.058	0.032	0.175	0.102	0.076	0.073
2-91	0.063	0.034	0.053	0.046	0.191	0.132	0.100	0.071
2-92	0.047	0.032	0.045	0.034	0.191	0.118	0.094	0.077
2-93	0.061	0.036	0.055	0.030	0.184	0.113	0.102	0.085
2-94	0.047	0.031	0.048	0.022	0.173	0.132	0.096	0.075
2-95	0.061	0.045	0.044	0.031	0.187	0.128	0.098	0.071
2-96	0.056	0.032	0.035	0.029	0.172	0.126	0.108	0.072
2-97	0.064	0.035	0.039	0.031	0.176	0.108	0.094	0.061
2-98	0.048	0.045	0.046	0.037	0.183	0.123	0.109	0.070
2-99	0.065	0.051	0.043	0.047	0.185	0.142	0.110	0.078
2-100	0.056	0.046	0.048	0.032	0.187	0.143	0.091	0.100
2-101	0.089	0.075	0.065	0.074	0.176	0.125	0.103	0.090
2-102	0.061	0.068	0.059	0.056	0.174	0.112	0.095	0.077
2-103	0.076	0.046	0.057	0.049	0.186	0.119	0.099	0.083
2-104	0.067	0.050	0.072	0.045	0.177	0.108	0.103	0.078
2-105	0.053	0.036	0.042	0.053	0.185	0.127	0.102	0.053
2-106	0.061	0.058	0.067	0.066	0.185	0.116	0.096	0.069
2-107	0.084	0.049	0.067	0.066	0.172	0.110	0.092	0.056

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
2-86	0.065	0.050	0.054	0.033	0.031	0.026	0.199	0.121
2-87	0.048	0.052	0.061	0.044	0.054	0.037	0.196	0.106
2-88	0.078	0.048	0.045	0.061	0.035	0.044	0.207	0.098
2-89	0.074	0.049	0.052	0.053	0.047	0.039	0.187	0.106
2-90	0.074	0.050	0.049	0.058	0.039	0.034	0.190	0.107
2-91	0.071	0.062	0.059	0.060	0.038	0.033	0.190	0.112
2-92	0.057	0.052	0.038	0.038	0.047	0.040	0.207	0.123
2-93	0.072	0.055	0.061	0.036	0.037	0.025	0.215	0.120
2-94	0.063	0.065	0.064	0.044	0.040	0.024	0.220	0.094
2-95	0.061	0.046	0.048	0.052	0.049	0.038	0.187	0.112
2-96	0.073	0.048	0.044	0.041	0.041	0.034	0.187	0.104
2-97	0.064	0.062	0.042	0.053	0.047	0.044	0.200	0.120
2-98	0.067	0.061	0.051	0.054	0.058	0.043	0.186	0.115
2-99	0.077	0.057	0.063	0.052	0.041	0.042	0.195	0.125
2-100	0.071	0.066	0.052	0.045	0.064	0.036	0.197	0.111
2-101	0.081	0.078	0.082	0.080	0.065	0.066	0.214	0.119
2-102	0.085	0.061	0.074	0.062	0.077	0.047	0.217	0.117
2-103	0.063	0.069	0.057	0.066	0.045	0.044	0.207	0.103
2-104	0.082	0.072	0.067	0.070	0.060	0.053	0.196	0.125
2-105	0.073	0.053	0.067	0.055	0.064	0.062	0.215	0.124
2-106	0.073	0.058	0.056	0.058	0.058	0.050	0.208	0.118
2-107	0.088	0.072	0.067	0.070	0.070	0.062	0.198	0.103

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
2-86	0.085	0.073	0.054	0.051	0.033	0.035	0.036	0.181
2-87	0.083	0.059	0.053	0.058	0.049	0.063	0.035	0.186
2-88	0.092	0.067	0.063	0.045	0.064	0.049	0.033	0.186
2-89	0.085	0.066	0.069	0.053	0.039	0.045	0.019	0.168
2-90	0.090	0.068	0.055	0.047	0.040	0.040	0.038	0.168
2-91	0.098	0.075	0.049	0.042	0.038	0.033	0.017	0.170
2-92	0.094	0.072	0.068	0.052	0.039	0.052	0.038	0.166
2-93	0.104	0.087	0.056	0.053	0.043	0.041	0.018	0.182
2-94	0.085	0.071	0.070	0.053	0.039	0.039	0.032	0.174
2-95	0.100	0.048	0.046	0.044	0.038	0.040	0.040	0.184
2-96	0.093	0.067	0.057	0.048	0.043	0.043	0.036	0.177
2-97	0.087	0.069	0.060	0.038	0.031	0.042	0.041	0.182
2-98	0.090	0.055	0.062	0.047	0.043	0.042	0.053	0.182
2-99	0.089	0.075	0.058	0.054	0.051	0.045	0.038	0.182
2-100	0.091	0.064	0.066	0.053	0.055	0.070	0.032	0.189
2-101	0.106	0.086	0.101	0.083	0.071	0.066	0.077	0.201
2-102	0.101	0.077	0.076	0.064	0.059	0.064	0.061	0.200
2-103	0.092	0.068	0.076	0.078	0.057	0.051	0.047	0.194
2-104	0.109	0.076	0.083	0.072	0.055	0.069	0.057	0.189
2-105	0.098	0.059	0.068	0.052	0.058	0.057	0.041	0.194
2-106	0.102	0.070	0.071	0.055	0.047	0.061	0.051	0.177
2-107	0.086	0.071	0.083	0.061	0.039	0.064	0.046	0.184

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
2-86	0.110	0.084	0.065	0.048	0.022	0.033	0.047	0.180
2-87	0.104	0.080	0.057	0.048	0.038	0.048	0.021	0.171
2-88	0.108	0.080	0.052	0.057	0.034	0.029	0.053	0.188
2-89	0.117	0.065	0.085	0.070	0.051	0.033	0.029	0.165
2-90	0.102	0.065	0.054	0.047	0.035	0.058	0.038	0.166
2-91	0.112	0.082	0.060	0.054	0.046	0.037	0.047	0.162
2-92	0.106	0.081	0.064	0.053	0.053	0.040	0.039	0.164
2-93	0.109	0.078	0.082	0.067	0.044	0.044	0.026	0.170
2-94	0.113	0.076	0.061	0.062	0.040	0.040	0.028	0.157
2-95	0.116	0.068	0.051	0.061	0.056	0.064	0.026	0.162
2-96	0.102	0.091	0.077	0.054	0.038	0.036	0.037	0.169
2-97	0.118	0.067	0.063	0.066	0.048	0.043	0.039	0.170
2-98	0.091	0.076	0.064	0.066	0.053	0.027	0.047	0.160
2-99	0.117	0.085	0.069	0.066	0.056	0.043	0.043	0.161
2-100	0.136	0.076	0.074	0.058	0.052	0.058	0.050	0.174
2-101	0.128	0.097	0.097	0.086	0.066	0.062	0.070	0.211
2-102	0.119	0.091	0.092	0.091	0.078	0.073	0.051	0.194
2-103	0.118	0.081	0.078	0.066	0.058	0.054	0.053	0.191
2-104	0.129	0.104	0.082	0.082	0.054	0.064	0.049	0.191
2-105	0.114	0.095	0.068	0.069	0.072	0.060	0.041	0.172
2-106	0.117	0.073	0.068	0.061	0.062	0.069	0.062	0.183
2-107	0.101	0.084	0.067	0.060	0.055	0.066	0.064	0.177

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
2-86	0.109	0.072	0.052	0.044	0.025	0.033	0.209	0.109
2-87	0.089	0.086	0.056	0.049	0.046	0.035	0.205	0.120
2-88	0.119	0.059	0.063	0.058	0.045	0.028	0.206	0.108
2-89	0.104	0.081	0.069	0.063	0.041	0.038	0.216	0.105
2-90	0.109	0.057	0.060	0.037	0.052	0.042	0.185	0.100
2-91	0.116	0.071	0.052	0.050	0.043	0.028	0.214	0.105
2-92	0.098	0.074	0.041	0.037	0.042	0.022	0.187	0.094
2-93	0.116	0.083	0.064	0.048	0.049	0.019	0.208	0.118
2-94	0.106	0.078	0.072	0.058	0.042	0.037	0.206	0.098
2-95	0.100	0.075	0.067	0.049	0.049	0.041	0.200	0.116
2-96	0.110	0.073	0.055	0.049	0.051	0.025	0.200	0.119
2-97	0.099	0.079	0.059	0.060	0.042	0.049	0.181	0.114
2-98	0.111	0.090	0.054	0.031	0.046	0.044	0.200	0.116
2-99	0.107	0.085	0.061	0.053	0.061	0.041	0.189	0.107
2-100	0.119	0.067	0.065	0.042	0.056	0.026	0.205	0.112
2-101	0.140	0.082	0.078	0.083	0.073	0.078	0.229	0.146
2-102	0.123	0.084	0.079	0.088	0.080	0.064	0.228	0.132
2-103	0.106	0.074	0.082	0.067	0.058	0.053	0.218	0.124
2-104	0.126	0.087	0.075	0.063	0.063	0.053	0.220	0.133
2-105	0.110	0.075	0.072	0.061	0.068	0.062	0.205	0.111
2-106	0.118	0.085	0.071	0.063	0.061	0.066	0.233	0.123
2-107	0.114	0.096	0.056	0.059	0.064	0.058	0.219	0.115

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
2-86	0.082	0.056	0.049	0.035	0.182	0.089	0.058	0.046
2-87	0.082	0.047	0.053	0.044	0.182	0.089	0.063	0.044
2-88	0.069	0.053	0.044	0.029	0.200	0.106	0.072	0.061
2-89	0.074	0.070	0.065	0.034	0.163	0.084	0.083	0.053
2-90	0.060	0.065	0.054	0.038	0.165	0.103	0.049	0.041
2-91	0.074	0.050	0.038	0.040	0.157	0.089	0.074	0.064
2-92	0.081	0.059	0.056	0.035	0.165	0.084	0.076	0.075
2-93	0.068	0.062	0.044	0.033	0.193	0.109	0.077	0.057
2-94	0.088	0.064	0.036	0.024	0.172	0.092	0.067	0.057
2-95	0.077	0.047	0.040	0.032	0.188	0.096	0.068	0.042
2-96	0.064	0.045	0.054	0.016	0.170	0.082	0.080	0.056
2-97	0.072	0.046	0.042	0.037	0.169	0.090	0.071	0.055
2-98	0.078	0.057	0.052	0.059	0.179	0.100	0.059	0.056
2-99	0.081	0.047	0.038	0.046	0.167	0.099	0.066	0.056
2-100	0.071	0.048	0.049	0.052	0.181	0.095	0.063	0.052
2-101	0.103	0.078	0.071	0.059	0.209	0.125	0.106	0.078
2-102	0.107	0.089	0.058	0.067	0.205	0.122	0.103	0.087
2-103	0.095	0.069	0.071	0.053	0.184	0.122	0.112	0.079
2-104	0.085	0.075	0.077	0.055	0.182	0.112	0.097	0.059
2-105	0.079	0.071	0.058	0.048	0.187	0.114	0.079	0.073
2-106	0.079	0.062	0.072	0.046	0.202	0.096	0.083	0.068
2-107	0.092	0.069	0.081	0.052	0.195	0.105	0.099	0.078

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
2-86	0.040	0.176	0.081	0.062	0.057	0.220	0.102	0.060
2-87	0.035	0.169	0.094	0.075	0.066	0.234	0.105	0.069
2-88	0.041	0.156	0.103	0.072	0.053	0.228	0.122	0.068
2-89	0.037	0.171	0.104	0.066	0.055	0.233	0.122	0.058
2-90	0.053	0.169	0.089	0.061	0.048	0.212	0.096	0.054
2-91	0.043	0.170	0.091	0.075	0.035	0.241	0.105	0.056
2-92	0.044	0.183	0.093	0.068	0.057	0.216	0.084	0.062
2-93	0.054	0.174	0.090	0.057	0.056	0.226	0.095	0.054
2-94	0.042	0.179	0.101	0.090	0.045	0.218	0.102	0.049
2-95	0.038	0.166	0.091	0.068	0.052	0.216	0.111	0.068
2-96	0.037	0.142	0.083	0.071	0.039	0.202	0.104	0.060
2-97	0.037	0.173	0.109	0.083	0.046	0.238	0.105	0.051
2-98	0.034	0.179	0.116	0.055	0.039	0.217	0.108	0.052
2-99	0.034	0.174	0.088	0.064	0.051	0.226	0.103	0.049
2-100	0.037	0.167	0.090	0.076	0.040	0.233	0.100	0.056
2-101	0.057	0.215	0.120	0.110	0.051	0.255	0.154	0.060
2-102	0.073	0.202	0.135	0.102	0.061	0.257	0.135	0.071
2-103	0.051	0.198	0.115	0.089	0.049	0.250	0.133	0.048
2-104	0.069	0.204	0.100	0.101	0.050	0.259	0.122	0.063
2-105	0.041	0.195	0.098	0.090	0.038	0.249	0.107	0.045
2-106	0.049	0.186	0.102	0.097	0.053	0.258	0.118	0.065
2-107	0.061	0.200	0.127	0.084	0.048	0.235	0.122	0.067

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
2-86	0.183	0.066	0.090	4.75E-03	1.88E-02	2.29E-04	7.84E-08	1.10E-07
2-87	0.187	0.071	0.088	1.32E-02	4.54E-02	5.03E-05	7.47E-08	9.17E-08
2-88	0.193	0.076	0.088	4.91E-03	1.71E-02	2.03E-05	7.83E-08	1.05E-07
2-89	0.203	0.062	0.071	1.25E-02	2.76E-02	1.51E-05	7.95E-08	1.06E-07
2-90	0.174	0.080	0.089	2.06E-02	3.76E-02	2.76E-04	7.39E-08	9.96E-08
2-91	0.185	0.078	0.070	1.72E-02	6.10E-02	3.10E-04	9.62E-08	1.30E-07
2-92	0.180	0.060	0.078	7.46E-03	1.73E-02	1.10E-04	8.42E-08	1.13E-07
2-93	0.172	0.051	0.077	1.96E-02	6.89E-02	1.47E-03	9.95E-08	1.43E-07
2-94	0.183	0.067	0.077	4.07E-03	1.13E-02	1.11E-04	9.84E-08	1.39E-07
2-95	0.181	0.063	0.077	2.14E-02	6.91E-02	2.77E-04	1.05E-07	1.52E-07
2-96	0.192	0.069	0.079	9.25E-03	2.61E-02	1.70E-06	1.15E-07	1.63E-07
2-97	0.180	0.057	0.078	2.89E-02	7.83E-02	2.38E-03	1.13E-07	1.70E-07
2-98	0.177	0.072	0.081	6.80E-03	1.76E-02	3.87E-06	1.01E-07	1.43E-07
2-99	0.186	0.068	0.059	5.54E-02	1.36E-01	2.61E-05	1.19E-07	1.64E-07
2-100	0.168	0.057	0.077	2.25E-02	5.50E-02	1.57E-05	1.04E-07	1.57E-07
2-101	0.222	0.065	0.072	2.25E-04	7.52E-04	7.19E-07	2.69E-09	4.96E-09
2-102	0.223	0.081	0.098	4.57E-04	1.82E-03	1.66E-07	3.19E-09	5.06E-09
2-103	0.211	0.063	0.072	1.05E-03	3.57E-03	5.82E-05	4.13E-09	6.57E-09
2-104	0.196	0.076	0.087	1.26E-03	3.58E-03	1.45E-04	6.21E-09	9.69E-09
2-105	0.188	0.051	0.069	6.26E-04	1.76E-03	3.89E-06	7.50E-09	1.21E-08
2-106	0.200	0.079	0.091	4.23E-03	1.08E-02	1.03E-05	1.09E-08	1.97E-08
2-107	0.220	0.078	0.095	2.02E-03	8.70E-03	2.67E-07	9.45E-09	1.91E-08

Case No.	ck
	$\Delta_{\min,FFT}$
2-86	4.90E-08
2-87	3.44E-08
2-88	3.88E-08
2-89	4.59E-08
2-90	3.93E-08
2-91	4.19E-08
2-92	3.14E-08
2-93	4.43E-08
2-94	5.56E-08
2-95	4.92E-08
2-96	4.77E-08
2-97	4.32E-08
2-98	4.20E-08
2-99	4.74E-08
2-100	3.85E-08
2-101	4.89E-10
2-102	5.48E-10
2-103	5.94E-10
2-104	8.03E-10
2-105	1.41E-09
2-106	1.53E-09
2-107	9.39E-10

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V _{ref} [m/s]	Wind speed ratio [-]
2-108	None	100 cm	None	10	5	12.60	0.99
2-109	None	100 cm	None	5	5	12.47	0.98
2-110	None	100 cm	None	0	5	12.38	0.97
2-111	None	100 cm	None	0	10	12.01	0.94
2-112	None	100 cm	None	5	10	12.10	0.95
2-113	None	100 cm	None	10	10	12.25	0.96
2-114	None	100 cm	None	15	10	12.37	0.97
2-115	None	100 cm	None	20	10	12.45	0.98
2-116	None	100 cm	None	20	15	11.96	0.94
2-117	None	100 cm	None	15	15	11.91	0.93
2-118	None	100 cm	None	10	15	11.94	0.94
2-119	None	100 cm	None	5	15	11.87	0.93
2-120	None	100 cm	None	0	15	11.82	0.93
2-121	None	100 cm	None	0	20	11.42	0.90
2-122	None	100 cm	None	5	20	11.51	0.90
2-123	None	100 cm	None	10	20	11.50	0.90
2-124	None	100 cm	None	15	20	11.63	0.91
2-125	None	100 cm	None	20	20	11.71	0.92
2-126	None	100 cm	30 cm triangles	0	0	11.30	0.89
2-127	None	100 cm	30 cm triangles	5	0	11.28	0.89
2-128	None	100 cm	30 cm triangles	10	0	11.43	0.90
2-129	None	100 cm	30 cm triangles	15	0	11.49	0.90

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
2-108	0.30	1.70	-0.43	3.08	16.2%	4	4	A
2-109	0.30	1.77	-0.46	3.47	16.2%	4	4	A
2-110	0.29	1.70	-0.47	3.76	15.5%	4	4	A
2-111	0.39	3.75	-0.46	3.36	20.0%	4	5	A
2-112	0.38	3.68	-0.45	3.16	19.9%	4	5	A
2-113	0.39	3.80	-0.42	2.63	20.0%	4	5	A
2-114	0.39	3.73	-0.44	3.05	20.9%	4	5	A
2-115	0.38	3.63	-0.45	3.21	21.3%	4	5	A
2-116	0.46	5.32	-0.38	2.04	24.3%	4	5	A
2-117	0.45	5.09	-0.37	1.87	23.7%	4	5	A
2-118	0.46	5.33	-0.38	2.06	23.3%	4	5	A
2-119	0.45	5.03	-0.38	2.04	23.0%	4	5	A
2-120	0.45	5.13	-0.39	2.22	22.9%	4	5	A
2-121	0.50	6.30	-0.32	1.18	24.2%	4	5	A
2-122	0.51	6.37	-0.34	1.41	24.9%	4	5	A
2-123	0.51	6.36	-0.32	1.18	25.2%	4	5	A
2-124	0.50	6.12	-0.32	1.23	25.8%	4	5	A
2-125	0.50	6.09	-0.34	1.38	26.1%	4	5	A
2-126	0.14	0.04	-0.11	0.00	17.7%	1	2	C
2-127	0.15	0.05	-0.07	0.00	17.0%	2	2	C
2-128	0.17	0.11	-0.08	0.00	16.9%	2	2	C
2-129	0.19	0.20	-0.09	0.00	17.2%	3	3	B

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
2-108	0.232	0.702	0.789	2.077	0.449	0.076	0.702	0.342
2-109	0.237	0.765	0.897	2.471	0.450	0.072	0.294	0.423
2-110	0.217	0.699	0.958	2.757	0.472	0.087	0.699	0.468
2-111	0.605	2.751	0.922	2.364	0.319	0.014	0.501	0.214
2-112	0.599	2.678	0.870	2.157	0.322	0.010	0.471	0.181
2-113	0.626	2.798	0.732	1.628	0.320	0.027	0.519	0.094
2-114	0.612	2.726	0.830	2.048	0.289	0.018	0.491	0.156
2-115	0.600	2.633	0.857	2.209	0.274	0.011	0.453	0.173
2-116	0.897	4.318	0.585	1.044	0.175	0.198	1.127	0.001
2-117	0.862	4.086	0.537	0.870	0.193	0.176	1.034	0.029
2-118	0.908	4.334	0.598	1.058	0.208	0.205	1.134	0.010
2-119	0.859	4.029	0.595	1.040	0.218	0.174	1.012	0.008
2-120	0.866	4.131	0.634	1.223	0.221	0.178	1.052	0.032
2-121	1.096	5.298	0.333	0.177	0.178	0.323	1.519	0.158
2-122	1.112	5.368	0.407	0.407	0.152	0.334	1.547	0.112
2-123	1.108	5.363	0.334	0.181	0.143	0.331	1.545	0.158
2-124	1.073	5.124	0.353	0.235	0.122	0.309	1.449	0.145
2-125	1.069	5.091	0.399	0.380	0.111	0.307	1.436	0.116
2-126	0.090	0.219	0.183	0.636	0.611	0.012	0.219	0.242
2-127	0.146	0.088	0.609	1.000	0.363	0.064	0.088	0.525
2-128	0.018	1.252	0.533	0.997	0.356	0.193	1.252	0.433
2-129	0.024	0.327	0.510	0.996	0.015	0.117	0.327	0.557

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
2-108	0.494	0.113	0.288	0.514	0.037	0.040	0.015	0.023
2-109	0.495	0.109	0.366	0.515	0.033	0.036	0.021	0.027
2-110	0.515	0.124	0.410	0.534	0.028	0.033	0.026	0.031
2-111	0.473	0.156	0.384	0.400	0.081	0.084	0.013	0.022
2-112	0.476	0.151	0.346	0.402	0.083	0.085	0.010	0.020
2-113	0.474	0.171	0.247	0.400	0.089	0.091	0.004	0.016
2-114	0.450	0.160	0.317	0.373	0.087	0.089	0.005	0.017
2-115	0.438	0.152	0.337	0.360	0.088	0.090	0.002	0.017
2-116	0.362	0.366	0.141	0.272	0.126	0.125	0.032	0.023
2-117	0.375	0.341	0.107	0.288	0.123	0.123	0.030	0.023
2-118	0.387	0.373	0.151	0.302	0.126	0.125	0.032	0.023
2-119	0.395	0.339	0.149	0.310	0.122	0.121	0.029	0.021
2-120	0.398	0.343	0.176	0.313	0.121	0.121	0.028	0.020
2-121	0.364	0.509	0.040	0.275	0.152	0.149	0.055	0.043
2-122	0.344	0.520	0.013	0.252	0.154	0.151	0.057	0.045
2-123	0.337	0.518	0.040	0.244	0.154	0.151	0.057	0.045
2-124	0.321	0.493	0.025	0.226	0.154	0.151	0.058	0.047
2-125	0.312	0.490	0.008	0.216	0.153	0.150	0.057	0.046
2-126	0.265	0.008	0.257	0.240	0.033	0.037	0.025	0.029
2-127	0.217	0.043	0.535	0.193	0.020	0.021	0.035	0.039
2-128	0.210	0.169	0.444	0.186	0.027	0.032	0.050	0.055
2-129	0.180	0.165	0.581	0.225	0.024	0.027	0.018	0.021

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
2-108	0.026	0.086	0.087	0.136	1.00	0.08	12.33	0.983
2-109	0.031	0.089	0.090	0.139	1.01	0.08	12.33	0.986
2-110	0.037	0.098	0.099	0.144	1.02	0.07	12.31	0.988
2-111	0.024	0.026	0.029	0.117	1.02	0.09	11.83	0.977
2-112	0.025	0.025	0.028	0.116	1.02	0.09	11.85	0.978
2-113	0.031	0.018	0.021	0.112	1.01	0.10	11.91	0.976
2-114	0.029	0.019	0.022	0.109	1.01	0.10	12.04	0.978
2-115	0.030	0.019	0.023	0.106	1.00	0.10	12.06	0.977
2-116	0.069	0.050	0.052	0.085	1.01	0.13	11.45	0.969
2-117	0.066	0.044	0.046	0.086	1.00	0.13	11.37	0.969
2-118	0.070	0.043	0.045	0.091	1.01	0.12	11.43	0.965
2-119	0.065	0.037	0.039	0.093	1.00	0.12	11.35	0.965
2-120	0.064	0.036	0.039	0.093	1.01	0.12	11.34	0.968
2-121	0.096	0.069	0.071	0.077	1.00	0.14	10.74	0.958
2-122	0.098	0.075	0.076	0.076	1.00	0.14	10.81	0.955
2-123	0.098	0.078	0.080	0.073	1.00	0.15	10.80	0.958
2-124	0.098	0.081	0.082	0.071	0.99	0.15	10.86	0.956
2-125	0.097	0.082	0.084	0.071	0.99	0.15	10.93	0.955
2-126	0.023	0.059	0.058	0.045	0.97	0.15	10.91	0.921
2-127	0.033	0.026	0.026	0.028	0.97	0.15	10.83	0.912
2-128	0.047	0.028	0.029	0.025	0.97	0.15	10.94	0.916
2-129	0.022	0.034	0.034	0.038	0.97	0.15	10.98	0.910

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
2-108	0.981	0.020	0.954	0.949	0.423	0.798	0.777	0.021
2-109	0.985	0.019	0.962	0.958	0.385	0.804	0.784	0.021
2-110	0.987	0.017	0.969	0.966	0.342	0.831	0.814	0.019
2-111	0.975	0.029	0.941	0.935	0.562	0.715	0.687	0.035
2-112	0.976	0.028	0.939	0.933	0.571	0.699	0.669	0.035
2-113	0.974	0.029	0.933	0.927	0.605	0.674	0.641	0.035
2-114	0.976	0.028	0.937	0.930	0.593	0.709	0.680	0.035
2-115	0.975	0.029	0.934	0.927	0.603	0.745	0.719	0.033
2-116	0.966	0.037	0.910	0.901	0.752	0.610	0.571	0.046
2-117	0.966	0.036	0.911	0.902	0.736	0.595	0.555	0.045
2-118	0.962	0.039	0.904	0.894	0.782	0.593	0.552	0.046
2-119	0.961	0.039	0.904	0.894	0.762	0.588	0.547	0.046
2-120	0.965	0.037	0.911	0.902	0.735	0.628	0.591	0.043
2-121	0.954	0.045	0.881	0.869	0.868	0.530	0.483	0.047
2-122	0.951	0.047	0.877	0.865	0.895	0.553	0.508	0.048
2-123	0.953	0.046	0.880	0.868	0.880	0.518	0.470	0.050
2-124	0.952	0.046	0.878	0.866	0.882	0.526	0.479	0.051
2-125	0.951	0.046	0.877	0.865	0.891	0.542	0.496	0.051
2-126	0.913	0.024	0.896	0.886	0.316	0.878	0.866	0.005
2-127	0.903	0.027	0.885	0.873	0.347	0.720	0.692	0.005
2-128	0.908	0.029	0.886	0.875	0.383	0.840	0.823	0.004
2-129	0.901	0.033	0.875	0.863	0.441	0.701	0.671	0.007

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
2-108	0.699	0.669	0.025	7.21	7.63	8.44	8.93	9.75
2-109	0.700	0.670	0.026	7.12	7.54	8.38	8.94	9.81
2-110	0.729	0.701	0.024	7.07	7.57	8.42	8.98	9.87
2-111	0.604	0.564	0.041	6.07	6.21	7.09	7.74	8.81
2-112	0.590	0.549	0.041	6.11	6.31	7.18	7.77	8.79
2-113	0.570	0.527	0.040	6.14	6.32	7.14	7.74	8.78
2-114	0.602	0.562	0.041	6.20	6.42	7.27	7.86	8.92
2-115	0.638	0.602	0.039	6.27	6.50	7.29	7.91	8.95
2-116	0.513	0.464	0.051	5.53	5.60	6.31	6.88	8.03
2-117	0.501	0.451	0.050	5.57	5.60	6.38	6.93	7.99
2-118	0.496	0.446	0.051	5.57	5.57	6.32	6.84	7.91
2-119	0.491	0.440	0.051	5.63	5.63	6.36	6.86	7.96
2-120	0.529	0.482	0.048	5.55	5.56	6.33	6.87	7.97
2-121	0.448	0.392	0.051	5.08	4.99	5.68	6.12	7.19
2-122	0.466	0.413	0.053	5.14	5.00	5.65	6.10	7.20
2-123	0.436	0.380	0.054	5.09	5.03	5.67	6.11	7.20
2-124	0.443	0.387	0.055	5.21	5.11	5.76	6.19	7.30
2-125	0.456	0.401	0.056	5.24	5.19	5.84	6.23	7.30
2-126	0.866	0.853	0.005	8.55	8.74	9.07	9.19	9.55
2-127	0.705	0.676	0.005	8.42	8.59	8.91	9.01	9.41
2-128	0.827	0.810	0.004	8.27	8.42	8.79	8.93	9.40
2-129	0.679	0.646	0.007	8.14	8.22	8.58	8.70	9.26

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
2-108	10.26	10.70	11.21	11.77	12.08	12.55	12.60	17.2%
2-109	10.36	10.79	11.24	11.76	12.05	12.48	12.47	17.2%
2-110	10.42	10.83	11.25	11.74	12.00	12.40	12.38	17.0%
2-111	9.54	10.10	10.63	11.24	11.57	12.02	12.01	20.1%
2-112	9.49	10.06	10.63	11.27	11.63	12.10	12.10	19.9%
2-113	9.48	10.06	10.65	11.30	11.68	12.19	12.25	19.5%
2-114	9.60	10.16	10.77	11.41	11.79	12.32	12.37	20.8%
2-115	9.62	10.17	10.77	11.41	11.81	12.38	12.45	21.8%
2-116	8.77	9.40	10.06	10.80	11.27	11.91	11.96	22.6%
2-117	8.73	9.34	9.99	10.74	11.20	11.81	11.91	21.8%
2-118	8.71	9.36	10.07	10.85	11.31	11.89	11.94	21.5%
2-119	8.69	9.32	10.00	10.76	11.21	11.81	11.87	21.2%
2-120	8.75	9.36	9.99	10.73	11.17	11.77	11.82	21.6%
2-121	7.91	8.56	9.28	10.12	10.68	11.40	11.42	21.2%
2-122	7.97	8.63	9.36	10.22	10.74	11.45	11.51	22.3%
2-123	7.94	8.61	9.34	10.18	10.73	11.44	11.50	22.2%
2-124	8.02	8.67	9.39	10.21	10.75	11.50	11.63	22.7%
2-125	8.05	8.73	9.47	10.31	10.84	11.57	11.71	23.2%
2-126	9.75	9.98	10.23	10.58	10.83	11.21	11.30	18.1%
2-127	9.63	9.85	10.12	10.49	10.73	11.15	11.28	16.9%
2-128	9.64	9.85	10.12	10.54	10.82	11.32	11.43	17.1%
2-129	9.56	9.83	10.13	10.59	10.89	11.40	11.49	17.1%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
2-108	17.8%	16.2%	14.8%	12.4%	11.8%	10.4%	9.6%	8.3%
2-109	18.0%	16.3%	14.8%	12.3%	11.2%	9.6%	9.0%	7.8%
2-110	17.1%	15.4%	14.0%	11.6%	10.6%	9.2%	8.4%	7.1%
2-111	23.2%	21.3%	19.5%	15.6%	13.9%	11.9%	10.8%	8.8%
2-112	22.7%	21.2%	19.6%	16.0%	14.4%	12.3%	11.0%	9.0%
2-113	22.6%	21.4%	20.1%	16.2%	14.9%	13.0%	11.8%	10.0%
2-114	24.0%	22.4%	20.3%	16.3%	15.0%	13.0%	11.8%	10.0%
2-115	24.2%	22.6%	20.3%	16.3%	15.0%	13.1%	11.8%	10.1%
2-116	27.1%	26.4%	25.8%	20.9%	19.1%	16.1%	14.6%	12.2%
2-117	26.6%	26.0%	25.3%	20.4%	18.9%	16.2%	14.7%	12.3%
2-118	26.1%	25.2%	25.1%	20.3%	18.1%	15.8%	14.2%	11.6%
2-119	25.8%	25.2%	24.5%	19.7%	18.3%	15.8%	14.1%	11.6%
2-120	25.8%	24.5%	24.0%	19.3%	17.7%	15.2%	13.9%	11.6%
2-121	26.9%	26.1%	26.6%	21.9%	20.2%	17.9%	16.3%	13.7%
2-122	27.7%	27.1%	27.0%	22.2%	20.5%	18.1%	16.5%	13.9%
2-123	27.6%	27.1%	28.1%	22.9%	21.6%	19.0%	16.9%	14.1%
2-124	28.8%	28.1%	27.8%	23.1%	22.2%	19.3%	17.6%	14.8%
2-125	29.0%	28.2%	28.9%	23.5%	21.5%	18.8%	17.5%	14.5%
2-126	17.9%	17.6%	17.4%	15.9%	16.1%	15.3%	15.4%	15.1%
2-127	17.3%	17.1%	17.3%	16.0%	16.2%	15.2%	15.5%	15.8%
2-128	17.2%	16.7%	16.8%	15.6%	15.8%	15.1%	15.8%	15.2%
2-129	17.3%	17.2%	17.5%	15.8%	16.0%	15.4%	16.0%	15.4%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
2-108	7.1%	5.8%	5.1%	79.0	80.5	81.5	85.7	97.2
2-109	6.7%	5.6%	5.1%	72.1	95.1	109.4	128.5	142.5
2-110	6.3%	5.4%	5.0%	74.5	85.5	91.2	107.9	122.6
2-111	7.4%	6.1%	5.7%	73.9	78.0	87.7	104.3	119.5
2-112	7.4%	6.2%	5.4%	65.5	71.1	79.8	88.5	107.4
2-113	8.3%	6.7%	5.5%	74.8	84.9	79.3	87.5	100.6
2-114	8.4%	6.9%	5.8%	64.3	71.9	76.4	81.7	92.6
2-115	8.7%	7.4%	6.2%	77.2	79.7	83.7	79.7	88.5
2-116	10.4%	8.8%	7.7%	68.8	71.8	79.7	93.7	103.1
2-117	10.5%	8.9%	7.4%	56.1	65.2	72.2	77.8	95.8
2-118	9.8%	8.0%	6.8%	58.6	64.2	69.0	66.8	78.1
2-119	9.7%	7.7%	6.5%	71.7	75.9	71.0	71.6	125.1
2-120	9.9%	7.9%	6.5%	59.5	64.8	77.2	92.2	103.3
2-121	11.6%	9.6%	8.8%	61.1	58.2	63.0	65.2	70.4
2-122	11.7%	9.5%	8.4%	63.5	53.4	55.2	59.7	74.6
2-123	12.1%	10.0%	8.6%	55.7	54.4	60.4	65.0	79.9
2-124	12.4%	10.1%	8.2%	68.6	71.5	77.3	79.9	96.5
2-125	12.3%	10.0%	8.7%	60.0	60.0	60.5	63.7	78.3
2-126	14.6%	14.9%	15.3%	140.8	145.6	135.5	128.0	129.9
2-127	15.3%	15.3%	14.9%	113.1	149.6	156.6	159.7	145.7
2-128	14.8%	14.7%	14.7%	114.1	120.8	126.3	124.1	128.2
2-129	14.5%	14.0%	14.2%	106.1	106.4	105.1	105.6	123.8

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
2-108	95.0	111.9	156.5	182.6	193.1	140.2	97.5	38.1
2-109	139.6	146.4	146.3	154.7	157.9	161.4	147.6	40.5
2-110	118.1	122.9	109.9	111.8	122.1	120.6	111.6	33.9
2-111	107.8	122.8	111.7	113.0	122.7	120.0	91.6	37.4
2-112	123.6	148.8	135.8	119.3	126.2	143.9	121.0	34.4
2-113	105.5	143.3	133.7	155.0	235.5	280.5	106.2	36.9
2-114	92.1	106.6	117.7	130.9	152.3	188.1	186.8	37.3
2-115	89.5	98.8	96.5	109.3	127.0	130.5	105.5	34.7
2-116	115.2	129.2	132.3	145.2	170.5	187.5	111.0	34.2
2-117	92.7	103.4	101.3	118.0	132.6	137.3	114.0	35.7
2-118	84.6	100.3	105.1	132.3	151.5	143.6	119.5	38.1
2-119	155.2	177.2	179.0	207.9	237.3	246.4	212.1	39.2
2-120	110.5	128.0	138.6	176.0	199.8	204.8	148.0	38.5
2-121	71.6	79.0	79.6	91.3	105.5	110.8	118.3	36.7
2-122	79.3	91.5	95.8	146.9	180.6	187.8	150.9	37.9
2-123	87.6	96.6	110.7	142.9	187.7	206.8	115.7	37.2
2-124	103.5	111.2	103.1	107.8	133.5	152.0	111.0	39.7
2-125	79.0	88.4	88.1	99.2	111.3	106.7	103.0	36.5
2-126	121.7	131.9	120.9	114.2	124.9	119.1	123.1	48.8
2-127	126.2	126.2	110.2	114.4	122.5	123.3	112.5	52.1
2-128	108.4	112.6	99.8	101.4	110.1	114.4	109.4	46.4
2-129	173.4	114.7	110.9	111.2	117.4	116.0	109.2	44.1

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
2-108	25.6	0.140	0.123	0.093	0.083	0.099	0.065	0.078
2-109	31.4	0.147	0.119	0.094	0.063	0.072	0.052	0.075
2-110	30.1	0.149	0.116	0.088	0.081	0.093	0.057	0.075
2-111	26.3	0.180	0.158	0.124	0.079	0.097	0.067	0.089
2-112	28.6	0.169	0.157	0.121	0.092	0.096	0.058	0.078
2-113	27.6	0.184	0.136	0.114	0.081	0.089	0.074	0.087
2-114	29.8	0.185	0.151	0.123	0.099	0.092	0.062	0.081
2-115	27.2	0.180	0.144	0.116	0.077	0.081	0.065	0.078
2-116	23.4	0.198	0.165	0.130	0.087	0.113	0.065	0.092
2-117	29.4	0.183	0.166	0.147	0.108	0.118	0.076	0.090
2-118	28.9	0.184	0.159	0.133	0.102	0.105	0.096	0.114
2-119	26.7	0.217	0.175	0.149	0.095	0.102	0.083	0.102
2-120	29.0	0.206	0.174	0.147	0.115	0.117	0.091	0.086
2-121	25.9	0.216	0.212	0.173	0.109	0.129	0.100	0.114
2-122	29.3	0.224	0.205	0.165	0.132	0.125	0.086	0.123
2-123	26.7	0.218	0.207	0.160	0.131	0.137	0.096	0.096
2-124	27.2	0.215	0.193	0.175	0.124	0.126	0.076	0.111
2-125	21.3	0.201	0.195	0.163	0.116	0.114	0.093	0.089
2-126	38.1	0.169	0.127	0.099	0.084	0.076	0.054	0.056
2-127	39.8	0.157	0.118	0.100	0.074	0.082	0.053	0.068
2-128	39.5	0.165	0.101	0.089	0.075	0.086	0.063	0.073
2-129	34.5	0.179	0.128	0.110	0.085	0.089	0.071	0.064

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
2-108	0.066	0.051	0.069	0.051	0.154	0.097	0.085	0.076
2-109	0.076	0.060	0.086	0.057	0.162	0.107	0.099	0.075
2-110	0.079	0.071	0.076	0.049	0.169	0.109	0.096	0.066
2-111	0.092	0.082	0.095	0.079	0.179	0.117	0.089	0.079
2-112	0.075	0.064	0.079	0.091	0.184	0.117	0.107	0.076
2-113	0.074	0.068	0.087	0.063	0.192	0.126	0.103	0.065
2-114	0.080	0.061	0.069	0.075	0.185	0.105	0.088	0.073
2-115	0.062	0.066	0.076	0.069	0.188	0.109	0.106	0.057
2-116	0.080	0.075	0.079	0.071	0.198	0.148	0.117	0.094
2-117	0.100	0.070	0.108	0.093	0.194	0.143	0.107	0.089
2-118	0.087	0.071	0.097	0.072	0.189	0.136	0.100	0.087
2-119	0.098	0.077	0.090	0.095	0.194	0.148	0.102	0.057
2-120	0.087	0.083	0.101	0.095	0.200	0.149	0.114	0.081
2-121	0.088	0.087	0.109	0.104	0.209	0.157	0.140	0.115
2-122	0.103	0.077	0.098	0.097	0.211	0.180	0.135	0.111
2-123	0.091	0.072	0.095	0.092	0.213	0.137	0.136	0.100
2-124	0.075	0.069	0.075	0.083	0.205	0.150	0.136	0.107
2-125	0.080	0.067	0.083	0.074	0.213	0.158	0.134	0.101
2-126	0.046	0.039	0.037	0.043	0.185	0.113	0.101	0.062
2-127	0.066	0.043	0.051	0.040	0.178	0.107	0.089	0.070
2-128	0.064	0.052	0.056	0.046	0.177	0.110	0.086	0.080
2-129	0.051	0.048	0.054	0.034	0.192	0.130	0.092	0.063

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
2-108	0.069	0.057	0.072	0.066	0.053	0.040	0.187	0.099
2-109	0.080	0.060	0.061	0.063	0.057	0.077	0.181	0.097
2-110	0.074	0.066	0.046	0.065	0.065	0.059	0.182	0.110
2-111	0.074	0.077	0.084	0.098	0.087	0.085	0.197	0.099
2-112	0.080	0.077	0.077	0.070	0.078	0.076	0.205	0.121
2-113	0.084	0.067	0.070	0.076	0.078	0.055	0.184	0.113
2-114	0.084	0.048	0.067	0.073	0.079	0.052	0.193	0.112
2-115	0.068	0.053	0.066	0.070	0.065	0.072	0.199	0.102
2-116	0.067	0.057	0.071	0.073	0.076	0.074	0.211	0.125
2-117	0.076	0.077	0.072	0.077	0.074	0.078	0.194	0.099
2-118	0.092	0.086	0.071	0.078	0.082	0.081	0.195	0.120
2-119	0.087	0.077	0.079	0.074	0.077	0.082	0.200	0.127
2-120	0.088	0.085	0.069	0.081	0.095	0.070	0.211	0.122
2-121	0.103	0.078	0.083	0.081	0.087	0.090	0.226	0.146
2-122	0.099	0.096	0.093	0.072	0.088	0.091	0.231	0.123
2-123	0.093	0.066	0.091	0.070	0.087	0.071	0.215	0.139
2-124	0.098	0.080	0.066	0.082	0.077	0.084	0.236	0.134
2-125	0.084	0.065	0.079	0.075	0.074	0.066	0.214	0.128
2-126	0.063	0.053	0.060	0.053	0.041	0.029	0.213	0.111
2-127	0.066	0.051	0.050	0.060	0.038	0.036	0.207	0.103
2-128	0.058	0.044	0.061	0.055	0.043	0.034	0.200	0.097
2-129	0.070	0.057	0.058	0.071	0.053	0.038	0.201	0.103

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
2-108	0.083	0.068	0.075	0.083	0.066	0.065	0.038	0.179
2-109	0.098	0.068	0.072	0.071	0.059	0.064	0.063	0.182
2-110	0.092	0.077	0.074	0.070	0.052	0.064	0.051	0.187
2-111	0.105	0.061	0.095	0.073	0.051	0.080	0.078	0.170
2-112	0.109	0.069	0.084	0.092	0.068	0.093	0.073	0.182
2-113	0.075	0.067	0.062	0.065	0.058	0.062	0.057	0.170
2-114	0.093	0.070	0.069	0.086	0.066	0.070	0.063	0.193
2-115	0.064	0.063	0.065	0.057	0.066	0.053	0.068	0.168
2-116	0.086	0.074	0.075	0.068	0.071	0.072	0.068	0.184
2-117	0.086	0.071	0.080	0.064	0.051	0.068	0.061	0.187
2-118	0.094	0.074	0.074	0.082	0.072	0.076	0.067	0.170
2-119	0.109	0.087	0.084	0.073	0.074	0.067	0.071	0.169
2-120	0.098	0.076	0.081	0.070	0.061	0.075	0.068	0.186
2-121	0.124	0.091	0.094	0.085	0.069	0.080	0.083	0.188
2-122	0.104	0.078	0.095	0.082	0.067	0.082	0.069	0.179
2-123	0.113	0.095	0.087	0.081	0.051	0.087	0.067	0.182
2-124	0.115	0.090	0.089	0.066	0.063	0.077	0.067	0.184
2-125	0.111	0.085	0.090	0.075	0.068	0.071	0.059	0.196
2-126	0.088	0.056	0.069	0.061	0.049	0.039	0.050	0.203
2-127	0.082	0.076	0.068	0.064	0.039	0.031	0.034	0.179
2-128	0.080	0.063	0.057	0.047	0.040	0.046	0.031	0.199
2-129	0.079	0.059	0.067	0.063	0.055	0.050	0.035	0.192

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
2-108	0.108	0.075	0.071	0.064	0.047	0.063	0.048	0.170
2-109	0.117	0.083	0.068	0.075	0.054	0.052	0.047	0.179
2-110	0.110	0.104	0.087	0.084	0.077	0.070	0.044	0.174
2-111	0.102	0.090	0.085	0.061	0.072	0.070	0.070	0.178
2-112	0.112	0.093	0.085	0.077	0.060	0.078	0.062	0.170
2-113	0.117	0.091	0.087	0.081	0.065	0.071	0.056	0.168
2-114	0.099	0.075	0.074	0.077	0.068	0.065	0.063	0.174
2-115	0.092	0.057	0.072	0.053	0.059	0.067	0.039	0.185
2-116	0.105	0.080	0.074	0.079	0.075	0.053	0.050	0.154
2-117	0.115	0.086	0.078	0.082	0.060	0.072	0.071	0.166
2-118	0.122	0.080	0.084	0.078	0.068	0.065	0.084	0.167
2-119	0.108	0.091	0.087	0.065	0.050	0.071	0.056	0.163
2-120	0.111	0.086	0.090	0.075	0.069	0.076	0.053	0.166
2-121	0.144	0.108	0.100	0.093	0.060	0.091	0.059	0.178
2-122	0.119	0.091	0.085	0.070	0.059	0.076	0.074	0.159
2-123	0.119	0.107	0.079	0.083	0.056	0.084	0.059	0.181
2-124	0.123	0.097	0.090	0.069	0.062	0.069	0.073	0.169
2-125	0.134	0.093	0.097	0.074	0.063	0.067	0.064	0.177
2-126	0.124	0.074	0.070	0.046	0.046	0.036	0.045	0.199
2-127	0.096	0.070	0.067	0.068	0.047	0.049	0.048	0.200
2-128	0.094	0.085	0.072	0.058	0.053	0.057	0.036	0.206
2-129	0.101	0.075	0.063	0.044	0.051	0.051	0.035	0.184

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
2-108	0.105	0.073	0.070	0.075	0.063	0.051	0.213	0.118
2-109	0.113	0.089	0.077	0.087	0.059	0.075	0.219	0.128
2-110	0.135	0.083	0.080	0.076	0.070	0.072	0.224	0.151
2-111	0.102	0.086	0.074	0.065	0.077	0.065	0.204	0.128
2-112	0.118	0.073	0.069	0.066	0.061	0.058	0.200	0.123
2-113	0.119	0.067	0.075	0.072	0.069	0.074	0.212	0.106
2-114	0.102	0.078	0.073	0.072	0.071	0.058	0.204	0.122
2-115	0.097	0.066	0.053	0.075	0.068	0.067	0.185	0.114
2-116	0.111	0.085	0.074	0.068	0.054	0.048	0.197	0.113
2-117	0.110	0.076	0.073	0.068	0.055	0.072	0.202	0.123
2-118	0.117	0.080	0.064	0.064	0.072	0.064	0.210	0.123
2-119	0.115	0.081	0.072	0.075	0.059	0.081	0.209	0.112
2-120	0.124	0.076	0.074	0.074	0.068	0.071	0.197	0.125
2-121	0.132	0.099	0.093	0.069	0.055	0.068	0.180	0.118
2-122	0.109	0.084	0.058	0.069	0.074	0.069	0.191	0.128
2-123	0.133	0.087	0.060	0.077	0.069	0.057	0.190	0.108
2-124	0.111	0.076	0.064	0.067	0.055	0.065	0.194	0.120
2-125	0.110	0.072	0.063	0.053	0.060	0.051	0.203	0.115
2-126	0.110	0.067	0.064	0.054	0.051	0.040	0.204	0.110
2-127	0.132	0.070	0.057	0.048	0.048	0.045	0.190	0.101
2-128	0.112	0.069	0.066	0.054	0.056	0.039	0.203	0.107
2-129	0.108	0.077	0.065	0.064	0.050	0.038	0.221	0.105

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
2-108	0.089	0.072	0.067	0.057	0.192	0.114	0.090	0.053
2-109	0.084	0.069	0.065	0.049	0.202	0.115	0.098	0.081
2-110	0.103	0.075	0.091	0.070	0.200	0.138	0.106	0.099
2-111	0.087	0.066	0.082	0.053	0.192	0.104	0.097	0.079
2-112	0.101	0.063	0.060	0.055	0.182	0.114	0.087	0.066
2-113	0.094	0.063	0.072	0.043	0.187	0.099	0.095	0.076
2-114	0.085	0.071	0.066	0.062	0.187	0.109	0.092	0.076
2-115	0.088	0.056	0.083	0.054	0.162	0.097	0.078	0.060
2-116	0.079	0.053	0.058	0.041	0.167	0.093	0.095	0.060
2-117	0.093	0.056	0.062	0.059	0.184	0.097	0.076	0.080
2-118	0.084	0.054	0.068	0.061	0.177	0.105	0.076	0.089
2-119	0.098	0.060	0.053	0.058	0.176	0.111	0.097	0.058
2-120	0.083	0.041	0.062	0.052	0.178	0.103	0.102	0.082
2-121	0.085	0.052	0.062	0.056	0.177	0.106	0.090	0.081
2-122	0.090	0.064	0.065	0.057	0.174	0.105	0.079	0.078
2-123	0.091	0.061	0.069	0.058	0.167	0.099	0.086	0.083
2-124	0.091	0.067	0.065	0.064	0.186	0.091	0.077	0.058
2-125	0.062	0.061	0.047	0.046	0.172	0.105	0.072	0.066
2-126	0.074	0.056	0.048	0.034	0.185	0.092	0.089	0.051
2-127	0.071	0.056	0.053	0.062	0.175	0.099	0.087	0.059
2-128	0.079	0.056	0.049	0.040	0.193	0.112	0.070	0.062
2-129	0.080	0.073	0.057	0.028	0.187	0.111	0.086	0.061

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
2-108	0.064	0.189	0.101	0.084	0.052	0.249	0.117	0.065
2-109	0.067	0.192	0.099	0.099	0.047	0.251	0.131	0.058
2-110	0.064	0.217	0.131	0.112	0.067	0.268	0.154	0.085
2-111	0.057	0.197	0.117	0.101	0.066	0.242	0.133	0.076
2-112	0.065	0.188	0.093	0.092	0.071	0.236	0.135	0.086
2-113	0.054	0.186	0.113	0.094	0.065	0.231	0.127	0.053
2-114	0.075	0.193	0.112	0.100	0.072	0.242	0.124	0.072
2-115	0.053	0.181	0.109	0.070	0.048	0.243	0.120	0.055
2-116	0.059	0.180	0.084	0.085	0.041	0.229	0.116	0.054
2-117	0.064	0.176	0.090	0.078	0.061	0.225	0.131	0.059
2-118	0.068	0.179	0.100	0.070	0.051	0.221	0.118	0.060
2-119	0.058	0.172	0.107	0.089	0.045	0.227	0.117	0.062
2-120	0.065	0.174	0.119	0.095	0.053	0.247	0.134	0.068
2-121	0.063	0.164	0.096	0.078	0.054	0.210	0.110	0.056
2-122	0.054	0.174	0.104	0.084	0.056	0.230	0.099	0.049
2-123	0.058	0.161	0.088	0.073	0.058	0.232	0.102	0.054
2-124	0.044	0.176	0.101	0.072	0.049	0.223	0.109	0.032
2-125	0.044	0.174	0.094	0.074	0.056	0.221	0.110	0.042
2-126	0.034	0.180	0.110	0.076	0.046	0.227	0.129	0.052
2-127	0.062	0.176	0.101	0.052	0.065	0.230	0.121	0.062
2-128	0.052	0.178	0.103	0.083	0.049	0.235	0.116	0.087
2-129	0.060	0.181	0.098	0.091	0.057	0.244	0.130	0.066

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
2-108	0.216	0.082	0.090	8.78E-04	2.54E-03	2.35E-06	7.91E-09	1.53E-08
2-109	0.205	0.079	0.068	5.22E-04	1.95E-03	1.20E-05	7.36E-09	1.56E-08
2-110	0.229	0.101	0.097	5.72E-04	1.75E-03	2.72E-06	6.08E-09	1.26E-08
2-111	0.225	0.094	0.124	2.04E-03	1.07E-02	8.87E-06	1.09E-08	2.32E-08
2-112	0.229	0.079	0.098	2.15E-03	9.01E-03	2.20E-06	1.14E-08	2.41E-08
2-113	0.217	0.071	0.093	5.53E-04	1.88E-03	3.50E-06	1.26E-08	2.58E-08
2-114	0.203	0.076	0.074	2.25E-03	5.51E-03	6.44E-05	1.47E-08	3.10E-08
2-115	0.209	0.055	0.076	4.52E-03	1.13E-02	2.31E-05	1.56E-08	3.29E-08
2-116	0.206	0.066	0.075	5.21E-03	1.83E-02	3.38E-04	2.14E-08	4.41E-08
2-117	0.197	0.090	0.083	2.29E-03	1.33E-02	1.67E-09	2.05E-08	4.20E-08
2-118	0.208	0.080	0.083	2.43E-03	1.22E-02	1.84E-05	1.81E-08	3.84E-08
2-119	0.187	0.071	0.095	2.61E-03	1.12E-02	5.63E-06	1.74E-08	3.55E-08
2-120	0.213	0.073	0.087	1.93E-03	7.35E-03	1.57E-04	1.61E-08	3.29E-08
2-121	0.188	0.070	0.081	2.16E-03	7.99E-03	6.96E-05	1.80E-08	3.14E-08
2-122	0.180	0.052	0.078	5.25E-04	1.59E-03	5.88E-05	1.94E-08	3.25E-08
2-123	0.196	0.064	0.071	3.12E-03	1.52E-02	5.21E-07	2.18E-08	3.85E-08
2-124	0.196	0.059	0.068	1.92E-03	7.36E-03	3.57E-05	2.47E-08	4.44E-08
2-125	0.190	0.044	0.058	4.53E-03	1.67E-02	4.13E-06	2.54E-08	4.65E-08
2-126	0.200	0.087	0.088	5.14E-03	1.26E-02	2.47E-05	2.86E-08	3.93E-08
2-127	0.193	0.075	0.098	1.53E-03	3.24E-03	6.54E-05	2.72E-08	3.73E-08
2-128	0.201	0.088	0.103	1.77E-03	7.51E-03	1.50E-05	2.53E-08	3.50E-08
2-129	0.193	0.067	0.092	1.90E-03	8.31E-03	1.98E-04	2.48E-08	3.14E-08

Case No.	ck
	$\Delta_{\min,FFT}$
2-108	7.39E-10
2-109	7.08E-10
2-110	6.42E-10
2-111	9.74E-10
2-112	7.99E-10
2-113	9.11E-10
2-114	1.17E-09
2-115	1.59E-09
2-116	3.15E-09
2-117	2.64E-09
2-118	1.95E-09
2-119	1.57E-09
2-120	1.56E-09
2-121	4.53E-09
2-122	3.85E-09
2-123	4.33E-09
2-124	3.77E-09
2-125	4.71E-09
2-126	2.36E-08
2-127	1.82E-08
2-128	1.76E-08
2-129	1.66E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
2-130	None	100 cm	30 cm triangles	20	0	11.38	0.89
2-131	None	100 cm	30 cm triangles	20	5	11.39	0.89
2-132	None	100 cm	30 cm triangles	15	5	11.32	0.89
2-133	None	100 cm	30 cm triangles	10	5	11.25	0.88
2-134	None	100 cm	30 cm triangles	5	5	11.17	0.88
2-135	None	100 cm	30 cm triangles	0	5	11.04	0.87
2-136	None	100 cm	30 cm triangles	0	10	10.92	0.86
2-137	None	100 cm	30 cm triangles	5	10	11.00	0.86
2-138	None	100 cm	30 cm triangles	10	10	11.12	0.87
2-139	None	100 cm	30 cm triangles	15	10	11.27	0.88
2-140	None	100 cm	30 cm triangles	20	10	11.33	0.89
2-141	None	100 cm	30 cm triangles	20	15	11.16	0.88
2-142	None	100 cm	30 cm triangles	15	15	10.95	0.86
2-143	None	100 cm	30 cm triangles	10	15	10.97	0.86
2-144	None	100 cm	30 cm triangles	5	15	10.82	0.85
2-145	None	100 cm	30 cm triangles	0	15	10.82	0.85
2-146	None	100 cm	30 cm triangles	0	20	10.47	0.82
2-147	None	100 cm	30 cm triangles	5	20	10.54	0.83
2-148	None	100 cm	30 cm triangles	10	20	10.80	0.85
2-149	None	100 cm	30 cm triangles	15	20	10.81	0.85
2-150	None	100 cm	30 cm triangles	20	20	10.90	0.86
3-1	None	120 cm	30 cm triangles	0	0	11.21	0.88

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
2-130	0.18	0.18	-0.06	0.00	17.1%	3	3	C
2-131	0.25	0.93	-0.18	0.13	20.7%	4	4	B
2-132	0.24	0.78	-0.18	0.14	21.8%	4	3	B
2-133	0.23	0.65	-0.17	0.09	21.1%	4	3	B
2-134	0.23	0.58	-0.16	0.07	20.6%	4	3	B
2-135	0.22	0.54	-0.18	0.13	21.7%	4	3	B
2-136	0.29	1.63	-0.21	0.28	25.4%	4	4	A
2-137	0.29	1.57	-0.21	0.27	24.5%	4	4	A
2-138	0.31	1.86	-0.22	0.37	24.6%	4	4	A
2-139	0.31	1.91	-0.24	0.52	24.7%	4	4	A
2-140	0.32	2.00	-0.24	0.46	24.4%	4	4	A
2-141	0.37	3.14	-0.26	0.70	27.8%	4	5	A
2-142	0.38	3.38	-0.24	0.47	28.9%	4	5	A
2-143	0.37	3.15	-0.25	0.57	28.2%	4	5	A
2-144	0.35	2.72	-0.23	0.35	28.2%	4	5	A
2-145	0.35	2.63	-0.25	0.53	29.3%	4	5	A
2-146	0.40	3.77	-0.20	0.17	31.5%	4	5	A
2-147	0.42	4.26	-0.22	0.28	31.6%	4	5	A
2-148	0.43	4.32	-0.23	0.33	31.7%	4	5	A
2-149	0.44	4.70	-0.24	0.41	30.6%	4	5	A
2-150	0.42	4.18	-0.27	0.67	30.7%	4	5	A
3-1	0.15	0.05	-0.10	0.00	18.0%	2	2	C

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
2-130	0.046	0.411	0.685	1.000	0.025	0.137	0.411	0.715
2-131	0.060	0.065	0.259	0.874	0.298	0.211	0.065	0.445
2-132	0.017	0.221	0.242	0.861	0.257	0.162	0.221	0.133
2-133	0.034	1.153	0.306	0.914	0.282	0.104	1.153	0.207
2-134	0.060	0.949	0.327	0.929	0.299	0.075	0.949	0.231
2-135	0.073	0.792	0.254	0.872	0.261	0.059	0.792	0.148
2-136	0.227	0.625	0.111	0.718	0.137	0.079	0.625	0.333
2-137	0.222	0.572	0.121	0.725	0.168	0.083	0.572	0.341
2-138	0.277	0.858	0.063	0.631	0.162	0.043	0.257	0.297
2-139	0.285	0.908	0.012	0.483	0.161	0.037	0.237	0.241
2-140	0.314	1.001	0.014	0.541	0.169	0.015	0.199	0.261
2-141	0.528	2.136	0.102	0.305	0.055	0.035	0.255	0.304
2-142	0.584	2.383	0.013	0.529	0.018	0.000	0.353	0.360
2-143	0.533	2.149	0.055	0.432	0.040	0.032	0.260	0.334
2-144	0.463	1.723	0.056	0.653	0.039	0.076	0.089	0.404
2-145	0.440	1.635	0.041	0.473	0.004	0.080	0.054	0.343
2-146	0.664	2.766	0.175	0.827	0.071	0.051	0.506	0.479
2-147	0.764	3.257	0.085	0.722	0.076	0.114	0.703	0.422
2-148	0.772	3.324	0.047	0.673	0.077	0.119	0.730	0.398
2-149	0.820	3.701	0.000	0.589	0.040	0.150	0.880	0.368
2-150	0.736	3.183	0.111	0.334	0.044	0.096	0.673	0.298
3-1	0.119	0.072	0.385	0.947	0.442	0.039	0.072	0.254

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
2-130	0.188	0.269	0.582	0.194	0.023	0.026	0.019	0.021
2-131	0.355	0.145	0.200	0.071	0.022	0.024	0.031	0.037
2-132	0.040	0.098	0.181	0.017	0.021	0.023	0.040	0.041
2-133	0.005	0.044	0.250	0.050	0.006	0.013	0.023	0.025
2-134	0.019	0.016	0.273	0.073	0.007	0.013	0.017	0.019
2-135	0.034	0.001	0.195	0.023	0.010	0.015	0.012	0.015
2-136	0.207	0.116	0.360	0.238	0.033	0.035	0.019	0.027
2-137	0.236	0.120	0.367	0.266	0.036	0.038	0.015	0.024
2-138	0.230	0.081	0.325	0.261	0.040	0.042	0.014	0.022
2-139	0.229	0.075	0.272	0.260	0.041	0.044	0.012	0.020
2-140	0.236	0.054	0.290	0.267	0.051	0.052	0.002	0.015
2-141	0.269	0.100	0.206	0.167	0.074	0.075	0.014	0.026
2-142	0.240	0.140	0.270	0.134	0.084	0.084	0.006	0.020
2-143	0.257	0.104	0.241	0.153	0.075	0.075	0.014	0.026
2-144	0.257	0.054	0.321	0.153	0.068	0.068	0.018	0.030
2-145	0.229	0.037	0.250	0.122	0.062	0.062	0.025	0.035
2-146	0.171	0.198	0.406	0.055	0.093	0.092	0.006	0.016
2-147	0.168	0.270	0.341	0.051	0.106	0.104	0.015	0.014
2-148	0.167	0.276	0.314	0.050	0.109	0.107	0.018	0.016
2-149	0.196	0.310	0.280	0.083	0.111	0.110	0.019	0.013
2-150	0.192	0.250	0.200	0.079	0.100	0.098	0.011	0.013
3-1	0.288	0.019	0.269	0.262	0.018	0.019	0.029	0.033

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
2-130	0.058	0.037	0.038	0.037	0.97	0.15	10.88	0.904
2-131	0.036	0.054	0.054	0.074	0.98	0.15	10.98	0.962
2-132	0.033	0.050	0.050	0.065	0.98	0.16	10.86	0.953
2-133	0.016	0.065	0.064	0.069	0.99	0.16	10.95	0.965
2-134	0.009	0.073	0.073	0.073	0.99	0.16	10.92	0.972
2-135	0.003	0.068	0.068	0.066	1.00	0.16	10.83	0.962
2-136	0.030	0.013	0.012	0.045	1.01	0.18	10.74	0.964
2-137	0.027	0.014	0.013	0.050	1.00	0.17	10.73	0.958
2-138	0.023	0.011	0.010	0.051	1.01	0.17	10.94	0.965
2-139	0.021	0.008	0.007	0.054	1.01	0.16	11.07	0.969
2-140	0.011	0.010	0.009	0.054	1.00	0.16	11.00	0.962
2-141	0.016	0.051	0.052	0.041	1.01	0.18	10.90	0.962
2-142	0.026	0.070	0.070	0.038	1.01	0.19	10.62	0.955
2-143	0.017	0.057	0.057	0.039	1.01	0.19	10.72	0.960
2-144	0.009	0.054	0.055	0.037	1.01	0.19	10.52	0.953
2-145	0.007	0.055	0.056	0.038	1.01	0.19	10.61	0.957
2-146	0.036	0.106	0.106	0.042	1.01	0.23	10.14	0.945
2-147	0.049	0.113	0.113	0.046	1.01	0.22	10.17	0.936
2-148	0.052	0.113	0.113	0.048	1.01	0.22	10.37	0.941
2-149	0.054	0.105	0.106	0.045	1.02	0.21	10.47	0.950
2-150	0.043	0.094	0.095	0.044	1.02	0.20	10.60	0.945
3-1	0.027	0.026	0.026	0.031	0.97	0.15	10.80	0.913

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
2-130	0.894	0.033	0.868	0.855	0.441	0.547	0.501	0.006
2-131	0.958	0.027	0.927	0.920	0.426	0.777	0.754	0.013
2-132	0.948	0.029	0.916	0.908	0.437	0.740	0.714	0.015
2-133	0.961	0.024	0.935	0.928	0.372	0.751	0.726	0.013
2-134	0.969	0.021	0.946	0.941	0.330	0.746	0.721	0.013
2-135	0.958	0.025	0.933	0.927	0.361	0.739	0.713	0.015
2-136	0.960	0.030	0.928	0.921	0.464	0.636	0.599	0.027
2-137	0.954	0.032	0.918	0.910	0.492	0.673	0.640	0.023
2-138	0.961	0.031	0.928	0.921	0.487	0.675	0.643	0.025
2-139	0.966	0.029	0.933	0.927	0.474	0.704	0.674	0.025
2-140	0.959	0.032	0.920	0.912	0.526	0.693	0.662	0.025
2-141	0.958	0.036	0.914	0.906	0.604	0.669	0.636	0.033
2-142	0.951	0.040	0.901	0.891	0.650	0.589	0.548	0.038
2-143	0.956	0.037	0.911	0.902	0.607	0.622	0.585	0.036
2-144	0.948	0.039	0.903	0.893	0.603	0.575	0.532	0.036
2-145	0.953	0.037	0.911	0.902	0.576	0.592	0.551	0.039
2-146	0.940	0.046	0.884	0.872	0.699	0.495	0.444	0.042
2-147	0.929	0.052	0.866	0.852	0.786	0.483	0.431	0.048
2-148	0.936	0.049	0.872	0.860	0.782	0.472	0.419	0.051
2-149	0.945	0.046	0.885	0.874	0.762	0.496	0.446	0.049
2-150	0.939	0.047	0.881	0.870	0.760	0.568	0.525	0.046
3-1	0.905	0.026	0.887	0.875	0.336	0.779	0.756	0.007

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
2-130	0.528	0.481	0.007	8.15	8.18	8.53	8.69	9.19
2-131	0.732	0.705	0.014	7.11	7.28	7.90	8.22	8.91
2-132	0.693	0.663	0.017	7.19	7.36	7.92	8.17	8.86
2-133	0.709	0.680	0.014	7.31	7.48	8.09	8.39	9.04
2-134	0.705	0.676	0.014	7.31	7.50	8.14	8.44	9.11
2-135	0.694	0.663	0.016	7.37	7.52	8.06	8.33	9.02
2-136	0.577	0.535	0.029	6.54	6.59	7.27	7.65	8.48
2-137	0.615	0.576	0.025	6.61	6.65	7.28	7.65	8.42
2-138	0.616	0.578	0.027	6.54	6.58	7.25	7.68	8.55
2-139	0.640	0.604	0.027	6.54	6.66	7.35	7.79	8.67
2-140	0.629	0.592	0.027	6.53	6.59	7.26	7.66	8.53
2-141	0.598	0.558	0.036	6.01	6.03	6.70	7.14	8.13
2-142	0.522	0.474	0.041	5.84	5.78	6.45	6.83	7.81
2-143	0.554	0.509	0.039	5.93	5.90	6.58	7.01	7.98
2-144	0.512	0.464	0.039	6.04	5.99	6.56	6.99	7.89
2-145	0.523	0.476	0.043	6.07	6.07	6.69	7.08	8.01
2-146	0.440	0.384	0.044	5.54	5.41	5.99	6.34	7.32
2-147	0.423	0.366	0.050	5.50	5.30	5.81	6.14	7.10
2-148	0.411	0.352	0.054	5.53	5.40	5.94	6.30	7.26
2-149	0.432	0.375	0.052	5.42	5.27	5.88	6.31	7.36
2-150	0.497	0.446	0.050	5.64	5.57	6.13	6.47	7.52
3-1	0.754	0.729	0.007	8.46	8.60	8.89	9.04	9.43

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
2-130	9.49	9.73	10.04	10.51	10.79	11.31	11.38	16.6%
2-131	9.30	9.61	9.97	10.47	10.79	11.34	11.39	20.3%
2-132	9.21	9.51	9.88	10.36	10.70	11.23	11.32	21.1%
2-133	9.41	9.71	10.03	10.47	10.77	11.25	11.25	20.5%
2-134	9.45	9.74	10.05	10.47	10.72	11.15	11.17	20.0%
2-135	9.39	9.67	9.99	10.42	10.68	11.12	11.04	21.0%
2-136	8.95	9.35	9.78	10.30	10.59	11.06	10.92	23.6%
2-137	8.89	9.30	9.74	10.28	10.61	11.10	11.00	23.0%
2-138	9.10	9.52	9.96	10.48	10.76	11.23	11.12	23.0%
2-139	9.21	9.61	10.04	10.57	10.89	11.37	11.27	23.6%
2-140	9.04	9.46	9.93	10.48	10.85	11.38	11.33	23.2%
2-141	8.77	9.23	9.76	10.40	10.77	11.33	11.16	26.1%
2-142	8.42	8.88	9.45	10.14	10.53	11.11	10.95	26.2%
2-143	8.57	9.07	9.64	10.24	10.60	11.12	10.97	26.1%
2-144	8.44	8.94	9.49	10.06	10.40	10.96	10.82	25.4%
2-145	8.56	9.06	9.59	10.15	10.49	11.02	10.82	26.5%
2-146	7.91	8.43	8.98	9.68	10.11	10.73	10.47	27.9%
2-147	7.78	8.37	9.04	9.74	10.19	10.80	10.54	27.3%
2-148	7.92	8.52	9.15	9.90	10.37	11.01	10.80	27.4%
2-149	8.00	8.62	9.25	9.97	10.41	11.09	10.81	26.5%
2-150	8.19	8.76	9.39	10.11	10.61	11.26	10.90	27.8%
3-1	9.64	9.87	10.07	10.50	10.73	11.10	11.21	18.0%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
2-130	17.2%	17.3%	17.4%	16.0%	16.3%	16.0%	16.5%	15.9%
2-131	21.5%	20.7%	20.4%	18.2%	18.0%	16.9%	16.9%	16.0%
2-132	23.3%	22.1%	21.7%	19.0%	18.8%	17.8%	17.6%	16.8%
2-133	22.3%	21.4%	21.1%	18.7%	18.3%	17.0%	17.3%	16.7%
2-134	21.6%	20.9%	20.6%	18.2%	18.2%	16.9%	16.9%	16.0%
2-135	23.0%	22.0%	22.0%	19.3%	18.7%	17.3%	17.0%	16.4%
2-136	27.1%	26.7%	26.6%	22.6%	21.5%	19.8%	19.3%	17.9%
2-137	26.2%	25.5%	24.8%	21.7%	21.0%	19.3%	18.8%	17.2%
2-138	27.1%	25.9%	24.9%	21.1%	20.5%	18.9%	18.2%	16.8%
2-139	26.5%	25.2%	25.4%	21.5%	20.3%	18.3%	17.7%	16.7%
2-140	26.5%	25.1%	24.7%	21.0%	20.5%	18.9%	18.4%	16.8%
2-141	30.1%	29.3%	28.6%	23.8%	22.7%	20.9%	19.6%	17.8%
2-142	31.6%	30.5%	30.6%	25.4%	24.9%	22.6%	21.2%	18.8%
2-143	30.4%	29.9%	29.8%	25.2%	23.9%	21.2%	19.7%	17.9%
2-144	30.6%	30.3%	30.0%	25.6%	24.6%	21.8%	20.6%	18.7%
2-145	32.0%	31.3%	30.9%	26.0%	25.3%	22.3%	20.9%	18.7%
2-146	33.5%	33.0%	34.4%	29.1%	28.8%	26.4%	25.1%	22.4%
2-147	34.4%	33.7%	35.1%	30.0%	28.2%	25.2%	23.5%	21.4%
2-148	33.9%	33.9%	35.1%	30.2%	28.8%	25.8%	24.0%	20.9%
2-149	33.3%	32.8%	33.8%	28.2%	27.6%	24.2%	22.4%	19.5%
2-150	32.8%	32.8%	33.7%	27.8%	26.1%	23.1%	21.5%	19.0%
3-1	18.0%	18.0%	18.0%	16.7%	16.8%	16.0%	16.4%	15.4%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
2-130	15.5%	15.0%	14.4%	108.6	122.0	124.6	121.3	125.5
2-131	15.1%	14.4%	14.0%	102.8	98.5	102.4	109.4	111.6
2-132	15.7%	15.2%	14.7%	107.7	124.0	124.5	123.2	152.2
2-133	15.7%	15.2%	15.0%	107.2	120.7	122.1	123.8	131.0
2-134	15.3%	15.1%	14.9%	111.1	118.4	123.1	136.9	166.2
2-135	15.8%	15.6%	15.1%	159.7	260.1	183.0	184.2	187.8
2-136	16.7%	15.9%	15.8%	90.5	107.8	117.6	128.8	152.1
2-137	16.1%	15.6%	15.5%	90.8	92.0	99.1	107.4	118.4
2-138	15.9%	15.6%	15.7%	78.3	83.0	87.9	95.4	104.6
2-139	15.6%	14.9%	14.6%	96.9	105.3	115.8	121.6	142.7
2-140	15.3%	14.6%	14.3%	99.7	107.7	116.2	118.3	122.1
2-141	16.5%	15.3%	15.2%	73.1	78.3	78.2	87.9	111.6
2-142	17.3%	16.2%	16.0%	90.0	95.9	107.3	122.6	137.4
2-143	16.7%	16.0%	15.9%	81.3	83.9	80.8	82.7	98.0
2-144	17.5%	16.9%	16.9%	74.9	78.3	84.9	113.4	135.0
2-145	17.4%	16.6%	15.8%	76.8	85.9	95.4	104.2	121.0
2-146	20.6%	18.6%	18.4%	67.4	83.9	90.3	92.2	117.8
2-147	19.5%	17.9%	17.7%	57.1	56.1	64.4	77.5	100.0
2-148	18.6%	17.3%	16.4%	73.9	76.6	84.2	89.3	110.0
2-149	17.7%	16.2%	16.2%	65.2	73.0	76.3	78.2	94.8
2-150	17.0%	15.5%	16.2%	84.7	90.6	93.4	104.2	117.4
3-1	14.7%	14.8%	14.6%	132.9	137.3	128.8	125.5	136.2

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
2-130	113.7	119.7	104.2	110.2	121.7	128.4	119.1	44.2
2-131	102.6	104.5	100.8	106.3	114.3	119.8	104.8	43.7
2-132	138.5	131.2	129.7	126.7	123.7	115.0	113.4	49.3
2-133	120.6	130.4	121.8	121.8	123.3	121.4	111.5	46.0
2-134	174.6	182.7	163.2	146.2	117.8	116.6	112.1	46.5
2-135	168.0	166.0	138.2	120.3	125.7	126.5	107.7	48.2
2-136	147.3	158.7	157.6	168.8	171.1	153.8	123.2	49.7
2-137	108.1	117.2	120.2	119.8	125.4	128.2	111.9	37.5
2-138	106.8	112.5	108.6	113.9	122.5	123.4	117.7	41.9
2-139	140.3	131.7	122.6	125.3	132.5	125.9	135.8	43.4
2-140	147.1	117.2	108.5	104.7	107.0	104.5	120.8	41.5
2-141	114.3	122.9	121.3	121.1	127.8	124.4	117.3	40.7
2-142	140.1	144.1	141.5	146.7	131.4	124.4	118.6	41.8
2-143	101.2	113.7	114.8	121.6	130.8	132.7	119.1	43.9
2-144	144.7	159.4	172.3	128.3	129.2	126.3	122.7	38.9
2-145	125.1	133.9	129.9	128.5	134.2	132.0	121.7	43.6
2-146	117.0	125.7	122.7	130.2	139.7	146.6	117.6	41.1
2-147	104.0	113.9	112.5	120.6	129.7	129.7	113.7	43.8
2-148	116.0	124.0	121.2	120.3	125.4	130.7	126.4	42.7
2-149	102.0	112.3	110.0	113.9	121.9	121.9	112.7	41.1
2-150	115.1	129.2	174.7	130.9	120.5	122.9	120.6	44.4
3-1	125.2	116.2	100.7	101.2	106.6	106.9	104.9	48.4

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f^*_{z,1-2}$ [Hz]	$f^*_{z,1-3}$ [Hz]	$f^*_{z,1-4}$ [Hz]	$f^*_{z,1-5}$ [Hz]	$f^*_{z,1-6}$ [Hz]	$f^*_{z,1-7}$ [Hz]	$f^*_{z,1-8}$ [Hz]
2-130	40.0	0.180	0.137	0.108	0.084	0.095	0.066	0.071
2-131	38.0	0.187	0.141	0.114	0.085	0.082	0.053	0.074
2-132	39.9	0.185	0.125	0.103	0.096	0.071	0.061	0.074
2-133	42.3	0.168	0.118	0.097	0.073	0.064	0.061	0.064
2-134	39.5	0.168	0.118	0.092	0.086	0.081	0.058	0.069
2-135	42.6	0.164	0.122	0.111	0.090	0.079	0.071	0.081
2-136	40.1	0.166	0.136	0.104	0.094	0.099	0.069	0.079
2-137	38.9	0.167	0.133	0.102	0.067	0.070	0.069	0.056
2-138	41.0	0.165	0.122	0.100	0.079	0.080	0.049	0.063
2-139	40.7	0.180	0.136	0.108	0.089	0.090	0.069	0.058
2-140	38.3	0.176	0.129	0.106	0.085	0.086	0.060	0.063
2-141	37.3	0.178	0.134	0.119	0.082	0.083	0.064	0.082
2-142	37.3	0.174	0.140	0.126	0.095	0.095	0.055	0.080
2-143	37.0	0.181	0.154	0.117	0.079	0.097	0.068	0.073
2-144	36.6	0.182	0.143	0.113	0.087	0.089	0.077	0.064
2-145	37.3	0.191	0.166	0.128	0.067	0.082	0.052	0.073
2-146	35.0	0.189	0.161	0.132	0.099	0.093	0.071	0.081
2-147	42.1	0.212	0.163	0.151	0.091	0.097	0.088	0.083
2-148	34.9	0.196	0.150	0.146	0.102	0.096	0.072	0.080
2-149	35.1	0.209	0.186	0.159	0.102	0.106	0.079	0.084
2-150	34.7	0.186	0.160	0.133	0.104	0.093	0.069	0.083
3-1	38.4	0.163	0.118	0.098	0.080	0.078	0.058	0.072

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
2-130	0.074	0.055	0.052	0.027	0.202	0.141	0.109	0.065
2-131	0.059	0.062	0.046	0.033	0.163	0.108	0.097	0.089
2-132	0.066	0.043	0.051	0.041	0.177	0.117	0.099	0.060
2-133	0.053	0.030	0.040	0.036	0.174	0.103	0.087	0.071
2-134	0.060	0.048	0.053	0.068	0.162	0.096	0.085	0.062
2-135	0.077	0.049	0.060	0.043	0.176	0.111	0.093	0.058
2-136	0.055	0.050	0.056	0.041	0.184	0.118	0.110	0.081
2-137	0.053	0.034	0.063	0.039	0.187	0.120	0.092	0.064
2-138	0.063	0.056	0.053	0.043	0.160	0.122	0.094	0.060
2-139	0.059	0.041	0.045	0.060	0.187	0.133	0.093	0.066
2-140	0.063	0.051	0.048	0.042	0.174	0.120	0.100	0.079
2-141	0.061	0.050	0.035	0.056	0.193	0.131	0.091	0.068
2-142	0.066	0.042	0.061	0.043	0.174	0.129	0.108	0.086
2-143	0.063	0.055	0.051	0.060	0.190	0.140	0.102	0.076
2-144	0.041	0.043	0.051	0.056	0.183	0.119	0.083	0.073
2-145	0.068	0.046	0.069	0.044	0.193	0.149	0.103	0.080
2-146	0.075	0.067	0.065	0.051	0.195	0.132	0.114	0.085
2-147	0.070	0.060	0.048	0.045	0.189	0.118	0.116	0.092
2-148	0.069	0.057	0.062	0.046	0.206	0.134	0.112	0.062
2-149	0.068	0.058	0.065	0.049	0.199	0.142	0.131	0.078
2-150	0.068	0.072	0.070	0.061	0.200	0.153	0.132	0.098
3-1	0.062	0.053	0.042	0.046	0.187	0.128	0.080	0.059

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
2-130	0.059	0.076	0.064	0.053	0.050	0.049	0.216	0.125
2-131	0.066	0.081	0.054	0.070	0.048	0.030	0.195	0.117
2-132	0.068	0.065	0.053	0.039	0.037	0.038	0.192	0.110
2-133	0.067	0.067	0.059	0.055	0.042	0.044	0.188	0.124
2-134	0.061	0.048	0.049	0.035	0.046	0.049	0.187	0.101
2-135	0.073	0.052	0.035	0.043	0.030	0.036	0.203	0.113
2-136	0.073	0.060	0.074	0.060	0.051	0.038	0.196	0.106
2-137	0.069	0.049	0.044	0.042	0.037	0.053	0.194	0.110
2-138	0.063	0.049	0.061	0.047	0.059	0.050	0.198	0.109
2-139	0.070	0.055	0.037	0.050	0.050	0.046	0.202	0.111
2-140	0.072	0.072	0.053	0.048	0.056	0.046	0.209	0.110
2-141	0.080	0.060	0.046	0.052	0.042	0.057	0.195	0.111
2-142	0.090	0.069	0.042	0.041	0.052	0.040	0.179	0.091
2-143	0.068	0.082	0.072	0.059	0.058	0.045	0.212	0.113
2-144	0.070	0.049	0.042	0.051	0.034	0.039	0.202	0.100
2-145	0.066	0.067	0.049	0.057	0.056	0.041	0.198	0.105
2-146	0.081	0.072	0.056	0.065	0.048	0.060	0.211	0.144
2-147	0.087	0.068	0.079	0.061	0.058	0.048	0.214	0.128
2-148	0.081	0.067	0.052	0.061	0.048	0.031	0.198	0.129
2-149	0.087	0.072	0.068	0.054	0.064	0.049	0.208	0.140
2-150	0.084	0.084	0.074	0.044	0.066	0.051	0.208	0.111
3-1	0.053	0.050	0.057	0.054	0.043	0.048	0.207	0.124

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
2-130	0.105	0.074	0.080	0.061	0.059	0.062	0.040	0.197
2-131	0.075	0.068	0.064	0.056	0.044	0.075	0.048	0.187
2-132	0.069	0.058	0.076	0.046	0.049	0.050	0.030	0.195
2-133	0.095	0.081	0.075	0.067	0.040	0.044	0.036	0.179
2-134	0.096	0.071	0.062	0.050	0.036	0.037	0.042	0.167
2-135	0.082	0.075	0.072	0.055	0.034	0.047	0.044	0.180
2-136	0.096	0.072	0.078	0.065	0.049	0.054	0.032	0.192
2-137	0.092	0.059	0.059	0.053	0.039	0.047	0.040	0.181
2-138	0.080	0.065	0.065	0.056	0.036	0.048	0.039	0.181
2-139	0.088	0.054	0.052	0.050	0.046	0.054	0.044	0.192
2-140	0.097	0.061	0.056	0.045	0.047	0.040	0.040	0.166
2-141	0.090	0.065	0.063	0.051	0.040	0.041	0.031	0.178
2-142	0.094	0.070	0.061	0.051	0.054	0.043	0.054	0.172
2-143	0.086	0.063	0.063	0.048	0.047	0.046	0.042	0.180
2-144	0.096	0.079	0.070	0.061	0.030	0.030	0.031	0.177
2-145	0.089	0.082	0.065	0.065	0.044	0.051	0.040	0.196
2-146	0.109	0.096	0.072	0.070	0.051	0.042	0.048	0.160
2-147	0.106	0.088	0.076	0.075	0.052	0.048	0.056	0.189
2-148	0.090	0.082	0.075	0.051	0.057	0.020	0.049	0.177
2-149	0.103	0.083	0.092	0.071	0.048	0.058	0.053	0.174
2-150	0.110	0.068	0.092	0.061	0.050	0.062	0.049	0.173
3-1	0.091	0.049	0.061	0.040	0.041	0.052	0.047	0.198

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
2-130	0.116	0.088	0.086	0.065	0.048	0.051	0.043	0.181
2-131	0.117	0.088	0.078	0.072	0.062	0.053	0.043	0.181
2-132	0.118	0.101	0.080	0.046	0.062	0.053	0.042	0.183
2-133	0.113	0.090	0.077	0.075	0.042	0.040	0.037	0.179
2-134	0.118	0.075	0.060	0.052	0.035	0.038	0.026	0.176
2-135	0.089	0.089	0.077	0.045	0.055	0.045	0.040	0.169
2-136	0.101	0.078	0.073	0.060	0.050	0.029	0.044	0.166
2-137	0.113	0.088	0.072	0.053	0.046	0.031	0.036	0.172
2-138	0.098	0.080	0.079	0.048	0.042	0.046	0.043	0.167
2-139	0.108	0.066	0.050	0.050	0.055	0.040	0.048	0.163
2-140	0.098	0.078	0.074	0.063	0.056	0.042	0.038	0.174
2-141	0.113	0.073	0.073	0.048	0.051	0.060	0.051	0.162
2-142	0.102	0.077	0.063	0.067	0.045	0.055	0.034	0.171
2-143	0.122	0.072	0.059	0.057	0.047	0.033	0.035	0.159
2-144	0.104	0.074	0.057	0.059	0.029	0.046	0.044	0.171
2-145	0.124	0.082	0.087	0.056	0.028	0.043	0.035	0.185
2-146	0.118	0.091	0.082	0.082	0.049	0.060	0.059	0.179
2-147	0.109	0.097	0.074	0.056	0.049	0.035	0.041	0.166
2-148	0.117	0.092	0.071	0.061	0.055	0.049	0.035	0.177
2-149	0.113	0.089	0.077	0.064	0.052	0.045	0.054	0.164
2-150	0.117	0.098	0.091	0.055	0.037	0.050	0.047	0.153
3-1	0.112	0.075	0.067	0.046	0.036	0.057	0.050	0.196

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
2-130	0.118	0.092	0.067	0.052	0.047	0.048	0.201	0.111
2-131	0.112	0.085	0.056	0.058	0.042	0.051	0.202	0.114
2-132	0.123	0.091	0.079	0.070	0.051	0.045	0.215	0.112
2-133	0.113	0.091	0.084	0.068	0.057	0.043	0.214	0.118
2-134	0.105	0.071	0.068	0.060	0.036	0.037	0.197	0.110
2-135	0.104	0.097	0.064	0.067	0.052	0.055	0.214	0.109
2-136	0.101	0.080	0.066	0.042	0.051	0.032	0.207	0.109
2-137	0.113	0.069	0.054	0.061	0.042	0.037	0.199	0.116
2-138	0.105	0.069	0.068	0.059	0.049	0.035	0.187	0.129
2-139	0.116	0.079	0.068	0.045	0.041	0.034	0.208	0.091
2-140	0.106	0.083	0.069	0.054	0.061	0.042	0.203	0.119
2-141	0.107	0.080	0.052	0.038	0.032	0.035	0.197	0.105
2-142	0.105	0.080	0.058	0.064	0.048	0.042	0.195	0.107
2-143	0.101	0.083	0.074	0.063	0.035	0.041	0.201	0.107
2-144	0.108	0.085	0.074	0.061	0.050	0.037	0.195	0.101
2-145	0.109	0.075	0.068	0.055	0.053	0.027	0.190	0.103
2-146	0.119	0.078	0.068	0.064	0.051	0.049	0.198	0.115
2-147	0.102	0.080	0.058	0.064	0.036	0.054	0.186	0.092
2-148	0.121	0.073	0.064	0.063	0.044	0.040	0.205	0.116
2-149	0.110	0.064	0.065	0.064	0.049	0.038	0.202	0.116
2-150	0.107	0.088	0.077	0.058	0.056	0.044	0.193	0.115
3-1	0.124	0.077	0.061	0.051	0.047	0.040	0.207	0.115

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
2-130	0.087	0.057	0.067	0.051	0.201	0.102	0.091	0.081
2-131	0.076	0.048	0.054	0.043	0.181	0.094	0.088	0.073
2-132	0.088	0.051	0.053	0.050	0.193	0.087	0.074	0.067
2-133	0.088	0.063	0.048	0.049	0.194	0.101	0.078	0.057
2-134	0.070	0.058	0.059	0.039	0.188	0.094	0.083	0.062
2-135	0.091	0.062	0.060	0.047	0.183	0.087	0.078	0.050
2-136	0.078	0.062	0.040	0.037	0.178	0.100	0.077	0.074
2-137	0.092	0.044	0.048	0.031	0.177	0.092	0.070	0.053
2-138	0.078	0.042	0.041	0.041	0.178	0.092	0.076	0.055
2-139	0.071	0.054	0.052	0.044	0.169	0.089	0.089	0.063
2-140	0.077	0.068	0.059	0.029	0.162	0.103	0.064	0.064
2-141	0.083	0.063	0.079	0.017	0.177	0.093	0.098	0.066
2-142	0.075	0.043	0.041	0.035	0.177	0.098	0.072	0.043
2-143	0.089	0.048	0.037	0.038	0.151	0.083	0.075	0.054
2-144	0.074	0.054	0.069	0.041	0.186	0.102	0.078	0.056
2-145	0.078	0.058	0.054	0.032	0.176	0.111	0.080	0.067
2-146	0.083	0.062	0.051	0.044	0.173	0.106	0.080	0.054
2-147	0.058	0.052	0.060	0.045	0.173	0.110	0.086	0.067
2-148	0.086	0.070	0.063	0.043	0.164	0.092	0.090	0.058
2-149	0.076	0.051	0.046	0.033	0.172	0.100	0.080	0.064
2-150	0.071	0.057	0.066	0.048	0.179	0.105	0.072	0.062
3-1	0.086	0.065	0.061	0.046	0.182	0.092	0.082	0.061

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
2-130	0.063	0.187	0.106	0.092	0.061	0.230	0.101	0.072
2-131	0.054	0.182	0.100	0.088	0.045	0.235	0.101	0.080
2-132	0.059	0.176	0.111	0.083	0.061	0.229	0.117	0.040
2-133	0.046	0.178	0.111	0.075	0.047	0.235	0.104	0.065
2-134	0.051	0.174	0.101	0.086	0.073	0.238	0.110	0.068
2-135	0.050	0.173	0.091	0.076	0.065	0.235	0.114	0.065
2-136	0.033	0.189	0.106	0.081	0.051	0.220	0.114	0.057
2-137	0.044	0.178	0.089	0.069	0.048	0.220	0.111	0.054
2-138	0.042	0.179	0.107	0.074	0.057	0.241	0.102	0.055
2-139	0.055	0.177	0.094	0.073	0.053	0.246	0.117	0.062
2-140	0.053	0.174	0.093	0.064	0.035	0.225	0.110	0.059
2-141	0.037	0.188	0.117	0.091	0.050	0.250	0.121	0.061
2-142	0.047	0.156	0.108	0.079	0.054	0.215	0.109	0.067
2-143	0.043	0.178	0.112	0.085	0.043	0.238	0.114	0.051
2-144	0.038	0.168	0.097	0.079	0.051	0.220	0.113	0.047
2-145	0.041	0.172	0.103	0.075	0.047	0.220	0.117	0.049
2-146	0.041	0.164	0.094	0.077	0.046	0.217	0.115	0.050
2-147	0.041	0.175	0.104	0.074	0.048	0.224	0.097	0.047
2-148	0.051	0.167	0.112	0.078	0.044	0.226	0.111	0.042
2-149	0.049	0.170	0.094	0.079	0.054	0.206	0.114	0.048
2-150	0.033	0.173	0.103	0.083	0.056	0.216	0.107	0.045
3-1	0.057	0.191	0.113	0.089	0.060	0.244	0.114	0.078

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
2-130	0.194	0.071	0.101	2.39E-03	7.97E-03	4.26E-05	2.67E-08	3.71E-08
2-131	0.198	0.089	0.075	2.48E-03	1.19E-02	1.11E-05	3.10E-08	3.56E-08
2-132	0.192	0.059	0.082	1.78E-02	5.22E-02	3.14E-04	3.74E-08	4.38E-08
2-133	0.184	0.071	0.097	1.36E-03	2.93E-03	3.68E-06	3.67E-08	4.40E-08
2-134	0.186	0.056	0.089	1.92E-03	7.13E-03	4.34E-05	3.41E-08	4.09E-08
2-135	0.178	0.075	0.092	1.97E-03	8.72E-03	6.48E-05	3.85E-08	5.03E-08
2-136	0.194	0.059	0.080	4.51E-03	8.83E-03	1.38E-04	5.12E-08	7.64E-08
2-137	0.199	0.085	0.087	6.27E-03	1.51E-02	1.44E-05	4.44E-08	5.74E-08
2-138	0.196	0.061	0.076	3.64E-03	1.63E-02	2.93E-07	4.51E-08	5.96E-08
2-139	0.193	0.069	0.088	1.41E-02	3.01E-02	1.42E-04	4.44E-08	6.82E-08
2-140	0.178	0.070	0.078	3.01E-03	9.70E-03	6.77E-07	4.21E-08	5.65E-08
2-141	0.199	0.061	0.076	4.90E-03	1.24E-02	1.18E-04	5.37E-08	7.68E-08
2-142	0.175	0.079	0.084	4.56E-03	2.25E-02	1.10E-04	6.01E-08	8.60E-08
2-143	0.179	0.069	0.068	1.85E-03	6.25E-03	4.85E-05	5.60E-08	8.40E-08
2-144	0.182	0.080	0.094	1.47E-02	3.53E-02	3.73E-05	6.02E-08	8.57E-08
2-145	0.191	0.065	0.088	1.06E-02	5.25E-02	6.33E-05	6.68E-08	1.01E-07
2-146	0.197	0.065	0.073	4.94E-03	2.06E-02	1.31E-05	8.26E-08	1.20E-07
2-147	0.173	0.061	0.092	6.36E-03	3.74E-02	4.64E-06	7.29E-08	1.04E-07
2-148	0.166	0.073	0.065	4.50E-03	1.27E-02	1.12E-05	7.70E-08	1.20E-07
2-149	0.171	0.068	0.058	3.22E-03	1.58E-02	5.45E-05	6.42E-08	1.06E-07
2-150	0.199	0.054	0.057	8.18E-03	3.51E-02	6.73E-06	6.39E-08	1.01E-07
3-1	0.194	0.083	0.097	2.91E-03	9.97E-03	1.22E-04	2.91E-08	3.27E-08

Case No.	ck
	$\Delta_{\min,FFT}$
2-130	1.50E-08
2-131	1.94E-08
2-132	2.36E-08
2-133	2.26E-08
2-134	2.03E-08
2-135	2.56E-08
2-136	2.53E-08
2-137	2.38E-08
2-138	2.29E-08
2-139	2.53E-08
2-140	2.34E-08
2-141	2.70E-08
2-142	2.42E-08
2-143	2.55E-08
2-144	2.48E-08
2-145	2.96E-08
2-146	2.52E-08
2-147	2.24E-08
2-148	2.34E-08
2-149	1.88E-08
2-150	2.70E-08
3-1	2.38E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
3-2	None	120 cm	30 cm triangles	5	0	11.30	0.89
3-3	None	120 cm	30 cm triangles	10	0	11.35	0.89
3-4	None	120 cm	30 cm triangles	15	0	11.53	0.91
3-5	None	120 cm	30 cm triangles	20	0	11.53	0.91
3-6	None	120 cm	30 cm triangles	20	5	11.42	0.90
3-7	None	120 cm	30 cm triangles	15	5	11.35	0.89
3-8	None	120 cm	30 cm triangles	10	5	11.27	0.88
3-9	None	120 cm	30 cm triangles	5	5	11.21	0.88
3-10	None	120 cm	30 cm triangles	0	5	11.17	0.88
3-11	None	120 cm	30 cm triangles	0	10	10.99	0.86
3-12	None	120 cm	30 cm triangles	5	10	10.98	0.86
3-13	None	120 cm	30 cm triangles	10	10	11.34	0.89
3-14	None	120 cm	30 cm triangles	15	10	11.33	0.89
3-15	None	120 cm	30 cm triangles	20	10	11.43	0.90
3-16	None	120 cm	30 cm triangles	20	15	11.32	0.89
3-17	None	120 cm	30 cm triangles	15	15	11.15	0.88
3-18	None	120 cm	30 cm triangles	10	15	11.14	0.87
3-19	None	120 cm	30 cm triangles	5	15	10.92	0.86
3-20	None	120 cm	30 cm triangles	0	15	10.96	0.86
3-21	None	120 cm	30 cm triangles	0	20	10.71	0.84
3-22	None	120 cm	30 cm triangles	5	20	10.88	0.85
3-23	None	120 cm	30 cm triangles	10	20	10.92	0.86

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
3-2	0.16	0.09	-0.09	0.00	17.9%	2	2	C
3-3	0.17	0.13	-0.10	0.00	17.8%	2	2	C
3-4	0.18	0.18	-0.10	0.00	18.1%	3	3	C
3-5	0.20	0.28	-0.11	0.01	17.7%	3	3	B
3-6	0.26	0.96	-0.22	0.35	22.5%	4	4	B
3-7	0.25	0.89	-0.21	0.31	22.0%	4	4	B
3-8	0.25	0.90	-0.21	0.29	22.1%	4	4	B
3-9	0.24	0.78	-0.20	0.22	22.0%	4	3	B
3-10	0.21	0.40	-0.18	0.14	21.5%	3	3	B
3-11	0.29	1.59	-0.27	0.71	27.9%	4	4	A
3-12	0.31	2.00	-0.26	0.70	27.1%	4	4	A
3-13	0.33	2.26	-0.27	0.76	26.3%	4	4	A
3-14	0.33	2.31	-0.27	0.73	26.2%	4	4	A
3-15	0.33	2.42	-0.27	0.79	26.1%	4	5	A
3-16	0.41	4.02	-0.30	1.09	31.3%	4	5	A
3-17	0.40	3.86	-0.31	1.13	31.7%	4	5	A
3-18	0.40	3.97	-0.30	1.11	31.7%	4	5	A
3-19	0.38	3.47	-0.30	1.09	31.8%	4	5	A
3-20	0.38	3.50	-0.29	0.90	32.5%	4	5	A
3-21	0.47	5.40	-0.29	0.94	36.4%	4	5	A
3-22	0.44	4.84	-0.29	0.88	34.1%	4	5	A
3-23	0.45	5.13	-0.30	1.03	34.8%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_{α}	Δ_{z0}	Δ_{β}	Δ_{z0T}	Δ_{IV30}	$\Delta_{\alpha ISO}$	$\Delta_{z0 ISO}$	$\Delta_{\beta ISO}$
3-2	0.058	0.720	0.451	0.985	0.430	0.144	0.720	0.333
3-3	0.006	1.557	0.438	0.976	0.422	0.222	1.557	0.318
3-4	0.045	0.402	0.448	0.991	0.037	0.136	0.402	0.501
3-5	0.040	0.067	0.402	0.982	0.014	0.059	0.067	0.459
3-6	0.067	0.039	0.096	0.649	0.234	0.219	0.039	0.322
3-7	0.044	0.112	0.116	0.694	0.252	0.193	0.112	0.337
3-8	0.047	0.097	0.127	0.708	0.250	0.197	0.097	0.345
3-9	0.010	0.222	0.179	0.785	0.253	0.154	0.222	0.062
3-10	0.096	0.349	0.039	0.521	0.226	0.008	0.349	0.131
3-11	0.224	0.590	0.106	0.292	0.052	0.082	0.590	0.171
3-12	0.305	0.997	0.089	0.302	0.079	0.021	0.201	0.183
3-13	0.364	1.258	0.122	0.237	0.105	0.023	0.097	0.158
3-14	0.373	1.313	0.113	0.269	0.110	0.030	0.075	0.166
3-15	0.395	1.420	0.133	0.212	0.112	0.046	0.032	0.284
3-16	0.694	3.023	0.266	0.089	0.063	0.070	0.609	0.200
3-17	0.664	2.859	0.280	0.128	0.078	0.051	0.544	0.192
3-18	0.678	2.971	0.268	0.105	0.078	0.060	0.588	0.199
3-19	0.582	2.466	0.256	0.092	0.081	0.001	0.386	0.206
3-20	0.604	2.496	0.211	0.096	0.106	0.013	0.398	0.235
3-21	0.948	4.396	0.224	0.063	0.237	0.230	1.158	0.227
3-22	0.844	3.837	0.191	0.121	0.159	0.165	0.935	0.248
3-23	0.879	4.127	0.253	0.026	0.182	0.187	1.051	0.208

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
3-2	0.277	0.121	0.346	0.252	0.017	0.021	0.037	0.043
3-3	0.270	0.197	0.331	0.244	0.020	0.027	0.045	0.051
3-4	0.136	0.270	0.266	0.270	0.024	0.027	0.020	0.022
3-5	0.155	0.110	0.488	0.202	0.030	0.033	0.019	0.022
3-6	0.296	0.152	0.023	0.014	0.025	0.027	0.029	0.035
3-7	0.313	0.128	0.045	0.011	0.016	0.020	0.035	0.040
3-8	0.311	0.131	0.057	0.007	0.015	0.019	0.036	0.041
3-9	0.046	0.091	0.114	0.011	0.010	0.015	0.030	0.031
3-10	0.022	0.063	0.178	0.034	0.024	0.030	0.011	0.016
3-11	0.129	0.119	0.204	0.164	0.039	0.040	0.013	0.022
3-12	0.154	0.060	0.216	0.188	0.045	0.047	0.008	0.017
3-13	0.178	0.018	0.192	0.211	0.062	0.063	0.010	0.016
3-14	0.182	0.011	0.199	0.215	0.060	0.061	0.007	0.014
3-15	0.313	0.004	0.184	0.217	0.064	0.065	0.020	0.032
3-16	0.177	0.220	0.089	0.062	0.104	0.103	0.014	0.017
3-17	0.166	0.198	0.079	0.049	0.097	0.097	0.007	0.015
3-18	0.166	0.208	0.087	0.049	0.098	0.098	0.008	0.015
3-19	0.164	0.139	0.095	0.047	0.082	0.083	0.009	0.021
3-20	0.145	0.155	0.128	0.025	0.089	0.089	0.002	0.018
3-21	0.043	0.403	0.119	0.091	0.130	0.127	0.035	0.025
3-22	0.103	0.328	0.143	0.022	0.121	0.119	0.028	0.022
3-23	0.085	0.353	0.098	0.043	0.125	0.124	0.031	0.023

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
3-2	0.035	0.031	0.031	0.031	0.98	0.15	10.91	0.906
3-3	0.042	0.033	0.033	0.030	0.98	0.15	10.98	0.907
3-4	0.059	0.029	0.029	0.031	0.97	0.15	11.01	0.915
3-5	0.018	0.026	0.026	0.036	0.97	0.15	11.03	0.908
3-6	0.039	0.040	0.040	0.064	0.98	0.16	10.98	0.963
3-7	0.030	0.049	0.049	0.068	0.99	0.15	11.01	0.965
3-8	0.029	0.048	0.048	0.067	0.99	0.16	10.96	0.965
3-9	0.023	0.053	0.053	0.066	0.99	0.16	10.91	0.963
3-10	0.009	0.013	0.013	0.016	0.99	0.16	10.87	0.972
3-11	0.024	0.019	0.019	0.041	1.00	0.18	10.68	0.961
3-12	0.017	0.021	0.022	0.041	1.01	0.18	10.76	0.966
3-13	0.005	0.024	0.024	0.048	0.99	0.17	10.91	0.965
3-14	0.002	0.023	0.024	0.049	1.00	0.17	10.98	0.965
3-15	0.004	0.025	0.025	0.050	1.00	0.17	11.05	0.966
3-16	0.046	0.093	0.094	0.046	1.00	0.19	10.83	0.961
3-17	0.039	0.092	0.093	0.047	1.00	0.19	10.74	0.959
3-18	0.040	0.094	0.095	0.046	1.00	0.19	10.75	0.962
3-19	0.024	0.084	0.085	0.043	1.01	0.19	10.65	0.963
3-20	0.030	0.095	0.096	0.050	1.00	0.20	10.58	0.954
3-21	0.074	0.156	0.157	0.068	1.01	0.22	10.23	0.946
3-22	0.064	0.131	0.132	0.052	1.00	0.21	10.38	0.953
3-23	0.068	0.137	0.138	0.058	1.00	0.21	10.43	0.962

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
3-2	0.897	0.030	0.876	0.864	0.386	0.674	0.641	0.008
3-3	0.897	0.031	0.874	0.861	0.414	0.675	0.643	0.008
3-4	0.906	0.031	0.881	0.869	0.423	0.690	0.659	0.009
3-5	0.899	0.035	0.870	0.857	0.477	0.727	0.700	0.008
3-6	0.959	0.027	0.929	0.921	0.423	0.798	0.778	0.016
3-7	0.961	0.026	0.932	0.925	0.406	0.764	0.740	0.017
3-8	0.962	0.026	0.933	0.927	0.402	0.777	0.754	0.016
3-9	0.960	0.026	0.932	0.925	0.393	0.747	0.722	0.016
3-10	0.969	0.020	0.949	0.943	0.300	0.748	0.723	0.015
3-11	0.957	0.031	0.922	0.914	0.479	0.674	0.641	0.033
3-12	0.963	0.030	0.929	0.921	0.484	0.722	0.694	0.028
3-13	0.961	0.031	0.922	0.914	0.529	0.694	0.664	0.030
3-14	0.961	0.032	0.922	0.915	0.534	0.686	0.654	0.030
3-15	0.963	0.031	0.923	0.915	0.542	0.697	0.667	0.030
3-16	0.957	0.039	0.903	0.894	0.684	0.632	0.595	0.046
3-17	0.955	0.039	0.904	0.894	0.669	0.632	0.595	0.047
3-18	0.958	0.038	0.908	0.899	0.659	0.642	0.606	0.045
3-19	0.960	0.036	0.916	0.908	0.598	0.667	0.633	0.043
3-20	0.950	0.041	0.899	0.889	0.659	0.588	0.546	0.051
3-21	0.941	0.050	0.873	0.860	0.820	0.585	0.544	0.058
3-22	0.949	0.045	0.887	0.876	0.754	0.616	0.578	0.049
3-23	0.958	0.041	0.899	0.888	0.725	0.602	0.562	0.054

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
3-2	0.648	0.613	0.008	8.40	8.48	8.78	8.91	9.41
3-3	0.651	0.616	0.008	8.34	8.39	8.69	8.82	9.33
3-4	0.665	0.631	0.009	8.20	8.27	8.62	8.77	9.34
3-5	0.699	0.669	0.009	8.06	8.10	8.45	8.60	9.20
3-6	0.747	0.722	0.018	7.09	7.23	7.86	8.19	8.93
3-7	0.711	0.682	0.018	7.15	7.31	7.92	8.24	8.98
3-8	0.725	0.698	0.018	7.11	7.25	7.86	8.21	8.96
3-9	0.700	0.670	0.018	7.20	7.31	7.91	8.22	8.95
3-10	0.702	0.673	0.016	7.48	7.67	8.27	8.58	9.24
3-11	0.604	0.564	0.036	6.57	6.57	7.22	7.59	8.44
3-12	0.655	0.621	0.031	6.34	6.42	7.08	7.50	8.41
3-13	0.625	0.588	0.033	6.36	6.41	7.02	7.49	8.46
3-14	0.616	0.577	0.033	6.37	6.41	7.05	7.52	8.46
3-15	0.626	0.589	0.033	6.34	6.45	7.10	7.53	8.45
3-16	0.551	0.507	0.051	5.71	5.70	6.36	6.77	7.82
3-17	0.551	0.506	0.052	5.73	5.70	6.32	6.76	7.77
3-18	0.562	0.518	0.050	5.67	5.63	6.31	6.75	7.80
3-19	0.588	0.547	0.047	5.74	5.77	6.39	6.85	7.88
3-20	0.511	0.462	0.055	5.81	5.72	6.30	6.71	7.76
3-21	0.507	0.458	0.063	5.18	4.98	5.49	5.88	7.01
3-22	0.540	0.494	0.054	5.32	5.23	5.76	6.19	7.24
3-23	0.522	0.474	0.059	5.19	5.13	5.75	6.22	7.29

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
3-2	9.66	9.89	10.11	10.60	10.86	11.30	11.30	17.5%
3-3	9.63	9.95	10.19	10.68	10.95	11.34	11.35	17.4%
3-4	9.63	9.91	10.16	10.61	10.91	11.34	11.53	17.8%
3-5	9.52	9.84	10.11	10.64	10.97	11.47	11.53	17.5%
3-6	9.35	9.66	9.93	10.47	10.78	11.27	11.42	22.3%
3-7	9.37	9.70	9.99	10.53	10.83	11.29	11.35	21.5%
3-8	9.34	9.68	9.97	10.48	10.77	11.26	11.27	21.6%
3-9	9.36	9.70	10.00	10.46	10.71	11.17	11.21	21.3%
3-10	9.54	9.78	9.99	10.43	10.65	11.06	11.17	20.8%
3-11	8.92	9.30	9.65	10.22	10.51	10.98	10.99	26.2%
3-12	8.93	9.32	9.69	10.26	10.59	11.08	10.98	26.1%
3-13	8.98	9.41	9.80	10.37	10.70	11.19	11.34	24.9%
3-14	9.03	9.47	9.85	10.42	10.77	11.30	11.33	24.8%
3-15	9.03	9.47	9.90	10.52	10.88	11.38	11.43	24.7%
3-16	8.49	9.04	9.56	10.28	10.67	11.26	11.32	28.9%
3-17	8.47	9.06	9.52	10.20	10.60	11.15	11.15	29.3%
3-18	8.48	9.02	9.57	10.22	10.59	11.12	11.14	29.4%
3-19	8.57	9.08	9.55	10.15	10.49	10.98	10.92	29.9%
3-20	8.41	8.96	9.48	10.11	10.46	10.95	10.96	29.3%
3-21	7.74	8.41	8.99	9.73	10.19	10.80	10.71	33.0%
3-22	7.97	8.60	9.15	9.85	10.27	10.86	10.88	31.4%
3-23	8.03	8.59	9.17	9.86	10.29	10.87	10.92	31.6%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
3-2	17.9%	18.2%	18.1%	16.9%	16.8%	15.8%	16.5%	15.6%
3-3	18.1%	18.0%	18.1%	16.4%	16.4%	15.5%	16.4%	15.6%
3-4	18.5%	18.3%	18.2%	16.3%	16.7%	16.2%	16.7%	16.0%
3-5	18.1%	17.8%	17.8%	16.0%	16.2%	15.5%	16.1%	15.4%
3-6	24.2%	22.9%	21.8%	18.7%	18.3%	17.3%	17.6%	16.4%
3-7	23.4%	22.5%	21.8%	18.6%	18.3%	17.0%	17.1%	15.7%
3-8	23.7%	22.4%	21.6%	18.6%	18.4%	17.1%	17.1%	16.1%
3-9	23.8%	22.6%	21.8%	18.7%	18.4%	16.8%	16.8%	16.3%
3-10	22.9%	22.0%	21.3%	18.7%	18.1%	17.1%	17.3%	16.2%
3-11	30.7%	29.4%	28.7%	23.5%	22.5%	20.3%	19.7%	17.9%
3-12	29.3%	28.3%	27.6%	22.6%	21.6%	19.6%	18.9%	17.7%
3-13	29.0%	28.2%	26.8%	21.7%	20.4%	18.5%	18.4%	16.9%
3-14	28.5%	27.8%	26.8%	22.1%	20.6%	19.0%	18.8%	17.0%
3-15	28.9%	27.4%	26.3%	21.9%	20.7%	18.7%	18.5%	16.8%
3-16	34.6%	33.6%	33.3%	26.6%	24.7%	21.9%	20.8%	18.4%
3-17	35.1%	34.0%	33.1%	27.6%	25.7%	22.0%	20.7%	18.0%
3-18	35.2%	34.3%	33.4%	26.9%	24.8%	22.1%	20.5%	18.4%
3-19	35.0%	33.9%	33.2%	27.3%	24.6%	21.5%	20.5%	18.8%
3-20	35.9%	35.6%	35.4%	28.1%	25.9%	23.0%	21.9%	19.5%
3-21	39.7%	39.4%	39.7%	32.1%	30.0%	25.9%	24.3%	21.3%
3-22	37.0%	36.9%	36.1%	29.7%	27.9%	24.6%	23.4%	20.9%
3-23	38.4%	37.9%	37.3%	30.1%	27.9%	24.5%	23.1%	20.3%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
3-2	15.0%	14.8%	14.5%	133.9	145.1	147.7	137.2	146.5
3-3	15.1%	14.7%	14.3%	184.5	176.4	168.7	205.1	131.9
3-4	15.2%	14.7%	14.0%	130.9	131.6	134.1	136.7	142.9
3-5	14.4%	14.0%	13.8%	106.8	120.1	108.8	113.4	121.7
3-6	15.6%	15.0%	14.2%	107.9	114.9	119.5	118.0	125.5
3-7	15.0%	14.6%	14.1%	106.1	114.3	128.6	138.1	149.6
3-8	15.2%	14.7%	14.4%	94.3	101.3	105.4	110.6	119.3
3-9	15.7%	15.0%	15.3%	151.1	157.8	158.2	110.0	114.6
3-10	15.5%	15.2%	14.8%	104.1	110.8	118.1	127.6	178.7
3-11	16.5%	15.8%	15.6%	89.7	119.9	123.7	113.8	134.7
3-12	16.6%	15.9%	15.9%	117.6	140.7	149.9	153.8	165.4
3-13	15.9%	15.5%	14.8%	86.4	86.6	94.2	106.4	114.4
3-14	15.7%	14.6%	14.4%	70.4	76.5	85.3	97.3	109.5
3-15	15.7%	14.7%	14.1%	87.2	87.4	88.0	90.2	114.9
3-16	16.9%	15.5%	14.7%	118.6	99.5	111.4	113.1	121.4
3-17	16.5%	15.6%	15.4%	86.8	108.2	117.8	134.0	159.6
3-18	17.1%	15.9%	16.0%	74.0	80.5	86.2	94.9	112.5
3-19	17.7%	16.6%	16.4%	79.8	79.9	88.1	95.9	108.9
3-20	17.7%	16.5%	15.8%	73.1	86.5	100.6	97.6	147.3
3-21	19.3%	17.7%	17.7%	63.6	73.9	77.6	81.9	103.3
3-22	18.6%	17.3%	17.0%	69.7	76.2	82.8	100.1	118.7
3-23	18.5%	17.2%	16.3%	67.0	73.2	85.0	101.5	132.3

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
3-2	141.0	149.6	119.7	117.9	122.1	126.5	115.9	48.6
3-3	112.1	113.3	105.2	113.5	120.7	126.0	110.9	45.8
3-4	134.3	121.8	112.9	116.9	120.4	122.5	116.4	54.9
3-5	113.0	121.5	110.2	112.9	119.6	117.7	114.1	47.8
3-6	117.5	128.5	122.6	124.7	129.8	125.1	125.2	44.6
3-7	147.9	146.1	132.2	115.8	124.4	125.1	111.2	49.4
3-8	112.3	110.7	99.7	106.1	114.7	112.3	110.3	43.1
3-9	106.8	111.7	109.7	111.9	120.6	123.0	117.6	44.7
3-10	192.5	167.2	131.3	116.8	119.7	118.6	113.7	48.1
3-11	138.3	148.3	142.2	134.6	136.9	118.0	118.4	45.9
3-12	169.9	184.8	155.8	133.8	129.1	126.4	119.4	38.4
3-13	108.9	113.1	112.0	121.3	130.0	124.9	113.2	35.4
3-14	109.7	113.7	113.4	121.3	133.4	132.0	131.2	41.5
3-15	112.9	125.9	116.8	122.0	129.8	125.9	115.0	40.8
3-16	125.7	133.8	119.1	123.7	130.5	126.0	120.4	40.6
3-17	165.3	164.4	149.4	128.0	122.7	116.3	116.2	45.7
3-18	114.6	126.6	118.9	121.2	125.1	119.9	114.5	40.4
3-19	105.6	113.5	109.3	122.0	130.9	136.2	130.0	41.1
3-20	163.0	171.1	142.1	143.1	153.9	125.2	119.5	43.7
3-21	111.4	116.1	104.6	113.6	121.1	123.2	123.2	33.9
3-22	130.0	142.9	134.6	132.0	130.7	118.2	112.4	38.9
3-23	125.8	144.2	133.1	132.2	120.5	118.9	112.9	41.0

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
3-2	38.0	0.176	0.123	0.101	0.083	0.081	0.062	0.060
3-3	39.9	0.160	0.127	0.098	0.085	0.083	0.058	0.059
3-4	42.9	0.164	0.115	0.109	0.083	0.101	0.074	0.073
3-5	42.4	0.177	0.117	0.100	0.077	0.089	0.070	0.072
3-6	46.2	0.154	0.134	0.102	0.080	0.086	0.051	0.067
3-7	38.8	0.174	0.121	0.107	0.089	0.080	0.075	0.074
3-8	39.3	0.180	0.127	0.101	0.089	0.086	0.070	0.062
3-9	43.4	0.167	0.130	0.099	0.082	0.093	0.062	0.067
3-10	39.4	0.173	0.125	0.099	0.078	0.095	0.076	0.076
3-11	40.9	0.165	0.135	0.117	0.086	0.089	0.064	0.059
3-12	37.7	0.168	0.141	0.117	0.083	0.084	0.065	0.070
3-13	37.1	0.183	0.148	0.117	0.081	0.095	0.053	0.057
3-14	37.2	0.184	0.125	0.105	0.090	0.085	0.079	0.071
3-15	37.0	0.171	0.146	0.116	0.097	0.097	0.071	0.047
3-16	37.5	0.193	0.151	0.124	0.086	0.082	0.065	0.061
3-17	35.0	0.182	0.137	0.103	0.080	0.091	0.062	0.075
3-18	38.7	0.183	0.163	0.127	0.085	0.090	0.058	0.069
3-19	37.1	0.187	0.133	0.108	0.093	0.083	0.069	0.075
3-20	34.6	0.216	0.170	0.126	0.095	0.101	0.068	0.061
3-21	34.1	0.197	0.167	0.142	0.096	0.097	0.069	0.081
3-22	34.6	0.194	0.165	0.119	0.100	0.093	0.073	0.071
3-23	33.3	0.175	0.175	0.138	0.090	0.090	0.076	0.070

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
3-2	0.062	0.038	0.037	0.036	0.184	0.127	0.080	0.075
3-3	0.055	0.051	0.047	0.027	0.202	0.130	0.090	0.053
3-4	0.068	0.058	0.062	0.048	0.183	0.121	0.097	0.083
3-5	0.062	0.055	0.049	0.034	0.191	0.113	0.109	0.078
3-6	0.048	0.045	0.065	0.035	0.183	0.114	0.100	0.069
3-7	0.066	0.062	0.062	0.047	0.179	0.118	0.100	0.075
3-8	0.047	0.037	0.047	0.062	0.184	0.124	0.084	0.083
3-9	0.064	0.055	0.057	0.041	0.183	0.120	0.078	0.069
3-10	0.057	0.046	0.049	0.040	0.174	0.111	0.091	0.082
3-11	0.072	0.047	0.053	0.033	0.200	0.109	0.104	0.072
3-12	0.068	0.051	0.057	0.048	0.166	0.127	0.125	0.079
3-13	0.062	0.056	0.056	0.028	0.190	0.113	0.100	0.070
3-14	0.053	0.050	0.056	0.040	0.196	0.109	0.086	0.077
3-15	0.058	0.049	0.056	0.058	0.185	0.119	0.094	0.069
3-16	0.080	0.044	0.050	0.050	0.175	0.124	0.082	0.082
3-17	0.074	0.051	0.047	0.028	0.191	0.132	0.124	0.081
3-18	0.051	0.050	0.058	0.056	0.187	0.131	0.099	0.071
3-19	0.044	0.043	0.049	0.043	0.194	0.123	0.111	0.086
3-20	0.055	0.062	0.056	0.047	0.211	0.126	0.110	0.092
3-21	0.061	0.044	0.046	0.043	0.191	0.143	0.113	0.086
3-22	0.061	0.055	0.049	0.042	0.191	0.137	0.124	0.086
3-23	0.062	0.052	0.065	0.055	0.191	0.136	0.126	0.094

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
3-2	0.064	0.060	0.047	0.055	0.045	0.041	0.196	0.106
3-3	0.064	0.052	0.055	0.071	0.035	0.053	0.213	0.116
3-4	0.072	0.065	0.066	0.062	0.051	0.037	0.211	0.105
3-5	0.065	0.044	0.060	0.069	0.052	0.052	0.204	0.124
3-6	0.066	0.061	0.050	0.058	0.050	0.040	0.202	0.120
3-7	0.084	0.055	0.062	0.056	0.030	0.037	0.183	0.110
3-8	0.074	0.053	0.055	0.057	0.045	0.039	0.210	0.109
3-9	0.064	0.050	0.047	0.048	0.045	0.042	0.196	0.109
3-10	0.067	0.062	0.057	0.060	0.062	0.045	0.195	0.099
3-11	0.074	0.063	0.067	0.051	0.053	0.032	0.218	0.118
3-12	0.075	0.053	0.055	0.036	0.036	0.035	0.217	0.127
3-13	0.069	0.048	0.056	0.058	0.061	0.046	0.195	0.105
3-14	0.073	0.060	0.045	0.048	0.052	0.039	0.181	0.119
3-15	0.062	0.054	0.052	0.052	0.038	0.043	0.192	0.120
3-16	0.074	0.057	0.062	0.043	0.050	0.025	0.215	0.099
3-17	0.083	0.058	0.052	0.058	0.055	0.047	0.204	0.110
3-18	0.064	0.065	0.055	0.065	0.058	0.054	0.213	0.096
3-19	0.063	0.059	0.037	0.051	0.036	0.038	0.205	0.125
3-20	0.077	0.054	0.050	0.047	0.051	0.046	0.203	0.118
3-21	0.078	0.040	0.034	0.061	0.048	0.059	0.231	0.120
3-22	0.093	0.060	0.077	0.055	0.053	0.050	0.201	0.128
3-23	0.082	0.055	0.058	0.064	0.062	0.050	0.220	0.127

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
3-2	0.083	0.074	0.059	0.058	0.038	0.057	0.048	0.195
3-3	0.075	0.067	0.054	0.059	0.064	0.051	0.027	0.184
3-4	0.102	0.072	0.075	0.074	0.058	0.056	0.051	0.200
3-5	0.094	0.076	0.066	0.051	0.041	0.060	0.027	0.197
3-6	0.086	0.047	0.069	0.074	0.049	0.061	0.029	0.173
3-7	0.093	0.069	0.064	0.054	0.032	0.054	0.036	0.196
3-8	0.076	0.070	0.070	0.047	0.038	0.042	0.049	0.178
3-9	0.085	0.077	0.063	0.050	0.046	0.064	0.037	0.204
3-10	0.098	0.076	0.066	0.048	0.050	0.038	0.035	0.190
3-11	0.095	0.068	0.070	0.066	0.051	0.049	0.032	0.193
3-12	0.076	0.072	0.055	0.057	0.045	0.044	0.038	0.187
3-13	0.080	0.060	0.072	0.049	0.058	0.055	0.046	0.174
3-14	0.069	0.056	0.064	0.053	0.029	0.057	0.035	0.179
3-15	0.097	0.073	0.044	0.061	0.057	0.048	0.052	0.173
3-16	0.084	0.068	0.065	0.053	0.056	0.053	0.038	0.167
3-17	0.089	0.076	0.060	0.053	0.049	0.059	0.034	0.185
3-18	0.104	0.066	0.068	0.061	0.042	0.041	0.056	0.186
3-19	0.084	0.068	0.055	0.060	0.039	0.051	0.020	0.188
3-20	0.116	0.072	0.067	0.059	0.037	0.041	0.043	0.193
3-21	0.108	0.092	0.066	0.052	0.039	0.049	0.048	0.179
3-22	0.110	0.076	0.081	0.066	0.054	0.057	0.043	0.175
3-23	0.099	0.075	0.062	0.064	0.061	0.059	0.044	0.193

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
3-2	0.107	0.082	0.080	0.046	0.053	0.046	0.039	0.194
3-3	0.100	0.089	0.064	0.069	0.050	0.056	0.026	0.187
3-4	0.117	0.083	0.074	0.075	0.061	0.051	0.056	0.193
3-5	0.120	0.096	0.075	0.066	0.055	0.062	0.048	0.190
3-6	0.113	0.087	0.078	0.077	0.063	0.051	0.033	0.188
3-7	0.111	0.092	0.083	0.069	0.042	0.049	0.042	0.186
3-8	0.109	0.076	0.065	0.064	0.055	0.040	0.040	0.178
3-9	0.110	0.090	0.073	0.058	0.061	0.057	0.050	0.167
3-10	0.115	0.085	0.067	0.057	0.064	0.057	0.057	0.182
3-11	0.097	0.097	0.081	0.060	0.064	0.051	0.033	0.165
3-12	0.106	0.099	0.061	0.062	0.050	0.046	0.027	0.188
3-13	0.115	0.068	0.067	0.052	0.052	0.049	0.057	0.166
3-14	0.096	0.065	0.065	0.049	0.056	0.044	0.031	0.184
3-15	0.110	0.074	0.063	0.062	0.051	0.052	0.037	0.175
3-16	0.111	0.080	0.079	0.059	0.048	0.042	0.042	0.166
3-17	0.090	0.085	0.069	0.055	0.039	0.046	0.046	0.178
3-18	0.113	0.088	0.077	0.066	0.041	0.048	0.046	0.169
3-19	0.102	0.092	0.068	0.051	0.053	0.048	0.042	0.181
3-20	0.121	0.087	0.072	0.055	0.053	0.042	0.041	0.191
3-21	0.122	0.099	0.067	0.054	0.045	0.050	0.045	0.172
3-22	0.104	0.078	0.084	0.068	0.054	0.069	0.048	0.161
3-23	0.120	0.104	0.074	0.075	0.054	0.056	0.039	0.177

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
3-2	0.117	0.086	0.066	0.052	0.045	0.053	0.219	0.127
3-3	0.120	0.073	0.062	0.064	0.066	0.039	0.214	0.105
3-4	0.128	0.097	0.088	0.067	0.061	0.055	0.215	0.103
3-5	0.110	0.089	0.072	0.060	0.063	0.056	0.210	0.119
3-6	0.119	0.095	0.080	0.072	0.051	0.050	0.230	0.112
3-7	0.118	0.091	0.078	0.056	0.052	0.030	0.224	0.093
3-8	0.106	0.087	0.061	0.046	0.059	0.046	0.202	0.109
3-9	0.125	0.077	0.062	0.051	0.048	0.052	0.204	0.120
3-10	0.111	0.072	0.059	0.060	0.058	0.042	0.220	0.114
3-11	0.124	0.076	0.063	0.051	0.055	0.059	0.211	0.120
3-12	0.122	0.077	0.077	0.057	0.054	0.047	0.208	0.110
3-13	0.110	0.071	0.053	0.063	0.064	0.050	0.222	0.118
3-14	0.111	0.093	0.065	0.053	0.063	0.039	0.214	0.109
3-15	0.096	0.065	0.071	0.075	0.047	0.050	0.211	0.095
3-16	0.115	0.083	0.054	0.056	0.051	0.040	0.200	0.106
3-17	0.112	0.080	0.060	0.062	0.049	0.037	0.199	0.109
3-18	0.109	0.072	0.061	0.067	0.050	0.046	0.212	0.127
3-19	0.127	0.068	0.060	0.045	0.053	0.042	0.210	0.113
3-20	0.093	0.072	0.057	0.060	0.046	0.026	0.186	0.107
3-21	0.122	0.078	0.056	0.044	0.047	0.055	0.196	0.112
3-22	0.110	0.066	0.066	0.049	0.045	0.049	0.194	0.107
3-23	0.117	0.084	0.063	0.040	0.035	0.044	0.189	0.108

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
3-2	0.091	0.056	0.045	0.043	0.196	0.109	0.098	0.053
3-3	0.075	0.067	0.070	0.057	0.190	0.098	0.087	0.078
3-4	0.072	0.065	0.067	0.048	0.187	0.096	0.085	0.084
3-5	0.092	0.074	0.065	0.040	0.197	0.114	0.088	0.067
3-6	0.085	0.059	0.066	0.047	0.192	0.109	0.085	0.073
3-7	0.083	0.063	0.054	0.045	0.181	0.106	0.080	0.060
3-8	0.077	0.068	0.067	0.032	0.208	0.108	0.091	0.068
3-9	0.066	0.060	0.062	0.055	0.194	0.101	0.092	0.064
3-10	0.080	0.072	0.080	0.053	0.188	0.092	0.088	0.079
3-11	0.080	0.053	0.061	0.050	0.187	0.087	0.071	0.046
3-12	0.089	0.060	0.064	0.036	0.175	0.099	0.073	0.082
3-13	0.072	0.068	0.064	0.054	0.173	0.100	0.077	0.073
3-14	0.059	0.051	0.053	0.050	0.180	0.087	0.075	0.068
3-15	0.077	0.056	0.047	0.042	0.181	0.085	0.075	0.055
3-16	0.062	0.052	0.070	0.042	0.163	0.115	0.075	0.059
3-17	0.062	0.064	0.058	0.034	0.173	0.093	0.089	0.065
3-18	0.081	0.072	0.076	0.047	0.167	0.080	0.074	0.059
3-19	0.075	0.044	0.049	0.036	0.170	0.088	0.078	0.063
3-20	0.055	0.050	0.038	0.051	0.161	0.086	0.077	0.062
3-21	0.077	0.065	0.063	0.043	0.155	0.093	0.094	0.070
3-22	0.104	0.067	0.044	0.037	0.158	0.099	0.081	0.058
3-23	0.097	0.058	0.054	0.039	0.176	0.112	0.075	0.049

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
3-2	0.059	0.196	0.120	0.097	0.042	0.252	0.106	0.067
3-3	0.051	0.180	0.120	0.090	0.047	0.228	0.120	0.060
3-4	0.057	0.196	0.118	0.087	0.067	0.250	0.127	0.071
3-5	0.044	0.195	0.135	0.068	0.057	0.238	0.131	0.072
3-6	0.042	0.183	0.104	0.094	0.057	0.230	0.116	0.073
3-7	0.055	0.187	0.106	0.069	0.044	0.226	0.112	0.066
3-8	0.048	0.181	0.109	0.075	0.043	0.237	0.107	0.063
3-9	0.059	0.180	0.110	0.098	0.056	0.228	0.103	0.062
3-10	0.059	0.181	0.112	0.091	0.049	0.238	0.113	0.077
3-11	0.026	0.163	0.093	0.080	0.045	0.229	0.122	0.058
3-12	0.047	0.189	0.101	0.091	0.059	0.231	0.112	0.067
3-13	0.055	0.163	0.100	0.071	0.062	0.244	0.117	0.060
3-14	0.036	0.174	0.084	0.072	0.051	0.230	0.113	0.042
3-15	0.040	0.168	0.099	0.061	0.059	0.236	0.114	0.060
3-16	0.032	0.175	0.095	0.051	0.050	0.213	0.094	0.047
3-17	0.038	0.176	0.117	0.078	0.050	0.232	0.109	0.053
3-18	0.057	0.175	0.102	0.085	0.048	0.215	0.104	0.076
3-19	0.056	0.172	0.111	0.075	0.055	0.218	0.117	0.061
3-20	0.026	0.168	0.086	0.057	0.046	0.222	0.105	0.055
3-21	0.059	0.174	0.094	0.060	0.058	0.210	0.110	0.065
3-22	0.040	0.163	0.102	0.079	0.038	0.233	0.103	0.052
3-23	0.039	0.166	0.104	0.087	0.051	0.244	0.122	0.055

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
3-2	0.184	0.062	0.082	2.41E-03	9.51E-03	9.61E-05	2.95E-08	3.44E-08
3-3	0.208	0.074	0.085	2.75E-03	1.08E-02	1.84E-05	2.87E-08	3.50E-08
3-4	0.187	0.090	0.091	1.81E-03	4.88E-03	7.65E-07	2.96E-08	3.73E-08
3-5	0.213	0.075	0.087	4.27E-03	8.71E-03	2.44E-07	2.54E-08	3.19E-08
3-6	0.199	0.086	0.088	1.41E-03	6.20E-03	1.46E-04	3.76E-08	4.67E-08
3-7	0.189	0.070	0.093	1.34E-02	3.70E-02	5.89E-06	3.54E-08	4.60E-08
3-8	0.196	0.077	0.085	1.07E-03	3.02E-03	1.28E-05	3.56E-08	4.41E-08
3-9	0.194	0.078	0.078	4.09E-03	9.47E-03	3.28E-06	3.69E-08	4.61E-08
3-10	0.197	0.078	0.085	3.59E-03	1.44E-02	4.26E-05	3.81E-08	4.96E-08
3-11	0.205	0.073	0.090	1.47E-02	5.64E-02	1.19E-06	6.05E-08	9.99E-08
3-12	0.200	0.068	0.086	4.98E-03	2.40E-02	2.88E-06	5.29E-08	8.21E-08
3-13	0.191	0.072	0.082	3.98E-03	1.45E-02	6.87E-06	4.70E-08	7.17E-08
3-14	0.186	0.046	0.087	6.52E-03	1.70E-02	9.77E-07	4.73E-08	7.36E-08
3-15	0.171	0.069	0.077	5.48E-03	1.54E-02	3.38E-06	4.66E-08	6.88E-08
3-16	0.178	0.066	0.085	5.41E-03	1.73E-02	1.85E-06	6.61E-08	1.14E-07
3-17	0.186	0.067	0.074	5.22E-03	2.31E-02	5.19E-04	6.80E-08	1.12E-07
3-18	0.173	0.064	0.080	1.77E-03	8.89E-03	8.77E-06	6.79E-08	1.14E-07
3-19	0.185	0.074	0.088	2.00E-02	5.05E-02	9.77E-05	7.07E-08	1.19E-07
3-20	0.177	0.053	0.078	1.39E-02	4.61E-02	1.55E-04	7.84E-08	1.42E-07
3-21	0.188	0.072	0.078	3.94E-03	1.51E-02	9.66E-05	8.70E-08	1.32E-07
3-22	0.180	0.067	0.057	8.44E-03	4.03E-02	3.36E-06	7.75E-08	1.10E-07
3-23	0.180	0.054	0.081	1.28E-02	2.78E-02	2.08E-03	7.90E-08	1.29E-07

Case No.	ck
	$\Delta_{\min,FFT}$
3-2	2.06E-08
3-3	1.95E-08
3-4	2.04E-08
3-5	1.76E-08
3-6	2.78E-08
3-7	2.47E-08
3-8	2.47E-08
3-9	2.45E-08
3-10	2.59E-08
3-11	3.81E-08
3-12	3.36E-08
3-13	2.81E-08
3-14	2.77E-08
3-15	2.68E-08
3-16	3.29E-08
3-17	3.51E-08
3-18	3.43E-08
3-19	3.88E-08
3-20	3.73E-08
3-21	3.79E-08
3-22	3.45E-08
3-23	3.21E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V _{ref} [m/s]	Wind speed ratio [-]
3-24	None	120 cm	30 cm triangles	15	20	10.99	0.86
3-25	None	120 cm	30 cm triangles	20	20	11.10	0.87
3-26	None	120 cm	None	0	0	12.44	0.98
3-27	None	120 cm	None	5	0	12.46	0.98
3-28	None	120 cm	None	10	0	12.54	0.98
3-29	None	120 cm	None	15	0	12.50	0.98
3-30	None	120 cm	None	20	0	12.48	0.98
3-31	None	120 cm	None	20	5	12.35	0.97
3-32	None	120 cm	None	15	5	12.37	0.97
3-33	None	120 cm	None	10	5	12.27	0.96
3-34	None	120 cm	None	5	5	12.15	0.95
3-35	None	120 cm	None	0	5	12.13	0.95
3-36	None	120 cm	None	0	10	11.79	0.93
3-37	None	120 cm	None	5	10	11.87	0.93
3-38	None	120 cm	None	10	10	11.97	0.94
3-39	None	120 cm	None	15	10	12.09	0.95
3-40	None	120 cm	None	20	10	12.12	0.95
3-41	None	120 cm	None	20	15	11.79	0.93
3-42	None	120 cm	None	15	15	11.79	0.93
3-43	None	120 cm	None	10	15	11.72	0.92
3-44	None	120 cm	None	5	15	11.66	0.92
3-45	None	120 cm	None	0	15	11.68	0.92

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
3-24	0.47	5.41	-0.33	1.41	36.1%	4	5	A
3-25	0.46	5.50	-0.30	1.05	33.4%	4	5	A
3-26	0.18	0.20	-0.35	2.04	10.5%	3	3	C
3-27	0.20	0.30	-0.37	2.22	11.2%	3	3	B
3-28	0.21	0.44	-0.35	1.98	12.2%	3	3	B
3-29	0.23	0.65	-0.33	1.61	13.3%	4	3	B
3-30	0.26	1.06	-0.33	1.57	15.0%	4	4	B
3-31	0.32	2.08	-0.40	2.53	18.3%	4	4	A
3-32	0.31	2.00	-0.44	3.16	17.6%	4	4	A
3-33	0.30	1.77	-0.47	3.77	16.5%	4	4	A
3-34	0.28	1.57	-0.48	3.98	15.5%	4	4	A
3-35	0.27	1.31	-0.50	4.23	15.2%	4	4	B
3-36	0.38	3.69	-0.46	3.40	20.0%	4	5	A
3-37	0.39	3.87	-0.46	3.35	20.0%	4	5	A
3-38	0.38	3.75	-0.49	3.86	21.2%	4	5	A
3-39	0.39	3.82	-0.46	3.41	21.5%	4	5	A
3-40	0.40	4.03	-0.45	3.22	22.5%	4	5	A
3-41	0.47	5.59	-0.40	2.32	26.5%	4	5	A
3-42	0.47	5.68	-0.41	2.42	24.6%	4	5	A
3-43	0.46	5.50	-0.42	2.63	24.1%	4	5	A
3-44	0.45	5.34	-0.42	2.68	23.8%	4	5	A
3-45	0.45	5.31	-0.43	2.82	23.4%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
3-24	0.940	4.413	0.376	0.405	0.228	0.225	1.165	0.131
3-25	0.934	4.497	0.255	0.045	0.136	0.221	1.199	0.207
3-26	0.044	0.325	0.826	5.804	0.397	0.135	0.325	0.652
3-27	0.033	0.013	0.921	6.416	0.361	0.065	0.013	0.738
3-28	0.122	0.483	0.863	5.595	0.304	0.015	0.483	0.685
3-29	0.031	1.166	0.390	0.613	0.548	0.108	1.166	0.588
3-30	0.101	0.057	0.386	0.574	0.489	0.258	0.057	0.039
3-31	0.318	1.076	0.656	1.534	0.379	0.011	0.169	0.242
3-32	0.296	1.003	0.818	2.163	0.400	0.028	0.199	0.363
3-33	0.234	0.767	0.968	2.770	0.439	0.074	0.293	0.476
3-34	0.186	0.575	1.006	2.982	0.474	0.111	0.575	0.504
3-35	0.128	0.315	1.078	3.228	0.483	0.154	0.315	0.559
3-36	0.591	2.693	0.926	2.403	0.320	0.005	0.477	0.216
3-37	0.619	2.868	0.919	2.346	0.320	0.023	0.547	0.212
3-38	0.603	2.754	1.029	2.861	0.279	0.012	0.502	0.282
3-39	0.620	2.823	0.924	2.406	0.269	0.023	0.529	0.215
3-40	0.666	3.035	0.864	2.225	0.233	0.053	0.614	0.177
3-41	0.957	4.593	0.660	1.316	0.100	0.236	1.237	0.048
3-42	0.957	4.685	0.690	1.419	0.163	0.236	1.274	0.067
3-43	0.915	4.498	0.733	1.631	0.182	0.209	1.199	0.095
3-44	0.896	4.337	0.749	1.677	0.191	0.197	1.135	0.105
3-45	0.882	4.307	0.801	1.819	0.203	0.189	1.123	0.137

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
3-24	0.050	0.397	0.009	0.083	0.129	0.127	0.035	0.025
3-25	0.121	0.392	0.096	0.002	0.127	0.126	0.033	0.022
3-26	0.498	0.272	1.429	0.262	0.006	0.011	0.017	0.017
3-27	0.467	0.117	0.643	0.497	0.010	0.017	0.008	0.011
3-28	0.420	0.041	0.593	0.452	0.026	0.032	0.012	0.017
3-29	0.367	0.047	0.501	0.402	0.010	0.015	0.028	0.029
3-30	0.531	0.189	0.497	0.324	0.030	0.032	0.024	0.032
3-31	0.430	0.051	0.193	0.452	0.054	0.056	0.004	0.015
3-32	0.449	0.067	0.309	0.471	0.047	0.050	0.005	0.016
3-33	0.485	0.112	0.417	0.505	0.032	0.037	0.020	0.026
3-34	0.517	0.146	0.444	0.536	0.023	0.029	0.030	0.035
3-35	0.525	0.218	1.245	0.316	0.015	0.022	0.038	0.042
3-36	0.474	0.146	0.386	0.400	0.082	0.085	0.010	0.020
3-37	0.474	0.166	0.382	0.400	0.084	0.087	0.010	0.020
3-38	0.442	0.154	0.461	0.364	0.084	0.087	0.009	0.019
3-39	0.435	0.166	0.386	0.355	0.089	0.091	0.004	0.016
3-40	0.407	0.200	0.342	0.324	0.098	0.099	0.008	0.014
3-41	0.304	0.409	0.195	0.206	0.139	0.138	0.045	0.036
3-42	0.352	0.409	0.216	0.262	0.134	0.133	0.039	0.029
3-43	0.367	0.379	0.248	0.278	0.129	0.129	0.034	0.025
3-44	0.374	0.365	0.259	0.287	0.127	0.127	0.033	0.024
3-45	0.384	0.355	0.296	0.297	0.122	0.122	0.028	0.020

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
3-24	0.073	0.149	0.150	0.064	1.01	0.21	10.51	0.955
3-25	0.071	0.130	0.131	0.051	1.01	0.20	10.67	0.964
3-26	0.042	0.105	0.106	0.115	0.99	0.06	12.19	0.979
3-27	0.018	0.093	0.094	0.111	0.99	0.06	12.23	0.978
3-28	0.007	0.076	0.077	0.104	0.99	0.07	12.22	0.969
3-29	0.021	0.137	0.137	0.150	0.98	0.08	12.10	0.964
3-30	0.045	0.104	0.104	0.137	0.98	0.09	11.98	0.953
3-31	0.008	0.057	0.057	0.120	0.99	0.09	11.94	0.978
3-32	0.015	0.068	0.069	0.128	1.00	0.09	12.06	0.983
3-33	0.031	0.088	0.089	0.138	1.01	0.08	12.12	0.989
3-34	0.042	0.103	0.104	0.145	1.01	0.07	12.09	0.991
3-35	0.031	0.114	0.114	0.148	1.01	0.07	12.07	0.992
3-36	0.024	0.027	0.029	0.117	1.01	0.09	11.56	0.982
3-37	0.027	0.025	0.028	0.117	1.02	0.09	11.66	0.982
3-38	0.026	0.025	0.029	0.112	1.01	0.09	11.72	0.983
3-39	0.030	0.021	0.025	0.108	1.01	0.10	11.76	0.982
3-40	0.040	0.022	0.026	0.100	1.00	0.11	11.69	0.979
3-41	0.083	0.072	0.074	0.078	0.99	0.14	11.09	0.966
3-42	0.077	0.056	0.058	0.087	1.00	0.13	11.25	0.971
3-43	0.072	0.049	0.051	0.090	1.00	0.12	11.21	0.976
3-44	0.070	0.045	0.048	0.092	1.00	0.12	11.14	0.973
3-45	0.065	0.041	0.043	0.097	1.01	0.11	11.25	0.974

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
3-24	0.950	0.045	0.886	0.874	0.794	0.643	0.607	0.056
3-25	0.961	0.041	0.902	0.892	0.745	0.622	0.584	0.050
3-26	0.977	0.015	0.960	0.956	0.263	0.887	0.876	0.008
3-27	0.976	0.017	0.957	0.953	0.293	0.833	0.817	0.011
3-28	0.966	0.021	0.943	0.937	0.362	0.786	0.765	0.014
3-29	0.960	0.025	0.933	0.926	0.419	0.731	0.704	0.017
3-30	0.948	0.031	0.912	0.903	0.526	0.702	0.672	0.020
3-31	0.976	0.024	0.942	0.936	0.486	0.755	0.730	0.025
3-32	0.981	0.021	0.951	0.946	0.443	0.776	0.754	0.025
3-33	0.988	0.017	0.968	0.964	0.349	0.810	0.791	0.022
3-34	0.990	0.015	0.976	0.973	0.293	0.846	0.830	0.018
3-35	0.991	0.014	0.978	0.975	0.271	0.838	0.822	0.019
3-36	0.981	0.025	0.949	0.943	0.508	0.720	0.692	0.034
3-37	0.980	0.026	0.948	0.943	0.523	0.703	0.674	0.036
3-38	0.981	0.025	0.948	0.943	0.522	0.759	0.735	0.034
3-39	0.981	0.025	0.944	0.939	0.544	0.717	0.689	0.037
3-40	0.977	0.028	0.935	0.929	0.596	0.726	0.699	0.037
3-41	0.963	0.039	0.900	0.890	0.784	0.626	0.589	0.050
3-42	0.969	0.036	0.911	0.902	0.751	0.619	0.581	0.048
3-43	0.974	0.033	0.921	0.913	0.695	0.653	0.618	0.045
3-44	0.971	0.034	0.916	0.908	0.706	0.646	0.610	0.045
3-45	0.972	0.034	0.920	0.912	0.692	0.641	0.605	0.046

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
3-24	0.557	0.512	0.062	5.22	5.10	5.73	6.18	7.19
3-25	0.541	0.495	0.055	5.17	5.14	5.83	6.31	7.39
3-26	0.827	0.810	0.010	8.65	9.15	9.63	9.91	10.43
3-27	0.759	0.735	0.013	8.50	8.96	9.46	9.78	10.35
3-28	0.708	0.678	0.016	8.33	8.74	9.26	9.56	10.14
3-29	0.653	0.618	0.019	8.05	8.40	8.89	9.23	9.88
3-30	0.622	0.584	0.023	7.71	7.95	8.44	8.78	9.52
3-31	0.660	0.626	0.029	6.84	7.23	7.94	8.43	9.25
3-32	0.675	0.643	0.030	6.88	7.34	8.07	8.57	9.39
3-33	0.704	0.675	0.027	6.94	7.44	8.24	8.82	9.66
3-34	0.744	0.718	0.024	6.97	7.50	8.34	8.95	9.78
3-35	0.732	0.705	0.025	7.12	7.69	8.49	9.05	9.85
3-36	0.609	0.570	0.041	5.86	6.19	6.96	7.62	8.63
3-37	0.592	0.552	0.042	5.85	6.16	6.96	7.65	8.67
3-38	0.646	0.610	0.041	5.93	6.26	7.06	7.72	8.71
3-39	0.606	0.566	0.044	5.95	6.27	7.06	7.72	8.71
3-40	0.619	0.581	0.044	5.89	6.20	6.93	7.57	8.55
3-41	0.527	0.479	0.057	5.33	5.41	6.00	6.55	7.66
3-42	0.518	0.470	0.054	5.29	5.45	6.09	6.71	7.75
3-43	0.550	0.504	0.051	5.26	5.45	6.16	6.81	7.83
3-44	0.543	0.497	0.051	5.30	5.51	6.17	6.75	7.76
3-45	0.535	0.488	0.053	5.35	5.52	6.23	6.84	7.88

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
3-24	7.93	8.59	9.21	9.99	10.46	11.06	10.99	33.7%
3-25	8.11	8.76	9.37	10.11	10.56	11.16	11.10	30.7%
3-26	10.78	11.08	11.39	11.77	12.00	12.33	12.44	11.8%
3-27	10.74	11.07	11.40	11.83	12.05	12.39	12.46	12.3%
3-28	10.57	10.95	11.33	11.79	12.06	12.43	12.54	13.0%
3-29	10.34	10.73	11.14	11.62	11.92	12.35	12.50	13.8%
3-30	10.02	10.46	10.91	11.48	11.85	12.34	12.48	15.3%
3-31	9.78	10.27	10.76	11.37	11.72	12.21	12.35	18.9%
3-32	9.95	10.46	10.93	11.48	11.83	12.26	12.37	18.7%
3-33	10.22	10.64	11.05	11.55	11.83	12.21	12.27	17.8%
3-34	10.28	10.70	11.09	11.52	11.75	12.09	12.15	17.2%
3-35	10.36	10.74	11.09	11.51	11.75	12.09	12.13	16.9%
3-36	9.33	9.89	10.39	10.96	11.28	11.69	11.79	20.4%
3-37	9.37	9.94	10.47	11.06	11.39	11.80	11.87	20.2%
3-38	9.43	9.97	10.53	11.11	11.45	11.88	11.97	22.3%
3-39	9.42	9.97	10.53	11.13	11.49	11.97	12.09	21.8%
3-40	9.26	9.81	10.37	11.04	11.45	11.99	12.12	23.1%
3-41	8.45	9.02	9.66	10.43	10.93	11.56	11.79	25.2%
3-42	8.52	9.19	9.86	10.61	11.10	11.67	11.79	23.4%
3-43	8.57	9.19	9.83	10.55	11.03	11.57	11.72	23.4%
3-44	8.52	9.16	9.79	10.52	10.97	11.53	11.66	23.3%
3-45	8.65	9.28	9.93	10.65	11.08	11.59	11.68	22.6%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
3-24	40.5%	38.2%	37.7%	31.1%	28.6%	24.8%	23.3%	20.2%
3-25	37.0%	35.6%	35.2%	28.9%	27.4%	24.0%	22.5%	19.7%
3-26	10.6%	9.6%	9.3%	8.4%	8.2%	7.6%	7.4%	6.5%
3-27	11.3%	10.5%	10.1%	9.1%	8.9%	8.1%	7.5%	6.4%
3-28	12.4%	11.7%	11.3%	10.3%	9.8%	8.8%	8.4%	7.2%
3-29	13.4%	13.0%	12.9%	11.4%	10.8%	9.9%	9.4%	8.1%
3-30	15.4%	14.7%	14.6%	13.1%	12.6%	11.4%	10.6%	9.0%
3-31	19.6%	18.3%	17.3%	14.9%	14.1%	12.3%	11.3%	9.6%
3-32	19.1%	17.7%	16.5%	13.9%	12.9%	11.3%	10.4%	8.8%
3-33	18.4%	16.6%	15.0%	12.2%	11.2%	9.9%	9.0%	7.5%
3-34	16.8%	15.4%	13.8%	11.3%	10.5%	9.1%	8.3%	7.0%
3-35	16.8%	15.2%	13.7%	11.0%	9.9%	8.5%	7.8%	6.7%
3-36	22.5%	21.4%	19.3%	15.9%	14.2%	12.0%	10.9%	8.8%
3-37	22.4%	21.9%	19.5%	15.7%	14.4%	12.1%	10.7%	8.7%
3-38	24.2%	22.4%	19.8%	15.9%	14.2%	12.2%	11.3%	9.3%
3-39	24.4%	23.1%	20.8%	16.9%	15.0%	13.0%	11.5%	9.6%
3-40	24.9%	24.0%	21.8%	17.8%	16.1%	14.0%	12.6%	10.6%
3-41	29.2%	29.3%	28.1%	22.0%	19.9%	17.2%	15.7%	13.3%
3-42	27.2%	27.3%	25.6%	20.9%	19.0%	16.2%	14.6%	12.0%
3-43	26.7%	26.0%	24.3%	20.0%	18.1%	16.0%	14.5%	11.7%
3-44	25.8%	25.7%	24.6%	19.9%	18.4%	15.6%	14.1%	11.4%
3-45	26.6%	25.5%	24.0%	19.5%	17.6%	15.1%	13.4%	10.6%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
3-24	17.8%	16.1%	16.2%	70.9	86.6	93.5	106.8	111.2
3-25	17.7%	16.3%	15.6%	56.0	70.0	76.1	83.2	107.4
3-26	5.8%	5.0%	4.6%	126.1	137.9	134.8	147.6	171.2
3-27	5.7%	4.8%	4.4%	98.0	104.2	95.8	103.4	119.2
3-28	6.2%	5.4%	4.5%	104.2	116.4	109.5	125.8	103.3
3-29	7.0%	5.8%	4.9%	106.0	107.1	102.0	108.7	113.4
3-30	7.5%	6.3%	5.7%	88.4	96.0	92.5	91.7	100.1
3-31	8.3%	6.9%	5.9%	81.4	82.5	85.6	91.2	102.6
3-32	7.4%	6.0%	5.1%	74.7	89.6	93.4	103.6	113.9
3-33	6.4%	5.6%	5.0%	73.6	98.8	114.6	115.7	127.9
3-34	6.2%	5.3%	4.7%	74.9	75.2	88.9	105.8	135.1
3-35	5.8%	5.0%	4.5%	79.2	93.8	107.0	120.8	134.7
3-36	7.3%	6.2%	5.3%	70.2	76.3	72.5	81.5	105.2
3-37	7.3%	6.2%	5.1%	56.8	65.8	71.0	87.7	108.0
3-38	7.9%	6.4%	5.3%	67.5	73.8	83.6	82.7	95.7
3-39	8.1%	6.6%	5.6%	64.4	68.9	76.6	84.6	93.5
3-40	8.9%	7.3%	5.9%	69.5	71.8	79.9	84.1	96.8
3-41	11.3%	9.4%	7.2%	63.6	65.9	63.2	66.6	82.0
3-42	9.9%	8.1%	6.4%	55.9	61.6	64.5	67.4	82.4
3-43	9.6%	7.6%	6.3%	59.9	68.0	64.3	72.7	86.0
3-44	9.3%	7.3%	5.9%	58.0	60.6	69.1	74.5	85.7
3-45	8.6%	6.9%	6.1%	73.8	71.5	74.1	77.3	109.4

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
3-24	99.9	113.4	111.7	111.6	120.9	118.1	126.5	39.1
3-25	110.0	104.8	118.9	114.6	123.2	127.5	124.2	40.0
3-26	186.8	225.0	246.5	278.1	263.5	328.8	218.0	41.6
3-27	113.1	124.2	110.7	122.6	134.4	134.2	224.4	41.4
3-28	133.9	110.7	108.4	167.7	256.9	180.1	127.6	44.5
3-29	102.0	110.1	104.7	115.8	134.8	133.9	134.8	47.1
3-30	97.0	103.4	94.3	102.1	103.9	102.5	104.4	38.9
3-31	101.5	105.9	102.5	107.9	124.7	223.6	129.5	36.2
3-32	112.8	123.9	114.3	129.7	143.5	146.9	116.8	35.9
3-33	119.0	125.4	109.6	125.5	136.0	148.3	153.8	37.2
3-34	133.5	170.4	177.4	186.4	205.5	249.7	204.9	34.2
3-35	146.6	161.8	150.4	146.4	156.0	244.4	98.5	38.7
3-36	121.7	159.3	191.0	187.1	242.1	250.4	201.7	36.9
3-37	116.4	120.4	129.9	192.0	196.6	204.6	129.6	35.4
3-38	103.7	130.7	128.4	138.9	201.0	327.5	453.1	36.0
3-39	95.1	107.7	111.9	136.2	157.5	154.4	146.2	35.3
3-40	97.7	111.2	110.9	109.0	117.0	178.6	126.2	39.6
3-41	123.6	101.3	102.0	116.7	133.0	170.7	106.7	35.4
3-42	109.6	107.5	107.4	99.5	132.4	141.8	112.1	37.0
3-43	87.3	106.9	111.3	124.9	139.1	277.3	154.0	33.2
3-44	88.0	101.0	99.2	110.7	121.7	116.9	96.2	37.5
3-45	117.4	110.3	117.3	127.1	146.8	210.9	189.2	41.1

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
3-24	32.1	0.207	0.170	0.136	0.104	0.102	0.068	0.076
3-25	35.3	0.198	0.164	0.130	0.097	0.094	0.075	0.078
3-26	38.0	0.138	0.132	0.108	0.075	0.102	0.072	0.083
3-27	32.9	0.148	0.132	0.114	0.097	0.098	0.074	0.086
3-28	34.0	0.158	0.135	0.114	0.083	0.097	0.068	0.082
3-29	31.2	0.177	0.122	0.116	0.109	0.114	0.094	0.095
3-30	26.0	0.172	0.134	0.121	0.086	0.092	0.070	0.088
3-31	28.0	0.167	0.147	0.119	0.087	0.105	0.072	0.081
3-32	28.7	0.162	0.118	0.102	0.091	0.091	0.061	0.084
3-33	34.6	0.167	0.137	0.094	0.104	0.110	0.077	0.101
3-34	30.9	0.172	0.120	0.117	0.078	0.090	0.081	0.109
3-35	32.6	0.158	0.133	0.119	0.080	0.086	0.083	0.099
3-36	31.8	0.178	0.159	0.126	0.092	0.106	0.085	0.117
3-37	35.2	0.187	0.161	0.122	0.100	0.095	0.080	0.121
3-38	30.1	0.181	0.158	0.117	0.096	0.106	0.089	0.096
3-39	25.1	0.186	0.152	0.121	0.082	0.095	0.056	0.083
3-40	25.1	0.170	0.152	0.127	0.107	0.097	0.084	0.102
3-41	29.1	0.195	0.177	0.131	0.115	0.106	0.083	0.096
3-42	26.1	0.219	0.172	0.151	0.110	0.110	0.092	0.105
3-43	31.3	0.206	0.173	0.149	0.109	0.124	0.085	0.102
3-44	26.5	0.214	0.195	0.161	0.088	0.099	0.086	0.093
3-45	30.7	0.216	0.192	0.149	0.109	0.121	0.101	0.118

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
3-24	0.063	0.052	0.053	0.059	0.188	0.147	0.094	0.083
3-25	0.076	0.057	0.067	0.063	0.201	0.145	0.114	0.084
3-26	0.075	0.058	0.064	0.063	0.186	0.106	0.121	0.083
3-27	0.071	0.070	0.067	0.072	0.190	0.128	0.117	0.091
3-28	0.083	0.065	0.081	0.070	0.176	0.122	0.112	0.093
3-29	0.089	0.060	0.072	0.065	0.179	0.139	0.113	0.085
3-30	0.096	0.065	0.079	0.087	0.190	0.140	0.117	0.081
3-31	0.076	0.071	0.098	0.070	0.177	0.126	0.112	0.092
3-32	0.073	0.074	0.070	0.065	0.184	0.130	0.100	0.071
3-33	0.092	0.084	0.098	0.077	0.166	0.102	0.089	0.077
3-34	0.089	0.074	0.092	0.081	0.174	0.110	0.102	0.062
3-35	0.093	0.084	0.080	0.075	0.151	0.126	0.087	0.070
3-36	0.090	0.080	0.087	0.093	0.209	0.133	0.117	0.088
3-37	0.111	0.100	0.090	0.091	0.194	0.121	0.118	0.069
3-38	0.102	0.060	0.080	0.070	0.183	0.124	0.104	0.086
3-39	0.092	0.073	0.089	0.093	0.181	0.125	0.099	0.094
3-40	0.083	0.075	0.097	0.075	0.205	0.129	0.108	0.085
3-41	0.080	0.076	0.078	0.088	0.198	0.135	0.127	0.093
3-42	0.085	0.073	0.081	0.097	0.202	0.151	0.128	0.088
3-43	0.102	0.084	0.106	0.094	0.208	0.145	0.107	0.076
3-44	0.095	0.084	0.090	0.097	0.209	0.145	0.118	0.088
3-45	0.119	0.078	0.111	0.100	0.211	0.128	0.119	0.090

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
3-24	0.076	0.065	0.060	0.059	0.053	0.044	0.207	0.123
3-25	0.078	0.056	0.052	0.063	0.068	0.041	0.190	0.112
3-26	0.094	0.063	0.058	0.075	0.082	0.073	0.221	0.126
3-27	0.088	0.081	0.066	0.089	0.076	0.078	0.230	0.125
3-28	0.081	0.072	0.083	0.071	0.076	0.068	0.209	0.114
3-29	0.099	0.089	0.088	0.087	0.082	0.082	0.231	0.121
3-30	0.090	0.063	0.070	0.067	0.071	0.074	0.221	0.125
3-31	0.078	0.067	0.067	0.077	0.075	0.063	0.199	0.119
3-32	0.086	0.060	0.076	0.081	0.069	0.081	0.191	0.115
3-33	0.083	0.074	0.081	0.080	0.078	0.079	0.202	0.111
3-34	0.078	0.067	0.078	0.076	0.092	0.080	0.203	0.115
3-35	0.084	0.069	0.071	0.101	0.089	0.075	0.197	0.118
3-36	0.087	0.083	0.090	0.073	0.091	0.102	0.203	0.109
3-37	0.095	0.071	0.083	0.094	0.088	0.090	0.190	0.123
3-38	0.100	0.089	0.074	0.083	0.088	0.092	0.197	0.115
3-39	0.075	0.071	0.091	0.071	0.094	0.082	0.209	0.128
3-40	0.087	0.073	0.077	0.071	0.072	0.068	0.206	0.122
3-41	0.086	0.053	0.079	0.073	0.074	0.085	0.206	0.130
3-42	0.105	0.063	0.087	0.086	0.082	0.088	0.200	0.128
3-43	0.094	0.076	0.082	0.074	0.071	0.082	0.232	0.130
3-44	0.100	0.077	0.086	0.098	0.110	0.092	0.211	0.120
3-45	0.101	0.083	0.070	0.076	0.085	0.095	0.216	0.120

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
3-24	0.094	0.068	0.082	0.067	0.038	0.043	0.039	0.173
3-25	0.086	0.071	0.065	0.044	0.048	0.061	0.054	0.178
3-26	0.113	0.103	0.098	0.082	0.076	0.098	0.076	0.202
3-27	0.109	0.081	0.092	0.077	0.070	0.070	0.077	0.218
3-28	0.107	0.088	0.084	0.097	0.074	0.085	0.074	0.205
3-29	0.115	0.095	0.093	0.077	0.062	0.067	0.086	0.202
3-30	0.105	0.075	0.072	0.080	0.044	0.069	0.051	0.193
3-31	0.111	0.089	0.072	0.071	0.072	0.090	0.065	0.191
3-32	0.115	0.077	0.087	0.075	0.075	0.076	0.059	0.174
3-33	0.107	0.097	0.087	0.088	0.057	0.078	0.092	0.188
3-34	0.098	0.087	0.080	0.082	0.066	0.076	0.078	0.193
3-35	0.090	0.070	0.084	0.093	0.068	0.074	0.068	0.196
3-36	0.109	0.091	0.093	0.084	0.067	0.090	0.075	0.187
3-37	0.100	0.090	0.095	0.083	0.071	0.078	0.085	0.188
3-38	0.098	0.083	0.076	0.090	0.077	0.077	0.094	0.171
3-39	0.105	0.084	0.078	0.083	0.060	0.081	0.072	0.180
3-40	0.110	0.074	0.079	0.069	0.067	0.083	0.074	0.175
3-41	0.092	0.077	0.083	0.072	0.066	0.061	0.059	0.197
3-42	0.111	0.080	0.093	0.055	0.067	0.073	0.066	0.180
3-43	0.105	0.101	0.086	0.080	0.065	0.070	0.090	0.193
3-44	0.099	0.083	0.094	0.083	0.065	0.089	0.078	0.194
3-45	0.123	0.094	0.096	0.078	0.063	0.080	0.085	0.169

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
3-24	0.103	0.074	0.066	0.060	0.053	0.046	0.025	0.184
3-25	0.101	0.083	0.066	0.059	0.054	0.040	0.038	0.166
3-26	0.130	0.102	0.104	0.082	0.078	0.088	0.061	0.205
3-27	0.128	0.111	0.113	0.092	0.076	0.088	0.084	0.207
3-28	0.132	0.101	0.104	0.099	0.079	0.069	0.083	0.195
3-29	0.140	0.109	0.089	0.090	0.057	0.071	0.077	0.194
3-30	0.118	0.105	0.084	0.078	0.061	0.075	0.057	0.183
3-31	0.121	0.088	0.084	0.082	0.080	0.079	0.069	0.200
3-32	0.118	0.082	0.080	0.083	0.071	0.089	0.074	0.188
3-33	0.120	0.093	0.080	0.087	0.069	0.086	0.066	0.192
3-34	0.125	0.099	0.099	0.089	0.069	0.070	0.073	0.204
3-35	0.110	0.105	0.098	0.086	0.080	0.091	0.079	0.185
3-36	0.124	0.102	0.102	0.082	0.061	0.091	0.087	0.161
3-37	0.097	0.087	0.079	0.067	0.068	0.063	0.070	0.155
3-38	0.114	0.099	0.080	0.085	0.067	0.069	0.064	0.193
3-39	0.106	0.080	0.083	0.075	0.072	0.079	0.053	0.183
3-40	0.116	0.088	0.078	0.068	0.069	0.075	0.070	0.185
3-41	0.136	0.083	0.078	0.068	0.059	0.063	0.055	0.162
3-42	0.125	0.093	0.088	0.079	0.082	0.068	0.056	0.168
3-43	0.115	0.086	0.095	0.093	0.065	0.084	0.080	0.172
3-44	0.124	0.084	0.084	0.096	0.095	0.093	0.073	0.173
3-45	0.111	0.075	0.090	0.090	0.075	0.076	0.069	0.165

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
3-24	0.112	0.075	0.050	0.043	0.040	0.055	0.187	0.100
3-25	0.112	0.065	0.057	0.045	0.041	0.024	0.197	0.115
3-26	0.143	0.101	0.089	0.092	0.090	0.071	0.231	0.142
3-27	0.133	0.100	0.083	0.082	0.083	0.081	0.243	0.147
3-28	0.134	0.106	0.076	0.091	0.095	0.088	0.229	0.142
3-29	0.133	0.101	0.084	0.072	0.082	0.070	0.237	0.132
3-30	0.125	0.078	0.079	0.080	0.078	0.055	0.204	0.130
3-31	0.115	0.090	0.081	0.078	0.075	0.066	0.229	0.137
3-32	0.125	0.075	0.063	0.077	0.070	0.075	0.202	0.122
3-33	0.124	0.076	0.083	0.074	0.068	0.087	0.213	0.148
3-34	0.141	0.107	0.095	0.070	0.081	0.076	0.227	0.140
3-35	0.152	0.089	0.091	0.078	0.073	0.090	0.223	0.143
3-36	0.121	0.083	0.088	0.070	0.084	0.083	0.210	0.140
3-37	0.106	0.074	0.091	0.083	0.076	0.075	0.217	0.122
3-38	0.120	0.087	0.072	0.073	0.072	0.063	0.196	0.121
3-39	0.114	0.080	0.066	0.071	0.074	0.057	0.201	0.125
3-40	0.120	0.064	0.069	0.060	0.073	0.072	0.209	0.117
3-41	0.110	0.085	0.072	0.081	0.063	0.077	0.207	0.123
3-42	0.120	0.093	0.071	0.070	0.063	0.057	0.179	0.118
3-43	0.124	0.092	0.080	0.066	0.086	0.078	0.206	0.125
3-44	0.114	0.079	0.077	0.090	0.091	0.075	0.187	0.114
3-45	0.130	0.067	0.070	0.071	0.072	0.070	0.186	0.129

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
3-24	0.078	0.077	0.058	0.035	0.164	0.108	0.069	0.062
3-25	0.066	0.053	0.055	0.036	0.167	0.099	0.087	0.055
3-26	0.113	0.071	0.077	0.061	0.232	0.131	0.116	0.086
3-27	0.100	0.067	0.077	0.073	0.217	0.125	0.119	0.082
3-28	0.100	0.067	0.079	0.064	0.206	0.120	0.096	0.094
3-29	0.102	0.079	0.067	0.057	0.204	0.120	0.096	0.080
3-30	0.097	0.055	0.073	0.067	0.202	0.103	0.087	0.082
3-31	0.099	0.085	0.085	0.052	0.186	0.113	0.094	0.079
3-32	0.104	0.082	0.067	0.044	0.193	0.117	0.109	0.075
3-33	0.099	0.077	0.075	0.070	0.207	0.130	0.098	0.090
3-34	0.104	0.083	0.091	0.054	0.204	0.107	0.103	0.092
3-35	0.117	0.086	0.101	0.069	0.204	0.125	0.106	0.098
3-36	0.110	0.089	0.087	0.066	0.204	0.117	0.112	0.097
3-37	0.088	0.071	0.076	0.082	0.200	0.115	0.096	0.075
3-38	0.098	0.070	0.080	0.065	0.181	0.112	0.095	0.074
3-39	0.091	0.074	0.082	0.081	0.186	0.111	0.111	0.094
3-40	0.088	0.068	0.071	0.061	0.176	0.101	0.105	0.058
3-41	0.067	0.078	0.052	0.055	0.179	0.097	0.084	0.068
3-42	0.087	0.072	0.079	0.071	0.183	0.103	0.095	0.081
3-43	0.099	0.064	0.075	0.074	0.168	0.100	0.091	0.079
3-44	0.093	0.078	0.072	0.067	0.178	0.113	0.103	0.077
3-45	0.101	0.065	0.087	0.053	0.181	0.104	0.088	0.090

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
3-24	0.029	0.171	0.094	0.071	0.036	0.215	0.116	0.044
3-25	0.039	0.183	0.111	0.082	0.043	0.237	0.117	0.037
3-26	0.070	0.212	0.112	0.104	0.074	0.265	0.147	0.087
3-27	0.071	0.217	0.144	0.098	0.087	0.268	0.130	0.089
3-28	0.069	0.210	0.121	0.103	0.065	0.266	0.136	0.077
3-29	0.070	0.229	0.120	0.104	0.072	0.261	0.118	0.091
3-30	0.059	0.205	0.105	0.084	0.068	0.234	0.134	0.069
3-31	0.068	0.192	0.107	0.099	0.056	0.251	0.140	0.078
3-32	0.055	0.191	0.114	0.095	0.062	0.241	0.105	0.066
3-33	0.082	0.209	0.121	0.101	0.072	0.269	0.156	0.090
3-34	0.074	0.219	0.129	0.110	0.080	0.264	0.147	0.096
3-35	0.087	0.207	0.126	0.111	0.083	0.256	0.152	0.086
3-36	0.074	0.205	0.114	0.119	0.082	0.268	0.150	0.080
3-37	0.081	0.208	0.109	0.103	0.082	0.236	0.129	0.095
3-38	0.064	0.198	0.111	0.109	0.068	0.242	0.135	0.077
3-39	0.073	0.197	0.110	0.107	0.050	0.247	0.142	0.070
3-40	0.063	0.187	0.117	0.096	0.060	0.226	0.128	0.069
3-41	0.064	0.164	0.102	0.087	0.060	0.218	0.129	0.056
3-42	0.079	0.173	0.109	0.085	0.058	0.235	0.111	0.065
3-43	0.077	0.183	0.109	0.078	0.073	0.224	0.131	0.091
3-44	0.064	0.178	0.095	0.086	0.048	0.243	0.120	0.069
3-45	0.076	0.182	0.094	0.090	0.071	0.226	0.122	0.072

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
3-24	0.193	0.062	0.087	1.52E-02	4.92E-02	1.27E-05	8.21E-08	1.31E-07
3-25	0.192	0.061	0.084	2.33E-02	1.30E-01	3.73E-05	7.20E-08	1.08E-07
3-26	0.221	0.085	0.104	1.98E-04	1.24E-03	1.03E-07	2.39E-09	4.89E-09
3-27	0.216	0.078	0.093	1.92E-04	7.22E-04	2.10E-08	2.86E-09	5.29E-09
3-28	0.216	0.091	0.099	2.35E-04	6.40E-04	5.36E-05	3.92E-09	6.22E-09
3-29	0.205	0.069	0.109	3.42E-04	1.64E-03	1.15E-07	5.30E-09	8.93E-09
3-30	0.205	0.081	0.108	3.97E-04	2.75E-03	8.10E-11	7.56E-09	1.19E-08
3-31	0.221	0.075	0.094	9.33E-04	3.54E-03	1.99E-05	1.15E-08	2.03E-08
3-32	0.207	0.074	0.088	4.77E-04	2.33E-03	4.57E-07	9.64E-09	1.87E-08
3-33	0.219	0.103	0.101	6.97E-04	3.73E-03	1.26E-05	7.24E-09	1.57E-08
3-34	0.217	0.098	0.113	5.56E-04	2.43E-03	3.05E-06	5.57E-09	1.20E-08
3-35	0.227	0.100	0.127	9.12E-04	3.00E-03	7.62E-09	5.40E-09	1.23E-08
3-36	0.218	0.116	0.133	9.74E-04	3.50E-03	1.02E-08	1.02E-08	2.19E-08
3-37	0.223	0.103	0.129	2.49E-03	1.07E-02	1.18E-07	1.04E-08	2.40E-08
3-38	0.206	0.080	0.107	2.75E-03	9.06E-03	1.19E-04	1.23E-08	2.78E-08
3-39	0.222	0.087	0.099	1.96E-03	9.08E-03	7.68E-06	1.42E-08	3.14E-08
3-40	0.207	0.074	0.080	2.37E-03	7.00E-03	1.24E-08	1.66E-08	3.42E-08
3-41	0.182	0.067	0.090	3.93E-03	1.92E-02	1.49E-05	2.43E-08	5.12E-08
3-42	0.195	0.076	0.085	1.73E-03	1.03E-02	1.25E-07	1.92E-08	3.88E-08
3-43	0.194	0.072	0.122	1.81E-03	5.55E-03	9.79E-08	1.70E-08	3.33E-08
3-44	0.219	0.084	0.100	1.60E-03	4.82E-03	9.26E-06	1.62E-08	3.37E-08
3-45	0.204	0.112	0.117	1.51E-03	5.70E-03	3.77E-05	1.53E-08	3.21E-08

Case No.	ck
	$\Delta_{\min,FFT}$
3-24	4.26E-08
3-25	2.82E-08
3-26	4.64E-10
3-27	4.00E-10
3-28	4.46E-10
3-29	6.38E-10
3-30	1.11E-09
3-31	1.24E-09
3-32	7.18E-10
3-33	6.05E-10
3-34	4.76E-10
3-35	4.12E-10
3-36	7.00E-10
3-37	5.99E-10
3-38	6.95E-10
3-39	9.25E-10
3-40	1.18E-09
3-41	2.26E-09
3-42	1.42E-09
3-43	1.29E-09
3-44	9.78E-10
3-45	1.12E-09

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
3-46	None	120 cm	None	0	20	11.35	0.89
3-47	None	120 cm	None	5	20	11.55	0.91
3-48	None	120 cm	None	10	20	11.49	0.90
3-49	None	120 cm	None	15	20	11.50	0.90
3-50	None	120 cm	None	20	20	11.51	0.90
3-51	None	120 cm	30 cm rectangle	0	0	11.33	0.89
3-52	None	120 cm	30 cm rectangle	5	0	11.44	0.90
3-53	None	120 cm	30 cm rectangle	10	0	11.45	0.90
3-54	None	120 cm	30 cm rectangle	15	0	11.55	0.91
3-55	None	120 cm	30 cm rectangle	20	0	11.58	0.91
3-56	None	120 cm	30 cm rectangle	20	5	11.38	0.89
3-57	None	120 cm	30 cm rectangle	15	5	11.43	0.90
3-58	None	120 cm	30 cm rectangle	10	5	11.31	0.89
3-59	None	120 cm	30 cm rectangle	5	5	11.32	0.89
3-60	None	120 cm	30 cm rectangle	0	5	11.21	0.88
3-61	None	120 cm	30 cm rectangle	0	10	11.20	0.88
3-62	None	120 cm	30 cm rectangle	5	10	11.25	0.88
3-63	None	120 cm	30 cm rectangle	10	10	11.32	0.89
3-64	None	120 cm	30 cm rectangle	15	10	11.52	0.90
3-65	None	120 cm	30 cm rectangle	20	10	11.30	0.89
3-66	None	120 cm	30 cm rectangle	20	15	11.36	0.89
3-67	None	120 cm	30 cm rectangle	15	15	11.38	0.89

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
3-46	0.51	6.64	-0.36	1.77	26.3%	4	5	A
3-47	0.53	6.96	-0.35	1.58	26.3%	4	5	A
3-48	0.52	6.83	-0.38	1.93	27.8%	4	5	A
3-49	0.53	6.88	-0.36	1.73	27.7%	4	5	A
3-50	0.52	6.83	-0.35	1.61	28.3%	4	5	A
3-51	0.15	0.06	-0.09	0.00	20.1%	2	2	C
3-52	0.17	0.11	-0.09	0.00	20.3%	2	2	C
3-53	0.18	0.17	-0.11	0.01	21.0%	2	3	C
3-54	0.18	0.17	-0.07	0.00	19.7%	2	3	C
3-55	0.20	0.29	-0.09	0.00	20.7%	3	3	B
3-56	0.25	0.87	-0.16	0.06	23.9%	4	4	B
3-57	0.26	0.92	-0.18	0.12	24.4%	4	4	B
3-58	0.25	0.88	-0.17	0.12	24.8%	4	4	B
3-59	0.24	0.70	-0.19	0.17	23.8%	4	3	B
3-60	0.21	0.42	-0.16	0.06	24.2%	3	3	B
3-61	0.30	1.64	-0.24	0.52	29.1%	4	4	A
3-62	0.30	1.80	-0.24	0.51	28.7%	4	4	A
3-63	0.31	1.98	-0.26	0.73	30.0%	4	4	A
3-64	0.33	2.18	-0.24	0.45	28.7%	4	4	A
3-65	0.33	2.22	-0.26	0.65	28.8%	4	4	A
3-66	0.42	4.22	-0.28	0.81	33.9%	4	5	A
3-67	0.40	3.89	-0.28	0.84	32.6%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_{α}	Δ_{z0}	Δ_{β}	Δ_{z0T}	Δ_{IV30}	$\Delta_{\alpha}ISO$	$\Delta_{z0}ISO$	$\Delta_{\beta}ISO$
3-46	1.137	5.639	0.511	0.771	0.107	0.349	1.656	0.046
3-47	1.196	5.961	0.470	0.577	0.104	0.387	1.784	0.071
3-48	1.164	5.827	0.563	0.933	0.054	0.367	1.731	0.013
3-49	1.193	5.881	0.503	0.726	0.058	0.385	1.752	0.051
3-50	1.187	5.826	0.459	0.614	0.037	0.381	1.730	0.079
3-51	0.107	0.213	0.500	0.993	0.604	0.084	0.213	0.393
3-52	0.012	1.269	0.461	0.986	0.626	0.200	1.269	0.346
3-53	0.058	2.415	0.348	0.897	0.678	0.144	2.415	0.473
3-54	0.051	2.327	0.589	0.999	0.579	0.149	2.327	0.667
3-55	0.048	0.047	0.510	0.997	0.182	0.052	0.047	0.557
3-56	0.045	0.131	0.349	0.941	0.186	0.195	0.131	0.511
3-57	0.065	0.083	0.266	0.882	0.170	0.217	0.083	0.449
3-58	0.050	0.120	0.273	0.884	0.158	0.200	0.120	0.455
3-59	0.012	0.296	0.223	0.833	0.191	0.129	0.296	0.112
3-60	0.114	0.407	0.167	0.789	0.381	0.008	0.407	0.246
3-61	0.234	0.641	0.013	0.481	0.012	0.074	0.641	0.240
3-62	0.269	0.799	0.003	0.492	0.024	0.048	0.280	0.247
3-63	0.312	0.980	0.097	0.274	0.021	0.016	0.208	0.177
3-64	0.365	1.180	0.010	0.548	0.024	0.024	0.128	0.257
3-65	0.366	1.221	0.063	0.350	0.021	0.024	0.112	0.203
3-66	0.750	3.219	0.168	0.195	0.154	0.105	0.688	0.262
3-67	0.681	2.887	0.159	0.163	0.109	0.062	0.555	0.268

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
3-46	0.309	0.538	0.088	0.212	0.158	0.156	0.061	0.048
3-47	0.307	0.581	0.059	0.210	0.164	0.162	0.067	0.053
3-48	0.268	0.558	0.126	0.165	0.159	0.157	0.062	0.048
3-49	0.271	0.579	0.082	0.169	0.165	0.162	0.068	0.054
3-50	0.255	0.575	0.050	0.151	0.165	0.162	0.068	0.055
3-51	0.432	0.063	0.405	0.404	0.022	0.024	0.039	0.043
3-52	0.451	0.176	0.359	0.422	0.033	0.037	0.056	0.061
3-53	0.001	0.259	0.225	0.468	0.033	0.039	0.018	0.020
3-54	0.060	0.251	0.511	0.382	0.034	0.040	0.020	0.021
3-55	0.015	0.104	0.581	0.069	0.039	0.042	0.028	0.030
3-56	0.252	0.129	0.296	0.077	0.021	0.024	0.032	0.039
3-57	0.237	0.150	0.207	0.098	0.030	0.032	0.027	0.034
3-58	0.226	0.134	0.215	0.114	0.029	0.031	0.028	0.035
3-59	0.133	0.067	0.161	0.071	0.009	0.014	0.028	0.030
3-60	0.151	0.048	0.288	0.088	0.031	0.036	0.017	0.021
3-61	0.092	0.111	0.271	0.128	0.039	0.041	0.012	0.022
3-62	0.103	0.087	0.278	0.139	0.047	0.048	0.006	0.018
3-63	0.062	0.055	0.210	0.100	0.054	0.055	0.004	0.016
3-64	0.104	0.017	0.287	0.140	0.069	0.069	0.018	0.022
3-65	0.100	0.017	0.235	0.136	0.061	0.061	0.009	0.015
3-66	0.107	0.260	0.159	0.018	0.112	0.110	0.021	0.020
3-67	0.142	0.210	0.165	0.022	0.106	0.105	0.017	0.020

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
3-46	0.102	0.086	0.087	0.073	1.00	0.14	10.65	0.966
3-47	0.109	0.091	0.093	0.076	1.00	0.15	10.80	0.964
3-48	0.104	0.098	0.100	0.071	1.00	0.15	10.80	0.967
3-49	0.110	0.101	0.103	0.069	0.99	0.15	10.72	0.961
3-50	0.110	0.106	0.108	0.065	0.99	0.16	10.71	0.960
3-51	0.037	0.050	0.050	0.052	0.97	0.17	10.84	0.900
3-52	0.053	0.058	0.058	0.053	0.96	0.17	10.87	0.894
3-53	0.055	0.065	0.064	0.056	0.97	0.17	10.97	0.910
3-54	0.056	0.059	0.059	0.052	0.97	0.18	11.04	0.917
3-55	0.024	0.025	0.025	0.013	0.96	0.18	10.96	0.899
3-56	0.035	0.031	0.031	0.044	0.98	0.18	10.96	0.953
3-57	0.044	0.025	0.024	0.043	0.97	0.18	10.90	0.945
3-58	0.042	0.024	0.024	0.040	0.97	0.19	10.79	0.952
3-59	0.021	0.041	0.041	0.049	0.99	0.17	10.98	0.963
3-60	0.012	0.041	0.041	0.020	0.98	0.19	10.84	0.960
3-61	0.023	0.033	0.033	0.031	1.00	0.19	10.90	0.965
3-62	0.016	0.035	0.035	0.030	0.99	0.19	10.89	0.968
3-63	0.009	0.048	0.048	0.030	0.99	0.19	10.92	0.963
3-64	0.013	0.049	0.050	0.033	0.98	0.19	10.95	0.951
3-65	0.003	0.045	0.046	0.031	0.99	0.19	10.90	0.958
3-66	0.055	0.123	0.124	0.054	1.00	0.21	10.79	0.949
3-67	0.048	0.107	0.108	0.041	0.99	0.21	10.79	0.958

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
3-46	0.963	0.041	0.892	0.882	0.829	0.589	0.547	0.050
3-47	0.961	0.043	0.887	0.876	0.875	0.520	0.472	0.057
3-48	0.964	0.041	0.894	0.883	0.842	0.592	0.551	0.054
3-49	0.957	0.045	0.881	0.869	0.893	0.568	0.524	0.055
3-50	0.956	0.045	0.880	0.867	0.896	0.572	0.529	0.054
3-51	0.890	0.029	0.870	0.857	0.377	0.877	0.865	0.004
3-52	0.883	0.033	0.860	0.846	0.428	0.766	0.743	0.007
3-53	0.901	0.032	0.877	0.864	0.426	0.876	0.863	0.006
3-54	0.909	0.030	0.885	0.873	0.411	0.717	0.689	0.006
3-55	0.889	0.036	0.859	0.845	0.497	0.756	0.731	0.007
3-56	0.949	0.030	0.916	0.908	0.452	0.775	0.753	0.013
3-57	0.940	0.032	0.904	0.894	0.490	0.751	0.726	0.016
3-58	0.947	0.030	0.913	0.904	0.454	0.777	0.754	0.015
3-59	0.959	0.025	0.931	0.924	0.391	0.788	0.767	0.015
3-60	0.956	0.024	0.931	0.924	0.352	0.764	0.740	0.014
3-61	0.961	0.029	0.926	0.919	0.477	0.694	0.664	0.030
3-62	0.964	0.029	0.928	0.921	0.480	0.714	0.686	0.028
3-63	0.959	0.031	0.919	0.911	0.524	0.745	0.720	0.029
3-64	0.947	0.037	0.900	0.890	0.605	0.657	0.622	0.032
3-65	0.954	0.035	0.910	0.901	0.569	0.753	0.728	0.027
3-66	0.944	0.045	0.882	0.870	0.774	0.578	0.536	0.052
3-67	0.953	0.040	0.897	0.886	0.701	0.669	0.636	0.041

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
3-46	0.496	0.445	0.055	4.85	4.92	5.52	6.04	7.05
3-47	0.432	0.375	0.062	4.87	4.90	5.48	6.04	7.07
3-48	0.496	0.446	0.060	4.87	4.92	5.55	6.10	7.14
3-49	0.476	0.424	0.061	4.89	4.92	5.48	5.95	6.98
3-50	0.483	0.431	0.060	4.90	4.93	5.49	5.98	7.00
3-51	0.866	0.853	0.004	8.42	8.62	8.87	8.98	9.33
3-52	0.746	0.721	0.007	8.25	8.44	8.72	8.85	9.21
3-53	0.859	0.844	0.006	8.15	8.35	8.65	8.80	9.22
3-54	0.699	0.668	0.006	8.17	8.41	8.73	8.91	9.34
3-55	0.735	0.708	0.008	7.98	8.13	8.39	8.55	9.04
3-56	0.736	0.709	0.014	7.16	7.42	7.89	8.21	8.82
3-57	0.705	0.676	0.018	7.15	7.35	7.76	8.07	8.70
3-58	0.735	0.709	0.016	7.06	7.27	7.74	8.08	8.69
3-59	0.743	0.718	0.016	7.26	7.54	8.05	8.39	8.96
3-60	0.723	0.695	0.015	7.47	7.75	8.22	8.50	9.04
3-61	0.631	0.594	0.033	6.62	6.78	7.33	7.77	8.50
3-62	0.653	0.618	0.031	6.49	6.73	7.27	7.71	8.47
3-63	0.677	0.645	0.033	6.46	6.66	7.23	7.65	8.39
3-64	0.591	0.551	0.035	6.48	6.60	7.13	7.52	8.29
3-65	0.687	0.656	0.030	6.38	6.54	7.06	7.49	8.26
3-66	0.503	0.454	0.057	5.71	5.76	6.21	6.65	7.53
3-67	0.594	0.554	0.045	5.75	5.83	6.33	6.85	7.72

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
3-46	7.86	8.54	9.20	10.00	10.53	11.19	11.35	24.1%
3-47	7.90	8.63	9.29	10.14	10.69	11.37	11.55	23.4%
3-48	7.94	8.64	9.32	10.16	10.69	11.33	11.49	25.6%
3-49	7.81	8.55	9.27	10.08	10.62	11.31	11.50	25.4%
3-50	7.81	8.51	9.20	10.05	10.64	11.34	11.51	26.0%
3-51	9.59	9.84	10.12	10.49	10.77	11.20	11.33	20.5%
3-52	9.47	9.76	10.05	10.50	10.80	11.27	11.44	20.4%
3-53	9.53	9.82	10.13	10.62	10.93	11.36	11.45	21.3%
3-54	9.59	9.89	10.19	10.64	10.95	11.43	11.55	19.7%
3-55	9.42	9.73	10.04	10.53	10.88	11.40	11.58	20.7%
3-56	9.22	9.58	9.97	10.50	10.84	11.35	11.38	23.6%
3-57	9.15	9.53	9.90	10.40	10.76	11.28	11.43	23.9%
3-58	9.09	9.43	9.78	10.27	10.61	11.16	11.31	24.3%
3-59	9.36	9.70	10.03	10.52	10.85	11.30	11.32	23.6%
3-60	9.38	9.67	9.96	10.40	10.68	11.13	11.21	23.6%
3-61	9.05	9.51	9.88	10.42	10.76	11.19	11.20	28.0%
3-62	8.99	9.45	9.85	10.38	10.71	11.22	11.25	27.7%
3-63	8.93	9.36	9.80	10.40	10.81	11.32	11.32	29.5%
3-64	8.83	9.30	9.77	10.42	10.82	11.42	11.52	26.8%
3-65	8.83	9.32	9.77	10.36	10.77	11.35	11.30	28.1%
3-66	8.27	8.89	9.53	10.26	10.75	11.35	11.36	31.0%
3-67	8.38	8.98	9.54	10.20	10.67	11.28	11.38	31.0%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
3-46	28.8%	29.1%	28.3%	23.0%	20.7%	17.7%	16.3%	13.8%
3-47	28.7%	29.2%	29.3%	24.4%	21.9%	18.7%	17.3%	13.8%
3-48	30.9%	30.9%	29.6%	24.2%	21.6%	18.9%	17.4%	14.4%
3-49	30.1%	30.3%	30.2%	24.8%	22.7%	19.2%	17.6%	14.5%
3-50	30.5%	30.8%	30.9%	25.5%	22.9%	19.7%	18.3%	15.4%
3-51	20.2%	19.5%	19.6%	18.5%	18.9%	18.1%	18.5%	18.1%
3-52	20.3%	20.1%	20.5%	19.0%	18.9%	18.0%	18.8%	18.1%
3-53	21.3%	20.7%	20.5%	18.8%	19.0%	18.3%	18.6%	18.0%
3-54	19.8%	19.8%	19.4%	18.5%	19.2%	18.2%	18.6%	18.2%
3-55	20.9%	20.4%	20.7%	19.0%	19.2%	18.6%	19.3%	18.4%
3-56	24.4%	24.4%	23.7%	21.4%	21.3%	19.8%	19.8%	19.0%
3-57	25.1%	25.0%	24.5%	21.6%	21.2%	19.9%	19.7%	18.6%
3-58	25.8%	25.7%	24.5%	21.6%	21.1%	19.7%	19.7%	19.2%
3-59	24.7%	24.2%	23.3%	21.1%	20.6%	18.9%	18.9%	17.6%
3-60	25.1%	24.5%	24.0%	21.7%	21.3%	20.3%	20.0%	19.1%
3-61	30.4%	30.5%	29.8%	26.1%	24.0%	21.4%	21.0%	19.1%
3-62	30.3%	30.3%	29.4%	24.8%	23.3%	21.1%	20.3%	19.0%
3-63	31.7%	30.8%	29.8%	26.0%	24.8%	22.2%	21.0%	19.6%
3-64	30.8%	30.4%	29.3%	25.3%	24.2%	22.1%	21.0%	19.2%
3-65	30.8%	29.9%	28.3%	24.6%	23.3%	21.1%	20.9%	19.4%
3-66	35.6%	37.4%	36.4%	31.4%	28.4%	24.3%	23.0%	20.7%
3-67	34.4%	35.1%	33.2%	28.8%	26.8%	23.5%	22.6%	20.5%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
3-46	11.7%	9.9%	8.7%	65.7	114.1	61.7	61.5	70.5
3-47	11.6%	8.9%	7.4%	64.4	85.2	90.0	83.9	78.3
3-48	12.0%	10.0%	8.2%	52.9	62.0	69.2	73.1	83.6
3-49	12.2%	9.8%	8.6%	52.0	56.5	56.3	64.1	75.3
3-50	12.9%	10.7%	9.2%	51.2	60.0	59.6	66.8	76.7
3-51	17.1%	16.9%	17.4%	136.1	131.4	124.0	180.3	115.2
3-52	17.2%	16.7%	17.0%	135.8	140.7	126.6	154.2	159.2
3-53	17.2%	16.9%	17.6%	115.9	123.5	118.8	116.1	112.3
3-54	17.3%	16.9%	17.0%	112.9	174.5	164.0	120.1	134.2
3-55	17.7%	17.2%	16.6%	121.1	126.1	116.5	111.6	108.2
3-56	18.0%	17.4%	17.6%	116.1	113.6	102.5	107.3	118.3
3-57	17.8%	17.1%	16.9%	114.1	125.5	122.4	113.4	121.0
3-58	18.4%	17.8%	17.6%	115.4	120.9	115.9	123.9	128.0
3-59	16.6%	16.5%	17.0%	114.4	118.5	123.4	130.5	143.5
3-60	18.1%	17.5%	17.6%	131.6	145.7	155.0	152.0	159.5
3-61	17.9%	17.4%	17.7%	129.6	163.4	138.6	118.3	133.8
3-62	18.6%	17.8%	17.7%	124.0	102.3	149.5	102.2	134.6
3-63	18.0%	17.1%	17.2%	100.3	118.4	128.0	121.6	138.3
3-64	18.1%	16.9%	16.6%	97.3	102.6	96.6	103.0	124.7
3-65	18.0%	16.9%	16.6%	77.8	87.0	90.6	95.4	107.1
3-66	18.4%	17.3%	16.6%	70.7	78.9	78.0	82.5	97.0
3-67	18.4%	17.5%	17.0%	69.9	75.5	79.2	89.3	111.7

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
3-46	76.3	89.8	100.3	115.9	132.7	141.4	142.1	37.2
3-47	79.9	90.2	93.3	98.7	109.8	106.6	140.7	35.6
3-48	82.2	94.5	92.4	98.4	111.6	163.7	143.2	39.0
3-49	81.2	92.3	91.5	107.8	125.0	126.0	107.3	39.9
3-50	73.4	79.7	82.6	97.0	108.1	119.3	112.9	33.4
3-51	153.6	118.7	123.2	129.3	132.7	131.5	125.4	46.2
3-52	134.1	111.2	146.2	107.2	114.8	114.4	106.2	49.7
3-53	106.7	117.0	108.6	115.6	118.5	115.6	119.6	45.0
3-54	229.4	244.4	129.5	127.0	133.2	137.7	128.3	47.0
3-55	104.1	114.8	106.4	115.3	125.4	125.7	115.2	44.6
3-56	115.7	130.4	122.3	126.2	140.9	138.2	125.4	47.7
3-57	113.7	115.2	110.5	117.6	131.9	136.0	124.4	44.1
3-58	115.6	116.4	105.9	110.8	123.1	125.2	123.6	46.2
3-59	130.7	126.9	121.3	111.8	116.5	121.4	119.2	42.4
3-60	149.9	157.0	146.3	144.9	150.7	133.0	133.8	47.9
3-61	140.3	152.1	147.6	152.2	150.5	126.4	119.3	48.0
3-62	105.0	113.5	110.3	120.8	131.2	124.9	108.0	42.6
3-63	133.2	131.1	118.6	120.5	129.4	127.6	131.2	46.4
3-64	121.4	133.0	126.7	126.1	133.1	130.2	124.8	42.9
3-65	104.7	112.6	113.4	118.5	122.4	117.4	113.7	43.9
3-66	98.5	107.9	105.4	114.2	120.5	115.8	104.3	38.3
3-67	111.4	119.8	120.4	113.0	122.8	125.6	112.5	40.8

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
3-46	30.0	0.230	0.214	0.161	0.129	0.128	0.102	0.112
3-47	28.7	0.215	0.197	0.154	0.106	0.139	0.087	0.103
3-48	27.7	0.238	0.193	0.158	0.120	0.113	0.091	0.105
3-49	28.1	0.246	0.216	0.163	0.131	0.122	0.093	0.099
3-50	26.5	0.215	0.189	0.149	0.102	0.102	0.081	0.101
3-51	39.6	0.160	0.122	0.099	0.045	0.067	0.042	0.063
3-52	37.3	0.158	0.091	0.096	0.067	0.066	0.039	0.056
3-53	43.8	0.176	0.109	0.100	0.062	0.065	0.059	0.047
3-54	44.2	0.156	0.111	0.088	0.074	0.080	0.055	0.054
3-55	40.7	0.170	0.119	0.079	0.074	0.070	0.052	0.050
3-56	47.5	0.168	0.110	0.089	0.058	0.077	0.043	0.058
3-57	45.7	0.165	0.111	0.097	0.084	0.079	0.057	0.063
3-58	41.0	0.179	0.140	0.102	0.084	0.083	0.044	0.054
3-59	34.9	0.152	0.119	0.078	0.069	0.072	0.055	0.063
3-60	40.9	0.163	0.116	0.090	0.073	0.074	0.063	0.067
3-61	38.6	0.196	0.110	0.101	0.061	0.076	0.062	0.058
3-62	37.7	0.172	0.128	0.094	0.073	0.089	0.042	0.064
3-63	39.6	0.167	0.135	0.111	0.067	0.088	0.054	0.056
3-64	35.2	0.188	0.116	0.112	0.074	0.086	0.069	0.068
3-65	35.8	0.171	0.136	0.114	0.065	0.085	0.059	0.068
3-66	34.2	0.185	0.150	0.108	0.080	0.080	0.062	0.077
3-67	38.2	0.193	0.151	0.102	0.082	0.082	0.058	0.064

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
3-46	0.098	0.084	0.091	0.076	0.228	0.162	0.139	0.087
3-47	0.100	0.065	0.097	0.105	0.231	0.164	0.133	0.102
3-48	0.095	0.084	0.085	0.082	0.205	0.151	0.125	0.087
3-49	0.099	0.082	0.099	0.100	0.227	0.155	0.132	0.104
3-50	0.086	0.074	0.084	0.071	0.209	0.173	0.127	0.097
3-51	0.046	0.043	0.050	0.034	0.189	0.111	0.074	0.058
3-52	0.033	0.022	0.033	0.035	0.179	0.100	0.095	0.057
3-53	0.043	0.032	0.042	0.030	0.187	0.100	0.080	0.064
3-54	0.060	0.031	0.034	0.040	0.172	0.118	0.076	0.066
3-55	0.042	0.031	0.041	0.017	0.176	0.111	0.086	0.066
3-56	0.049	0.047	0.034	0.039	0.168	0.115	0.092	0.076
3-57	0.047	0.037	0.046	0.035	0.172	0.096	0.087	0.069
3-58	0.063	0.043	0.044	0.042	0.181	0.114	0.089	0.072
3-59	0.046	0.040	0.030	0.024	0.162	0.101	0.068	0.056
3-60	0.057	0.043	0.047	0.041	0.170	0.104	0.087	0.072
3-61	0.059	0.046	0.039	0.043	0.178	0.119	0.094	0.061
3-62	0.057	0.037	0.034	0.031	0.173	0.105	0.078	0.066
3-63	0.066	0.037	0.047	0.042	0.170	0.110	0.087	0.059
3-64	0.055	0.047	0.047	0.037	0.201	0.118	0.086	0.082
3-65	0.066	0.075	0.043	0.043	0.196	0.112	0.074	0.056
3-66	0.046	0.028	0.038	0.039	0.207	0.122	0.106	0.073
3-67	0.052	0.038	0.042	0.037	0.206	0.128	0.106	0.066

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
3-46	0.109	0.096	0.073	0.069	0.079	0.085	0.218	0.124
3-47	0.100	0.092	0.084	0.087	0.077	0.087	0.227	0.142
3-48	0.090	0.069	0.079	0.093	0.060	0.073	0.221	0.119
3-49	0.084	0.090	0.071	0.075	0.065	0.070	0.206	0.140
3-50	0.077	0.071	0.091	0.082	0.085	0.085	0.226	0.134
3-51	0.055	0.061	0.040	0.038	0.032	0.020	0.202	0.094
3-52	0.059	0.055	0.054	0.045	0.049	0.032	0.189	0.099
3-53	0.054	0.051	0.039	0.046	0.039	0.025	0.217	0.104
3-54	0.069	0.050	0.045	0.043	0.030	0.027	0.195	0.105
3-55	0.045	0.047	0.053	0.055	0.038	0.032	0.195	0.101
3-56	0.057	0.037	0.056	0.051	0.046	0.038	0.215	0.099
3-57	0.051	0.034	0.048	0.047	0.049	0.041	0.170	0.107
3-58	0.059	0.054	0.065	0.057	0.034	0.026	0.212	0.094
3-59	0.059	0.045	0.038	0.031	0.028	0.023	0.191	0.086
3-60	0.079	0.053	0.033	0.042	0.035	0.036	0.188	0.100
3-61	0.079	0.055	0.044	0.045	0.042	0.019	0.193	0.110
3-62	0.064	0.044	0.043	0.051	0.047	0.038	0.188	0.104
3-63	0.054	0.041	0.050	0.055	0.036	0.036	0.212	0.085
3-64	0.057	0.038	0.057	0.047	0.045	0.032	0.175	0.096
3-65	0.057	0.056	0.055	0.040	0.044	0.042	0.200	0.103
3-66	0.074	0.047	0.044	0.041	0.036	0.032	0.190	0.128
3-67	0.054	0.046	0.046	0.038	0.040	0.020	0.201	0.122

Case No.								
	$f_{z,3-6}^*$ [Hz]	$f_{z,3-7}^*$ [Hz]	$f_{z,3-8}^*$ [Hz]	$f_{z,3-9}^*$ [Hz]	$f_{z,3-10}^*$ [Hz]	$f_{z,3-11}^*$ [Hz]	$f_{z,3-12}^*$ [Hz]	$f_{z,4-5}^*$ [Hz]
3-46	0.136	0.093	0.102	0.086	0.077	0.078	0.081	0.173
3-47	0.117	0.087	0.077	0.081	0.072	0.094	0.086	0.183
3-48	0.113	0.097	0.079	0.072	0.086	0.073	0.069	0.200
3-49	0.109	0.077	0.089	0.071	0.060	0.078	0.073	0.180
3-50	0.111	0.083	0.080	0.085	0.066	0.085	0.068	0.194
3-51	0.094	0.050	0.063	0.044	0.050	0.045	0.030	0.177
3-52	0.082	0.063	0.052	0.043	0.047	0.036	0.025	0.177
3-53	0.078	0.052	0.057	0.037	0.015	0.036	0.035	0.180
3-54	0.081	0.077	0.043	0.046	0.036	0.026	0.031	0.179
3-55	0.073	0.067	0.051	0.058	0.051	0.048	0.016	0.186
3-56	0.078	0.059	0.062	0.056	0.050	0.060	0.046	0.183
3-57	0.070	0.057	0.051	0.058	0.038	0.037	0.035	0.174
3-58	0.086	0.081	0.059	0.051	0.034	0.024	0.035	0.167
3-59	0.095	0.056	0.063	0.052	0.033	0.042	0.032	0.194
3-60	0.087	0.068	0.053	0.046	0.035	0.037	0.013	0.191
3-61	0.090	0.063	0.062	0.050	0.044	0.019	0.021	0.188
3-62	0.082	0.061	0.060	0.049	0.033	0.030	0.029	0.182
3-63	0.087	0.067	0.062	0.061	0.046	0.052	0.040	0.176
3-64	0.086	0.068	0.048	0.046	0.035	0.051	0.030	0.173
3-65	0.079	0.051	0.057	0.055	0.042	0.045	0.033	0.189
3-66	0.095	0.071	0.063	0.036	0.048	0.037	0.030	0.175
3-67	0.084	0.049	0.050	0.045	0.034	0.043	0.042	0.158

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
3-46	0.132	0.090	0.078	0.073	0.069	0.083	0.050	0.167
3-47	0.138	0.087	0.079	0.079	0.070	0.092	0.074	0.156
3-48	0.123	0.088	0.069	0.088	0.079	0.076	0.068	0.161
3-49	0.119	0.094	0.091	0.075	0.063	0.073	0.080	0.184
3-50	0.136	0.084	0.081	0.068	0.065	0.057	0.055	0.172
3-51	0.102	0.082	0.062	0.042	0.052	0.049	0.025	0.188
3-52	0.109	0.066	0.058	0.042	0.050	0.047	0.034	0.175
3-53	0.103	0.070	0.063	0.041	0.044	0.044	0.034	0.177
3-54	0.109	0.072	0.057	0.057	0.039	0.043	0.031	0.204
3-55	0.100	0.077	0.063	0.043	0.038	0.049	0.023	0.181
3-56	0.114	0.087	0.074	0.064	0.045	0.053	0.050	0.171
3-57	0.110	0.070	0.060	0.048	0.044	0.047	0.041	0.172
3-58	0.114	0.085	0.061	0.052	0.055	0.041	0.032	0.175
3-59	0.087	0.071	0.058	0.070	0.047	0.037	0.024	0.174
3-60	0.109	0.085	0.066	0.061	0.035	0.038	0.034	0.157
3-61	0.118	0.081	0.066	0.056	0.029	0.044	0.033	0.161
3-62	0.112	0.067	0.067	0.041	0.039	0.026	0.017	0.169
3-63	0.095	0.066	0.066	0.064	0.051	0.048	0.033	0.167
3-64	0.116	0.081	0.071	0.064	0.035	0.061	0.034	0.176
3-65	0.110	0.065	0.066	0.054	0.032	0.057	0.027	0.144
3-66	0.102	0.074	0.060	0.054	0.032	0.031	0.022	0.175
3-67	0.104	0.067	0.056	0.042	0.030	0.032	0.033	0.168

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
3-46	0.133	0.083	0.086	0.060	0.066	0.065	0.187	0.115
3-47	0.121	0.093	0.062	0.059	0.068	0.061	0.190	0.115
3-48	0.104	0.073	0.077	0.068	0.067	0.052	0.197	0.104
3-49	0.105	0.085	0.061	0.079	0.076	0.056	0.185	0.103
3-50	0.107	0.075	0.078	0.052	0.060	0.082	0.186	0.121
3-51	0.118	0.075	0.070	0.056	0.045	0.042	0.200	0.129
3-52	0.098	0.066	0.047	0.051	0.035	0.041	0.195	0.107
3-53	0.113	0.085	0.061	0.053	0.046	0.031	0.225	0.123
3-54	0.116	0.083	0.072	0.064	0.044	0.042	0.214	0.121
3-55	0.124	0.072	0.072	0.050	0.043	0.033	0.208	0.124
3-56	0.105	0.085	0.061	0.065	0.048	0.049	0.197	0.099
3-57	0.108	0.086	0.047	0.051	0.046	0.045	0.212	0.114
3-58	0.119	0.074	0.061	0.061	0.045	0.028	0.199	0.104
3-59	0.105	0.061	0.053	0.052	0.040	0.027	0.203	0.088
3-60	0.115	0.068	0.076	0.055	0.042	0.024	0.202	0.101
3-61	0.101	0.062	0.049	0.043	0.034	0.028	0.186	0.106
3-62	0.110	0.077	0.060	0.036	0.031	0.033	0.197	0.110
3-63	0.123	0.080	0.046	0.060	0.054	0.036	0.195	0.108
3-64	0.099	0.074	0.062	0.052	0.046	0.040	0.200	0.114
3-65	0.093	0.075	0.061	0.053	0.037	0.028	0.193	0.099
3-66	0.133	0.079	0.056	0.048	0.053	0.037	0.195	0.099
3-67	0.104	0.081	0.061	0.054	0.046	0.028	0.209	0.106

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
3-46	0.080	0.067	0.071	0.066	0.169	0.104	0.055	0.062
3-47	0.090	0.061	0.074	0.063	0.163	0.091	0.090	0.080
3-48	0.091	0.068	0.067	0.060	0.152	0.102	0.089	0.067
3-49	0.084	0.064	0.064	0.052	0.156	0.104	0.081	0.067
3-50	0.078	0.058	0.049	0.072	0.156	0.097	0.085	0.070
3-51	0.086	0.069	0.051	0.045	0.190	0.091	0.086	0.057
3-52	0.073	0.049	0.042	0.035	0.193	0.087	0.084	0.054
3-53	0.071	0.041	0.041	0.047	0.189	0.096	0.087	0.051
3-54	0.087	0.078	0.058	0.047	0.178	0.108	0.094	0.071
3-55	0.074	0.053	0.051	0.046	0.202	0.103	0.075	0.054
3-56	0.080	0.056	0.058	0.050	0.186	0.087	0.066	0.056
3-57	0.074	0.039	0.050	0.047	0.182	0.101	0.090	0.067
3-58	0.084	0.057	0.052	0.033	0.194	0.084	0.079	0.060
3-59	0.088	0.058	0.037	0.038	0.188	0.100	0.087	0.060
3-60	0.060	0.060	0.053	0.032	0.192	0.094	0.076	0.058
3-61	0.056	0.045	0.033	0.029	0.171	0.082	0.068	0.056
3-62	0.087	0.051	0.041	0.032	0.171	0.082	0.079	0.043
3-63	0.075	0.051	0.038	0.022	0.180	0.092	0.071	0.040
3-64	0.084	0.061	0.048	0.031	0.178	0.094	0.074	0.064
3-65	0.073	0.053	0.053	0.035	0.176	0.105	0.085	0.066
3-66	0.064	0.047	0.042	0.044	0.180	0.082	0.067	0.035
3-67	0.063	0.029	0.040	0.035	0.166	0.088	0.072	0.051

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
3-46	0.058	0.184	0.090	0.078	0.058	0.219	0.111	0.054
3-47	0.068	0.179	0.092	0.084	0.062	0.204	0.098	0.054
3-48	0.051	0.183	0.112	0.074	0.055	0.211	0.109	0.062
3-49	0.060	0.192	0.111	0.089	0.054	0.235	0.112	0.059
3-50	0.054	0.167	0.091	0.084	0.048	0.210	0.120	0.066
3-51	0.038	0.197	0.109	0.065	0.045	0.232	0.096	0.058
3-52	0.058	0.179	0.118	0.083	0.077	0.235	0.097	0.065
3-53	0.045	0.171	0.104	0.070	0.042	0.214	0.127	0.074
3-54	0.063	0.173	0.108	0.088	0.061	0.240	0.120	0.059
3-55	0.047	0.189	0.098	0.071	0.055	0.232	0.113	0.069
3-56	0.043	0.173	0.108	0.072	0.045	0.236	0.128	0.058
3-57	0.039	0.169	0.099	0.080	0.035	0.242	0.110	0.068
3-58	0.048	0.175	0.093	0.091	0.060	0.233	0.121	0.060
3-59	0.038	0.166	0.113	0.071	0.039	0.223	0.109	0.059
3-60	0.024	0.179	0.091	0.074	0.049	0.212	0.102	0.062
3-61	0.025	0.156	0.084	0.067	0.034	0.221	0.102	0.049
3-62	0.029	0.162	0.095	0.064	0.047	0.220	0.101	0.056
3-63	0.041	0.172	0.106	0.063	0.047	0.222	0.090	0.063
3-64	0.039	0.160	0.090	0.078	0.047	0.225	0.109	0.056
3-65	0.043	0.198	0.107	0.078	0.050	0.232	0.108	0.058
3-66	0.046	0.147	0.092	0.059	0.046	0.218	0.097	0.056
3-67	0.044	0.172	0.090	0.062	0.047	0.208	0.105	0.070

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
3-46	0.187	0.065	0.093	1.77E-03	6.12E-03	4.51E-06	1.99E-08	3.81E-08
3-47	0.196	0.061	0.080	1.97E-03	9.38E-03	3.76E-05	2.26E-08	4.34E-08
3-48	0.192	0.073	0.082	5.80E-03	1.61E-02	2.96E-05	2.53E-08	4.69E-08
3-49	0.183	0.055	0.062	8.45E-04	2.58E-03	4.73E-07	2.53E-08	4.62E-08
3-50	0.187	0.050	0.081	6.19E-03	2.89E-02	1.91E-04	2.84E-08	5.19E-08
3-51	0.191	0.074	0.104	1.72E-03	7.25E-03	5.09E-06	4.85E-08	6.74E-08
3-52	0.185	0.078	0.103	1.59E-03	6.51E-03	2.19E-06	4.82E-08	6.31E-08
3-53	0.199	0.100	0.089	4.46E-03	9.78E-03	5.50E-04	5.14E-08	7.40E-08
3-54	0.189	0.077	0.087	4.23E-03	1.36E-02	5.94E-06	4.88E-08	6.68E-08
3-55	0.189	0.082	0.089	1.55E-03	5.82E-03	2.97E-07	4.99E-08	6.63E-08
3-56	0.194	0.072	0.085	3.46E-03	1.15E-02	4.36E-04	6.09E-08	7.16E-08
3-57	0.197	0.066	0.089	5.51E-03	1.84E-02	6.33E-07	5.88E-08	6.76E-08
3-58	0.186	0.069	0.095	3.48E-03	1.16E-02	2.63E-05	6.09E-08	6.98E-08
3-59	0.199	0.083	0.104	6.36E-03	2.15E-02	6.81E-05	5.50E-08	6.52E-08
3-60	0.179	0.076	0.088	9.39E-03	3.05E-02	8.68E-05	6.59E-08	7.65E-08
3-61	0.177	0.084	0.092	4.55E-02	7.07E-02	1.24E-03	8.31E-08	1.27E-07
3-62	0.187	0.097	0.089	1.03E-02	7.71E-02	9.76E-08	7.80E-08	1.16E-07
3-63	0.176	0.064	0.085	1.72E-03	5.39E-03	3.91E-05	8.45E-08	1.20E-07
3-64	0.181	0.070	0.081	2.85E-03	1.24E-02	7.59E-07	7.62E-08	1.05E-07
3-65	0.207	0.076	0.086	2.99E-03	1.04E-02	2.57E-04	7.06E-08	8.99E-08
3-66	0.185	0.060	0.094	1.04E-02	3.07E-02	2.30E-03	9.66E-08	1.54E-07
3-67	0.185	0.069	0.077	6.30E-03	2.99E-02	8.91E-05	8.59E-08	1.19E-07

Case No.	ck
	$\Delta_{\min,FFT}$
3-46	4.14E-09
3-47	2.43E-09
3-48	3.49E-09
3-49	4.25E-09
3-50	5.51E-09
3-51	3.91E-08
3-52	3.54E-08
3-53	4.02E-08
3-54	2.96E-08
3-55	3.31E-08
3-56	3.64E-08
3-57	3.78E-08
3-58	3.88E-08
3-59	3.81E-08
3-60	4.33E-08
3-61	5.20E-08
3-62	4.67E-08
3-63	5.81E-08
3-64	4.07E-08
3-65	4.62E-08
3-66	4.37E-08
3-67	4.50E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
3-68	None	120 cm	30 cm rectangle	10	15	11.18	0.88
3-69	None	120 cm	30 cm rectangle	5	15	11.09	0.87
3-70	None	120 cm	30 cm rectangle	0	15	11.01	0.86
3-71	None	120 cm	30 cm rectangle	0	20	10.86	0.85
3-72	None	120 cm	30 cm rectangle	5	20	10.93	0.86
3-73	None	120 cm	30 cm rectangle	10	20	11.09	0.87
3-74	None	120 cm	30 cm rectangle	15	20	11.08	0.87
3-75	None	120 cm	30 cm rectangle	20	20	11.25	0.88
3-76	None	120 cm (backwards)	None	5	5	9.96	0.78
3-77	None	120 cm (backwards)	None	5	10	9.87	0.77
3-78	None	120 cm (backwards)	None	5	15	9.64	0.76
3-79	None	120 cm (backwards)	None	5	20	9.42	0.74
3-80	None	120 cm (backwards)	None	10	20	9.53	0.75
3-81	None	120 cm (backwards)	None	10	15	9.61	0.75
3-82	None	120 cm (backwards)	None	10	10	9.84	0.77
3-83	None	120 cm (backwards)	None	15	15	9.55	0.75
3-84	None	120 cm (backwards)	None	15	20	9.46	0.74
3-85	None	120 cm (backwards)	None	20	20	9.12	0.72
3-86	None	120 cm (backwards)	30 cm triangles	5	5	9.23	0.72
3-87	None	120 cm (backwards)	30 cm triangles	5	10	9.54	0.75
3-88	None	120 cm (backwards)	30 cm triangles	5	15	9.49	0.74
3-89	None	120 cm (backwards)	30 cm triangles	5	20	9.05	0.71

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
3-68	0.37	3.18	-0.27	0.71	31.5%	4	5	A
3-69	0.39	3.53	-0.28	0.84	33.3%	4	5	A
3-70	0.37	3.05	-0.26	0.66	33.1%	4	5	A
3-71	0.43	4.37	-0.25	0.48	36.1%	4	5	A
3-72	0.45	4.93	-0.29	0.92	36.7%	4	5	A
3-73	0.43	4.39	-0.26	0.66	35.0%	4	5	A
3-74	0.44	4.70	-0.23	0.38	34.8%	4	5	A
3-75	0.45	4.88	-0.29	0.99	35.0%	4	5	A
3-76	0.33	2.13	-0.14	0.02	22.2%	4	4	A
3-77	0.41	3.86	-0.21	0.26	25.9%	4	5	A
3-78	0.45	4.85	-0.21	0.22	28.2%	4	5	A
3-79	0.51	6.19	-0.21	0.23	32.5%	4	5	A
3-80	0.52	6.43	-0.21	0.24	31.7%	4	5	A
3-81	0.45	4.73	-0.20	0.17	30.2%	4	5	A
3-82	0.39	3.47	-0.18	0.12	25.5%	4	5	A
3-83	0.48	5.49	-0.19	0.13	30.4%	4	5	A
3-84	0.52	6.33	-0.20	0.16	32.7%	4	5	A
3-85	0.52	6.20	-0.18	0.09	33.2%	4	5	A
3-86	0.21	0.38	-0.09	0.00	24.7%	3	3	B
3-87	0.30	1.57	-0.17	0.07	29.9%	4	4	A
3-88	0.36	2.80	-0.13	0.01	30.9%	4	5	A
3-89	0.39	3.23	-0.14	0.02	34.9%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
3-68	0.546	2.184	0.105	0.292	0.073	0.024	0.273	0.302
3-69	0.612	2.527	0.153	0.163	0.133	0.018	0.411	0.272
3-70	0.526	2.053	0.085	0.340	0.126	0.037	0.221	0.315
3-71	0.774	3.375	0.030	0.516	0.226	0.120	0.750	0.349
3-72	0.871	3.933	0.198	0.077	0.247	0.182	0.973	0.243
3-73	0.779	3.392	0.093	0.338	0.190	0.124	0.757	0.310
3-74	0.841	3.700	0.029	0.621	0.183	0.162	0.880	0.387
3-75	0.857	3.879	0.226	0.009	0.192	0.173	0.951	0.226
3-76	0.374	1.134	0.430	0.979	0.245	0.031	0.146	0.573
3-77	0.696	2.857	0.129	0.739	0.119	0.071	0.543	0.450
3-78	0.881	3.855	0.138	0.776	0.040	0.188	0.942	0.456
3-79	1.128	5.193	0.132	0.772	0.104	0.344	1.477	0.452
3-80	1.181	5.426	0.118	0.758	0.079	0.378	1.571	0.443
3-81	0.867	3.734	0.185	0.832	0.028	0.179	0.894	0.485
3-82	0.622	2.475	0.239	0.877	0.131	0.024	0.390	0.519
3-83	1.012	4.485	0.211	0.865	0.034	0.271	1.194	0.502
3-84	1.174	5.329	0.177	0.843	0.112	0.373	1.532	0.480
3-85	1.169	5.198	0.263	0.913	0.131	0.370	1.479	0.534
3-86	0.096	0.272	0.545	0.999	0.409	0.009	0.272	0.589
3-87	0.234	0.570	0.311	0.928	0.018	0.075	0.570	0.483
3-88	0.499	1.798	0.454	0.987	0.050	0.053	0.119	0.655
3-89	0.605	2.226	0.412	0.979	0.187	0.014	0.290	0.629

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
3-68	0.170	0.113	0.205	0.054	0.083	0.083	0.004	0.021
3-69	0.124	0.161	0.170	0.001	0.093	0.092	0.004	0.018
3-70	0.129	0.098	0.219	0.007	0.082	0.082	0.005	0.022
3-71	0.051	0.277	0.258	0.082	0.113	0.111	0.021	0.018
3-72	0.035	0.347	0.137	0.100	0.125	0.122	0.031	0.024
3-73	0.079	0.281	0.213	0.050	0.116	0.114	0.025	0.022
3-74	0.085	0.325	0.301	0.043	0.124	0.122	0.032	0.026
3-75	0.078	0.337	0.118	0.051	0.121	0.119	0.028	0.021
3-76	0.306	0.010	0.590	0.334	0.089	0.088	0.041	0.042
3-77	0.319	0.221	0.373	0.223	0.124	0.122	0.038	0.039
3-78	0.258	0.354	0.380	0.154	0.145	0.142	0.054	0.050
3-79	0.146	0.532	0.375	0.026	0.172	0.167	0.077	0.067
3-80	0.165	0.570	0.365	0.048	0.180	0.175	0.085	0.075
3-81	0.205	0.344	0.413	0.093	0.144	0.141	0.054	0.050
3-82	0.328	0.168	0.452	0.234	0.115	0.114	0.032	0.035
3-83	0.200	0.448	0.432	0.088	0.160	0.155	0.066	0.059
3-84	0.140	0.565	0.408	0.019	0.178	0.172	0.082	0.072
3-85	0.125	0.562	0.469	0.003	0.183	0.176	0.088	0.078
3-86	0.174	0.063	0.611	0.110	0.022	0.027	0.008	0.014
3-87	0.064	0.112	0.504	0.102	0.043	0.044	0.010	0.021
3-88	0.188	0.079	0.607	0.074	0.084	0.083	0.007	0.024
3-89	0.081	0.156	0.577	0.047	0.106	0.103	0.021	0.028

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
3-68	0.024	0.085	0.086	0.036	1.00	0.20	10.77	0.961
3-69	0.034	0.105	0.105	0.041	1.00	0.21	10.64	0.959
3-70	0.023	0.097	0.097	0.041	1.00	0.21	10.58	0.960
3-71	0.055	0.147	0.147	0.067	1.00	0.24	10.37	0.949
3-72	0.068	0.154	0.155	0.064	1.00	0.23	10.39	0.951
3-73	0.059	0.137	0.138	0.054	1.00	0.23	10.53	0.951
3-74	0.067	0.146	0.146	0.059	0.99	0.24	10.47	0.946
3-75	0.064	0.138	0.139	0.056	1.01	0.21	10.75	0.952
3-76	0.036	0.025	0.025	0.056	0.95	0.18	9.17	0.930
3-77	0.068	0.068	0.068	0.040	0.96	0.18	9.08	0.947
3-78	0.089	0.103	0.104	0.035	0.96	0.20	8.81	0.944
3-79	0.116	0.157	0.157	0.045	0.97	0.23	8.53	0.941
3-80	0.125	0.154	0.155	0.042	0.96	0.22	8.55	0.938
3-81	0.088	0.121	0.121	0.034	0.96	0.22	8.77	0.940
3-82	0.059	0.063	0.063	0.040	0.96	0.19	9.07	0.950
3-83	0.104	0.135	0.135	0.038	0.97	0.22	8.67	0.935
3-84	0.123	0.164	0.164	0.052	0.97	0.24	8.52	0.932
3-85	0.128	0.173	0.174	0.056	0.96	0.25	8.12	0.923
3-86	0.008	0.056	0.056	0.038	0.99	0.21	9.00	0.943
3-87	0.020	0.056	0.056	0.027	0.99	0.23	9.21	0.944
3-88	0.025	0.102	0.102	0.040	0.99	0.25	9.02	0.939
3-89	0.048	0.147	0.147	0.070	0.97	0.28	8.43	0.918

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
3-68	0.957	0.036	0.909	0.899	0.621	0.676	0.644	0.037
3-69	0.955	0.038	0.903	0.893	0.652	0.697	0.666	0.039
3-70	0.956	0.036	0.907	0.897	0.610	0.670	0.637	0.039
3-71	0.944	0.046	0.882	0.870	0.751	0.543	0.497	0.053
3-72	0.946	0.046	0.881	0.869	0.783	0.650	0.615	0.049
3-73	0.946	0.044	0.883	0.871	0.758	0.638	0.601	0.044
3-74	0.941	0.047	0.874	0.861	0.803	0.525	0.477	0.051
3-75	0.947	0.045	0.884	0.872	0.797	0.633	0.597	0.050
3-76	0.923	0.043	0.870	0.857	0.584	0.638	0.602	0.015
3-77	0.942	0.043	0.879	0.867	0.644	0.659	0.625	0.025
3-78	0.939	0.047	0.866	0.853	0.706	0.546	0.501	0.035
3-79	0.935	0.052	0.850	0.835	0.785	0.523	0.475	0.043
3-80	0.931	0.054	0.842	0.826	0.822	0.513	0.465	0.043
3-81	0.934	0.049	0.860	0.846	0.716	0.529	0.481	0.037
3-82	0.945	0.041	0.886	0.874	0.605	0.579	0.537	0.026
3-83	0.928	0.053	0.846	0.831	0.781	0.474	0.422	0.041
3-84	0.925	0.057	0.834	0.818	0.838	0.435	0.379	0.049
3-85	0.916	0.060	0.822	0.804	0.829	0.419	0.361	0.047
3-86	0.938	0.029	0.911	0.902	0.330	0.527	0.480	0.014
3-87	0.939	0.037	0.897	0.887	0.479	0.607	0.567	0.026
3-88	0.933	0.044	0.878	0.865	0.592	0.449	0.394	0.031
3-89	0.910	0.053	0.844	0.829	0.660	0.419	0.361	0.040

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
3-68	0.605	0.566	0.041	5.92	6.05	6.58	7.05	7.94
3-69	0.623	0.586	0.043	5.75	5.86	6.39	6.84	7.71
3-70	0.600	0.560	0.043	5.87	6.00	6.54	7.01	7.78
3-71	0.475	0.423	0.057	5.46	5.45	5.90	6.32	7.24
3-72	0.573	0.531	0.054	5.28	5.29	5.81	6.24	7.12
3-73	0.566	0.523	0.049	5.48	5.59	6.03	6.46	7.33
3-74	0.462	0.408	0.054	5.40	5.46	5.92	6.32	7.20
3-75	0.556	0.511	0.055	5.44	5.55	6.00	6.45	7.40
3-76	0.598	0.558	0.016	5.48	5.67	6.02	6.31	6.84
3-77	0.601	0.561	0.027	4.89	4.96	5.35	5.75	6.49
3-78	0.488	0.437	0.037	4.54	4.55	4.94	5.30	6.07
3-79	0.466	0.413	0.045	4.17	4.09	4.48	4.78	5.62
3-80	0.455	0.400	0.046	4.16	4.06	4.44	4.75	5.55
3-81	0.474	0.421	0.039	4.59	4.54	4.94	5.28	6.06
3-82	0.527	0.480	0.028	4.97	5.04	5.51	5.87	6.59
3-83	0.422	0.365	0.043	4.41	4.35	4.71	5.01	5.77
3-84	0.382	0.321	0.052	4.21	4.07	4.44	4.71	5.52
3-85	0.372	0.309	0.049	4.07	3.92	4.27	4.49	5.24
3-86	0.506	0.457	0.014	6.32	6.48	6.81	7.04	7.50
3-87	0.560	0.517	0.028	5.70	5.84	6.23	6.48	7.11
3-88	0.412	0.353	0.032	5.23	5.21	5.58	5.90	6.59
3-89	0.380	0.318	0.041	4.88	4.77	5.09	5.32	6.01

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
3-68	8.57	9.09	9.59	10.23	10.65	11.22	11.18	29.8%
3-69	8.38	8.93	9.43	10.09	10.54	11.12	11.09	32.0%
3-70	8.36	8.91	9.43	10.05	10.47	11.04	11.01	31.4%
3-71	7.95	8.58	9.19	9.87	10.31	10.91	10.86	32.4%
3-72	7.85	8.47	9.06	9.87	10.38	11.01	10.93	34.8%
3-73	8.01	8.64	9.25	9.98	10.46	11.13	11.09	33.0%
3-74	7.87	8.50	9.15	9.95	10.44	11.13	11.08	31.5%
3-75	8.13	8.79	9.44	10.23	10.74	11.36	11.25	33.3%
3-76	7.26	7.66	8.08	8.66	9.05	9.64	9.96	21.2%
3-77	7.01	7.42	7.90	8.48	8.93	9.54	9.87	24.4%
3-78	6.63	7.10	7.56	8.22	8.70	9.35	9.64	25.4%
3-79	6.20	6.73	7.25	7.93	8.45	9.14	9.42	29.3%
3-80	6.12	6.68	7.27	7.99	8.47	9.17	9.53	28.2%
3-81	6.57	7.05	7.57	8.20	8.65	9.32	9.61	27.1%
3-82	7.07	7.46	7.91	8.50	8.92	9.50	9.84	23.5%
3-83	6.36	6.88	7.41	8.12	8.62	9.30	9.55	26.7%
3-84	6.11	6.64	7.22	7.96	8.49	9.19	9.46	28.1%
3-85	5.77	6.29	6.87	7.58	8.07	8.78	9.12	28.8%
3-86	7.76	8.02	8.29	8.65	8.92	9.36	9.23	23.3%
3-87	7.54	7.93	8.28	8.79	9.15	9.64	9.54	27.9%
3-88	7.13	7.61	8.03	8.59	8.94	9.48	9.49	27.8%
3-89	6.51	6.97	7.38	7.97	8.42	9.03	9.05	30.9%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
3-68	34.0%	33.7%	32.2%	27.4%	25.6%	22.7%	21.9%	20.3%
3-69	35.4%	35.2%	33.7%	28.8%	27.1%	24.3%	23.4%	21.0%
3-70	35.2%	35.2%	33.8%	29.0%	27.6%	24.5%	23.5%	21.3%
3-71	38.0%	38.9%	39.0%	33.9%	31.6%	27.8%	25.9%	23.2%
3-72	38.9%	38.3%	37.9%	32.7%	30.7%	27.1%	25.7%	22.1%
3-73	36.6%	37.0%	36.4%	31.7%	29.7%	26.2%	24.7%	22.3%
3-74	35.7%	37.4%	37.8%	32.4%	31.2%	28.0%	26.6%	23.1%
3-75	36.3%	37.7%	36.6%	30.9%	29.3%	26.1%	24.1%	20.8%
3-76	22.8%	22.8%	22.1%	20.8%	20.8%	19.4%	19.2%	18.0%
3-77	27.3%	27.4%	26.3%	22.9%	22.0%	20.4%	20.4%	18.9%
3-78	29.8%	30.2%	30.4%	25.9%	24.6%	22.4%	21.9%	20.1%
3-79	33.7%	34.6%	35.9%	29.8%	28.7%	26.0%	25.6%	23.0%
3-80	33.4%	33.9%	34.5%	29.6%	28.2%	25.8%	24.6%	22.4%
3-81	31.8%	32.3%	32.4%	28.1%	26.8%	24.3%	24.0%	22.4%
3-82	26.7%	27.1%	26.8%	23.1%	22.7%	21.4%	20.6%	19.2%
3-83	31.8%	32.9%	33.7%	28.5%	27.0%	24.6%	24.8%	22.5%
3-84	34.5%	35.5%	36.6%	30.6%	30.3%	27.6%	26.3%	22.7%
3-85	34.5%	35.5%	37.8%	32.0%	31.0%	28.3%	26.5%	24.0%
3-86	25.6%	26.0%	25.6%	22.9%	22.9%	21.5%	21.7%	21.5%
3-87	31.1%	31.4%	31.5%	27.8%	26.5%	24.4%	24.2%	22.8%
3-88	31.6%	32.5%	33.1%	30.3%	29.2%	26.5%	26.5%	25.1%
3-89	36.1%	36.7%	37.8%	33.9%	33.4%	31.2%	29.8%	27.6%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
3-68	18.6%	17.8%	17.7%	87.8	87.7	88.8	93.1	106.1
3-69	18.9%	17.9%	18.1%	69.0	81.9	84.0	92.1	105.8
3-70	19.6%	18.4%	18.5%	79.5	88.0	93.6	99.5	114.6
3-71	20.9%	19.3%	19.0%	60.7	72.7	78.1	85.6	99.4
3-72	19.5%	18.2%	18.5%	67.7	75.6	83.8	88.5	114.1
3-73	20.4%	18.8%	18.6%	64.5	68.3	72.6	76.0	88.2
3-74	20.8%	18.7%	18.4%	61.4	75.6	76.9	79.0	101.5
3-75	18.3%	17.0%	17.0%	61.1	72.6	82.0	92.4	106.2
3-76	17.2%	16.5%	15.7%	146.2	139.5	181.8	167.9	156.9
3-77	17.5%	16.4%	15.5%	105.2	115.5	109.3	108.3	122.3
3-78	18.4%	17.1%	16.7%	69.2	72.9	82.0	86.0	116.6
3-79	20.7%	19.3%	18.7%	72.8	84.7	85.9	94.0	96.4
3-80	20.5%	18.6%	17.3%	55.5	58.7	63.5	75.6	88.8
3-81	20.5%	18.9%	17.4%	77.7	78.7	81.4	88.1	109.6
3-82	17.7%	16.7%	16.2%	75.5	74.4	82.8	95.5	116.4
3-83	20.4%	18.9%	17.7%	75.3	93.0	91.9	97.0	112.6
3-84	20.5%	19.5%	18.5%	58.7	61.9	59.3	66.8	108.0
3-85	22.5%	21.2%	19.9%	55.8	60.6	66.9	70.4	86.5
3-86	21.0%	21.1%	21.1%	128.8	145.2	151.0	153.4	162.2
3-87	21.6%	20.8%	21.2%	138.2	159.5	162.0	166.1	195.3
3-88	23.6%	22.1%	21.7%	83.0	107.6	101.4	120.4	183.6
3-89	25.5%	23.5%	23.9%	83.1	81.6	88.0	96.1	110.8

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
3-68	101.5	113.1	107.5	113.3	119.5	116.2	114.8	43.7
3-69	111.2	130.5	125.9	128.5	135.8	127.6	126.9	44.1
3-70	115.5	123.6	122.0	134.4	149.5	148.6	135.0	44.2
3-71	105.2	119.2	118.0	121.9	132.1	130.9	126.9	39.7
3-72	113.1	130.2	126.6	111.7	116.1	115.8	107.6	39.4
3-73	97.1	109.8	117.4	128.9	128.1	128.9	148.5	45.8
3-74	111.4	121.1	119.9	130.6	139.2	128.1	126.5	37.5
3-75	108.6	120.6	114.5	112.2	125.2	126.3	123.4	35.7
3-76	118.8	139.7	162.4	128.5	134.0	134.4	136.8	54.9
3-77	114.6	123.5	118.5	122.0	130.0	124.1	140.8	43.3
3-78	129.6	148.2	120.2	125.1	128.6	125.0	112.6	40.8
3-79	96.3	107.1	111.8	119.8	130.9	127.6	135.7	45.5
3-80	87.8	99.6	100.6	108.0	118.6	123.1	109.6	41.6
3-81	111.9	124.5	125.7	131.8	138.3	143.4	143.9	46.6
3-82	113.3	120.3	121.8	126.2	136.6	135.7	130.4	41.3
3-83	117.4	132.2	135.9	136.9	145.2	145.8	135.1	48.4
3-84	96.7	107.1	104.0	114.3	119.8	125.1	116.2	39.9
3-85	93.0	105.3	113.2	127.6	129.9	159.9	117.2	41.0
3-86	158.4	167.1	162.4	217.2	283.2	316.8	312.0	59.1
3-87	212.9	262.4	245.2	262.9	263.3	275.0	365.0	56.0
3-88	198.2	209.5	210.7	248.2	274.6	268.1	298.4	50.4
3-89	123.8	133.4	128.9	133.5	138.2	142.9	211.0	50.3

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
3-68	37.4	0.163	0.128	0.114	0.068	0.087	0.072	0.070
3-69	35.3	0.172	0.157	0.097	0.073	0.088	0.064	0.071
3-70	42.1	0.190	0.146	0.125	0.078	0.076	0.064	0.064
3-71	39.0	0.185	0.124	0.106	0.085	0.073	0.066	0.058
3-72	33.0	0.203	0.153	0.126	0.082	0.097	0.069	0.049
3-73	35.3	0.178	0.149	0.120	0.089	0.092	0.072	0.057
3-74	39.9	0.175	0.128	0.111	0.076	0.076	0.051	0.065
3-75	35.7	0.187	0.121	0.113	0.065	0.071	0.057	0.065
3-76	46.1	0.249	0.217	0.195	0.160	0.150	0.134	0.139
3-77	39.3	0.242	0.229	0.187	0.137	0.149	0.116	0.140
3-78	34.2	0.255	0.233	0.191	0.148	0.156	0.116	0.128
3-79	34.5	0.278	0.245	0.208	0.163	0.177	0.126	0.151
3-80	34.2	0.289	0.275	0.240	0.176	0.179	0.130	0.139
3-81	42.6	0.261	0.257	0.239	0.151	0.175	0.136	0.146
3-82	44.8	0.232	0.228	0.198	0.147	0.157	0.107	0.139
3-83	39.3	0.262	0.264	0.214	0.160	0.172	0.112	0.132
3-84	39.9	0.253	0.269	0.223	0.176	0.175	0.123	0.151
3-85	34.7	0.293	0.281	0.225	0.164	0.180	0.135	0.150
3-86	44.9	0.181	0.157	0.133	0.111	0.121	0.103	0.107
3-87	46.7	0.210	0.183	0.157	0.125	0.139	0.106	0.109
3-88	43.3	0.222	0.194	0.171	0.124	0.116	0.087	0.102
3-89	35.9	0.202	0.203	0.160	0.125	0.144	0.101	0.105

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
3-68	0.053	0.047	0.044	0.038	0.165	0.128	0.092	0.065
3-69	0.047	0.047	0.039	0.031	0.188	0.132	0.098	0.066
3-70	0.040	0.047	0.050	0.039	0.195	0.121	0.102	0.061
3-71	0.057	0.036	0.025	0.034	0.173	0.131	0.094	0.072
3-72	0.050	0.036	0.043	0.044	0.181	0.142	0.100	0.083
3-73	0.053	0.032	0.059	0.043	0.169	0.128	0.109	0.063
3-74	0.043	0.035	0.047	0.047	0.196	0.119	0.107	0.079
3-75	0.043	0.038	0.047	0.031	0.172	0.128	0.078	0.067
3-76	0.141	0.096	0.100	0.097	0.242	0.190	0.158	0.133
3-77	0.111	0.098	0.099	0.081	0.229	0.182	0.156	0.127
3-78	0.115	0.093	0.086	0.065	0.244	0.199	0.147	0.124
3-79	0.124	0.099	0.098	0.067	0.258	0.188	0.161	0.142
3-80	0.119	0.089	0.089	0.078	0.267	0.218	0.187	0.144
3-81	0.127	0.099	0.099	0.075	0.260	0.209	0.157	0.138
3-82	0.108	0.090	0.101	0.091	0.263	0.170	0.164	0.115
3-83	0.112	0.100	0.095	0.081	0.262	0.210	0.186	0.132
3-84	0.117	0.101	0.097	0.089	0.247	0.213	0.179	0.132
3-85	0.135	0.093	0.090	0.074	0.285	0.220	0.190	0.153
3-86	0.085	0.072	0.070	0.063	0.202	0.152	0.136	0.112
3-87	0.090	0.075	0.073	0.058	0.211	0.154	0.139	0.125
3-88	0.091	0.073	0.072	0.061	0.198	0.154	0.145	0.122
3-89	0.097	0.078	0.077	0.062	0.223	0.160	0.146	0.107

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
3-68	0.067	0.063	0.041	0.044	0.039	0.037	0.189	0.110
3-69	0.062	0.061	0.040	0.046	0.051	0.033	0.208	0.111
3-70	0.066	0.047	0.049	0.062	0.045	0.039	0.198	0.119
3-71	0.076	0.064	0.041	0.059	0.033	0.046	0.191	0.108
3-72	0.058	0.062	0.053	0.040	0.041	0.040	0.197	0.109
3-73	0.068	0.054	0.035	0.034	0.039	0.036	0.202	0.119
3-74	0.078	0.070	0.052	0.043	0.040	0.057	0.192	0.121
3-75	0.074	0.042	0.042	0.050	0.046	0.030	0.190	0.121
3-76	0.129	0.112	0.114	0.094	0.079	0.079	0.251	0.172
3-77	0.132	0.103	0.111	0.115	0.085	0.071	0.252	0.157
3-78	0.125	0.110	0.102	0.082	0.088	0.067	0.256	0.164
3-79	0.148	0.128	0.108	0.090	0.089	0.082	0.263	0.165
3-80	0.134	0.109	0.099	0.102	0.094	0.076	0.281	0.184
3-81	0.124	0.103	0.090	0.089	0.087	0.073	0.274	0.182
3-82	0.129	0.119	0.097	0.108	0.085	0.068	0.254	0.165
3-83	0.136	0.124	0.106	0.104	0.083	0.081	0.272	0.177
3-84	0.121	0.124	0.102	0.099	0.078	0.079	0.265	0.187
3-85	0.142	0.116	0.117	0.096	0.090	0.072	0.279	0.171
3-86	0.092	0.078	0.085	0.075	0.052	0.060	0.228	0.134
3-87	0.109	0.103	0.084	0.088	0.076	0.062	0.215	0.150
3-88	0.095	0.085	0.072	0.070	0.060	0.056	0.213	0.152
3-89	0.103	0.088	0.080	0.060	0.061	0.053	0.236	0.141

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
3-68	0.085	0.055	0.049	0.043	0.043	0.043	0.045	0.166
3-69	0.086	0.073	0.064	0.062	0.040	0.028	0.029	0.184
3-70	0.076	0.075	0.068	0.052	0.045	0.041	0.027	0.177
3-71	0.088	0.064	0.048	0.043	0.038	0.041	0.034	0.173
3-72	0.091	0.064	0.064	0.046	0.056	0.028	0.022	0.180
3-73	0.099	0.076	0.065	0.049	0.034	0.053	0.030	0.174
3-74	0.088	0.068	0.069	0.069	0.034	0.033	0.035	0.166
3-75	0.078	0.074	0.064	0.043	0.051	0.041	0.015	0.168
3-76	0.159	0.123	0.119	0.109	0.097	0.099	0.087	0.235
3-77	0.146	0.111	0.127	0.111	0.084	0.082	0.064	0.225
3-78	0.150	0.100	0.124	0.099	0.082	0.077	0.067	0.215
3-79	0.166	0.120	0.136	0.105	0.094	0.093	0.079	0.209
3-80	0.172	0.121	0.113	0.110	0.105	0.083	0.077	0.222
3-81	0.159	0.133	0.114	0.110	0.093	0.086	0.066	0.211
3-82	0.151	0.113	0.124	0.121	0.094	0.099	0.075	0.201
3-83	0.179	0.129	0.130	0.104	0.085	0.082	0.074	0.241
3-84	0.163	0.106	0.120	0.093	0.088	0.080	0.073	0.220
3-85	0.178	0.132	0.130	0.116	0.079	0.089	0.069	0.222
3-86	0.105	0.087	0.096	0.088	0.067	0.080	0.052	0.203
3-87	0.124	0.106	0.089	0.092	0.076	0.070	0.065	0.207
3-88	0.124	0.097	0.090	0.089	0.065	0.072	0.060	0.221
3-89	0.123	0.103	0.084	0.082	0.079	0.086	0.054	0.201

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
3-68	0.107	0.077	0.067	0.053	0.032	0.041	0.032	0.169
3-69	0.097	0.066	0.056	0.044	0.044	0.042	0.015	0.180
3-70	0.110	0.081	0.060	0.052	0.039	0.060	0.033	0.183
3-71	0.109	0.080	0.065	0.036	0.026	0.039	0.024	0.163
3-72	0.101	0.093	0.055	0.054	0.033	0.030	0.026	0.183
3-73	0.105	0.088	0.062	0.048	0.029	0.029	0.032	0.167
3-74	0.098	0.084	0.073	0.056	0.050	0.047	0.050	0.160
3-75	0.109	0.085	0.067	0.048	0.056	0.039	0.034	0.166
3-76	0.175	0.132	0.128	0.121	0.095	0.086	0.088	0.224
3-77	0.158	0.133	0.112	0.119	0.080	0.083	0.070	0.181
3-78	0.157	0.107	0.100	0.111	0.071	0.079	0.065	0.194
3-79	0.161	0.141	0.125	0.105	0.086	0.093	0.056	0.181
3-80	0.171	0.130	0.114	0.103	0.086	0.094	0.072	0.185
3-81	0.188	0.149	0.122	0.090	0.087	0.086	0.057	0.192
3-82	0.155	0.122	0.123	0.114	0.103	0.088	0.075	0.208
3-83	0.174	0.137	0.124	0.102	0.086	0.094	0.071	0.183
3-84	0.161	0.122	0.123	0.109	0.092	0.081	0.066	0.194
3-85	0.187	0.129	0.129	0.117	0.093	0.093	0.073	0.197
3-86	0.124	0.101	0.091	0.083	0.053	0.064	0.032	0.198
3-87	0.132	0.116	0.085	0.083	0.076	0.057	0.042	0.199
3-88	0.141	0.102	0.094	0.077	0.082	0.061	0.056	0.179
3-89	0.142	0.112	0.105	0.112	0.073	0.079	0.058	0.190

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
3-68	0.092	0.059	0.055	0.045	0.036	0.046	0.195	0.118
3-69	0.096	0.083	0.058	0.070	0.049	0.038	0.193	0.119
3-70	0.110	0.076	0.071	0.061	0.060	0.035	0.203	0.102
3-71	0.107	0.078	0.051	0.046	0.030	0.034	0.192	0.094
3-72	0.109	0.078	0.056	0.043	0.038	0.038	0.201	0.103
3-73	0.103	0.067	0.049	0.043	0.037	0.025	0.205	0.109
3-74	0.128	0.068	0.057	0.061	0.048	0.033	0.204	0.109
3-75	0.112	0.072	0.057	0.059	0.037	0.024	0.207	0.121
3-76	0.154	0.110	0.112	0.116	0.081	0.101	0.223	0.159
3-77	0.147	0.093	0.091	0.085	0.077	0.071	0.210	0.148
3-78	0.138	0.101	0.095	0.079	0.083	0.060	0.191	0.128
3-79	0.163	0.117	0.093	0.088	0.083	0.060	0.203	0.162
3-80	0.145	0.118	0.106	0.101	0.077	0.066	0.198	0.142
3-81	0.155	0.114	0.094	0.091	0.077	0.055	0.225	0.144
3-82	0.145	0.121	0.103	0.100	0.103	0.079	0.207	0.137
3-83	0.125	0.098	0.101	0.100	0.069	0.062	0.200	0.158
3-84	0.153	0.109	0.095	0.100	0.088	0.076	0.191	0.130
3-85	0.150	0.119	0.088	0.077	0.071	0.066	0.205	0.146
3-86	0.129	0.106	0.083	0.066	0.063	0.053	0.196	0.139
3-87	0.124	0.096	0.086	0.086	0.068	0.054	0.207	0.144
3-88	0.133	0.097	0.078	0.076	0.051	0.037	0.176	0.134
3-89	0.119	0.105	0.101	0.067	0.073	0.059	0.219	0.134

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
3-68	0.070	0.051	0.041	0.031	0.167	0.099	0.065	0.049
3-69	0.081	0.049	0.029	0.030	0.182	0.085	0.066	0.040
3-70	0.080	0.066	0.052	0.035	0.186	0.105	0.074	0.043
3-71	0.065	0.038	0.026	0.032	0.167	0.067	0.086	0.039
3-72	0.075	0.046	0.047	0.030	0.177	0.091	0.063	0.059
3-73	0.069	0.048	0.039	0.033	0.167	0.080	0.076	0.053
3-74	0.072	0.059	0.053	0.044	0.166	0.095	0.072	0.058
3-75	0.084	0.047	0.034	0.028	0.163	0.095	0.078	0.050
3-76	0.113	0.082	0.080	0.075	0.194	0.134	0.113	0.083
3-77	0.124	0.087	0.079	0.068	0.178	0.115	0.119	0.085
3-78	0.099	0.081	0.092	0.046	0.167	0.105	0.090	0.084
3-79	0.111	0.084	0.095	0.048	0.191	0.124	0.099	0.086
3-80	0.119	0.085	0.067	0.050	0.173	0.100	0.088	0.065
3-81	0.113	0.099	0.090	0.071	0.186	0.119	0.118	0.084
3-82	0.113	0.092	0.087	0.084	0.195	0.135	0.111	0.099
3-83	0.119	0.094	0.074	0.055	0.178	0.109	0.093	0.074
3-84	0.113	0.071	0.090	0.050	0.173	0.110	0.097	0.078
3-85	0.101	0.061	0.070	0.065	0.172	0.126	0.084	0.078
3-86	0.106	0.073	0.079	0.042	0.183	0.118	0.098	0.075
3-87	0.105	0.088	0.073	0.055	0.177	0.115	0.095	0.078
3-88	0.071	0.068	0.062	0.043	0.183	0.107	0.090	0.065
3-89	0.118	0.083	0.071	0.063	0.169	0.114	0.098	0.061

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
3-68	0.039	0.149	0.079	0.079	0.049	0.232	0.099	0.051
3-69	0.028	0.185	0.100	0.070	0.037	0.225	0.097	0.053
3-70	0.050	0.159	0.094	0.083	0.047	0.198	0.097	0.065
3-71	0.047	0.157	0.083	0.059	0.045	0.213	0.089	0.055
3-72	0.042	0.169	0.088	0.059	0.046	0.207	0.096	0.053
3-73	0.028	0.171	0.107	0.064	0.049	0.213	0.100	0.056
3-74	0.035	0.177	0.108	0.057	0.048	0.228	0.111	0.059
3-75	0.029	0.152	0.102	0.054	0.043	0.226	0.085	0.057
3-76	0.076	0.190	0.118	0.095	0.069	0.231	0.121	0.082
3-77	0.068	0.191	0.123	0.092	0.075	0.221	0.123	0.074
3-78	0.058	0.178	0.097	0.104	0.063	0.211	0.112	0.057
3-79	0.061	0.189	0.107	0.100	0.064	0.208	0.105	0.064
3-80	0.058	0.187	0.121	0.088	0.066	0.208	0.118	0.063
3-81	0.069	0.181	0.125	0.099	0.054	0.197	0.121	0.056
3-82	0.072	0.178	0.123	0.112	0.068	0.222	0.130	0.082
3-83	0.052	0.177	0.097	0.088	0.070	0.215	0.103	0.080
3-84	0.058	0.175	0.107	0.099	0.065	0.209	0.121	0.068
3-85	0.076	0.173	0.101	0.088	0.071	0.214	0.113	0.067
3-86	0.050	0.198	0.126	0.088	0.051	0.225	0.111	0.059
3-87	0.050	0.181	0.119	0.090	0.042	0.210	0.099	0.072
3-88	0.064	0.170	0.113	0.084	0.054	0.206	0.107	0.058
3-89	0.048	0.177	0.099	0.077	0.060	0.213	0.104	0.058

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
3-68	0.184	0.076	0.081	5.43E-03	2.34E-02	1.81E-06	8.42E-08	1.18E-07
3-69	0.190	0.059	0.083	8.28E-03	2.35E-02	2.82E-05	9.20E-08	1.26E-07
3-70	0.189	0.076	0.093	2.23E-02	9.72E-02	1.35E-03	9.83E-08	1.40E-07
3-71	0.186	0.061	0.068	5.64E-03	1.85E-02	1.16E-05	1.19E-07	1.76E-07
3-72	0.182	0.046	0.071	4.54E-02	1.57E-01	1.06E-03	1.03E-07	1.50E-07
3-73	0.183	0.070	0.073	1.65E-02	5.82E-02	1.28E-04	1.04E-07	1.43E-07
3-74	0.176	0.064	0.081	4.44E-03	1.02E-02	8.32E-06	1.10E-07	1.61E-07
3-75	0.172	0.063	0.064	1.50E-02	4.80E-02	1.92E-03	9.68E-08	1.44E-07
3-76	0.172	0.081	0.085	8.25E-04	4.80E-03	8.08E-05	2.07E-08	2.82E-08
3-77	0.176	0.080	0.085	2.74E-03	7.14E-03	1.51E-04	2.29E-08	2.98E-08
3-78	0.183	0.065	0.080	1.49E-02	3.42E-02	2.17E-03	2.65E-08	3.37E-08
3-79	0.177	0.068	0.092	8.06E-03	2.06E-02	1.87E-03	3.68E-08	5.31E-08
3-80	0.163	0.077	0.084	7.42E-03	2.63E-02	2.82E-05	3.26E-08	4.55E-08
3-81	0.183	0.080	0.098	7.12E-03	2.64E-02	2.52E-05	3.64E-08	5.02E-08
3-82	0.189	0.080	0.070	4.17E-03	9.27E-03	1.43E-06	2.51E-08	3.11E-08
3-83	0.181	0.069	0.064	2.12E-03	8.99E-03	3.70E-05	3.47E-08	5.06E-08
3-84	0.173	0.081	0.083	7.79E-03	2.81E-02	3.93E-05	3.87E-08	5.83E-08
3-85	0.164	0.077	0.071	5.28E-03	2.44E-02	4.10E-05	3.80E-08	5.37E-08
3-86	0.167	0.079	0.094	7.33E-03	3.35E-02	7.81E-07	4.61E-08	6.71E-08
3-87	0.184	0.079	0.080	6.74E-02	1.69E-01	8.30E-03	6.47E-08	7.69E-08
3-88	0.162	0.069	0.085	3.43E-03	9.45E-03	1.22E-04	6.95E-08	9.63E-08
3-89	0.175	0.070	0.075	1.12E-02	5.26E-02	1.88E-06	7.94E-08	1.04E-07

Case No.	ck
	$\Delta_{\min,FFT}$
3-68	4.30E-08
3-69	5.12E-08
3-70	5.09E-08
3-71	4.33E-08
3-72	5.07E-08
3-73	4.75E-08
3-74	3.70E-08
3-75	4.79E-08
3-76	8.08E-09
3-77	8.97E-09
3-78	7.84E-09
3-79	9.89E-09
3-80	8.50E-09
3-81	1.07E-08
3-82	8.24E-09
3-83	8.56E-09
3-84	8.63E-09
3-85	8.37E-09
3-86	2.08E-08
3-87	2.87E-08
3-88	1.98E-08
3-89	2.29E-08

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V _{ref} [m/s]	Wind speed ratio [-]
3-90	None	120 cm (backwards)	30 cm triangles	10	20	9.48	0.74
3-91	None	120 cm (backwards)	30 cm triangles	10	15	9.39	0.74
3-92	None	120 cm (backwards)	30 cm triangles	10	10	9.42	0.74
3-93	None	120 cm (backwards)	30 cm triangles	15	15	9.43	0.74
3-94	None	120 cm (backwards)	30 cm triangles	15	20	9.32	0.73
3-95	None	120 cm (backwards)	30 cm triangles	20	20	9.37	0.74
3-96	Bars/patches	None	None	0	0	8.21	0.64
3-97	Bars/patches	None	None	5	0	8.31	0.65
3-98	Bars/patches	None	None	10	0	8.50	0.67
3-99	Bars/patches	None	None	15	0	8.79	0.69
3-100	Bars/patches	None	None	20	0	8.93	0.70
3-101	Bars/patches	None	None	20	5	8.96	0.70
3-102	Bars/patches	None	None	15	5	8.76	0.69
3-103	Bars/patches	None	None	10	5	8.55	0.67
3-104	Bars/patches	None	None	5	5	8.39	0.66
3-105	Bars/patches	None	None	0	5	8.27	0.65
3-106	Bars/patches	None	None	0	10	8.53	0.67
3-107	Bars/patches	None	None	5	10	8.57	0.67
3-108	Bars/patches	None	None	10	10	8.72	0.68
3-109	Bars/patches	None	None	15	10	8.86	0.70
3-110	Bars/patches	None	None	20	10	8.96	0.70
3-111	Bars/patches	None	None	20	15	8.96	0.70

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
3-90	0.41	3.93	-0.15	0.03	34.4%	4	5	A
3-91	0.35	2.57	-0.14	0.02	32.2%	4	5	A
3-92	0.30	1.73	-0.11	0.00	27.2%	4	4	A
3-93	0.35	2.57	-0.13	0.01	31.6%	4	5	A
3-94	0.42	4.08	-0.15	0.03	34.9%	4	5	A
3-95	0.43	4.27	-0.16	0.05	34.9%	4	5	A
3-96	-0.01	0.00	-0.33	2.45	6.8%	0	1	D
3-97	0.04	0.00	-0.47	4.85	7.1%	0	1	D
3-98	0.10	0.00	-0.51	4.81	8.8%	0	1	D
3-99	0.15	0.06	-0.42	2.98	10.3%	1	2	C
3-100	0.20	0.37	-0.37	2.20	12.9%	3	3	B
3-101	0.28	1.32	-0.47	3.61	16.8%	4	4	B
3-102	0.23	0.72	-0.53	4.58	14.2%	4	3	B
3-103	0.20	0.39	-0.62	6.13	12.8%	3	3	B
3-104	0.16	0.14	-0.66	6.76	11.5%	2	2	C
3-105	0.13	0.03	-0.61	6.22	11.2%	1	2	C
3-106	0.27	1.35	-0.57	5.11	16.0%	4	4	B
3-107	0.28	1.60	-0.57	5.01	16.4%	4	4	A
3-108	0.31	2.06	-0.56	4.90	17.4%	4	4	A
3-109	0.33	2.48	-0.50	3.90	18.7%	4	5	A
3-110	0.35	2.91	-0.47	3.45	20.1%	4	5	A
3-111	0.43	4.55	-0.40	2.32	23.2%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	Δ_α^{ISO}	Δ_{z0}^{ISO}	Δ_β^{ISO}
3-90	0.726	2.926	0.388	0.973	0.171	0.090	0.570	0.614
3-91	0.452	1.570	0.402	0.976	0.095	0.089	0.028	0.623
3-92	0.265	0.729	0.540	0.997	0.075	0.051	0.729	0.655
3-93	0.463	1.572	0.451	0.986	0.076	0.076	0.029	0.653
3-94	0.751	3.080	0.383	0.971	0.187	0.106	0.632	0.610
3-95	0.780	3.270	0.336	0.953	0.187	0.124	0.708	0.581
3-96	1.059	1.000	1.995	814.381	0.300	1.065	1.000	2.295
3-97	0.644	1.000	3.290	1616.821	0.264	0.608	1.000	3.719
3-98	0.081	0.041	3.644	1601.702	0.093	0.011	0.375	4.109
3-99	0.140	0.203	2.205	297.357	0.067	0.058	0.203	1.976
3-100	0.078	0.222	0.968	6.333	0.263	0.025	0.222	0.780
3-101	0.146	0.315	0.953	2.608	0.428	0.141	0.315	0.465
3-102	0.031	0.280	1.193	3.576	0.519	0.107	0.280	1.506
3-103	0.047	0.302	2.288	19.431	0.267	0.053	0.302	1.975
3-104	0.059	1.701	2.882	134.191	0.081	0.143	1.701	3.714
3-105	0.012	0.337	3.664	620.938	0.014	0.082	0.337	3.331
3-106	0.117	0.350	1.381	4.114	0.456	0.162	0.350	0.786
3-107	0.171	0.600	1.376	4.010	0.441	0.122	0.600	0.782
3-108	0.278	1.056	1.333	3.899	0.409	0.042	0.178	0.749
3-109	0.377	1.476	1.077	2.895	0.365	0.033	0.010	0.311
3-110	0.476	1.911	0.946	2.453	0.315	0.068	0.164	0.229
3-111	0.781	3.546	0.669	1.318	0.211	0.125	0.818	0.054

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
3-90	0.094	0.243	0.559	0.033	0.112	0.109	0.022	0.023
3-91	0.153	0.045	0.570	0.034	0.074	0.073	0.012	0.027
3-92	0.150	0.089	0.669	0.184	0.041	0.042	0.011	0.021
3-93	0.167	0.053	0.605	0.051	0.084	0.083	0.011	0.027
3-94	0.081	0.261	0.556	0.047	0.120	0.117	0.030	0.029
3-95	0.081	0.282	0.522	0.047	0.119	0.116	0.028	0.026
3-96	0.321	1.065	2.295	0.321	0.173	0.150	0.163	0.141
3-97	0.286	0.608	3.719	0.286	0.108	0.108	0.098	0.098
3-98	0.121	0.011	4.109	0.121	0.032	0.031	0.024	0.024
3-99	0.267	0.037	1.917	0.282	0.014	0.024	0.005	0.017
3-100	0.385	0.078	0.682	0.419	0.016	0.022	0.003	0.011
3-101	0.474	0.238	1.109	0.243	0.022	0.025	0.029	0.035
3-102	0.326	0.047	1.368	0.363	0.021	0.024	0.012	0.017
3-103	0.389	0.105	1.811	0.423	0.035	0.039	0.047	0.047
3-104	0.180	0.120	3.620	0.196	0.066	0.066	0.048	0.054
3-105	0.203	0.101	3.245	0.219	0.068	0.067	0.075	0.073
3-106	0.500	0.206	1.572	0.280	0.035	0.039	0.072	0.075
3-107	0.486	0.157	0.711	0.507	0.033	0.039	0.066	0.069
3-108	0.457	0.080	0.679	0.479	0.031	0.038	0.041	0.045
3-109	0.509	0.009	0.495	0.440	0.048	0.052	0.040	0.048
3-110	0.470	0.063	0.401	0.396	0.069	0.071	0.018	0.029
3-111	0.390	0.282	0.201	0.304	0.117	0.116	0.025	0.022

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
3-90	0.054	0.150	0.150	0.066	0.99	0.27	8.94	0.927
3-91	0.014	0.104	0.104	0.048	0.99	0.25	9.00	0.939
3-92	0.021	0.049	0.049	0.027	1.00	0.23	9.19	0.947
3-93	0.026	0.106	0.106	0.044	0.98	0.25	8.89	0.931
3-94	0.063	0.158	0.158	0.070	0.98	0.27	8.71	0.932
3-95	0.062	0.157	0.157	0.068	0.99	0.27	8.83	0.935
3-96	65535.000	0.083	0.084	0.049	1.04	0.04	8.80	0.011
3-97	0.098	0.075	0.072	0.052	1.04	0.03	8.64	0.395
3-98	0.024	0.069	0.053	0.043	1.03	0.04	8.71	0.943
3-99	0.004	0.049	0.040	0.045	1.01	0.05	8.79	0.976
3-100	0.011	0.076	0.077	0.100	0.99	0.07	8.77	0.963
3-101	0.038	0.097	0.097	0.136	1.00	0.08	8.82	0.976
3-102	0.013	0.148	0.149	0.157	1.02	0.06	8.82	0.980
3-103	0.056	0.102	0.102	0.117	1.05	0.05	8.90	0.941
3-104	0.050	0.147	0.095	0.070	1.07	0.04	8.95	0.814
3-105	0.077	0.123	0.077	0.051	1.07	0.04	8.89	0.688
3-106	0.033	0.123	0.124	0.151	1.06	0.06	8.89	0.942
3-107	0.078	0.112	0.113	0.149	1.06	0.06	8.93	0.945
3-108	0.050	0.089	0.090	0.142	1.04	0.07	8.92	0.962
3-109	0.020	0.060	0.062	0.129	1.02	0.08	8.83	0.975
3-110	0.010	0.036	0.038	0.117	1.01	0.09	8.75	0.972
3-111	0.059	0.033	0.035	0.094	0.99	0.12	8.52	0.965

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
3-90	0.919	0.053	0.851	0.836	0.717	0.401	0.341	0.042
3-91	0.933	0.043	0.881	0.869	0.570	0.438	0.382	0.036
3-92	0.942	0.037	0.901	0.891	0.478	0.447	0.392	0.023
3-93	0.924	0.046	0.868	0.855	0.597	0.472	0.419	0.030
3-94	0.925	0.051	0.857	0.842	0.692	0.407	0.347	0.043
3-95	0.928	0.051	0.860	0.845	0.701	0.425	0.367	0.044
3-96	-0.088	0.047	-0.282	-0.282	0.422	0.840	0.824	0.006
3-97	0.335	0.035	0.407	0.407	0.272	0.924	0.916	0.005
3-98	0.938	0.016	0.952	0.948	0.127	0.945	0.940	0.006
3-99	0.973	0.014	0.964	0.960	0.153	0.828	0.810	0.012
3-100	0.960	0.023	0.937	0.931	0.265	0.736	0.710	0.018
3-101	0.974	0.023	0.949	0.943	0.304	0.762	0.738	0.026
3-102	0.978	0.019	0.969	0.966	0.208	0.800	0.780	0.021
3-103	0.936	0.030	0.952	0.947	0.235	0.837	0.821	0.019
3-104	0.795	0.050	0.842	0.826	0.388	0.874	0.861	0.015
3-105	0.657	0.059	0.719	0.691	0.465	0.913	0.904	0.011
3-106	0.937	0.038	0.942	0.937	0.327	0.747	0.721	0.030
3-107	0.939	0.039	0.944	0.938	0.336	0.715	0.687	0.034
3-108	0.958	0.033	0.949	0.944	0.338	0.722	0.695	0.035
3-109	0.972	0.028	0.947	0.942	0.355	0.695	0.664	0.037
3-110	0.969	0.030	0.931	0.924	0.422	0.702	0.672	0.037
3-111	0.962	0.037	0.906	0.896	0.549	0.608	0.569	0.046

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
3-90	0.361	0.297	0.044	4.91	4.90	5.23	5.49	6.21
3-91	0.398	0.338	0.037	5.27	5.28	5.66	5.99	6.69
3-92	0.416	0.358	0.023	5.62	5.73	6.13	6.41	7.08
3-93	0.434	0.378	0.031	5.24	5.26	5.63	5.88	6.52
3-94	0.366	0.303	0.044	4.74	4.70	5.06	5.32	6.09
3-95	0.382	0.320	0.045	4.76	4.67	5.04	5.36	6.16
3-96	0.900	0.890	0.004	7.97	8.71	9.06	9.08	9.03
3-97	0.955	0.950	0.004	7.44	8.02	8.42	8.56	8.72
3-98	0.871	0.858	0.009	6.92	7.29	7.63	7.83	8.19
3-99	0.739	0.713	0.014	6.64	6.87	7.18	7.36	7.79
3-100	0.649	0.614	0.020	6.12	6.31	6.65	6.85	7.36
3-101	0.653	0.618	0.031	5.40	5.61	6.11	6.43	7.07
3-102	0.685	0.654	0.027	5.65	5.92	6.45	6.80	7.42
3-103	0.715	0.687	0.026	5.79	6.16	6.79	7.21	7.85
3-104	0.766	0.743	0.021	6.00	6.48	7.22	7.72	8.41
3-105	0.830	0.813	0.015	6.23	6.76	7.54	8.07	8.69
3-106	0.620	0.582	0.037	5.24	5.45	6.09	6.56	7.37
3-107	0.588	0.547	0.041	5.14	5.34	6.01	6.52	7.36
3-108	0.596	0.556	0.042	5.03	5.20	5.82	6.29	7.14
3-109	0.577	0.535	0.043	4.91	5.05	5.66	6.08	6.87
3-110	0.590	0.549	0.043	4.80	4.92	5.48	5.86	6.61
3-111	0.508	0.459	0.052	4.33	4.35	4.90	5.26	6.05

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
3-90	6.77	7.29	7.83	8.53	8.95	9.62	9.48	30.4%
3-91	7.13	7.58	7.99	8.58	8.98	9.51	9.39	28.5%
3-92	7.55	7.92	8.30	8.78	9.14	9.64	9.42	24.8%
3-93	7.01	7.44	7.88	8.45	8.86	9.41	9.43	28.7%
3-94	6.60	7.09	7.60	8.24	8.68	9.33	9.32	30.7%
3-95	6.69	7.19	7.70	8.38	8.81	9.44	9.37	30.7%
3-96	8.90	8.76	8.62	8.47	8.33	8.25	8.21	8.9%
3-97	8.69	8.63	8.55	8.47	8.36	8.33	8.31	9.4%
3-98	8.35	8.44	8.49	8.55	8.50	8.53	8.50	10.6%
3-99	8.02	8.22	8.41	8.61	8.67	8.78	8.79	11.3%
3-100	7.66	7.92	8.20	8.51	8.66	8.89	8.93	13.5%
3-101	7.46	7.80	8.13	8.48	8.64	8.90	8.96	17.8%
3-102	7.75	8.02	8.29	8.53	8.61	8.76	8.76	15.7%
3-103	8.19	8.40	8.52	8.60	8.56	8.61	8.55	15.1%
3-104	8.67	8.72	8.67	8.59	8.48	8.47	8.39	14.3%
3-105	8.84	8.80	8.67	8.54	8.39	8.35	8.27	13.9%
3-106	7.88	8.24	8.47	8.62	8.58	8.61	8.53	17.3%
3-107	7.85	8.22	8.50	8.66	8.63	8.66	8.57	17.5%
3-108	7.64	8.02	8.37	8.63	8.67	8.78	8.72	18.5%
3-109	7.34	7.71	8.12	8.48	8.64	8.87	8.86	19.0%
3-110	7.06	7.49	7.92	8.35	8.60	8.93	8.96	20.5%
3-111	6.57	7.04	7.53	8.07	8.40	8.82	8.96	21.8%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
3-90	35.1%	36.2%	37.9%	33.7%	33.1%	30.8%	29.5%	26.7%
3-91	33.6%	34.2%	34.7%	31.0%	30.3%	28.0%	27.6%	25.2%
3-92	27.8%	28.7%	29.3%	26.0%	25.7%	24.2%	23.9%	22.5%
3-93	32.4%	33.3%	33.9%	30.1%	29.6%	27.9%	27.4%	25.5%
3-94	35.8%	37.0%	38.7%	33.9%	33.1%	30.7%	29.4%	27.3%
3-95	35.6%	38.0%	38.7%	33.7%	33.0%	29.3%	28.7%	25.9%
3-96	6.4%	5.0%	4.8%	4.9%	5.1%	4.9%	4.9%	4.6%
3-97	7.4%	5.7%	4.7%	3.9%	4.1%	4.0%	4.2%	4.0%
3-98	9.3%	8.2%	7.1%	5.9%	5.4%	4.6%	4.3%	3.8%
3-99	10.6%	9.9%	9.4%	8.1%	7.8%	6.9%	6.2%	5.1%
3-100	13.2%	12.8%	12.5%	10.6%	10.4%	9.3%	8.6%	7.3%
3-101	18.6%	17.1%	16.1%	13.3%	11.8%	10.1%	9.2%	7.6%
3-102	15.8%	14.4%	13.0%	10.3%	9.5%	7.9%	6.8%	5.5%
3-103	14.8%	13.2%	11.2%	8.5%	7.1%	5.2%	4.4%	3.8%
3-104	13.3%	11.6%	9.4%	6.3%	4.8%	3.9%	4.1%	3.8%
3-105	12.7%	10.8%	8.5%	5.7%	5.0%	4.7%	5.0%	4.7%
3-106	18.9%	17.2%	15.2%	11.6%	10.0%	7.8%	6.4%	4.8%
3-107	19.2%	18.1%	16.2%	12.3%	10.6%	8.2%	6.5%	4.5%
3-108	20.2%	18.8%	17.0%	13.0%	11.2%	9.1%	7.4%	5.4%
3-109	21.5%	20.2%	18.2%	14.4%	13.2%	11.2%	9.5%	7.4%
3-110	22.9%	20.9%	20.3%	16.0%	14.5%	12.2%	10.8%	9.0%
3-111	25.8%	25.3%	24.5%	20.0%	18.0%	15.5%	13.8%	11.5%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
3-90	24.7%	23.0%	22.3%	92.1	157.4	178.6	207.1	274.3
3-91	23.3%	22.0%	22.4%	105.0	114.5	116.0	124.6	152.5
3-92	21.2%	20.7%	21.3%	98.1	115.9	125.8	137.6	277.3
3-93	24.0%	22.6%	22.6%	84.0	97.9	104.6	122.7	159.2
3-94	25.0%	23.0%	23.3%	71.1	79.4	94.5	97.2	119.8
3-95	24.5%	23.1%	23.3%	78.2	79.7	88.2	89.3	111.0
3-96	4.2%	4.1%	4.3%	52.6	59.0	51.6	59.7	104.9
3-97	3.8%	3.8%	4.0%	58.0	71.4	59.6	54.0	55.0
3-98	3.5%	3.6%	3.9%	81.4	72.3	65.8	63.8	64.5
3-99	4.3%	3.9%	3.9%	69.0	63.2	57.4	59.0	64.5
3-100	6.1%	4.9%	4.3%	100.9	101.3	90.3	71.6	76.2
3-101	6.4%	5.1%	4.5%	75.3	96.1	70.4	97.0	76.0
3-102	4.4%	3.8%	3.9%	58.0	60.3	65.1	61.6	68.8
3-103	3.5%	3.5%	3.8%	51.3	54.8	54.8	57.7	63.6
3-104	3.7%	3.7%	4.0%	45.3	44.3	44.4	49.0	57.0
3-105	4.4%	4.1%	4.1%	39.2	41.1	42.3	49.2	53.8
3-106	4.1%	3.9%	4.0%	44.5	44.7	45.3	46.3	54.6
3-107	3.9%	3.7%	3.9%	45.2	47.4	47.6	51.9	61.2
3-108	4.3%	3.8%	3.8%	46.1	50.1	52.1	55.5	61.0
3-109	5.7%	4.4%	4.2%	64.7	59.7	72.2	72.3	85.2
3-110	7.1%	5.5%	5.0%	55.5	63.0	66.1	68.1	79.0
3-111	9.5%	7.3%	6.1%	48.8	53.2	60.4	63.8	79.3

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
3-90	279.8	325.8	352.8	370.5	392.8	384.6	387.0	53.2
3-91	184.6	215.1	241.5	268.2	303.0	317.3	309.6	52.8
3-92	240.7	277.4	204.1	212.0	235.6	231.1	189.1	55.4
3-93	159.8	187.0	196.9	229.3	254.1	293.5	333.5	49.1
3-94	126.6	151.1	164.7	276.3	327.0	351.7	415.8	48.6
3-95	142.8	165.6	186.9	206.8	233.7	236.0	228.9	53.4
3-96	63.4	68.1	62.1	65.4	62.0	55.0	49.9	22.8
3-97	53.3	63.3	54.4	52.6	55.6	50.8	48.3	29.9
3-98	59.0	61.1	55.3	53.9	54.8	50.6	49.0	34.9
3-99	61.2	68.1	62.8	59.5	60.6	54.3	43.4	40.4
3-100	74.3	75.4	76.9	81.0	87.4	76.3	46.4	41.4
3-101	69.8	73.5	71.9	73.4	73.9	66.2	50.6	38.6
3-102	64.4	72.5	70.3	63.9	64.5	54.2	42.8	33.8
3-103	60.1	60.5	51.8	54.9	54.8	51.2	44.7	32.7
3-104	50.6	54.9	52.7	53.3	56.2	51.9	43.0	28.8
3-105	53.7	66.8	62.9	62.9	61.9	56.0	46.9	29.4
3-106	54.4	59.5	53.4	54.3	57.2	54.1	45.4	34.3
3-107	63.8	74.0	62.8	52.2	53.5	51.1	47.1	32.9
3-108	56.1	65.9	59.0	61.9	58.6	54.5	46.1	37.0
3-109	70.0	74.4	72.8	71.2	78.8	66.7	50.3	35.0
3-110	75.9	80.3	73.7	73.5	78.0	66.9	60.5	38.1
3-111	79.8	87.0	89.0	92.1	90.6	78.0	63.4	38.9

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
3-90	49.8	0.207	0.203	0.169	0.117	0.130	0.092	0.095
3-91	49.7	0.213	0.192	0.163	0.115	0.118	0.094	0.084
3-92	47.3	0.212	0.176	0.152	0.093	0.128	0.098	0.112
3-93	50.9	0.213	0.186	0.143	0.125	0.123	0.093	0.102
3-94	46.2	0.232	0.231	0.171	0.128	0.126	0.107	0.112
3-95	46.1	0.239	0.217	0.181	0.154	0.157	0.103	0.107
3-96	34.7	0.155	0.123	0.112	0.088	0.128	0.089	0.118
3-97	36.6	0.167	0.140	0.145	0.122	0.147	0.111	0.134
3-98	39.6	0.183	0.181	0.160	0.118	0.163	0.134	0.179
3-99	27.9	0.189	0.184	0.177	0.140	0.160	0.133	0.157
3-100	22.0	0.187	0.196	0.180	0.136	0.164	0.114	0.142
3-101	21.4	0.202	0.192	0.162	0.127	0.149	0.103	0.134
3-102	20.3	0.187	0.177	0.163	0.131	0.150	0.128	0.163
3-103	29.4	0.182	0.164	0.138	0.110	0.152	0.131	0.144
3-104	33.1	0.167	0.144	0.123	0.108	0.142	0.122	0.154
3-105	36.0	0.162	0.131	0.121	0.114	0.142	0.101	0.154
3-106	29.5	0.194	0.166	0.141	0.105	0.127	0.103	0.137
3-107	26.5	0.193	0.168	0.133	0.110	0.129	0.105	0.135
3-108	26.8	0.207	0.177	0.156	0.131	0.145	0.127	0.151
3-109	19.3	0.205	0.178	0.160	0.122	0.143	0.106	0.151
3-110	25.1	0.211	0.210	0.174	0.141	0.160	0.110	0.139
3-111	23.0	0.235	0.219	0.193	0.141	0.170	0.116	0.138

Case No.								
	$f_{z,1-9}^*$ [Hz]	$f_{z,1-10}^*$ [Hz]	$f_{z,1-11}^*$ [Hz]	$f_{z,1-12}^*$ [Hz]	$f_{z,2-3}^*$ [Hz]	$f_{z,2-4}^*$ [Hz]	$f_{z,2-5}^*$ [Hz]	$f_{z,2-6}^*$ [Hz]
3-90	0.093	0.073	0.071	0.044	0.216	0.169	0.147	0.117
3-91	0.085	0.080	0.081	0.061	0.210	0.166	0.129	0.110
3-92	0.093	0.070	0.075	0.067	0.201	0.161	0.130	0.106
3-93	0.086	0.073	0.074	0.083	0.205	0.154	0.134	0.104
3-94	0.081	0.074	0.075	0.068	0.219	0.185	0.142	0.113
3-95	0.096	0.073	0.078	0.071	0.229	0.171	0.149	0.122
3-96	0.110	0.091	0.118	0.123	0.173	0.134	0.125	0.123
3-97	0.140	0.123	0.133	0.161	0.198	0.144	0.147	0.123
3-98	0.172	0.130	0.154	0.159	0.227	0.173	0.151	0.146
3-99	0.160	0.138	0.160	0.164	0.206	0.179	0.161	0.141
3-100	0.153	0.107	0.148	0.146	0.215	0.165	0.161	0.130
3-101	0.133	0.118	0.140	0.149	0.205	0.151	0.160	0.126
3-102	0.145	0.132	0.138	0.158	0.209	0.143	0.140	0.094
3-103	0.155	0.126	0.163	0.174	0.181	0.137	0.146	0.126
3-104	0.143	0.126	0.136	0.153	0.171	0.116	0.126	0.108
3-105	0.142	0.115	0.137	0.133	0.176	0.115	0.100	0.100
3-106	0.161	0.128	0.175	0.163	0.180	0.142	0.123	0.096
3-107	0.142	0.125	0.139	0.155	0.194	0.133	0.120	0.118
3-108	0.133	0.127	0.164	0.160	0.197	0.159	0.127	0.108
3-109	0.158	0.120	0.162	0.146	0.191	0.150	0.142	0.116
3-110	0.144	0.110	0.137	0.153	0.217	0.168	0.151	0.114
3-111	0.135	0.130	0.156	0.151	0.223	0.182	0.176	0.130

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
3-90	0.092	0.095	0.074	0.075	0.067	0.053	0.233	0.168
3-91	0.110	0.085	0.072	0.074	0.078	0.059	0.212	0.152
3-92	0.105	0.086	0.082	0.070	0.067	0.064	0.229	0.143
3-93	0.107	0.090	0.087	0.071	0.066	0.064	0.226	0.149
3-94	0.122	0.089	0.078	0.086	0.069	0.067	0.248	0.141
3-95	0.117	0.094	0.066	0.075	0.065	0.060	0.245	0.140
3-96	0.126	0.115	0.110	0.120	0.131	0.152	0.247	0.145
3-97	0.137	0.124	0.128	0.126	0.129	0.154	0.254	0.183
3-98	0.162	0.135	0.158	0.142	0.155	0.168	0.271	0.190
3-99	0.157	0.136	0.137	0.126	0.139	0.161	0.264	0.165
3-100	0.132	0.107	0.129	0.129	0.146	0.136	0.241	0.180
3-101	0.124	0.108	0.116	0.115	0.132	0.138	0.217	0.148
3-102	0.122	0.113	0.128	0.137	0.134	0.149	0.217	0.151
3-103	0.139	0.121	0.135	0.141	0.141	0.155	0.213	0.132
3-104	0.116	0.123	0.110	0.132	0.138	0.135	0.188	0.116
3-105	0.121	0.102	0.115	0.113	0.125	0.133	0.195	0.109
3-106	0.098	0.106	0.118	0.124	0.144	0.151	0.194	0.130
3-107	0.114	0.107	0.132	0.127	0.128	0.163	0.187	0.127
3-108	0.102	0.121	0.142	0.139	0.157	0.155	0.204	0.151
3-109	0.125	0.122	0.126	0.127	0.136	0.156	0.223	0.151
3-110	0.118	0.107	0.111	0.118	0.138	0.138	0.227	0.157
3-111	0.126	0.113	0.127	0.133	0.131	0.134	0.247	0.171

Case No.								
	$f^*_{z,3-6}$ [Hz]	$f^*_{z,3-7}$ [Hz]	$f^*_{z,3-8}$ [Hz]	$f^*_{z,3-9}$ [Hz]	$f^*_{z,3-10}$ [Hz]	$f^*_{z,3-11}$ [Hz]	$f^*_{z,3-12}$ [Hz]	$f^*_{z,4-5}$ [Hz]
3-90	0.137	0.100	0.092	0.077	0.063	0.066	0.054	0.222
3-91	0.121	0.113	0.090	0.077	0.065	0.073	0.055	0.215
3-92	0.117	0.081	0.085	0.083	0.086	0.064	0.057	0.221
3-93	0.136	0.089	0.097	0.082	0.064	0.061	0.047	0.213
3-94	0.134	0.109	0.090	0.082	0.078	0.082	0.064	0.207
3-95	0.148	0.099	0.108	0.079	0.069	0.074	0.059	0.198
3-96	0.150	0.110	0.136	0.144	0.120	0.145	0.154	0.255
3-97	0.173	0.157	0.168	0.152	0.131	0.169	0.175	0.252
3-98	0.186	0.159	0.177	0.170	0.143	0.162	0.172	0.248
3-99	0.153	0.146	0.161	0.156	0.134	0.154	0.150	0.224
3-100	0.168	0.129	0.141	0.132	0.121	0.141	0.135	0.231
3-101	0.152	0.131	0.126	0.125	0.101	0.122	0.128	0.200
3-102	0.153	0.103	0.141	0.129	0.117	0.144	0.147	0.208
3-103	0.143	0.116	0.132	0.127	0.116	0.134	0.136	0.211
3-104	0.119	0.109	0.122	0.126	0.131	0.124	0.130	0.201
3-105	0.112	0.090	0.115	0.113	0.099	0.124	0.114	0.178
3-106	0.117	0.078	0.110	0.124	0.111	0.130	0.125	0.180
3-107	0.129	0.091	0.119	0.120	0.097	0.130	0.140	0.173
3-108	0.130	0.111	0.121	0.124	0.104	0.134	0.138	0.196
3-109	0.134	0.107	0.122	0.126	0.115	0.131	0.138	0.178
3-110	0.147	0.111	0.122	0.117	0.102	0.120	0.126	0.193
3-111	0.150	0.121	0.134	0.131	0.124	0.126	0.133	0.199

Case No.	Frequency scales from co-coherence							
	$f^*_{z,4-6}$ [Hz]	$f^*_{z,4-7}$ [Hz]	$f^*_{z,4-8}$ [Hz]	$f^*_{z,4-9}$ [Hz]	$f^*_{z,4-10}$ [Hz]	$f^*_{z,4-11}$ [Hz]	$f^*_{z,4-12}$ [Hz]	$f^*_{z,5-6}$ [Hz]
3-90	0.160	0.099	0.080	0.080	0.073	0.064	0.063	0.173
3-91	0.140	0.116	0.107	0.084	0.063	0.074	0.057	0.188
3-92	0.131	0.096	0.095	0.092	0.081	0.075	0.049	0.176
3-93	0.152	0.110	0.091	0.077	0.072	0.068	0.046	0.178
3-94	0.132	0.122	0.097	0.083	0.087	0.074	0.067	0.191
3-95	0.149	0.111	0.089	0.091	0.066	0.074	0.058	0.197
3-96	0.198	0.160	0.176	0.154	0.136	0.164	0.172	0.268
3-97	0.210	0.175	0.187	0.186	0.161	0.177	0.169	0.252
3-98	0.205	0.167	0.187	0.182	0.133	0.175	0.178	0.256
3-99	0.188	0.165	0.160	0.154	0.149	0.169	0.171	0.234
3-100	0.179	0.138	0.155	0.138	0.124	0.146	0.140	0.217
3-101	0.156	0.121	0.116	0.117	0.107	0.113	0.130	0.197
3-102	0.164	0.131	0.146	0.145	0.131	0.130	0.148	0.207
3-103	0.158	0.125	0.151	0.134	0.130	0.138	0.137	0.199
3-104	0.127	0.100	0.124	0.124	0.114	0.115	0.133	0.206
3-105	0.125	0.103	0.128	0.132	0.117	0.125	0.135	0.197
3-106	0.128	0.099	0.125	0.120	0.106	0.130	0.141	0.177
3-107	0.129	0.116	0.125	0.114	0.104	0.125	0.121	0.166
3-108	0.136	0.113	0.144	0.107	0.108	0.133	0.138	0.179
3-109	0.132	0.118	0.124	0.117	0.104	0.120	0.122	0.187
3-110	0.149	0.117	0.117	0.111	0.098	0.113	0.128	0.191
3-111	0.152	0.129	0.109	0.109	0.115	0.129	0.125	0.193

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
3-90	0.131	0.093	0.059	0.087	0.050	0.049	0.207	0.136
3-91	0.127	0.099	0.084	0.072	0.074	0.034	0.198	0.123
3-92	0.140	0.104	0.096	0.079	0.070	0.045	0.204	0.137
3-93	0.141	0.083	0.083	0.083	0.073	0.049	0.214	0.144
3-94	0.147	0.094	0.084	0.085	0.047	0.066	0.217	0.129
3-95	0.137	0.096	0.083	0.078	0.071	0.051	0.207	0.143
3-96	0.194	0.162	0.159	0.156	0.161	0.163	0.263	0.239
3-97	0.213	0.172	0.172	0.164	0.162	0.203	0.290	0.248
3-98	0.212	0.180	0.171	0.165	0.159	0.187	0.273	0.246
3-99	0.178	0.147	0.146	0.148	0.147	0.147	0.270	0.202
3-100	0.181	0.138	0.143	0.137	0.123	0.146	0.248	0.179
3-101	0.153	0.114	0.126	0.130	0.134	0.120	0.206	0.163
3-102	0.169	0.129	0.137	0.131	0.137	0.143	0.227	0.183
3-103	0.157	0.128	0.133	0.144	0.141	0.152	0.251	0.190
3-104	0.146	0.138	0.138	0.151	0.138	0.161	0.236	0.197
3-105	0.141	0.131	0.120	0.135	0.134	0.150	0.253	0.210
3-106	0.128	0.125	0.124	0.108	0.120	0.145	0.194	0.157
3-107	0.123	0.106	0.099	0.119	0.114	0.134	0.202	0.148
3-108	0.143	0.122	0.113	0.100	0.128	0.131	0.212	0.164
3-109	0.131	0.126	0.110	0.123	0.105	0.118	0.208	0.142
3-110	0.145	0.109	0.116	0.104	0.125	0.119	0.198	0.140
3-111	0.145	0.105	0.107	0.109	0.128	0.109	0.194	0.147

Case No.								
	$f_{z,6-9}^*$ [Hz]	$f_{z,6-10}^*$ [Hz]	$f_{z,6-11}^*$ [Hz]	$f_{z,6-12}^*$ [Hz]	$f_{z,7-8}^*$ [Hz]	$f_{z,7-9}^*$ [Hz]	$f_{z,7-10}^*$ [Hz]	$f_{z,7-11}^*$ [Hz]
3-90	0.085	0.073	0.065	0.046	0.157	0.094	0.088	0.069
3-91	0.095	0.074	0.073	0.049	0.193	0.114	0.087	0.068
3-92	0.105	0.062	0.054	0.048	0.174	0.113	0.095	0.062
3-93	0.092	0.081	0.078	0.054	0.185	0.121	0.101	0.072
3-94	0.098	0.078	0.072	0.052	0.171	0.104	0.095	0.084
3-95	0.090	0.069	0.063	0.069	0.193	0.104	0.086	0.051
3-96	0.198	0.151	0.181	0.160	0.257	0.179	0.178	0.163
3-97	0.206	0.164	0.191	0.196	0.262	0.200	0.185	0.175
3-98	0.208	0.170	0.184	0.178	0.273	0.200	0.182	0.182
3-99	0.176	0.147	0.158	0.161	0.249	0.172	0.162	0.146
3-100	0.159	0.120	0.134	0.133	0.225	0.172	0.139	0.118
3-101	0.122	0.099	0.120	0.112	0.191	0.142	0.133	0.117
3-102	0.160	0.113	0.139	0.135	0.215	0.170	0.149	0.132
3-103	0.173	0.121	0.158	0.153	0.237	0.171	0.153	0.157
3-104	0.174	0.133	0.159	0.157	0.246	0.203	0.193	0.163
3-105	0.187	0.139	0.171	0.177	0.263	0.198	0.183	0.169
3-106	0.121	0.083	0.128	0.137	0.202	0.133	0.111	0.115
3-107	0.120	0.088	0.117	0.130	0.191	0.139	0.119	0.116
3-108	0.128	0.095	0.118	0.128	0.202	0.125	0.125	0.118
3-109	0.121	0.102	0.116	0.123	0.182	0.138	0.135	0.122
3-110	0.110	0.090	0.113	0.096	0.191	0.136	0.116	0.109
3-111	0.124	0.112	0.117	0.097	0.162	0.123	0.123	0.108

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
3-90	0.066	0.167	0.093	0.066	0.057	0.225	0.113	0.062
3-91	0.060	0.187	0.099	0.083	0.053	0.212	0.111	0.064
3-92	0.070	0.178	0.105	0.077	0.055	0.222	0.114	0.058
3-93	0.048	0.168	0.105	0.090	0.067	0.221	0.118	0.059
3-94	0.060	0.173	0.112	0.076	0.064	0.206	0.102	0.054
3-95	0.043	0.170	0.109	0.075	0.054	0.212	0.106	0.056
3-96	0.181	0.278	0.177	0.197	0.194	0.276	0.218	0.195
3-97	0.195	0.287	0.188	0.199	0.194	0.288	0.239	0.211
3-98	0.197	0.305	0.204	0.207	0.204	0.303	0.242	0.213
3-99	0.158	0.241	0.167	0.170	0.158	0.283	0.198	0.182
3-100	0.124	0.241	0.145	0.151	0.126	0.259	0.184	0.138
3-101	0.127	0.193	0.148	0.140	0.116	0.242	0.182	0.131
3-102	0.146	0.246	0.154	0.163	0.137	0.284	0.191	0.150
3-103	0.162	0.270	0.182	0.197	0.177	0.301	0.249	0.200
3-104	0.181	0.301	0.213	0.196	0.185	0.310	0.234	0.214
3-105	0.176	0.280	0.195	0.200	0.187	0.309	0.243	0.222
3-106	0.138	0.225	0.137	0.161	0.160	0.257	0.207	0.196
3-107	0.135	0.240	0.122	0.144	0.158	0.261	0.212	0.200
3-108	0.141	0.213	0.138	0.151	0.148	0.256	0.184	0.172
3-109	0.117	0.216	0.149	0.132	0.119	0.252	0.180	0.130
3-110	0.117	0.196	0.133	0.123	0.117	0.241	0.172	0.128
3-111	0.095	0.189	0.126	0.120	0.093	0.235	0.139	0.110

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
3-90	0.175	0.073	0.086	4.40E-03	2.49E-02	1.85E-05	8.82E-08	1.27E-07
3-91	0.175	0.076	0.088	3.13E-02	1.01E-01	1.47E-05	7.84E-08	1.05E-07
3-92	0.179	0.067	0.083	3.97E-03	2.10E-02	2.83E-07	5.49E-08	7.17E-08
3-93	0.179	0.062	0.082	2.79E-02	8.02E-02	6.74E-04	7.38E-08	9.68E-08
3-94	0.174	0.078	0.078	9.13E-03	5.39E-02	8.78E-05	8.24E-08	1.14E-07
3-95	0.171	0.078	0.076	4.85E-02	1.30E-01	2.70E-03	8.13E-08	1.06E-07
3-96	0.279	0.206	0.234	2.17E-05	7.69E-05	3.35E-07	2.37E-10	1.13E-09
3-97	0.282	0.223	0.233	2.26E-05	1.01E-04	3.51E-07	2.05E-10	1.08E-09
3-98	0.278	0.213	0.233	8.94E-06	4.12E-05	2.00E-10	3.46E-10	1.29E-09
3-99	0.258	0.180	0.211	8.07E-05	4.91E-04	1.53E-08	6.12E-10	1.41E-09
3-100	0.241	0.146	0.158	1.68E-04	9.89E-04	1.11E-07	1.33E-09	2.36E-09
3-101	0.250	0.140	0.160	5.83E-05	2.69E-04	5.97E-07	2.52E-09	5.35E-09
3-102	0.244	0.176	0.196	2.92E-04	1.28E-03	1.27E-08	1.38E-09	3.38E-09
3-103	0.283	0.211	0.238	3.23E-05	2.87E-04	1.63E-08	1.02E-09	3.09E-09
3-104	0.282	0.217	0.231	4.70E-05	2.82E-04	6.12E-08	7.59E-10	2.48E-09
3-105	0.282	0.199	0.240	4.36E-05	1.71E-04	8.75E-07	7.45E-10	2.51E-09
3-106	0.250	0.191	0.218	1.58E-04	6.77E-04	2.91E-08	1.95E-09	5.31E-09
3-107	0.259	0.214	0.229	3.15E-04	1.24E-03	3.46E-07	2.18E-09	6.18E-09
3-108	0.252	0.185	0.224	5.22E-05	2.61E-04	3.58E-07	2.41E-09	6.40E-09
3-109	0.234	0.165	0.177	1.92E-04	6.89E-04	5.12E-10	3.10E-09	7.60E-09
3-110	0.219	0.123	0.148	1.11E-04	3.05E-04	2.09E-06	3.84E-09	8.80E-09
3-111	0.215	0.120	0.127	4.77E-04	1.50E-03	5.77E-05	5.77E-09	1.23E-08

Case No.	ck
	$\Delta_{\min,FFT}$
3-90	2.20E-08
3-91	2.25E-08
3-92	1.68E-08
3-93	2.28E-08
3-94	1.98E-08
3-95	2.02E-08
3-96	5.79E-11
3-97	4.33E-11
3-98	3.65E-11
3-99	5.94E-11
3-100	1.00E-10
3-101	1.19E-10
3-102	5.54E-11
3-103	3.57E-11
3-104	4.13E-11
3-105	6.15E-11
3-106	5.90E-11
3-107	4.51E-11
3-108	5.44E-11
3-109	8.30E-11
3-110	1.80E-10
3-111	4.09E-10

Case No.	Wind tunnel setup					Wind speed	
	Turbulizing net	Spires	Barrier	Blocks 1 (inlet)	Blocks 2-3	V_{ref} [m/s]	Wind speed ratio [-]
3-112	Bars/patches	None	None	15	15	8.90	0.70
3-113	Bars/patches	None	None	10	15	8.87	0.70
3-114	Bars/patches	None	None	5	15	8.83	0.69
3-115	Bars/patches	None	None	0	15	8.76	0.69
3-116	Bars/patches	None	None	0	20	8.76	0.69
3-117	Bars/patches	None	None	5	20	8.89	0.70
3-118	Bars/patches	None	None	10	20	8.91	0.70
3-119	Bars/patches	None	None	15	20	8.89	0.70
3-120	Bars/patches	None	None	20	20	8.88	0.70

Case No.	parameters		Turbulence intensity parameters			Assigned category		
	α exponent [-]	z_0 [m]	β exponent [-]	z_0^T [m]	$I_{v,30}$ [-]	PN-EN 1991-1-4	ISO 4354	ASCE/SEI 7
3-112	0.41	4.34	-0.43	2.80	21.5%	4	5	A
3-113	0.40	3.99	-0.48	3.51	21.1%	4	5	A
3-114	0.39	4.02	-0.50	3.77	19.9%	4	5	A
3-115	0.37	3.45	-0.47	3.40	19.2%	4	5	A
3-116	0.46	5.45	-0.40	2.26	22.2%	4	5	A
3-117	0.47	5.72	-0.37	1.89	21.7%	4	5	A
3-118	0.48	6.02	-0.41	2.48	23.0%	4	5	A
3-119	0.46	5.33	-0.37	1.85	23.6%	4	5	A
3-120	0.49	5.92	-0.35	1.56	25.2%	4	5	A

Case No.	Relative errors of different wind speed and turbulence intensity profiles par							
	Δ_α	Δ_{z0}	Δ_β	Δ_{z0T}	Δ_{IV30}	$\Delta_\alpha ISO$	$\Delta_{z0} ISO$	$\Delta_\beta ISO$
3-112	0.724	3.340	0.803	1.798	0.270	0.089	0.736	0.139
3-113	0.648	2.989	1.003	2.514	0.282	0.041	0.596	0.265
3-114	0.643	3.021	1.068	2.766	0.325	0.037	0.609	0.306
3-115	0.550	2.447	0.971	2.401	0.348	0.021	0.379	0.245
3-116	0.924	4.446	0.665	1.264	0.244	0.215	1.178	0.051
3-117	0.976	4.719	0.562	0.890	0.261	0.248	1.288	0.013
3-118	1.011	5.022	0.725	1.479	0.218	0.270	1.409	0.090
3-119	0.923	4.328	0.545	0.851	0.198	0.215	1.131	0.024
3-120	1.024	4.916	0.461	0.556	0.143	0.278	1.366	0.077

Case No.	Parameters				RMSE between the fit and model vertical wind speed profile			
	$\Delta_{lv30}ISO$	$\Delta_{\alpha}ASCE$	$\Delta_{\beta}ASCE$	$\Delta_{lv30}ASCE$	PN-EN, power law	PN-EN, logarithmic	ISO, power law	ISO, logarithmic
3-112	0.435	0.241	0.298	0.356	0.100	0.101	0.011	0.013
3-113	0.444	0.187	0.442	0.366	0.083	0.085	0.017	0.024
3-114	0.478	0.183	0.489	0.404	0.077	0.081	0.027	0.032
3-115	0.496	0.116	0.419	0.425	0.067	0.071	0.030	0.037
3-116	0.415	0.386	0.199	0.333	0.125	0.124	0.031	0.020
3-117	0.428	0.423	0.125	0.348	0.134	0.133	0.039	0.028
3-118	0.395	0.448	0.242	0.310	0.136	0.135	0.040	0.027
3-119	0.379	0.385	0.113	0.293	0.131	0.130	0.037	0.028
3-120	0.337	0.457	0.052	0.244	0.145	0.143	0.050	0.039

Case No.	Profiles	RMSE for turbulence intensity profiles			Correction factors for vertical profiles			R^2 , power law
	ASCE, power law	PN-EN, power law	PN-EN, logarithmic	ESDU 85020	a_w	a_{lv}	$v_{ref,log}$	
3-112	0.043	0.017	0.022	0.108	1.01	0.10	8.65	0.968
3-113	0.028	0.023	0.027	0.116	1.03	0.10	8.80	0.967
3-114	0.028	0.030	0.033	0.125	1.04	0.09	8.88	0.962
3-115	0.020	0.038	0.040	0.126	1.04	0.09	8.79	0.965
3-116	0.068	0.035	0.037	0.100	1.02	0.11	8.45	0.960
3-117	0.078	0.037	0.039	0.100	1.01	0.12	8.49	0.961
3-118	0.080	0.047	0.049	0.098	1.01	0.12	8.56	0.965
3-119	0.075	0.047	0.049	0.089	1.00	0.13	8.44	0.957
3-120	0.089	0.070	0.071	0.079	1.00	0.14	8.36	0.959

Case No.	Goodness of fit for wind speed profiles					Goodness of fit for turb		
	R^2_{adj} , power law	RMSE, power law	R^2 , logarithmic	R^2_{adj} , logarithmic	RMSE, logarithmic	R^2 , I_v , power law	R^2_{adj} , I_v , power law	RMSE, I_v , power law
3-112	0.965	0.036	0.919	0.911	0.505	0.617	0.578	0.045
3-113	0.964	0.036	0.928	0.921	0.472	0.629	0.592	0.047
3-114	0.958	0.039	0.928	0.921	0.478	0.627	0.589	0.046
3-115	0.962	0.036	0.933	0.926	0.438	0.616	0.578	0.043
3-116	0.956	0.043	0.898	0.888	0.598	0.585	0.543	0.047
3-117	0.957	0.043	0.895	0.885	0.622	0.544	0.498	0.047
3-118	0.961	0.041	0.903	0.893	0.611	0.595	0.554	0.049
3-119	0.953	0.044	0.889	0.878	0.623	0.551	0.506	0.050
3-120	0.955	0.044	0.887	0.876	0.644	0.535	0.488	0.053

Case No.	ulence intensity profiles			Measu				
	R^2 , I_v , logarithmic	R^2_{adj} , I_v , logarithmic	RMSE, I_v , logarithmic	v_1 [m/s]	v_2 [m/s]	v_3 [m/s]	v_4 [m/s]	v_5 [m/s]
3-112	0.511	0.462	0.051	4.40	4.44	4.96	5.40	6.29
3-113	0.515	0.467	0.054	4.51	4.57	5.14	5.58	6.49
3-114	0.510	0.461	0.052	4.51	4.59	5.17	5.62	6.52
3-115	0.503	0.454	0.049	4.63	4.70	5.28	5.73	6.58
3-116	0.485	0.434	0.052	4.13	4.08	4.58	4.94	5.82
3-117	0.451	0.397	0.052	4.11	4.04	4.55	4.94	5.81
3-118	0.492	0.442	0.055	4.02	4.01	4.51	4.91	5.87
3-119	0.458	0.404	0.055	4.20	4.13	4.62	4.95	5.83
3-120	0.446	0.391	0.057	4.03	3.96	4.46	4.80	5.68

Case No.	red mean wind speed at different height							$I_{v,1}$ [-]
	v_6 [m/s]	v_7 [m/s]	v_8 [m/s]	v_9 [m/s]	v_{10} [m/s]	v_{11} [m/s]	v_{12} [m/s]	
3-112	6.82	7.28	7.76	8.23	8.51	8.86	8.90	20.4%
3-113	7.05	7.54	8.01	8.45	8.66	8.90	8.87	20.6%
3-114	7.18	7.69	8.17	8.58	8.73	8.90	8.83	19.4%
3-115	7.16	7.64	8.07	8.47	8.63	8.83	8.76	18.4%
3-116	6.46	7.01	7.50	8.03	8.36	8.75	8.76	20.6%
3-117	6.41	6.96	7.51	8.08	8.39	8.82	8.89	19.8%
3-118	6.52	7.05	7.57	8.10	8.45	8.86	8.91	21.4%
3-119	6.41	6.91	7.45	8.00	8.35	8.83	8.89	21.3%
3-120	6.25	6.77	7.32	7.90	8.27	8.75	8.88	22.4%

Case No.	Measured turbulence intensity at different height							
	$I_{v,2}$ [-]	$I_{v,3}$ [-]	$I_{v,4}$ [-]	$I_{v,5}$ [-]	$I_{v,6}$ [-]	$I_{v,7}$ [-]	$I_{v,8}$ [-]	$I_{v,9}$ [-]
3-112	24.0%	24.0%	22.9%	17.5%	15.8%	13.6%	12.4%	10.1%
3-113	24.0%	23.8%	22.2%	17.1%	15.3%	12.6%	11.0%	8.4%
3-114	22.8%	22.2%	21.1%	16.6%	14.1%	11.5%	9.8%	7.1%
3-115	22.2%	21.1%	20.5%	15.7%	14.2%	11.8%	10.0%	7.4%
3-116	24.9%	24.4%	23.9%	19.2%	17.7%	14.9%	13.5%	10.8%
3-117	23.7%	24.0%	23.7%	19.4%	18.0%	15.4%	13.8%	11.3%
3-118	26.0%	25.4%	24.8%	19.5%	17.6%	14.8%	13.6%	11.1%
3-119	26.2%	25.8%	26.3%	21.0%	18.9%	16.4%	14.6%	12.0%
3-120	28.0%	27.5%	27.8%	22.6%	21.2%	18.1%	16.3%	13.3%

Case No.				Longitudinal				
	$I_{v,10}$ [-]	$I_{v,11}$ [-]	$I_{v,12}$ [-]	$L_{x,1}$ [m]	$L_{x,2}$ [m]	$L_{x,3}$ [m]	$L_{x,4}$ [m]	$L_{x,5}$ [m]
3-112	8.0%	5.9%	5.0%	51.3	48.2	51.4	53.6	61.1
3-113	6.4%	4.7%	4.2%	44.7	49.3	52.6	57.1	65.8
3-114	5.3%	4.2%	4.1%	41.3	42.6	47.3	51.4	56.6
3-115	5.6%	4.3%	4.3%	40.8	45.7	48.6	51.8	56.6
3-116	8.6%	6.8%	5.8%	42.3	49.4	47.2	48.3	58.5
3-117	9.2%	6.6%	5.3%	37.0	40.1	43.2	47.4	53.6
3-118	8.8%	6.7%	5.7%	40.3	45.1	47.9	48.9	59.9
3-119	10.1%	7.8%	6.8%	40.5	42.8	47.6	50.4	65.9
3-120	10.9%	9.1%	7.7%	52.7	61.4	53.3	55.2	65.7

Case No.	turbulence length scales from autocorrelation							Vertical turbu
	$L_{x,6}$ [m]	$L_{x,7}$ [m]	$L_{x,8}$ [m]	$L_{x,9}$ [m]	$L_{x,10}$ [m]	$L_{x,11}$ [m]	$L_{x,12}$ [m]	$L_{z\uparrow}$ [m]
3-112	60.6	66.0	66.9	81.9	83.7	70.2	55.8	36.8
3-113	66.3	71.8	68.8	69.5	68.9	57.0	45.9	34.6
3-114	56.8	67.2	65.4	61.7	66.2	58.5	45.9	33.1
3-115	56.4	63.3	63.1	63.9	64.5	57.5	51.0	33.9
3-116	59.5	68.7	67.1	69.6	72.4	66.9	61.2	36.6
3-117	52.7	65.5	68.0	76.5	80.5	71.2	57.5	34.6
3-118	59.1	66.0	63.9	68.7	74.1	68.4	52.3	37.8
3-119	63.8	69.8	66.7	72.4	75.1	70.0	66.0	37.5
3-120	68.6	78.4	75.0	79.6	82.7	80.7	69.5	37.6

Case No.	Silence length							
	$L_{z\downarrow}$ [m]	$f_{z,1-2}^*$ [Hz]	$f_{z,1-3}^*$ [Hz]	$f_{z,1-4}^*$ [Hz]	$f_{z,1-5}^*$ [Hz]	$f_{z,1-6}^*$ [Hz]	$f_{z,1-7}^*$ [Hz]	$f_{z,1-8}^*$ [Hz]
3-112	22.7	0.216	0.223	0.165	0.134	0.151	0.127	0.162
3-113	17.8	0.227	0.185	0.172	0.138	0.153	0.103	0.142
3-114	18.1	0.225	0.196	0.175	0.144	0.148	0.113	0.151
3-115	23.1	0.224	0.200	0.152	0.131	0.143	0.119	0.151
3-116	21.7	0.253	0.244	0.213	0.150	0.164	0.132	0.156
3-117	20.8	0.229	0.230	0.182	0.150	0.168	0.132	0.154
3-118	18.6	0.248	0.255	0.215	0.149	0.159	0.118	0.152
3-119	19.7	0.240	0.222	0.204	0.150	0.161	0.110	0.155
3-120	25.0	0.255	0.245	0.192	0.163	0.170	0.126	0.162

Case No.								
	$f^*_{z,1-9}$ [Hz]	$f^*_{z,1-10}$ [Hz]	$f^*_{z,1-11}$ [Hz]	$f^*_{z,1-12}$ [Hz]	$f^*_{z,2-3}$ [Hz]	$f^*_{z,2-4}$ [Hz]	$f^*_{z,2-5}$ [Hz]	$f^*_{z,2-6}$ [Hz]
3-112	0.138	0.114	0.142	0.168	0.202	0.153	0.133	0.117
3-113	0.115	0.111	0.152	0.172	0.208	0.165	0.143	0.118
3-114	0.142	0.118	0.157	0.173	0.195	0.163	0.156	0.122
3-115	0.151	0.130	0.166	0.173	0.212	0.165	0.141	0.108
3-116	0.139	0.136	0.154	0.162	0.239	0.182	0.149	0.130
3-117	0.123	0.122	0.148	0.155	0.222	0.165	0.145	0.144
3-118	0.152	0.114	0.144	0.168	0.233	0.188	0.175	0.133
3-119	0.130	0.121	0.141	0.132	0.227	0.189	0.156	0.127
3-120	0.138	0.106	0.141	0.135	0.236	0.203	0.175	0.147

Case No.								
	$f^*_{z,2-7}$ [Hz]	$f^*_{z,2-8}$ [Hz]	$f^*_{z,2-9}$ [Hz]	$f^*_{z,2-10}$ [Hz]	$f^*_{z,2-11}$ [Hz]	$f^*_{z,2-12}$ [Hz]	$f^*_{z,3-4}$ [Hz]	$f^*_{z,3-5}$ [Hz]
3-112	0.130	0.119	0.125	0.119	0.131	0.149	0.223	0.156
3-113	0.109	0.106	0.115	0.119	0.131	0.155	0.229	0.146
3-114	0.127	0.121	0.121	0.133	0.151	0.162	0.220	0.149
3-115	0.122	0.110	0.123	0.125	0.126	0.159	0.216	0.128
3-116	0.139	0.107	0.122	0.109	0.134	0.153	0.223	0.141
3-117	0.130	0.106	0.105	0.116	0.134	0.146	0.238	0.159
3-118	0.121	0.127	0.120	0.127	0.127	0.140	0.228	0.150
3-119	0.118	0.108	0.103	0.100	0.109	0.122	0.232	0.150
3-120	0.122	0.114	0.110	0.108	0.143	0.131	0.256	0.153

Case No.								
	$f_{z,3-6}^*$ [Hz]	$f_{z,3-7}^*$ [Hz]	$f_{z,3-8}^*$ [Hz]	$f_{z,3-9}^*$ [Hz]	$f_{z,3-10}^*$ [Hz]	$f_{z,3-11}^*$ [Hz]	$f_{z,3-12}^*$ [Hz]	$f_{z,4-5}^*$ [Hz]
3-112	0.142	0.100	0.137	0.133	0.115	0.124	0.149	0.192
3-113	0.134	0.102	0.113	0.114	0.098	0.124	0.117	0.199
3-114	0.129	0.096	0.114	0.099	0.108	0.130	0.125	0.180
3-115	0.121	0.111	0.120	0.117	0.105	0.122	0.132	0.165
3-116	0.145	0.107	0.117	0.119	0.097	0.123	0.124	0.198
3-117	0.144	0.123	0.127	0.125	0.106	0.122	0.120	0.190
3-118	0.148	0.105	0.123	0.124	0.108	0.125	0.132	0.197
3-119	0.144	0.109	0.114	0.122	0.115	0.119	0.114	0.192
3-120	0.165	0.122	0.117	0.122	0.106	0.132	0.118	0.203

Case No.	Frequency scales from co-coherence							
	$f_{z,4-6}^*$ [Hz]	$f_{z,4-7}^*$ [Hz]	$f_{z,4-8}^*$ [Hz]	$f_{z,4-9}^*$ [Hz]	$f_{z,4-10}^*$ [Hz]	$f_{z,4-11}^*$ [Hz]	$f_{z,4-12}^*$ [Hz]	$f_{z,5-6}^*$ [Hz]
3-112	0.143	0.118	0.127	0.107	0.085	0.107	0.122	0.176
3-113	0.140	0.113	0.123	0.117	0.101	0.125	0.119	0.162
3-114	0.142	0.114	0.096	0.111	0.094	0.126	0.140	0.170
3-115	0.137	0.118	0.107	0.116	0.114	0.119	0.130	0.180
3-116	0.152	0.119	0.124	0.102	0.086	0.110	0.118	0.155
3-117	0.160	0.110	0.117	0.115	0.099	0.118	0.113	0.195
3-118	0.141	0.115	0.133	0.109	0.118	0.127	0.136	0.167
3-119	0.142	0.122	0.102	0.110	0.110	0.114	0.096	0.156
3-120	0.174	0.116	0.120	0.121	0.095	0.126	0.121	0.198

Case No.								
	$f^*_{z,5-7}$ [Hz]	$f^*_{z,5-8}$ [Hz]	$f^*_{z,5-9}$ [Hz]	$f^*_{z,5-10}$ [Hz]	$f^*_{z,5-11}$ [Hz]	$f^*_{z,5-12}$ [Hz]	$f^*_{z,6-7}$ [Hz]	$f^*_{z,6-8}$ [Hz]
3-112	0.136	0.123	0.107	0.096	0.107	0.113	0.181	0.144
3-113	0.126	0.110	0.107	0.120	0.111	0.134	0.203	0.141
3-114	0.135	0.099	0.099	0.109	0.099	0.121	0.178	0.135
3-115	0.135	0.111	0.099	0.114	0.096	0.134	0.186	0.136
3-116	0.128	0.099	0.101	0.107	0.105	0.117	0.172	0.125
3-117	0.138	0.109	0.097	0.092	0.097	0.100	0.177	0.138
3-118	0.133	0.109	0.105	0.107	0.096	0.116	0.181	0.129
3-119	0.129	0.102	0.107	0.103	0.100	0.114	0.165	0.134
3-120	0.139	0.099	0.105	0.103	0.098	0.112	0.168	0.146

Case No.								
	$f^*_{z,6-9}$ [Hz]	$f^*_{z,6-10}$ [Hz]	$f^*_{z,6-11}$ [Hz]	$f^*_{z,6-12}$ [Hz]	$f^*_{z,7-8}$ [Hz]	$f^*_{z,7-9}$ [Hz]	$f^*_{z,7-10}$ [Hz]	$f^*_{z,7-11}$ [Hz]
3-112	0.112	0.080	0.097	0.105	0.170	0.116	0.108	0.112
3-113	0.120	0.100	0.110	0.113	0.175	0.138	0.117	0.110
3-114	0.117	0.083	0.107	0.101	0.179	0.114	0.117	0.089
3-115	0.119	0.101	0.098	0.117	0.185	0.125	0.120	0.092
3-116	0.100	0.091	0.093	0.104	0.180	0.115	0.120	0.105
3-117	0.114	0.106	0.118	0.103	0.171	0.114	0.114	0.105
3-118	0.106	0.086	0.099	0.087	0.158	0.112	0.095	0.091
3-119	0.107	0.090	0.100	0.088	0.152	0.102	0.102	0.086
3-120	0.127	0.080	0.106	0.100	0.159	0.121	0.092	0.099

Case No.								
	$f^*_{z,7-12}$ [Hz]	$f^*_{z,8-9}$ [Hz]	$f^*_{z,8-10}$ [Hz]	$f^*_{z,8-11}$ [Hz]	$f^*_{z,8-12}$ [Hz]	$f^*_{z,9-10}$ [Hz]	$f^*_{z,9-11}$ [Hz]	$f^*_{z,9-12}$ [Hz]
3-112	0.121	0.200	0.130	0.136	0.117	0.235	0.164	0.118
3-113	0.115	0.198	0.136	0.128	0.120	0.236	0.138	0.114
3-114	0.115	0.180	0.127	0.111	0.103	0.229	0.144	0.137
3-115	0.122	0.186	0.122	0.107	0.123	0.231	0.146	0.133
3-116	0.091	0.192	0.110	0.126	0.107	0.218	0.128	0.107
3-117	0.110	0.173	0.135	0.113	0.089	0.229	0.140	0.113
3-118	0.088	0.186	0.115	0.100	0.107	0.217	0.134	0.092
3-119	0.088	0.185	0.123	0.121	0.078	0.232	0.129	0.093
3-120	0.082	0.184	0.116	0.111	0.079	0.220	0.146	0.102

Case No.				Mean, maximal and minimal squared error for Parceval's identity check				
	$f_{z,10-11}^*$ [Hz]	$f_{z,10-12}^*$ [Hz]	$f_{z,11-12}^*$ [Hz]	$\Delta_{\text{mean,Welch}}$	$\Delta_{\text{max,Welch}}$	$\Delta_{\text{min,Welch}}$	$\Delta_{\text{mean,FFT}}$	$\Delta_{\text{max,FFT}}$
3-112	0.210	0.118	0.135	3.91E-04	1.71E-03	8.89E-06	4.34E-09	1.03E-08
3-113	0.204	0.132	0.166	1.37E-03	5.26E-03	1.61E-05	4.26E-09	1.05E-08
3-114	0.227	0.147	0.185	2.49E-04	1.09E-03	1.50E-06	3.39E-09	8.71E-09
3-115	0.199	0.160	0.192	1.00E-04	6.22E-04	1.21E-06	3.22E-09	8.40E-09
3-116	0.202	0.099	0.129	4.30E-04	1.24E-03	2.79E-05	4.30E-09	8.60E-09
3-117	0.192	0.126	0.142	1.41E-04	8.06E-04	2.22E-06	4.31E-09	8.26E-09
3-118	0.213	0.110	0.120	4.27E-04	1.27E-03	1.18E-05	4.65E-09	9.81E-09
3-119	0.195	0.090	0.115	2.23E-04	8.54E-04	3.92E-08	5.95E-09	1.28E-08
3-120	0.201	0.093	0.120	7.29E-04	2.32E-03	7.93E-06	7.49E-09	1.42E-08

Case No.	ck
	$\Delta_{\min,FFT}$
3-112	1.78E-10
3-113	8.95E-11
3-114	7.71E-11
3-115	9.06E-11
3-116	2.97E-10
3-117	2.25E-10
3-118	2.87E-10
3-119	5.79E-10
3-120	9.68E-10



**Cracow University
of Technology**



**Faculty of Civil
Engineering**

**Tadeusz Kościuszko Cracow University of Technology
Faculty of Civil Engineering
Wind Engineering Laboratory (L-14)**

Aleksander Pistol, MSc, Eng.

**Influence of terrain roughness on boundary layer simulation in
wind tunnel**

Wpływ chropowatości terenu na symulację warstwy przyziemnej w tunelu
aerodynamicznym

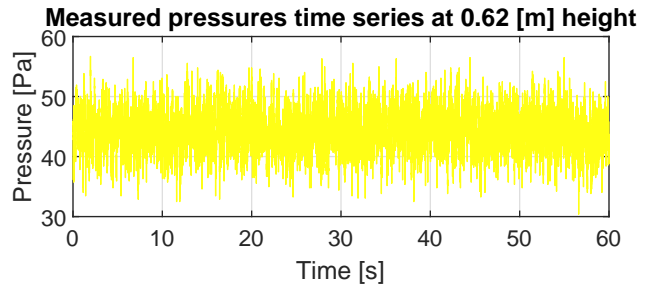
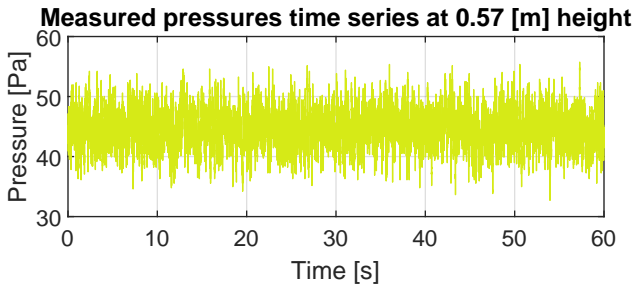
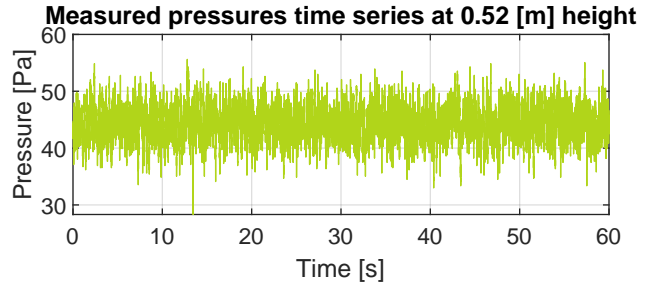
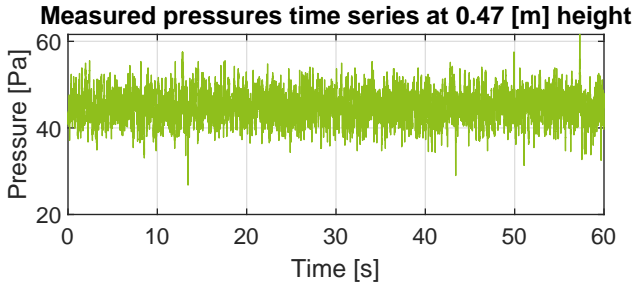
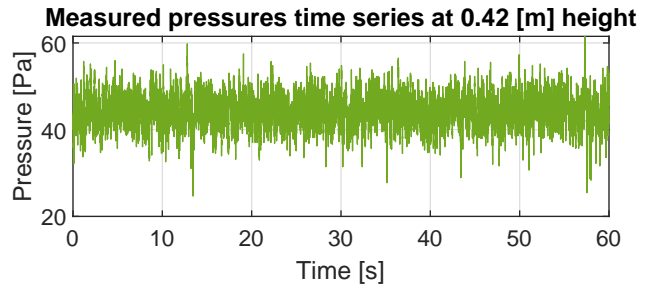
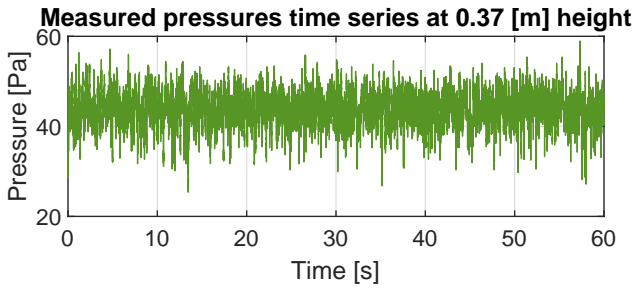
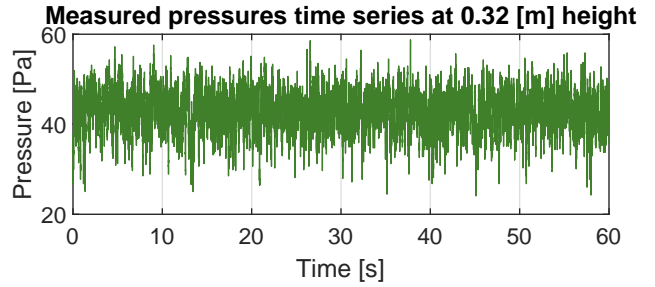
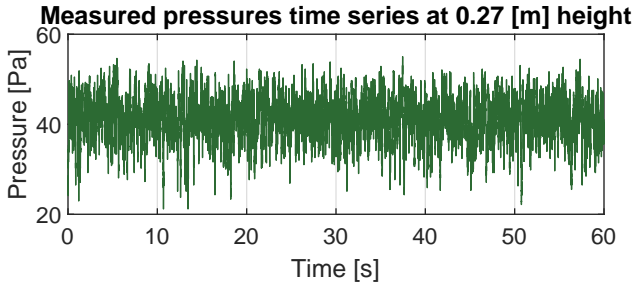
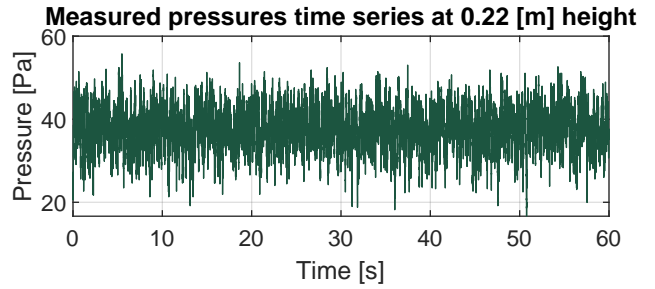
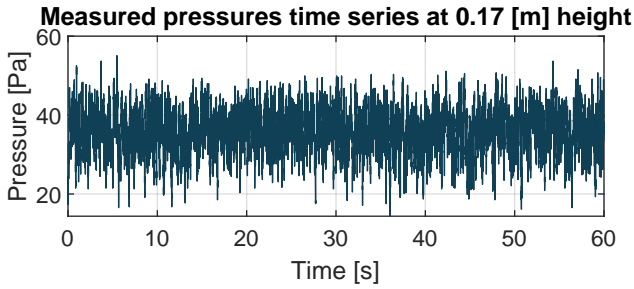
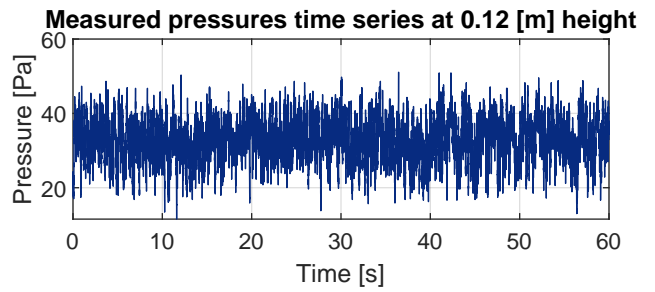
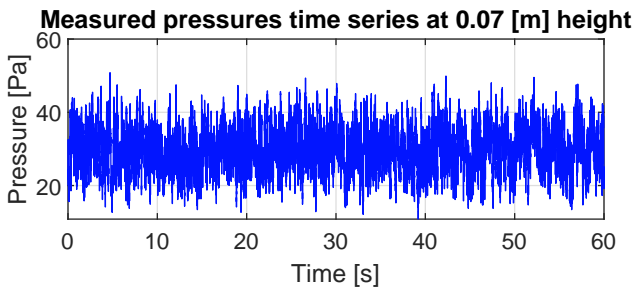
Attachment 3 – Plots.pdf

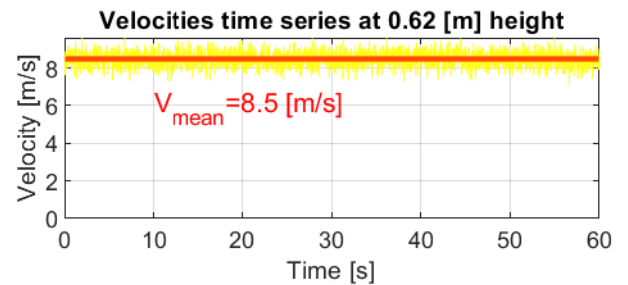
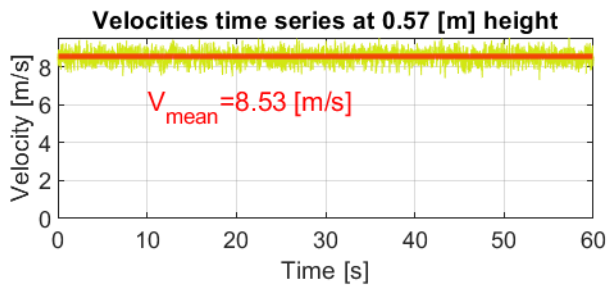
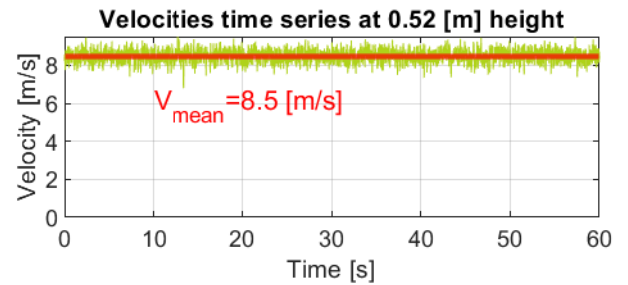
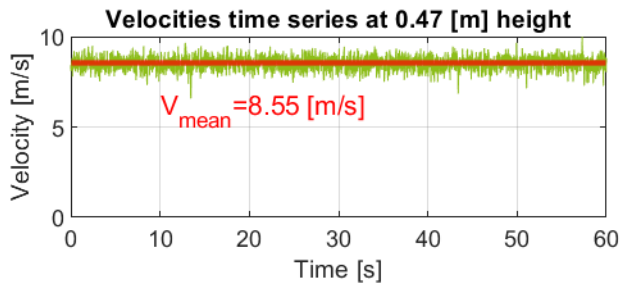
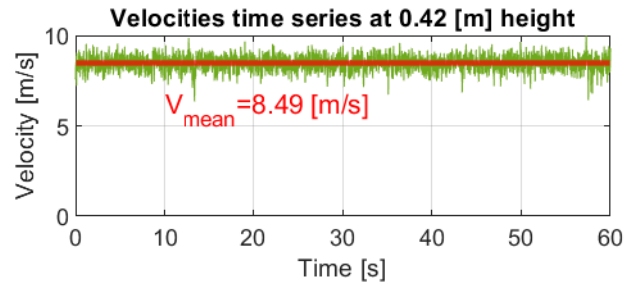
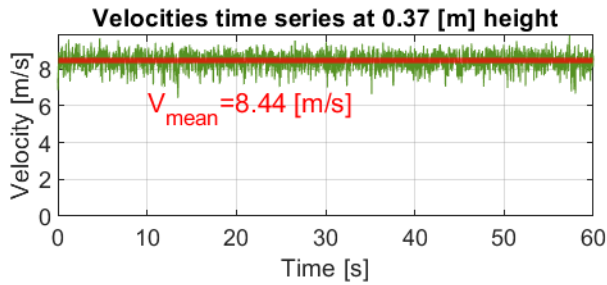
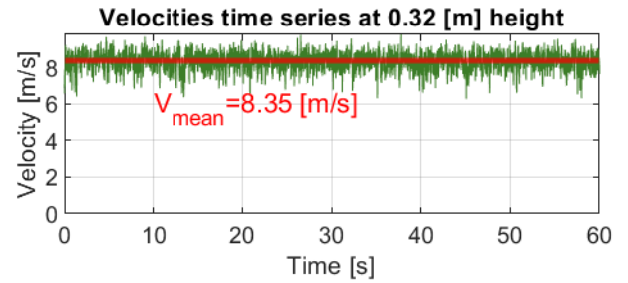
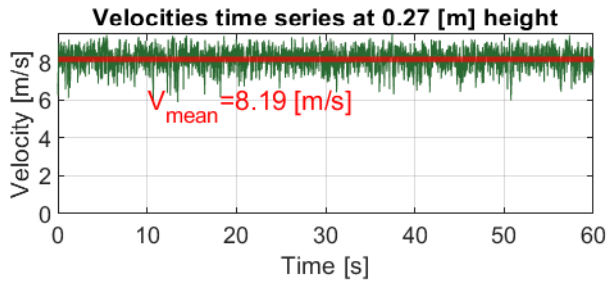
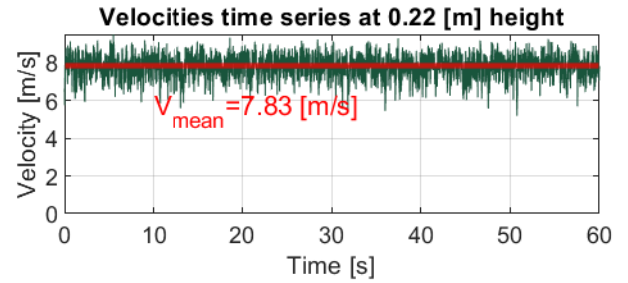
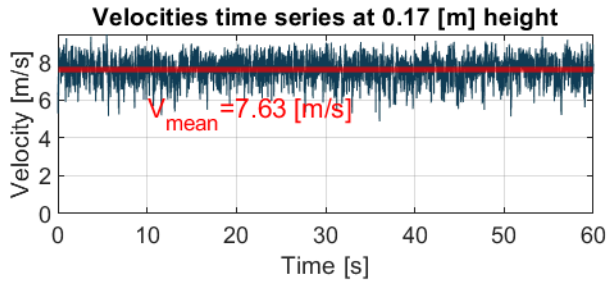
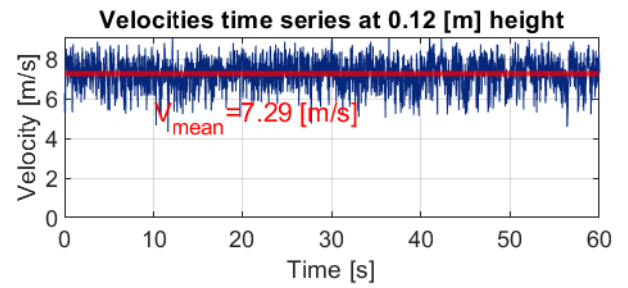
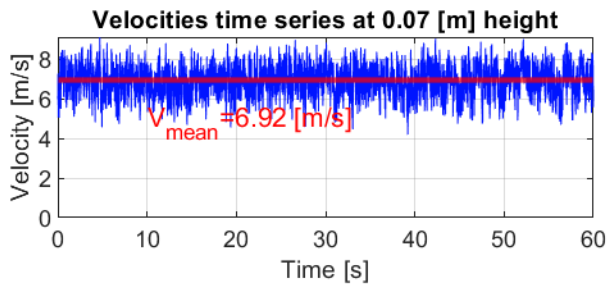
Załącznik nr 3 – Plots.pdf

Kraków, 2023

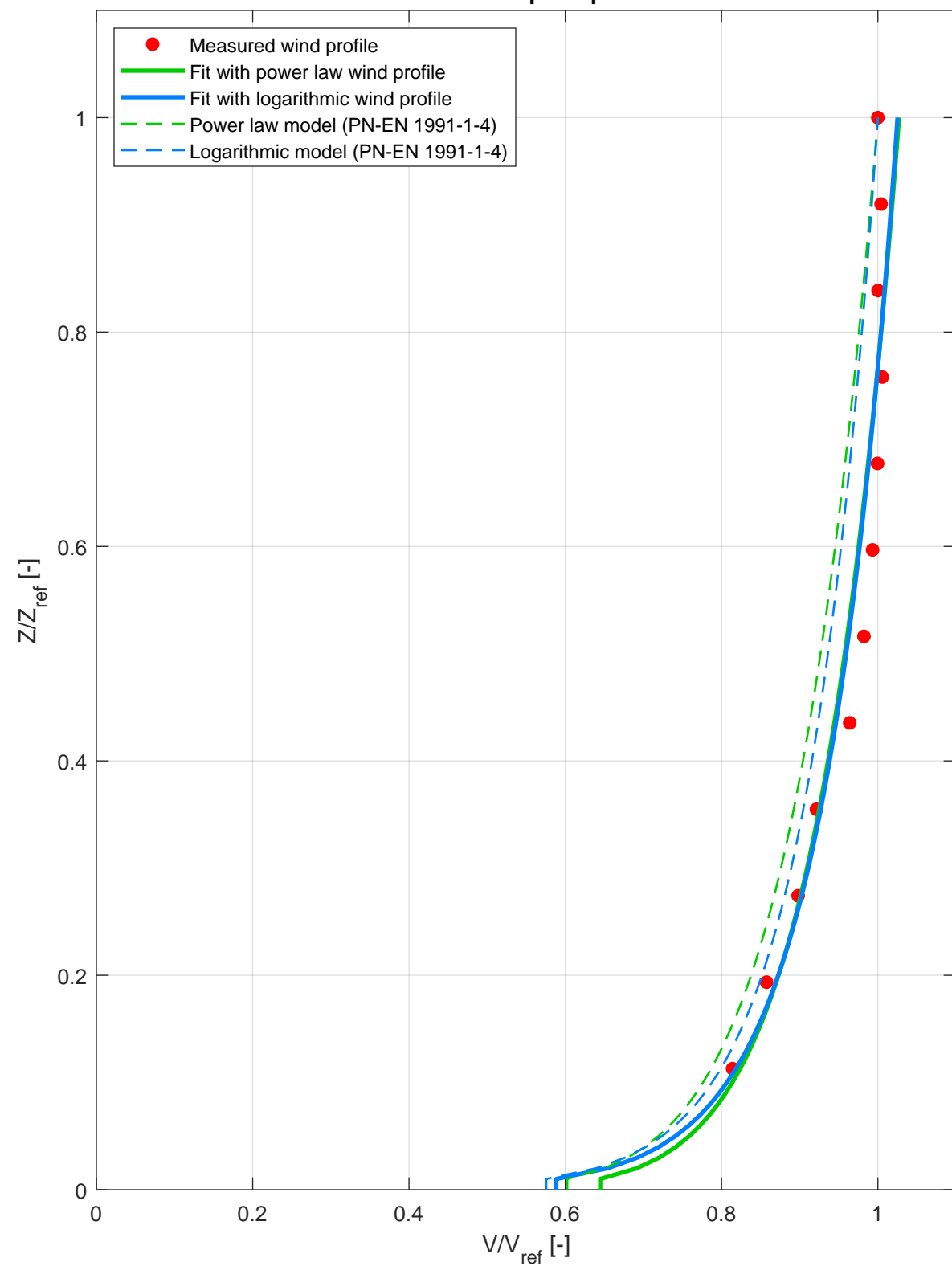
Plots for the test cases representative of terrain roughness categories according to PN-EN 1991-1-4

CASE-3-98

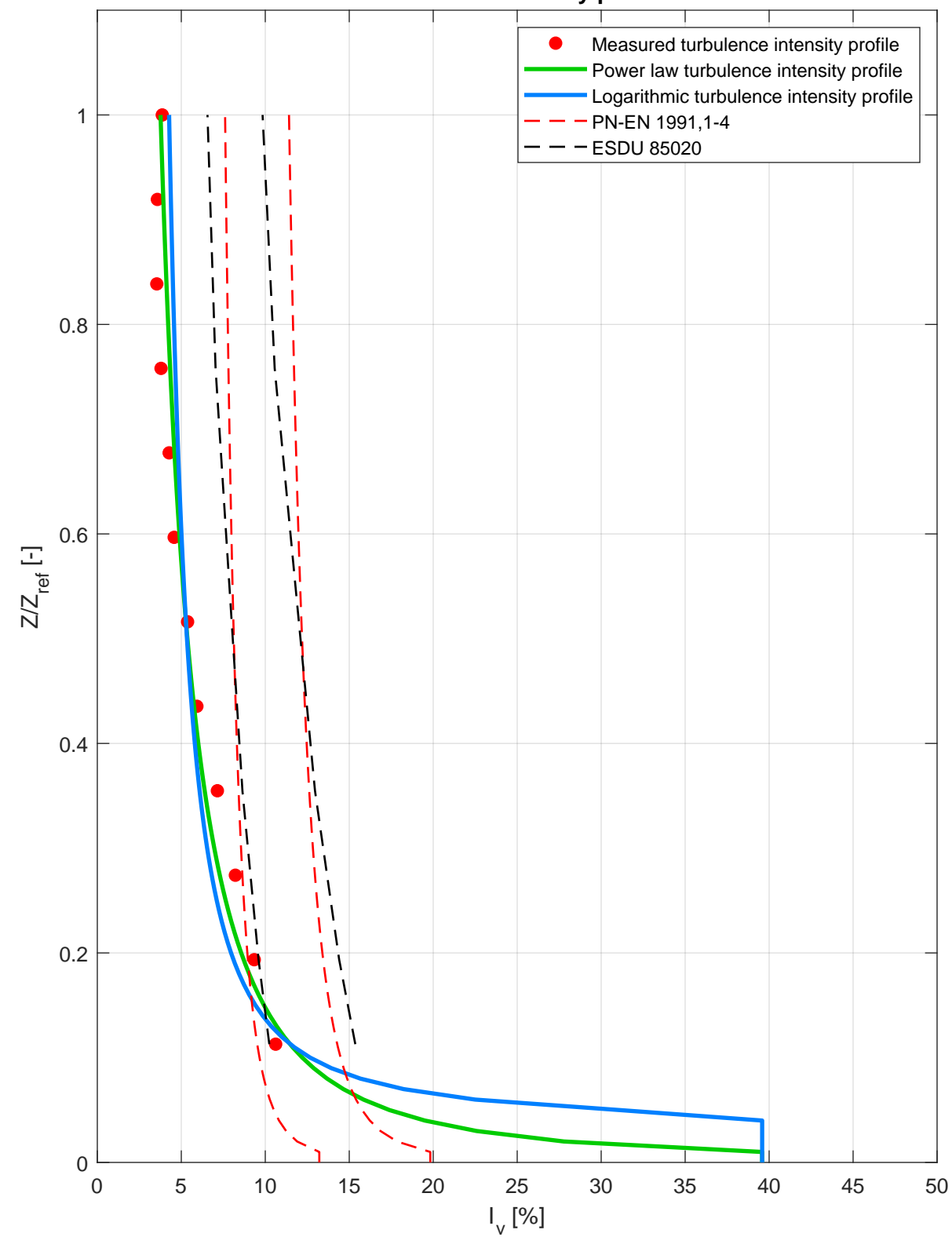




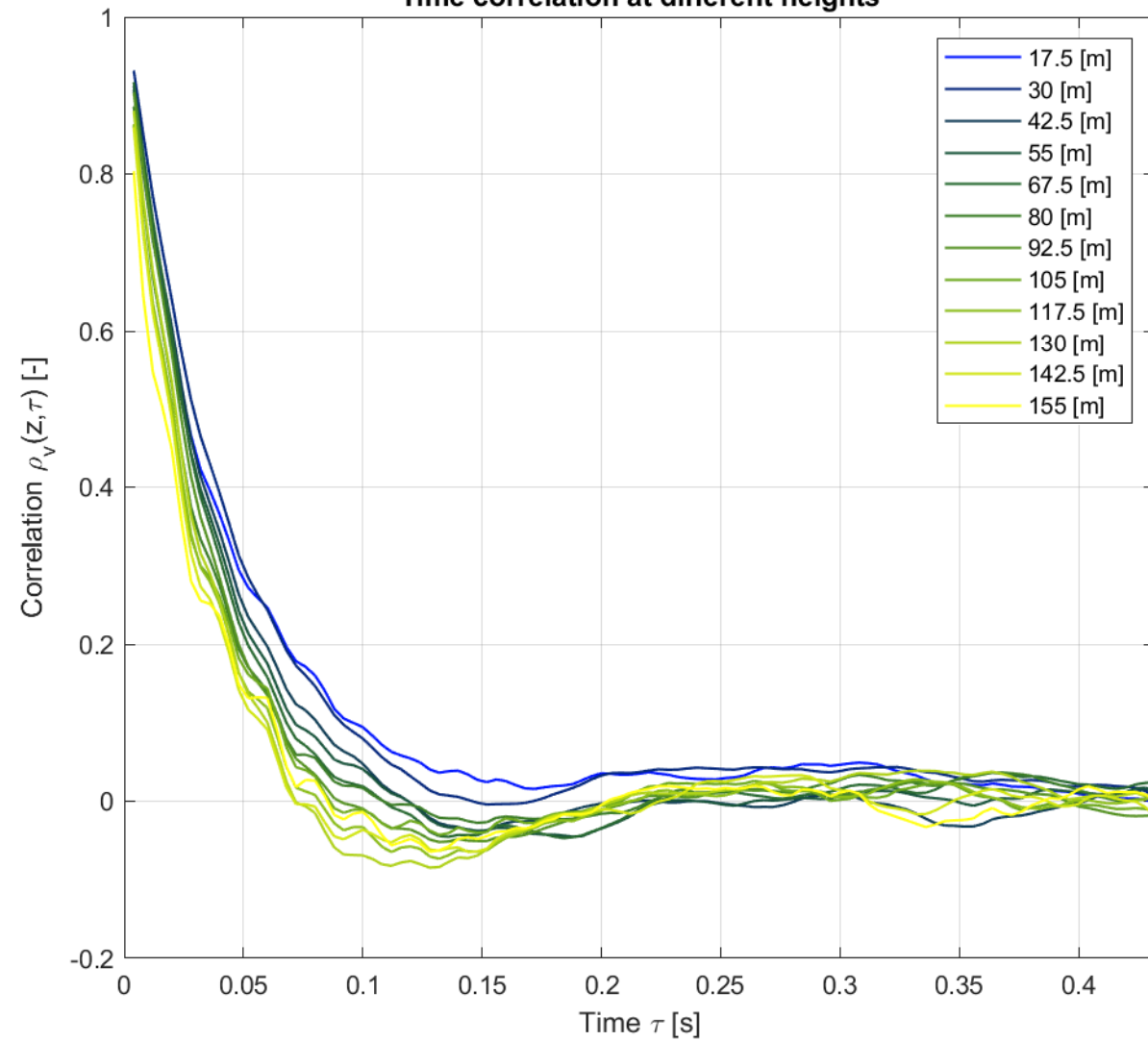
Mean wind speed profile



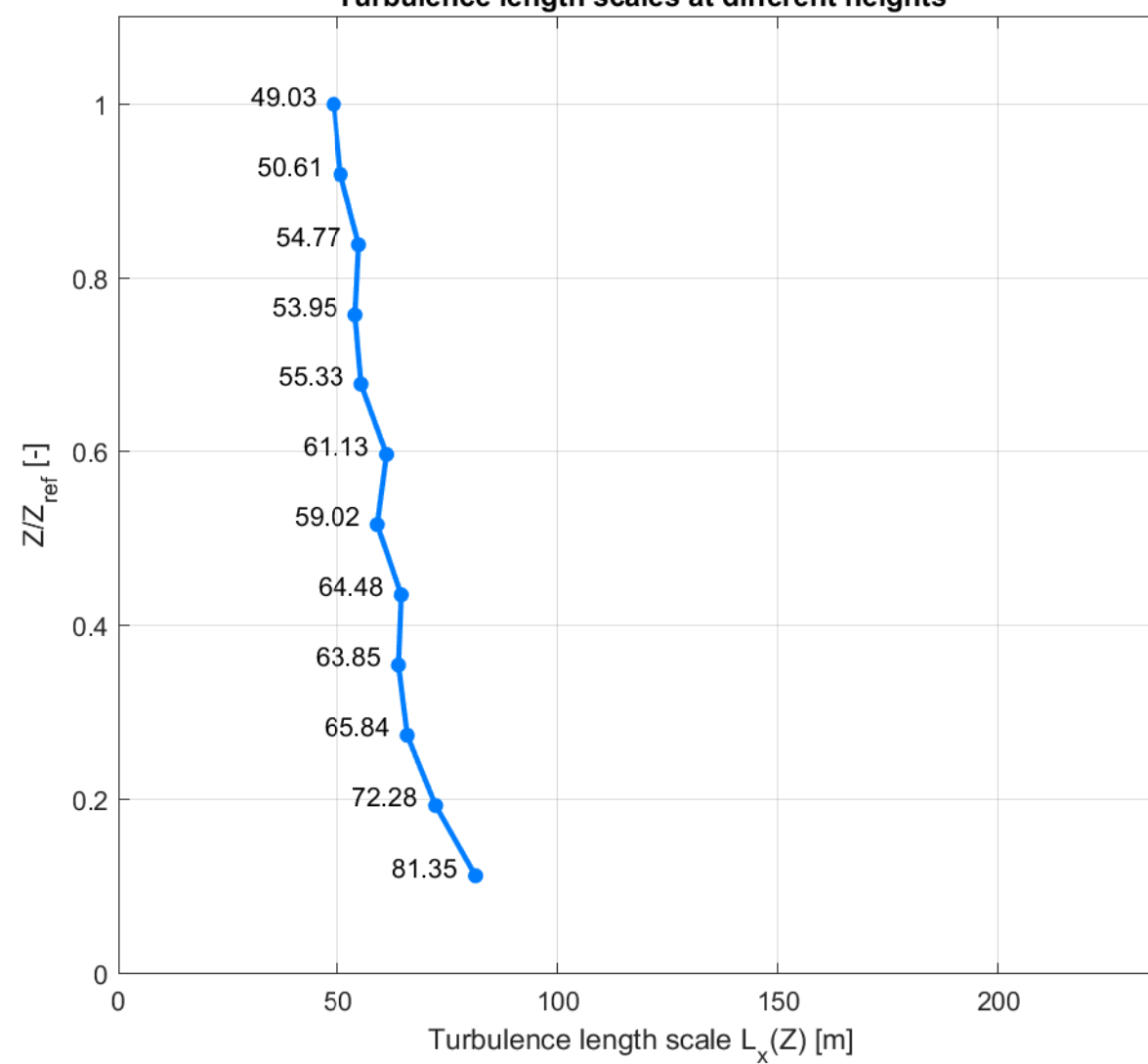
Turbulence intensity profile



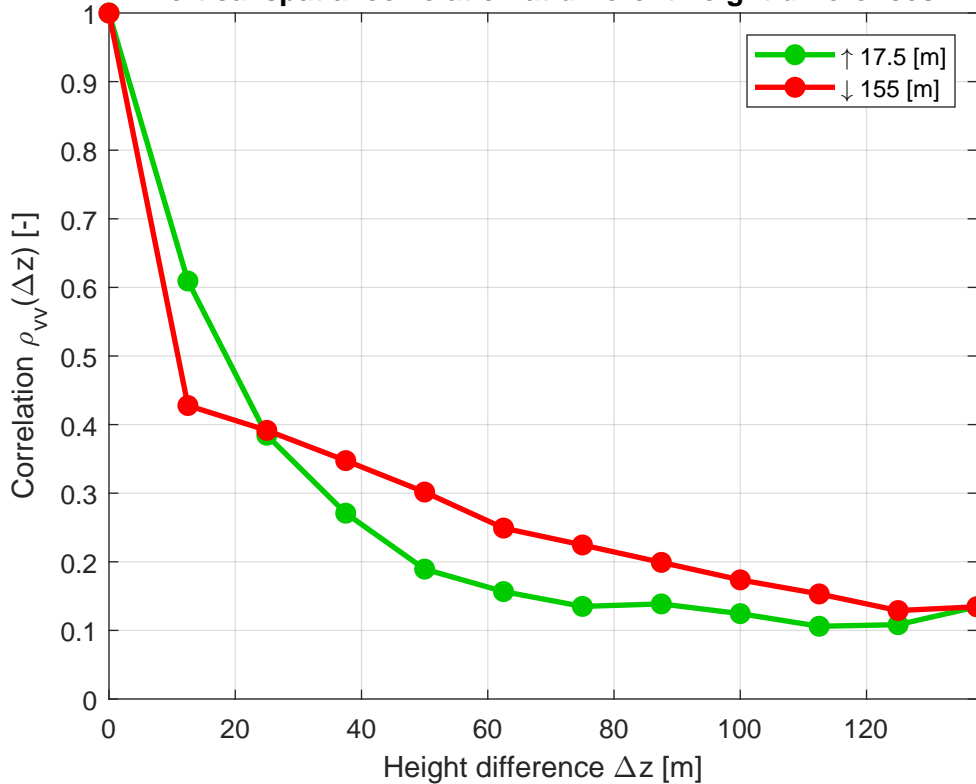
Time correlation at different heights



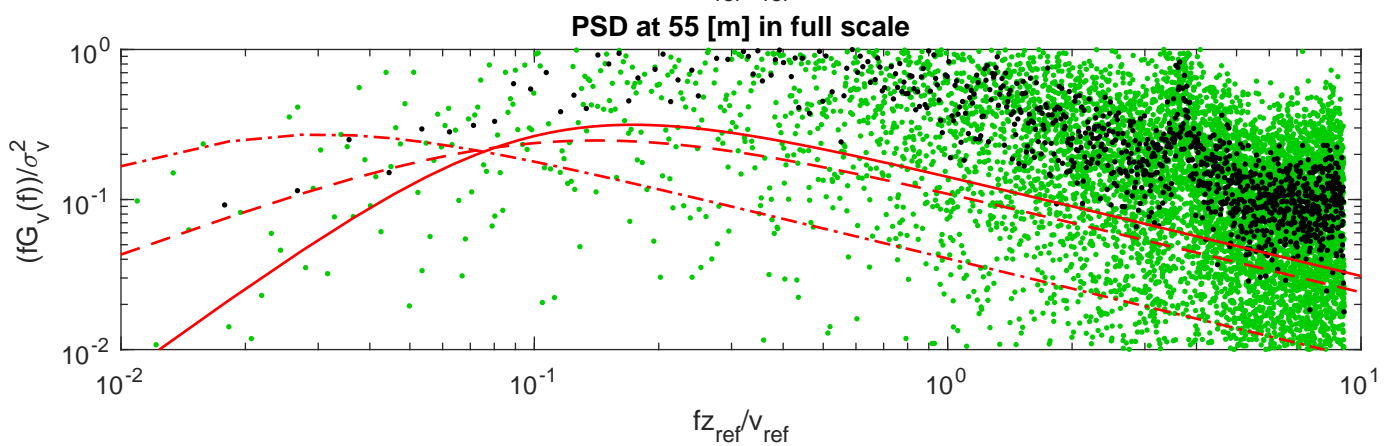
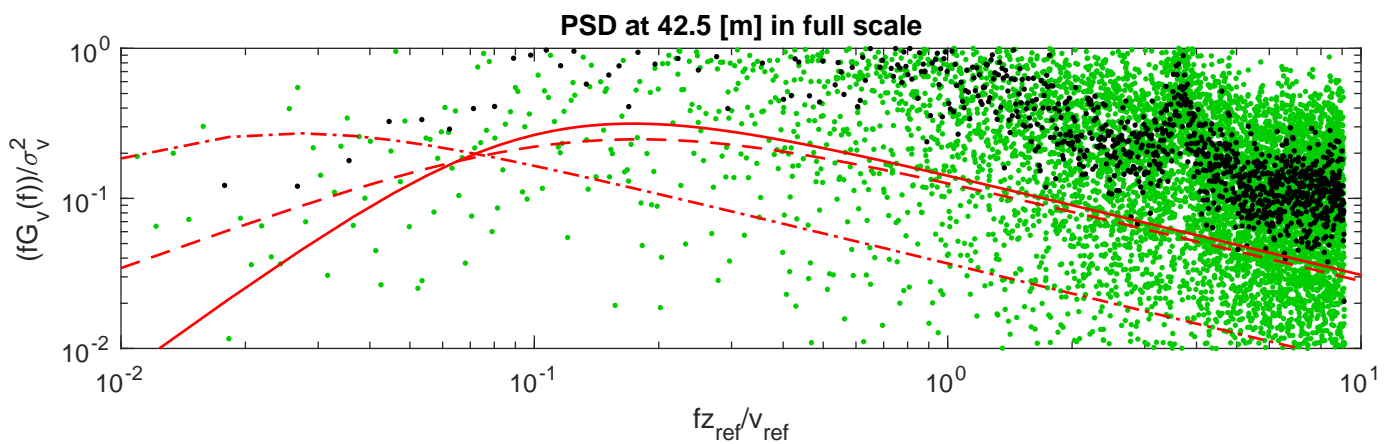
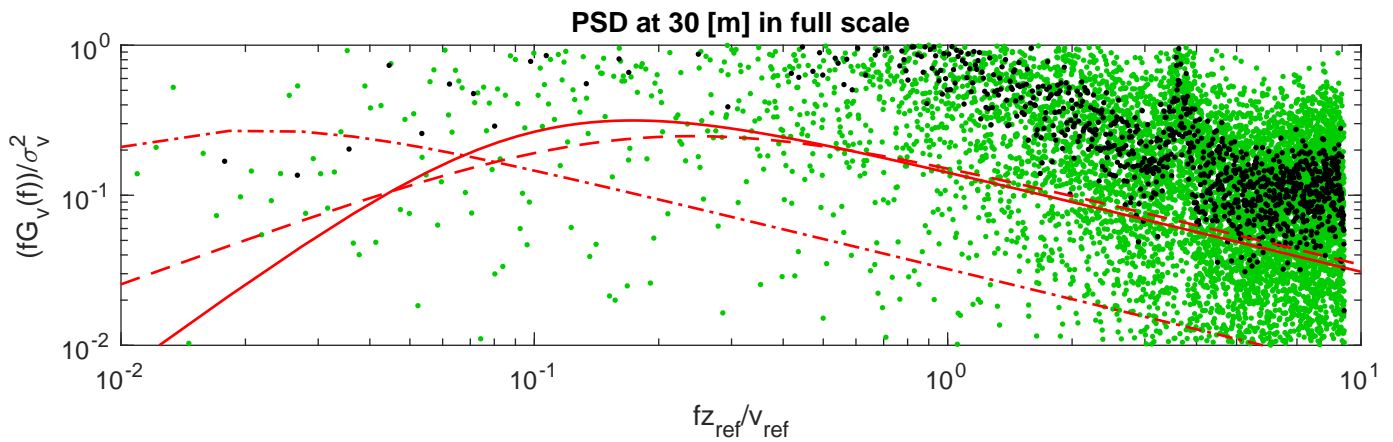
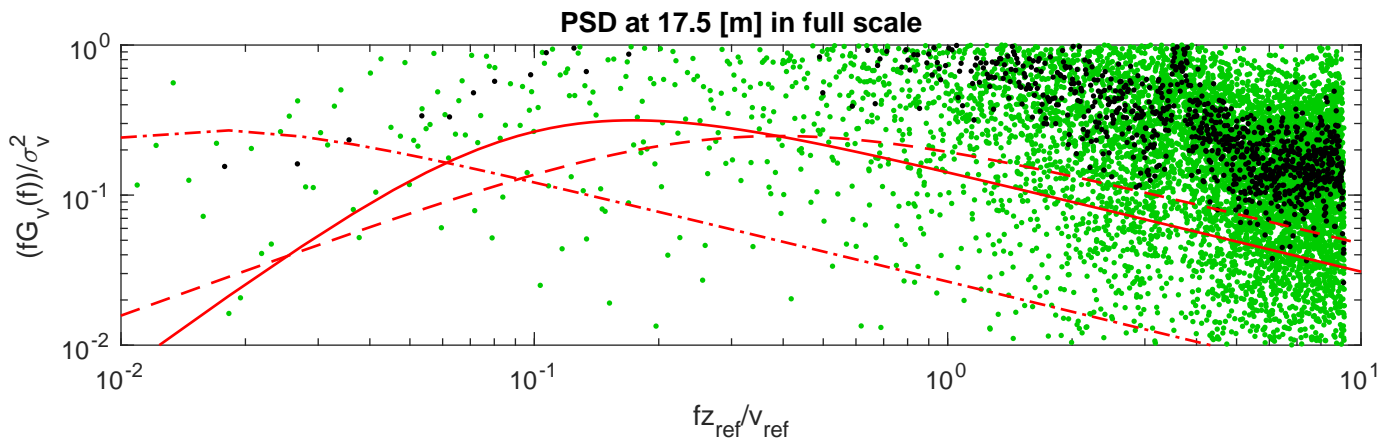
Turbulence length scales at different heights



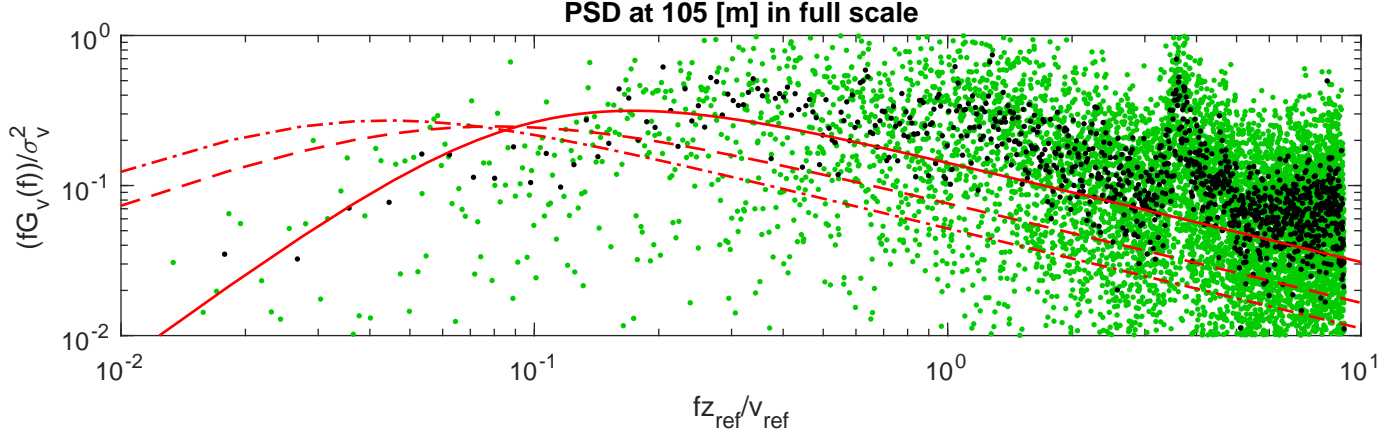
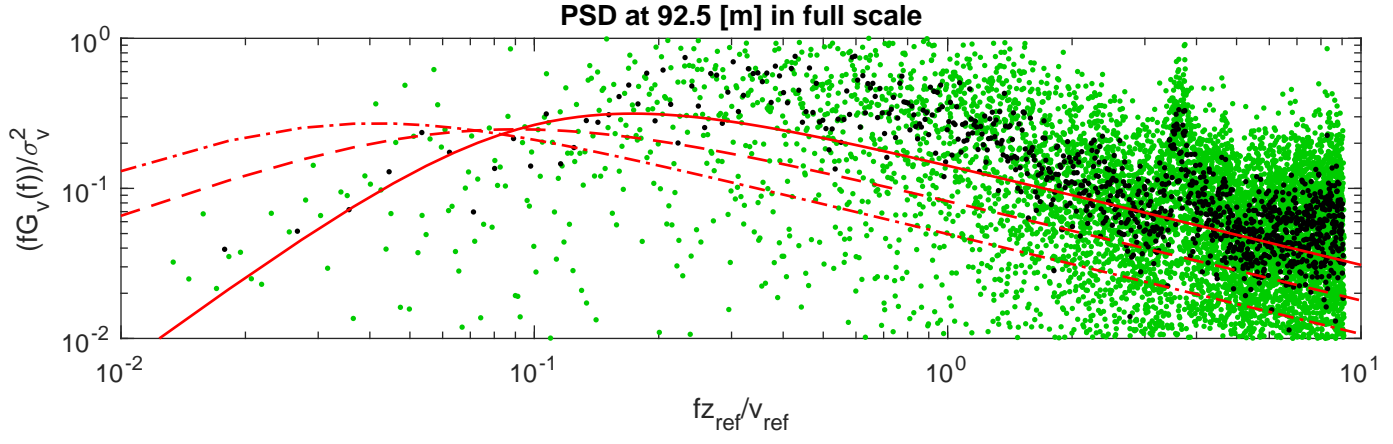
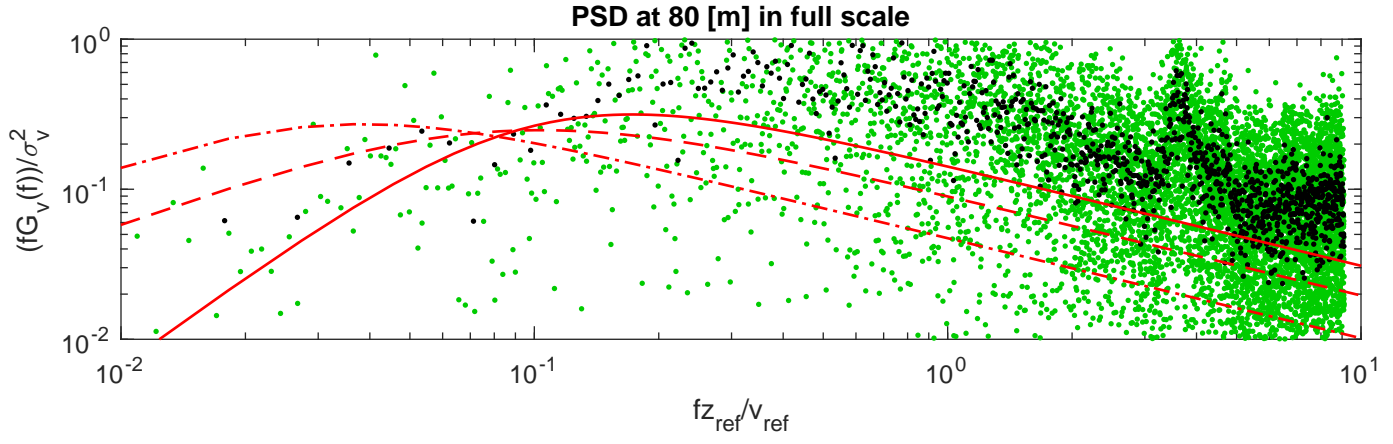
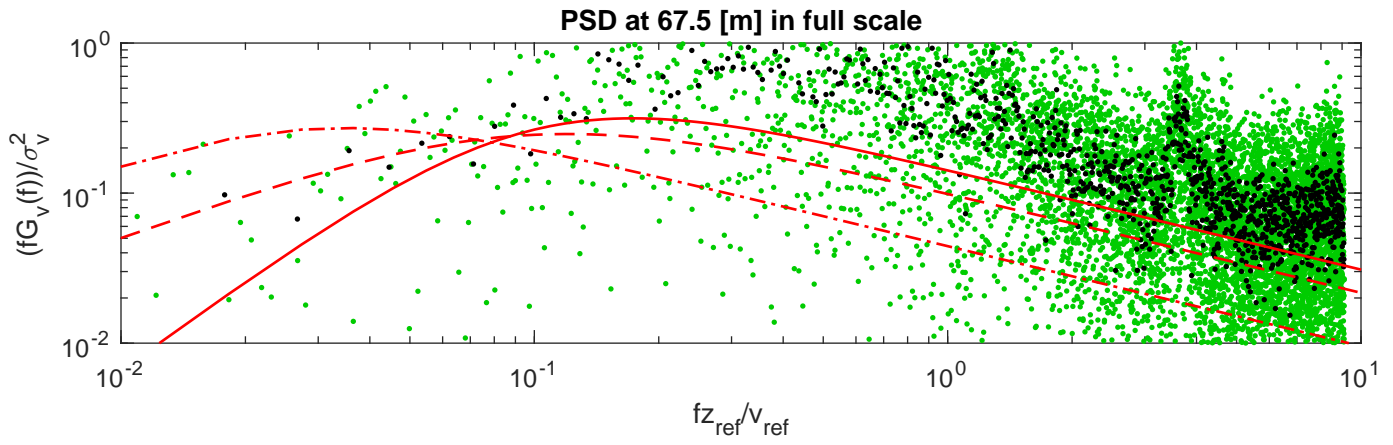
Vertical spatial correlation at different height differences



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

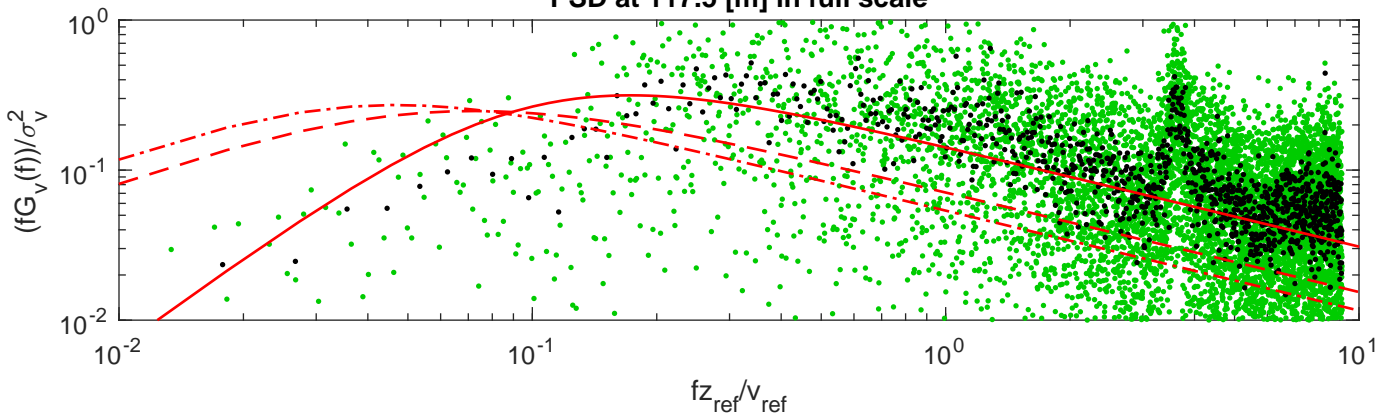


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

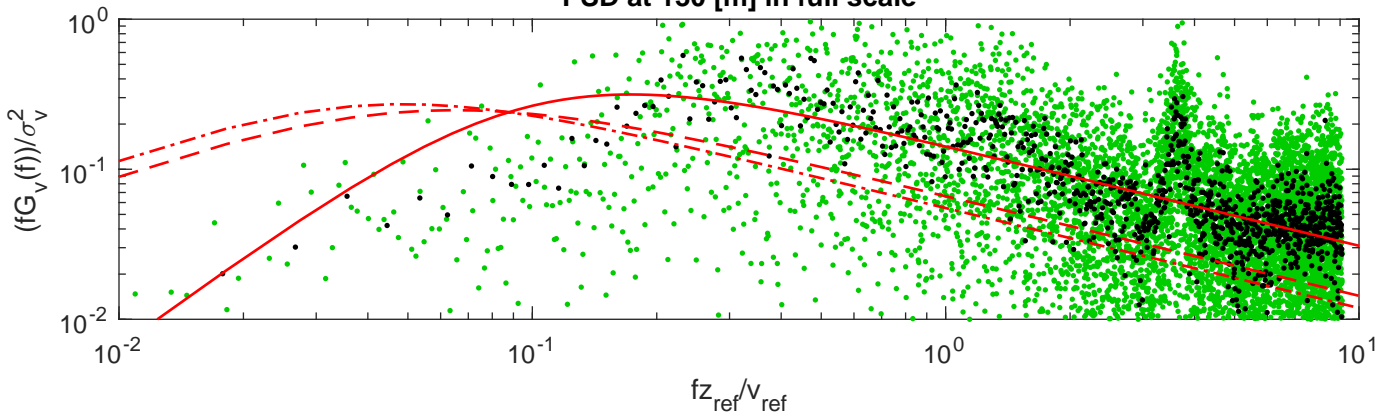


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

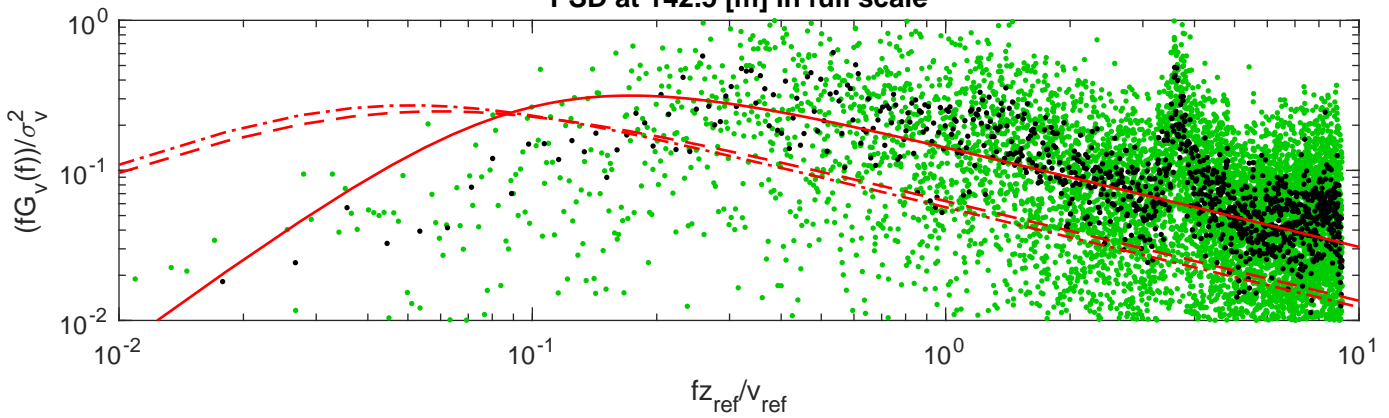
PSD at 117.5 [m] in full scale



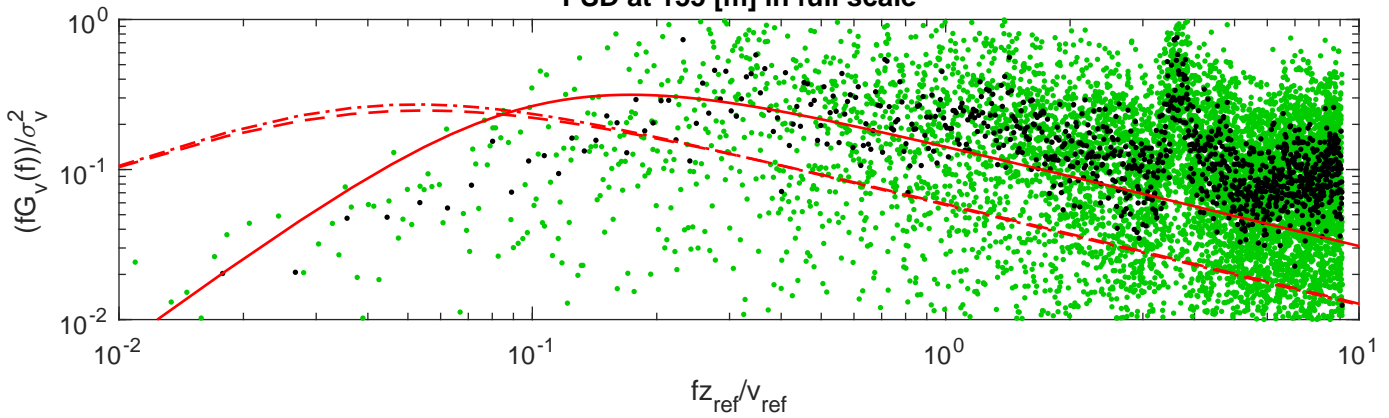
PSD at 130 [m] in full scale



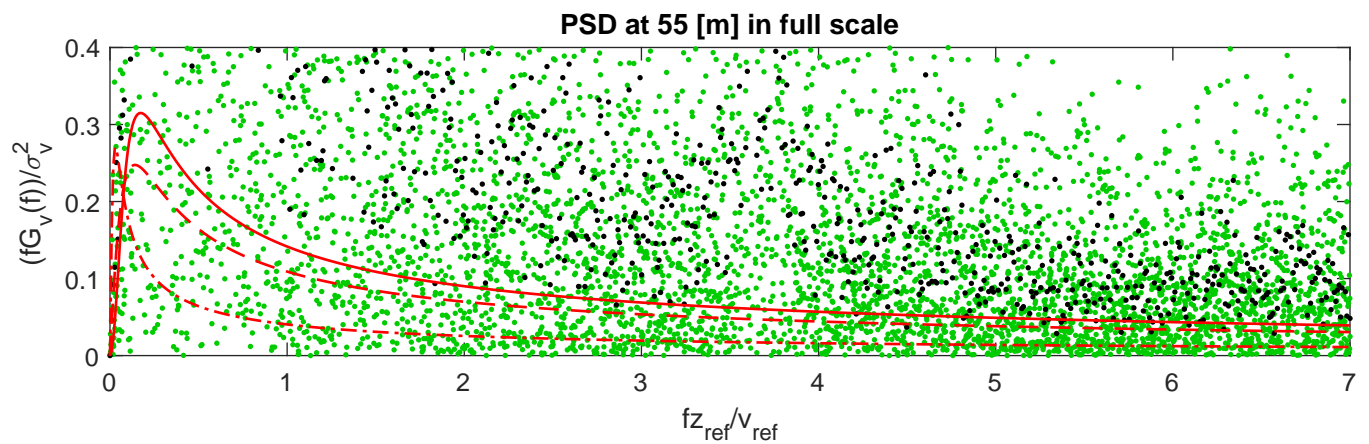
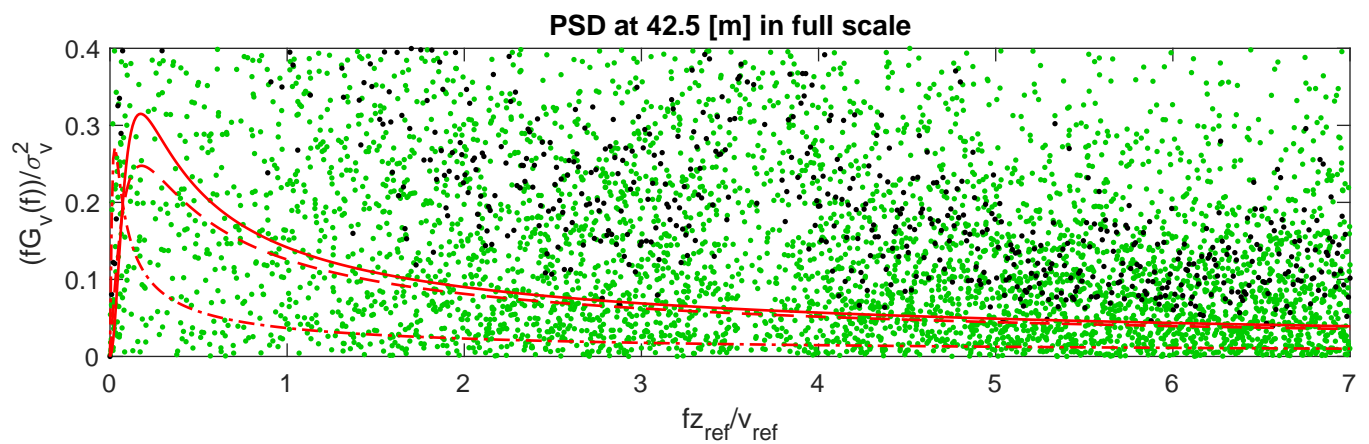
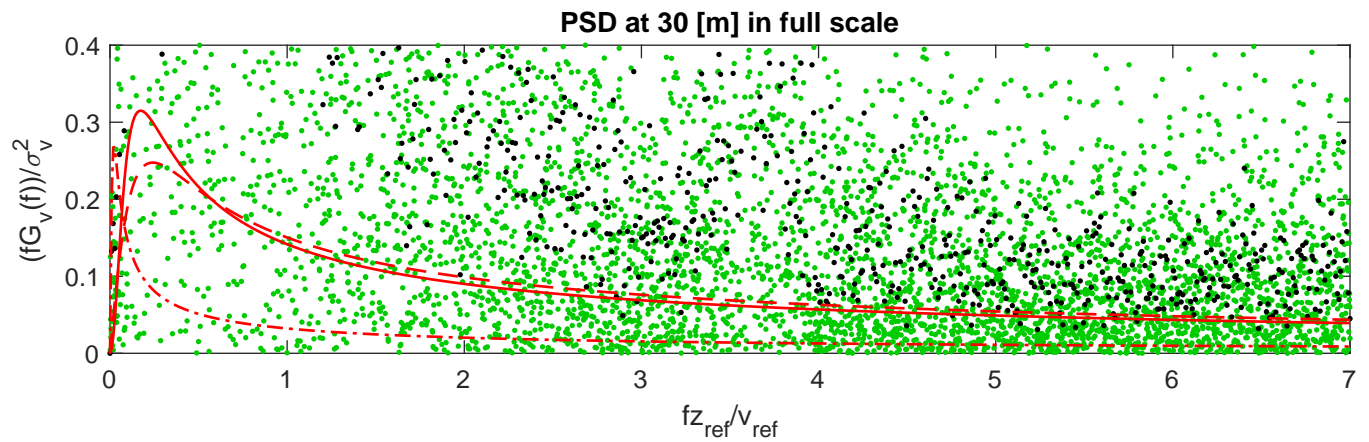
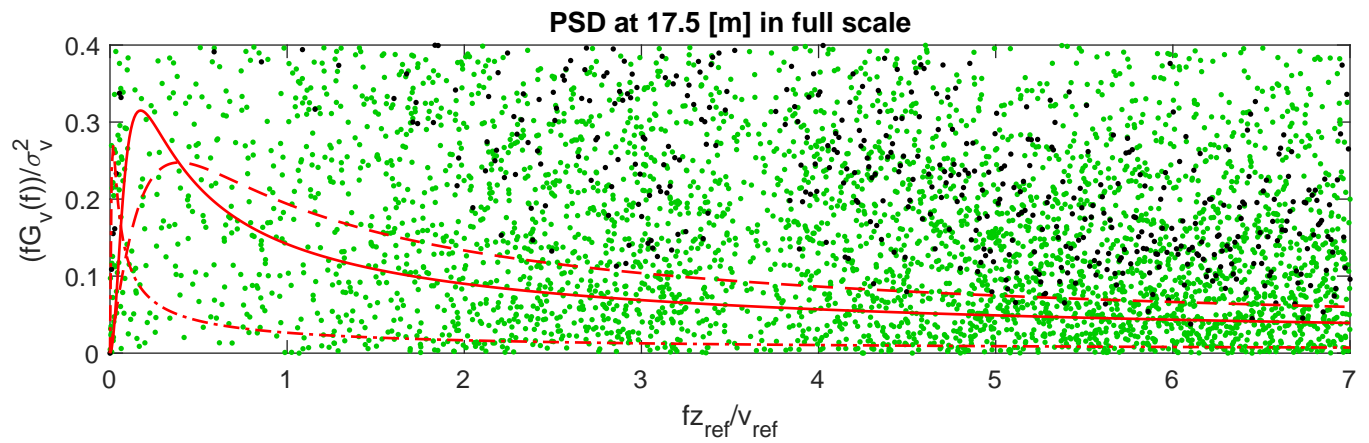
PSD at 142.5 [m] in full scale



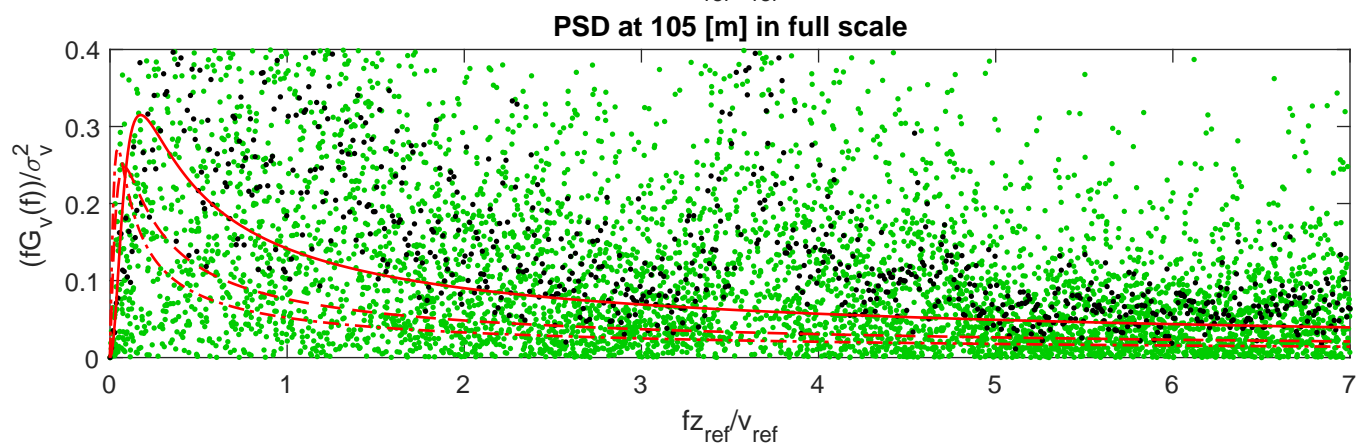
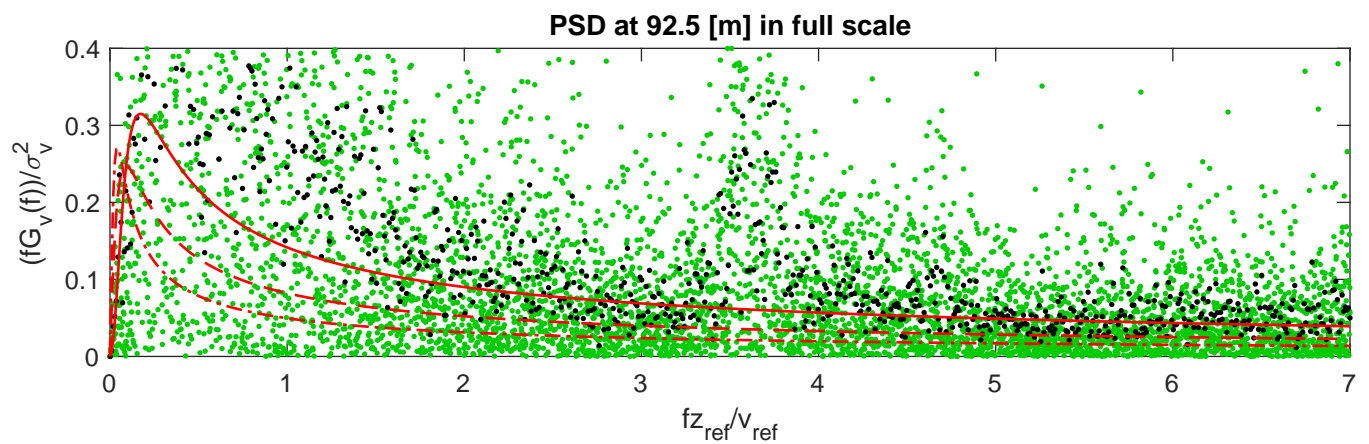
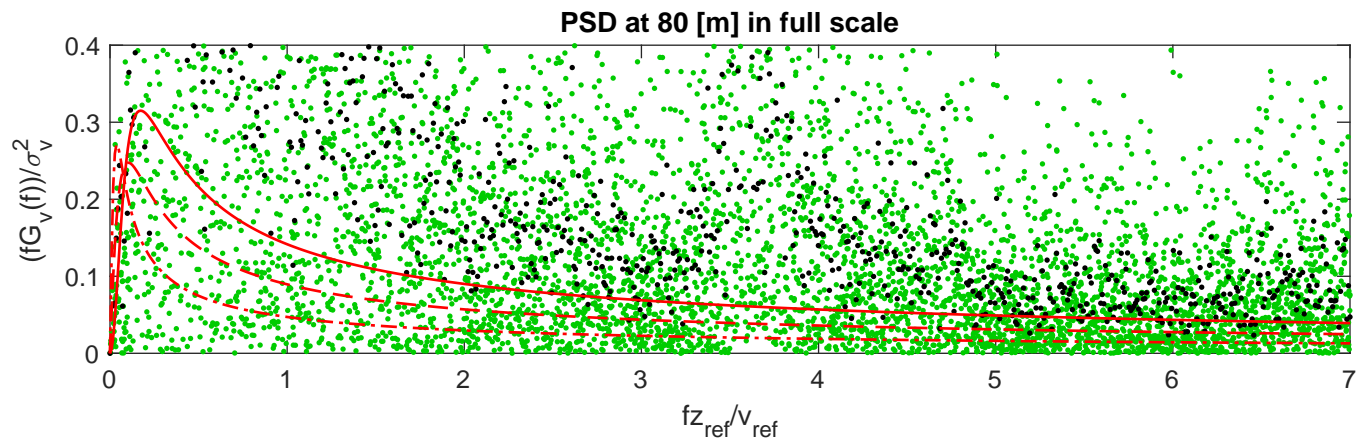
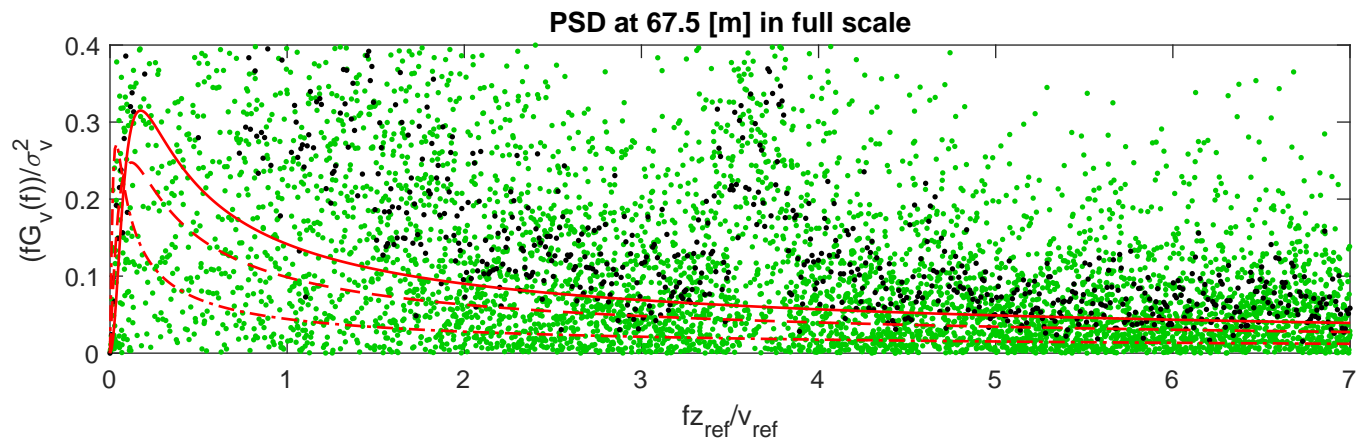
PSD at 155 [m] in full scale



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

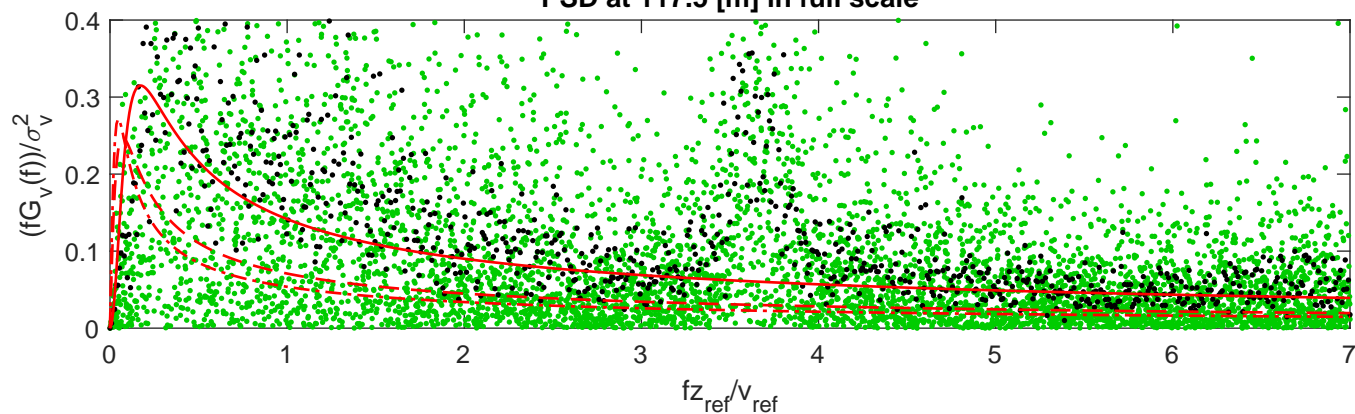


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

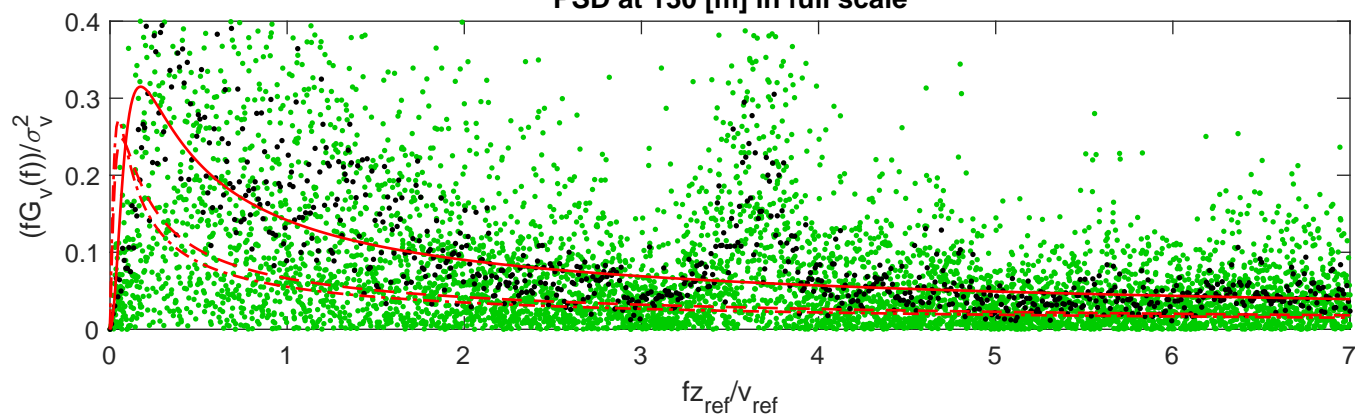


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

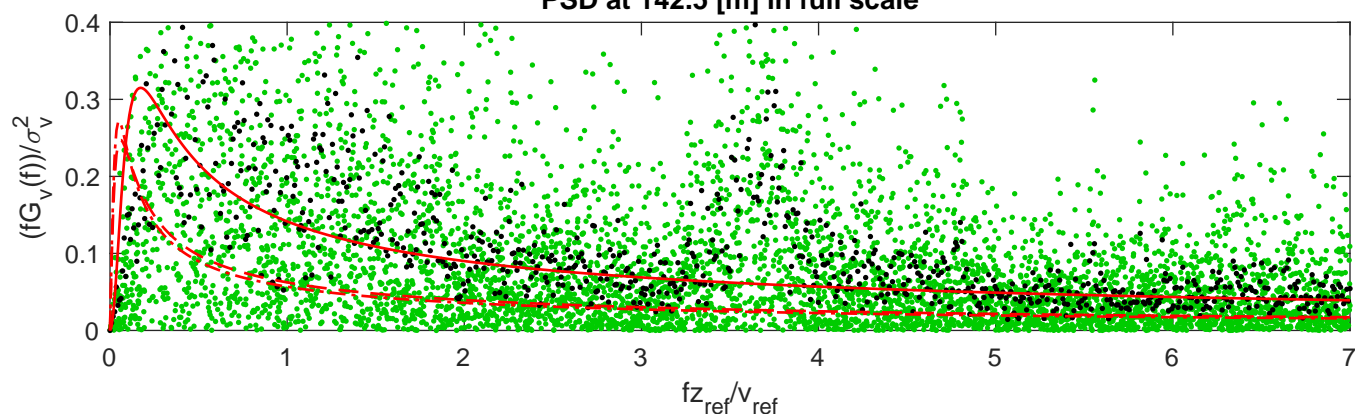
PSD at 117.5 [m] in full scale



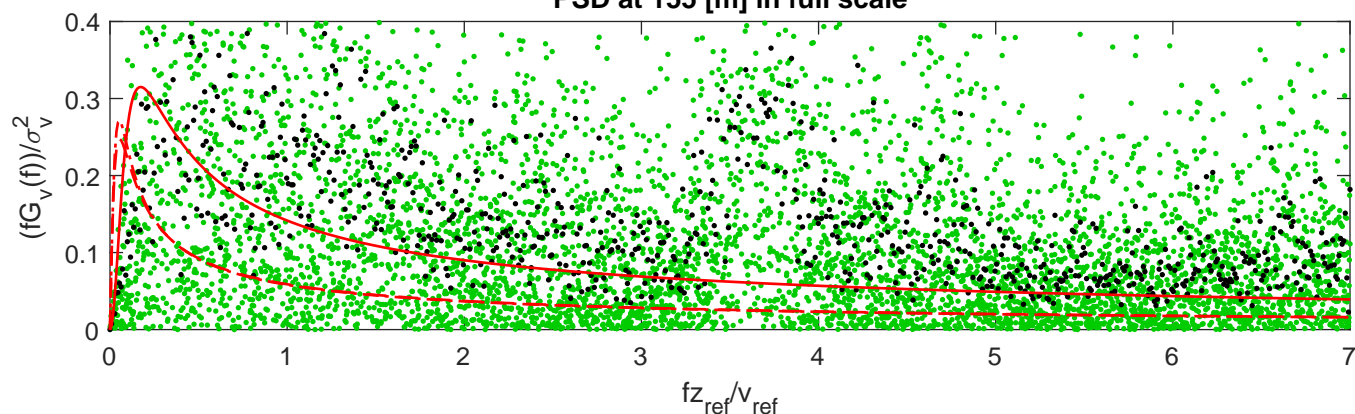
PSD at 130 [m] in full scale

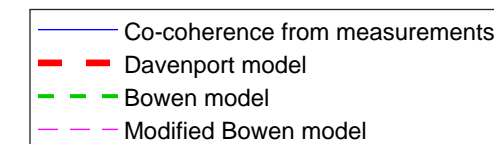
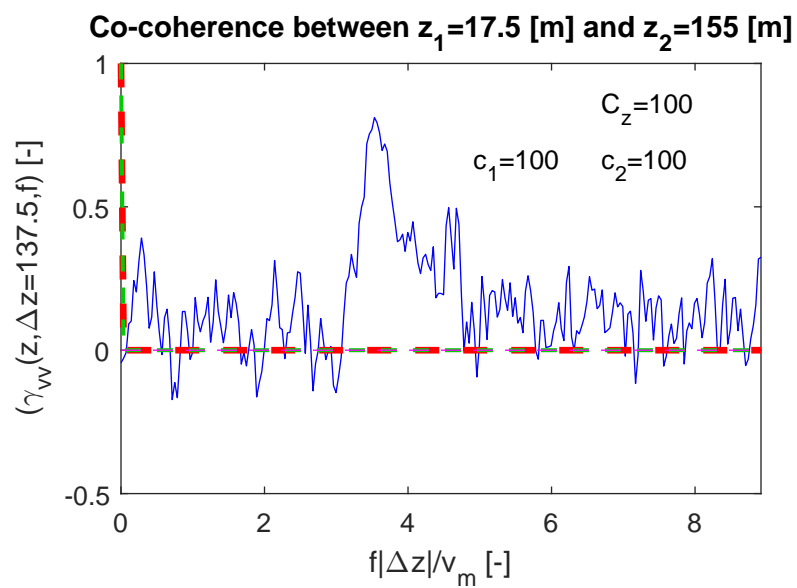
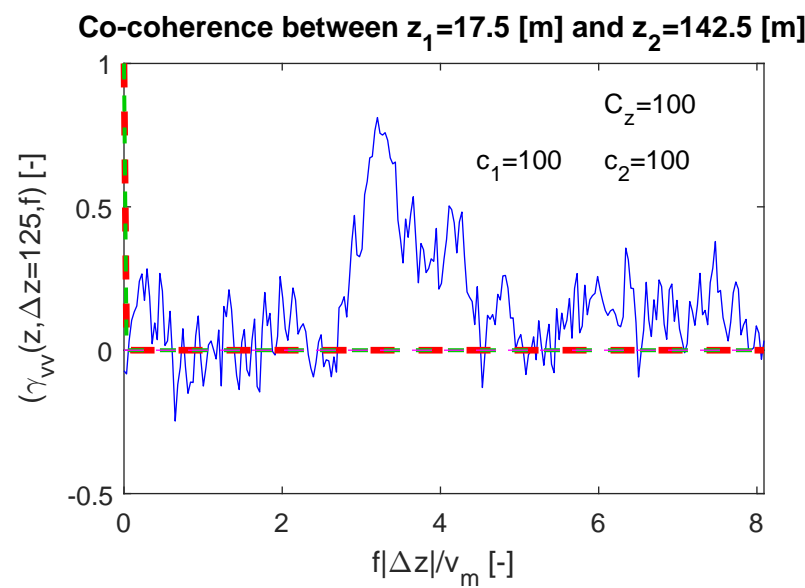
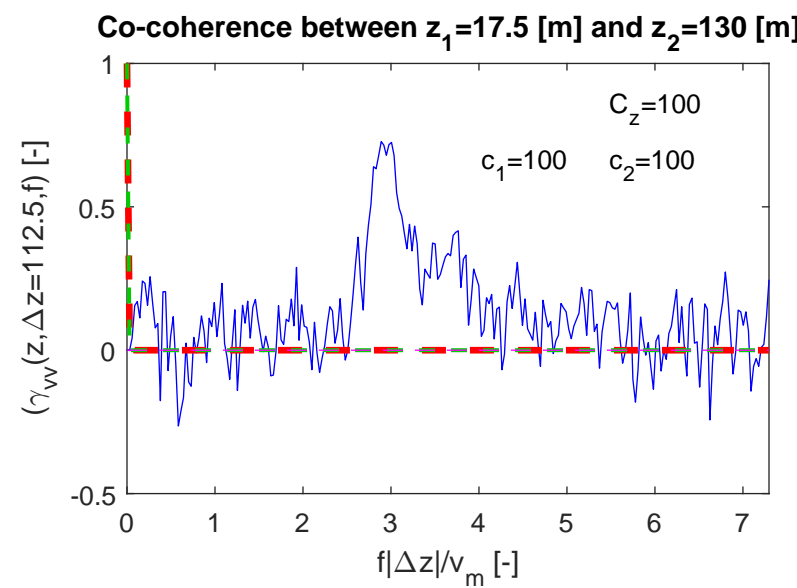
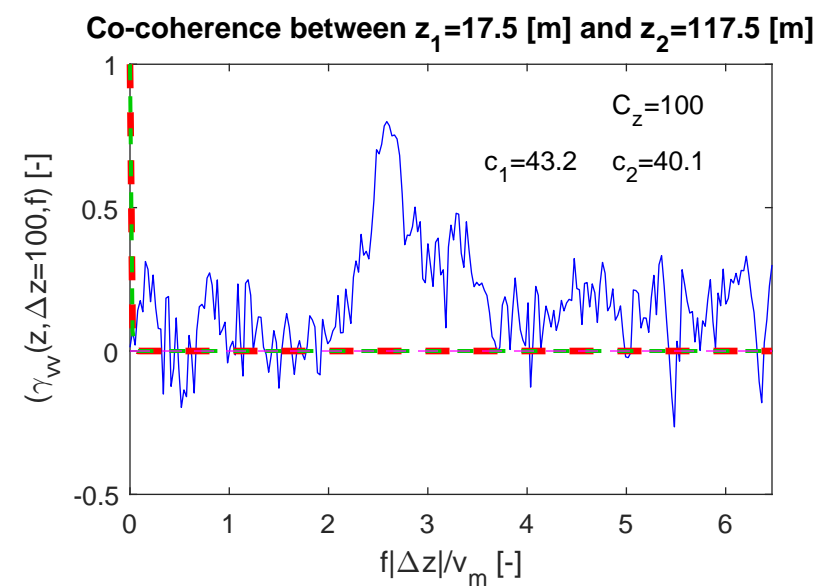
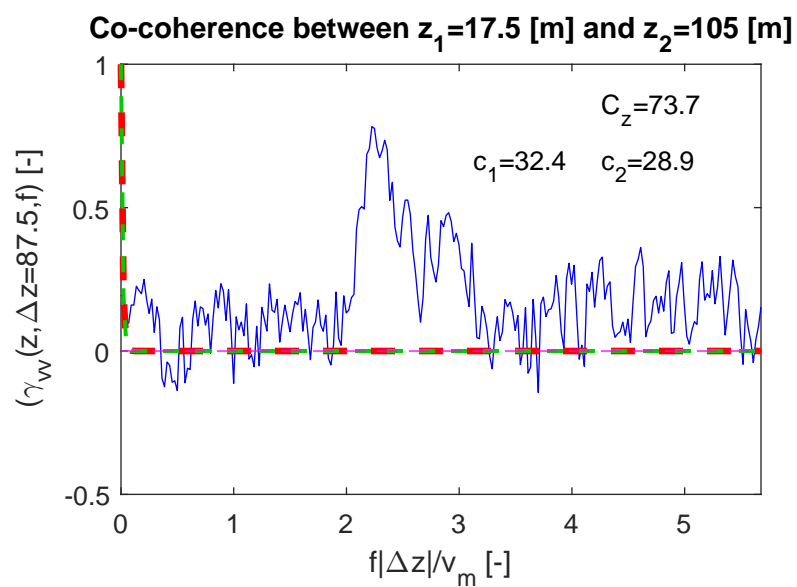
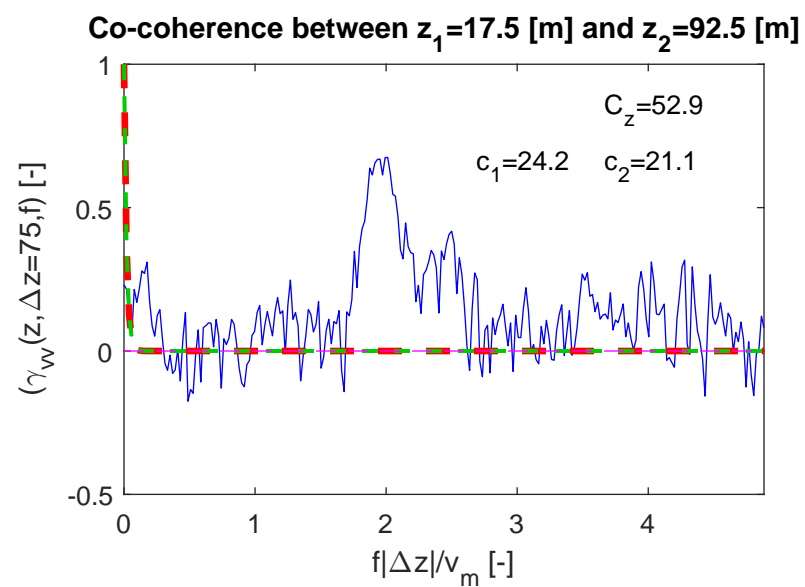
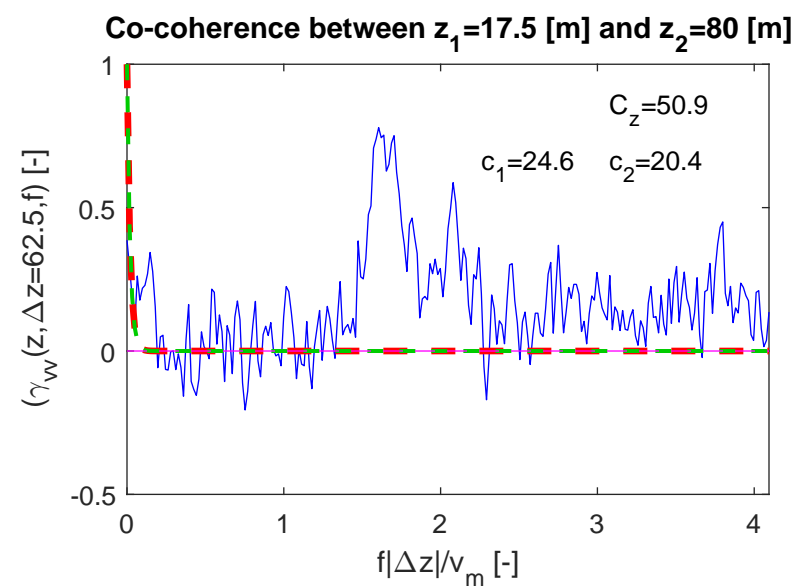
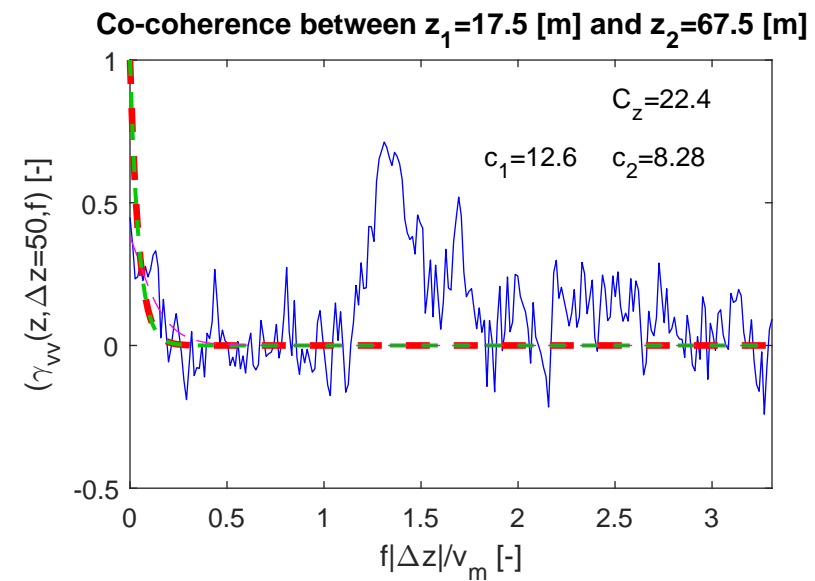
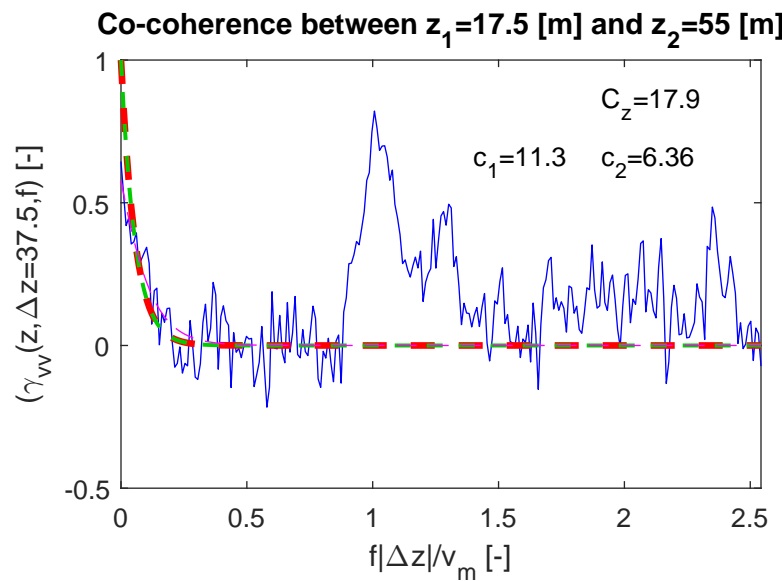
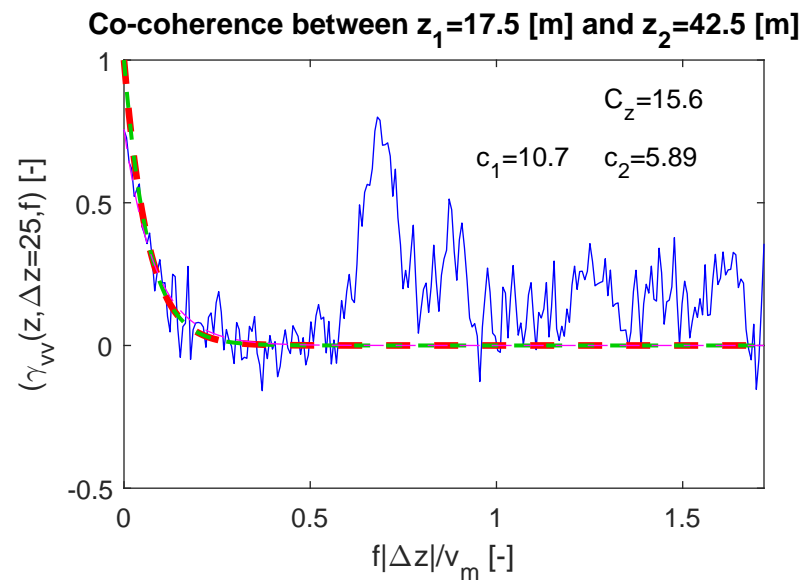
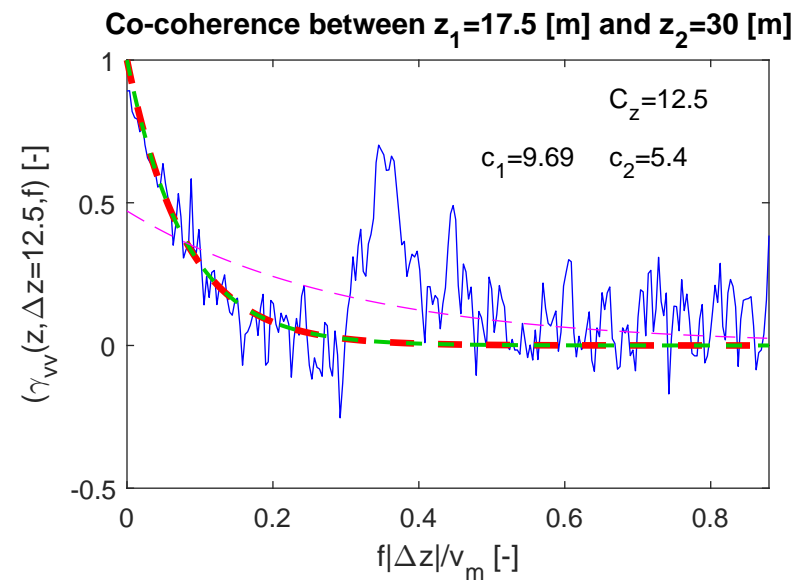


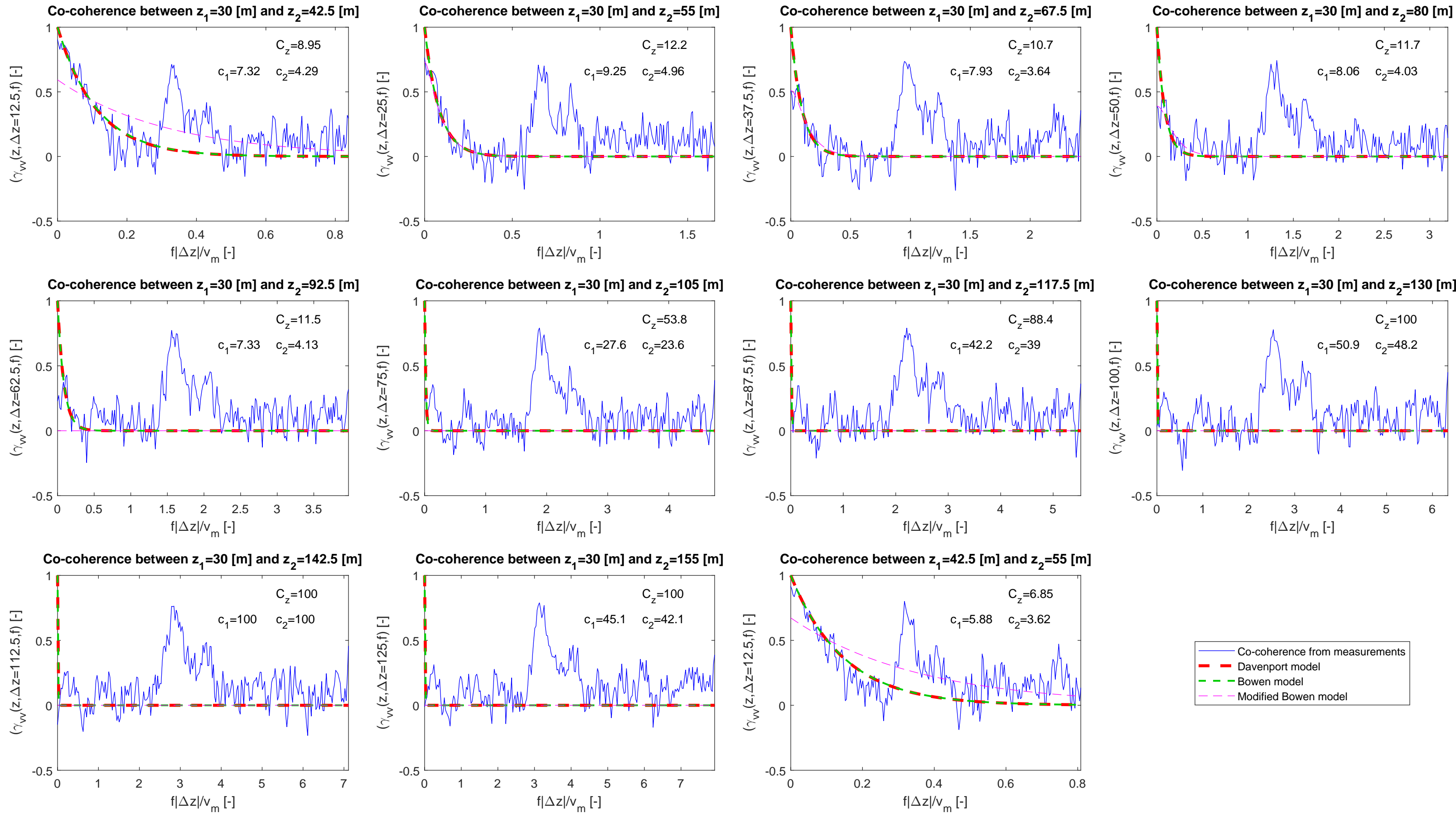
PSD at 142.5 [m] in full scale

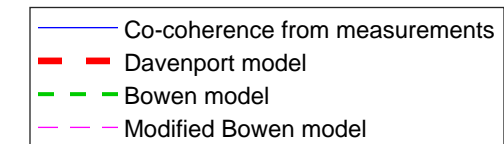
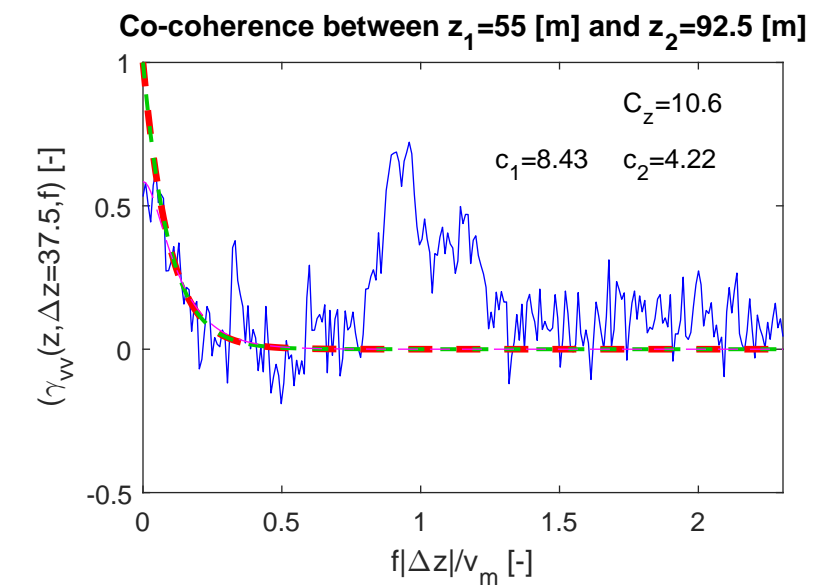
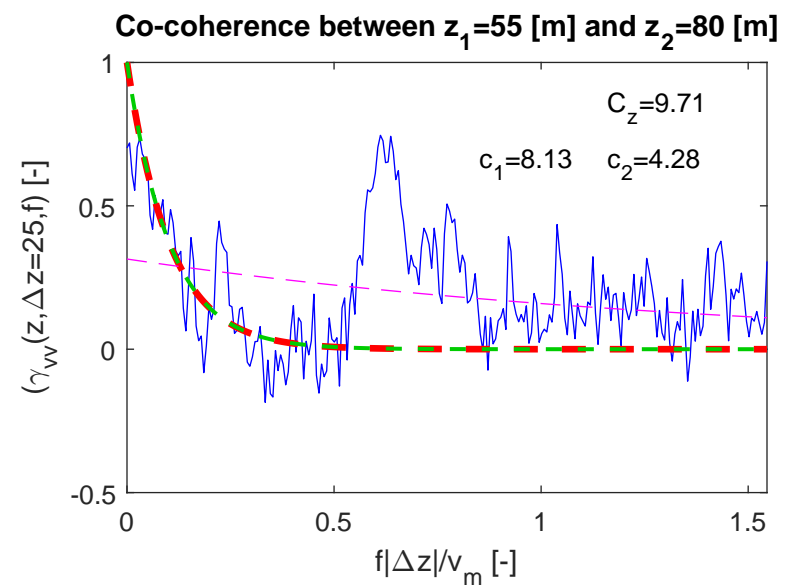
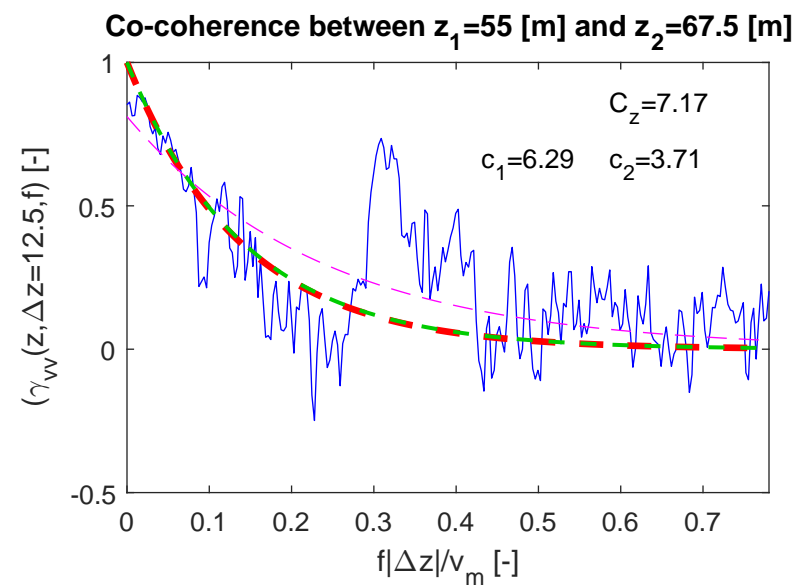
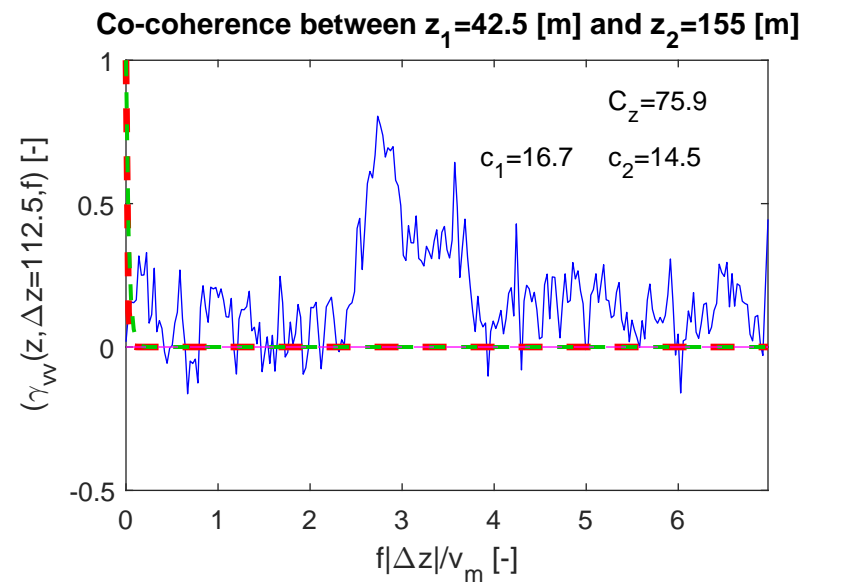
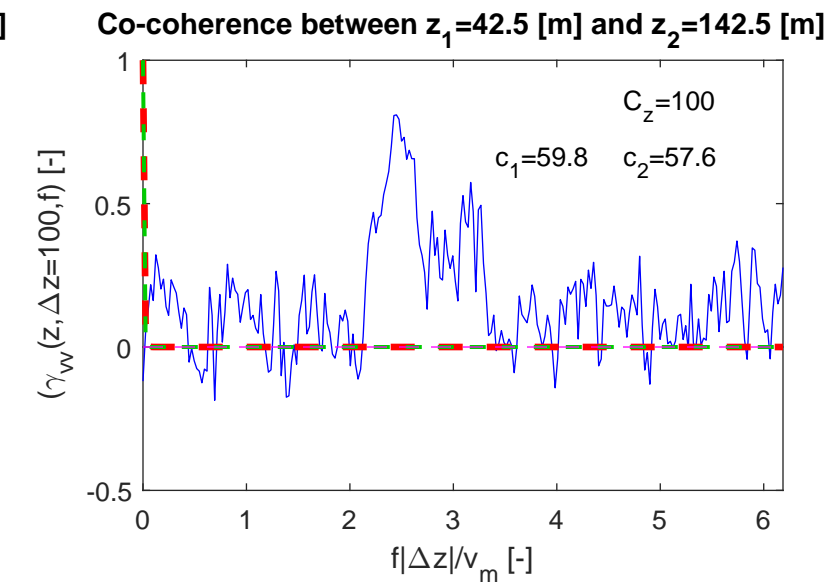
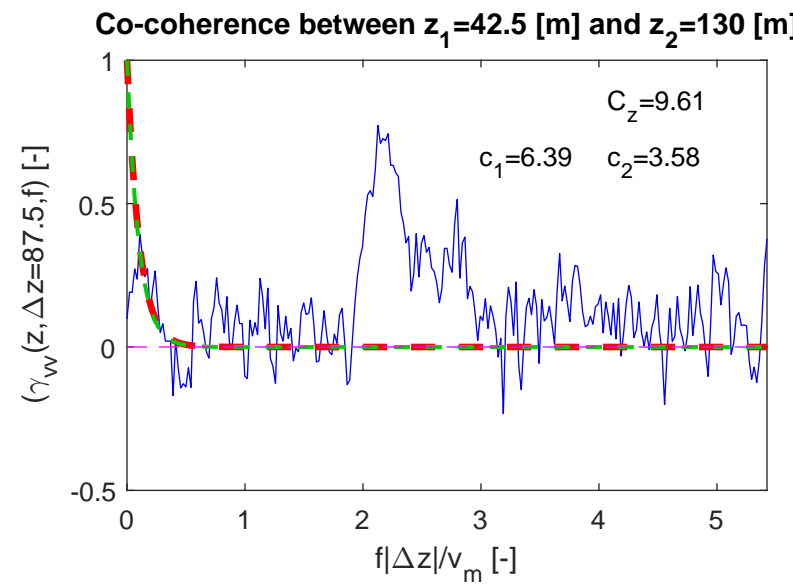
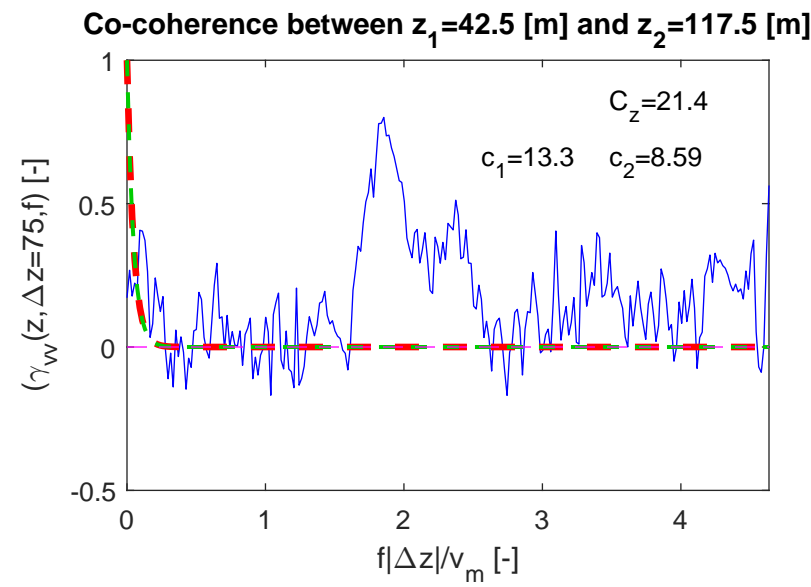
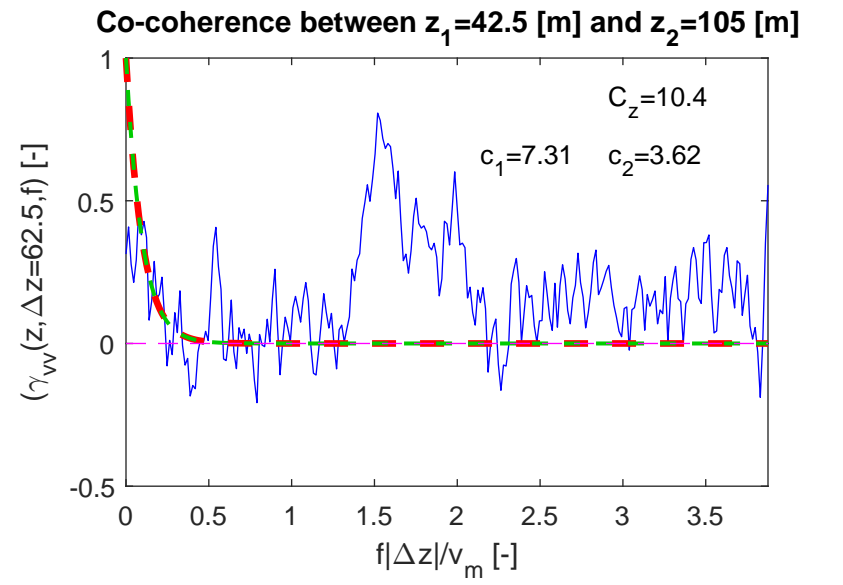
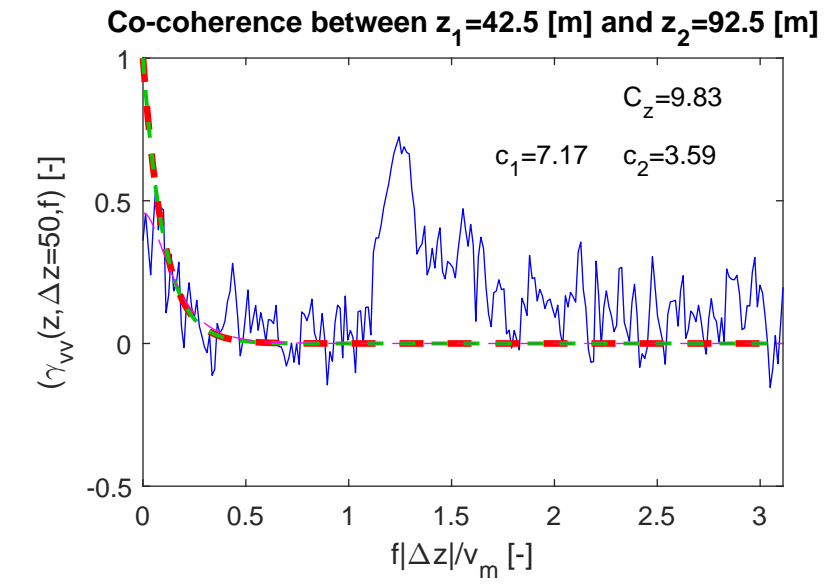
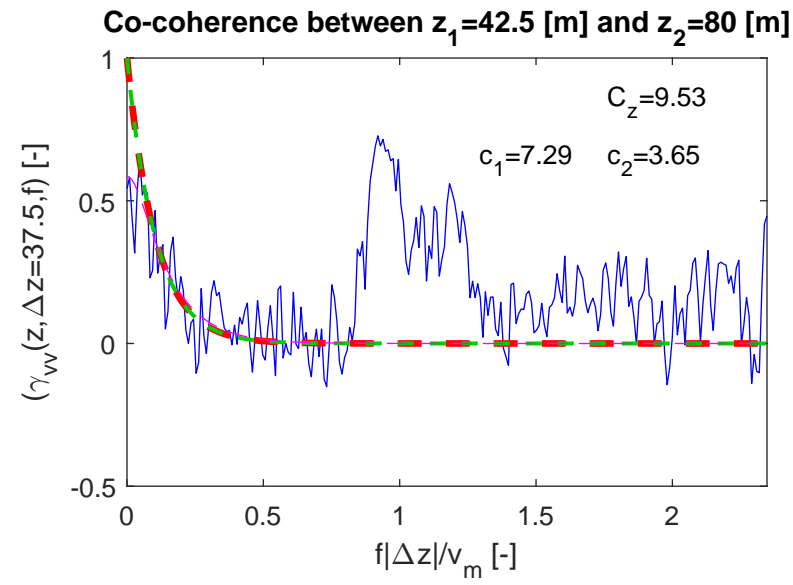
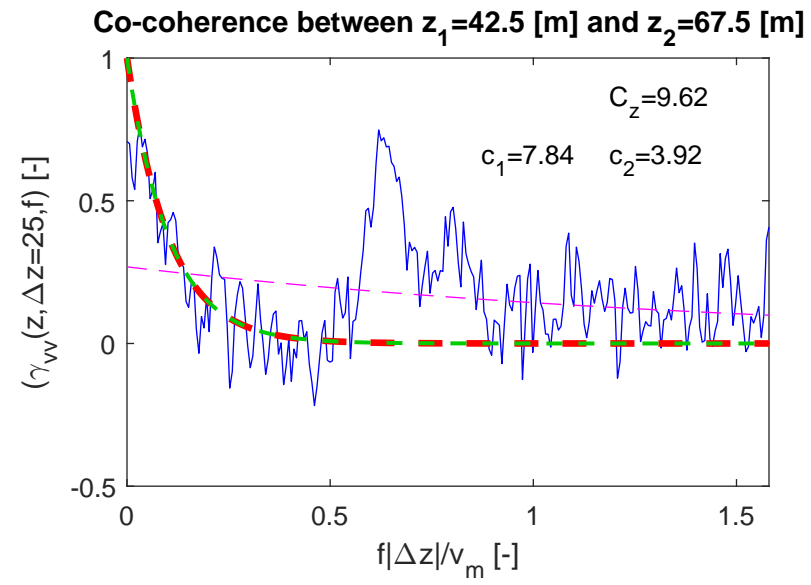


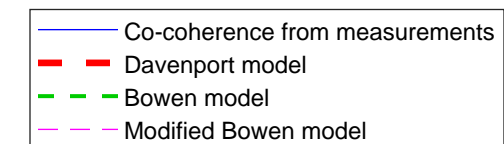
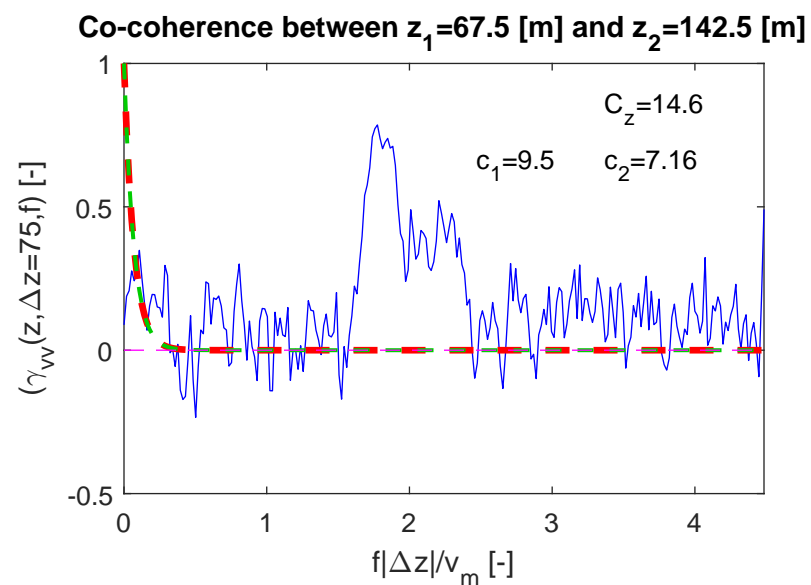
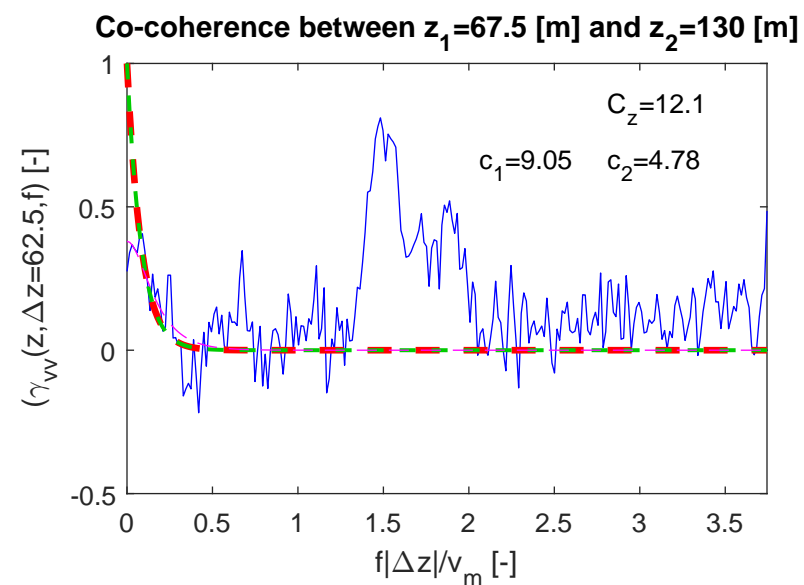
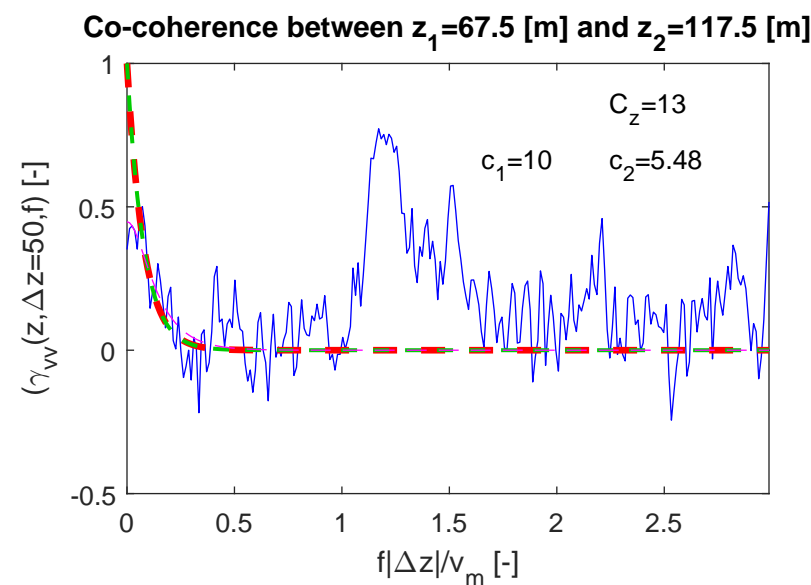
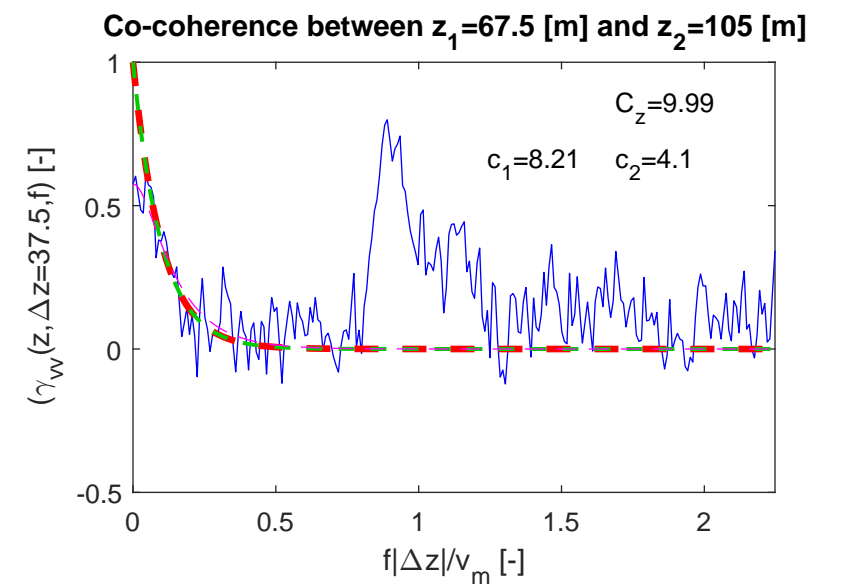
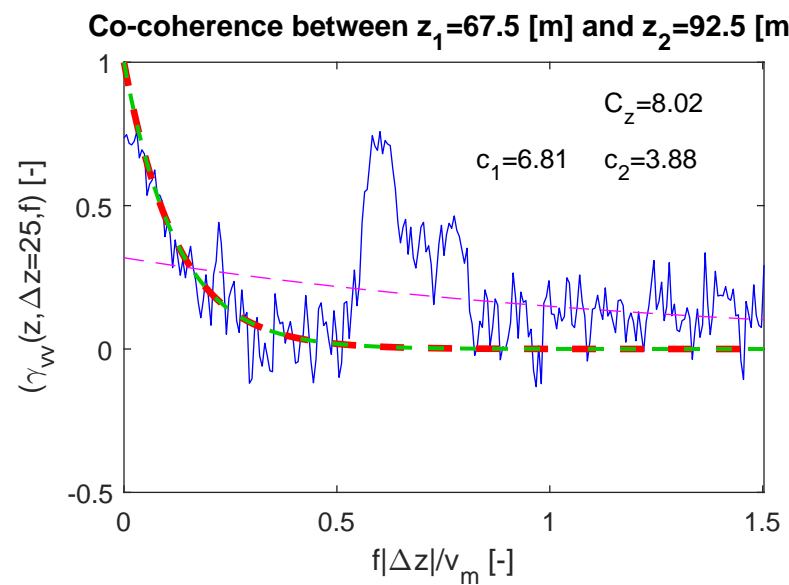
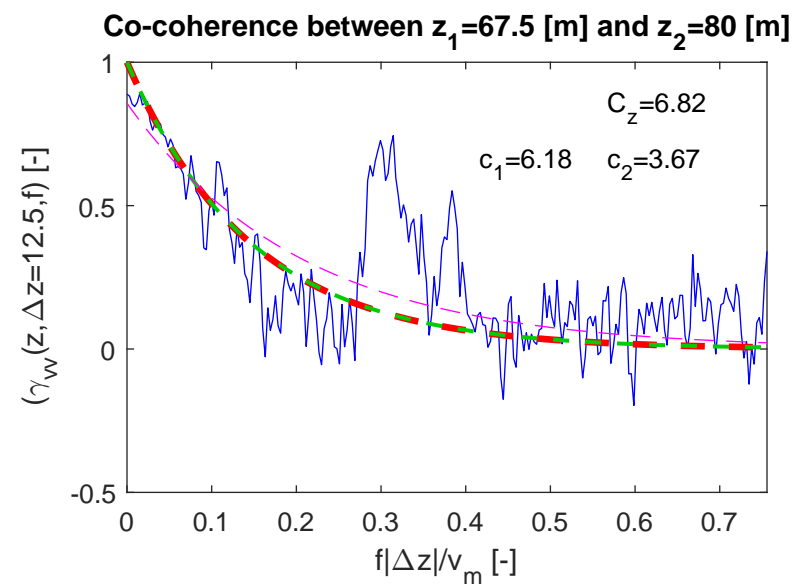
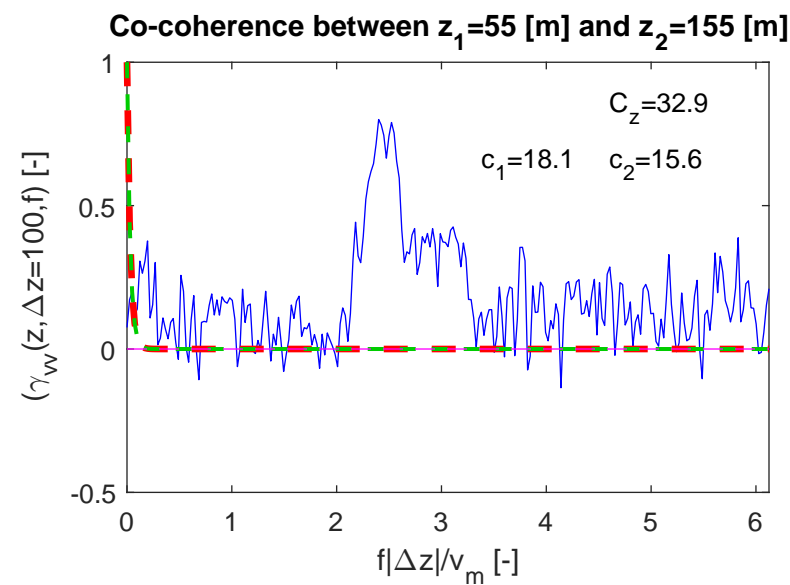
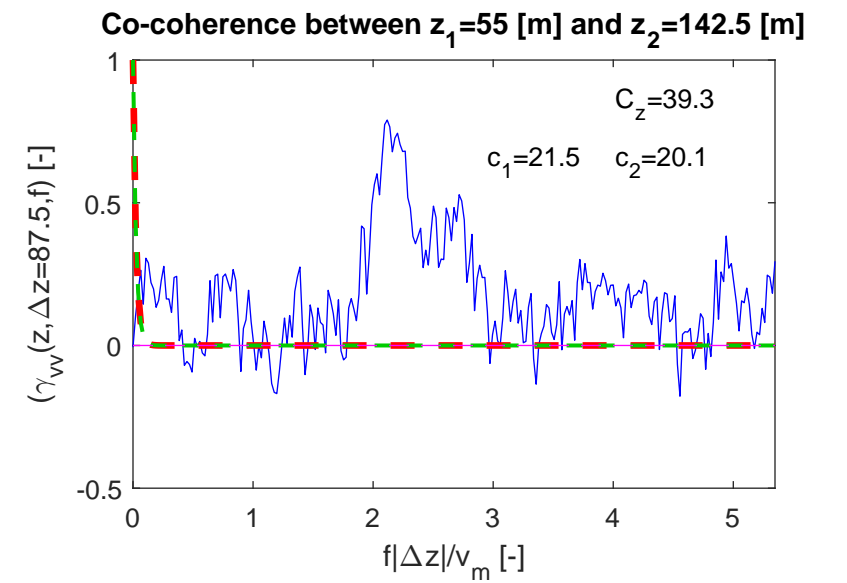
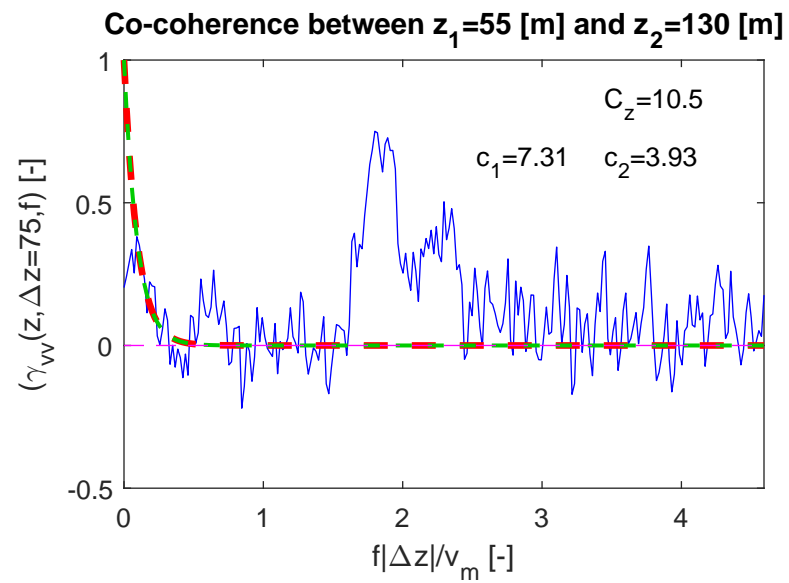
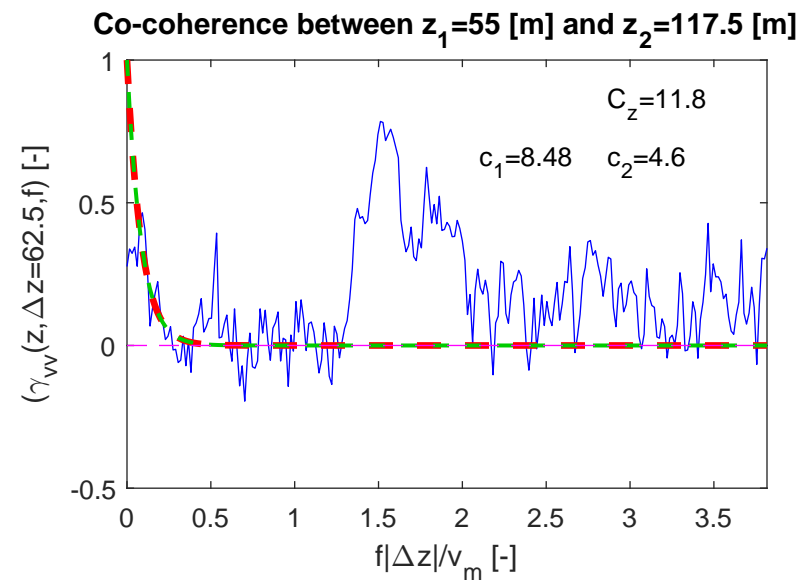
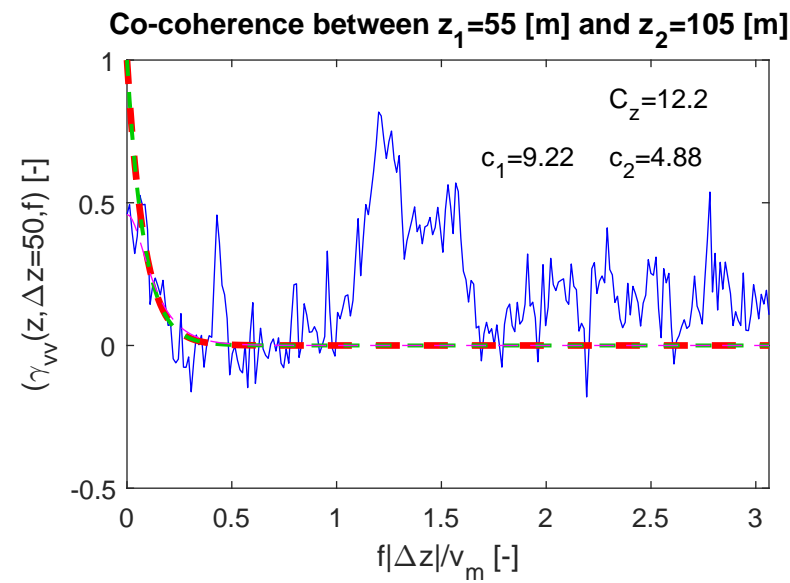
PSD at 155 [m] in full scale

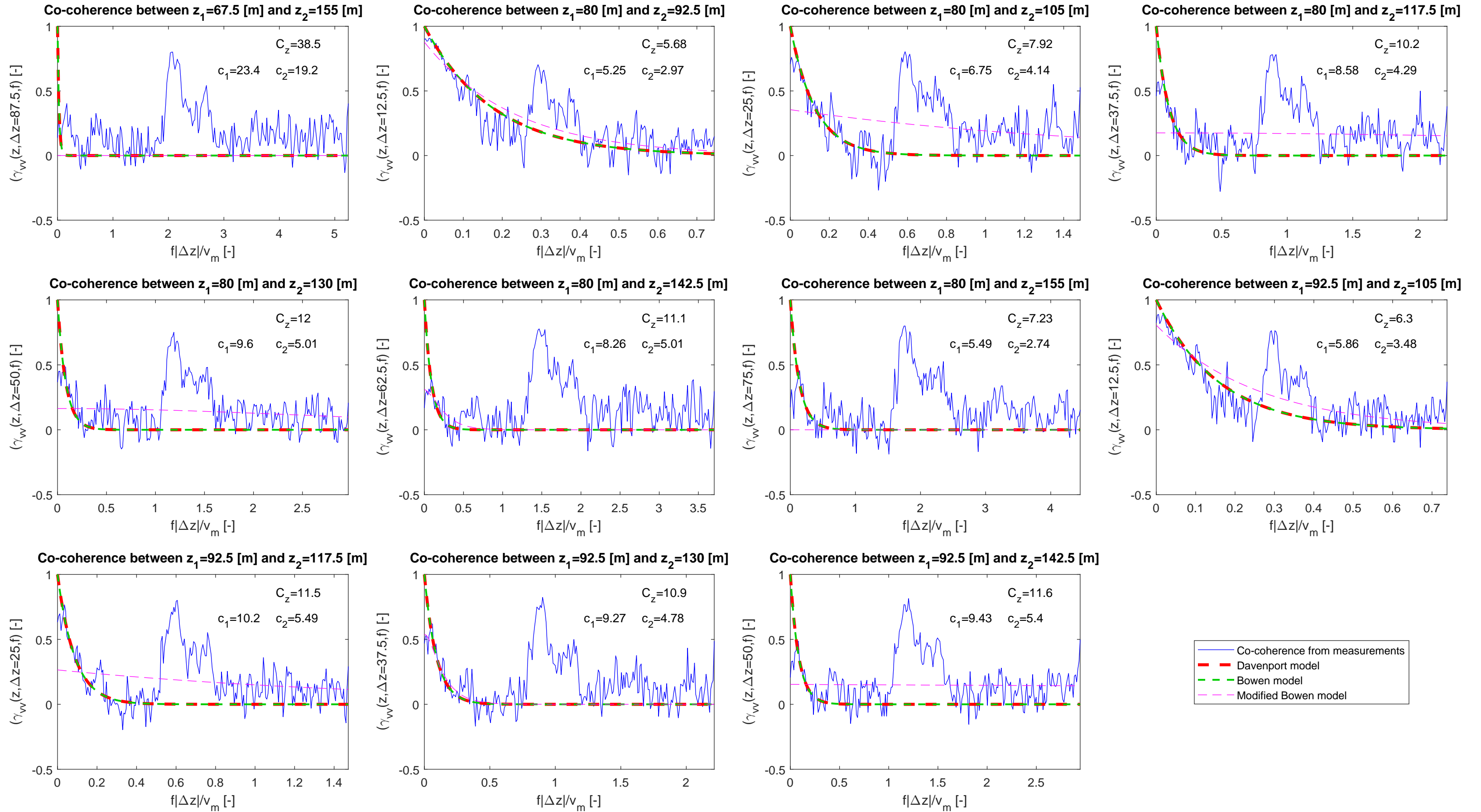


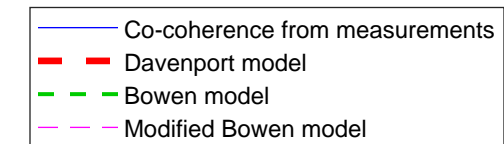
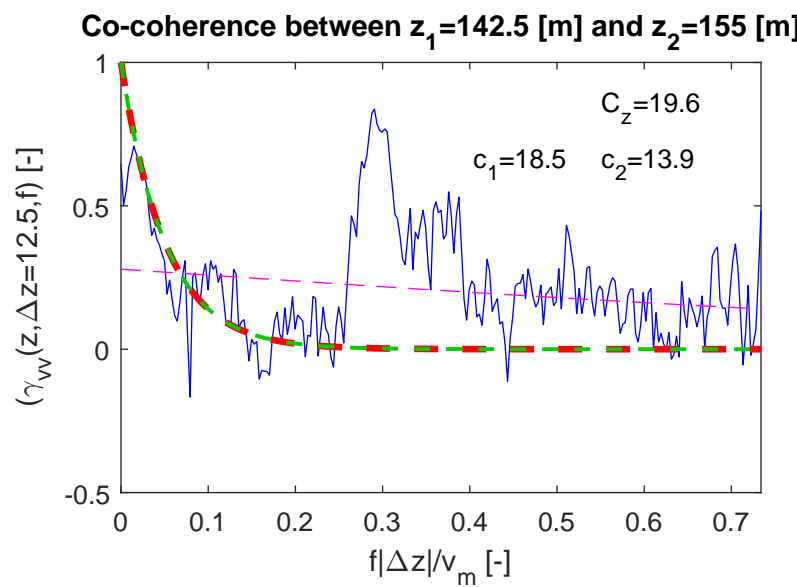
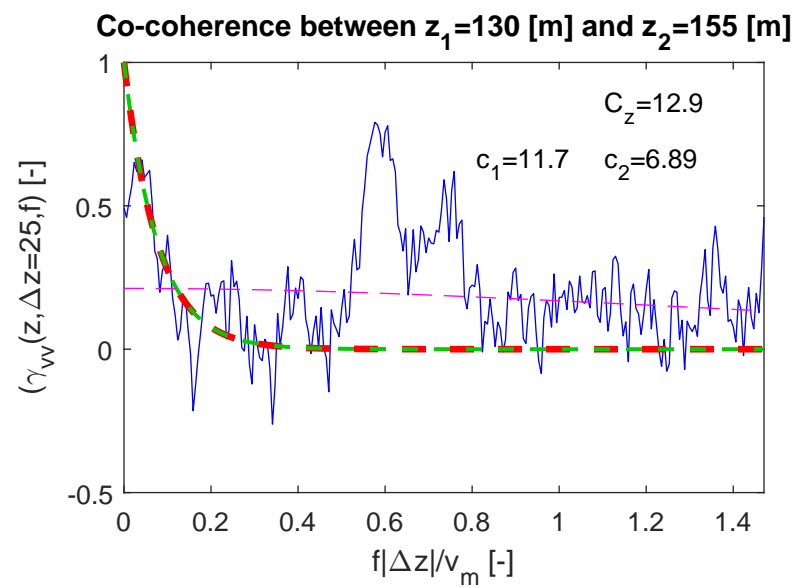
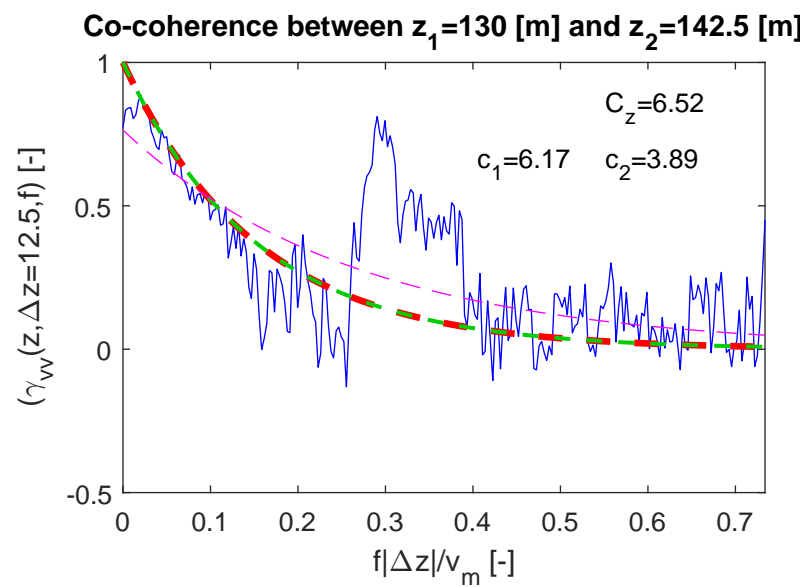
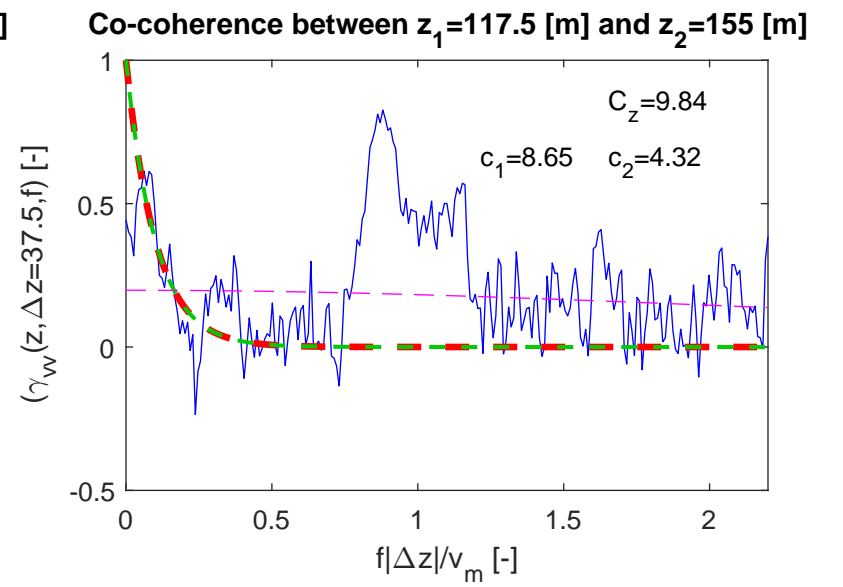
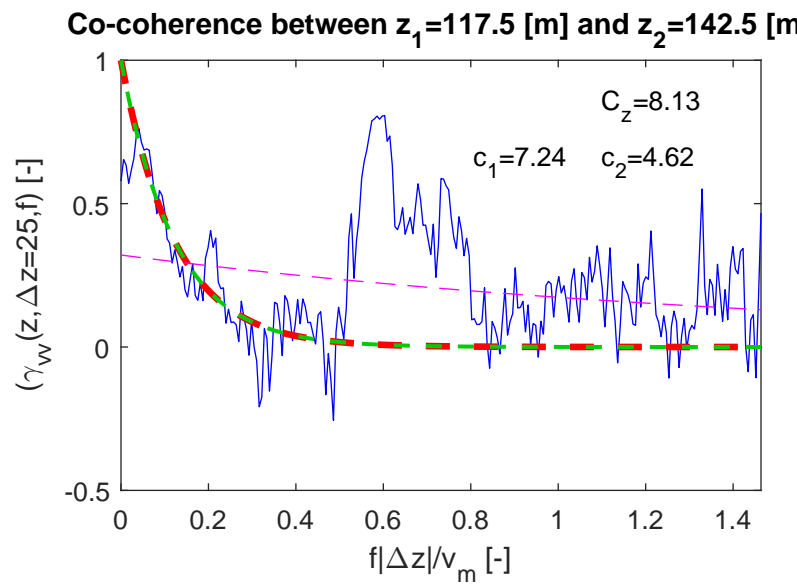
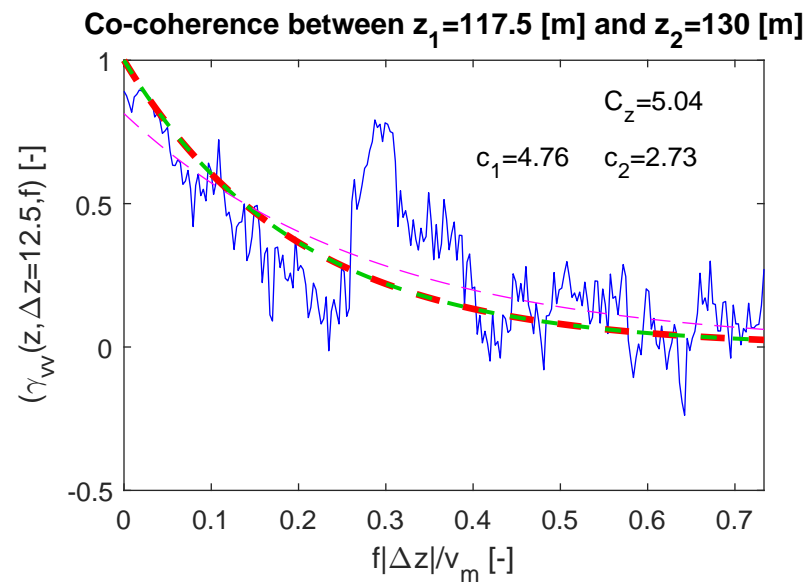
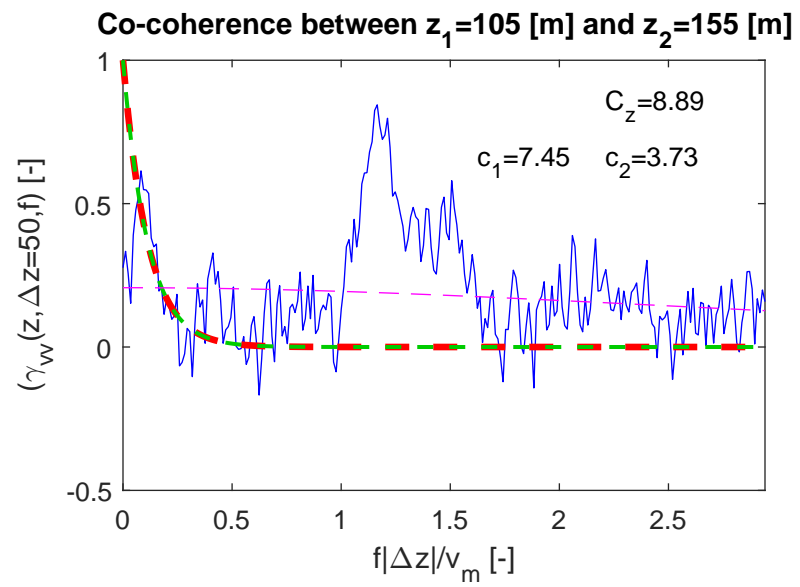
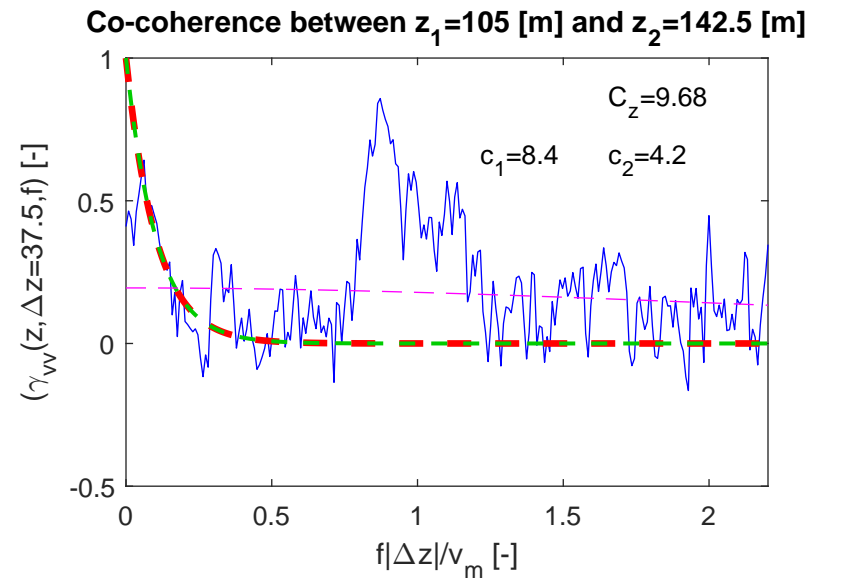
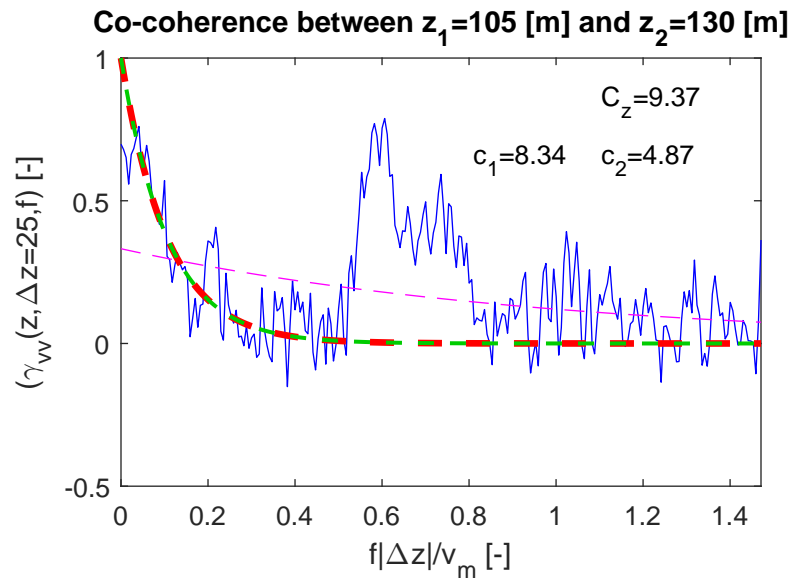
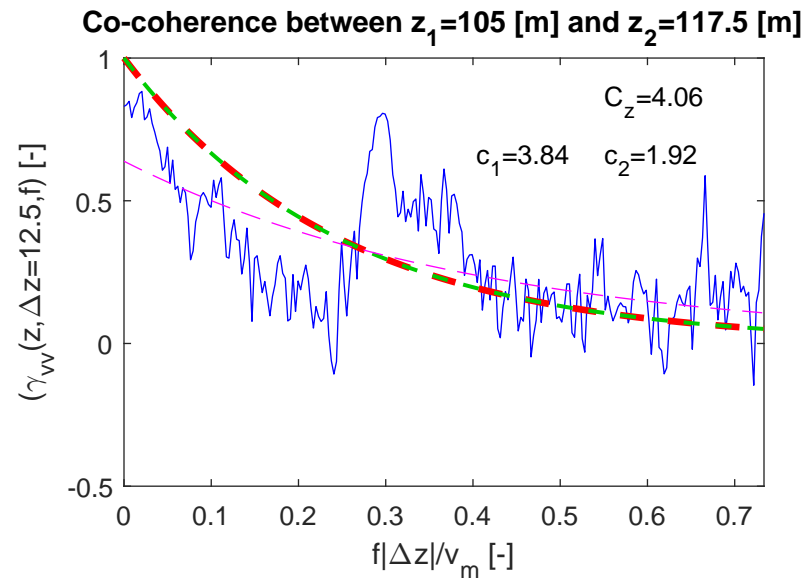
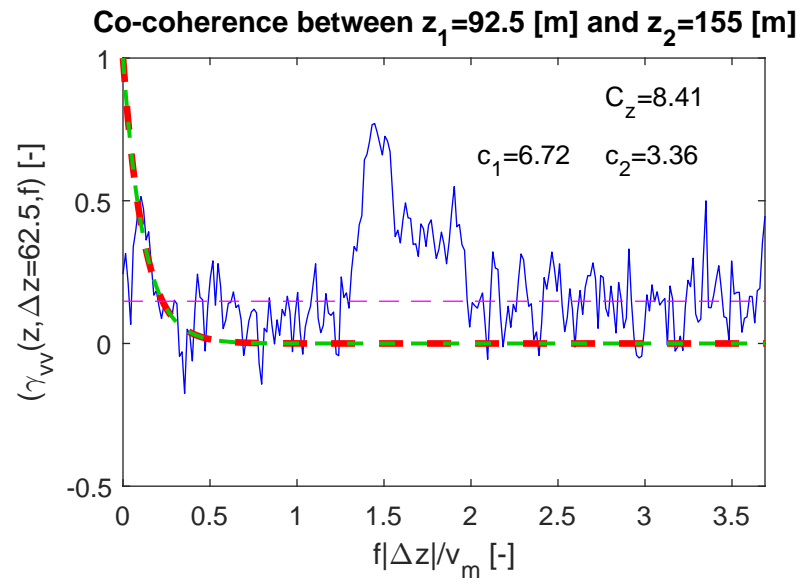




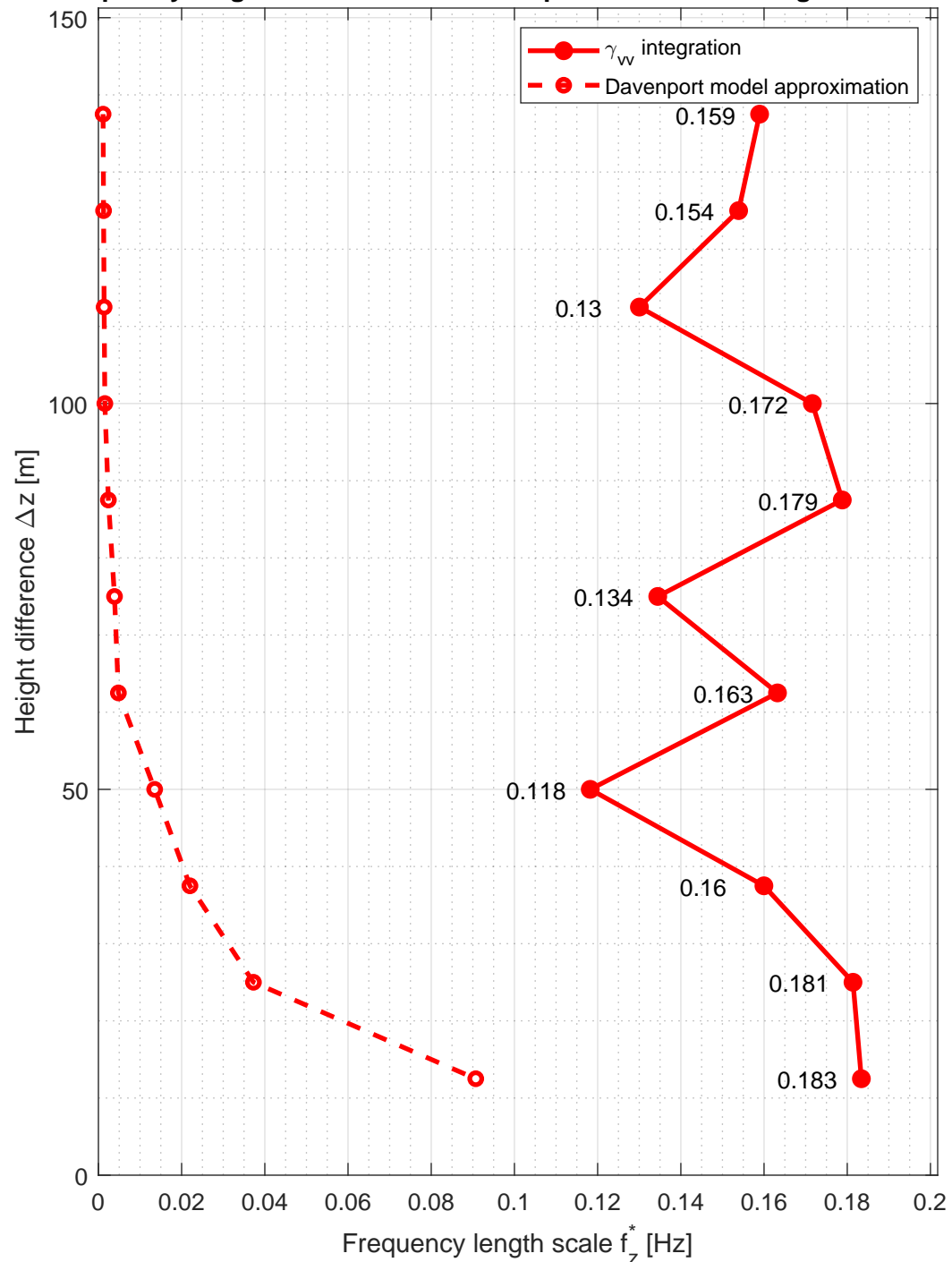




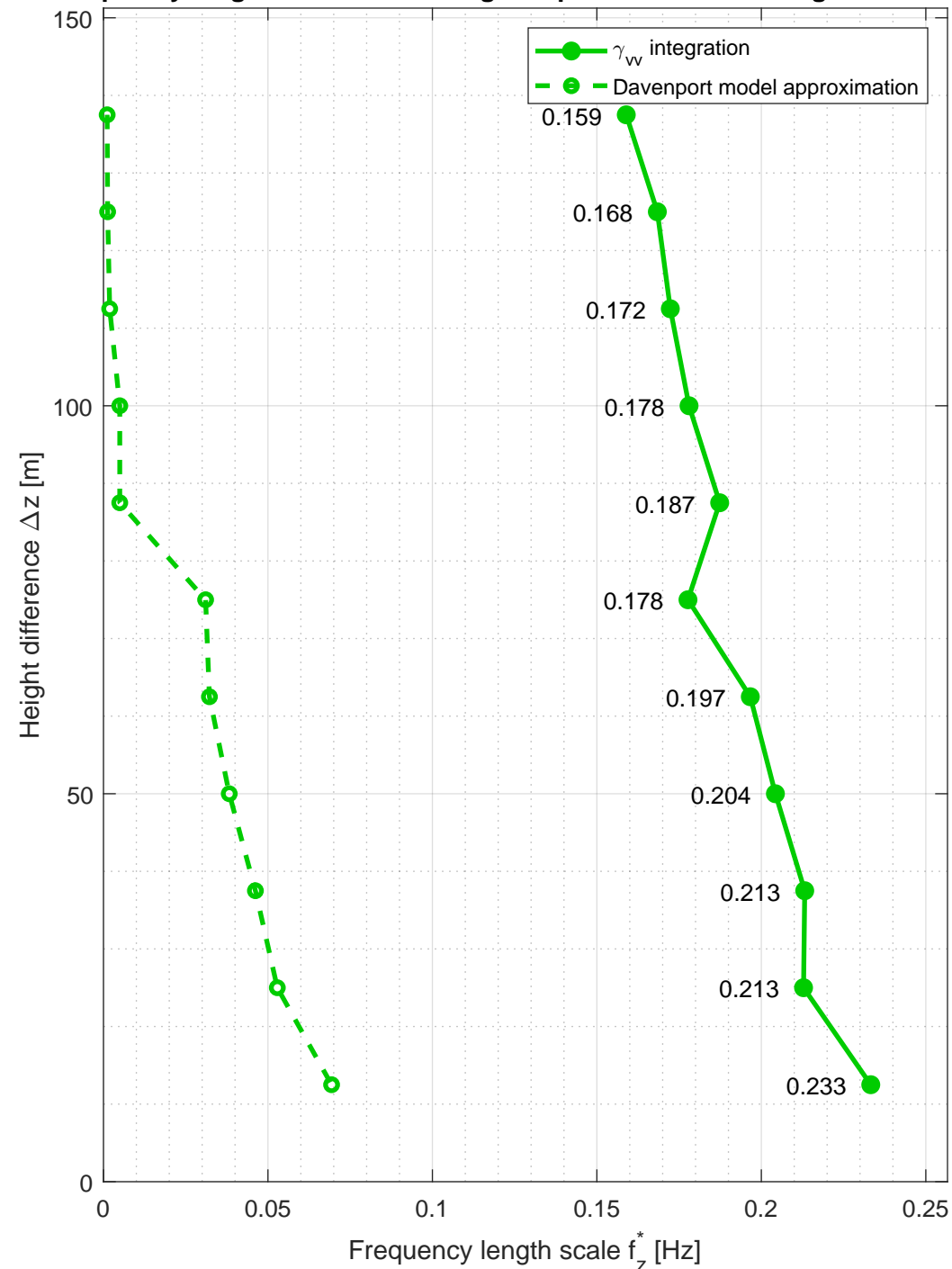




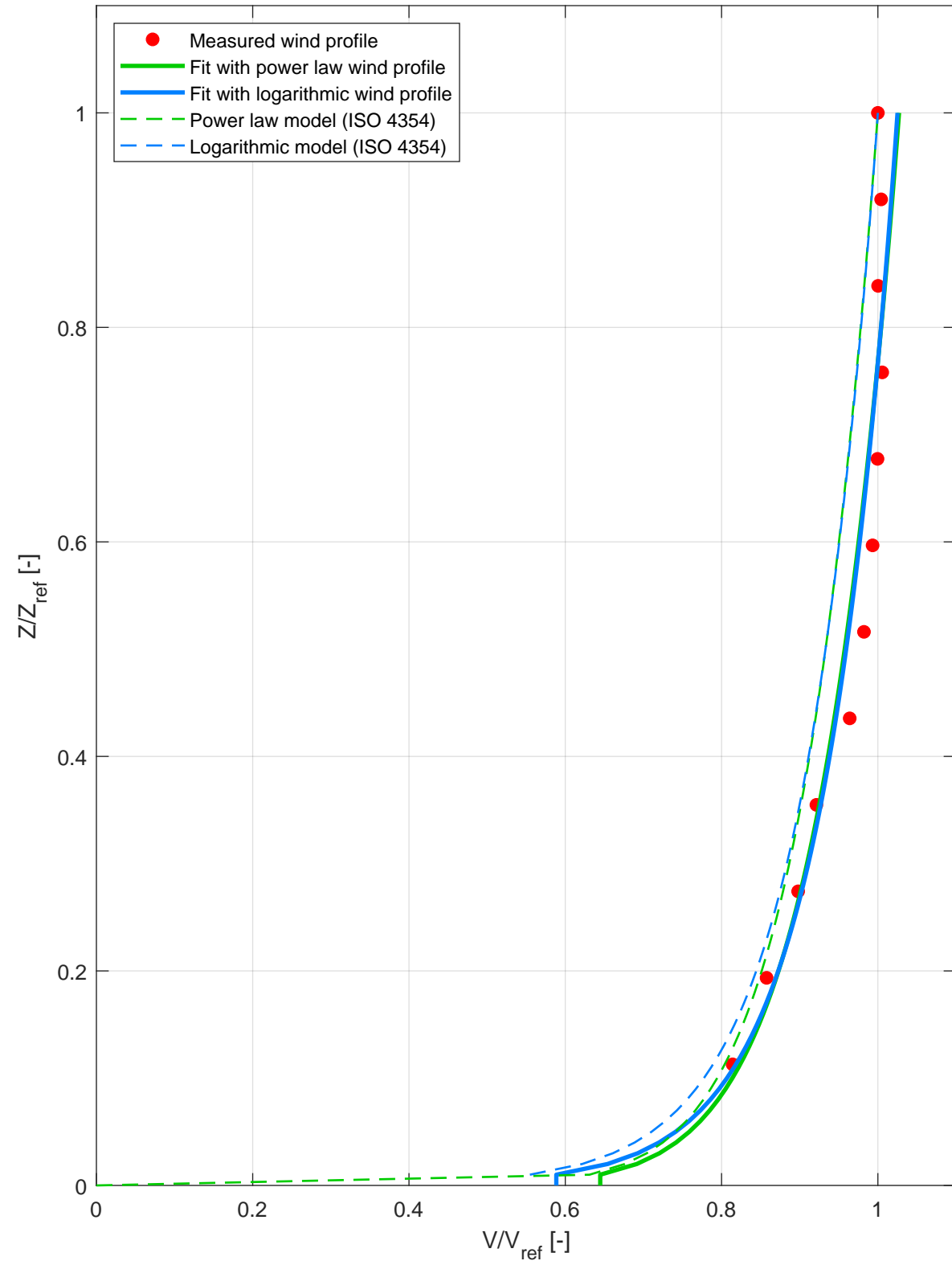
Frequency length scales for the lowest point at different height differences



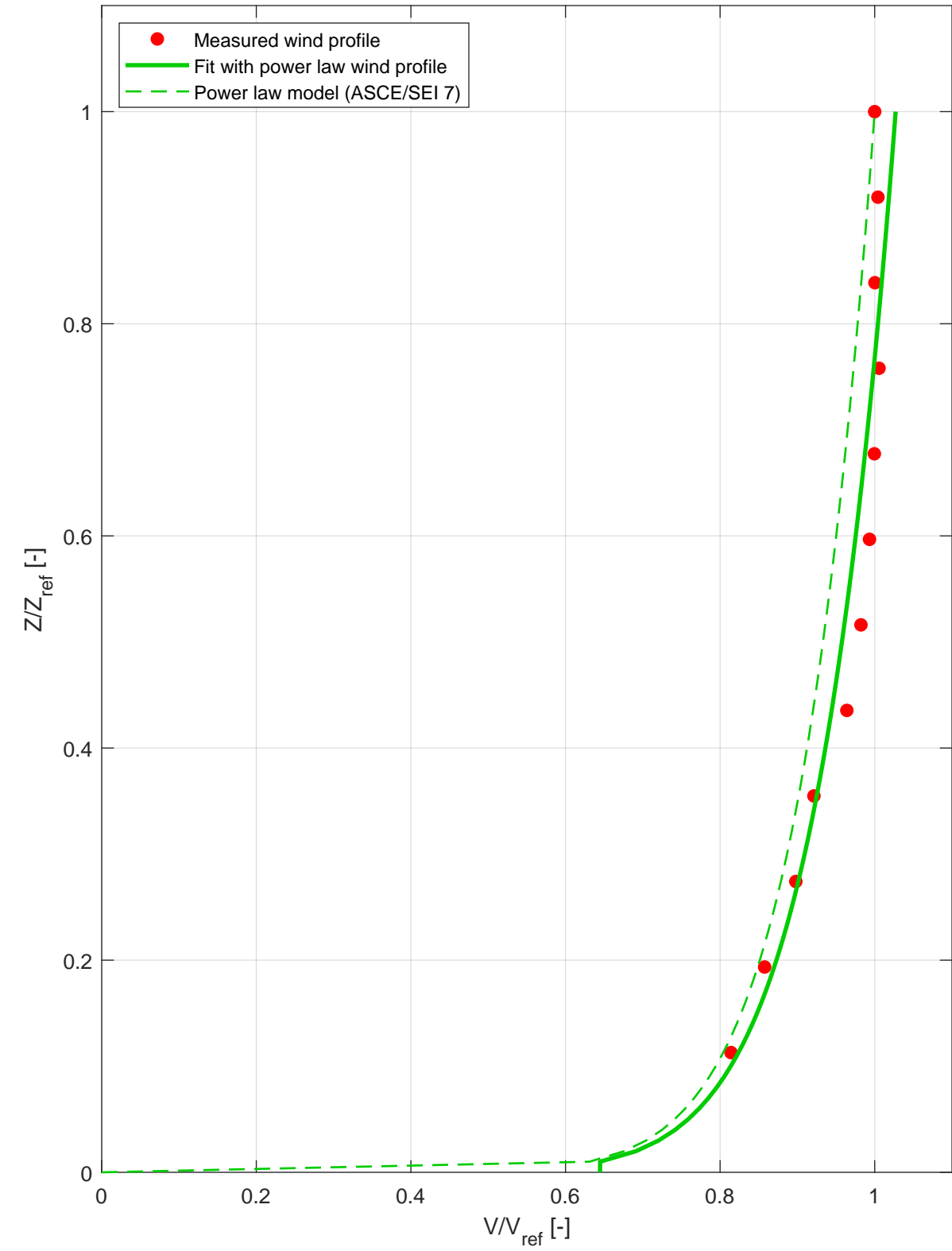
Frequency length scales for the highest point at different height differences

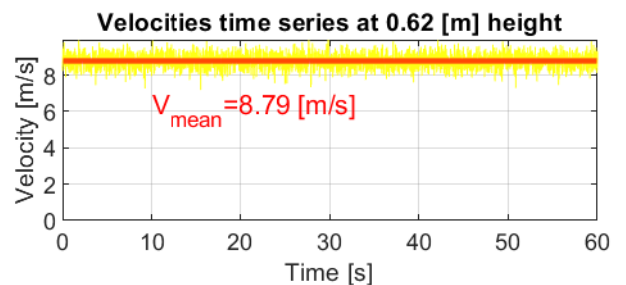
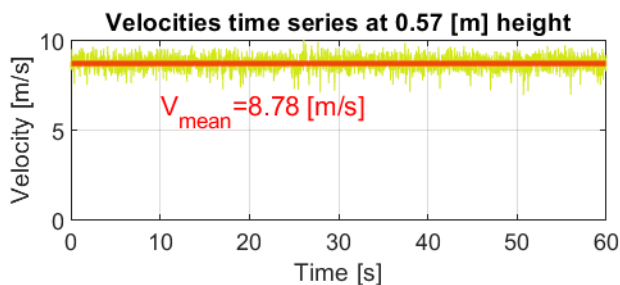
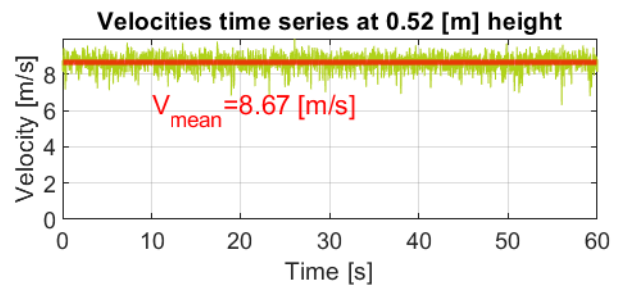
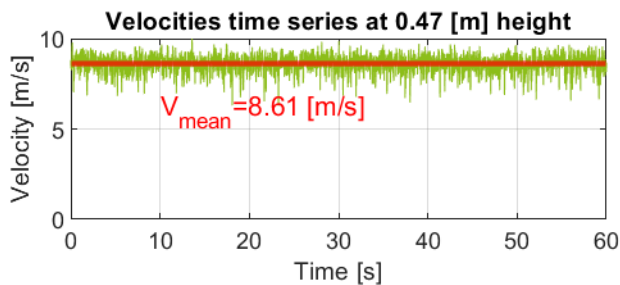
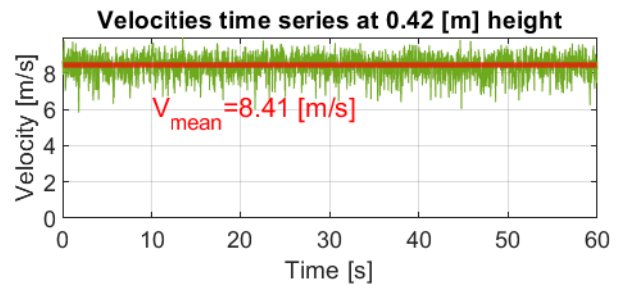
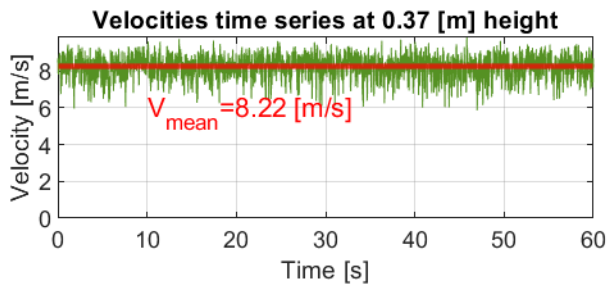
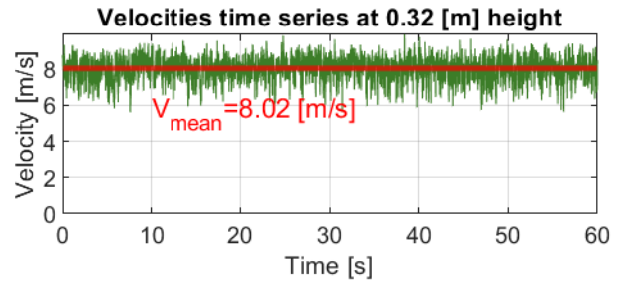
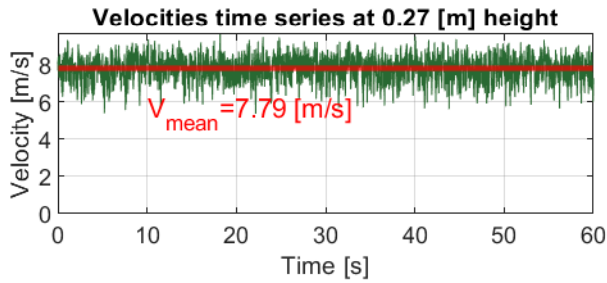
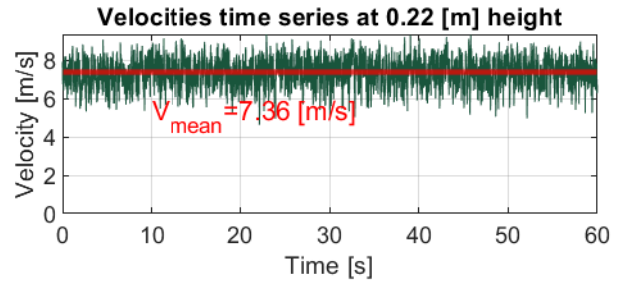
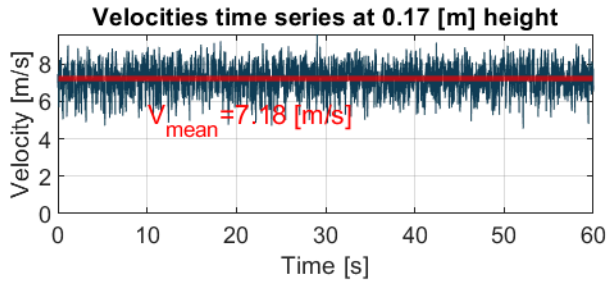
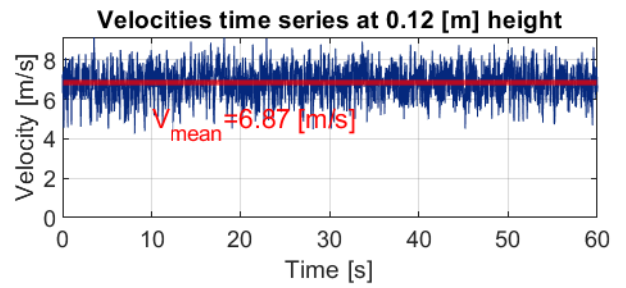
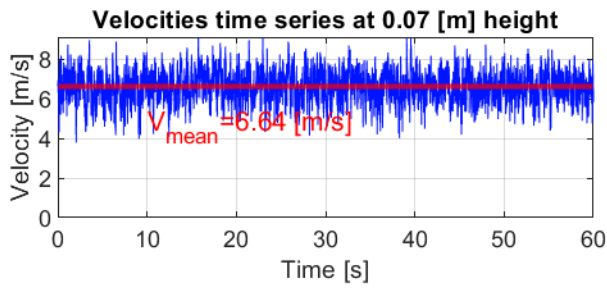


Mean wind velocity profile - comparison with ISO 4354

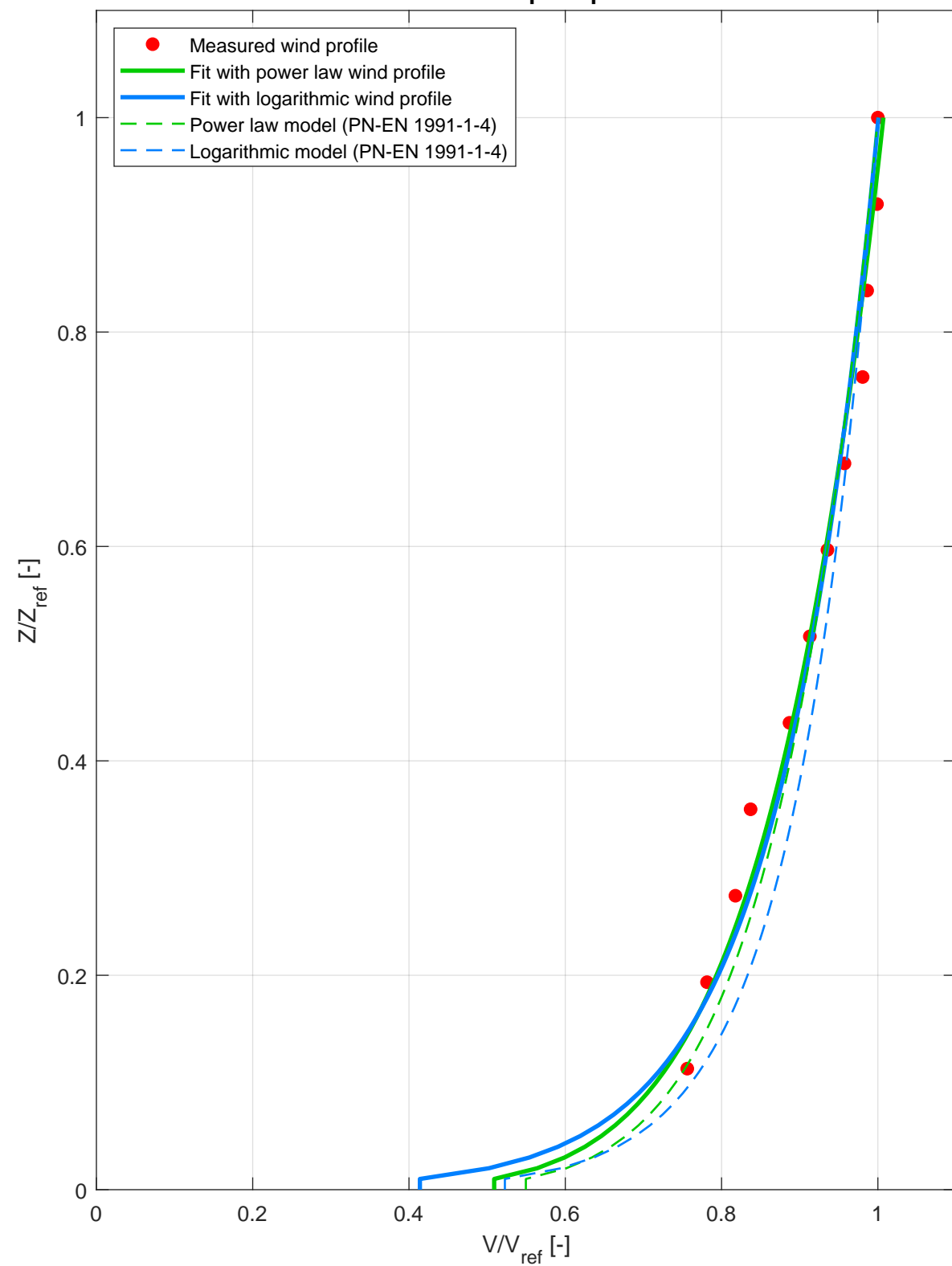


Mean wind velocity profile - comparison with ASCE/SEI 7

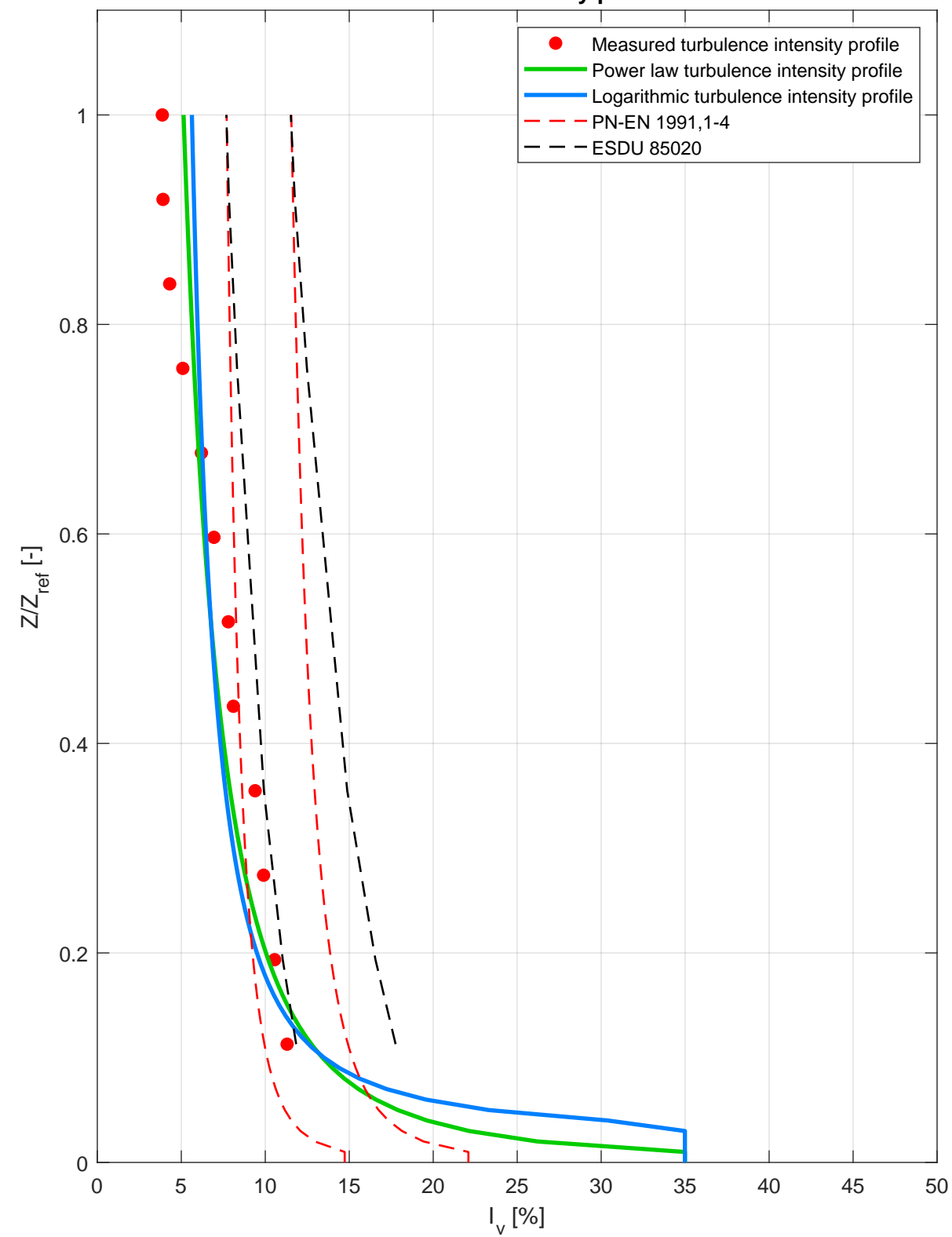




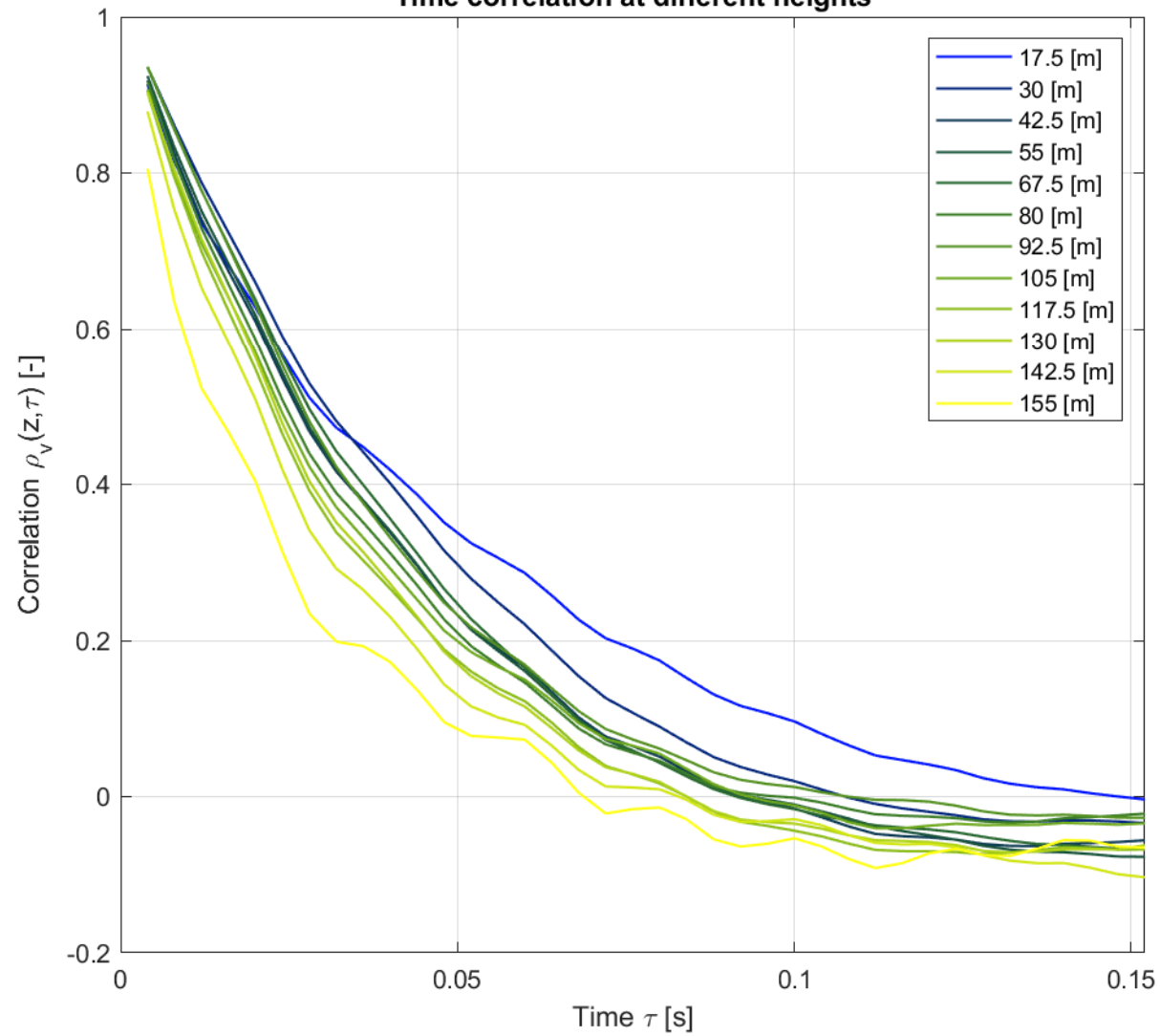
Mean wind speed profile



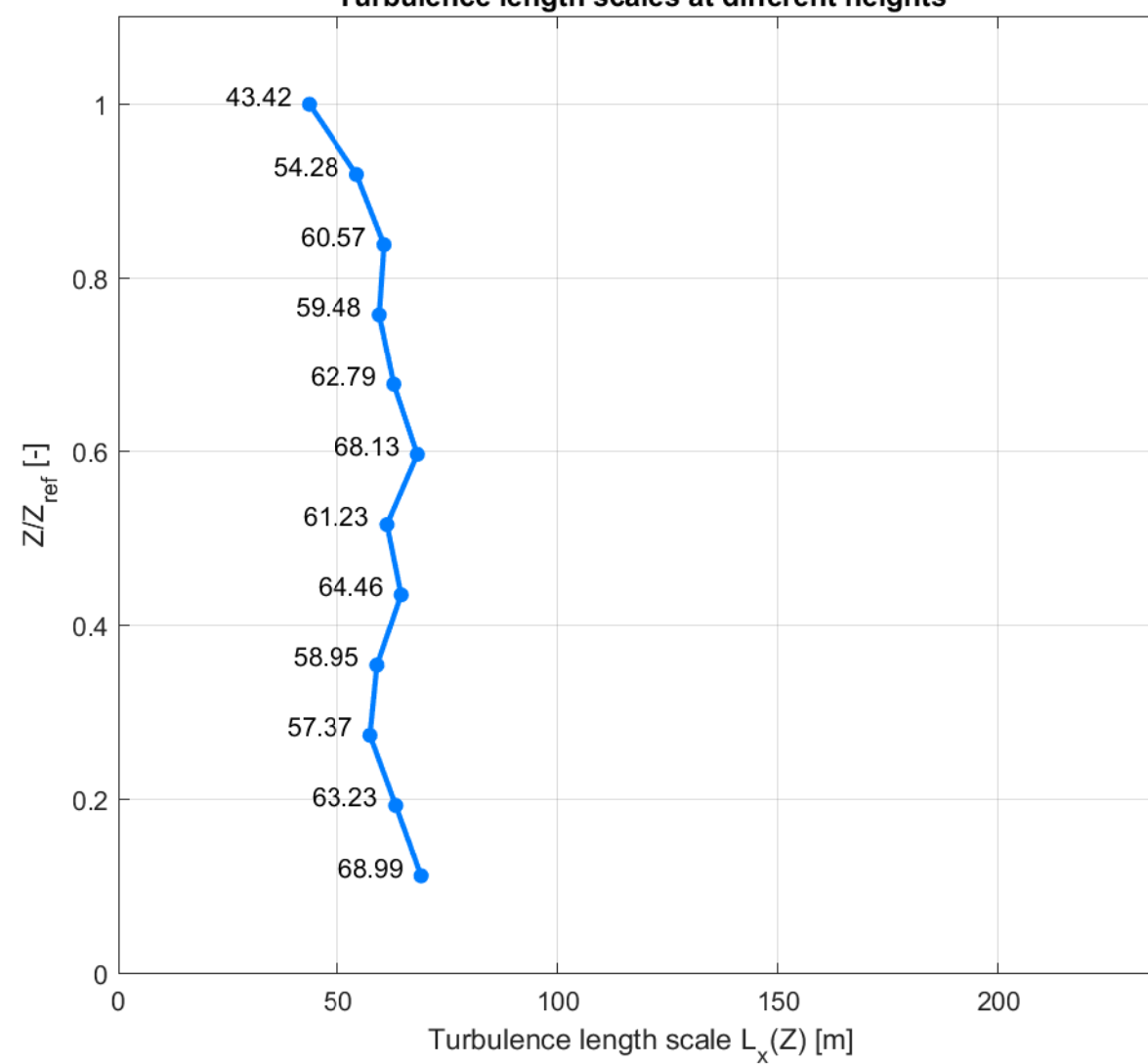
Turbulence intensity profile



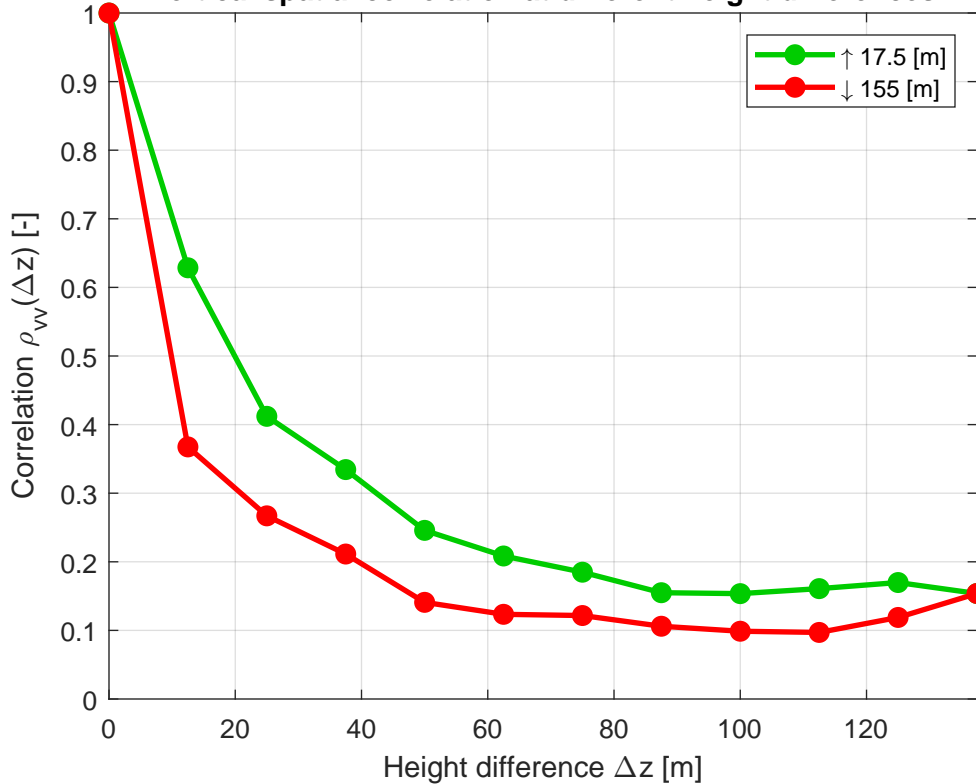
Time correlation at different heights



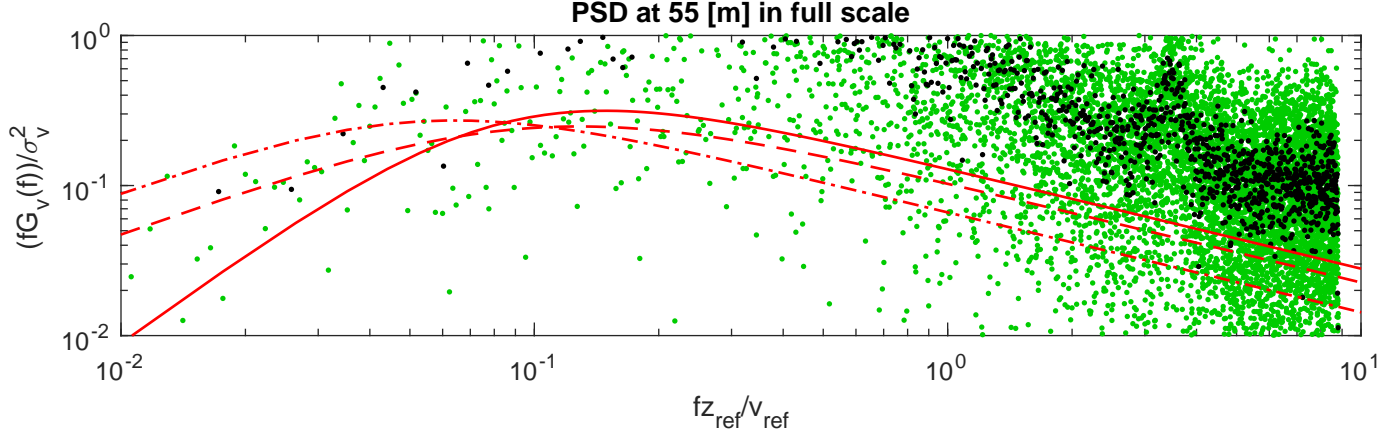
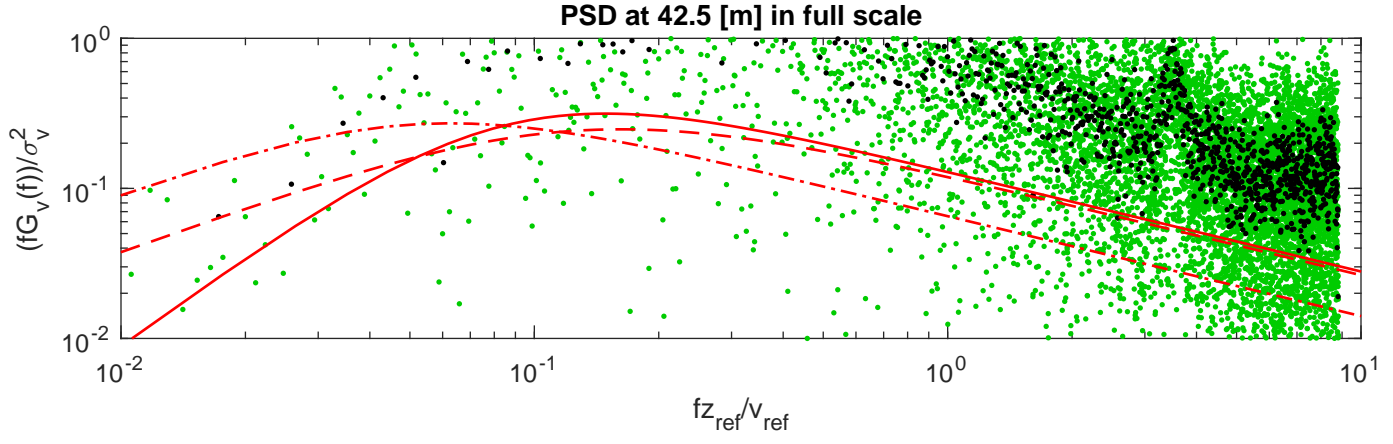
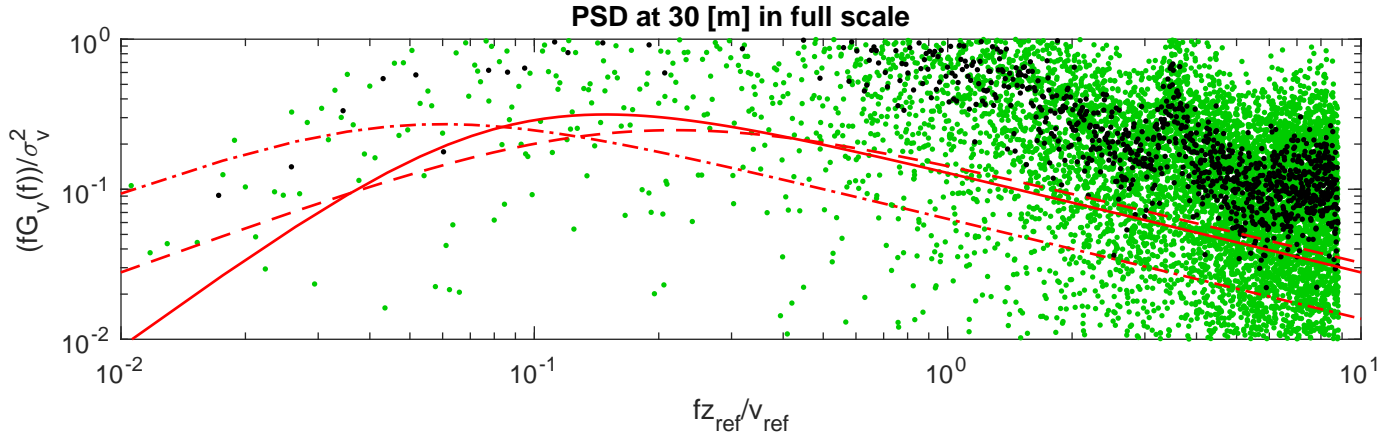
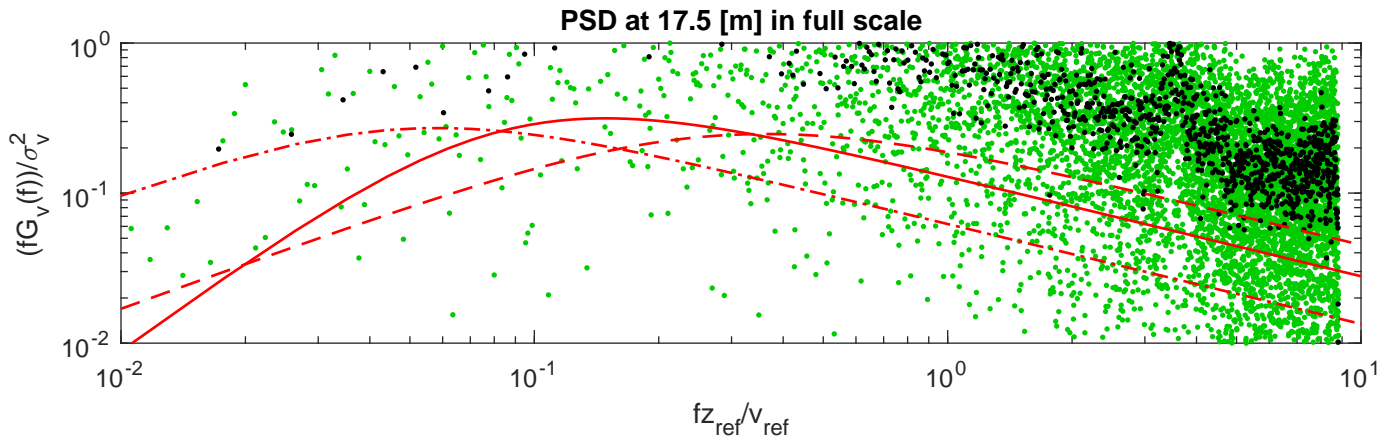
Turbulence length scales at different heights



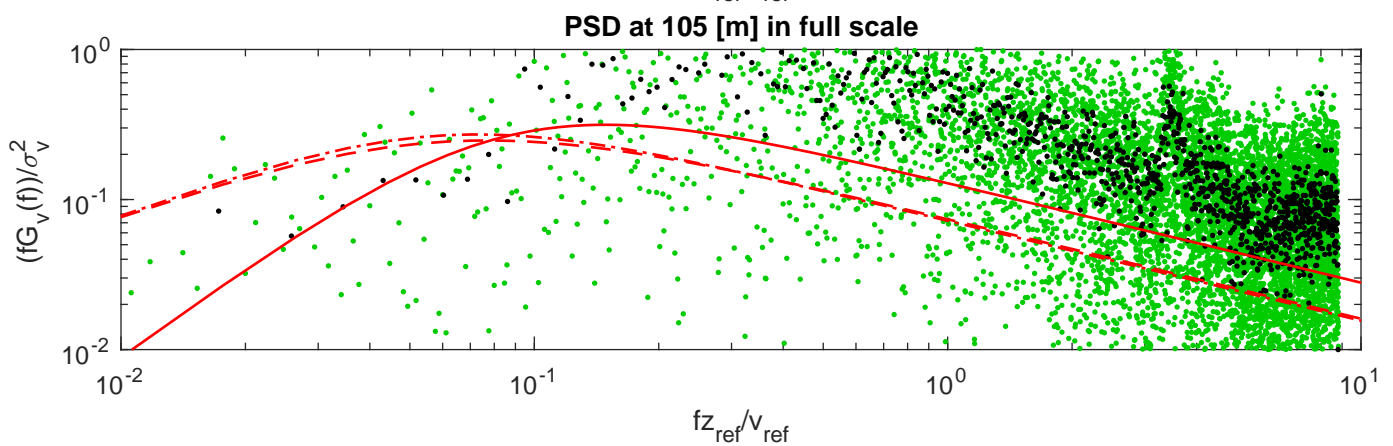
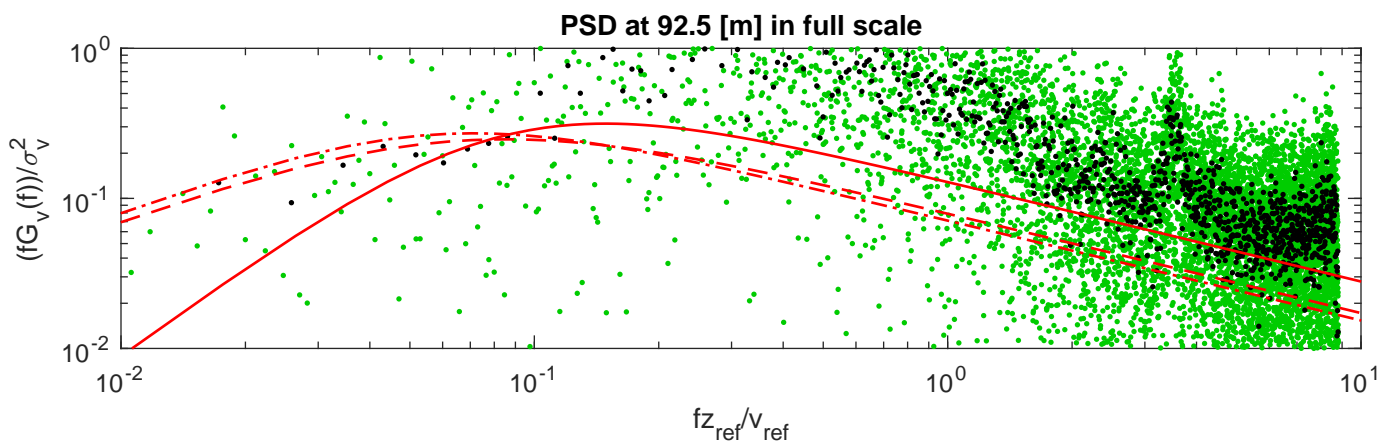
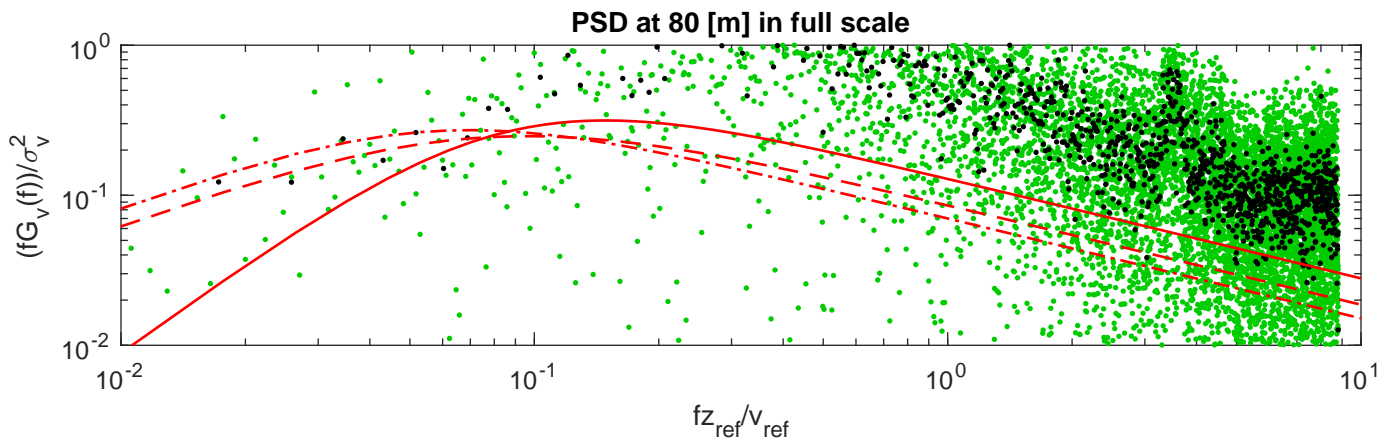
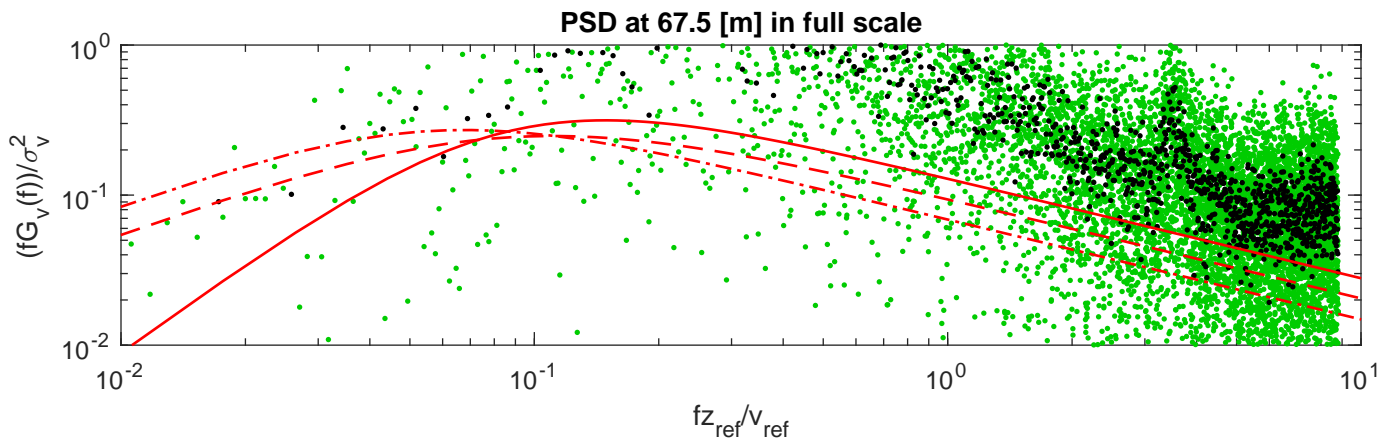
Vertical spatial correlation at different height differences



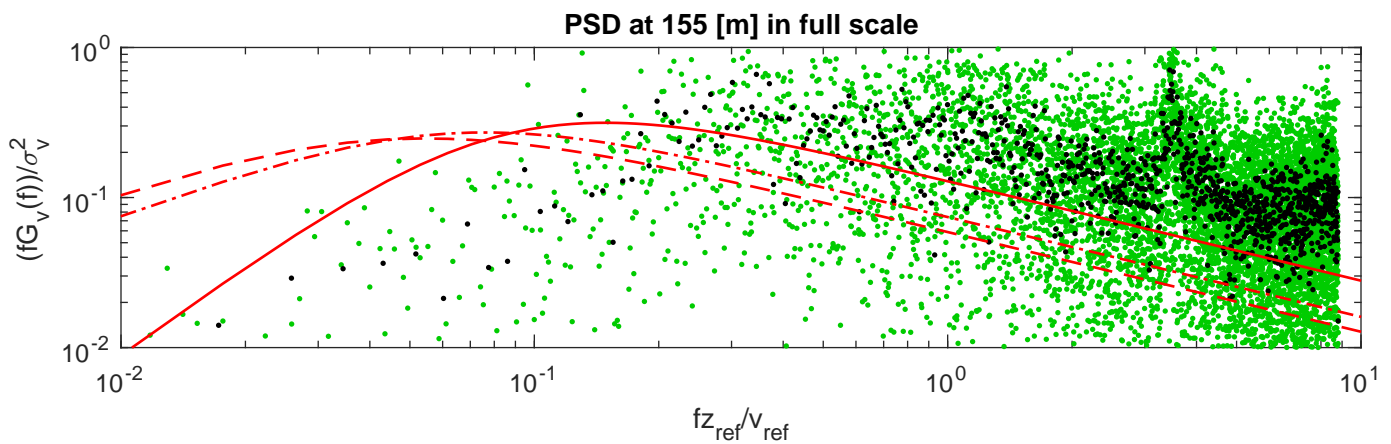
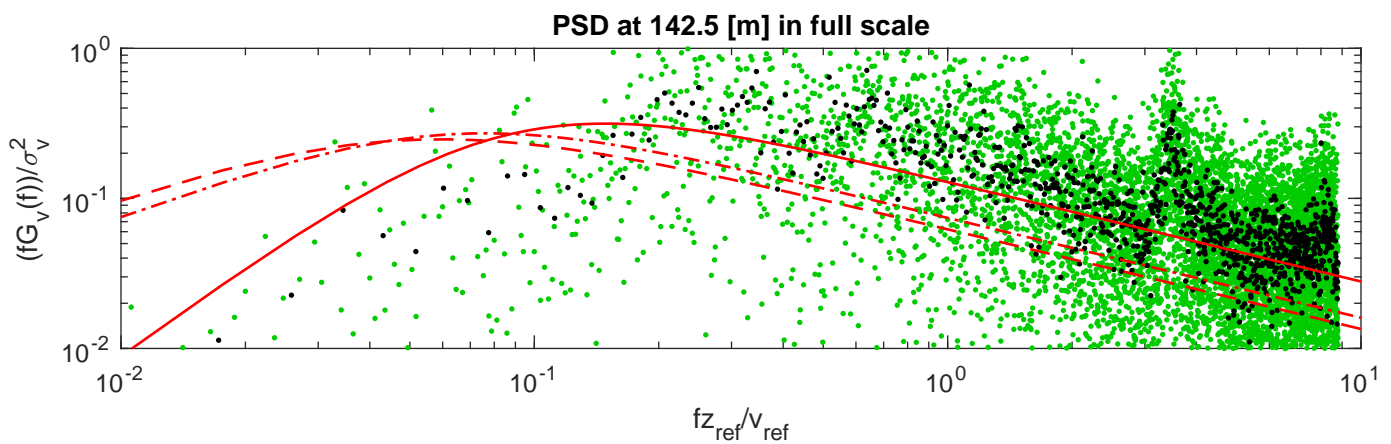
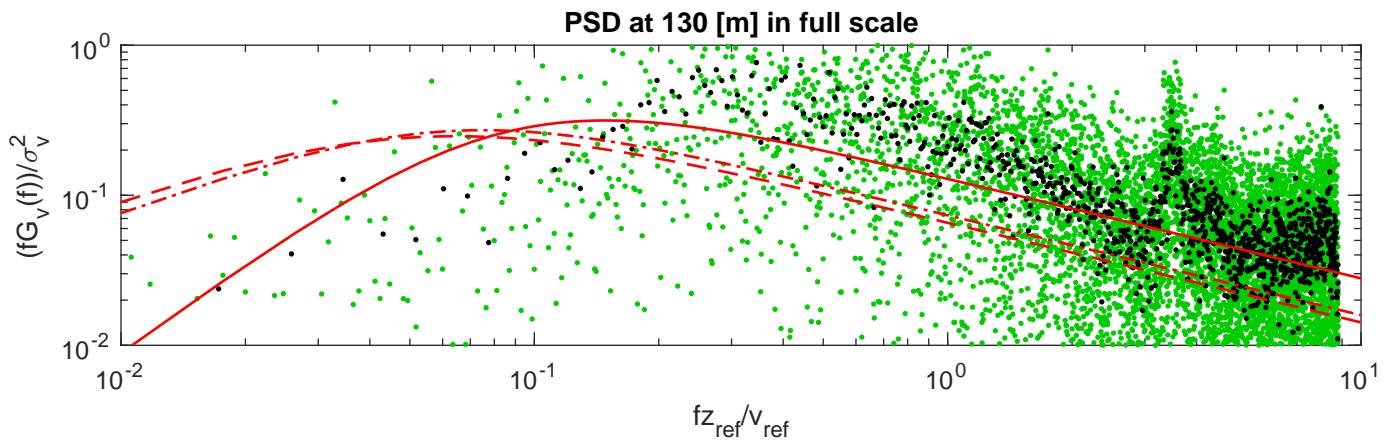
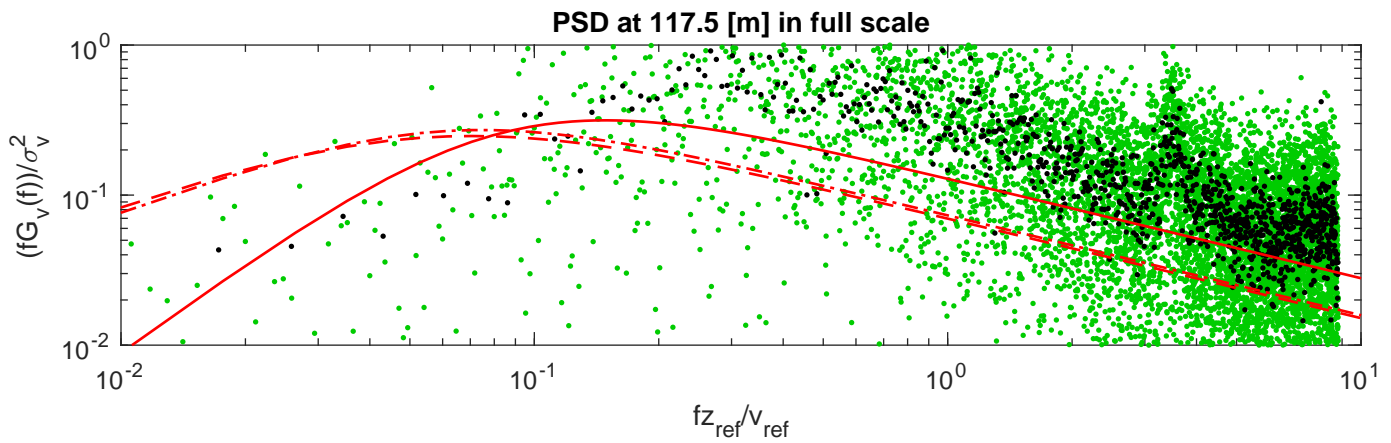
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



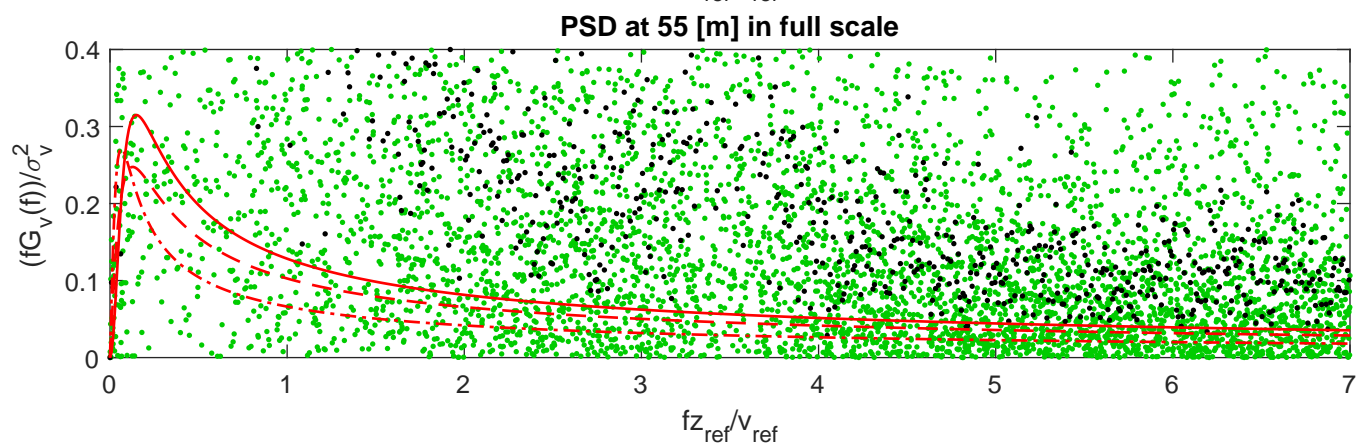
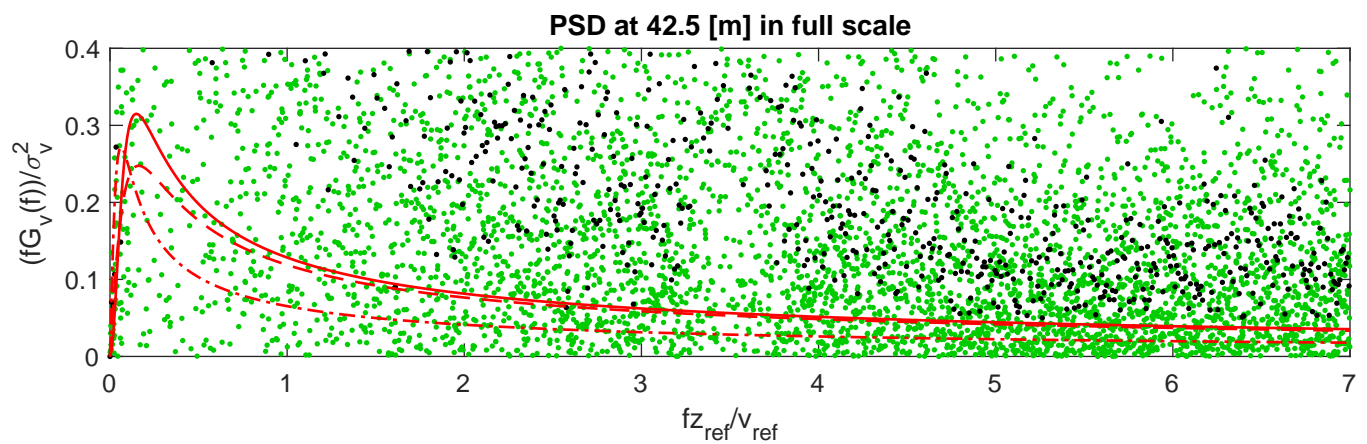
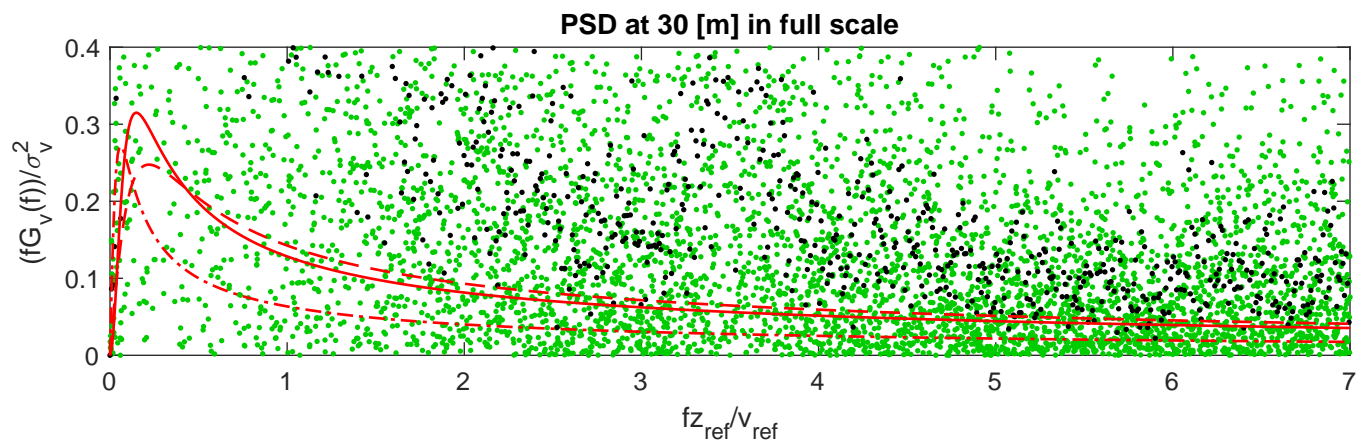
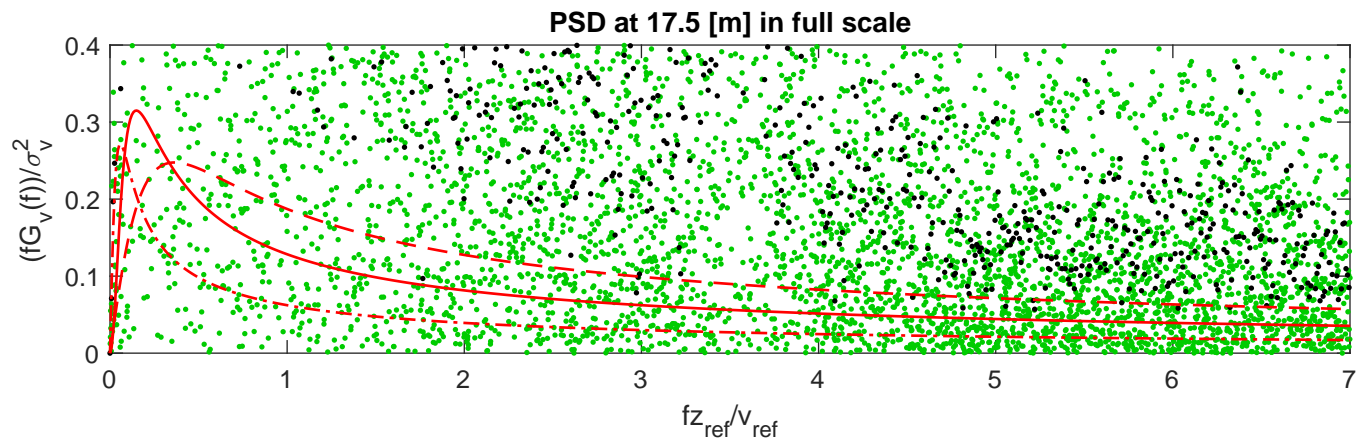
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

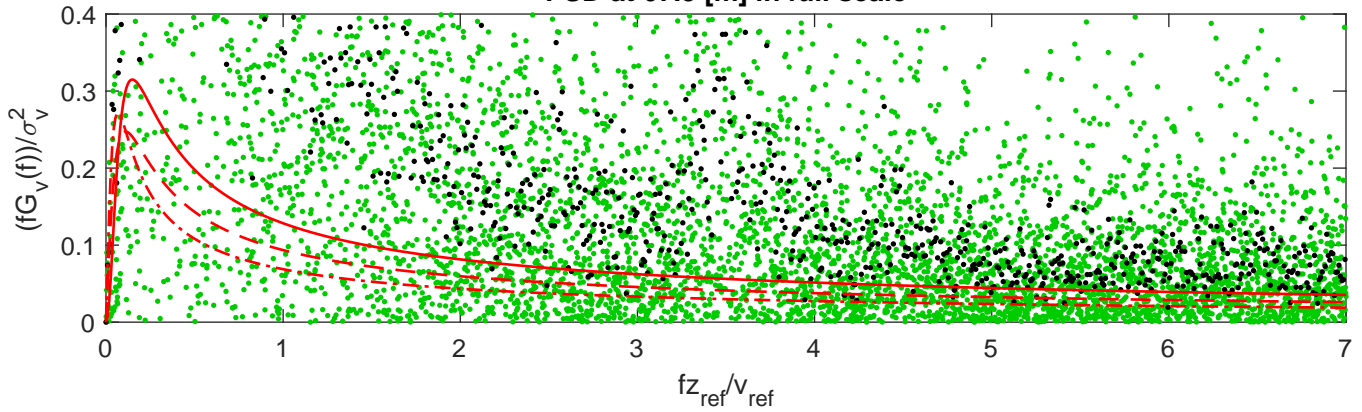


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

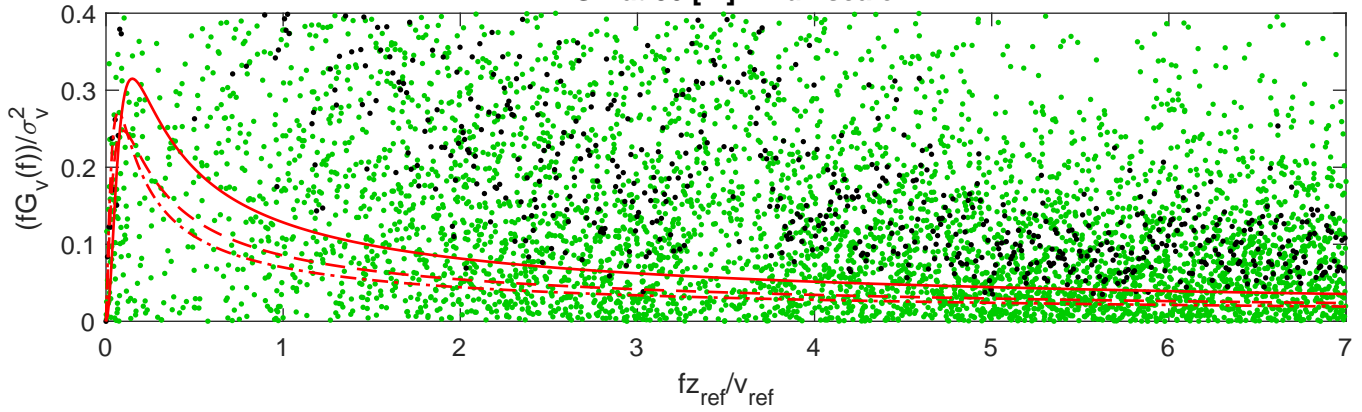


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

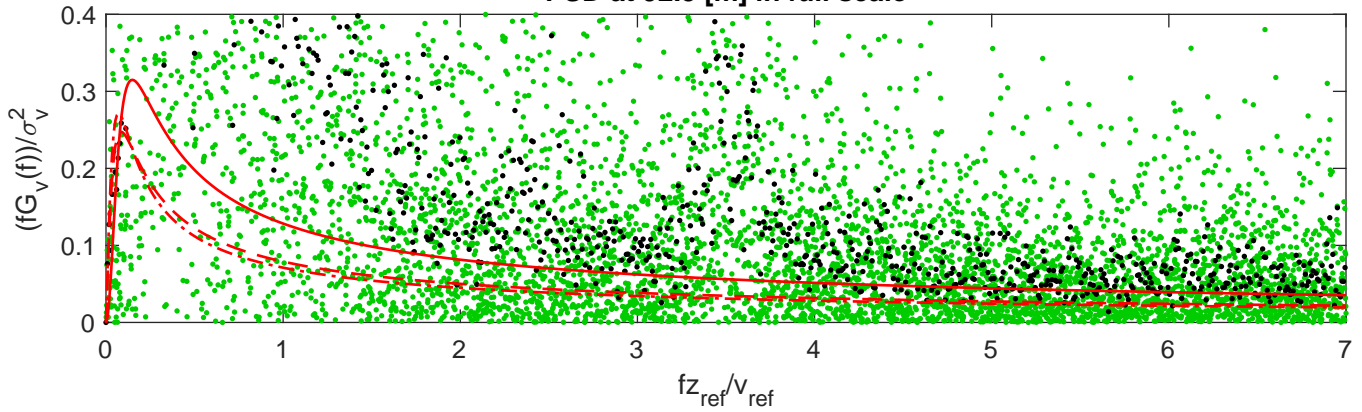
PSD at 67.5 [m] in full scale



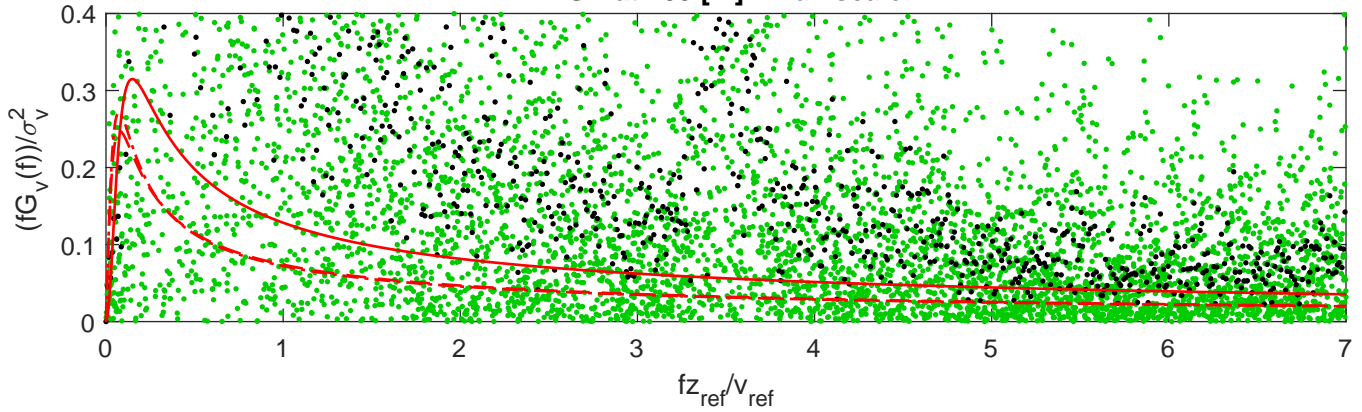
PSD at 80 [m] in full scale



PSD at 92.5 [m] in full scale

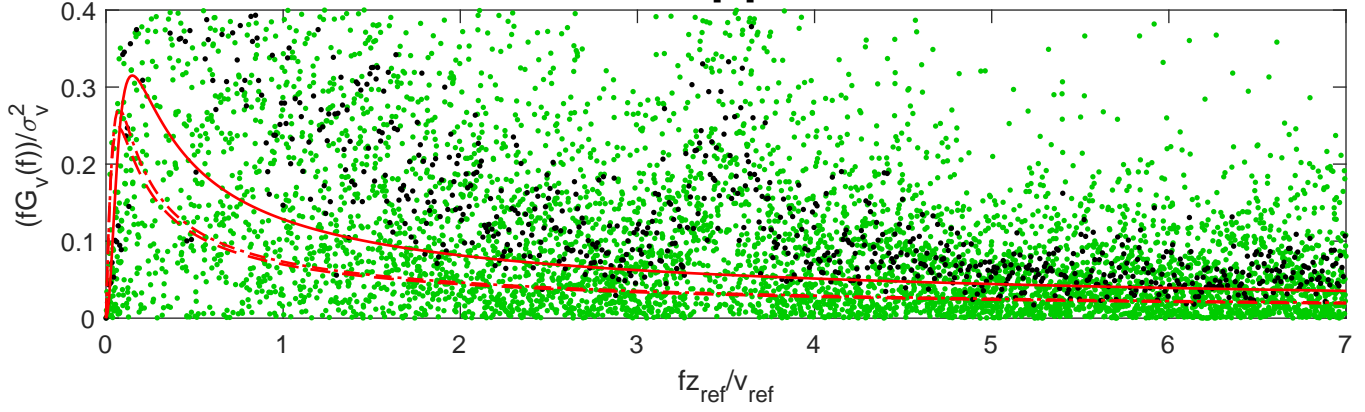


PSD at 105 [m] in full scale

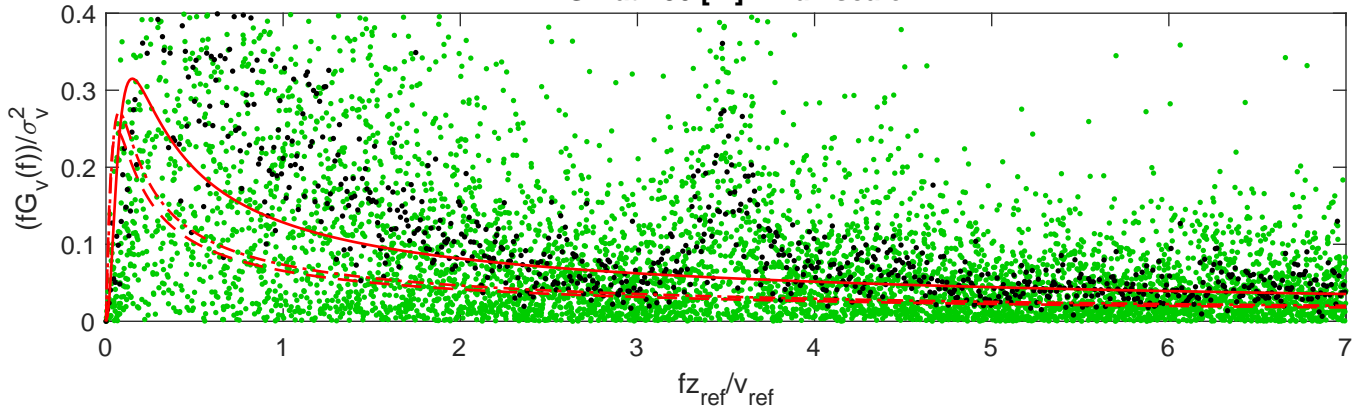


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

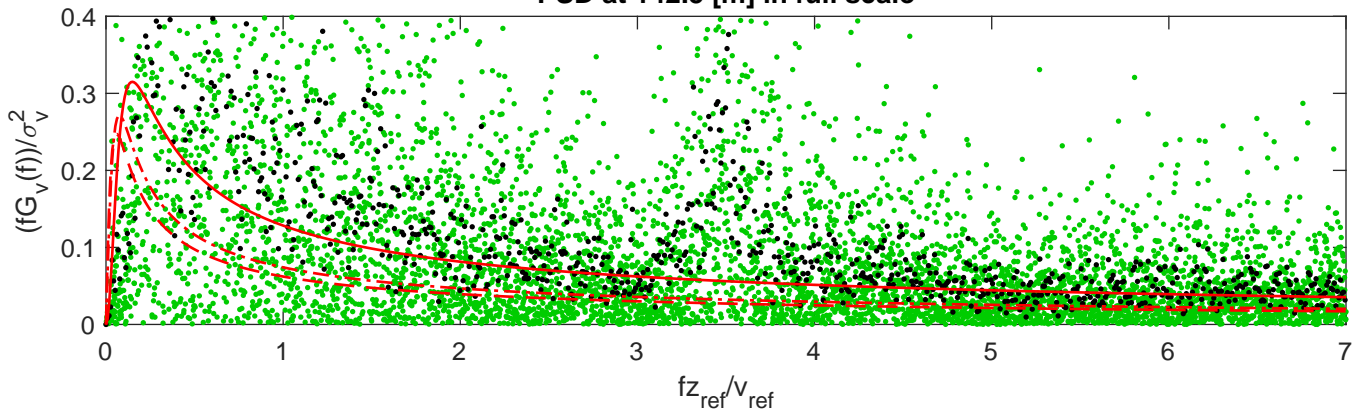
PSD at 117.5 [m] in full scale



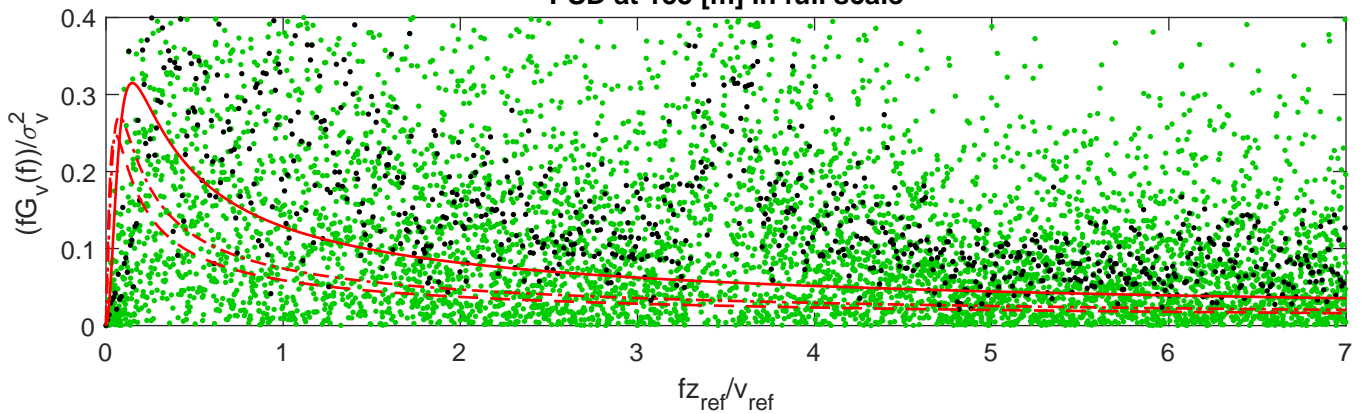
PSD at 130 [m] in full scale

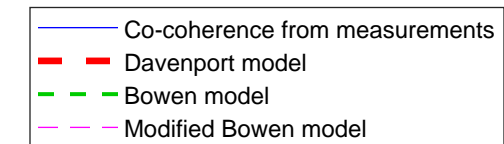
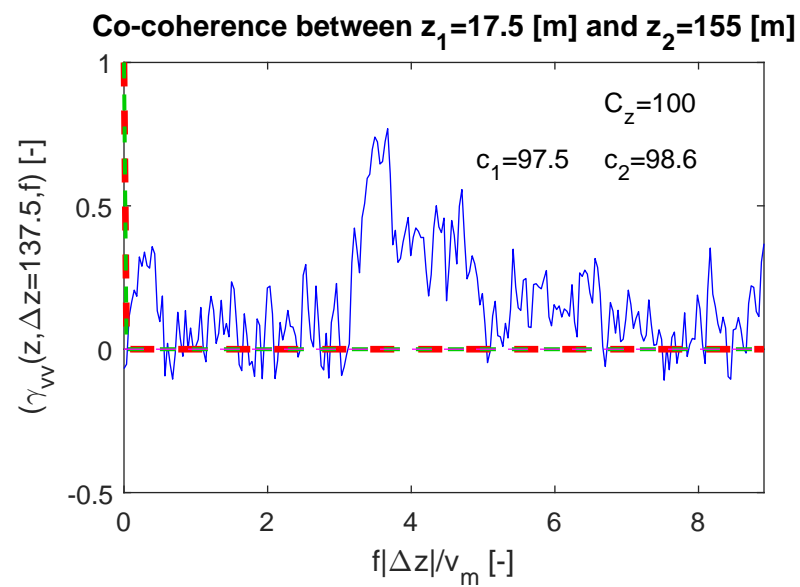
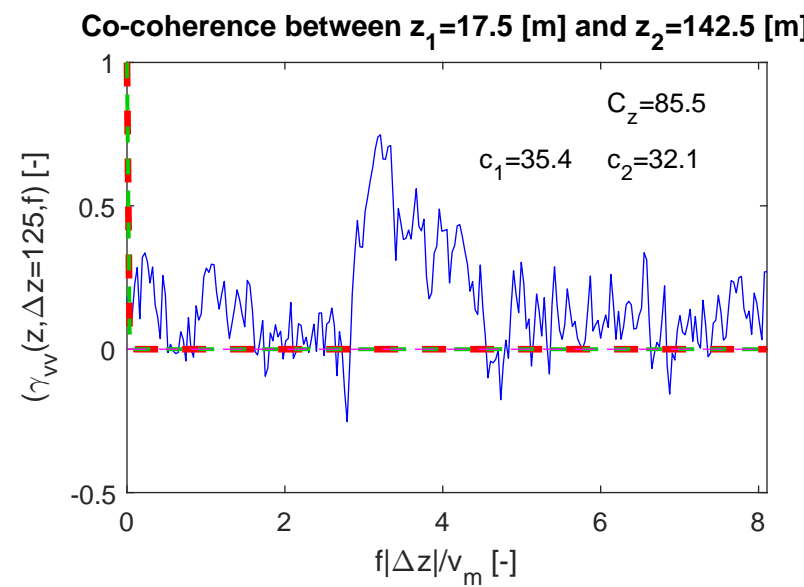
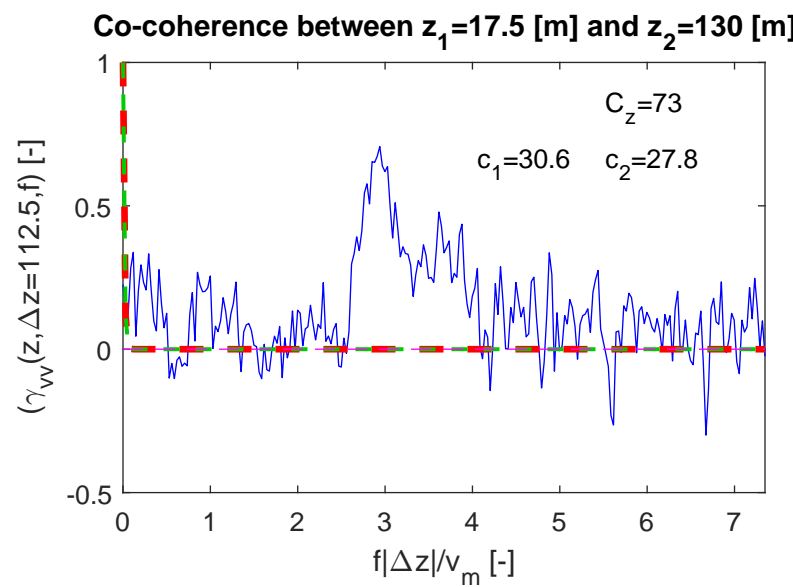
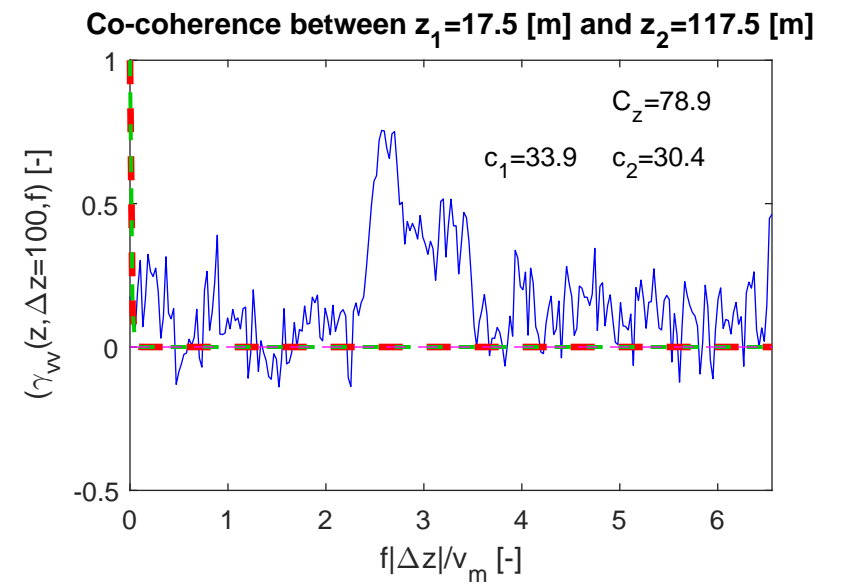
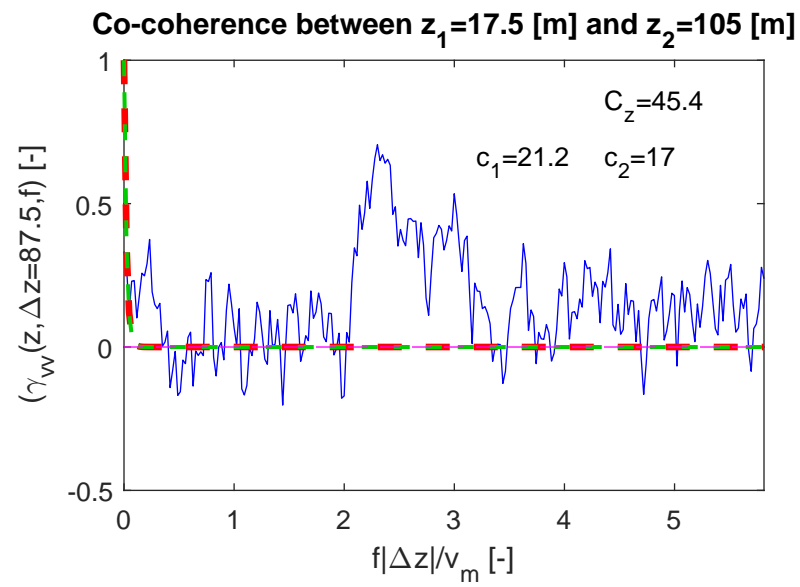
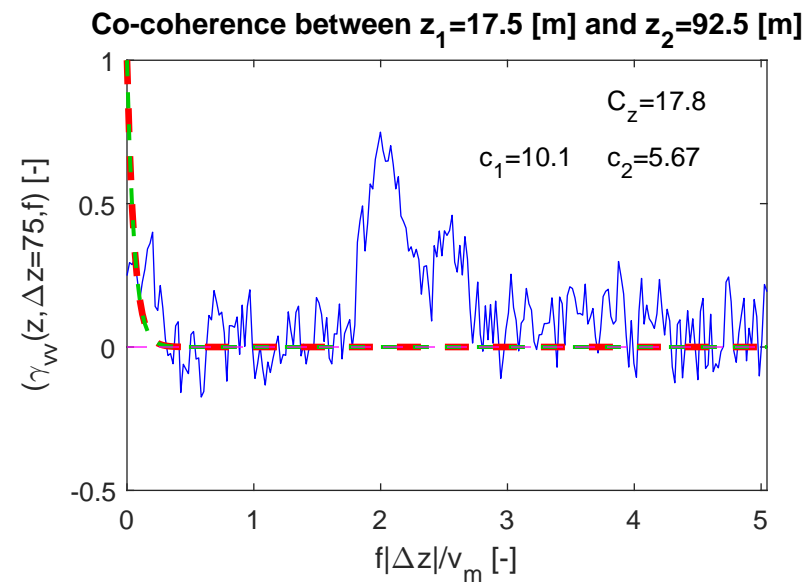
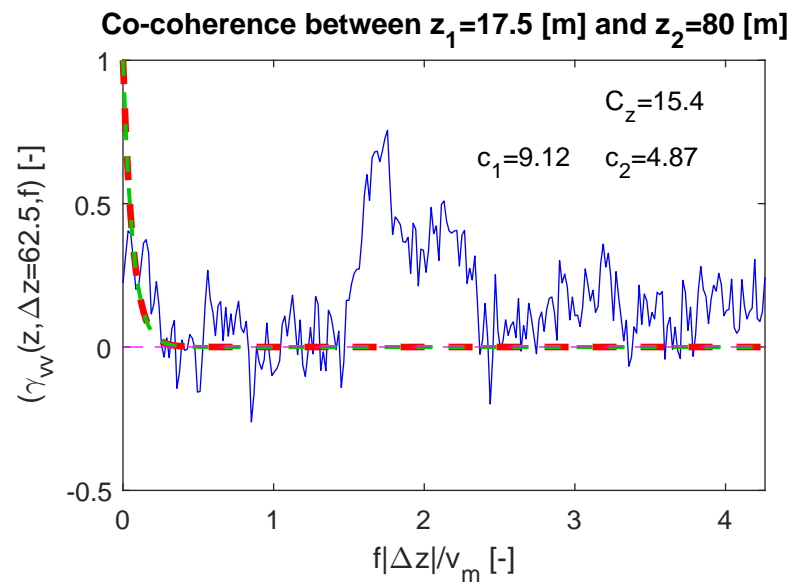
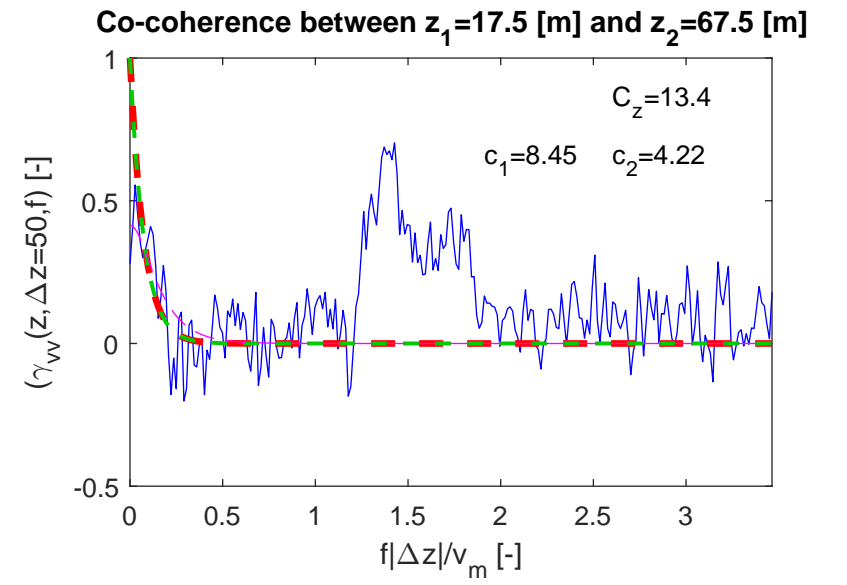
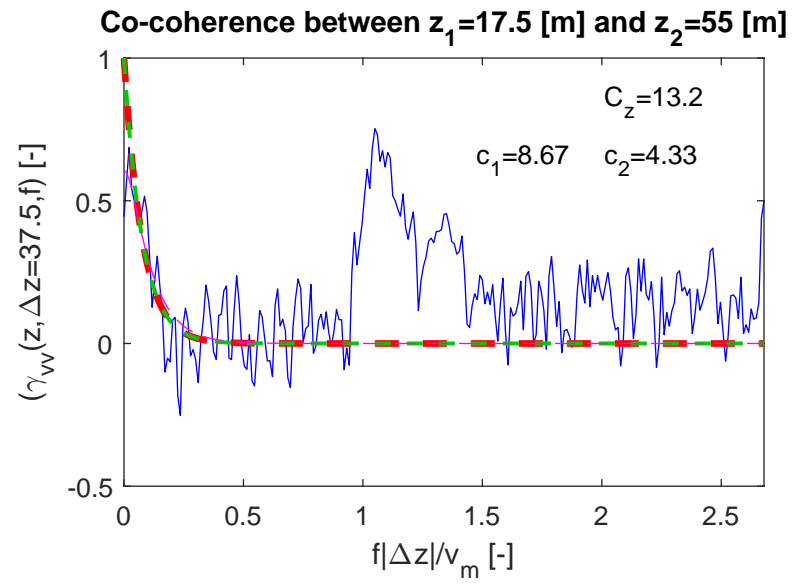
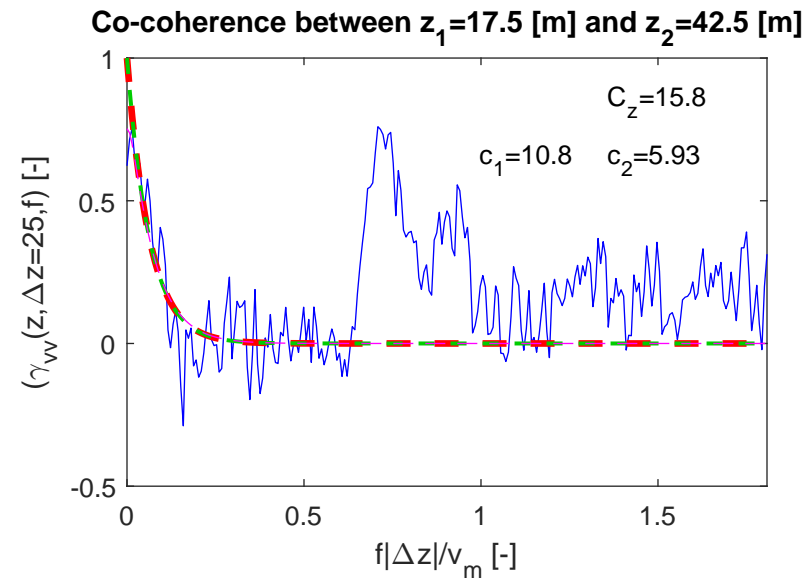
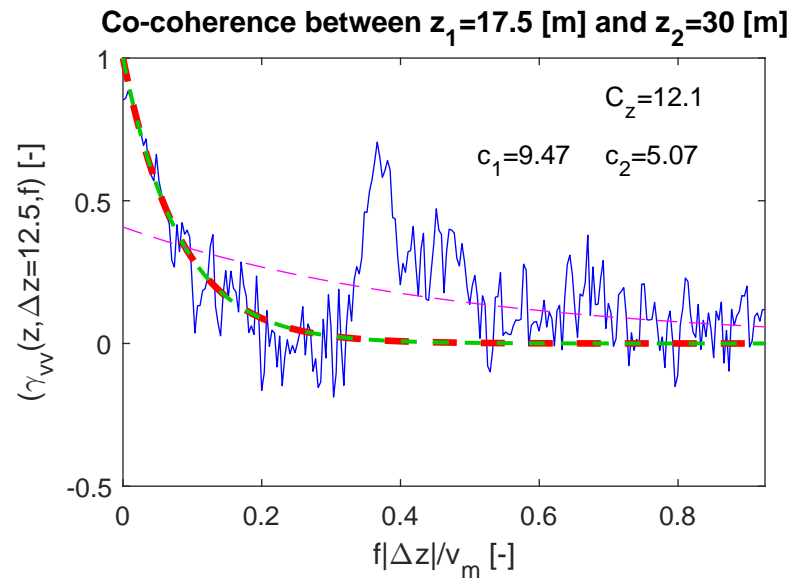


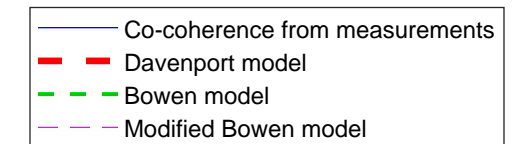
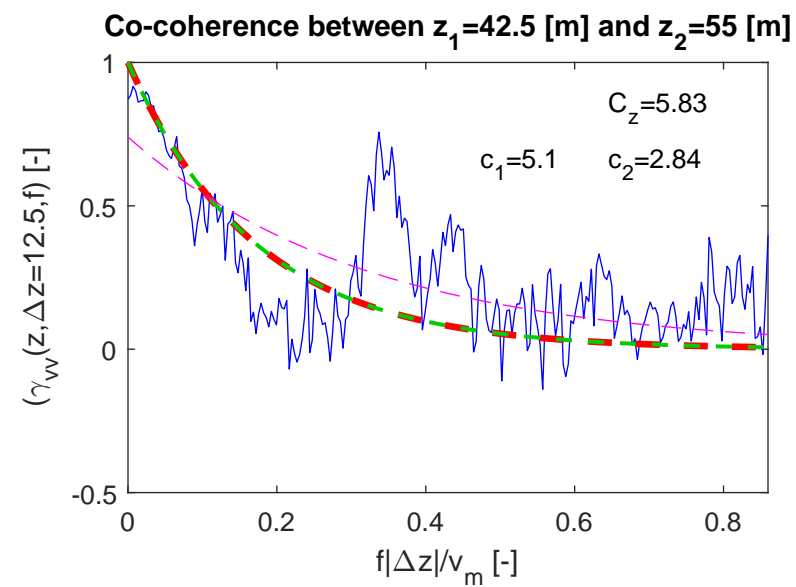
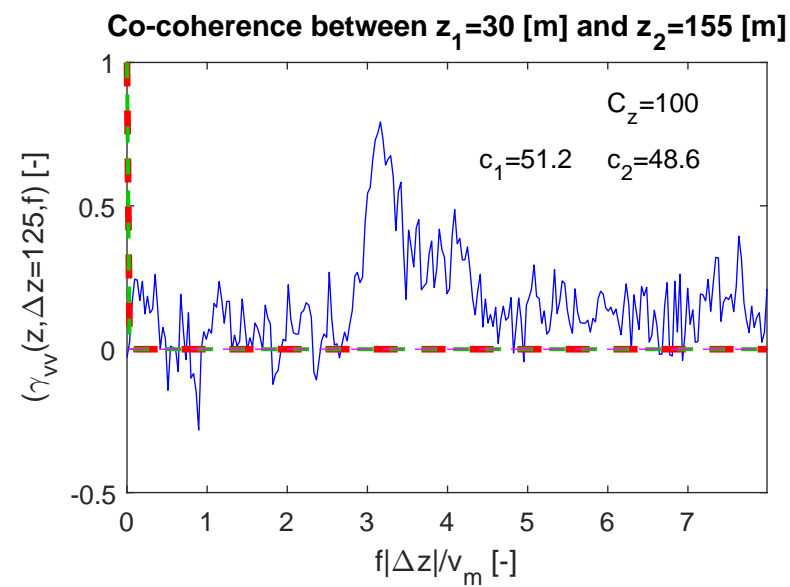
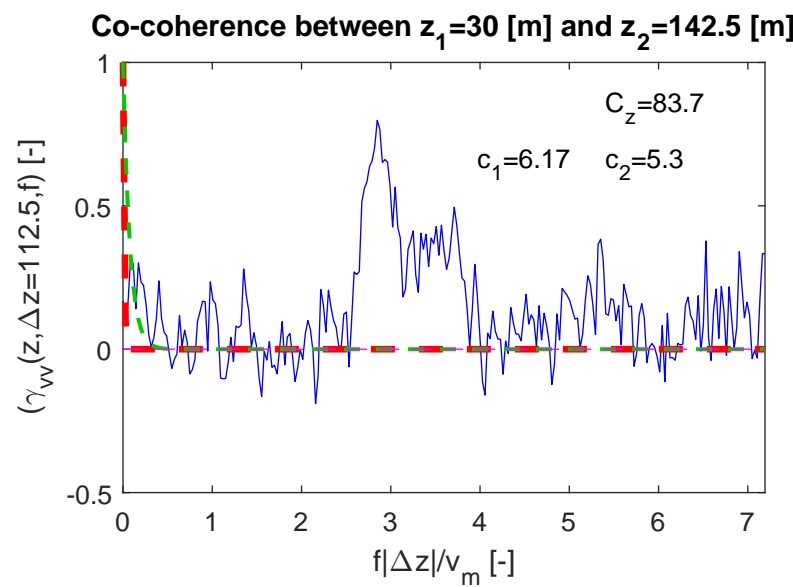
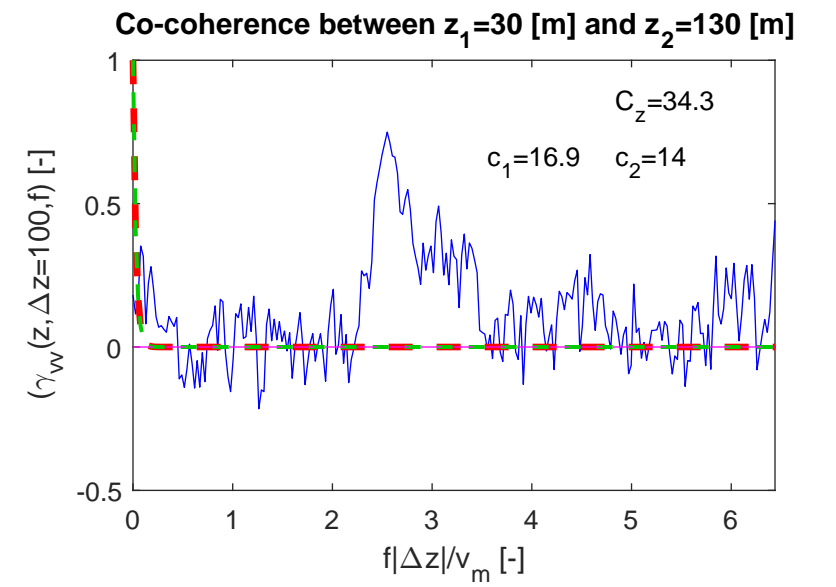
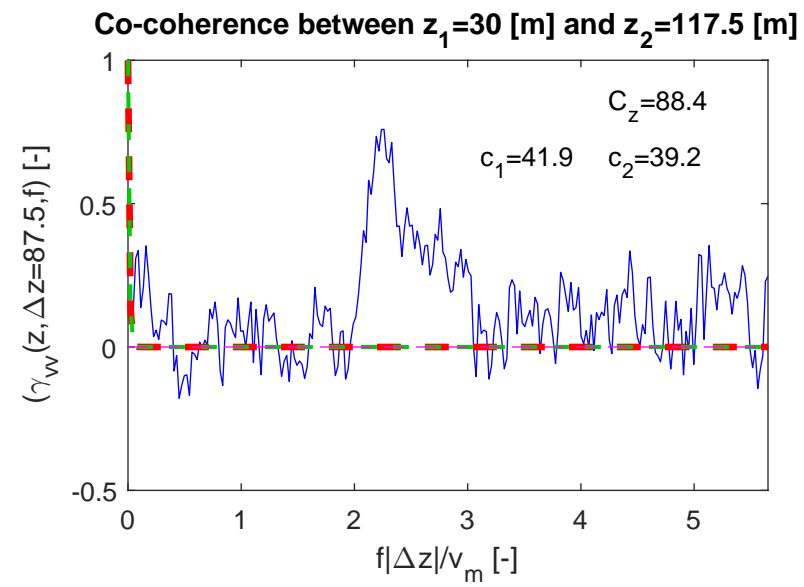
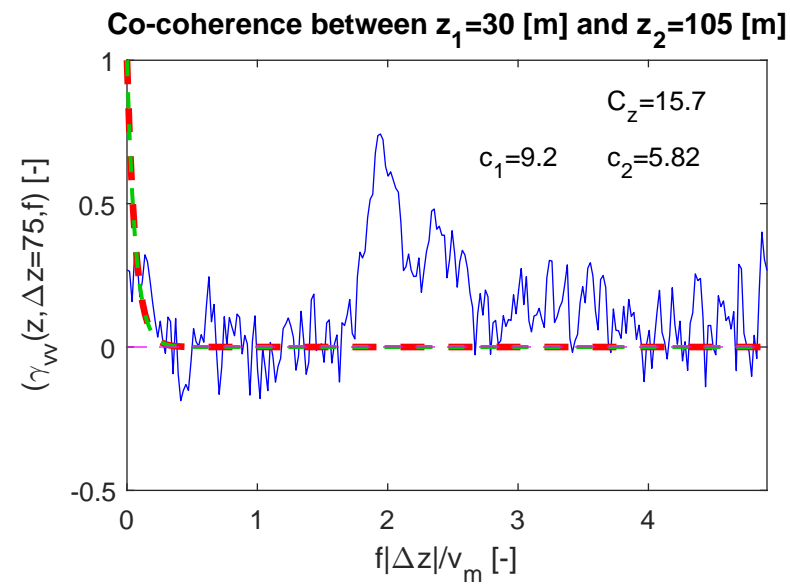
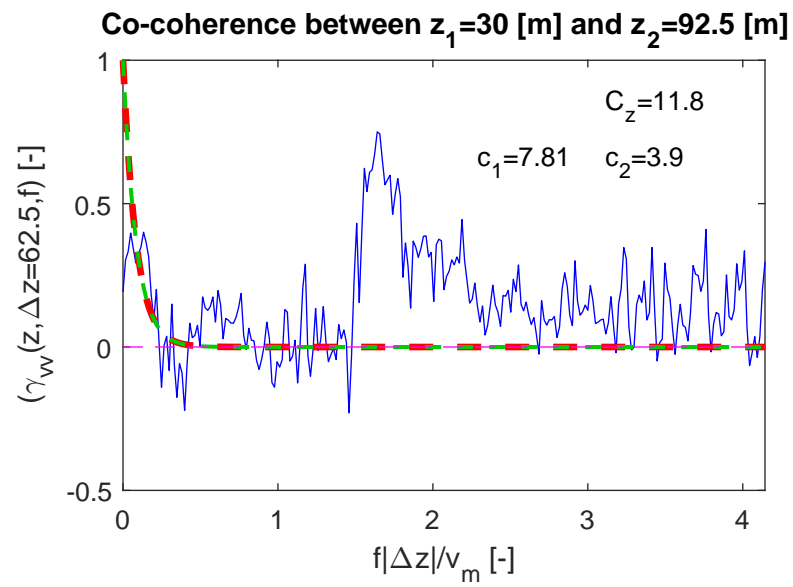
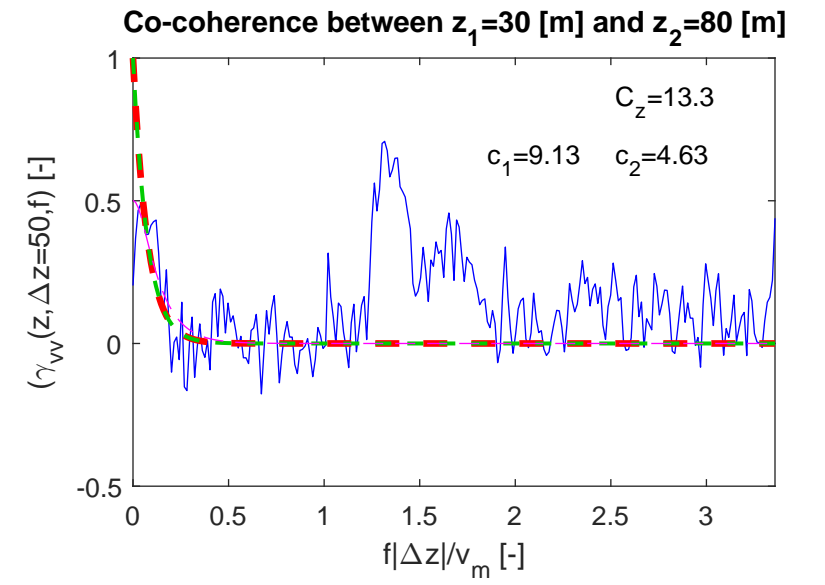
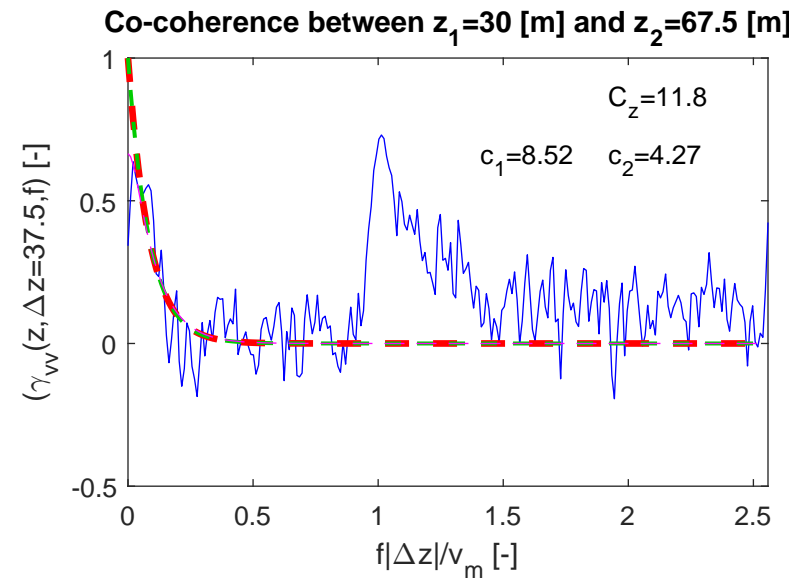
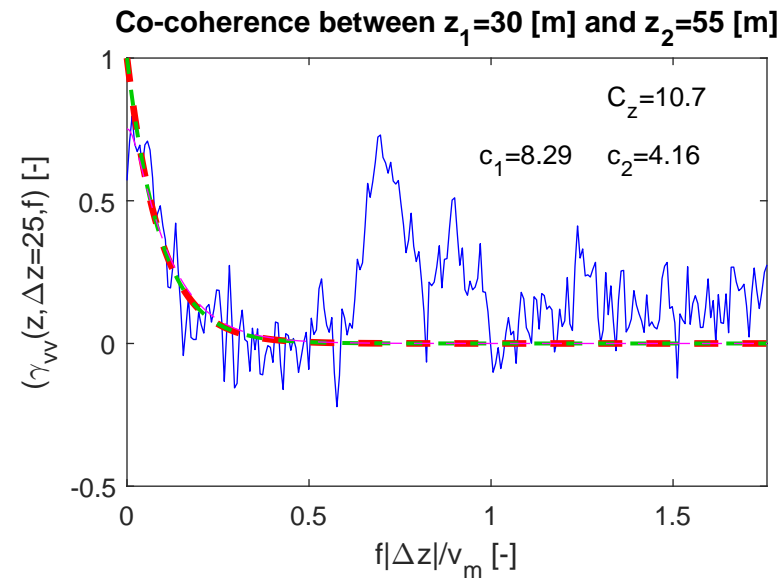
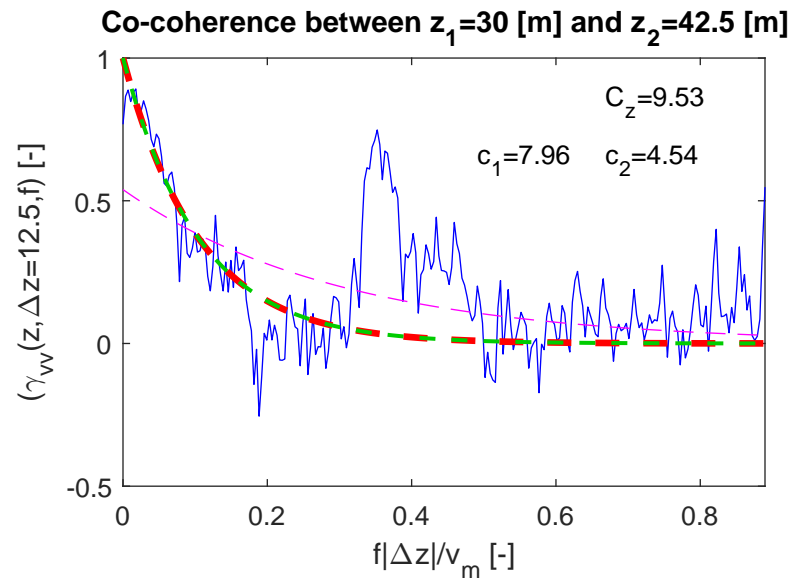
PSD at 142.5 [m] in full scale

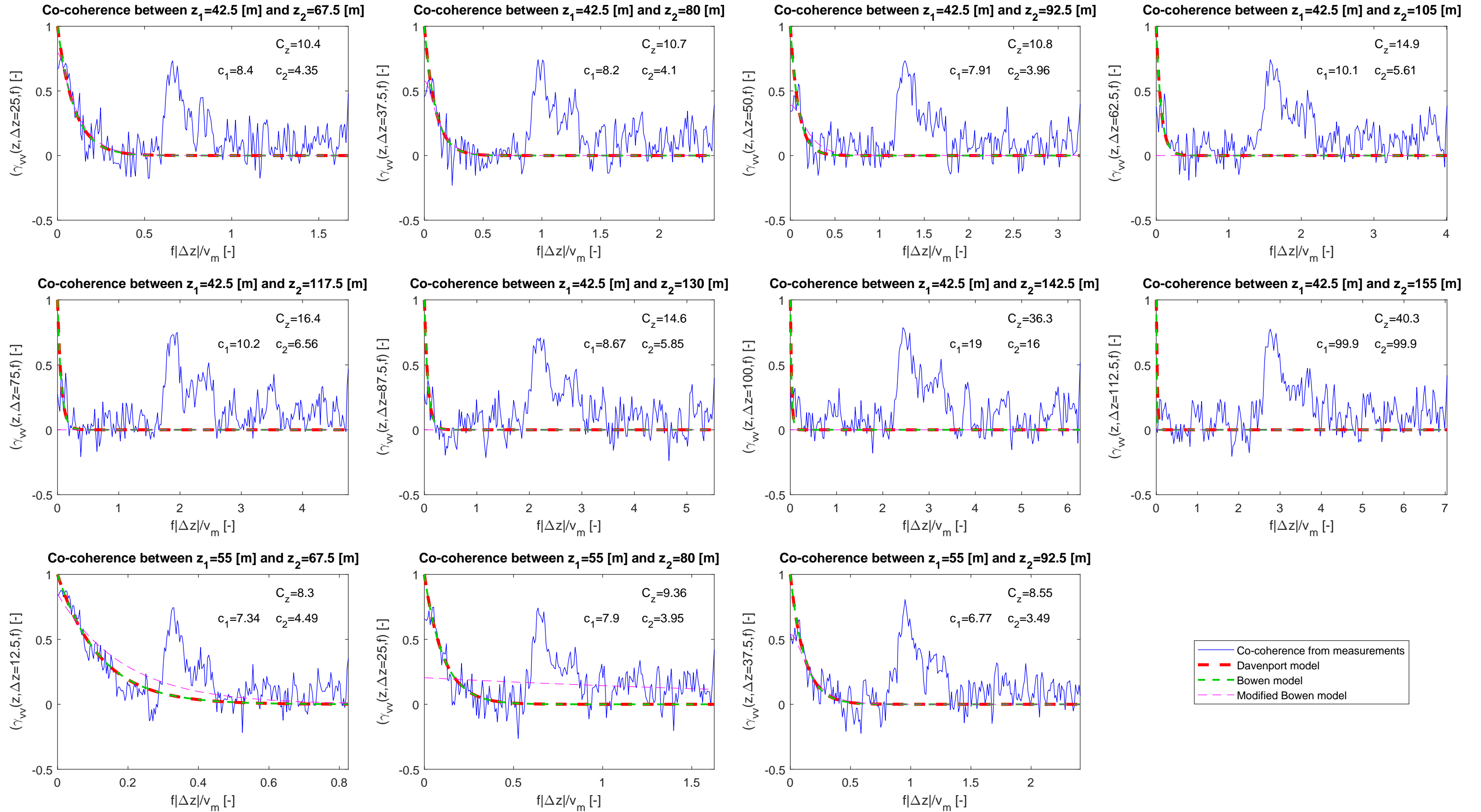


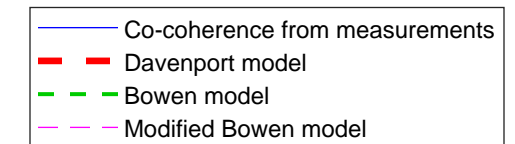
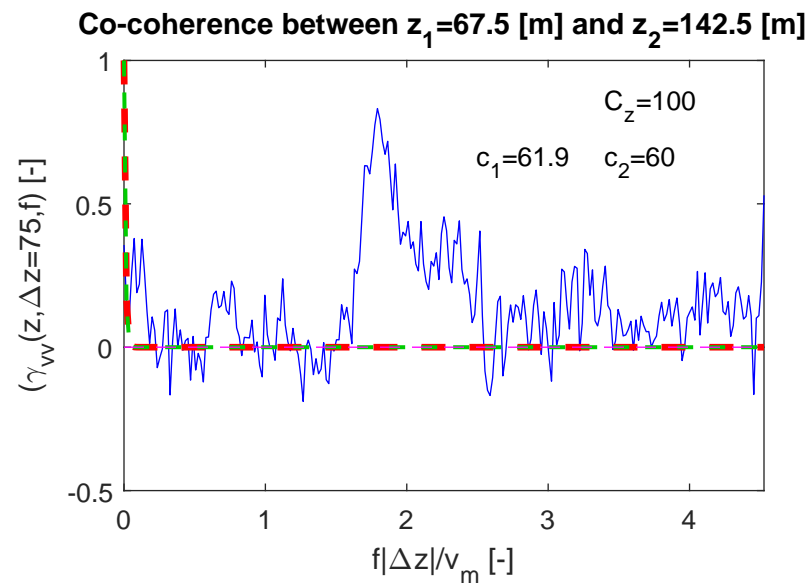
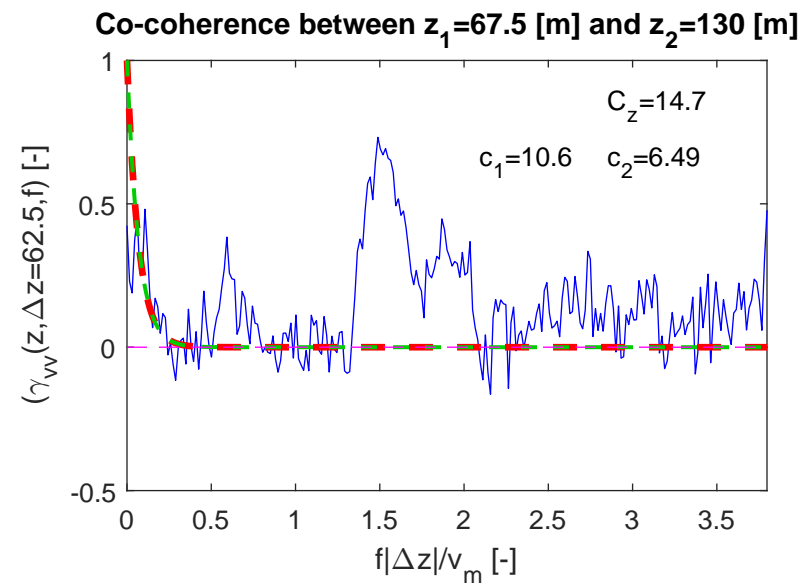
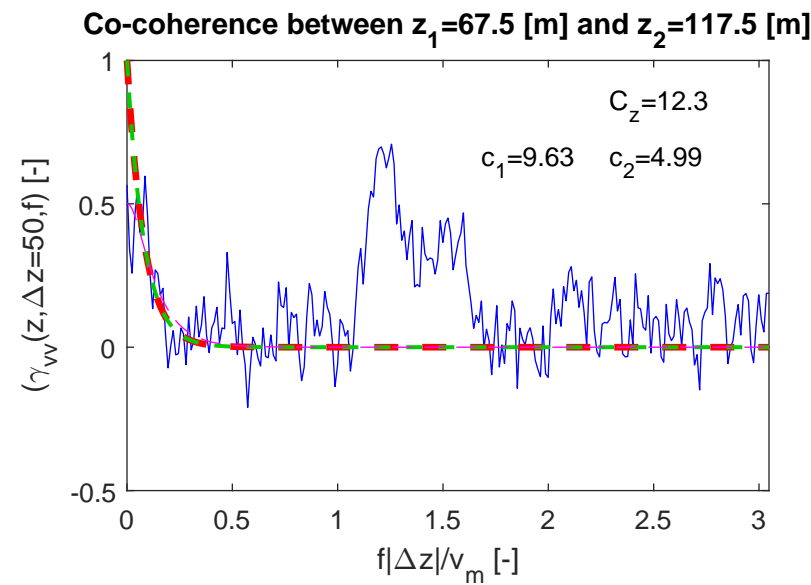
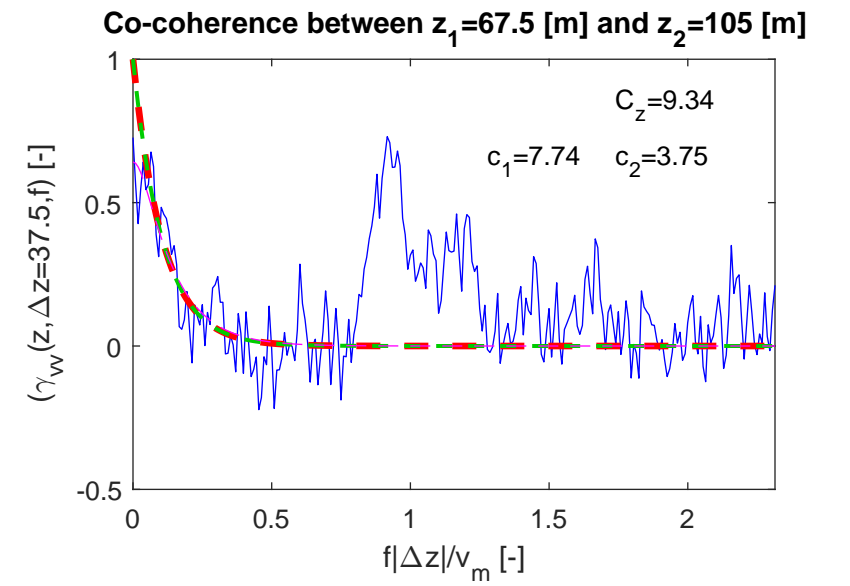
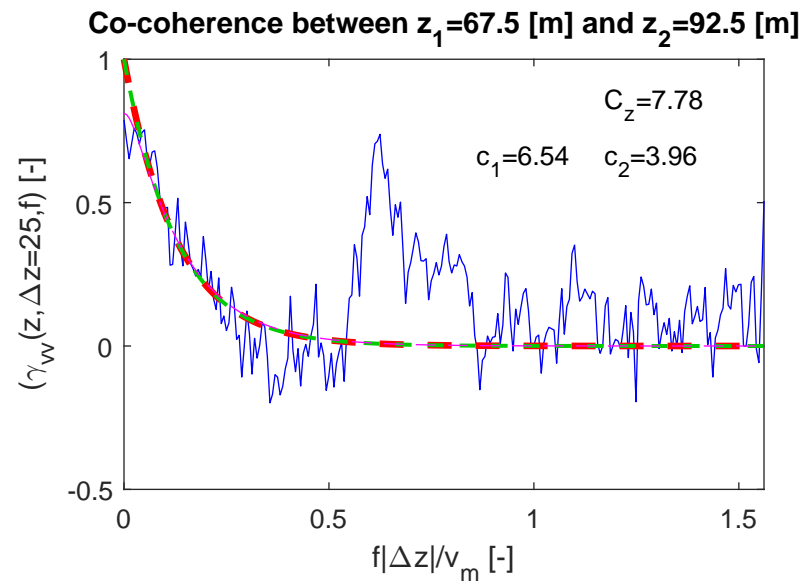
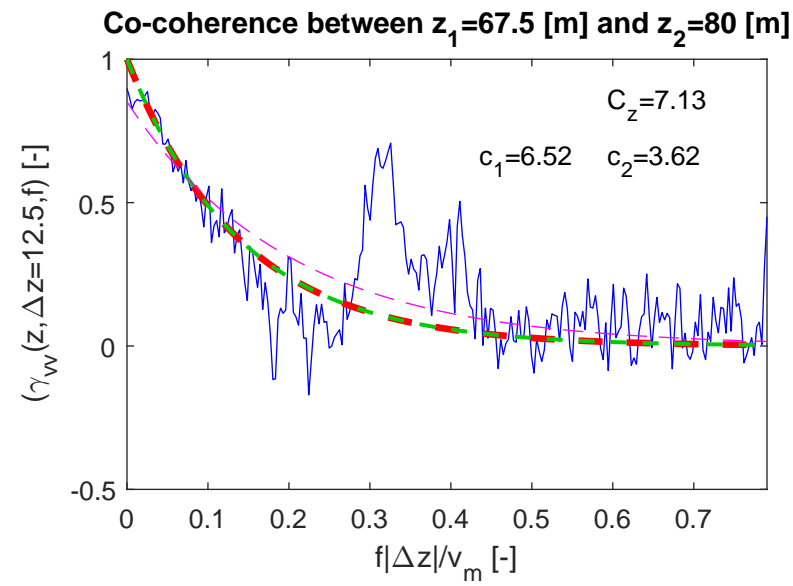
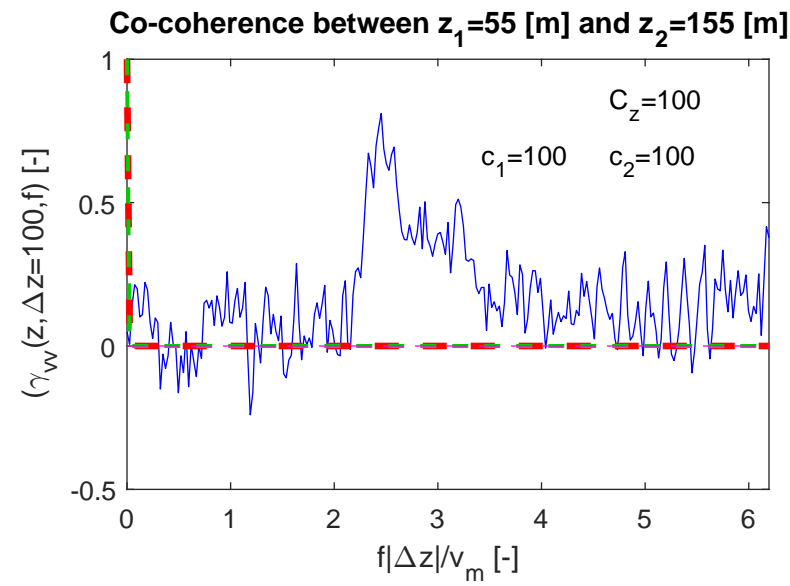
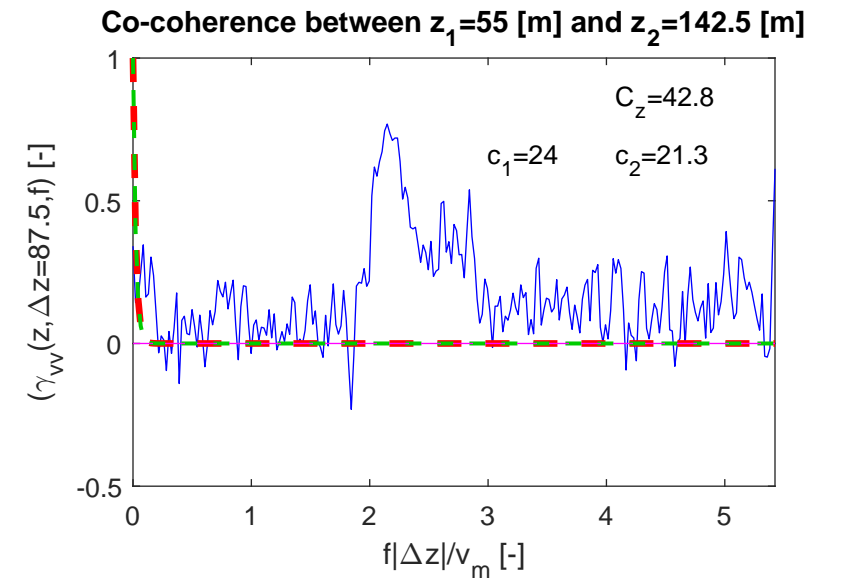
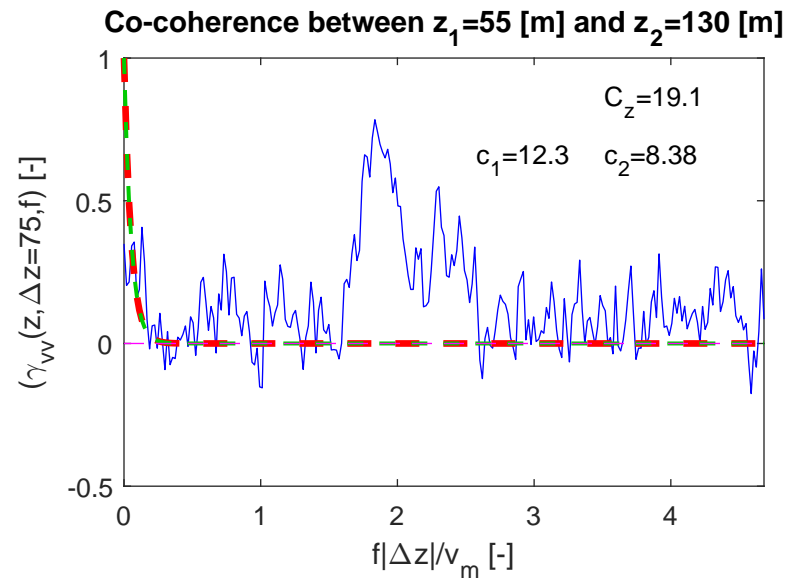
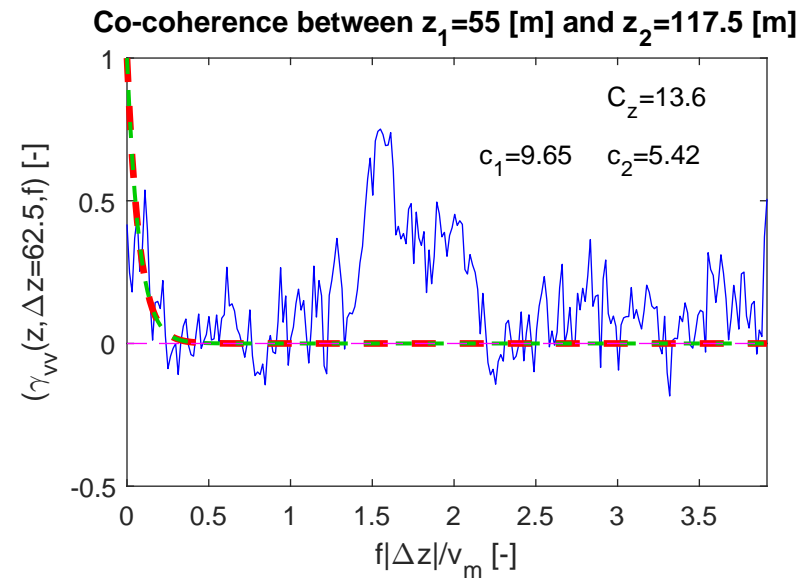
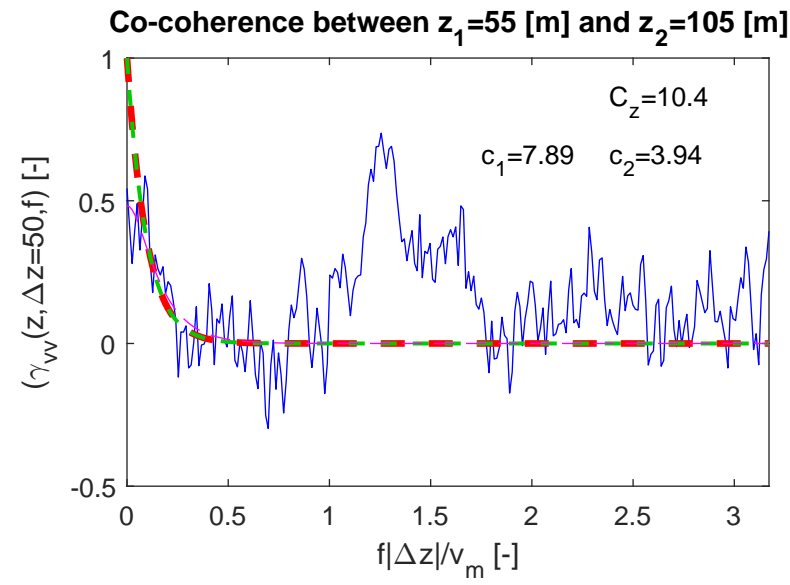
PSD at 155 [m] in full scale

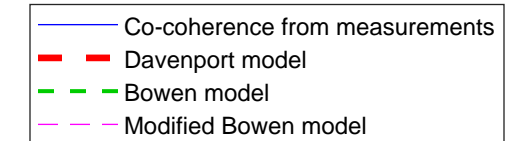
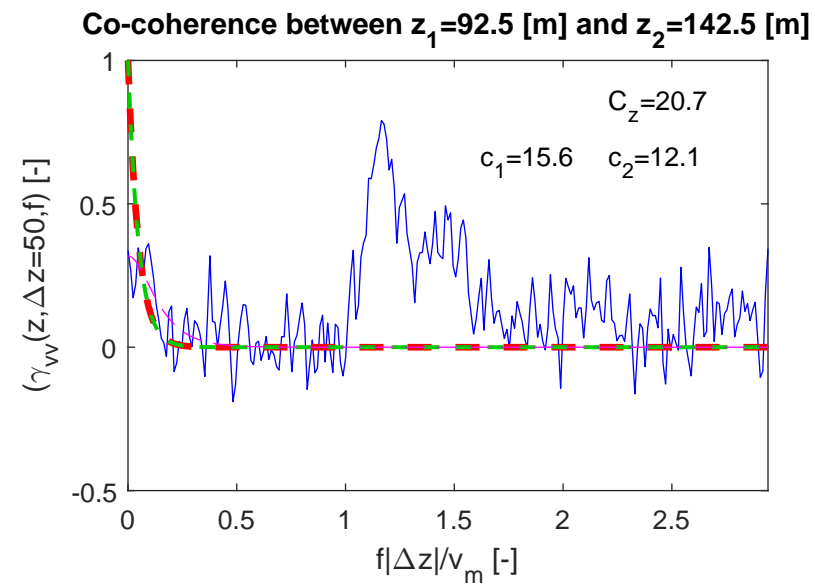
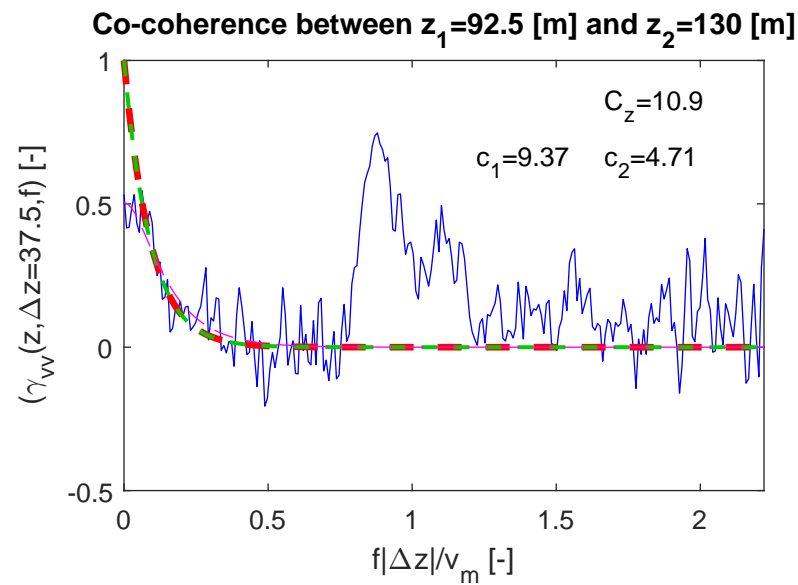
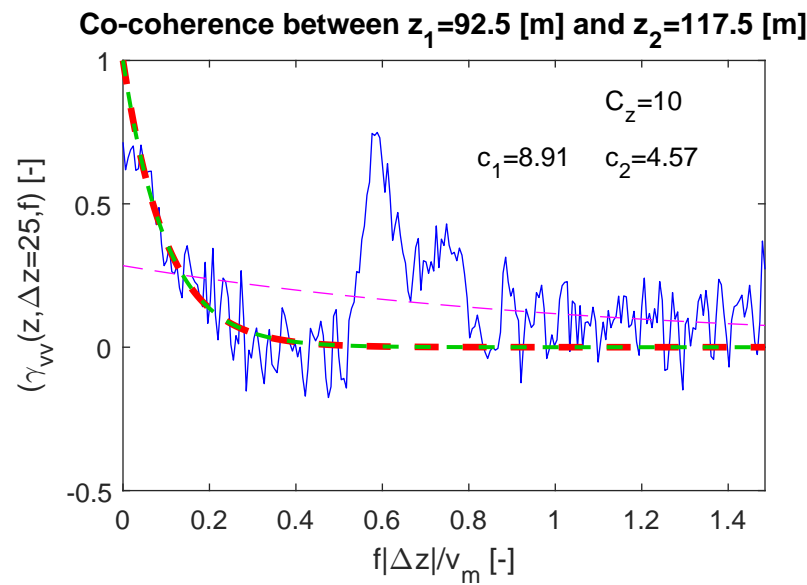
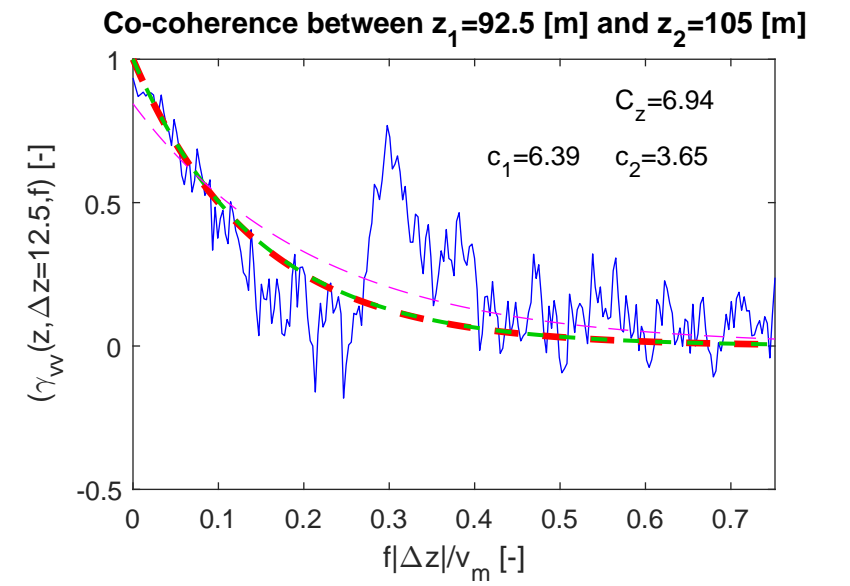
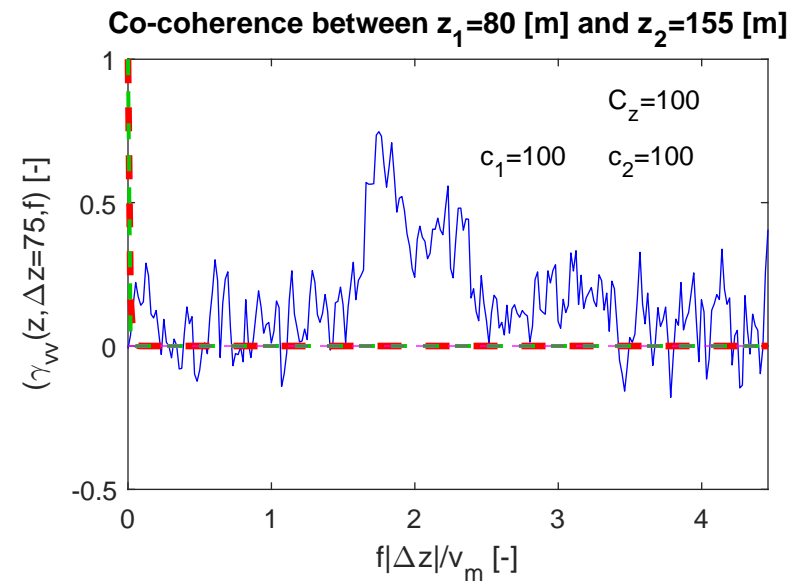
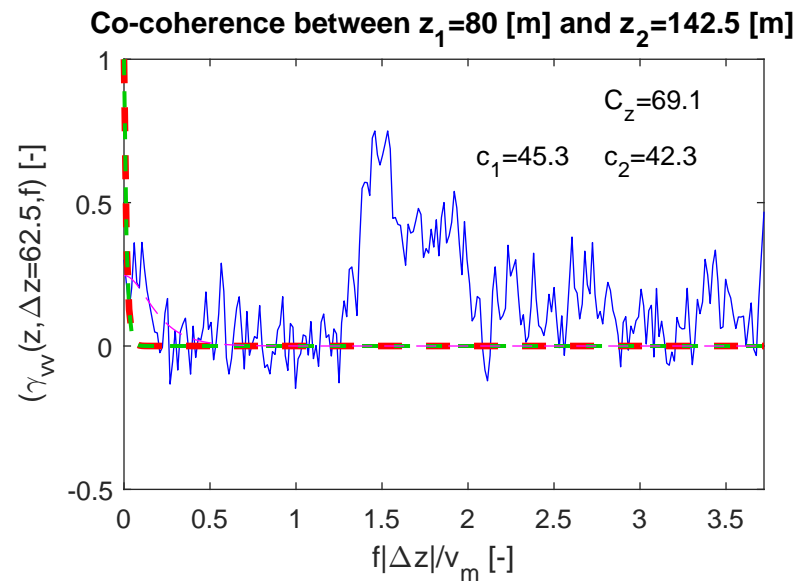
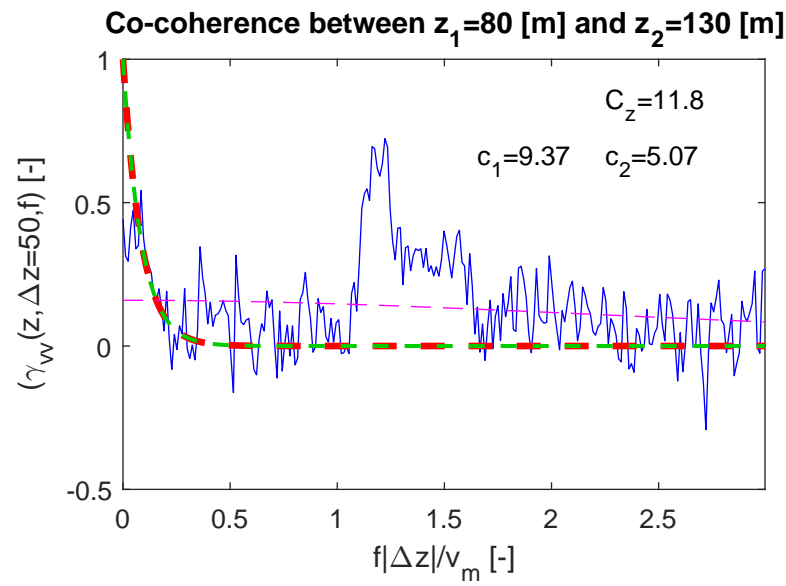
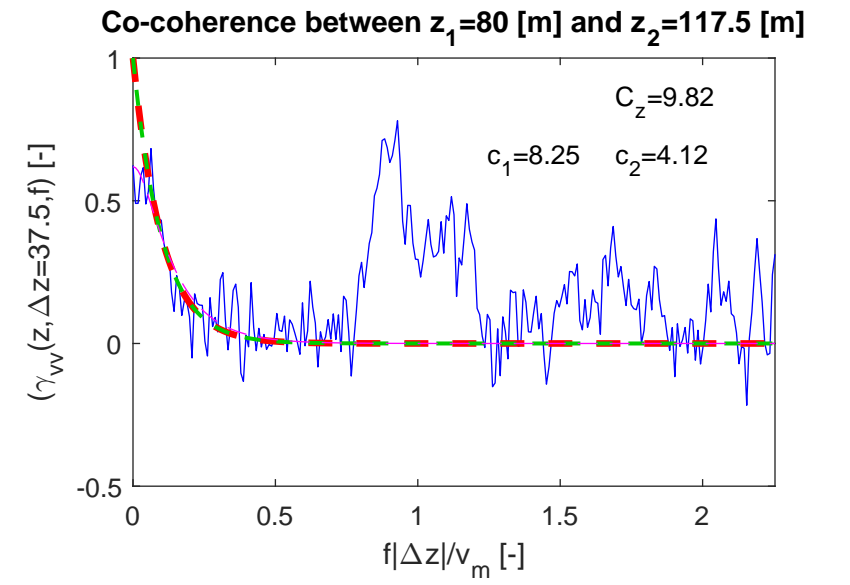
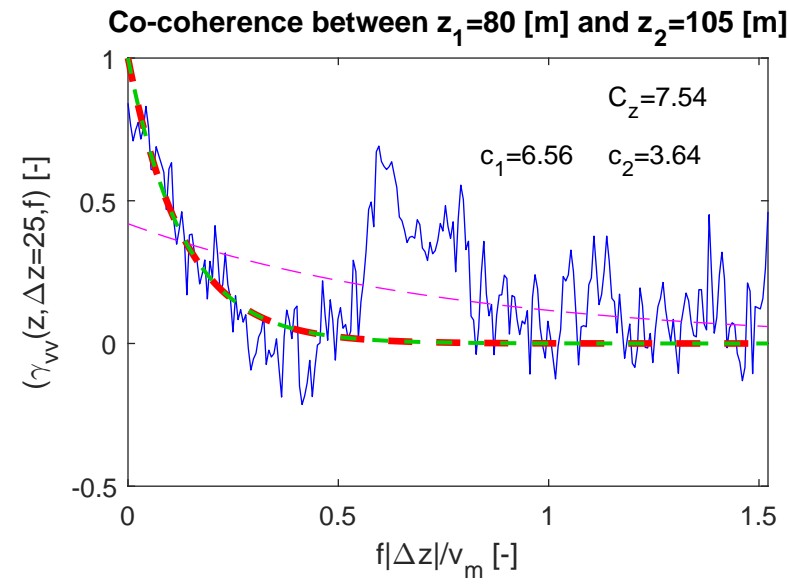
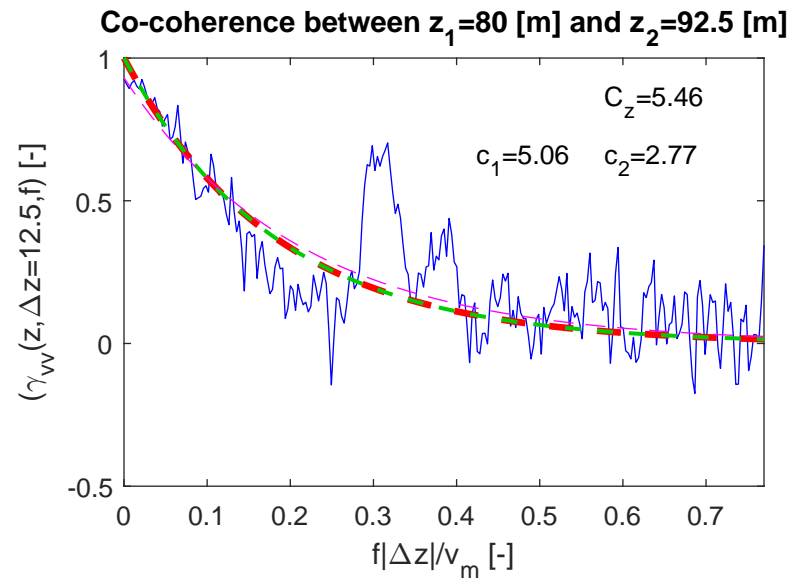
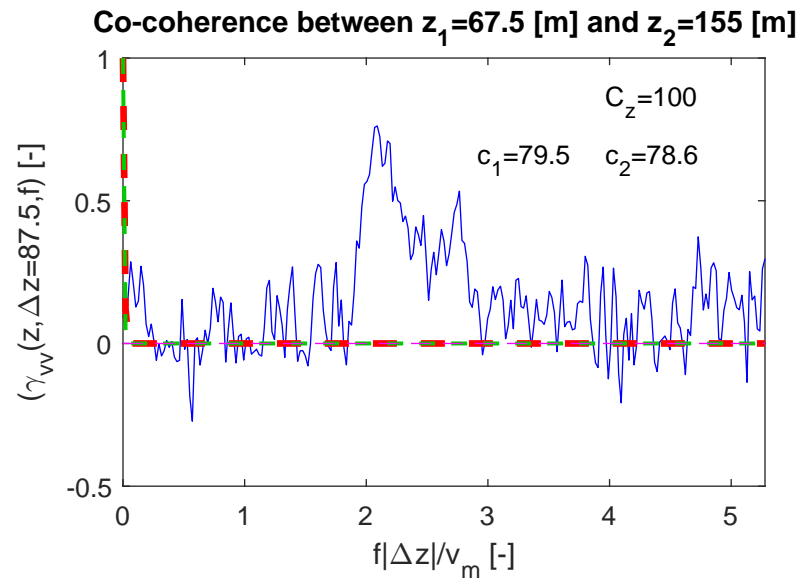


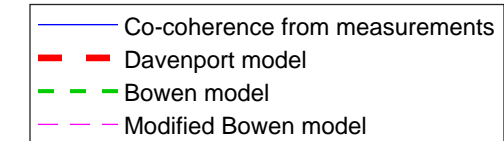
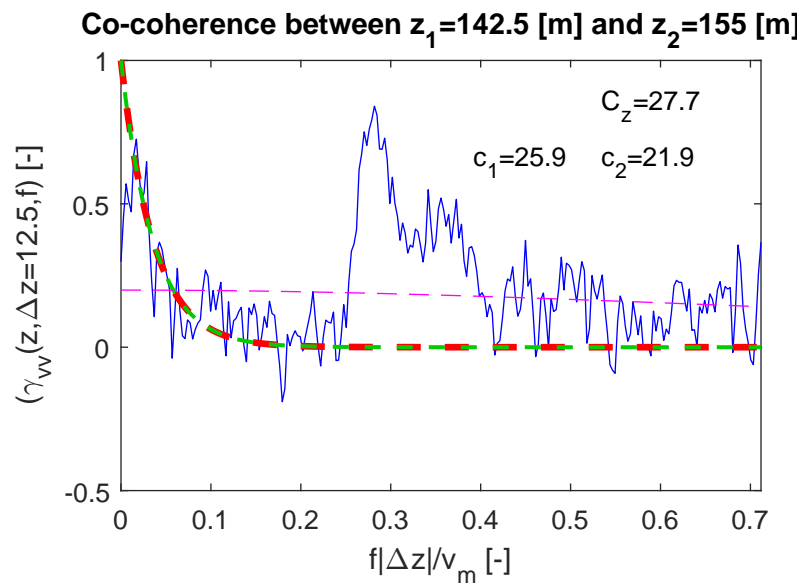
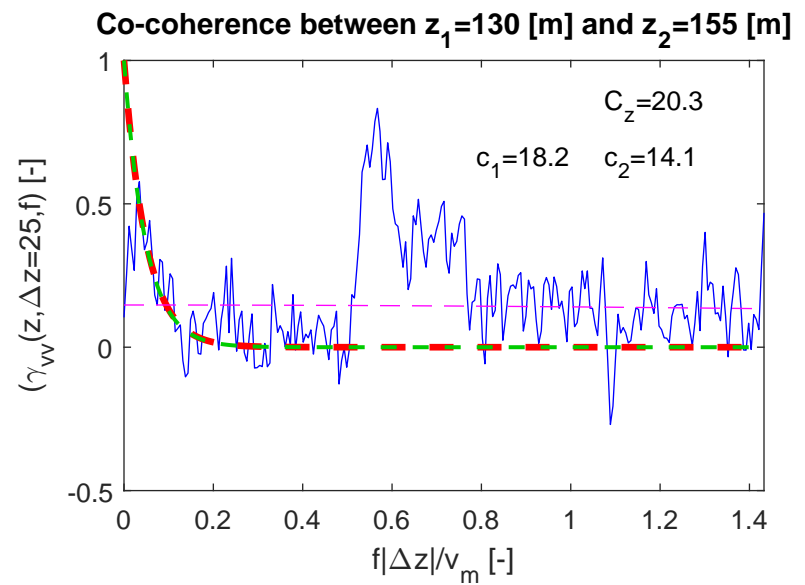
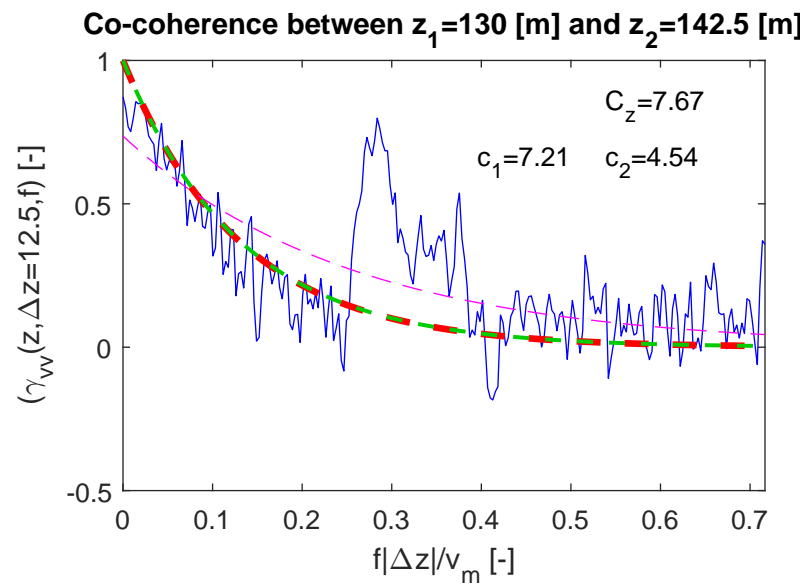
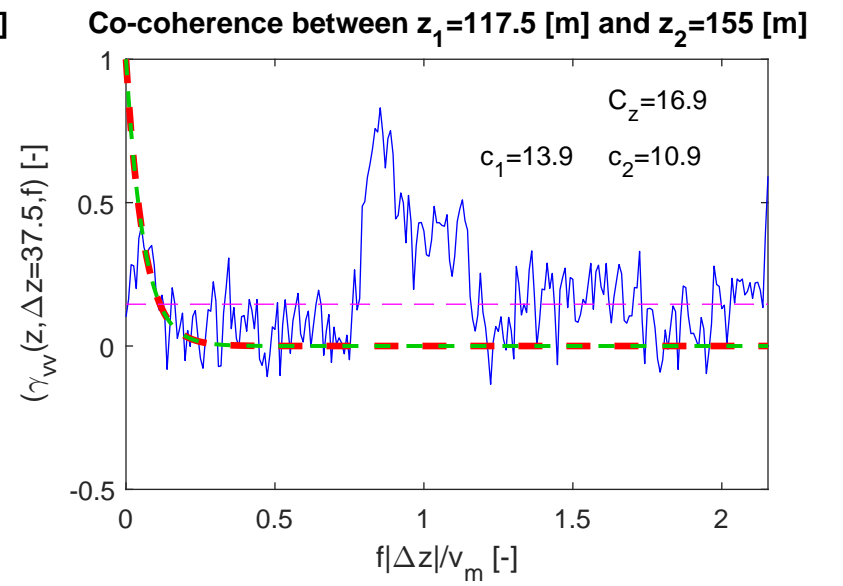
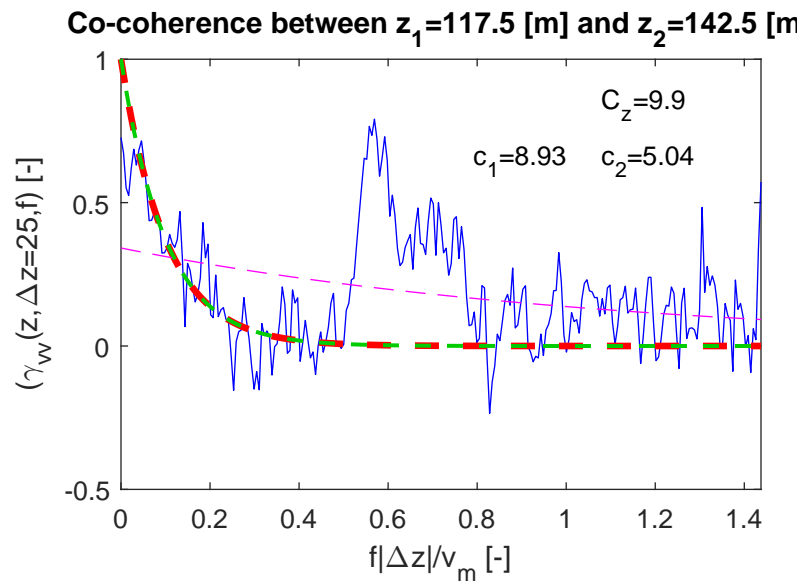
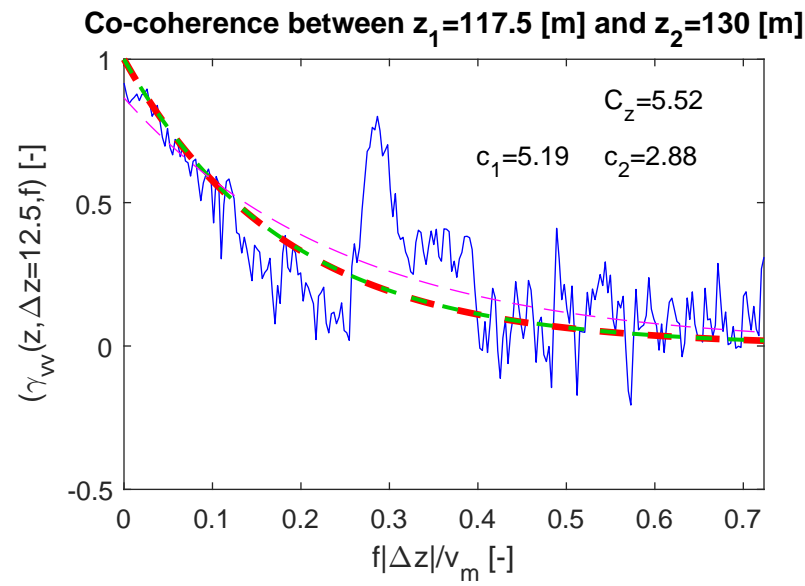
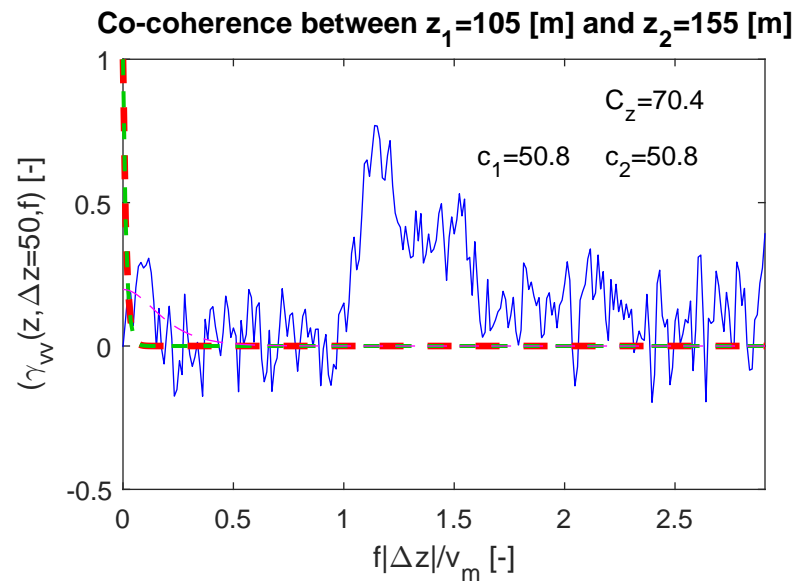
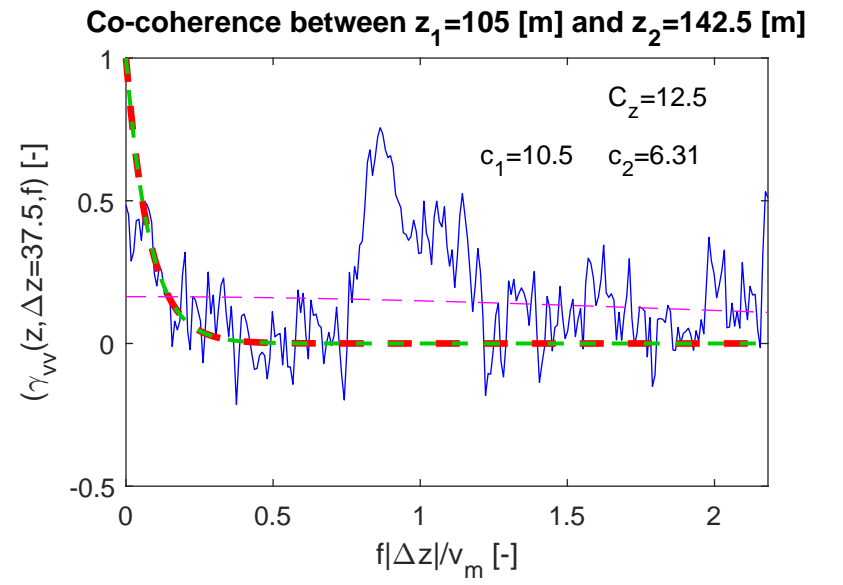
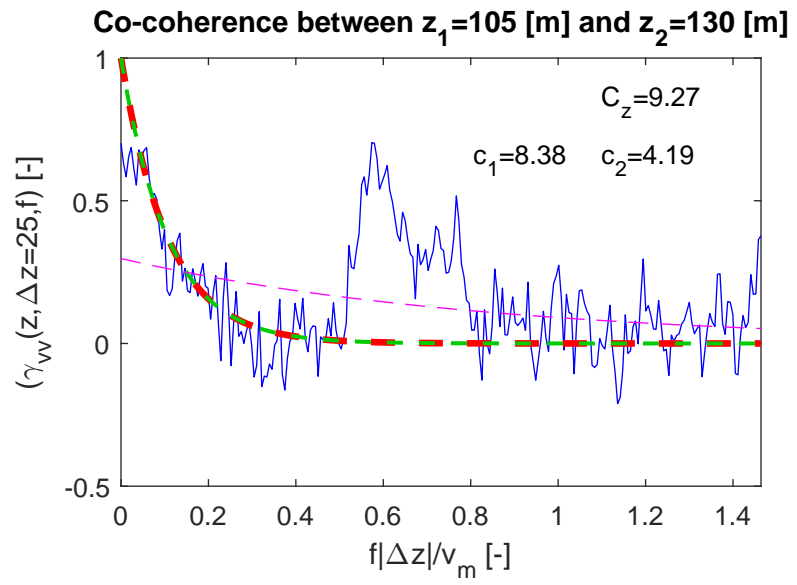
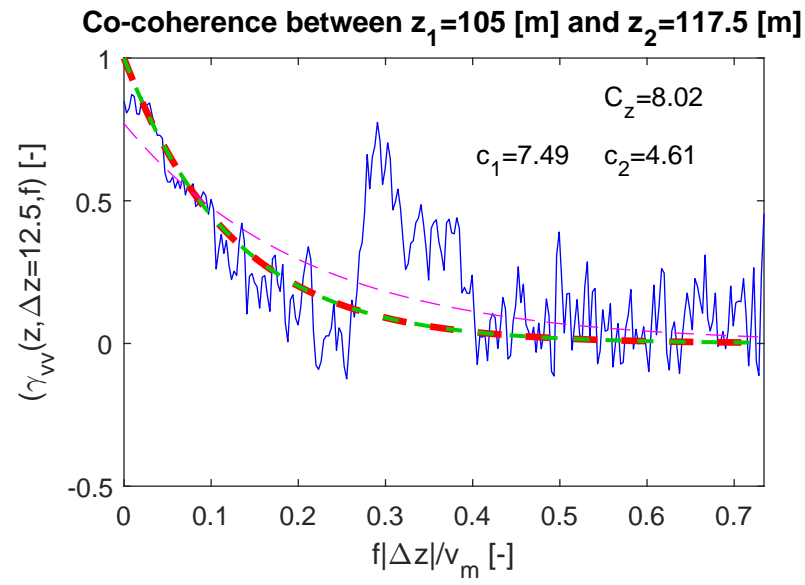
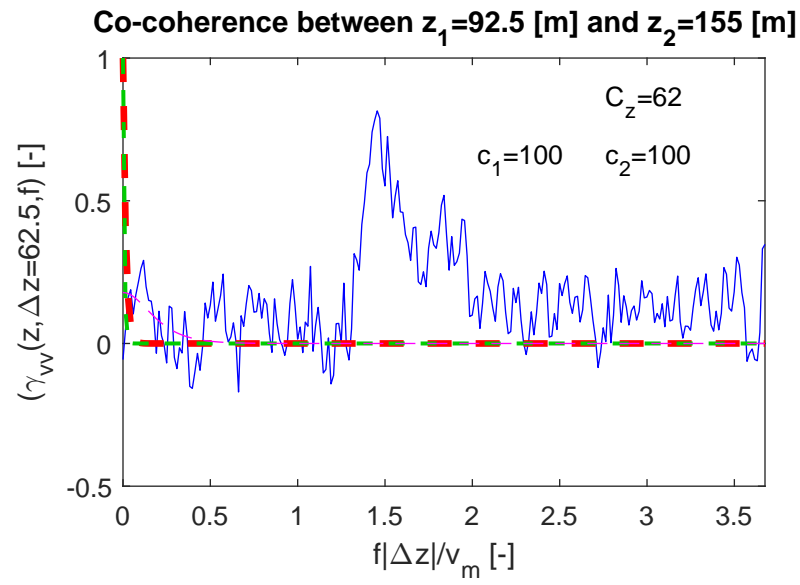




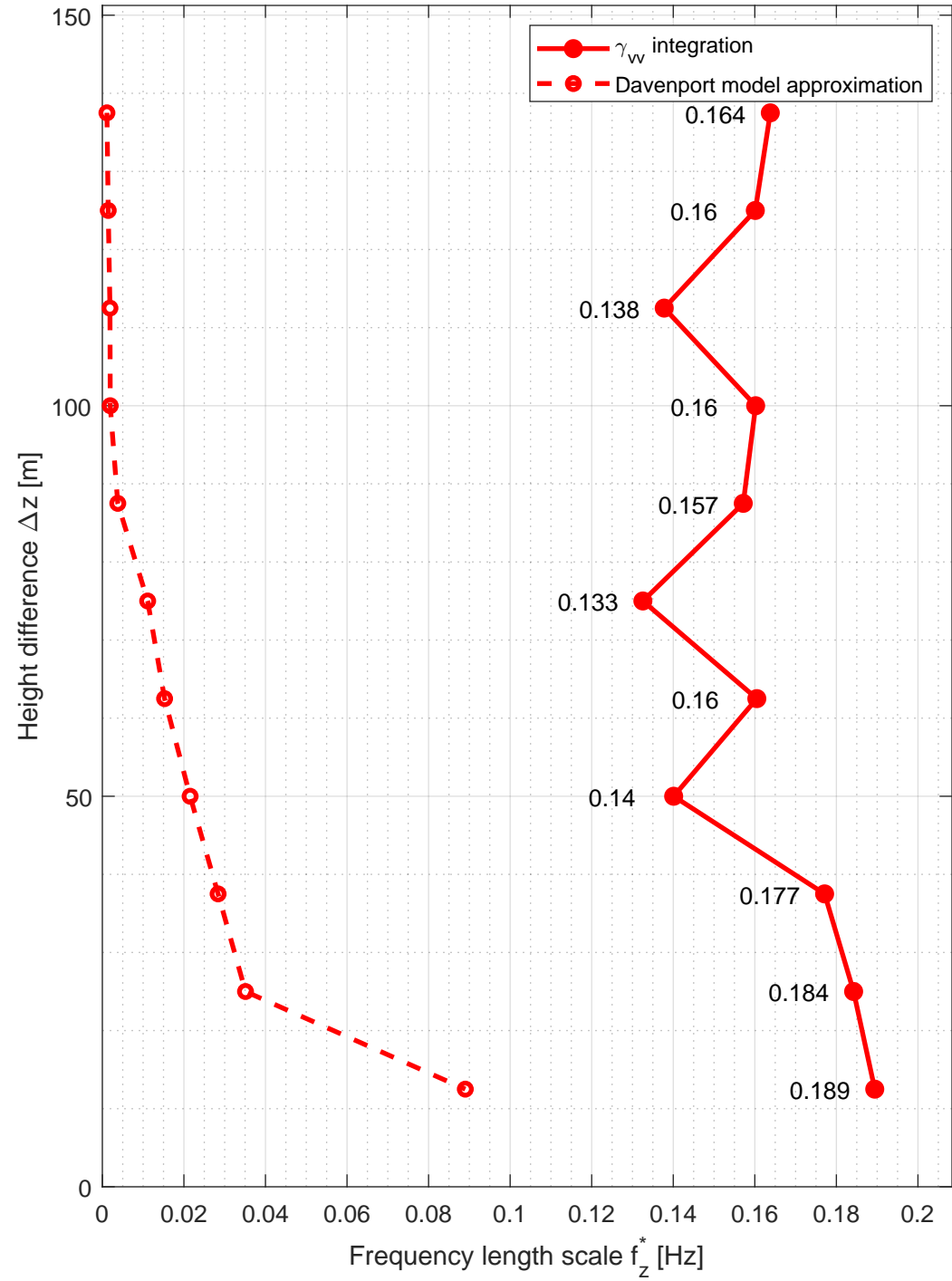




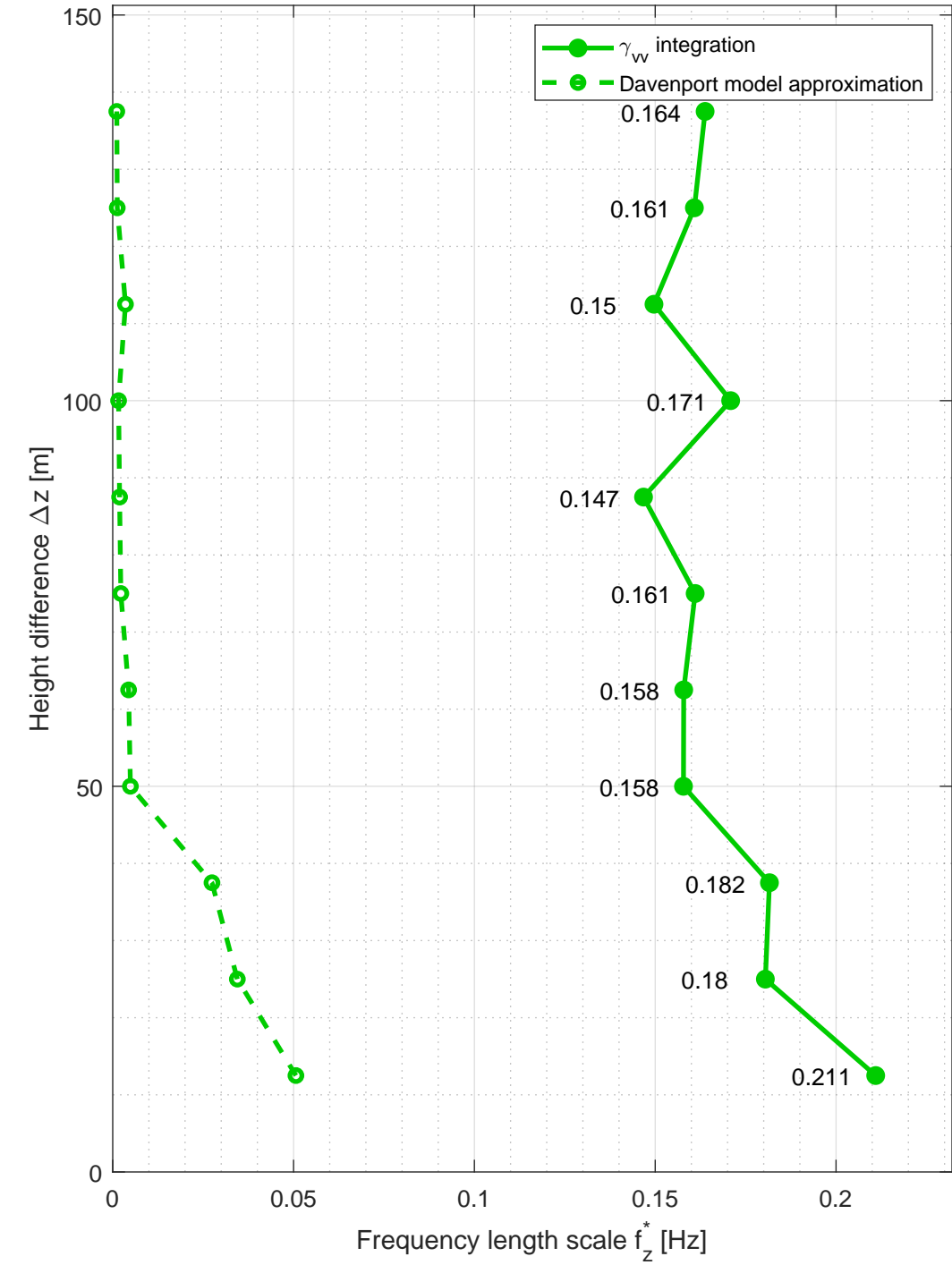




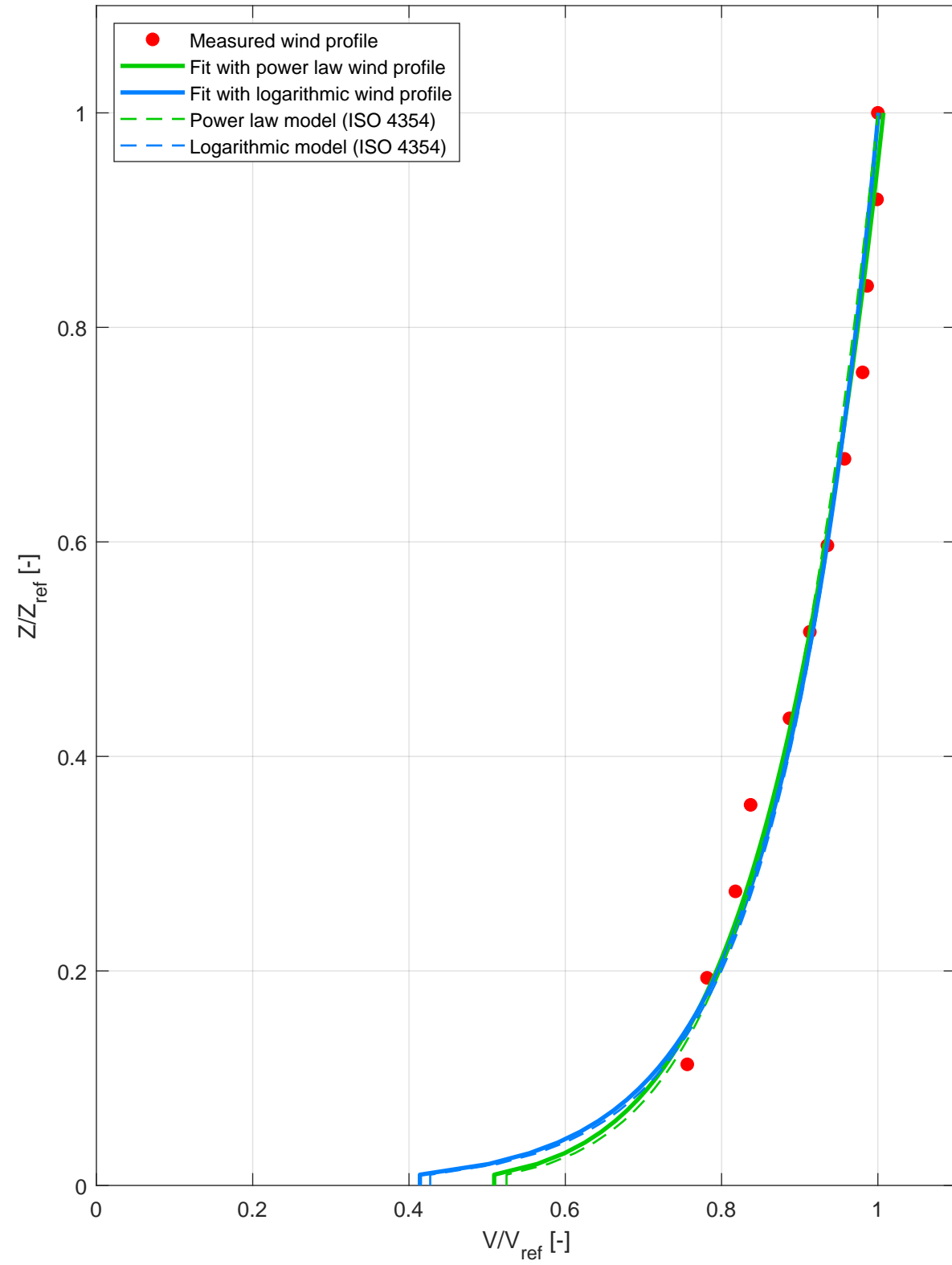
Frequency length scales for the lowest point at different height differences



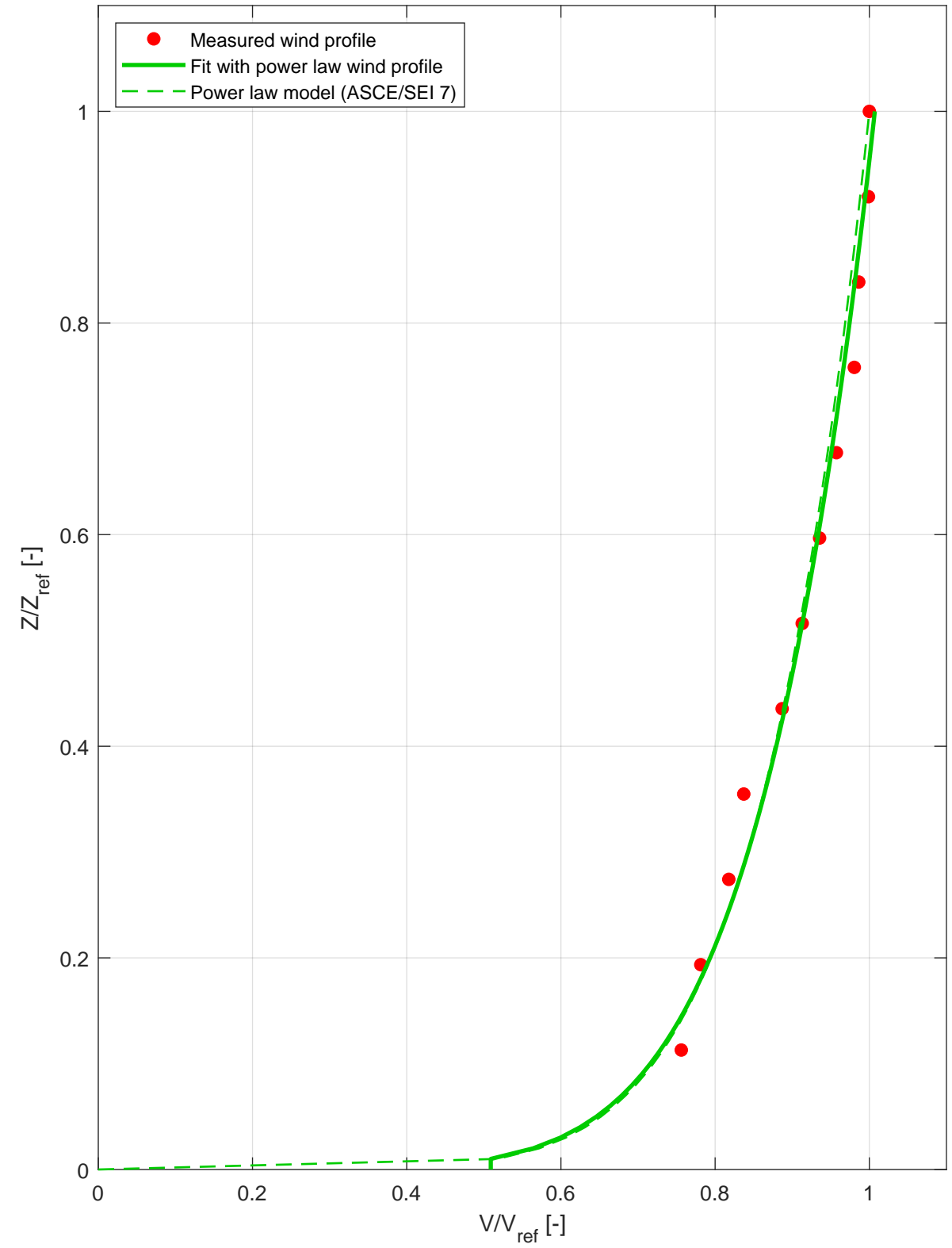
Frequency length scales for the highest point at different height differences

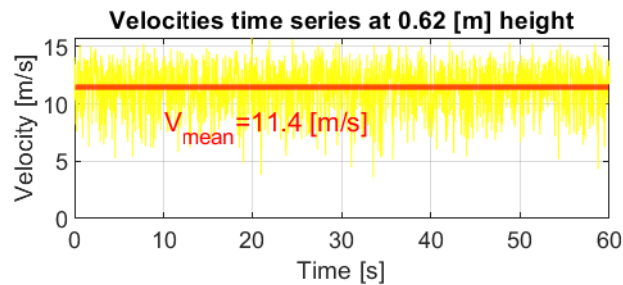
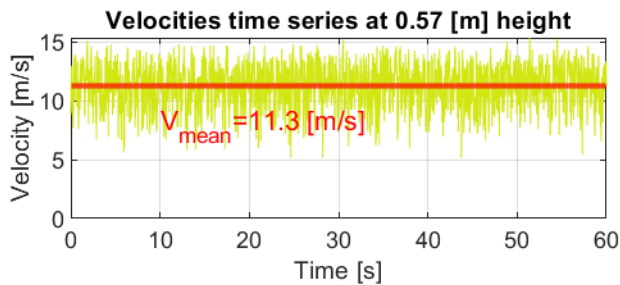
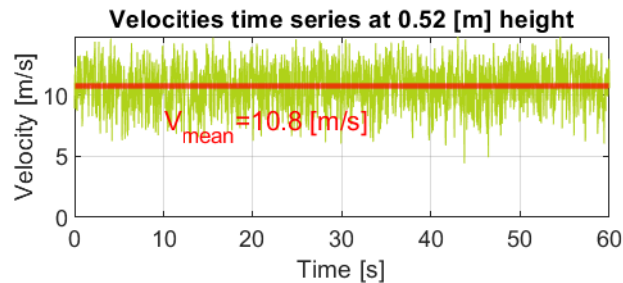
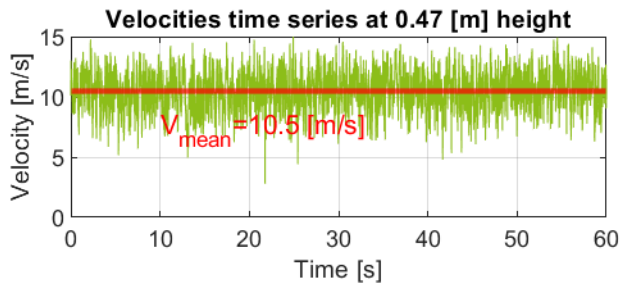
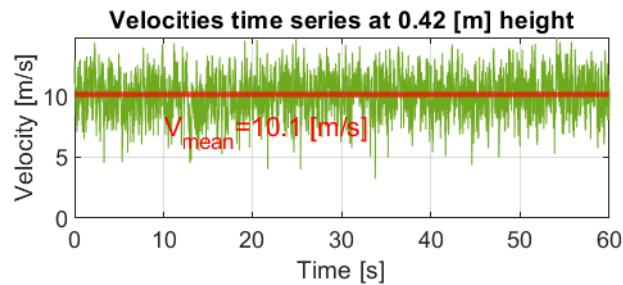
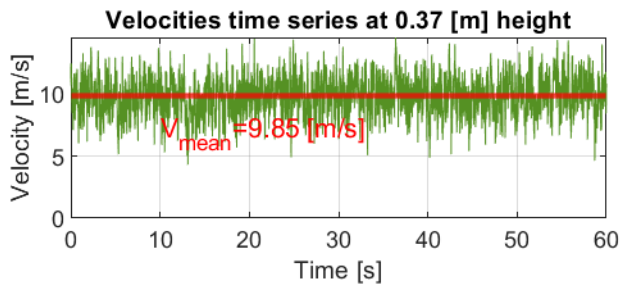
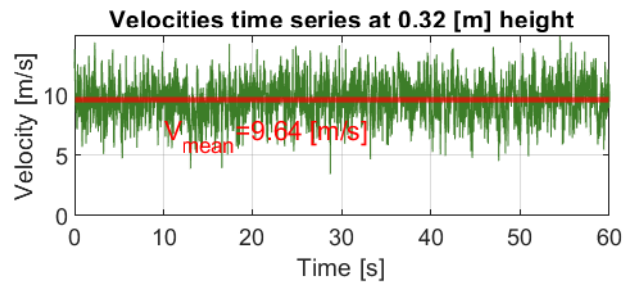
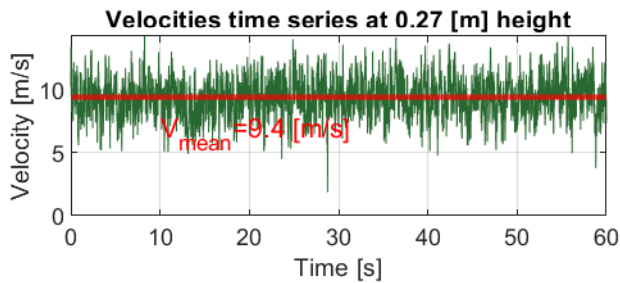
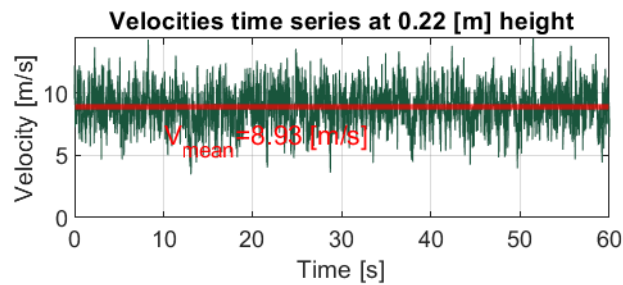
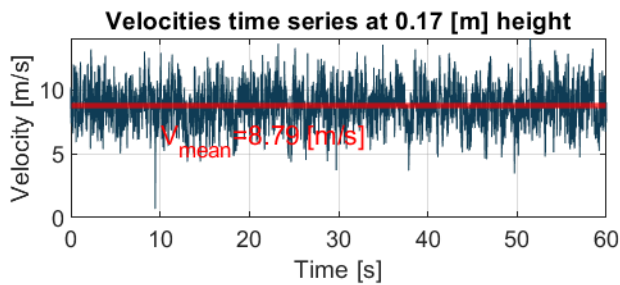
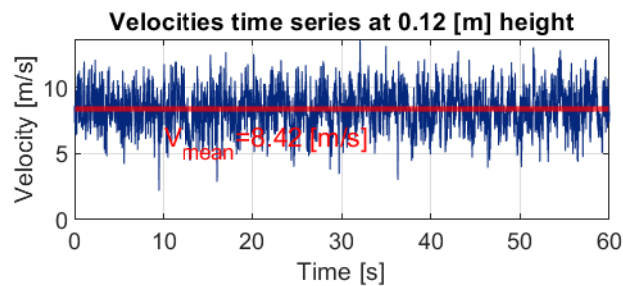
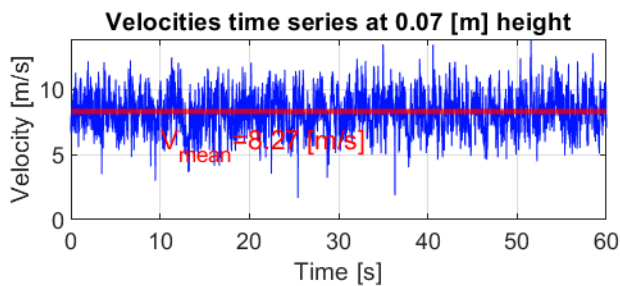


Mean wind velocity profile - comparison with ISO 4354

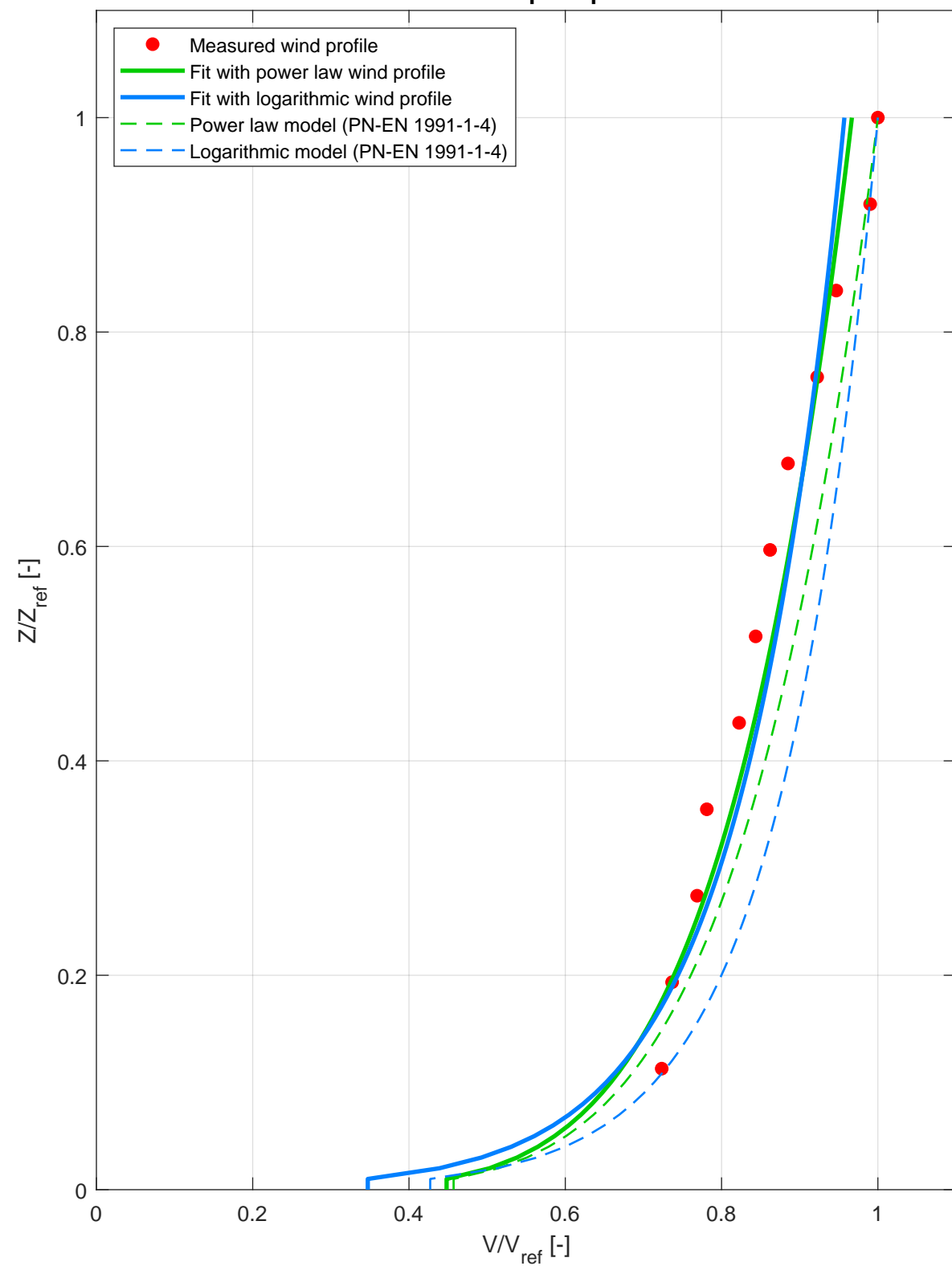


Mean wind velocity profile - comparison with ASCE/SEI 7

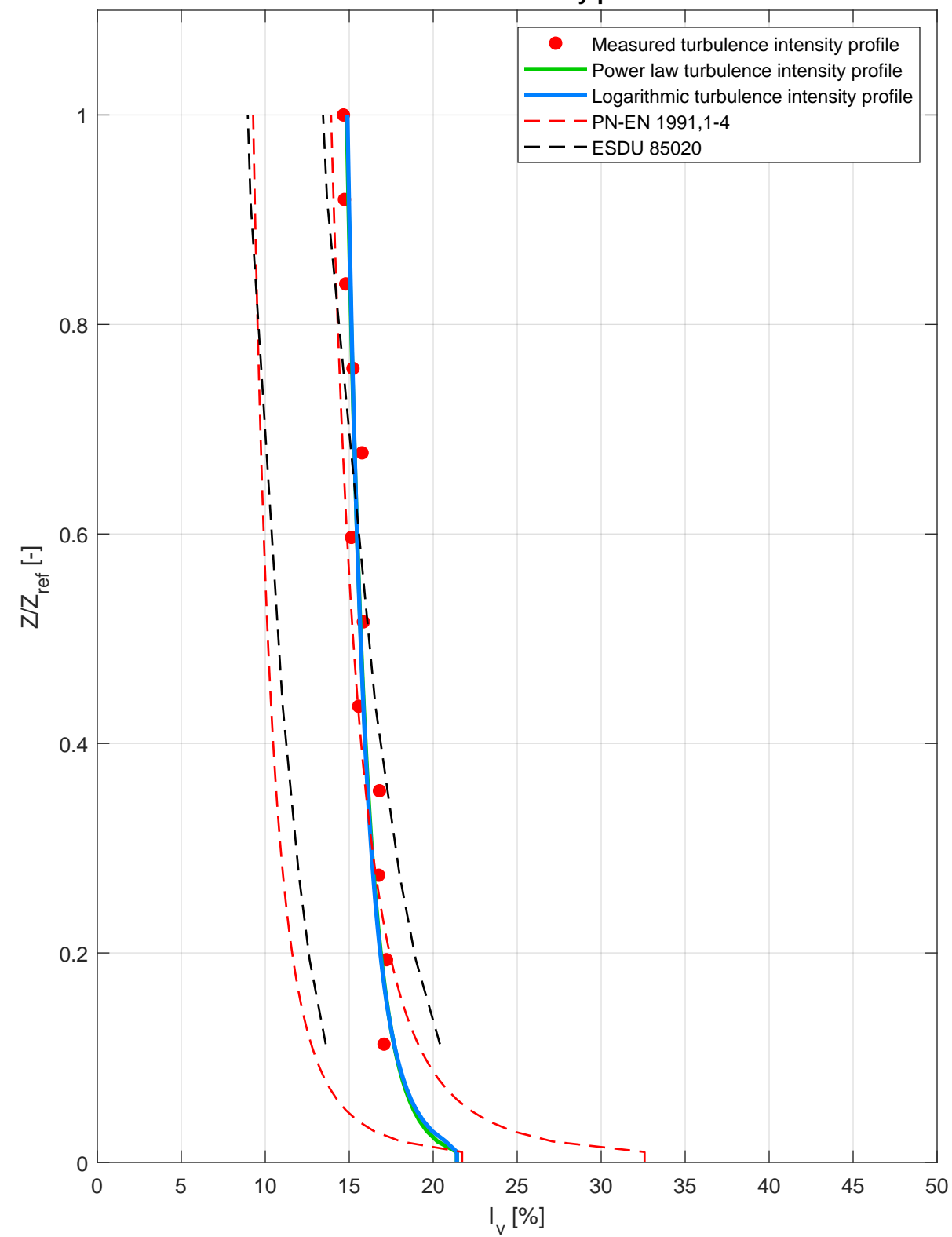




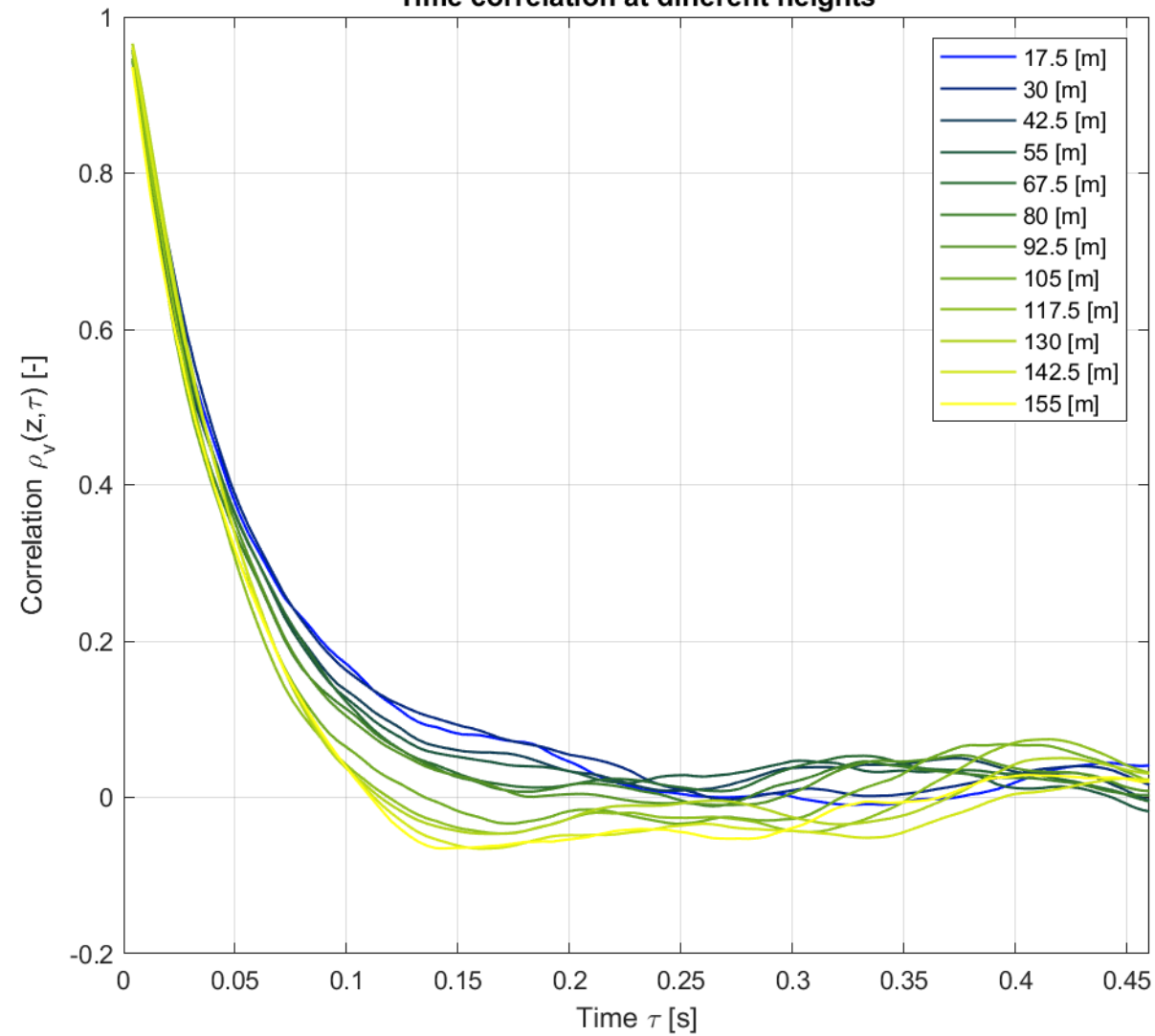
Mean wind speed profile



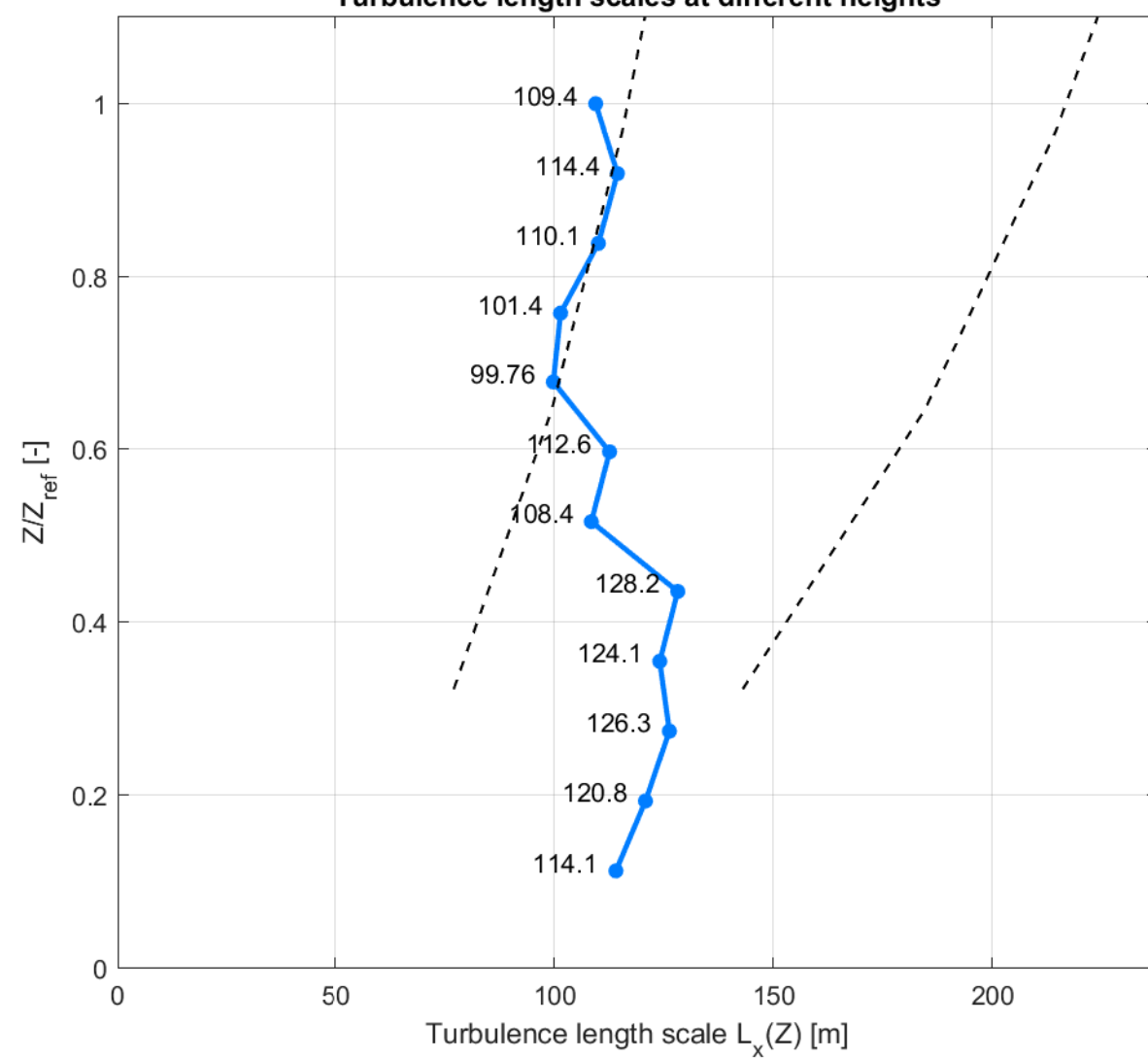
Turbulence intensity profile



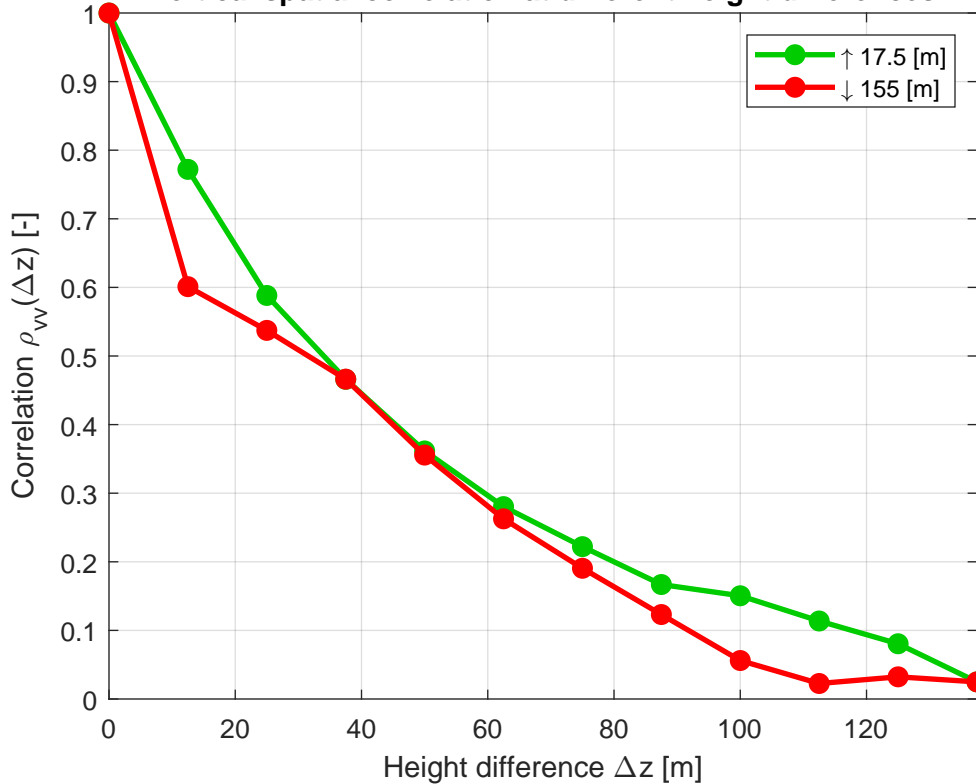
Time correlation at different heights



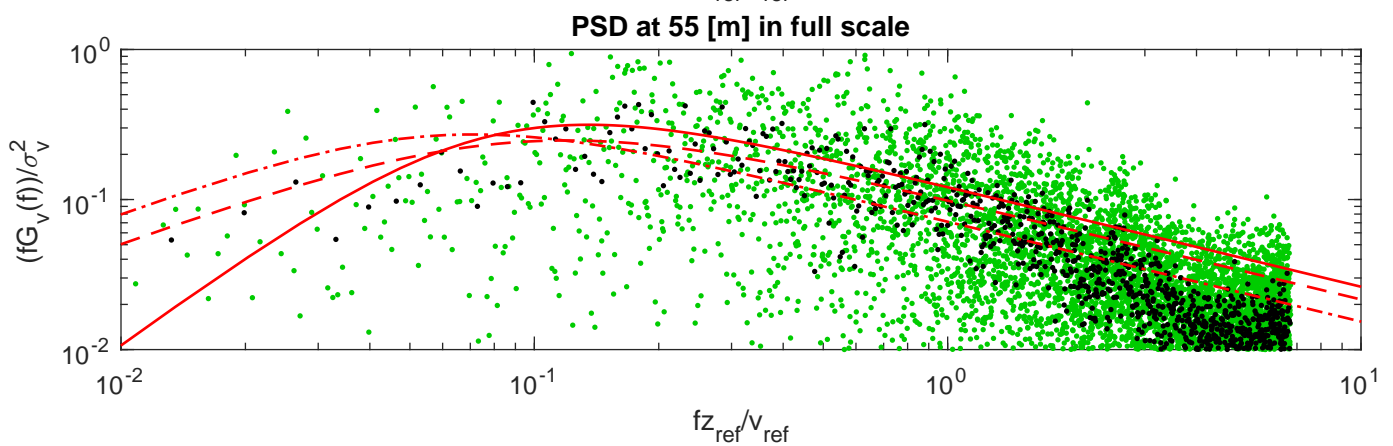
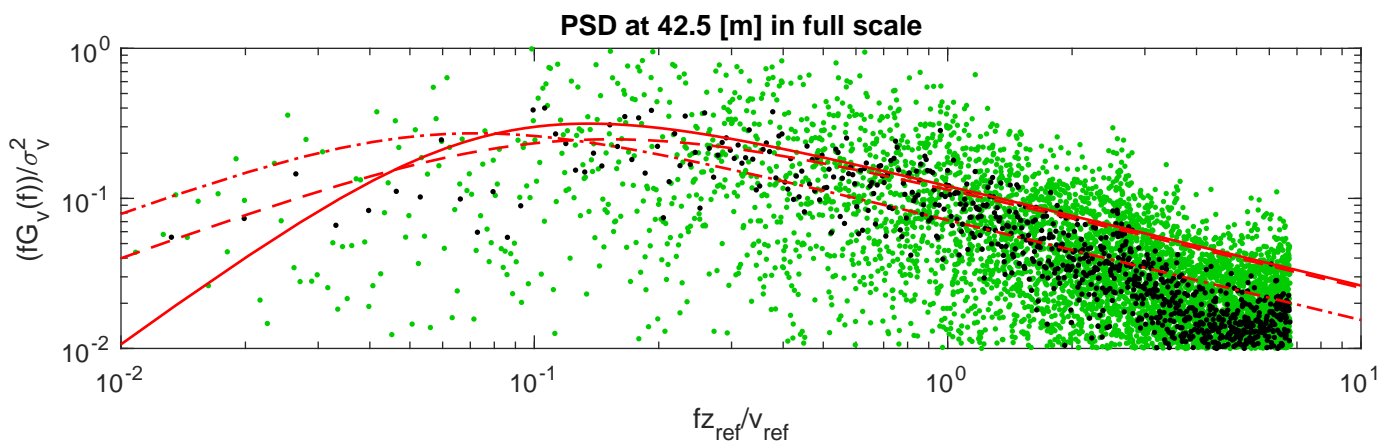
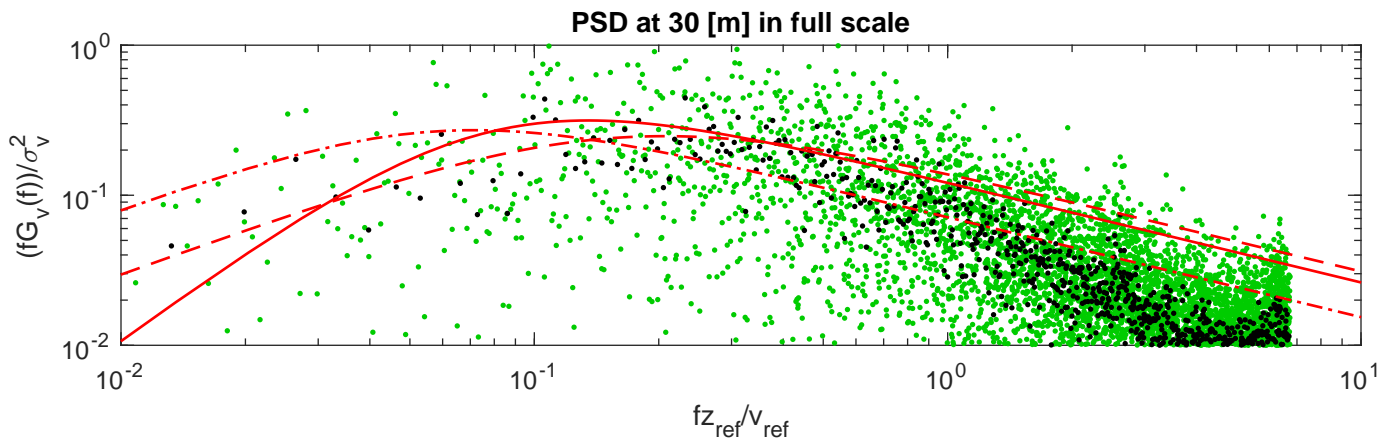
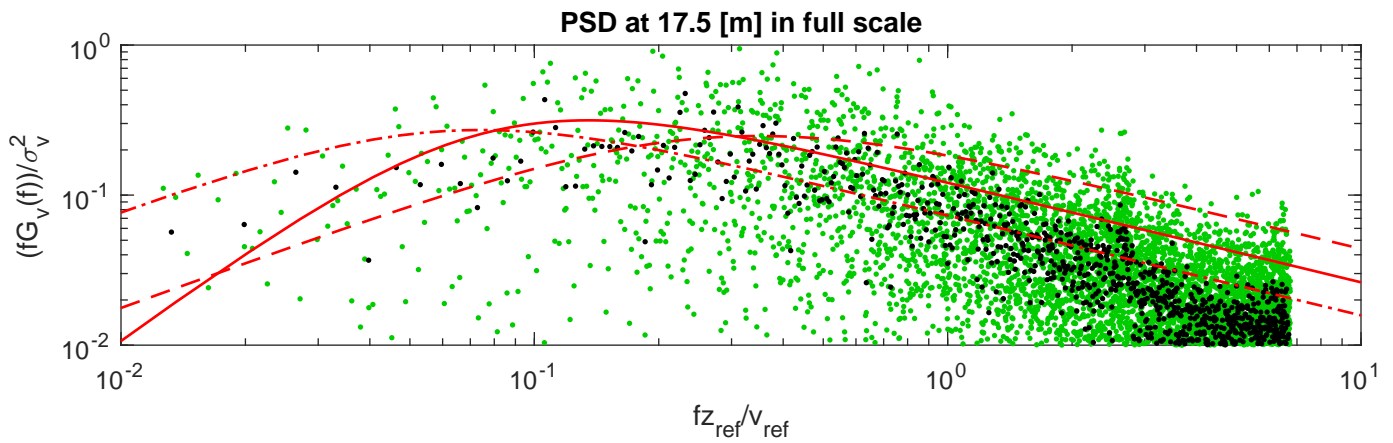
Turbulence length scales at different heights



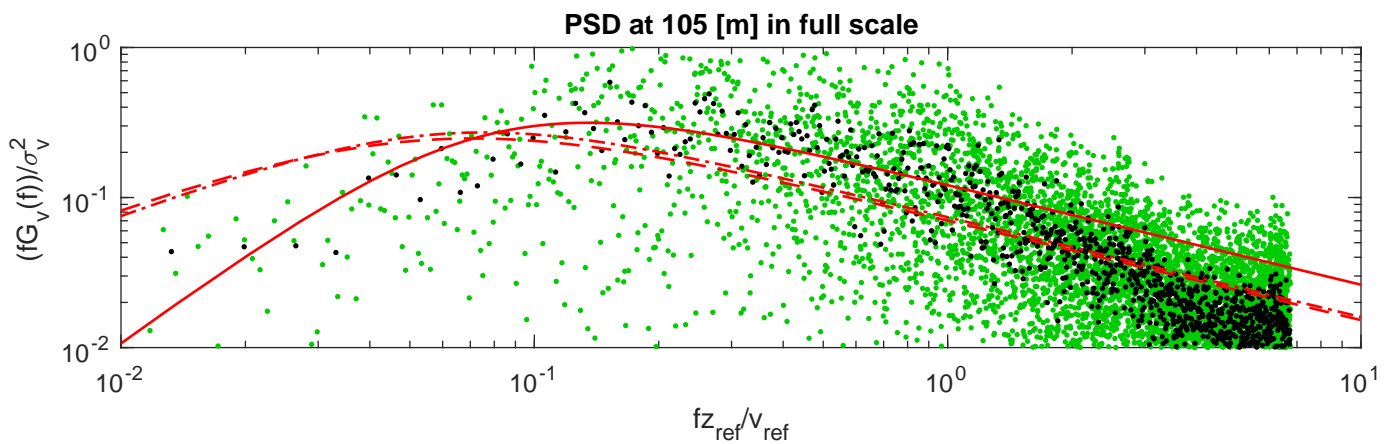
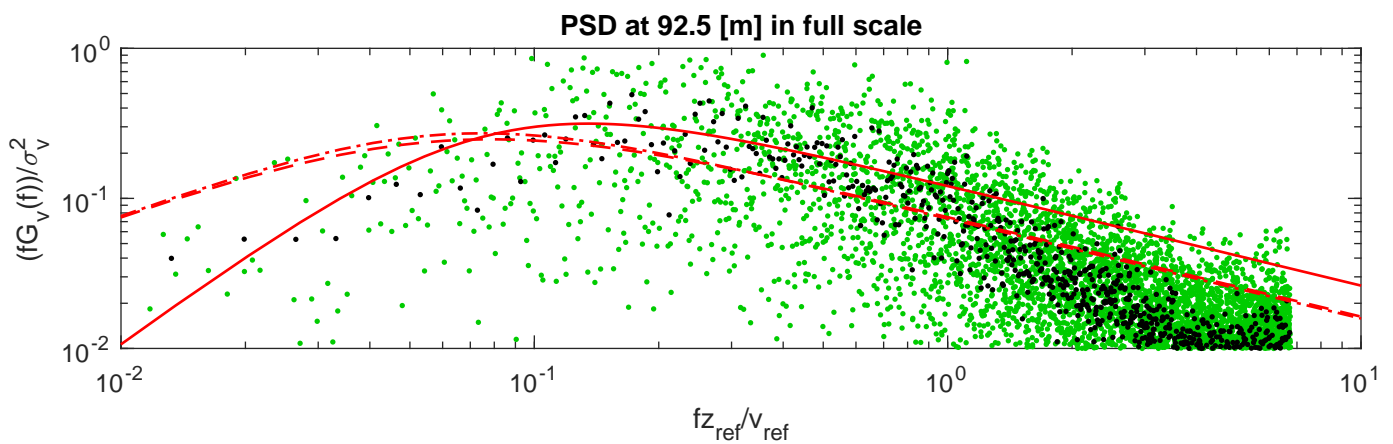
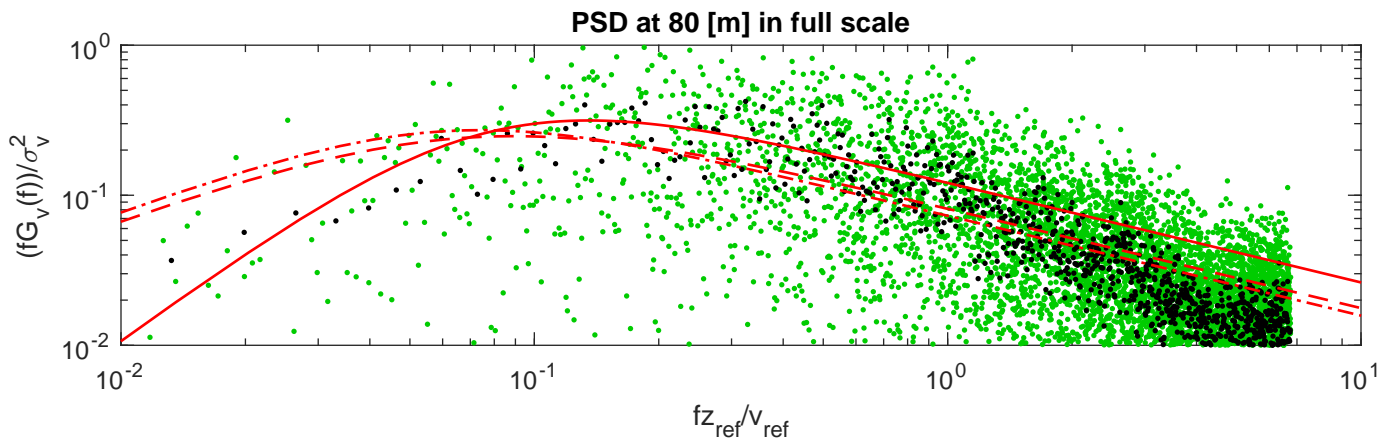
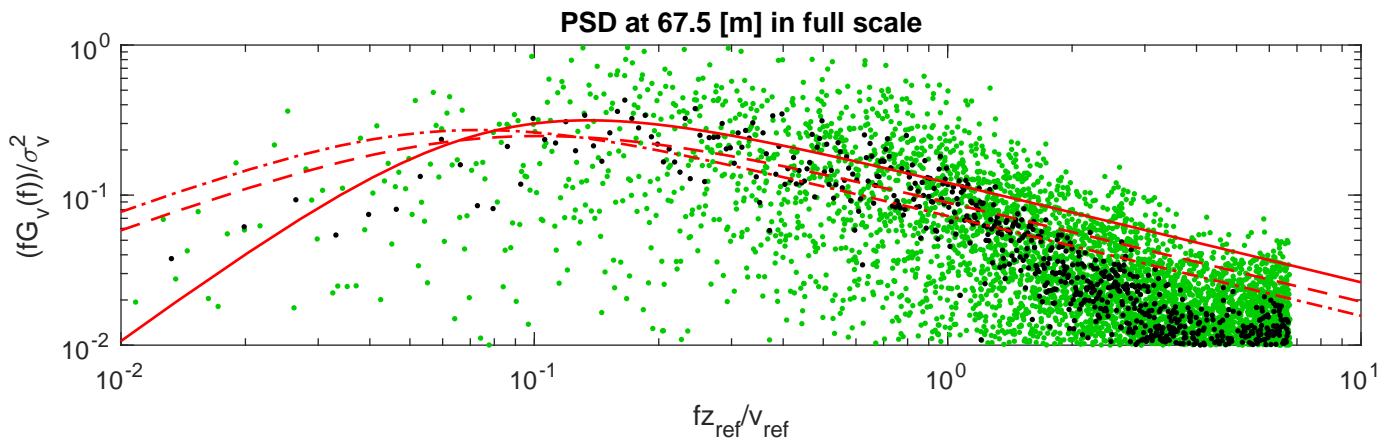
Vertical spatial correlation at different height differences



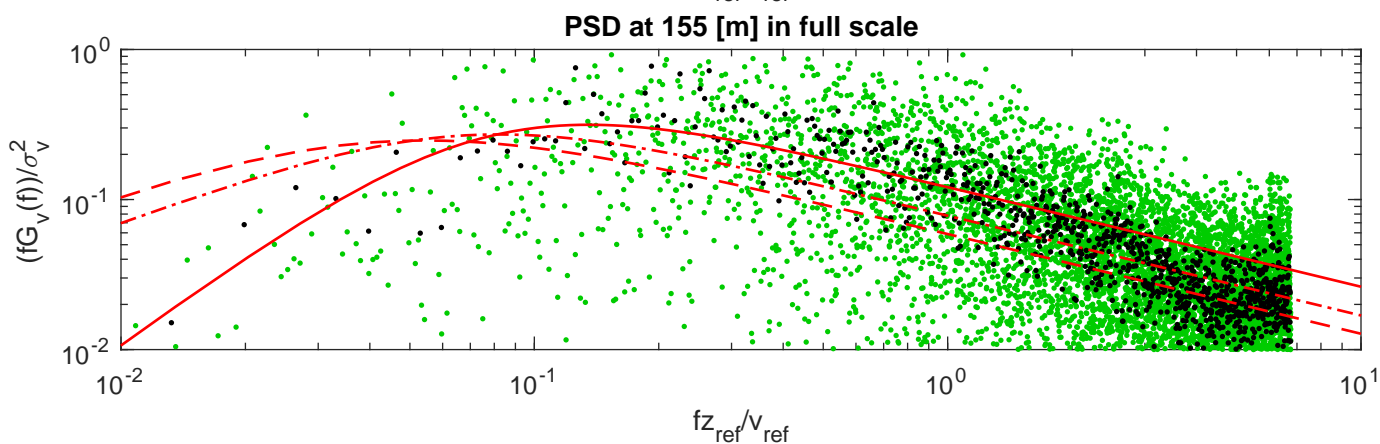
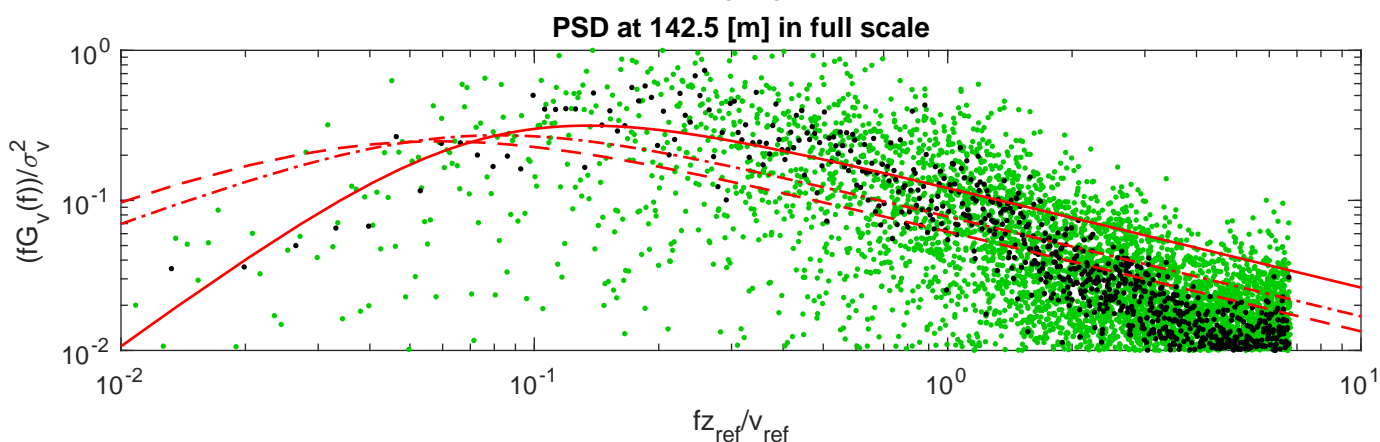
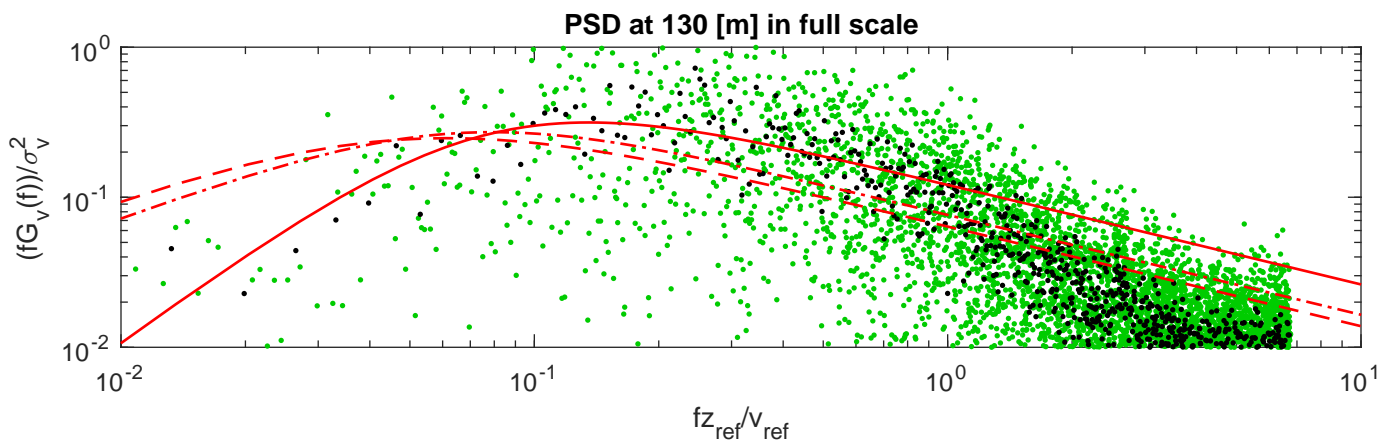
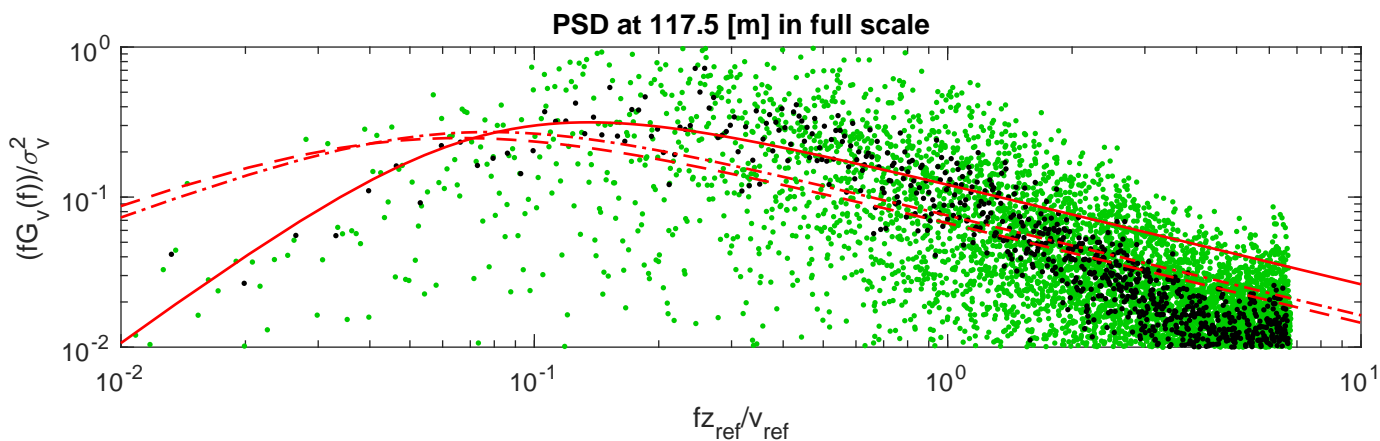
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



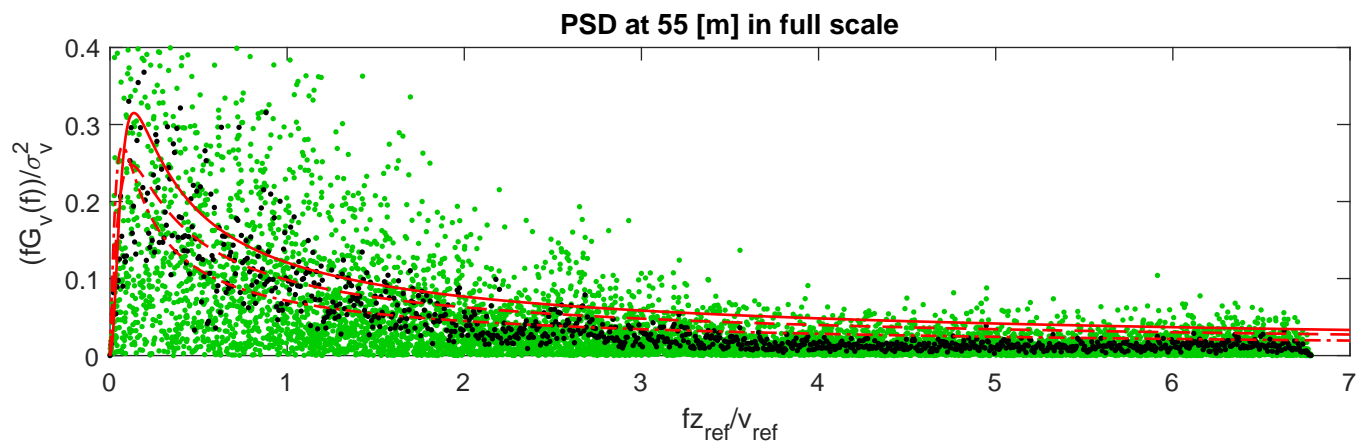
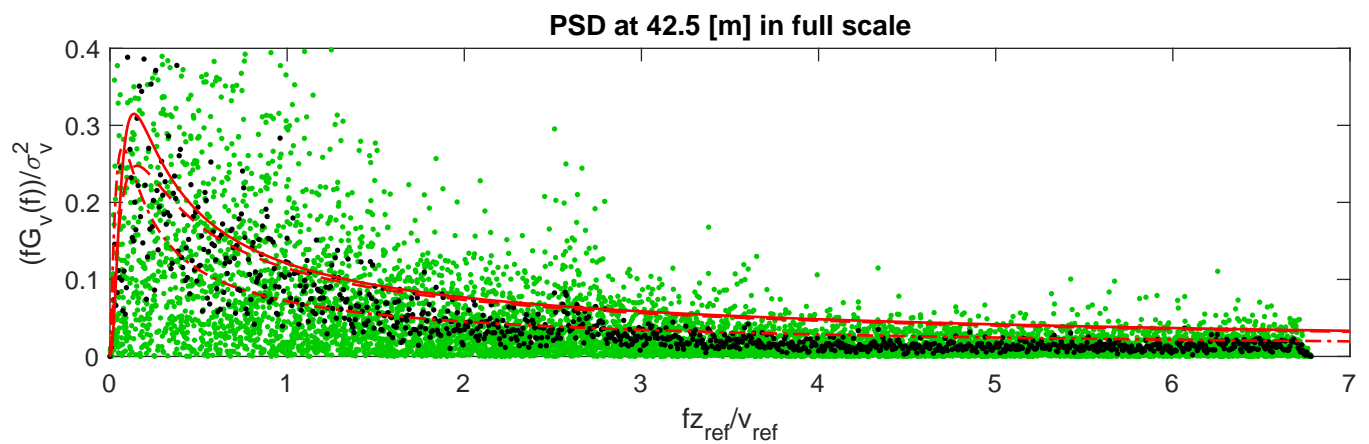
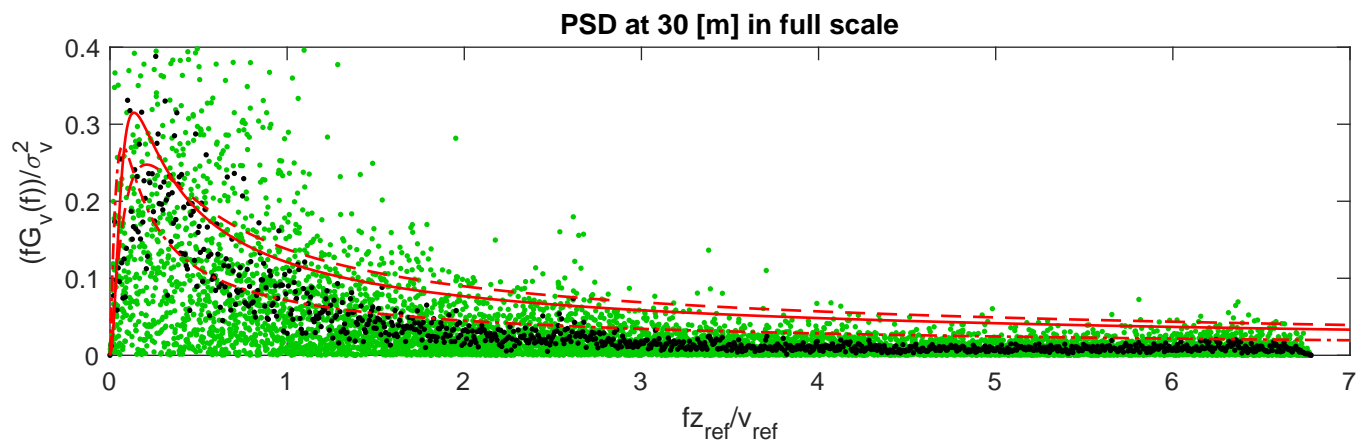
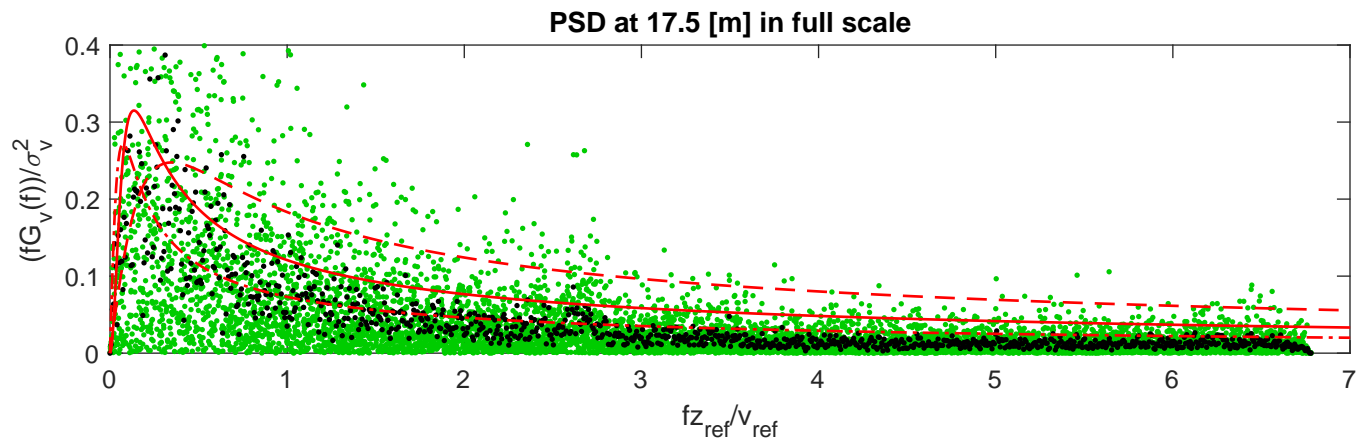
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

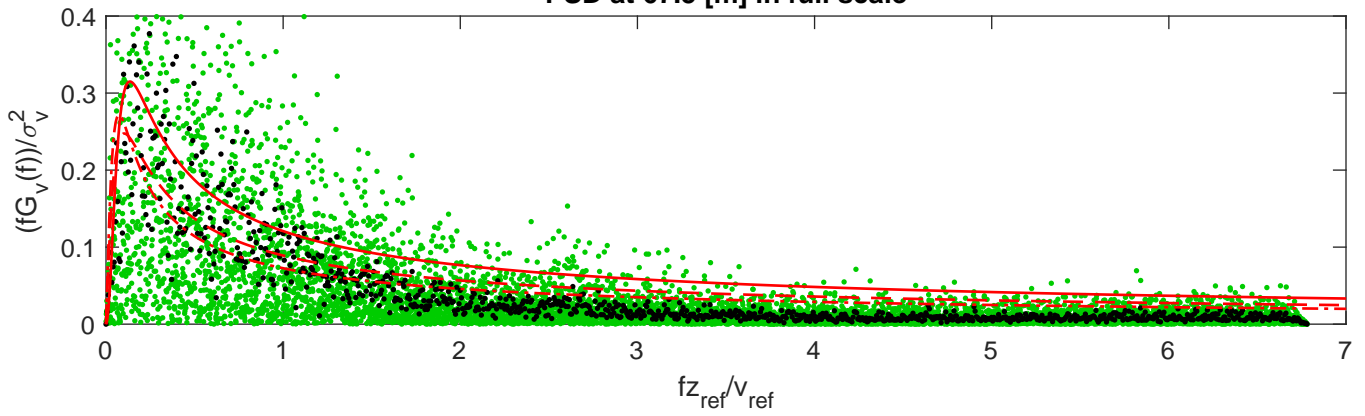


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

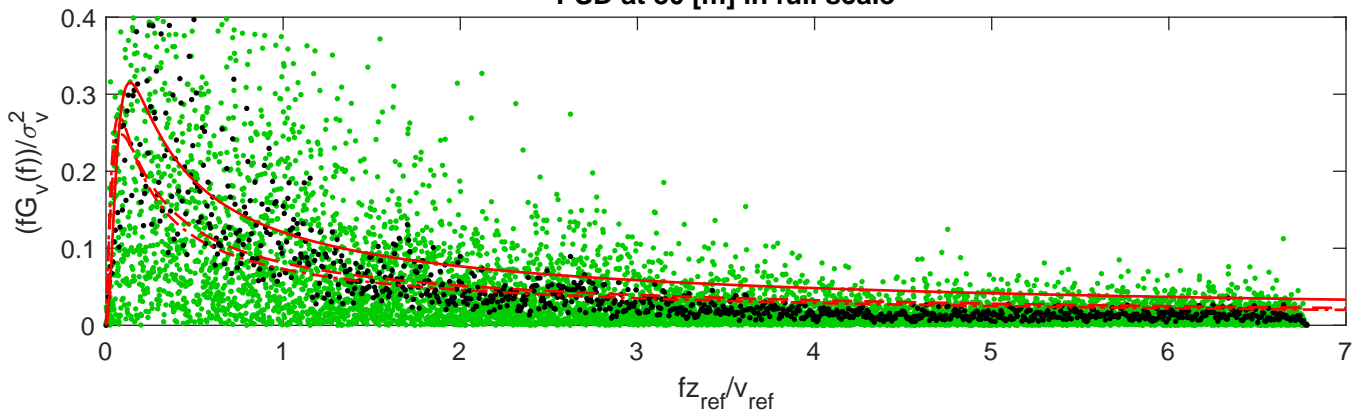


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

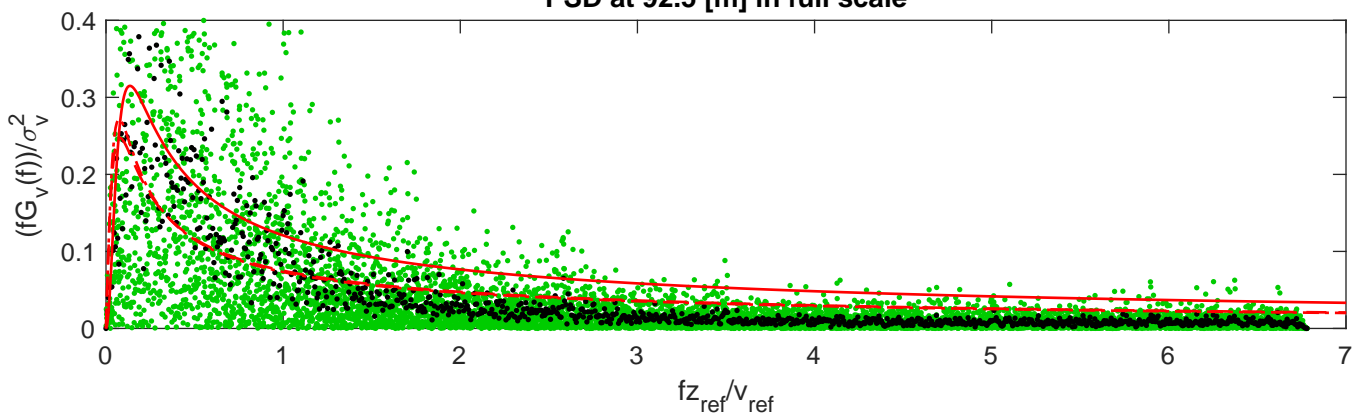
PSD at 67.5 [m] in full scale



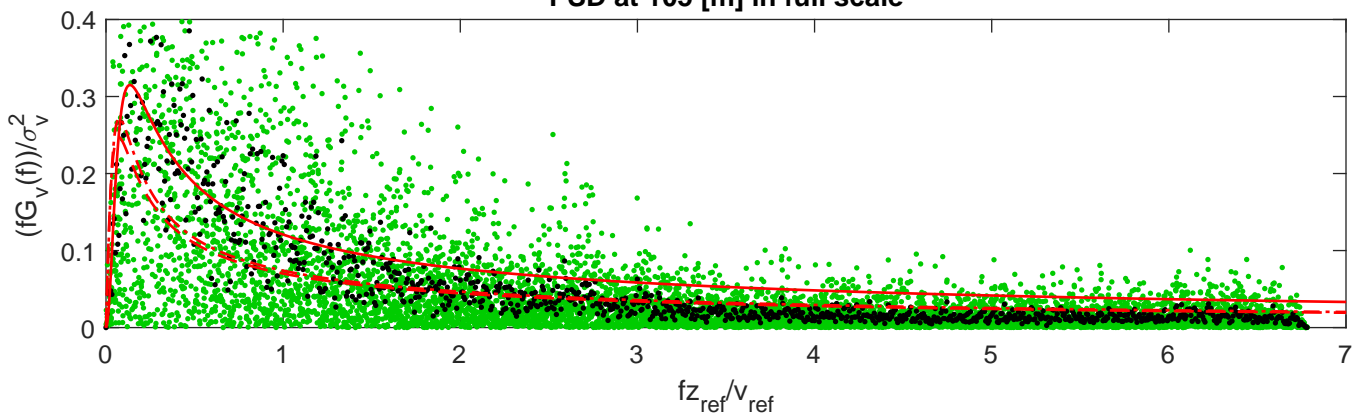
PSD at 80 [m] in full scale



PSD at 92.5 [m] in full scale

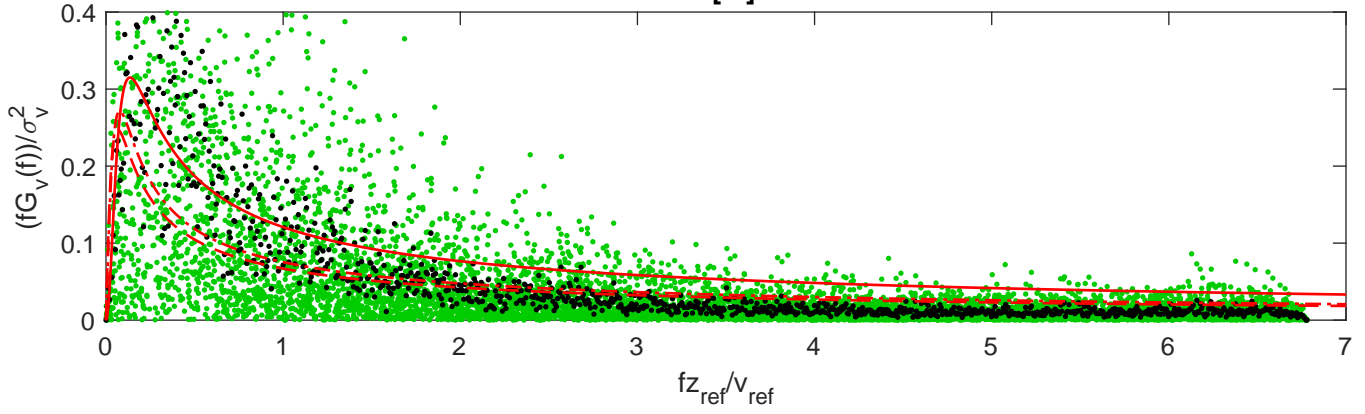


PSD at 105 [m] in full scale

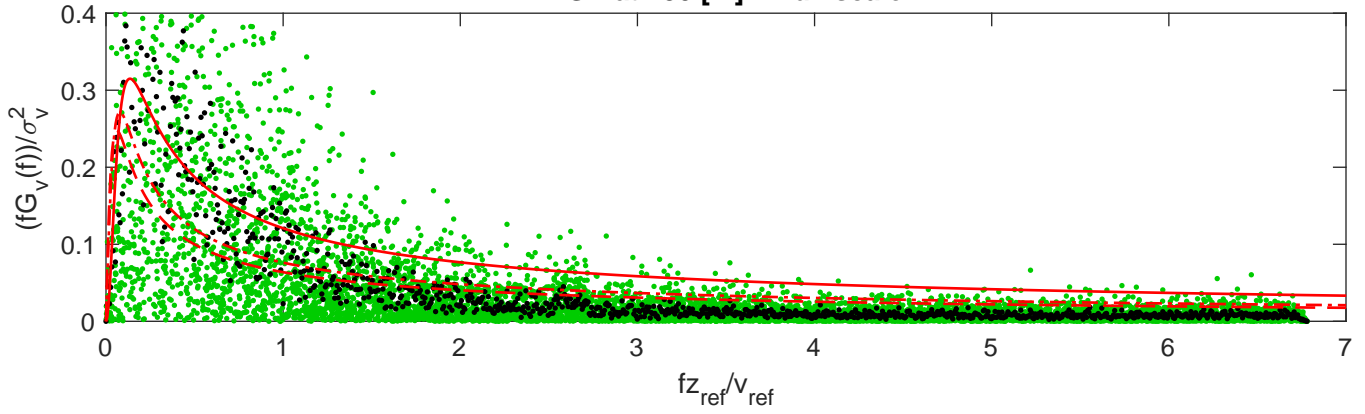


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

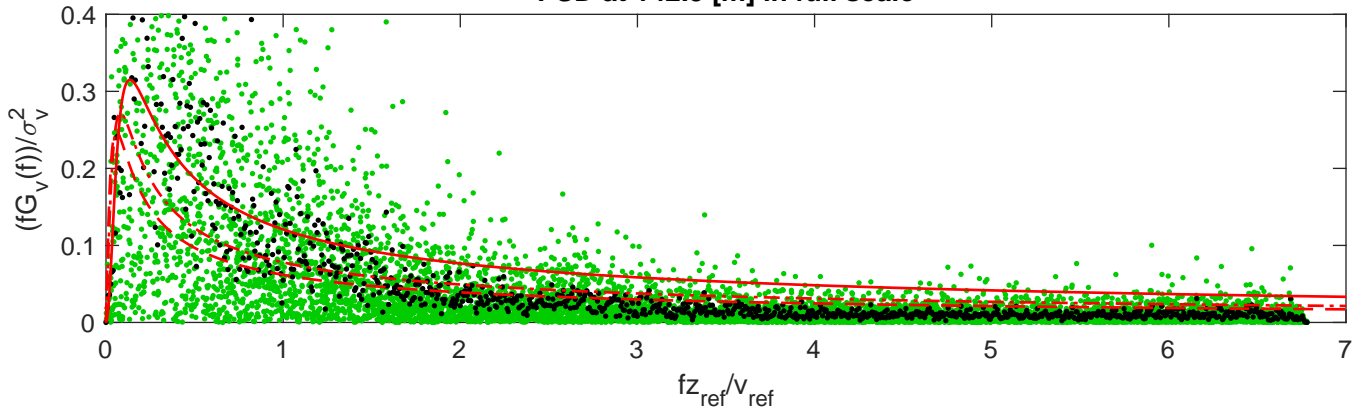
PSD at 117.5 [m] in full scale



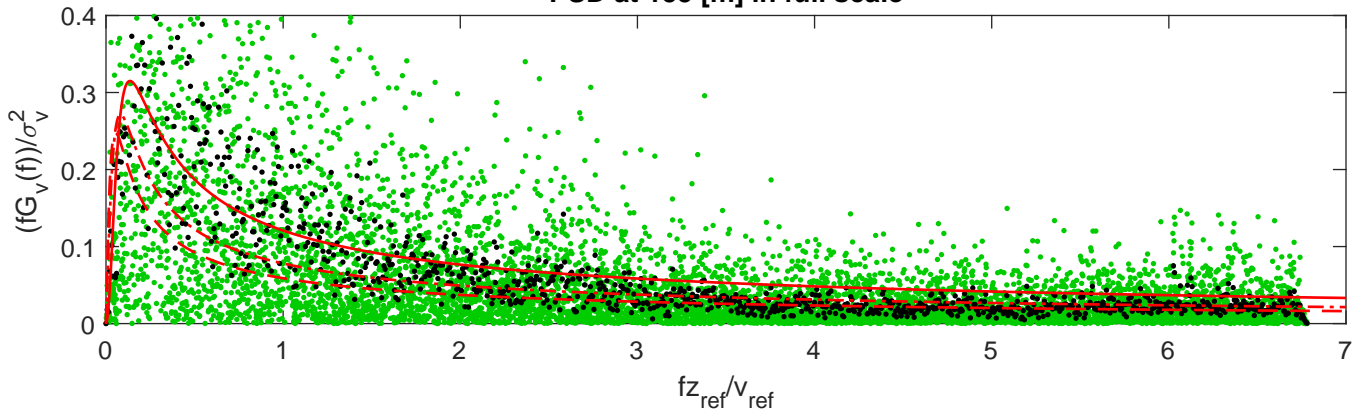
PSD at 130 [m] in full scale

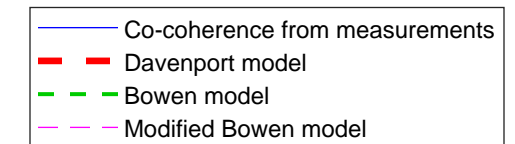
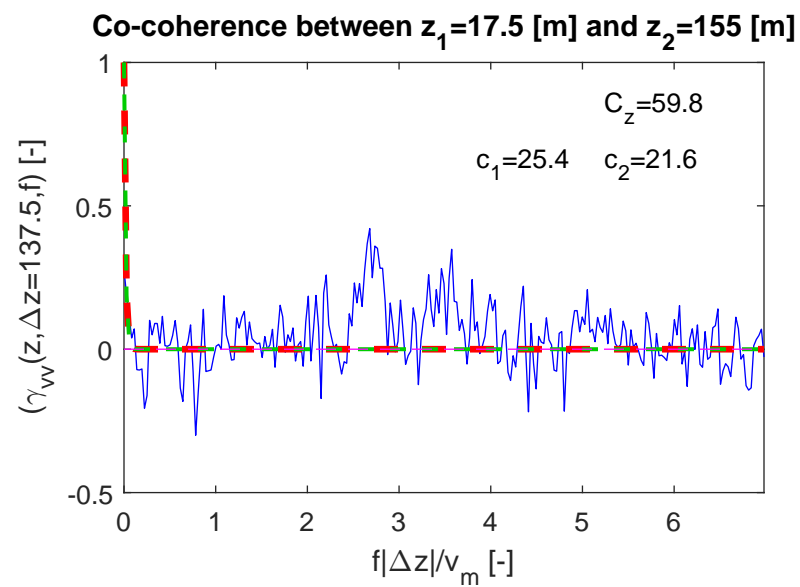
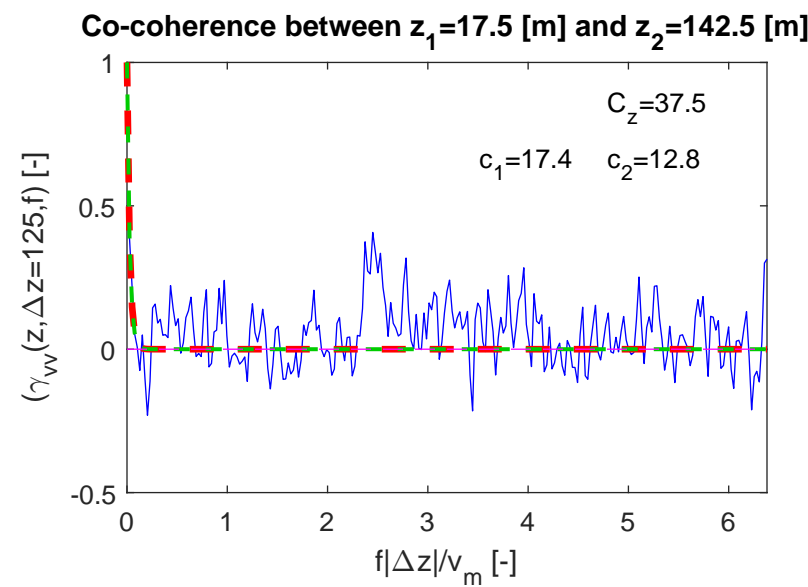
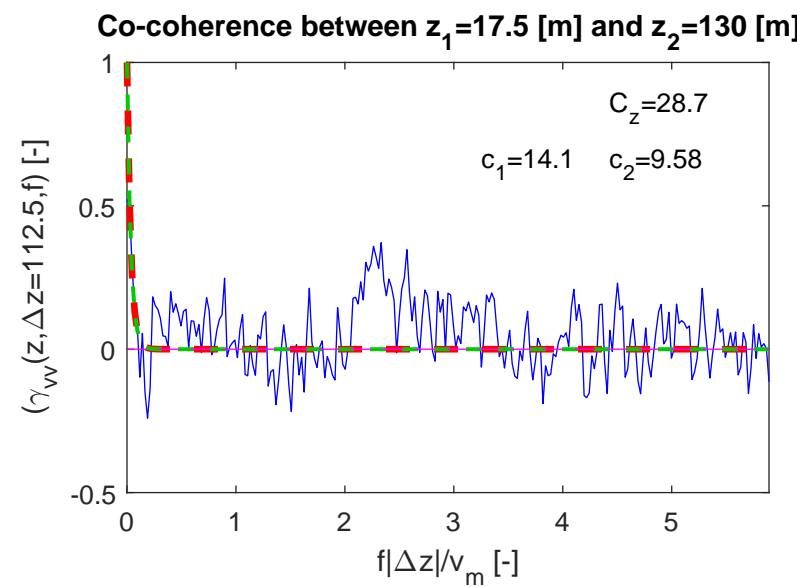
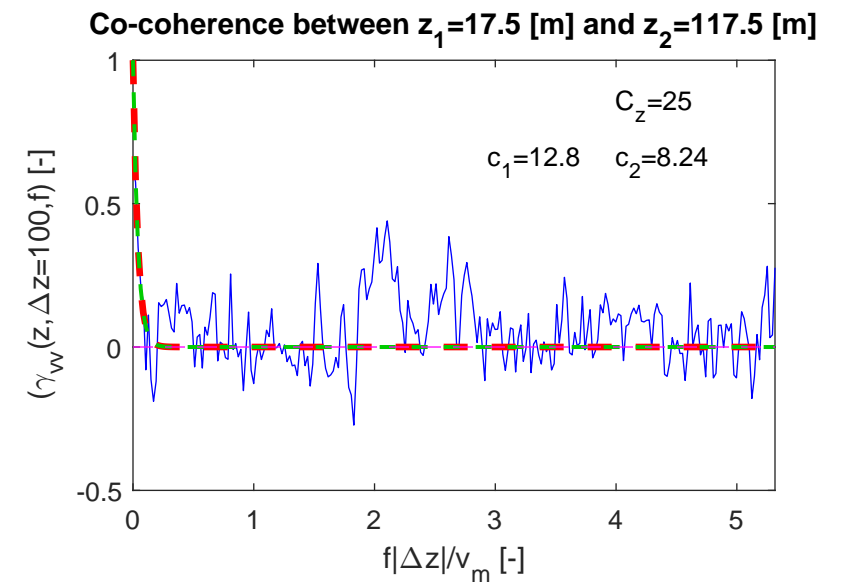
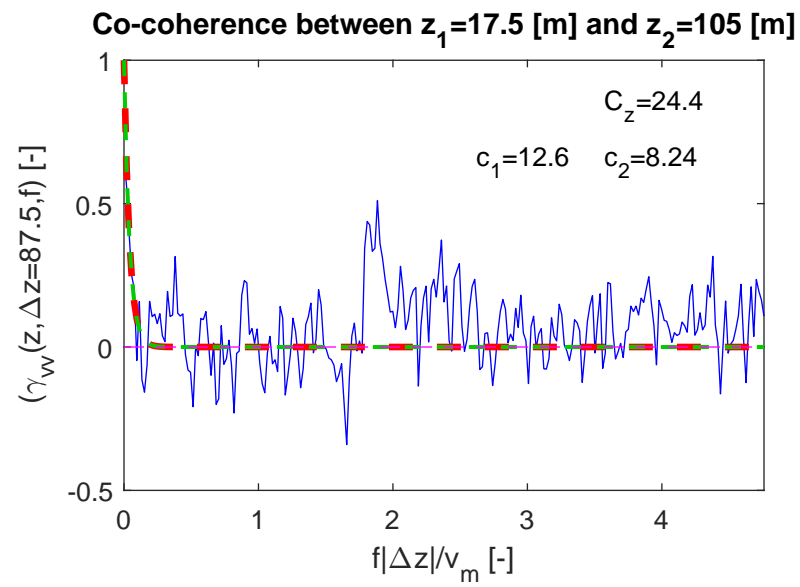
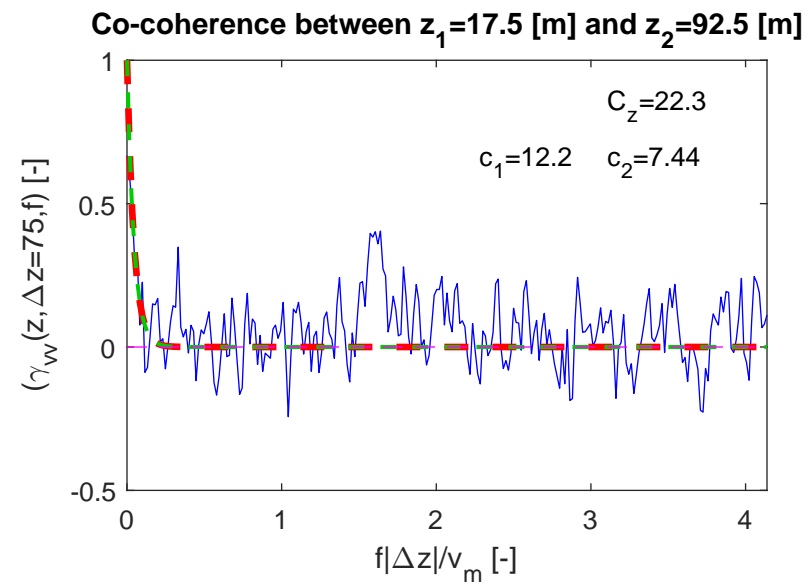
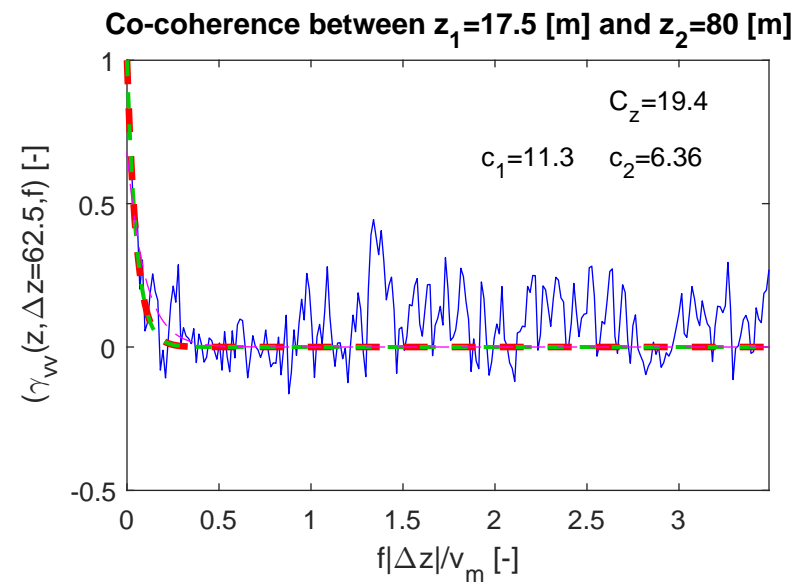
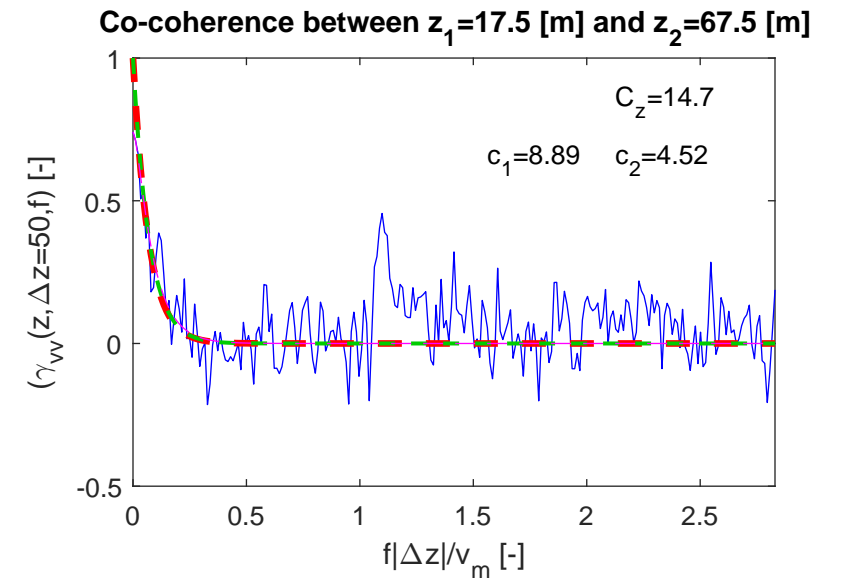
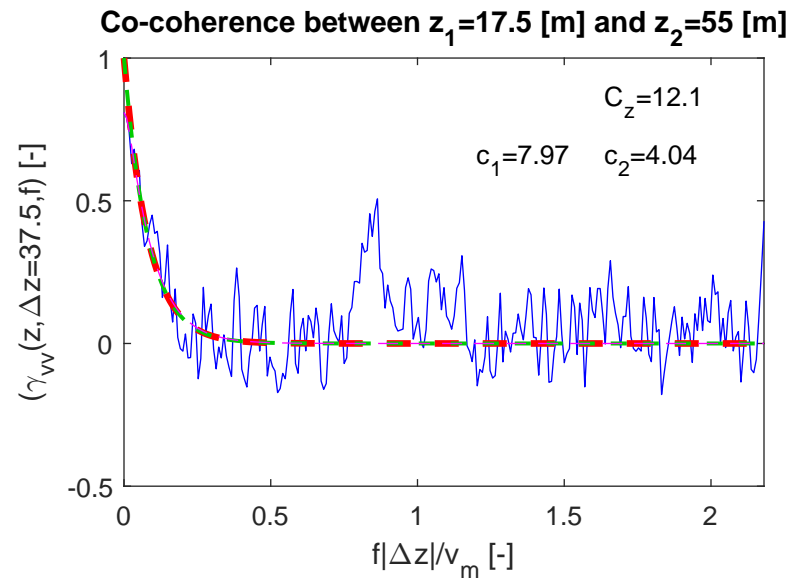
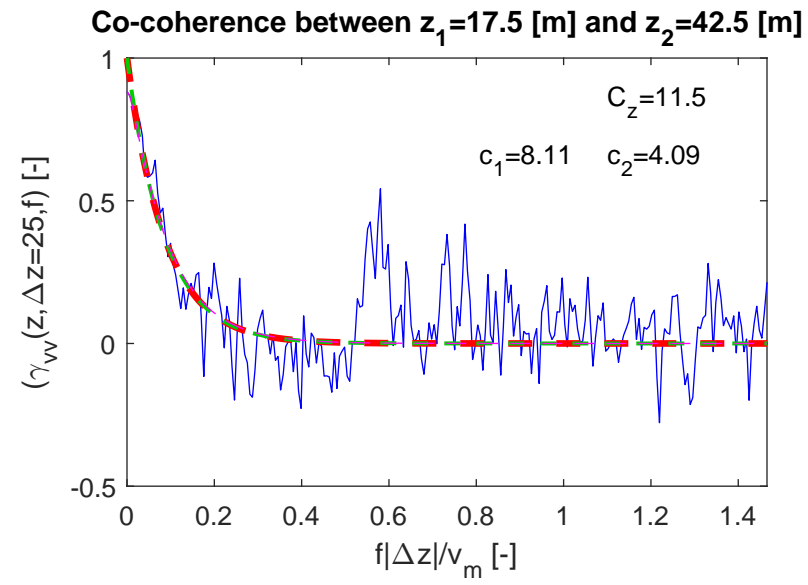
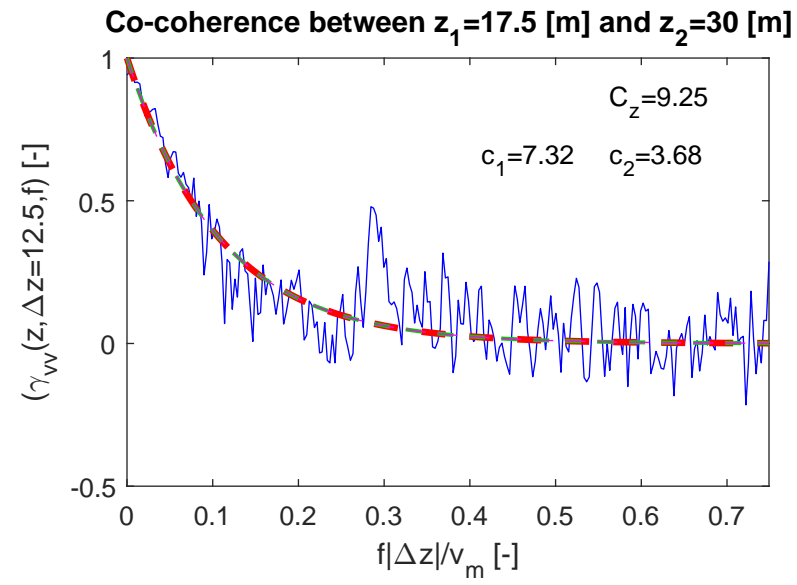


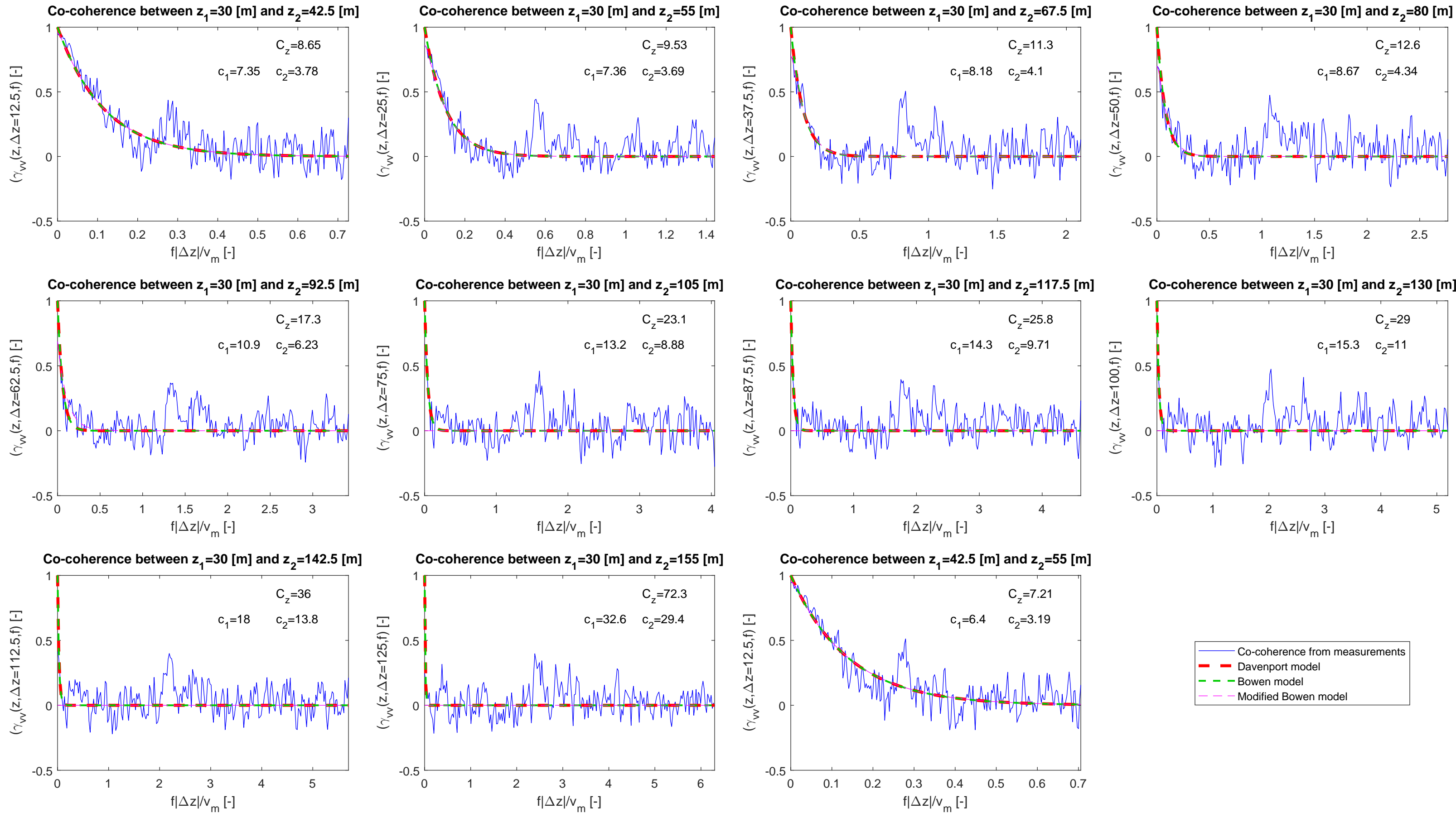
PSD at 142.5 [m] in full scale

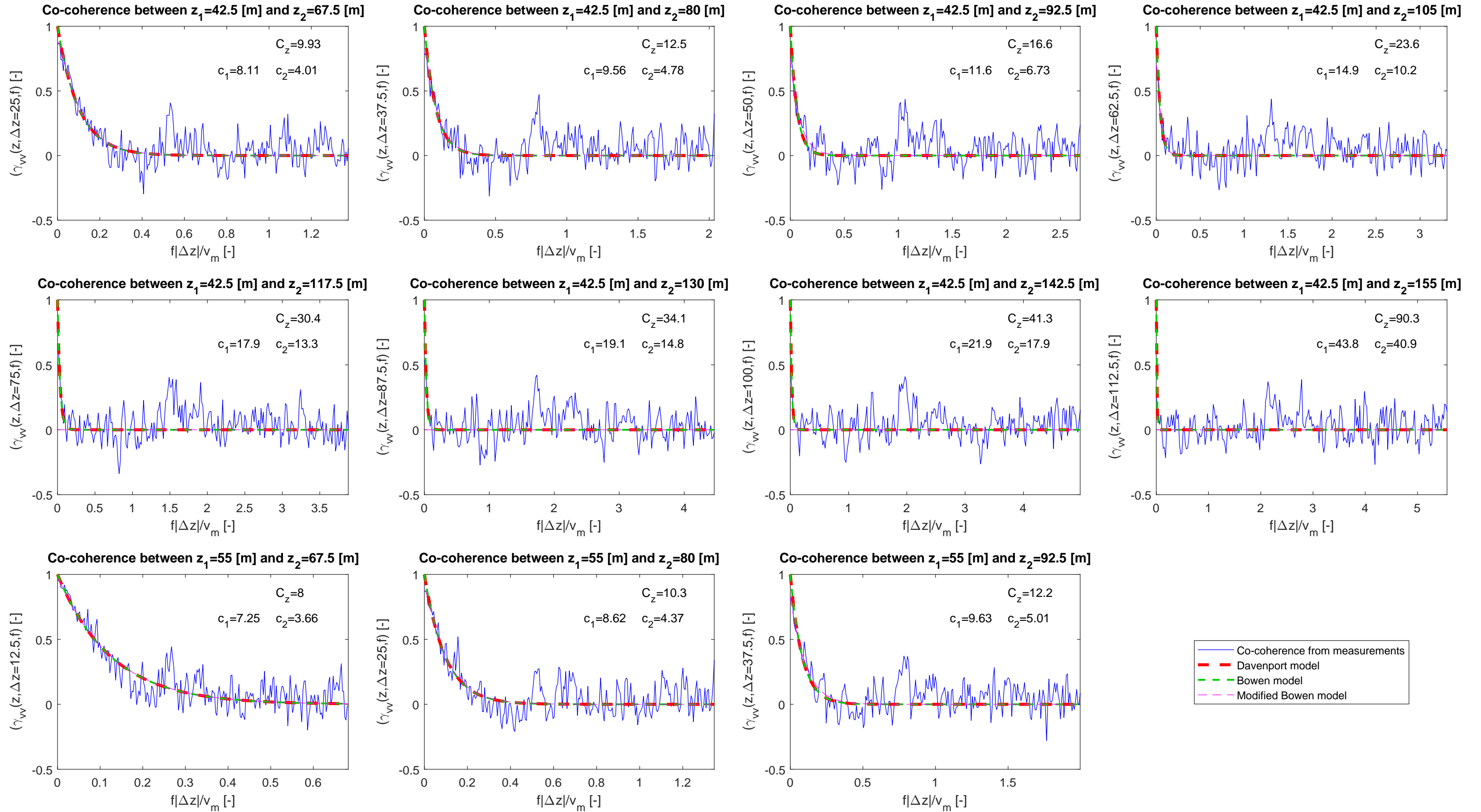


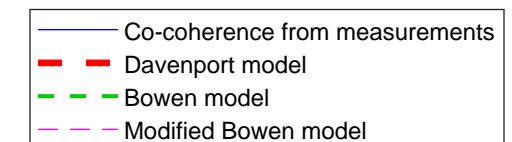
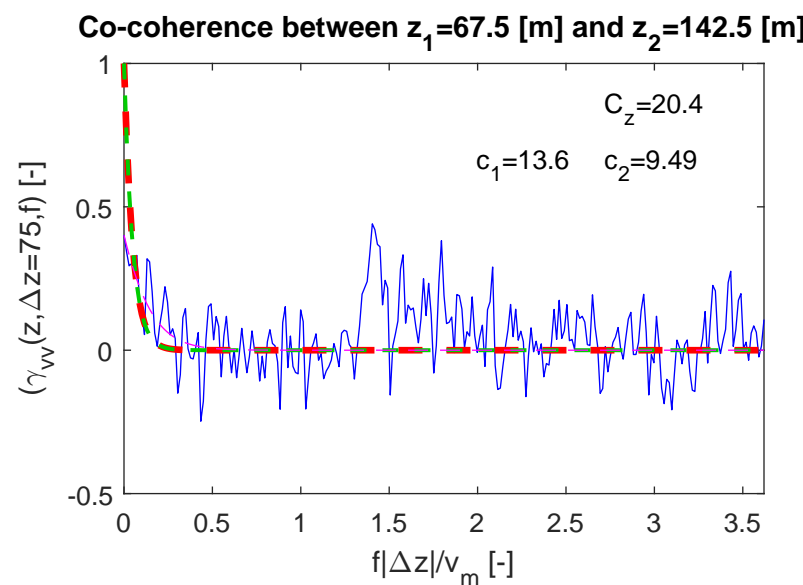
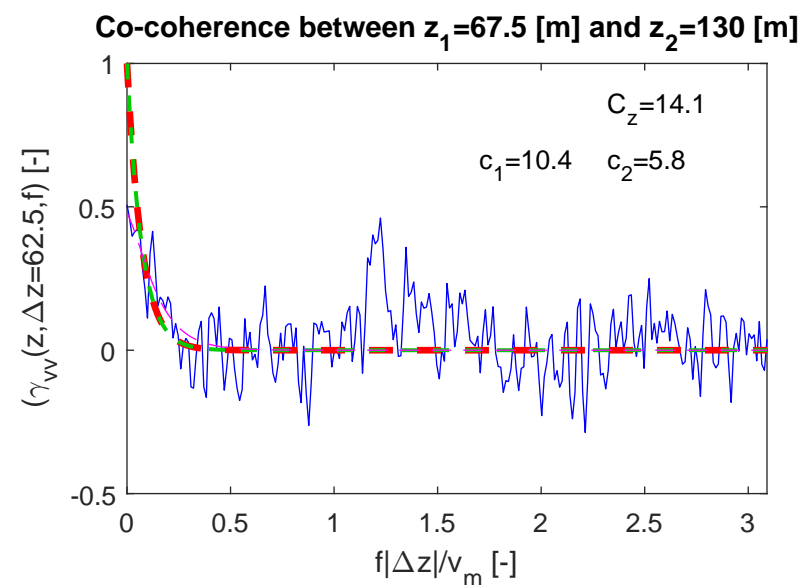
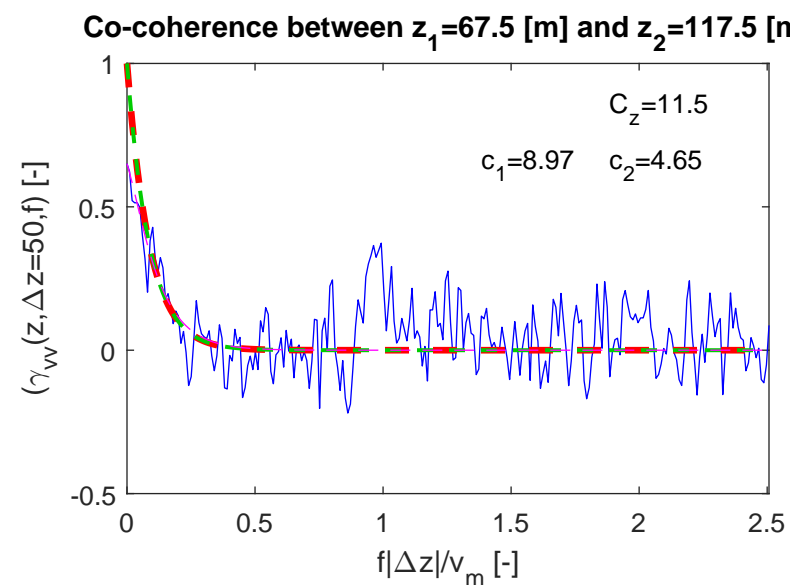
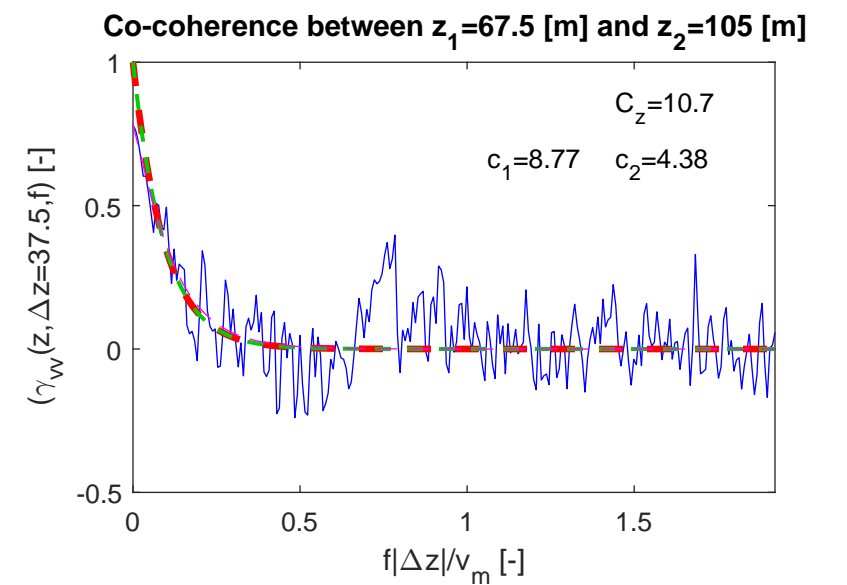
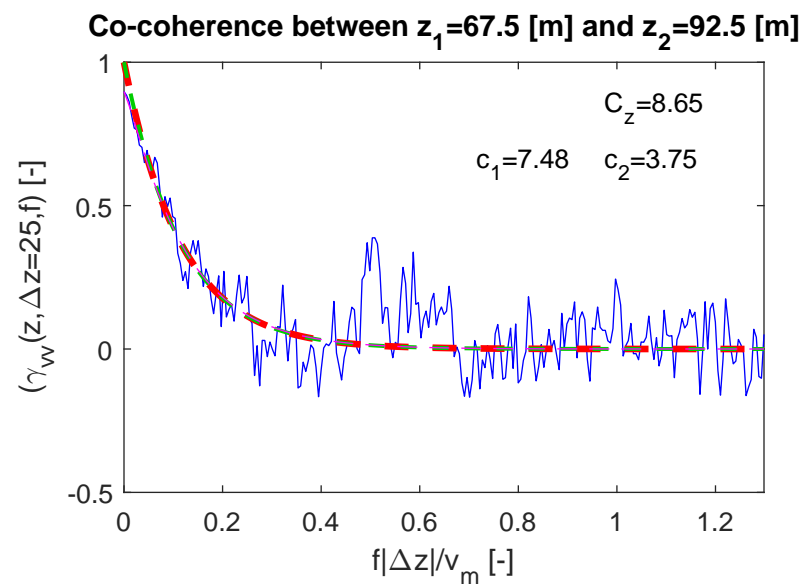
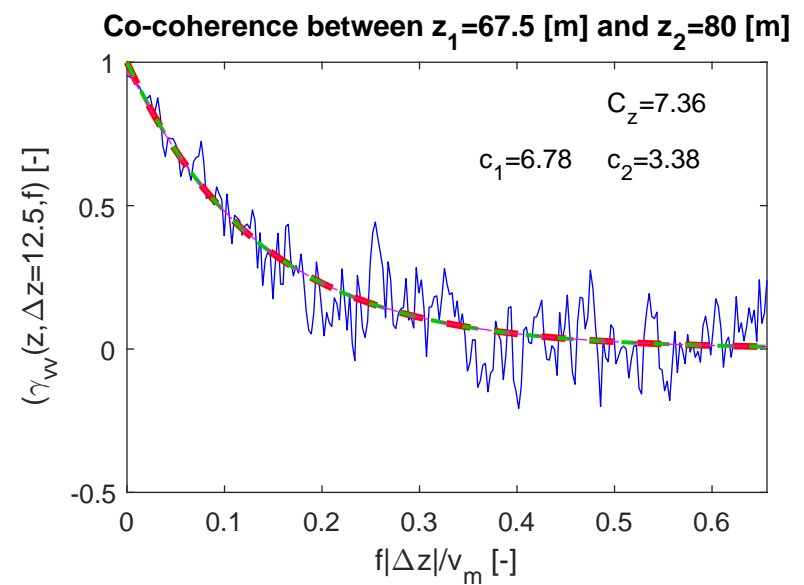
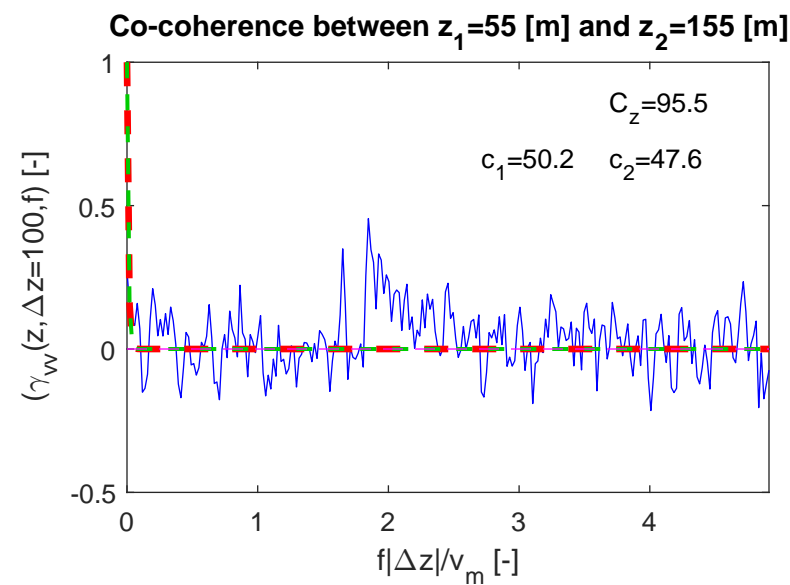
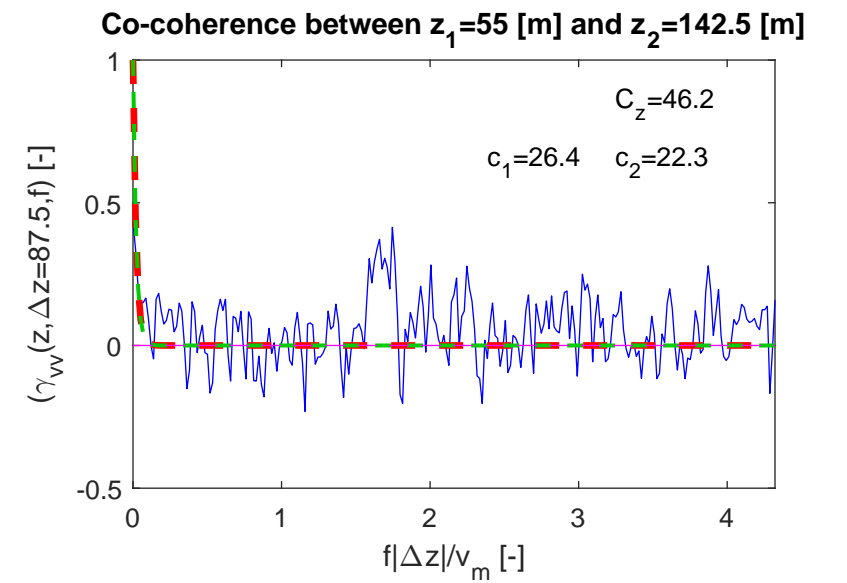
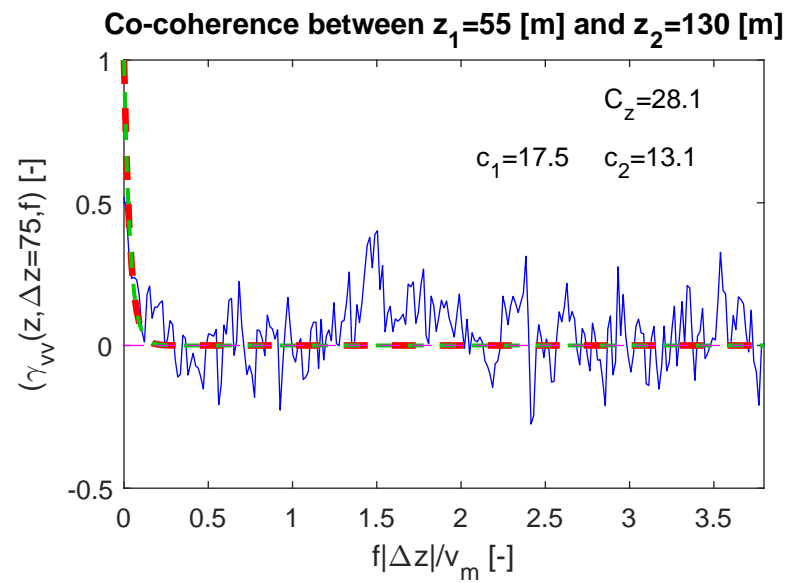
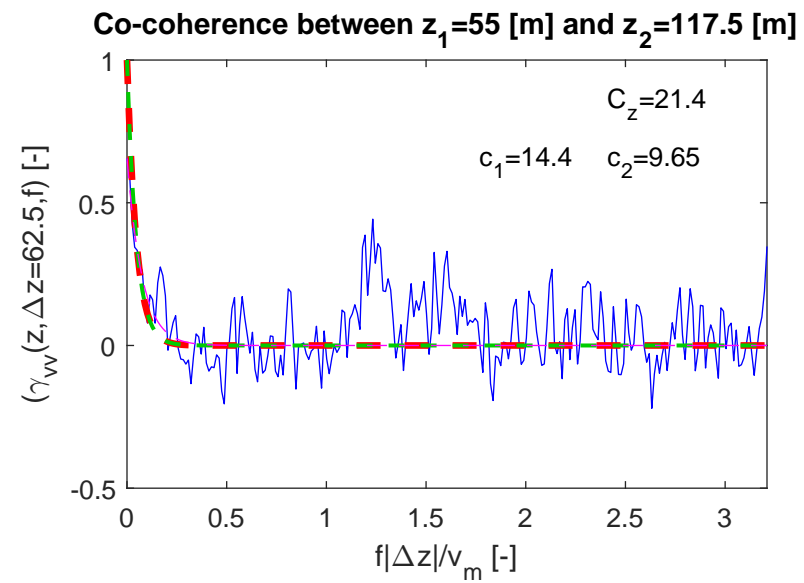
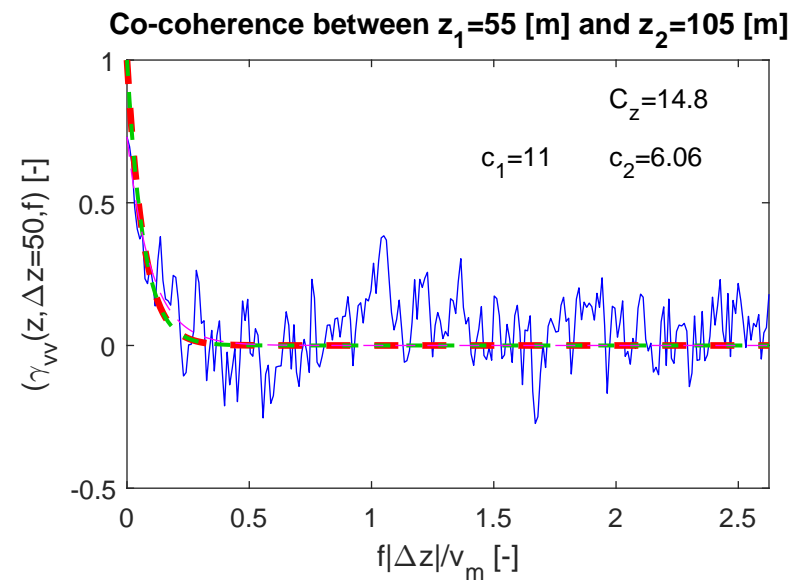
PSD at 155 [m] in full scale

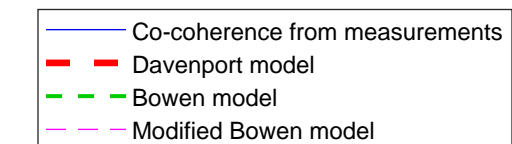
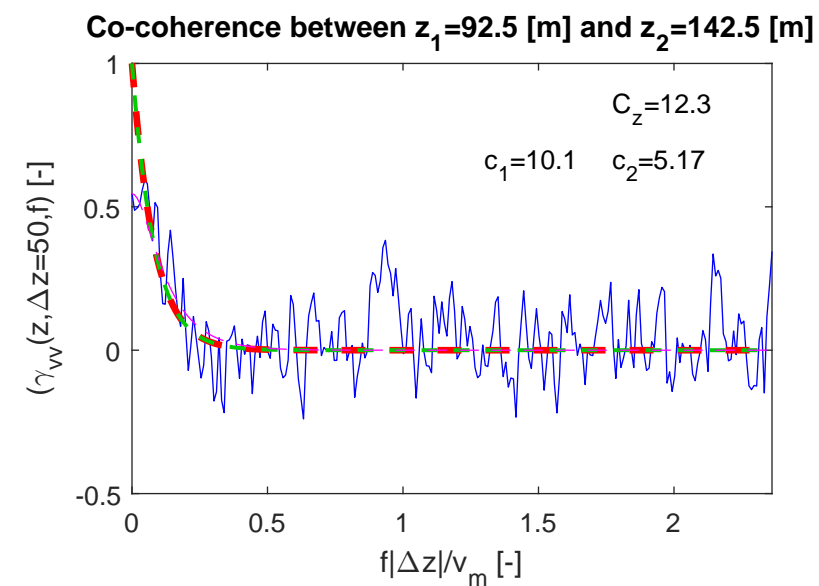
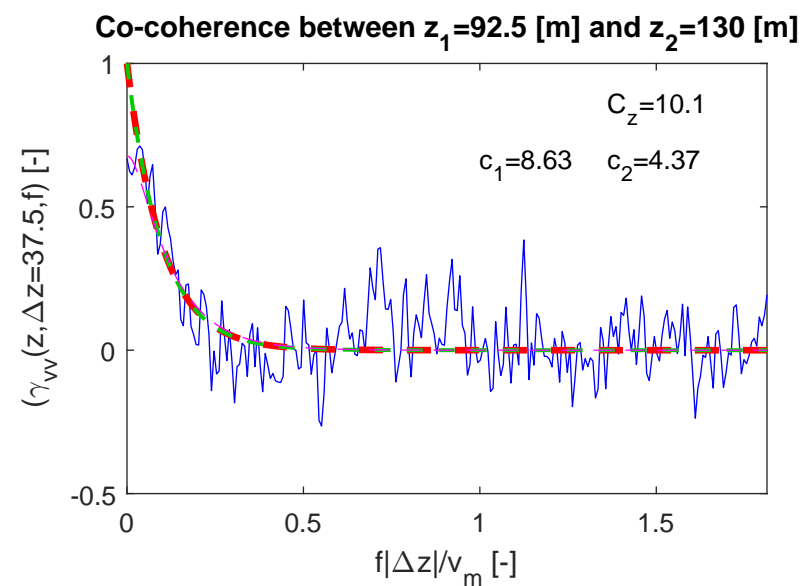
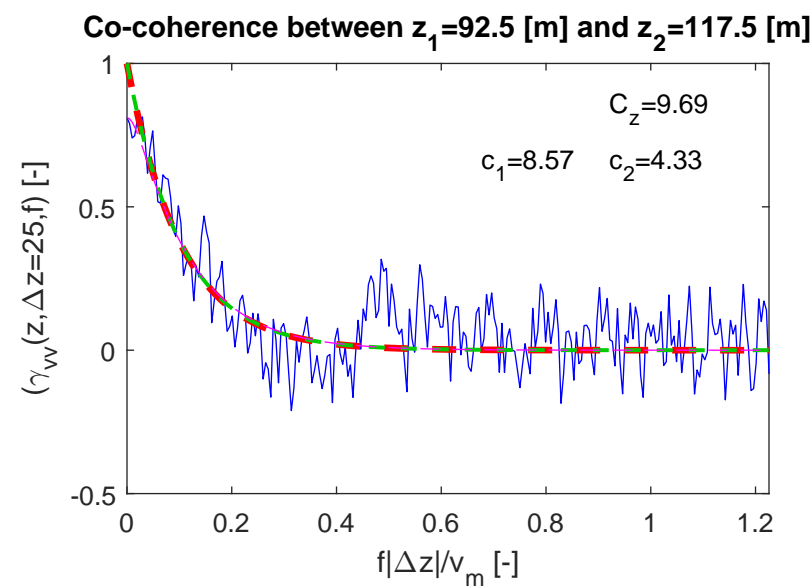
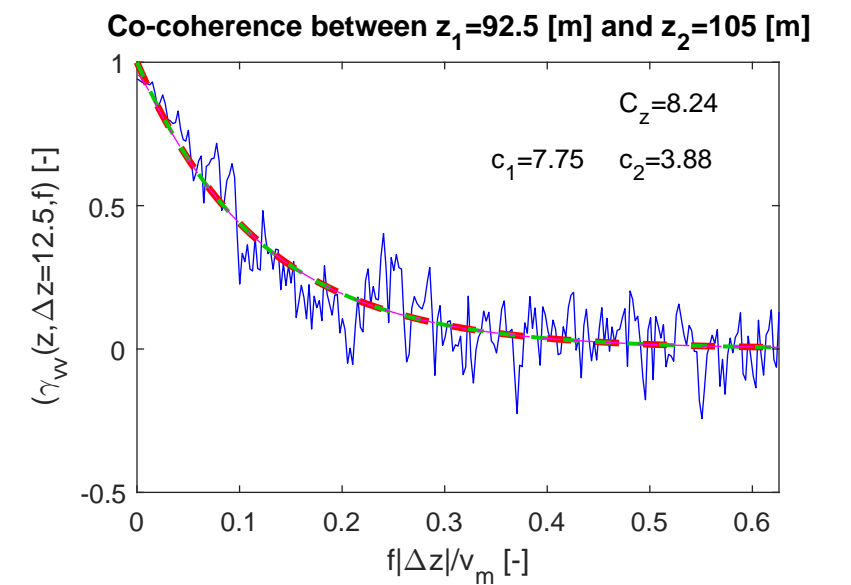
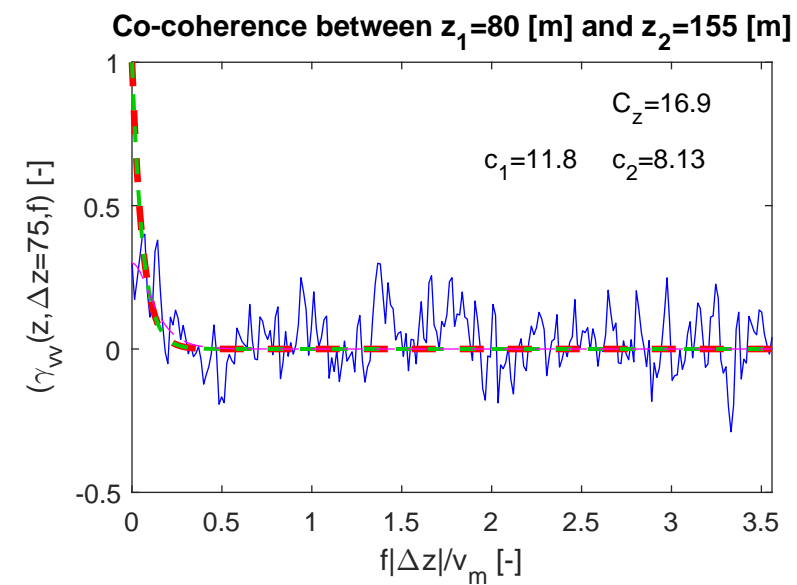
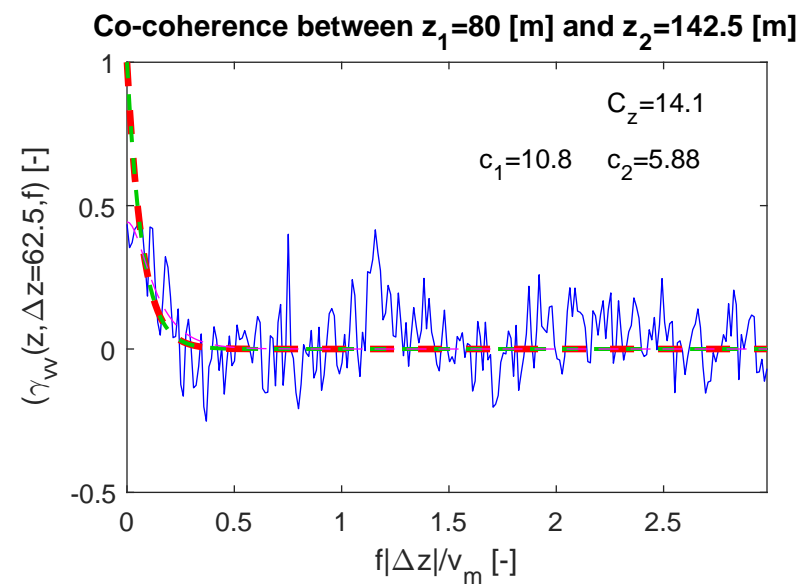
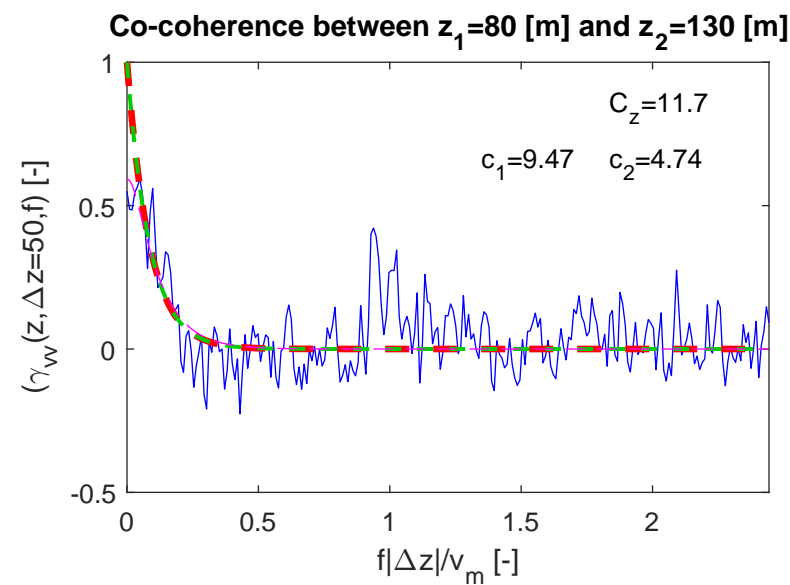
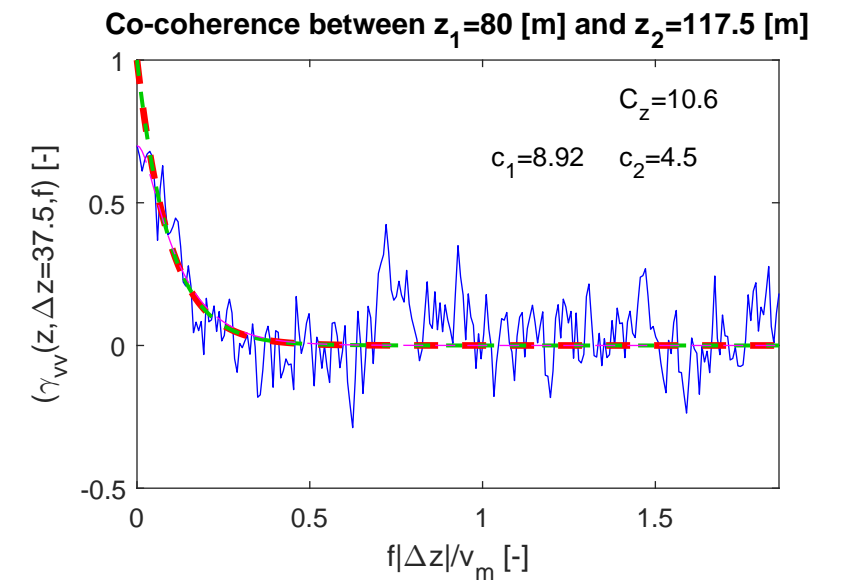
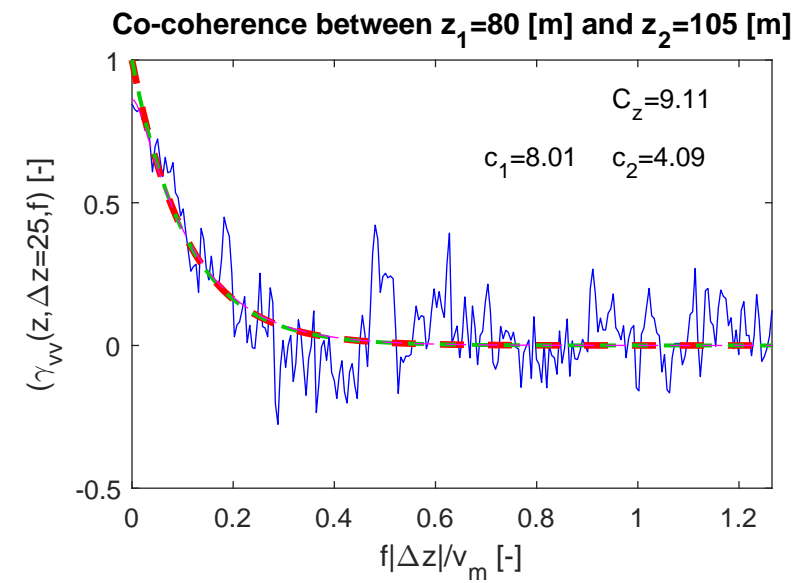
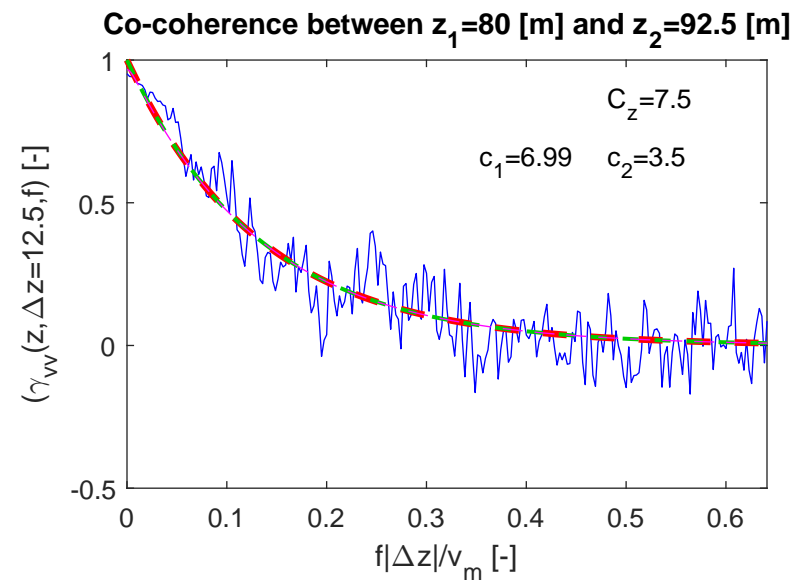
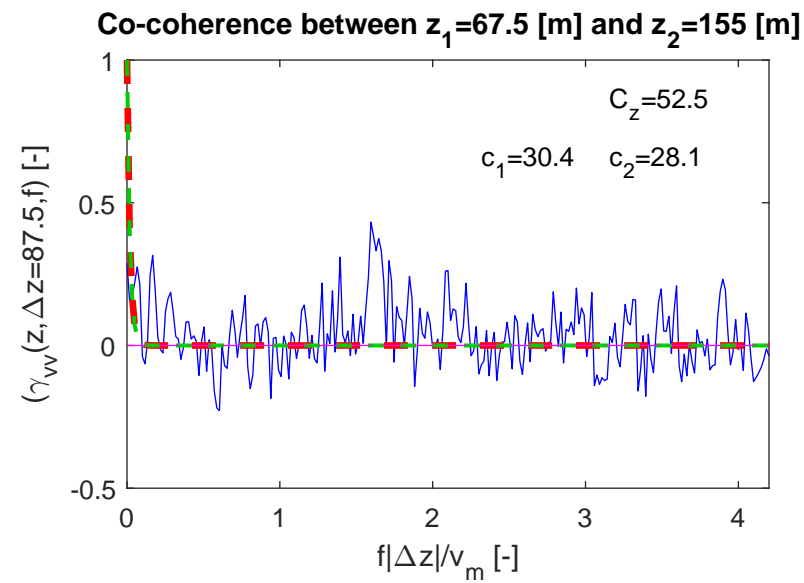


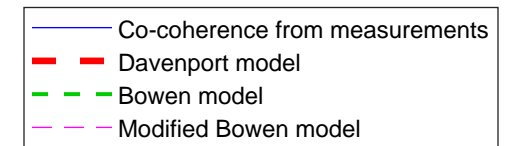
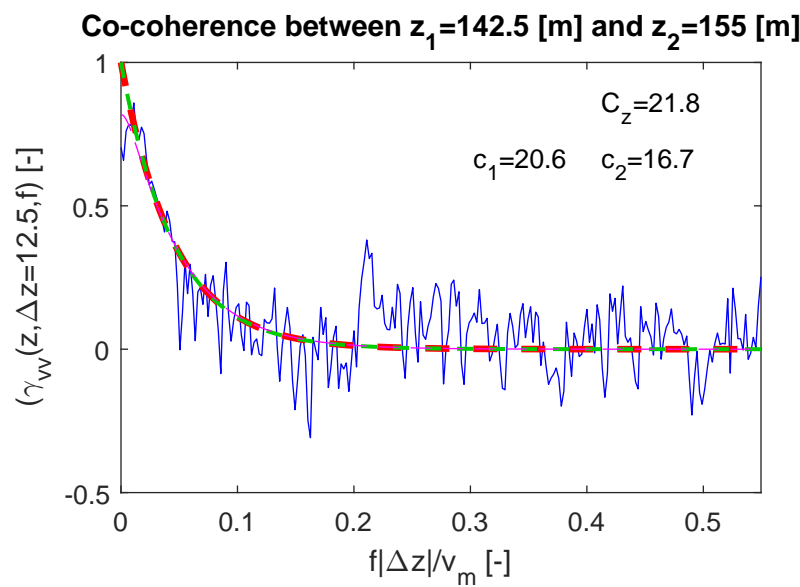
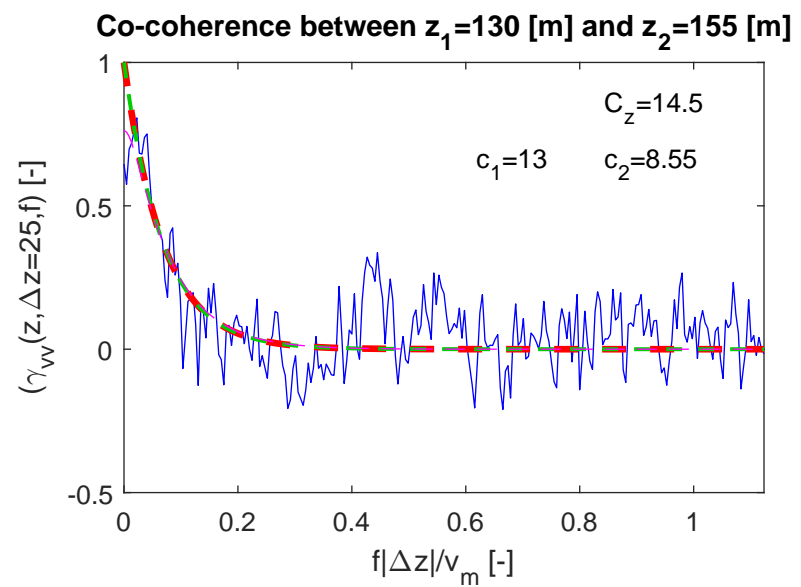
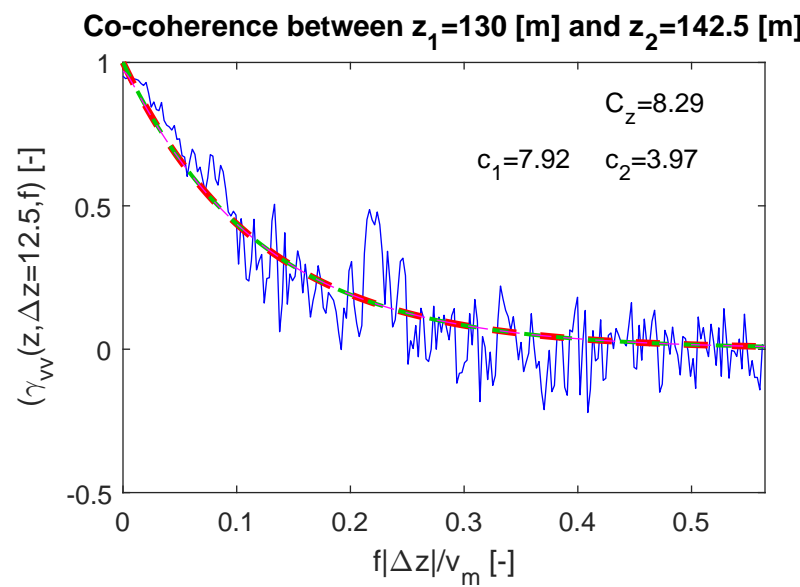
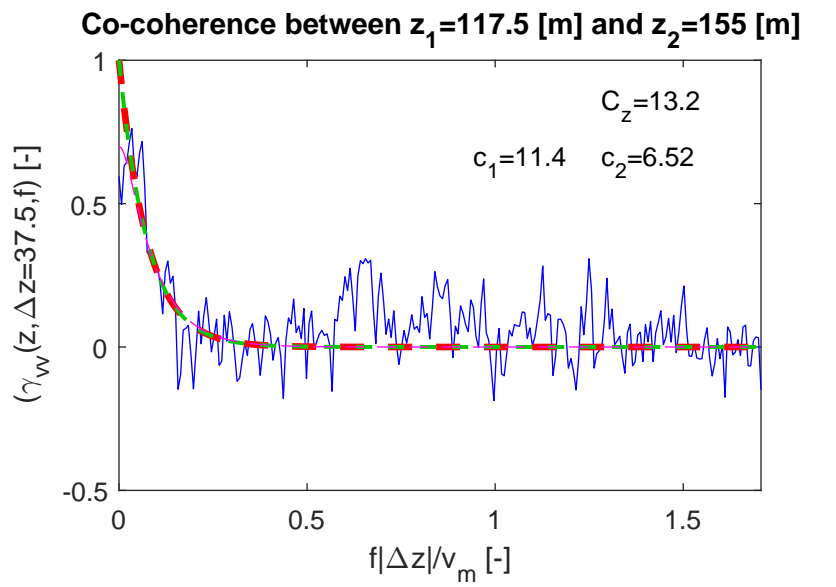
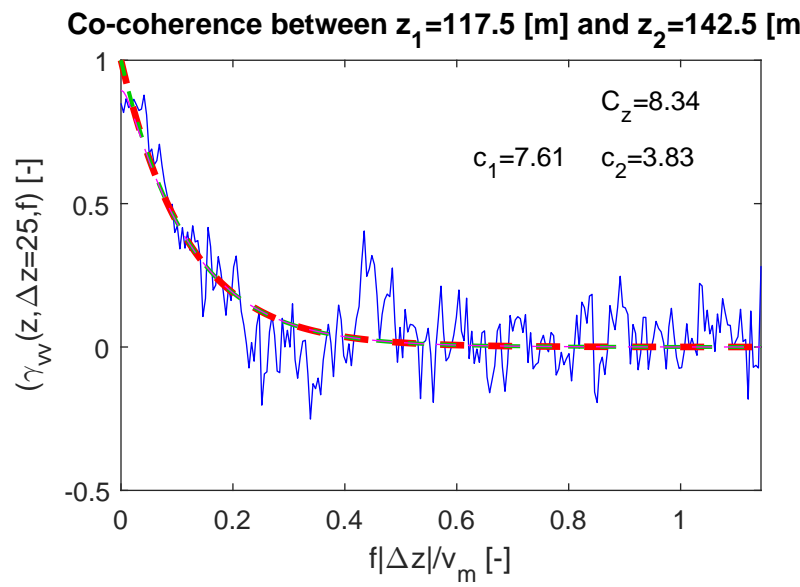
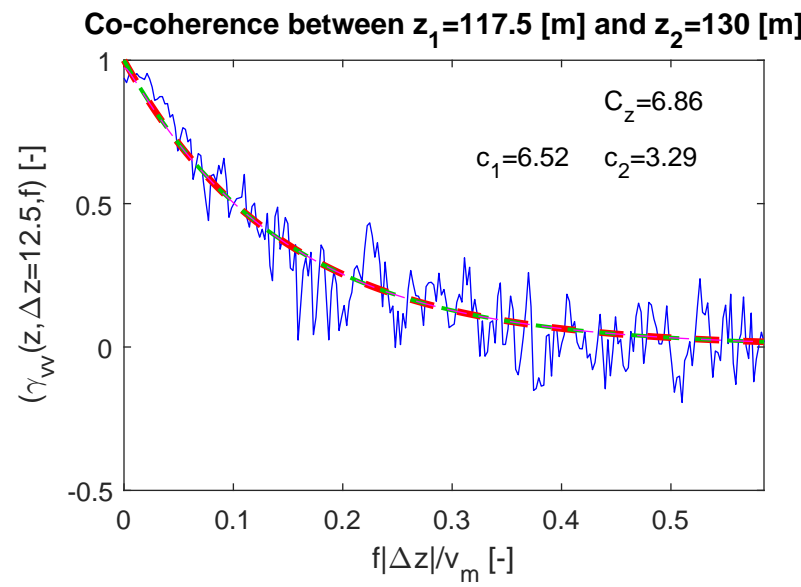
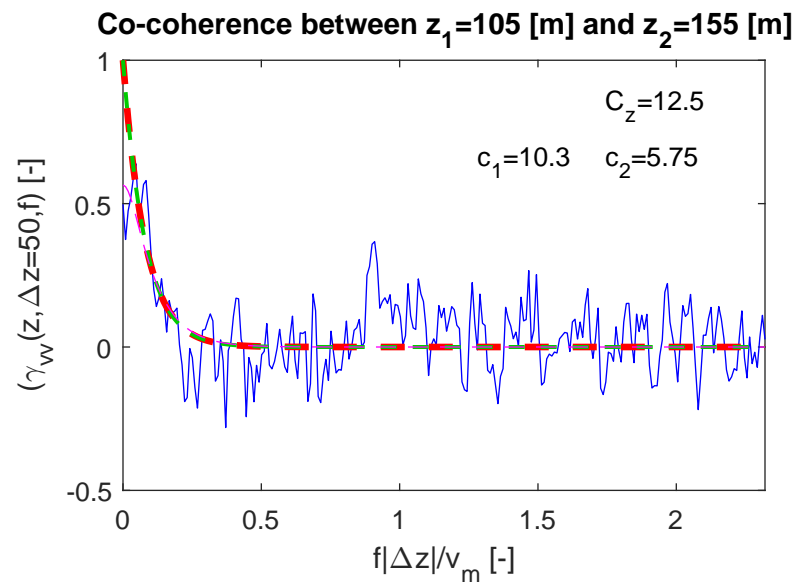
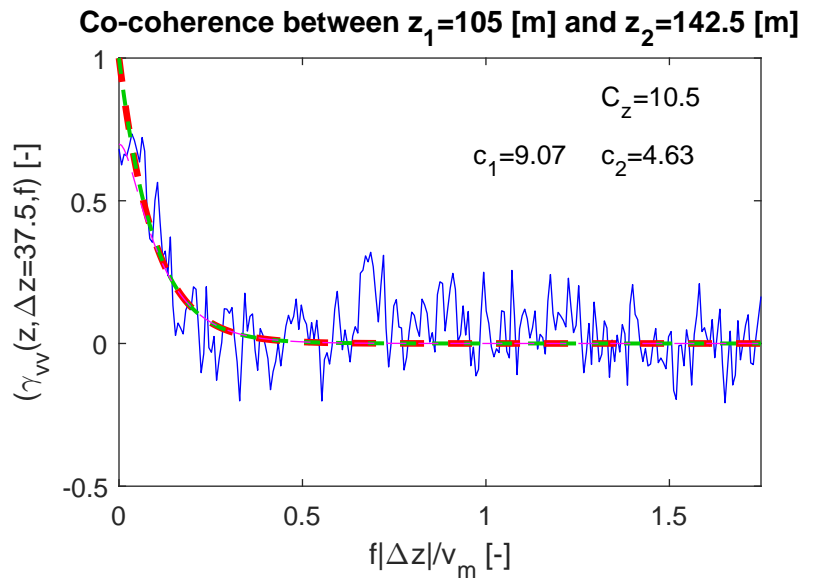
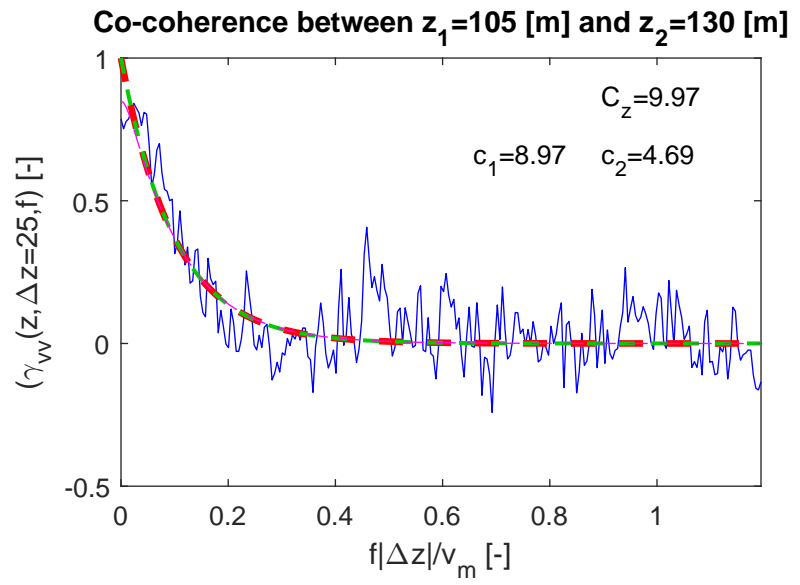
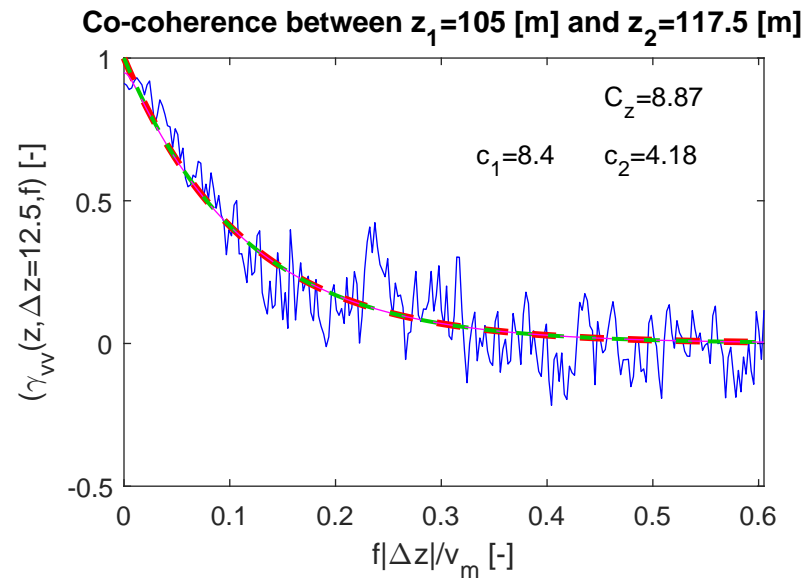
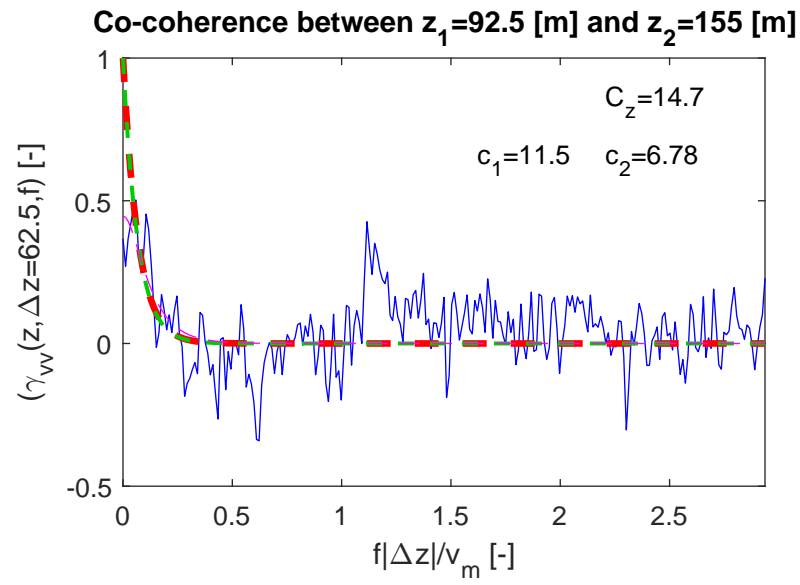




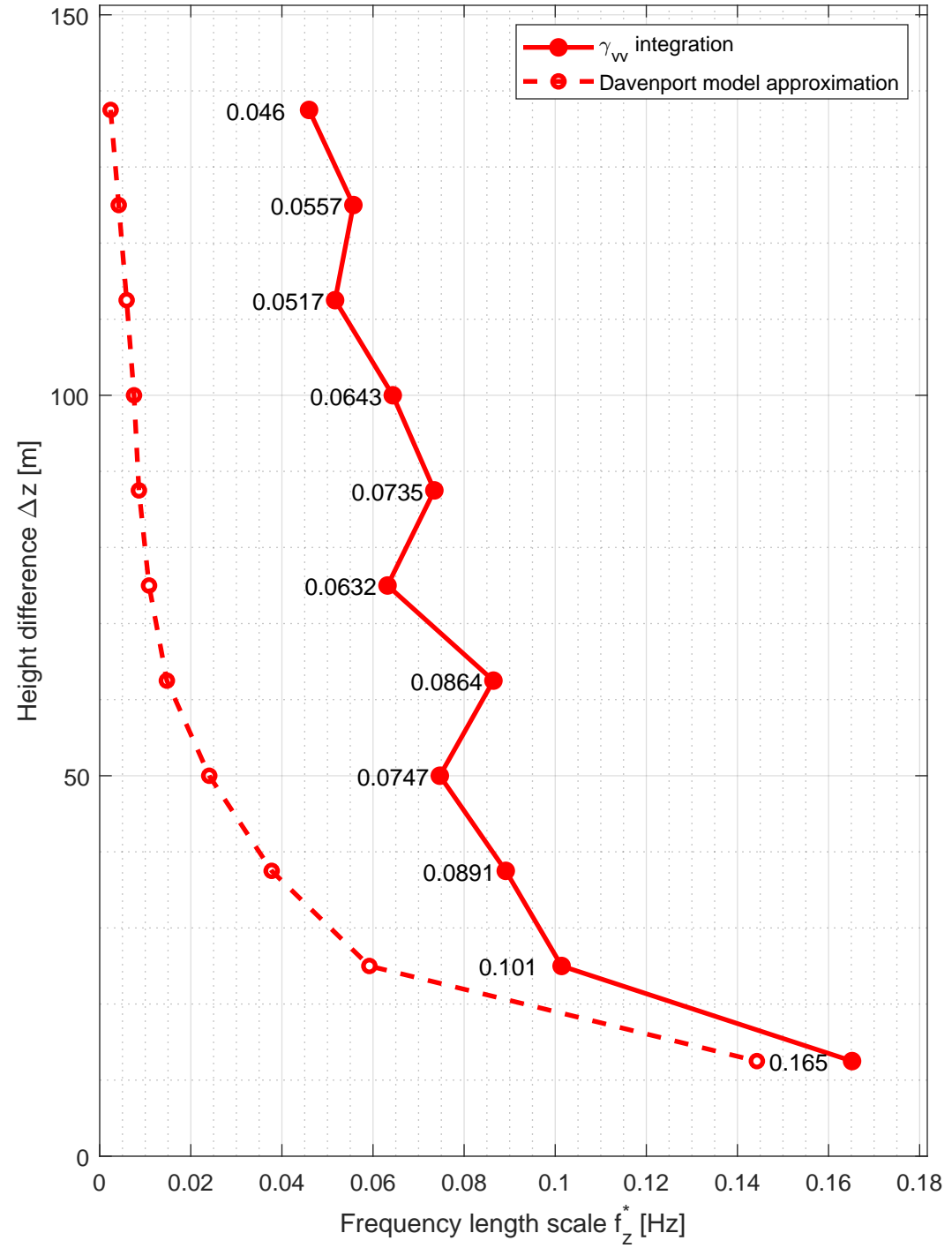




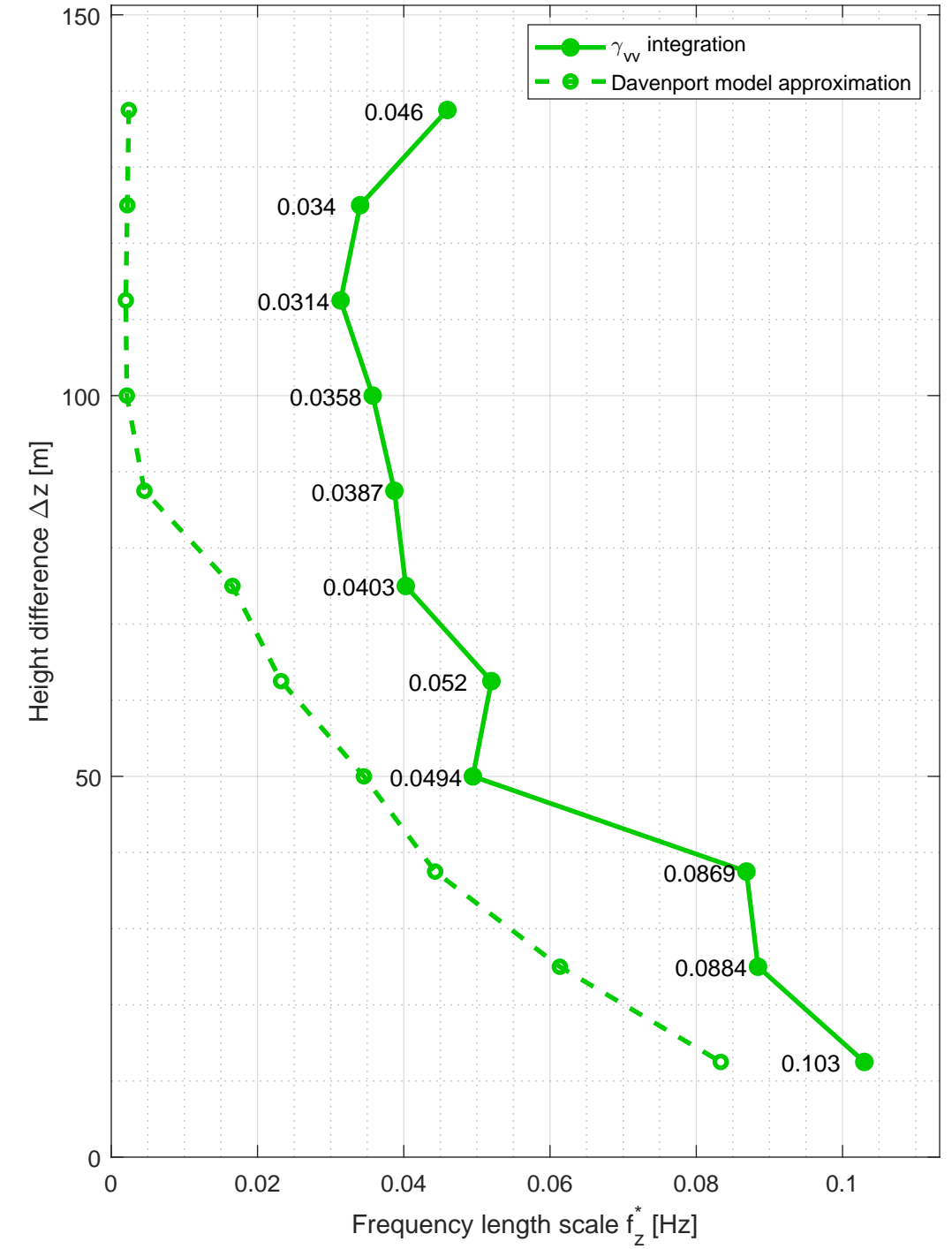




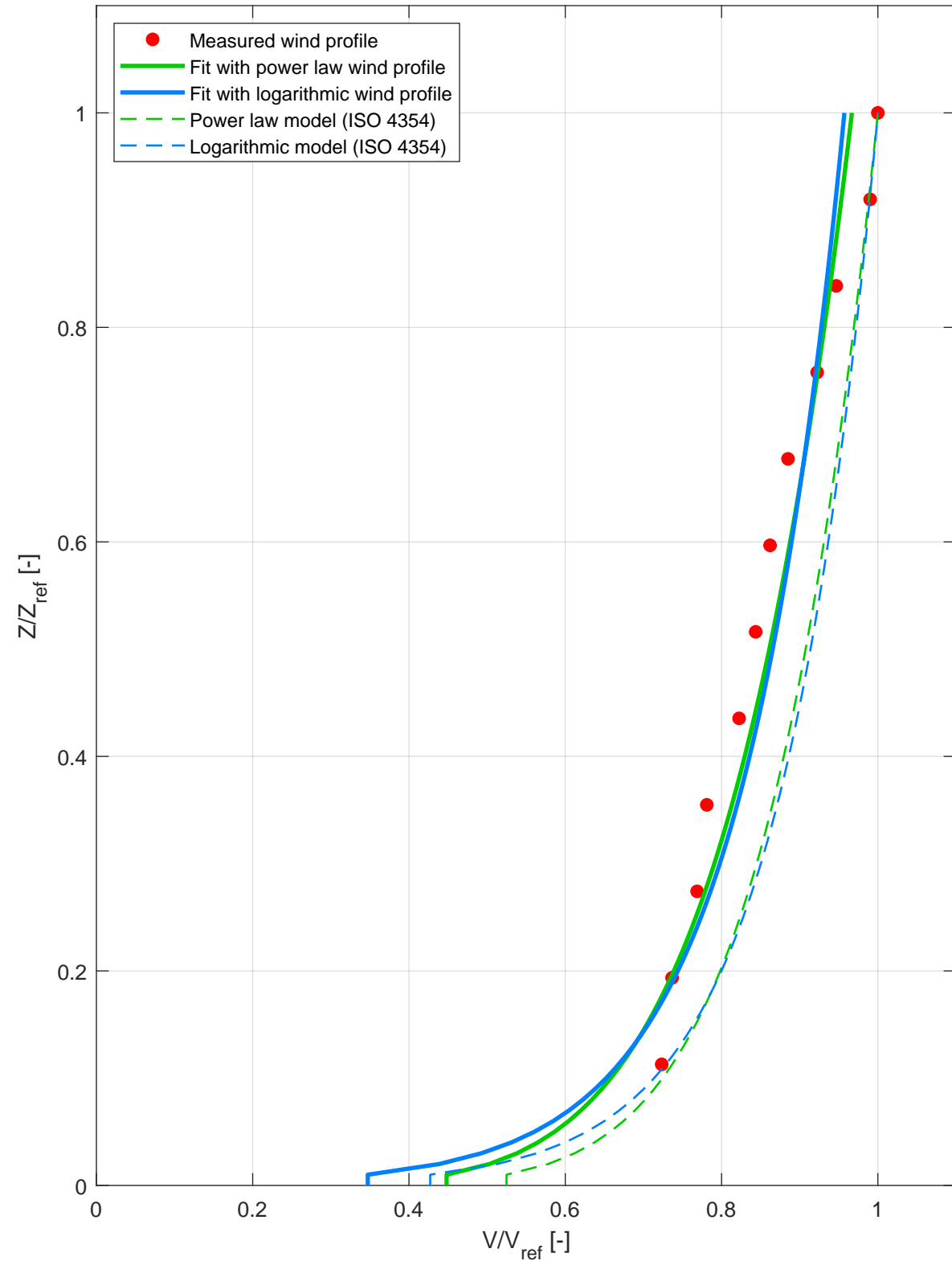
Frequency length scales for the lowest point at different height differences



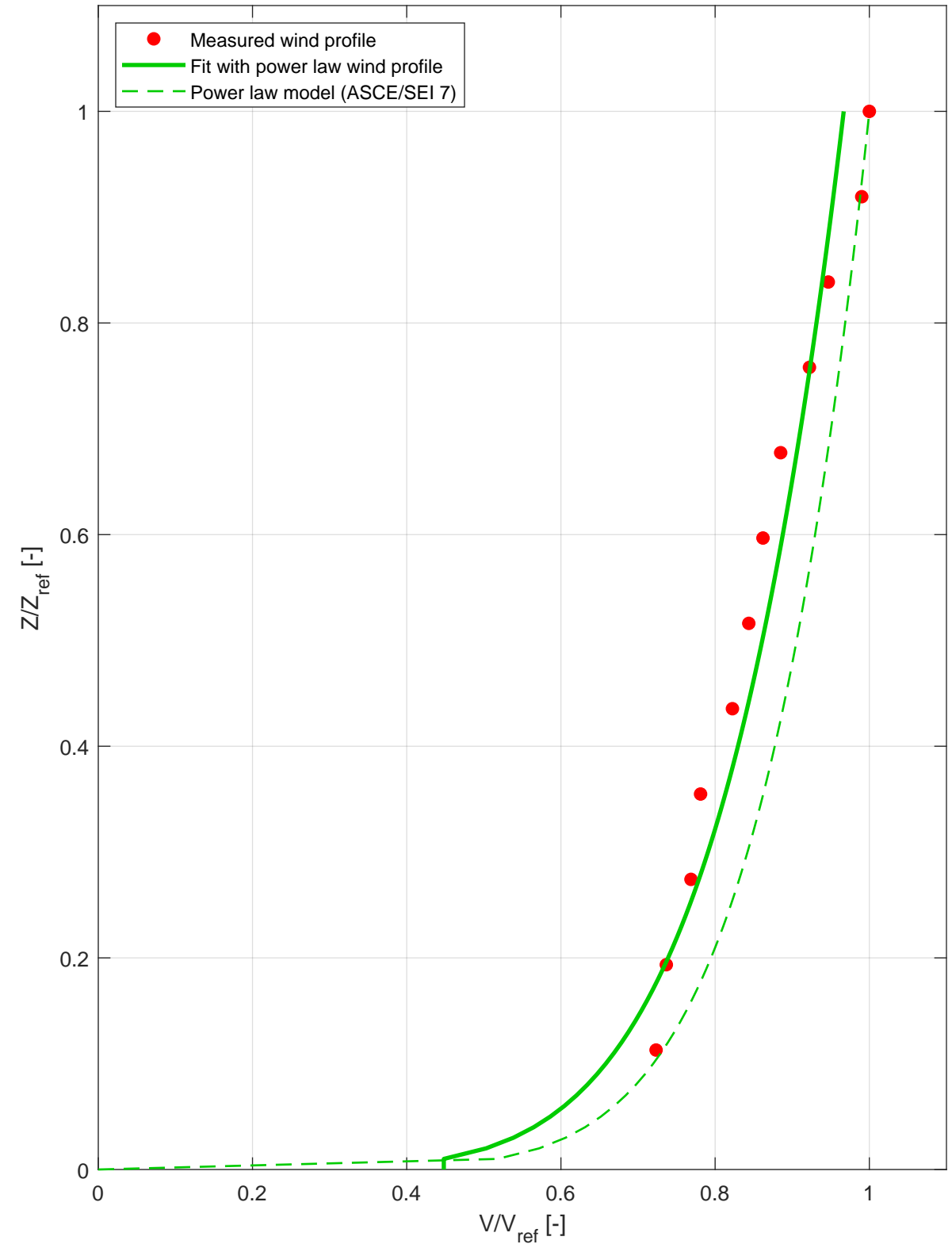
Frequency length scales for the highest point at different height differences

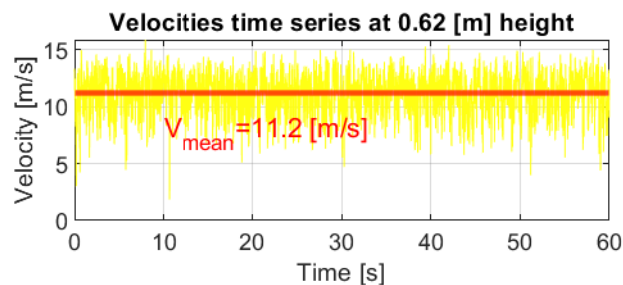
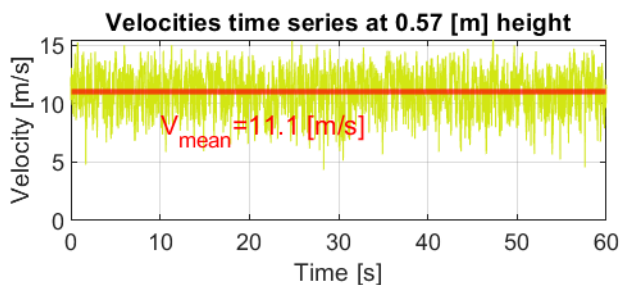
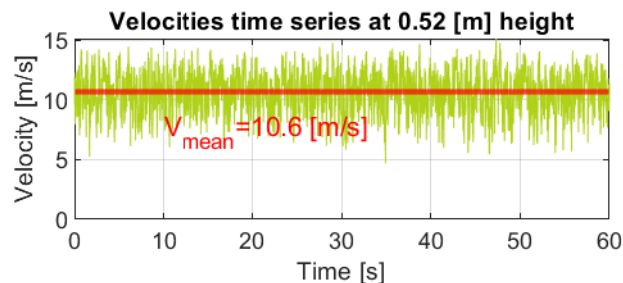
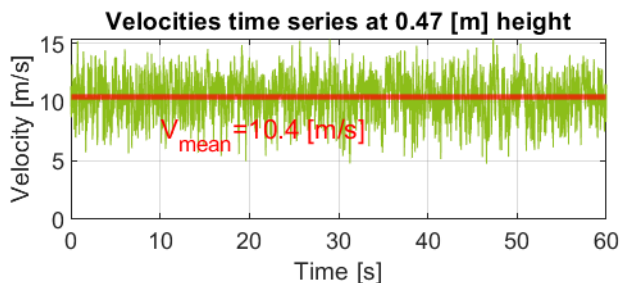
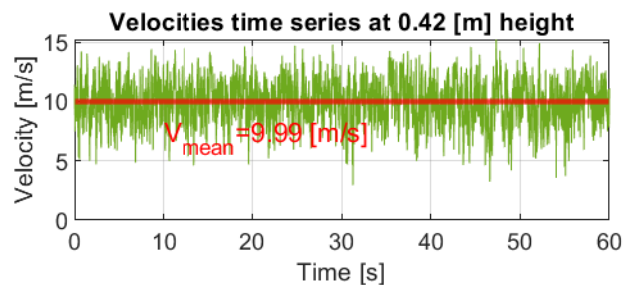
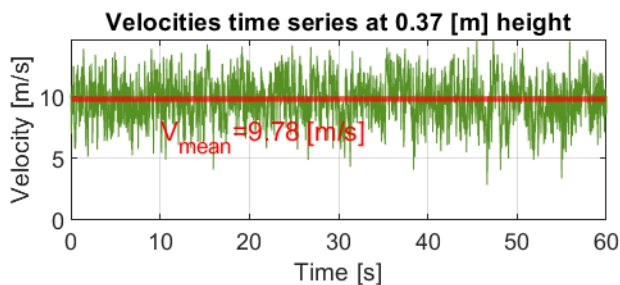
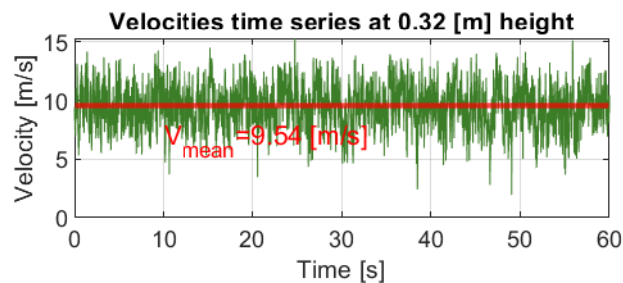
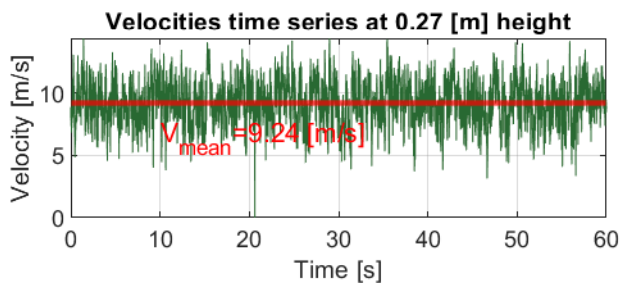
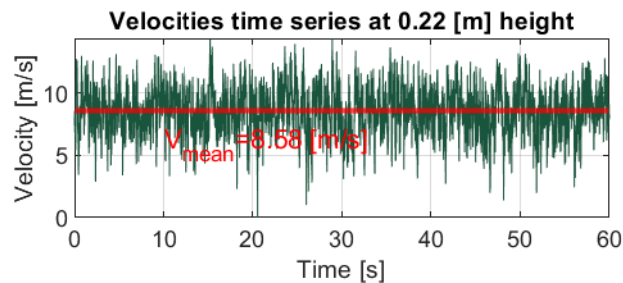
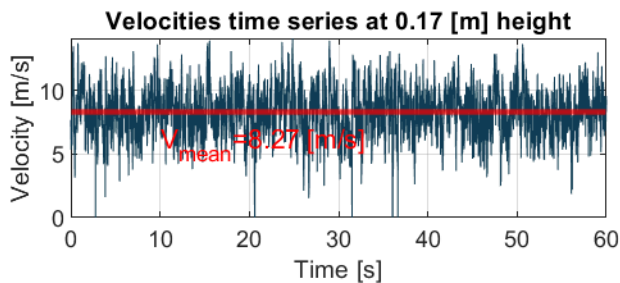
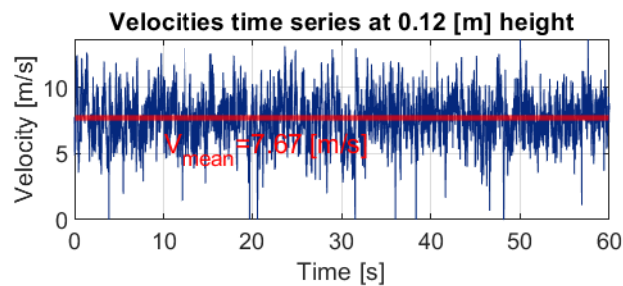
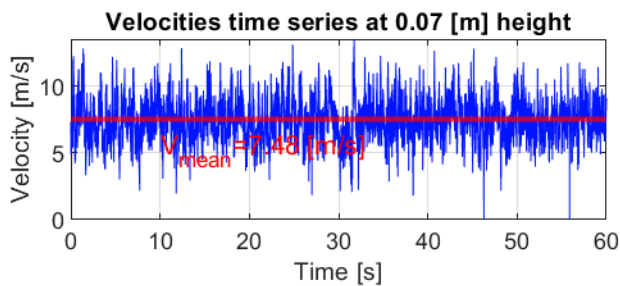


Mean wind velocity profile - comparison with ISO 4354

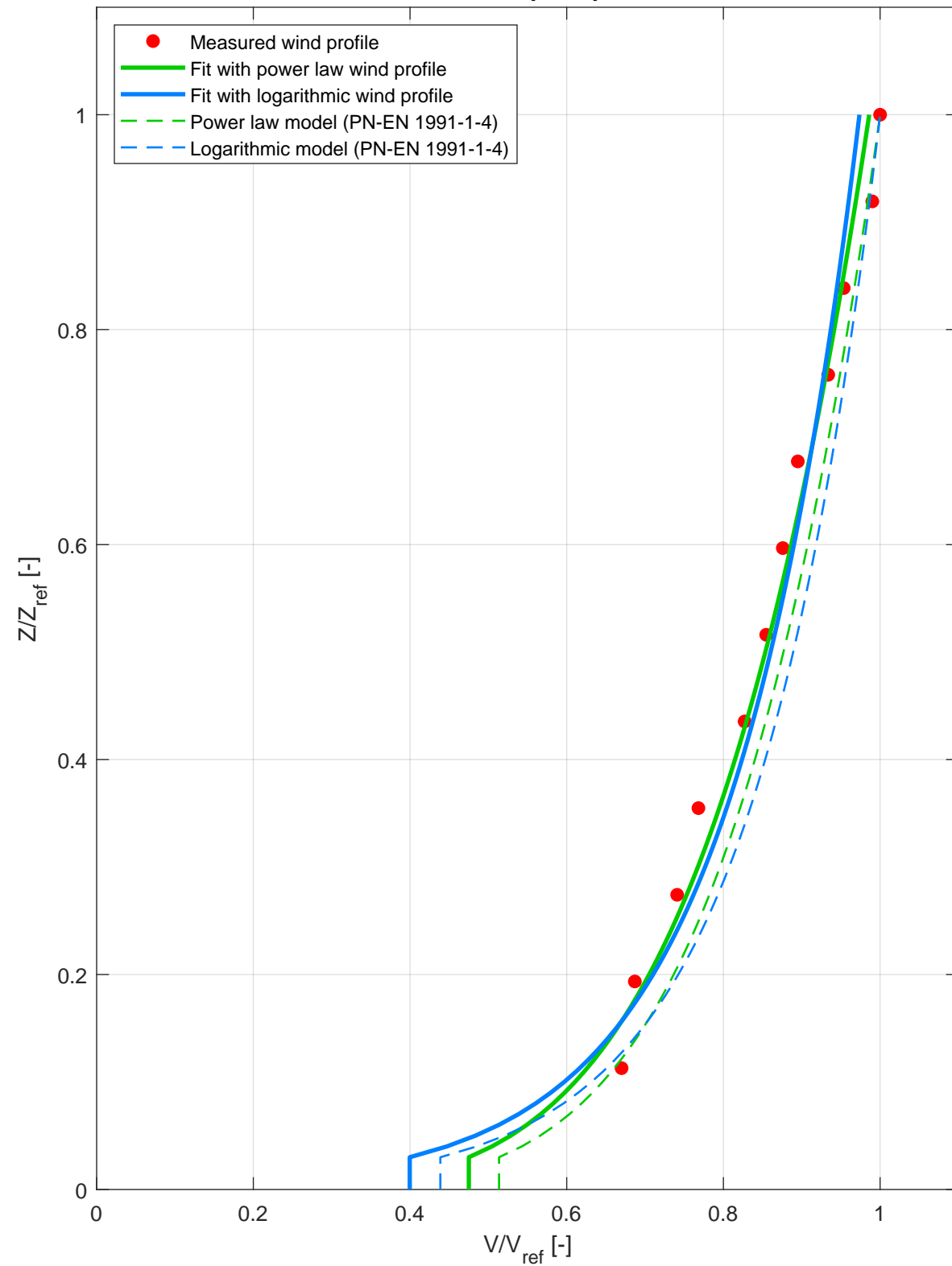


Mean wind velocity profile - comparison with ASCE/SEI 7

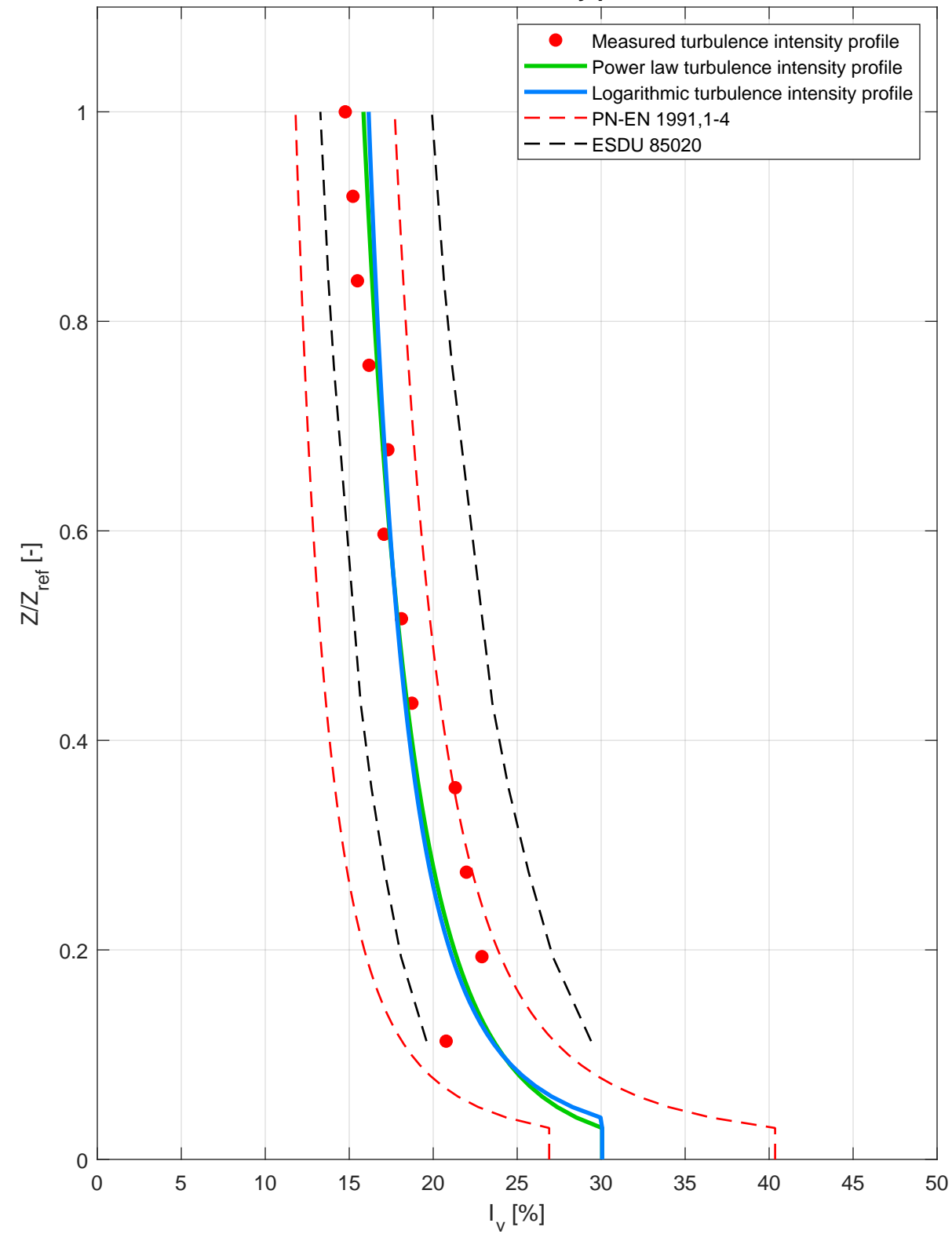




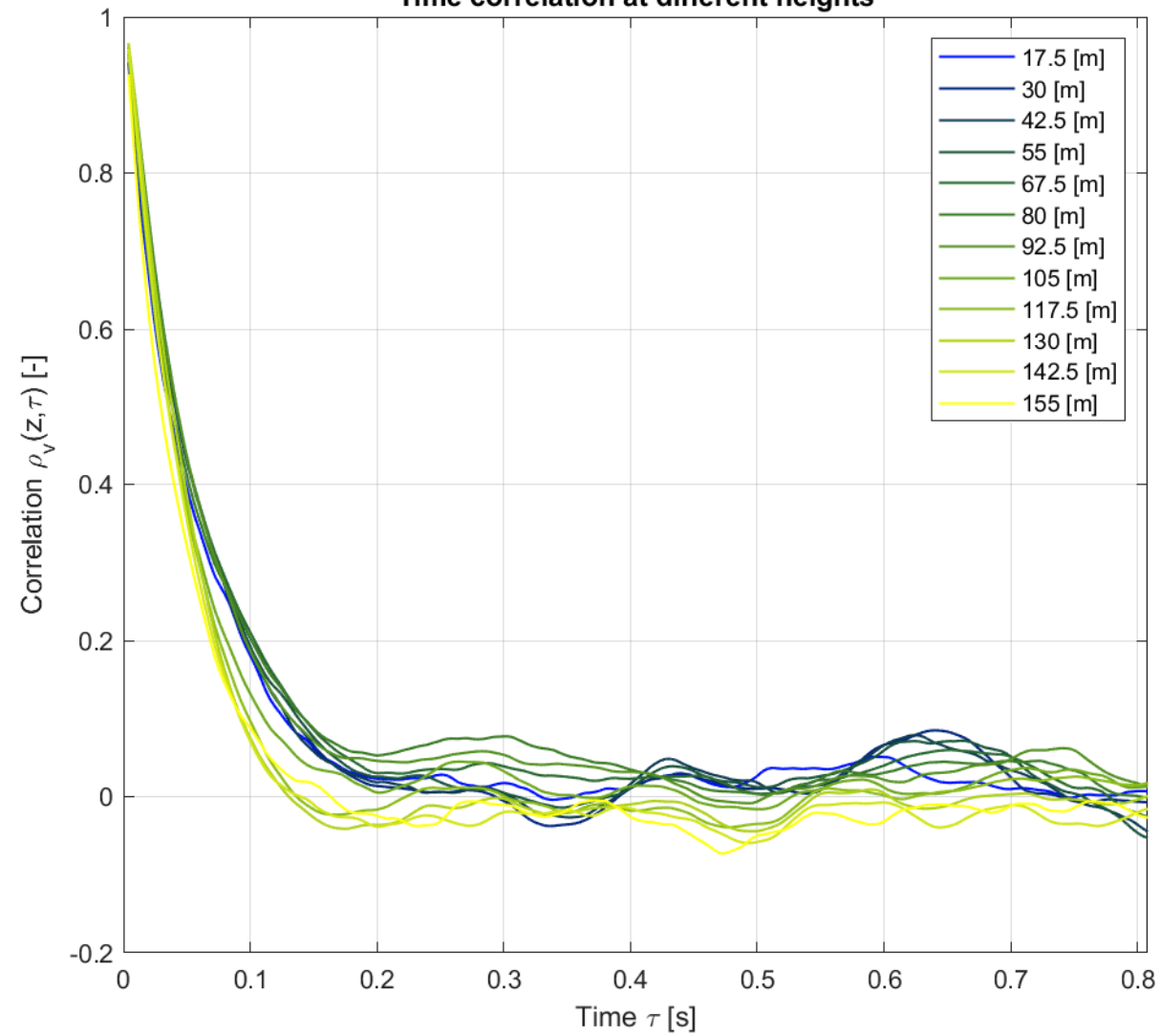
Mean wind speed profile



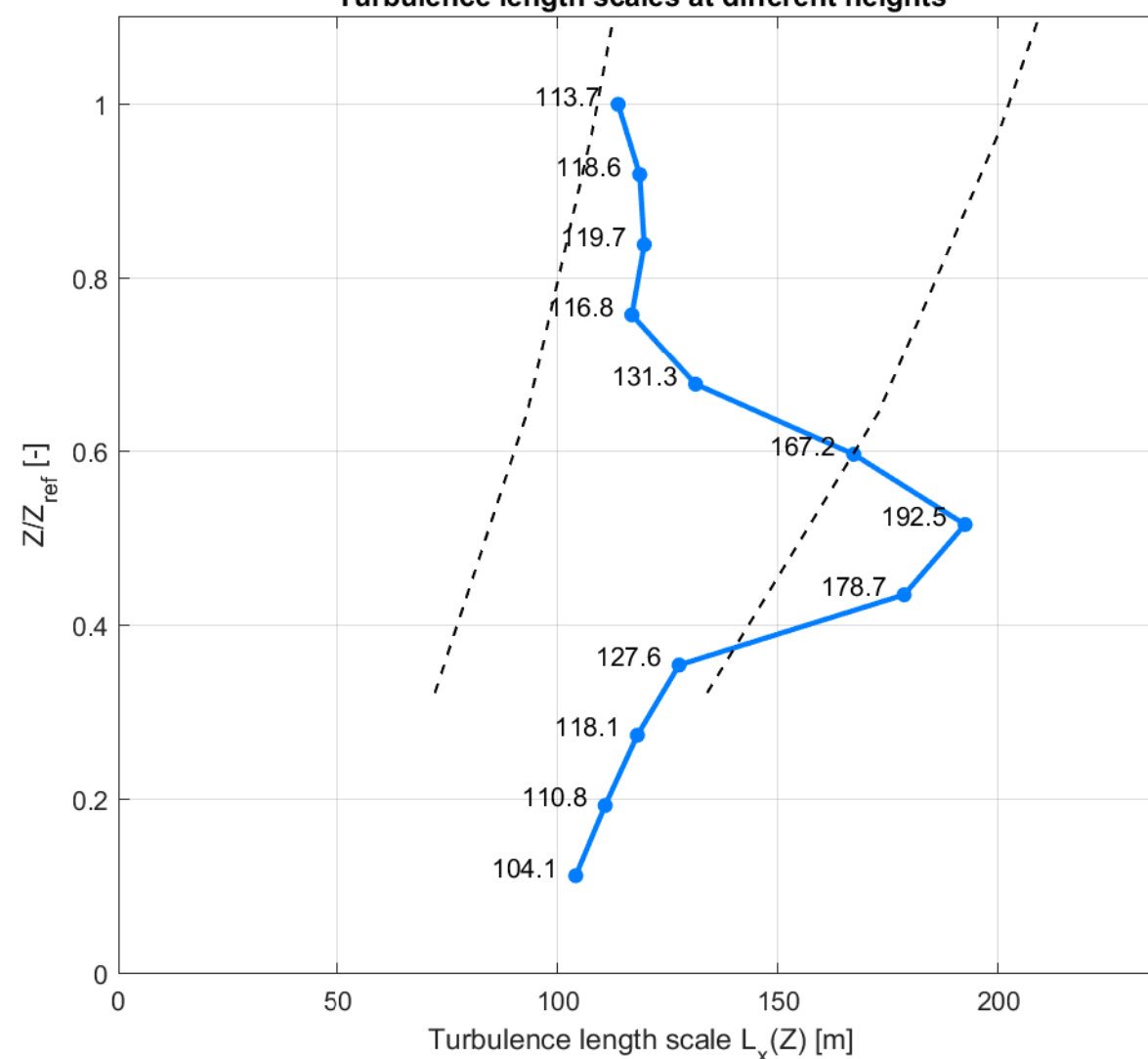
Turbulence intensity profile



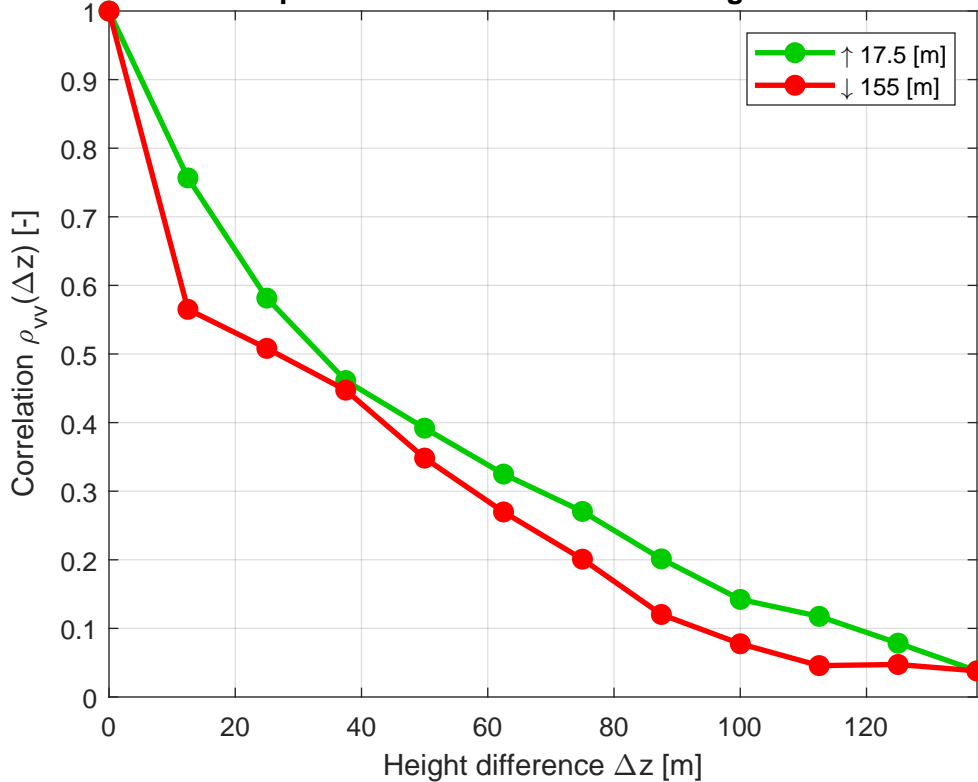
Time correlation at different heights



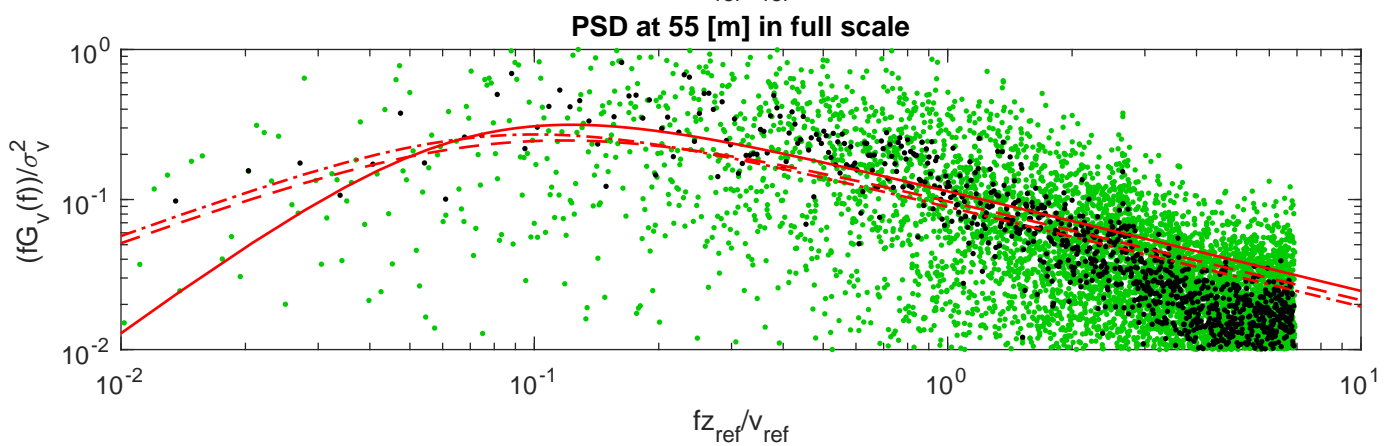
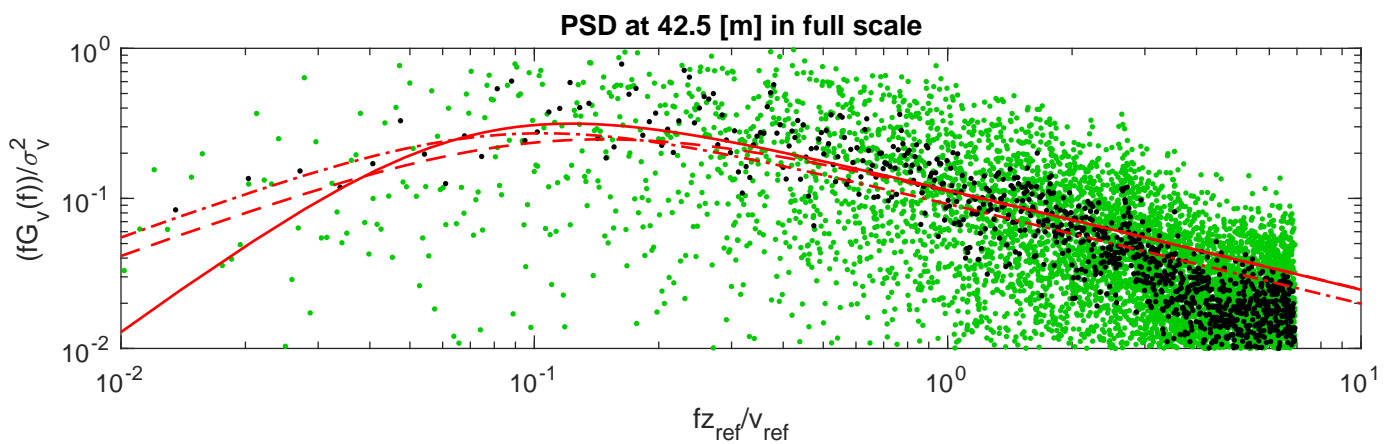
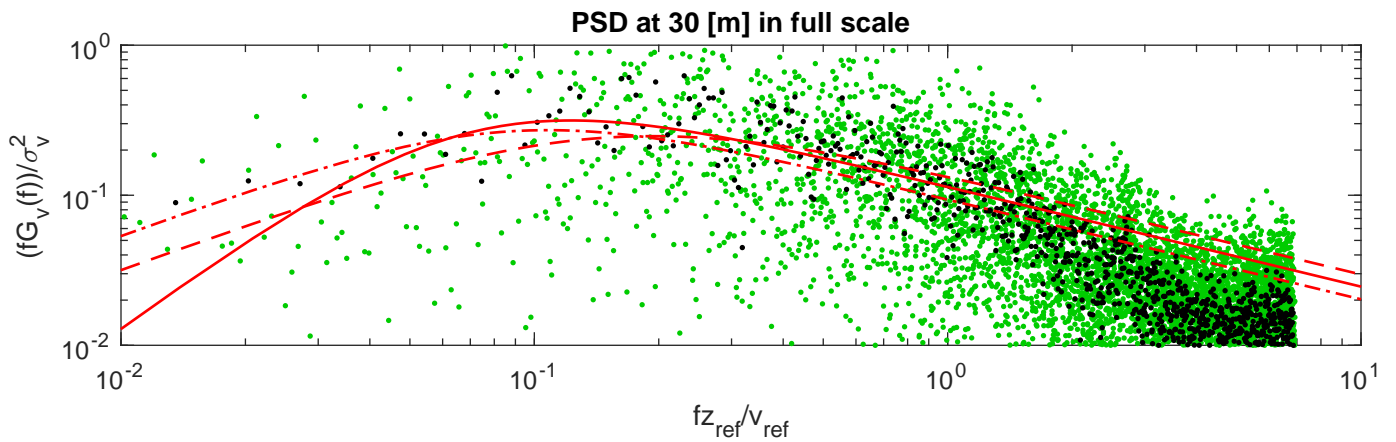
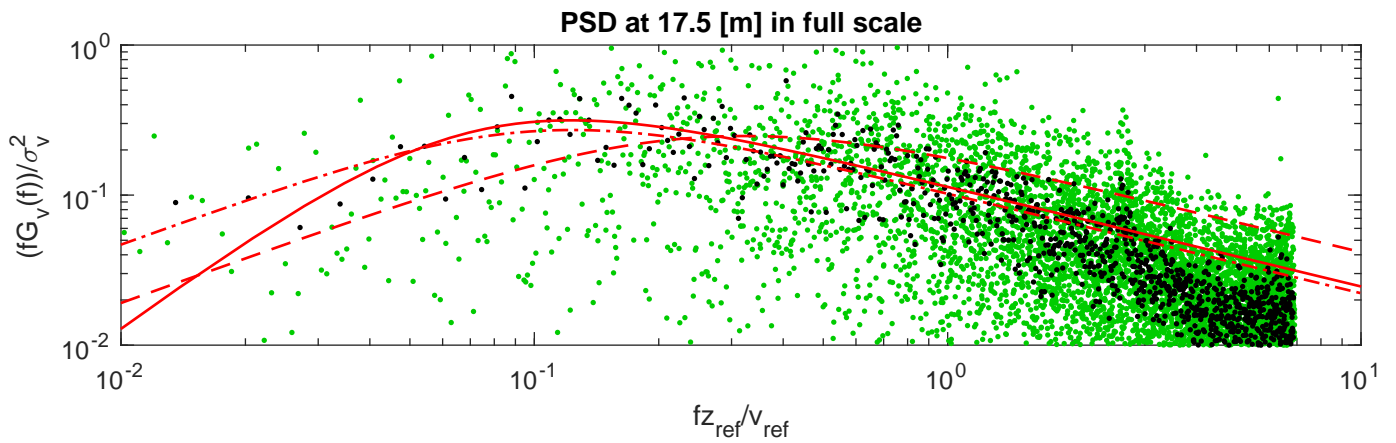
Turbulence length scales at different heights



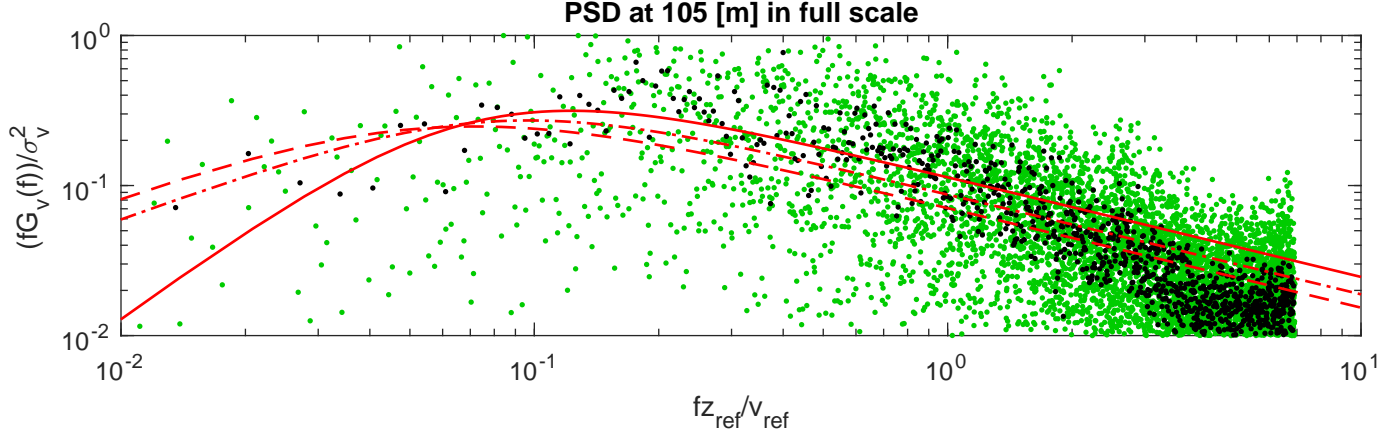
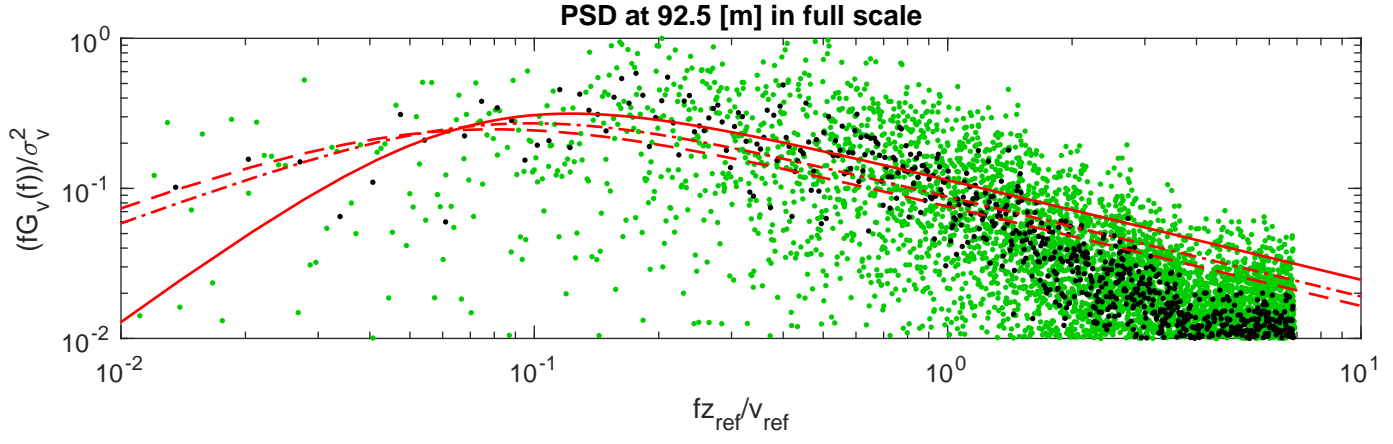
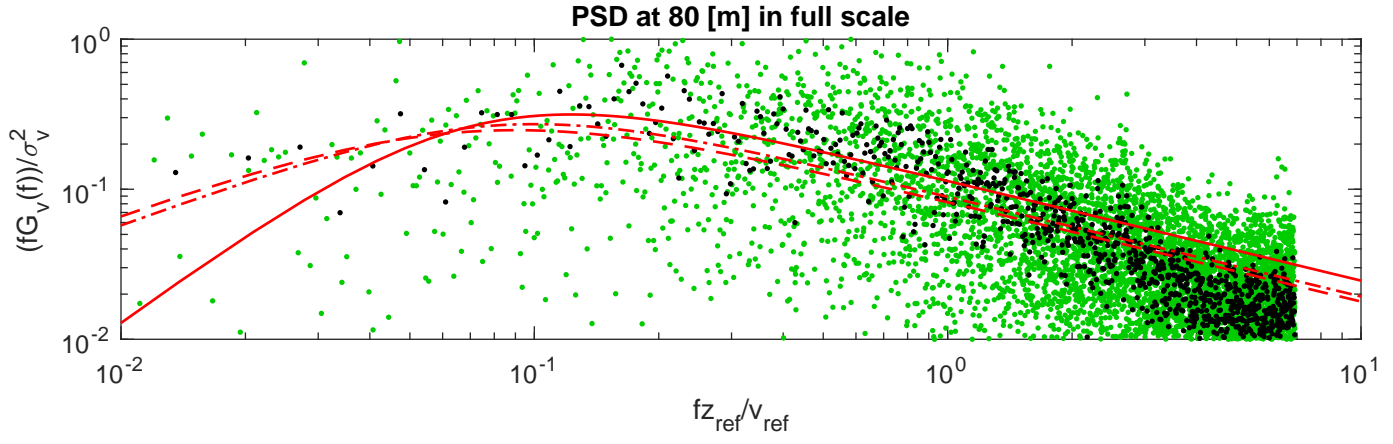
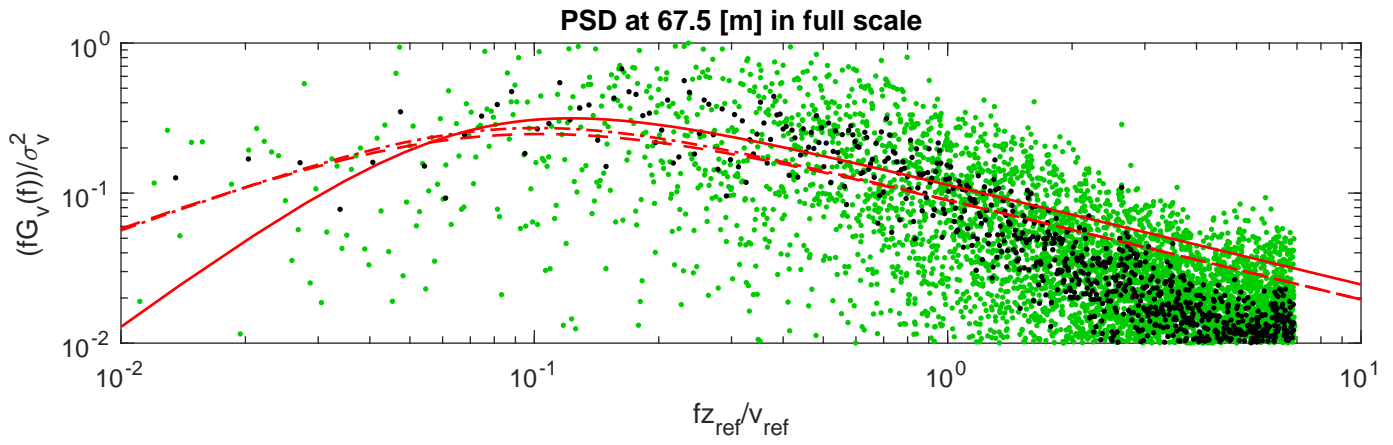
Vertical spatial correlation at different height differences



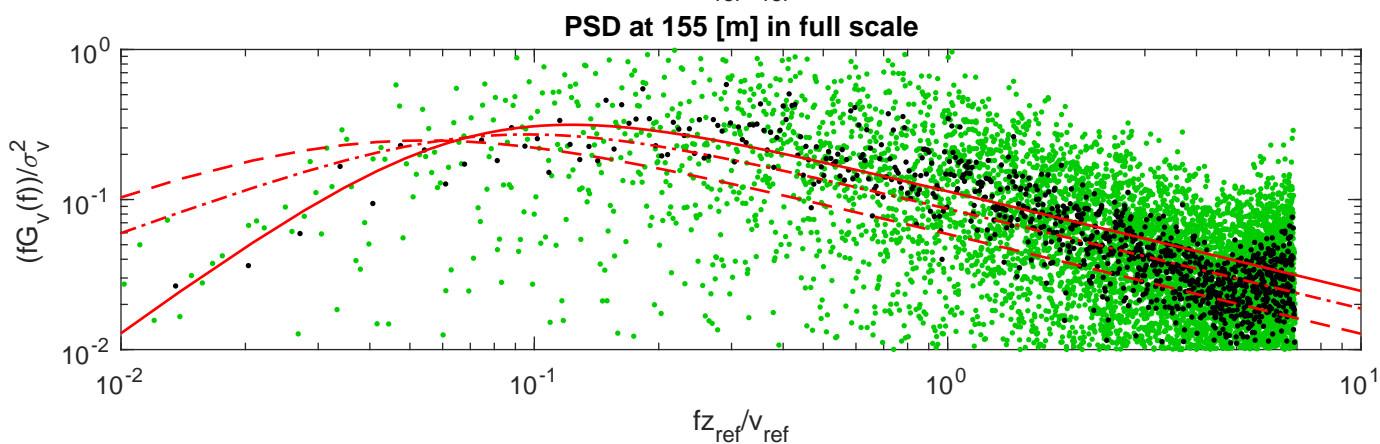
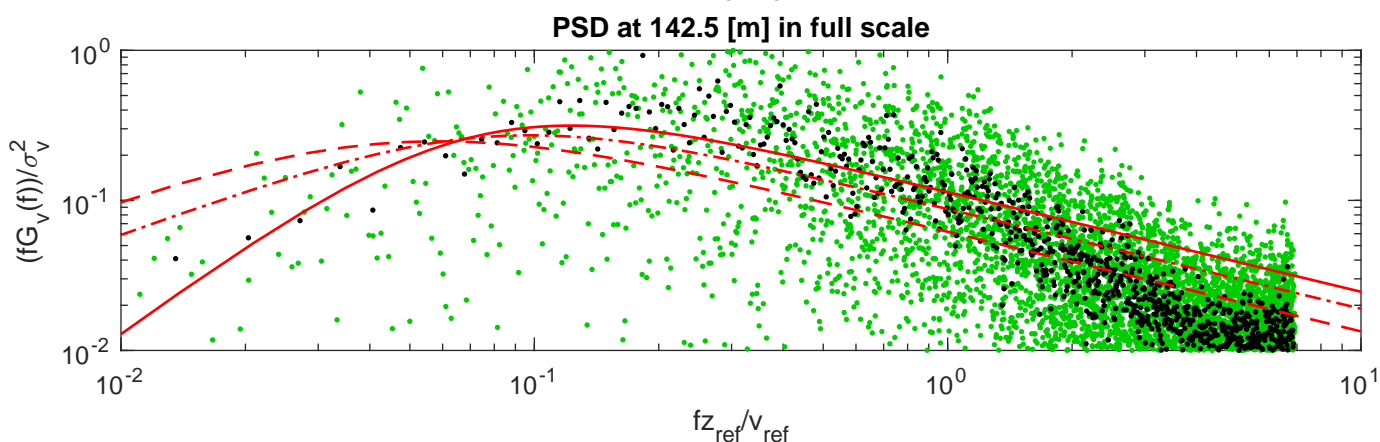
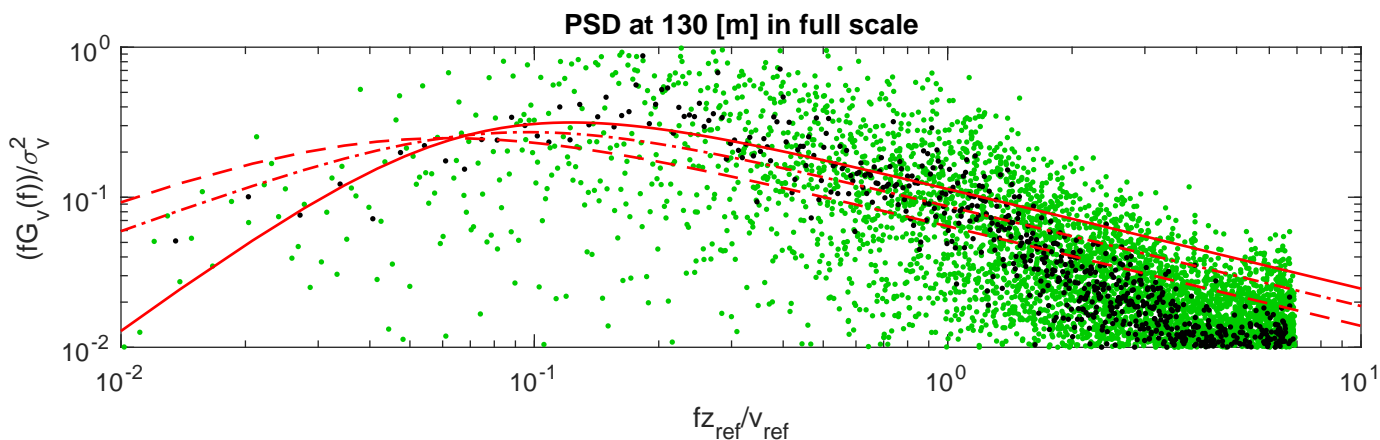
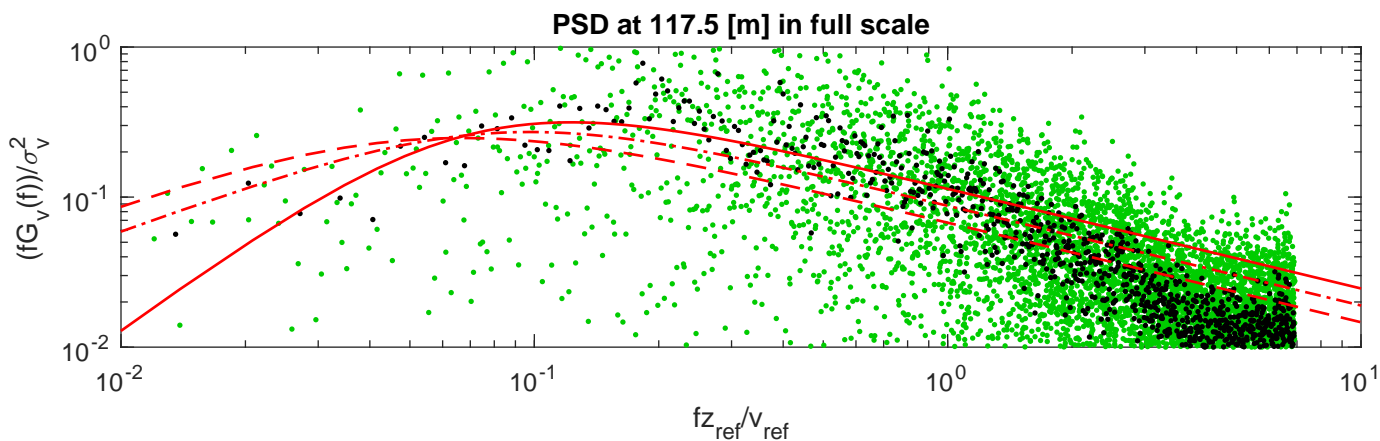
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



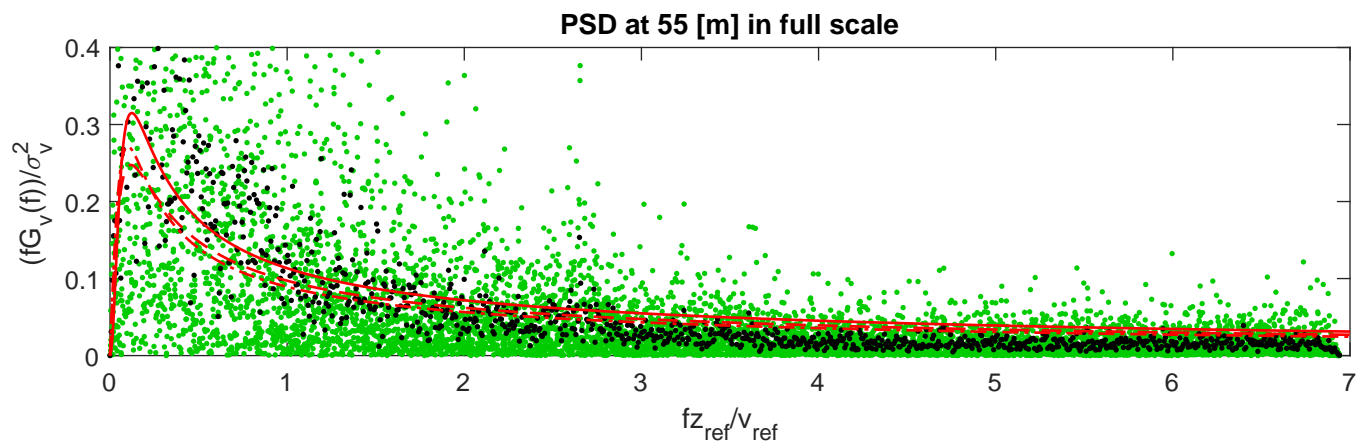
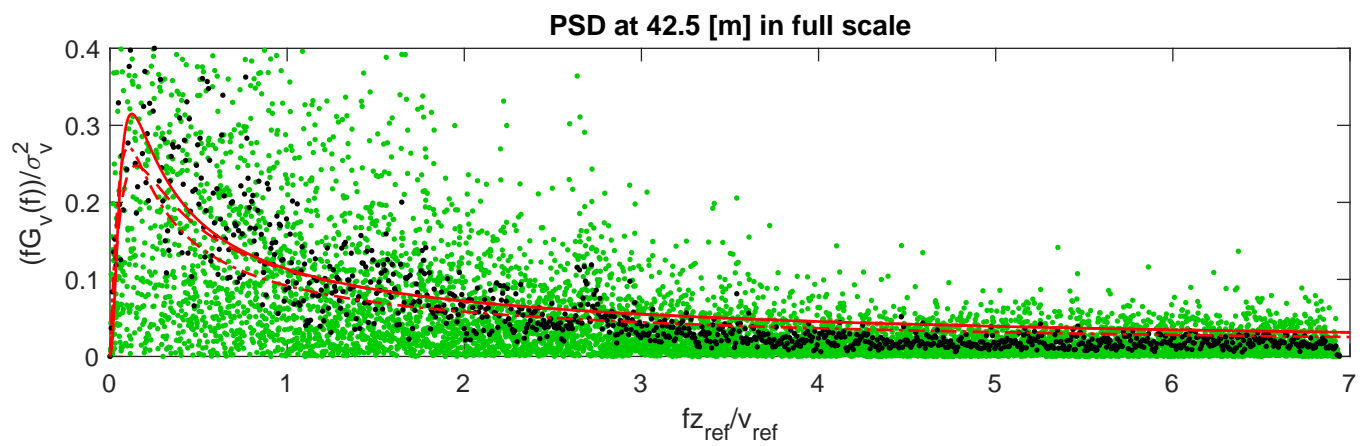
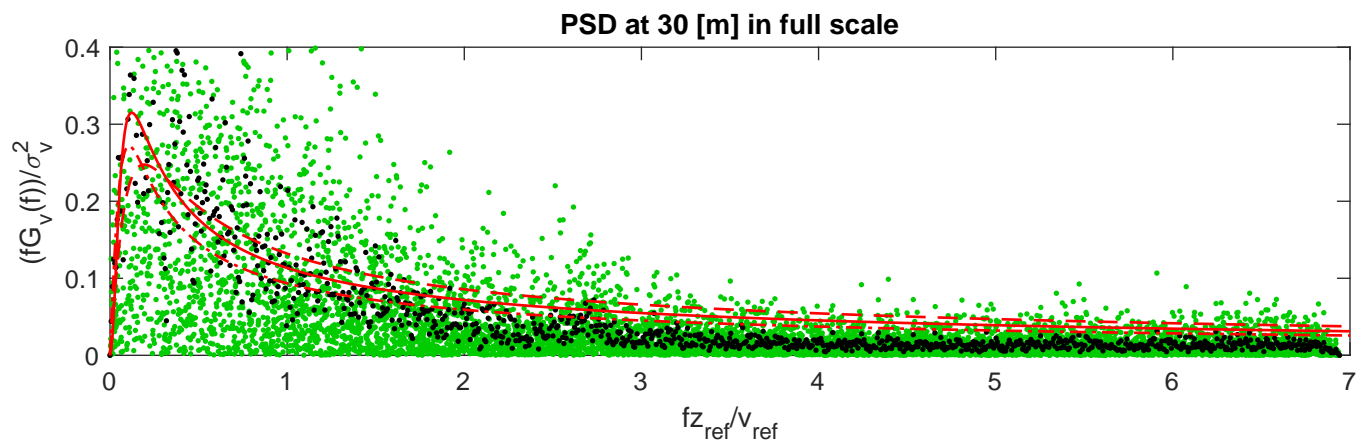
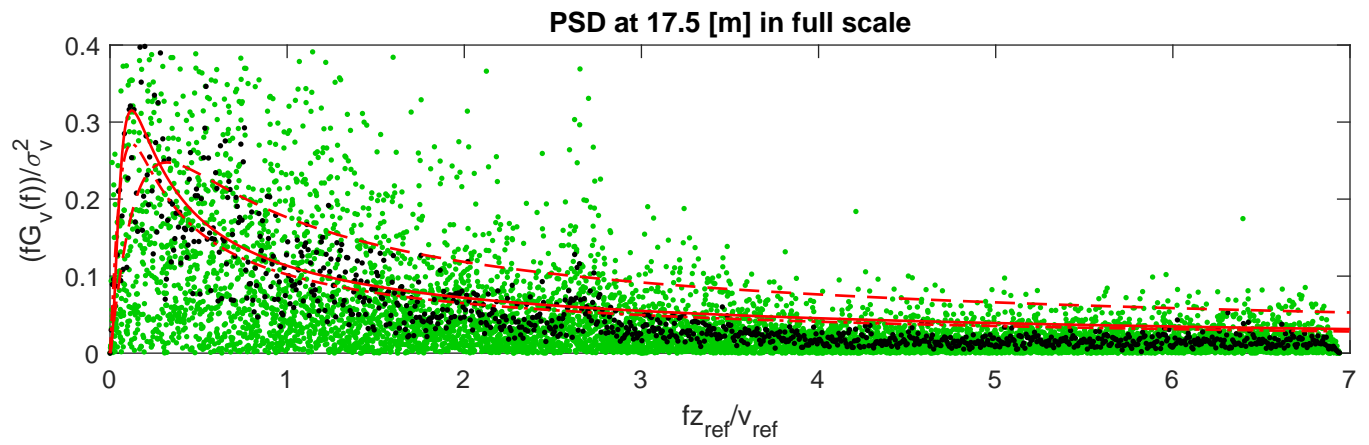
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



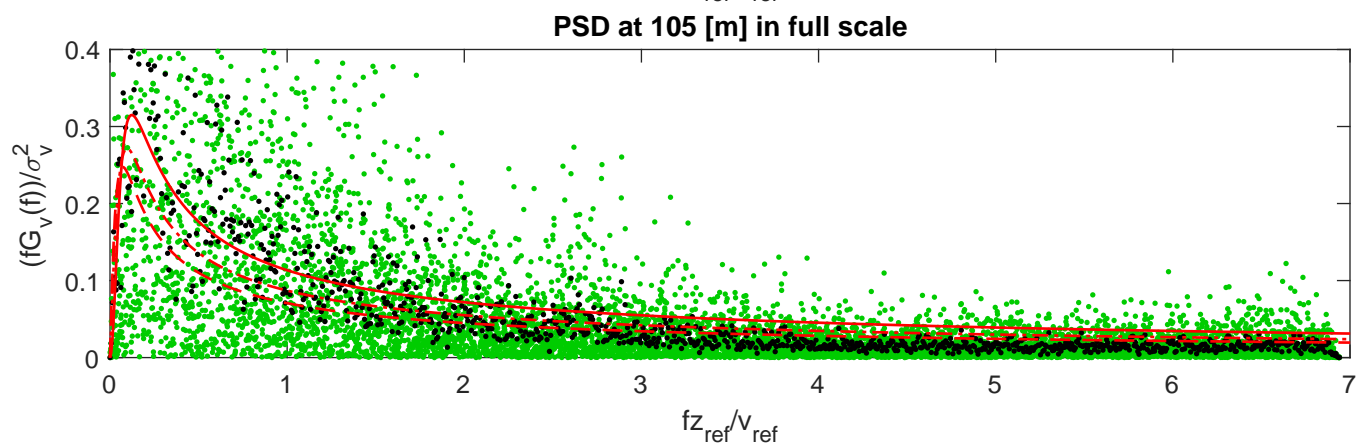
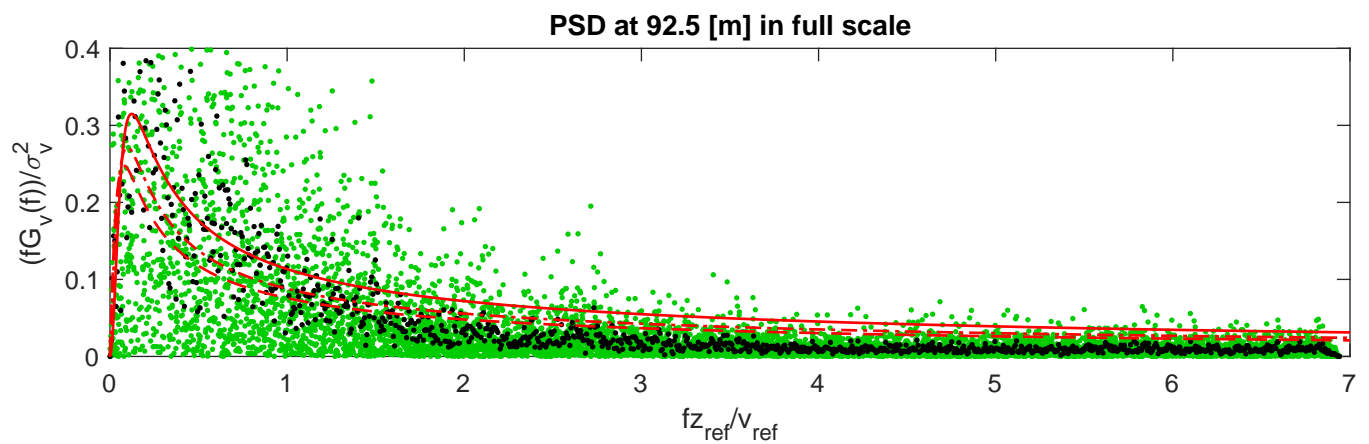
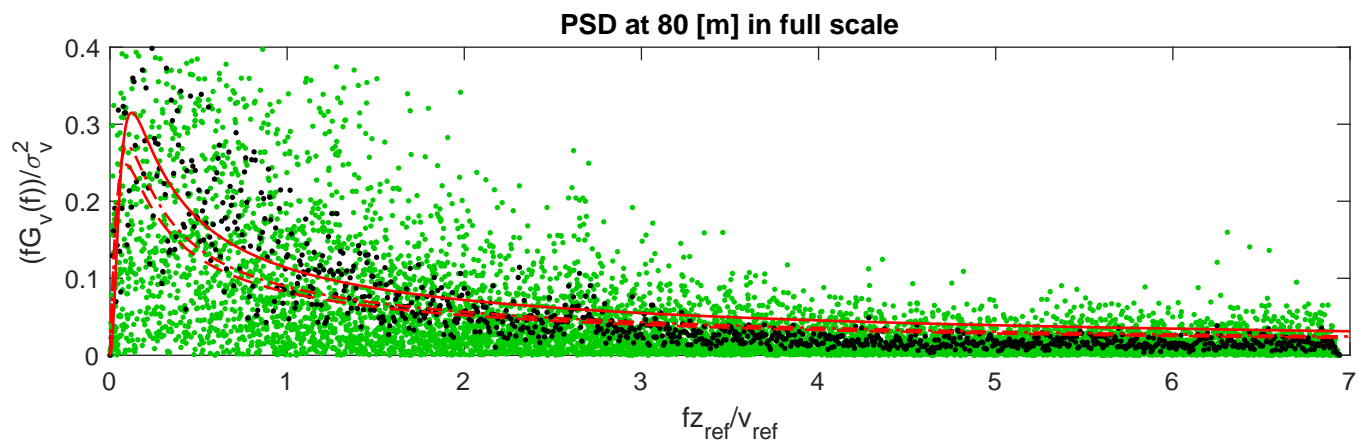
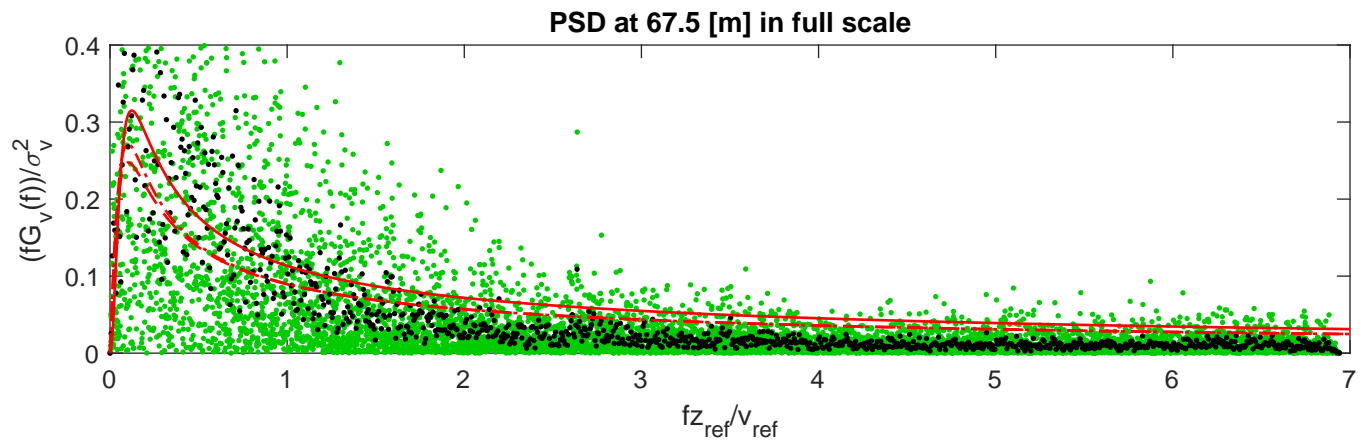
• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

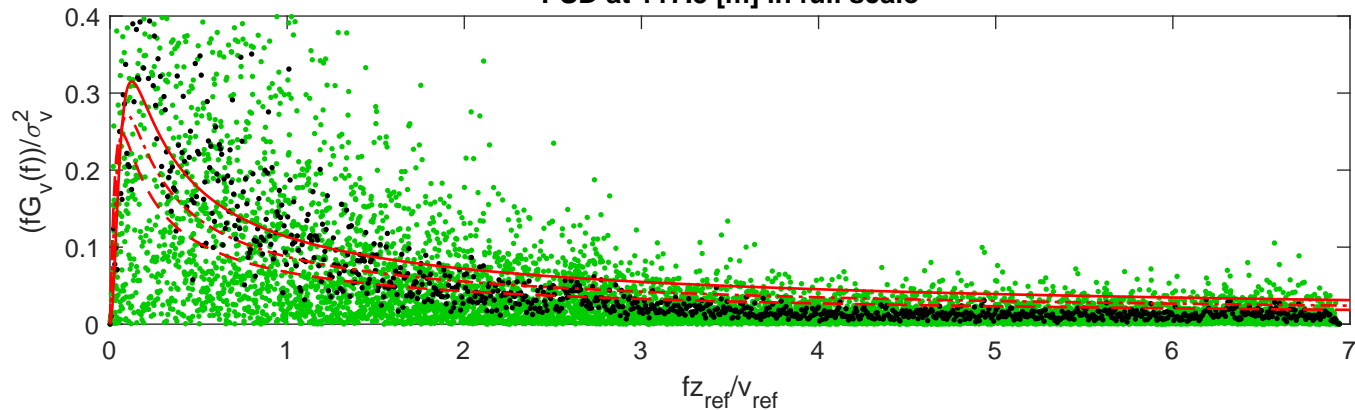


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

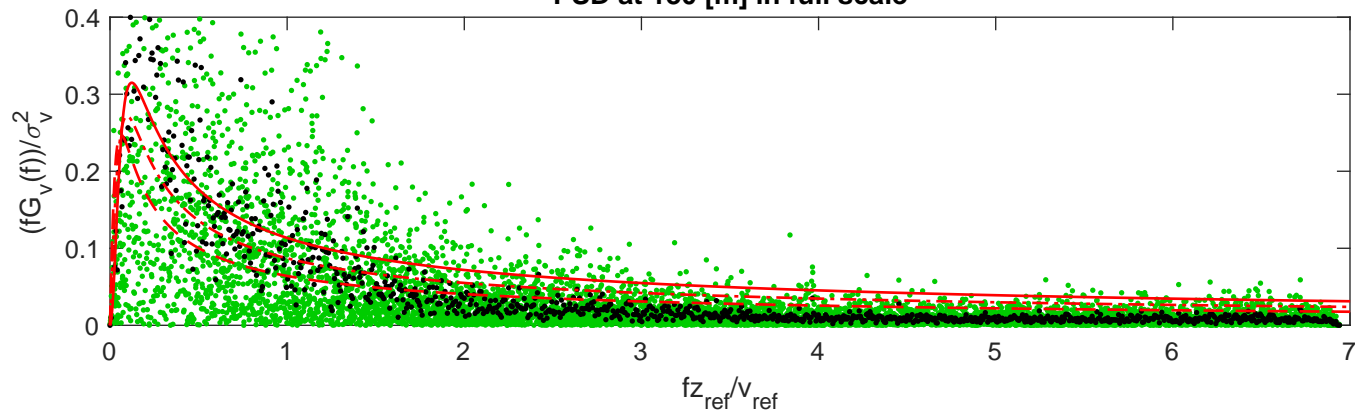


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

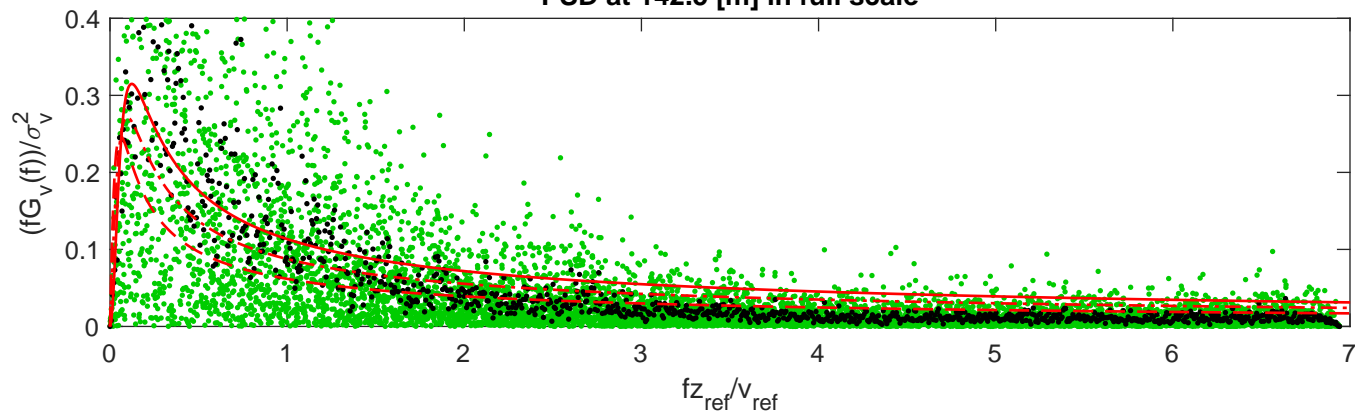
PSD at 117.5 [m] in full scale



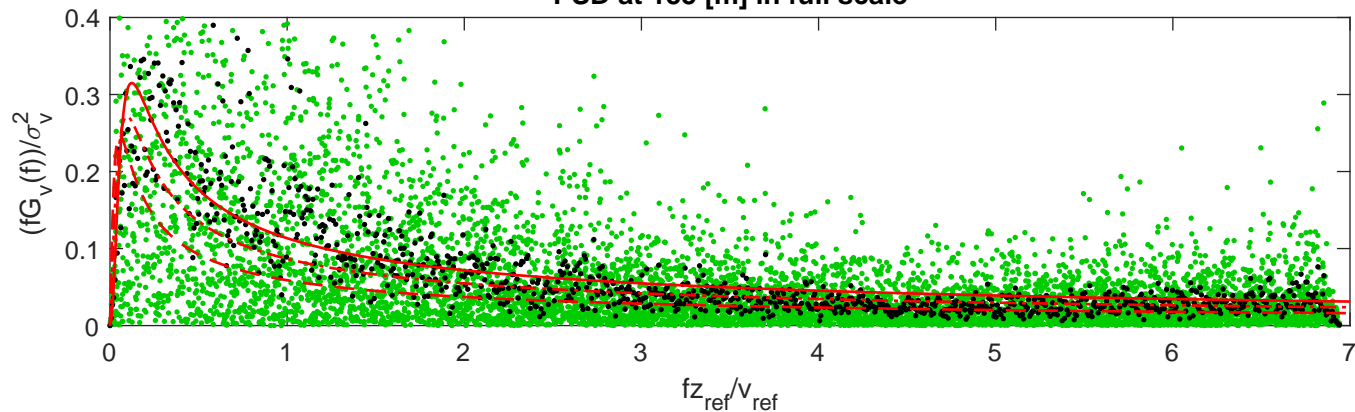
PSD at 130 [m] in full scale

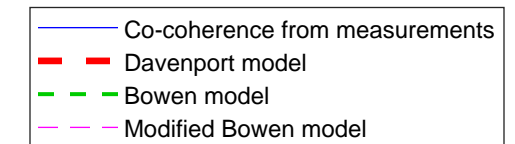
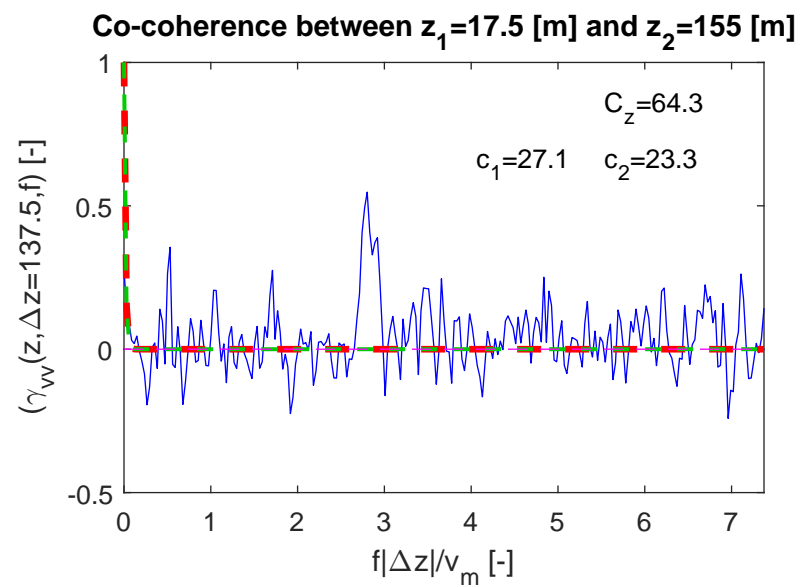
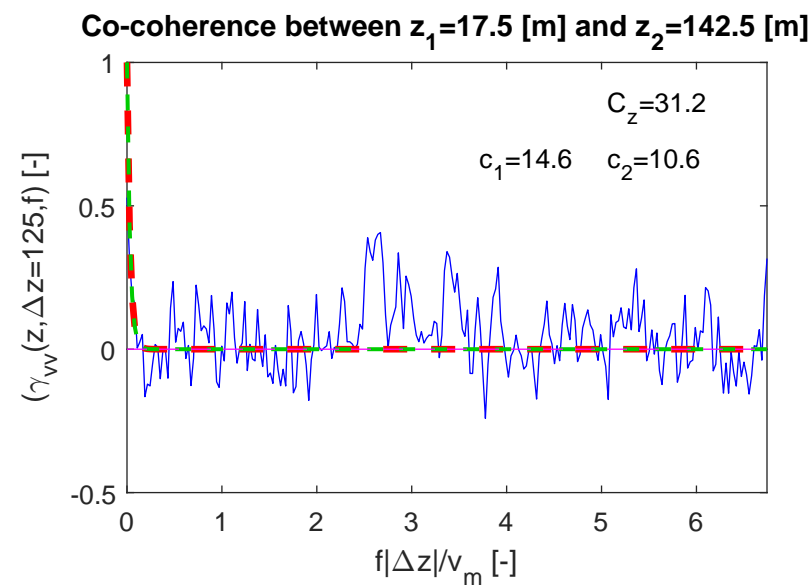
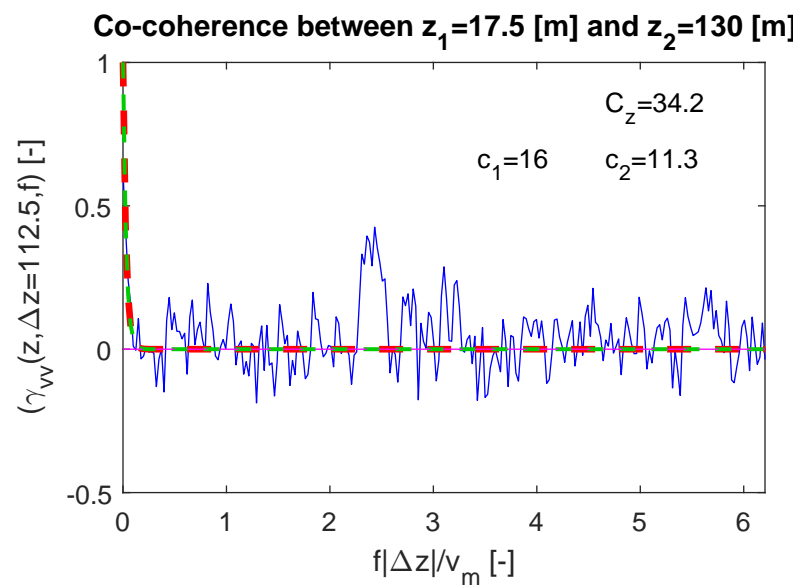
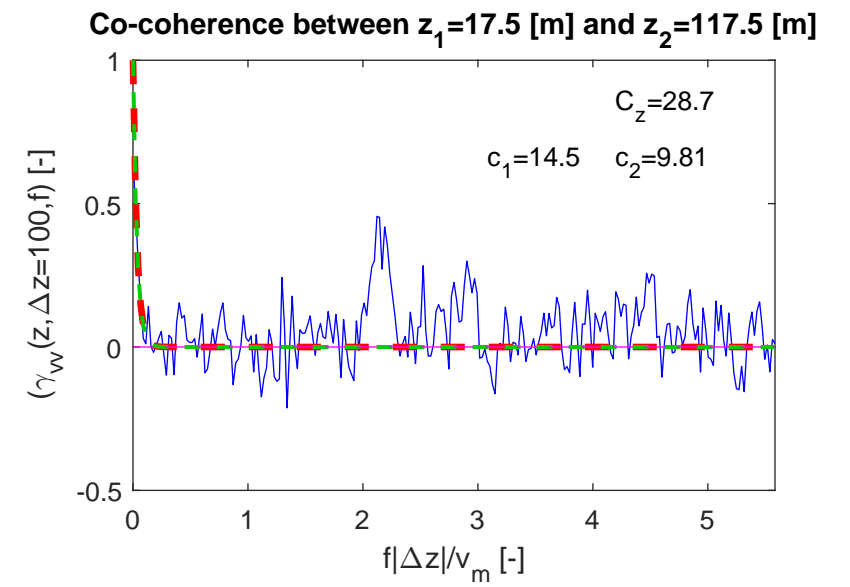
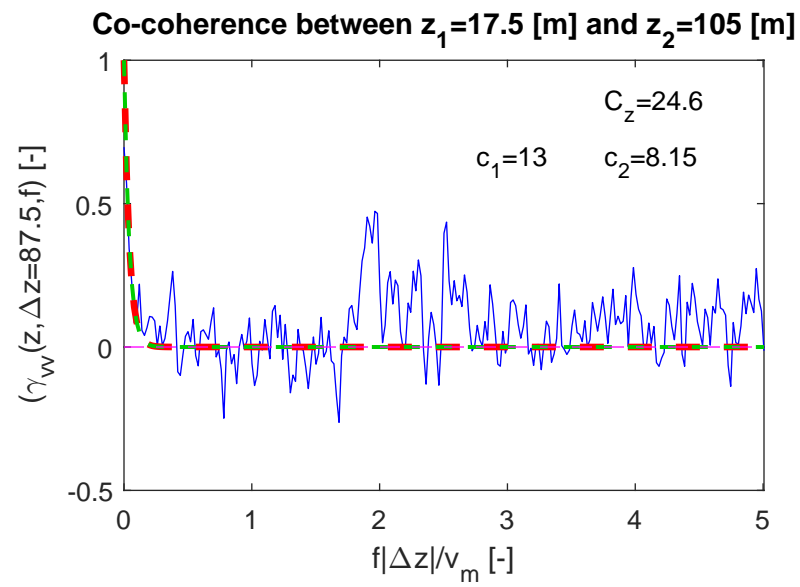
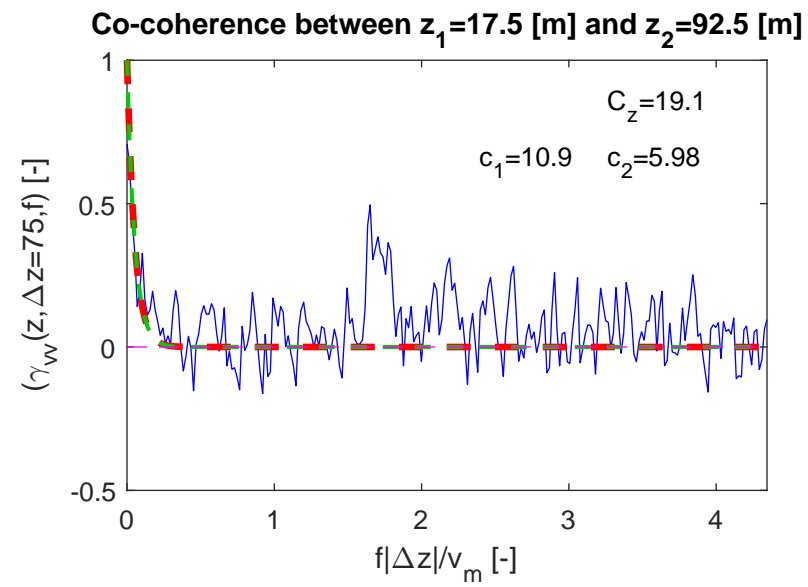
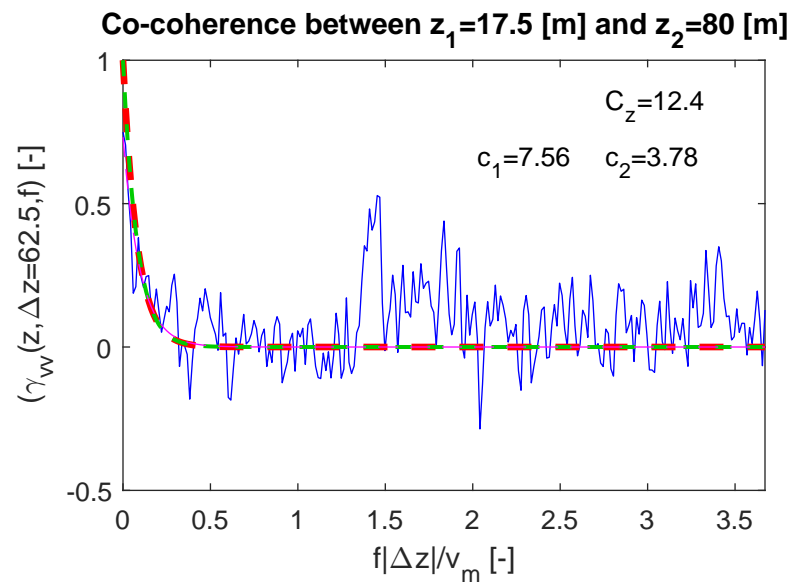
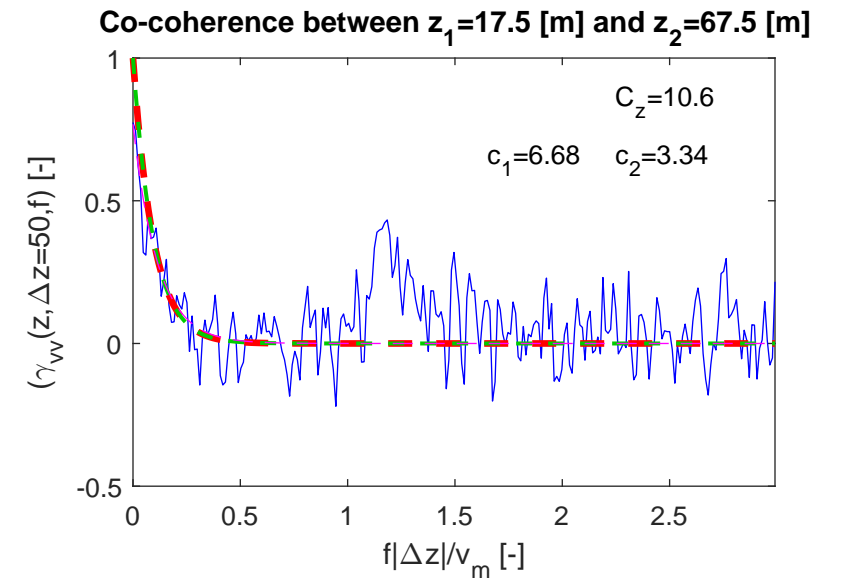
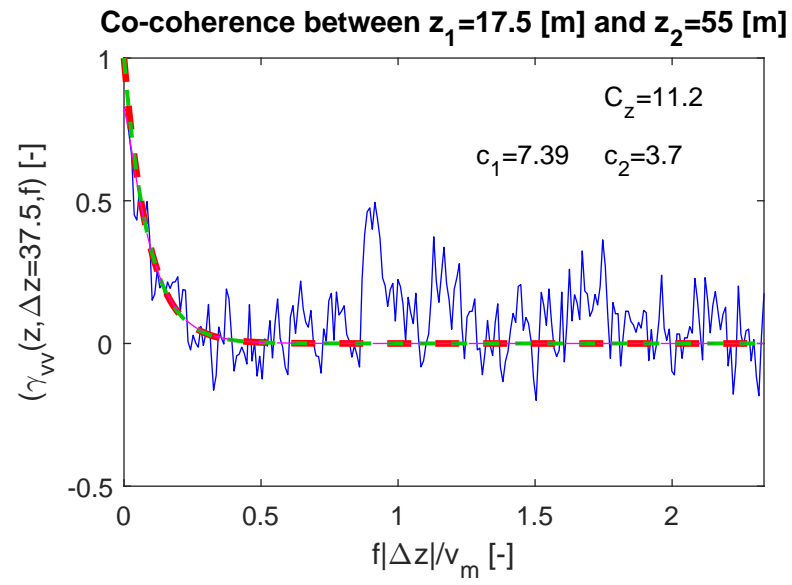
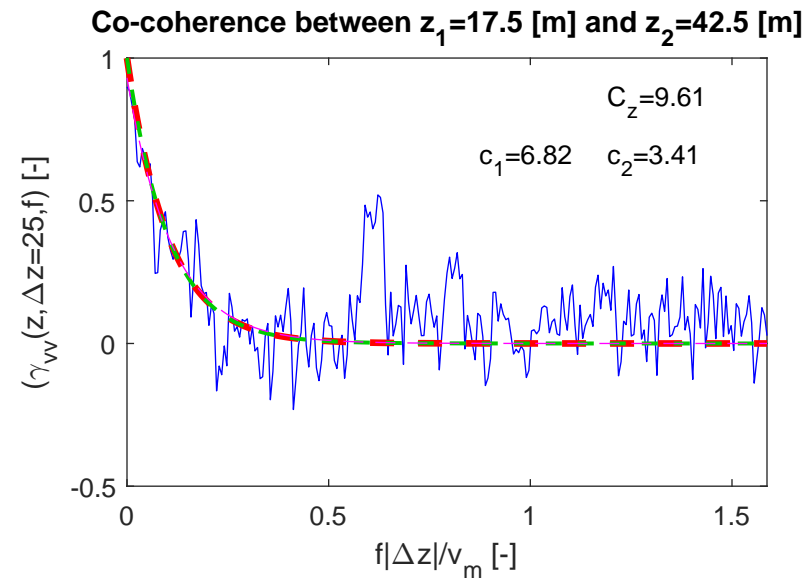
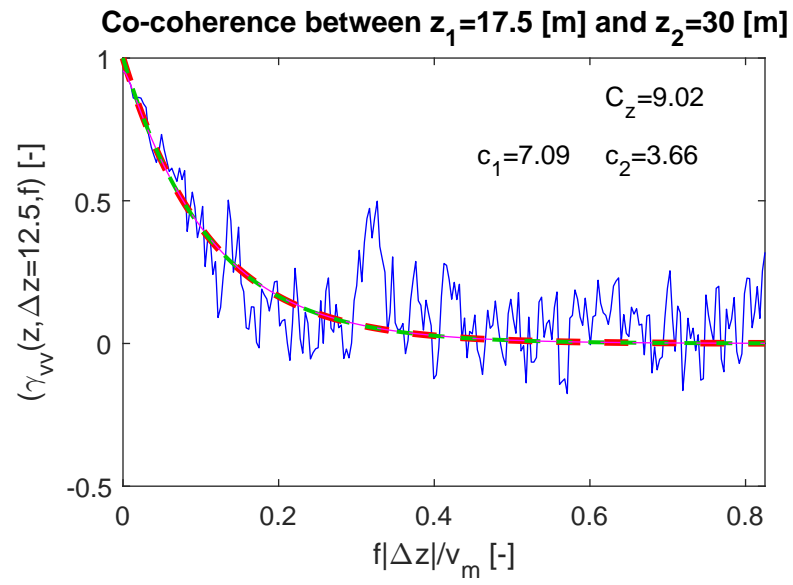


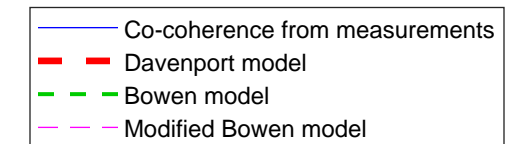
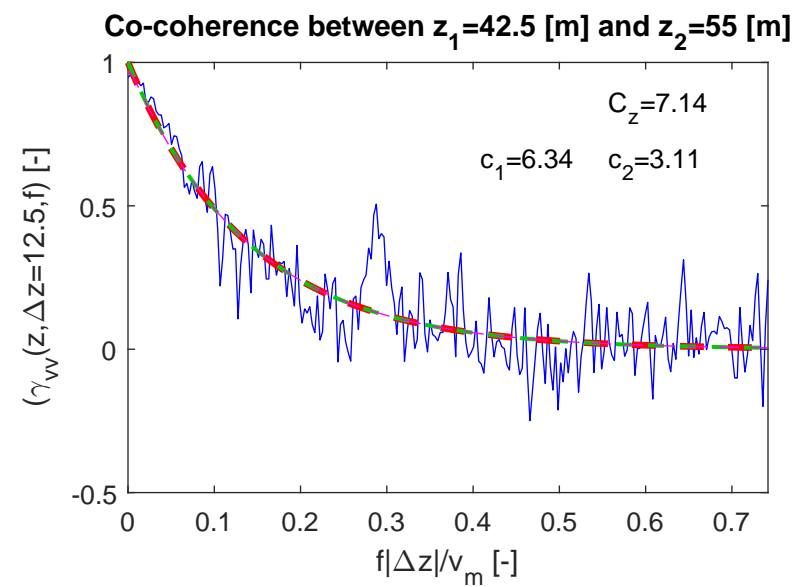
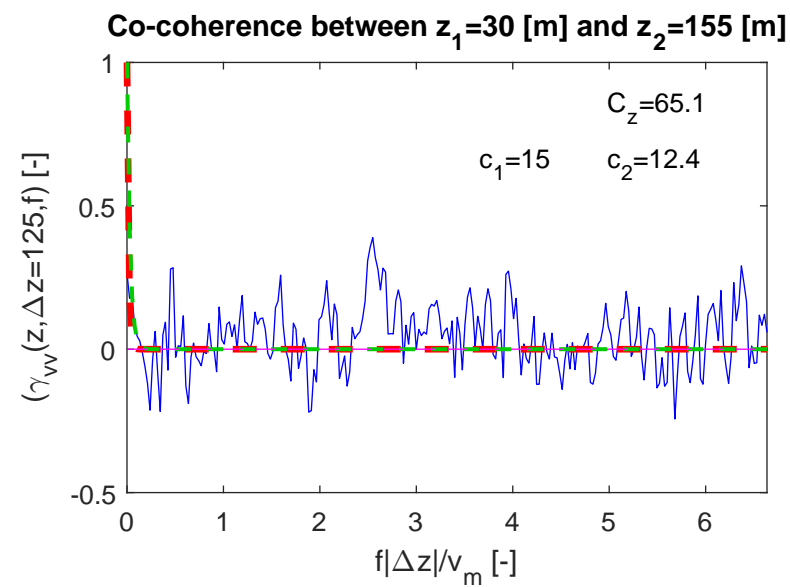
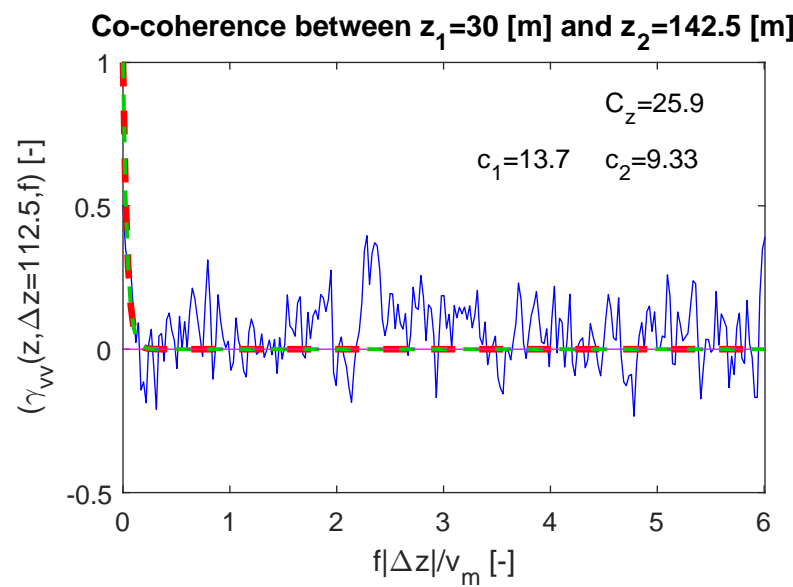
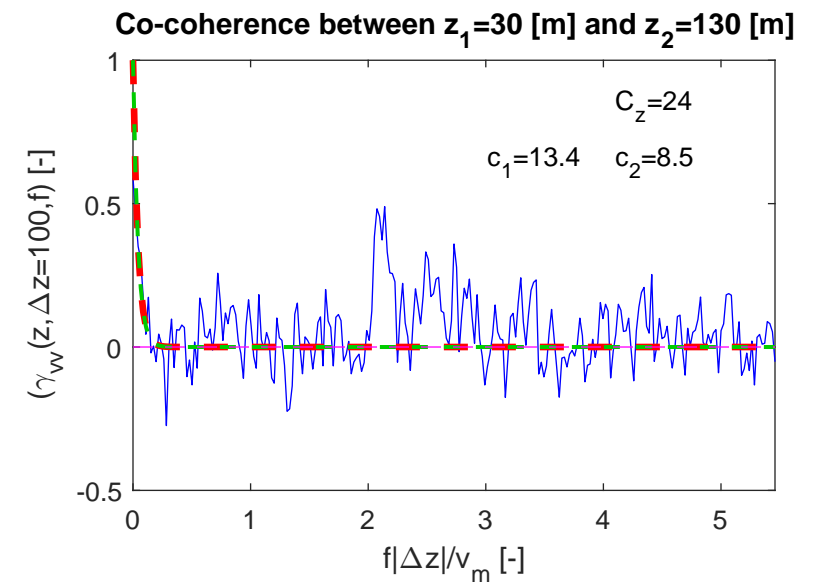
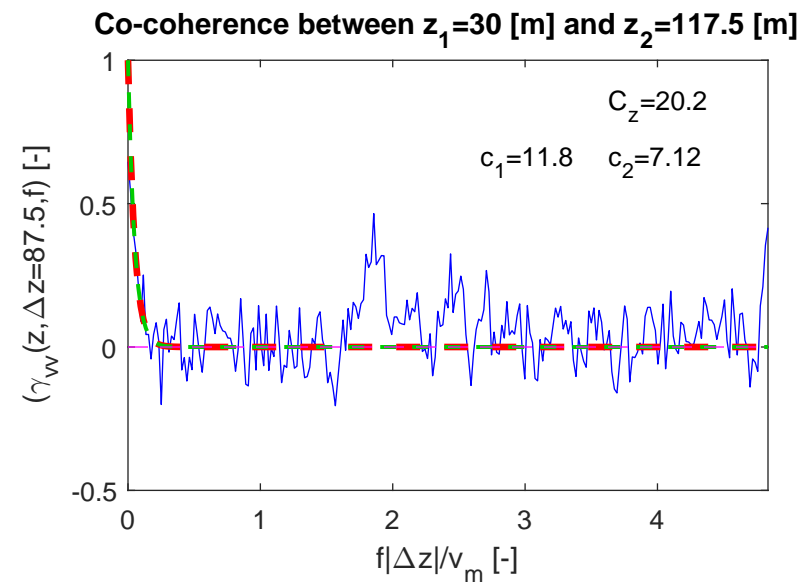
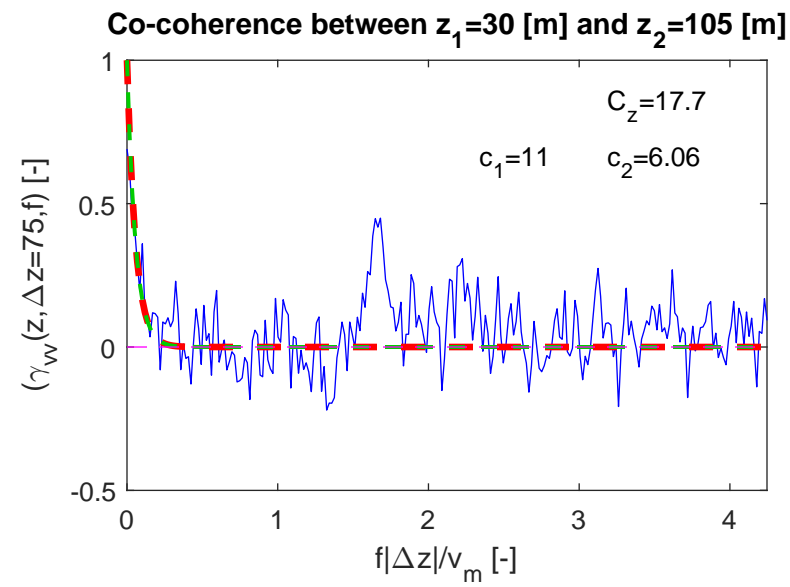
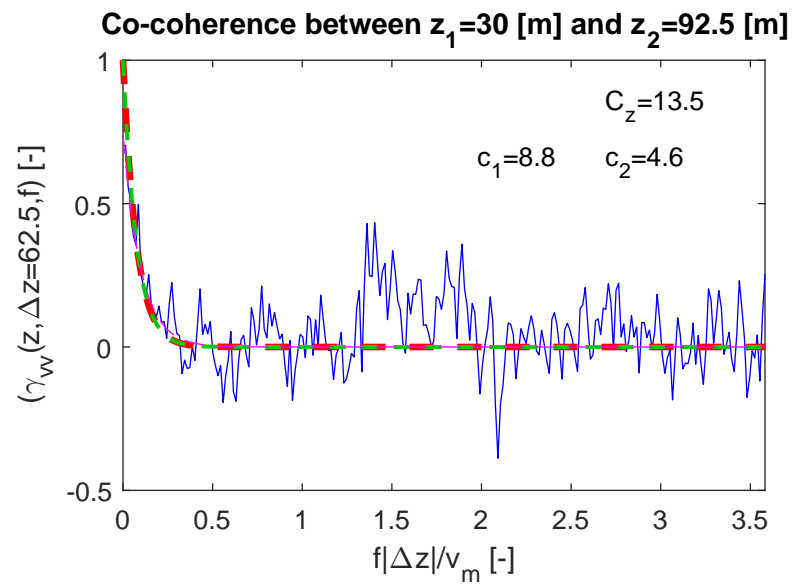
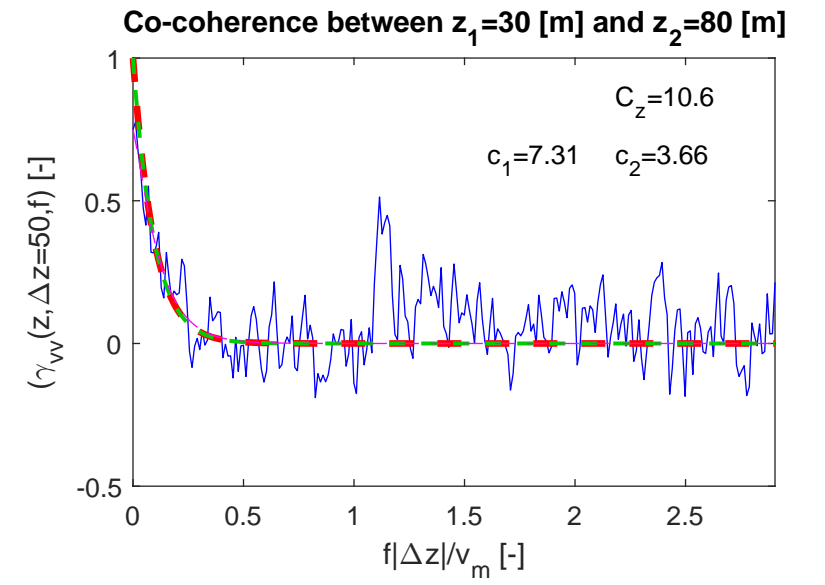
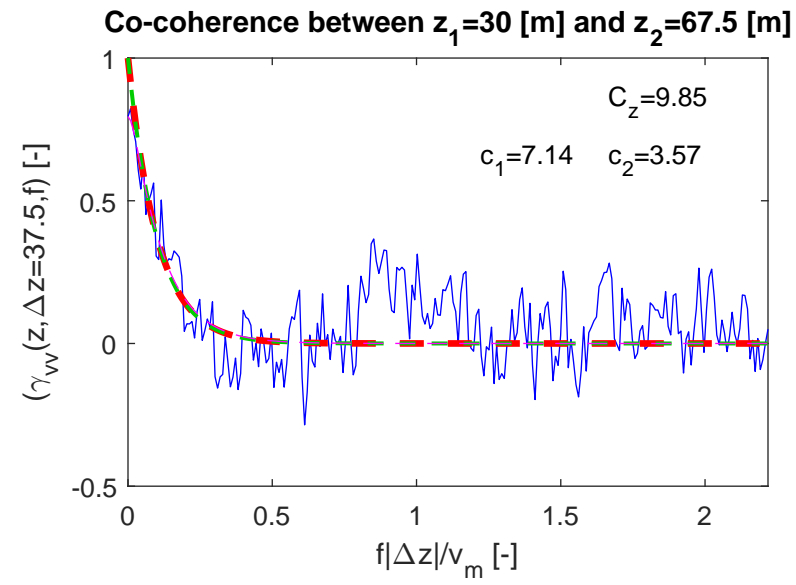
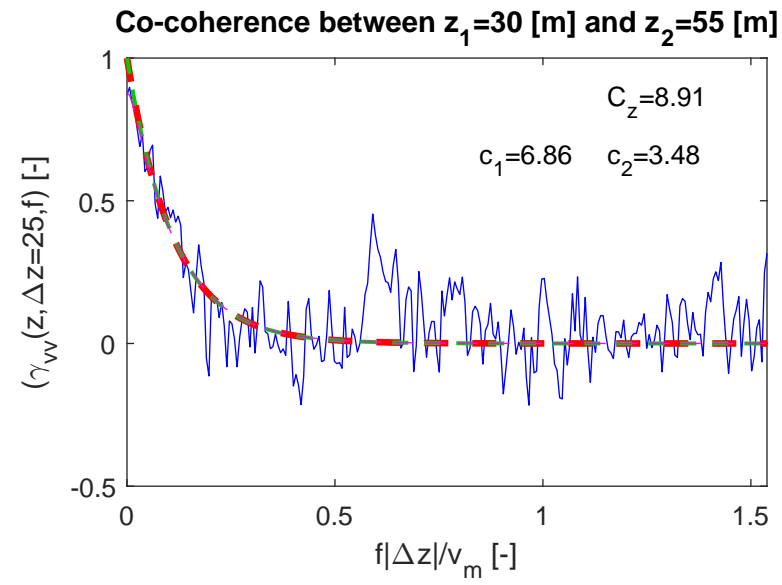
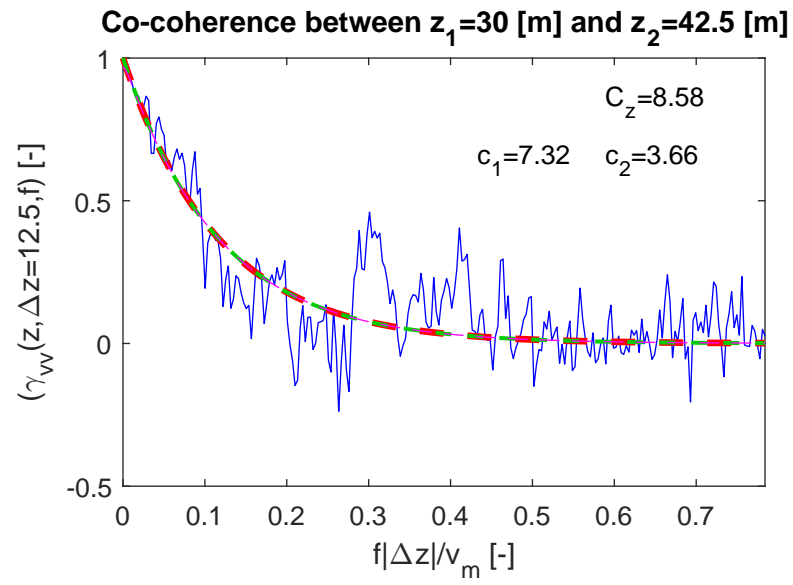
PSD at 142.5 [m] in full scale

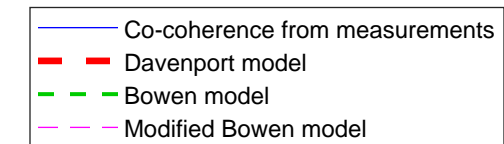
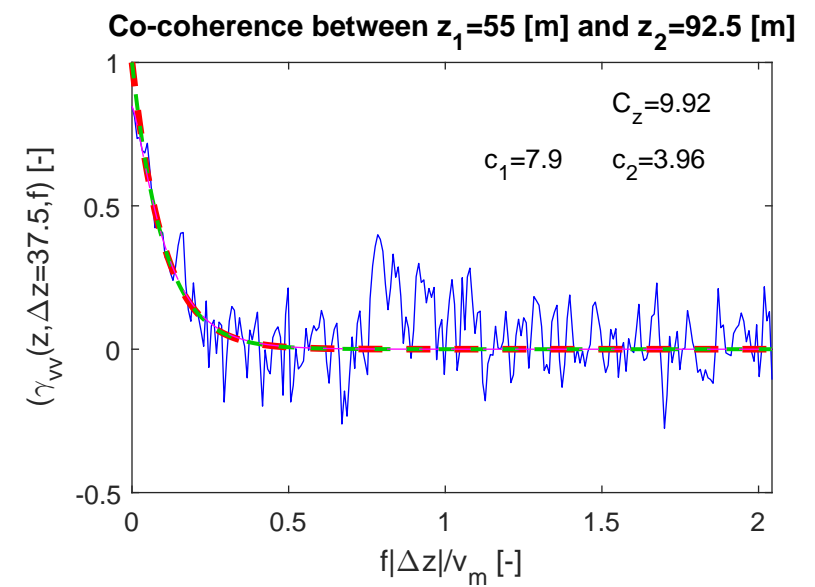
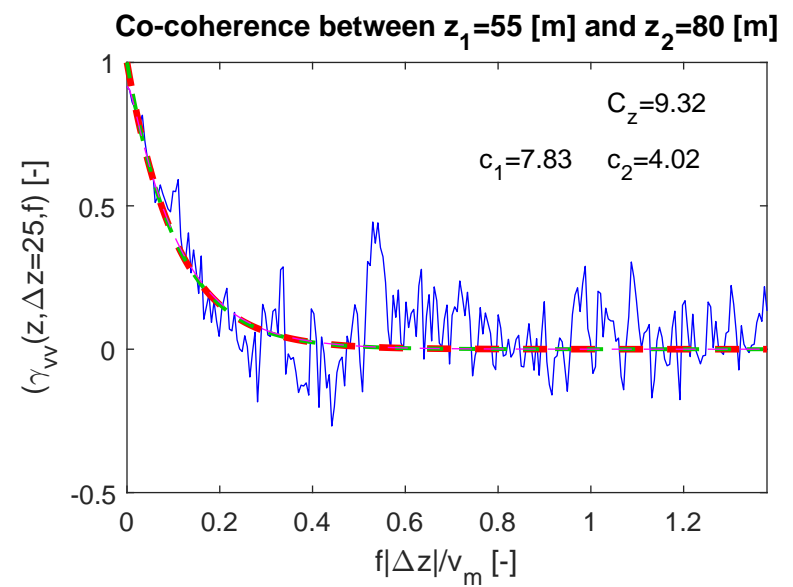
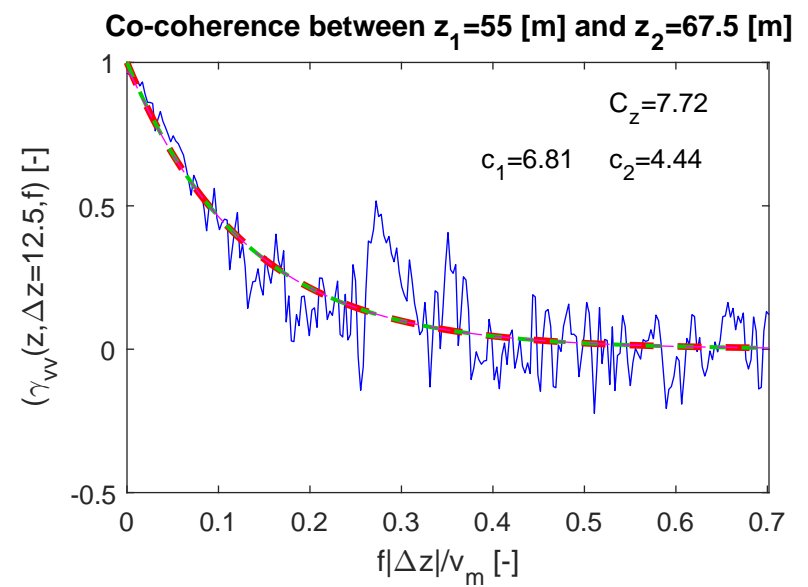
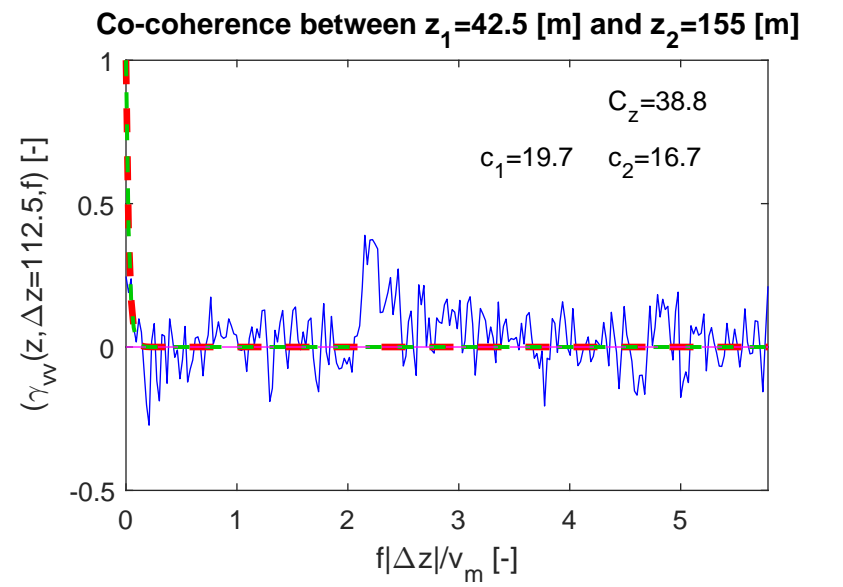
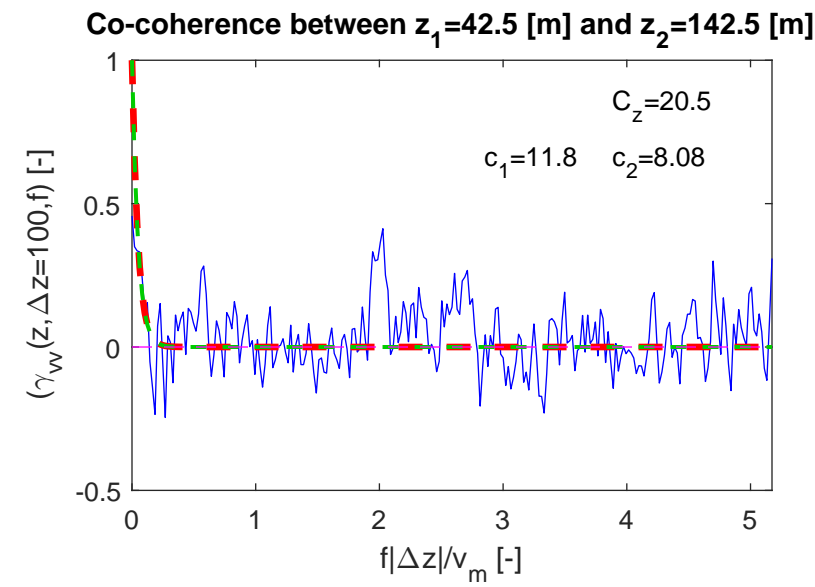
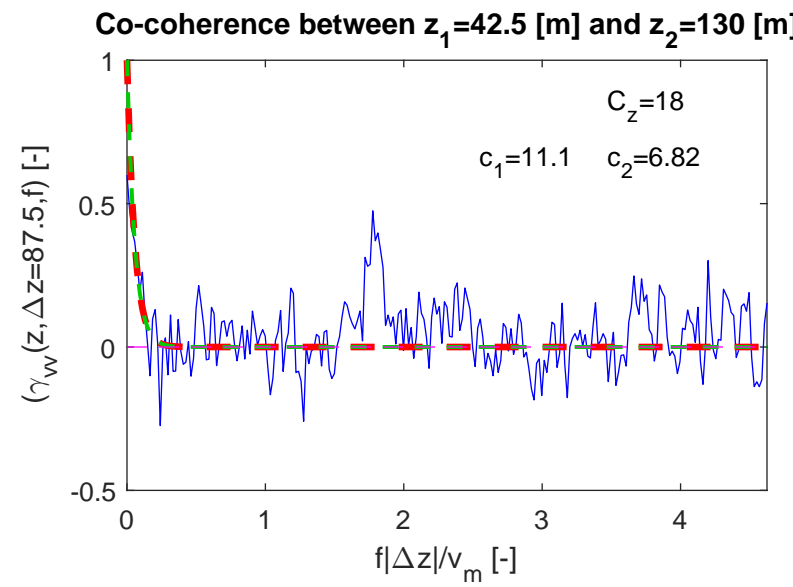
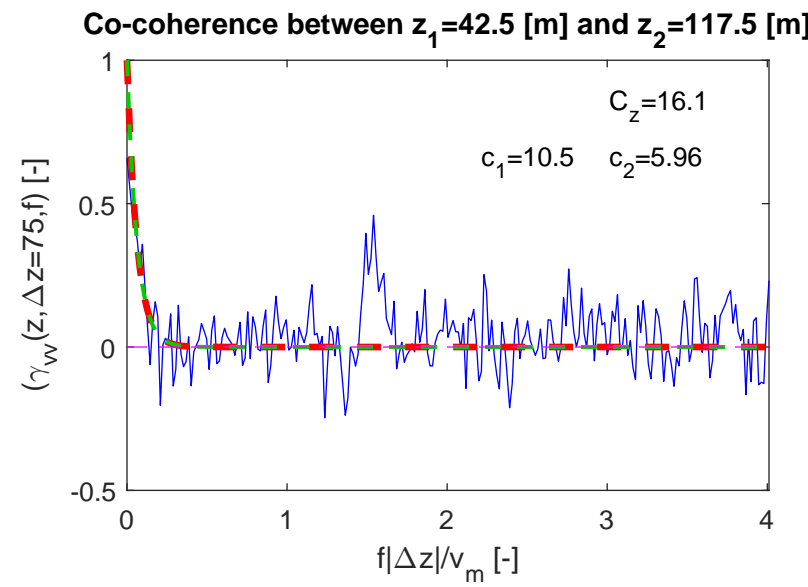
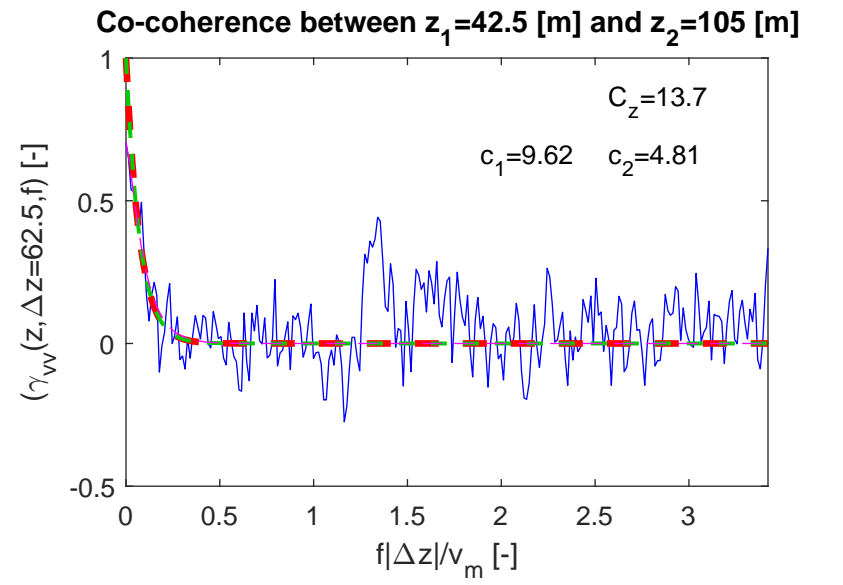
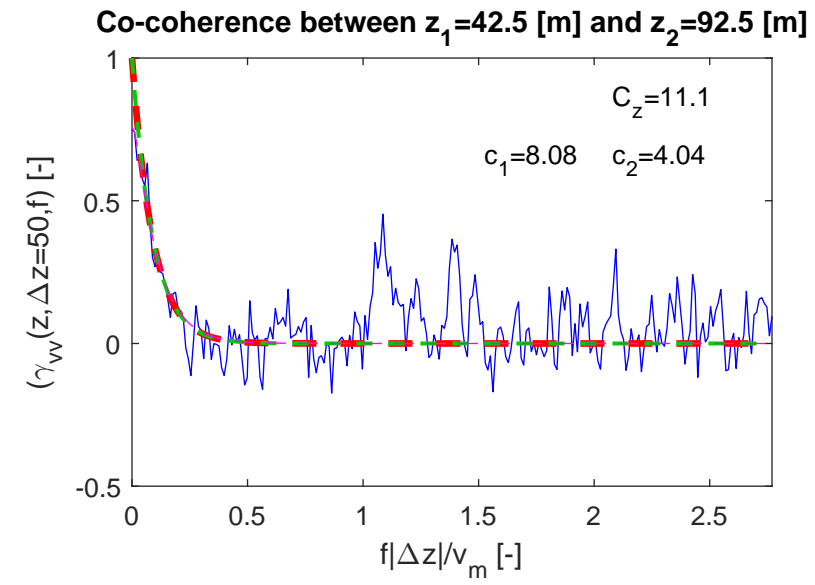
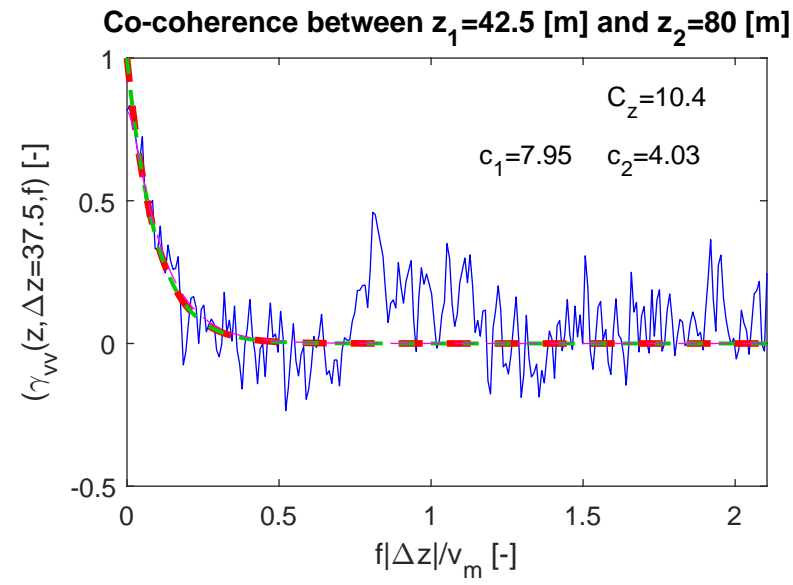
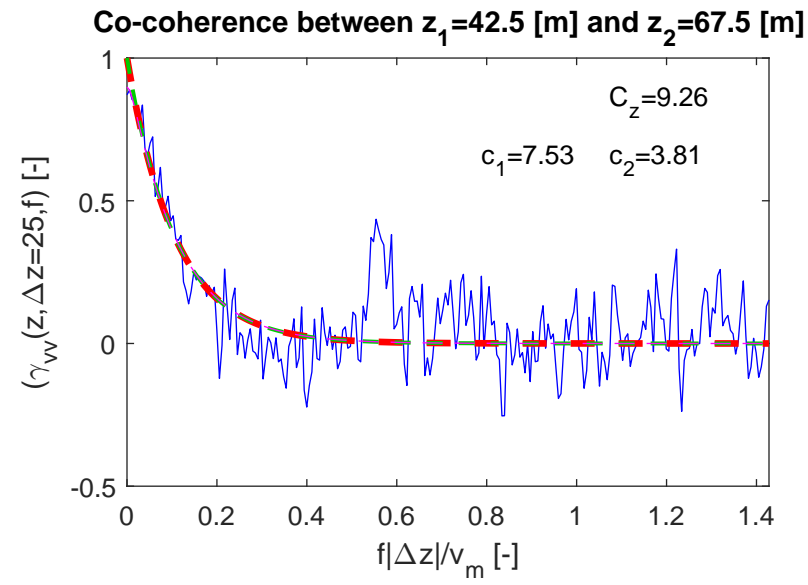


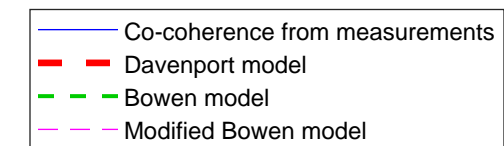
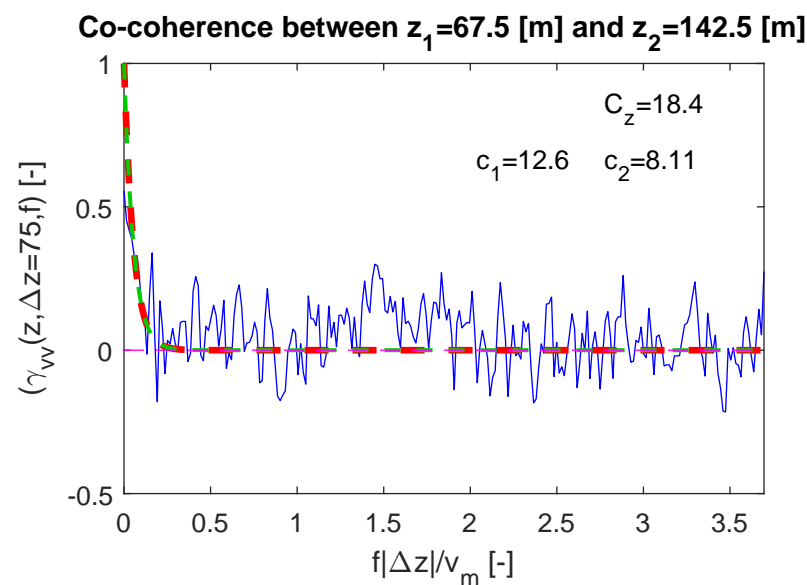
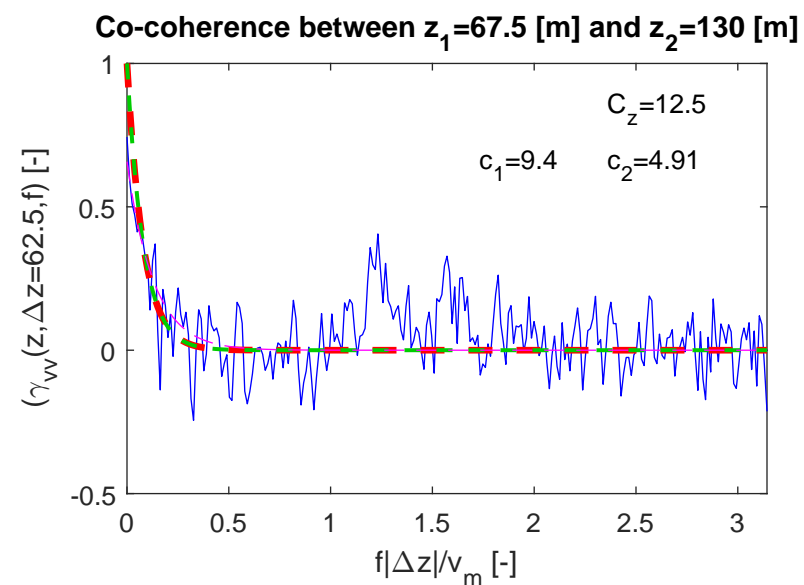
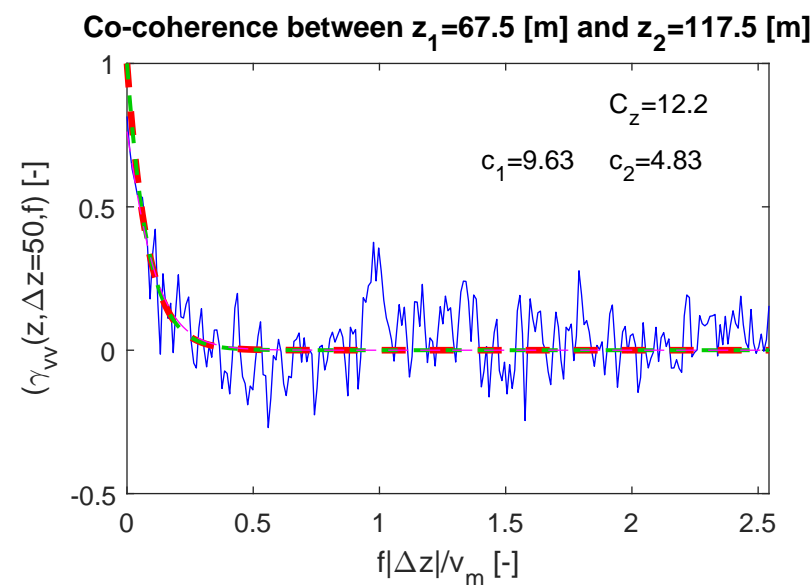
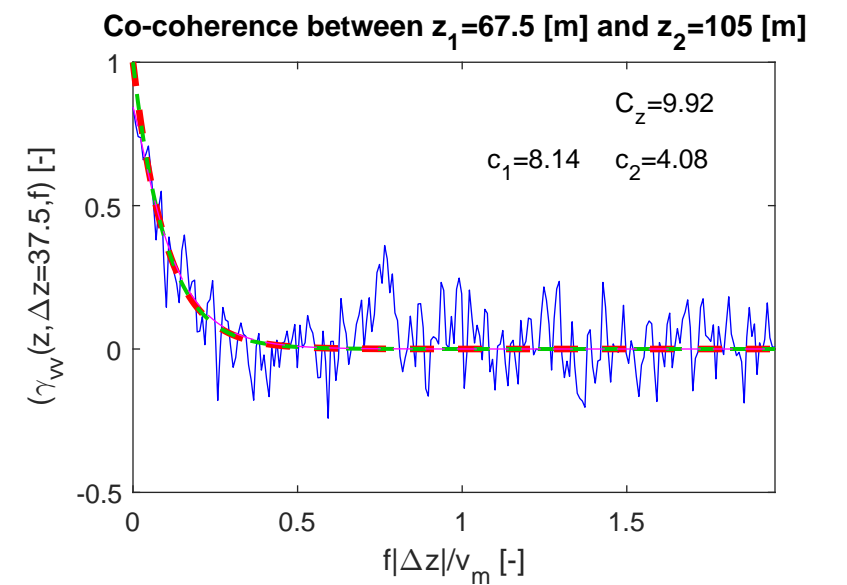
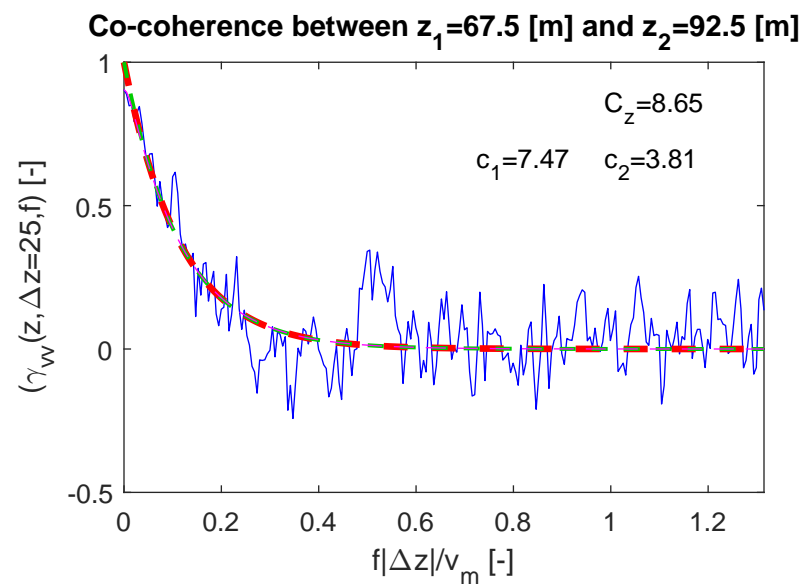
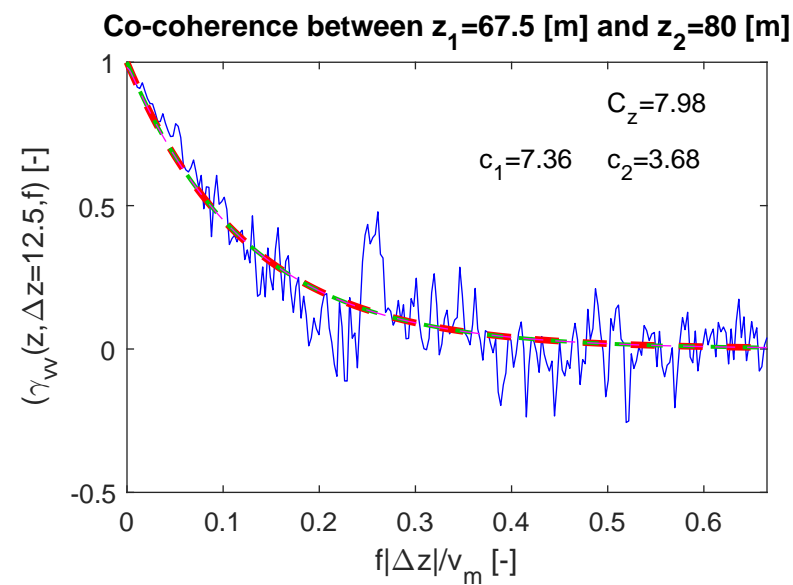
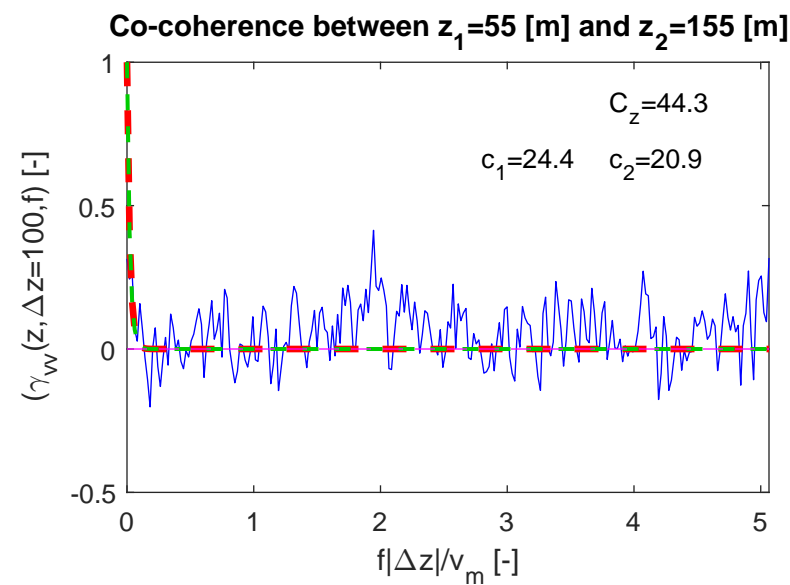
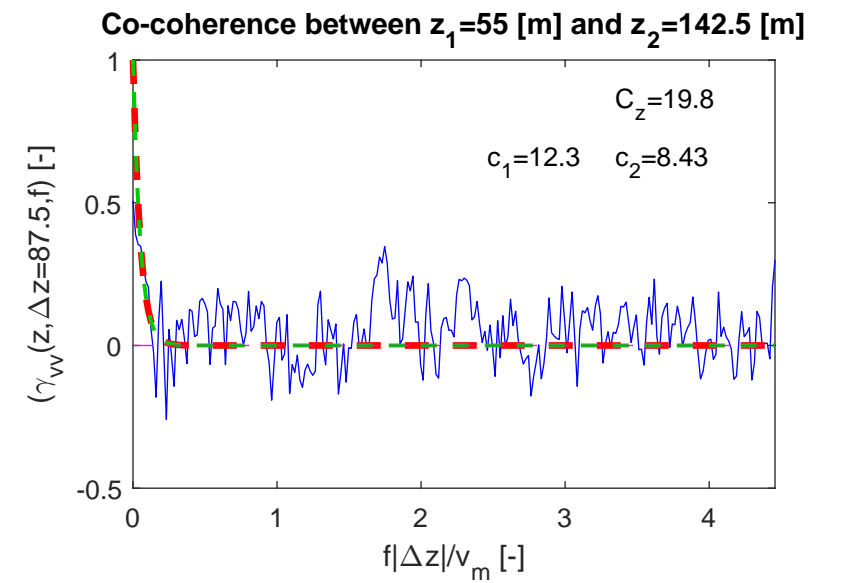
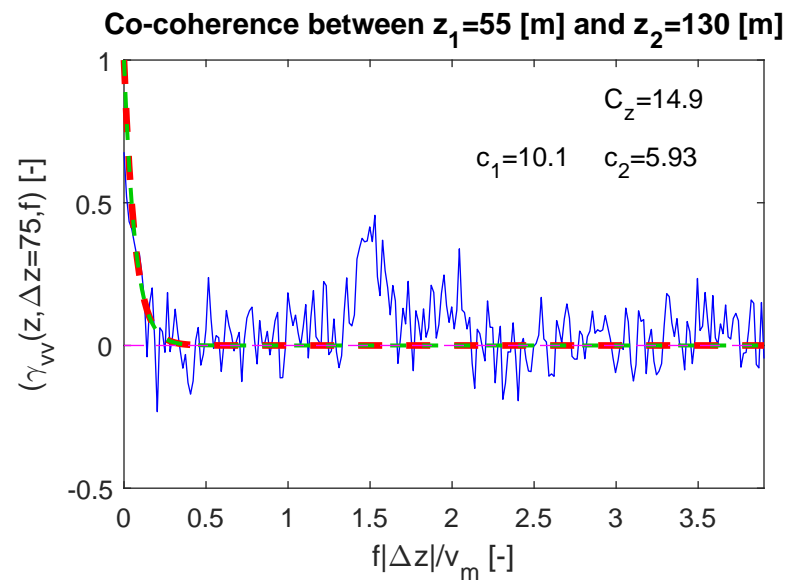
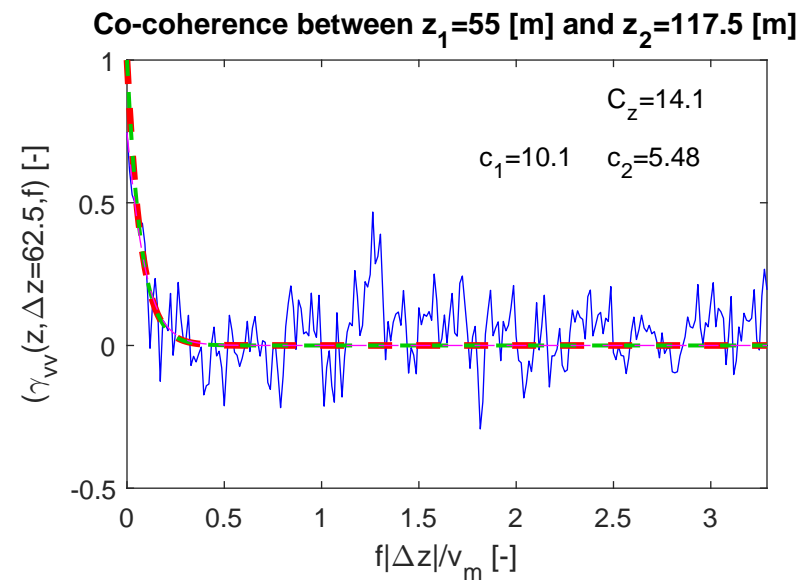
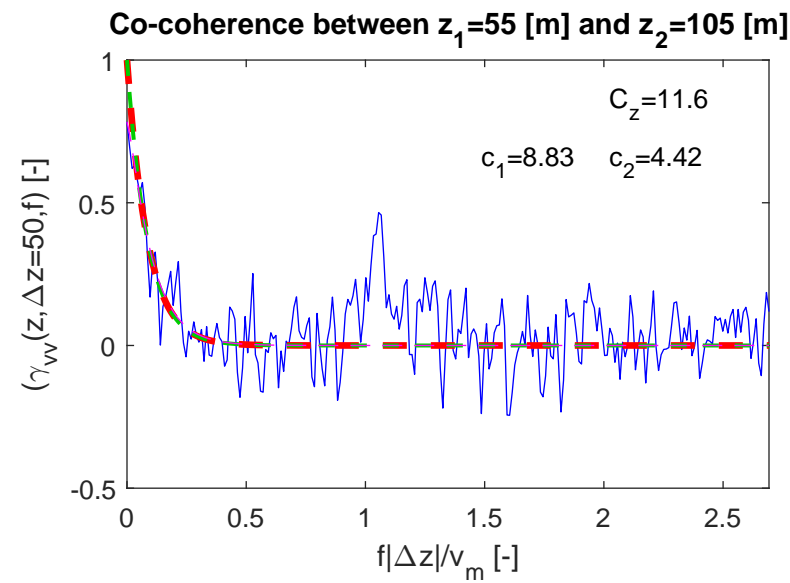
PSD at 155 [m] in full scale

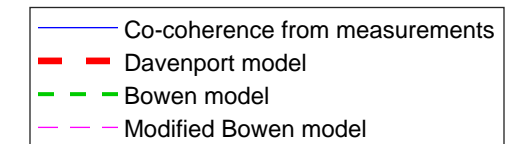
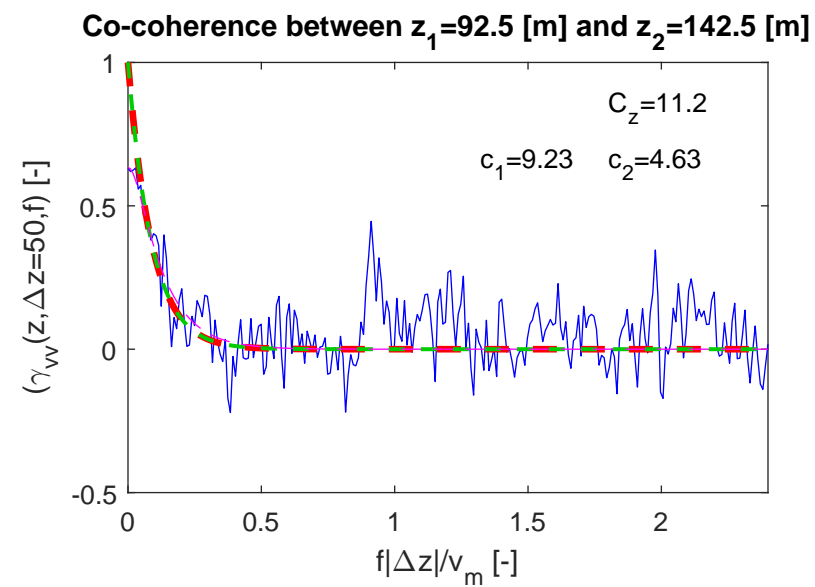
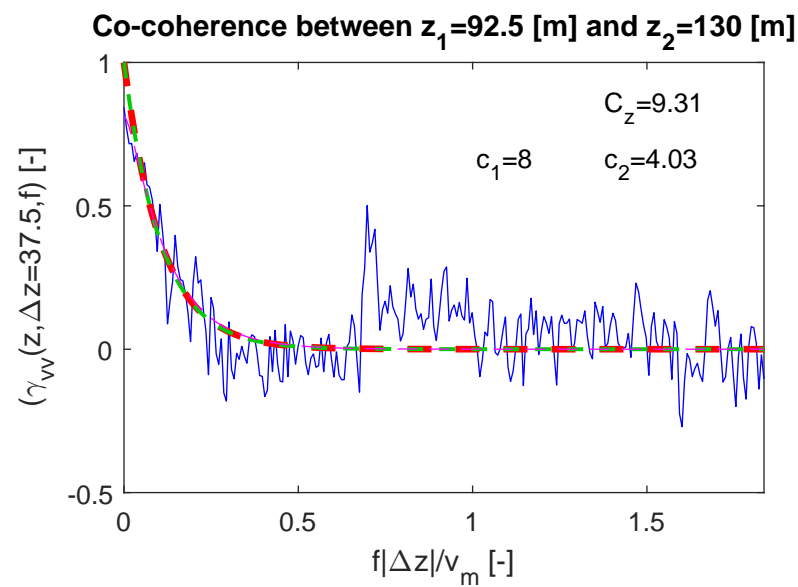
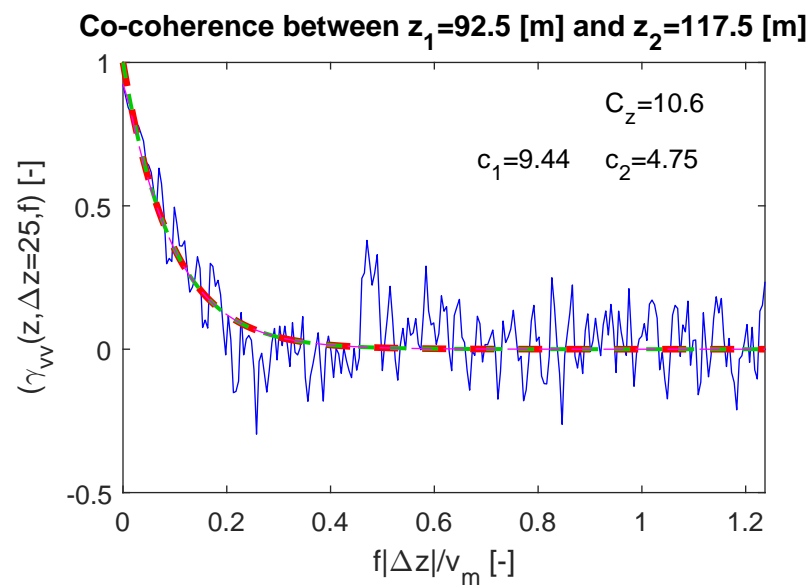
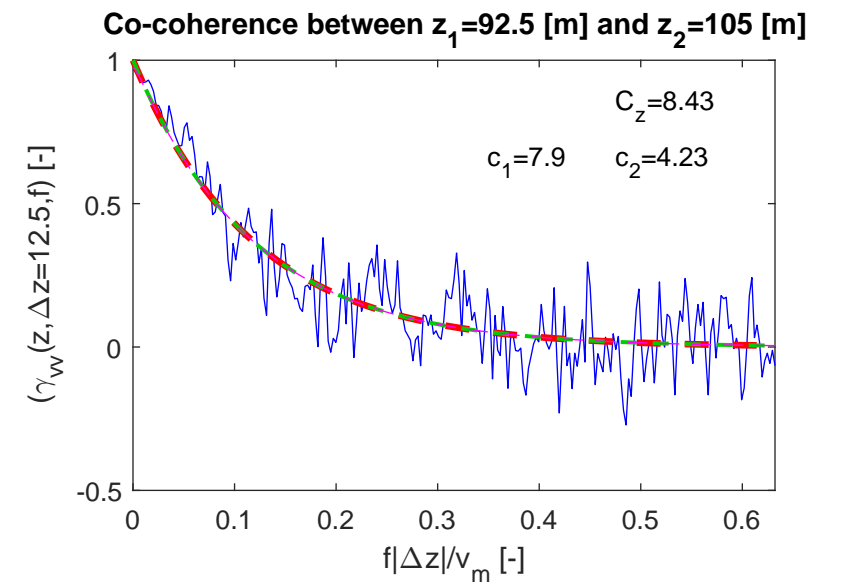
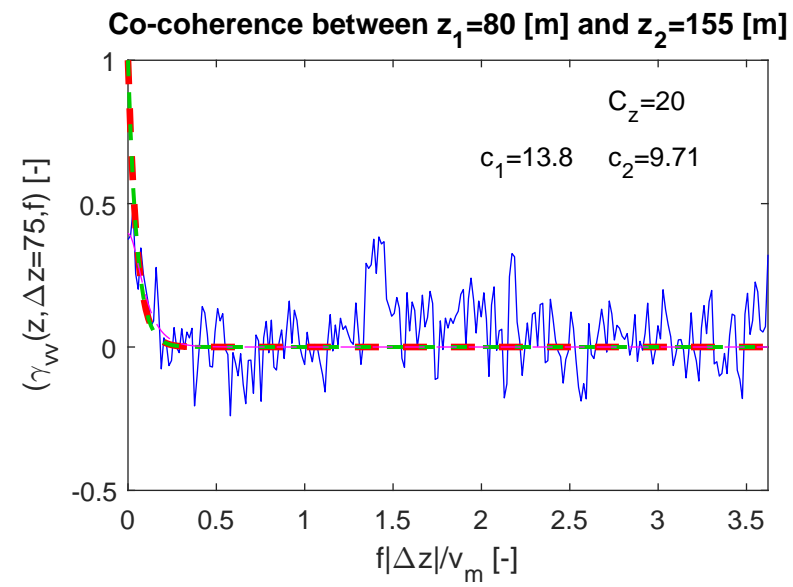
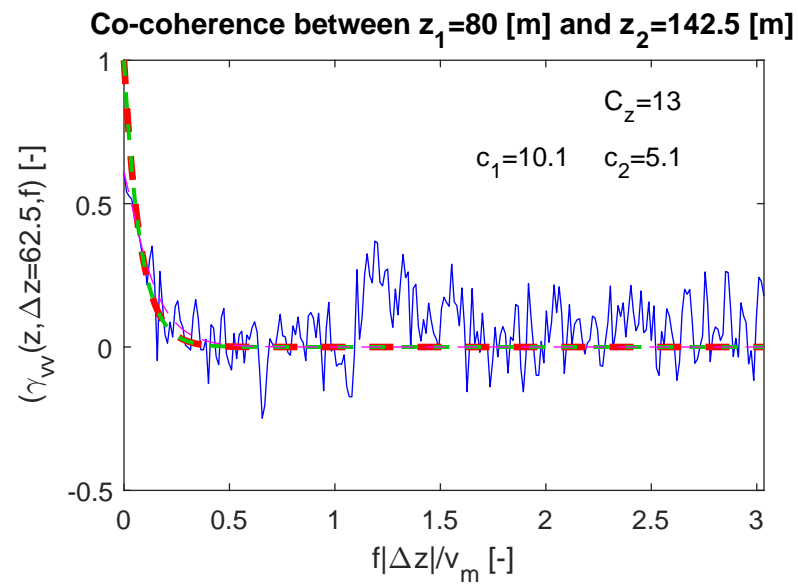
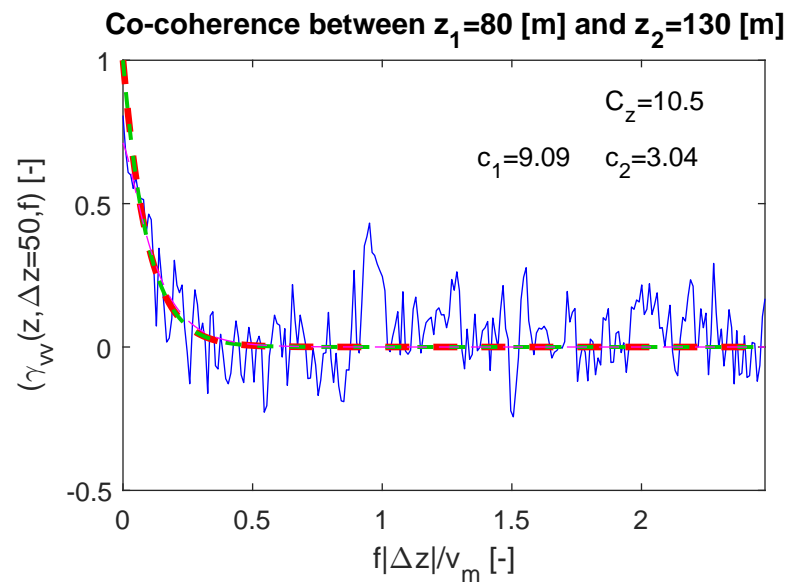
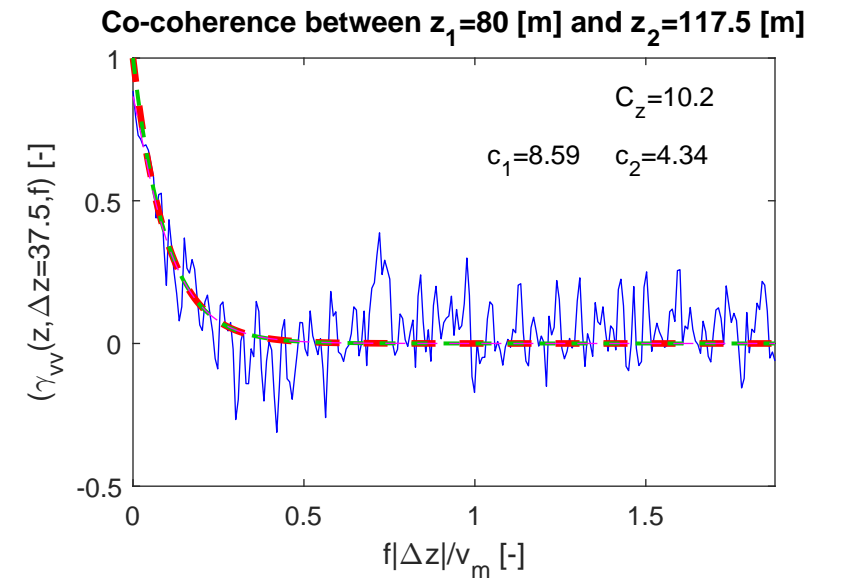
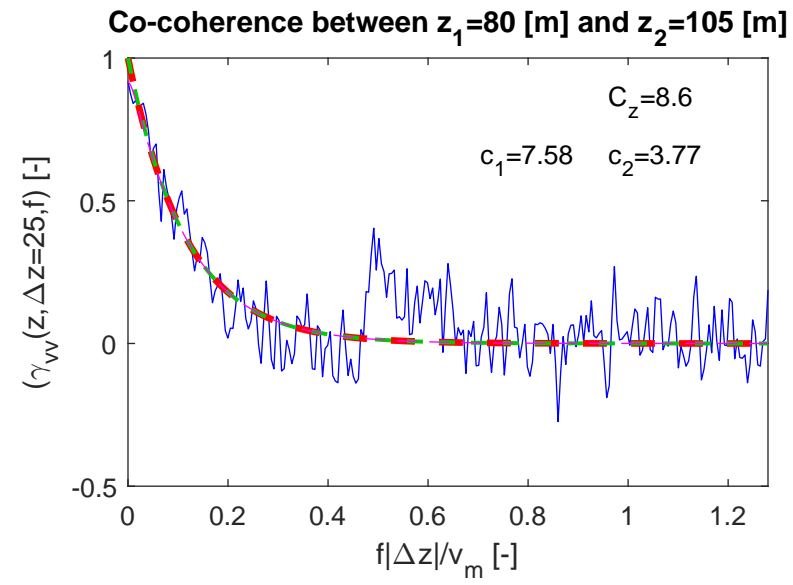
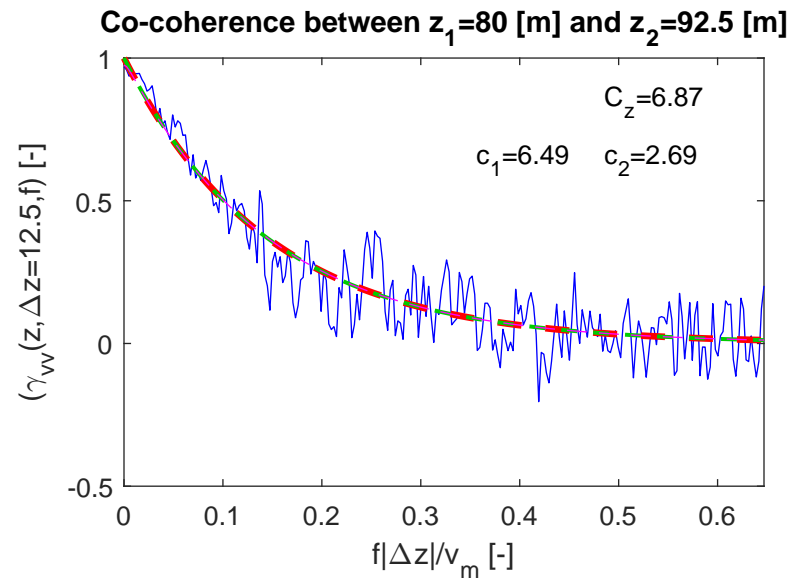
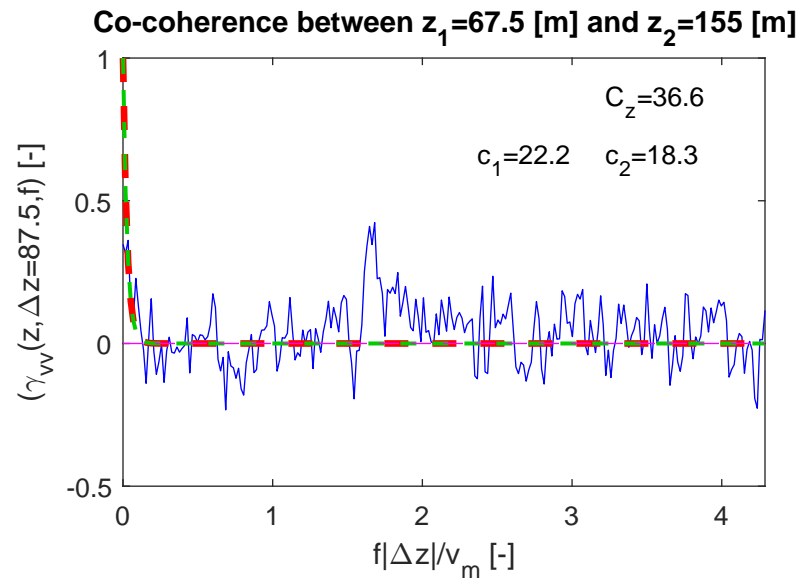


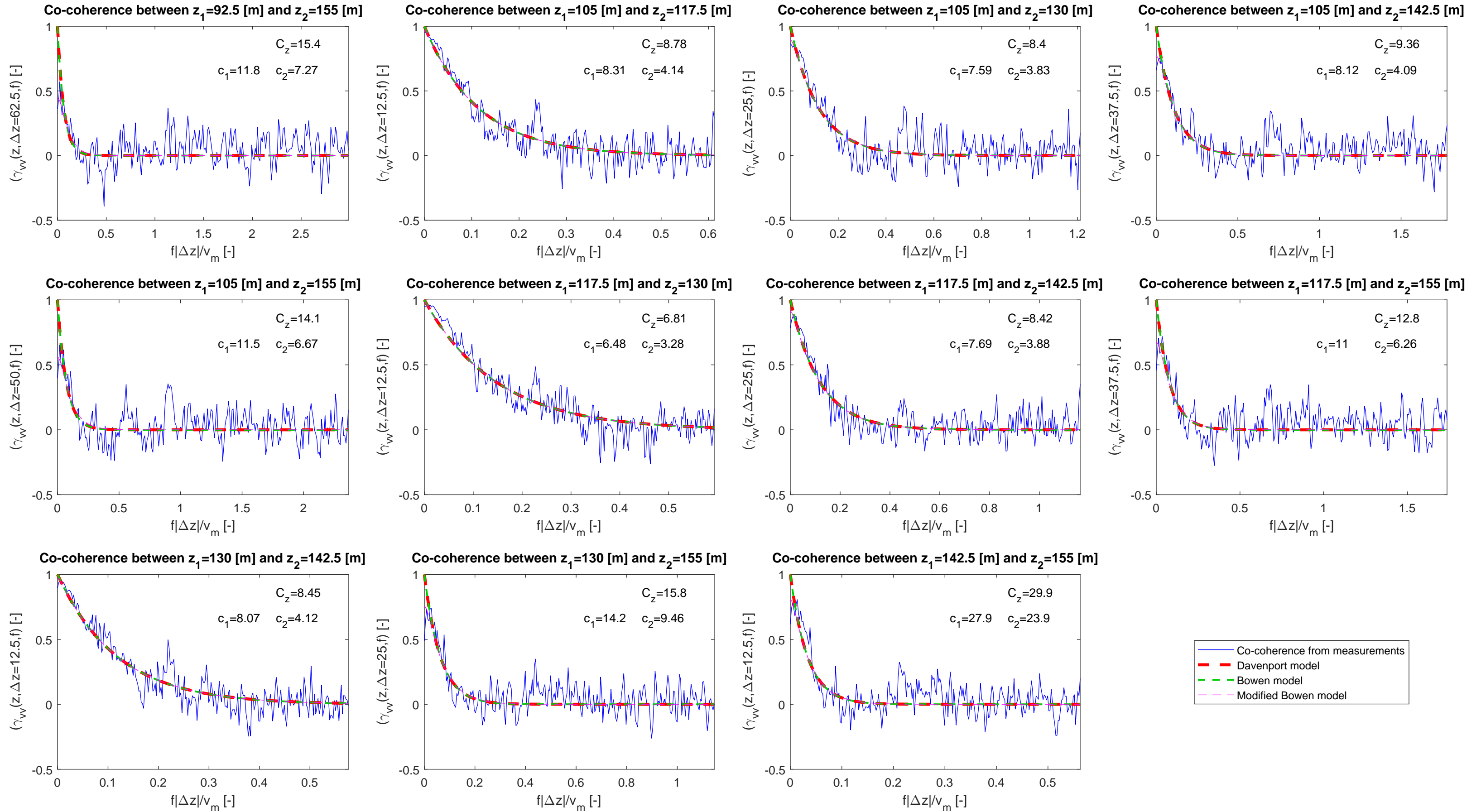




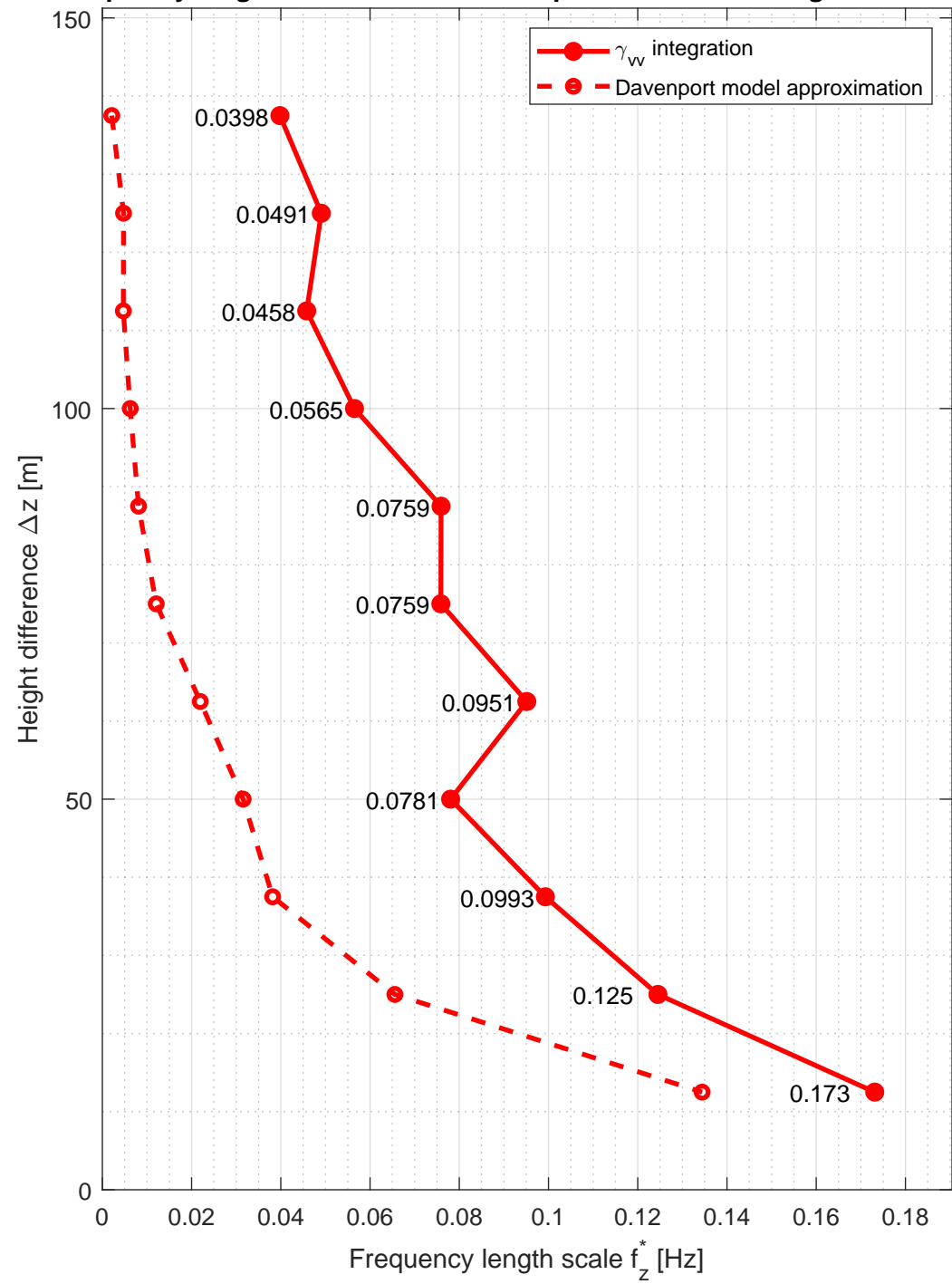




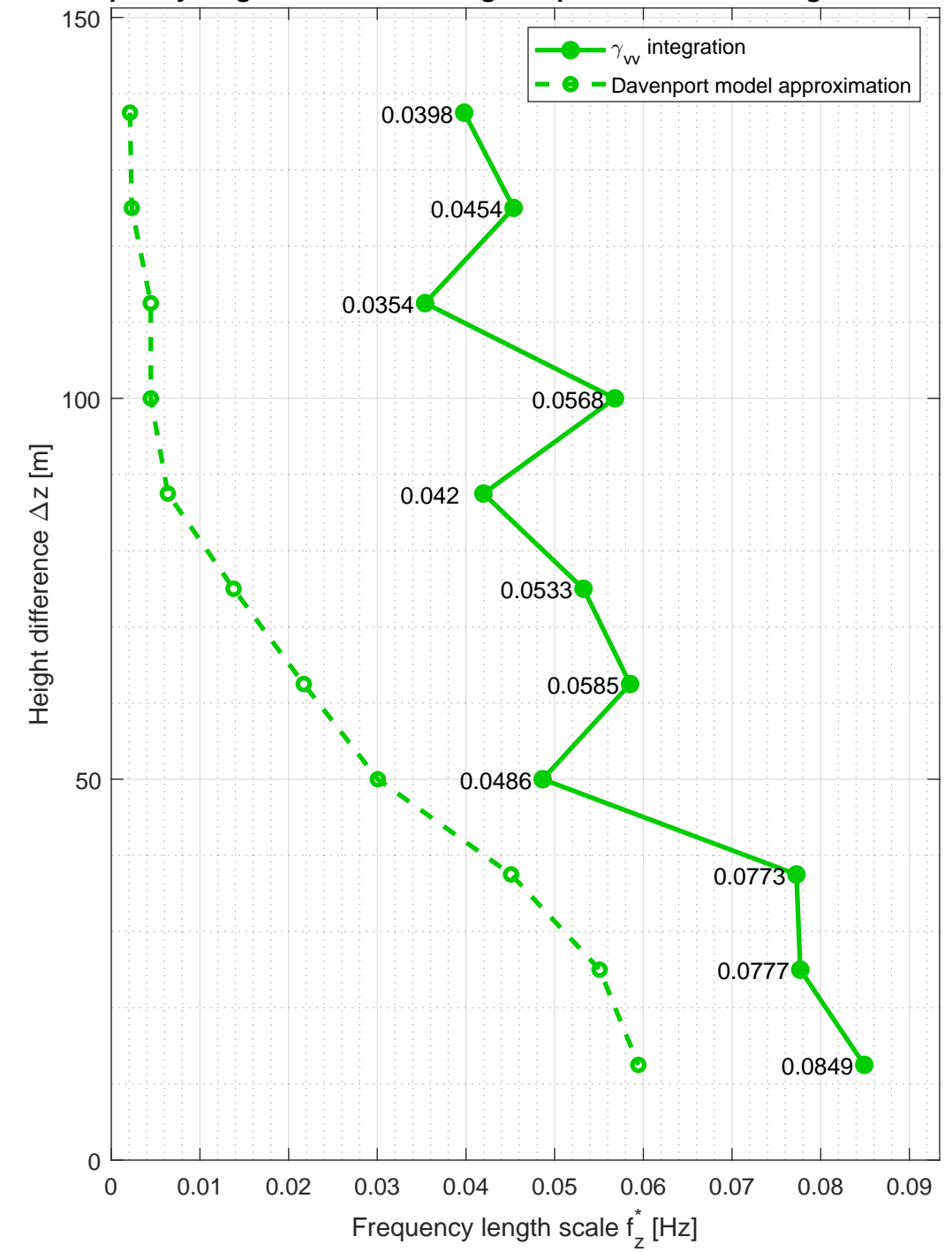




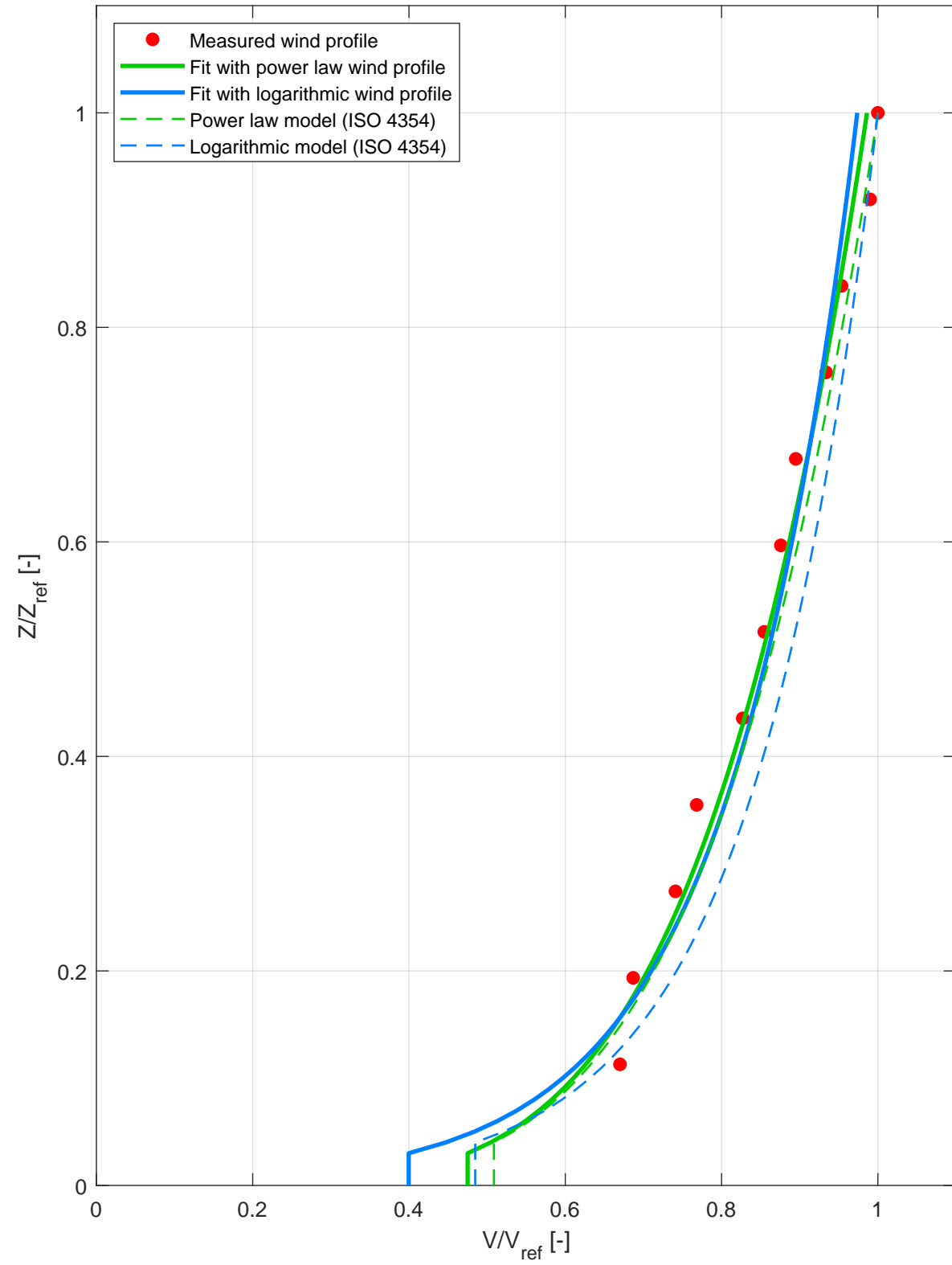
Frequency length scales for the lowest point at different height differences



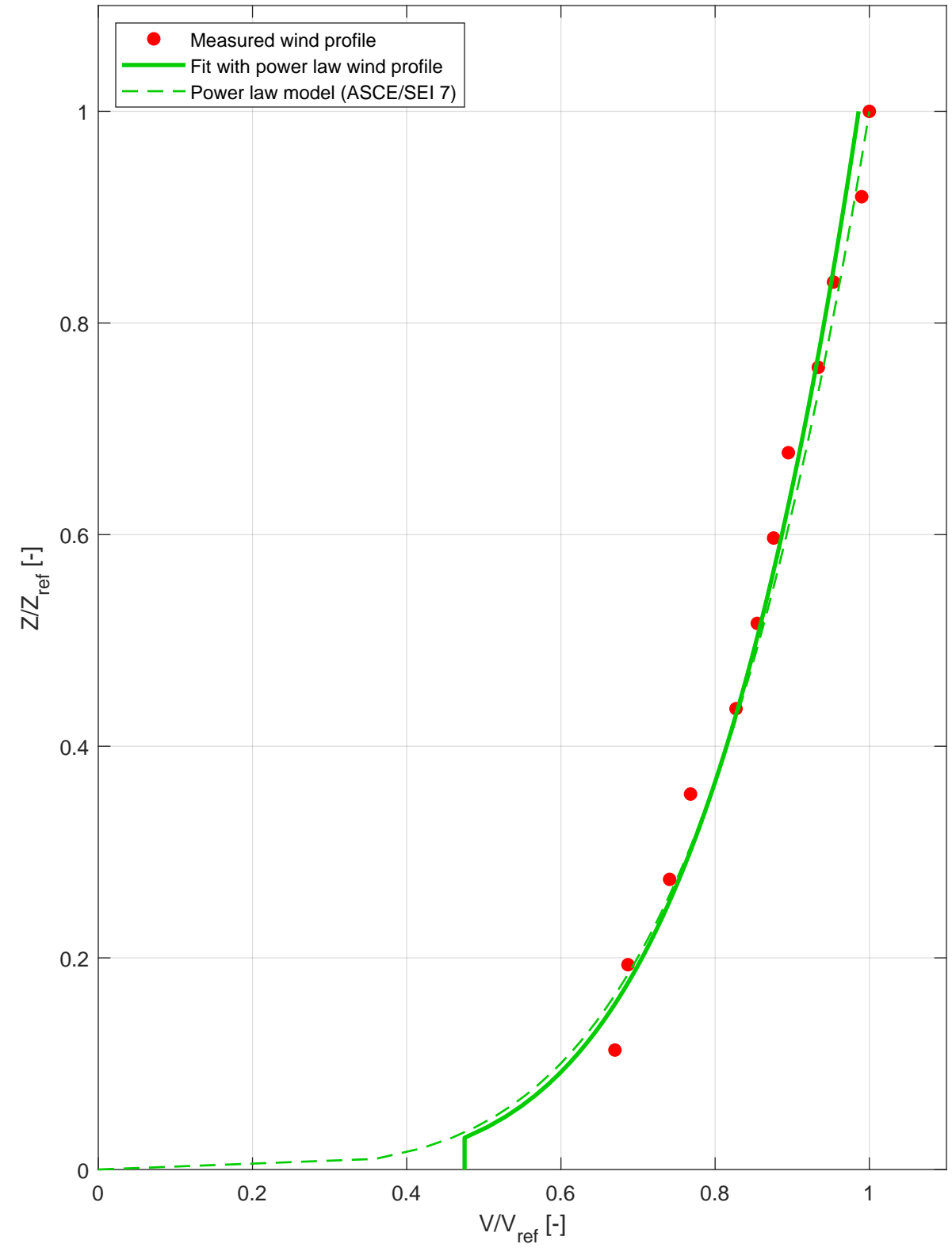
Frequency length scales for the highest point at different height differences

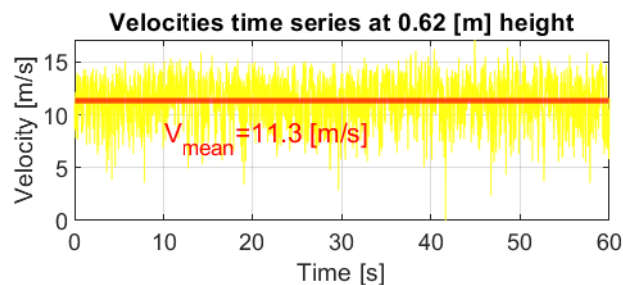
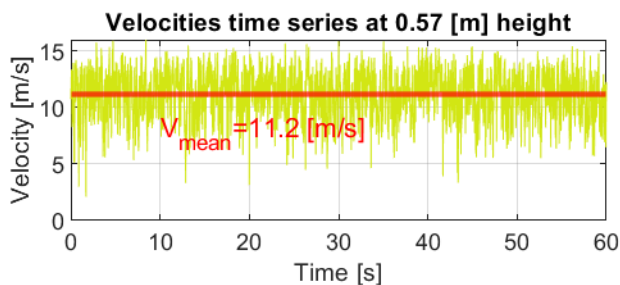
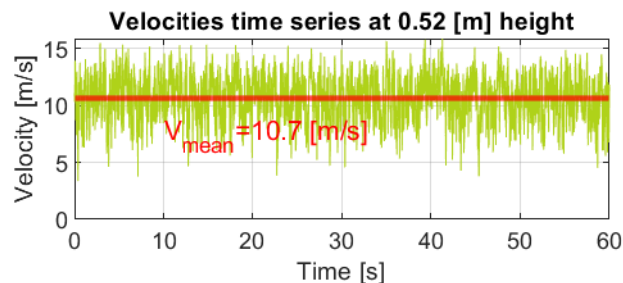
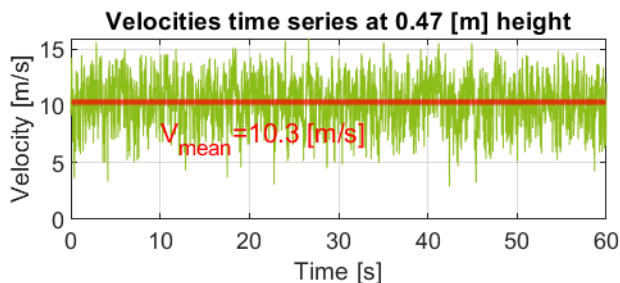
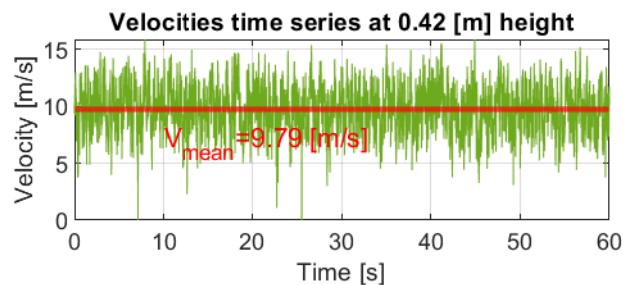
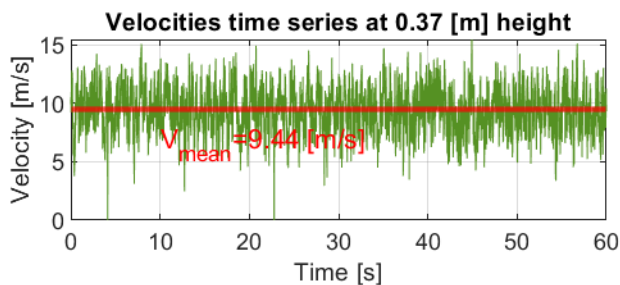
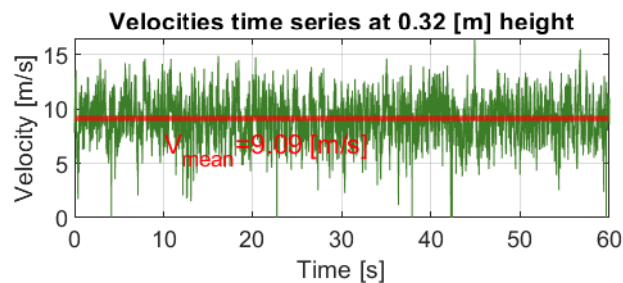
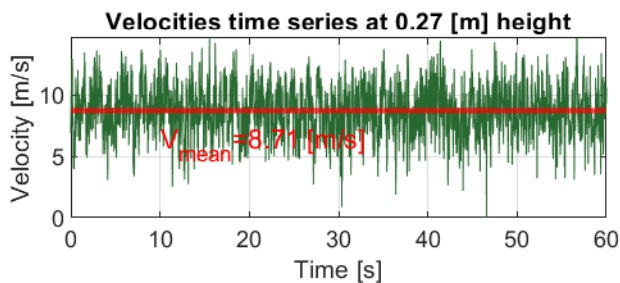
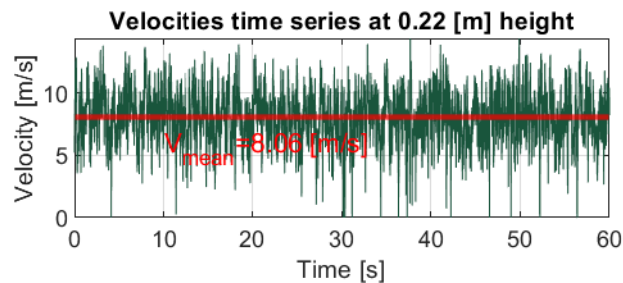
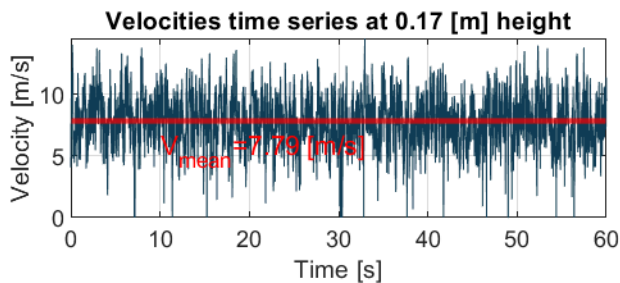
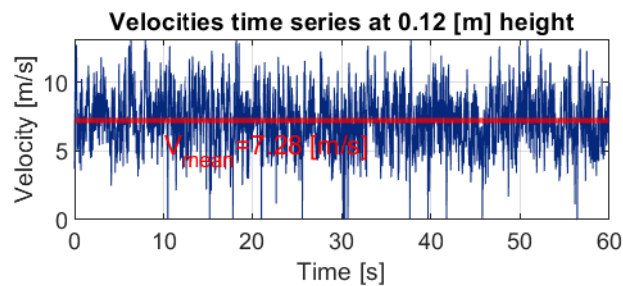
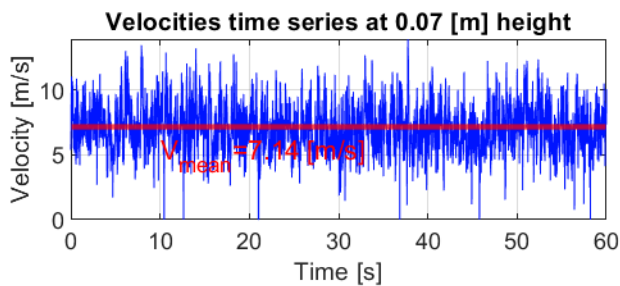


Mean wind velocity profile - comparison with ISO 4354

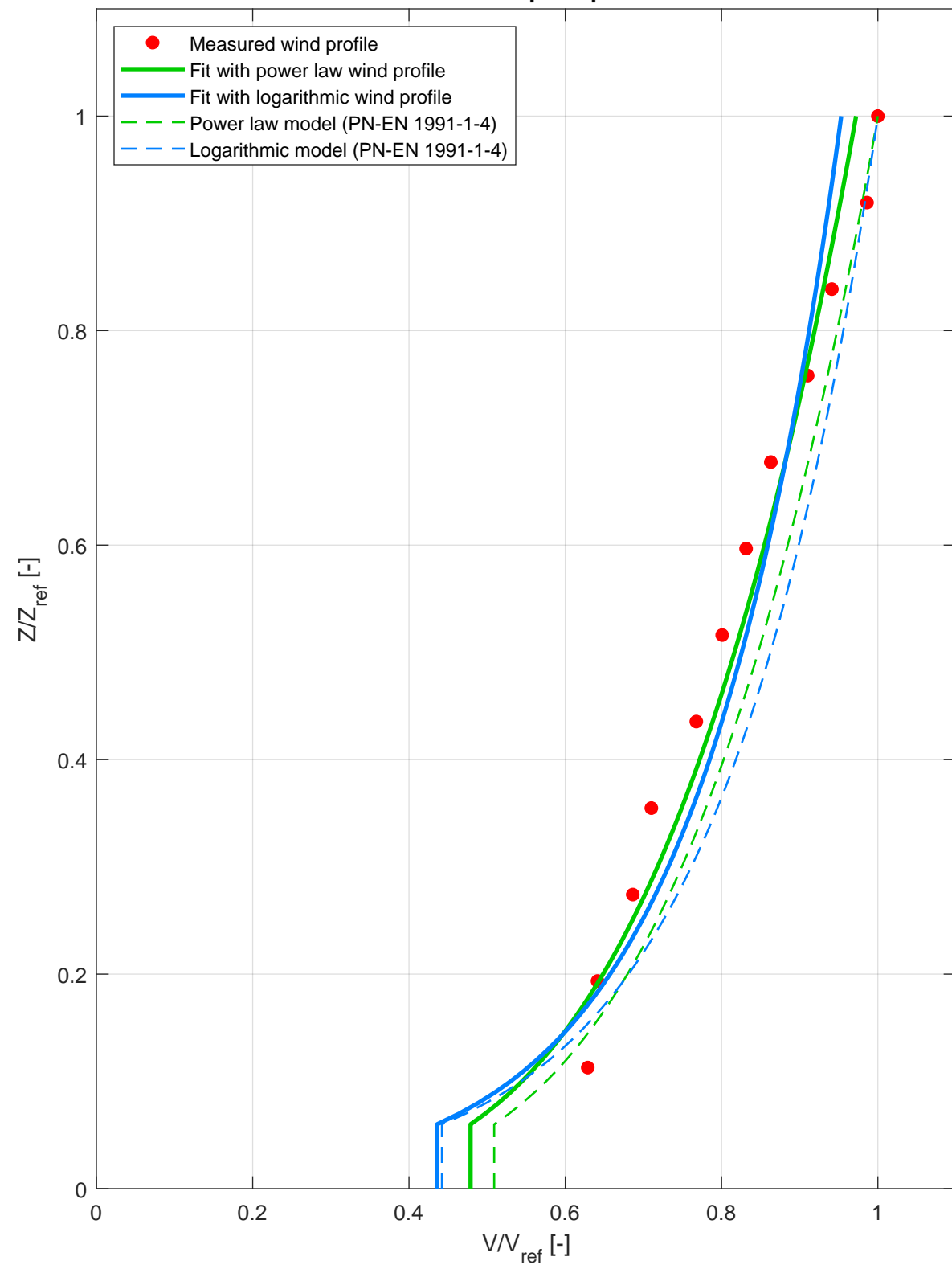


Mean wind velocity profile - comparison with ASCE/SEI 7

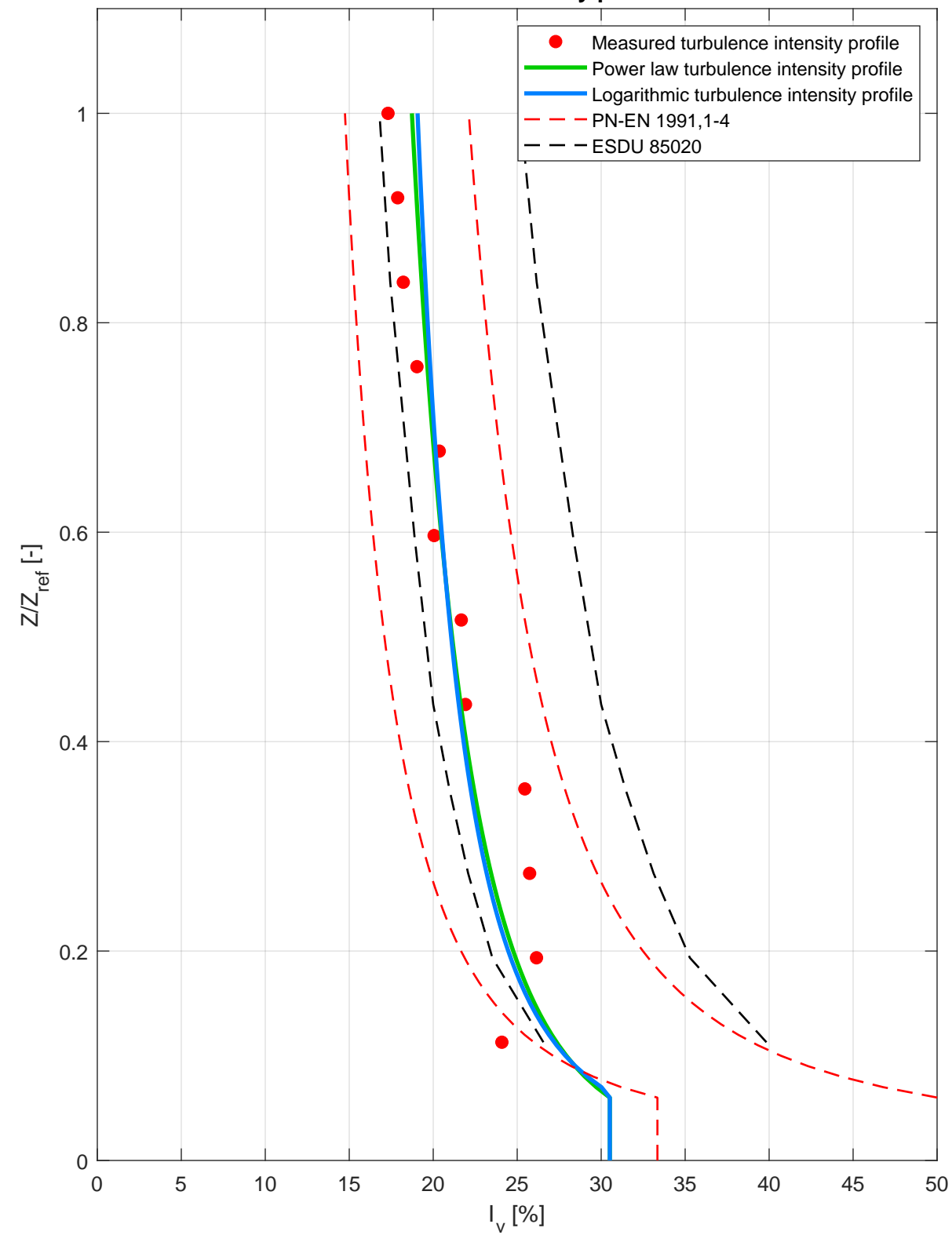




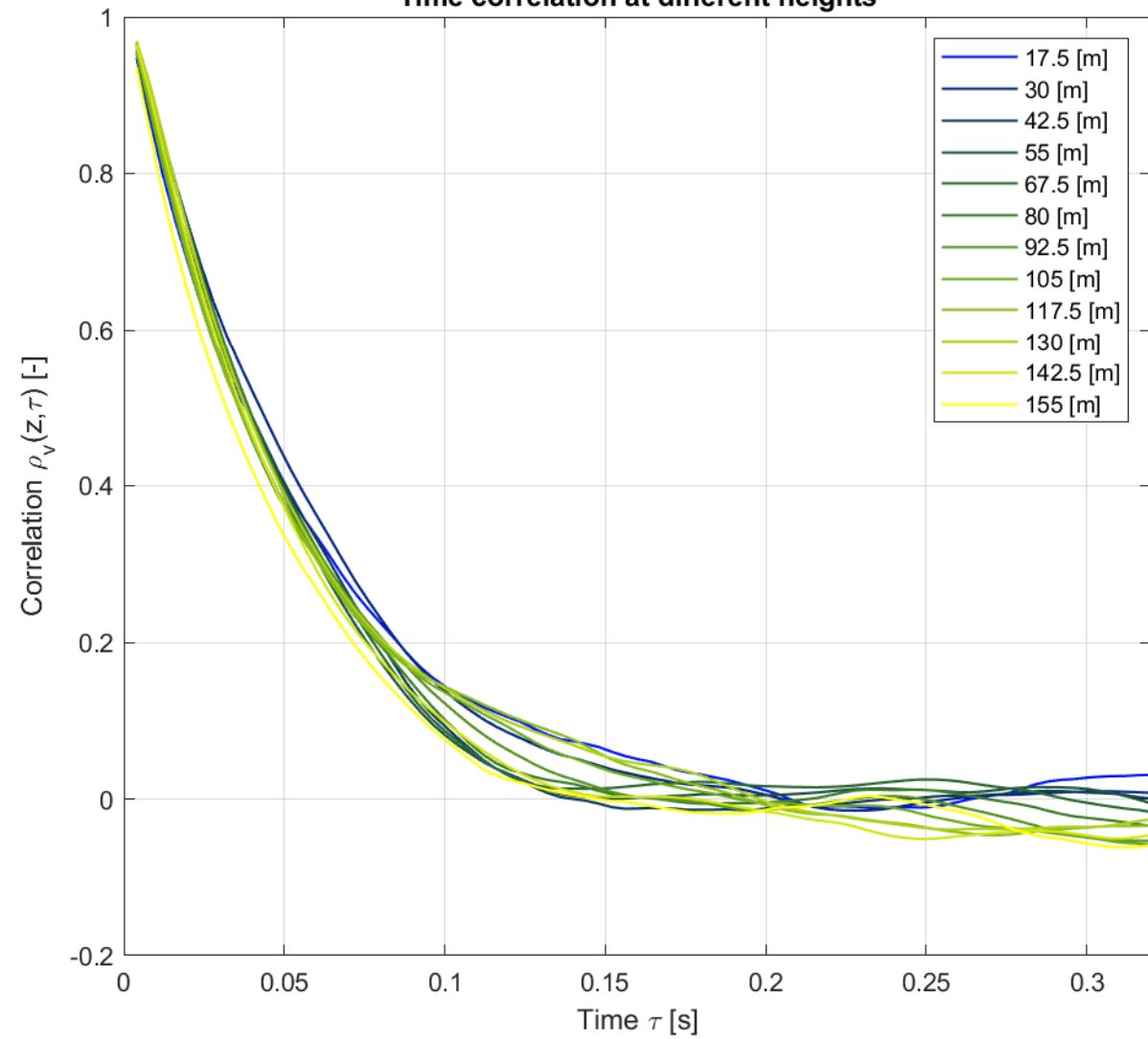
Mean wind speed profile



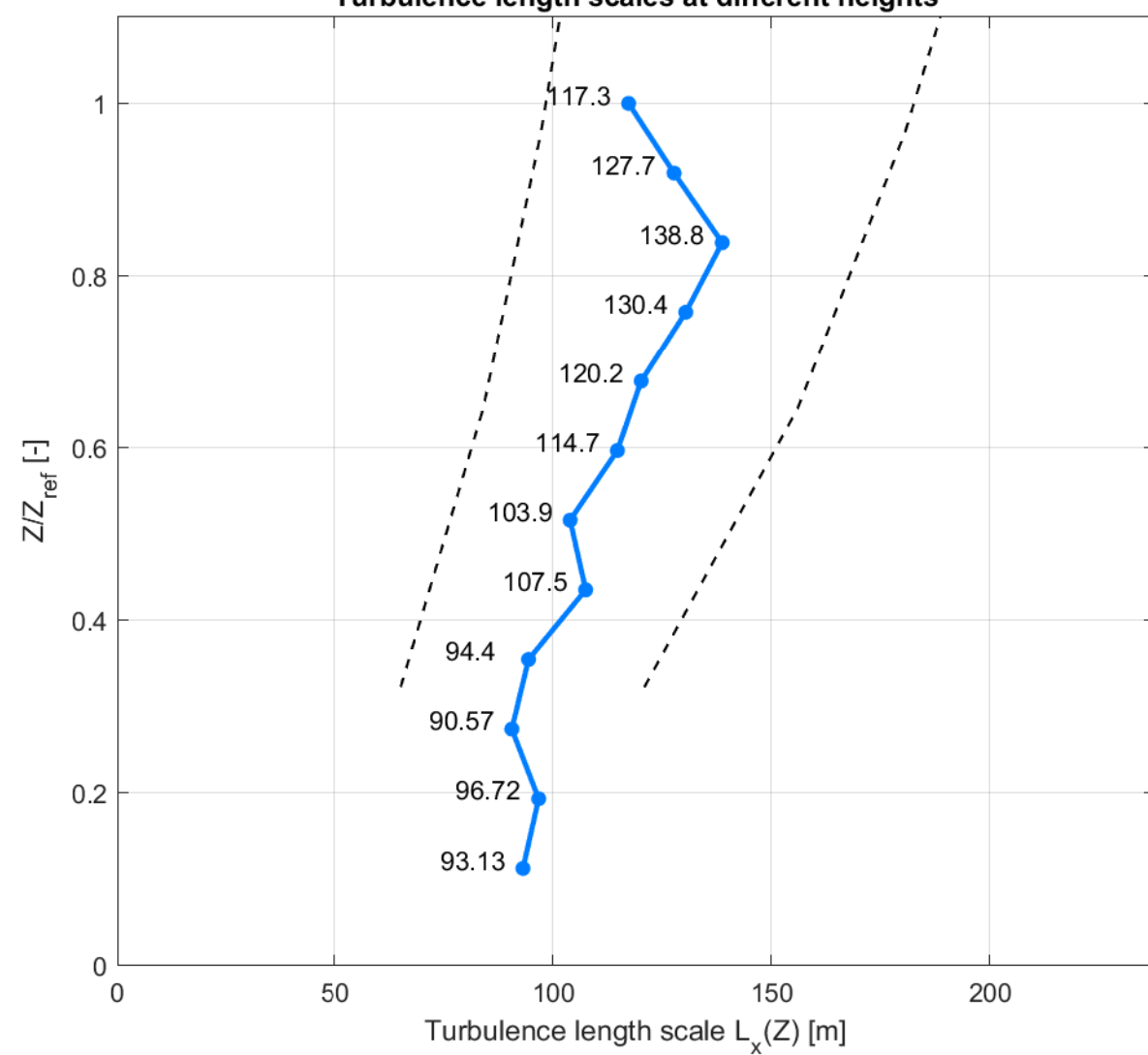
Turbulence intensity profile



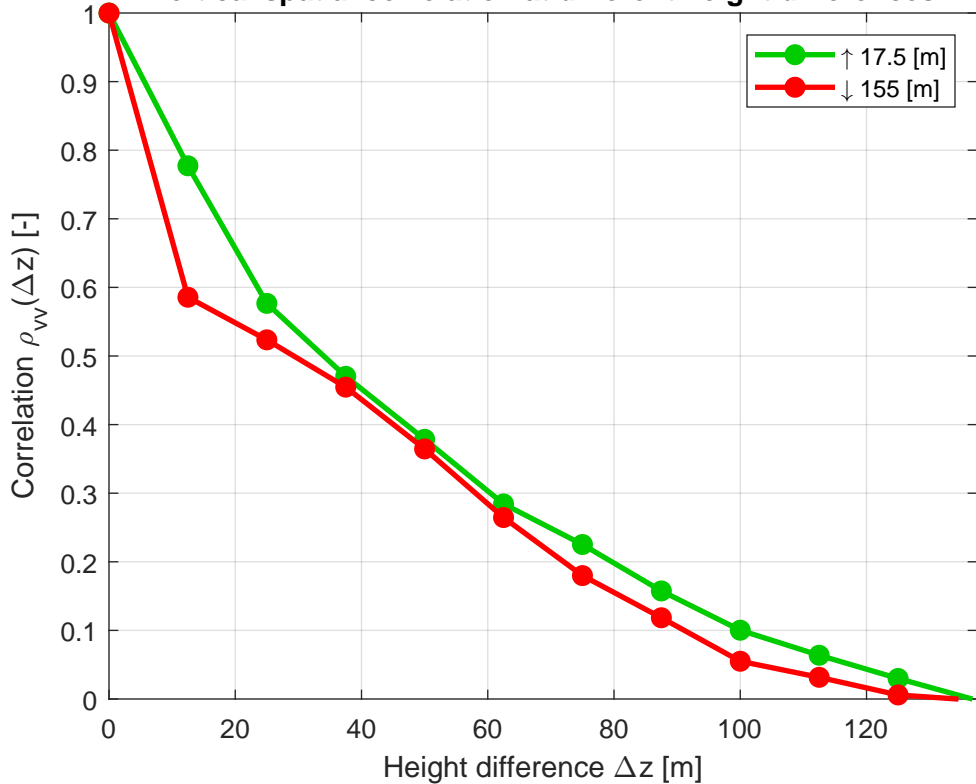
Time correlation at different heights



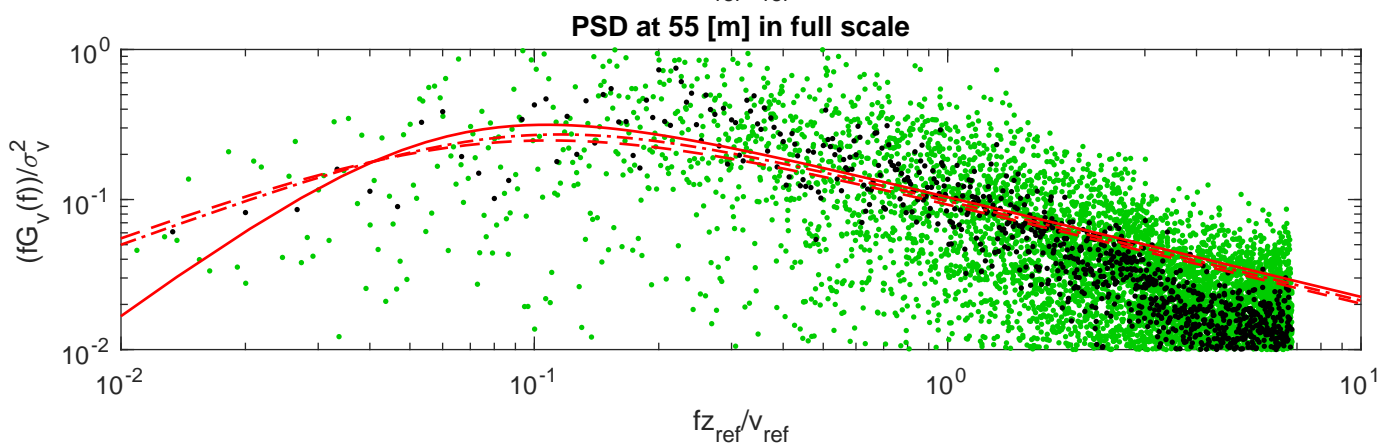
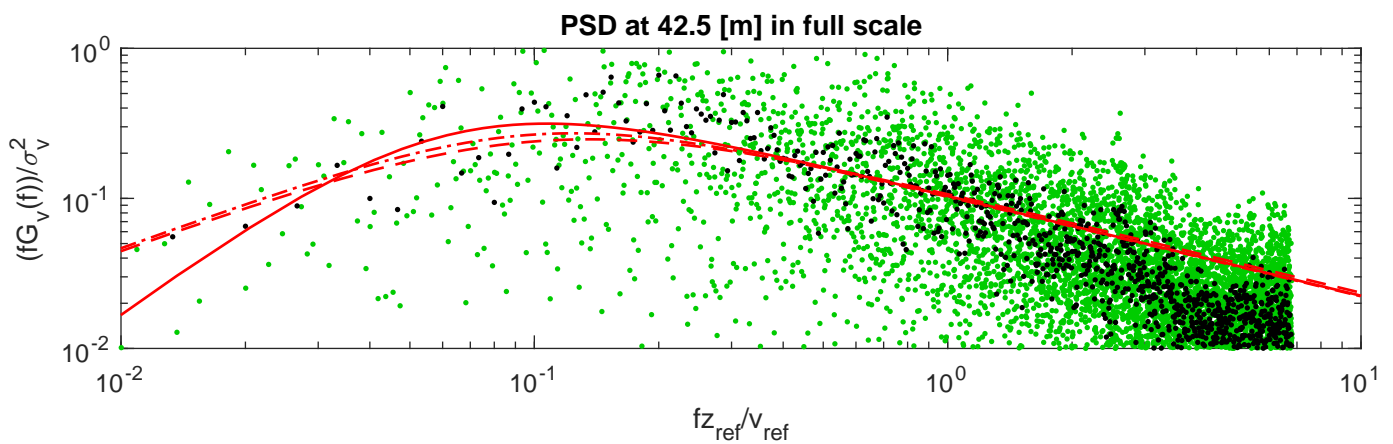
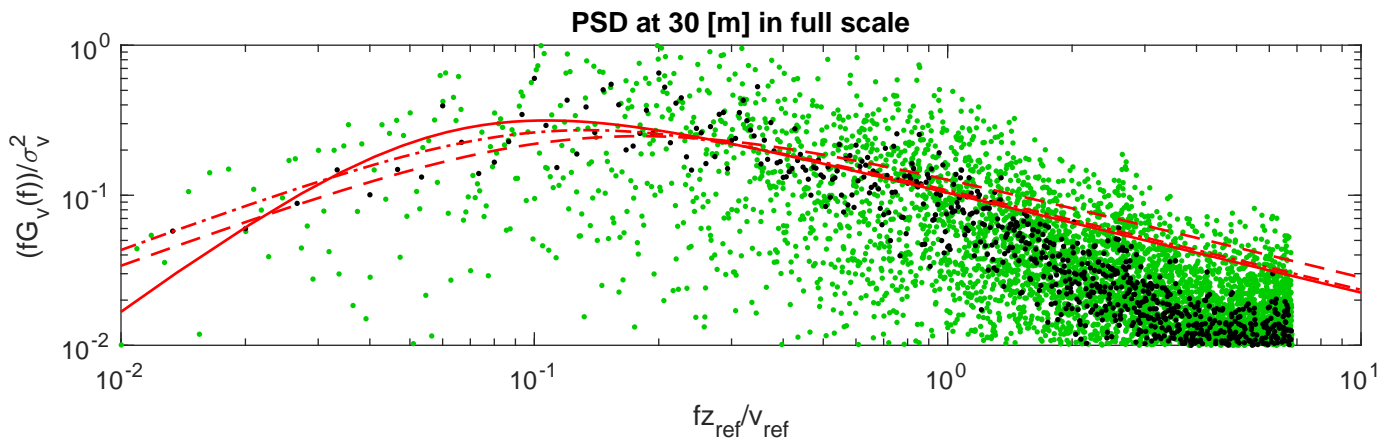
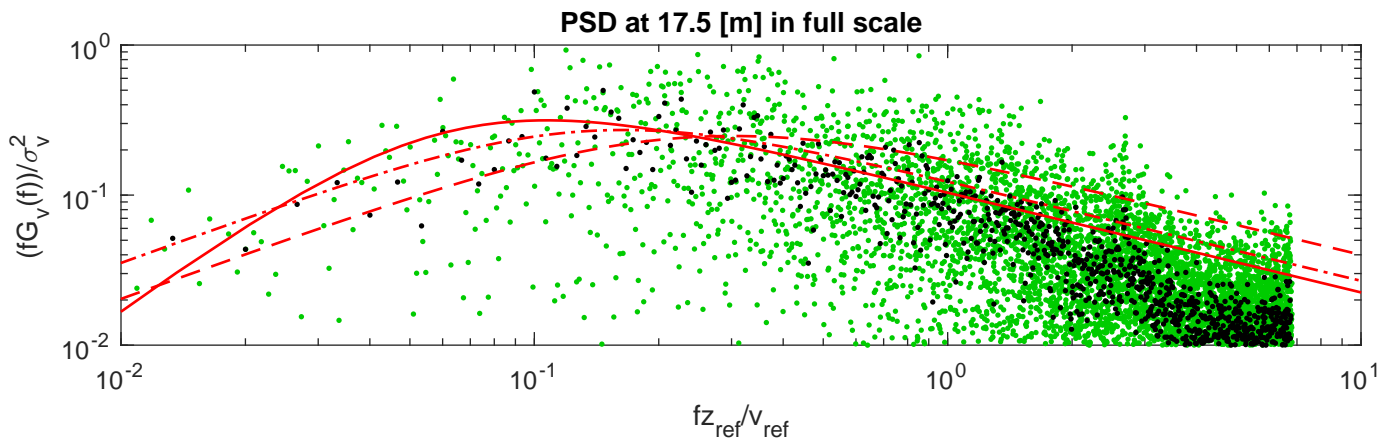
Turbulence length scales at different heights



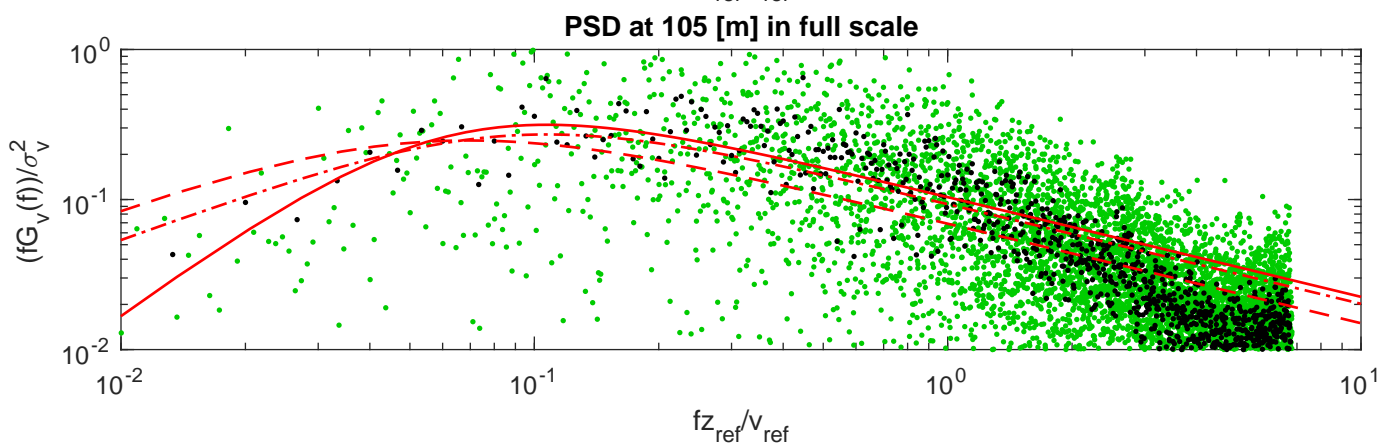
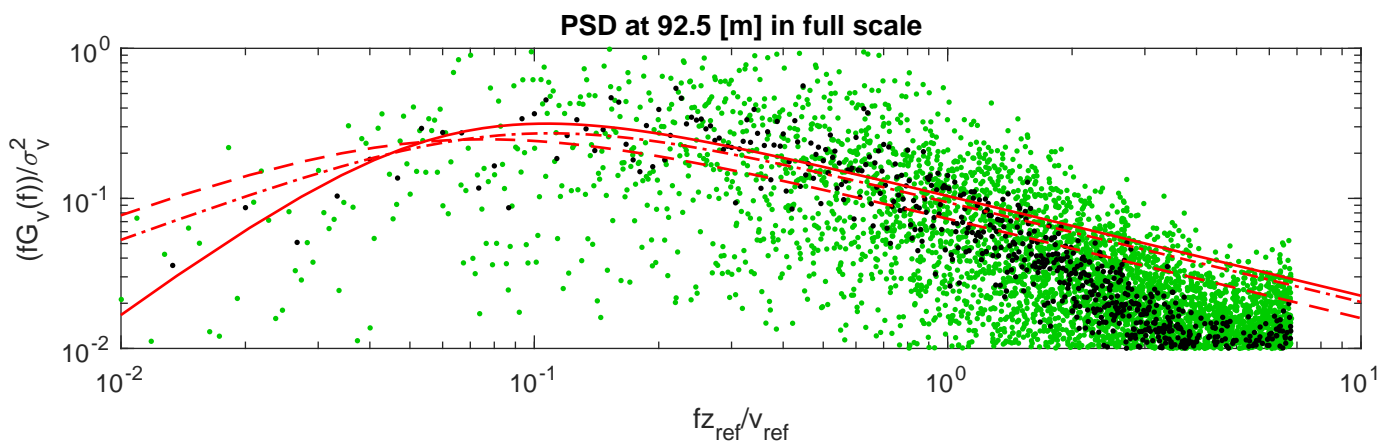
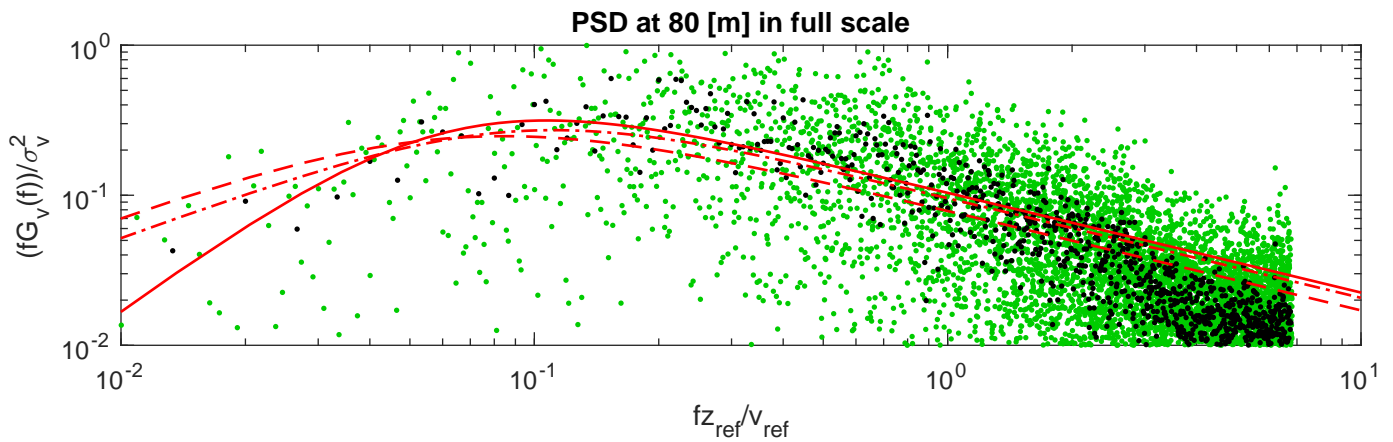
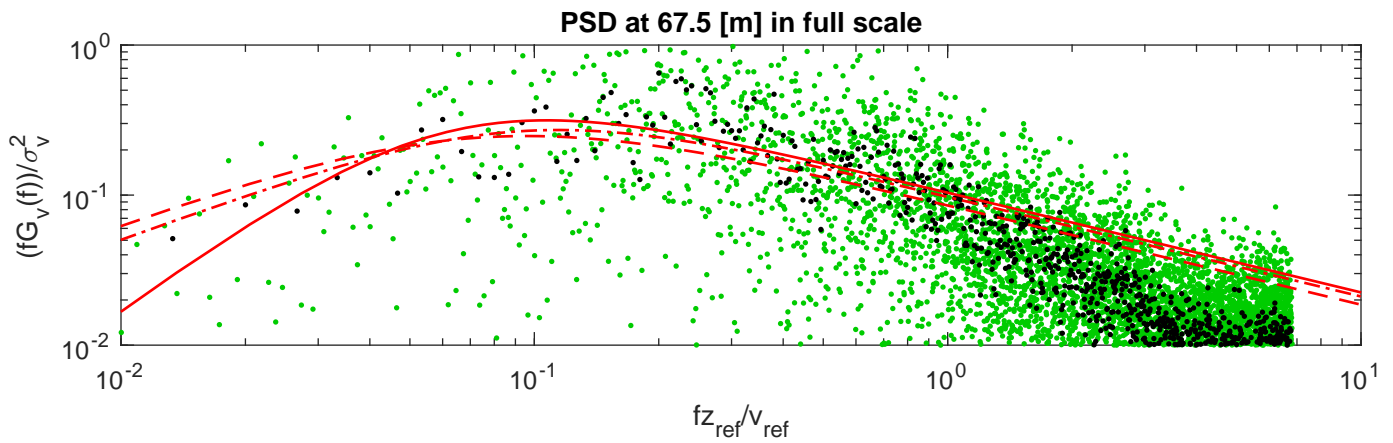
Vertical spatial correlation at different height differences



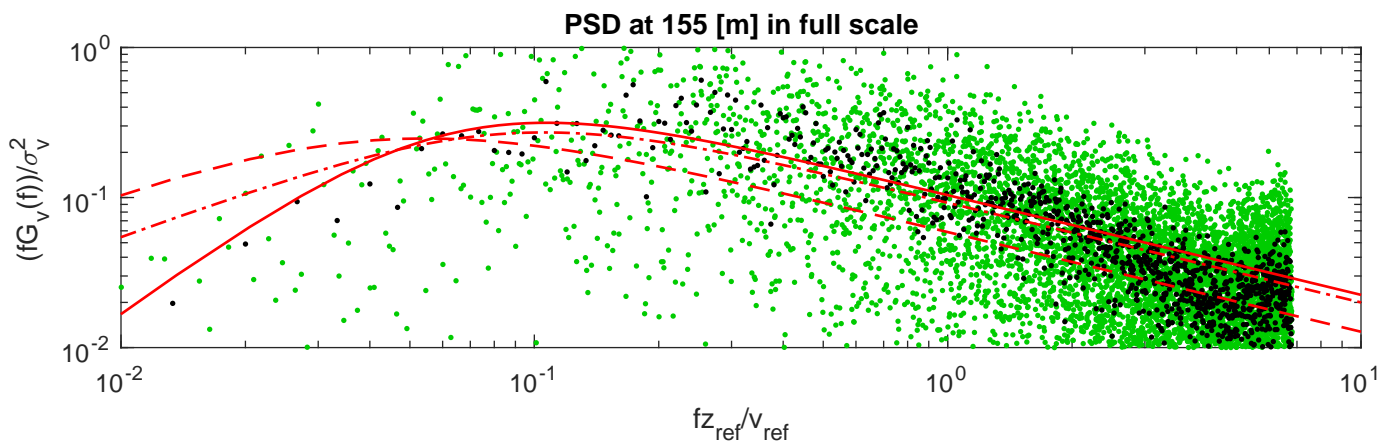
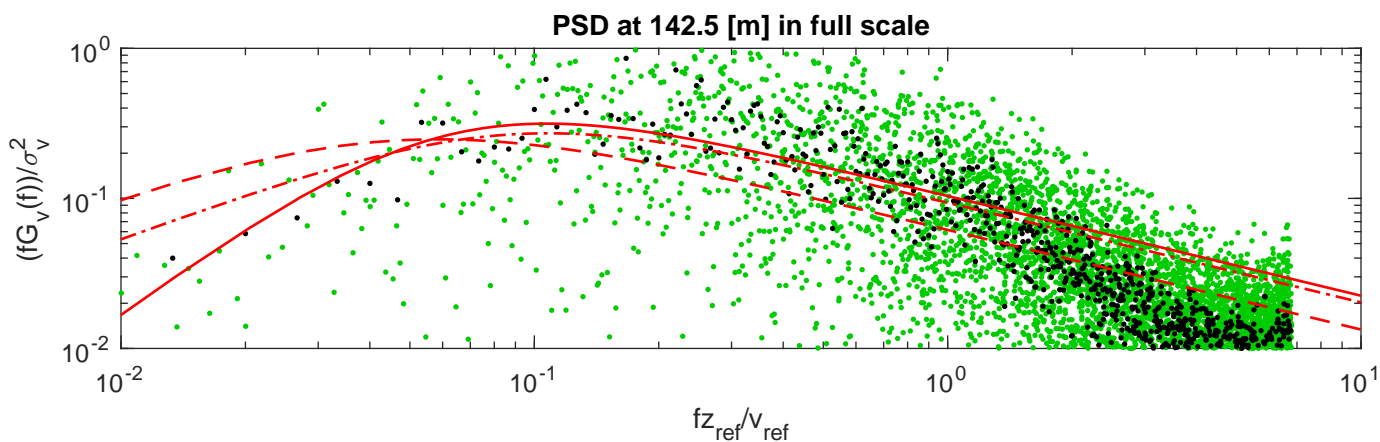
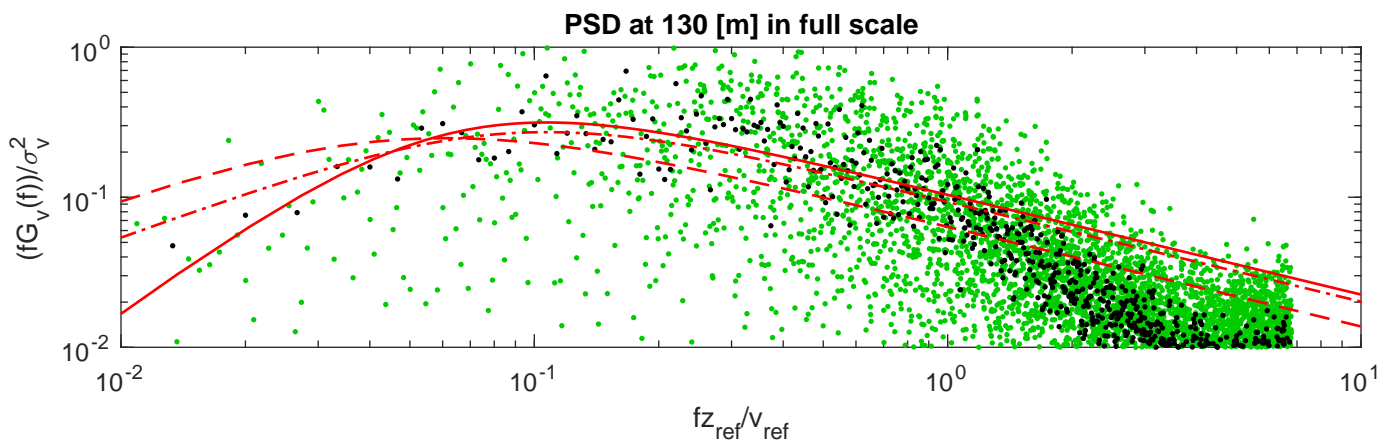
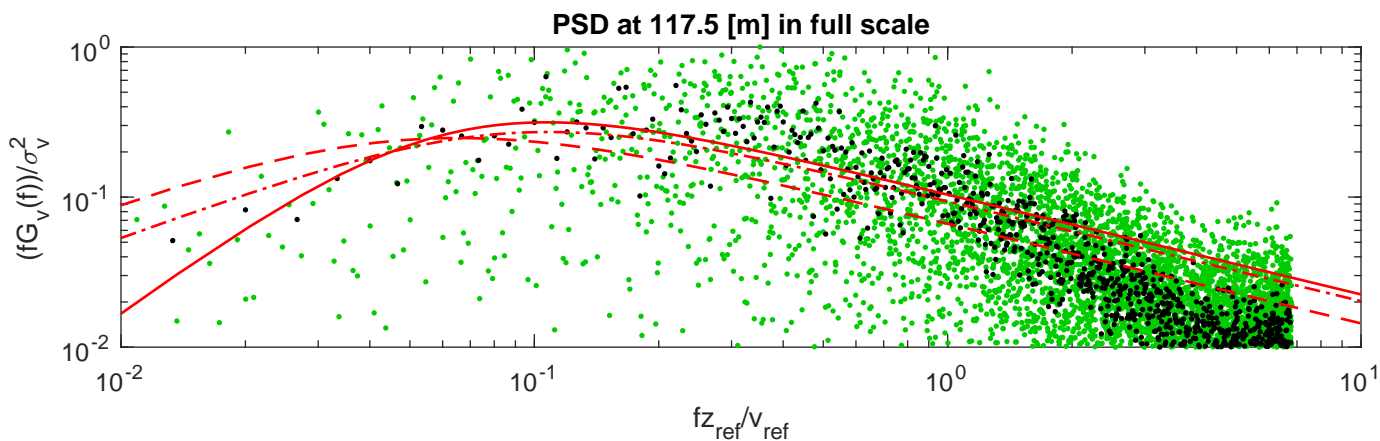
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

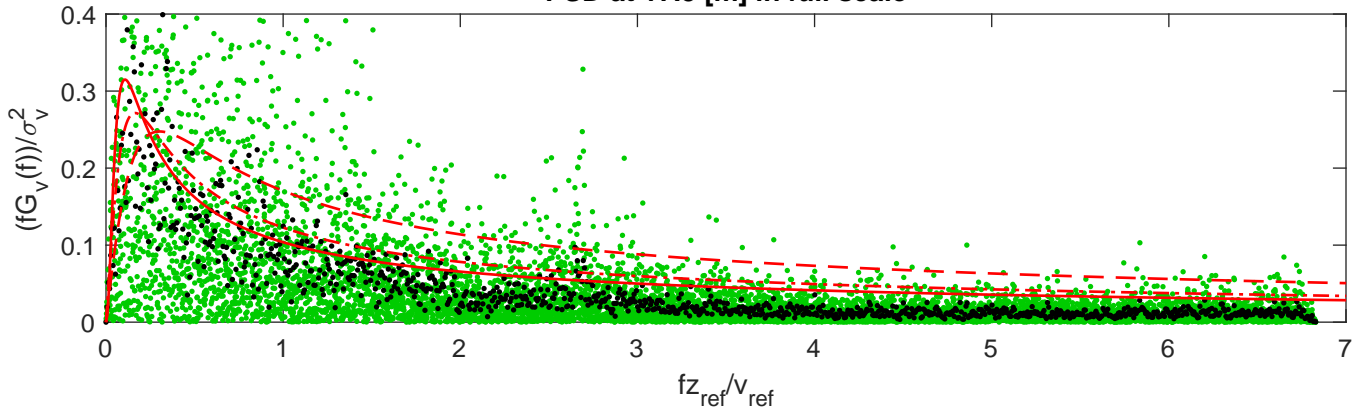


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

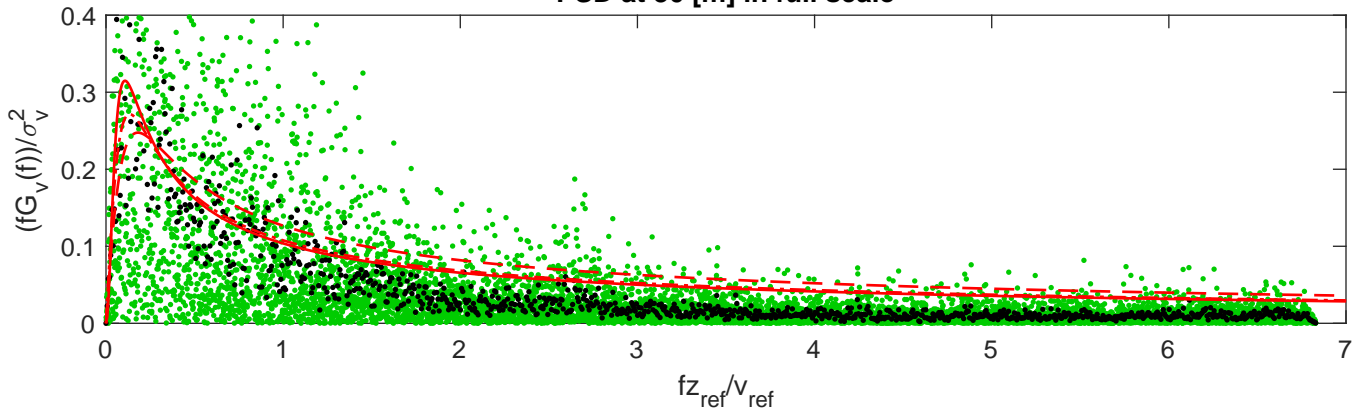


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

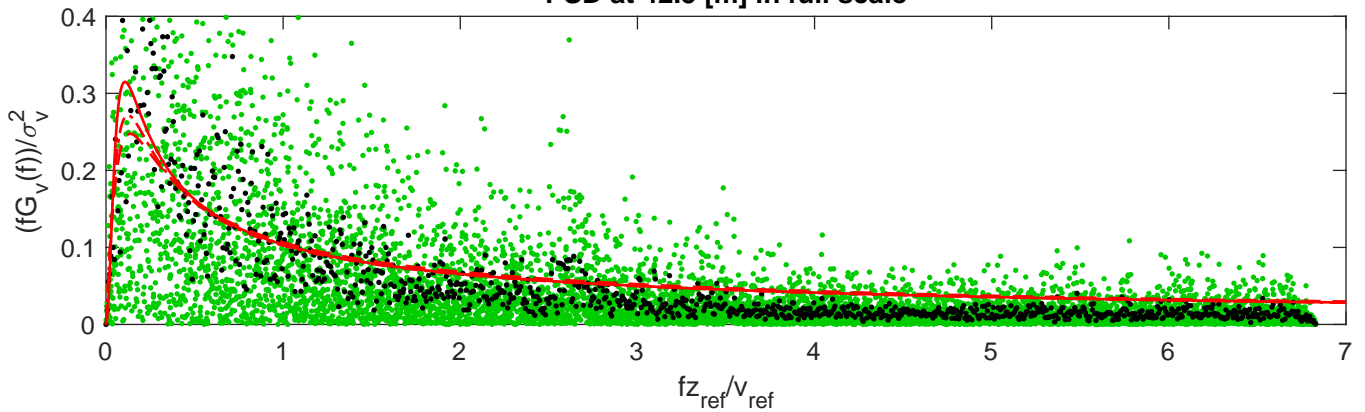
PSD at 17.5 [m] in full scale



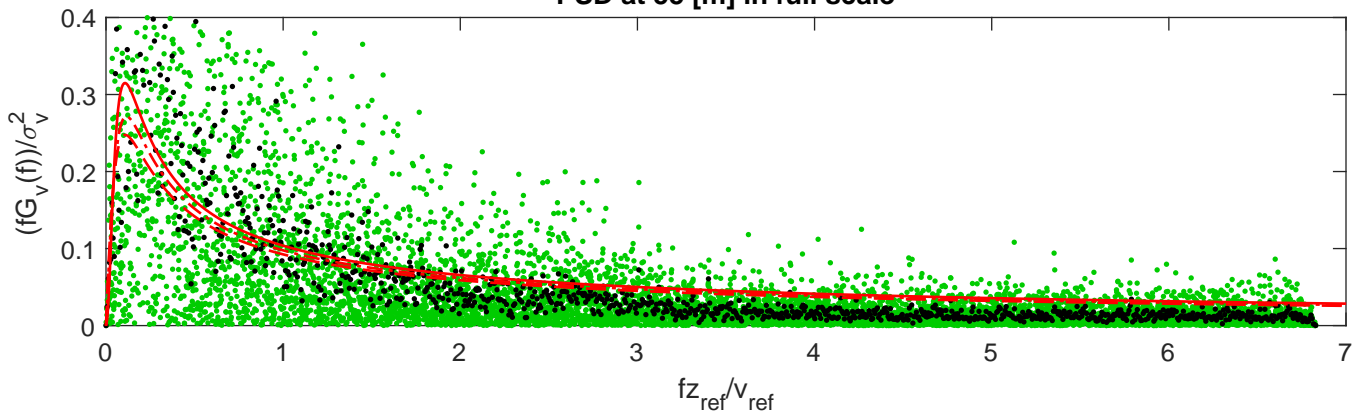
PSD at 30 [m] in full scale



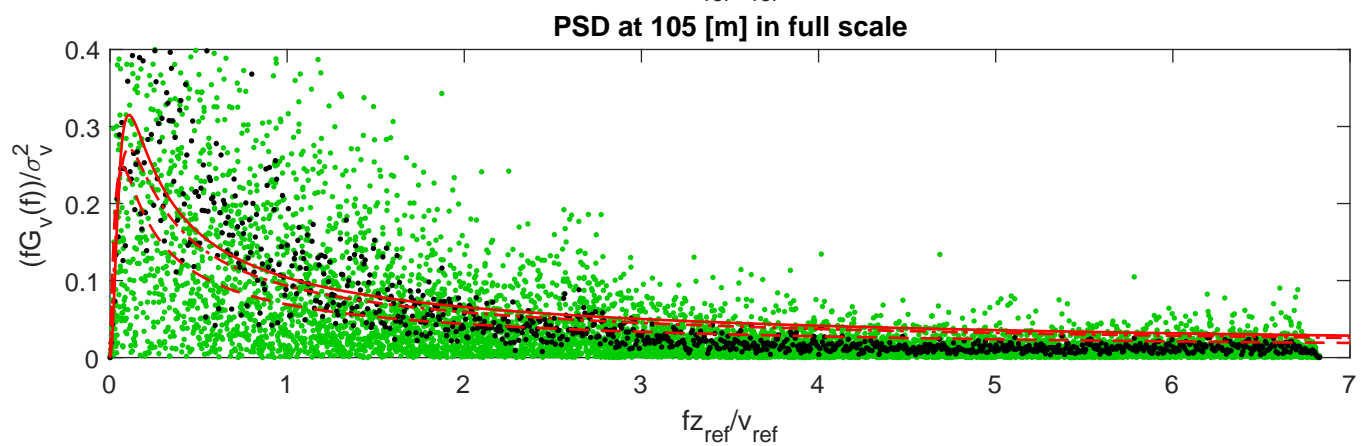
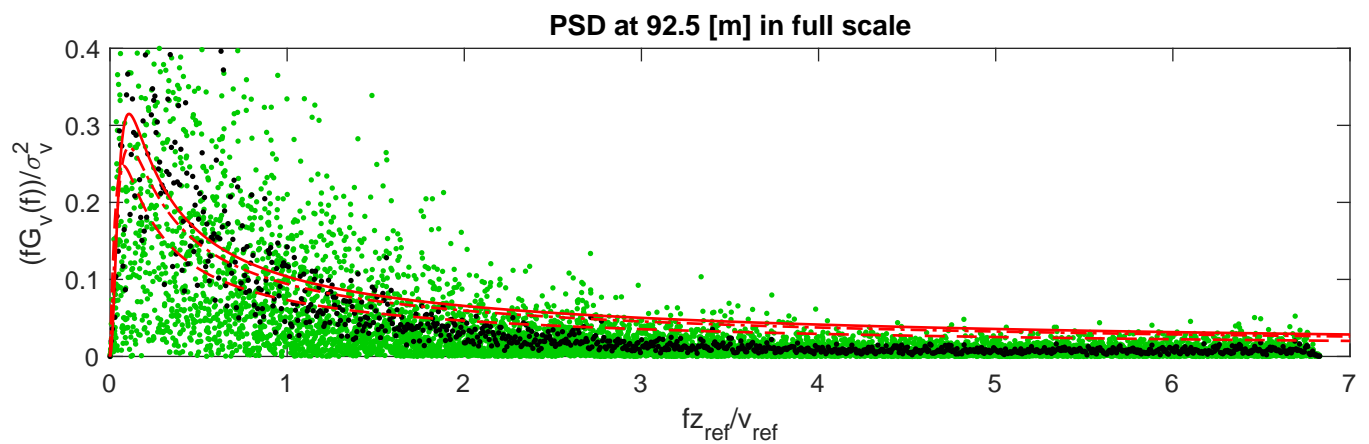
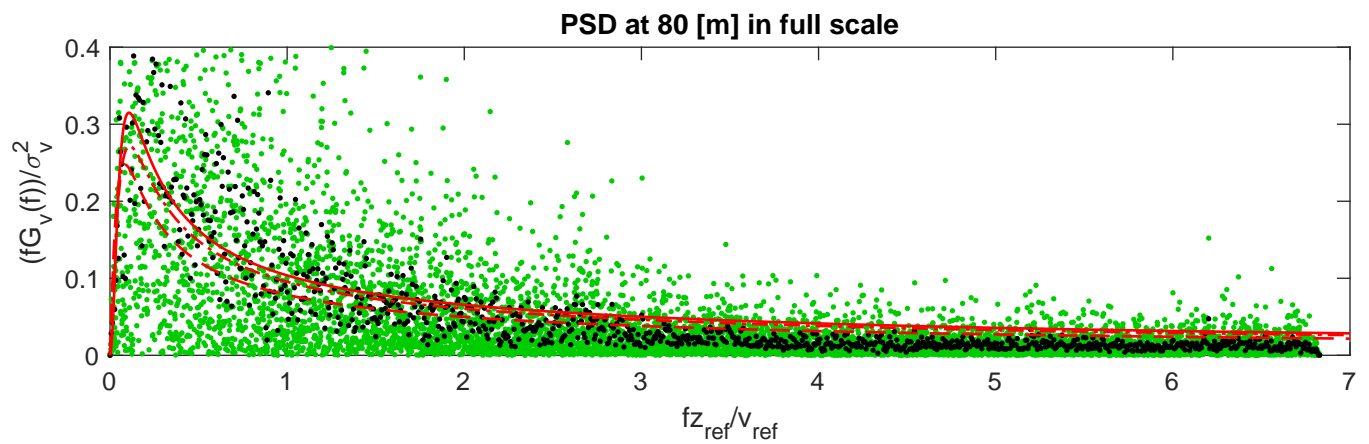
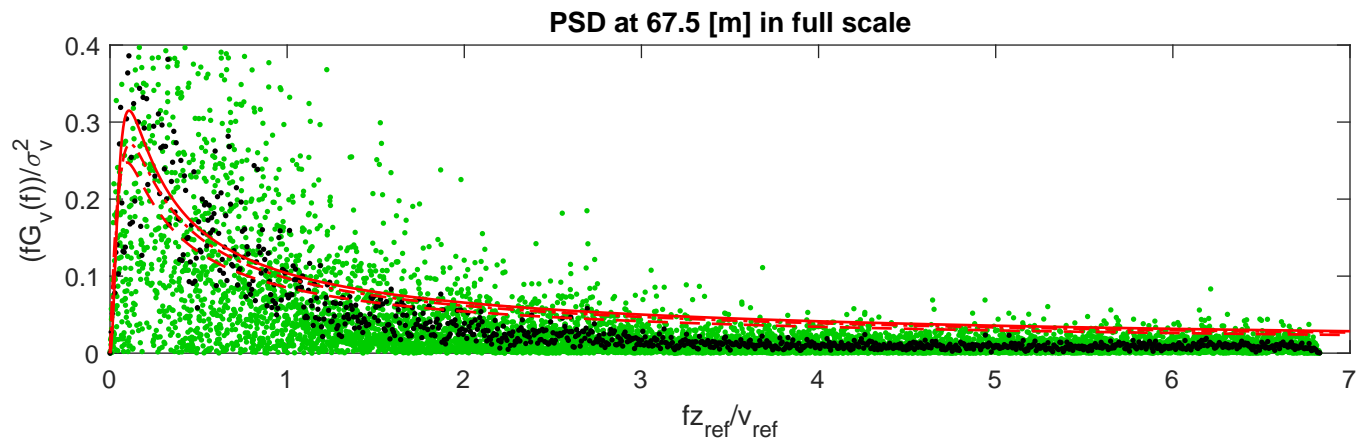
PSD at 42.5 [m] in full scale



PSD at 55 [m] in full scale

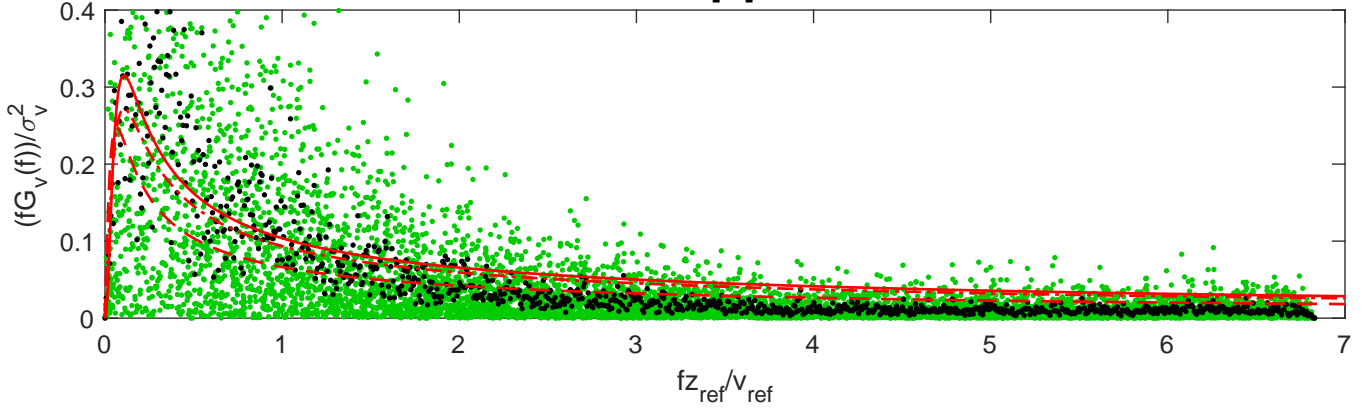


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

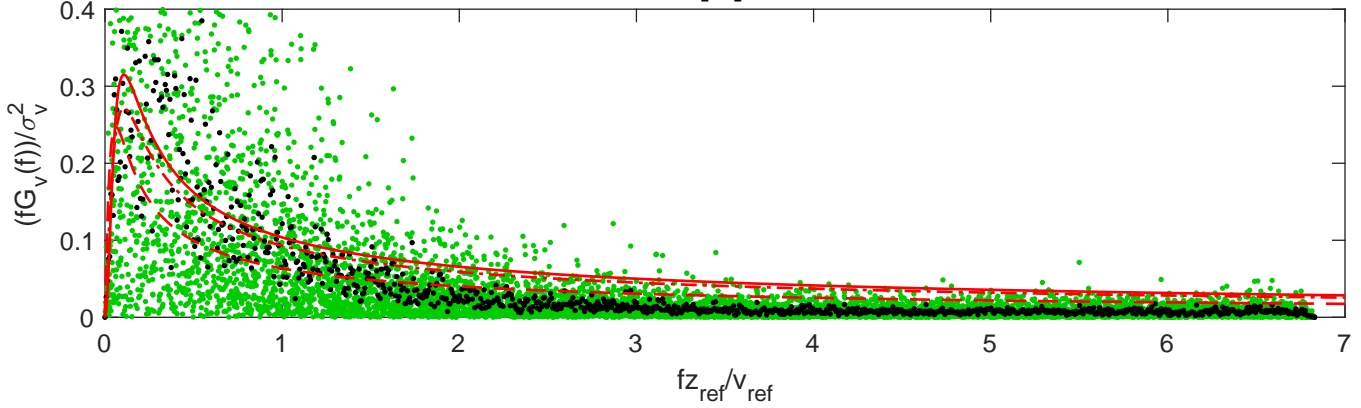


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

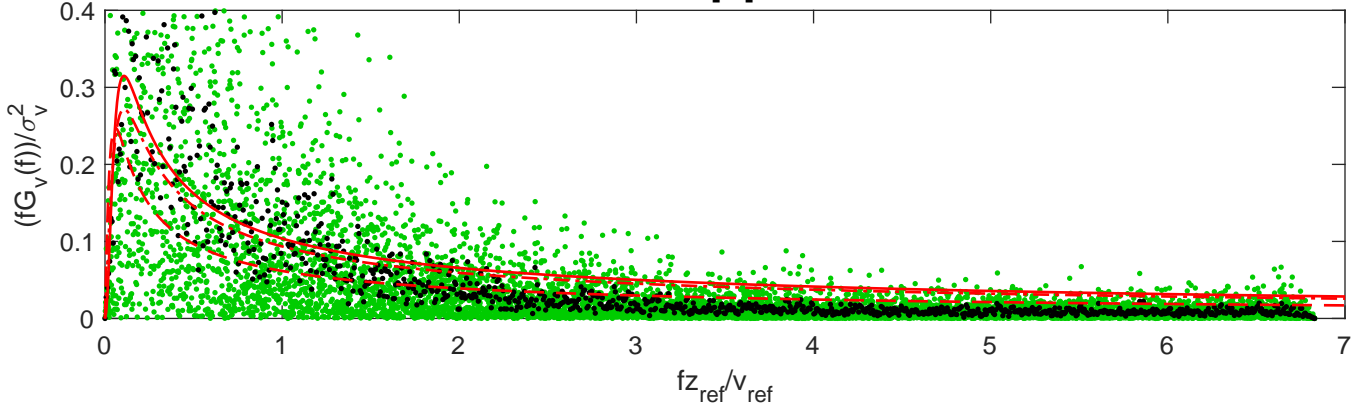
PSD at 117.5 [m] in full scale



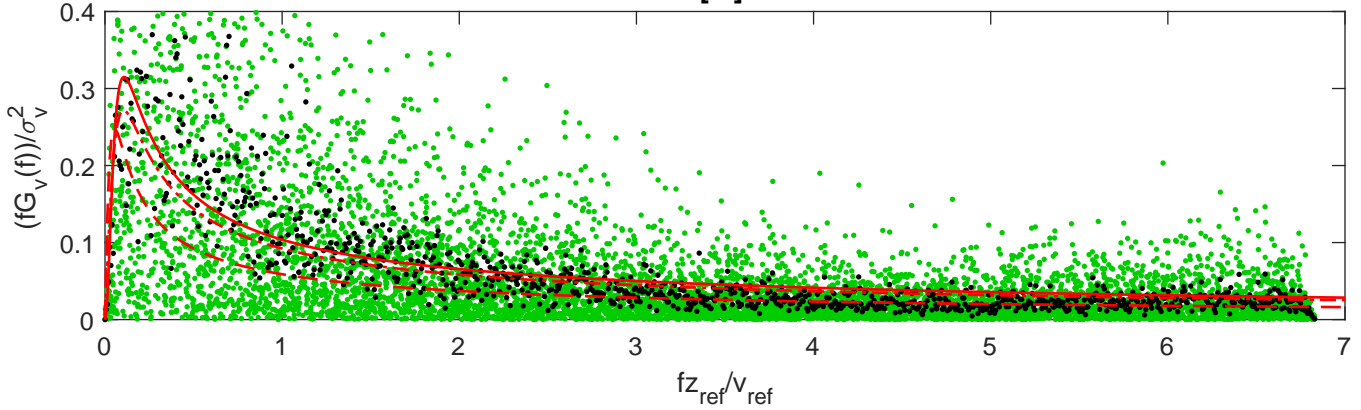
PSD at 130 [m] in full scale

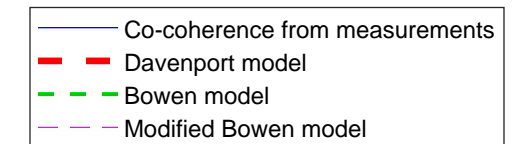
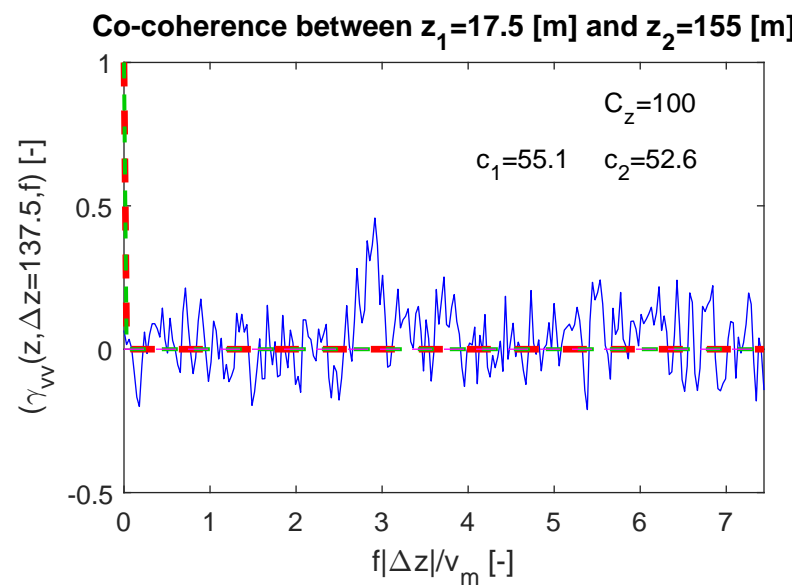
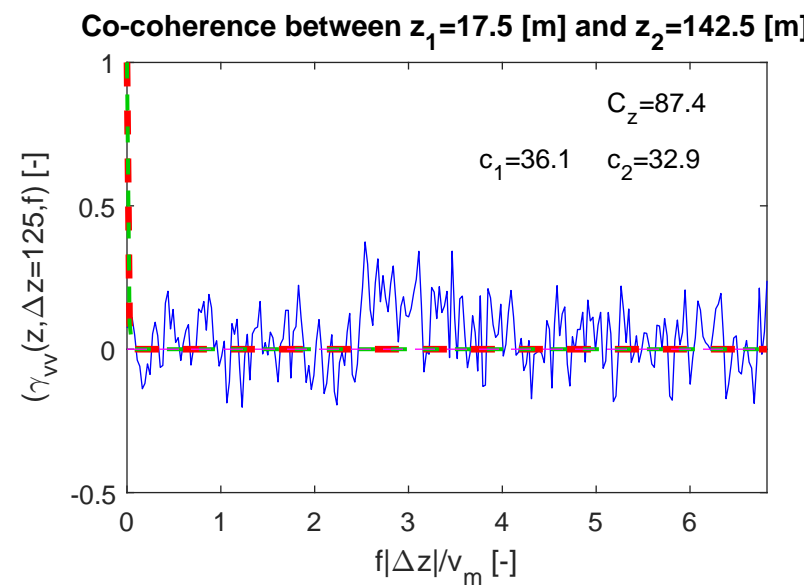
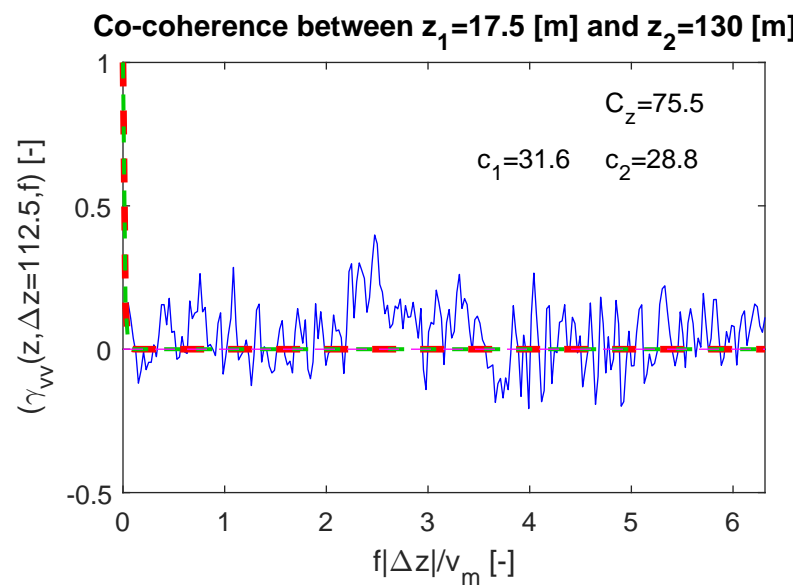
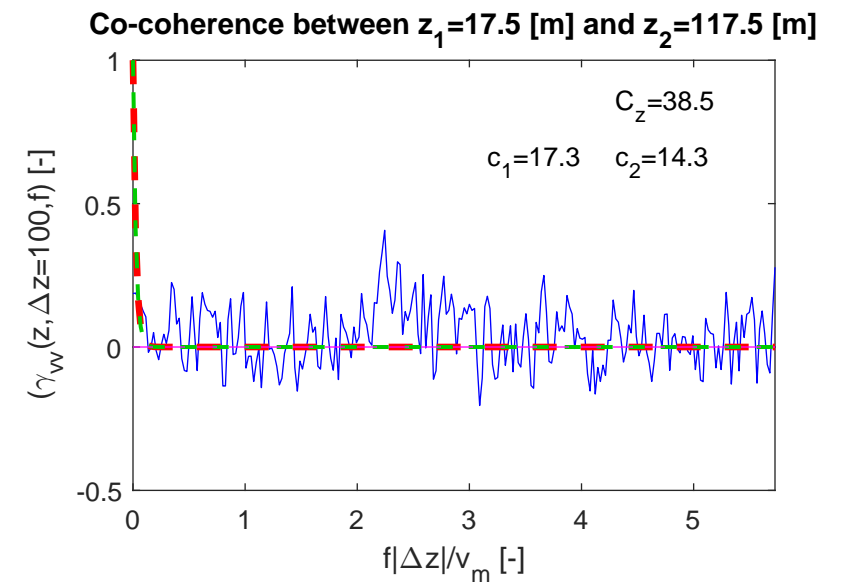
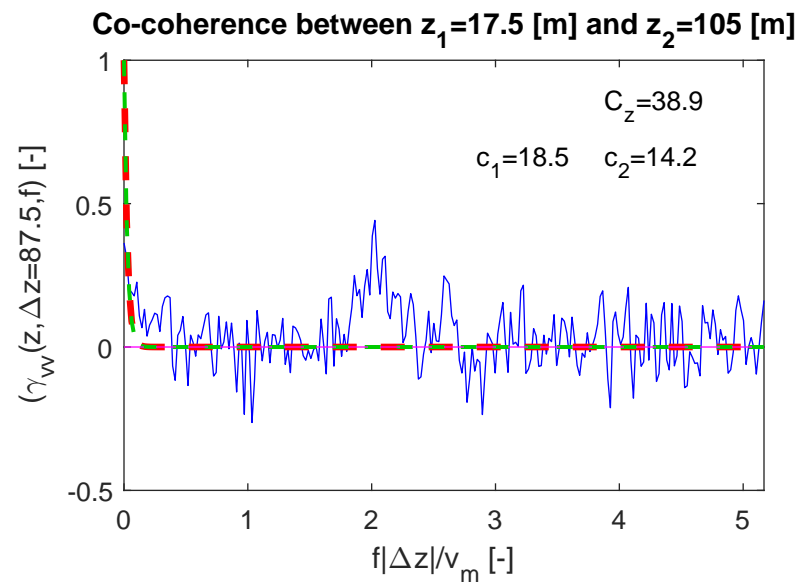
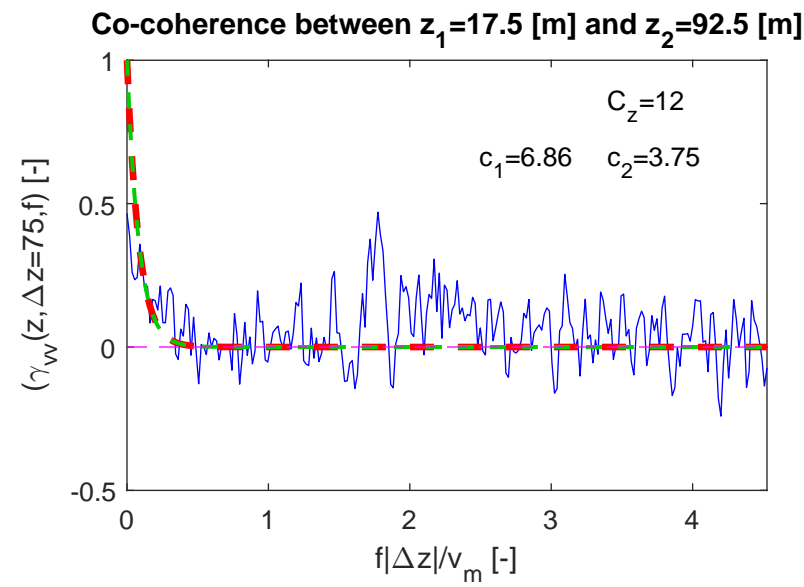
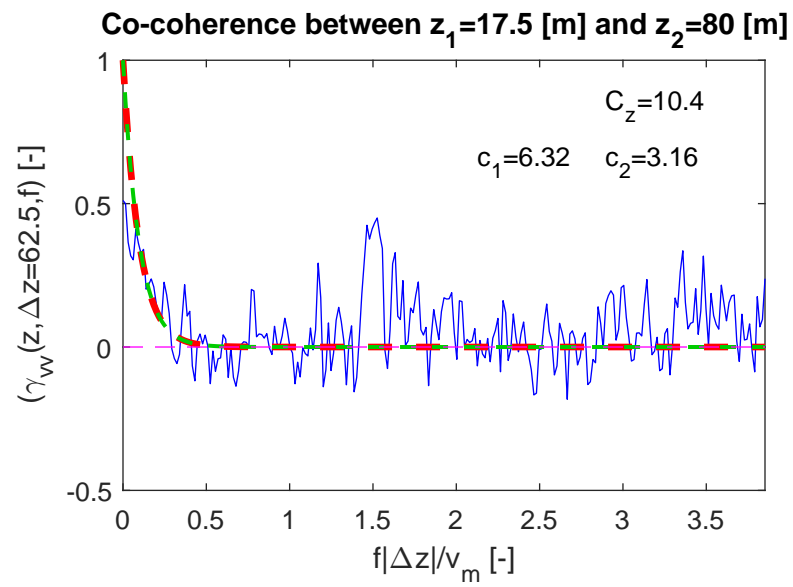
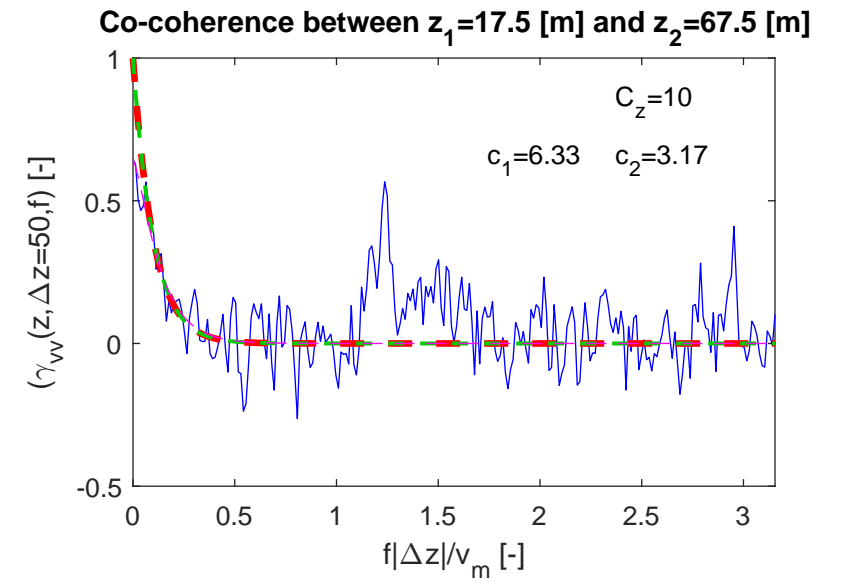
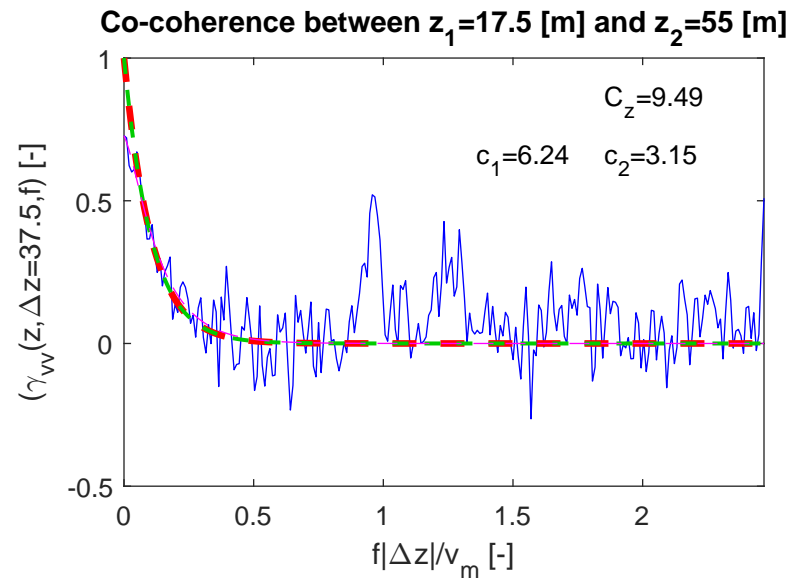
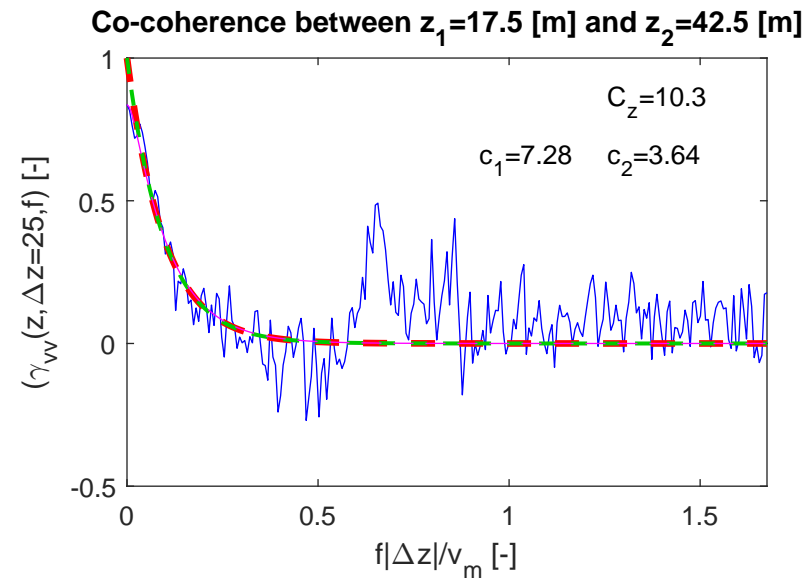
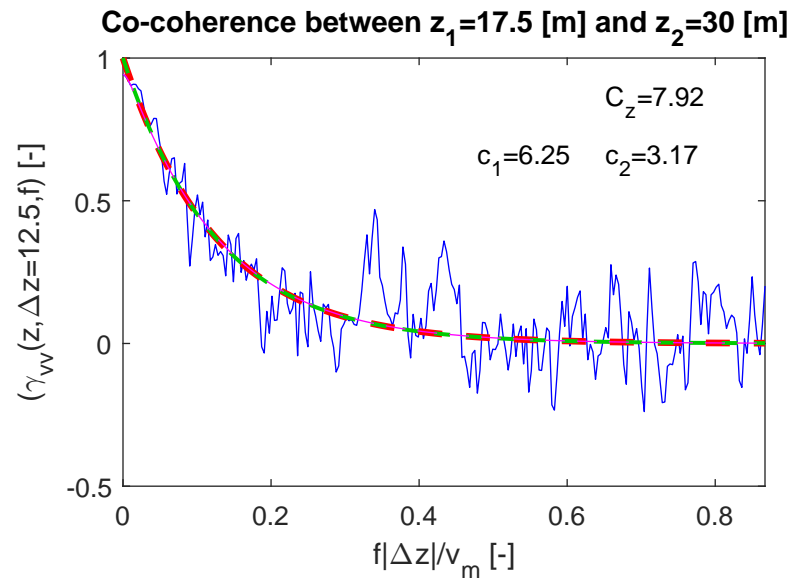


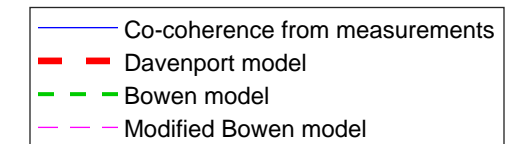
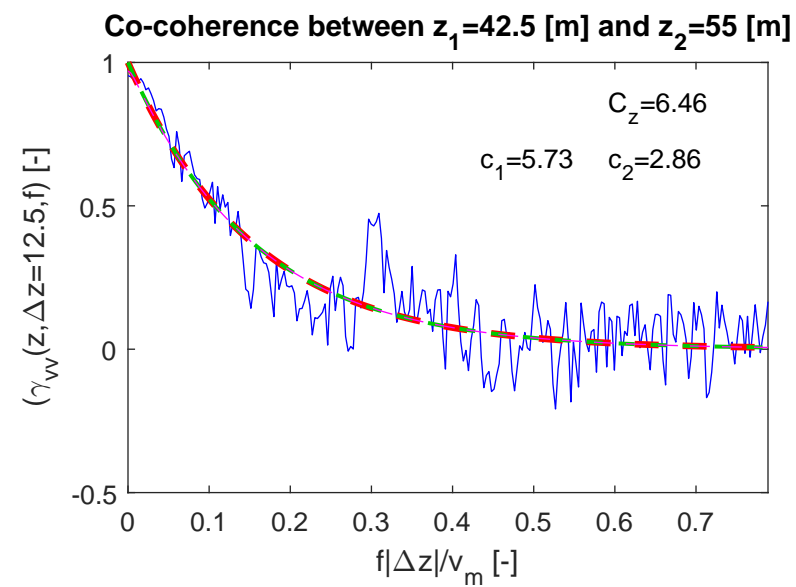
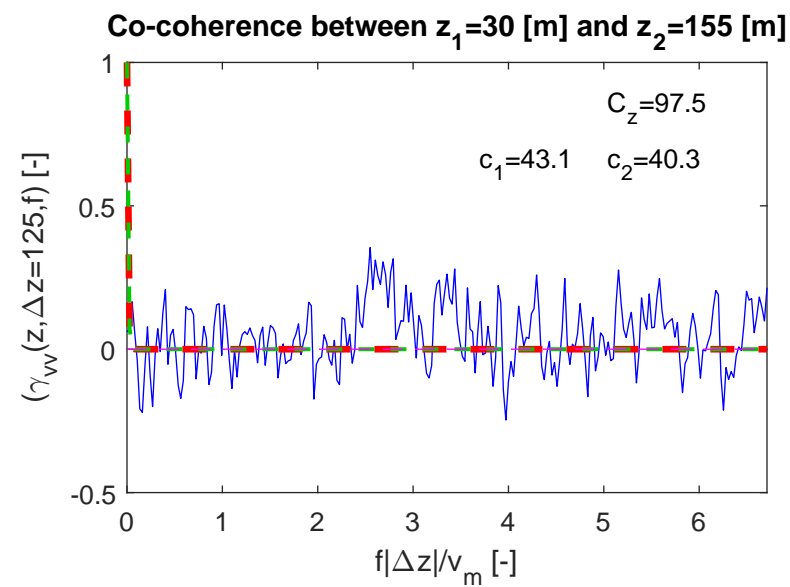
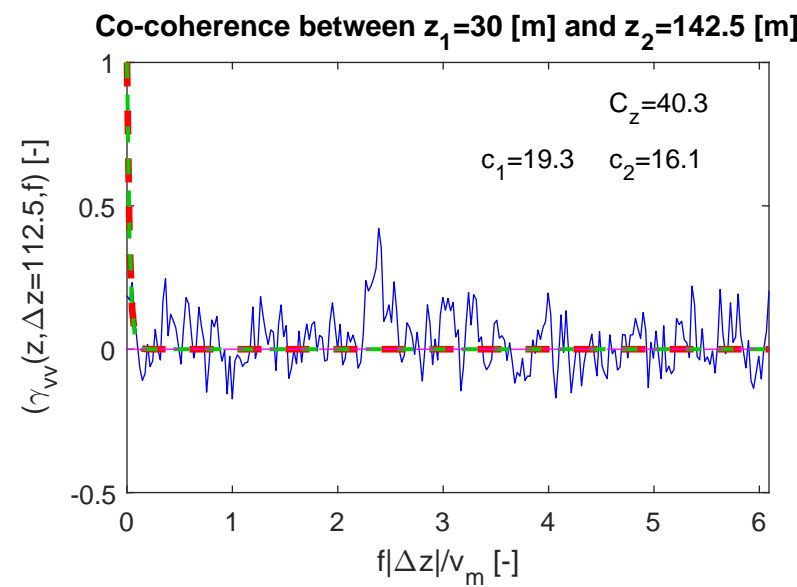
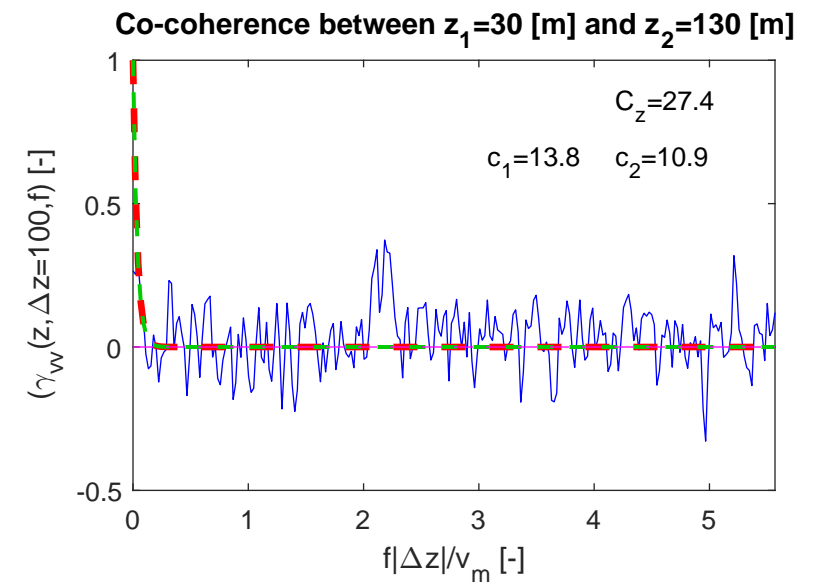
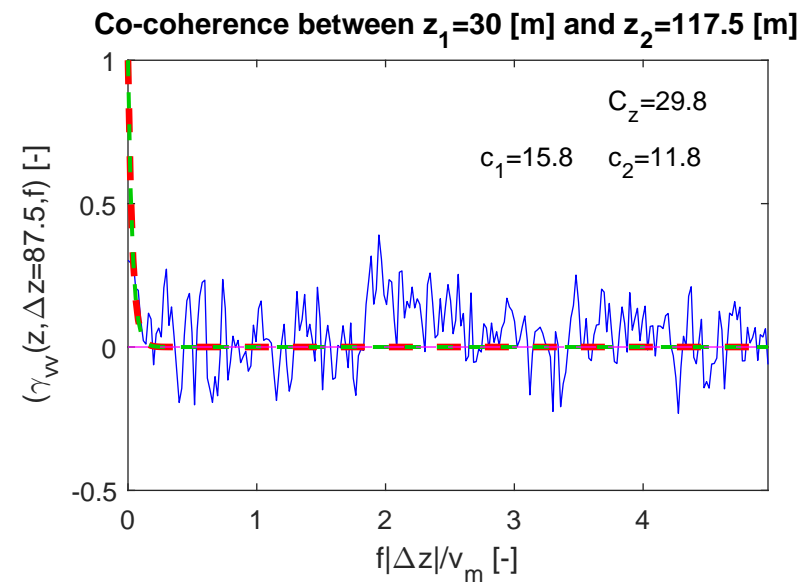
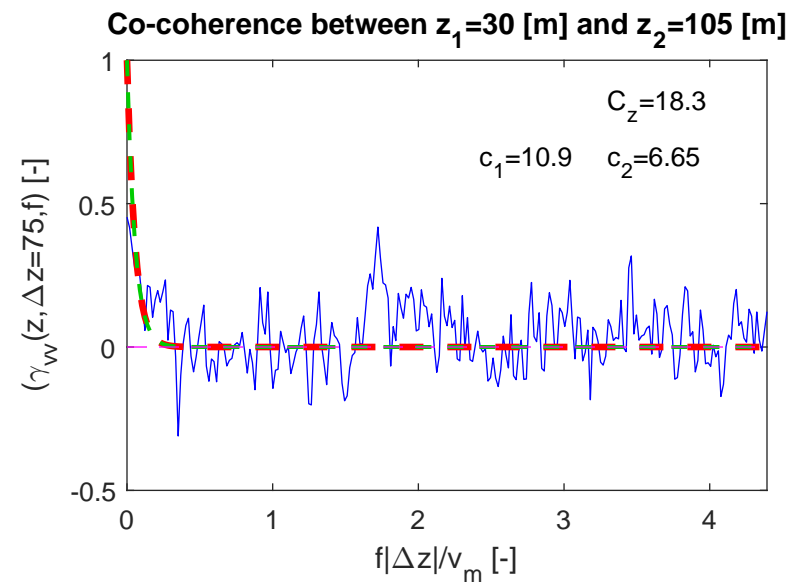
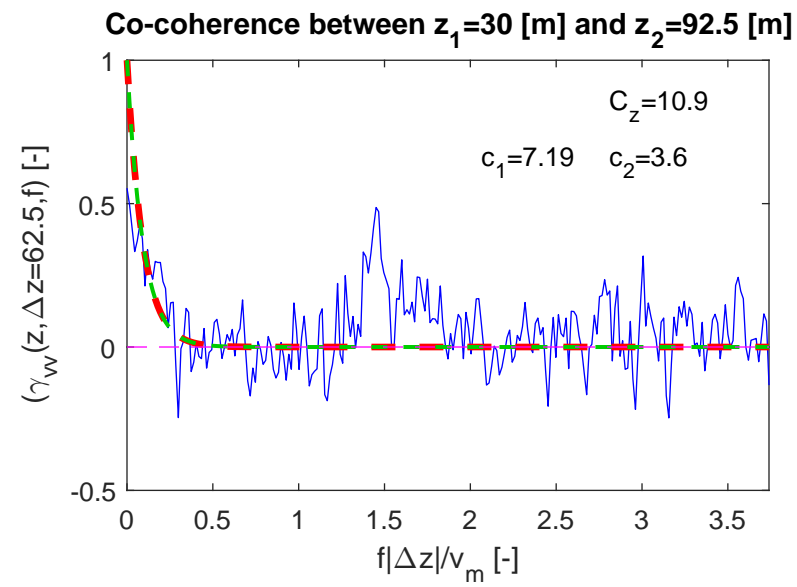
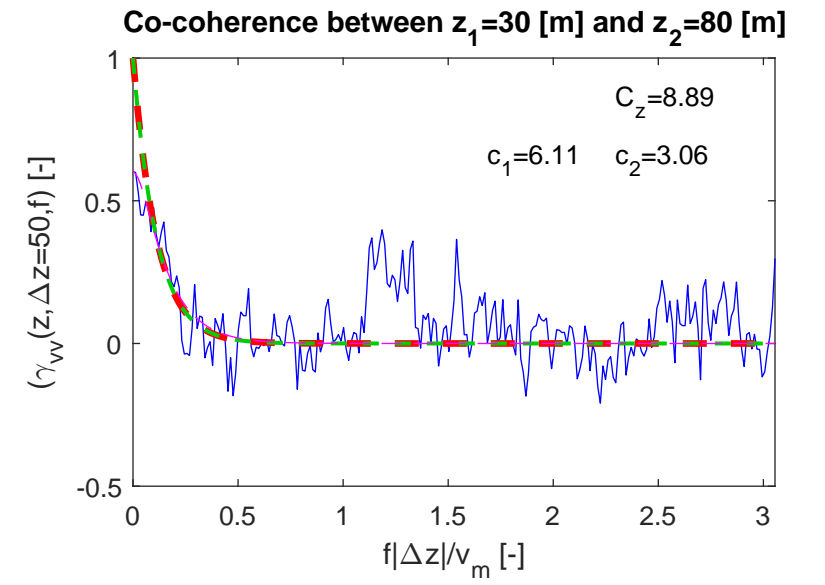
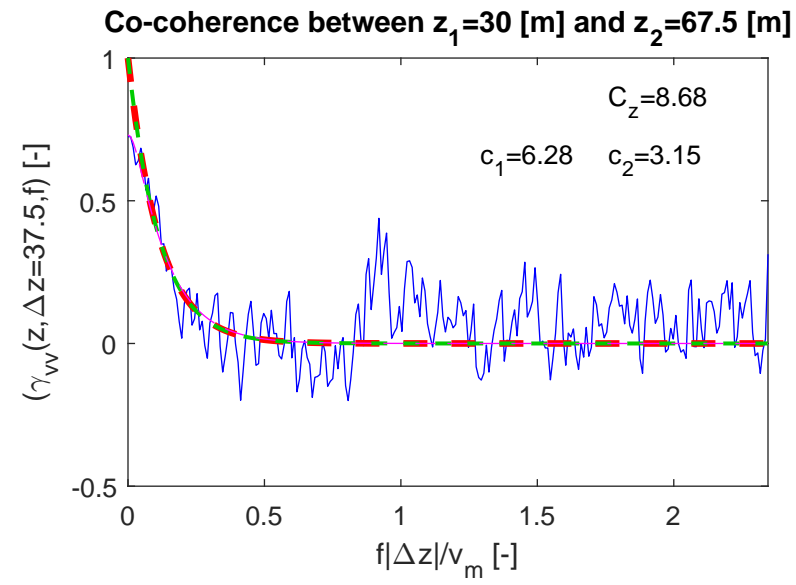
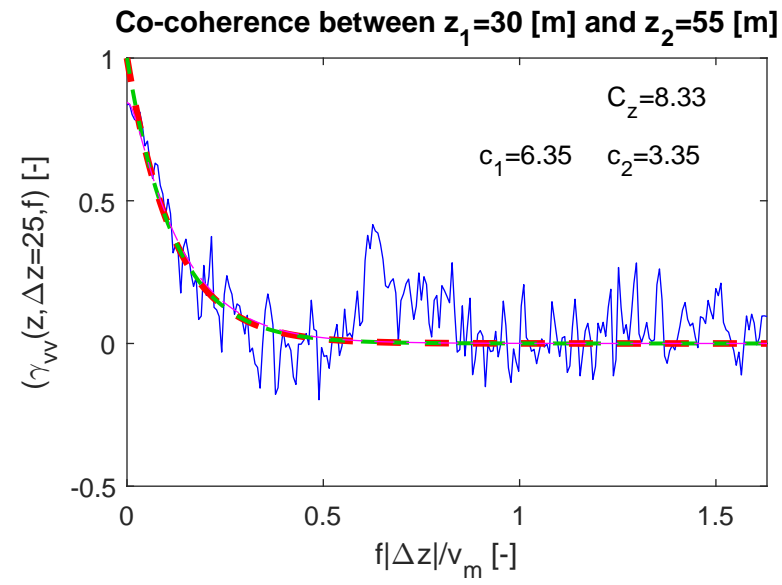
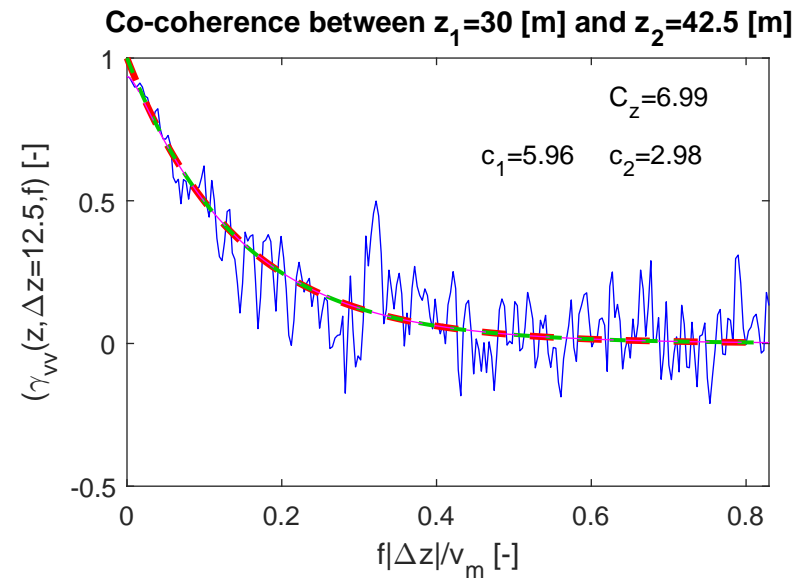
PSD at 142.5 [m] in full scale

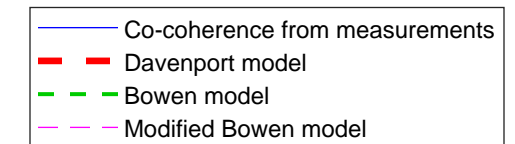
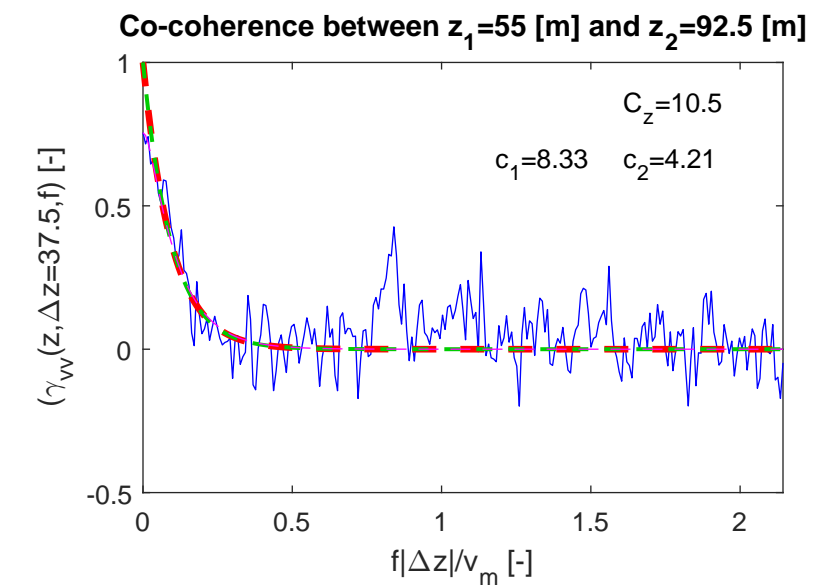
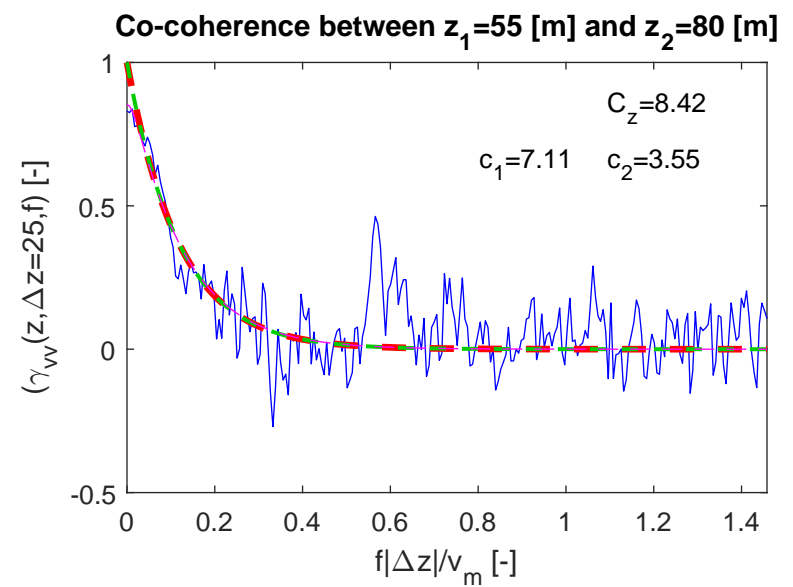
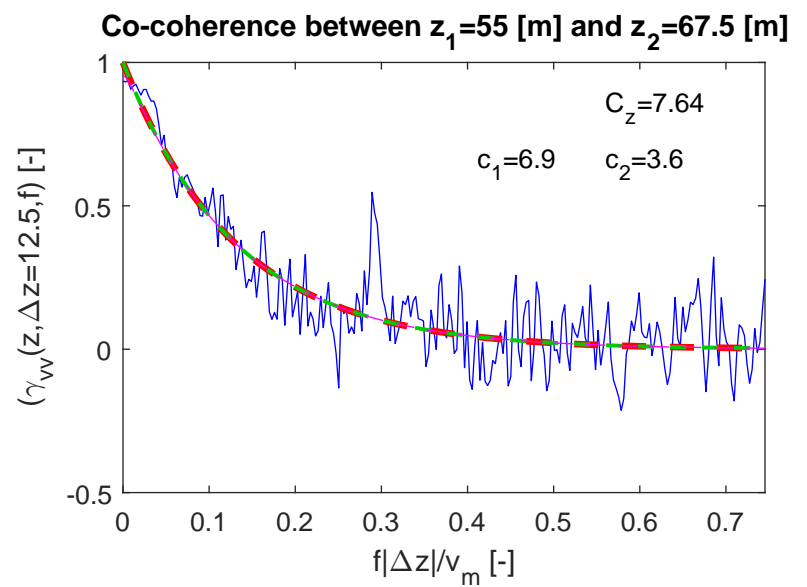
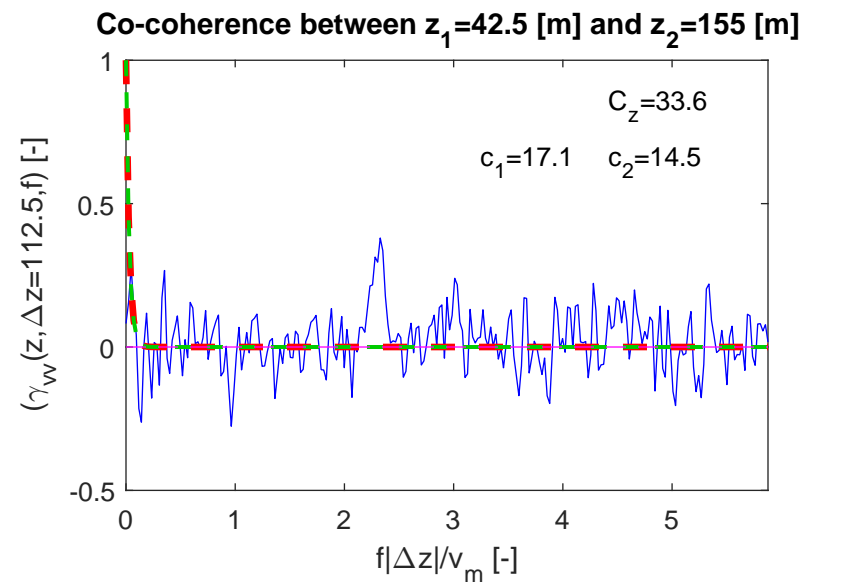
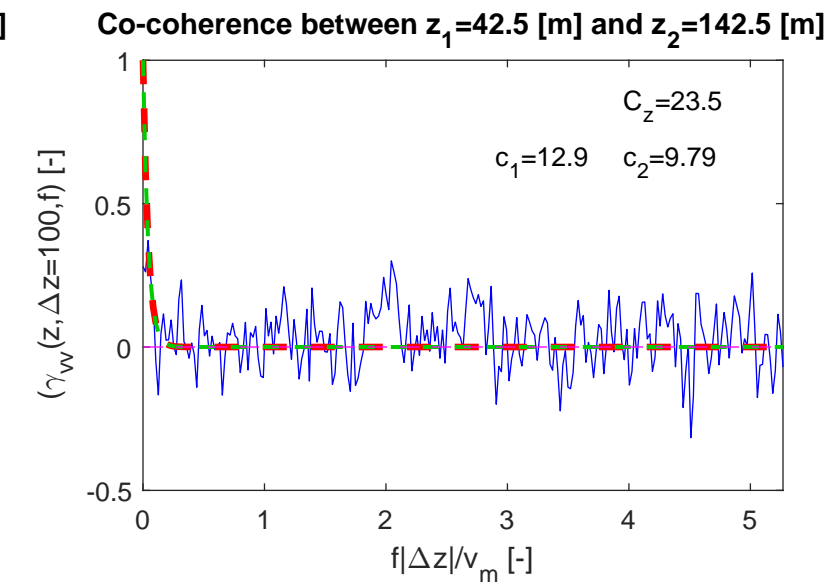
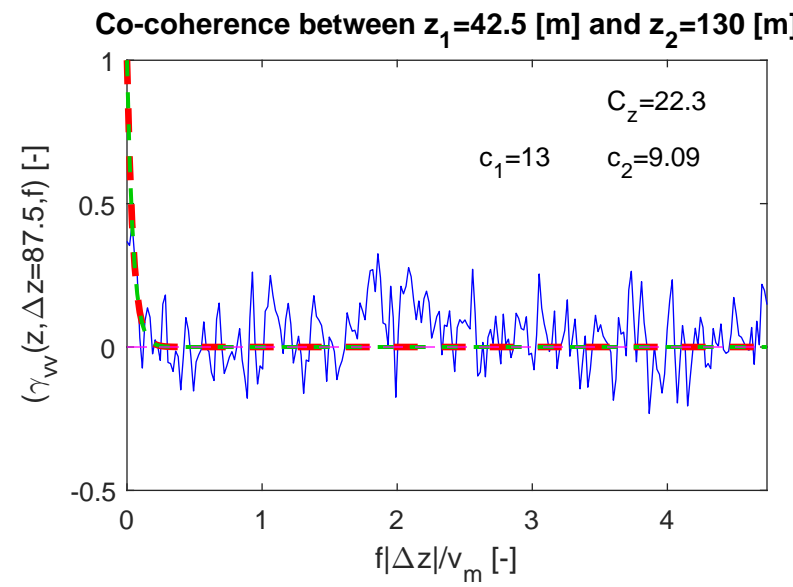
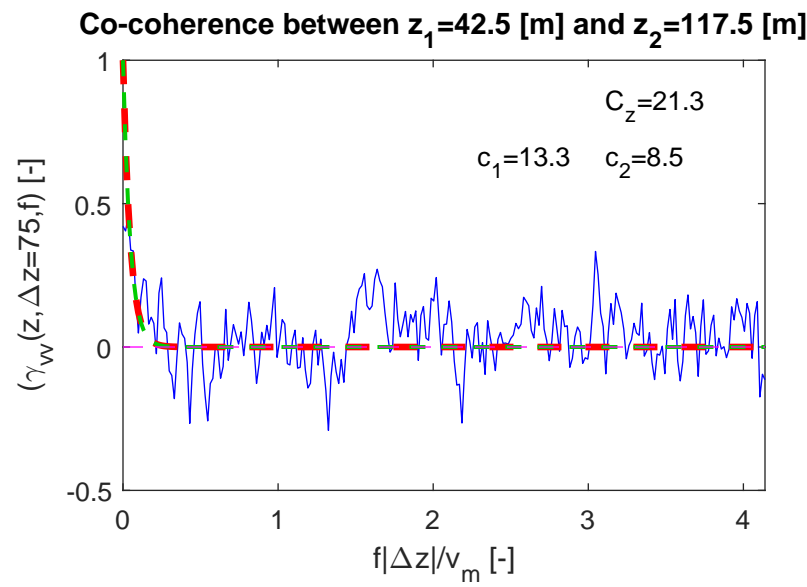
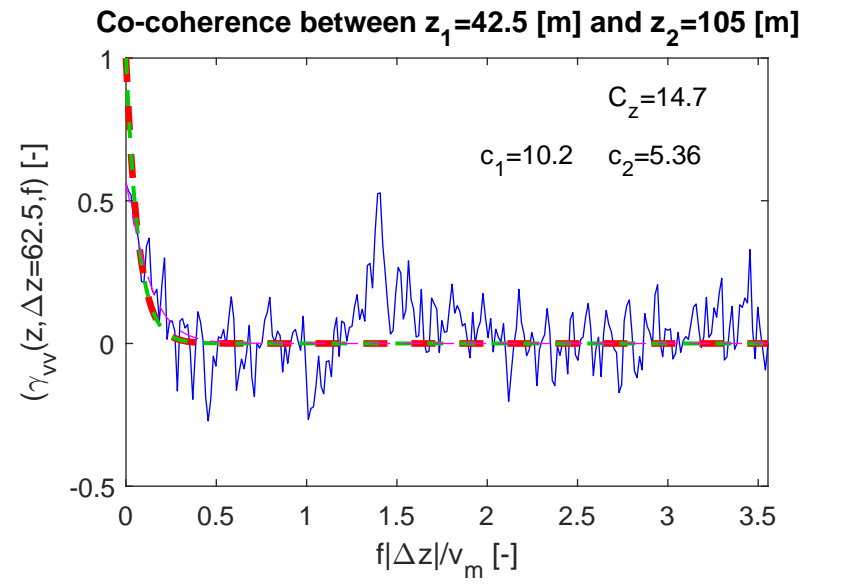
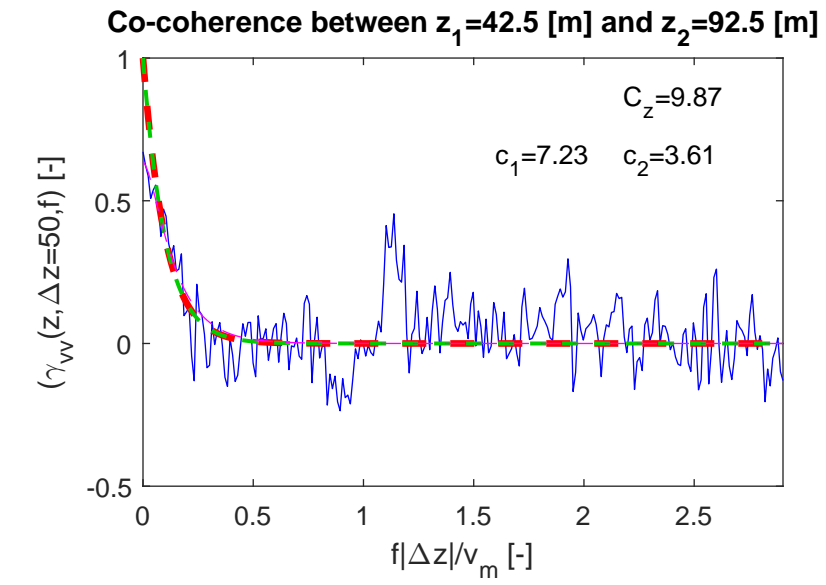
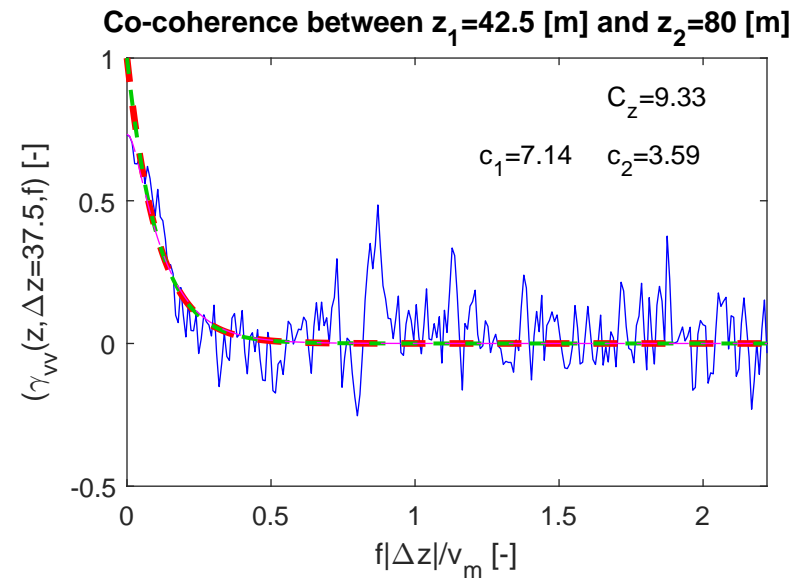
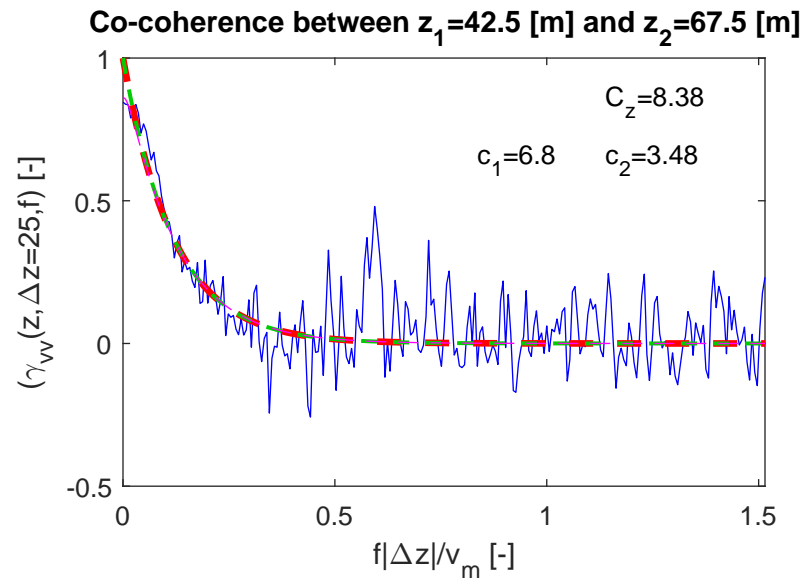


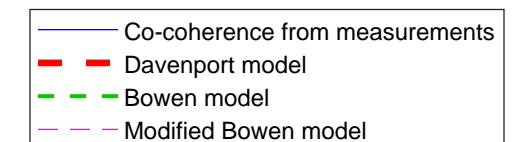
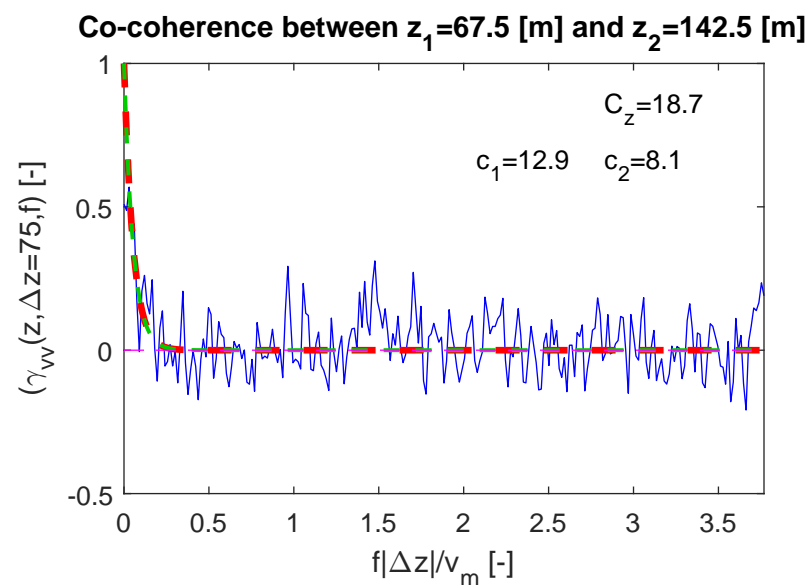
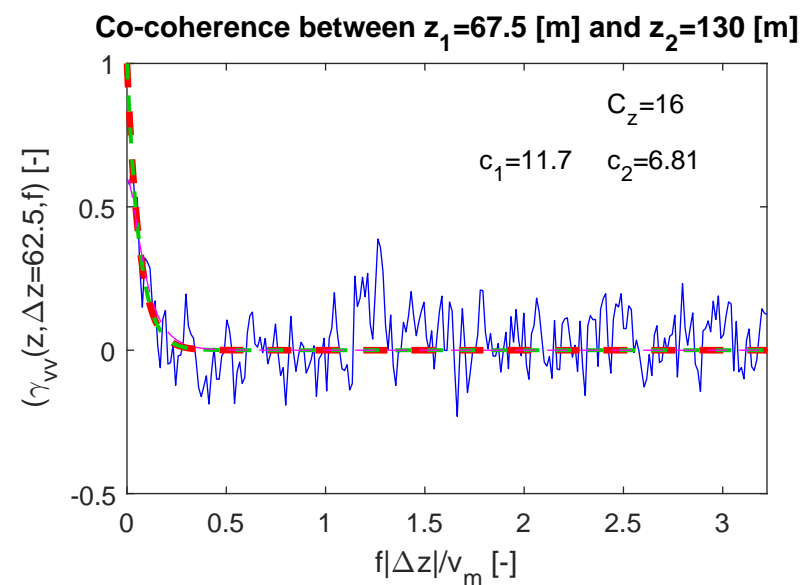
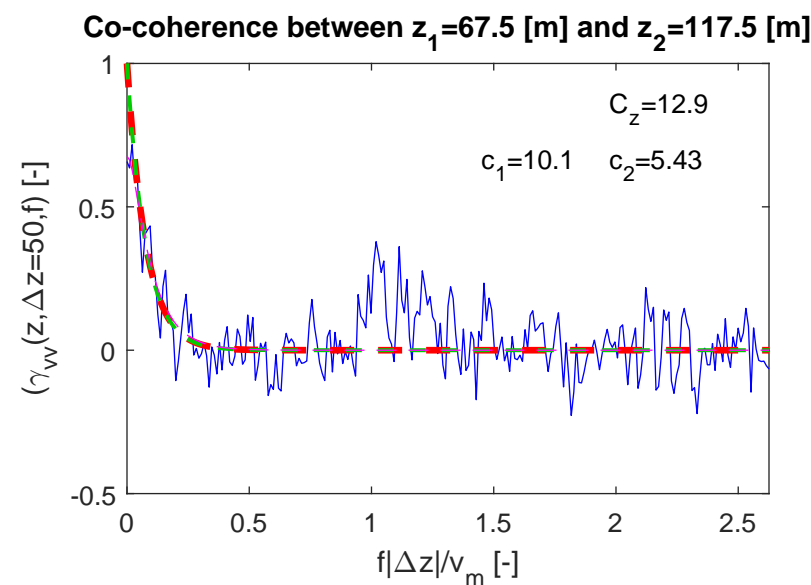
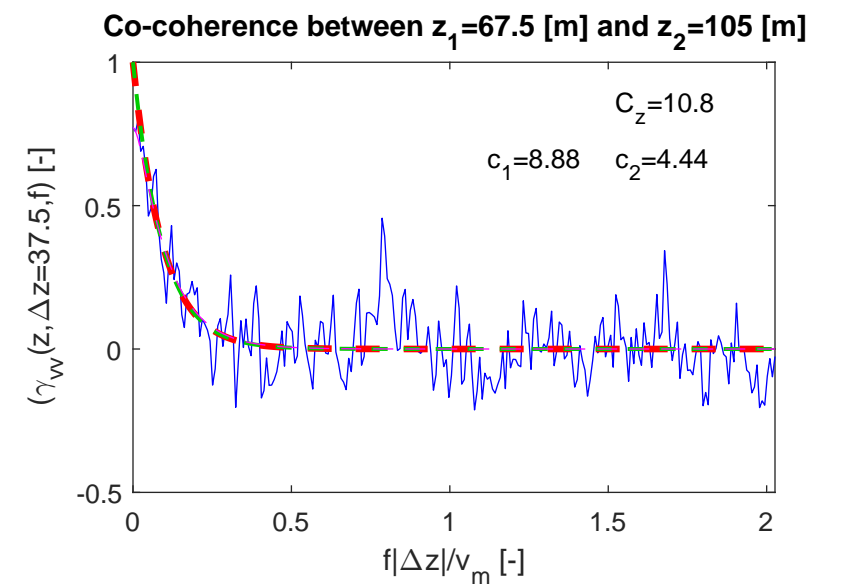
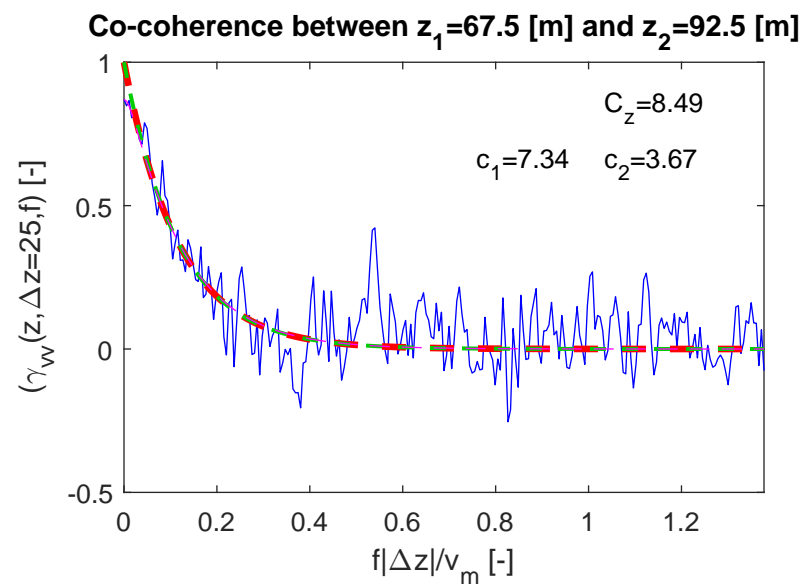
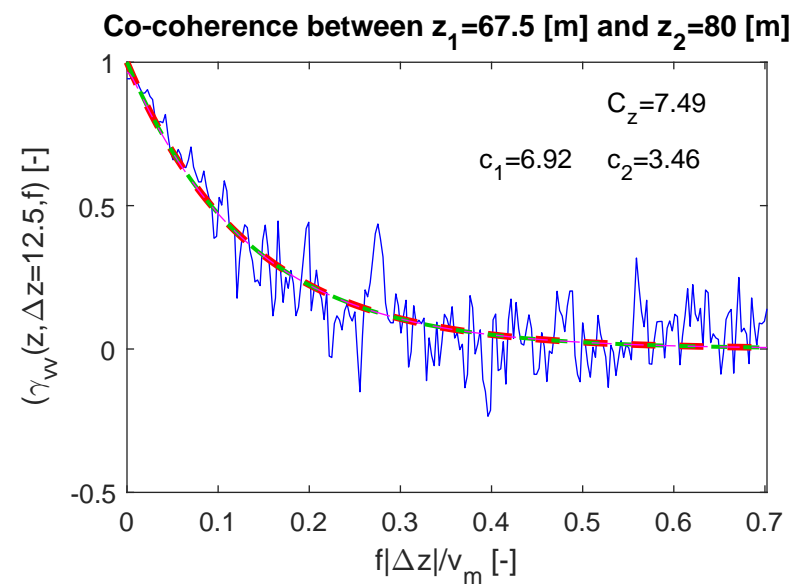
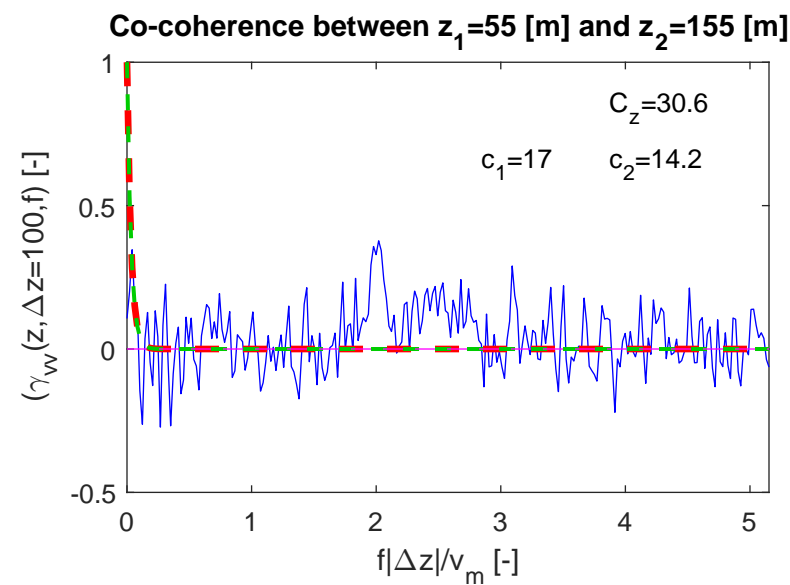
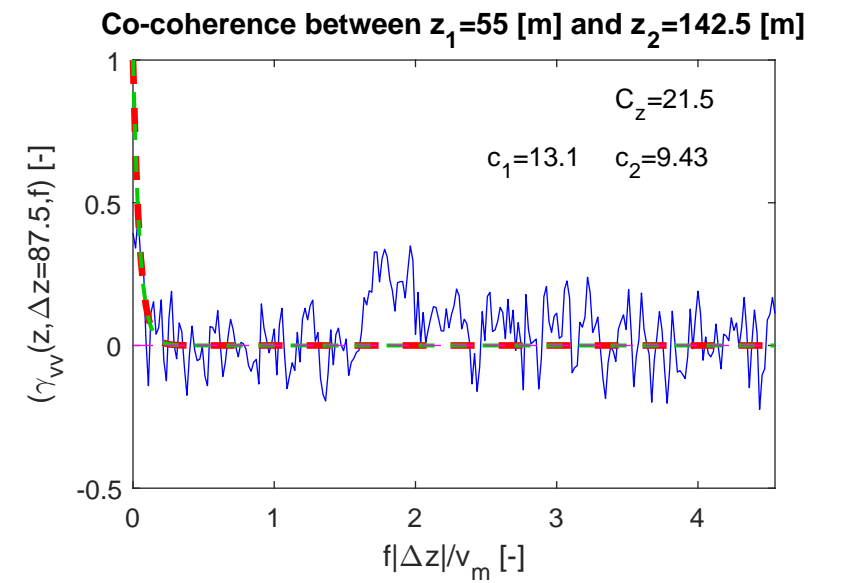
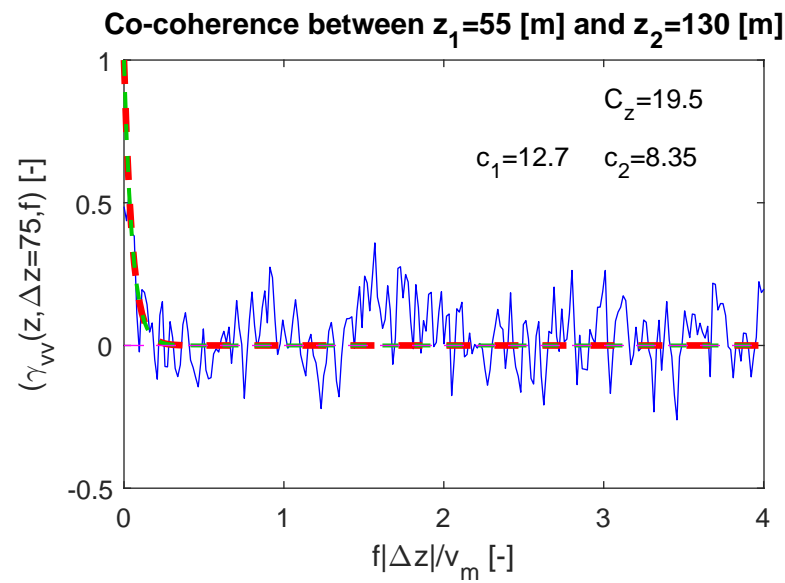
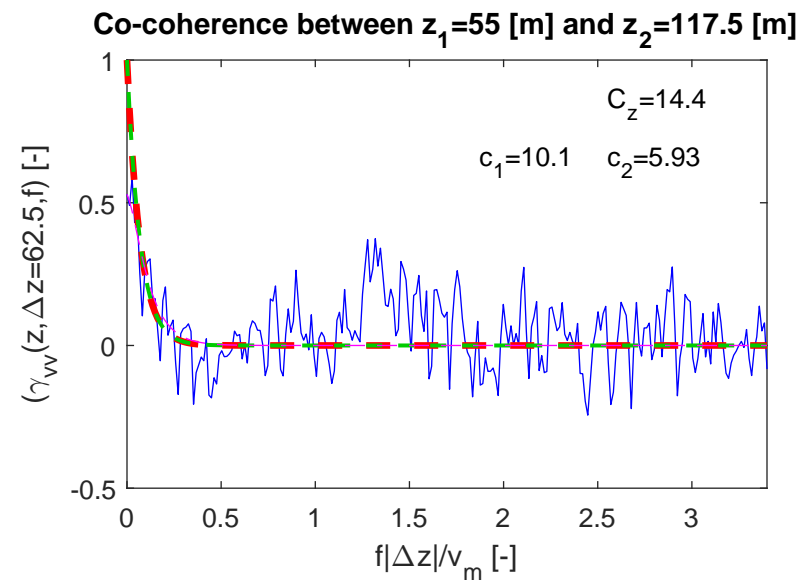
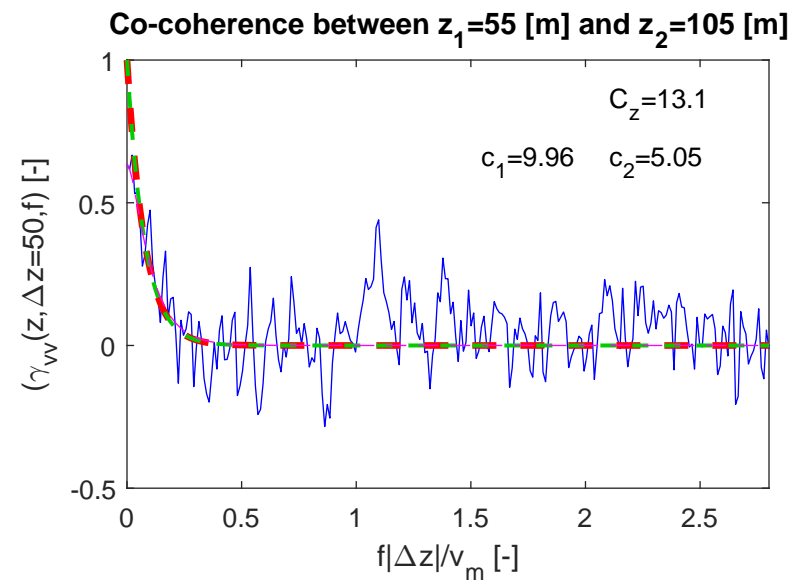
PSD at 155 [m] in full scale

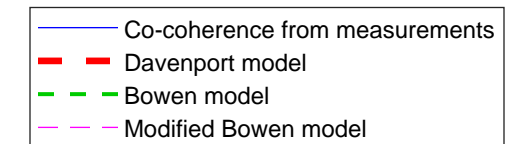
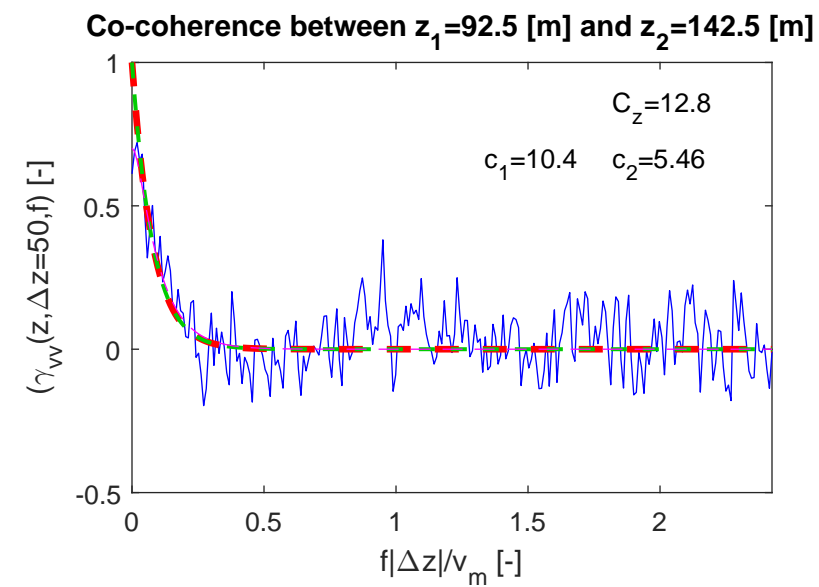
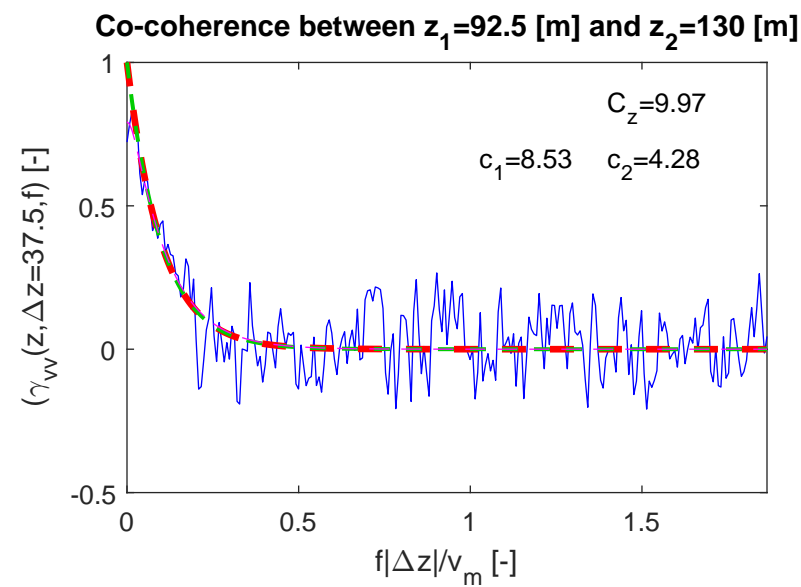
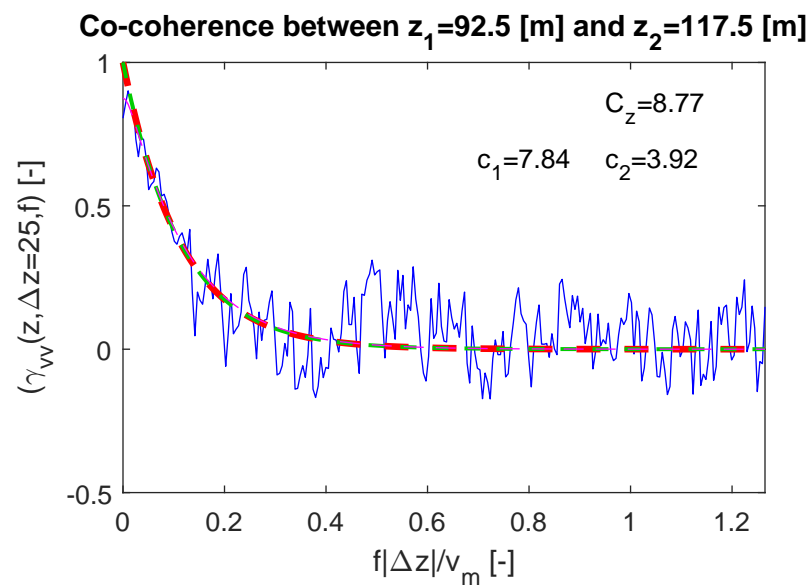
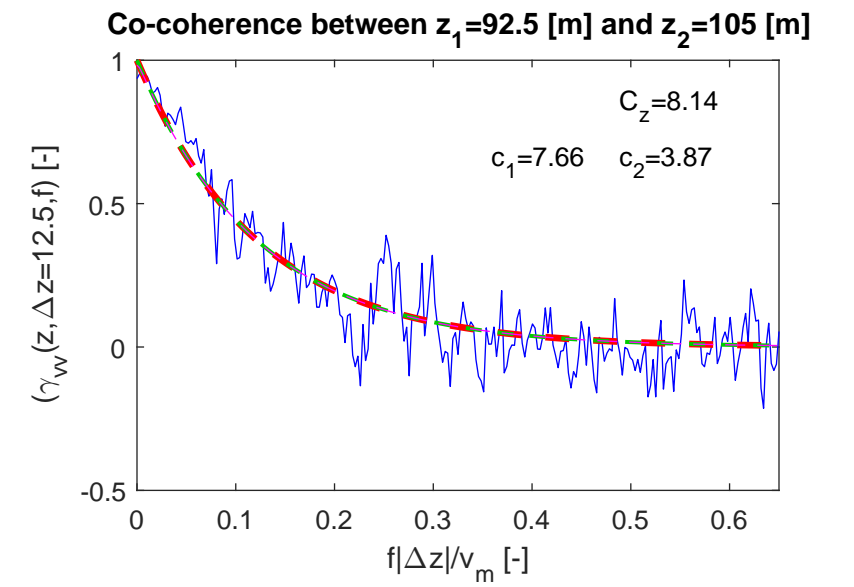
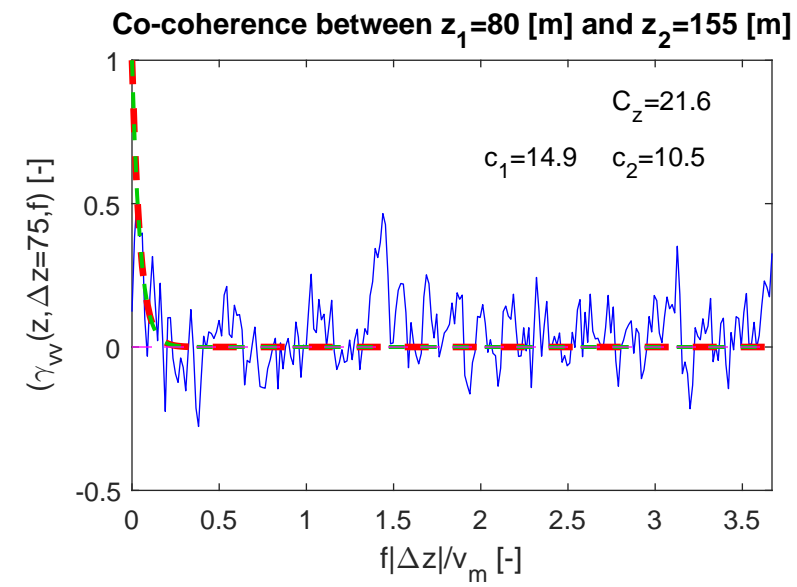
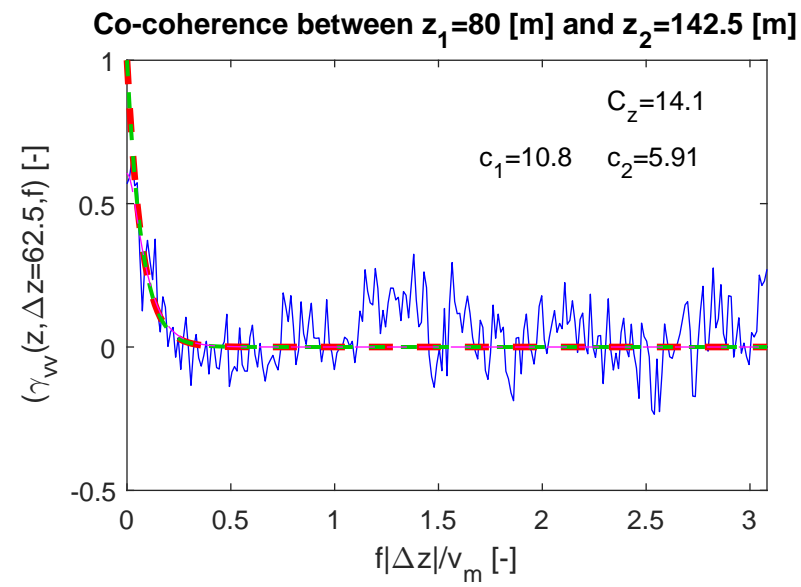
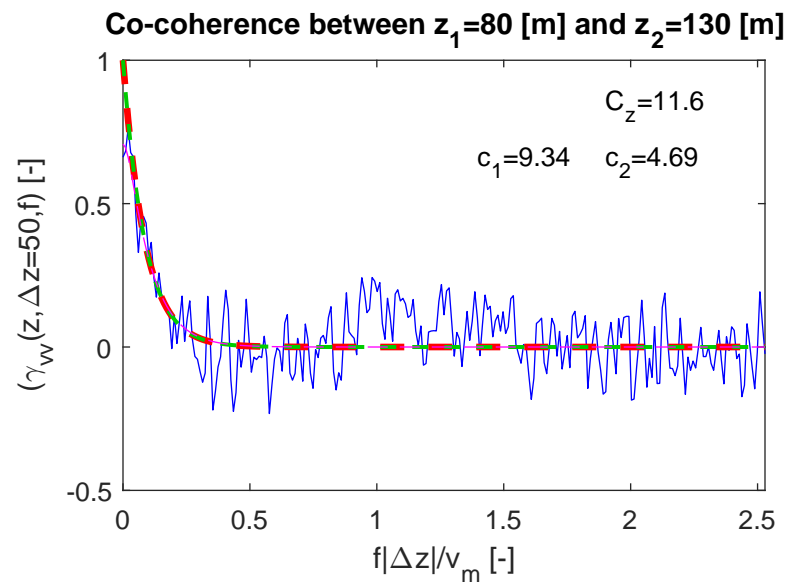
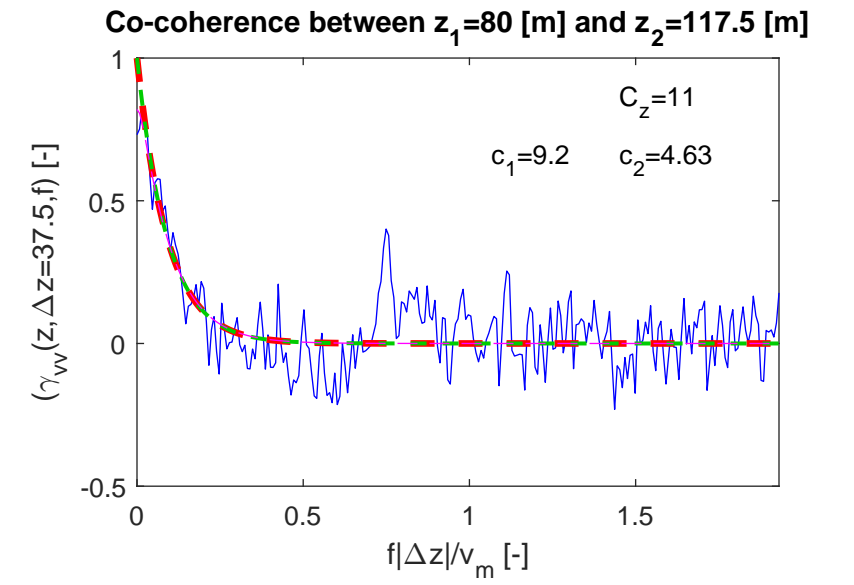
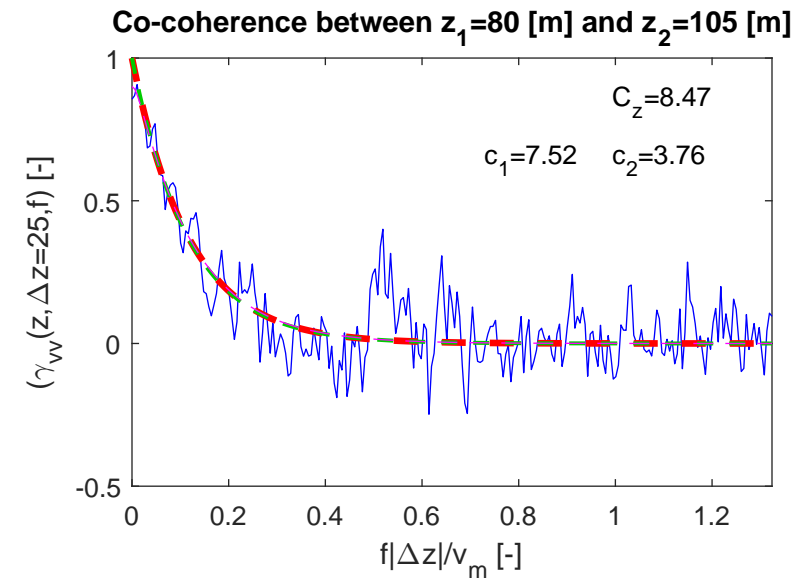
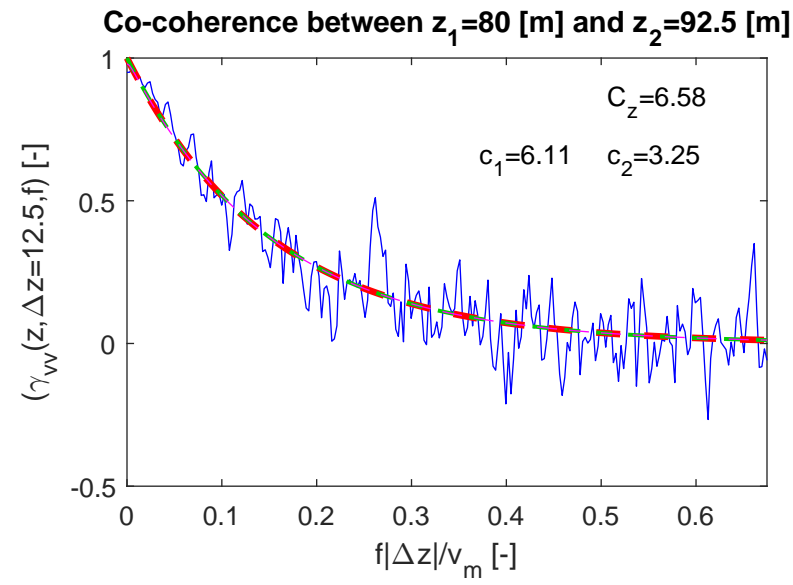
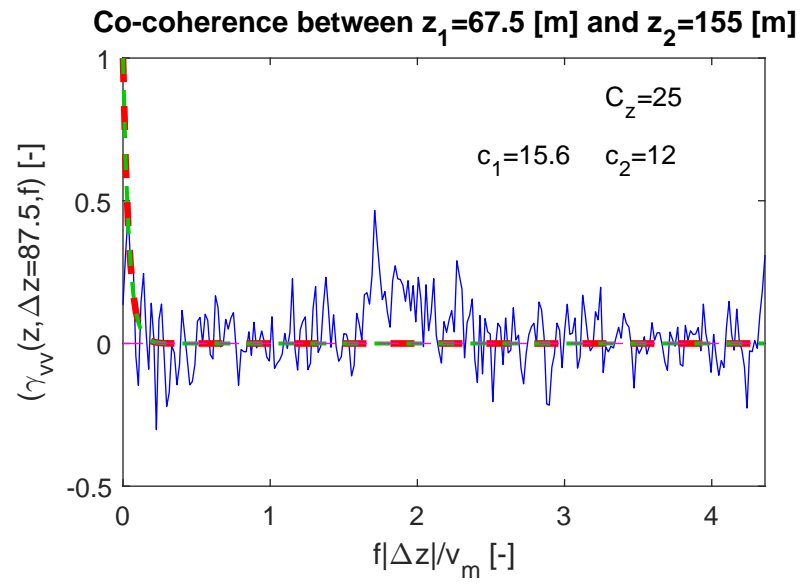


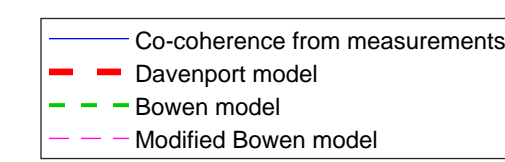
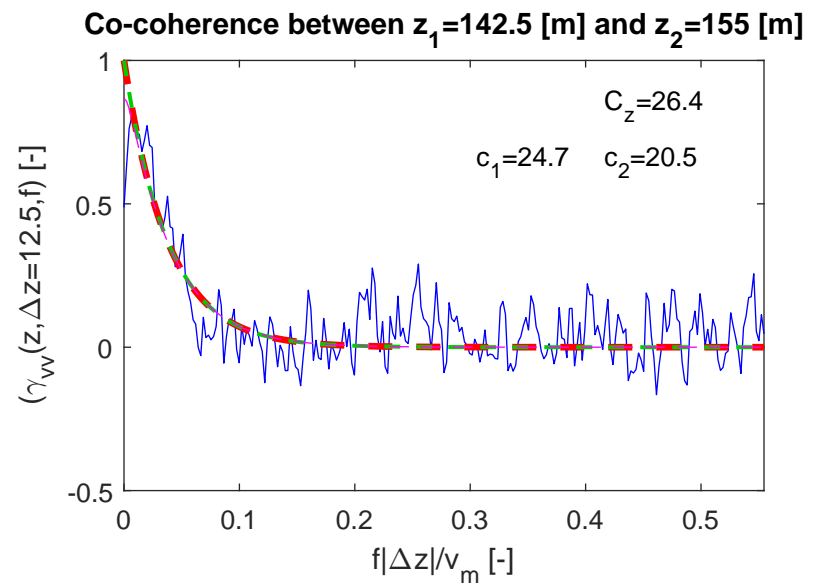
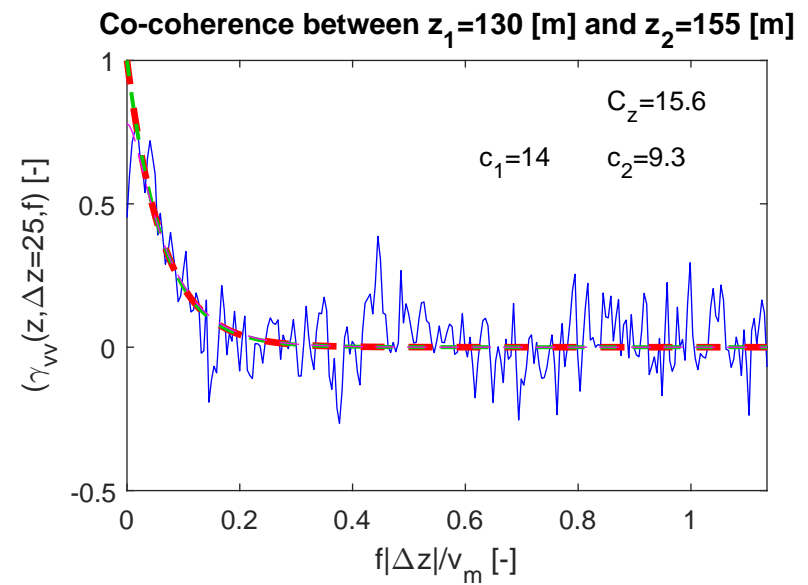
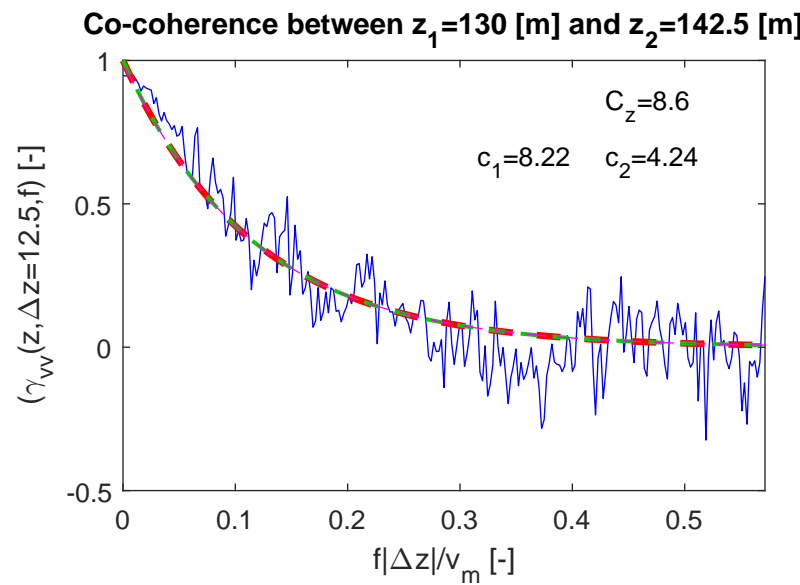
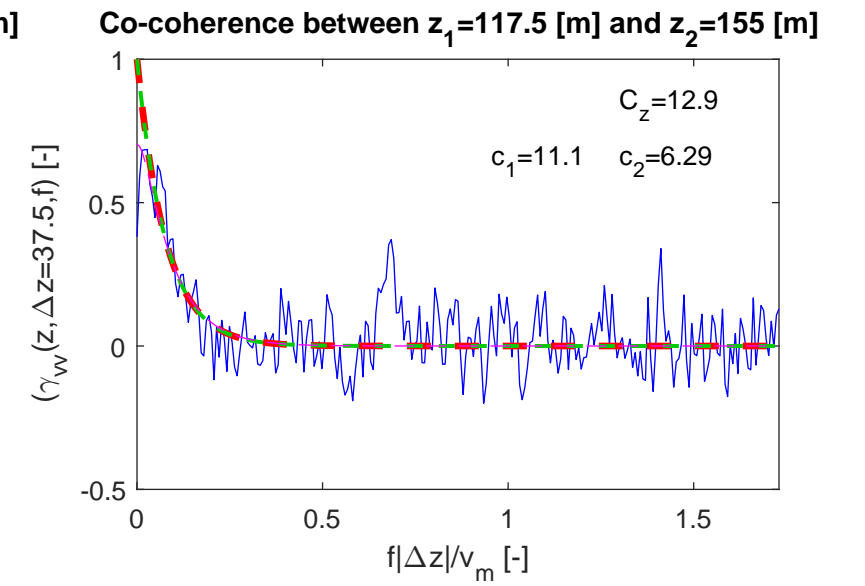
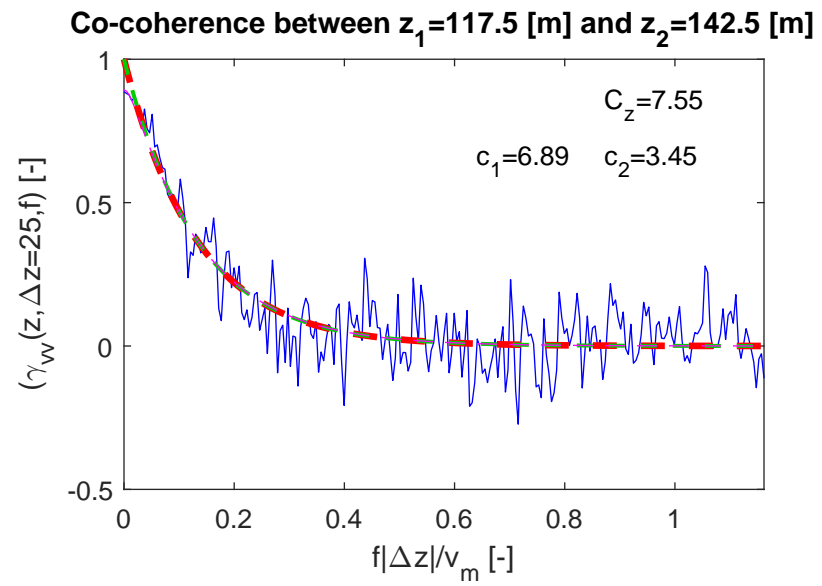
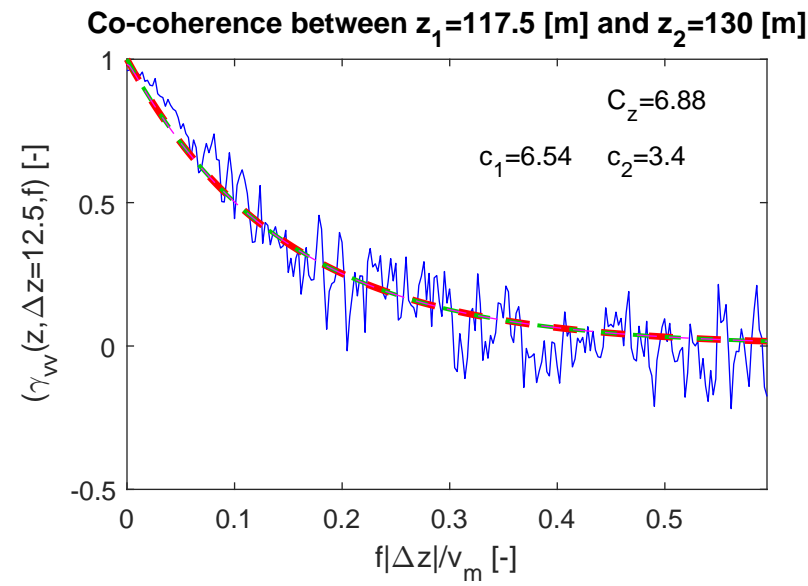
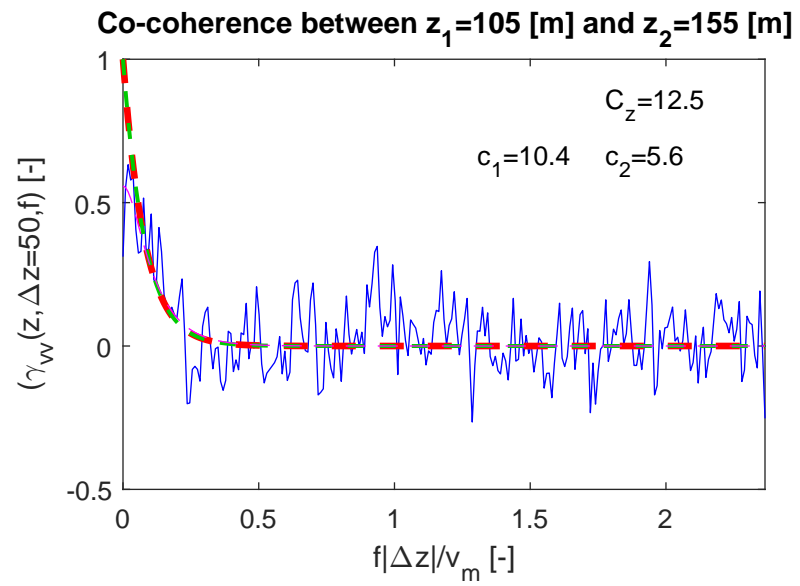
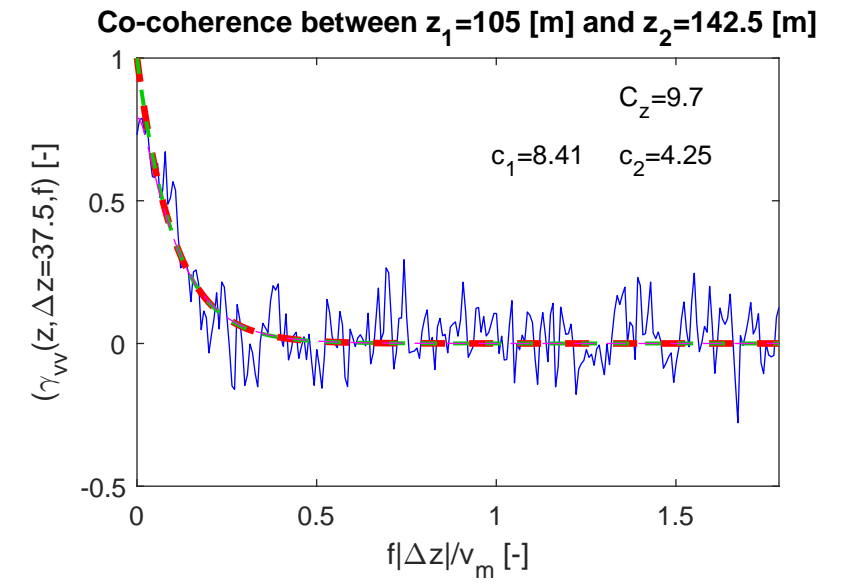
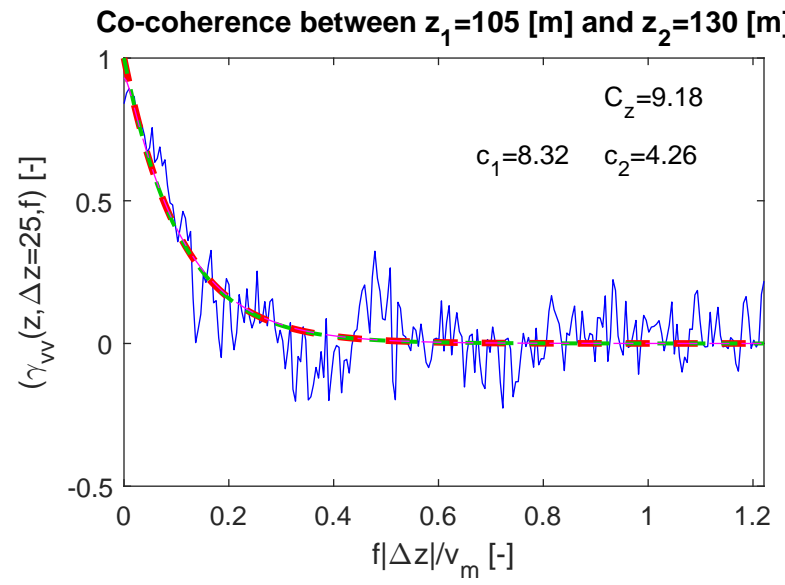
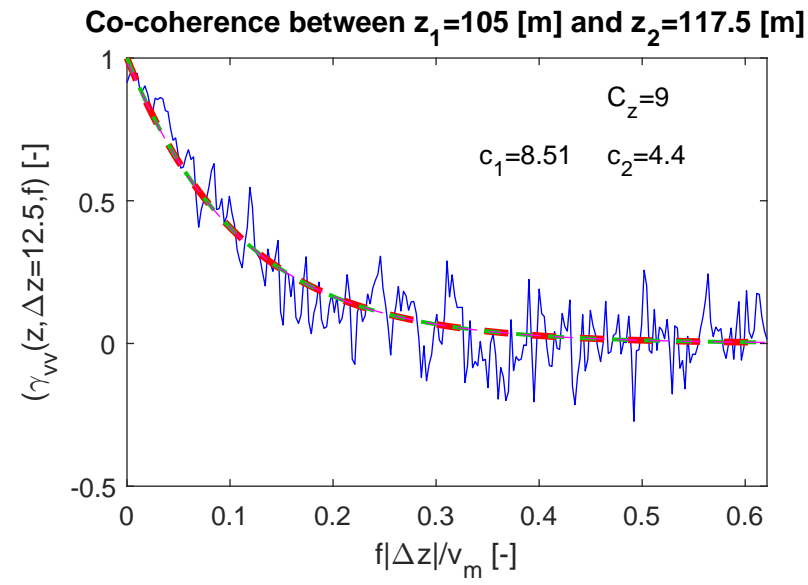
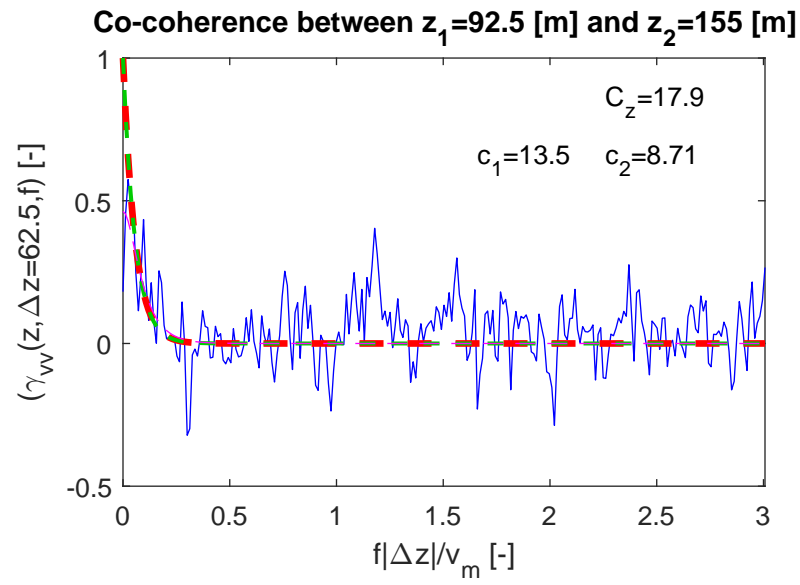




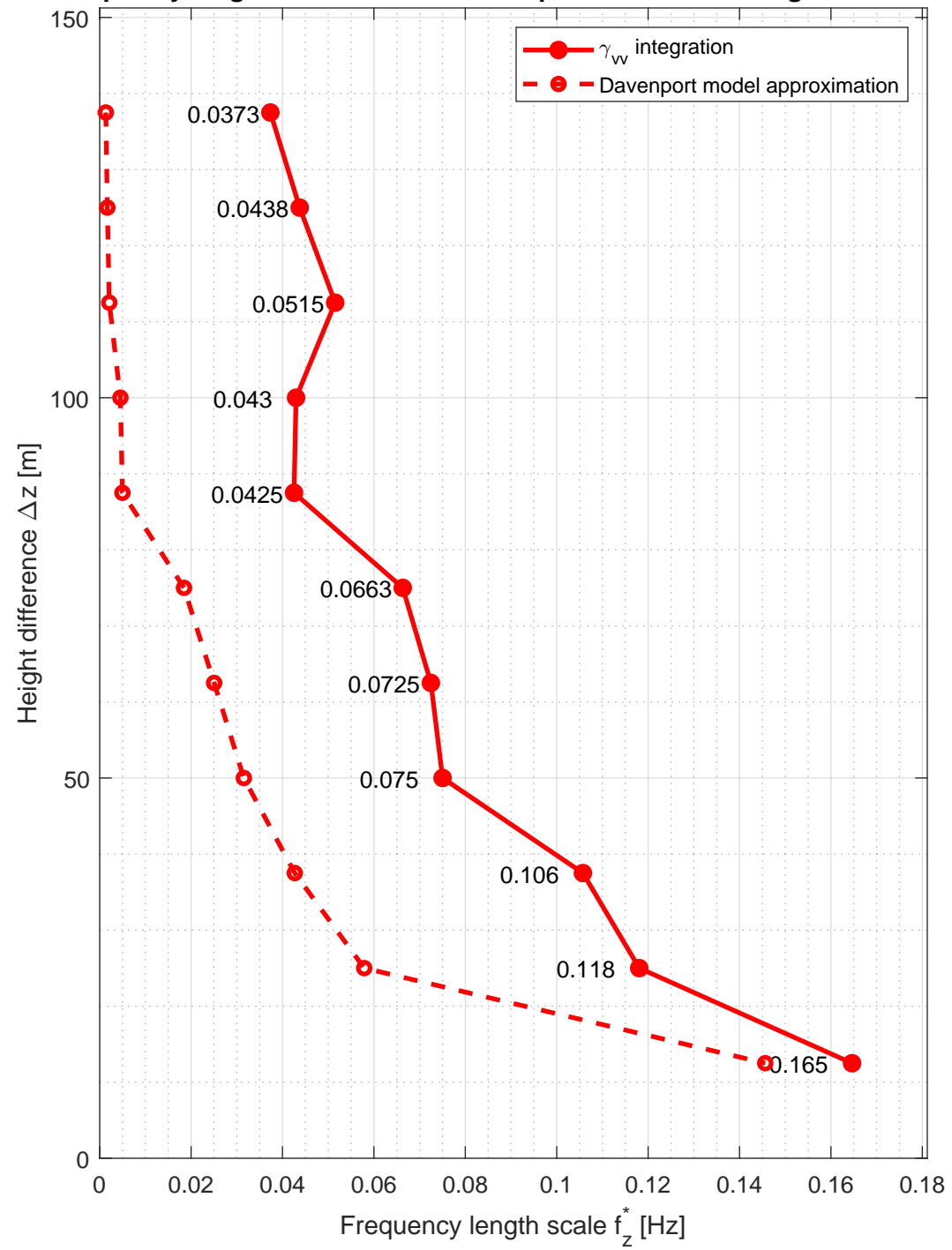




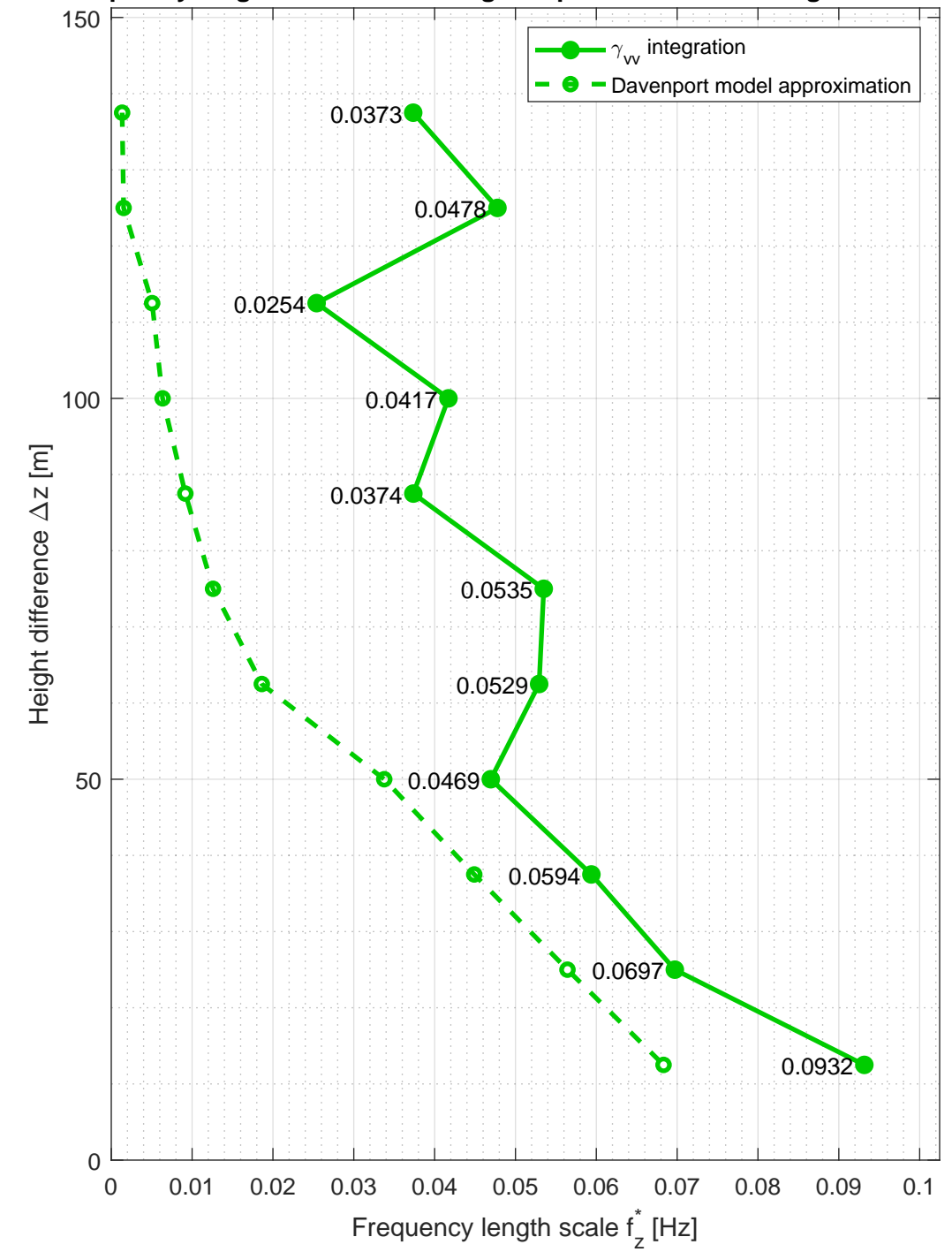




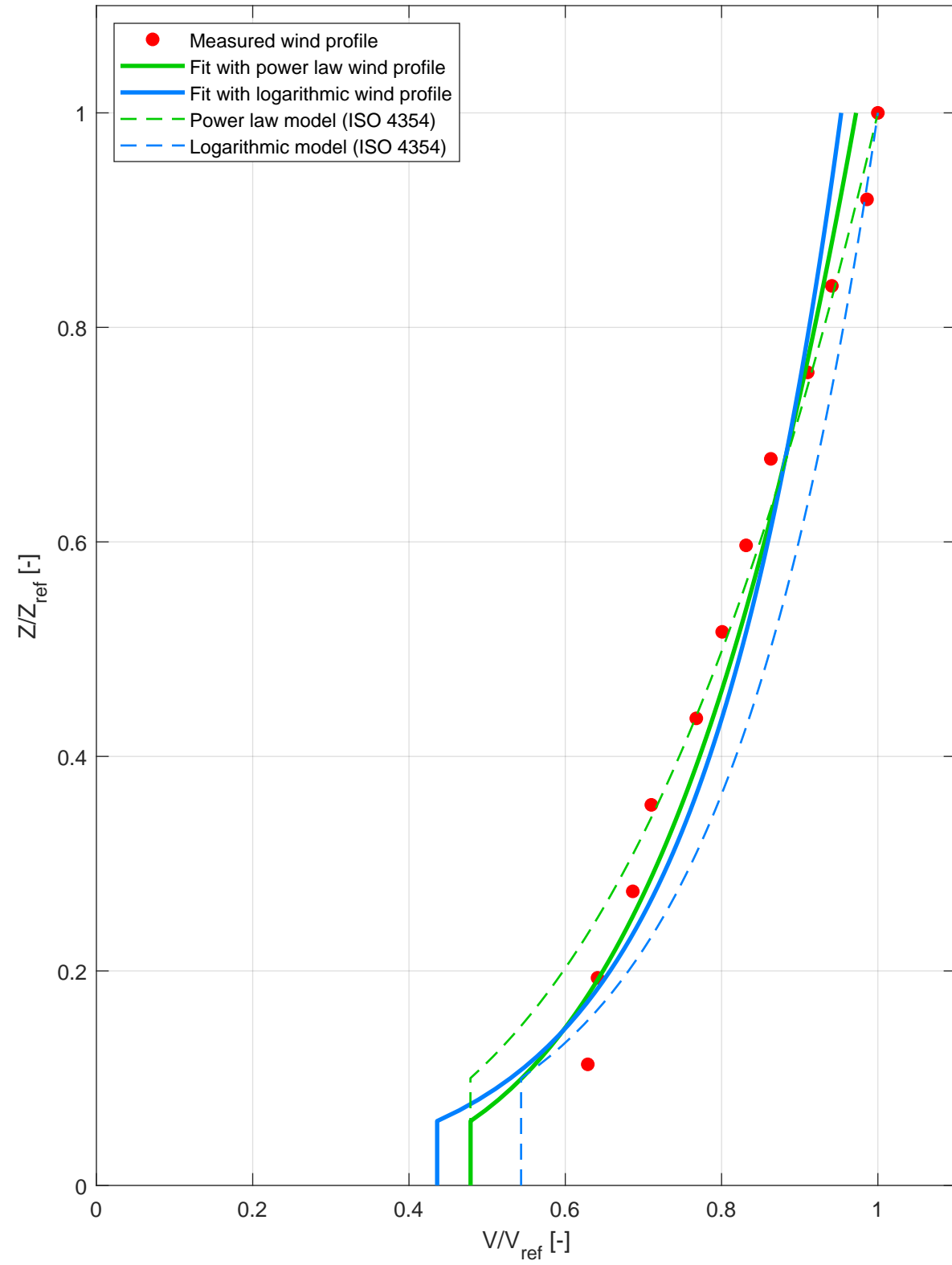
Frequency length scales for the lowest point at different height differences



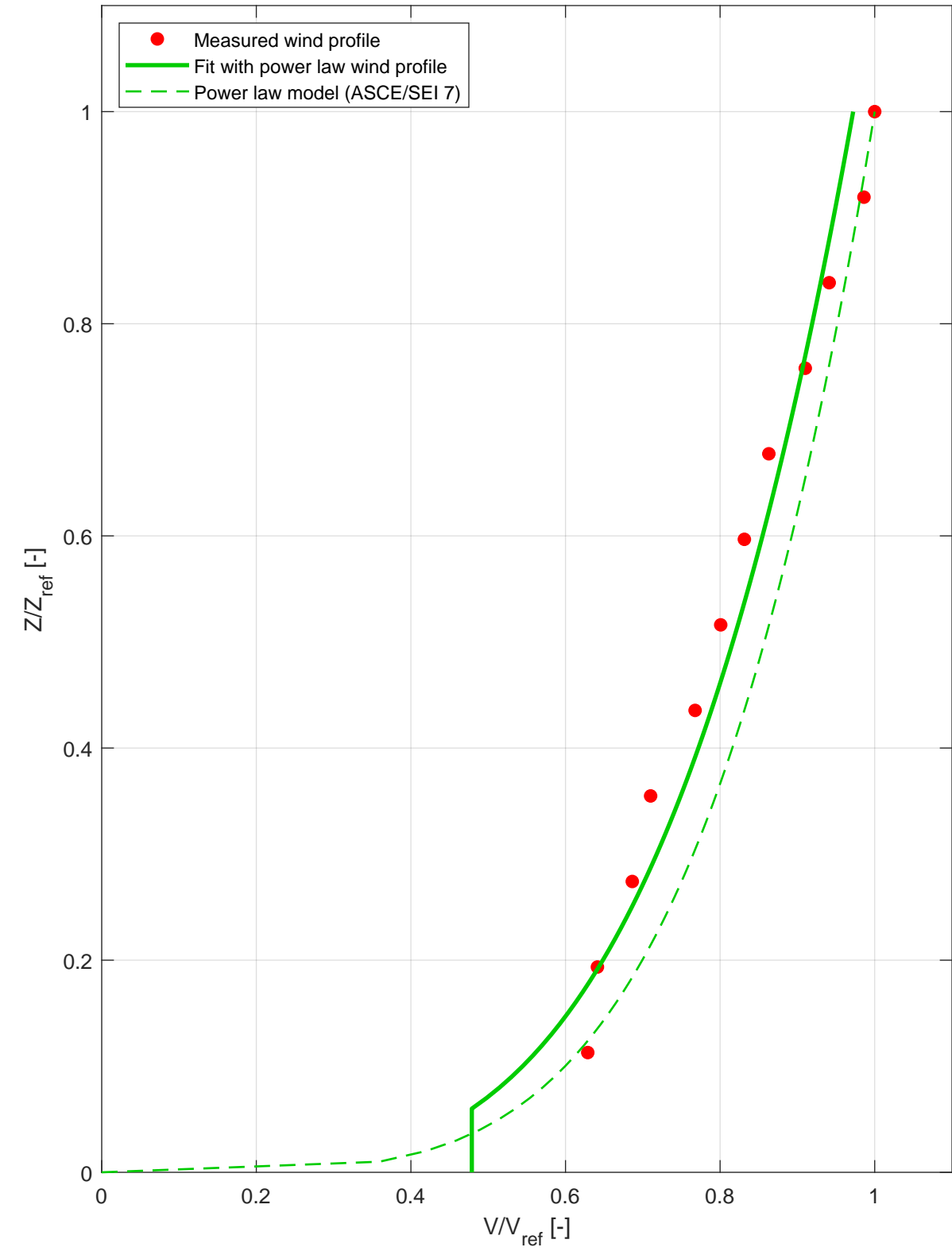
Frequency length scales for the highest point at different height differences



Mean wind velocity profile - comparison with ISO 4354

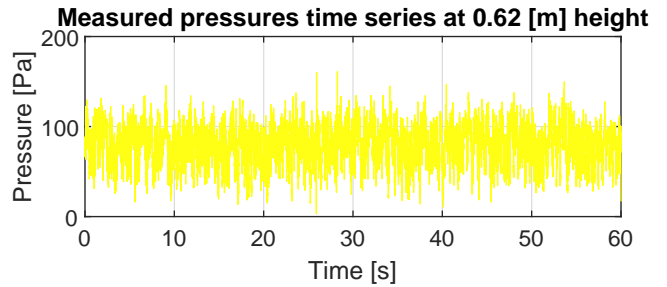
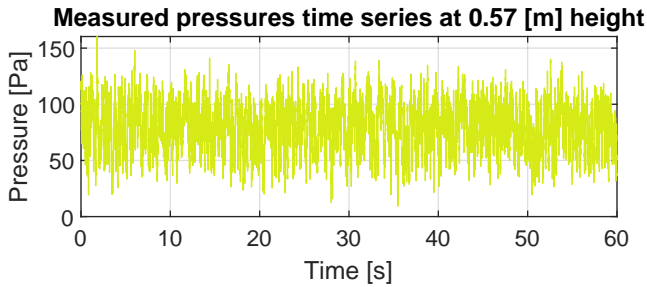
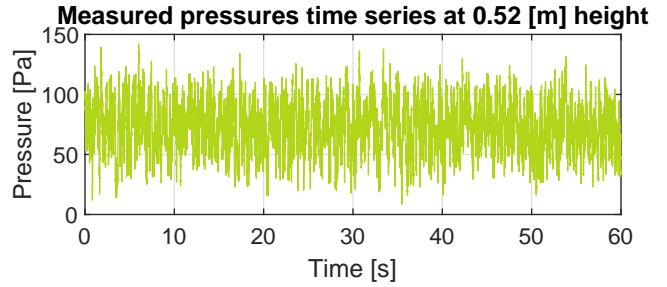
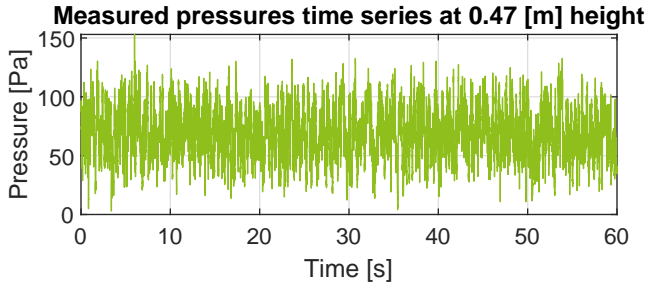
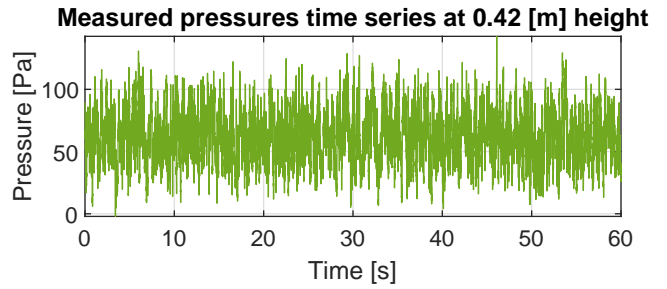
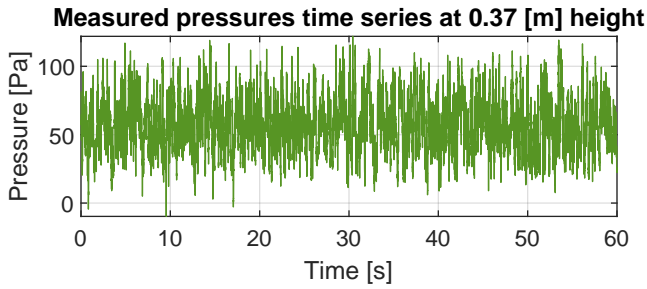
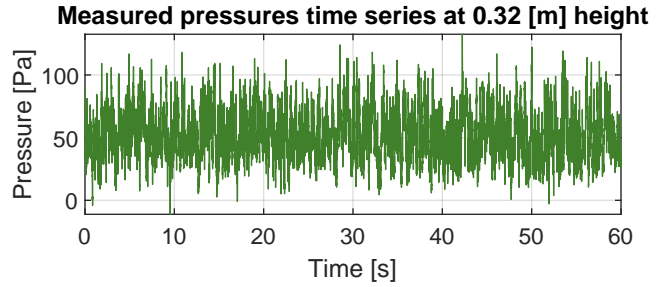
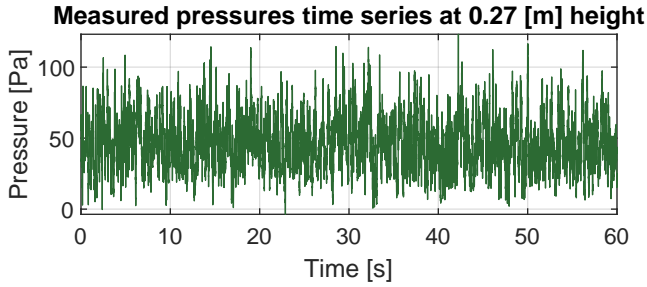
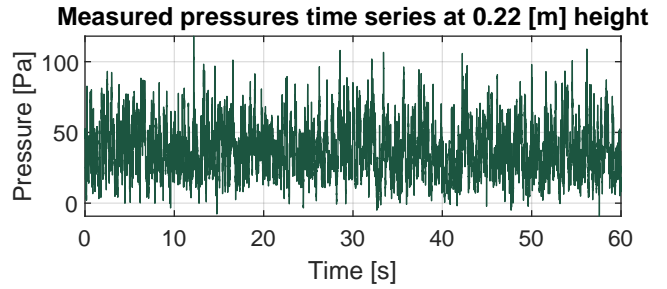
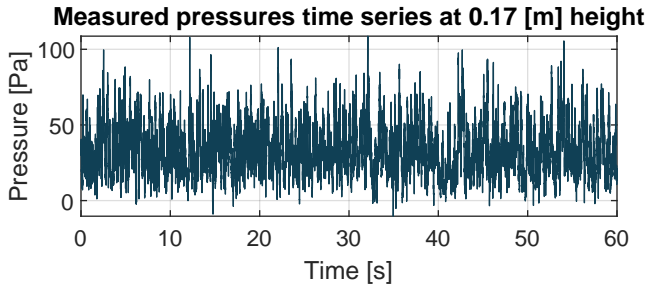
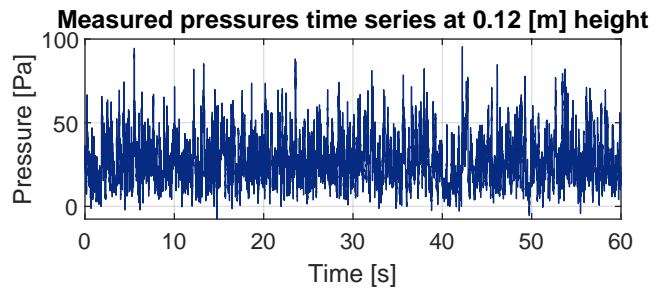
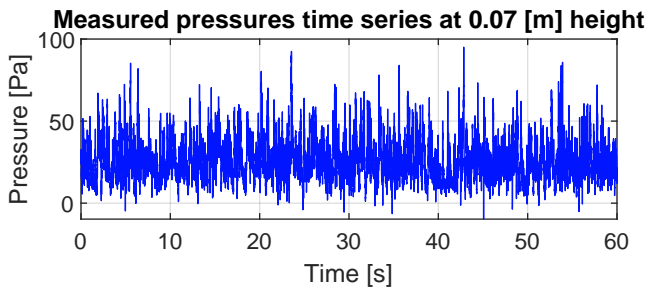


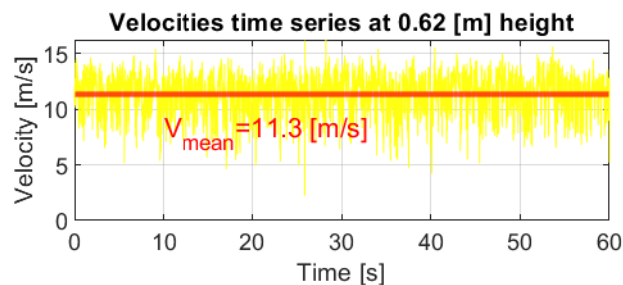
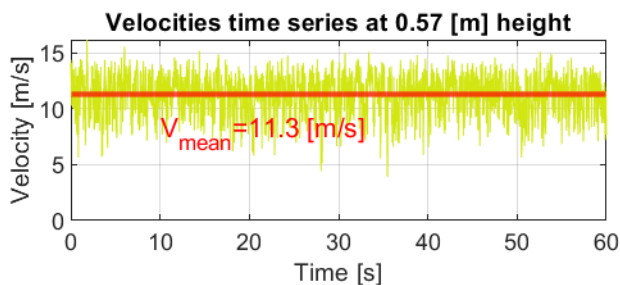
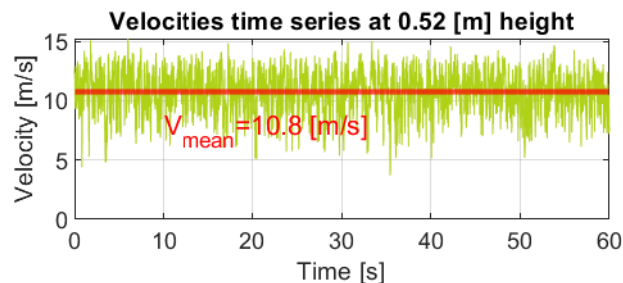
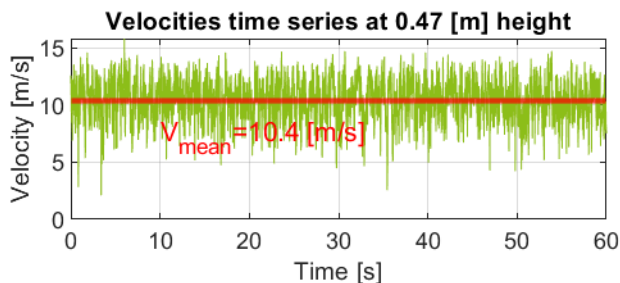
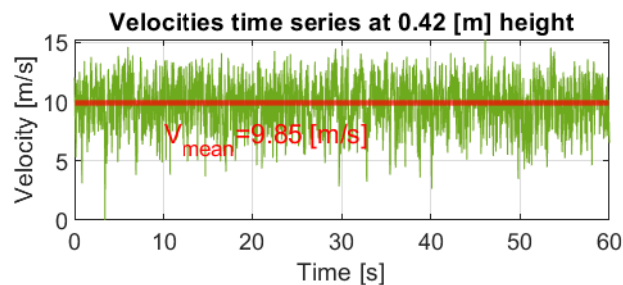
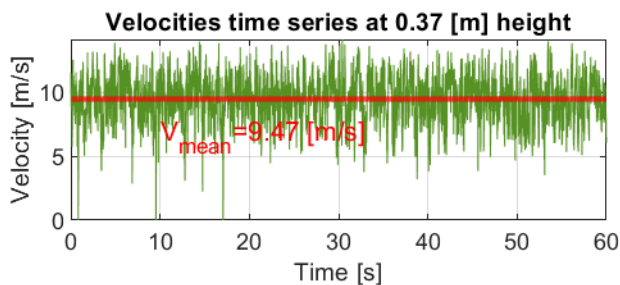
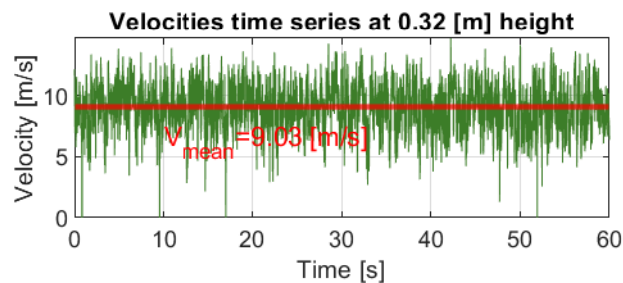
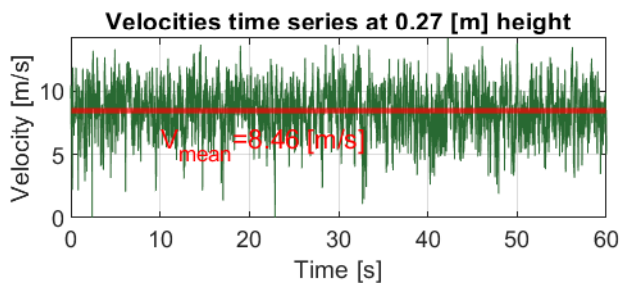
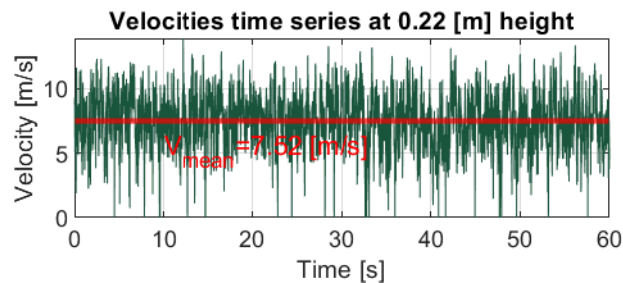
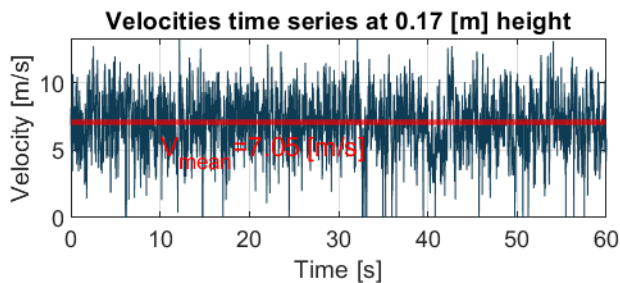
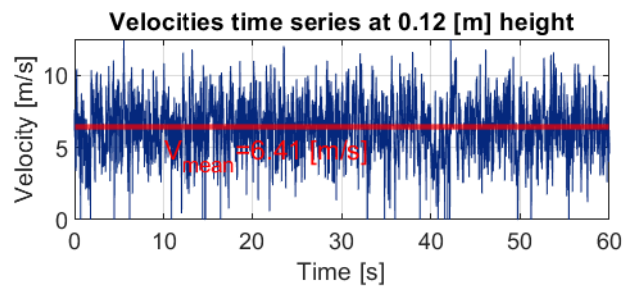
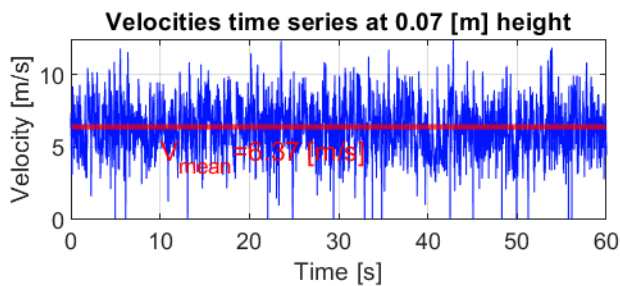
Mean wind velocity profile - comparison with ASCE/SEI 7



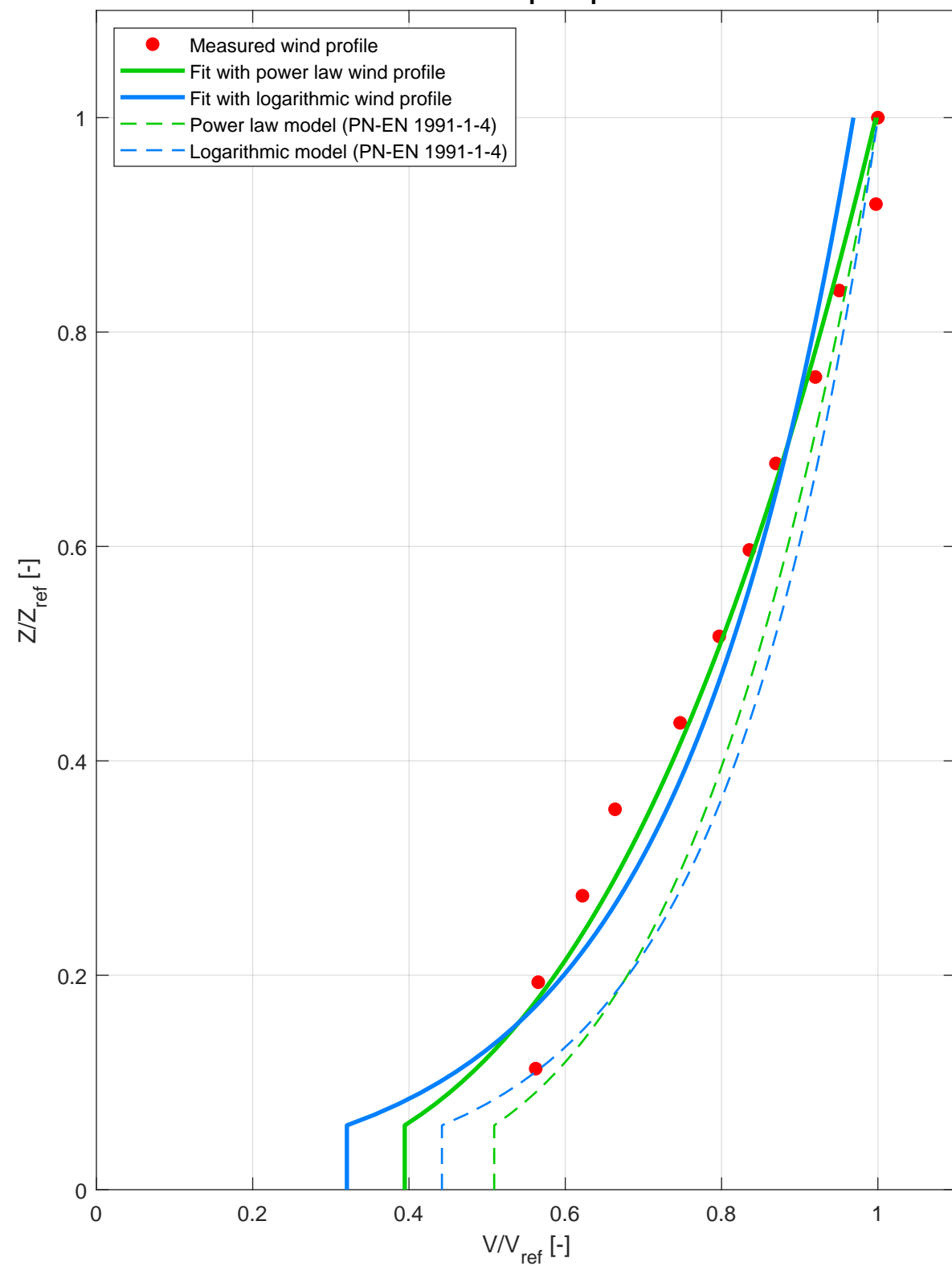
Plots for the test cases representative of terrain roughness categories according to ISO 4354

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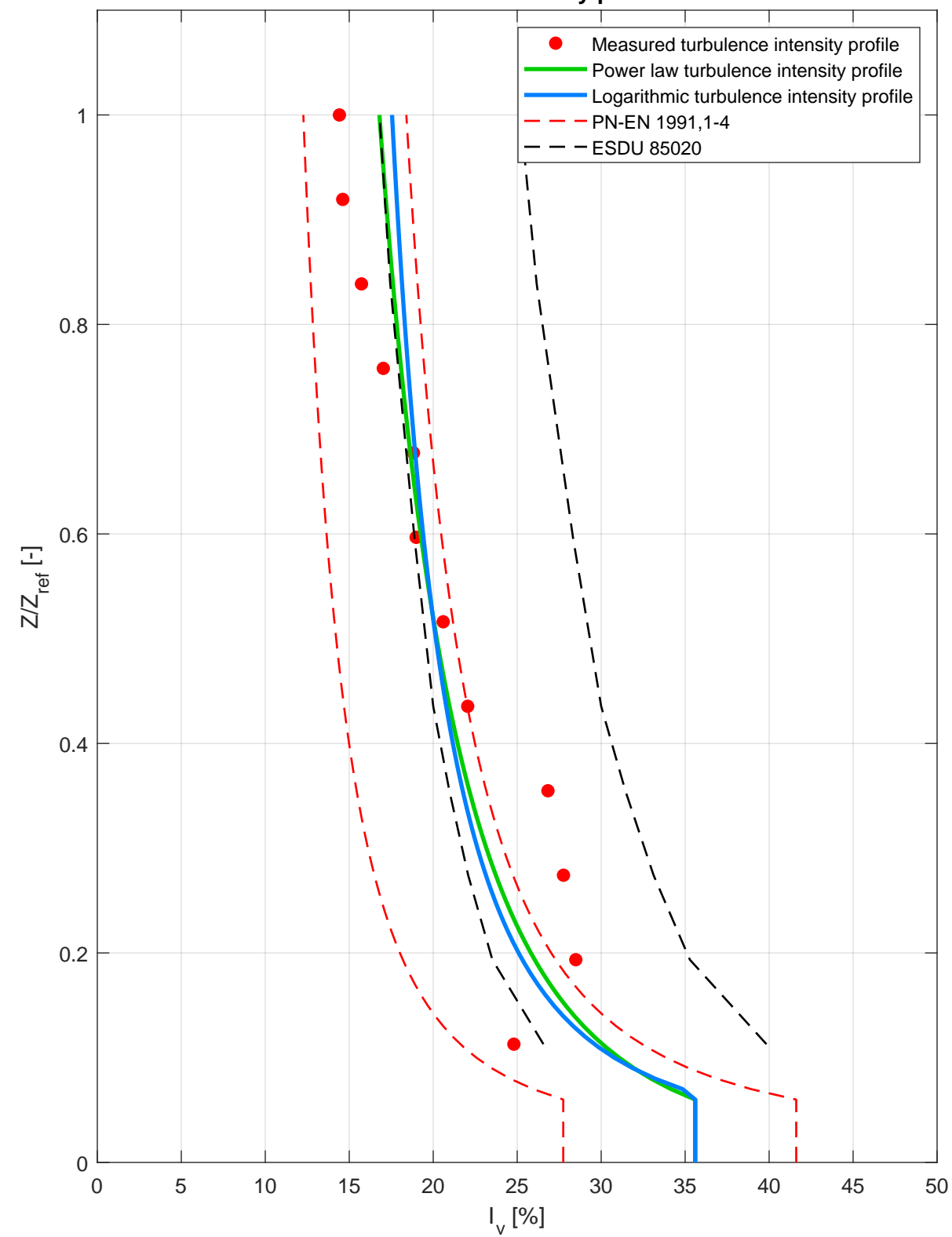




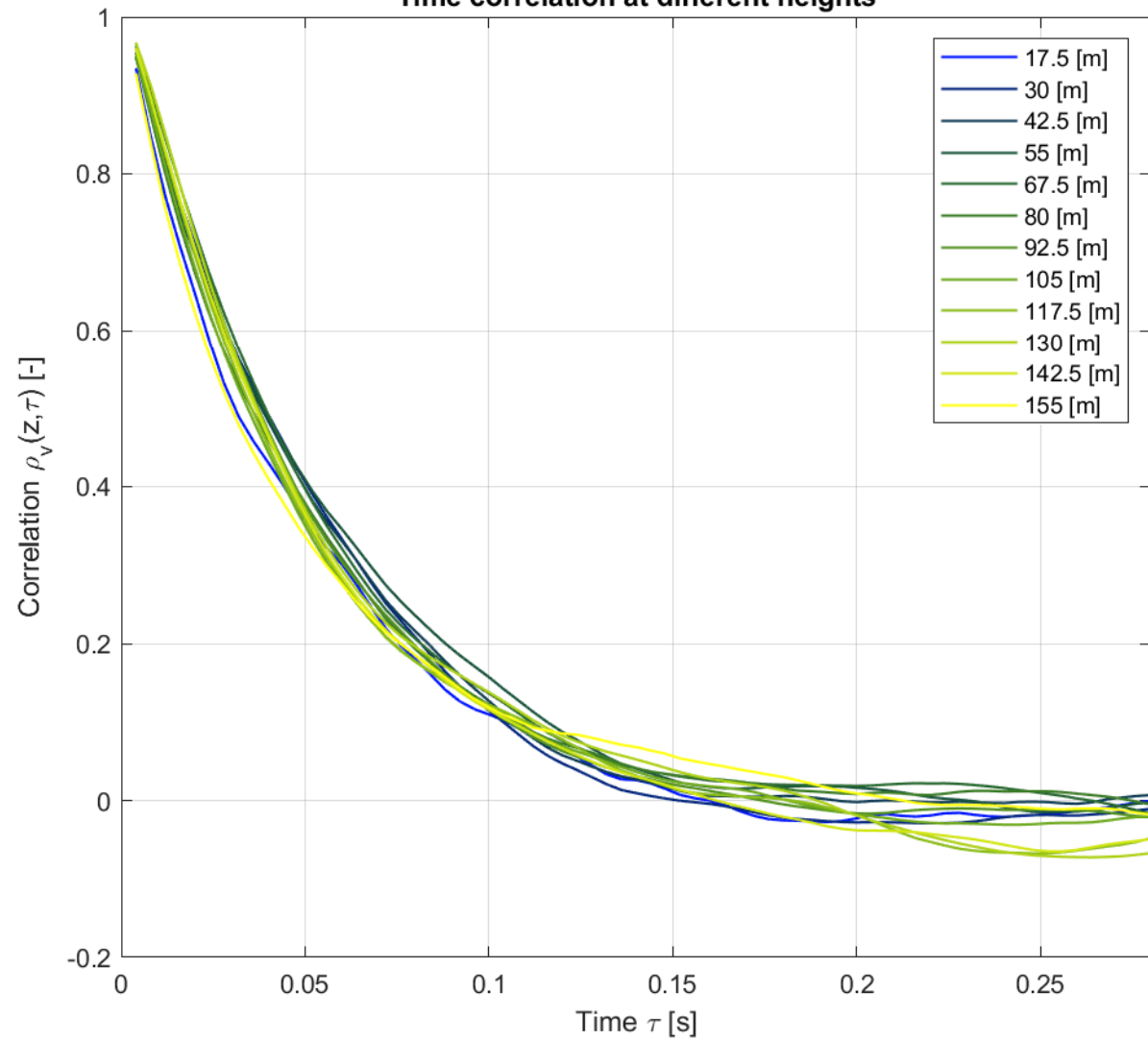
Mean wind speed profile



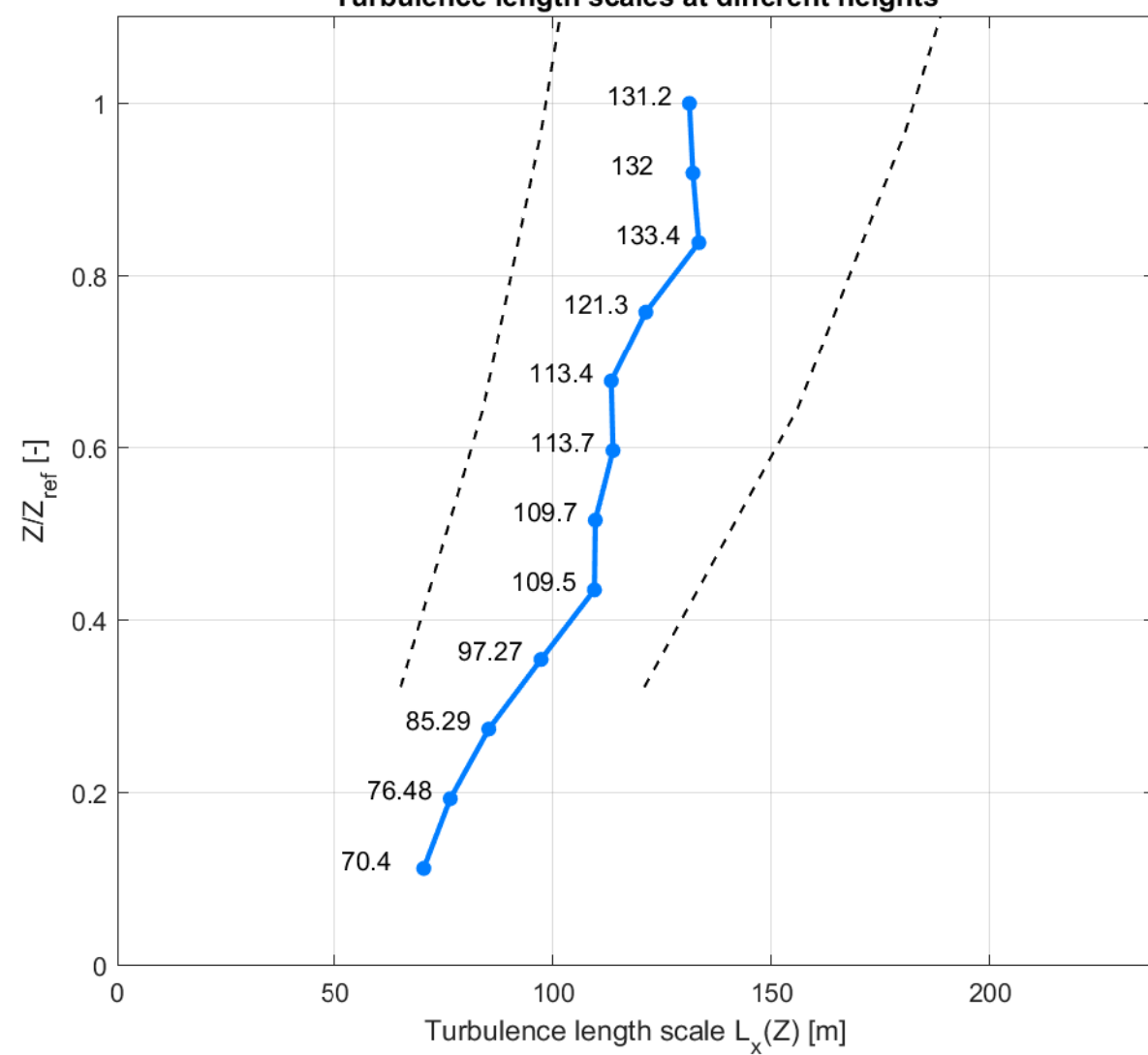
Turbulence intensity profile



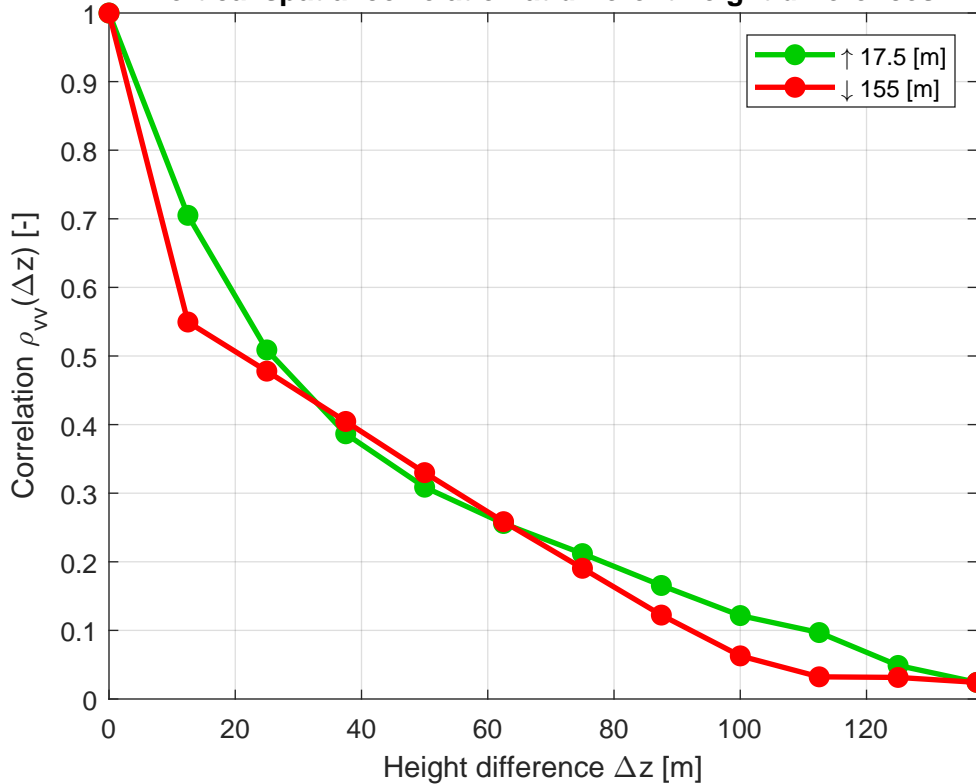
Time correlation at different heights



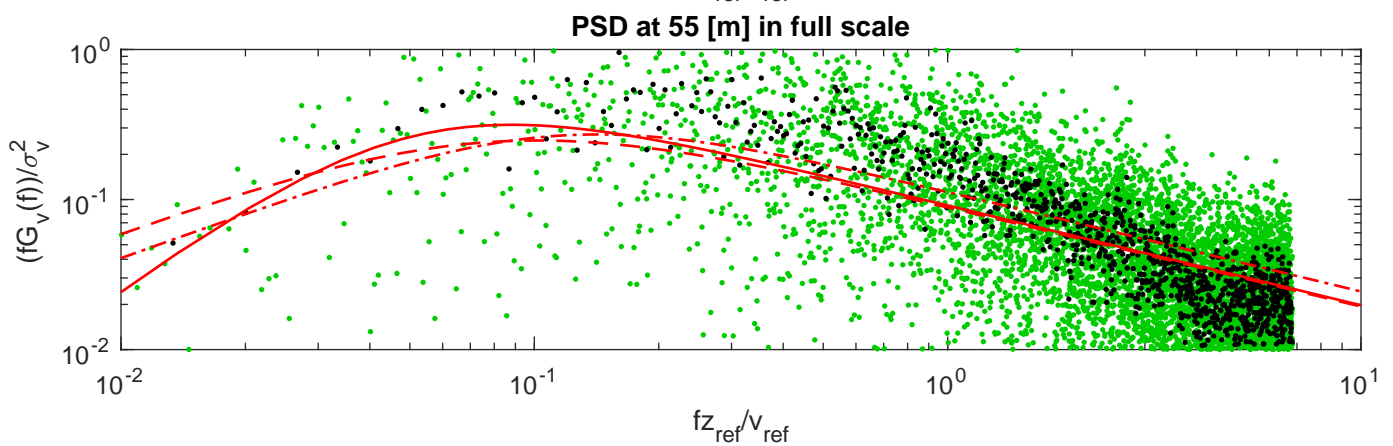
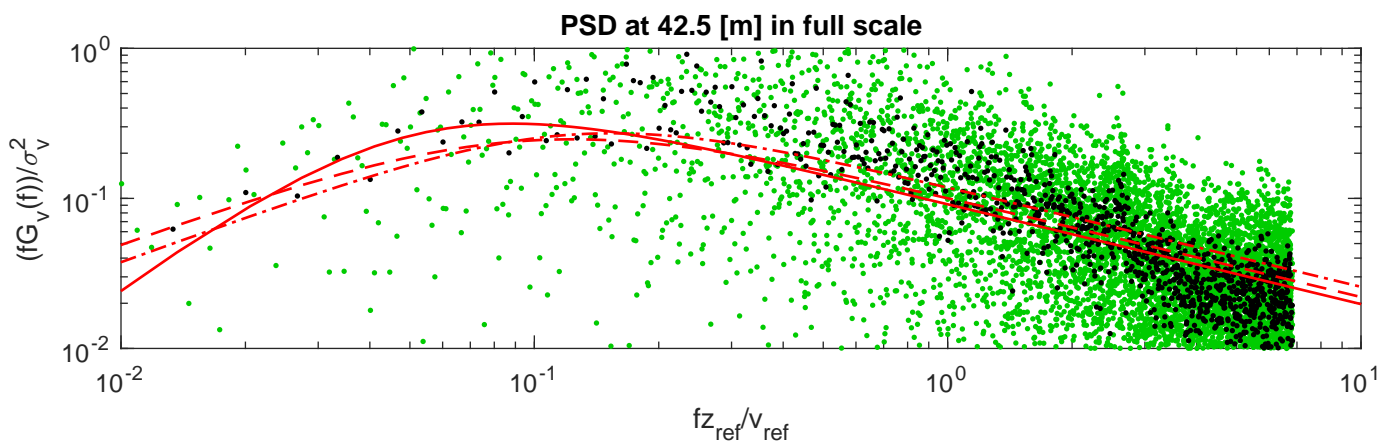
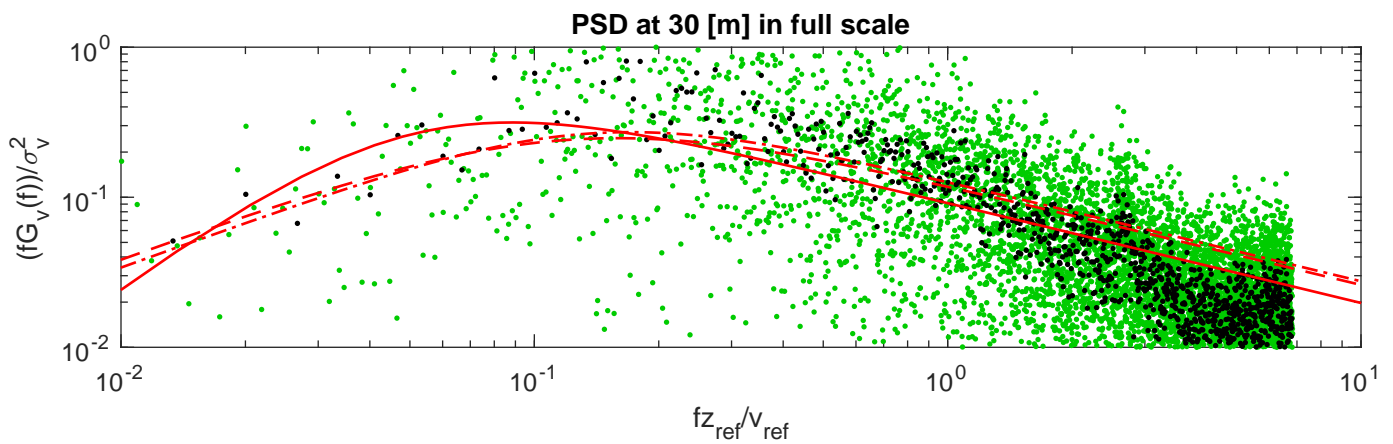
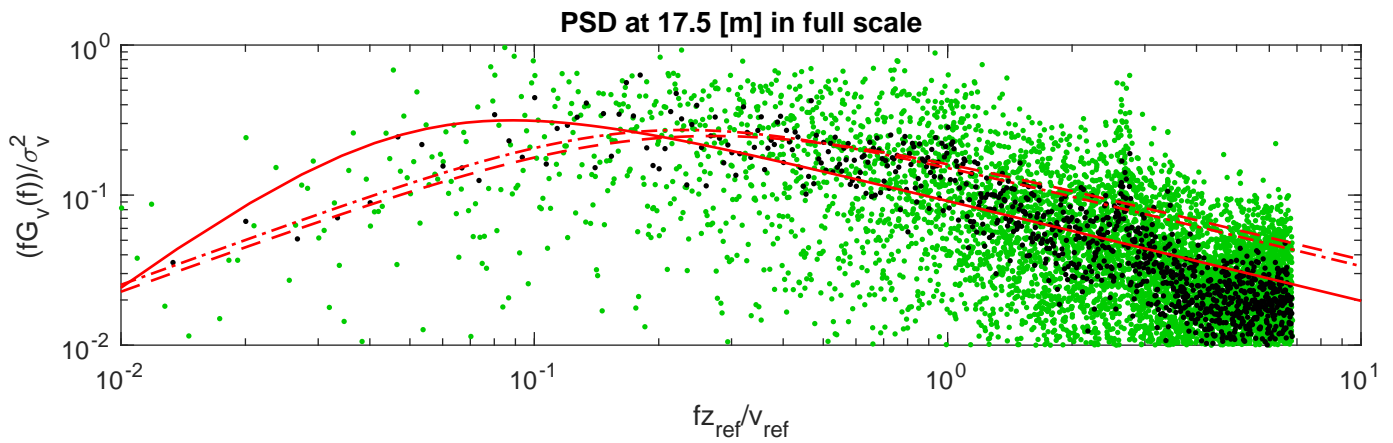
Turbulence length scales at different heights



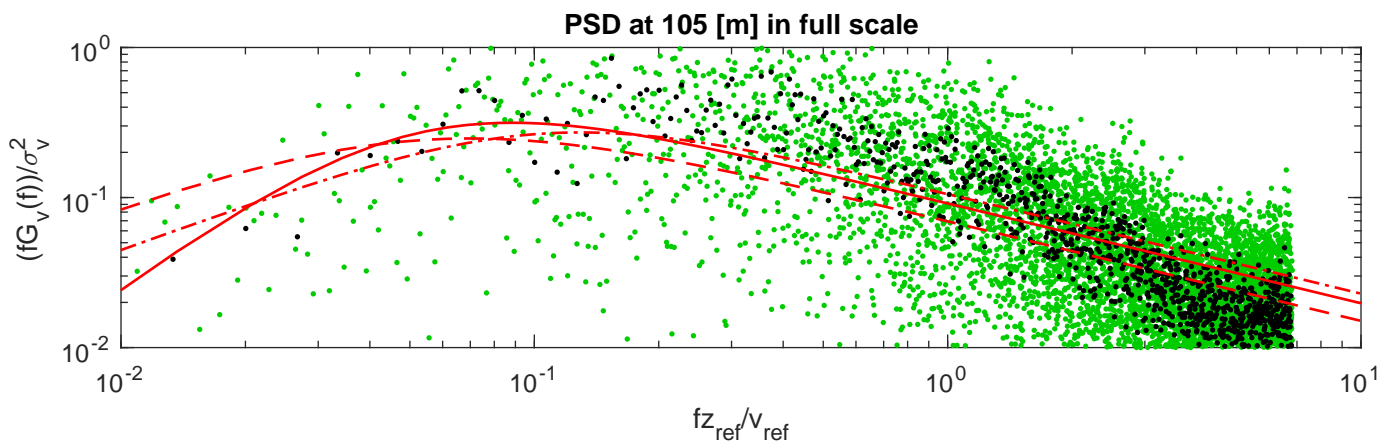
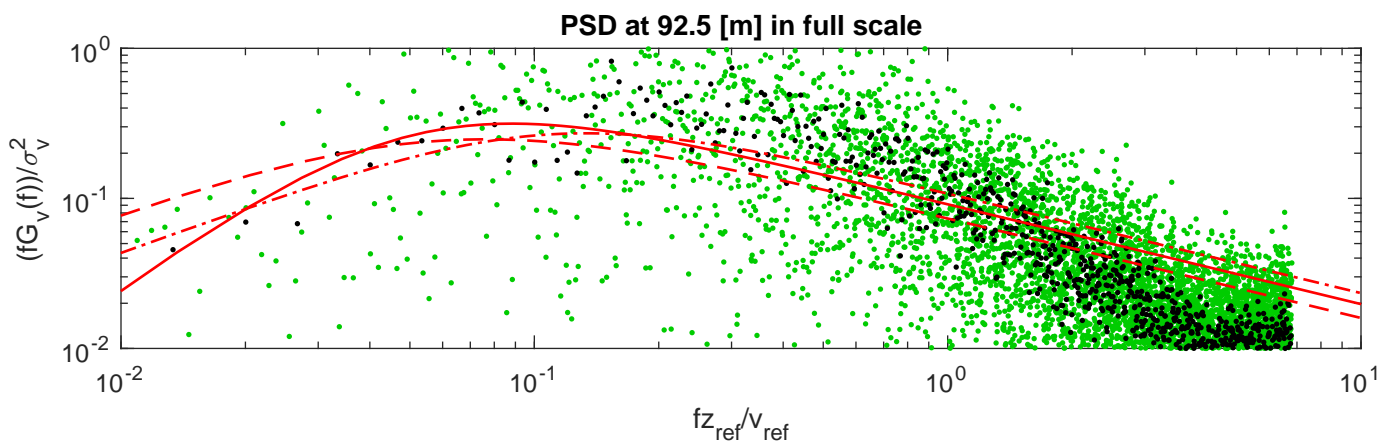
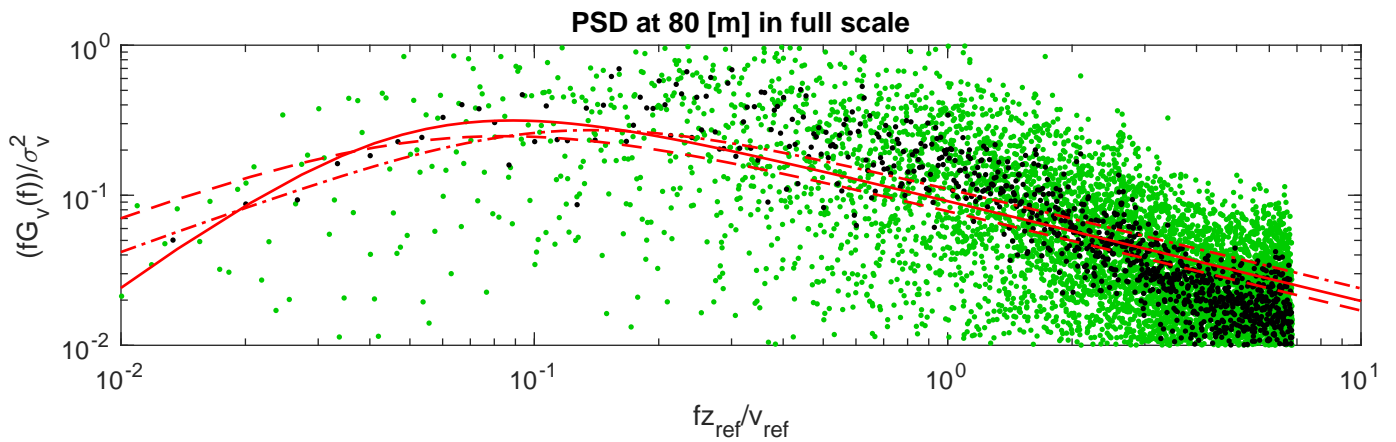
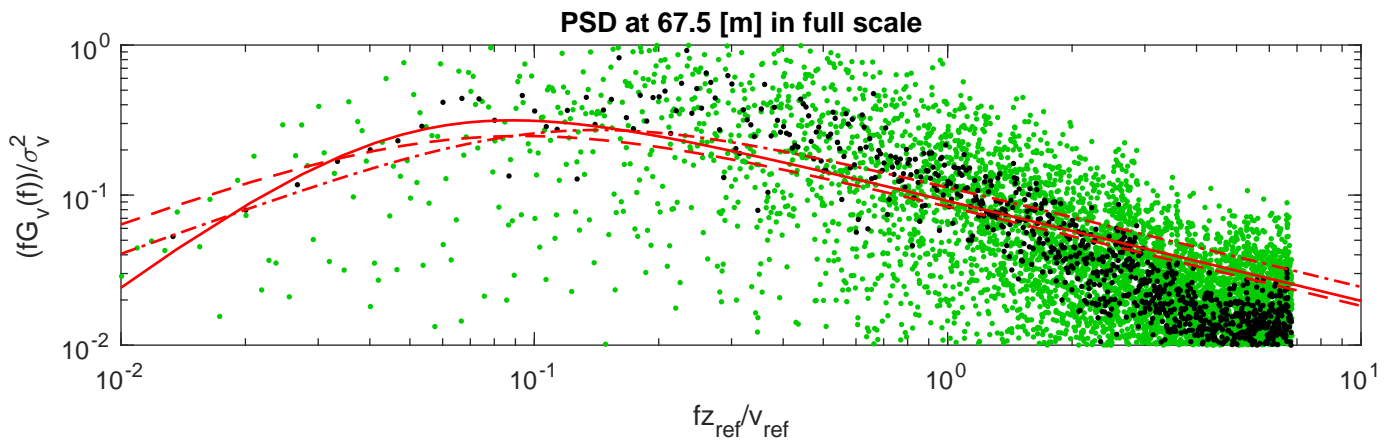
Vertical spatial correlation at different height differences



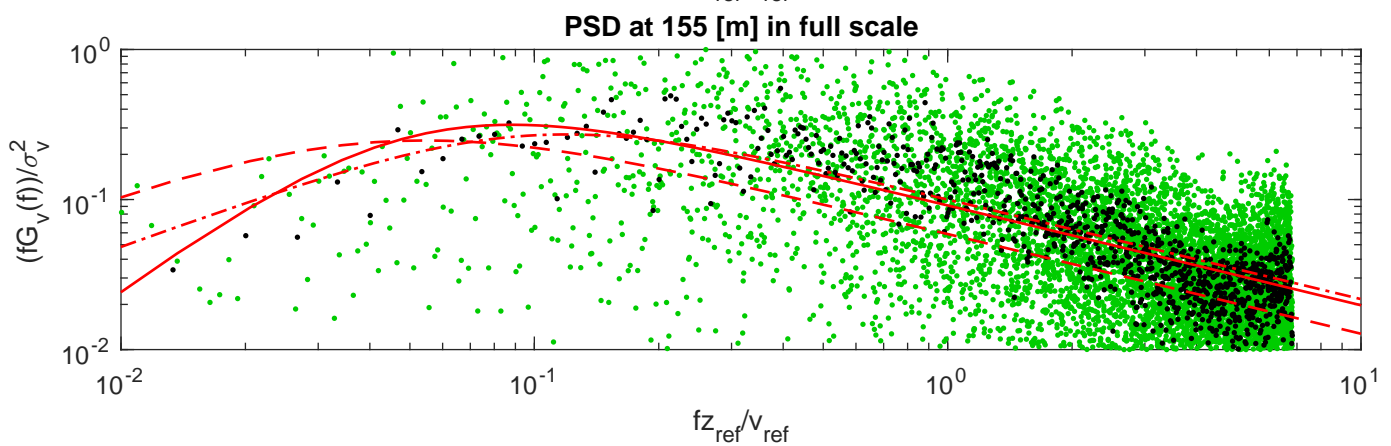
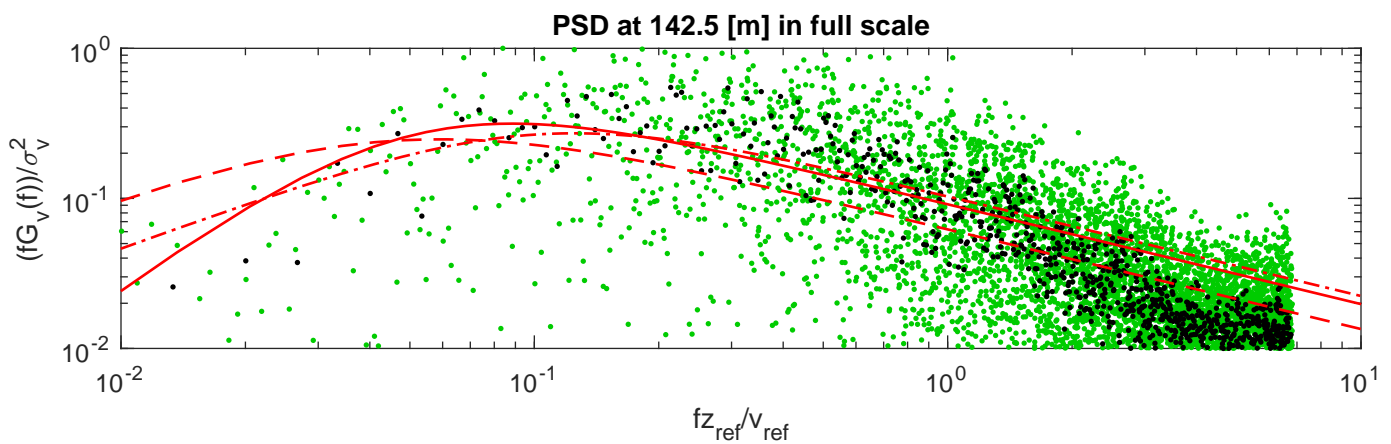
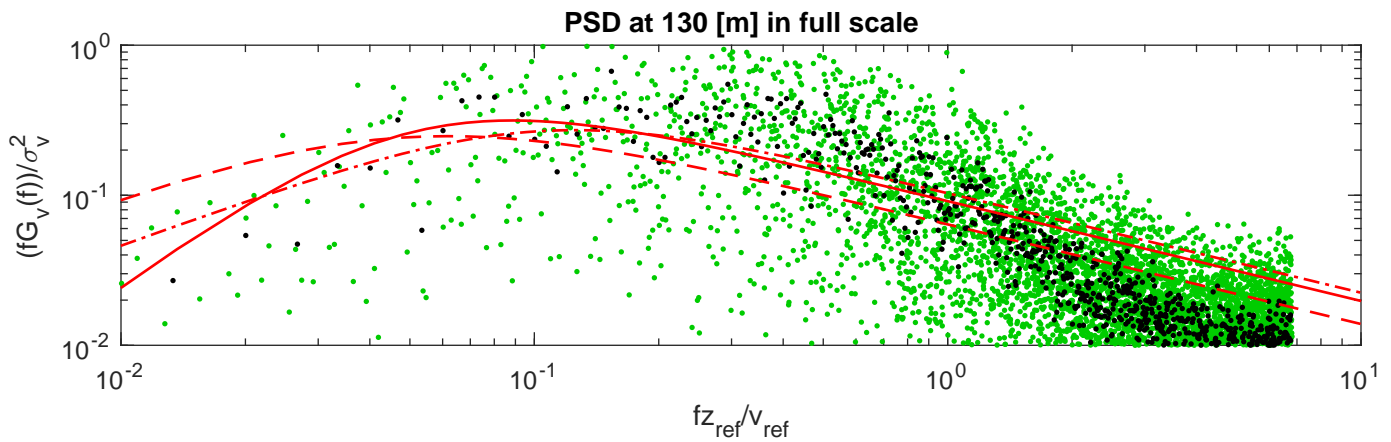
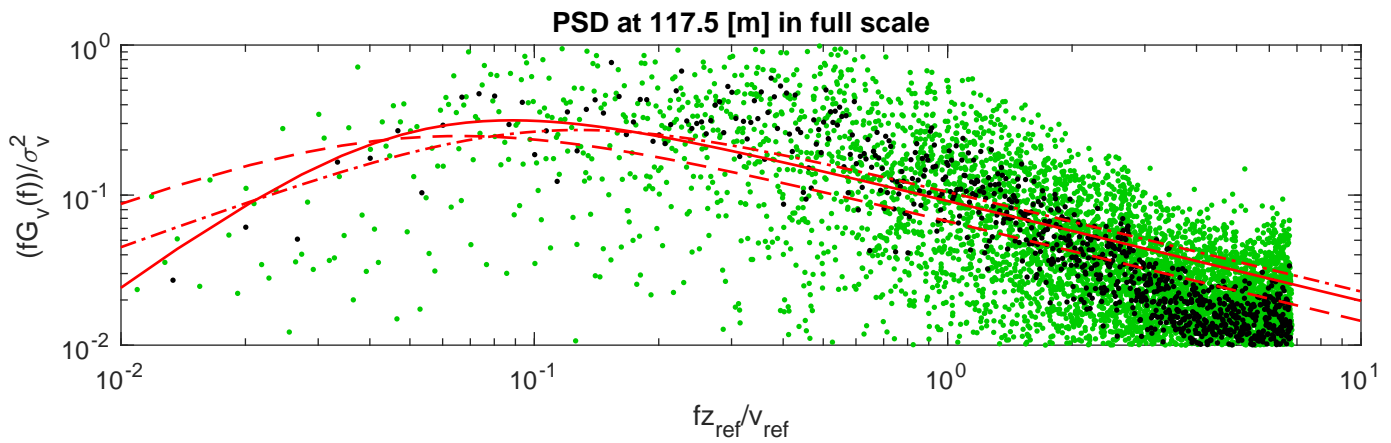
• From FFT • Welch method — Davenport - - - Kármán - · - Kaimal



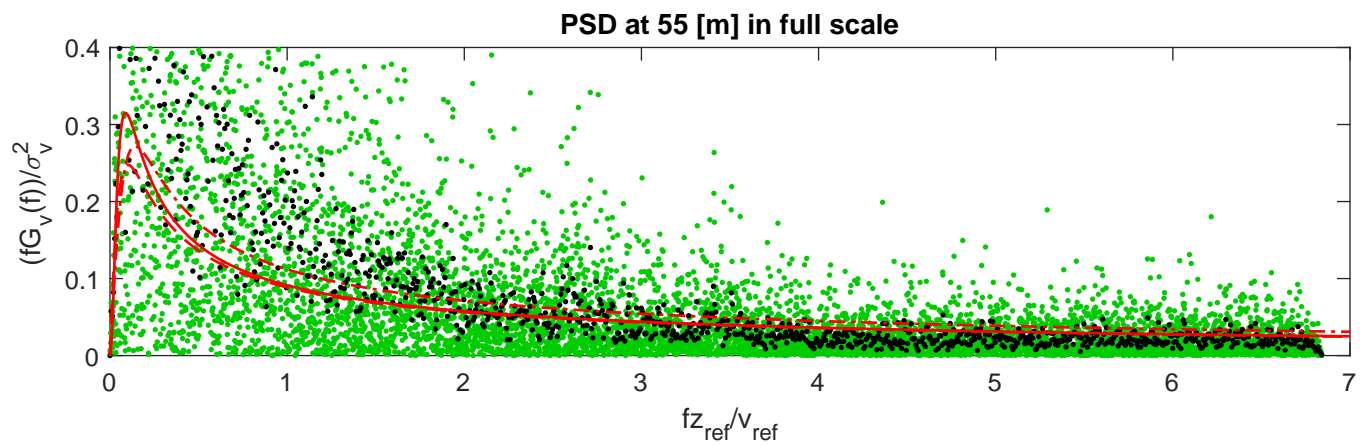
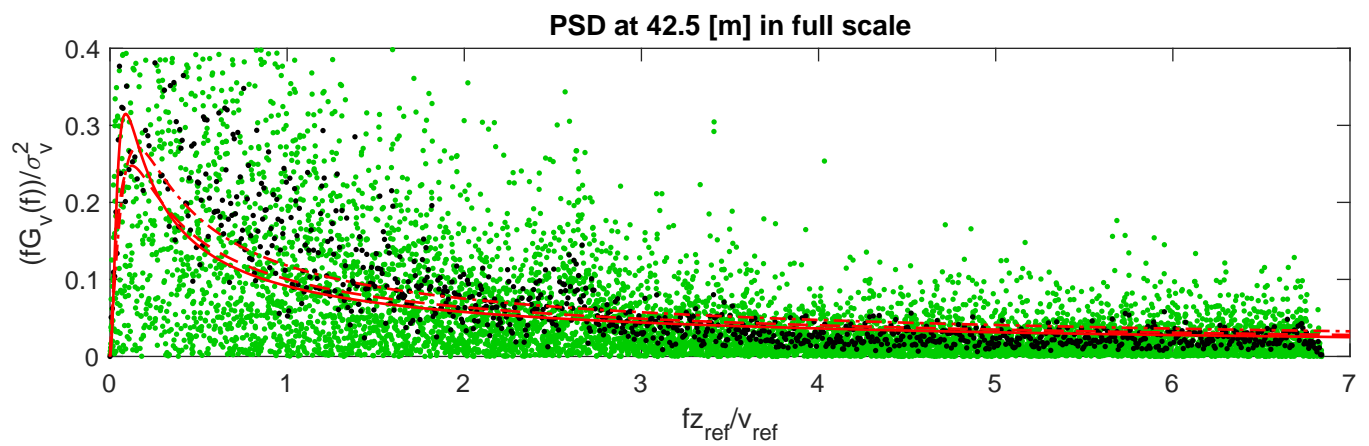
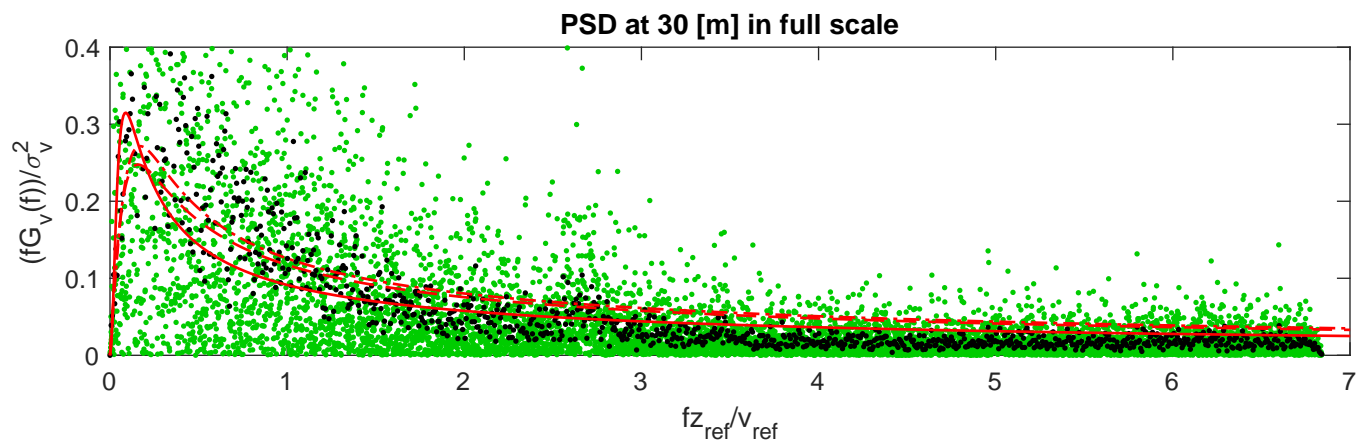
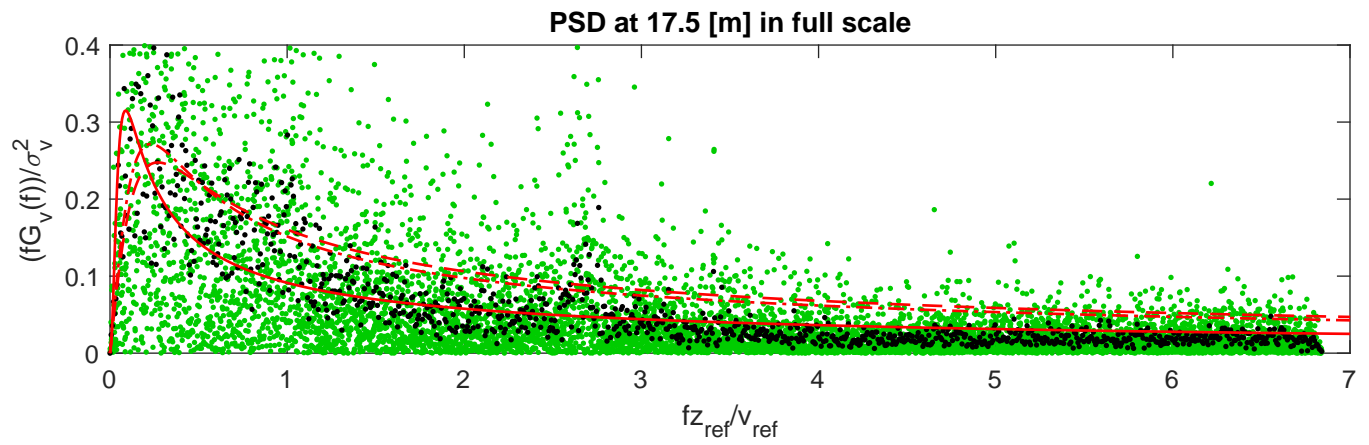
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



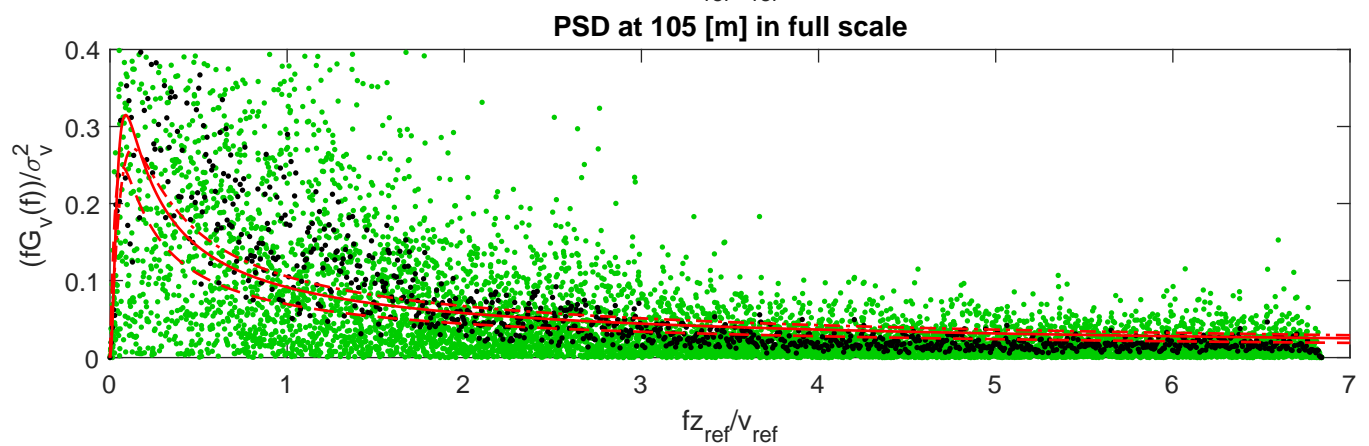
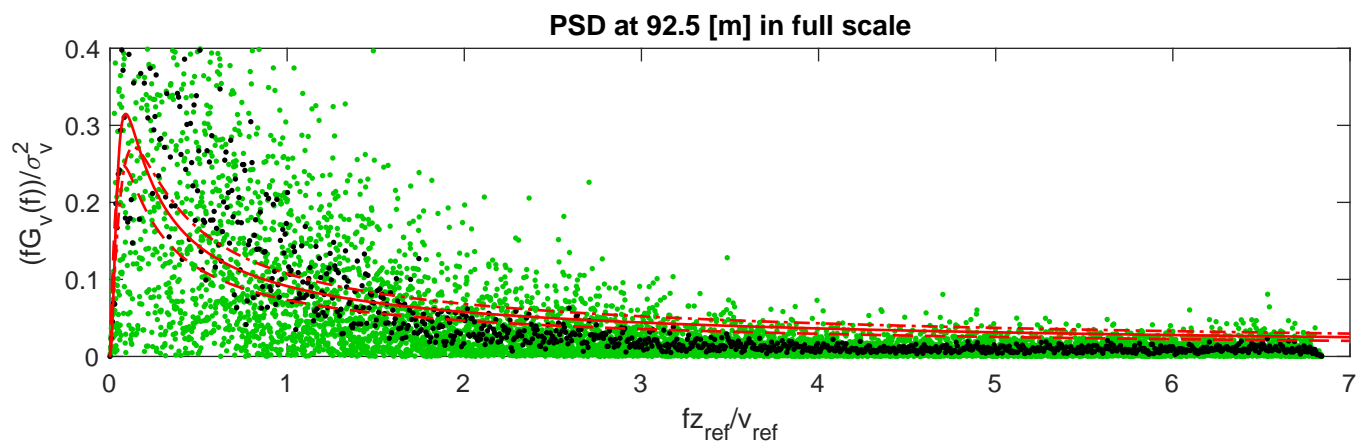
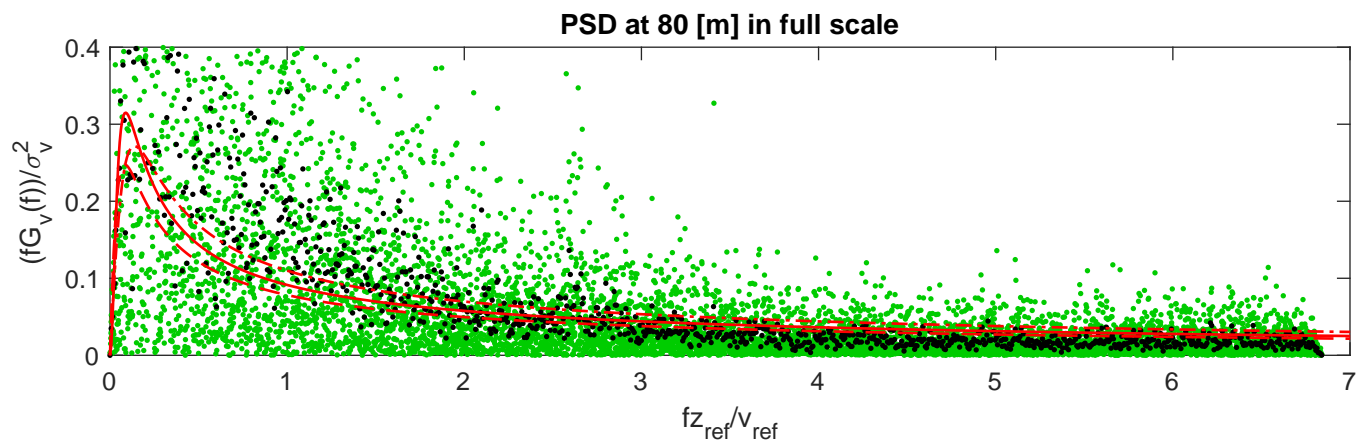
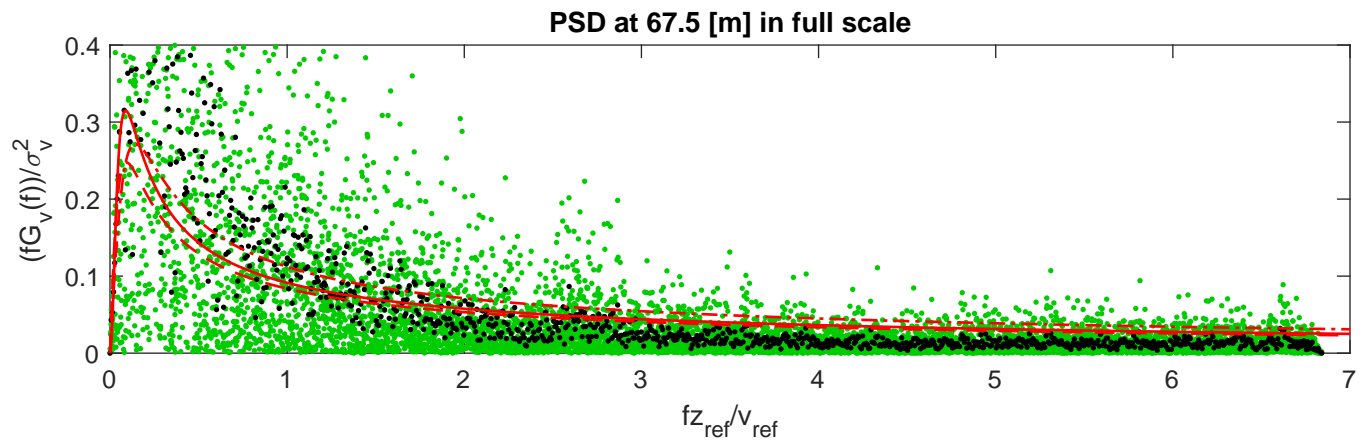
• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

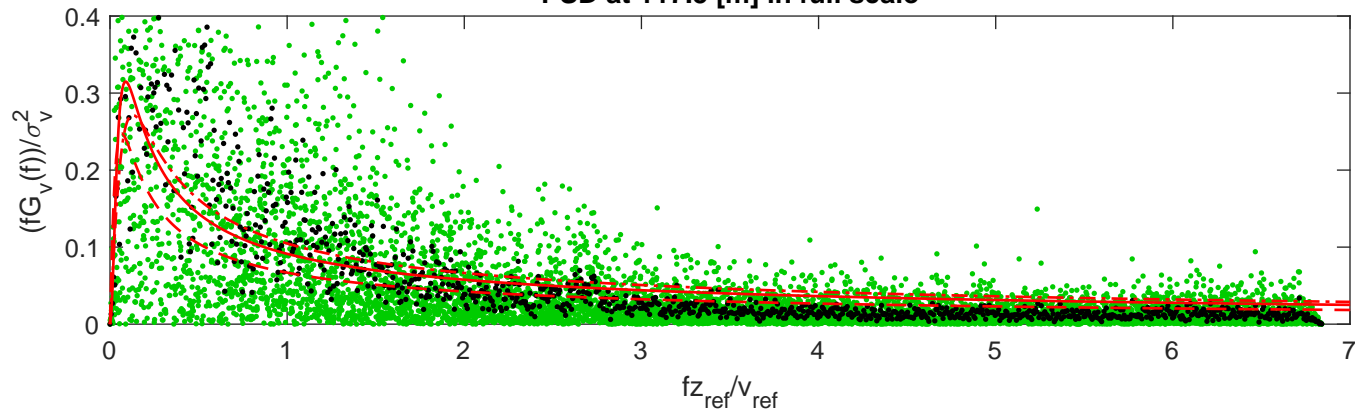


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

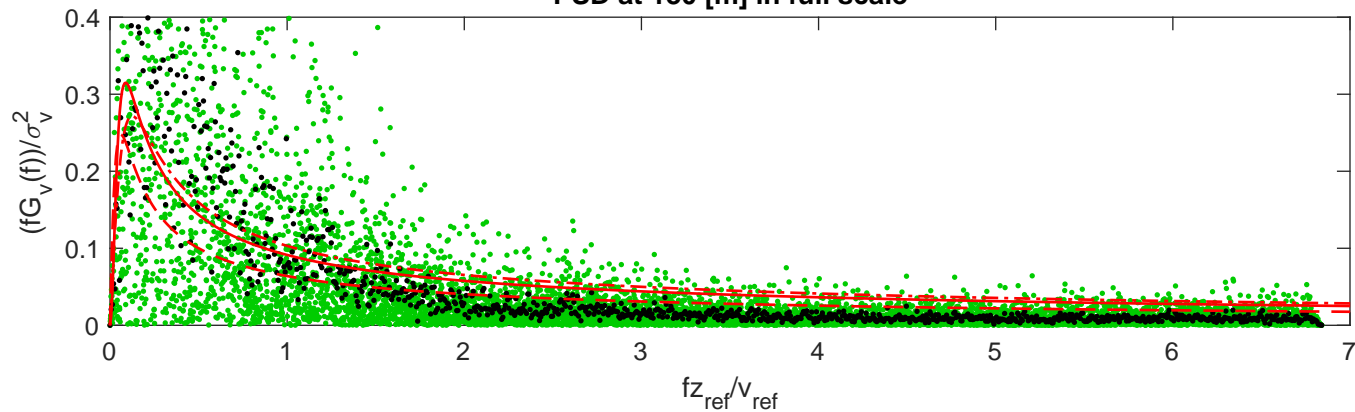


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

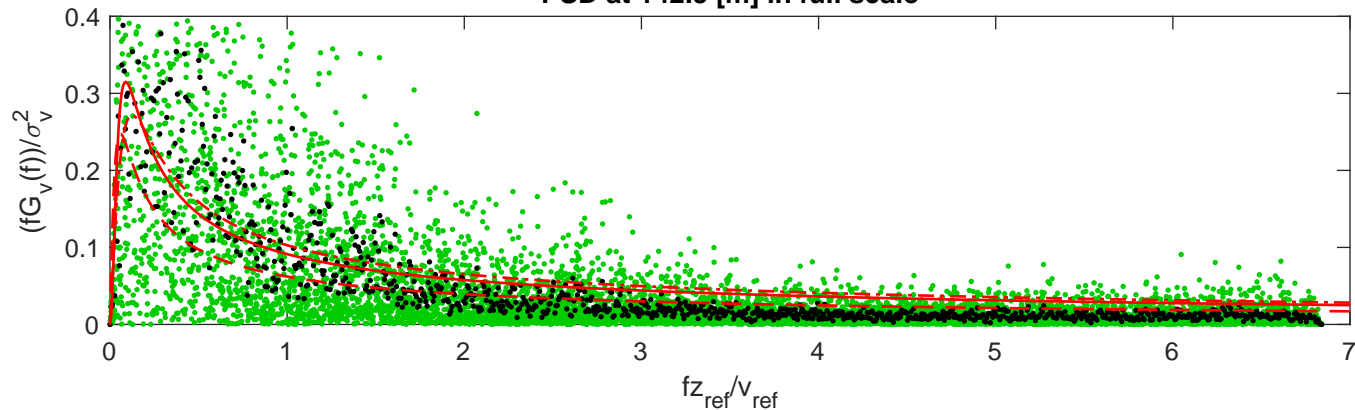
PSD at 117.5 [m] in full scale



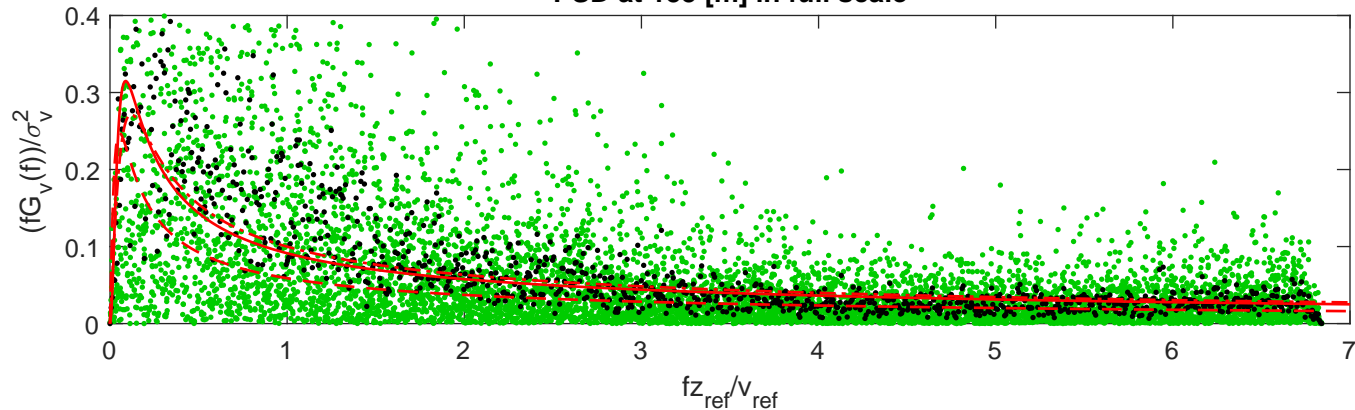
PSD at 130 [m] in full scale

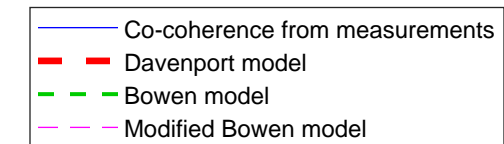
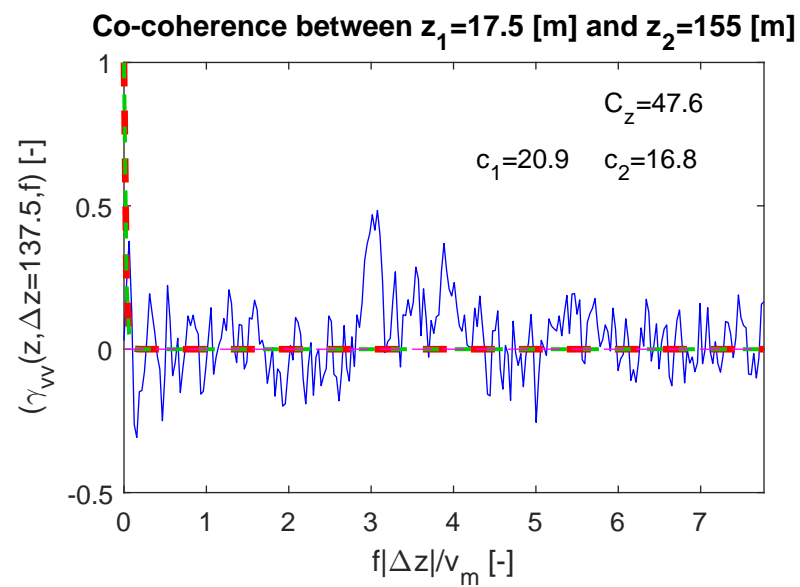
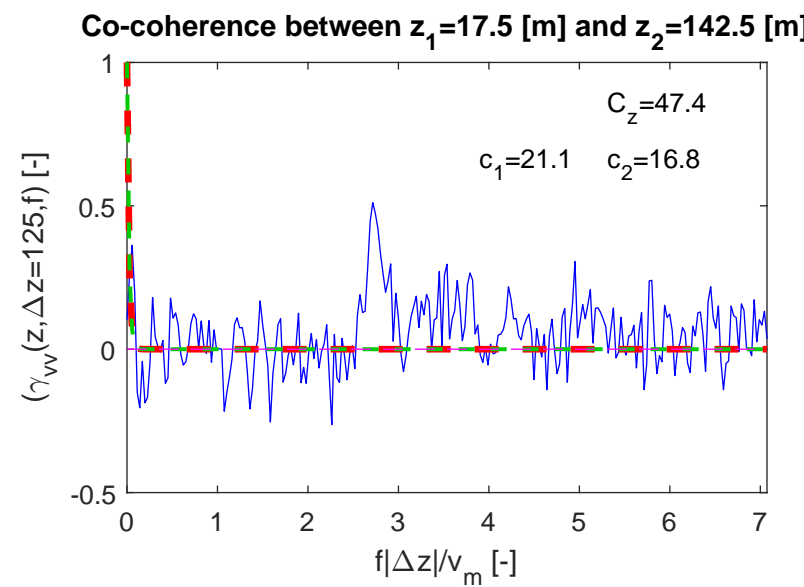
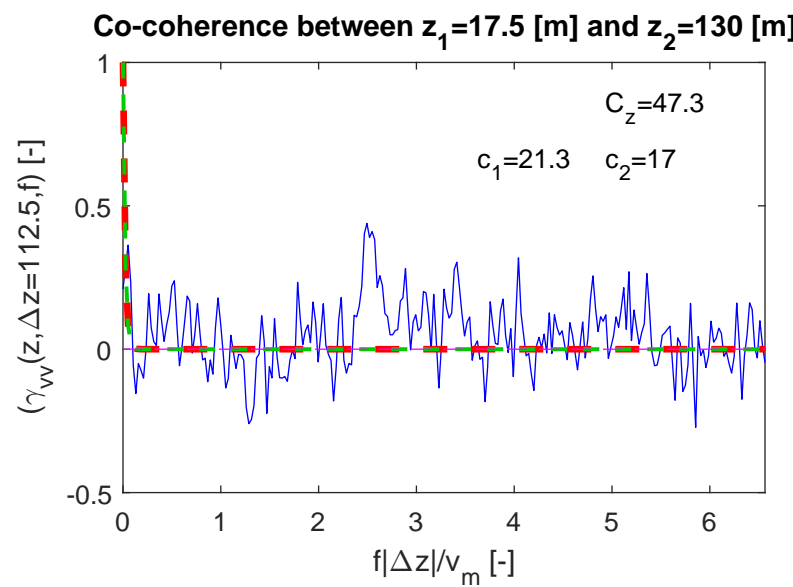
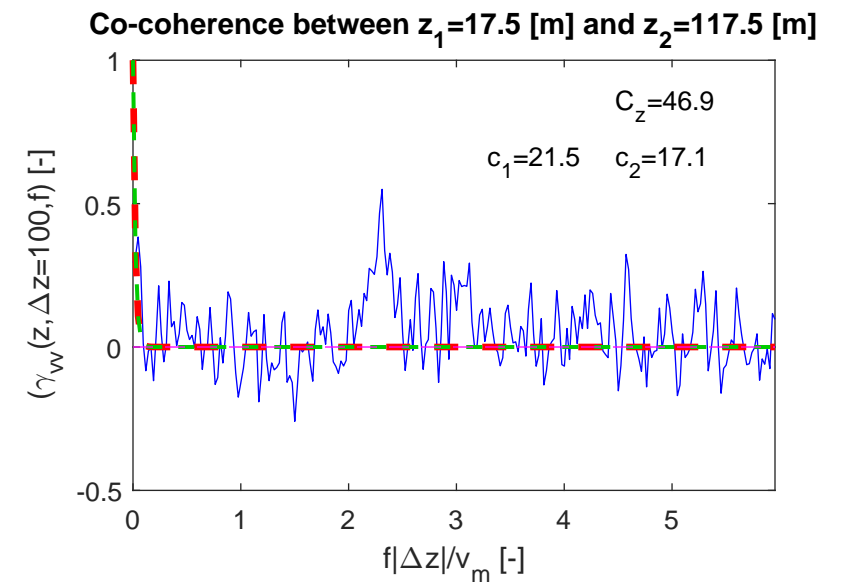
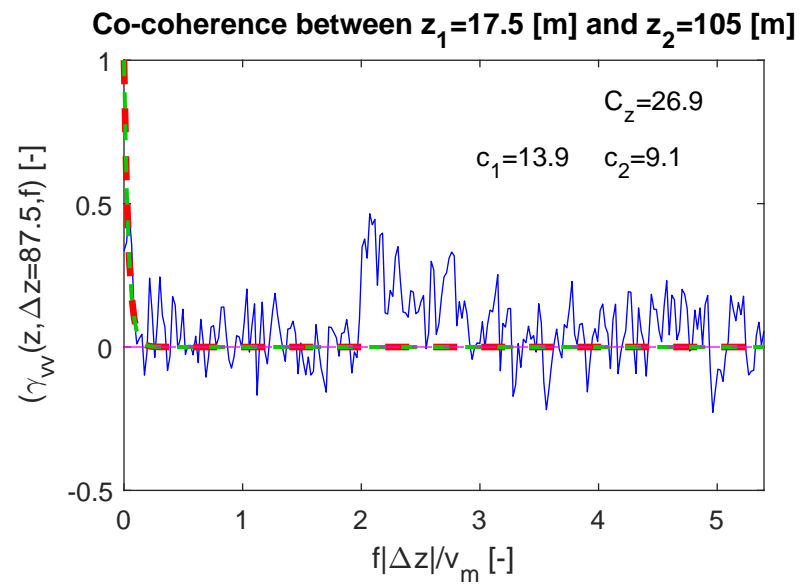
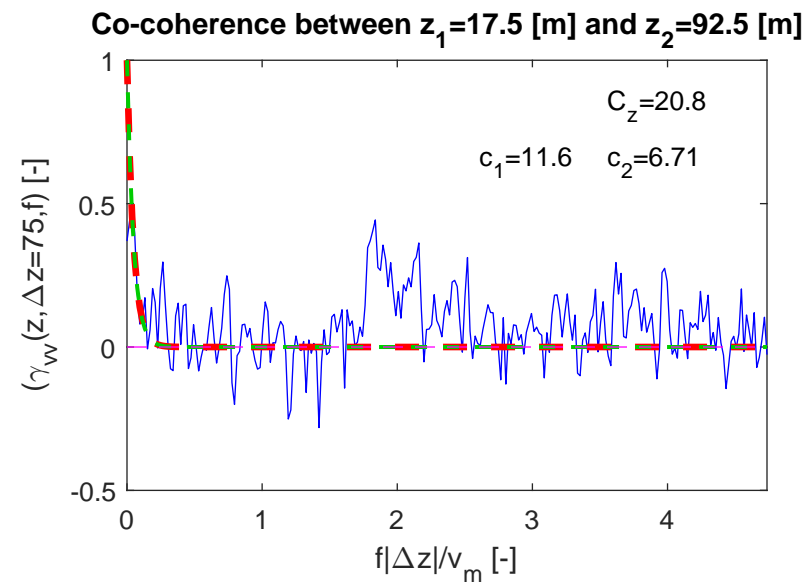
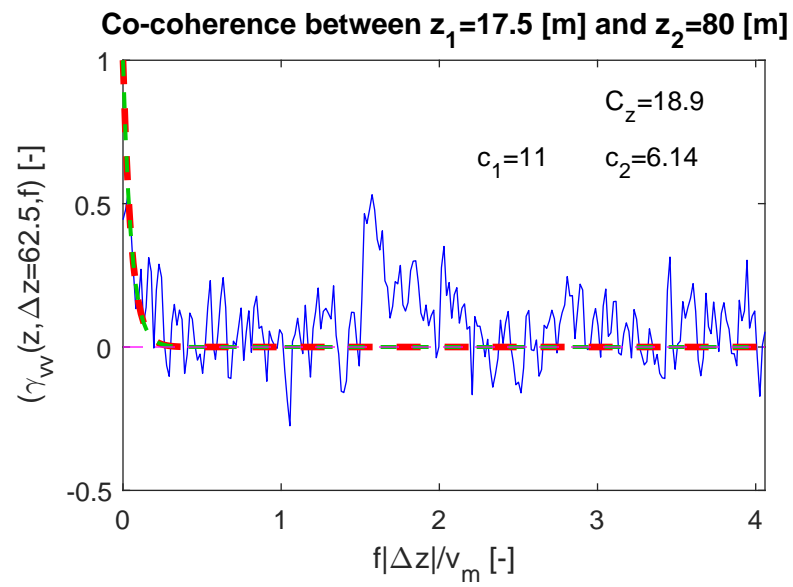
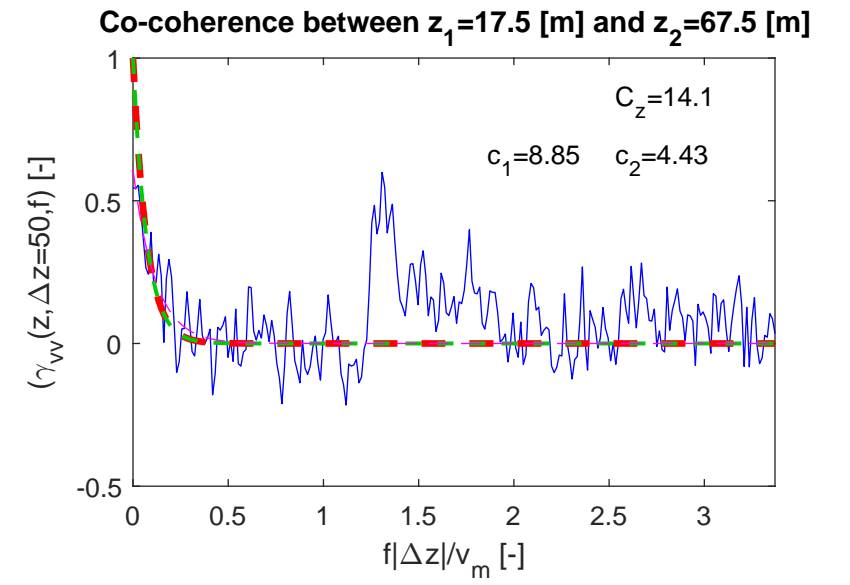
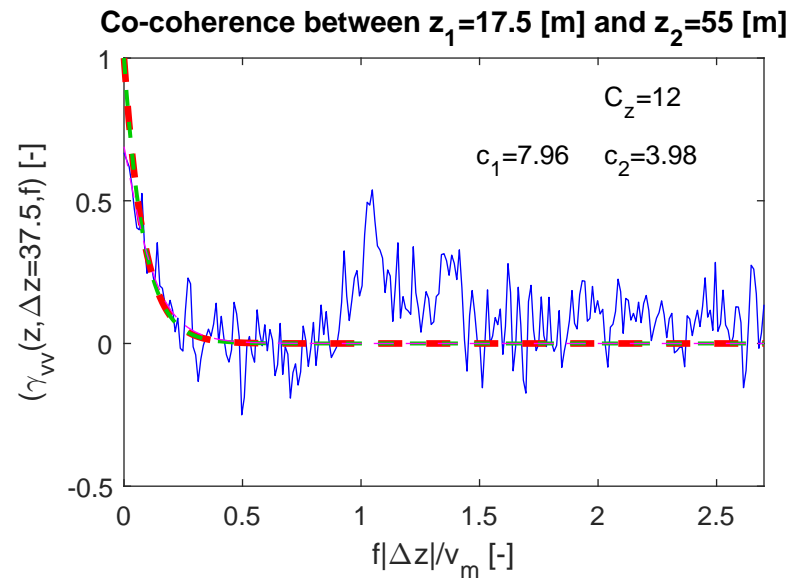
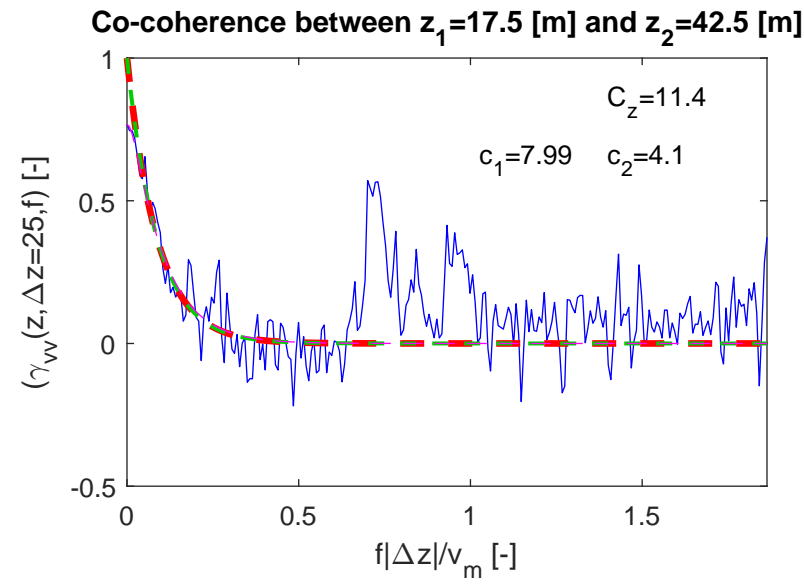
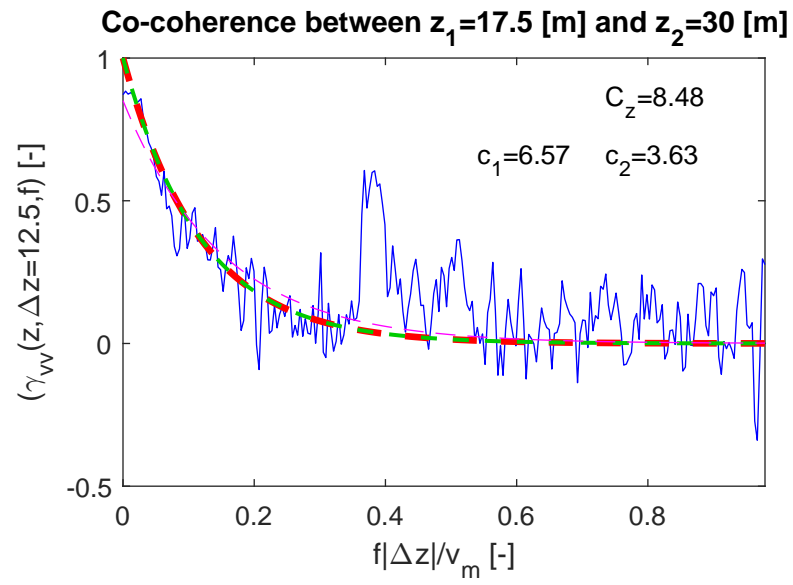


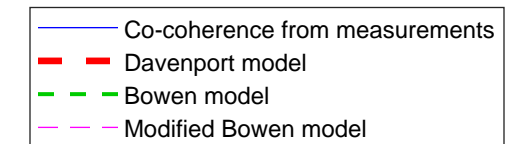
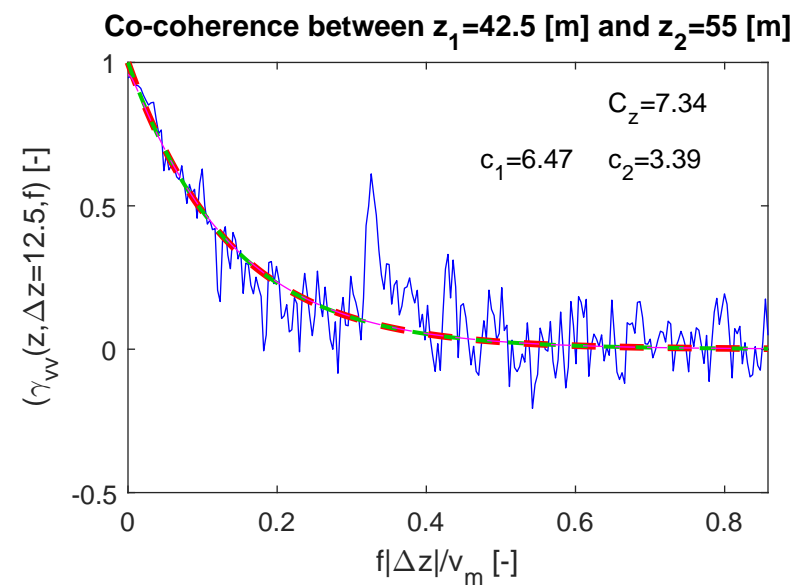
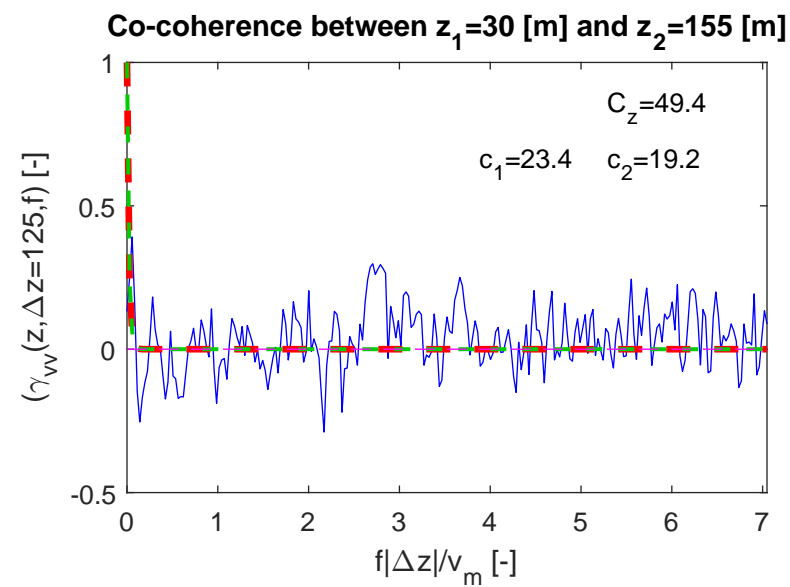
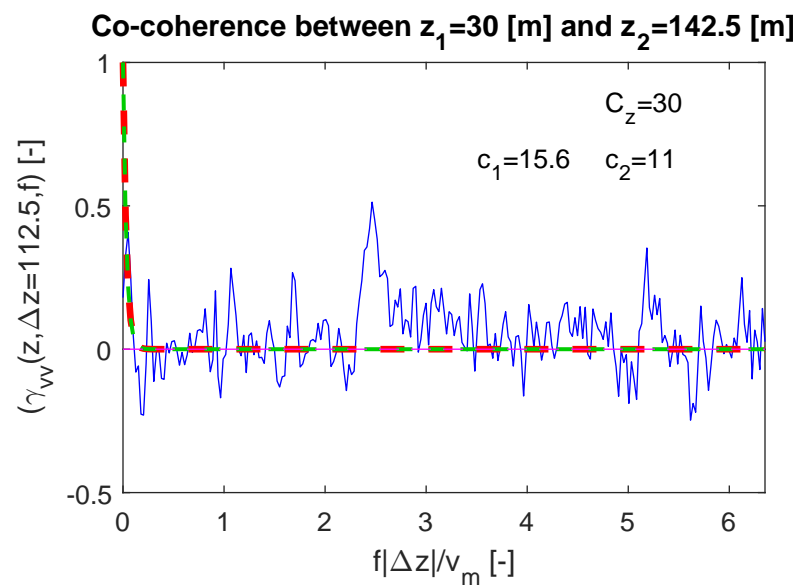
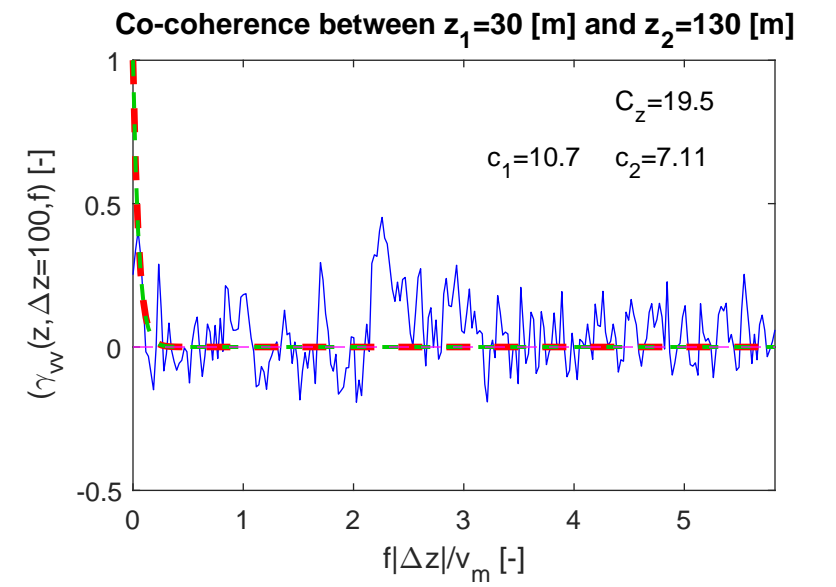
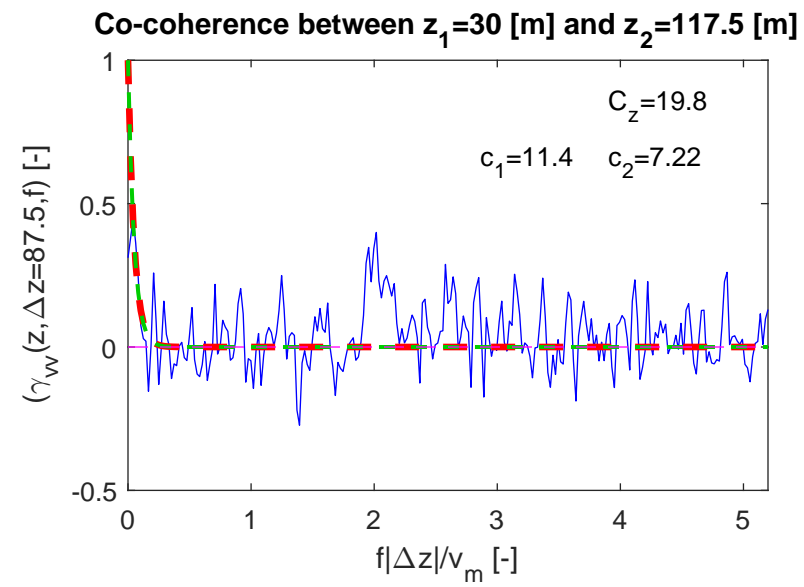
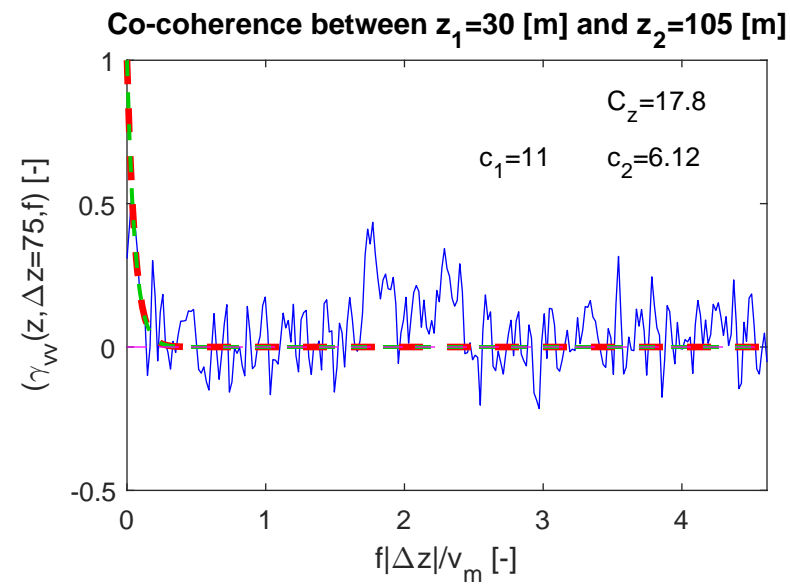
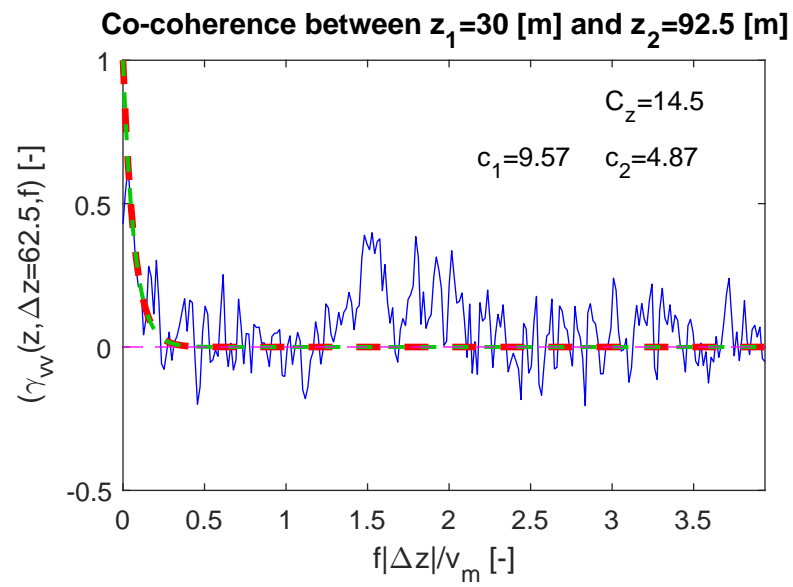
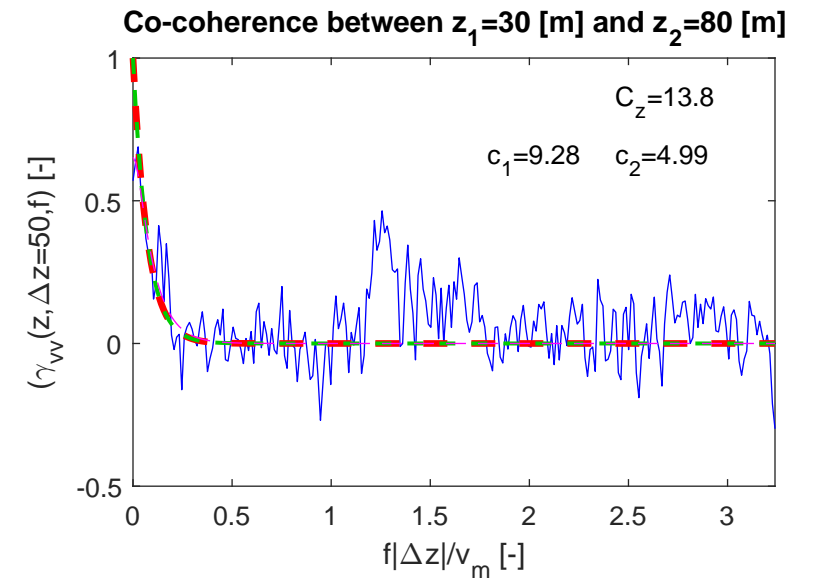
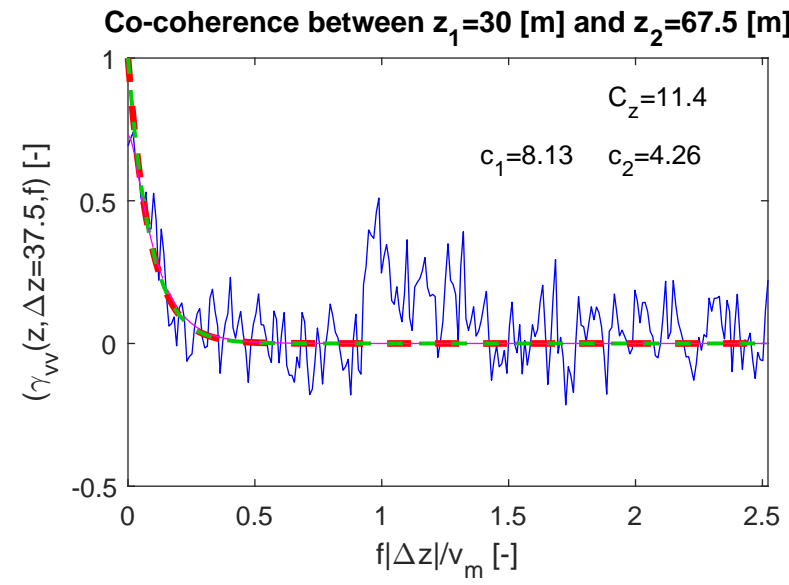
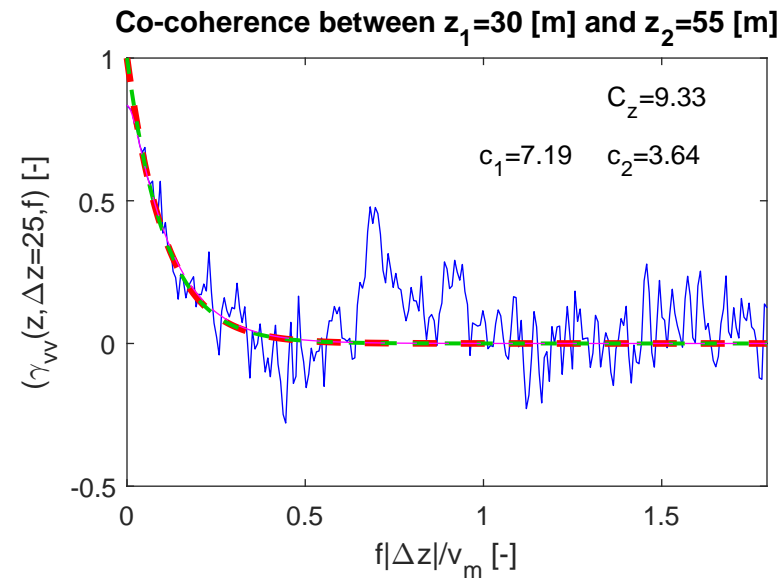
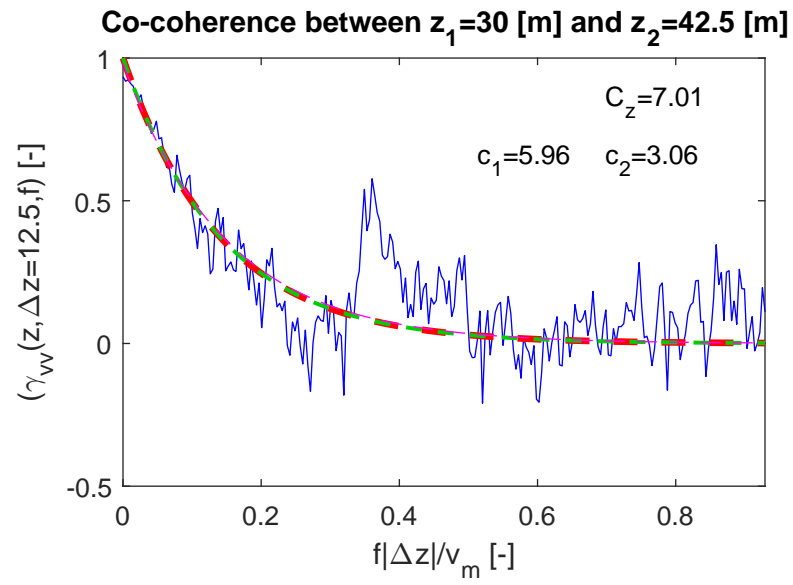
PSD at 142.5 [m] in full scale

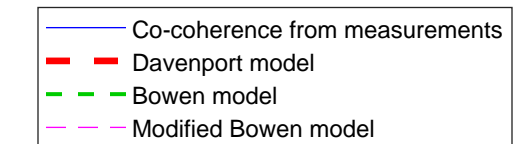
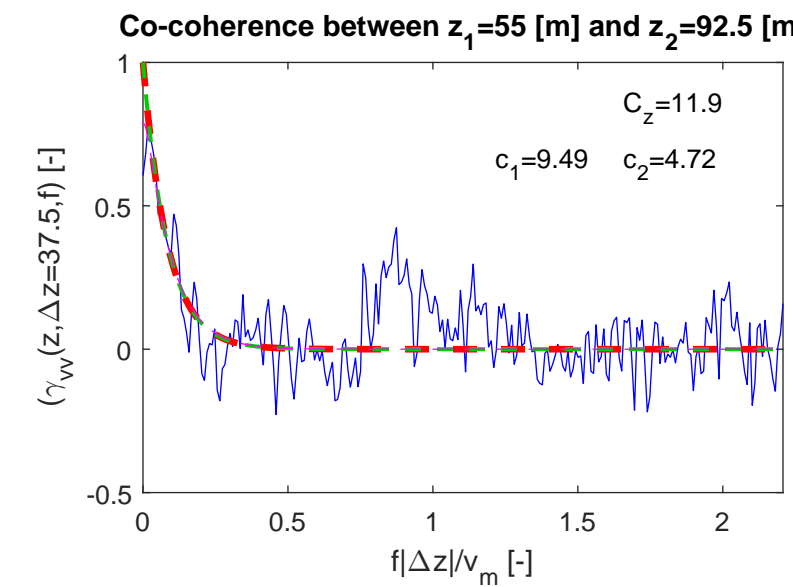
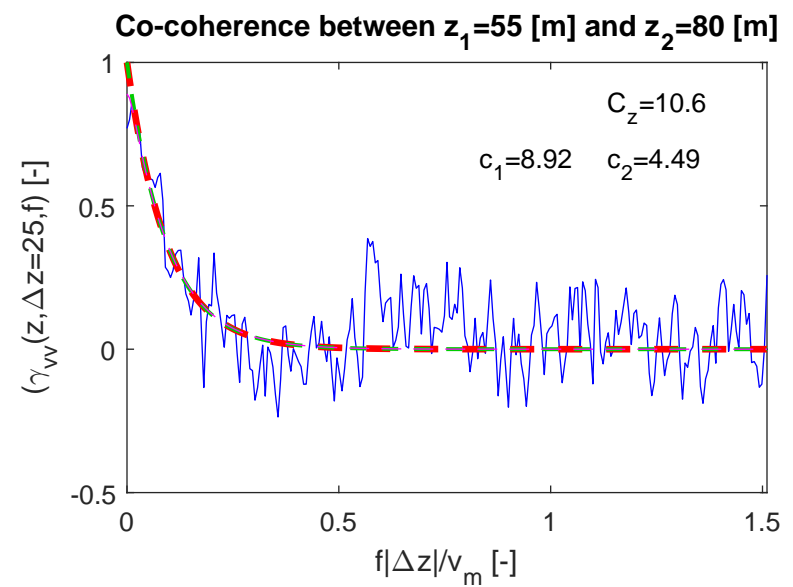
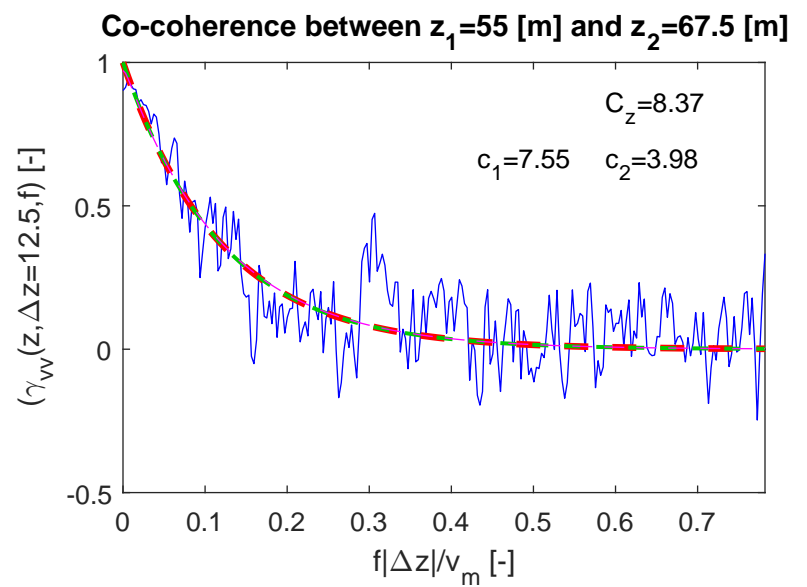
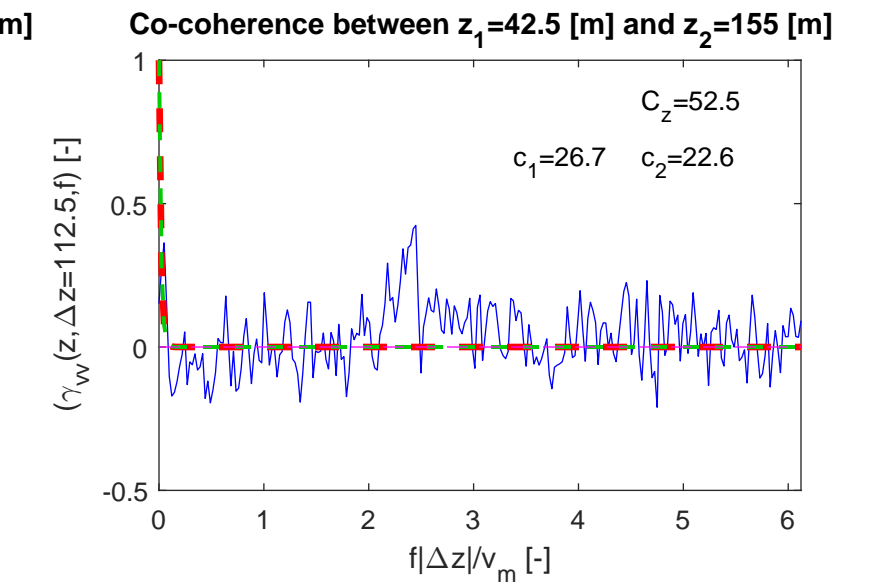
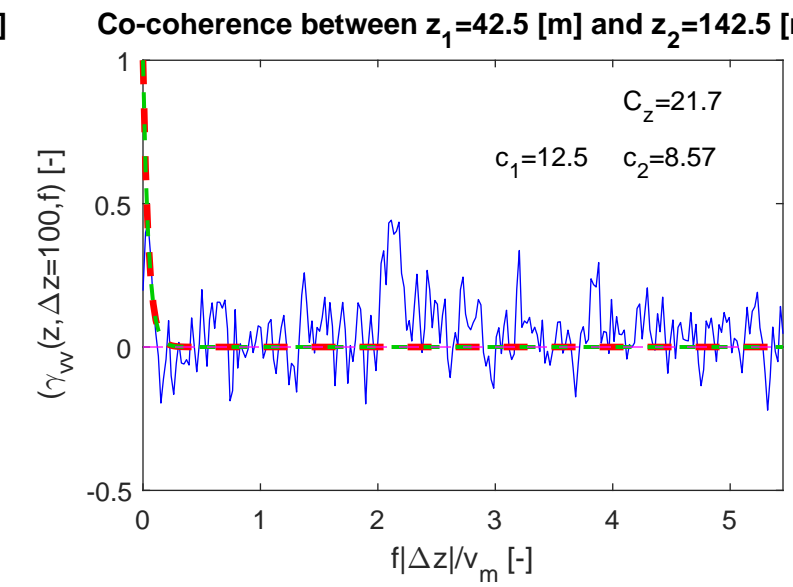
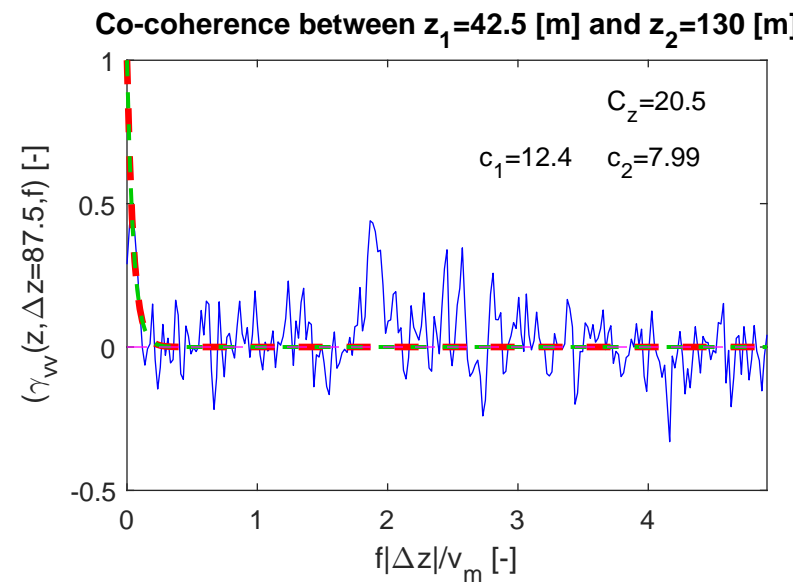
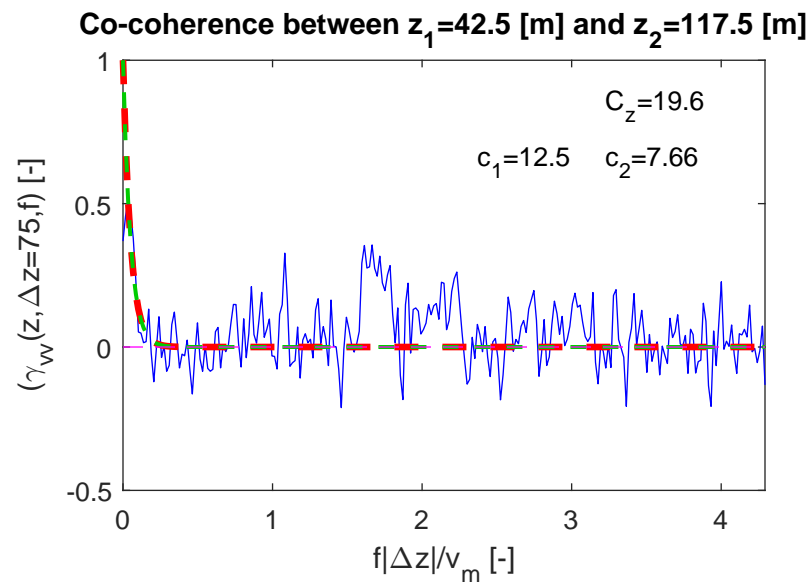
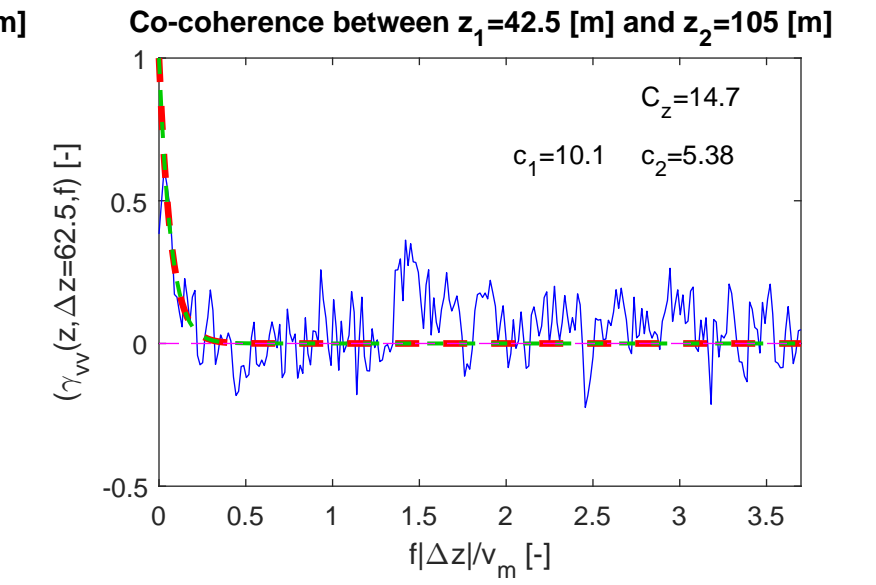
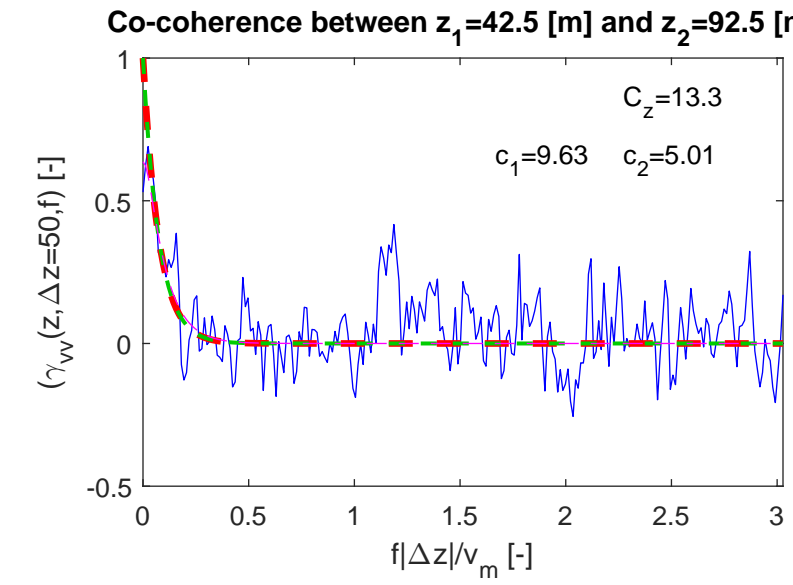
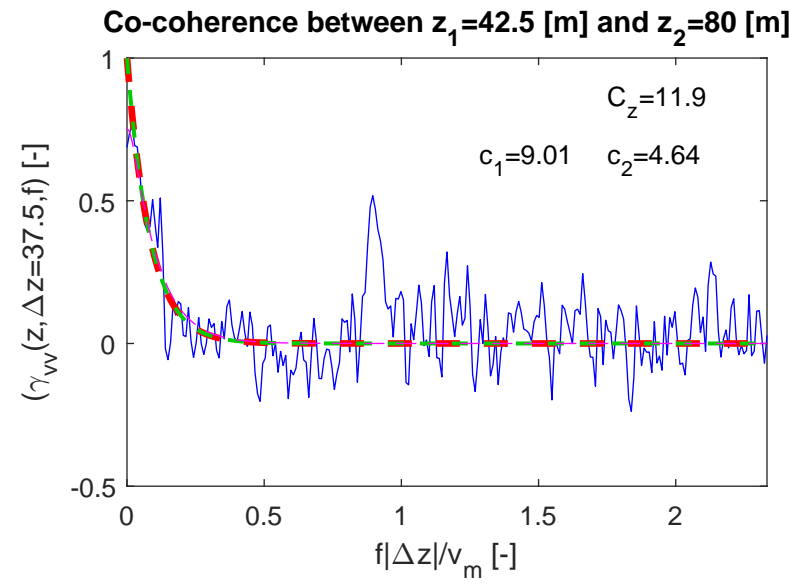
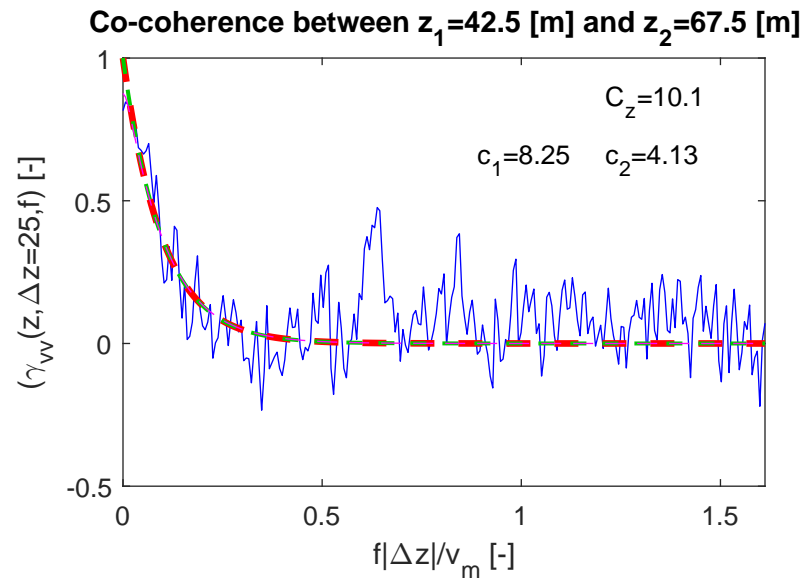


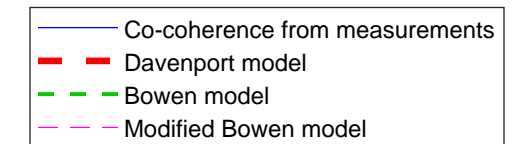
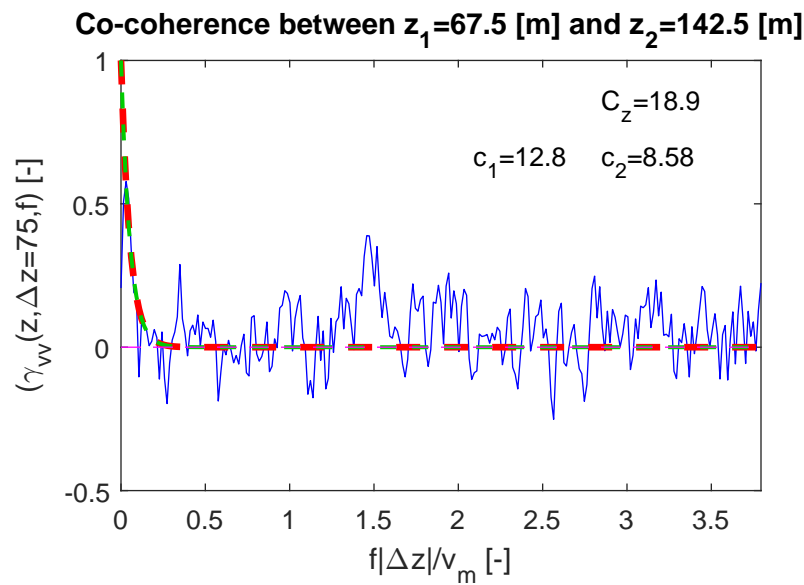
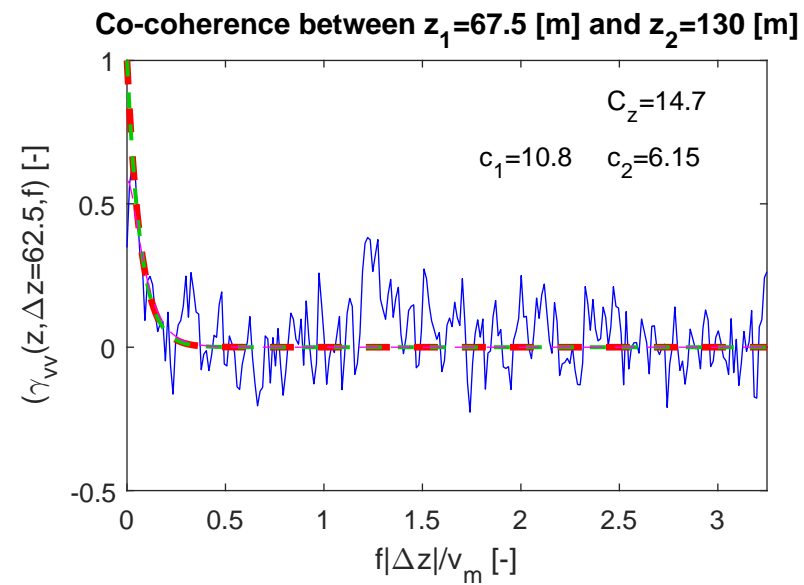
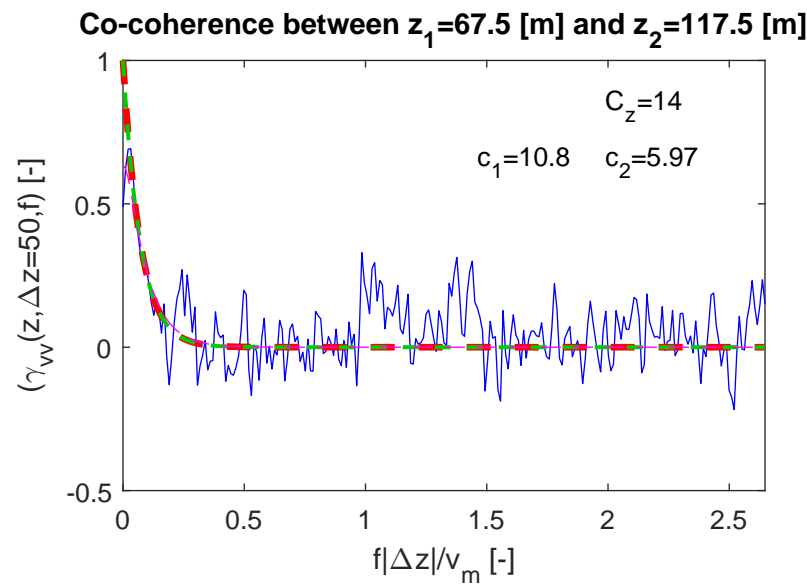
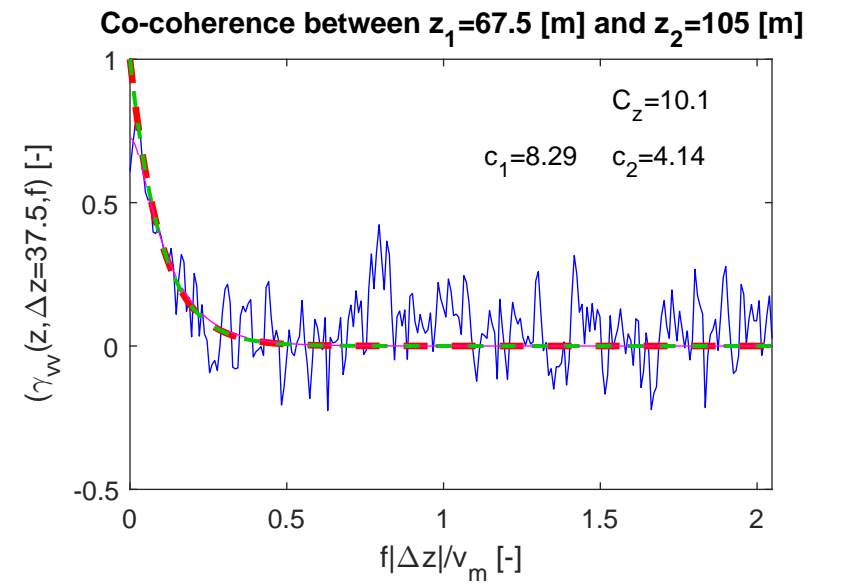
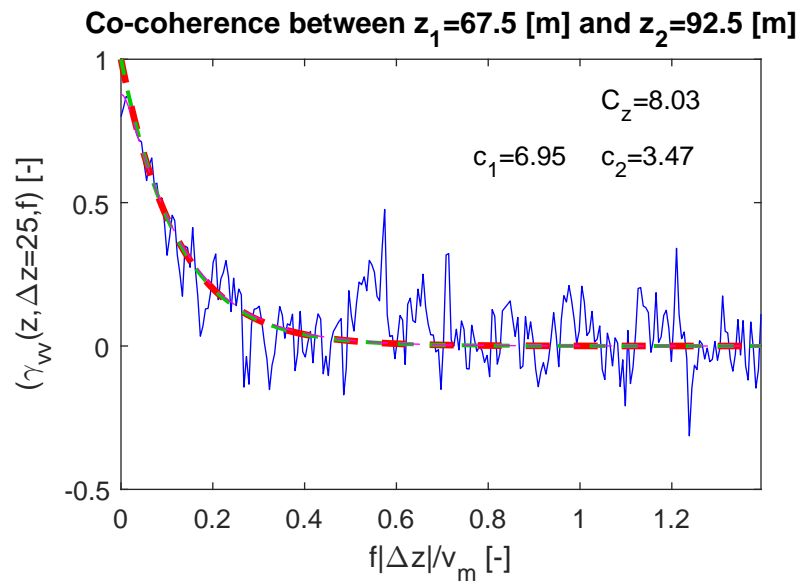
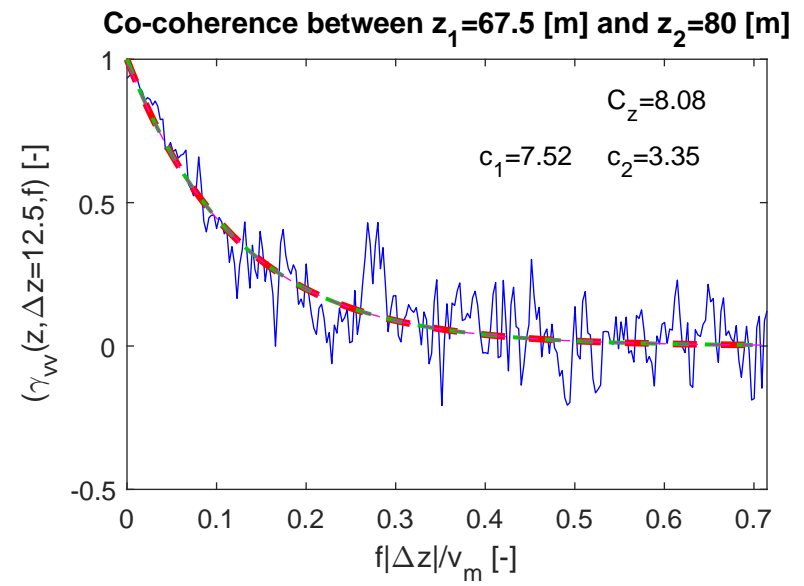
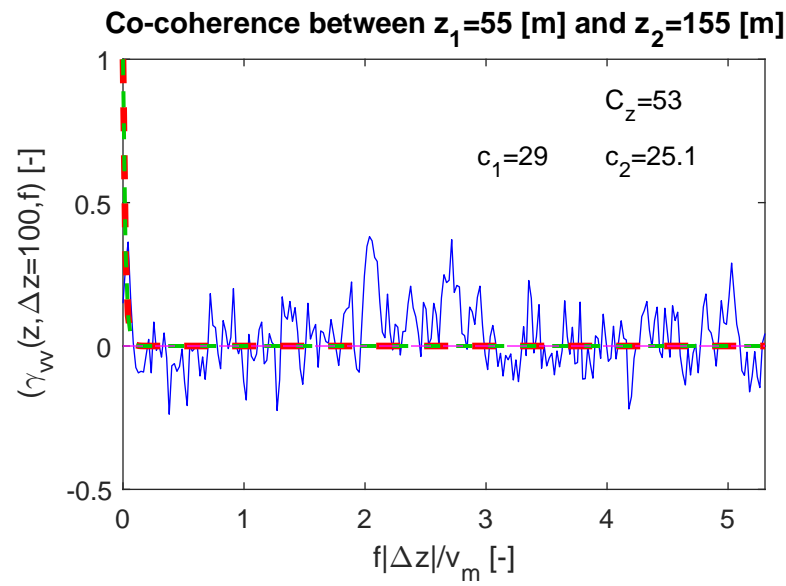
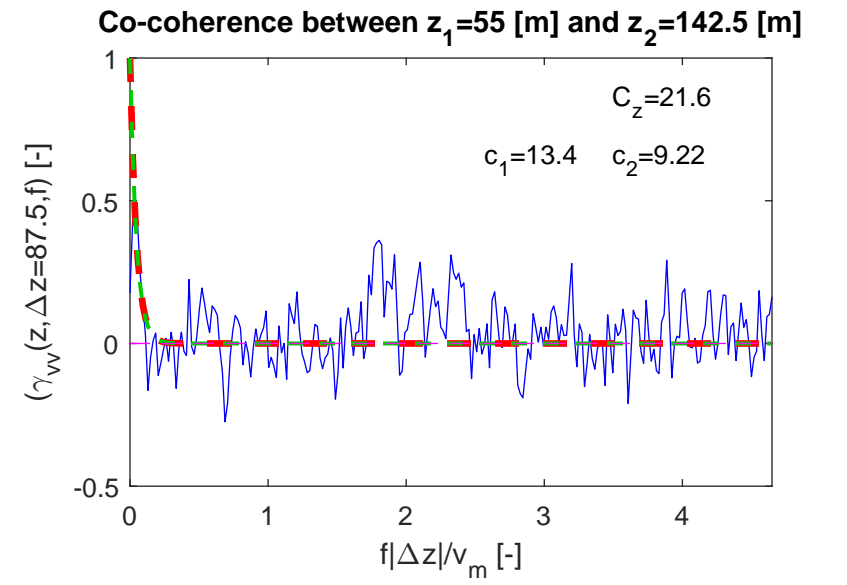
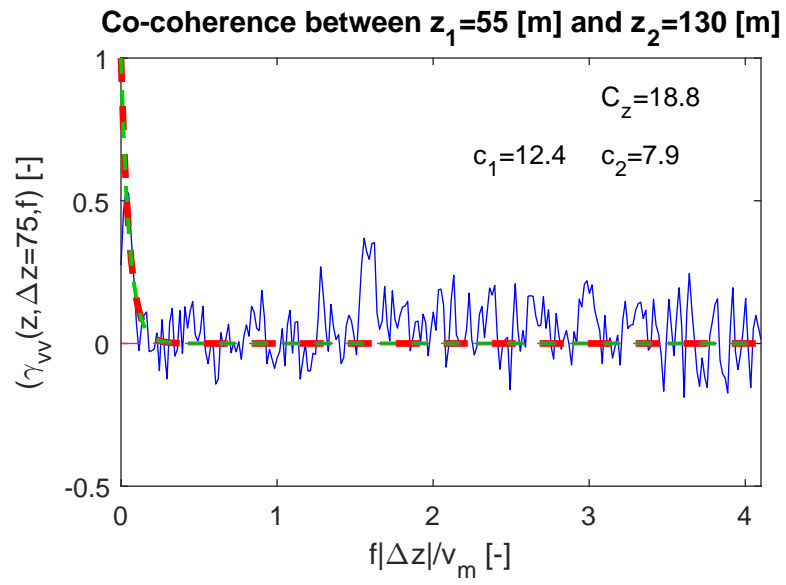
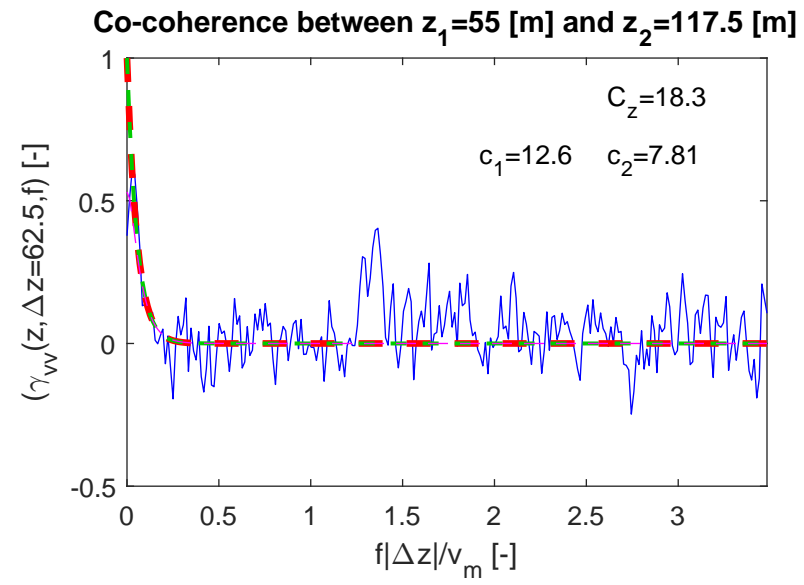
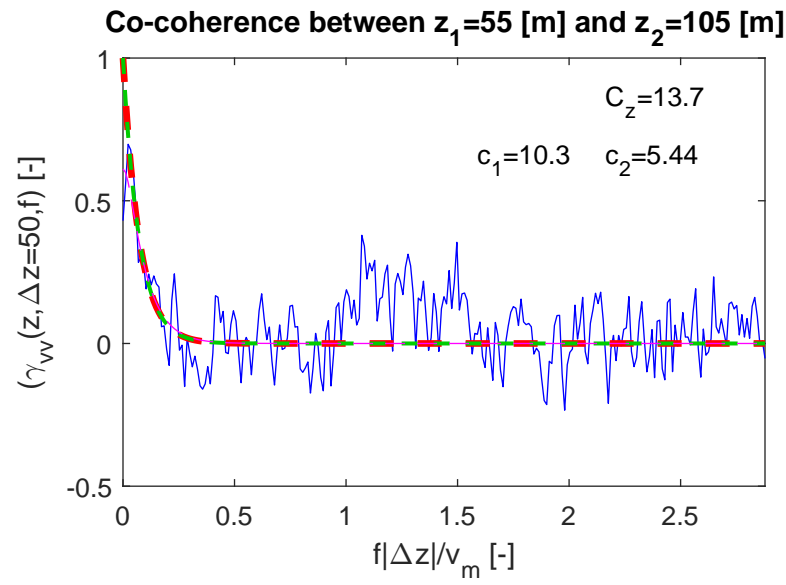
PSD at 155 [m] in full scale

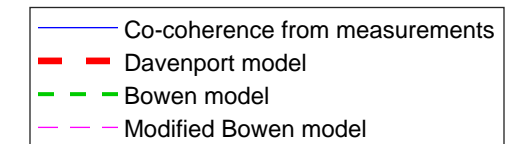
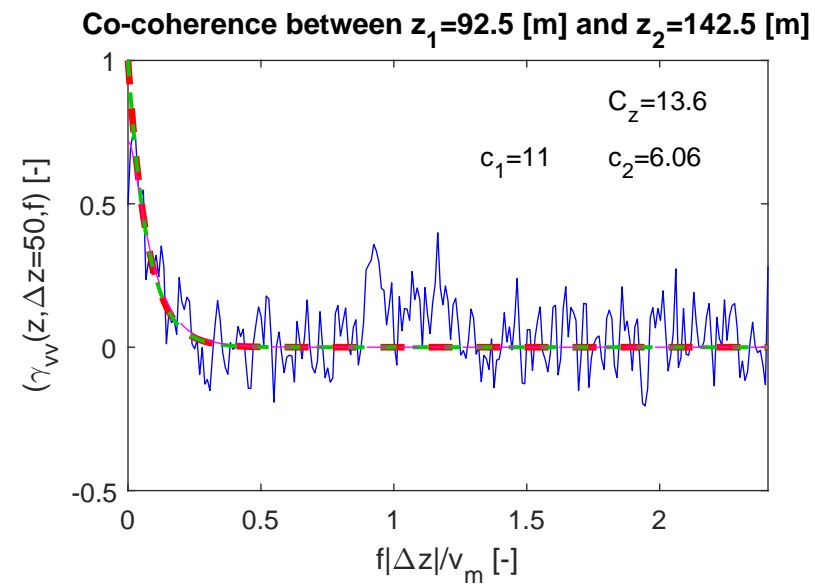
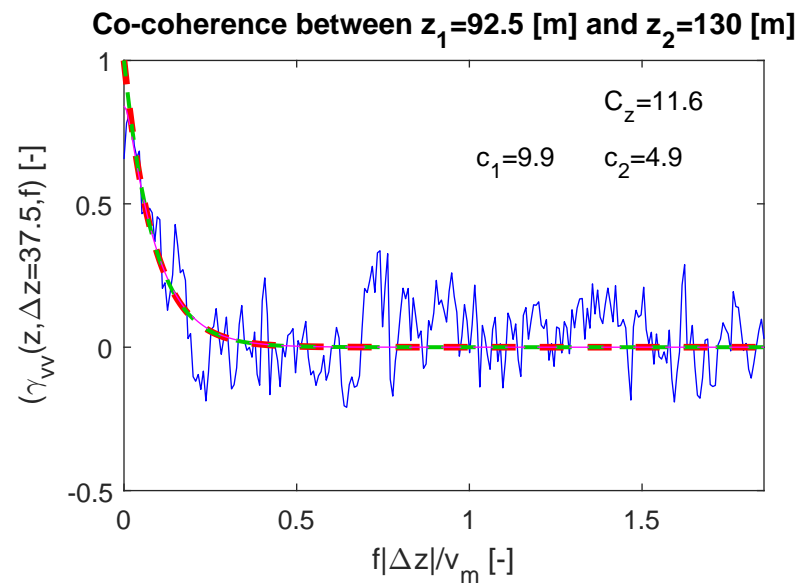
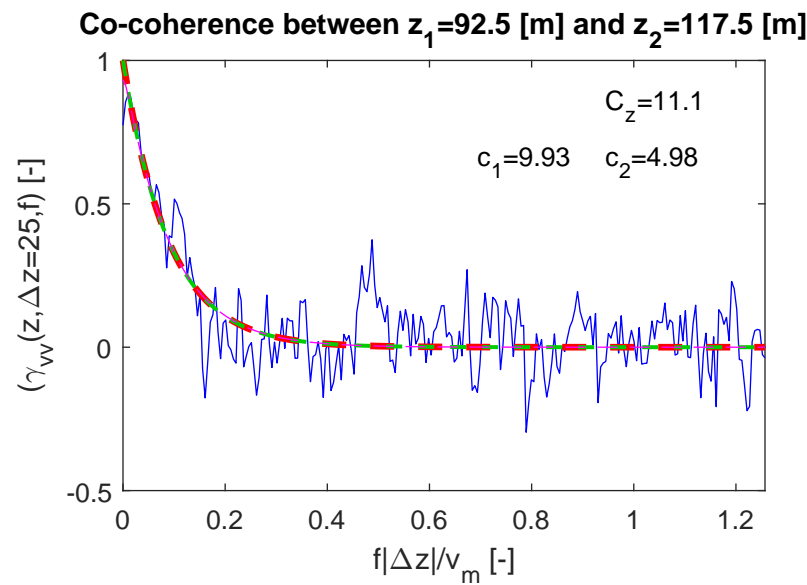
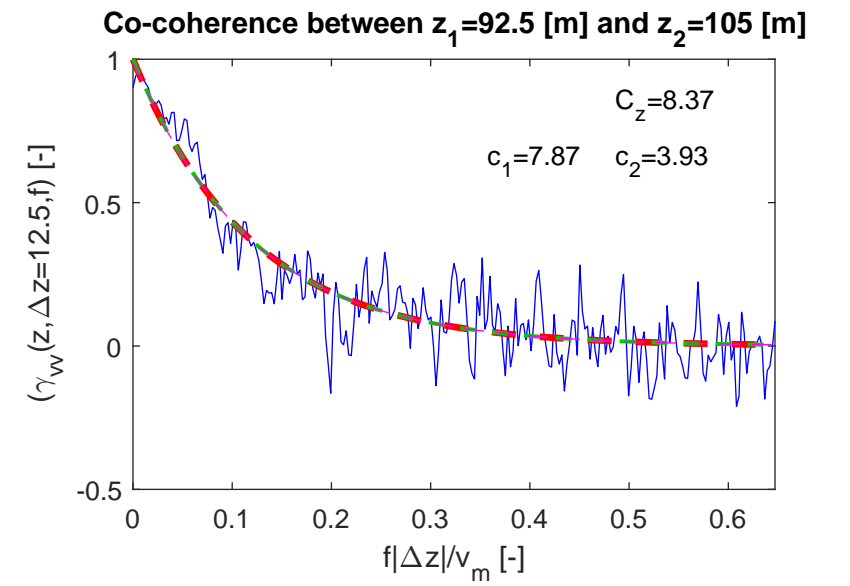
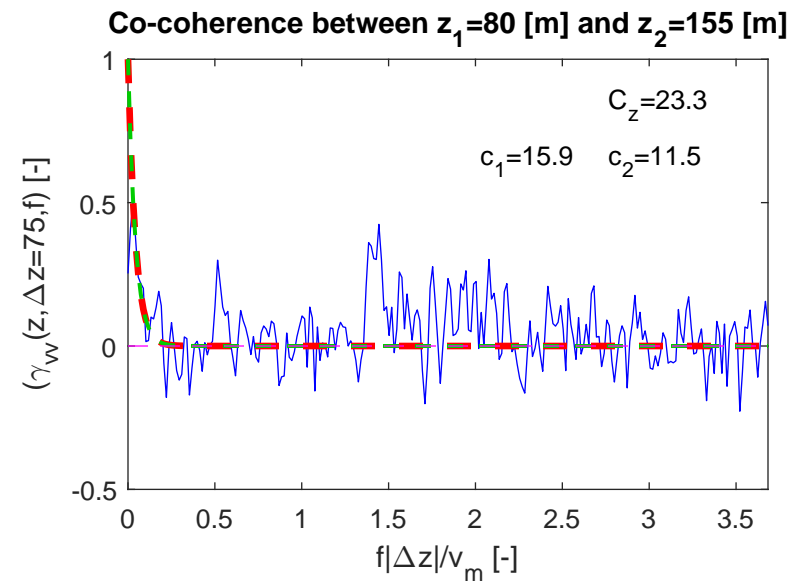
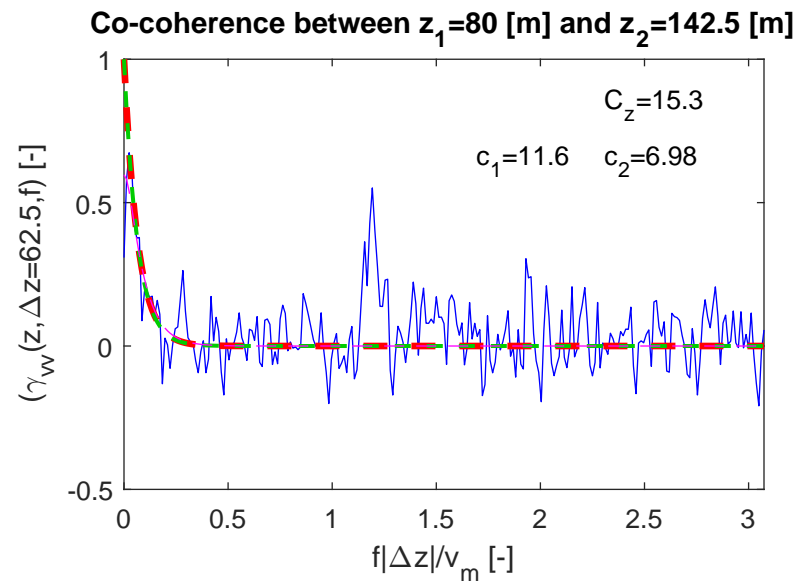
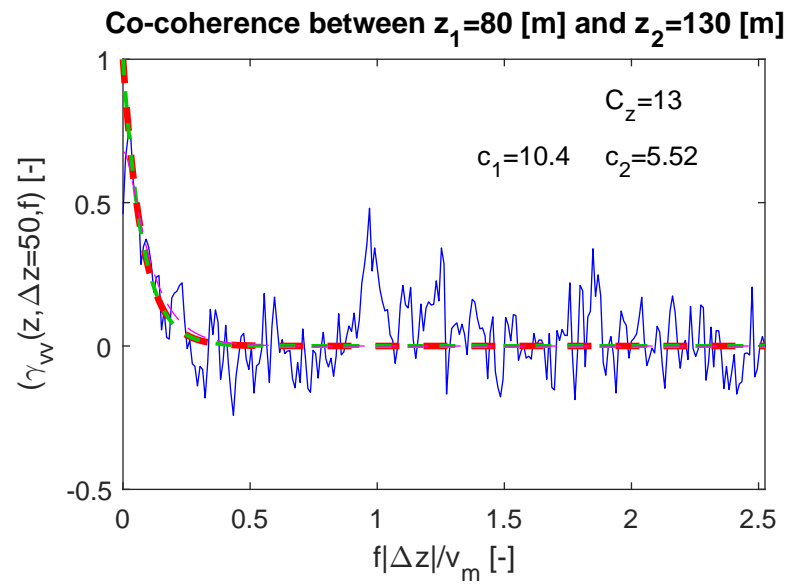
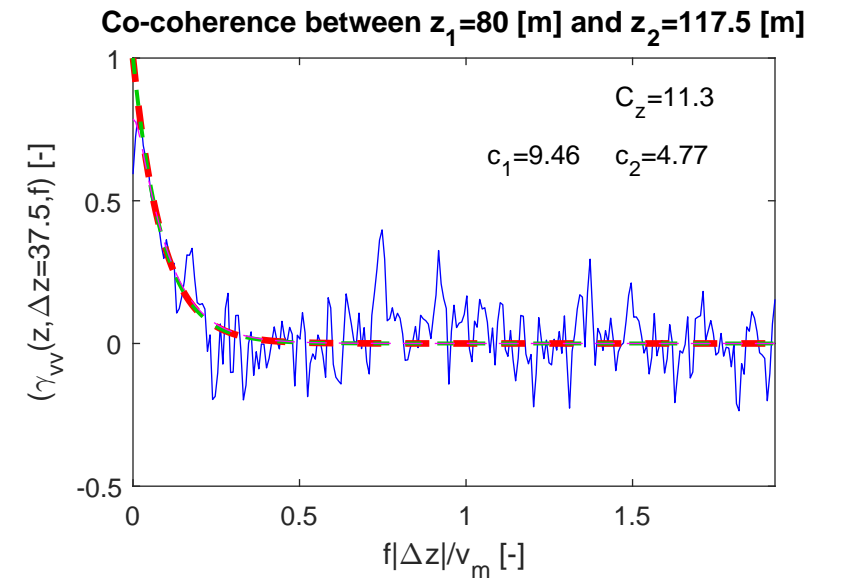
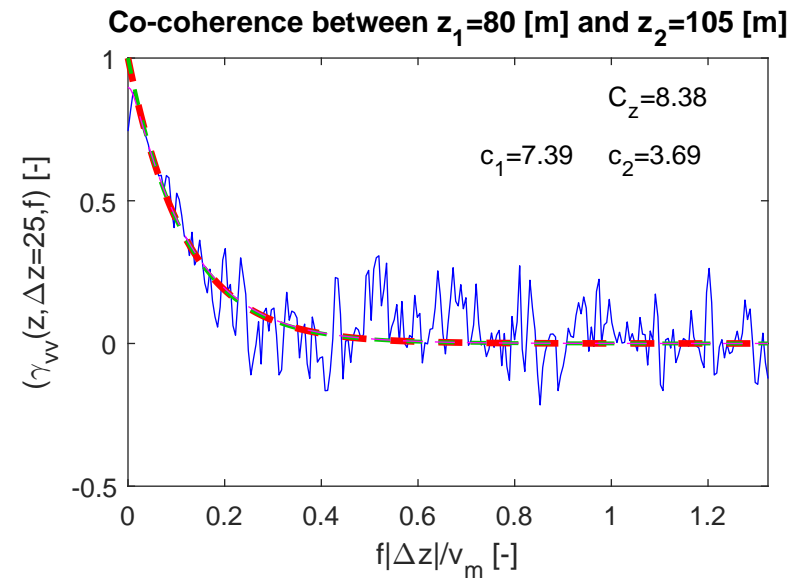
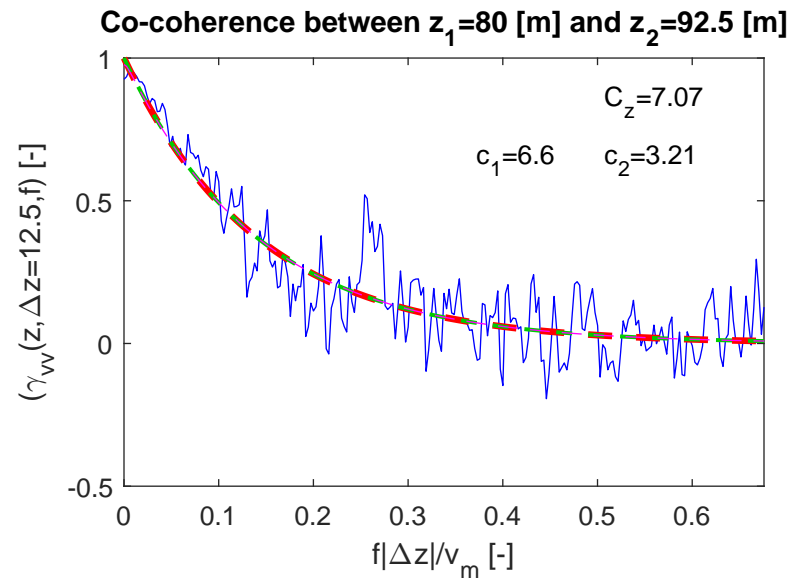
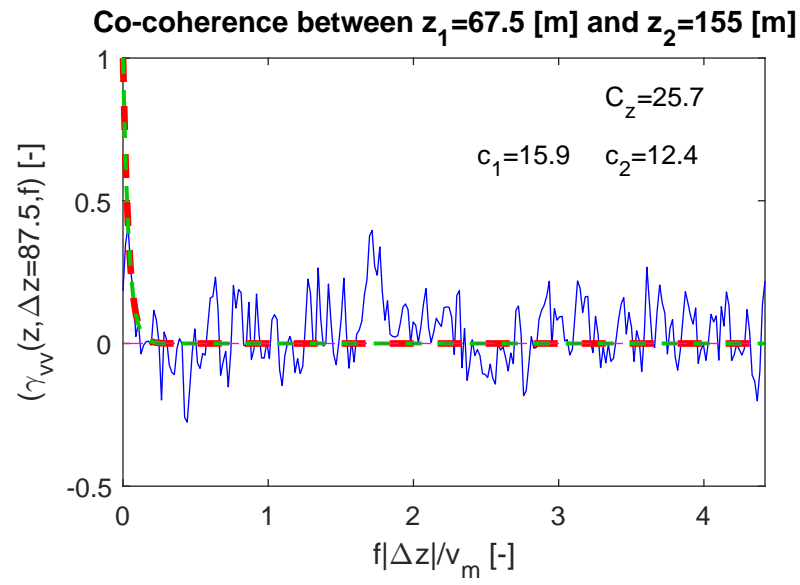


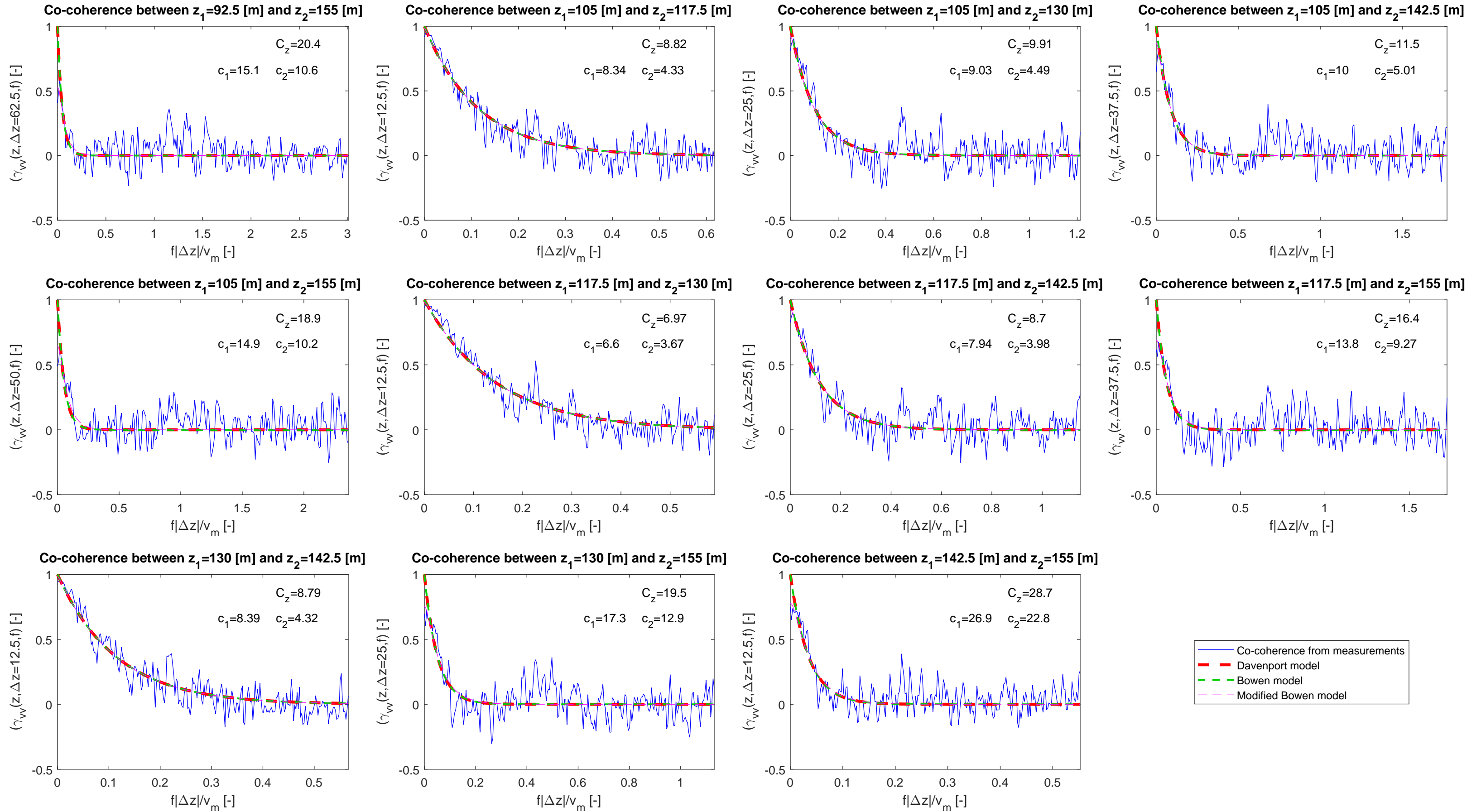




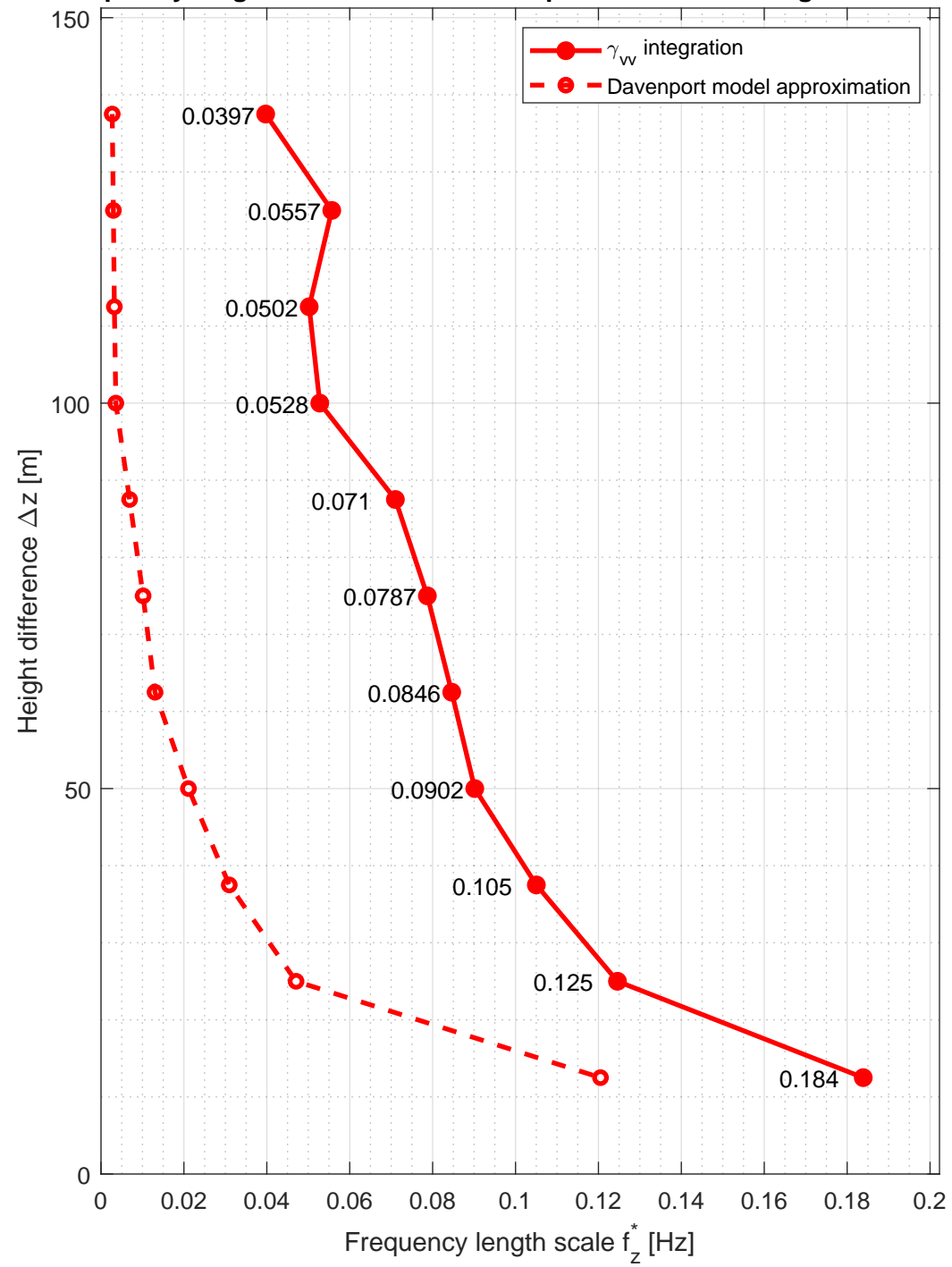




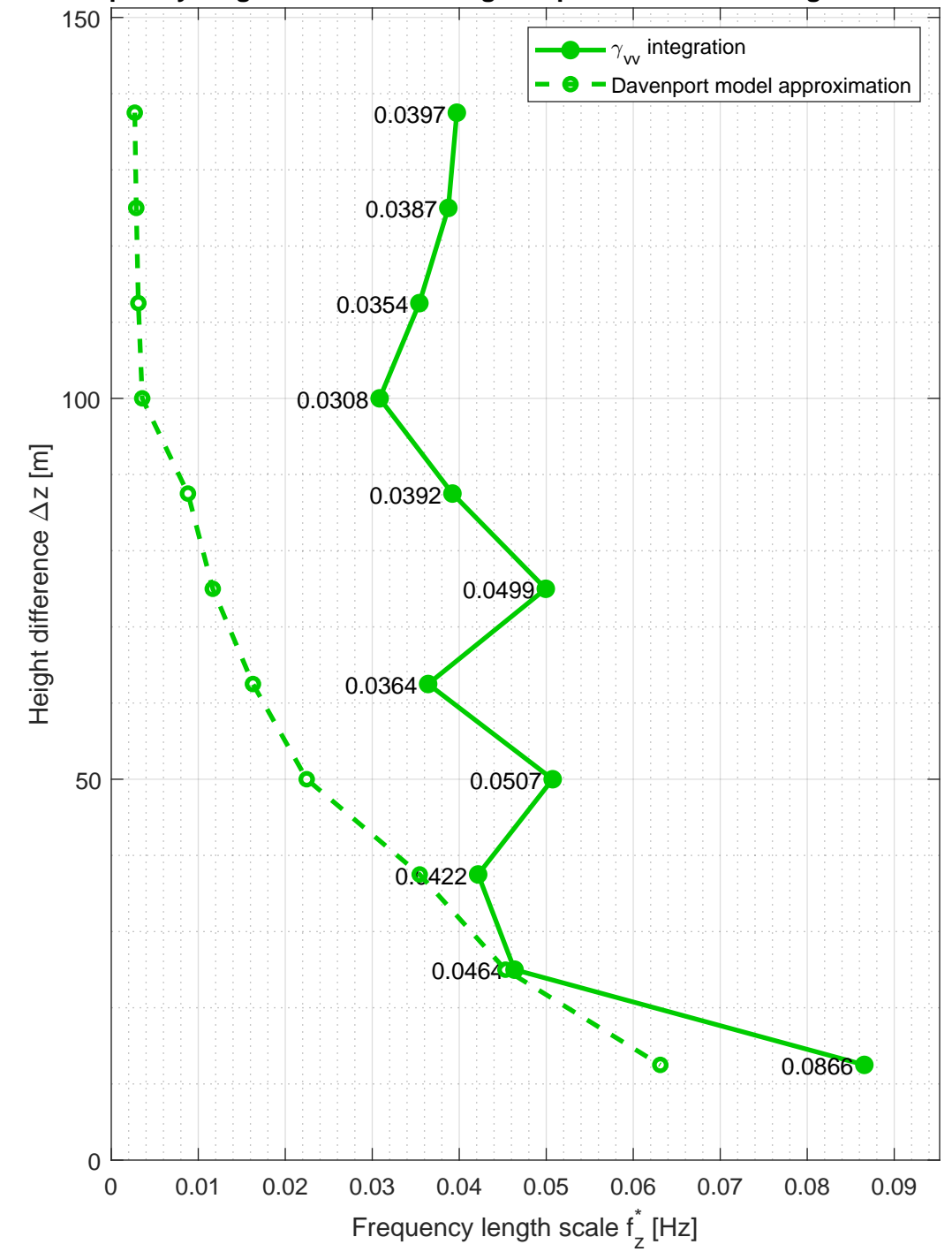




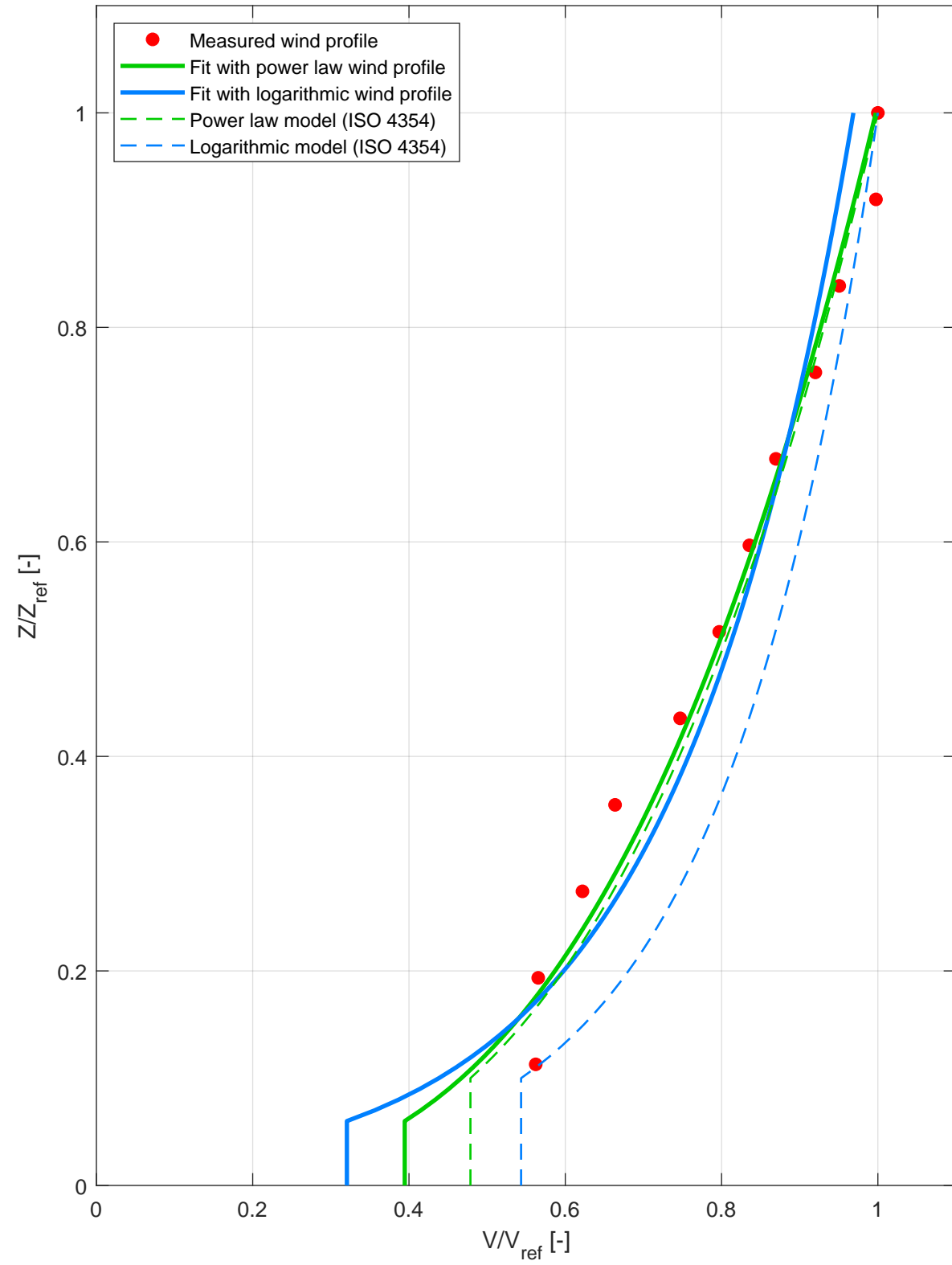
Frequency length scales for the lowest point at different height differences



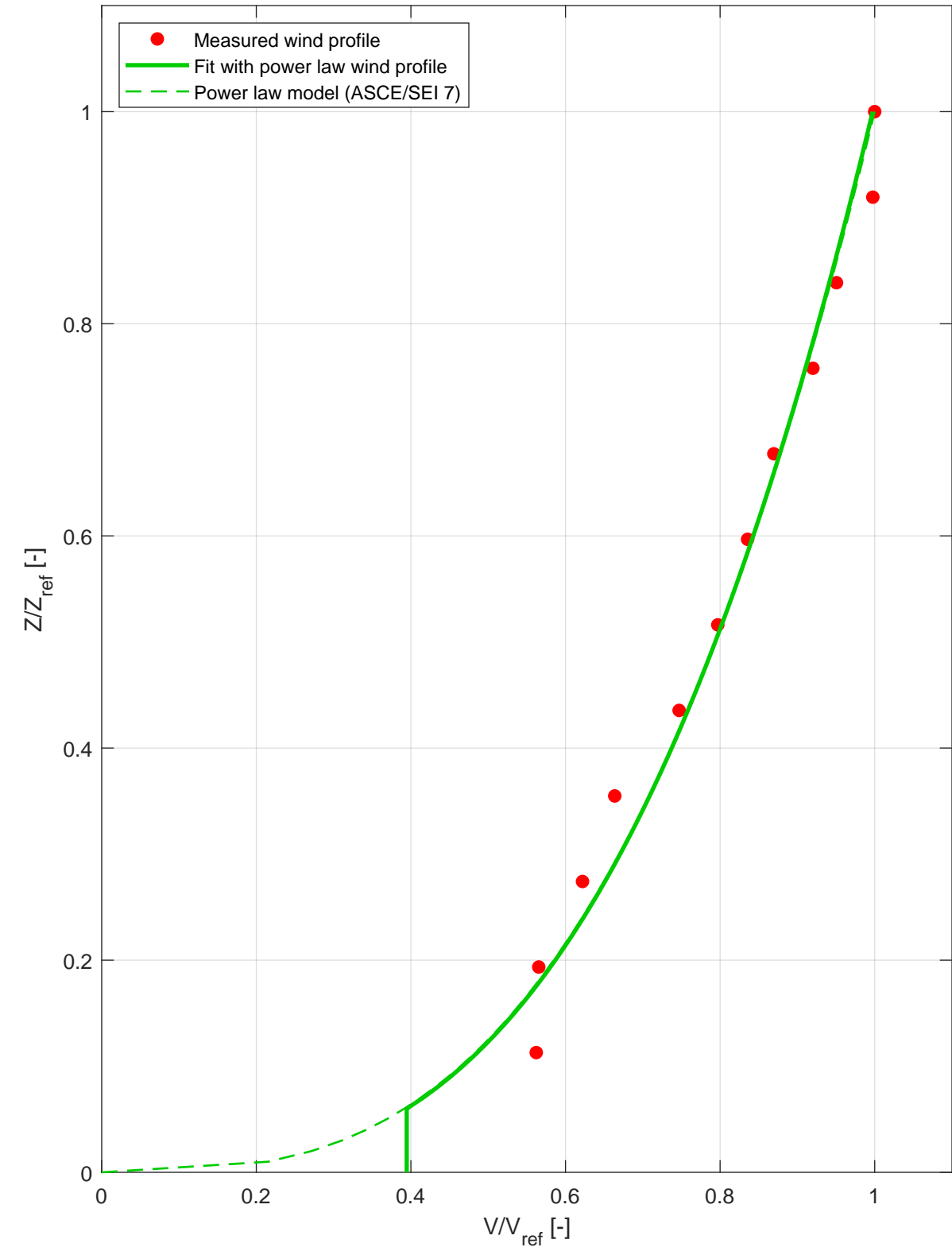
Frequency length scales for the highest point at different height differences



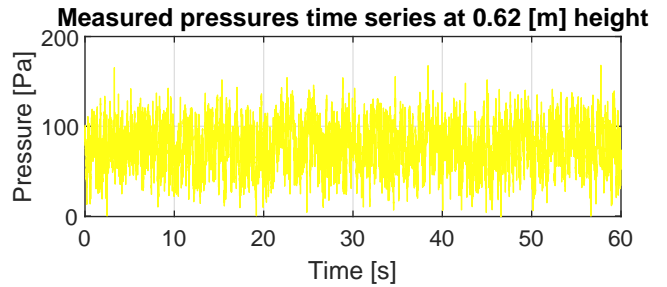
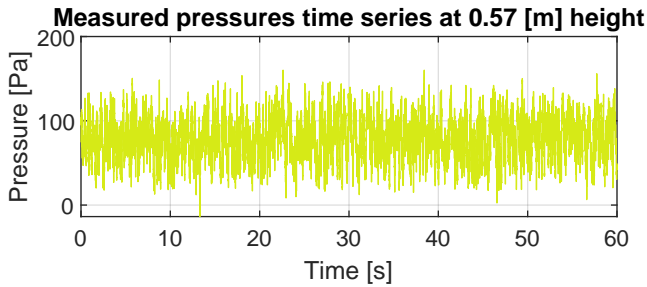
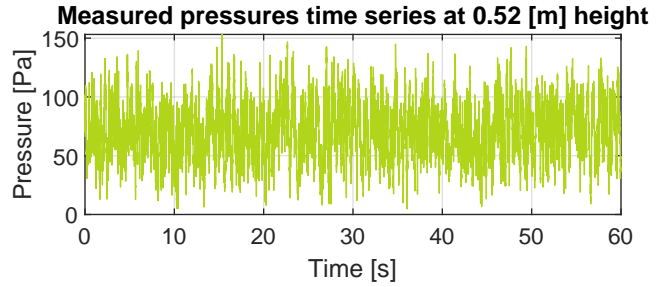
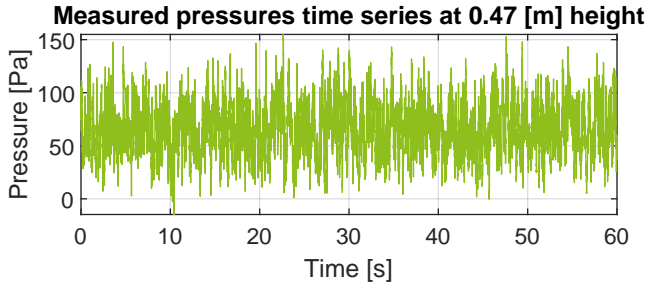
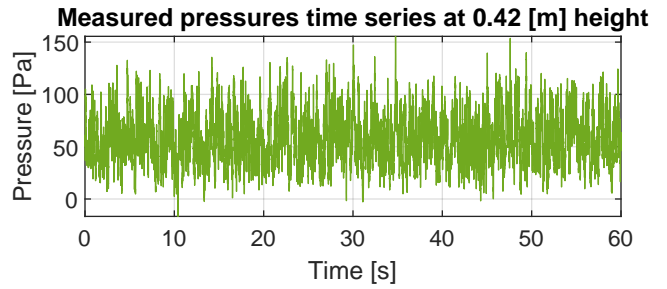
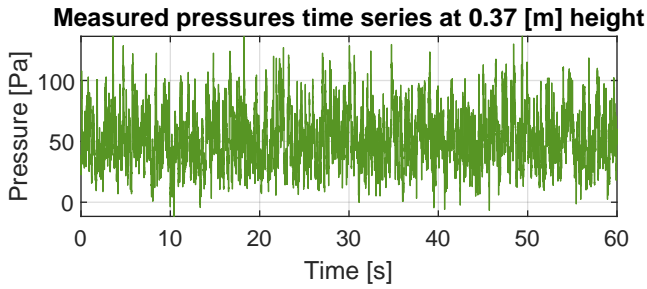
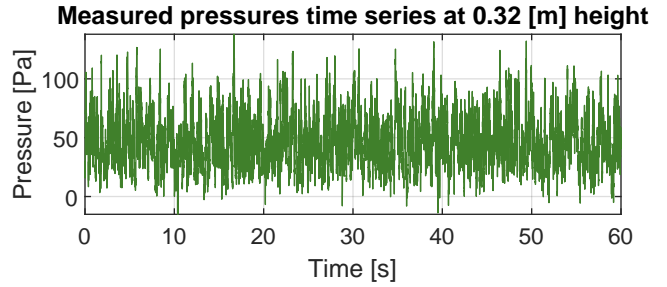
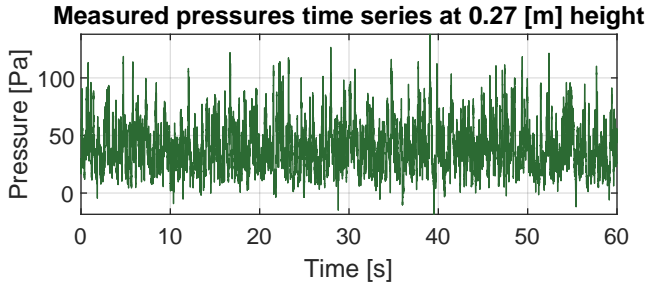
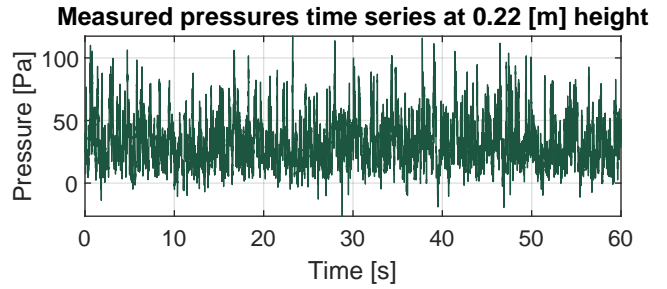
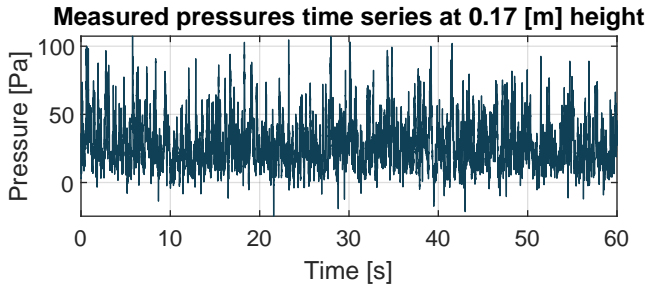
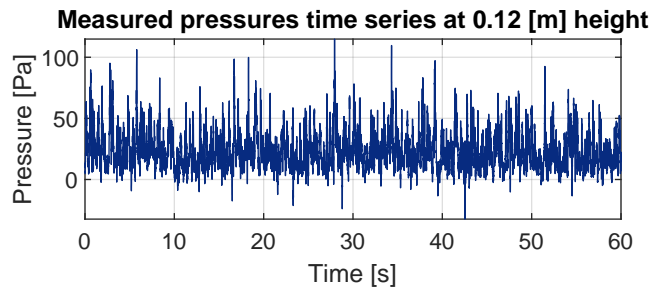
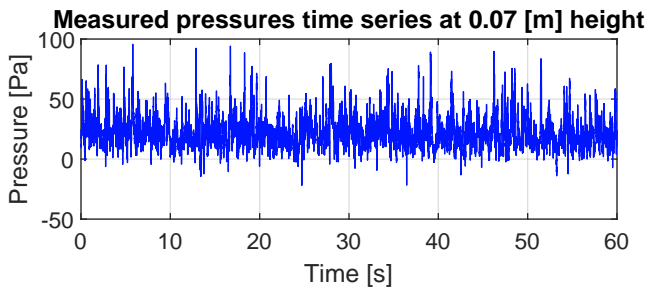
Mean wind velocity profile - comparison with ISO 4354

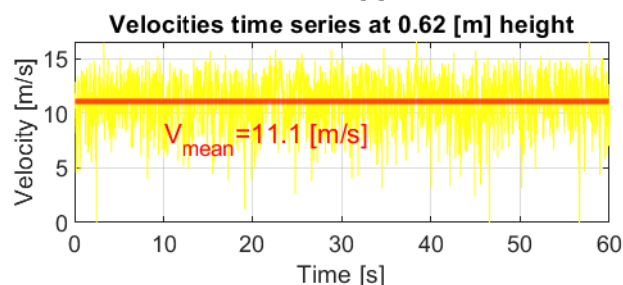
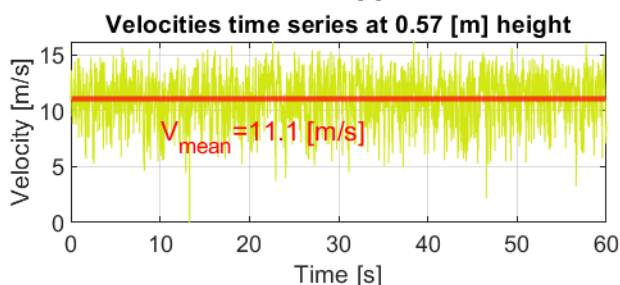
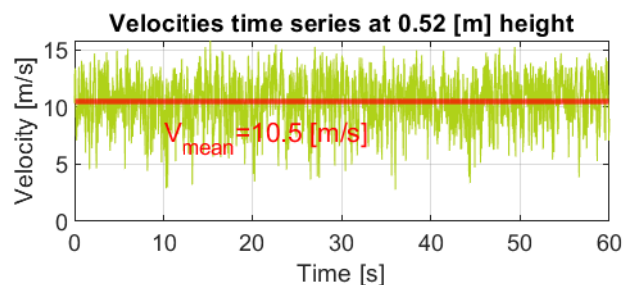
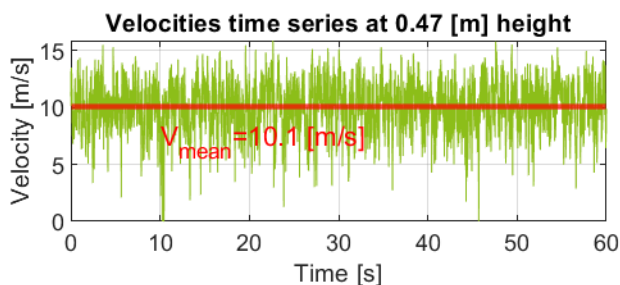
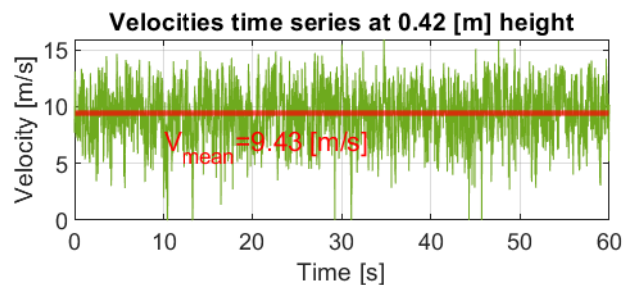
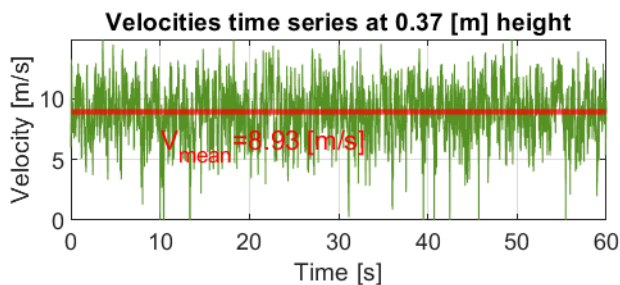
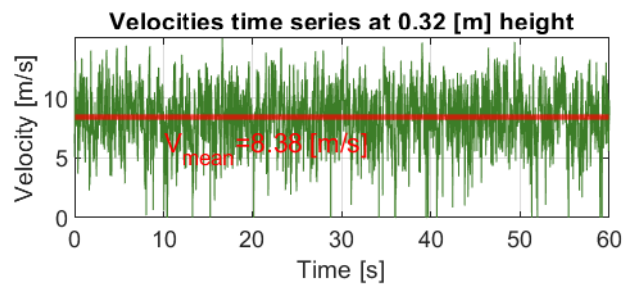
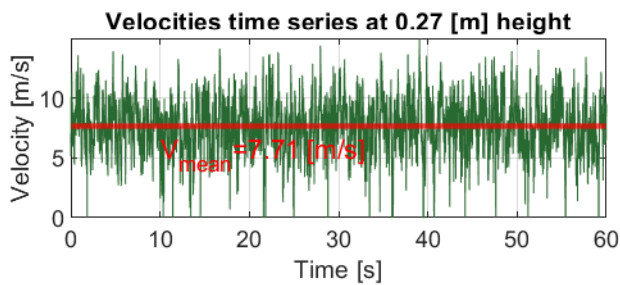
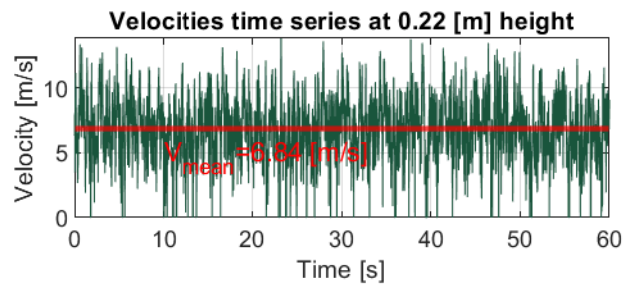
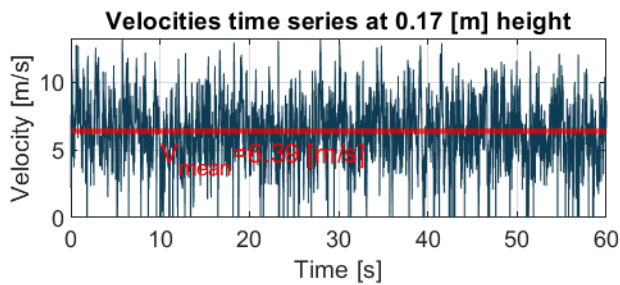
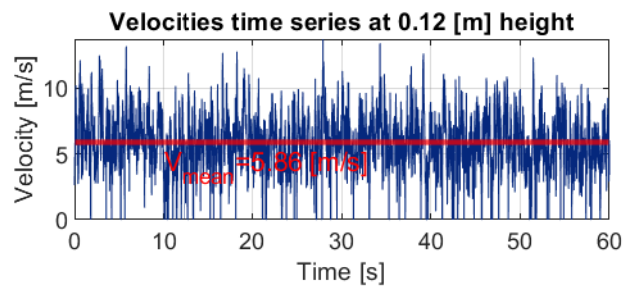
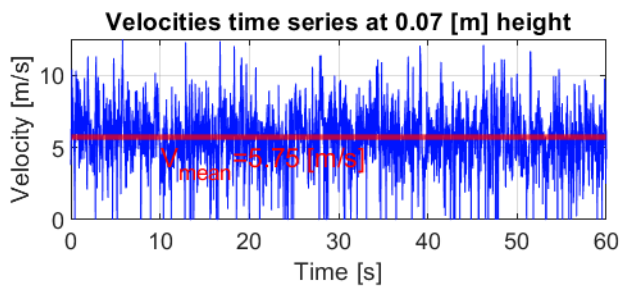


Mean wind velocity profile - comparison with ASCE/SEI 7

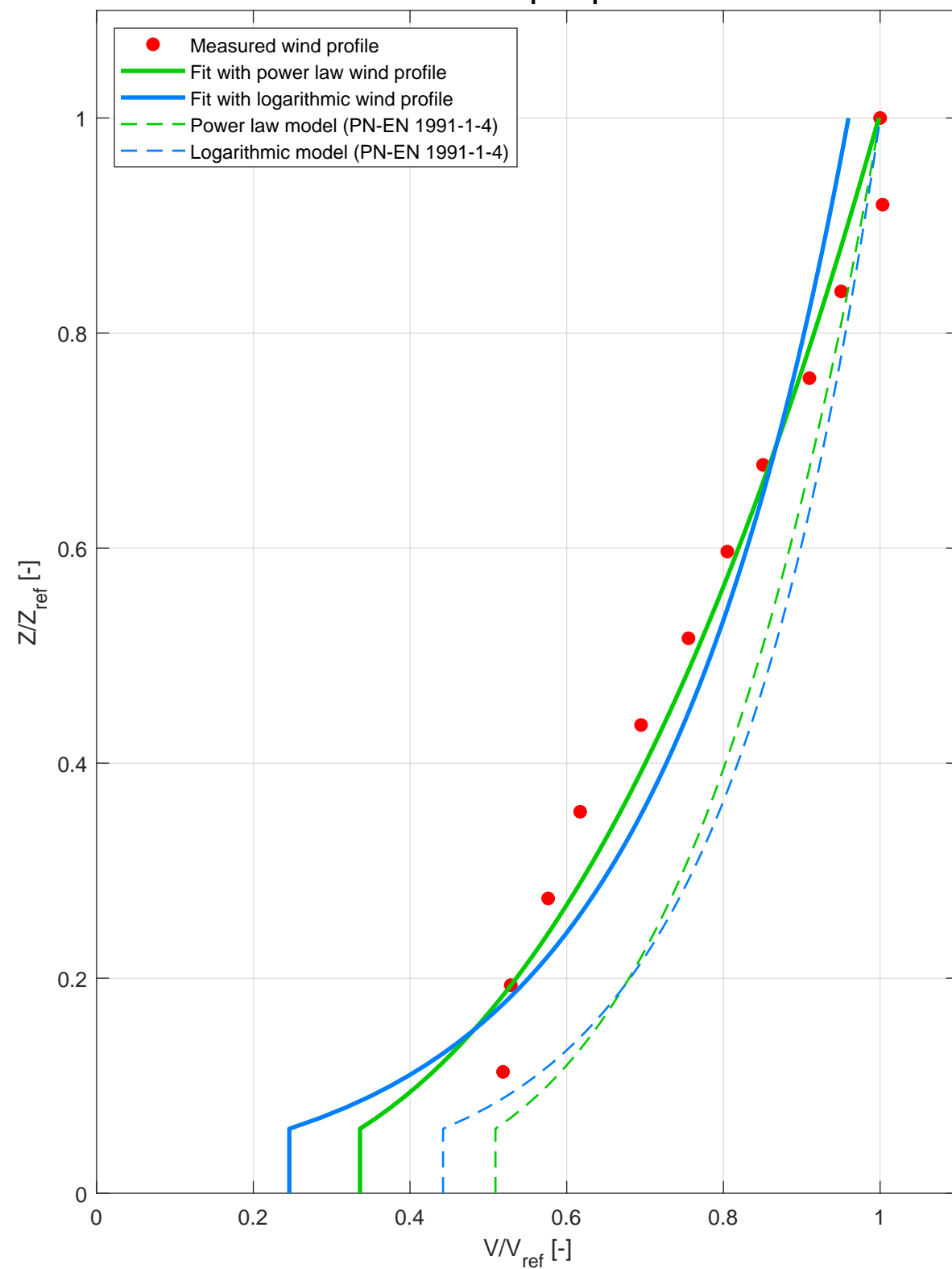


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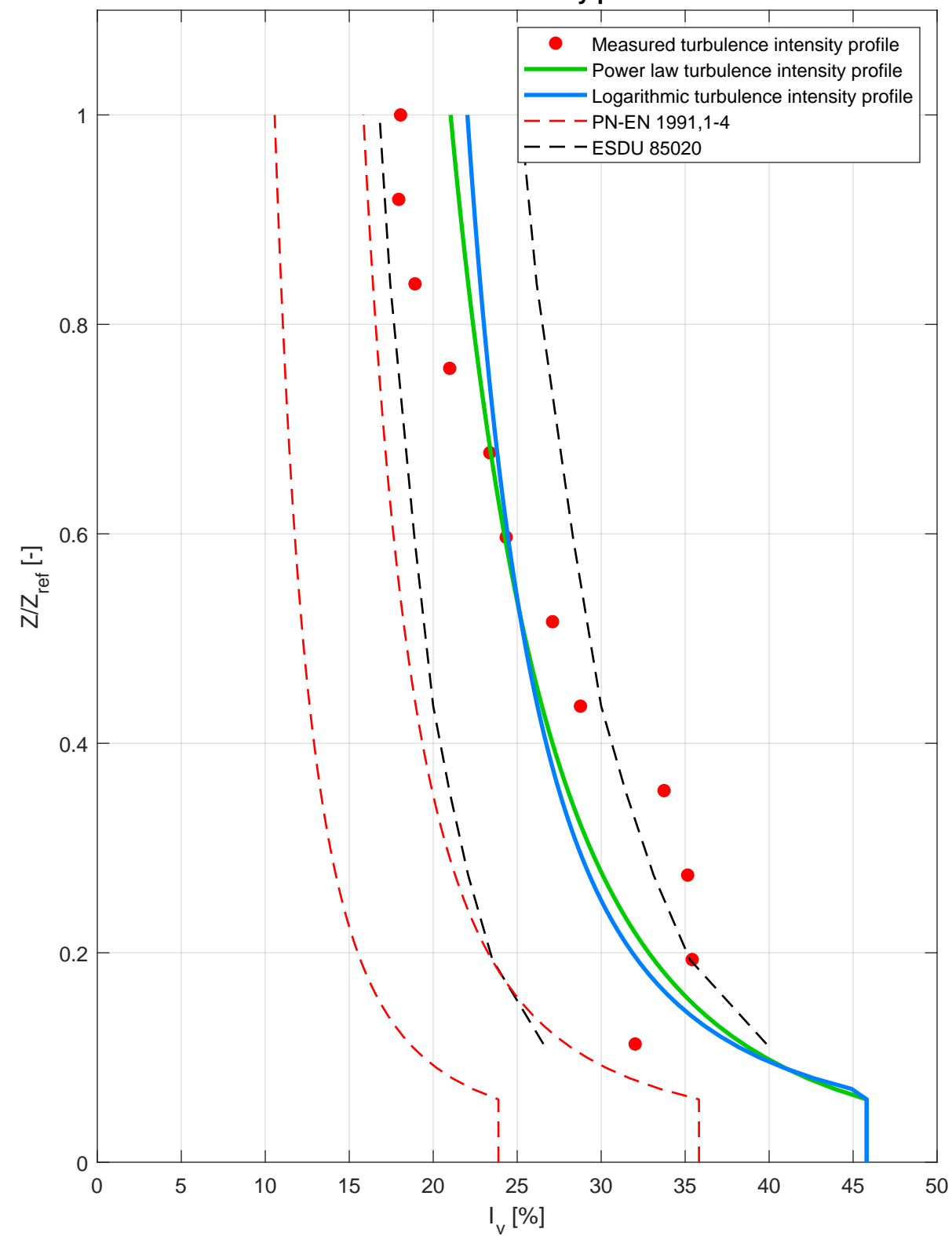




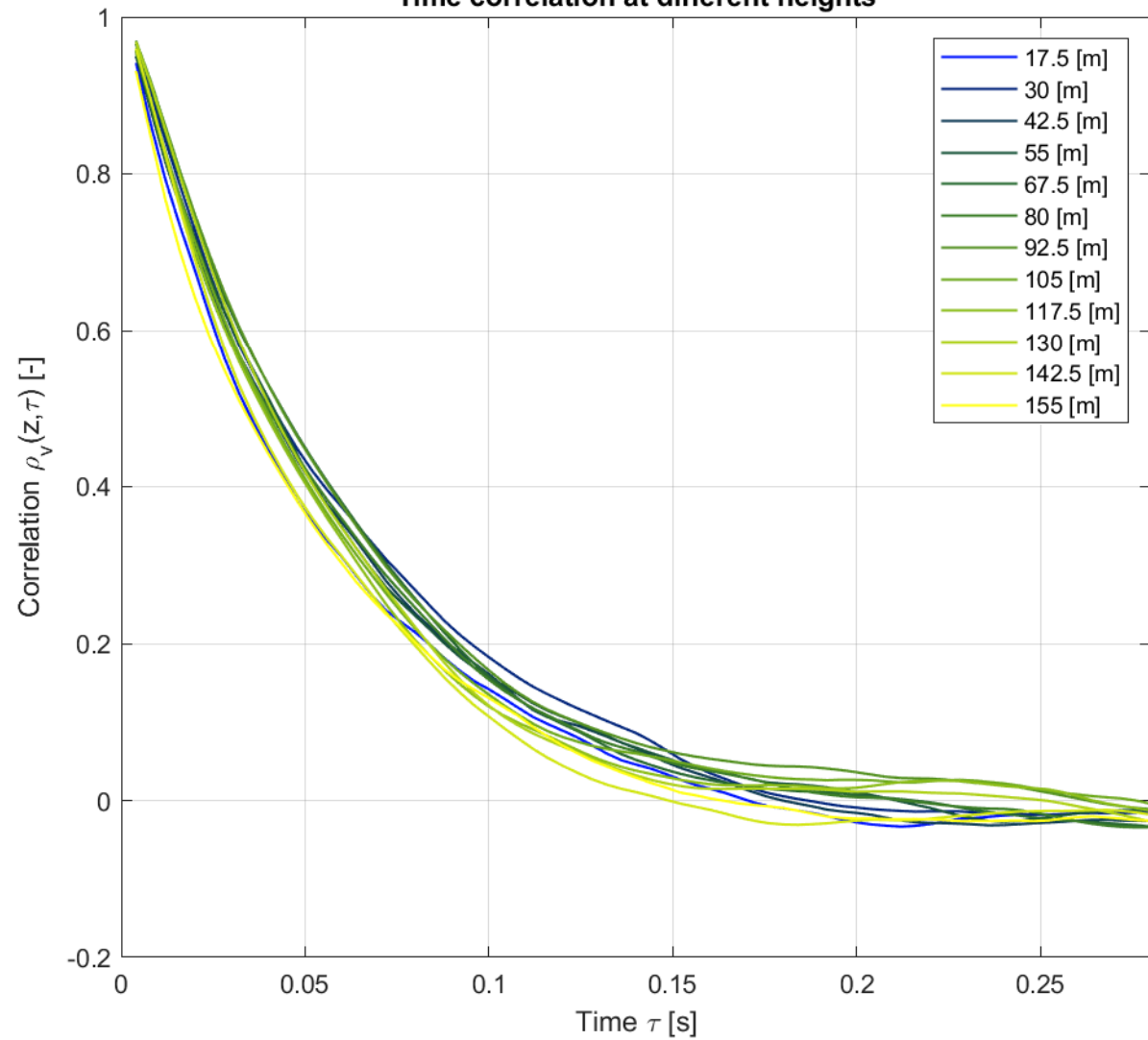
Mean wind speed profile



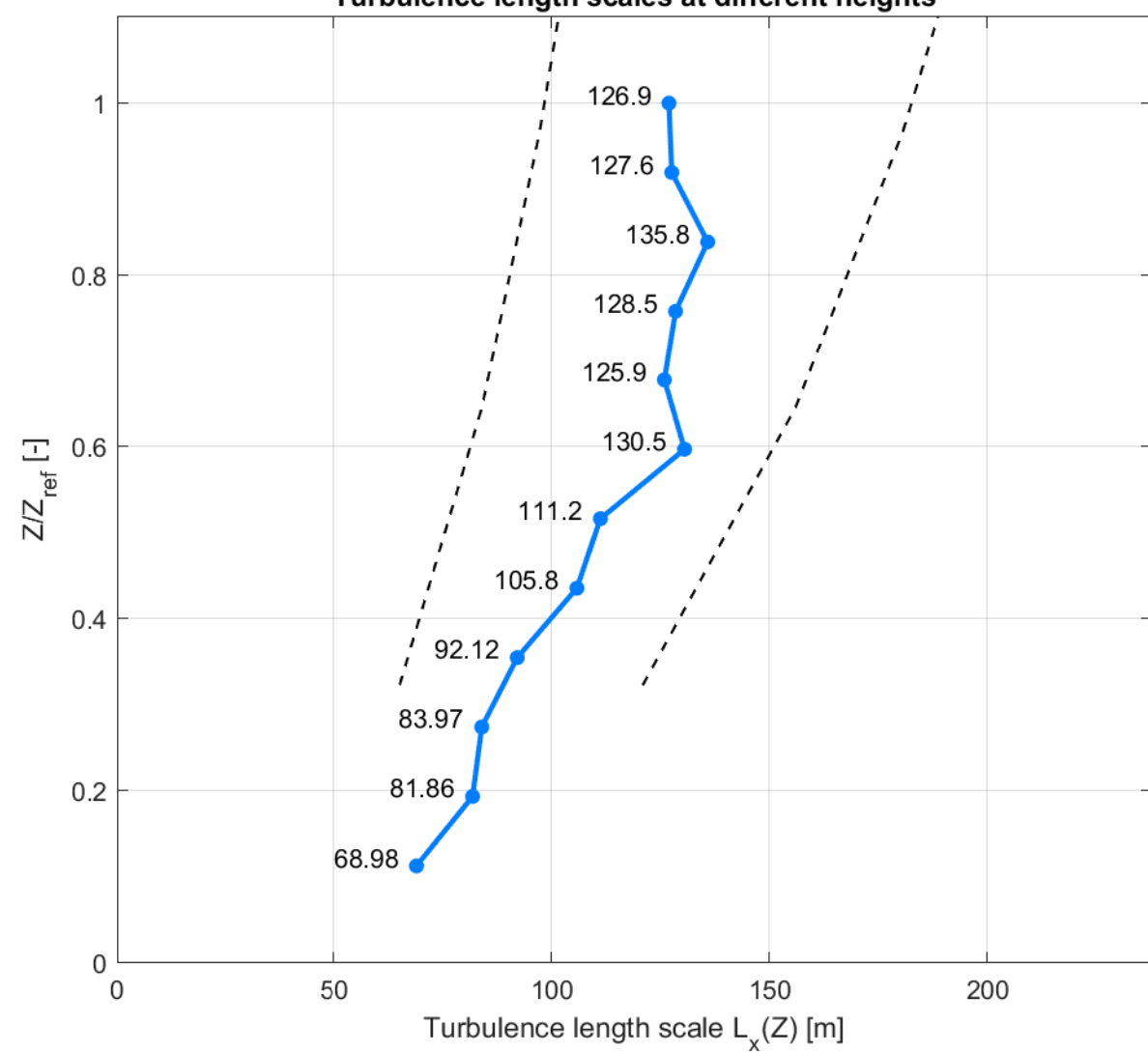
Turbulence intensity profile



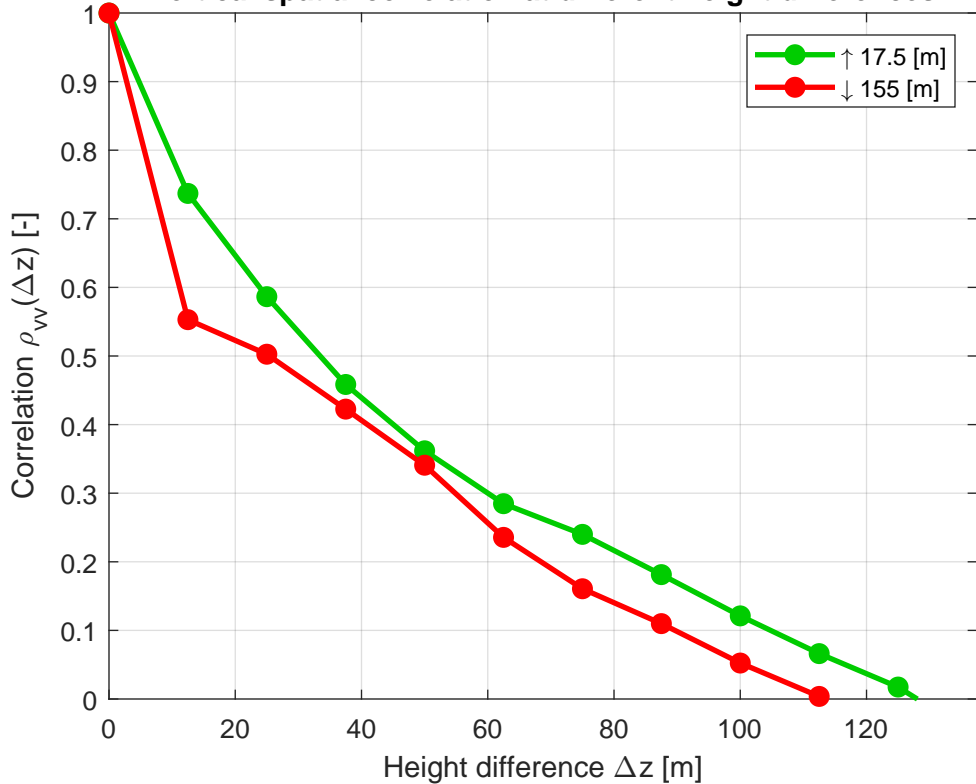
Time correlation at different heights



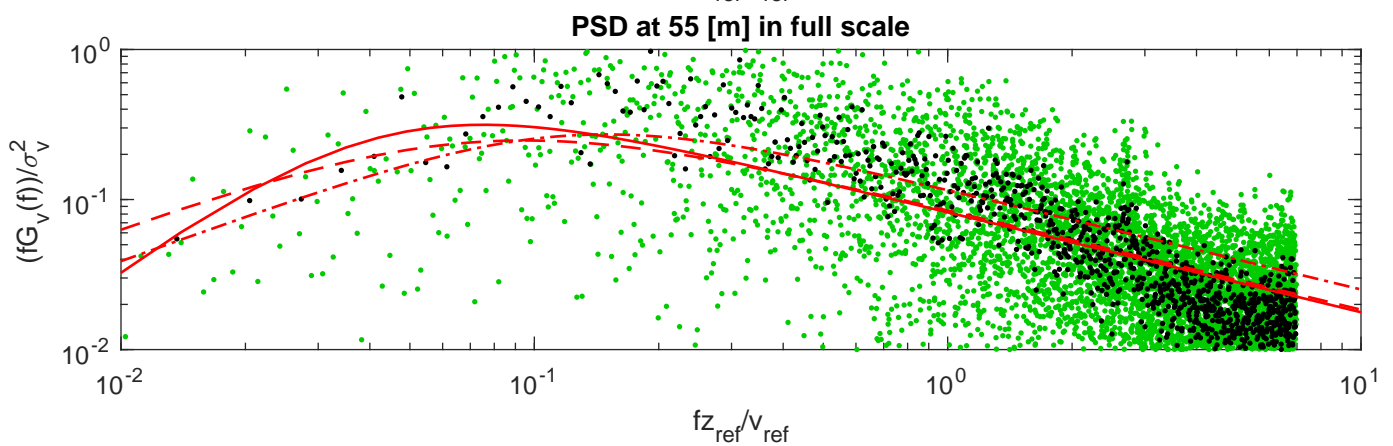
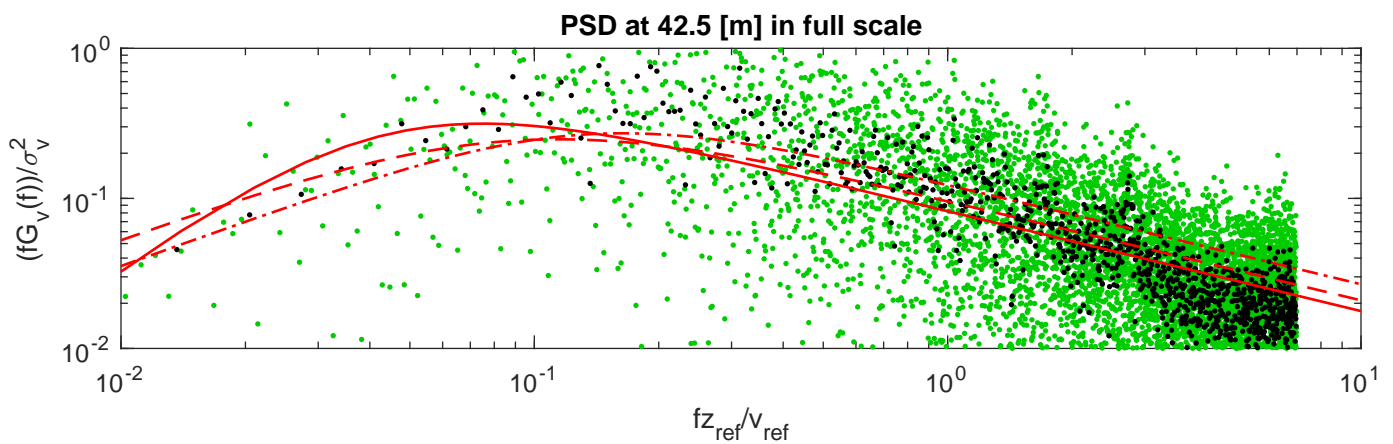
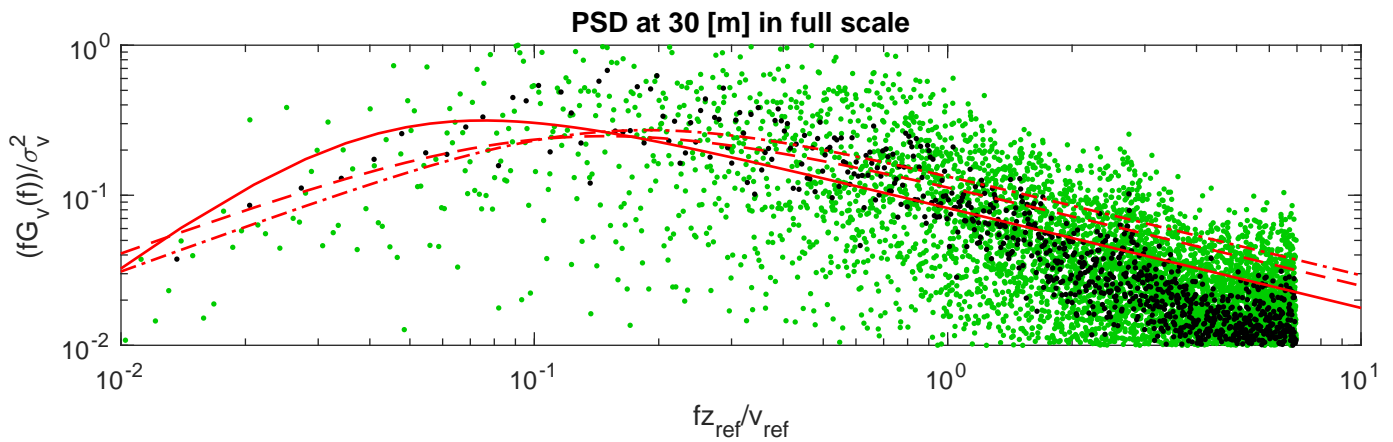
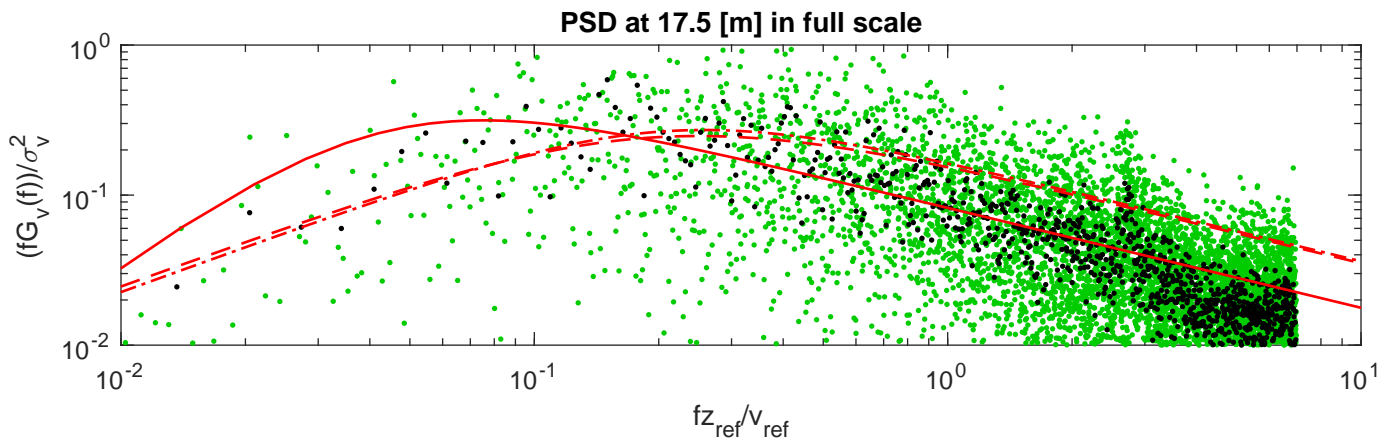
Turbulence length scales at different heights



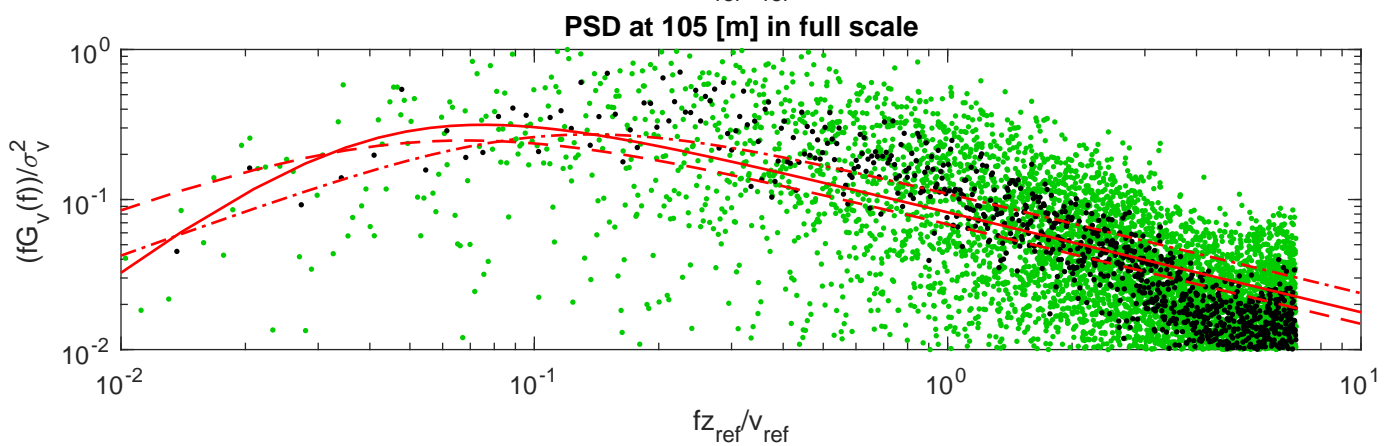
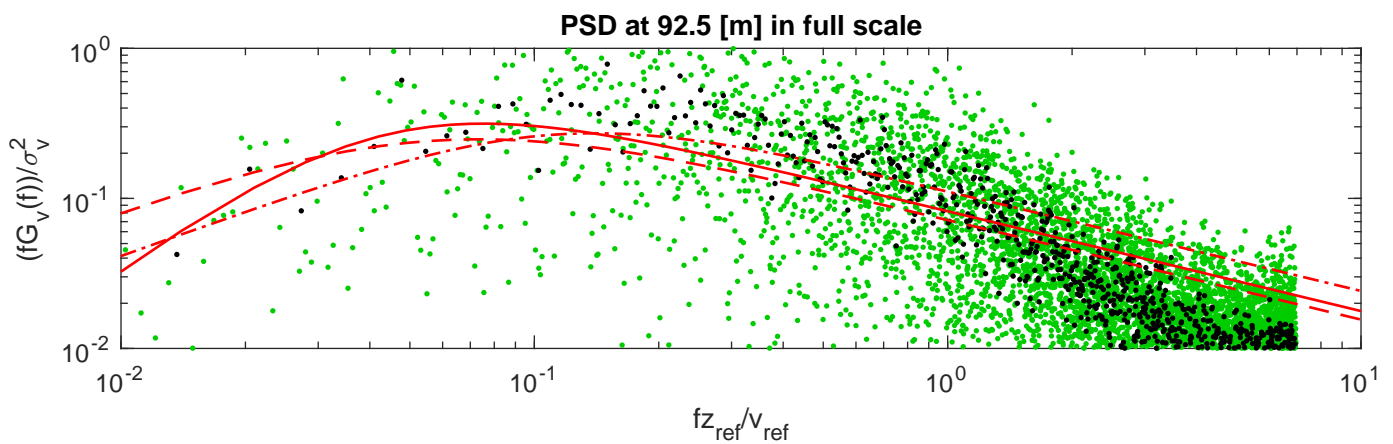
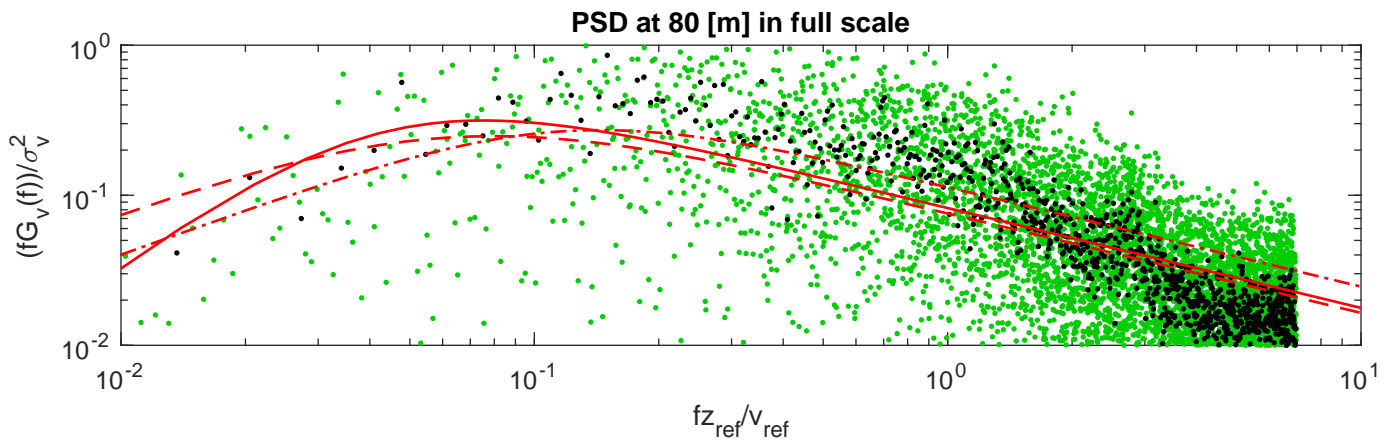
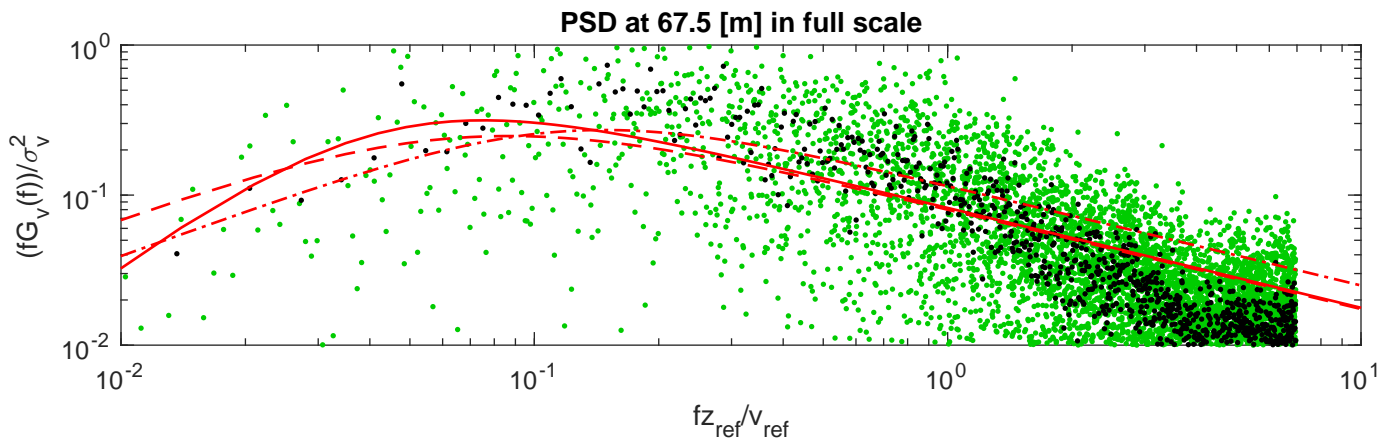
Vertical spatial correlation at different height differences



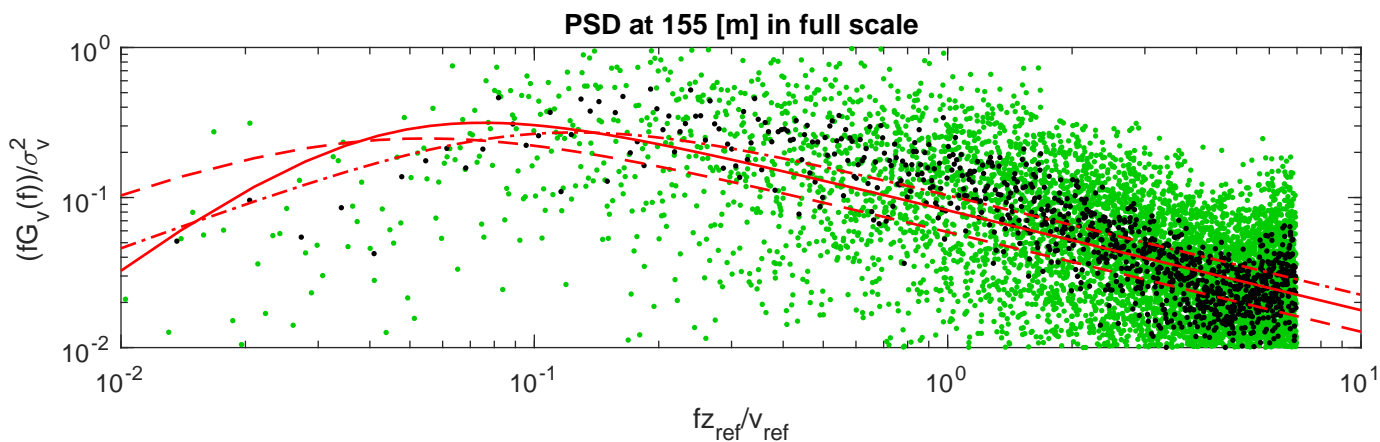
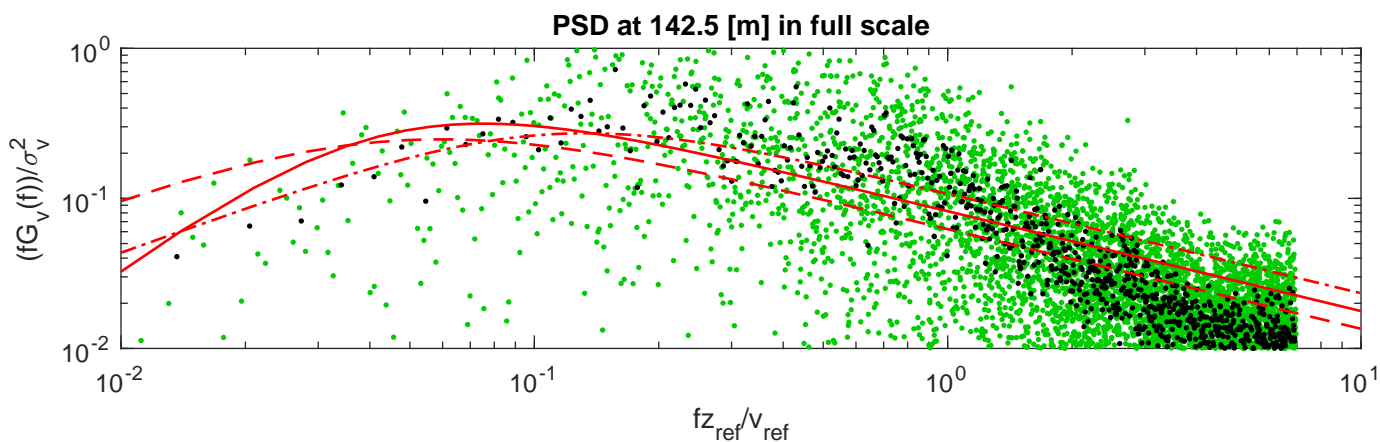
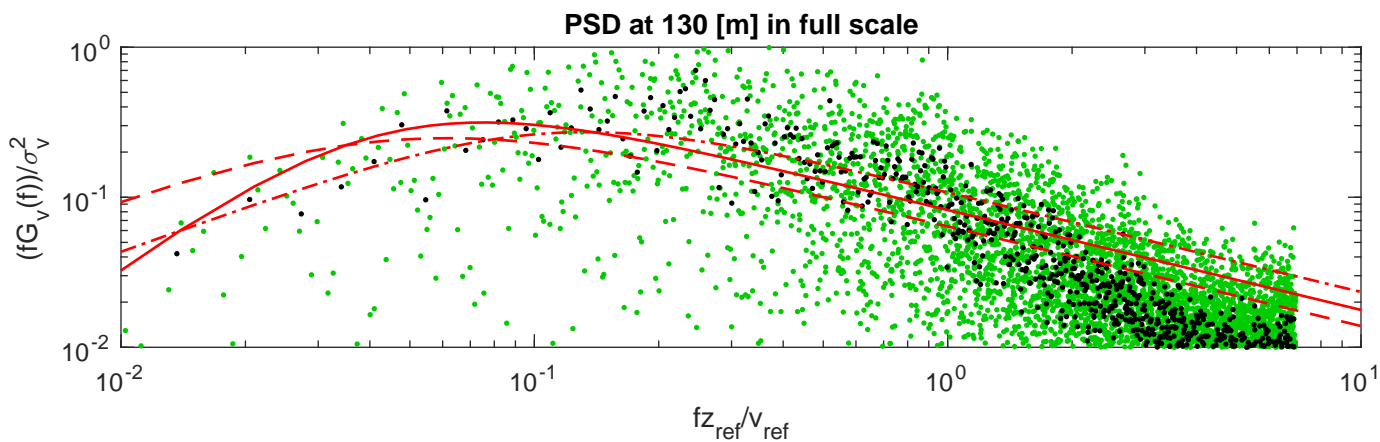
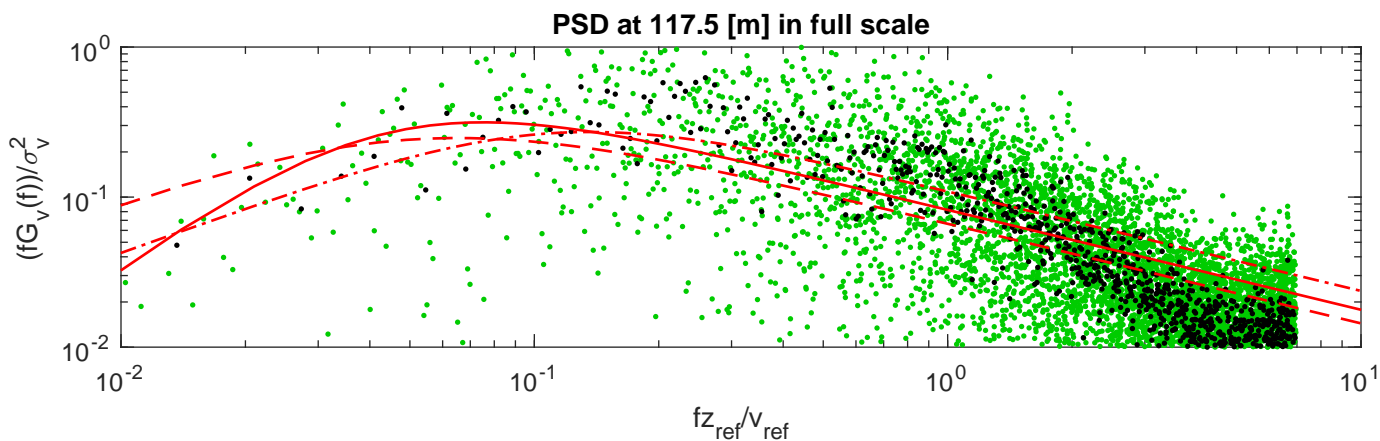
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



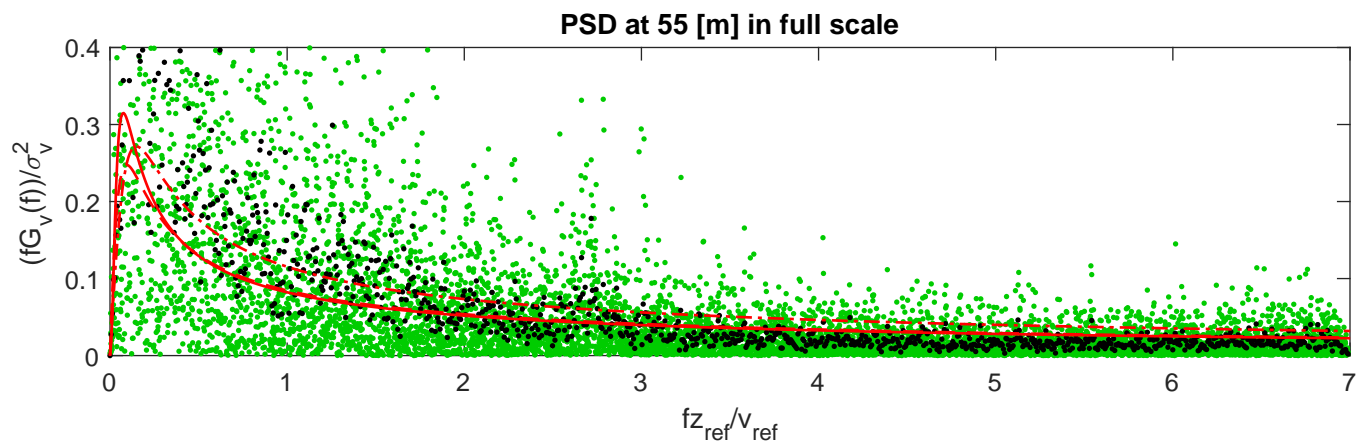
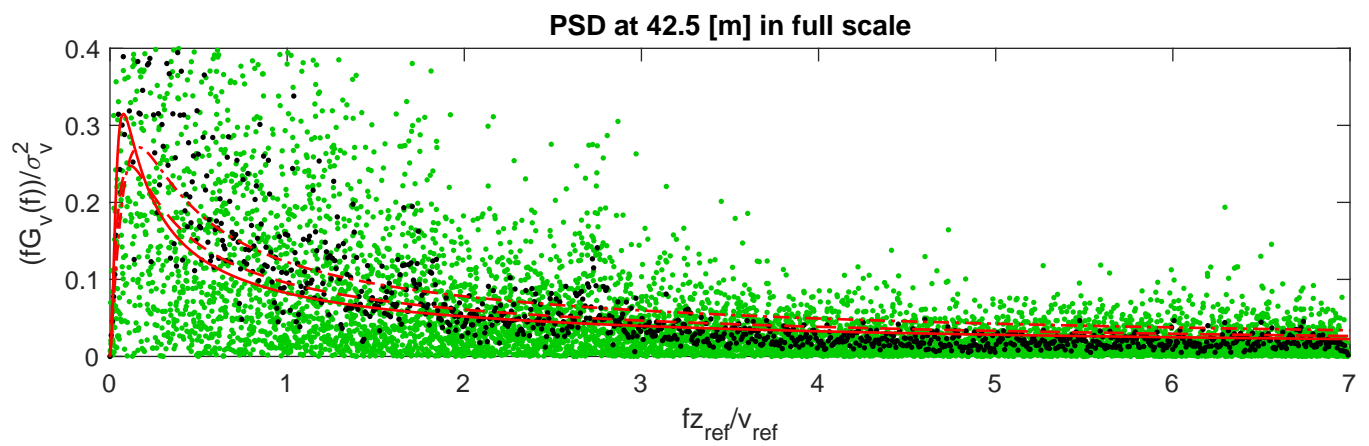
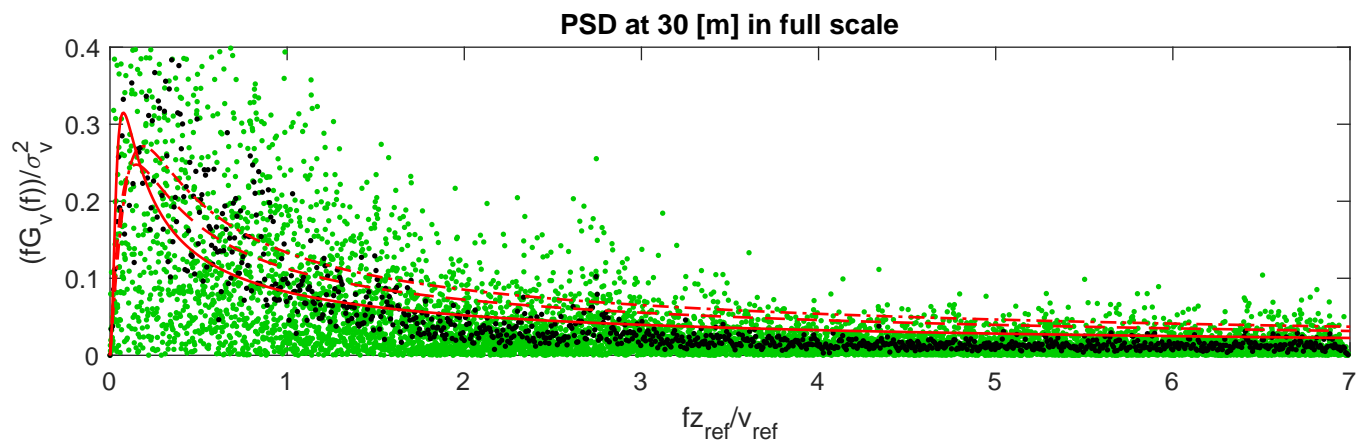
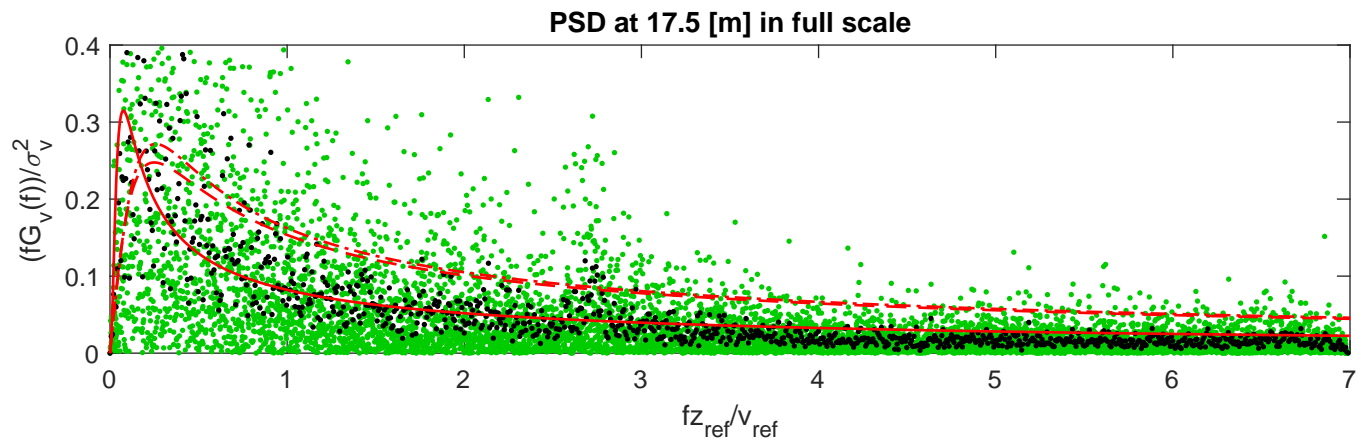
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

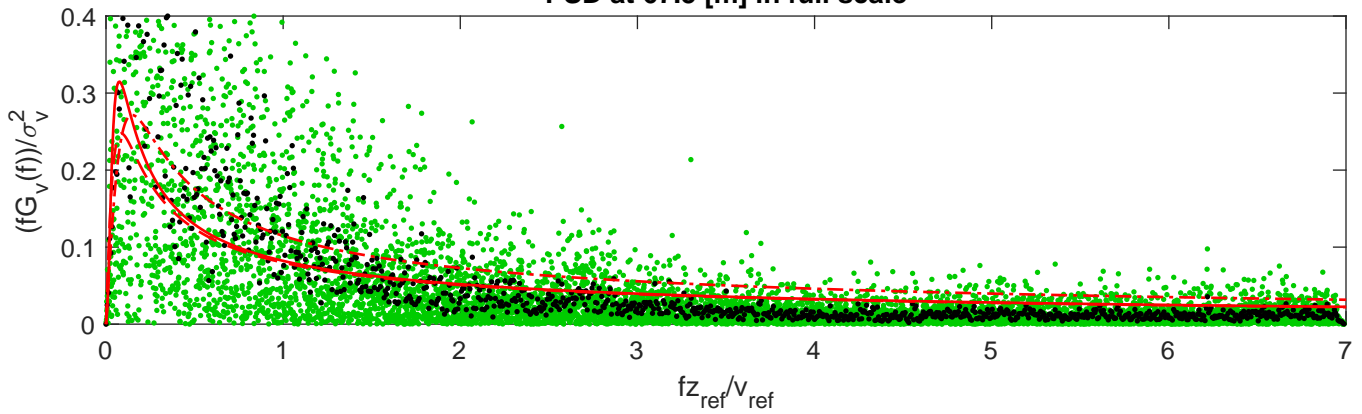


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

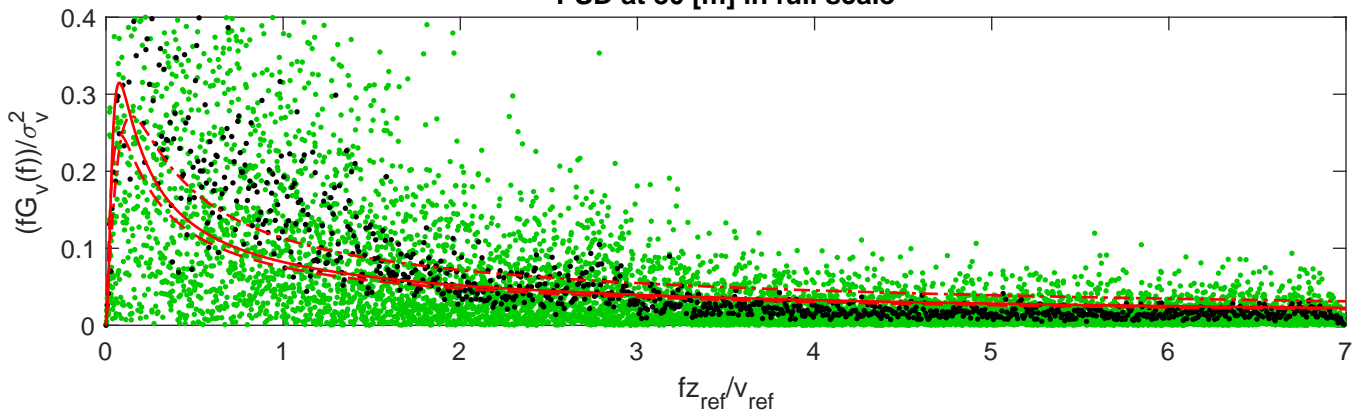


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

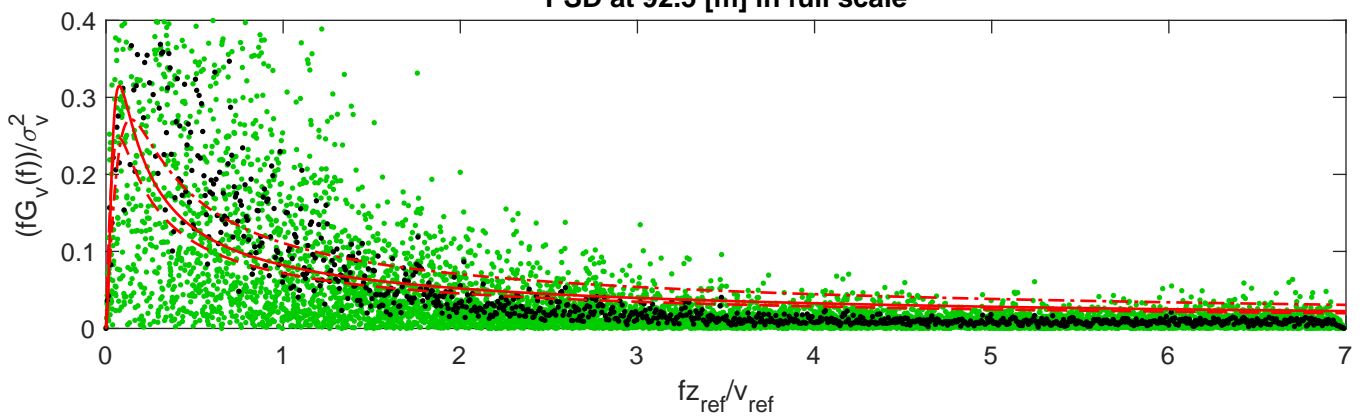
PSD at 67.5 [m] in full scale



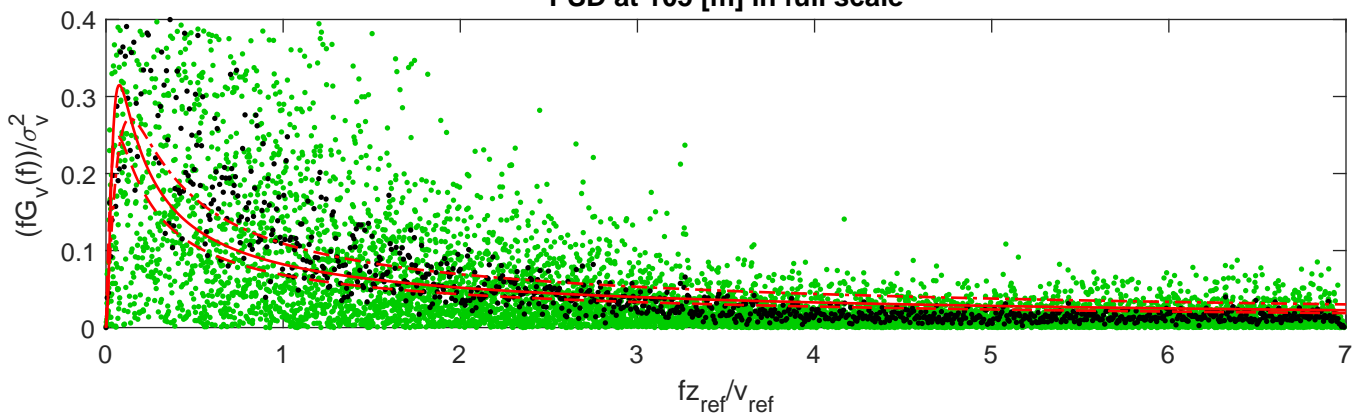
PSD at 80 [m] in full scale



PSD at 92.5 [m] in full scale

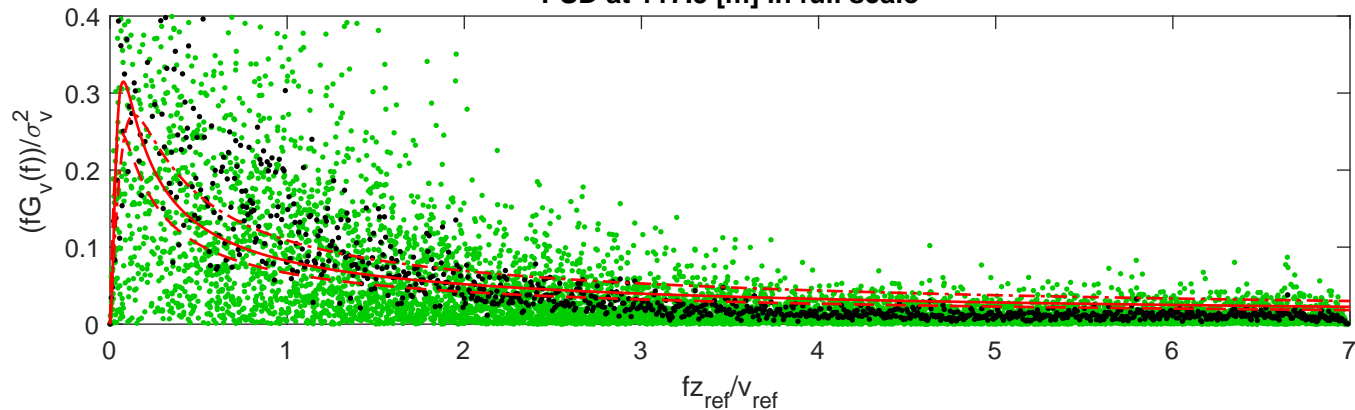


PSD at 105 [m] in full scale

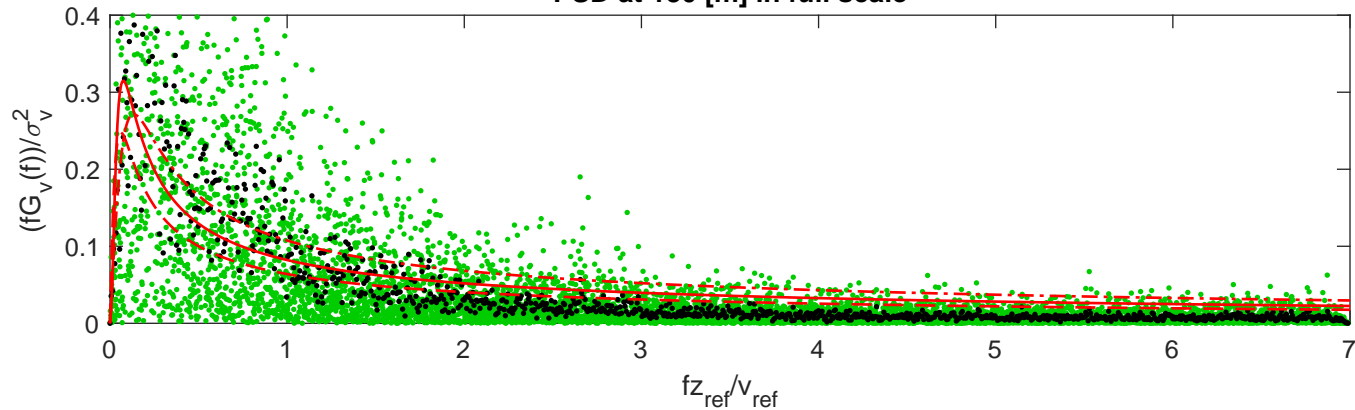


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

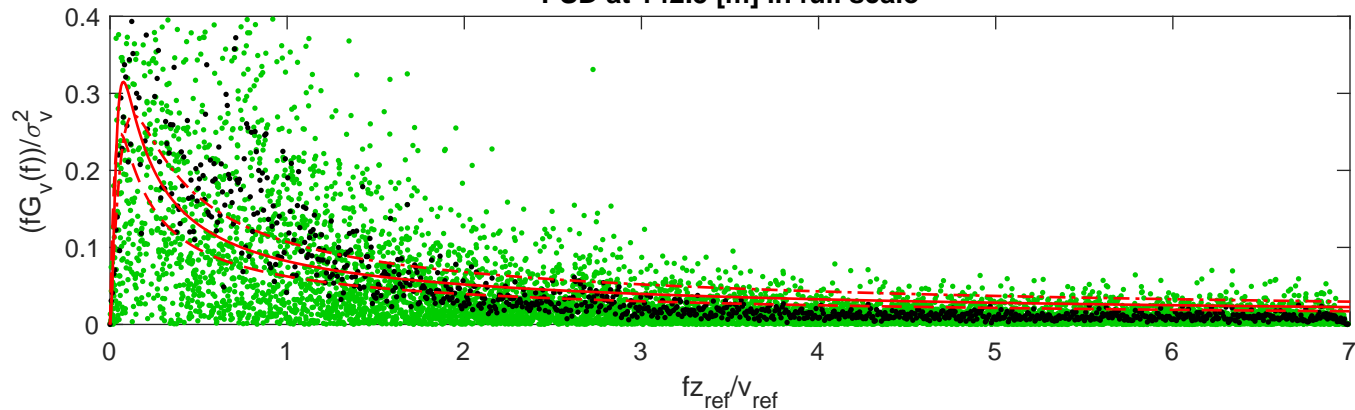
PSD at 117.5 [m] in full scale



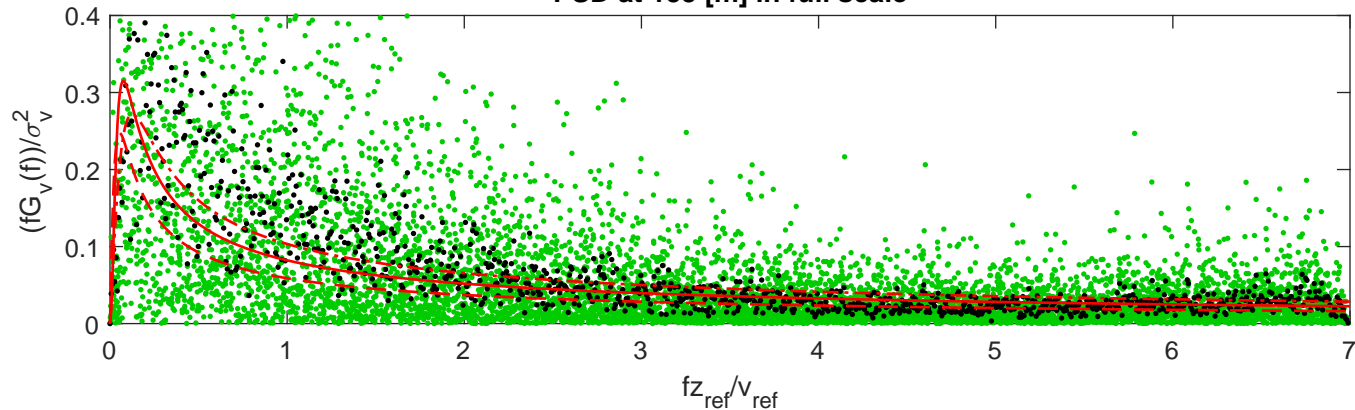
PSD at 130 [m] in full scale

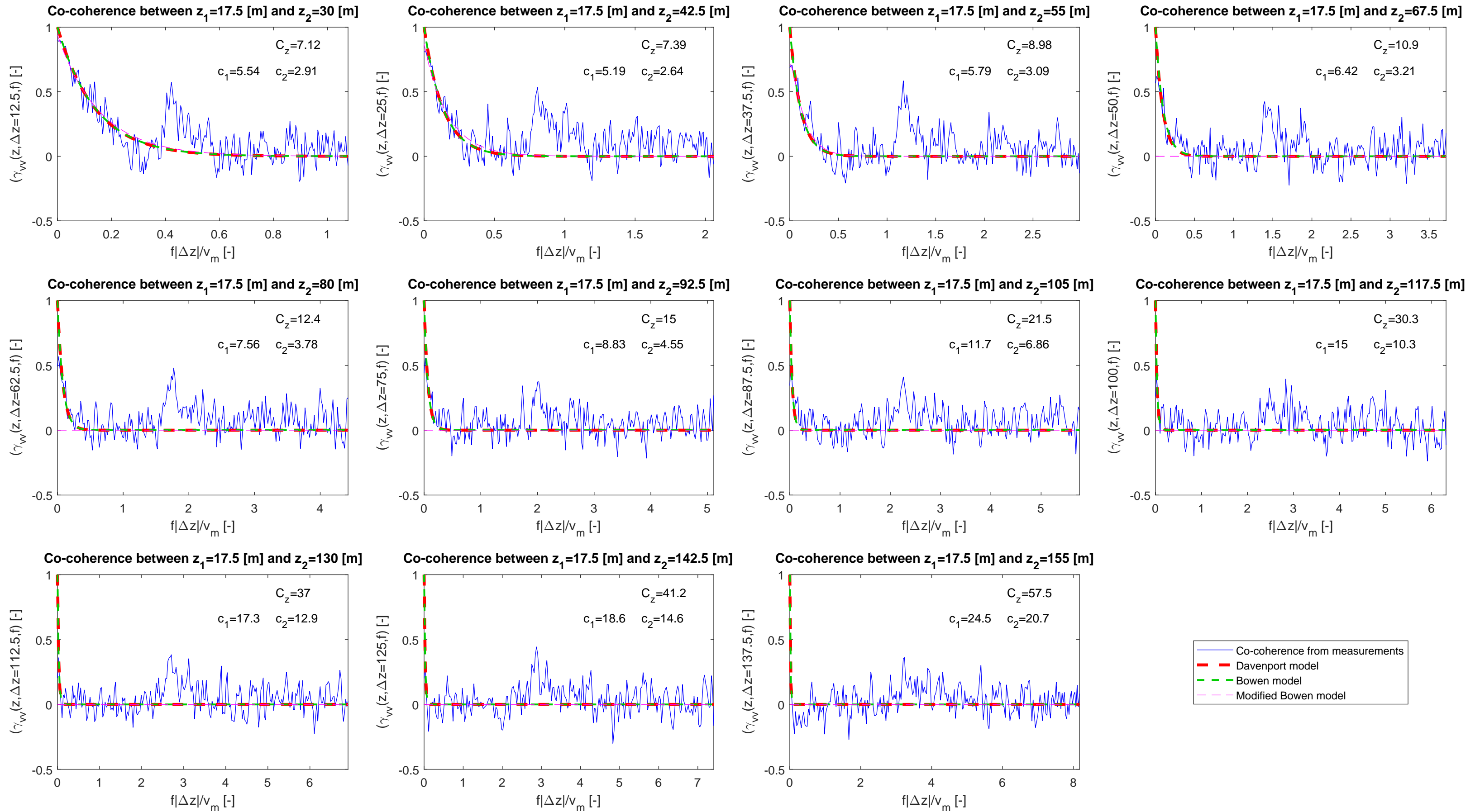


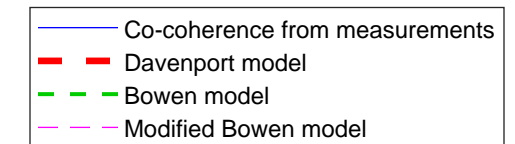
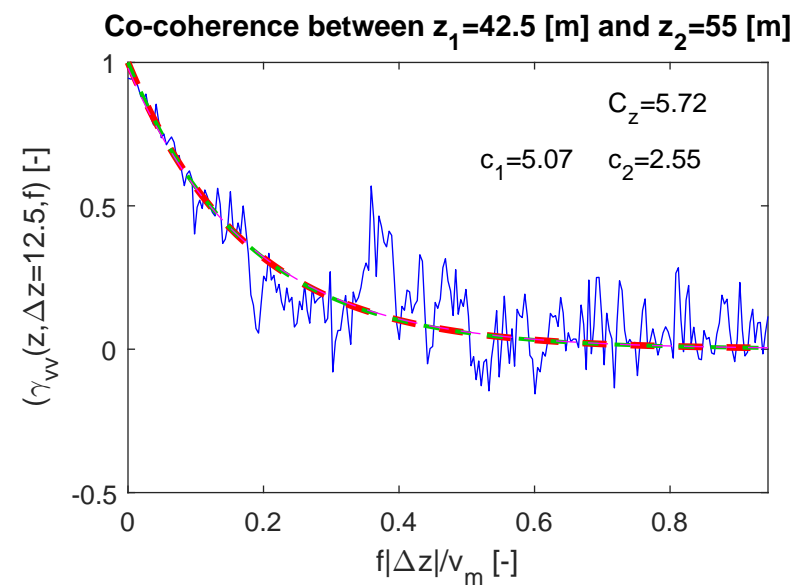
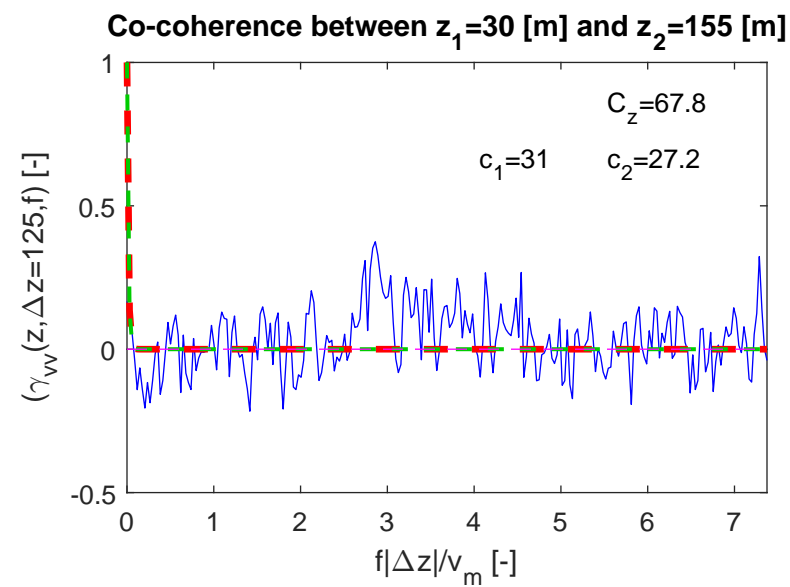
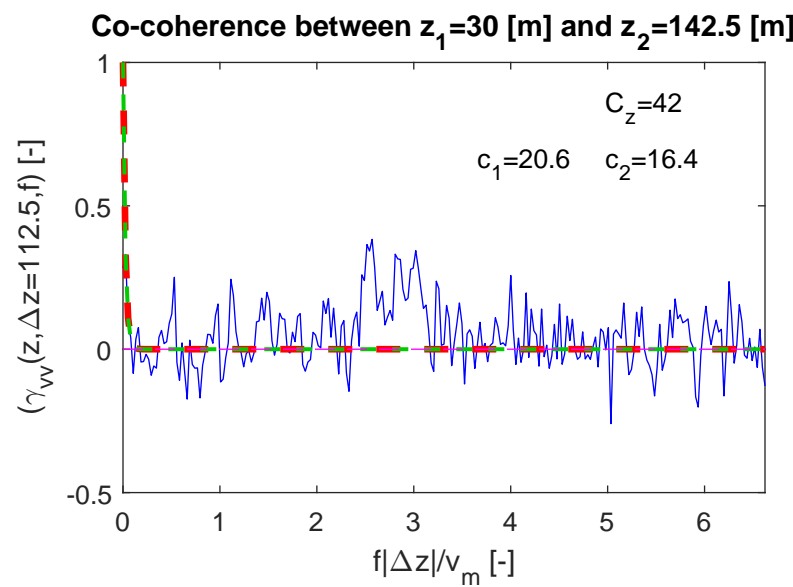
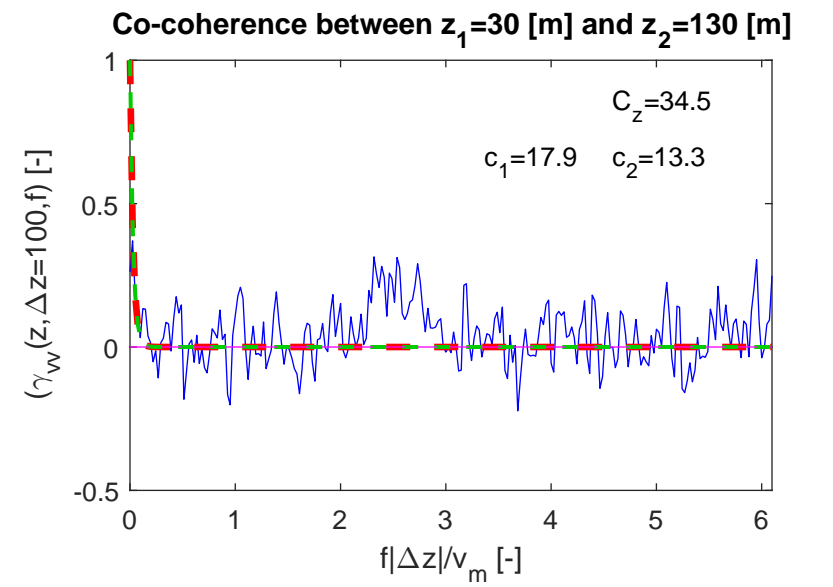
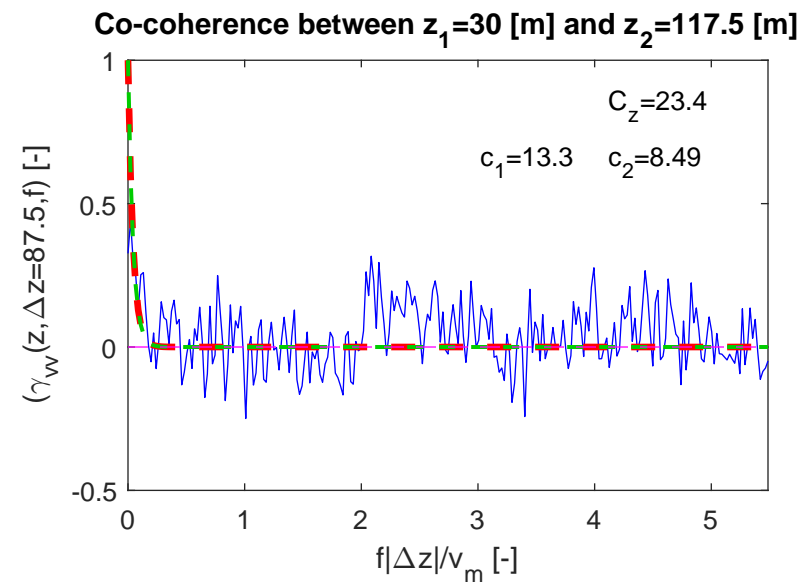
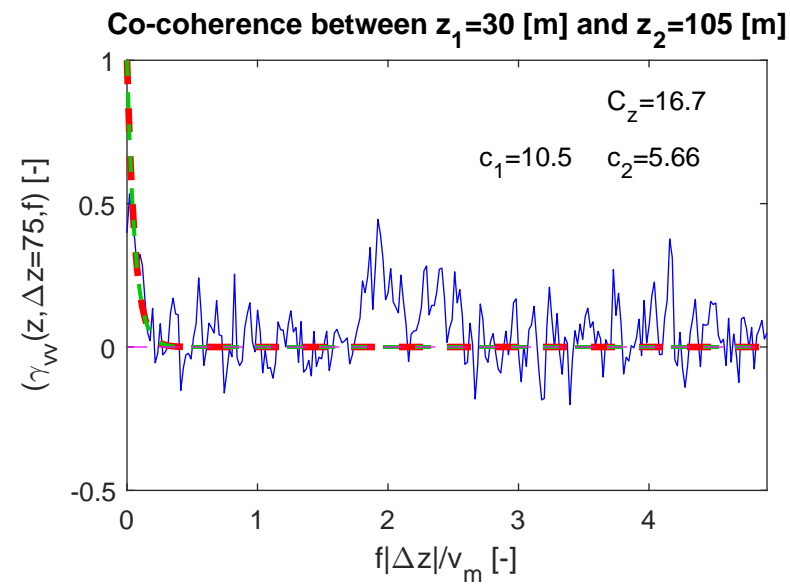
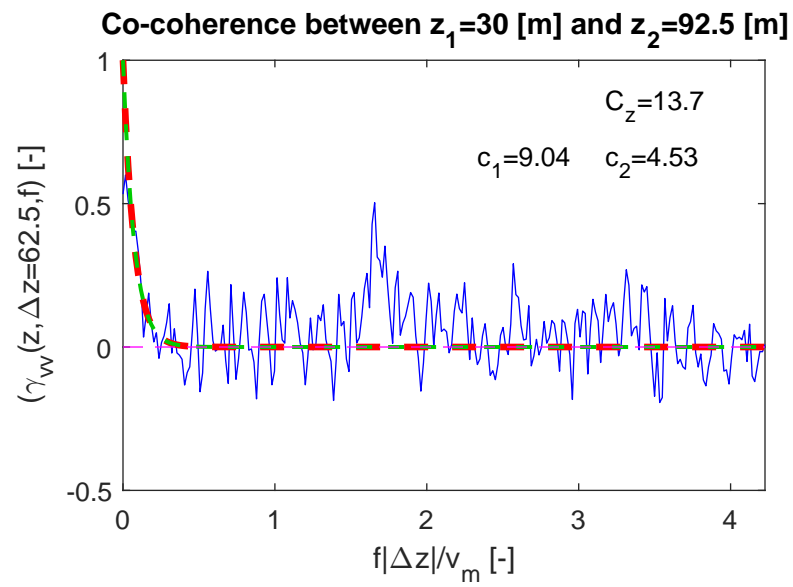
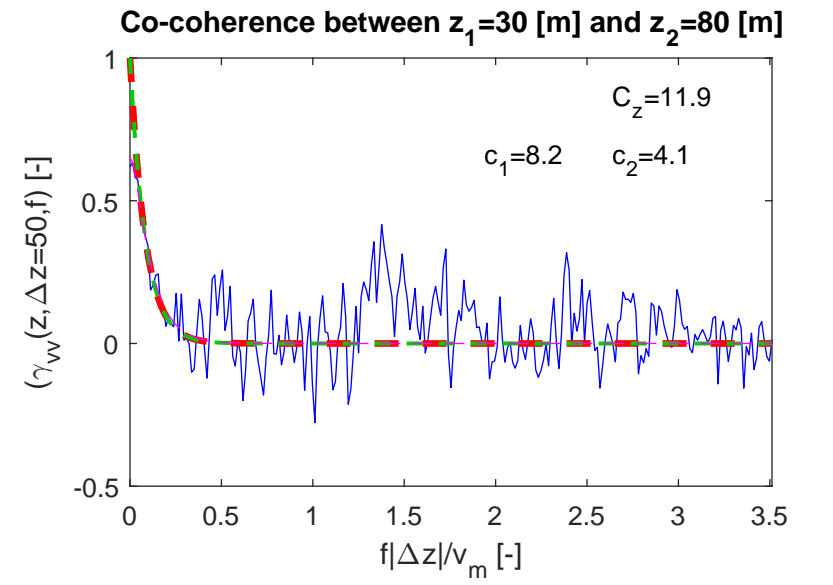
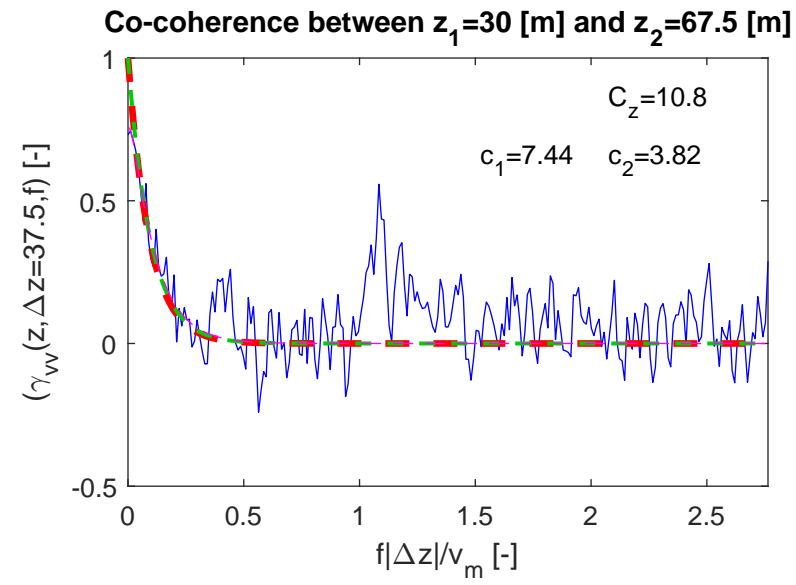
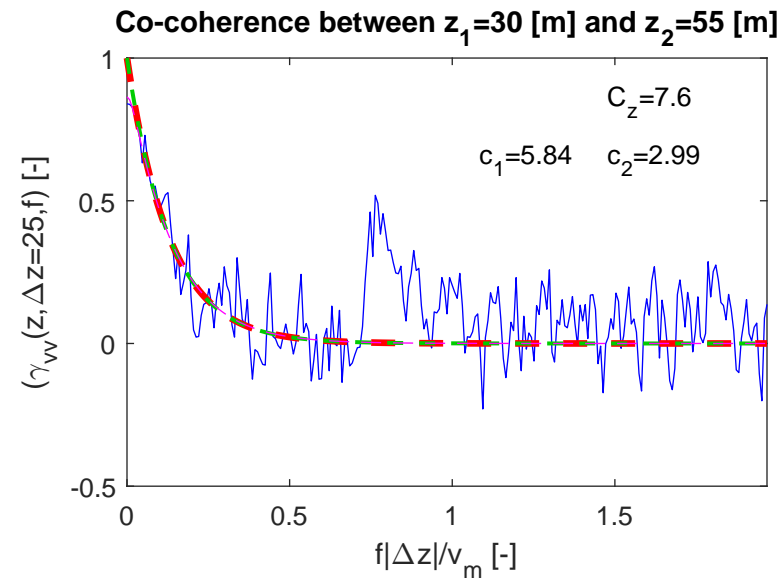
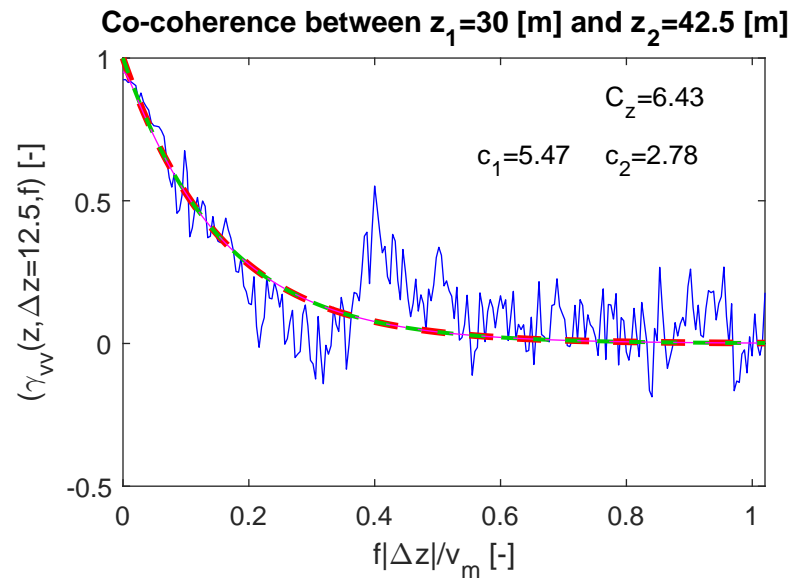
PSD at 142.5 [m] in full scale

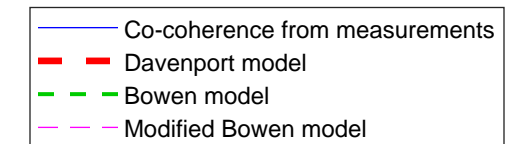
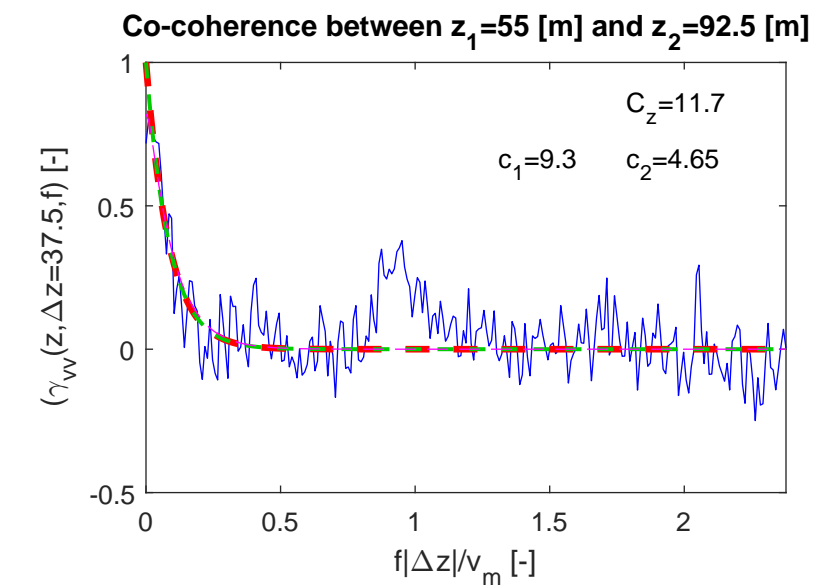
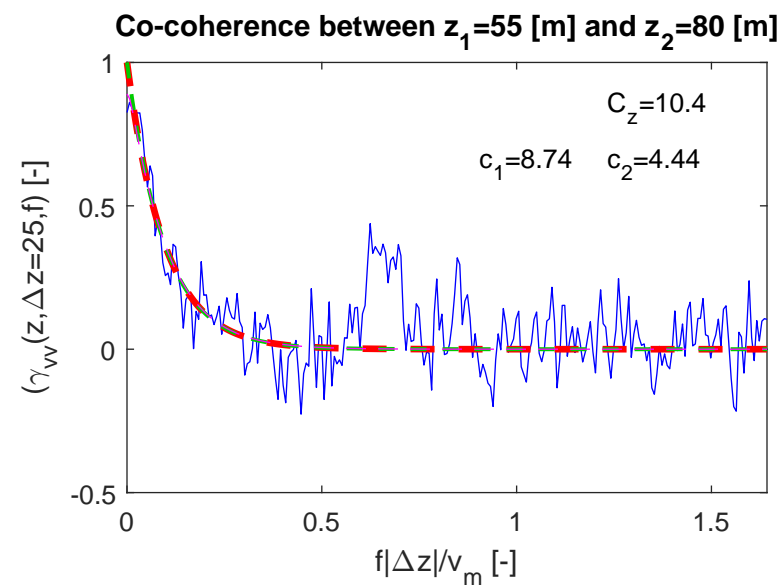
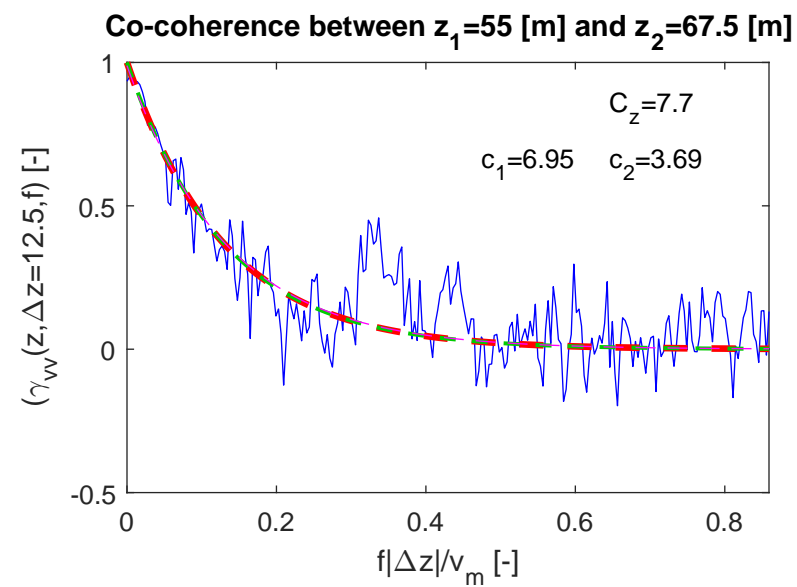
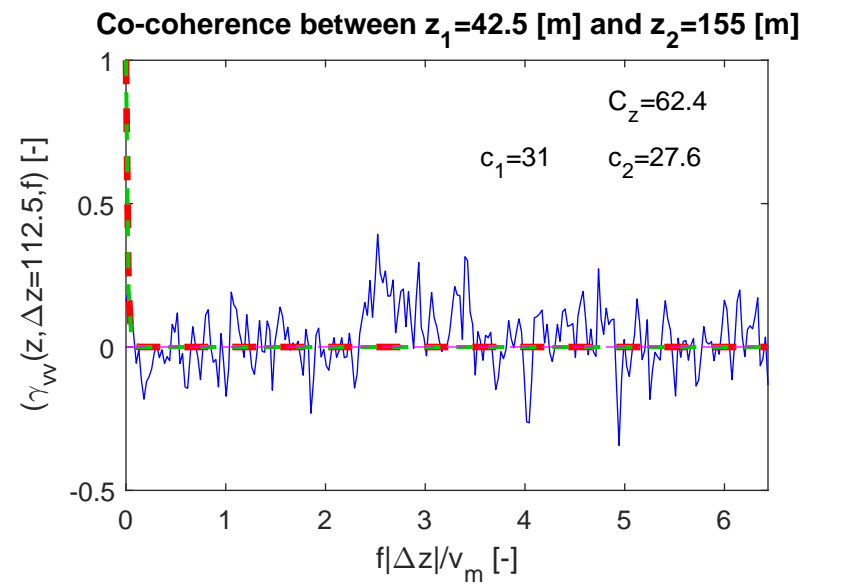
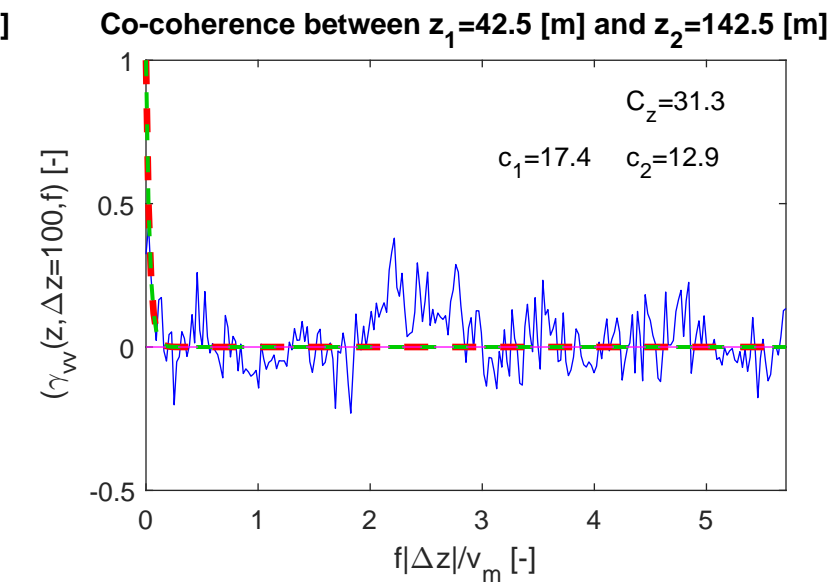
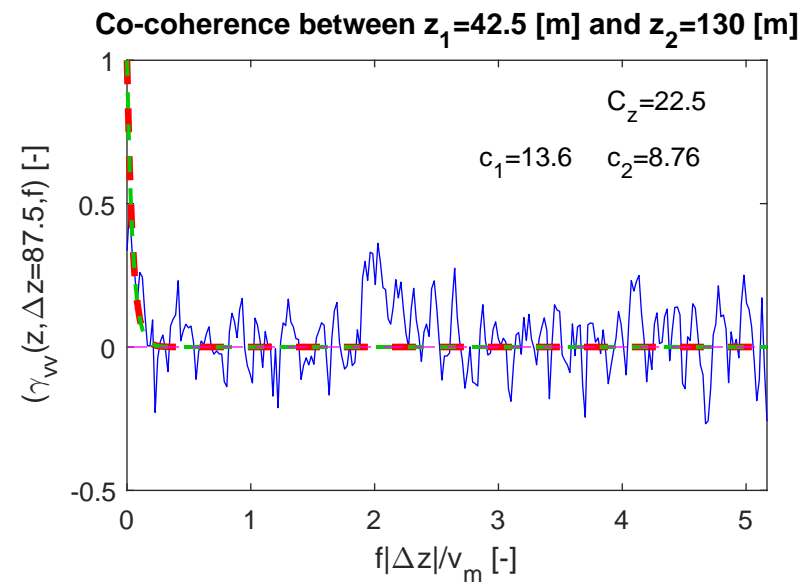
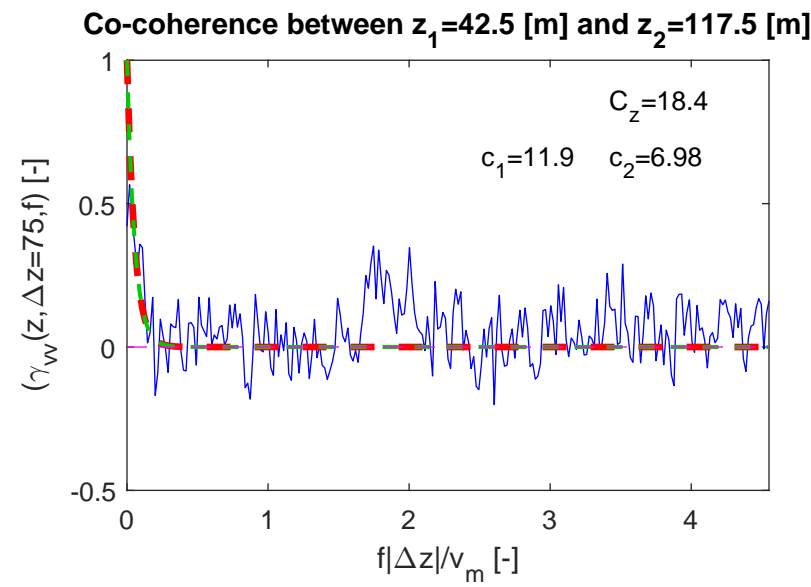
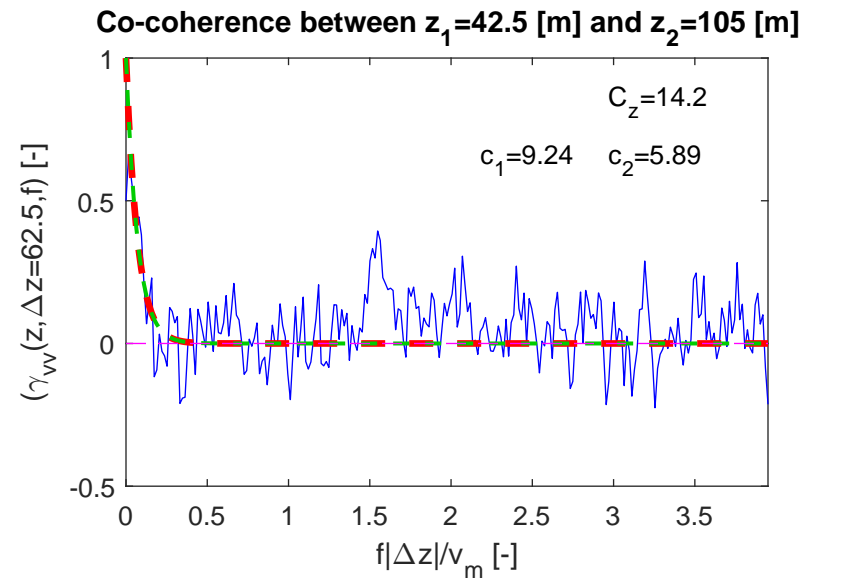
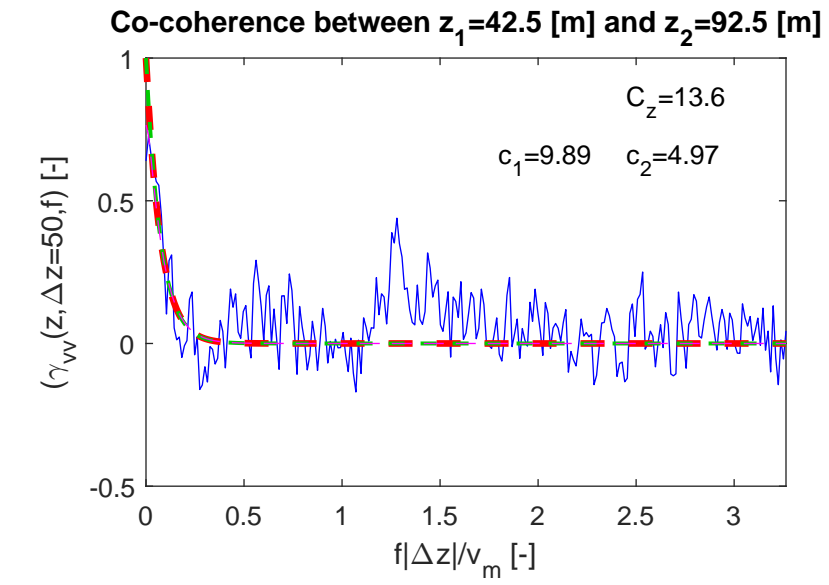
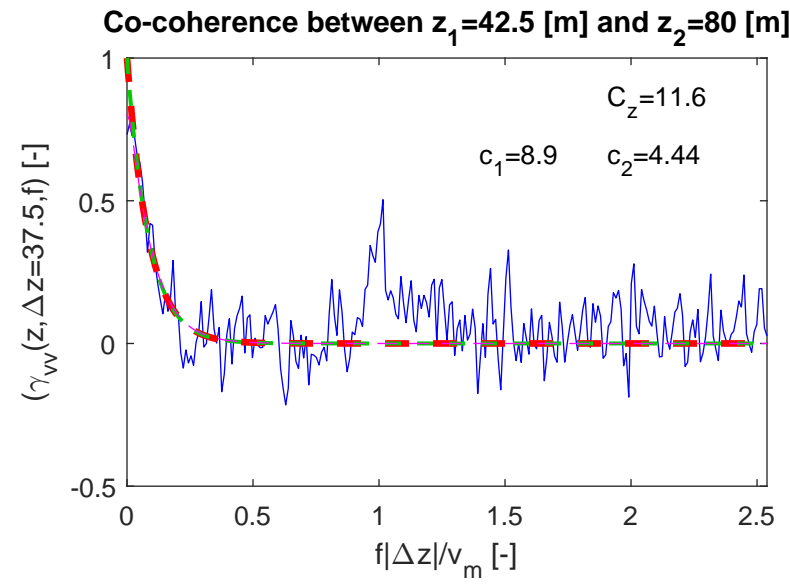
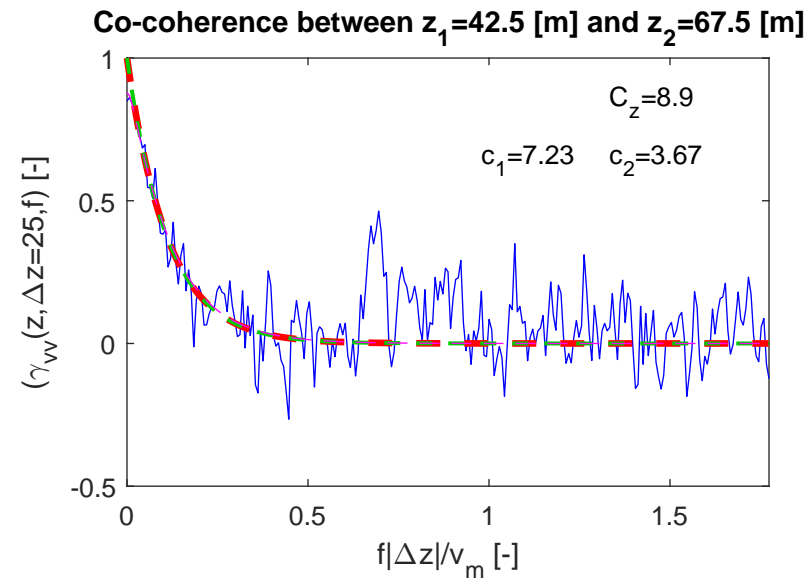


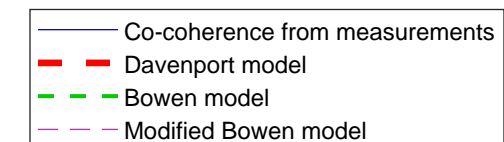
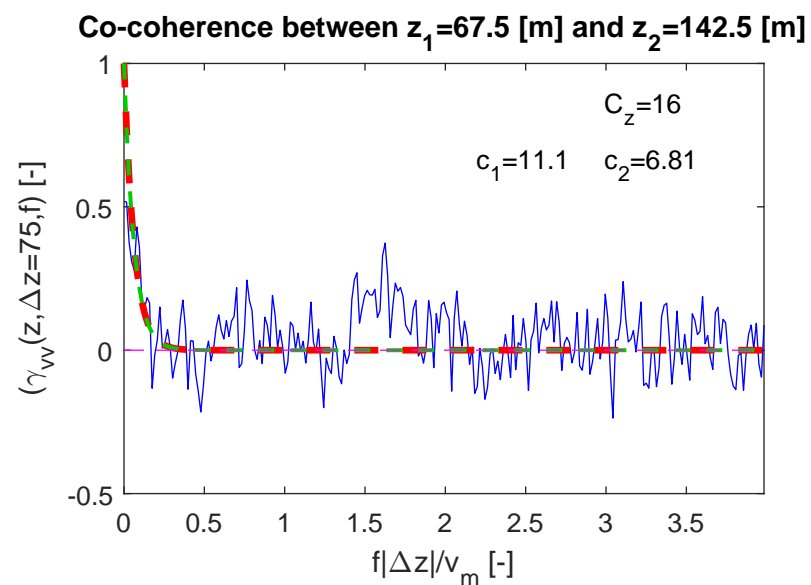
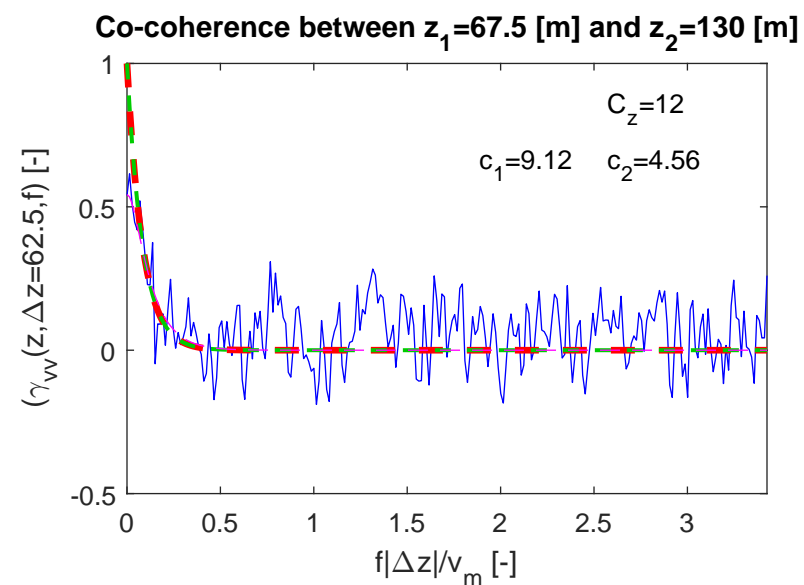
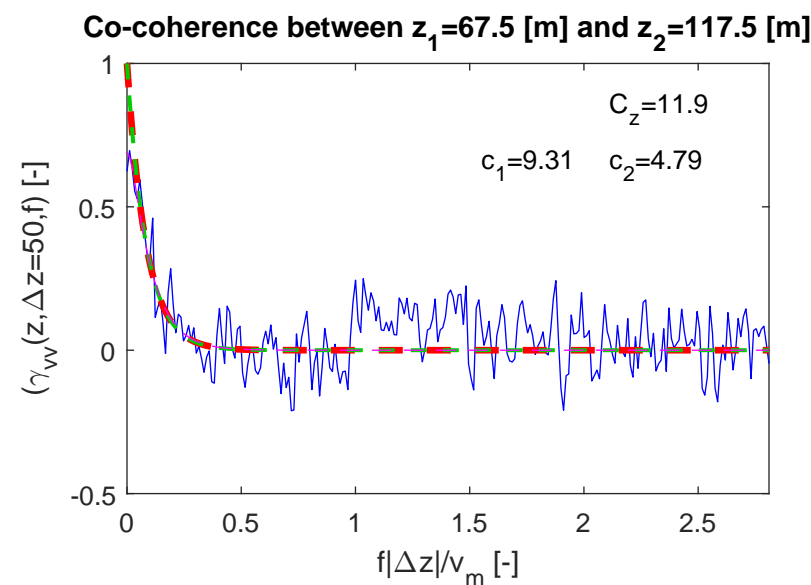
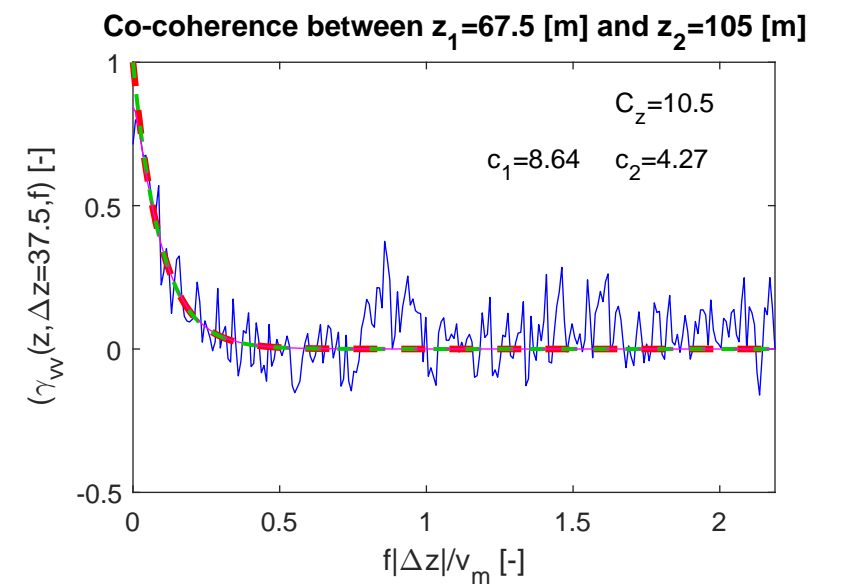
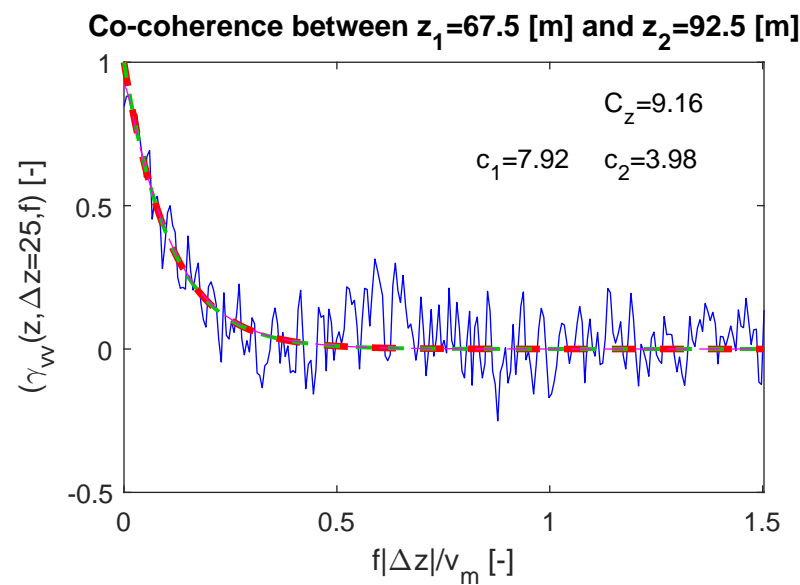
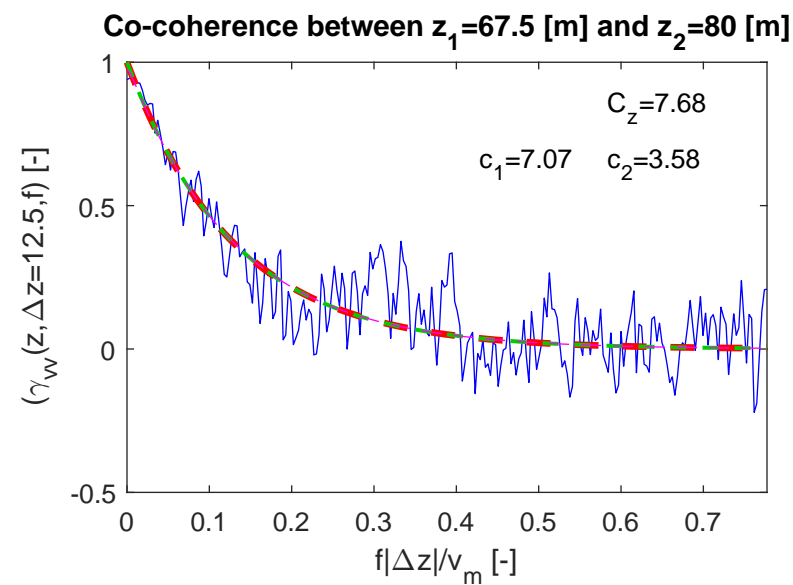
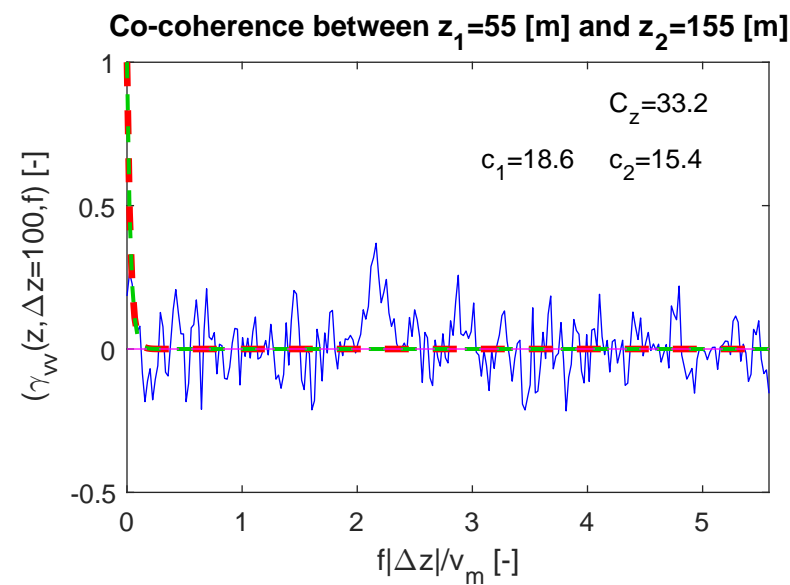
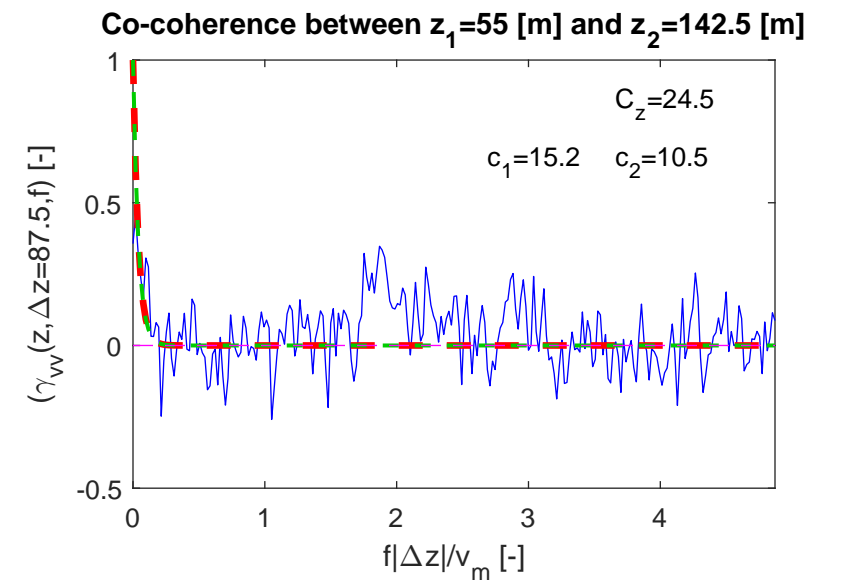
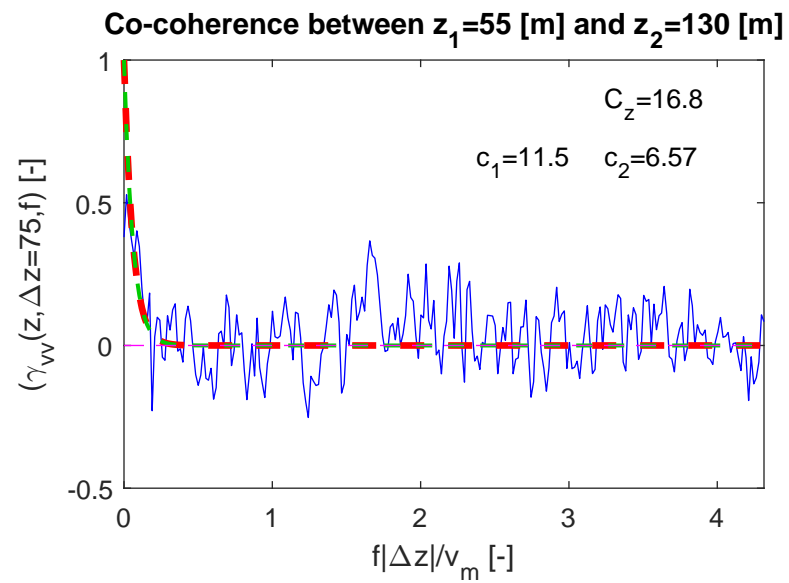
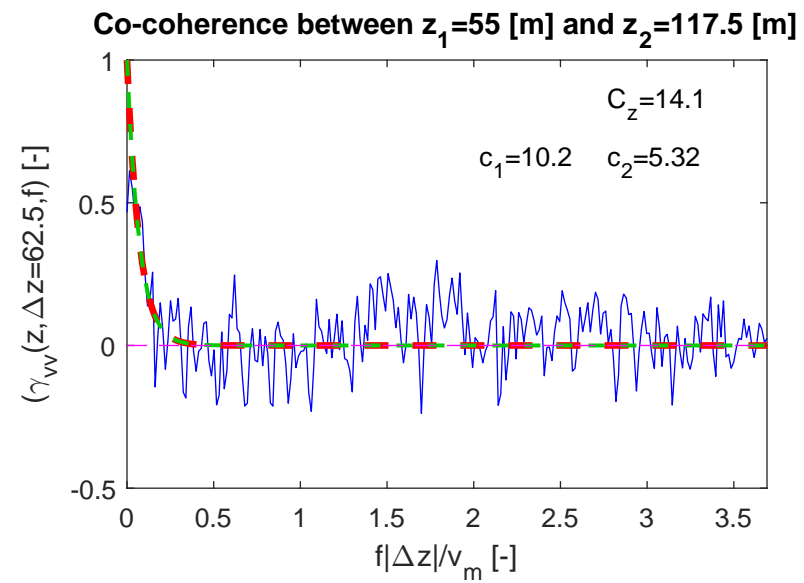
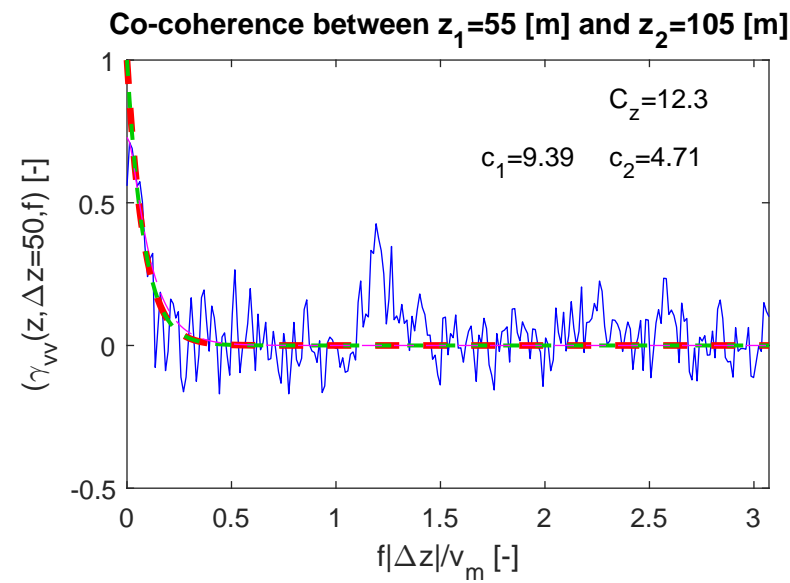
PSD at 155 [m] in full scale

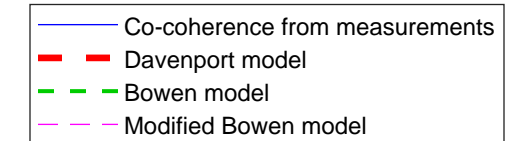
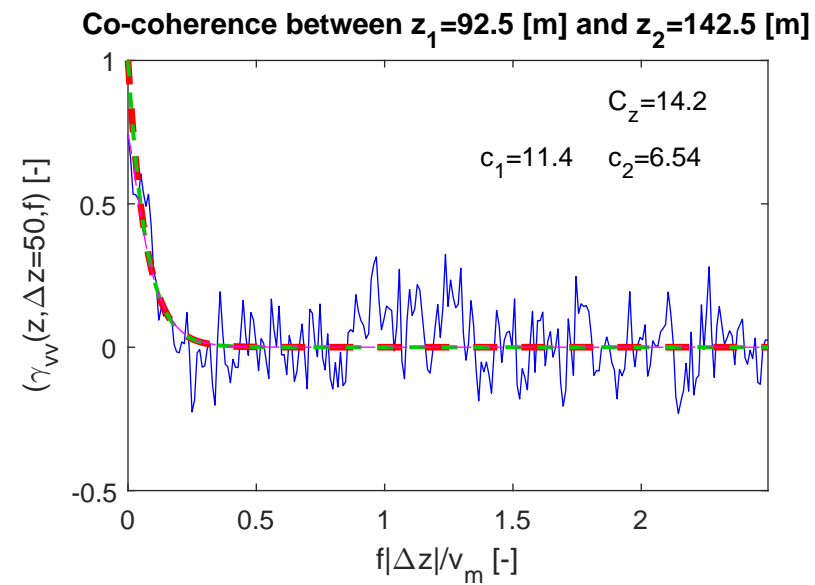
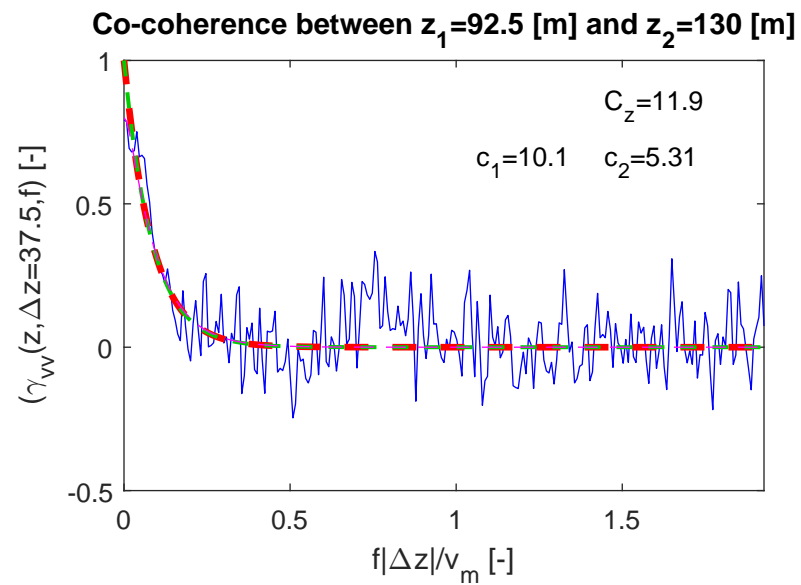
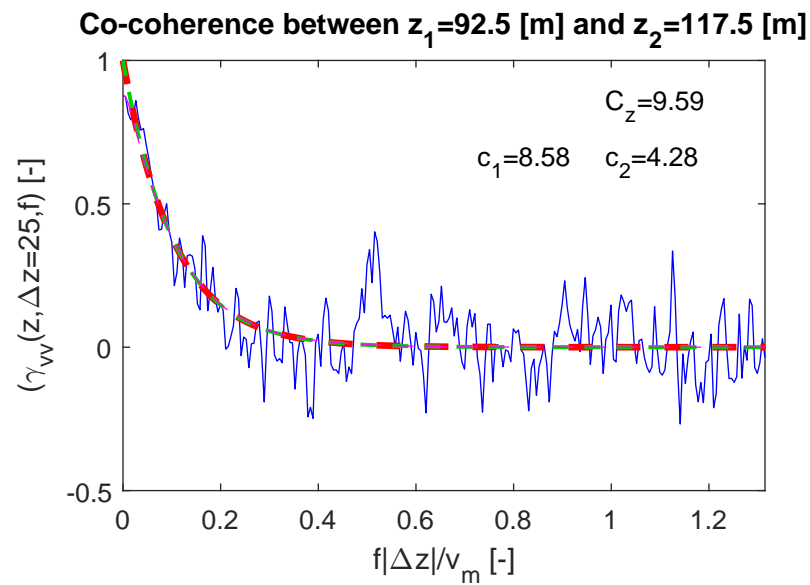
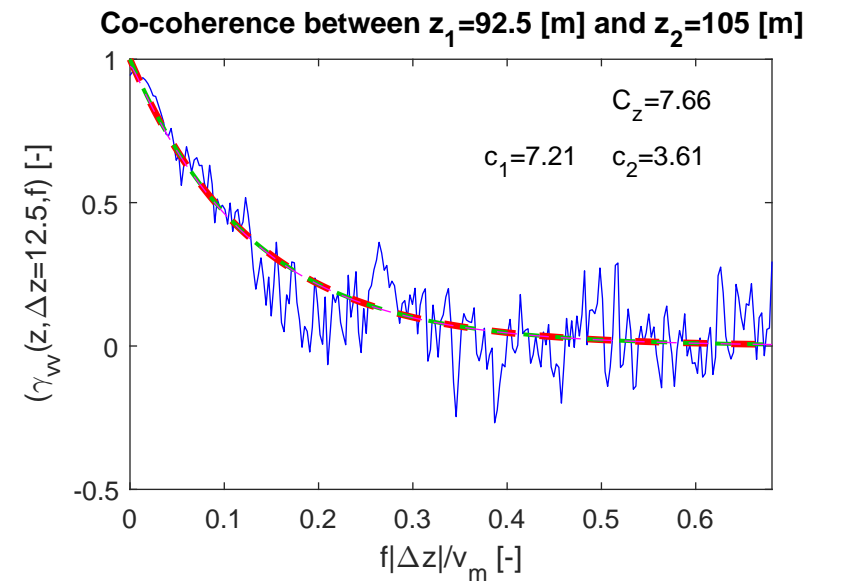
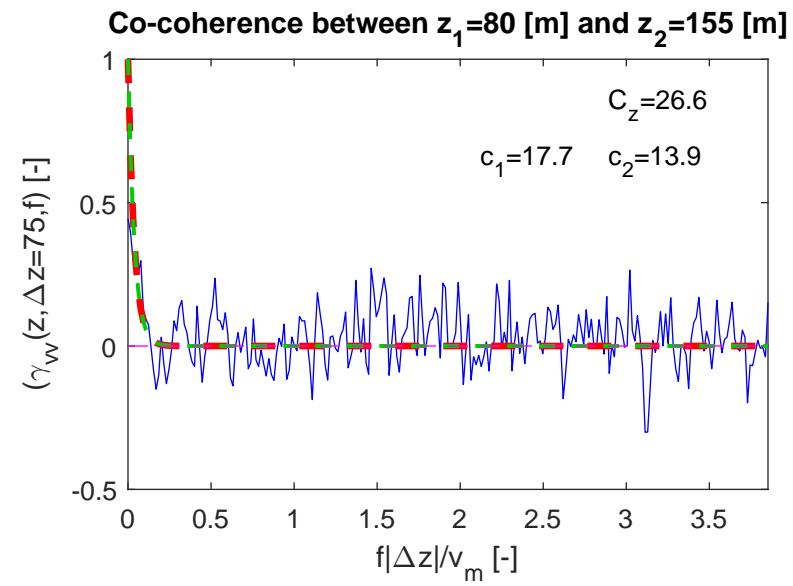
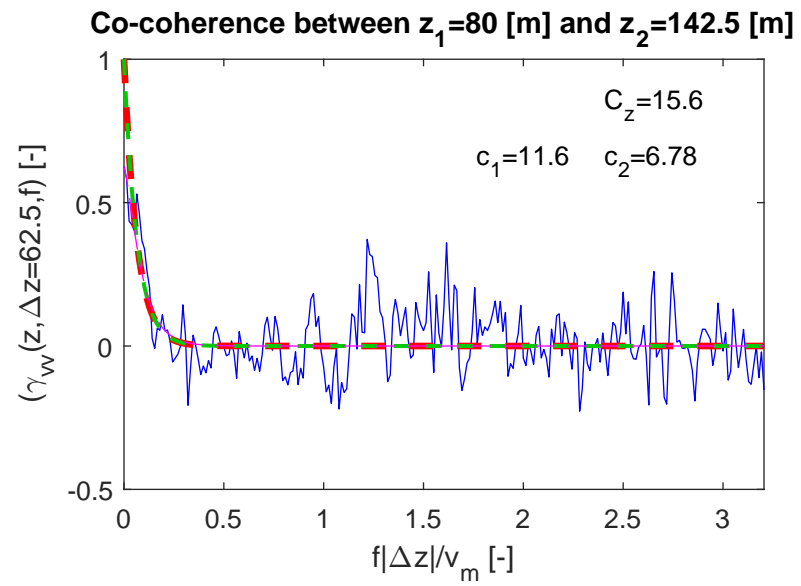
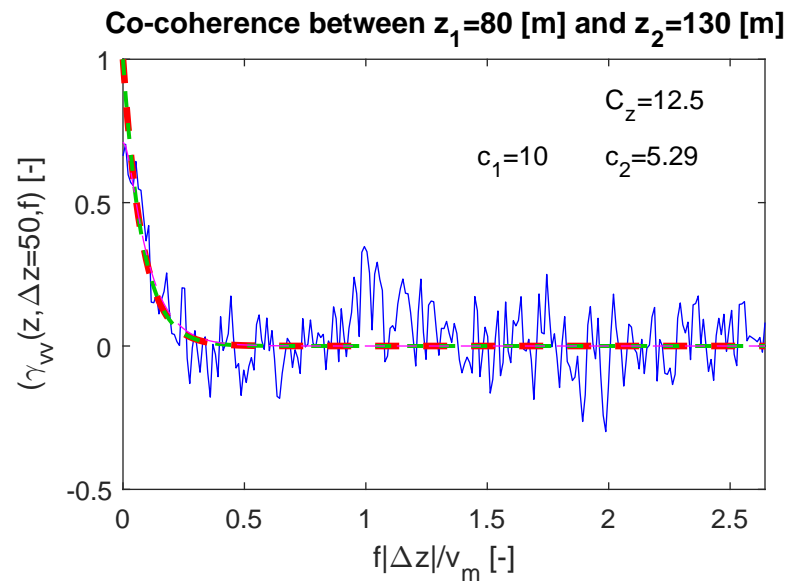
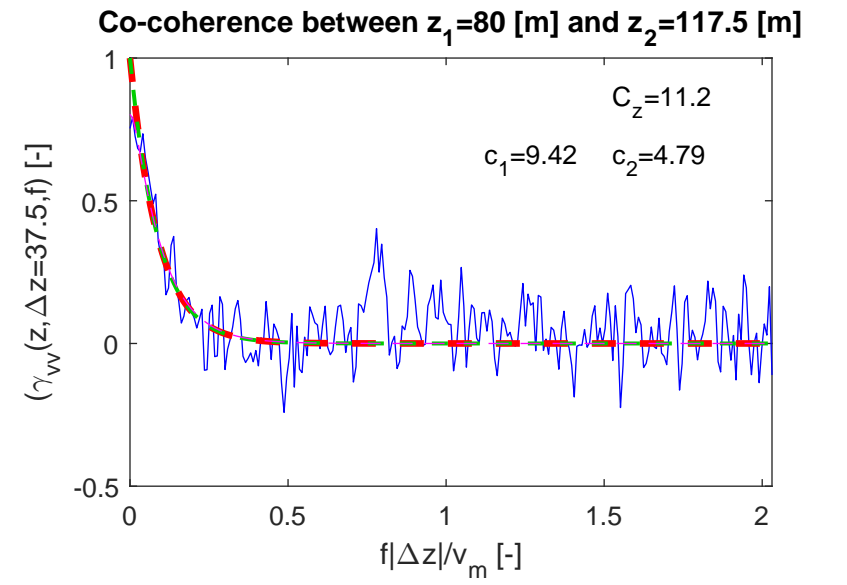
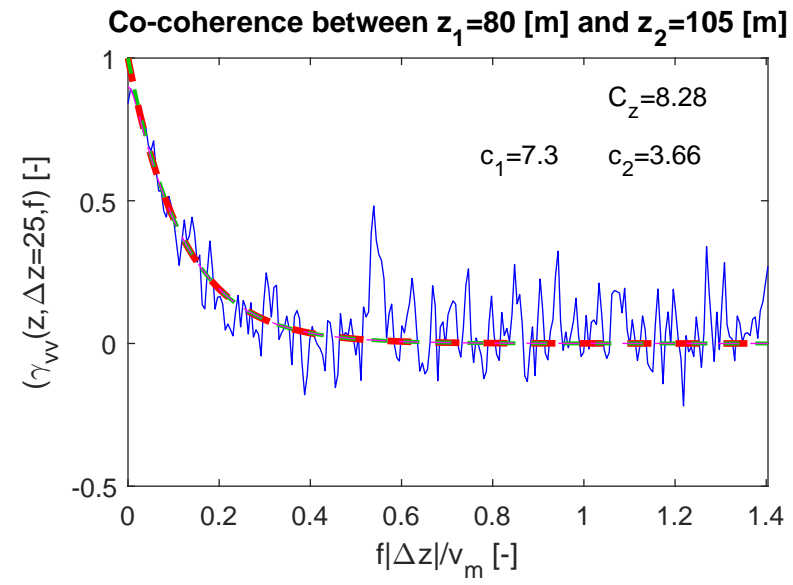
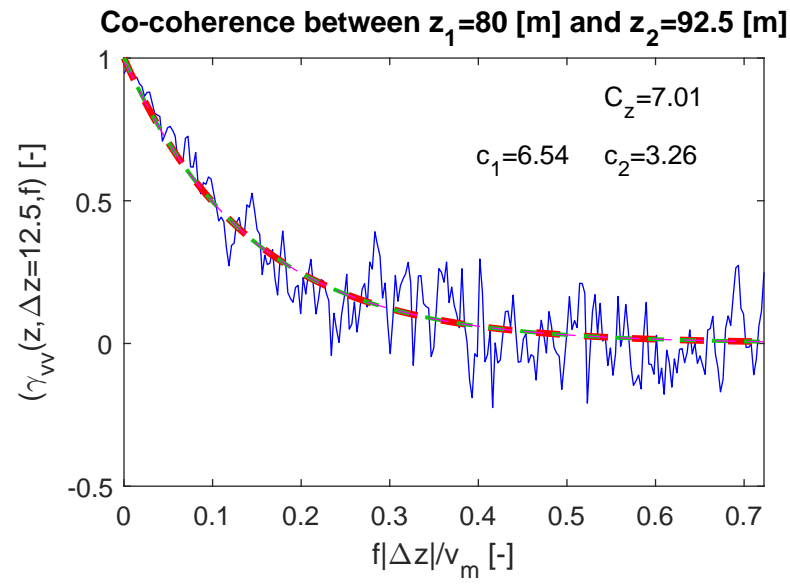
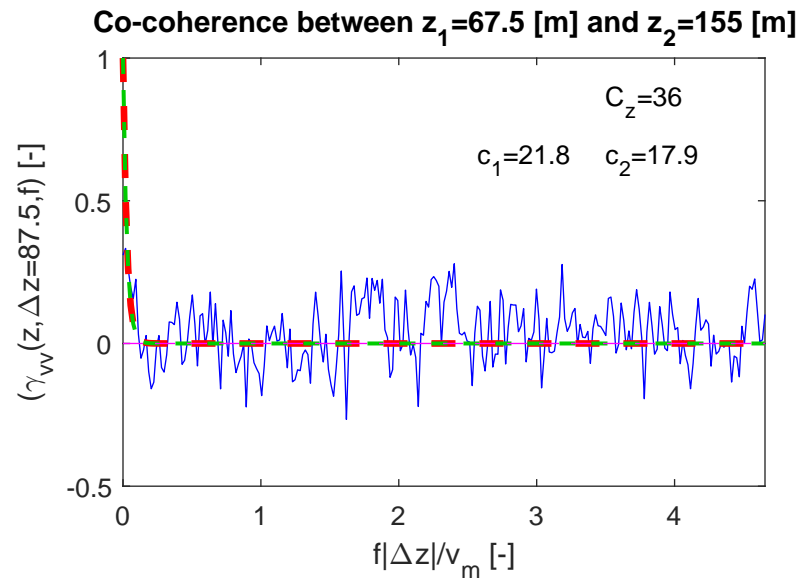


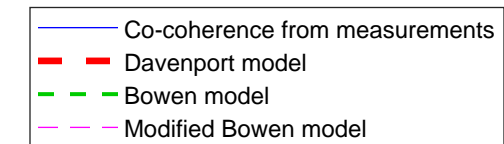
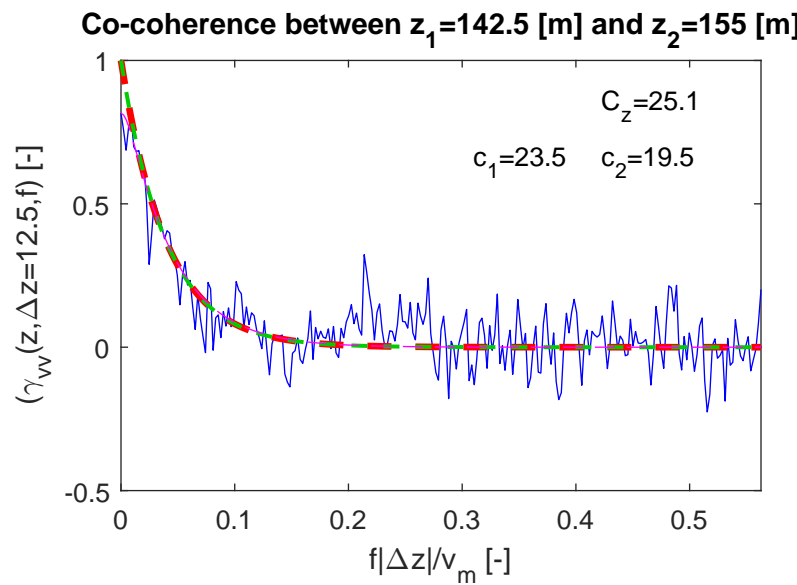
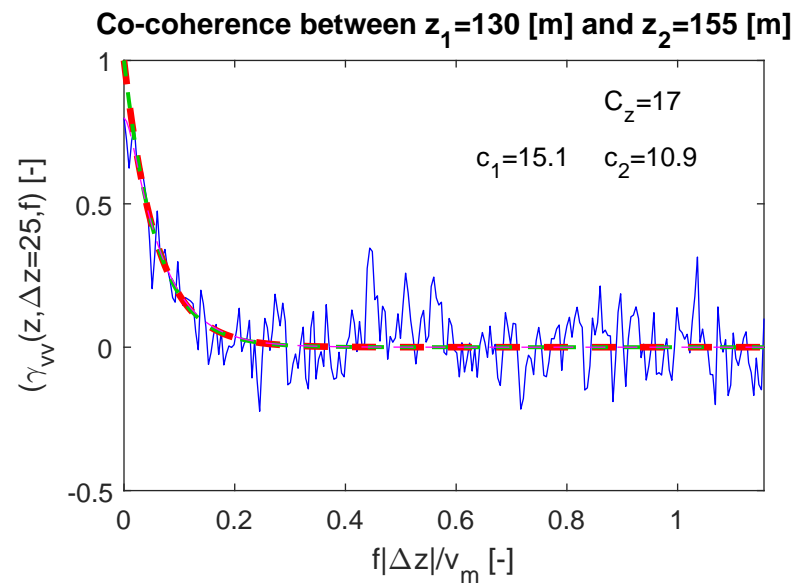
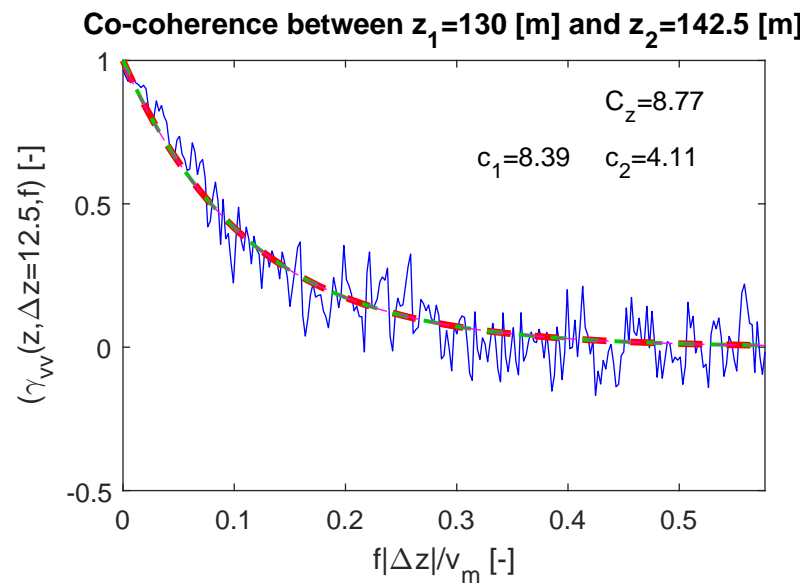
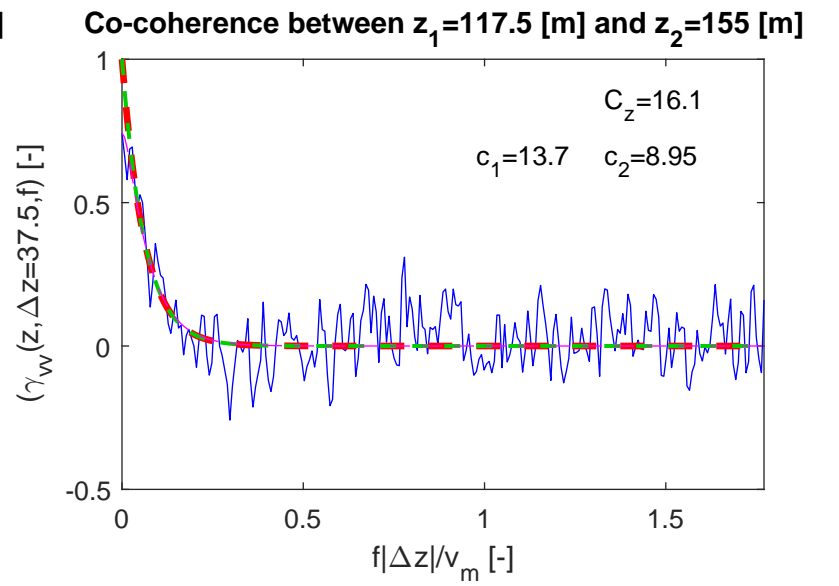
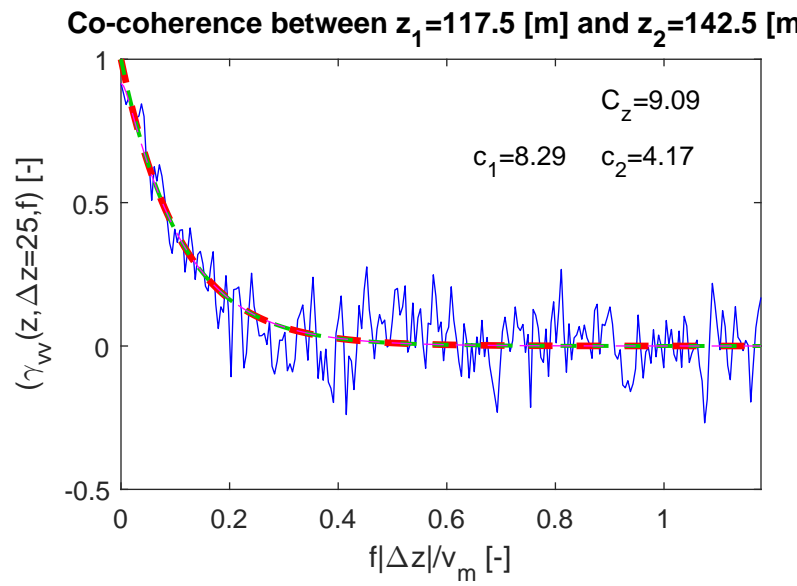
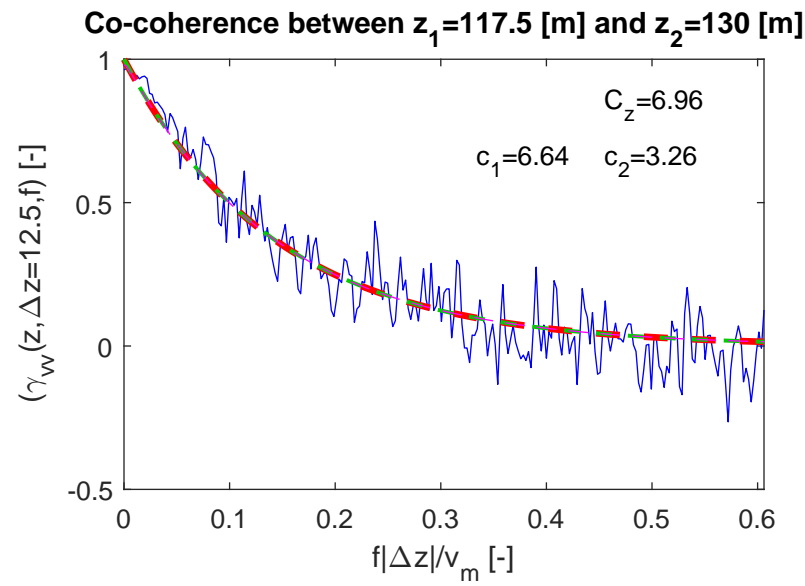
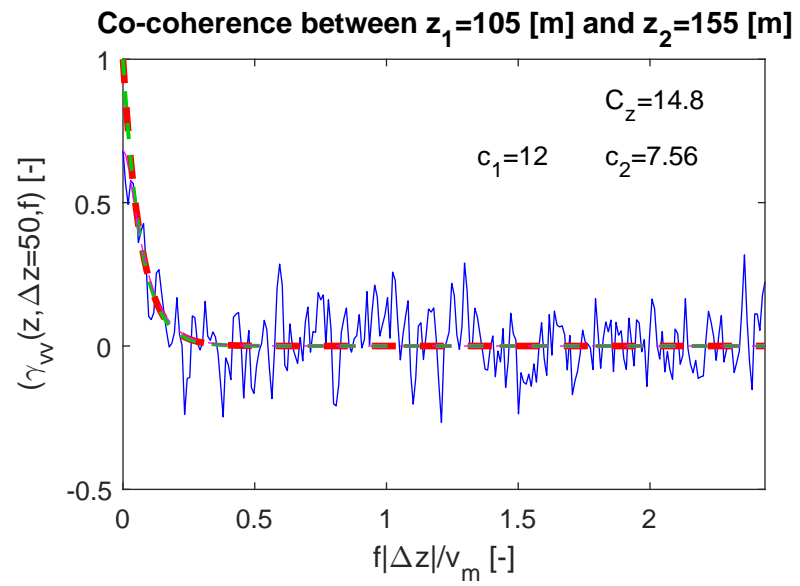
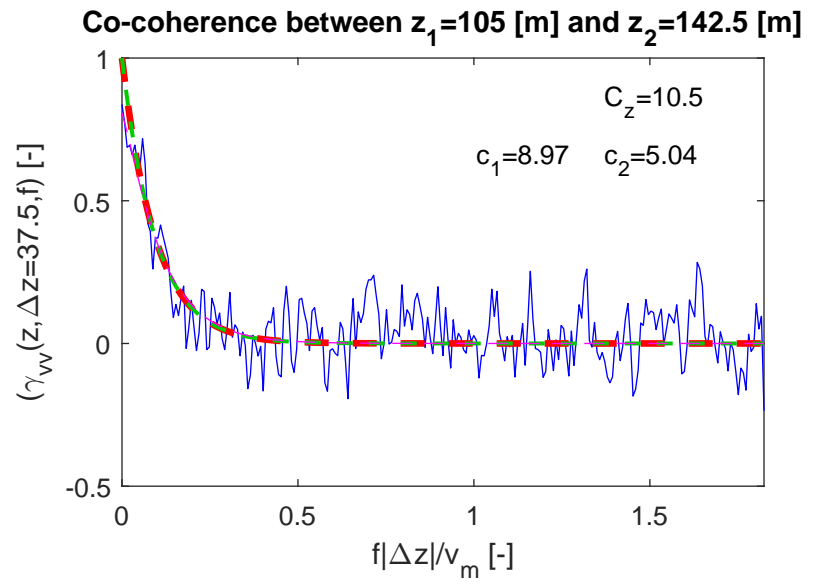
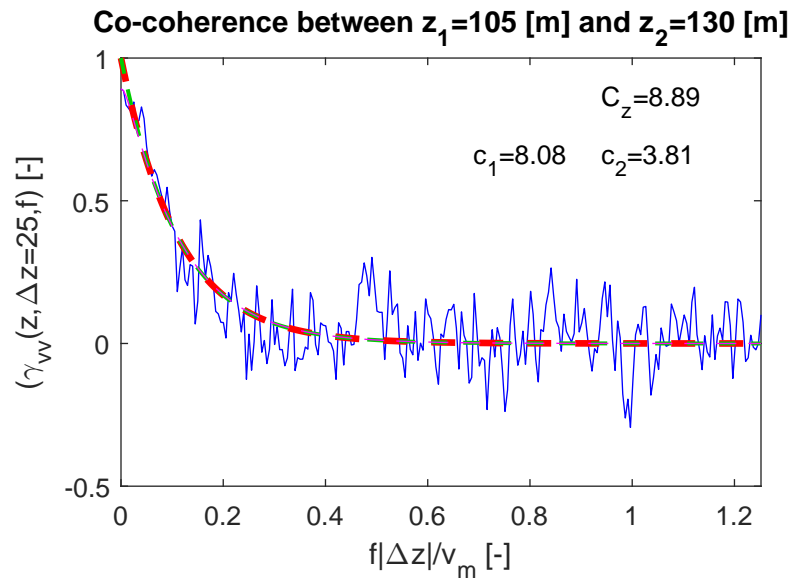
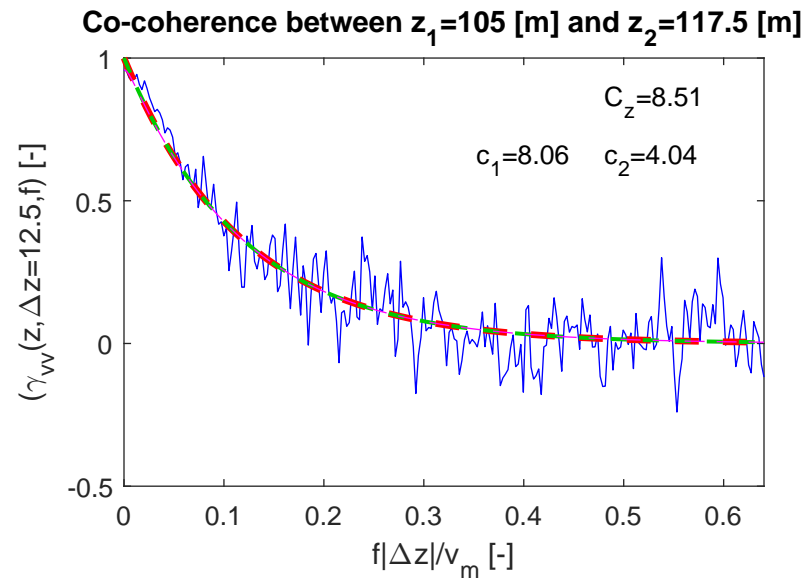
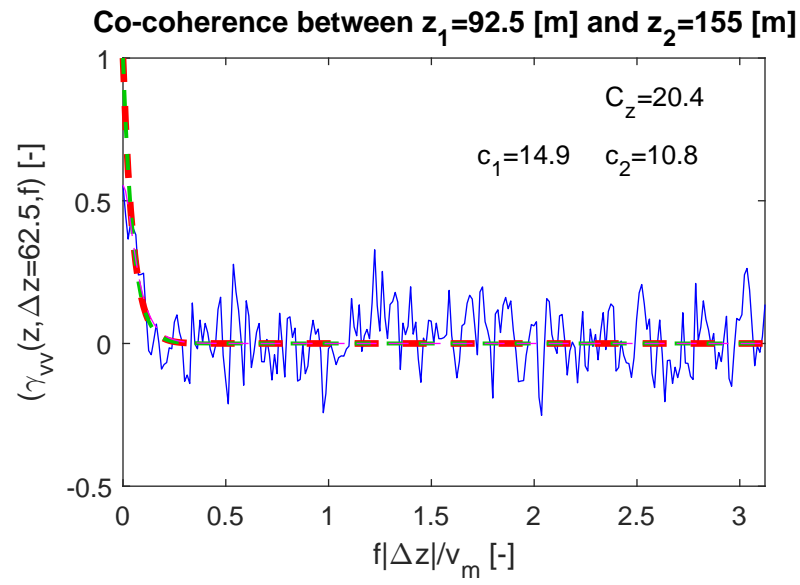




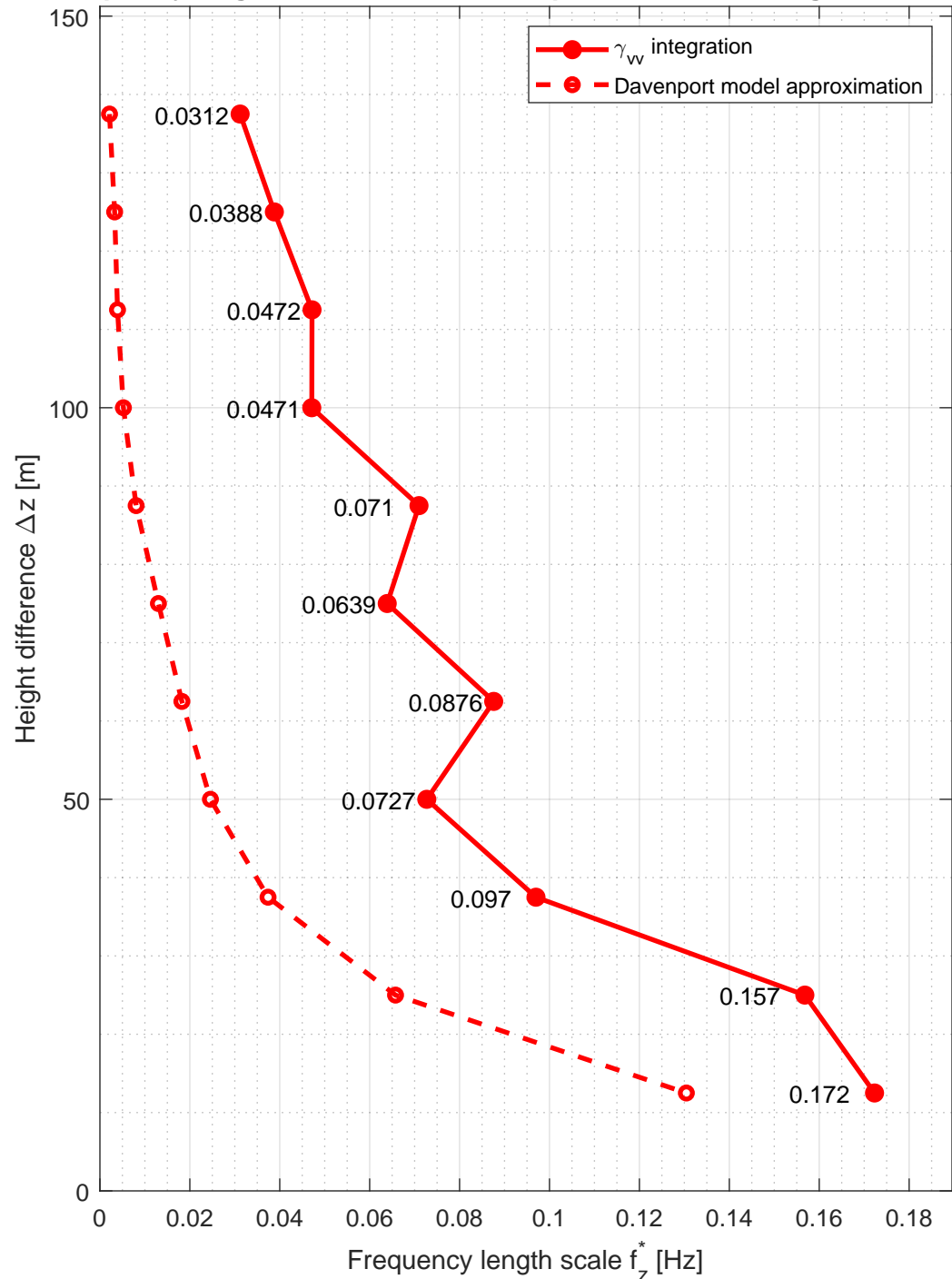




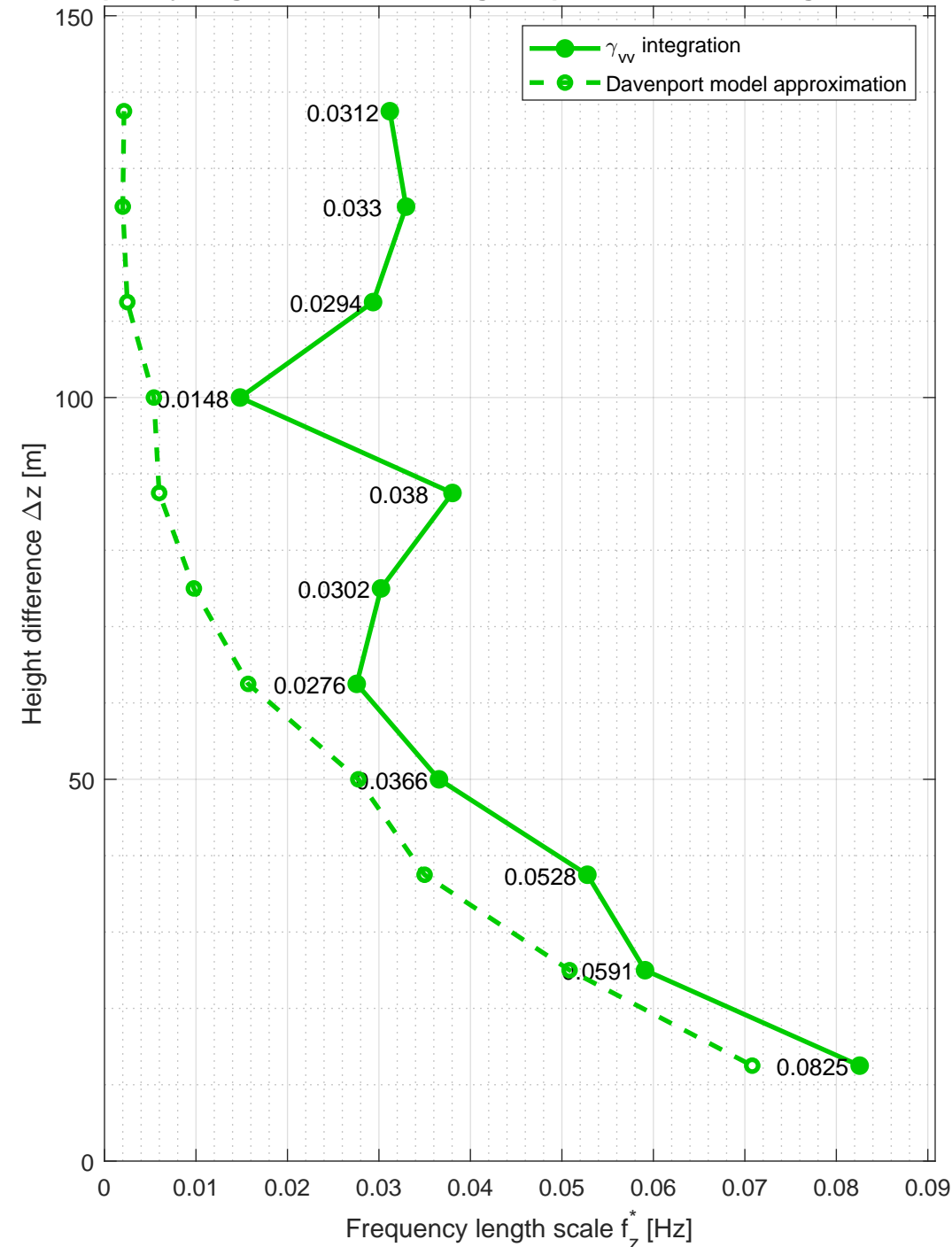




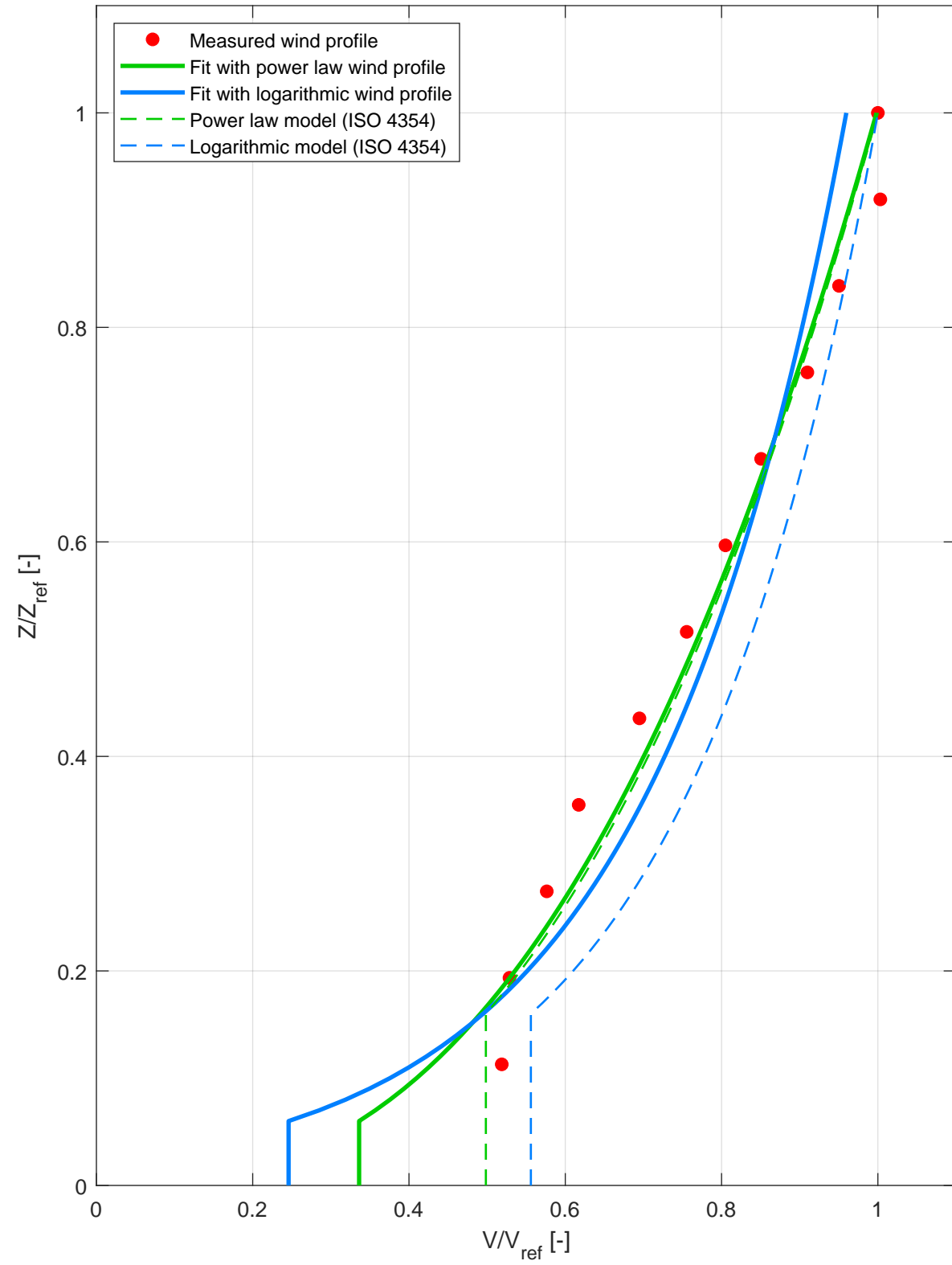
Frequency length scales for the lowest point at different height differences



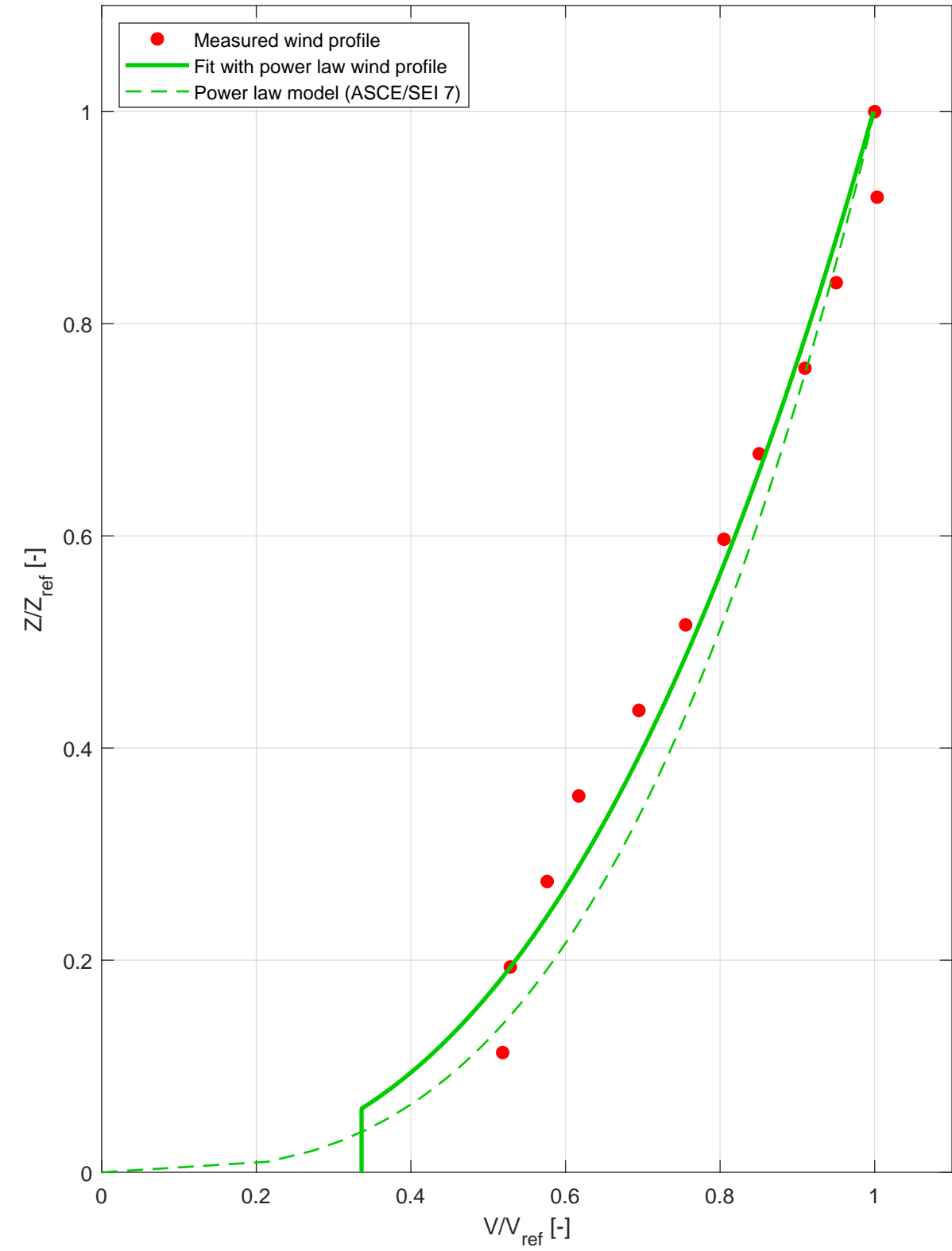
Frequency length scales for the highest point at different height differences



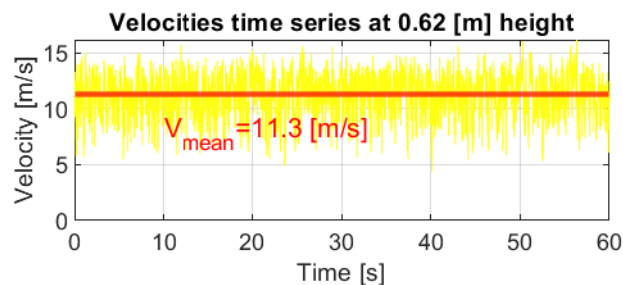
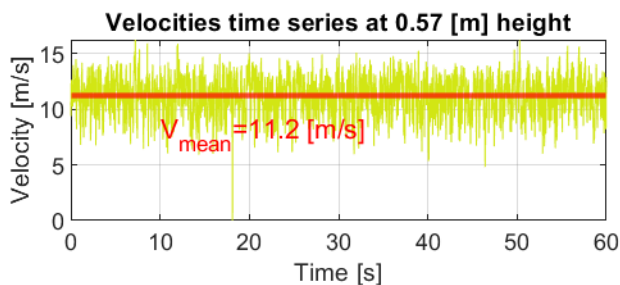
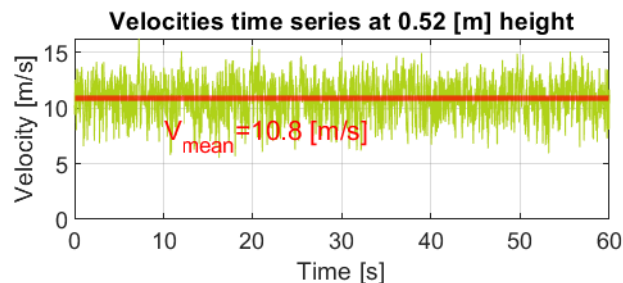
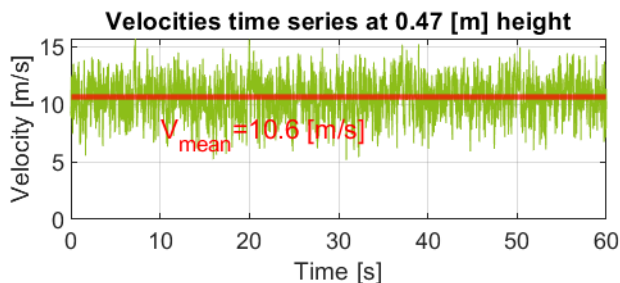
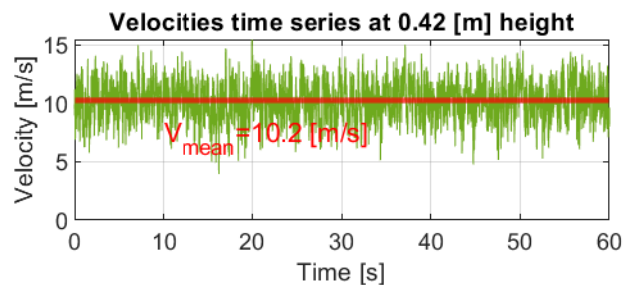
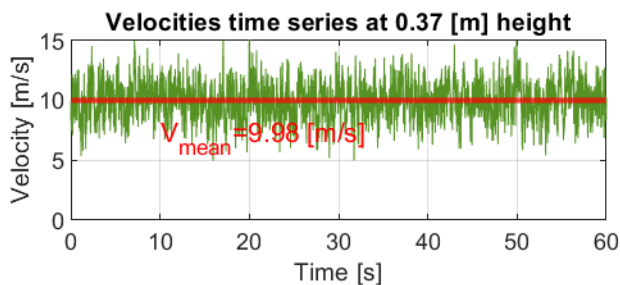
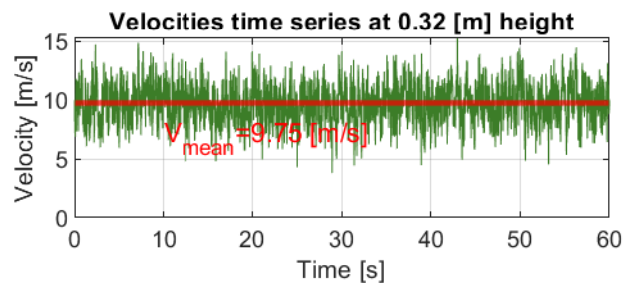
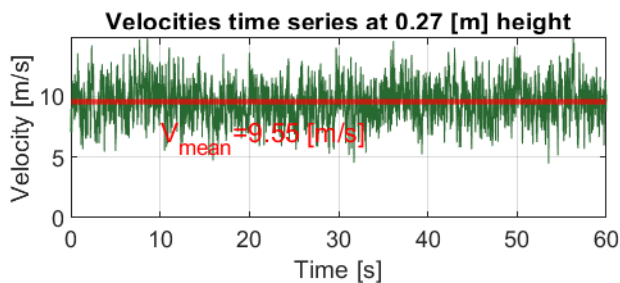
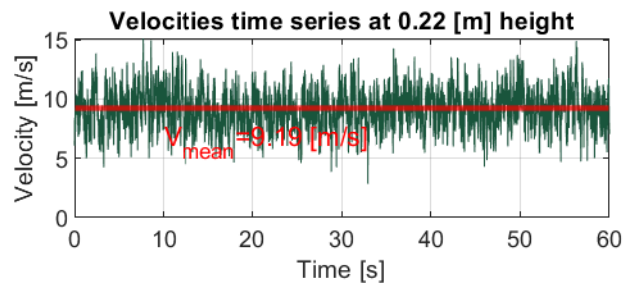
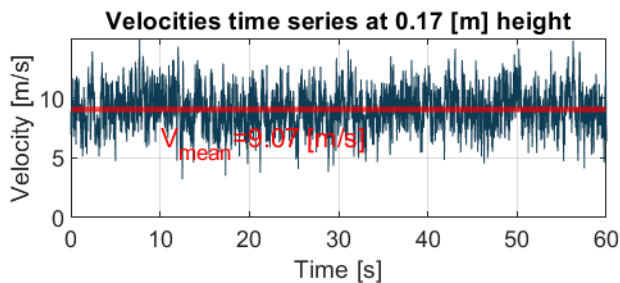
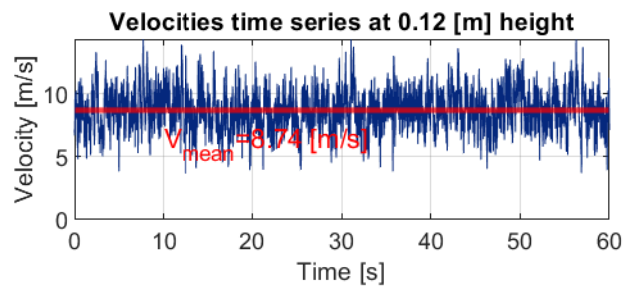
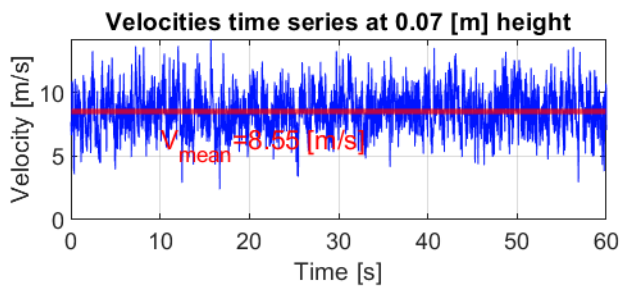
Mean wind velocity profile - comparison with ISO 4354



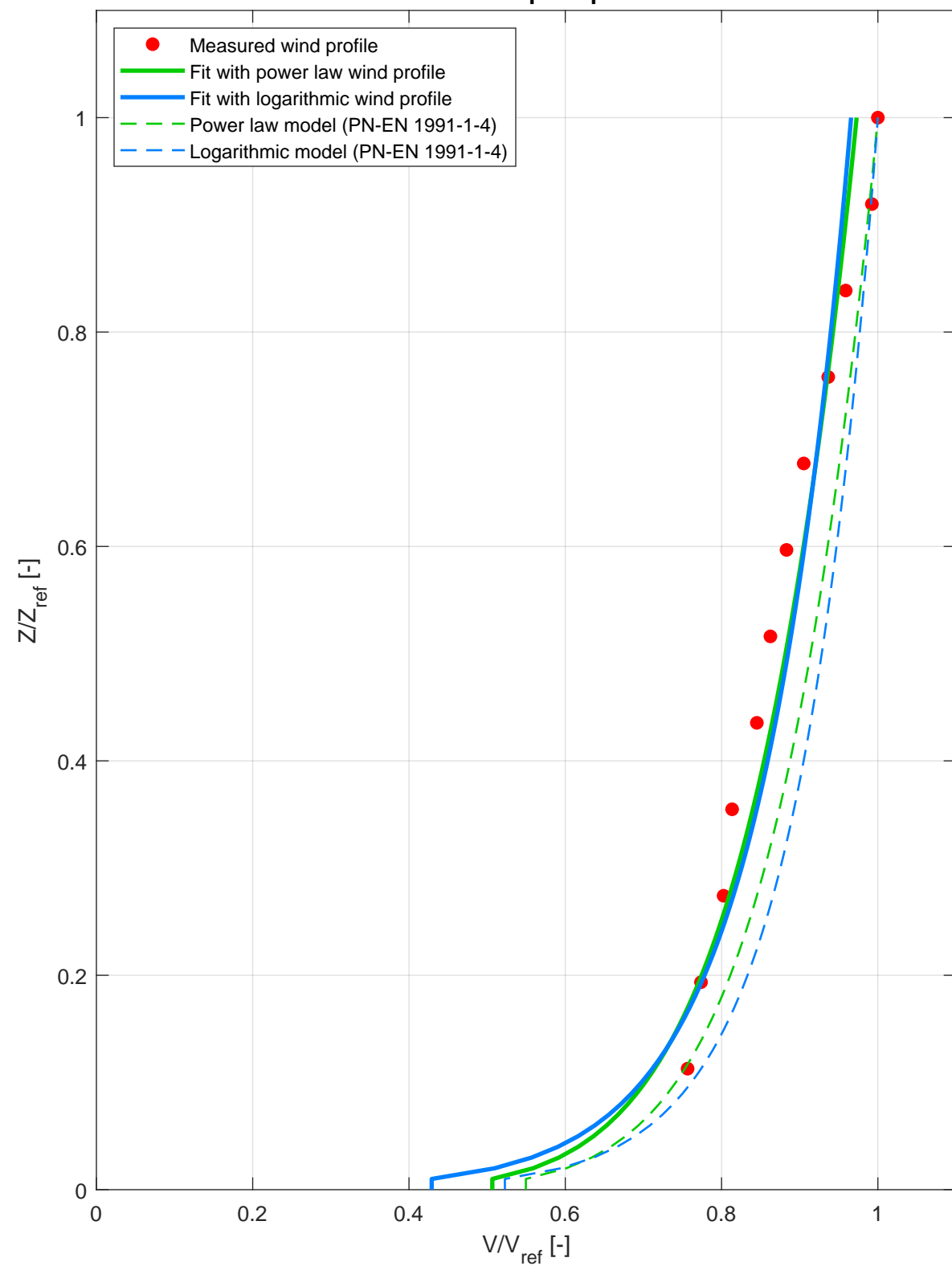
Mean wind velocity profile - comparison with ASCE/SEI 7



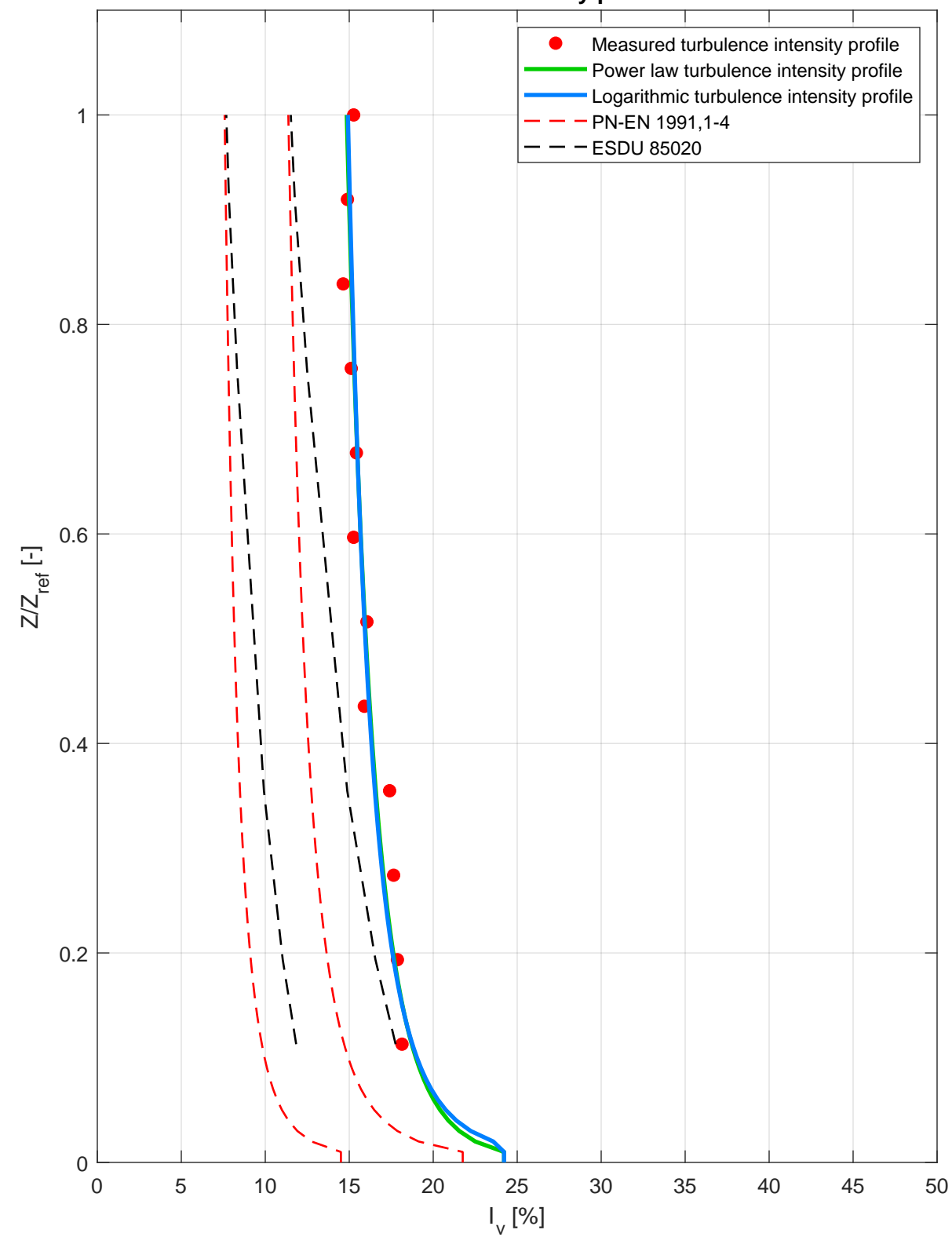
Plots for the test cases representative of terrain roughness categories according to ASCE/SEI 7



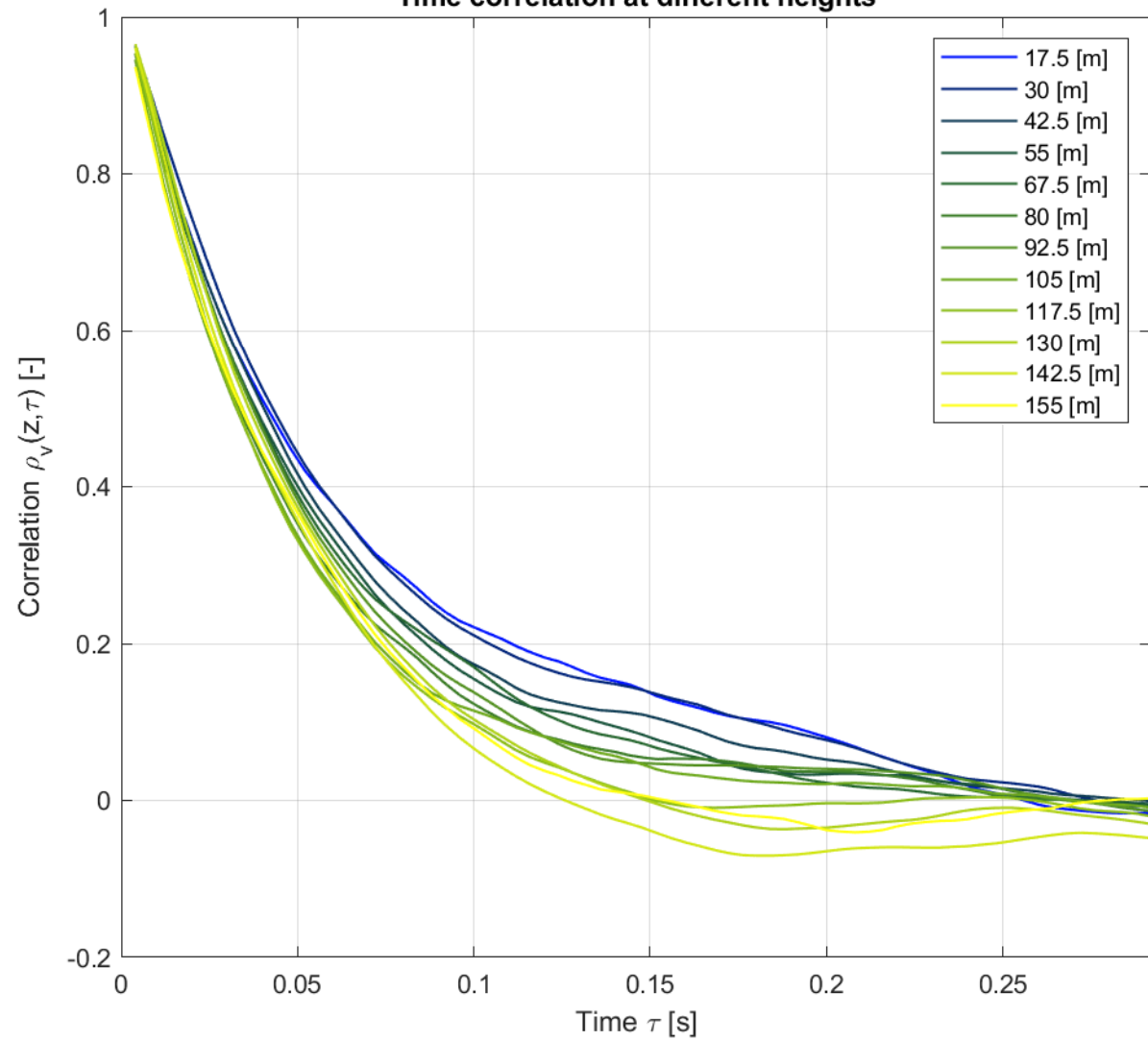
Mean wind speed profile



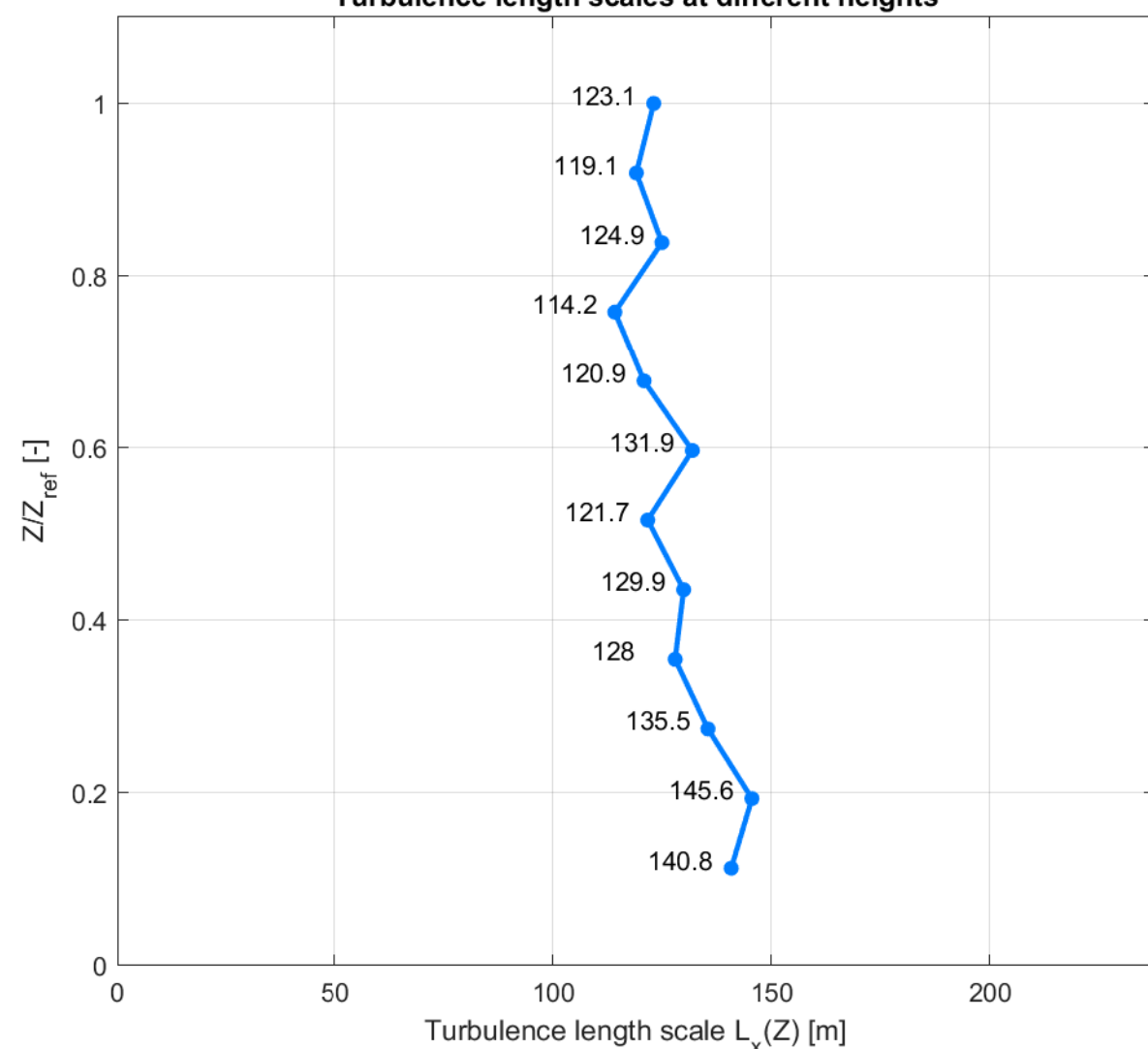
Turbulence intensity profile



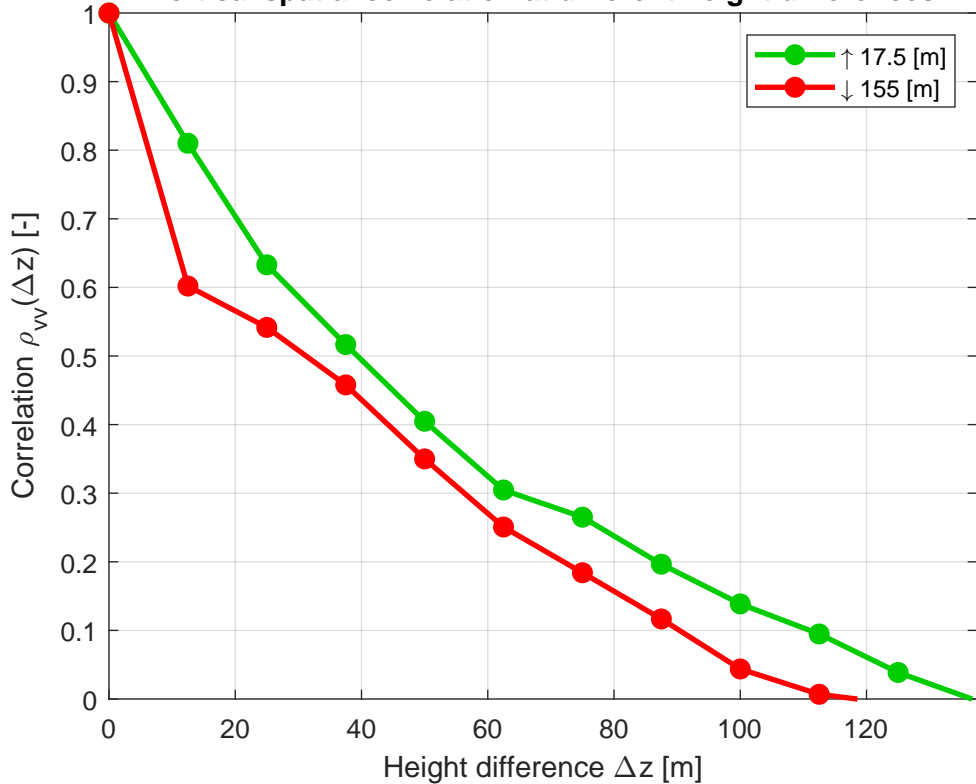
Time correlation at different heights



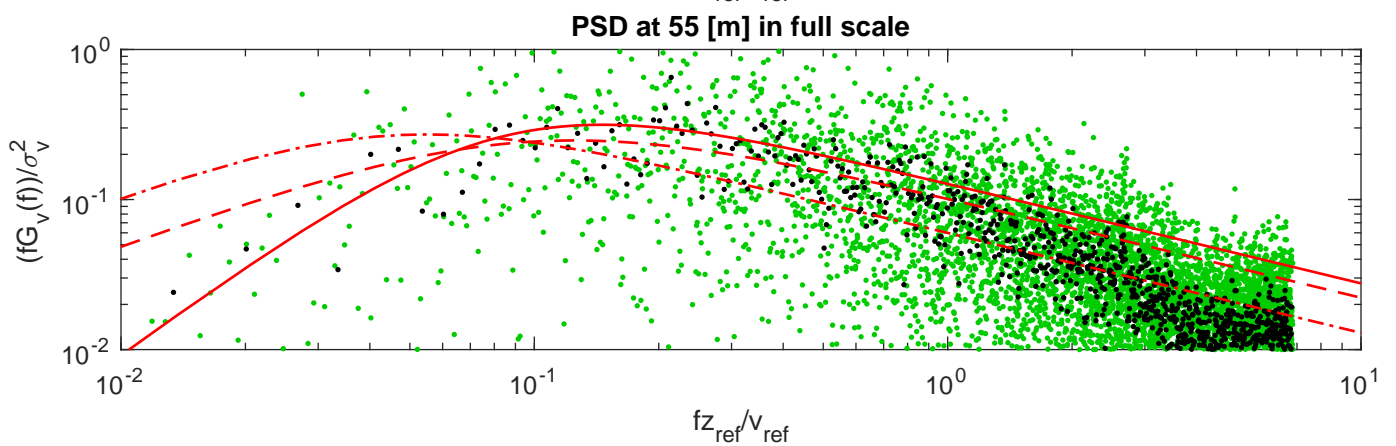
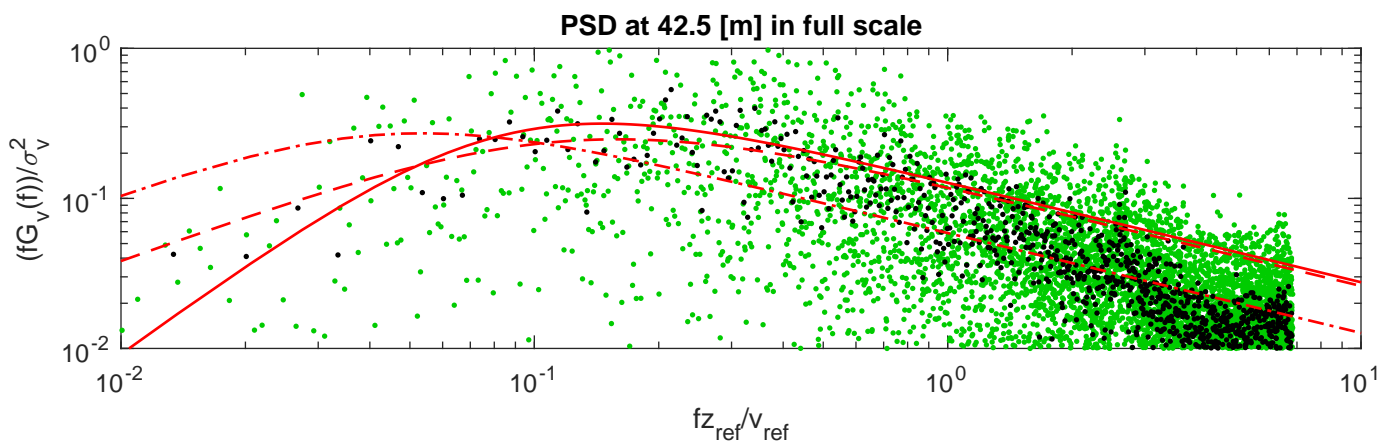
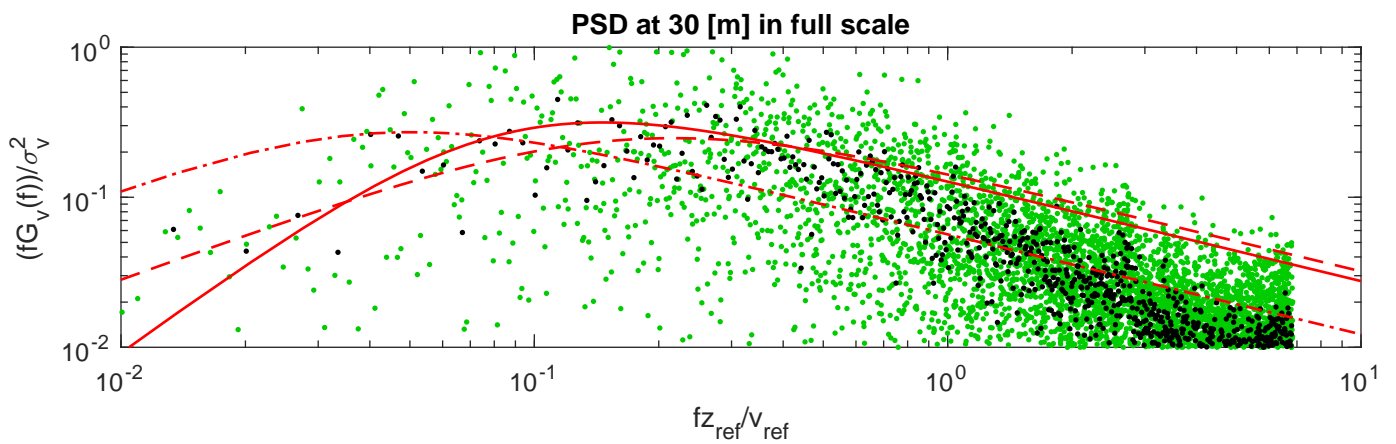
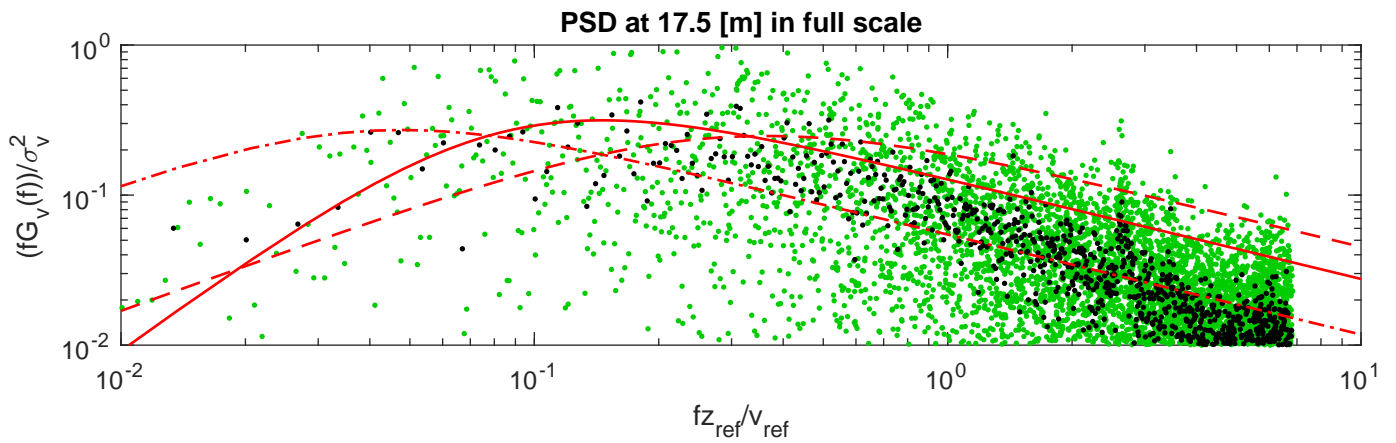
Turbulence length scales at different heights



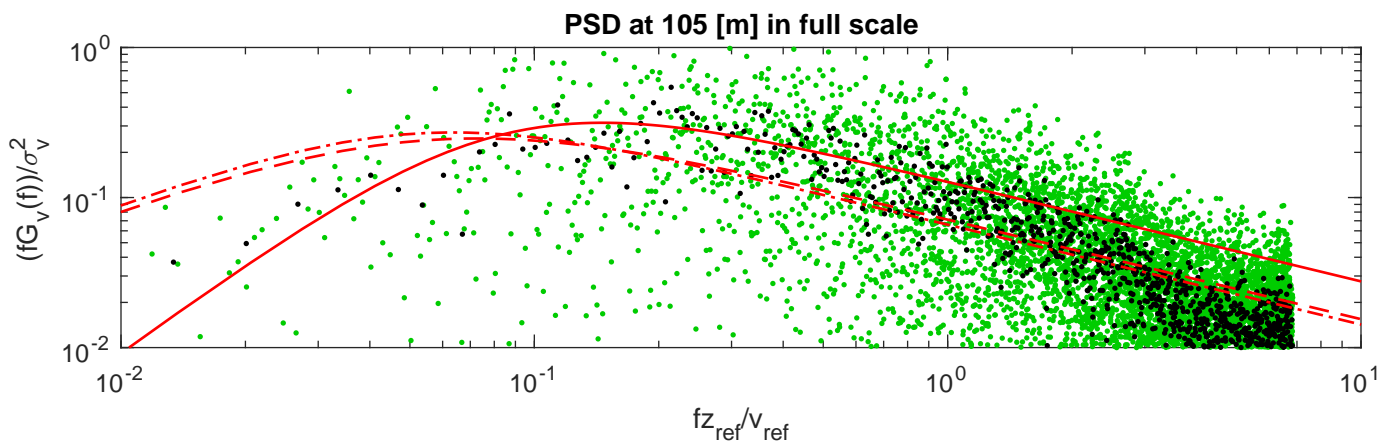
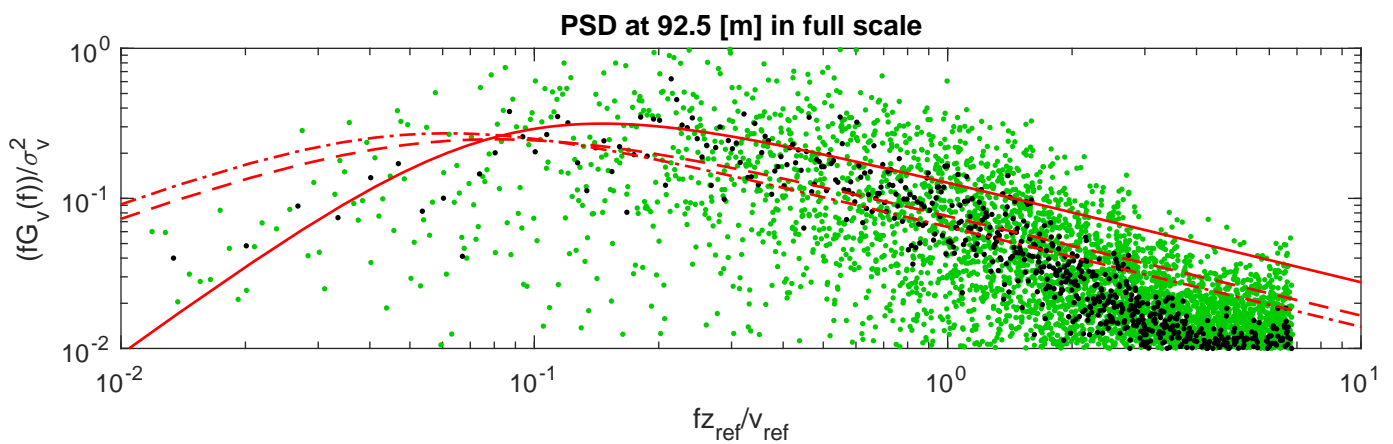
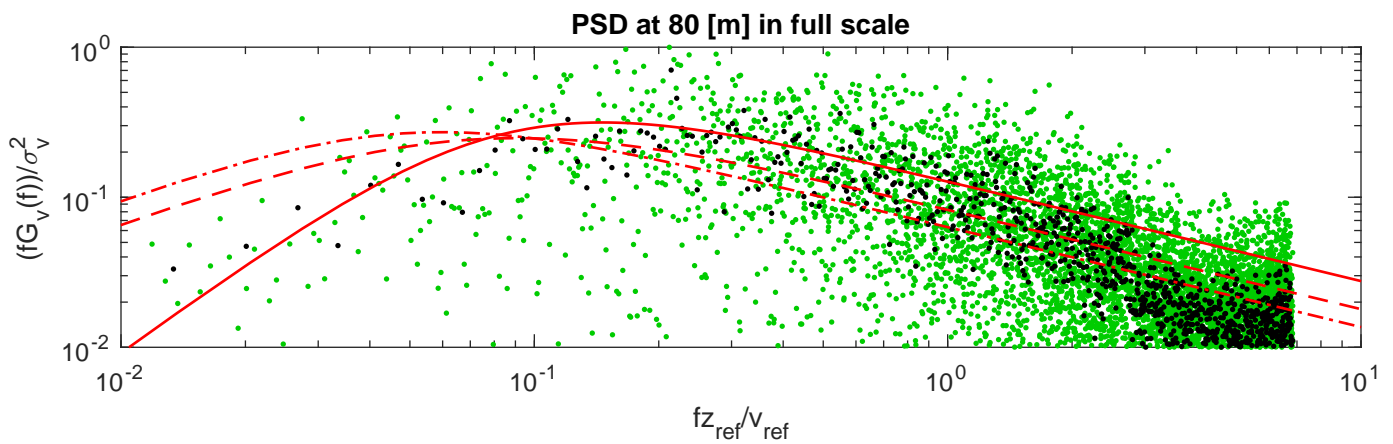
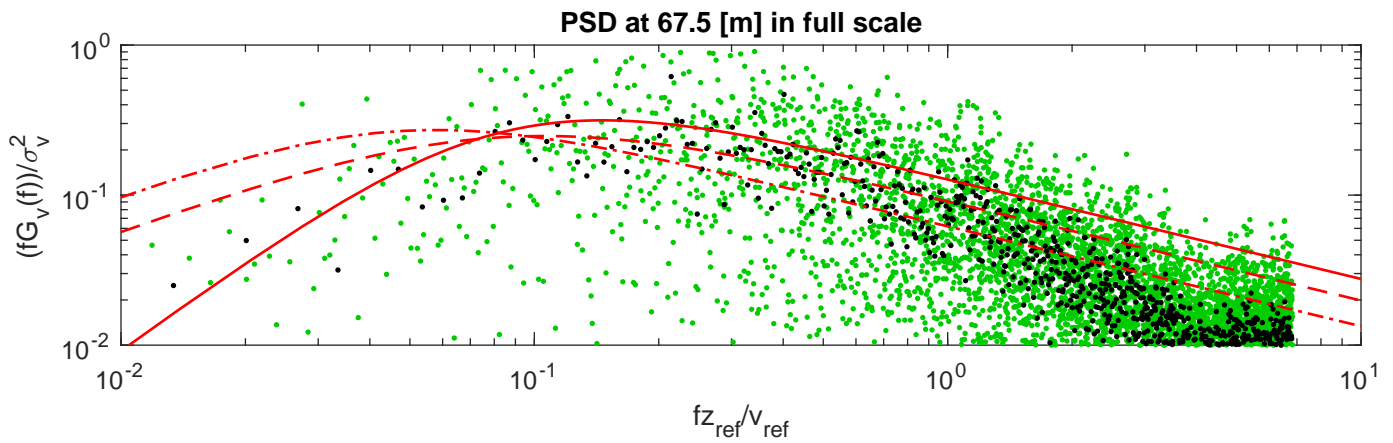
Vertical spatial correlation at different height differences



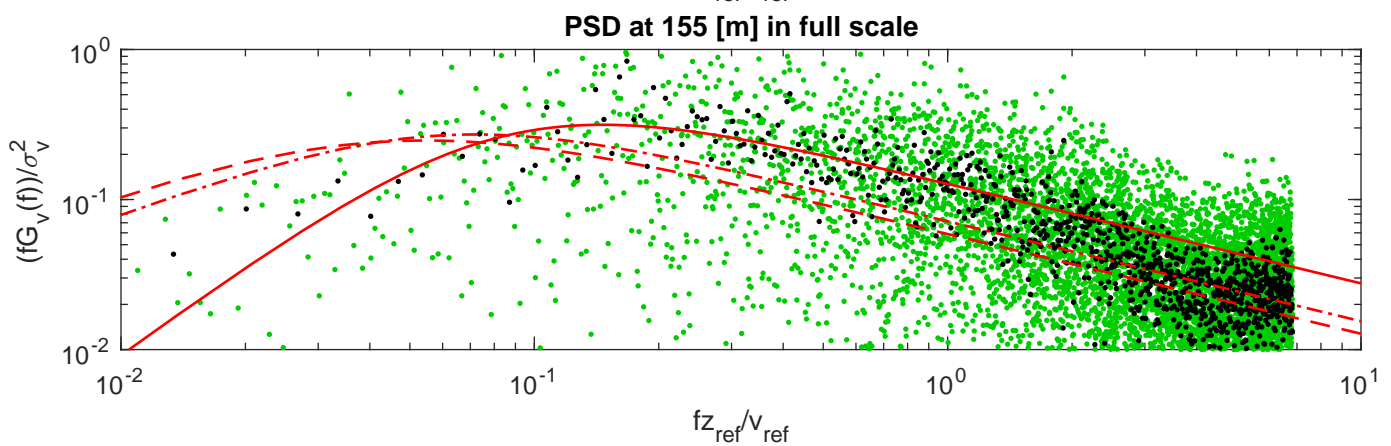
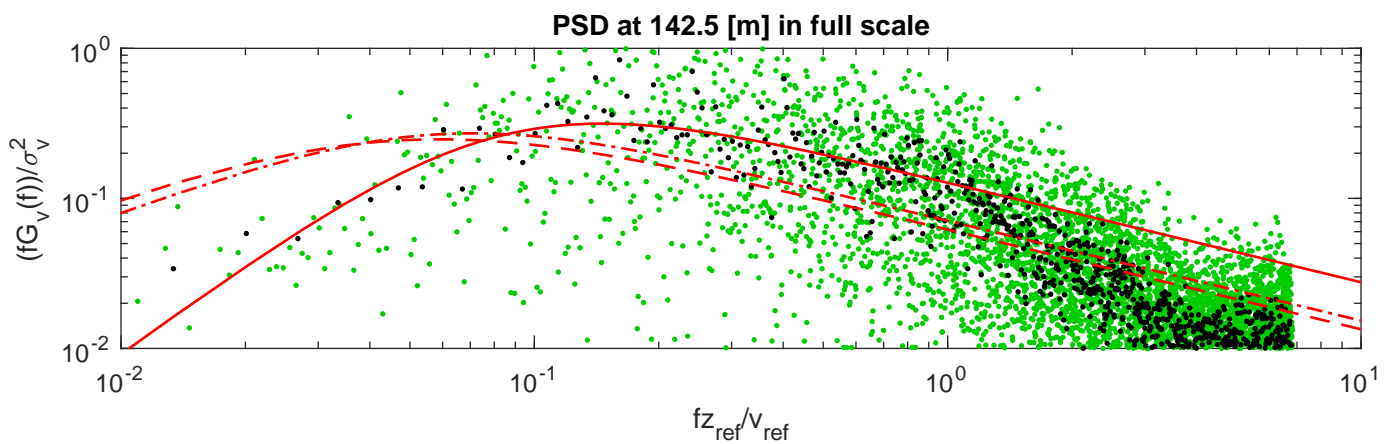
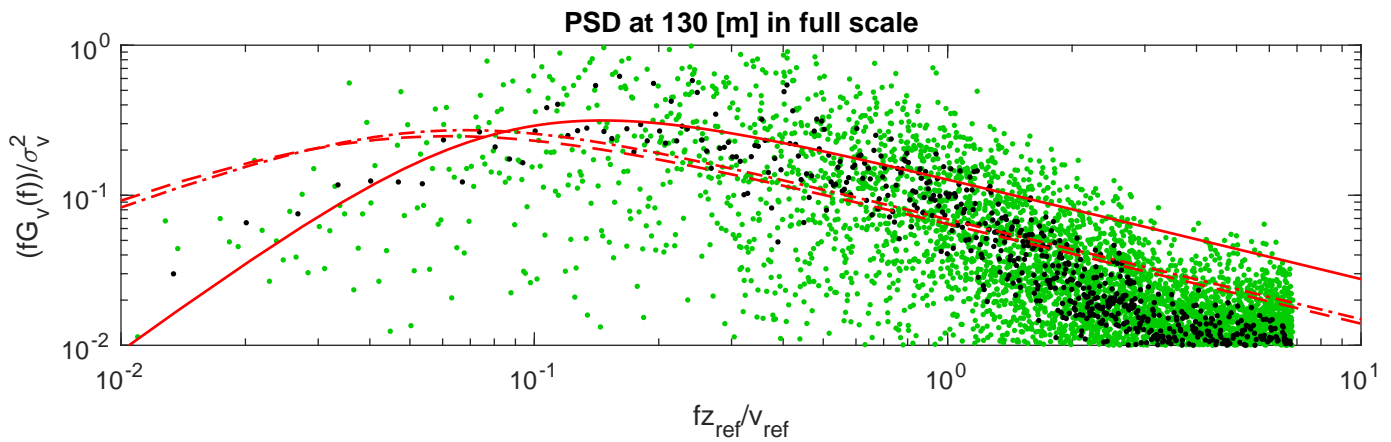
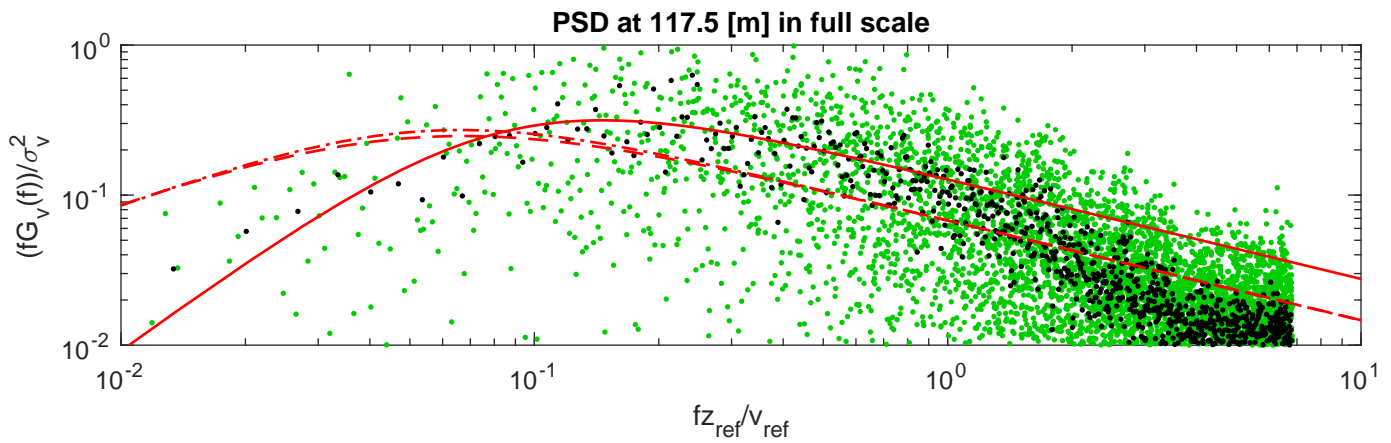
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



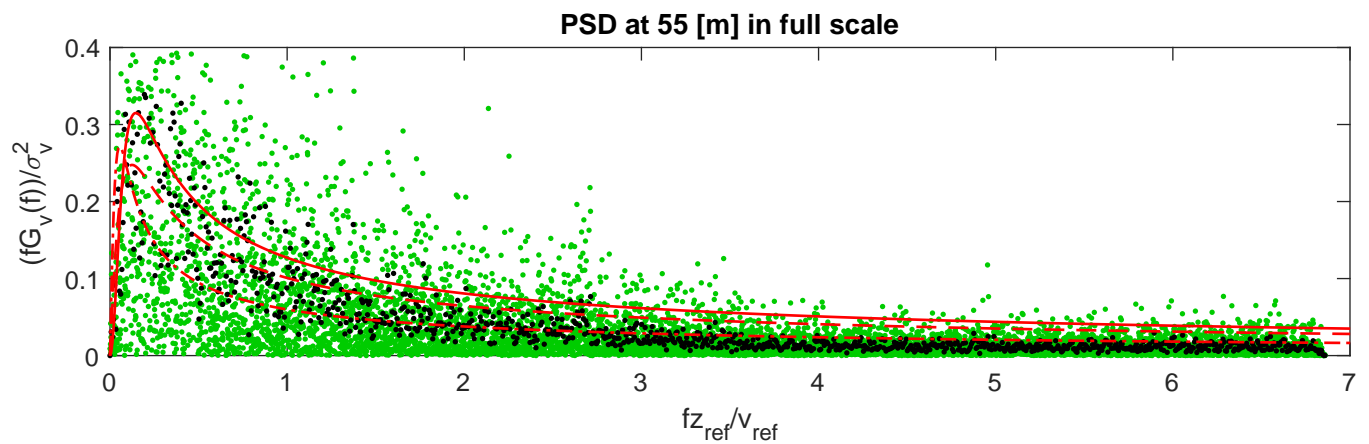
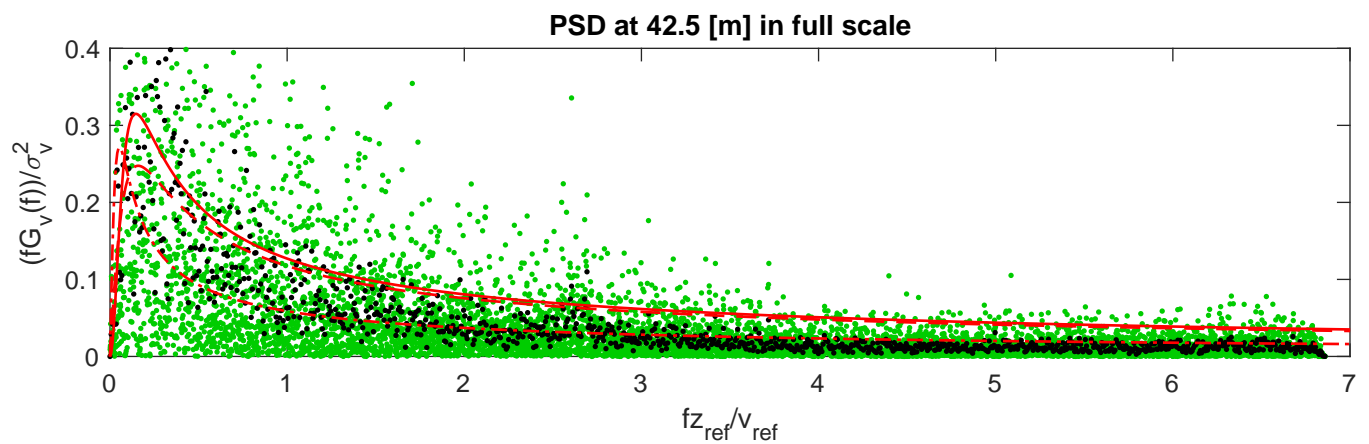
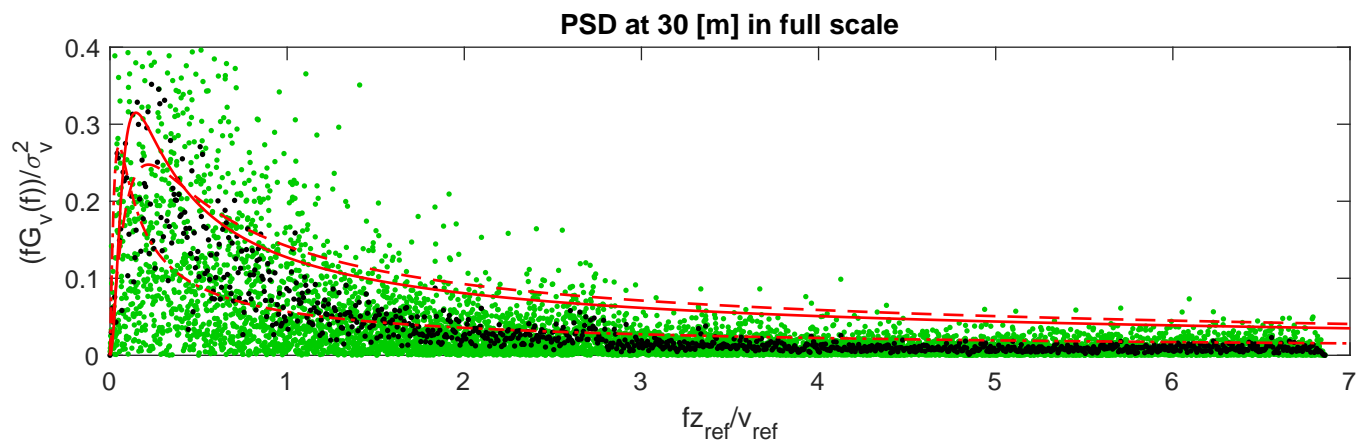
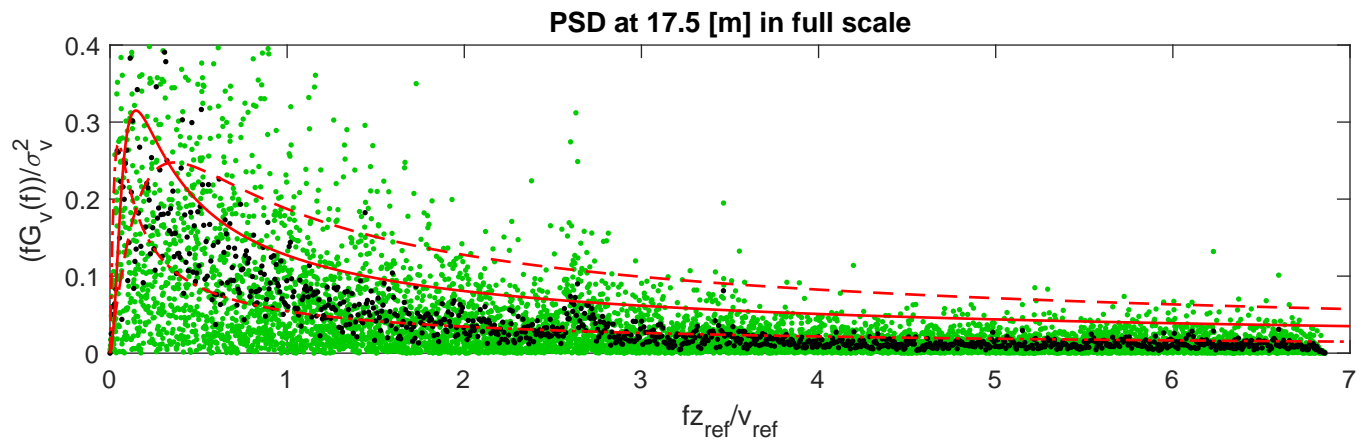
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



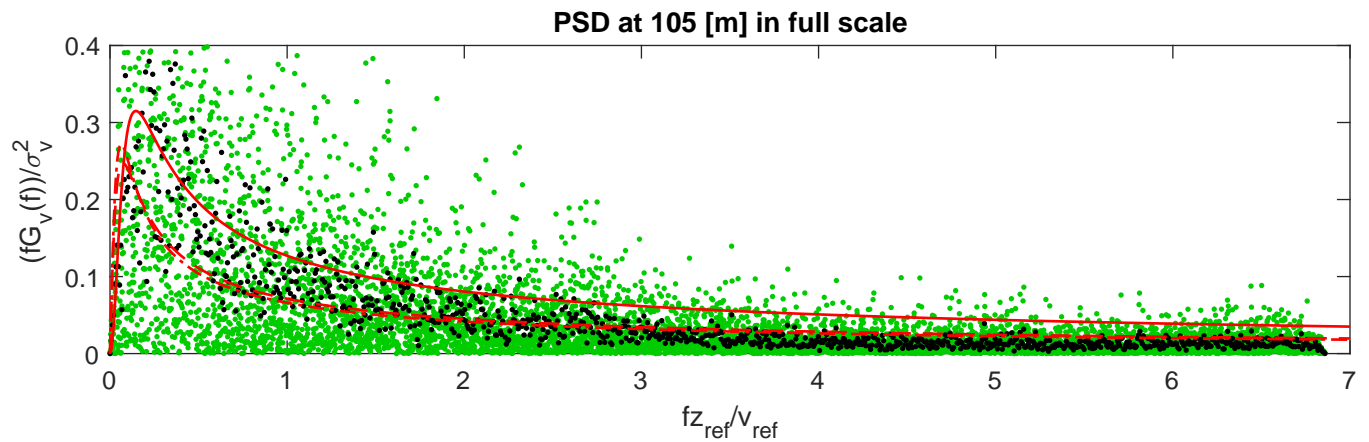
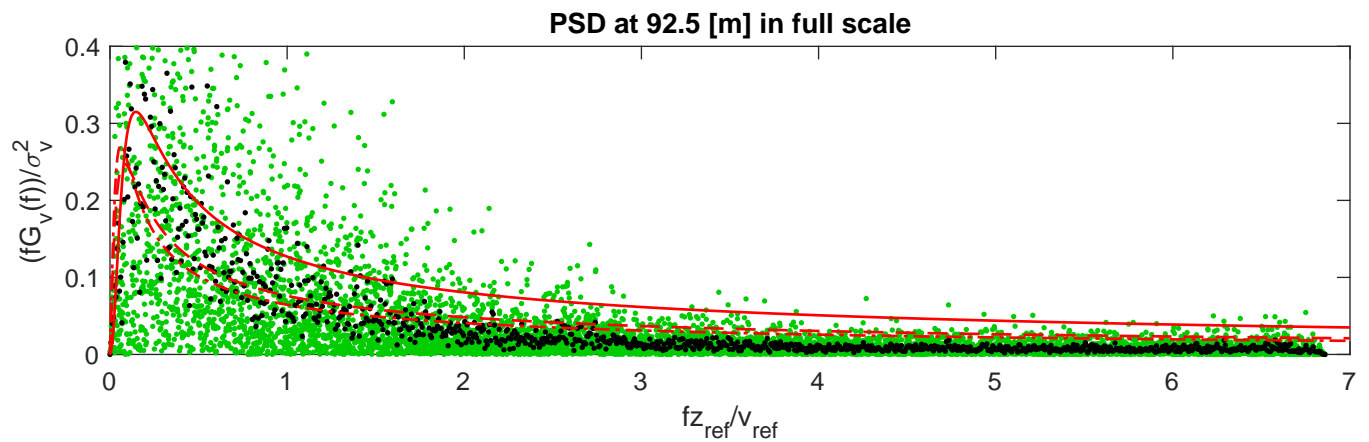
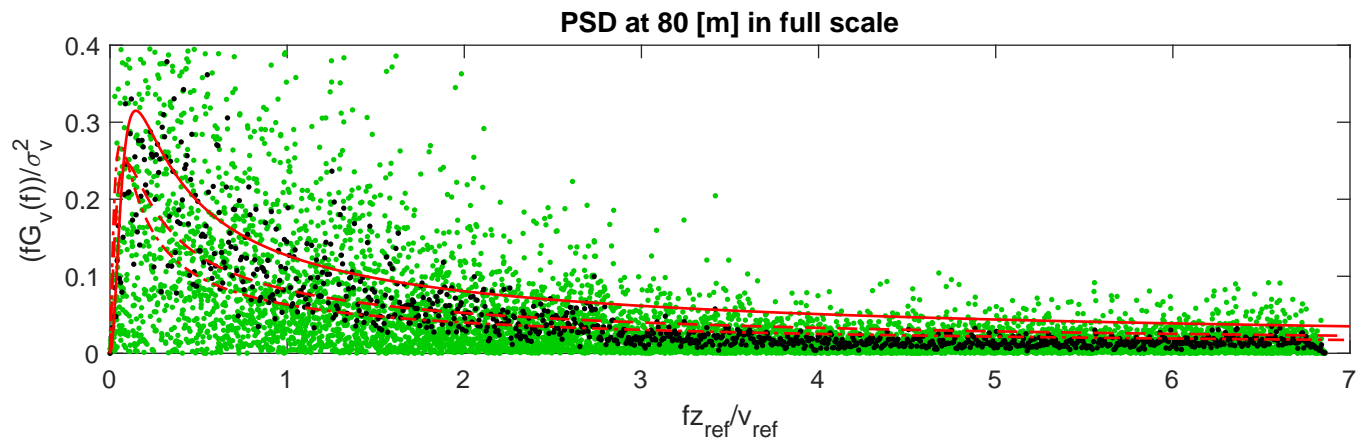
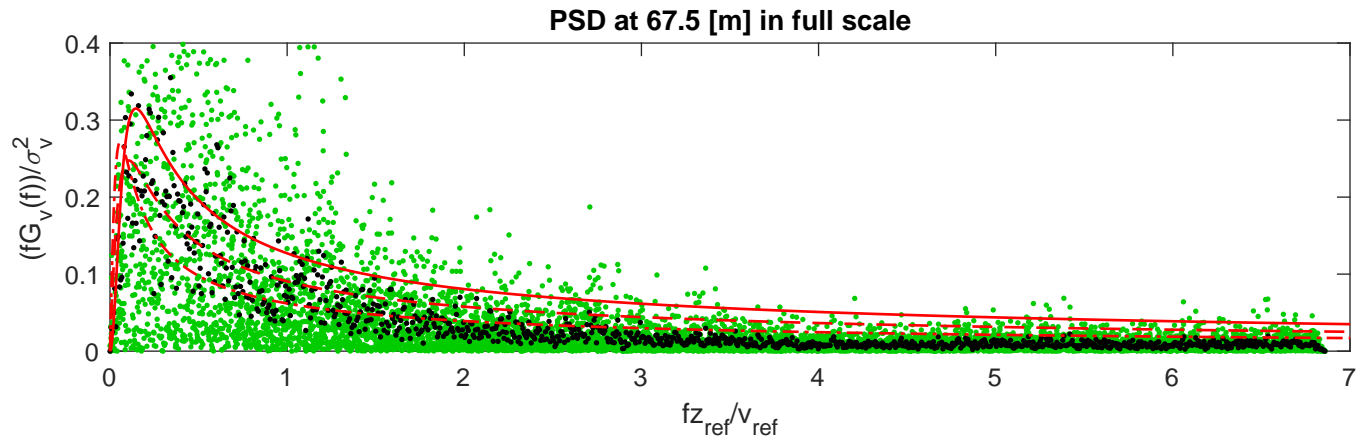
• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

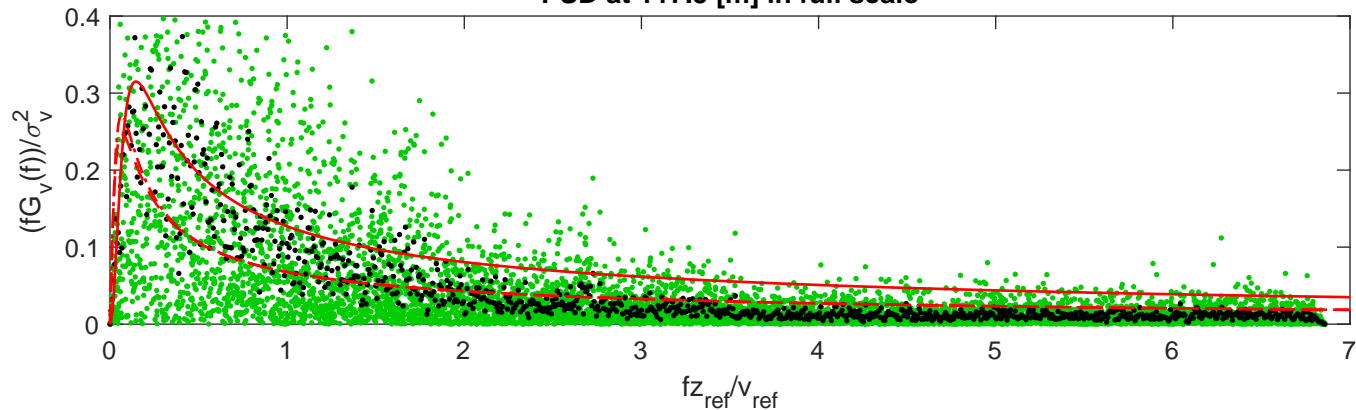


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

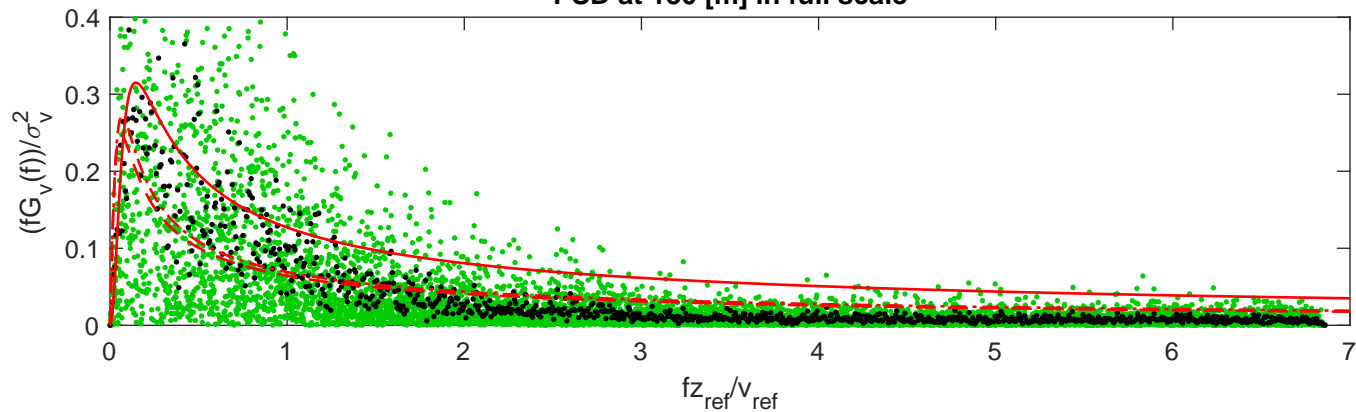


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

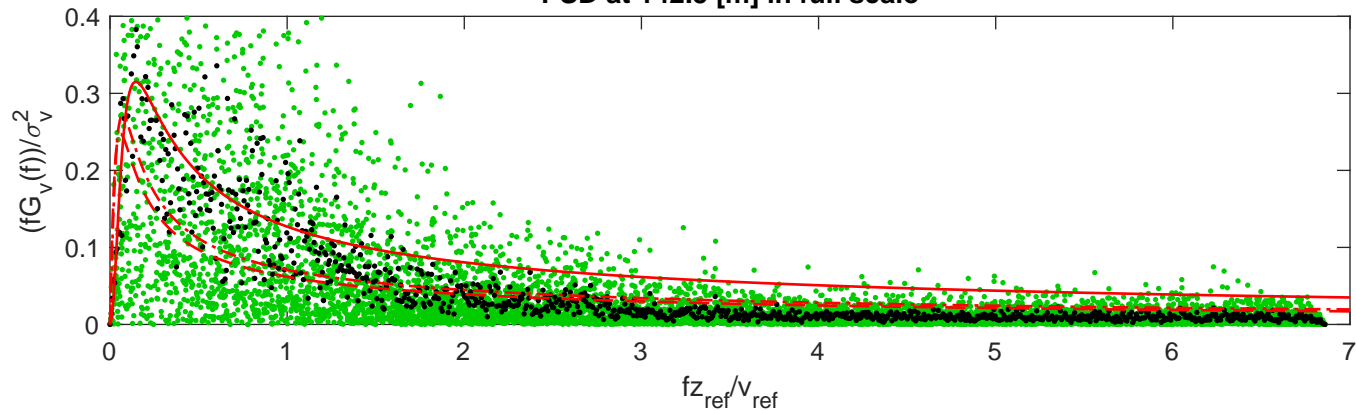
PSD at 117.5 [m] in full scale



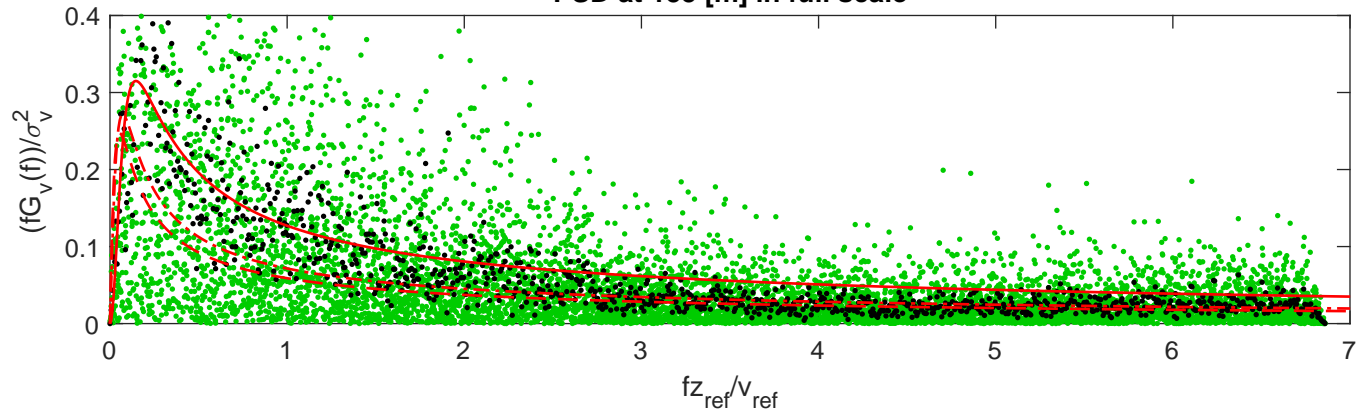
PSD at 130 [m] in full scale

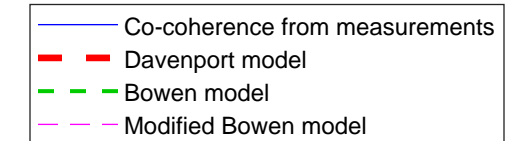
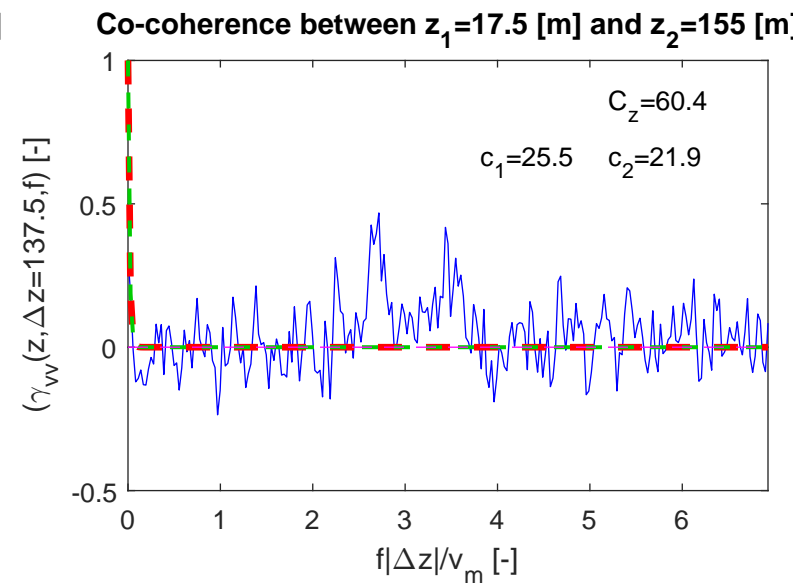
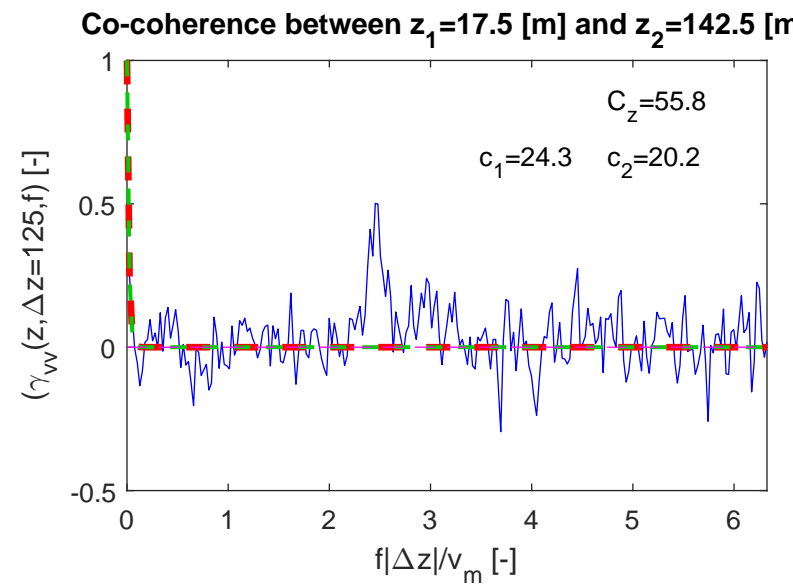
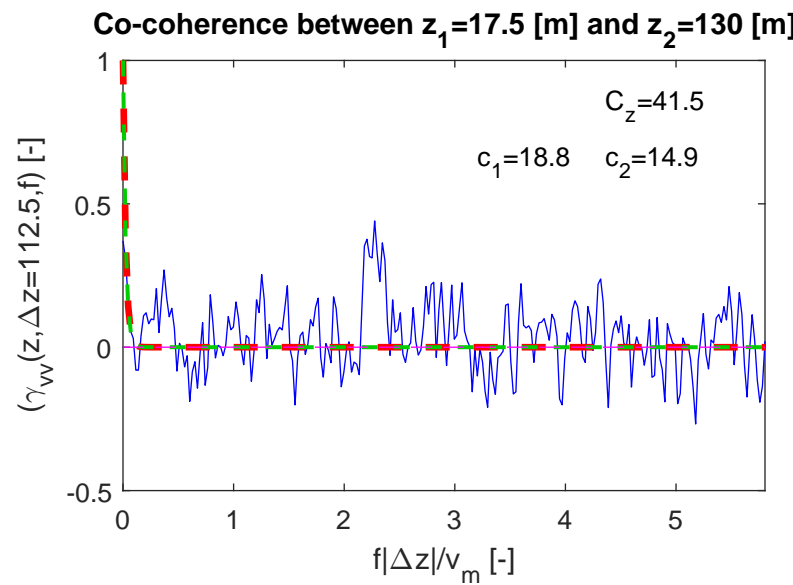
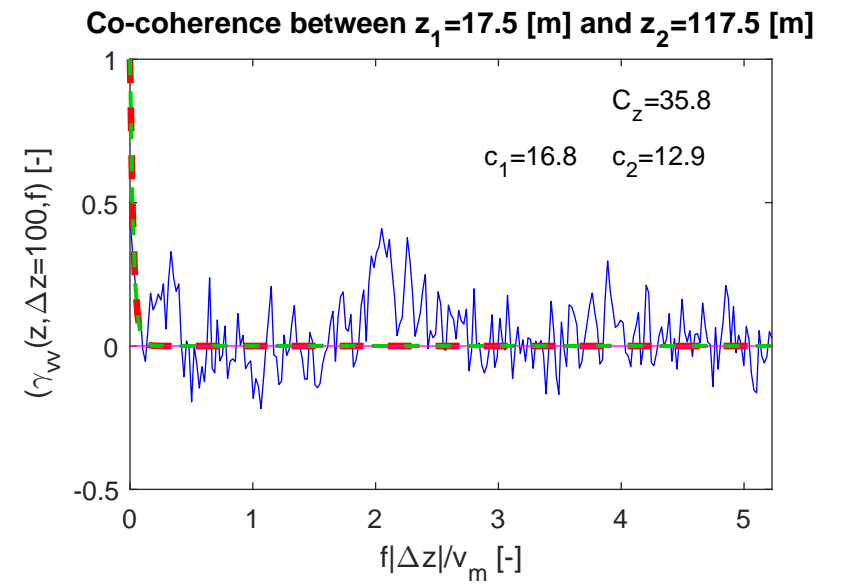
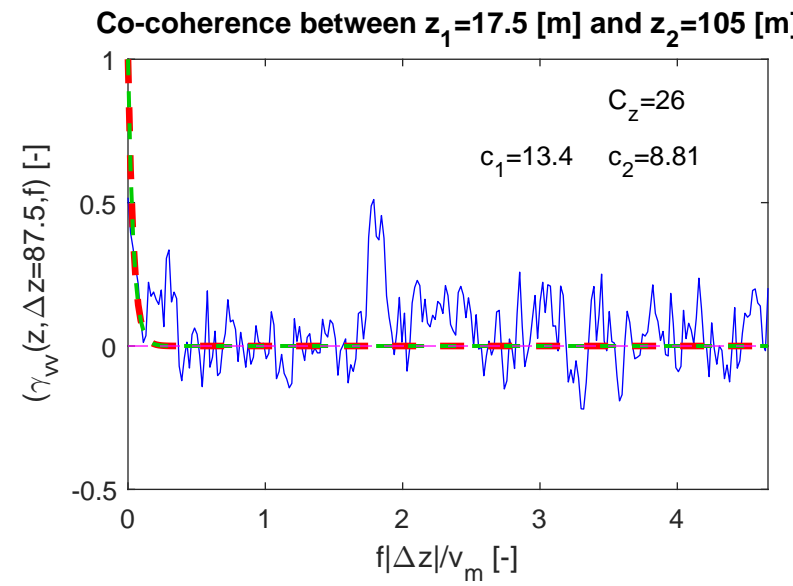
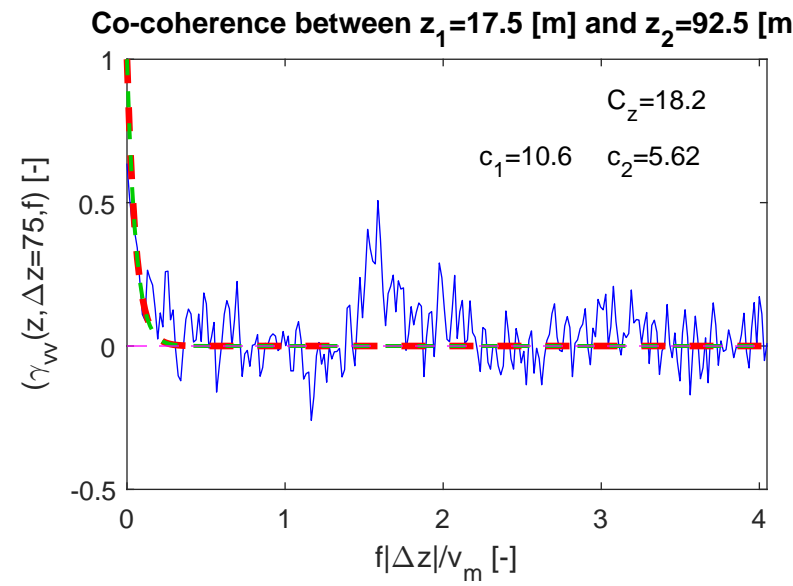
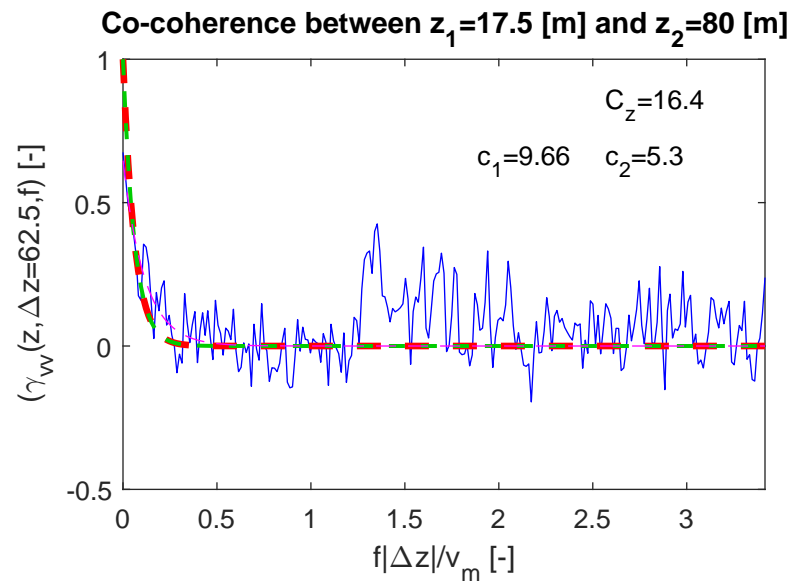
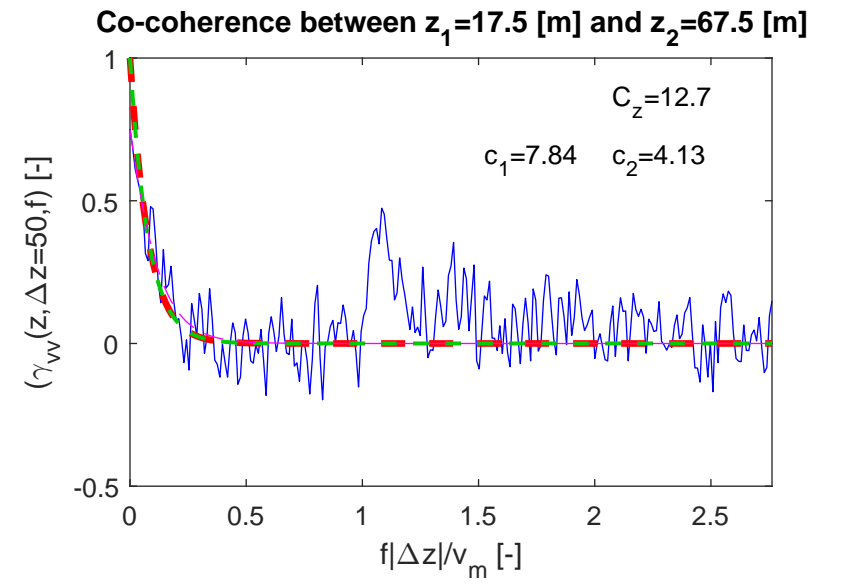
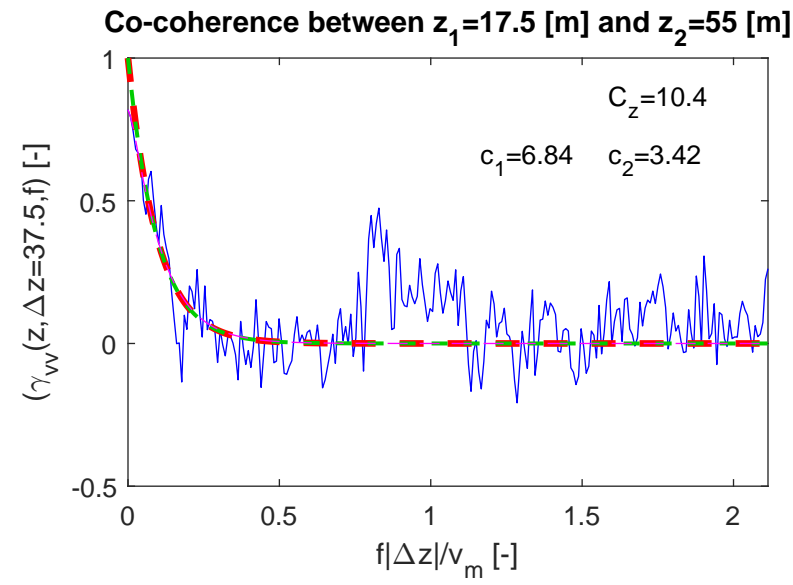
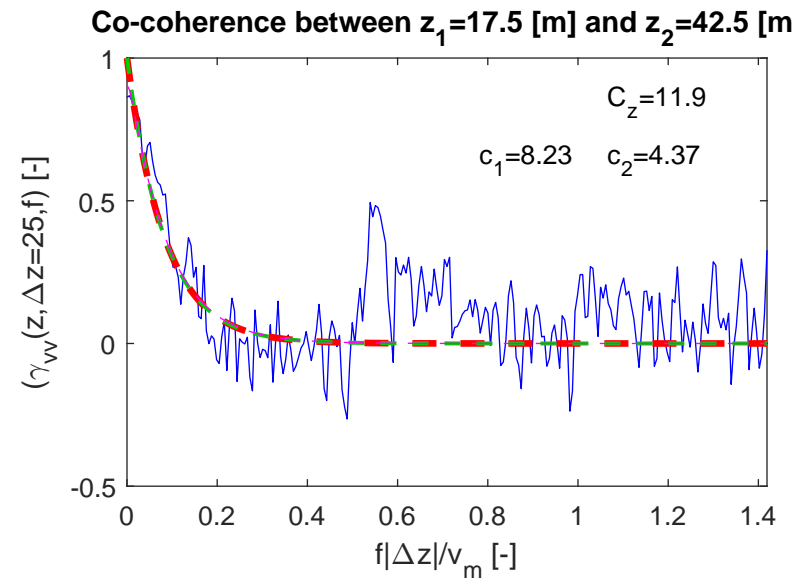
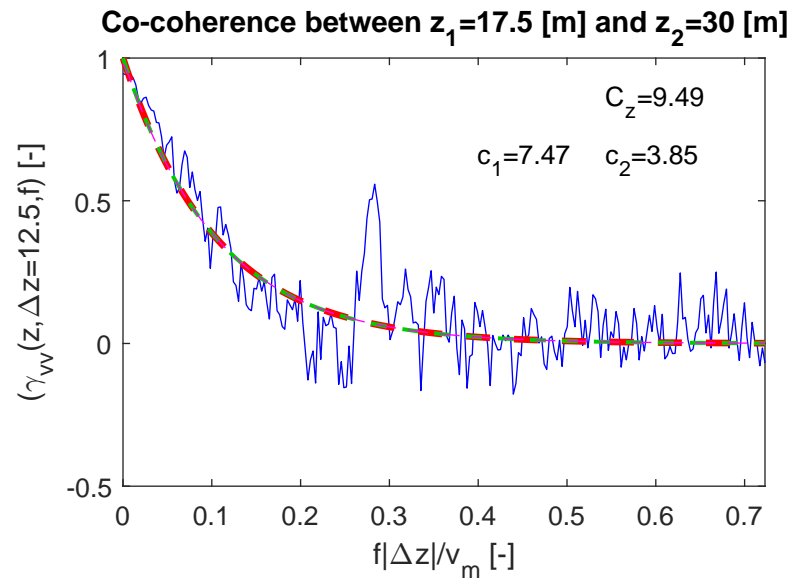


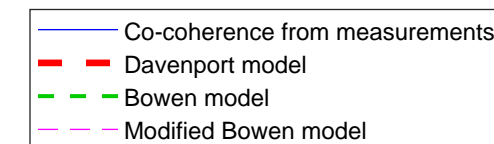
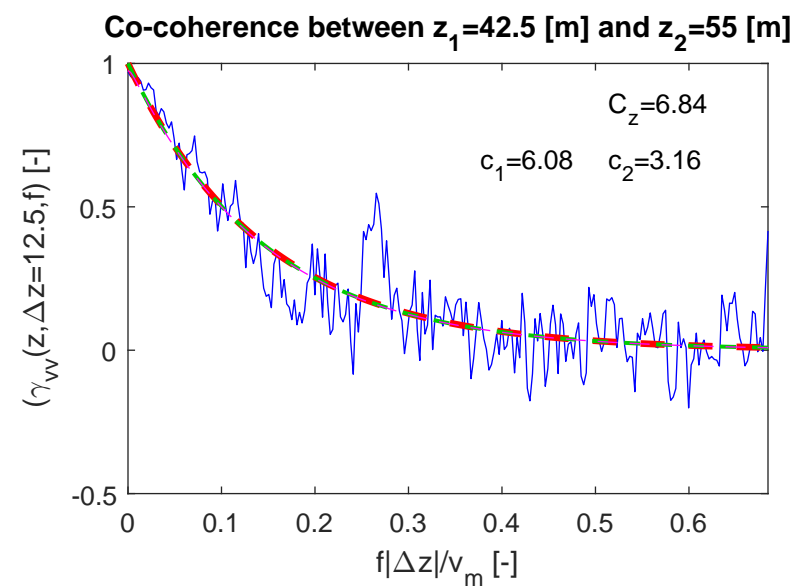
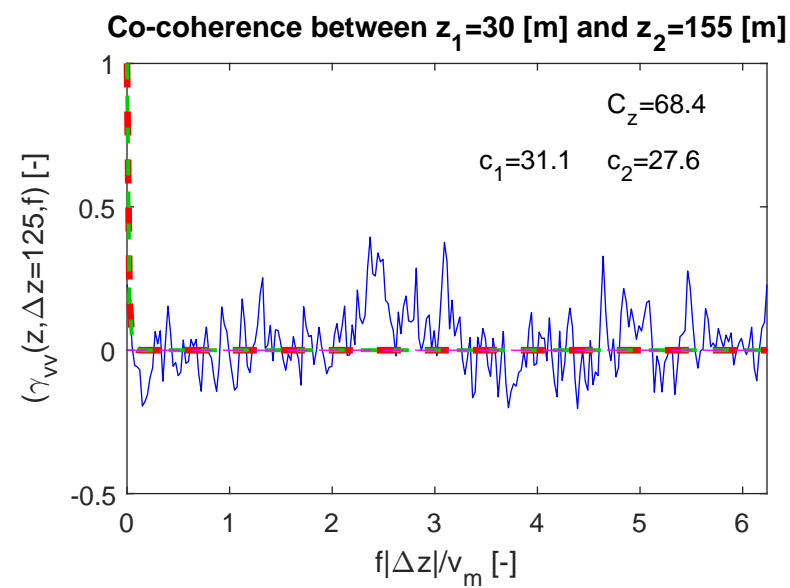
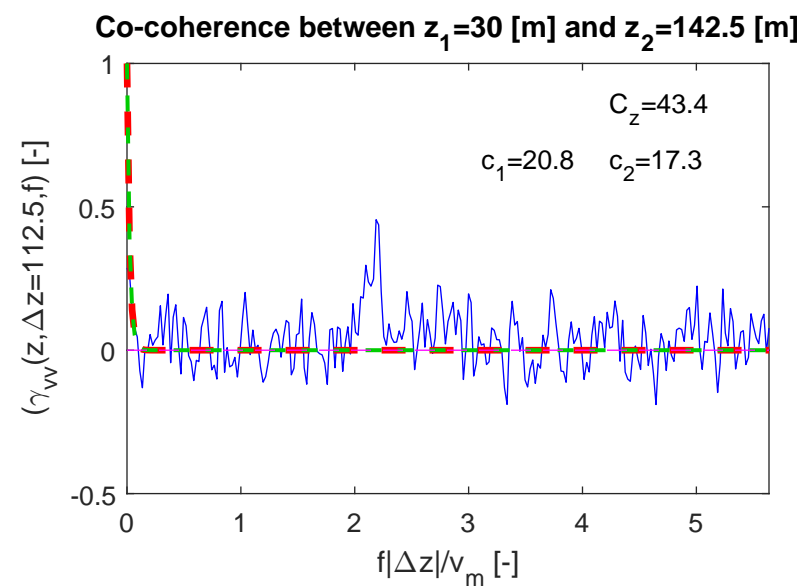
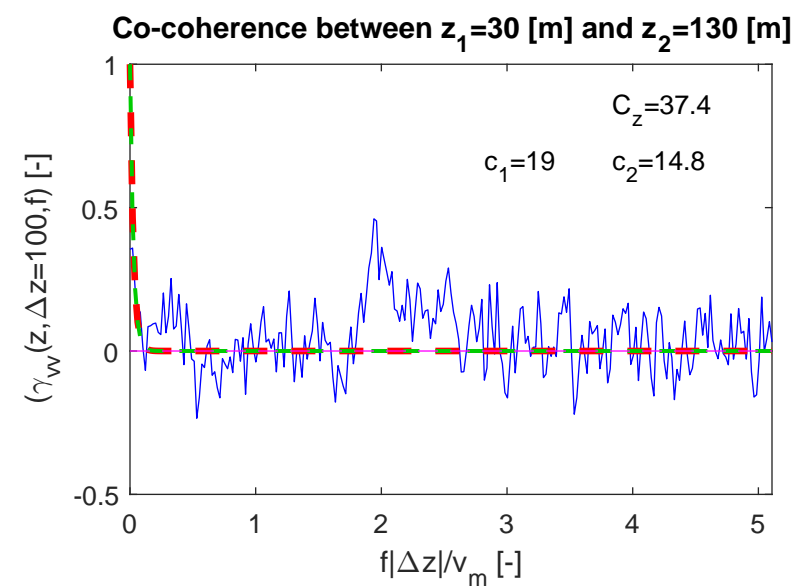
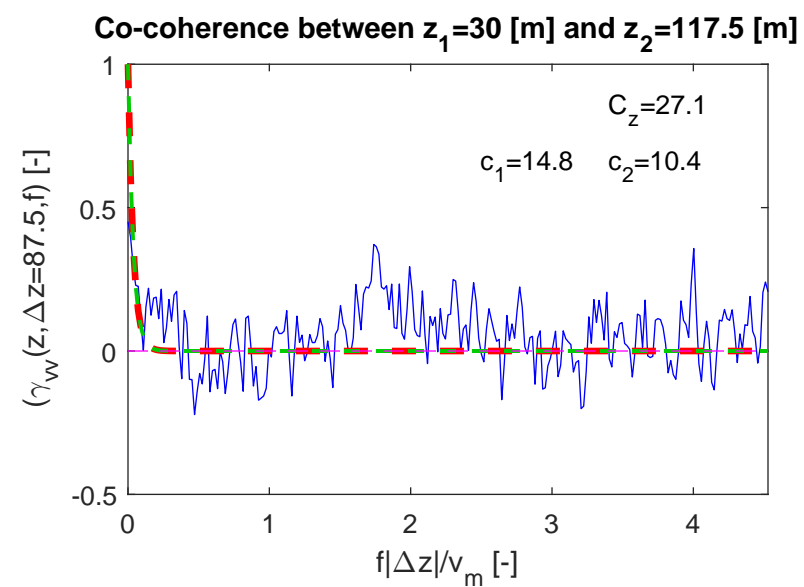
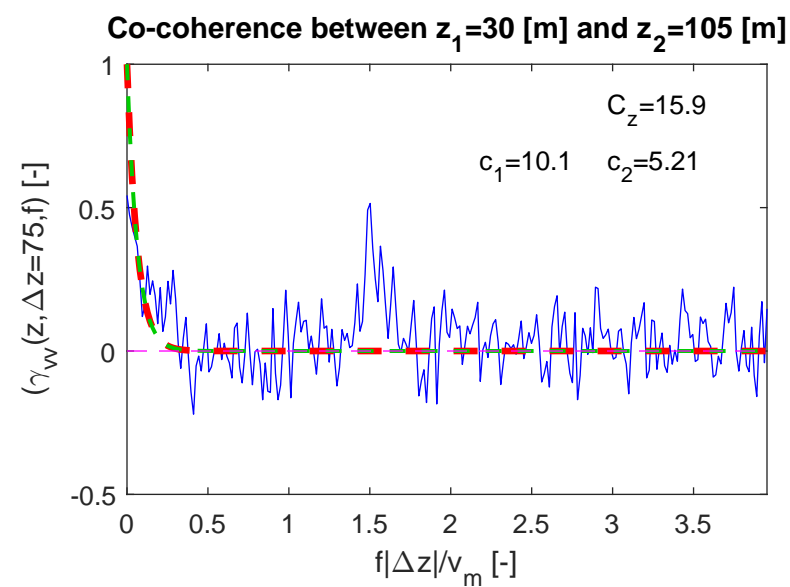
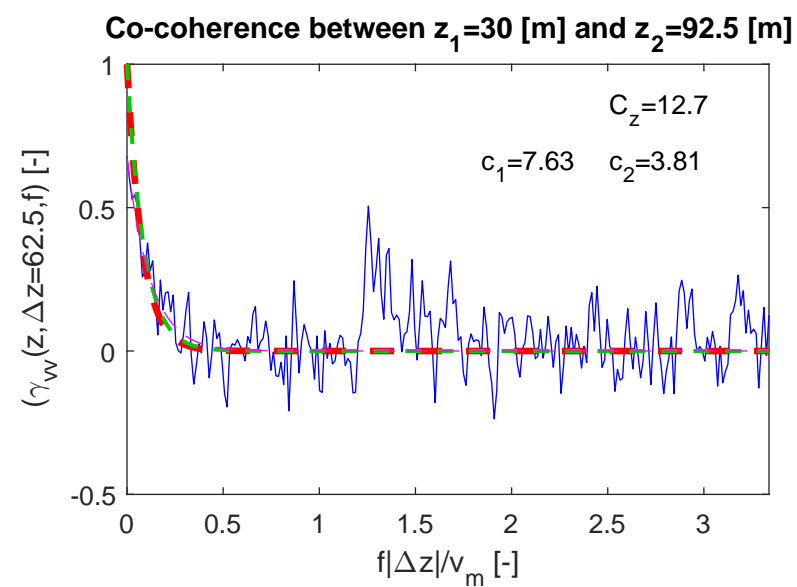
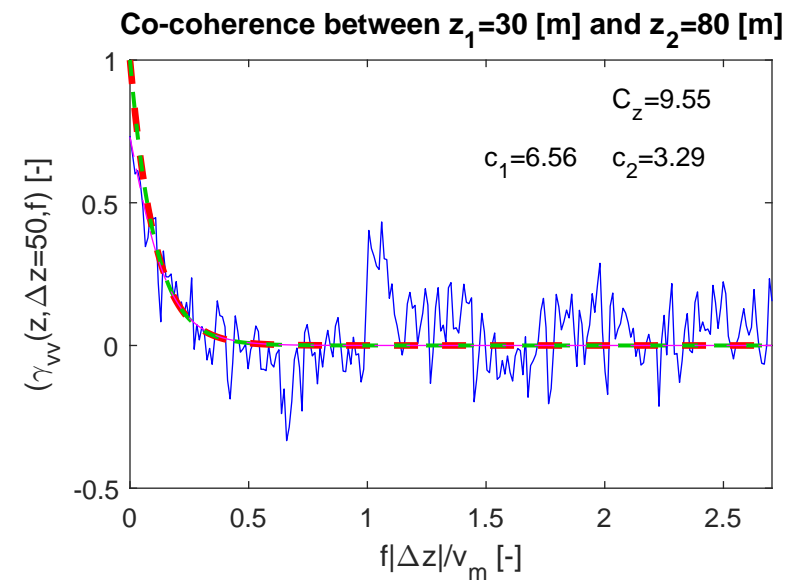
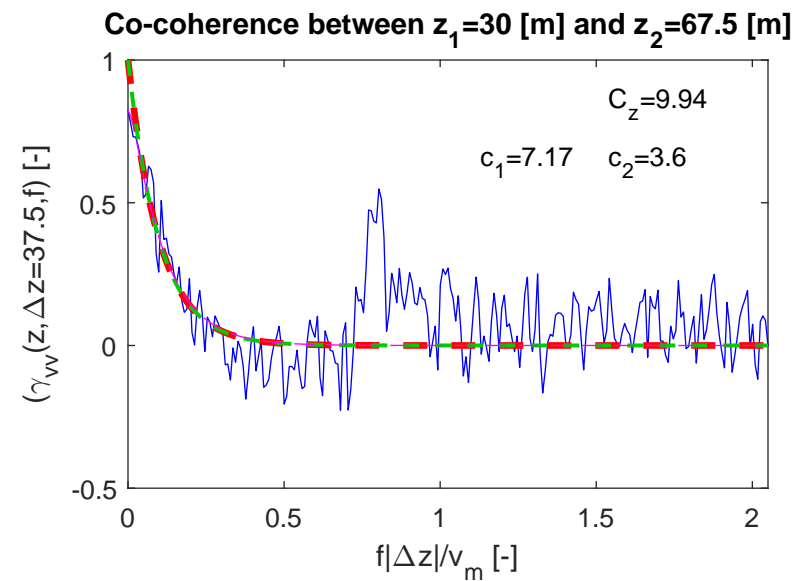
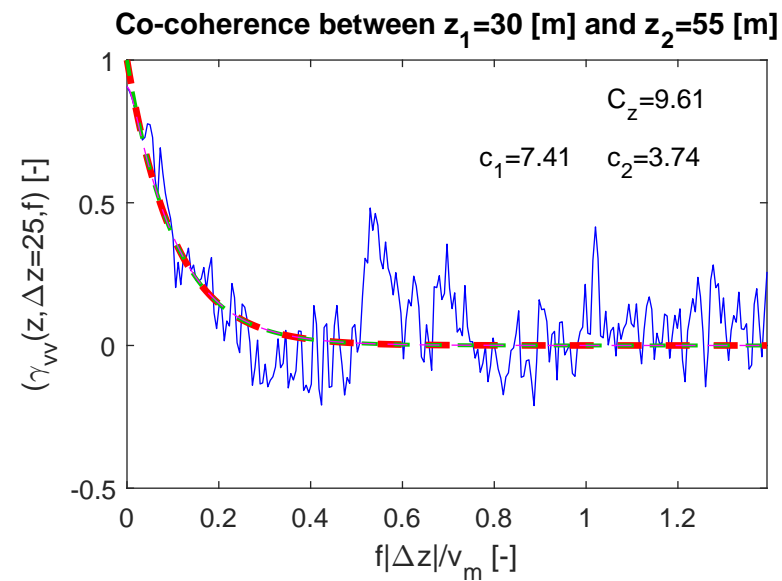
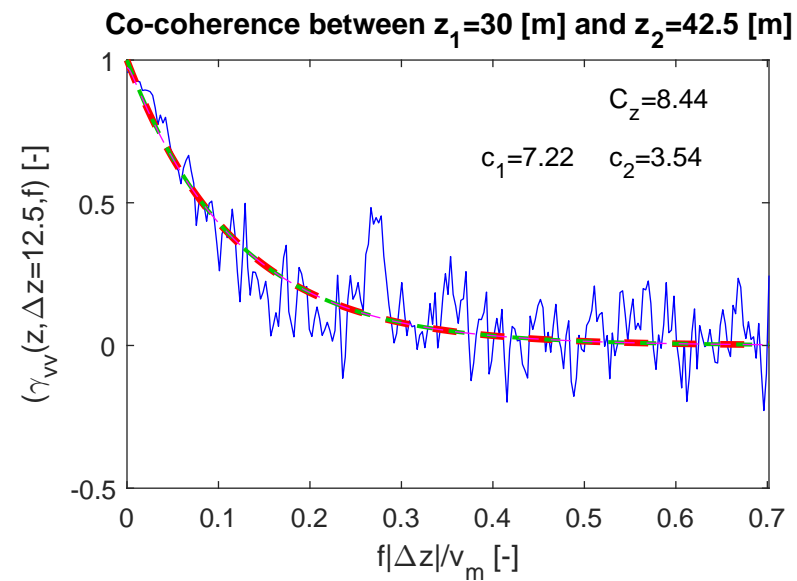
PSD at 142.5 [m] in full scale

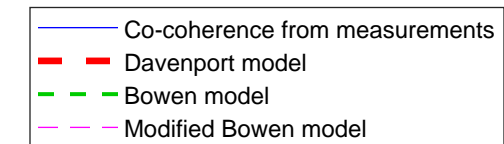
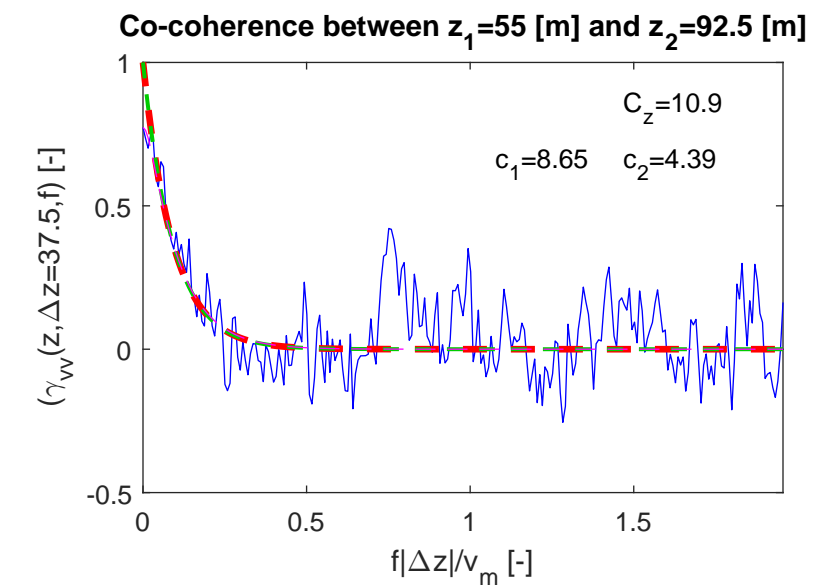
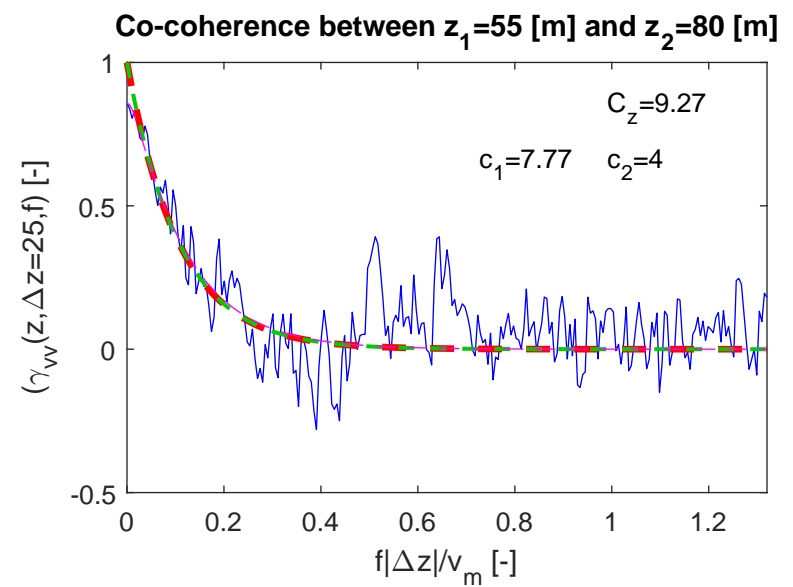
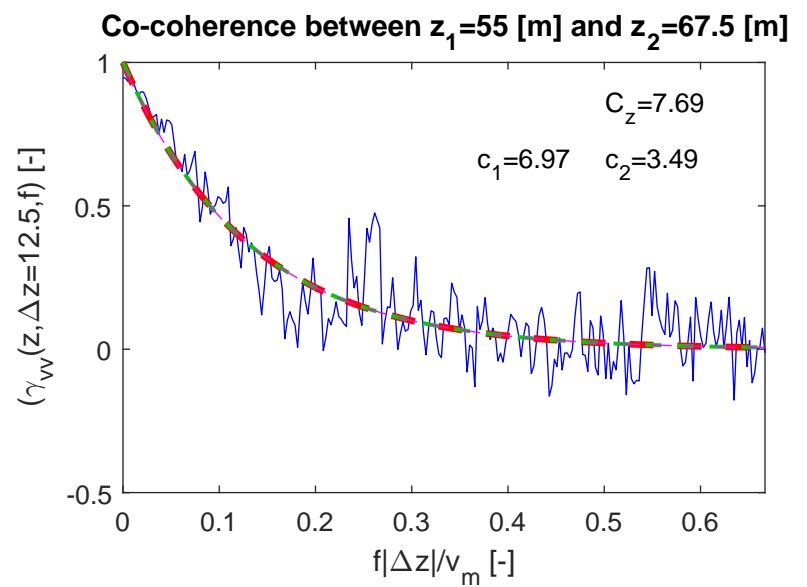
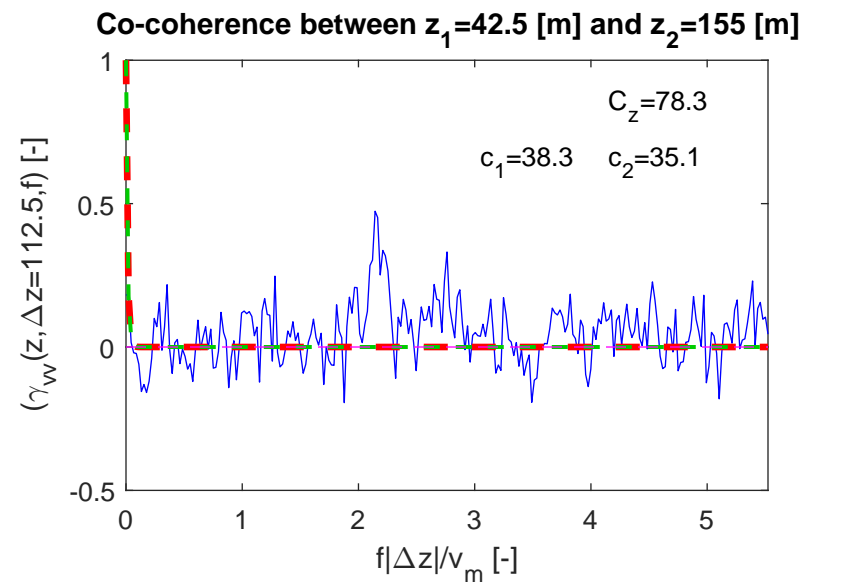
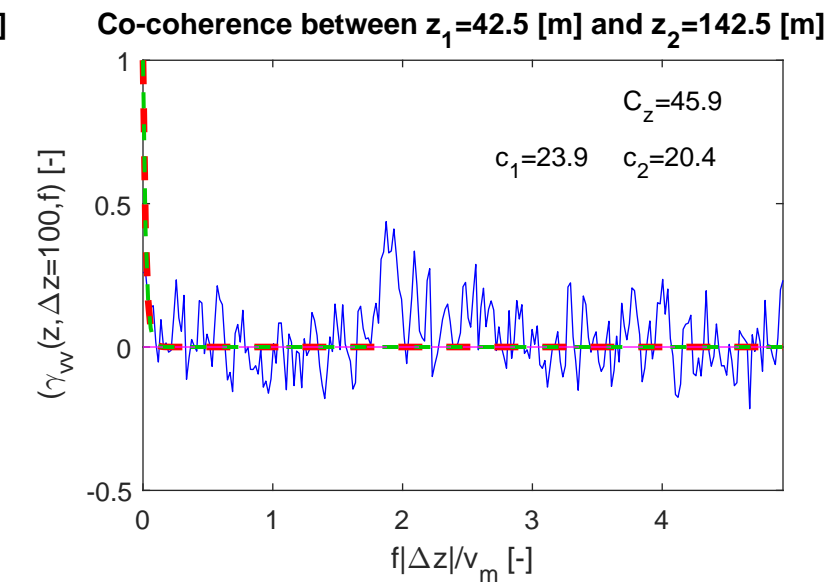
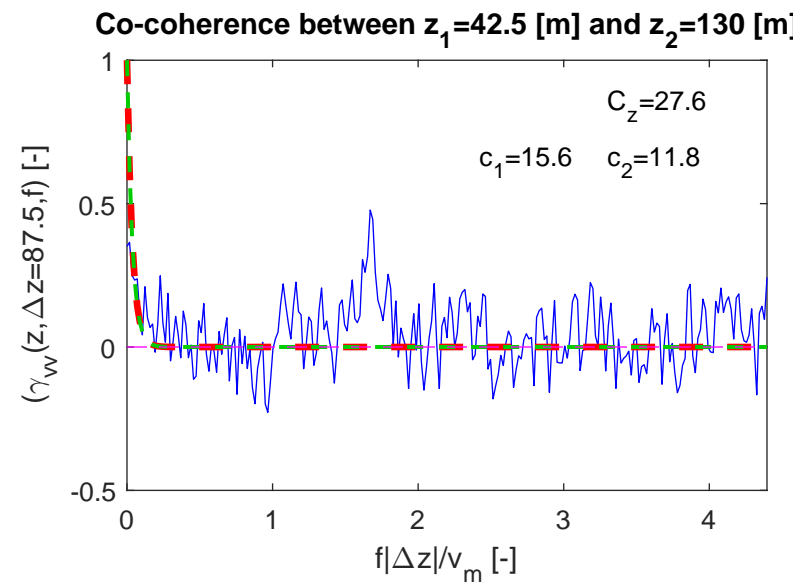
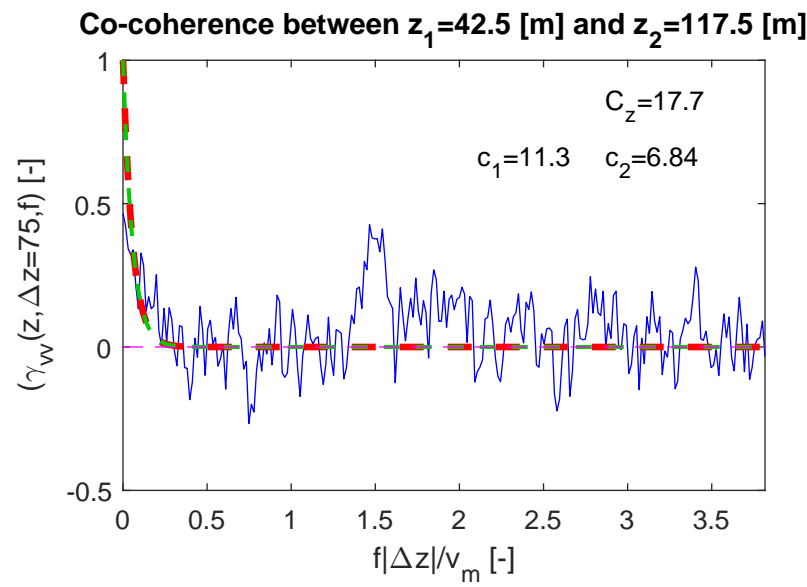
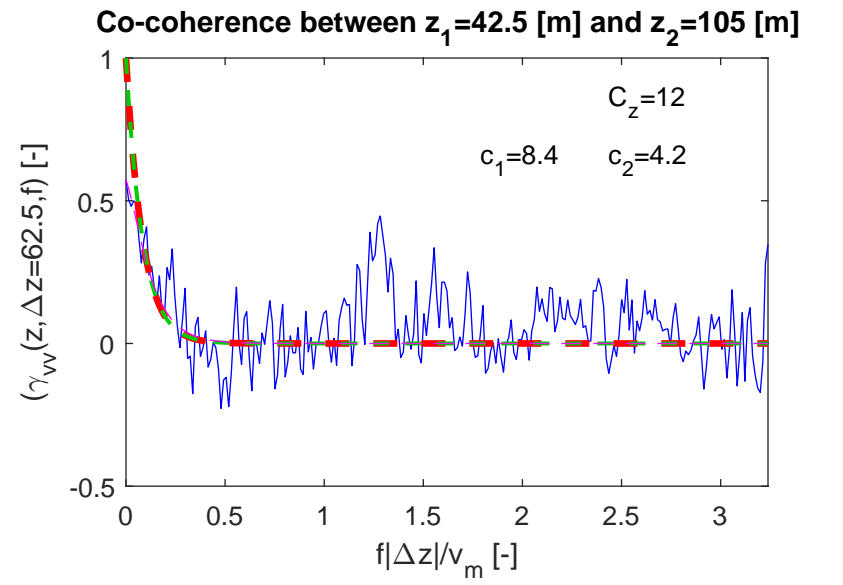
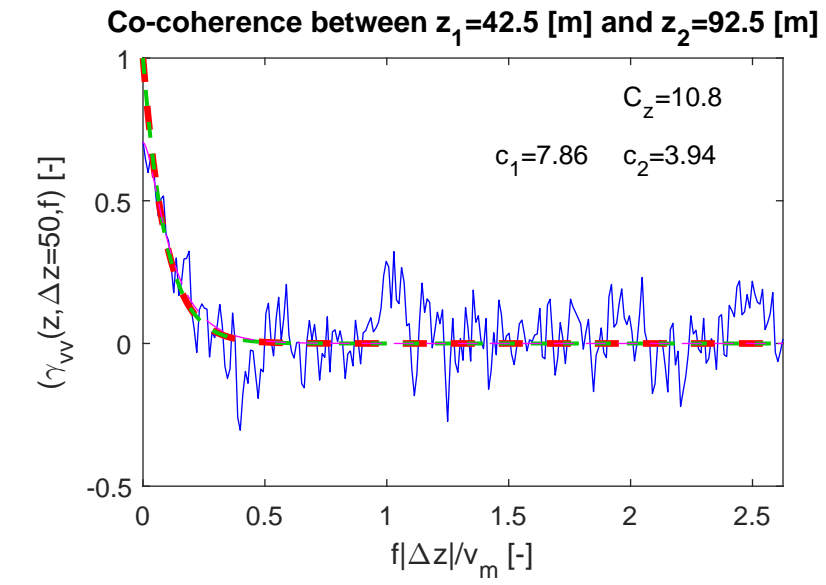
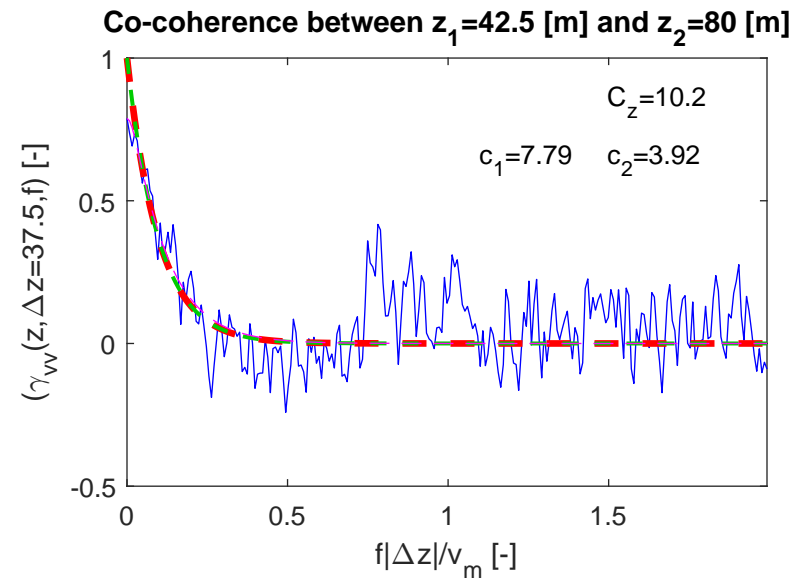
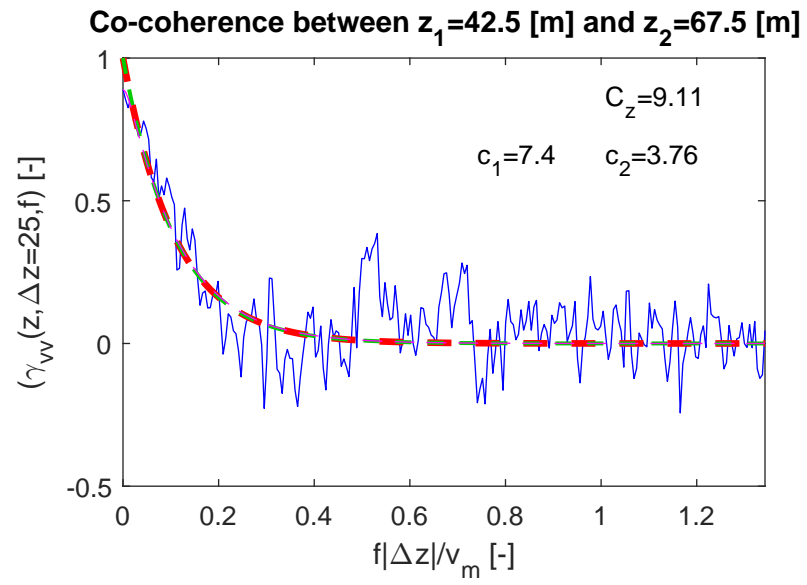


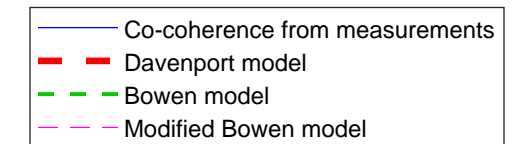
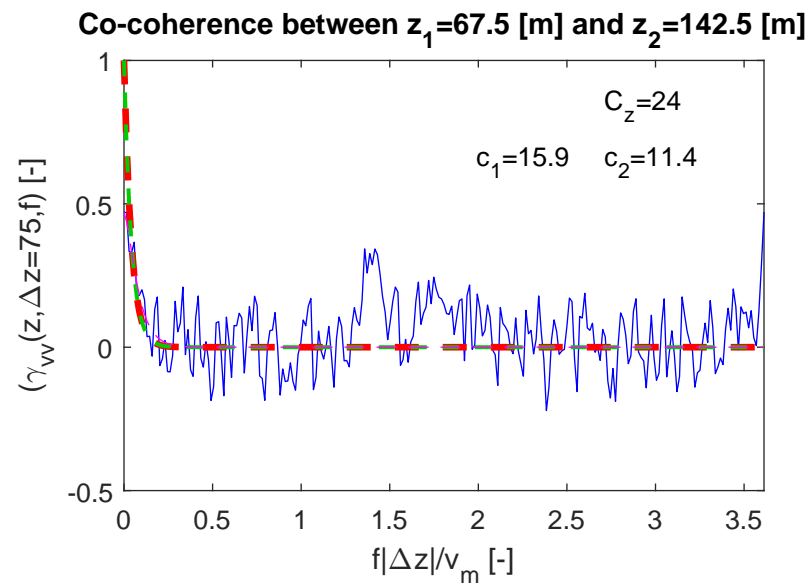
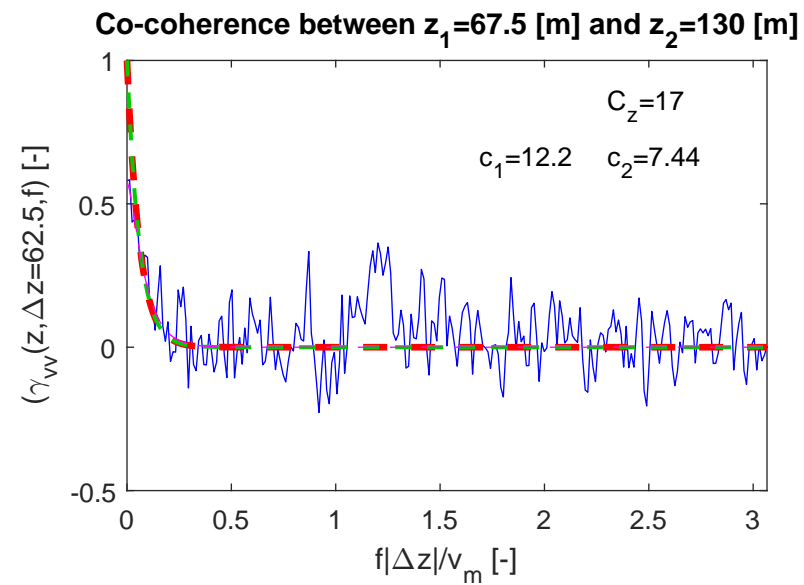
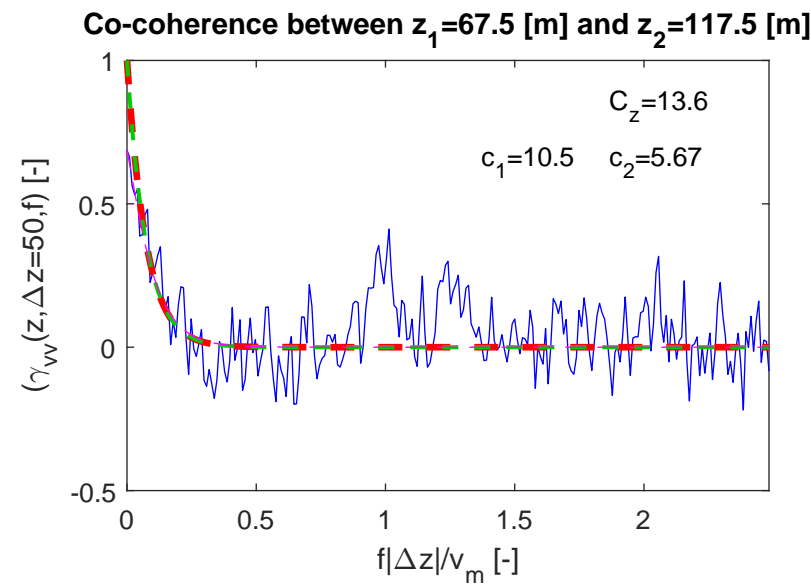
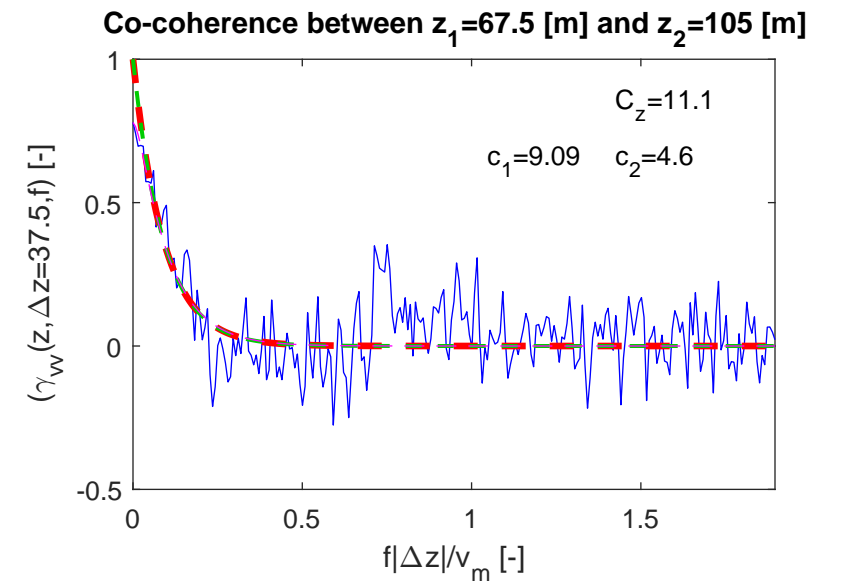
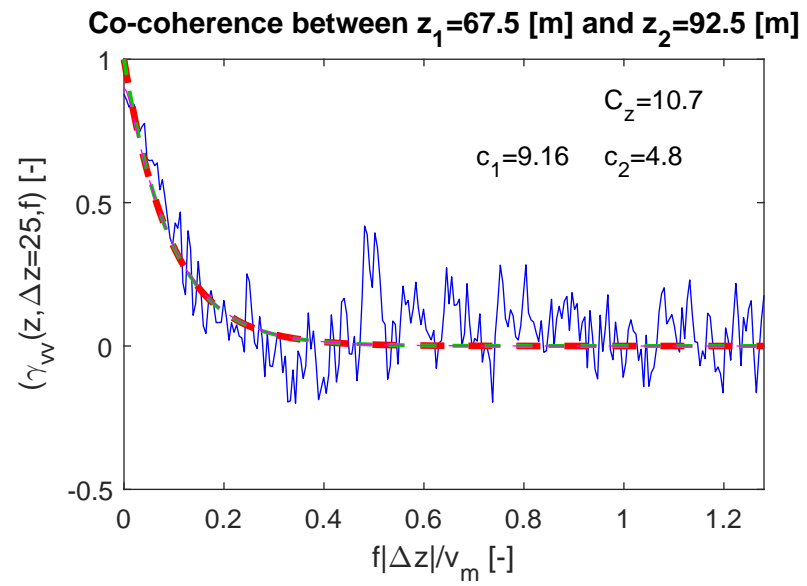
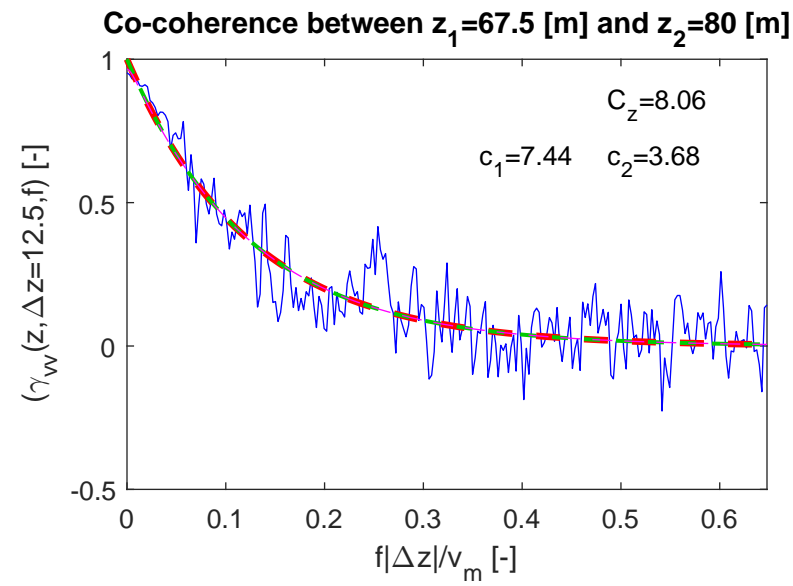
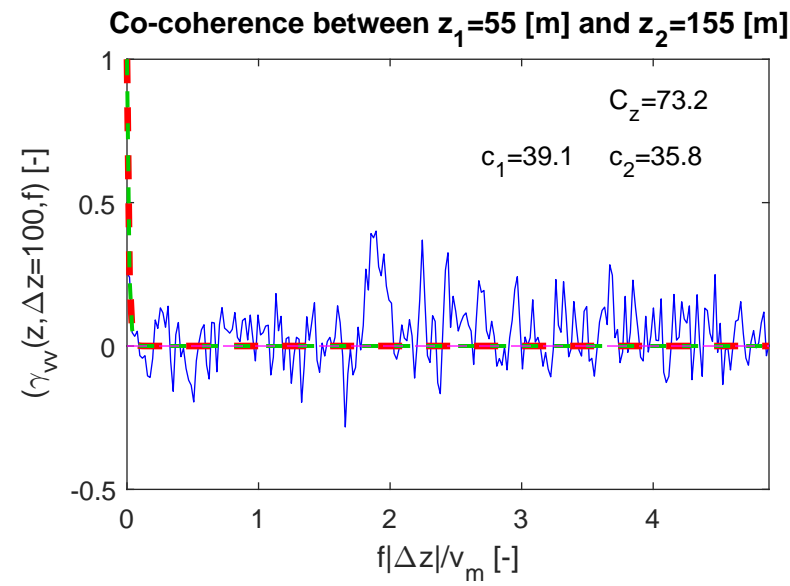
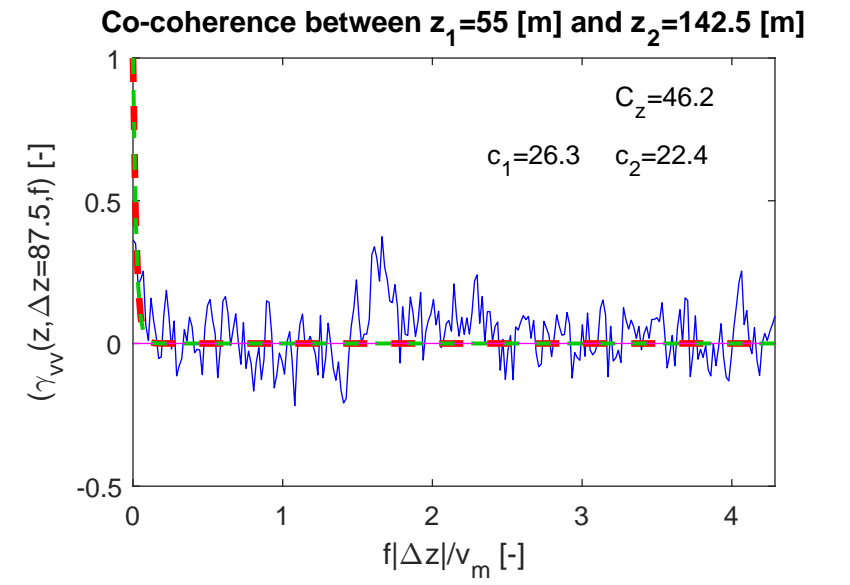
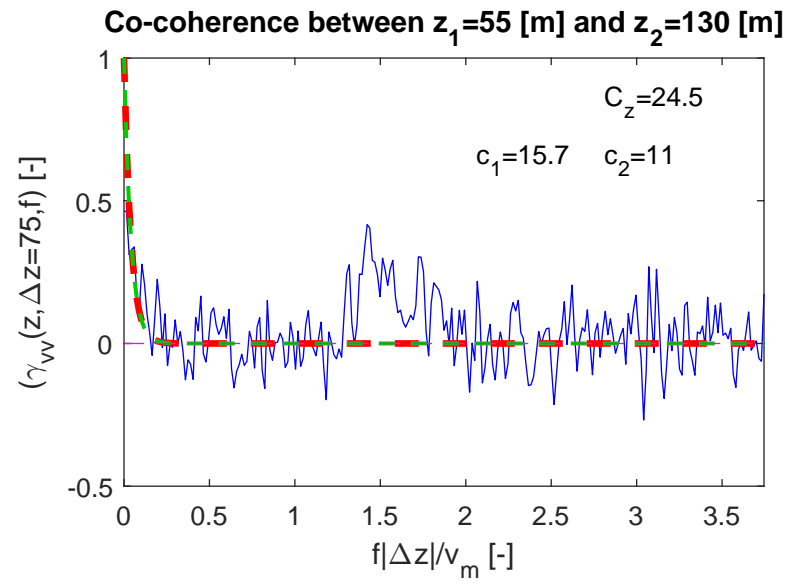
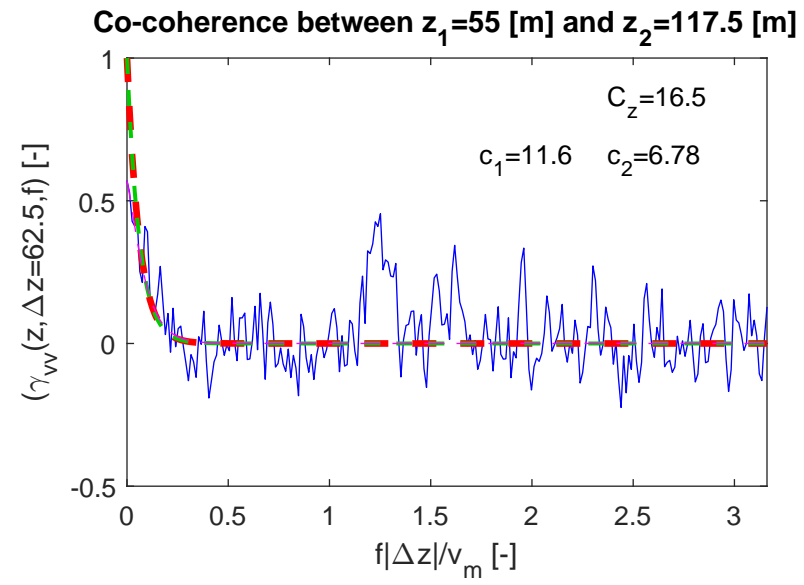
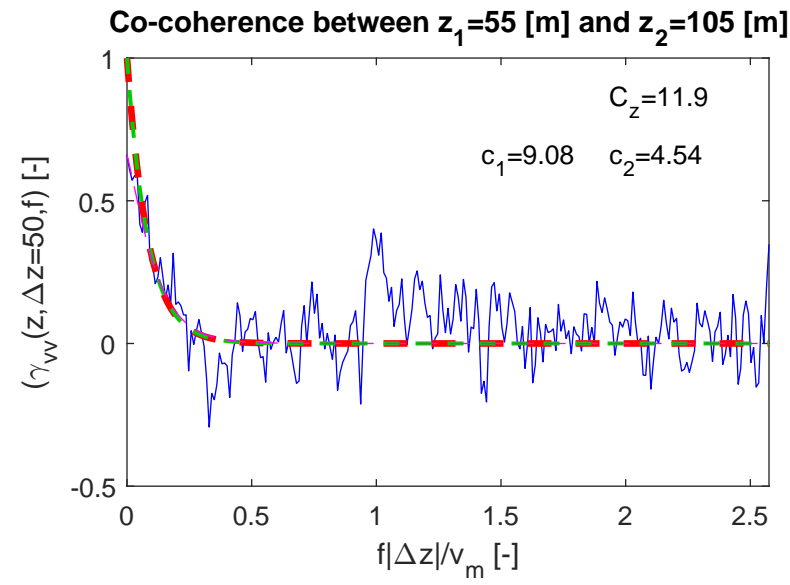
PSD at 155 [m] in full scale

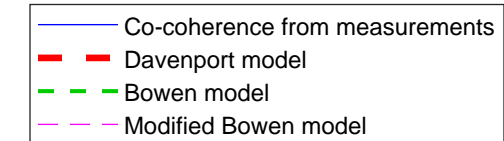
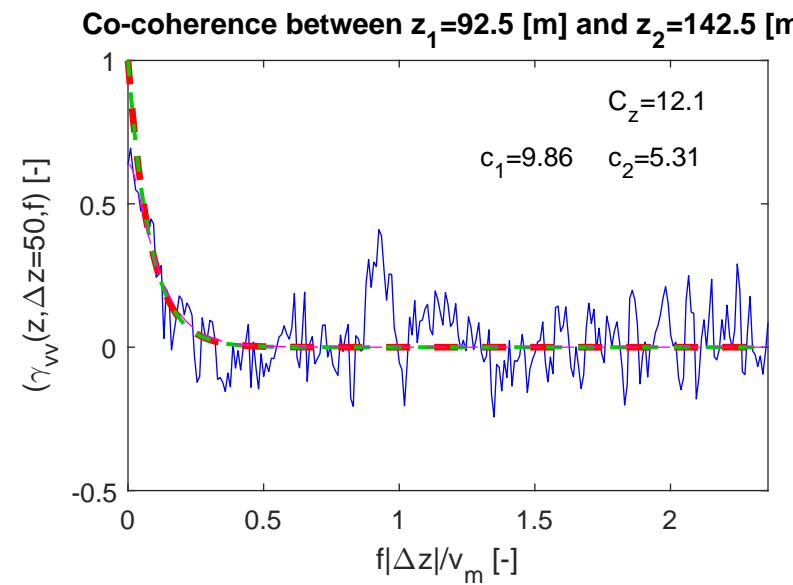
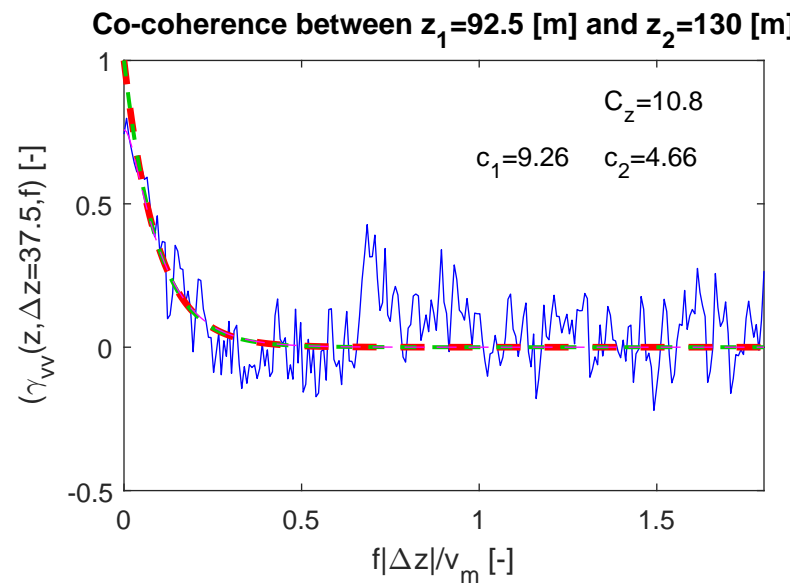
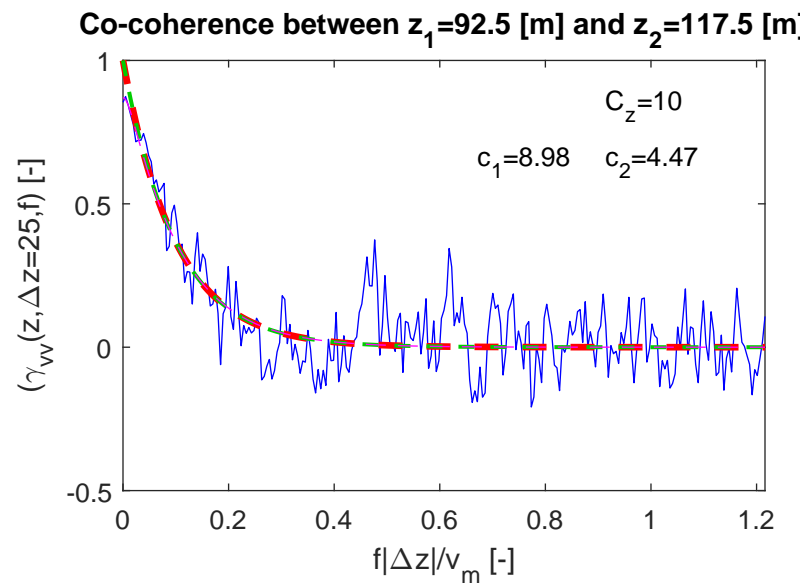
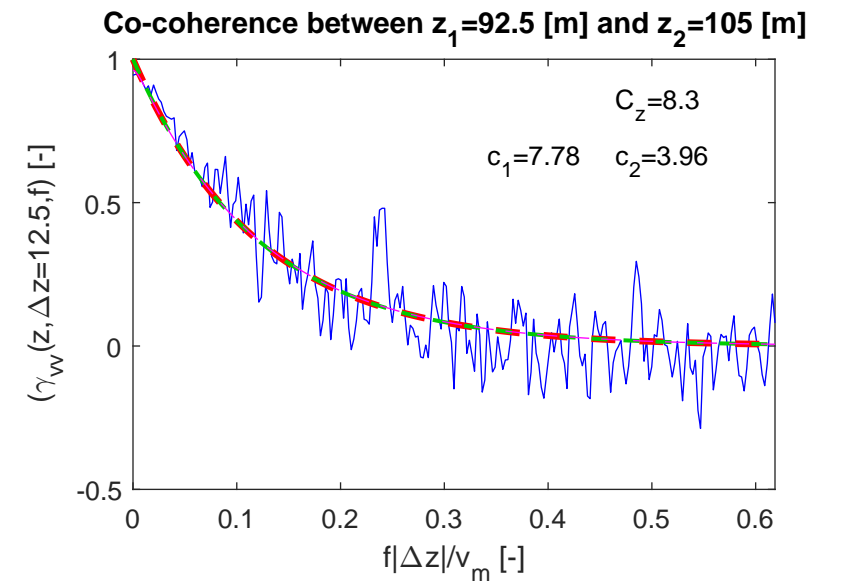
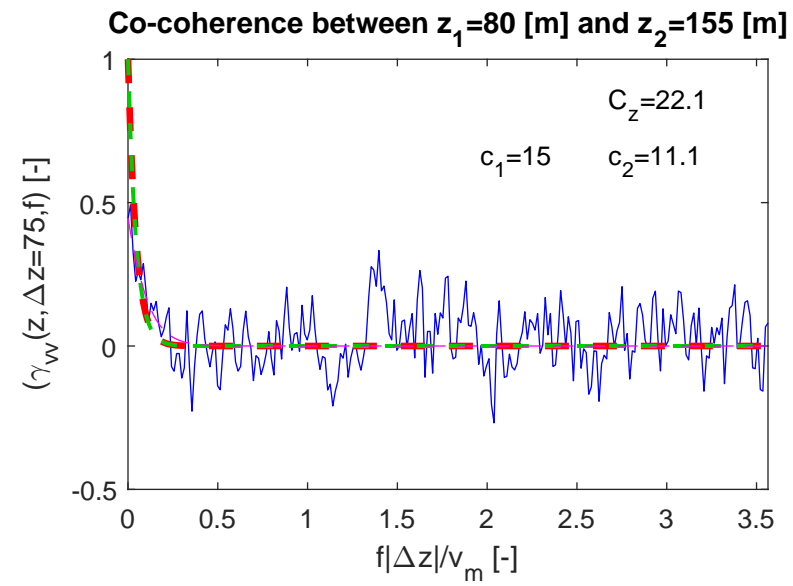
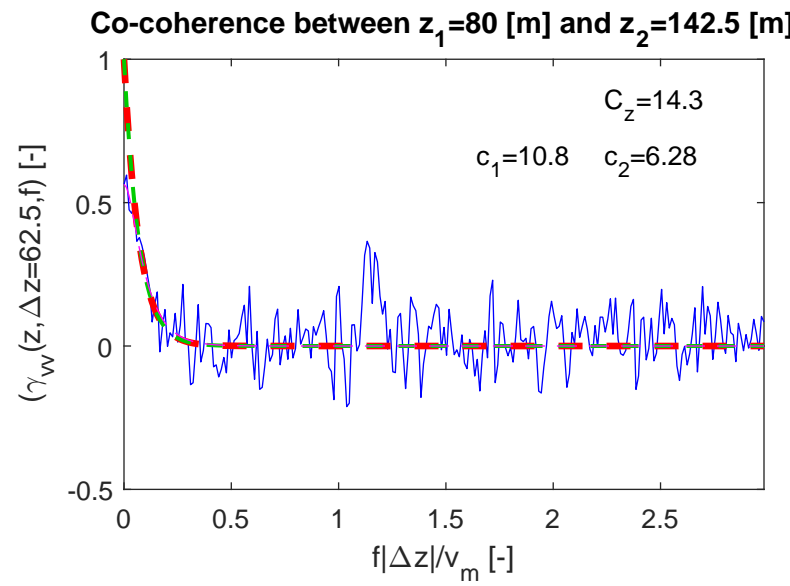
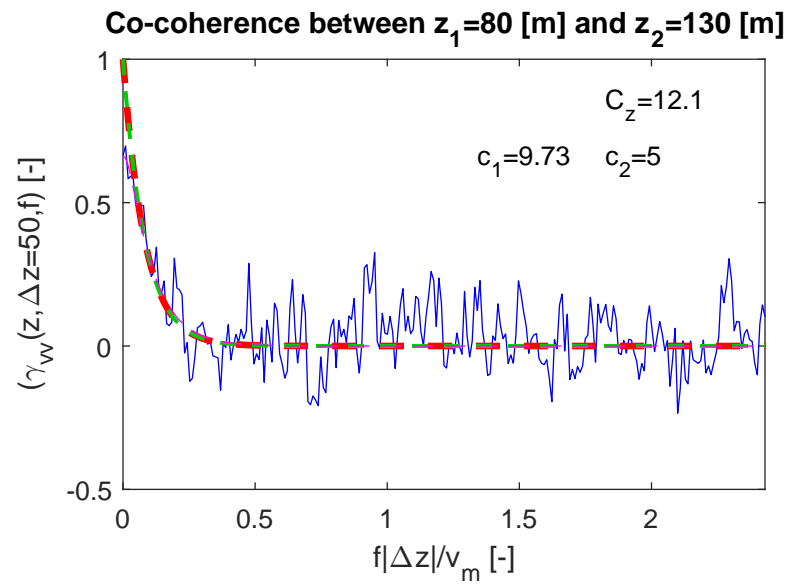
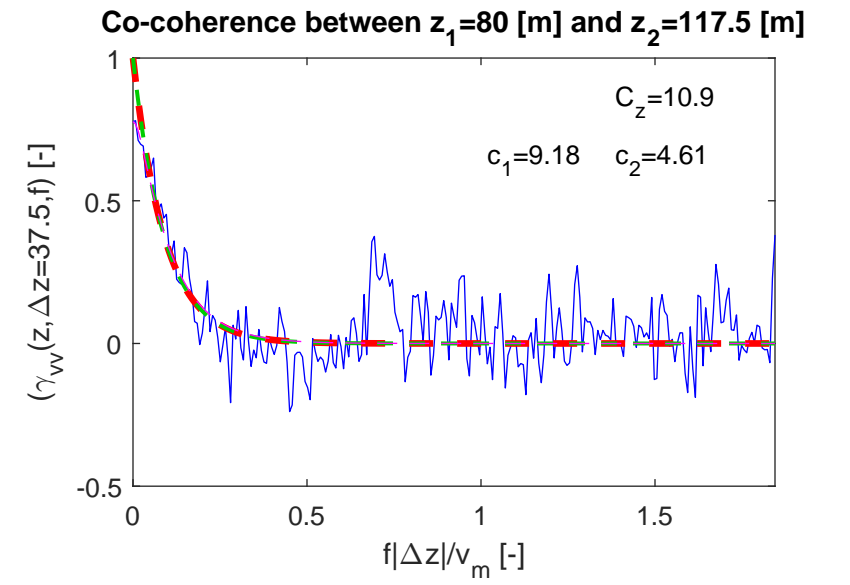
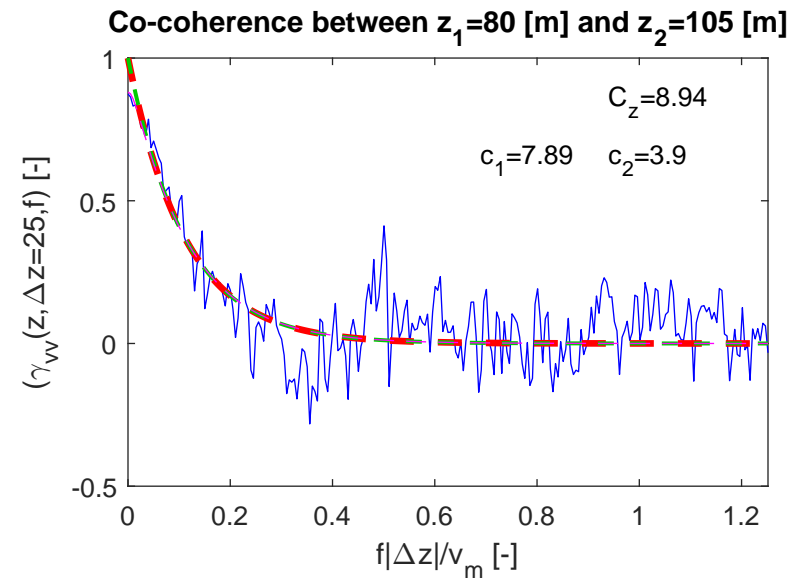
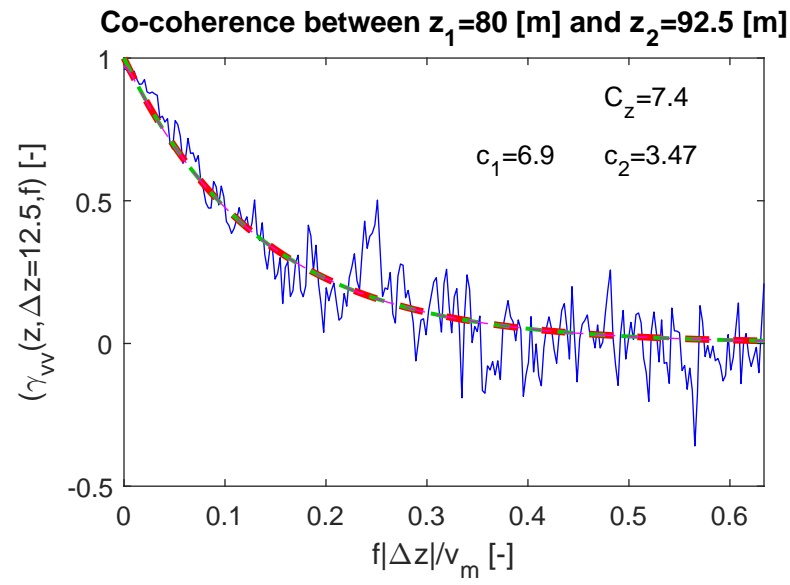
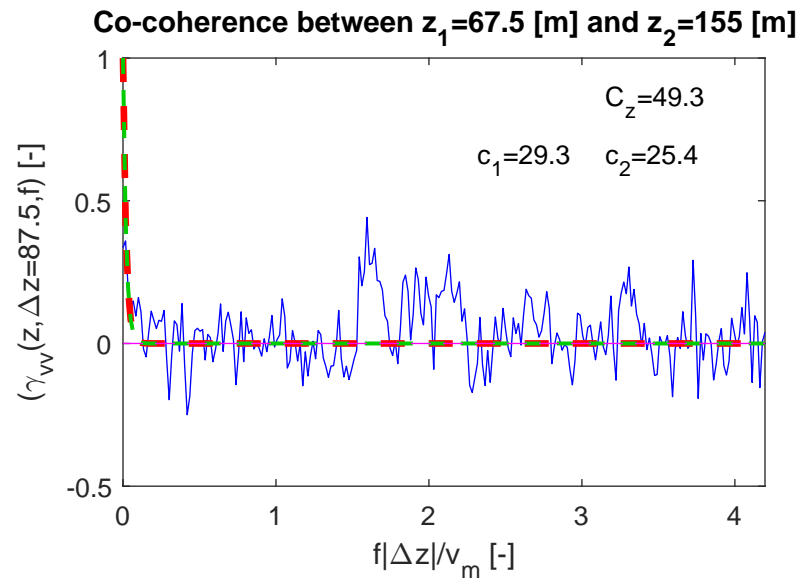


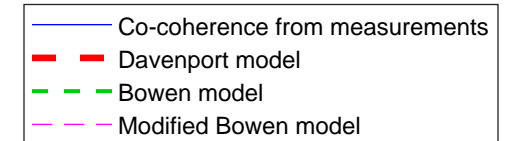
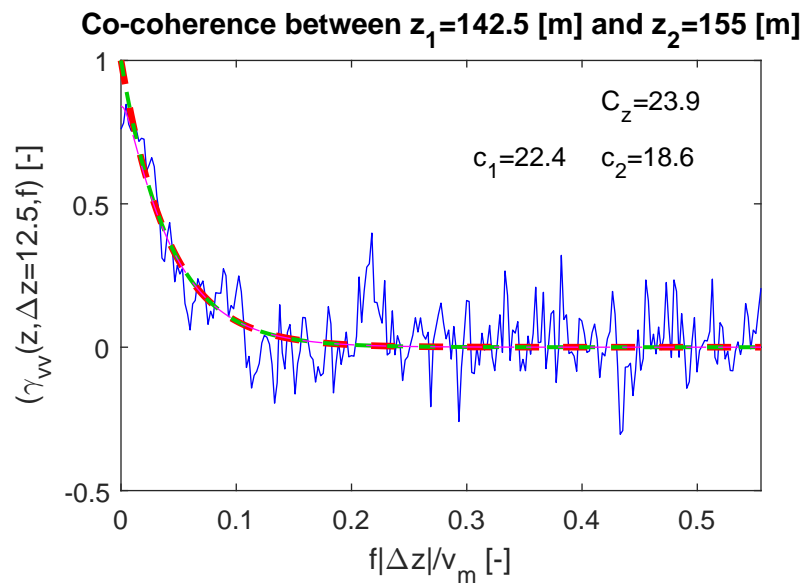
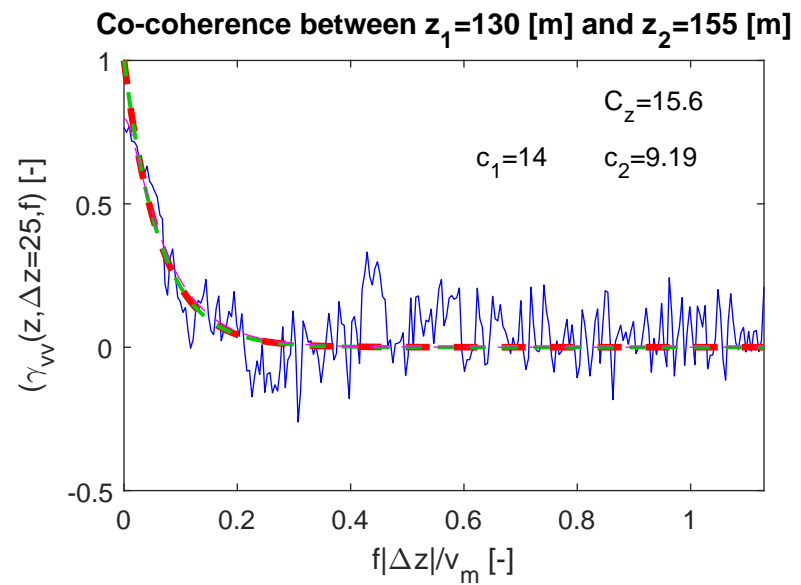
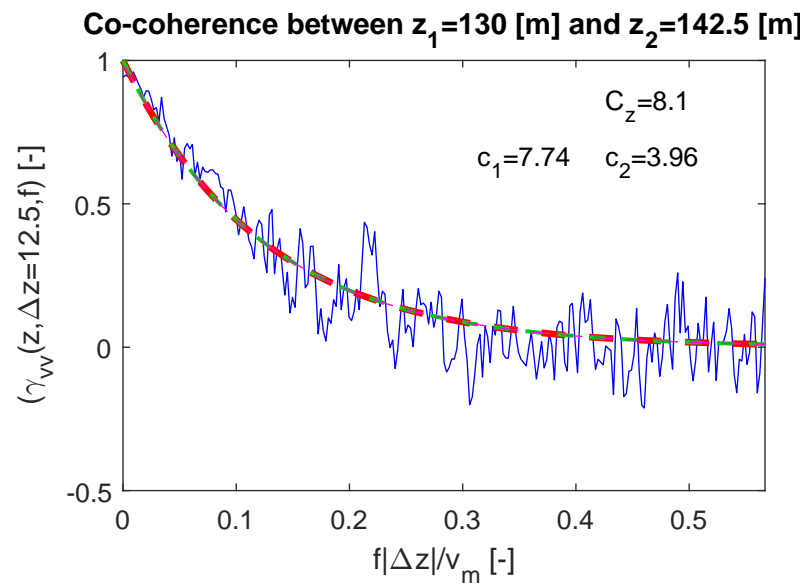
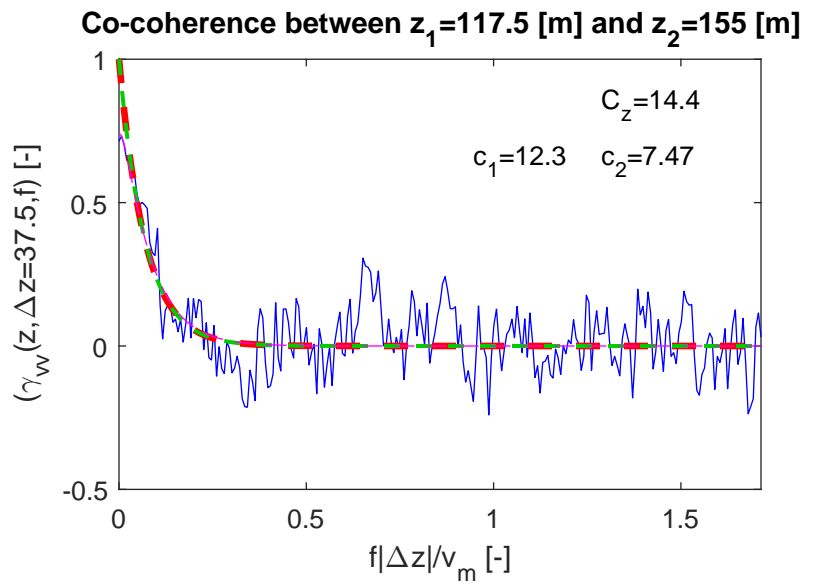
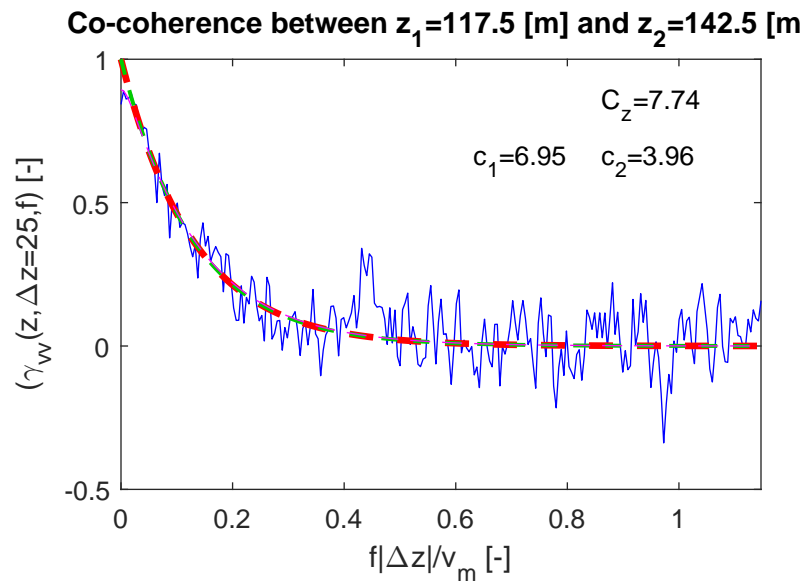
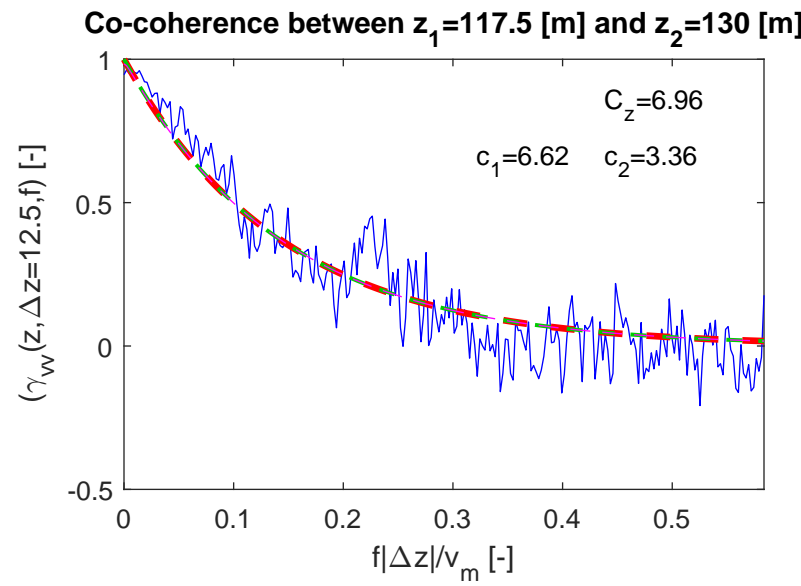
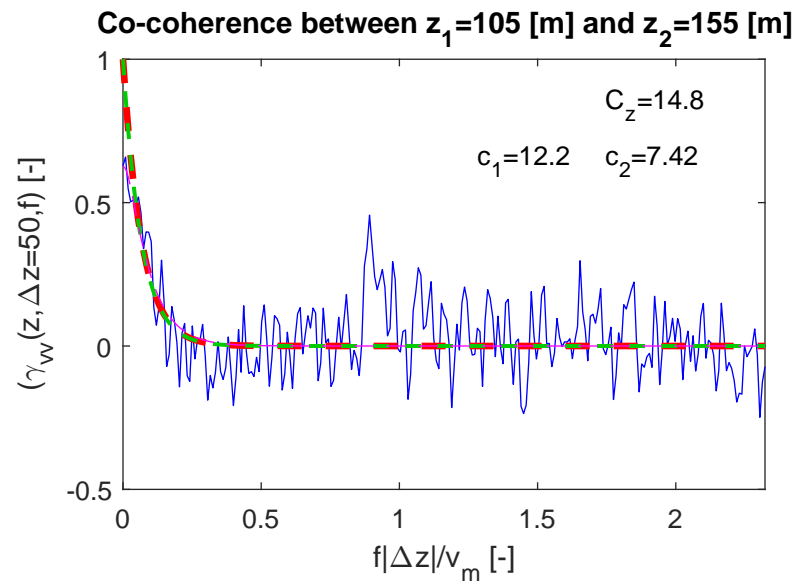
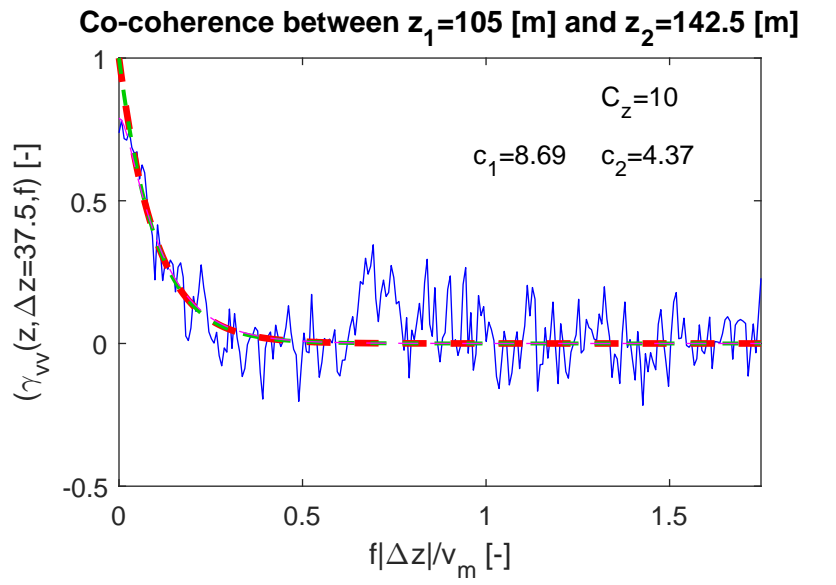
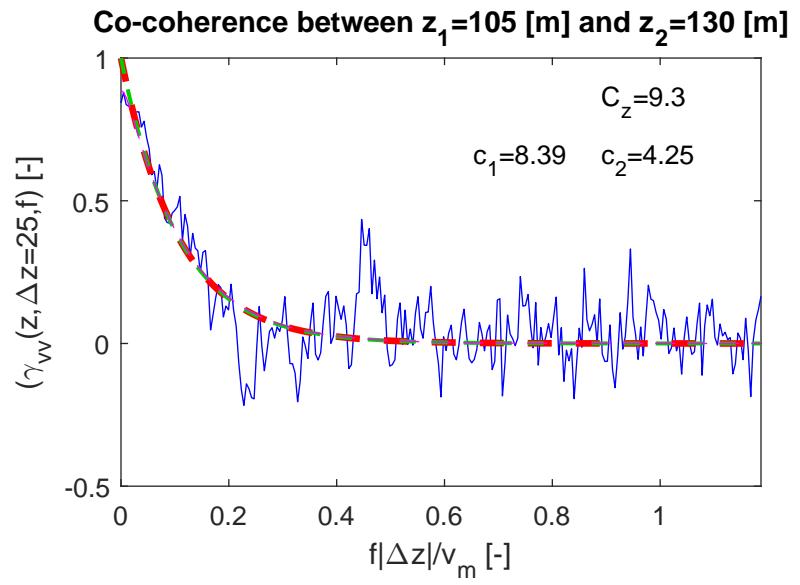
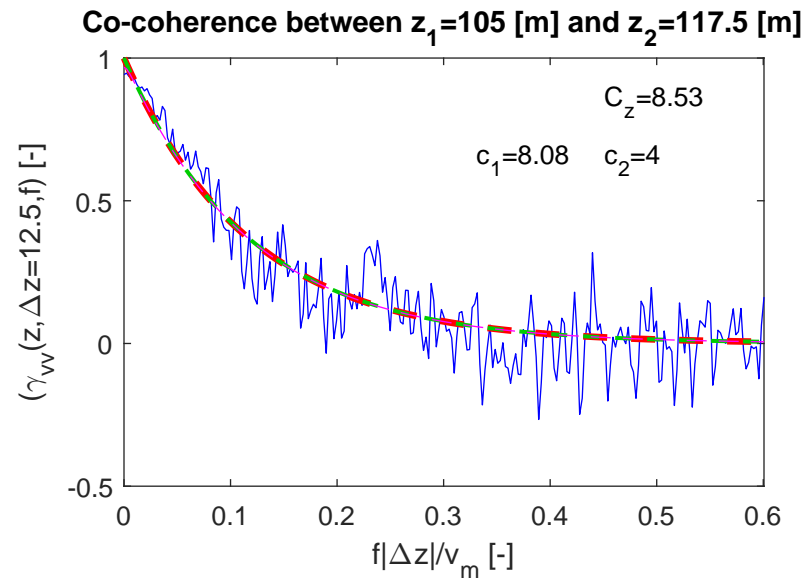
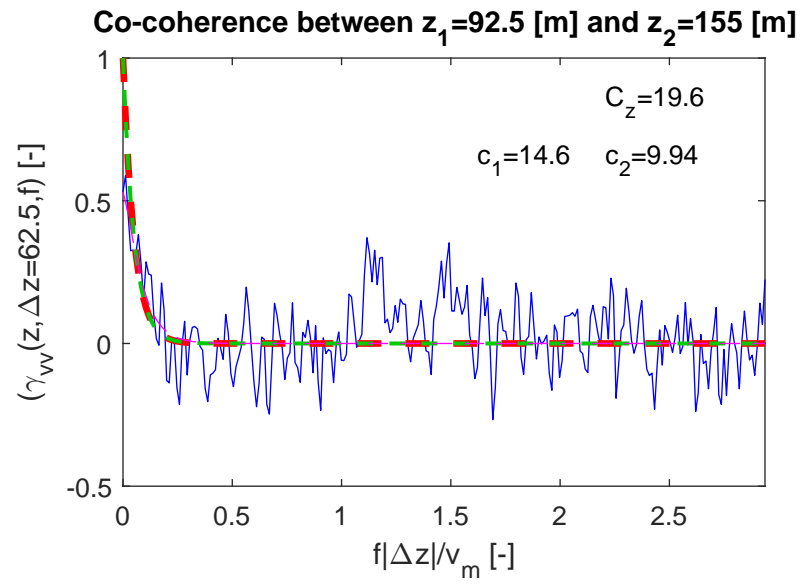




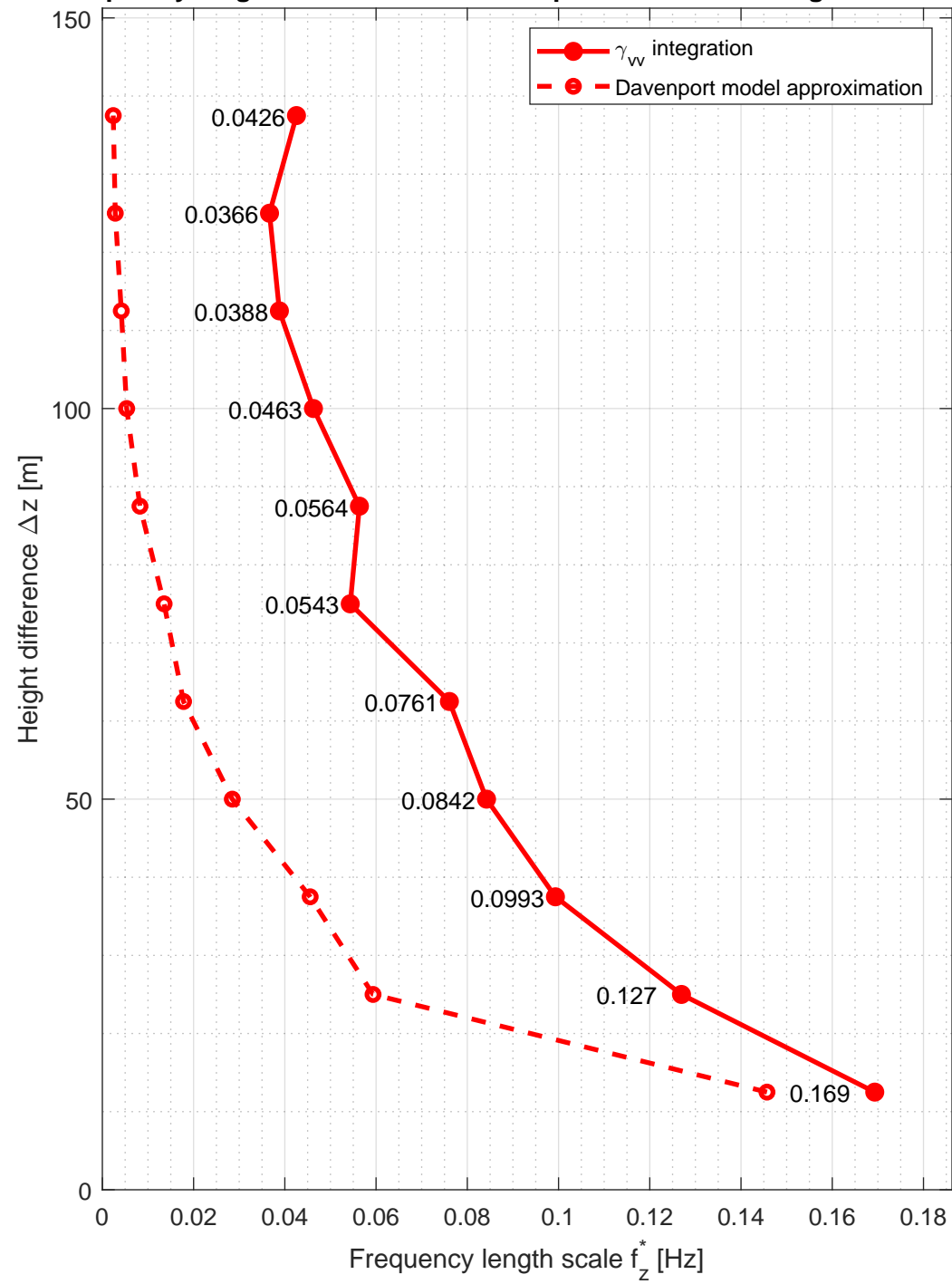




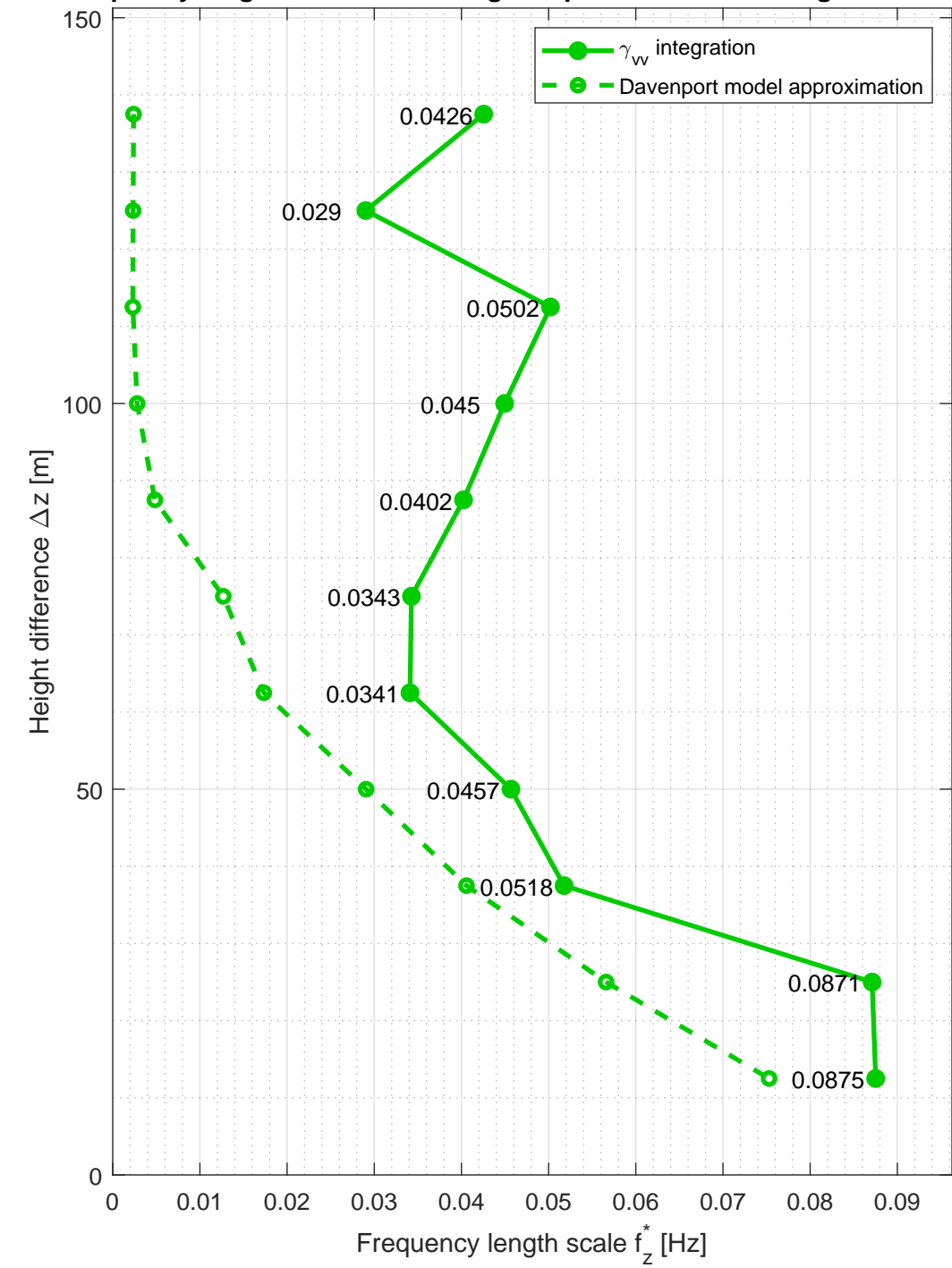




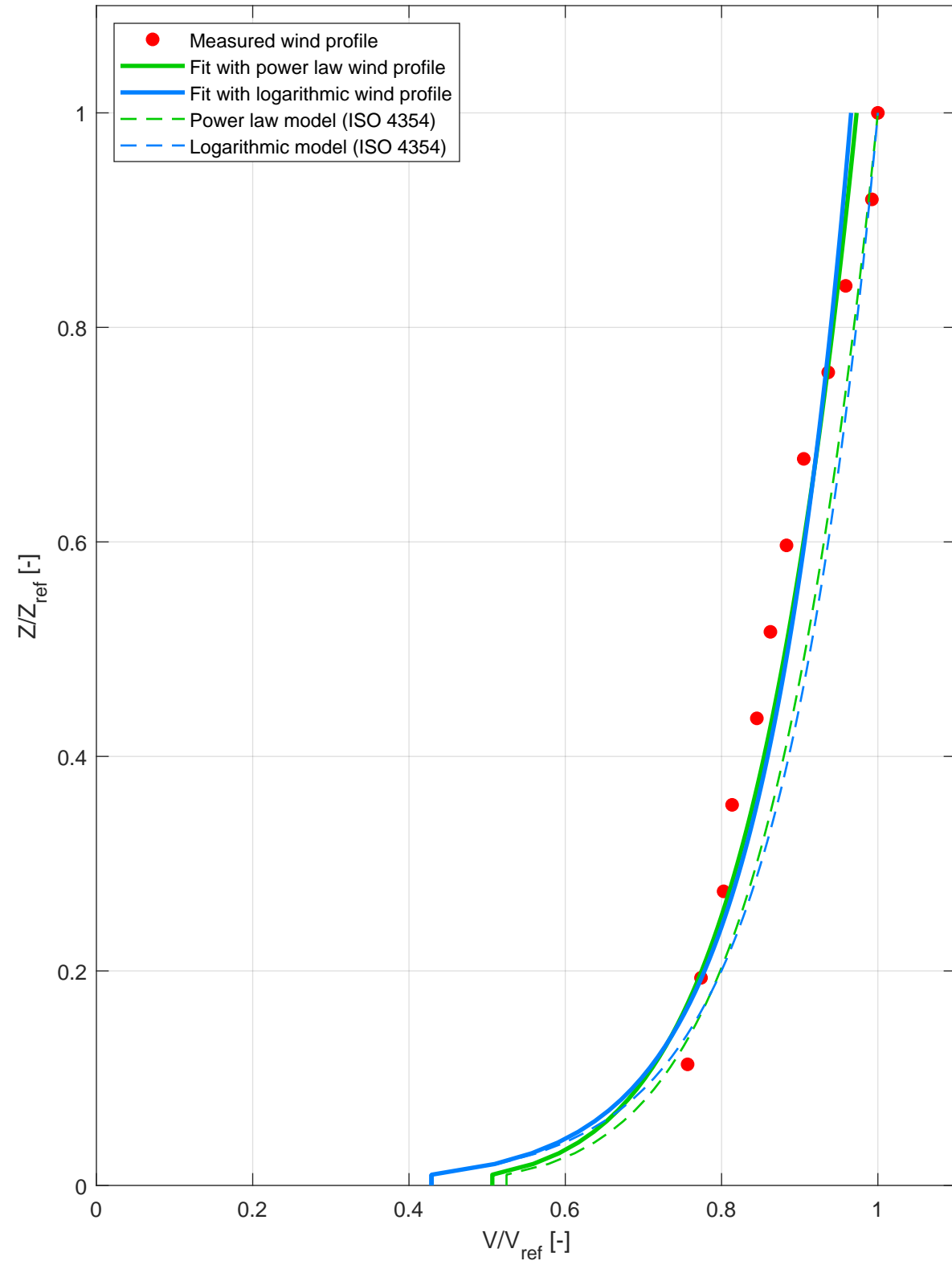
Frequency length scales for the lowest point at different height differences



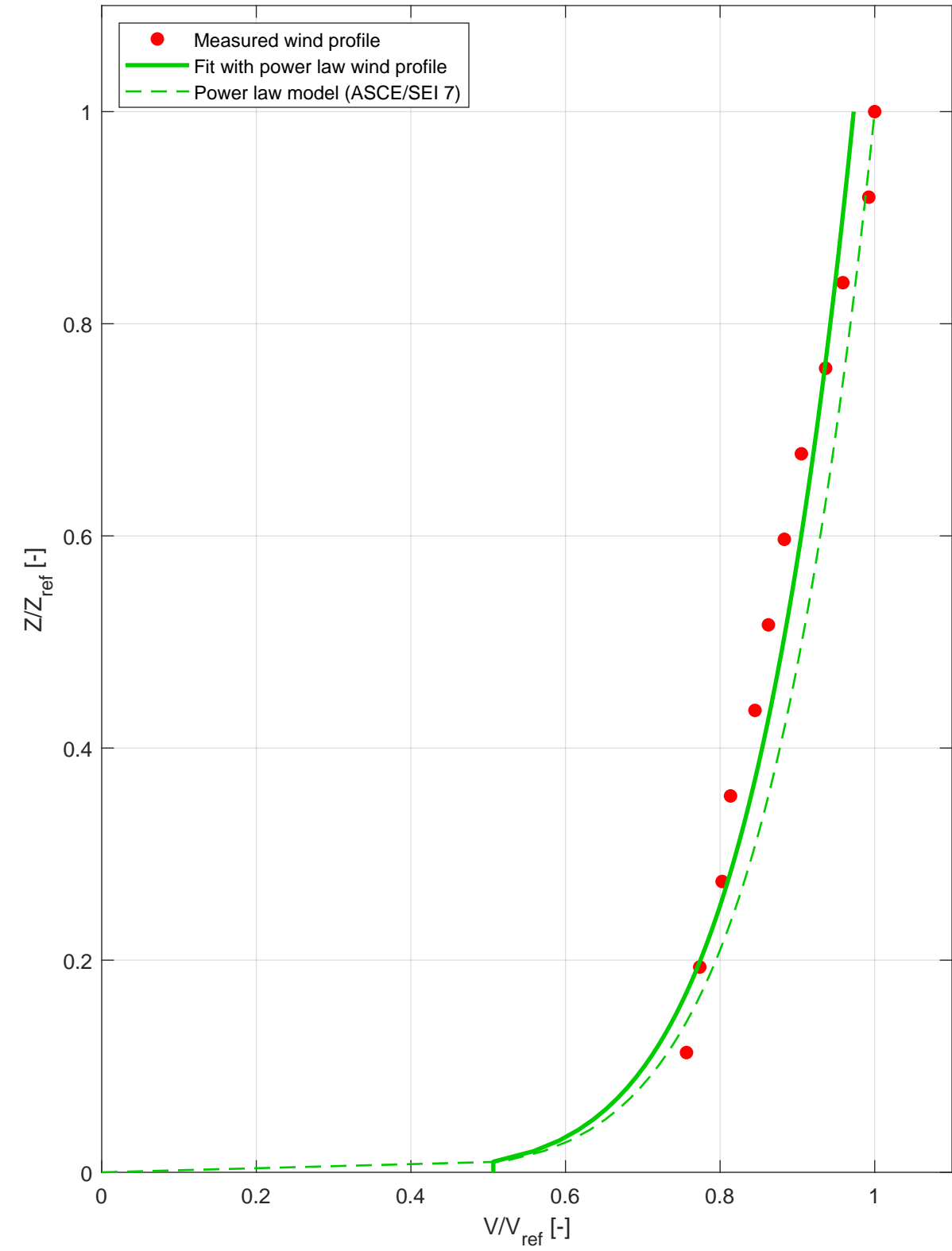
Frequency length scales for the highest point at different height differences

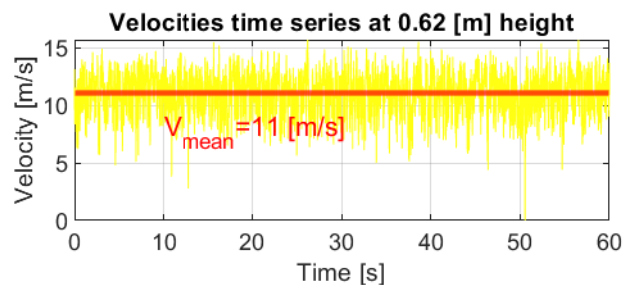
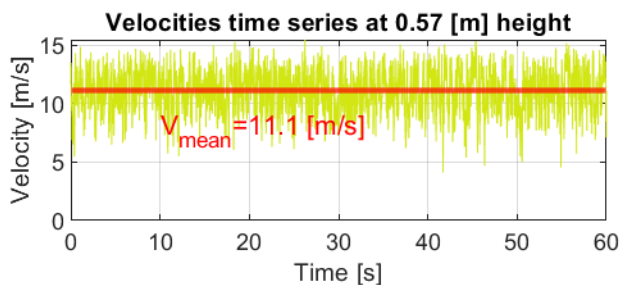
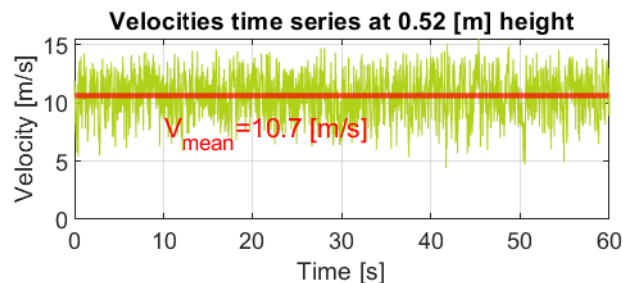
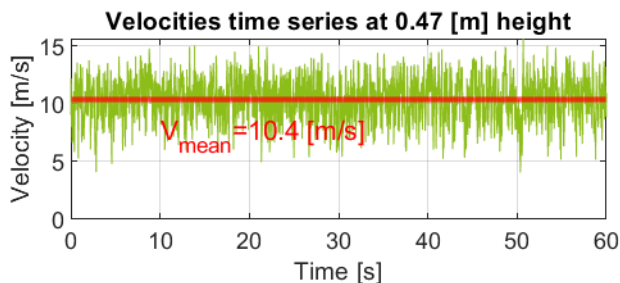
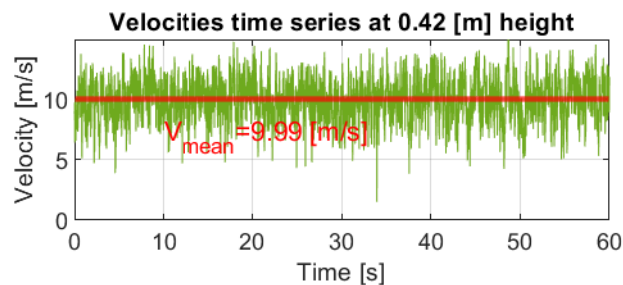
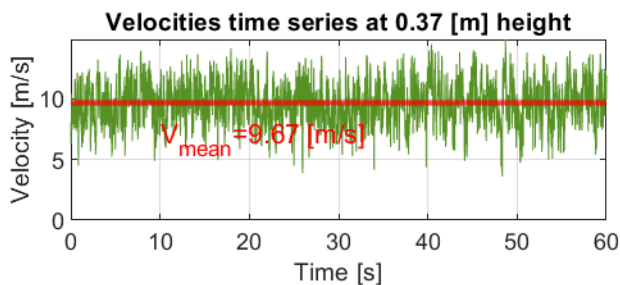
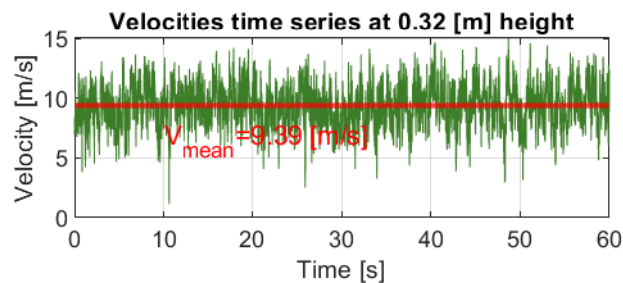
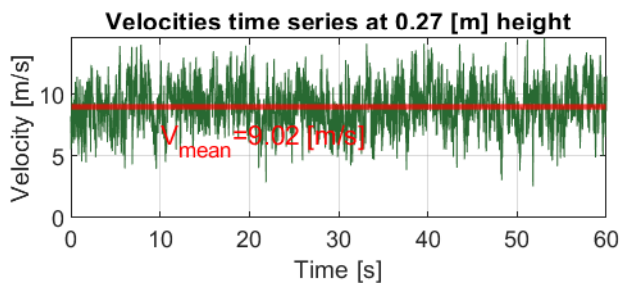
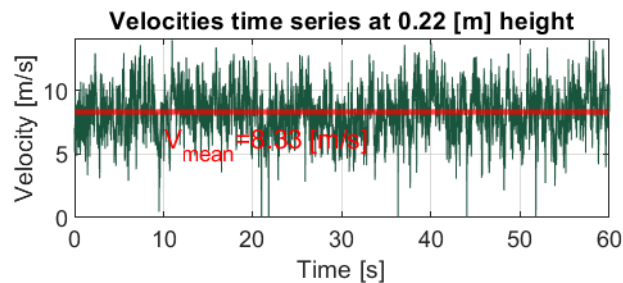
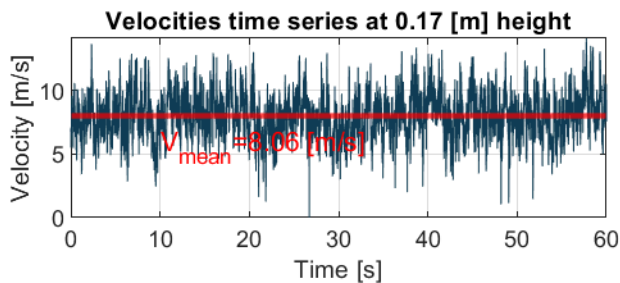
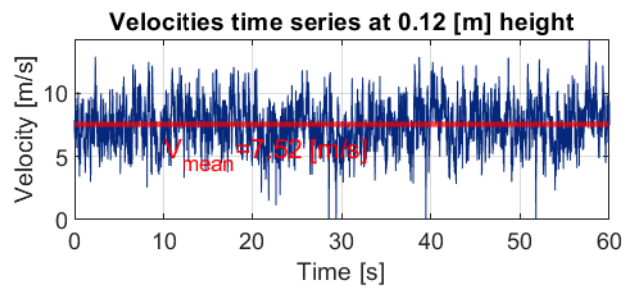
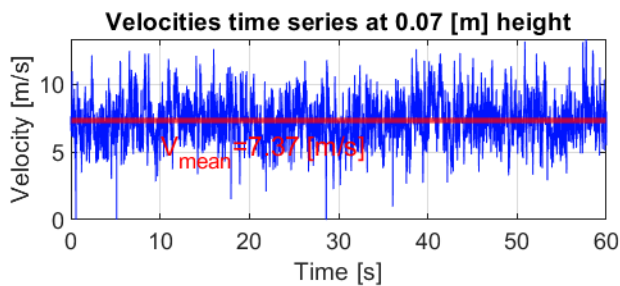


Mean wind velocity profile - comparison with ISO 4354

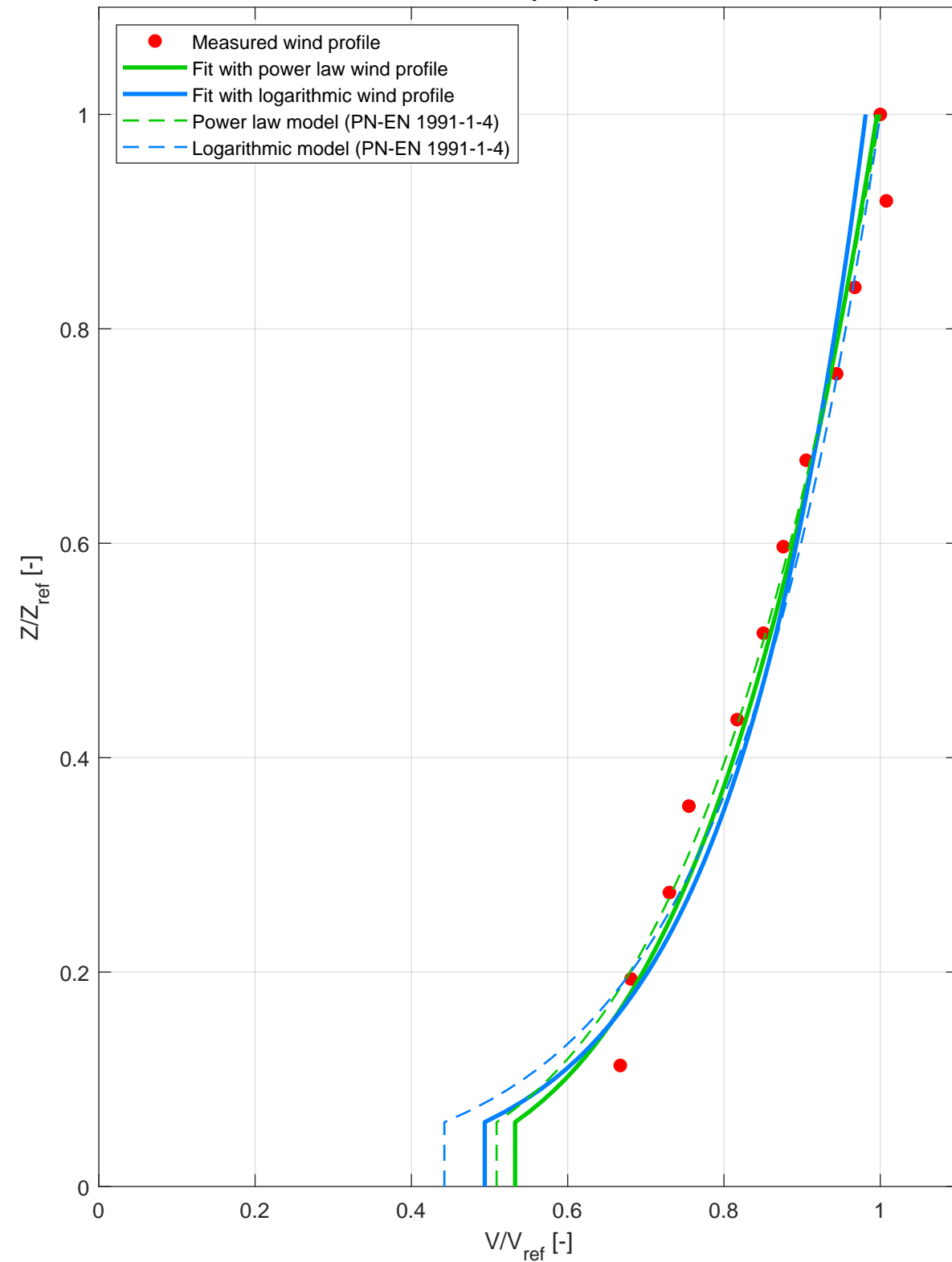


Mean wind velocity profile - comparison with ASCE/SEI 7

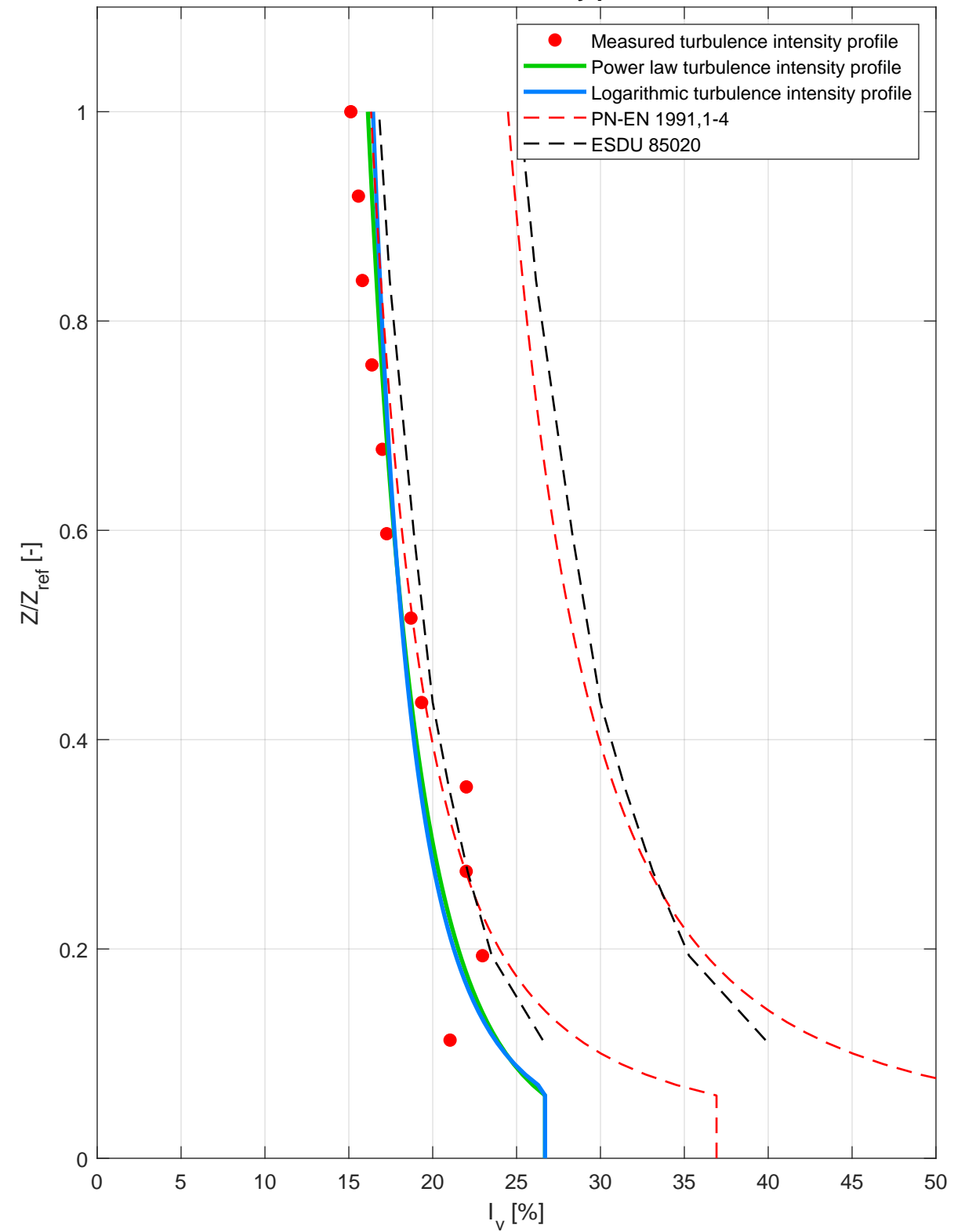




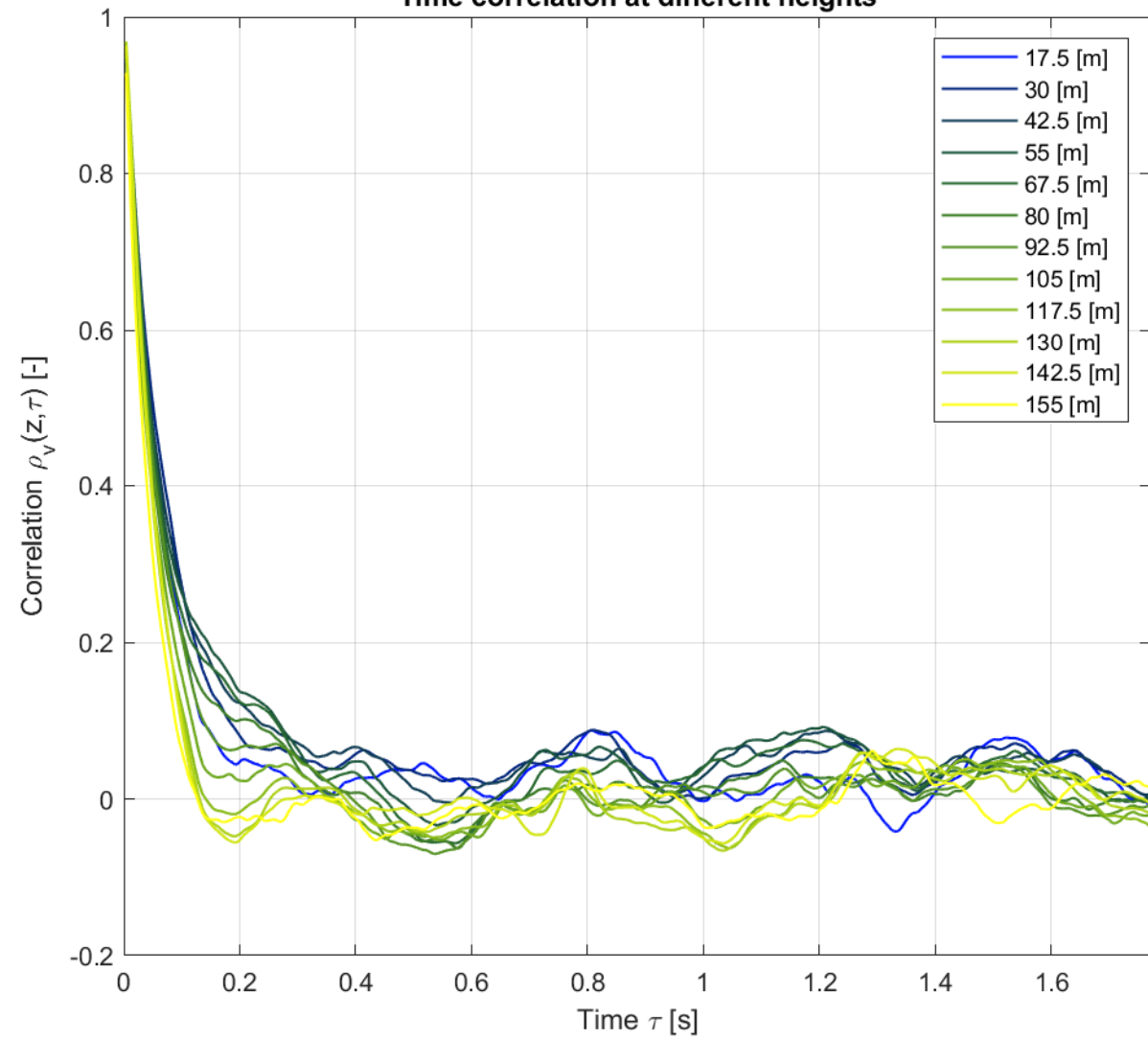
Mean wind speed profile



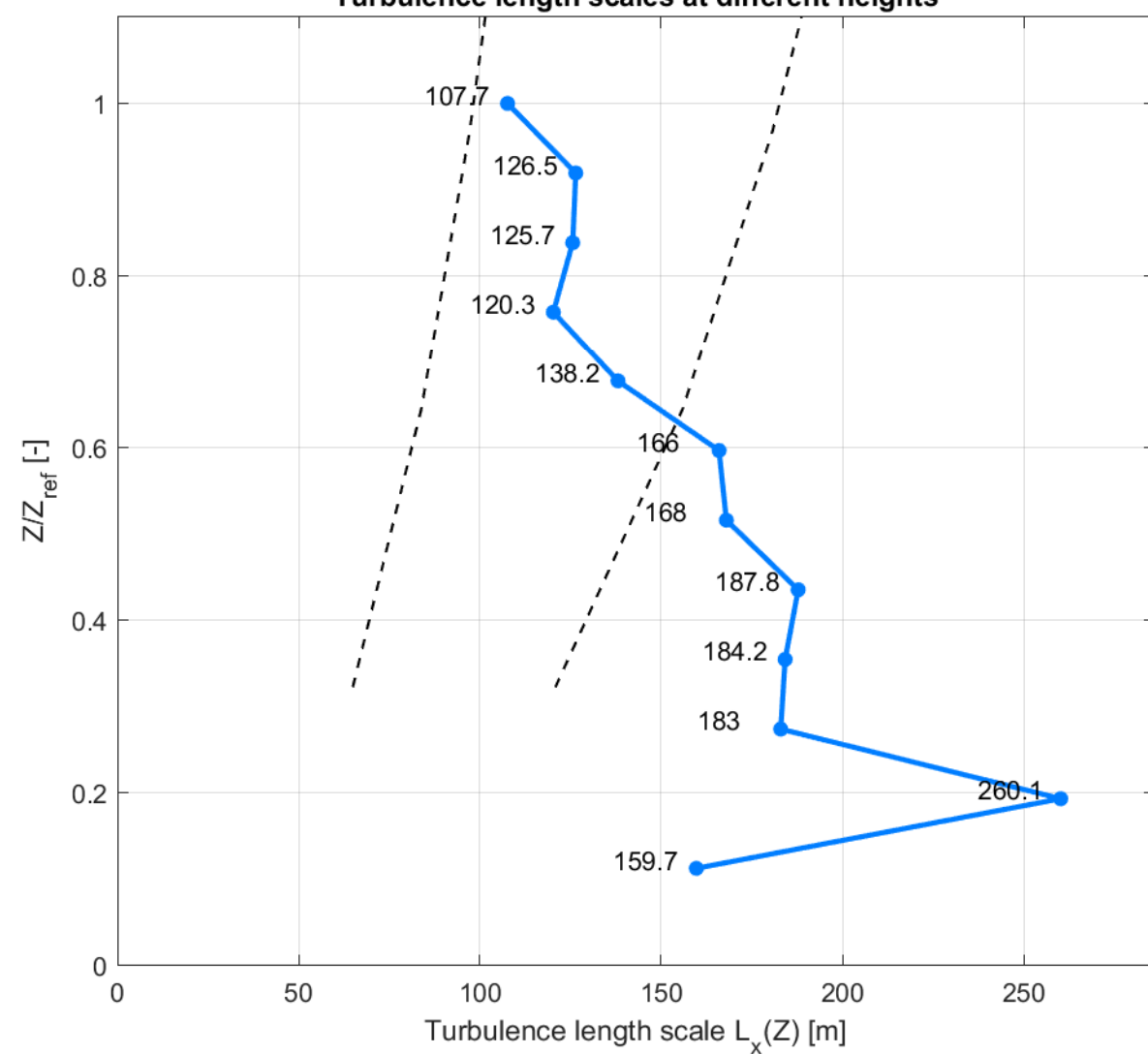
Turbulence intensity profile



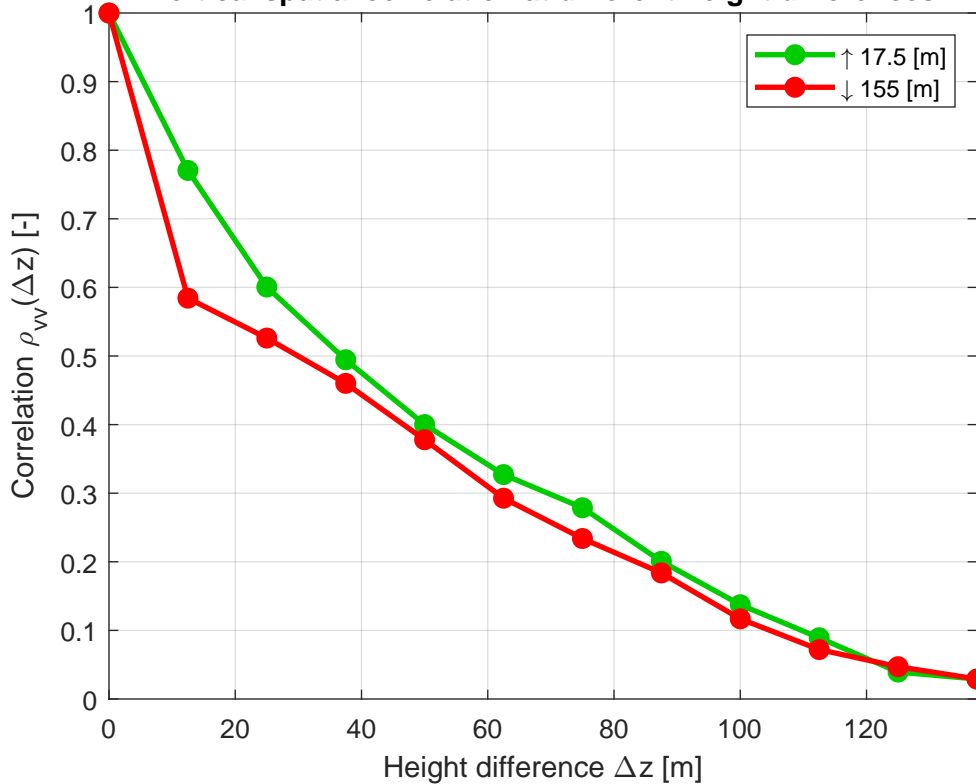
Time correlation at different heights



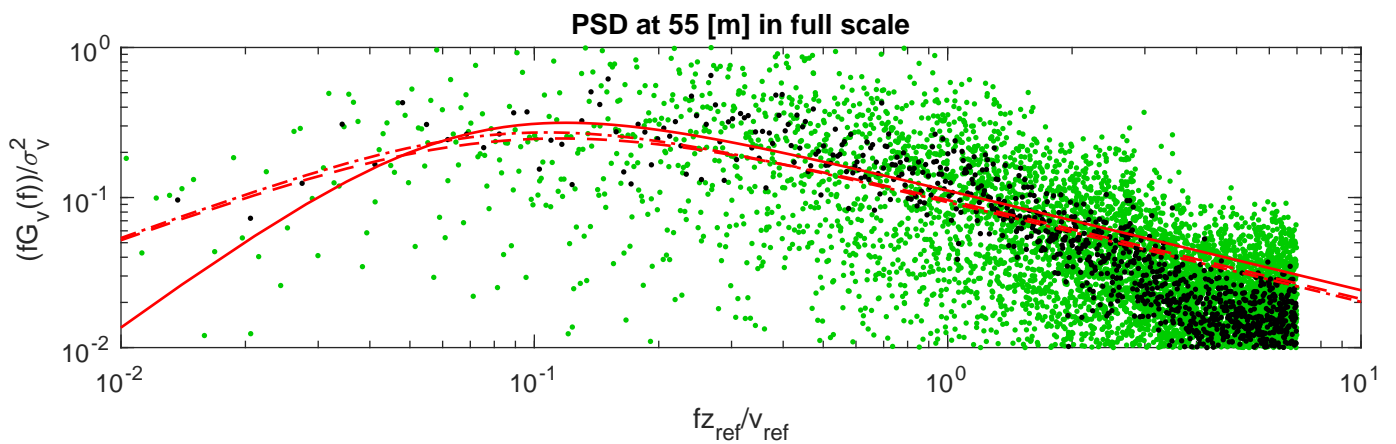
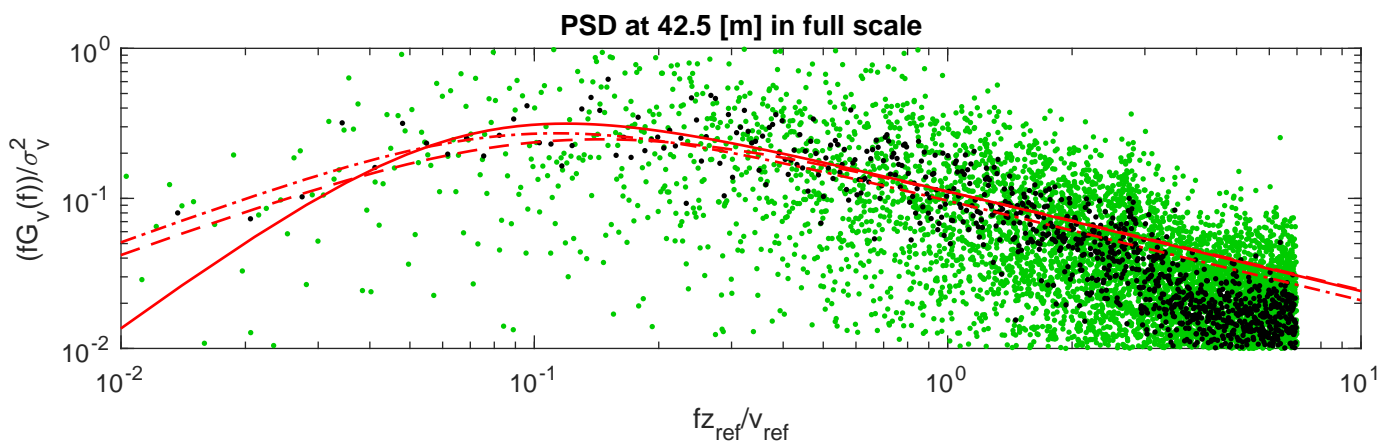
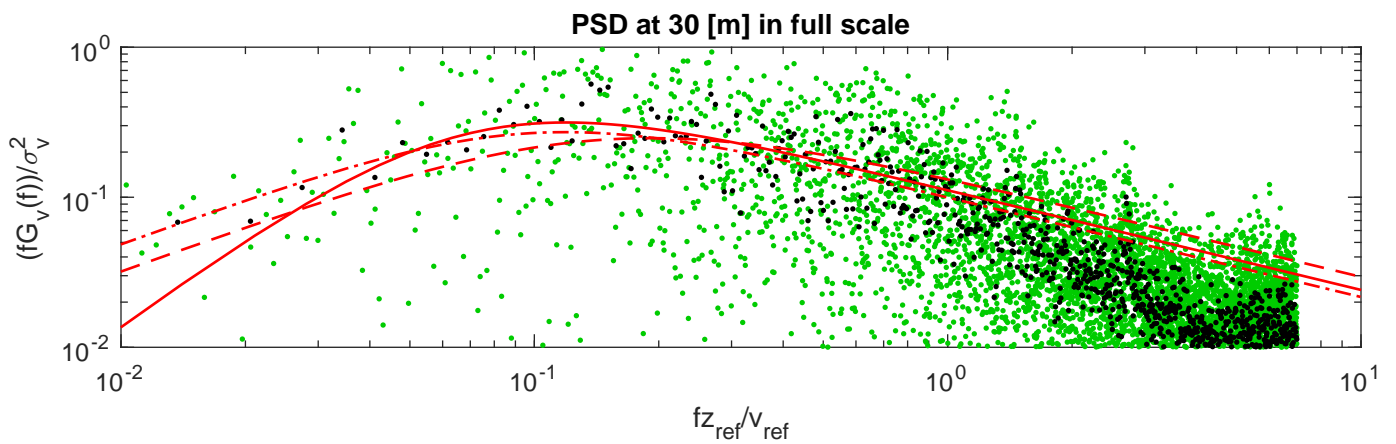
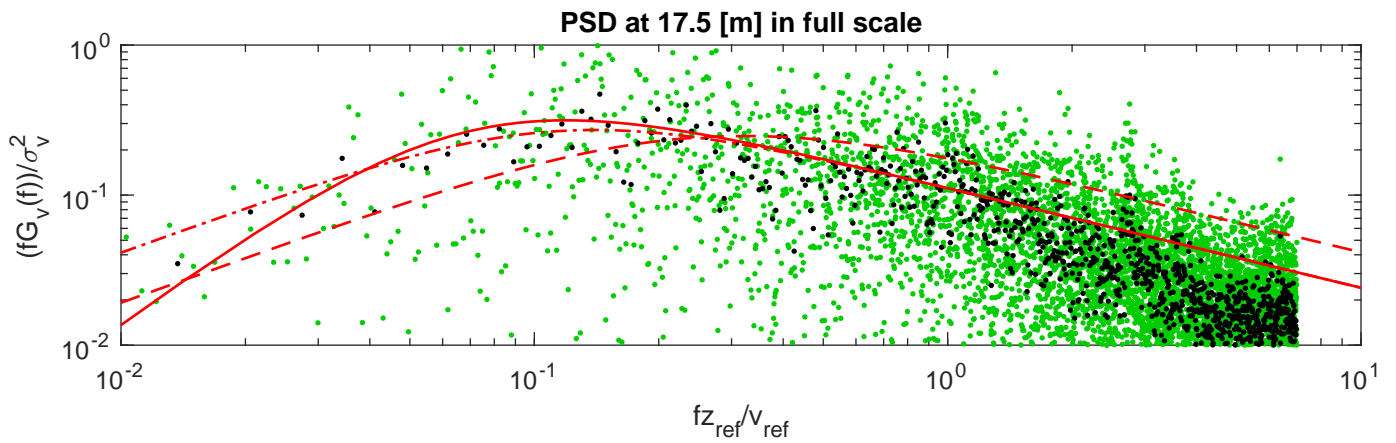
Turbulence length scales at different heights



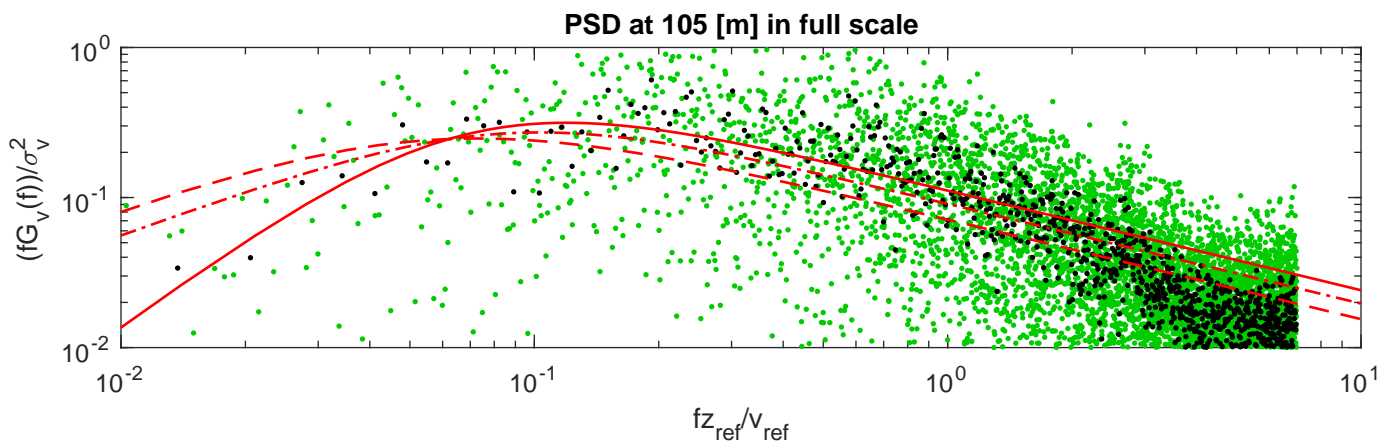
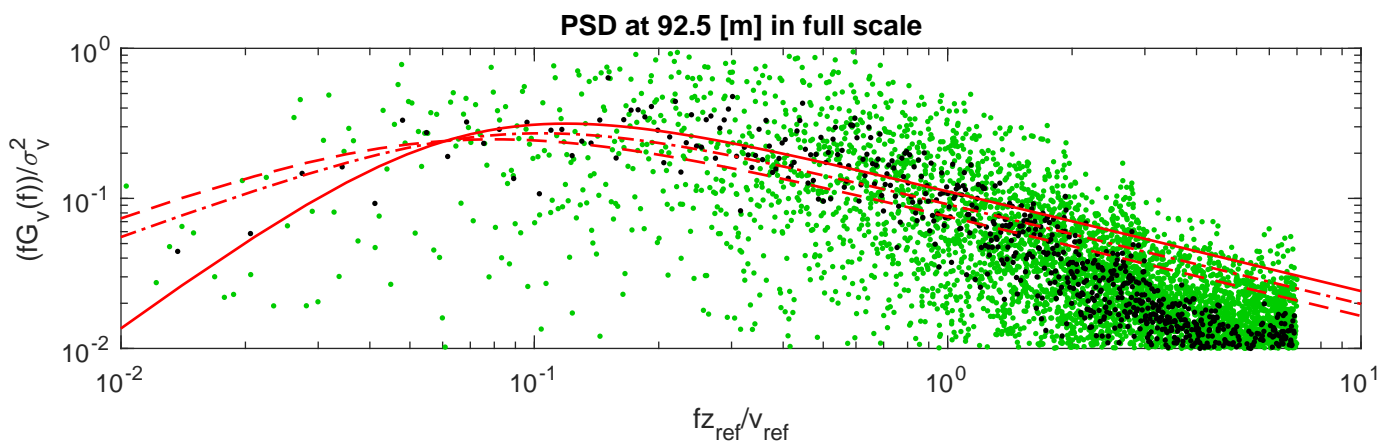
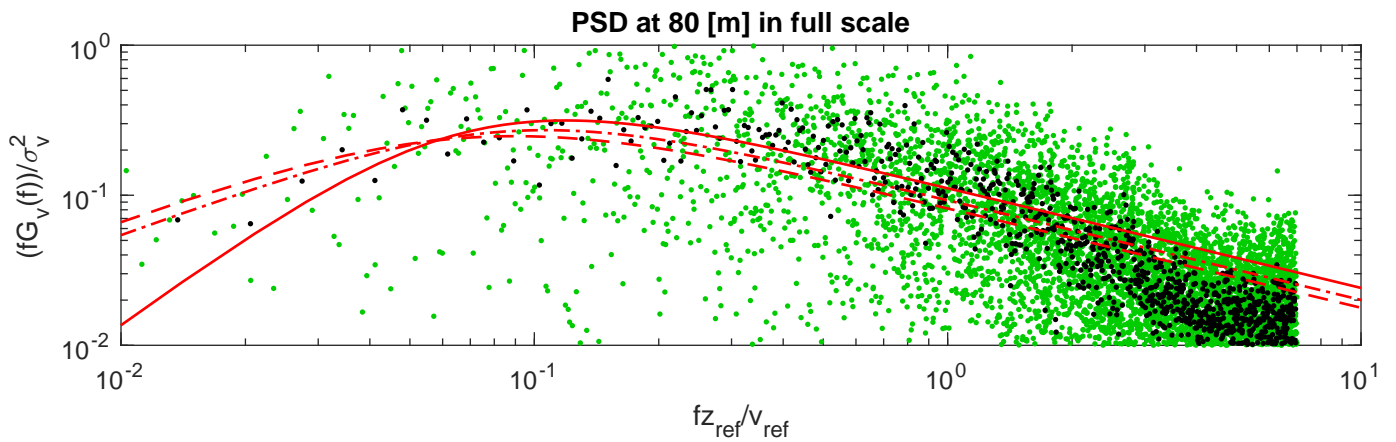
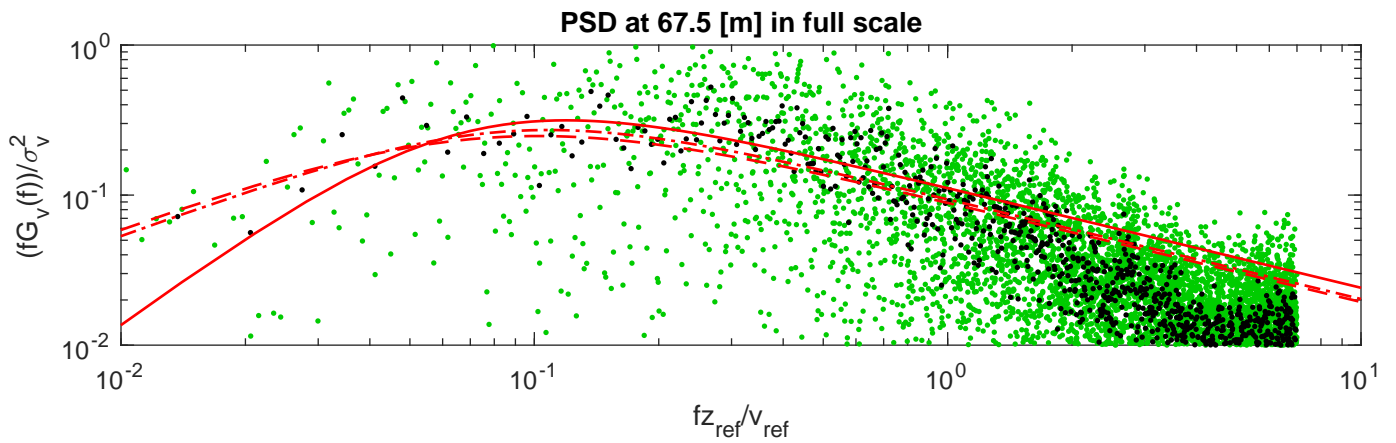
Vertical spatial correlation at different height differences



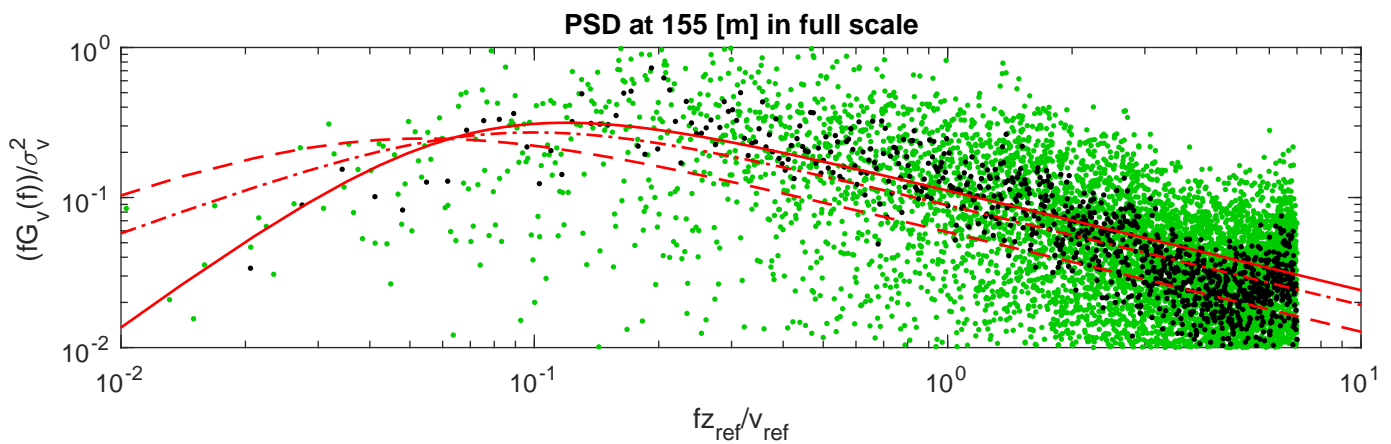
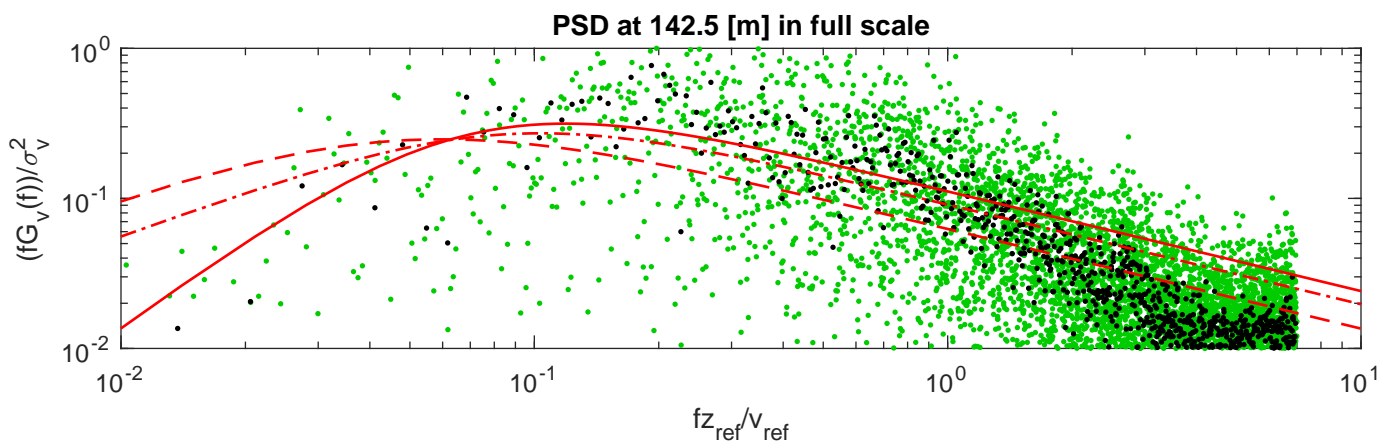
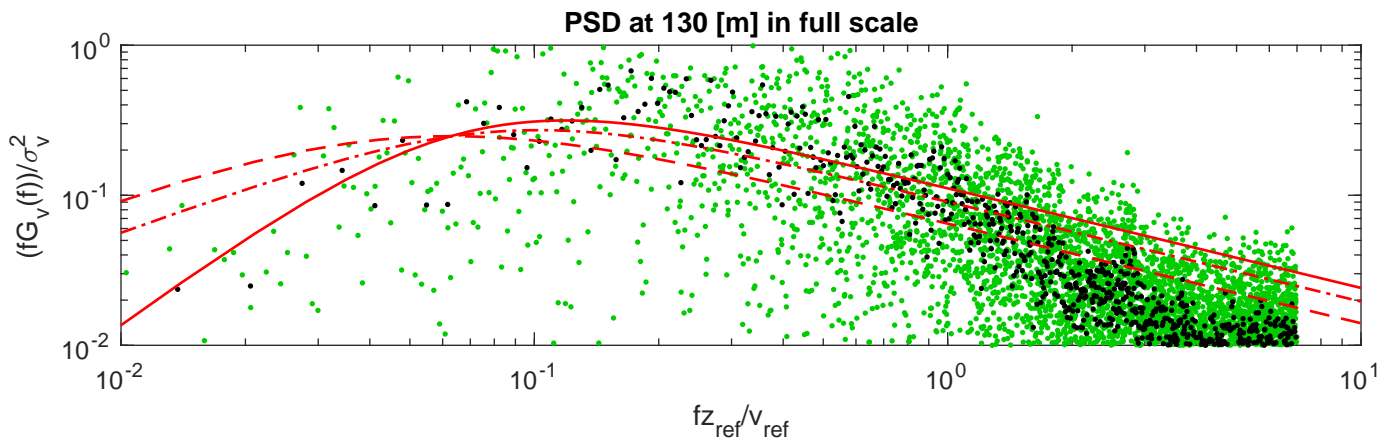
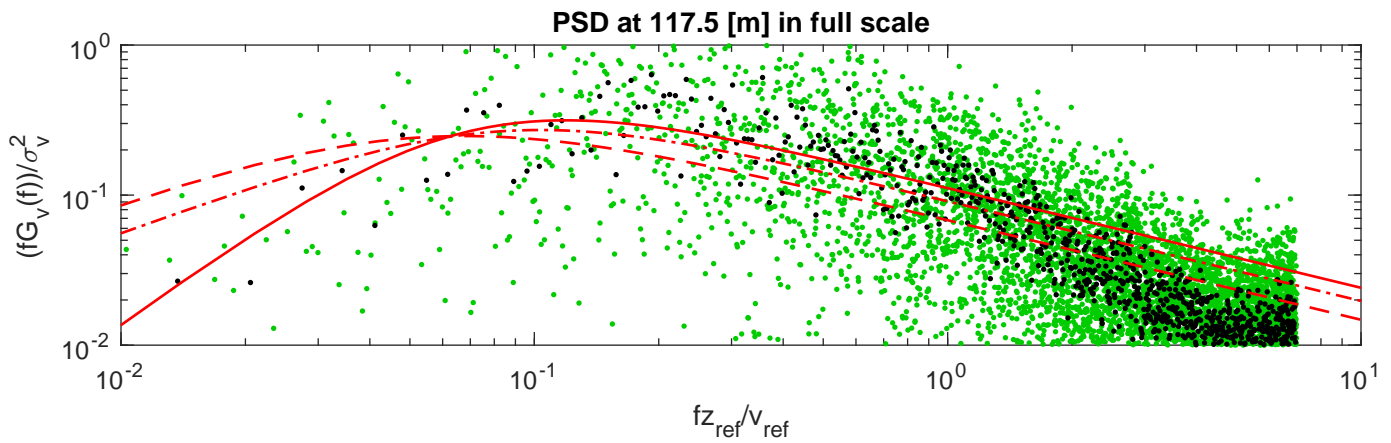
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



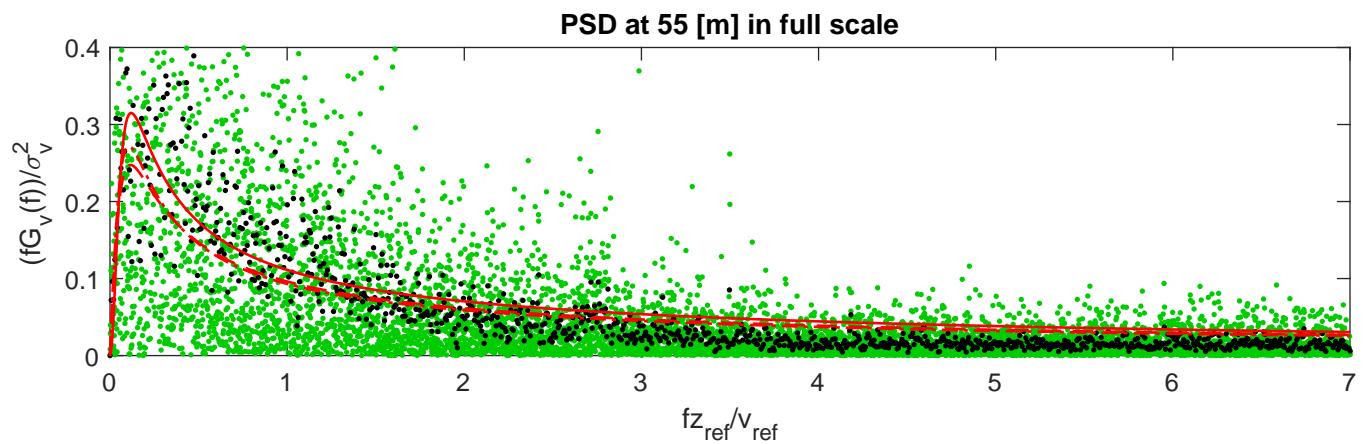
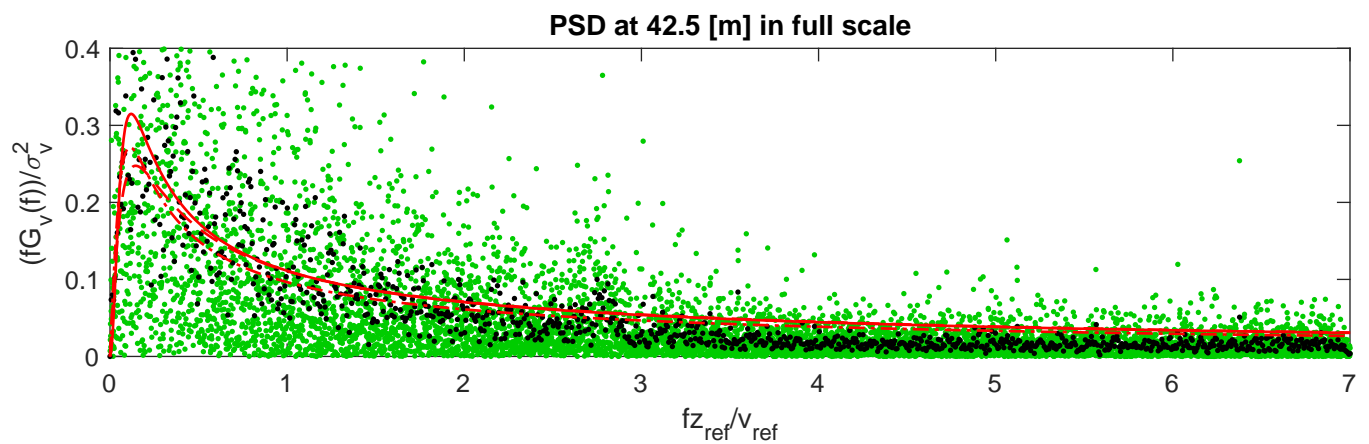
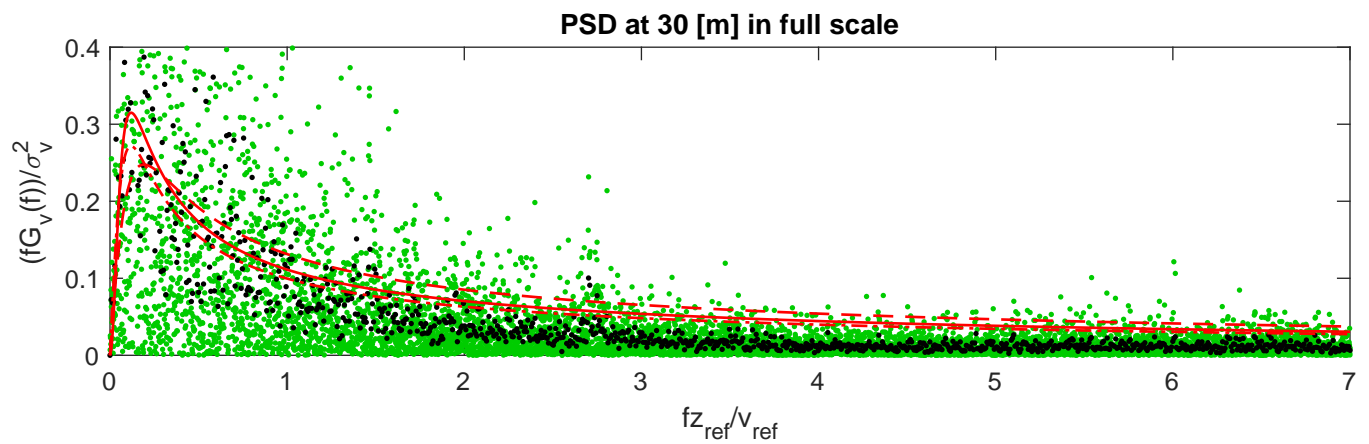
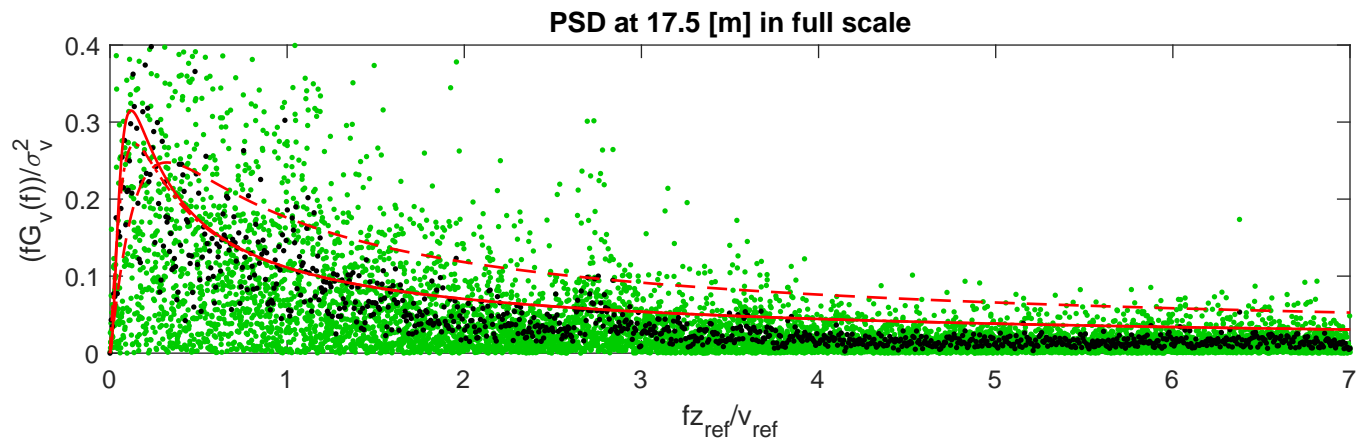
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



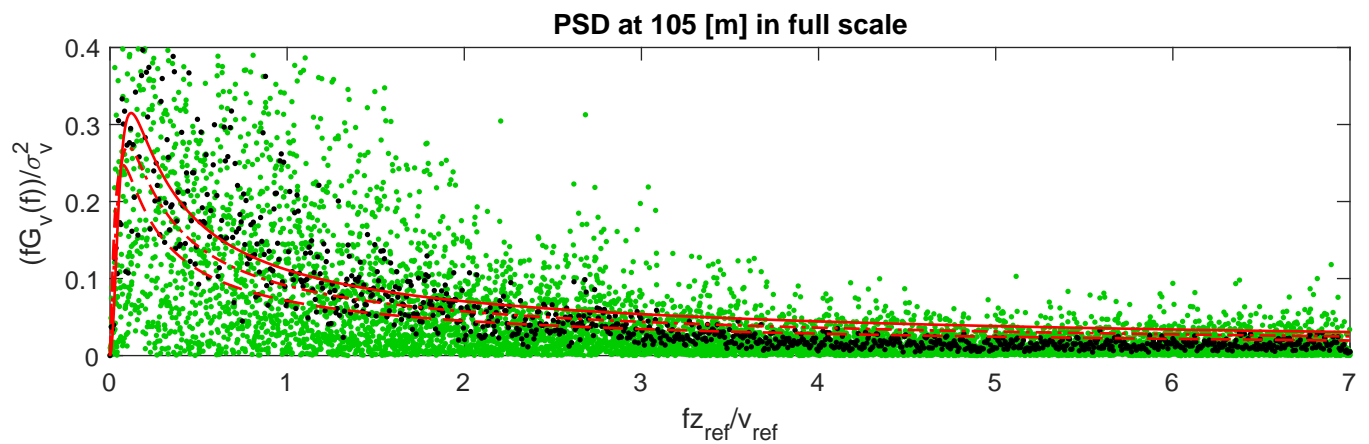
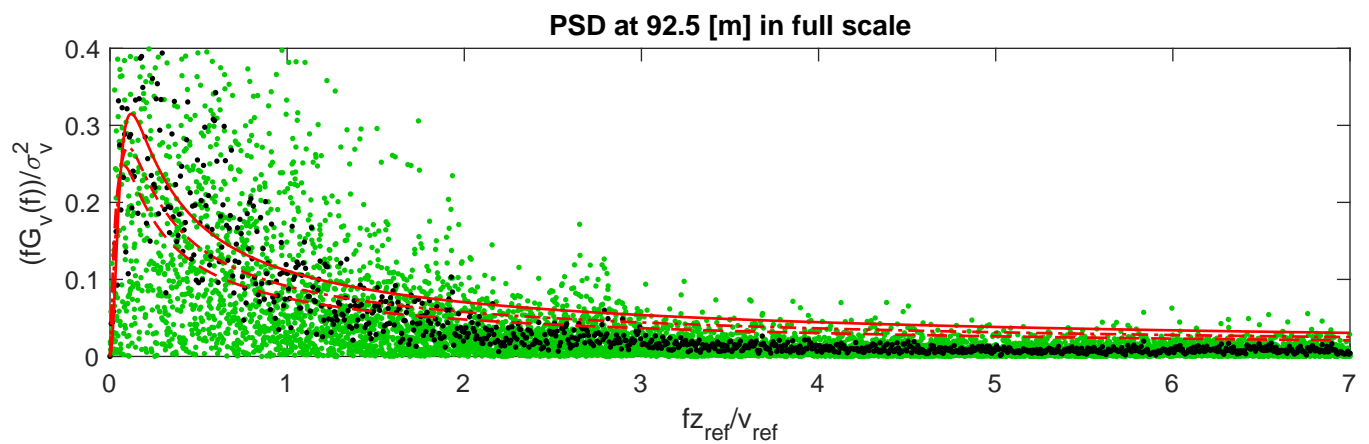
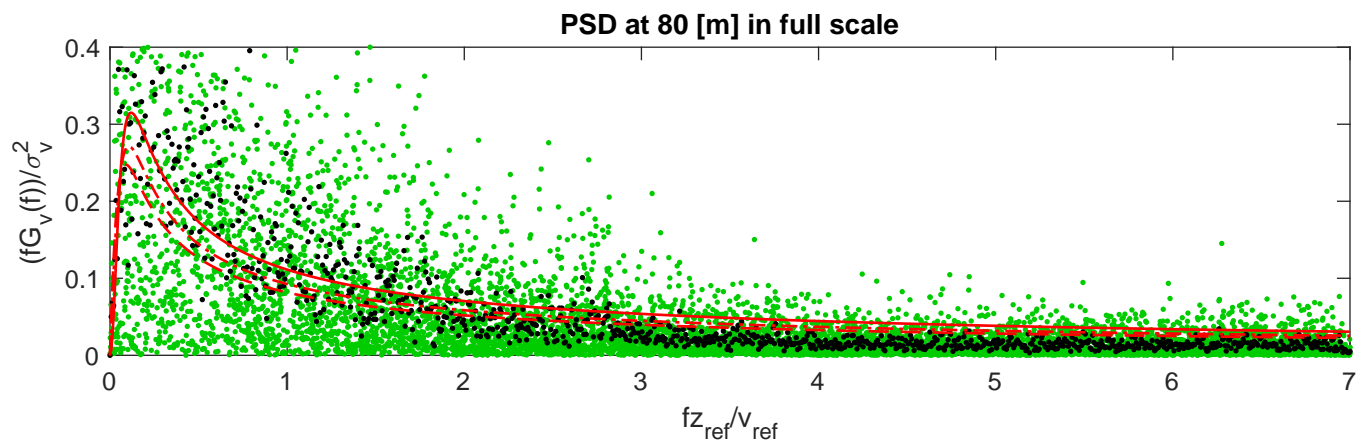
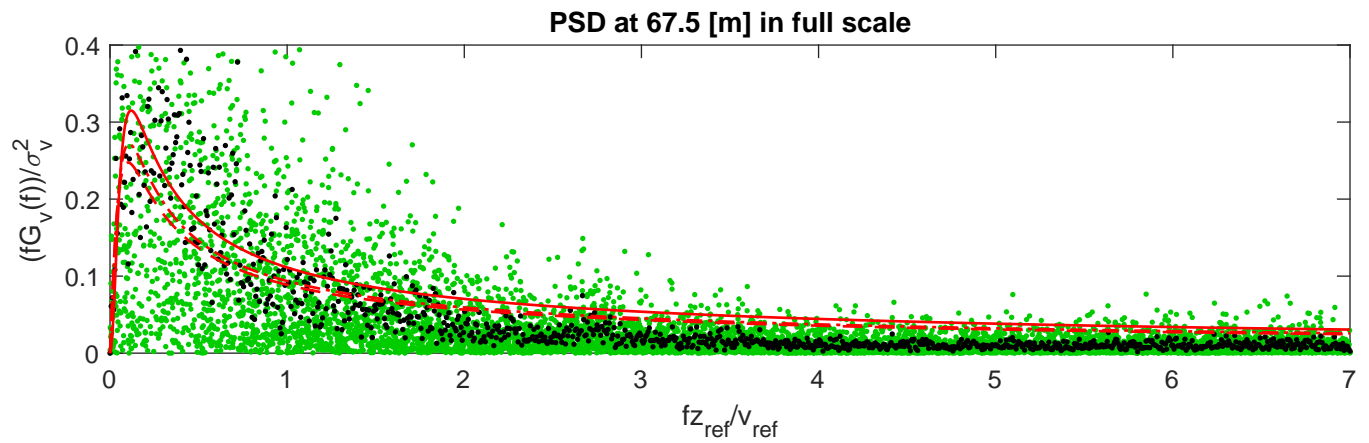
• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

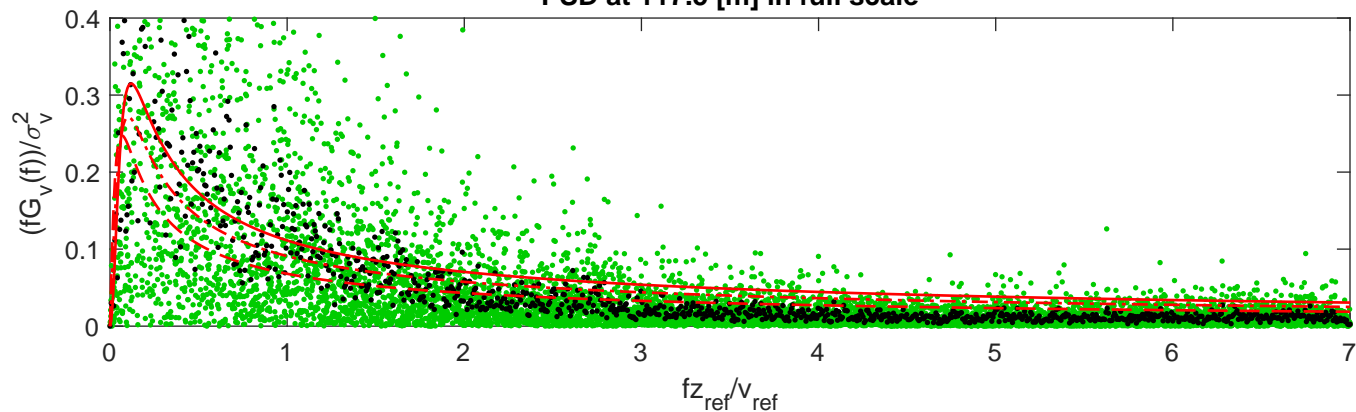


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

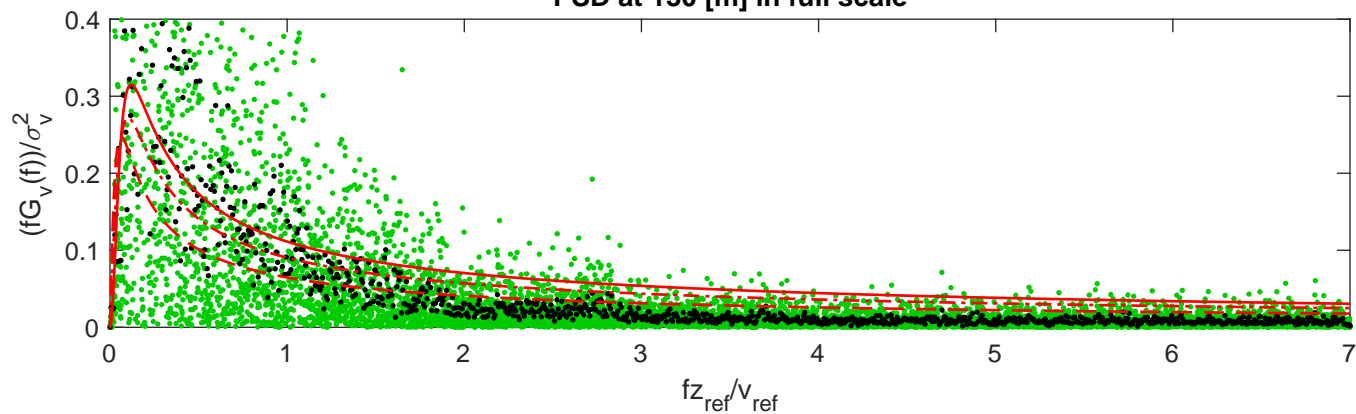


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

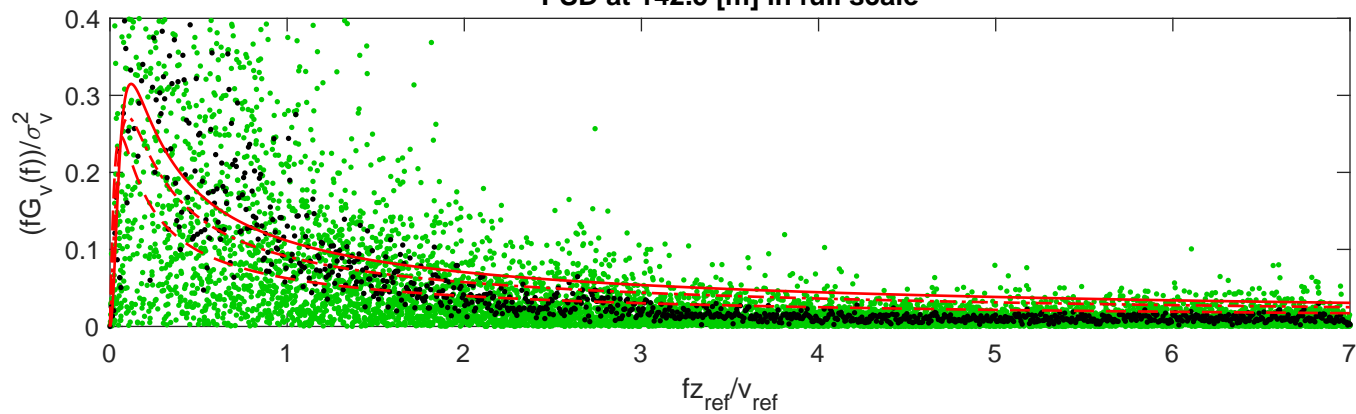
PSD at 117.5 [m] in full scale



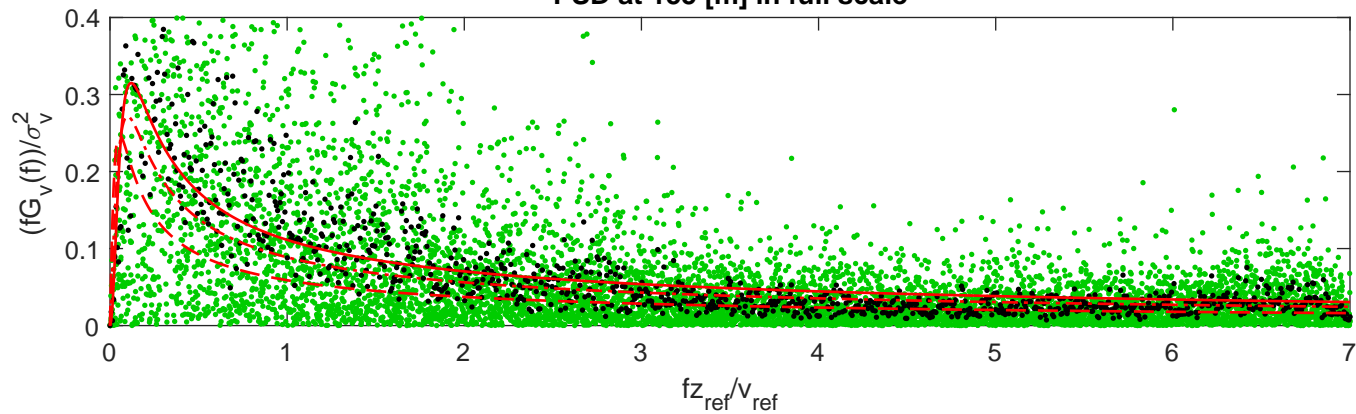
PSD at 130 [m] in full scale

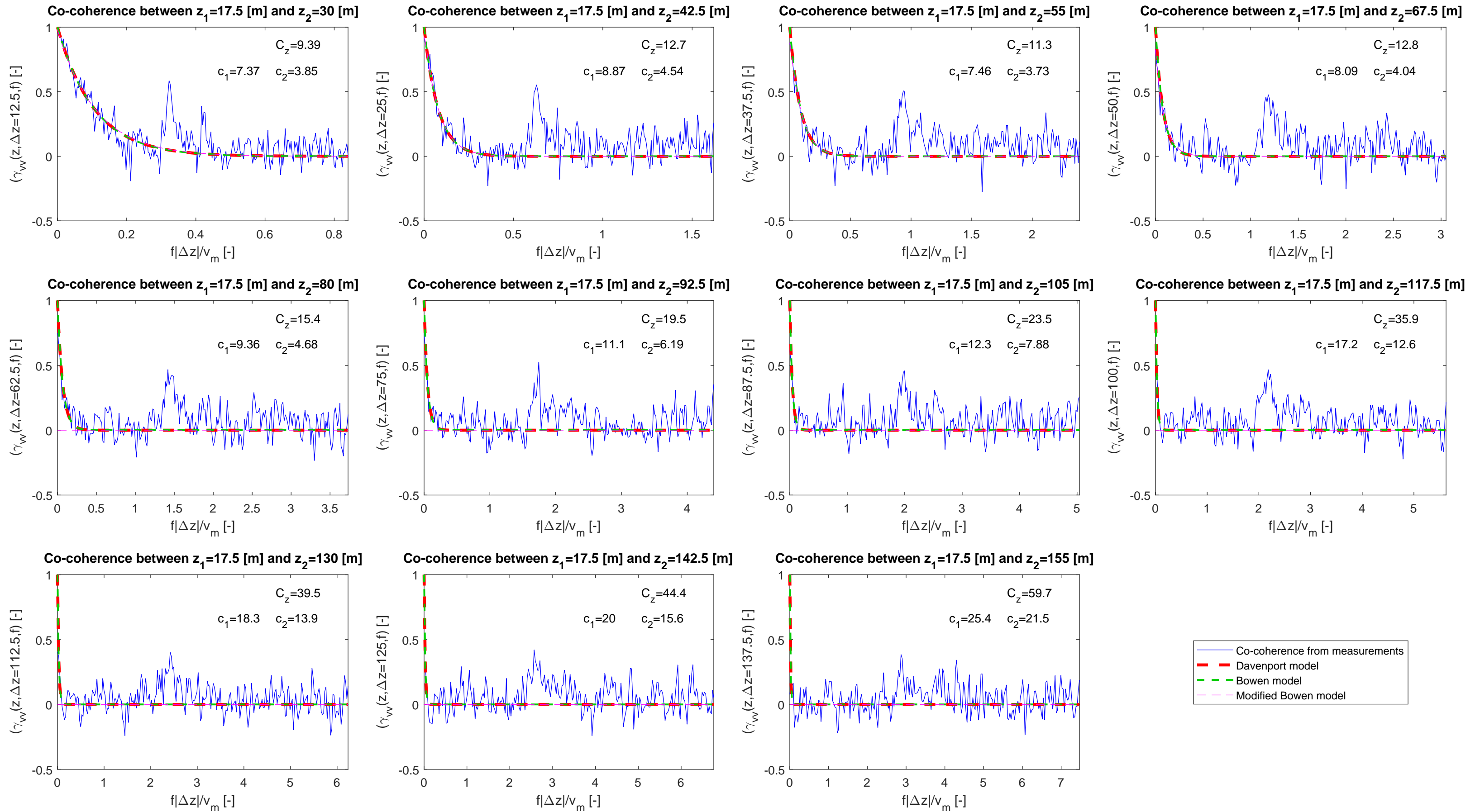


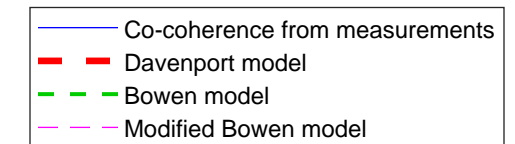
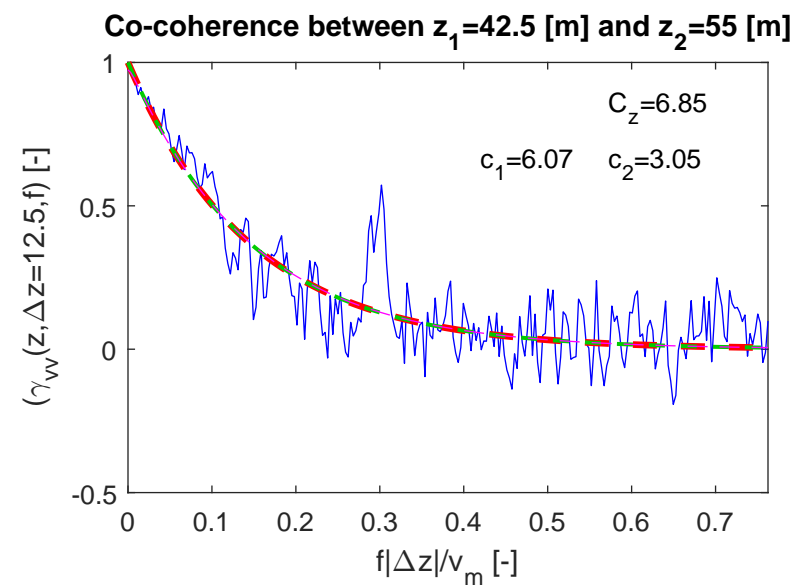
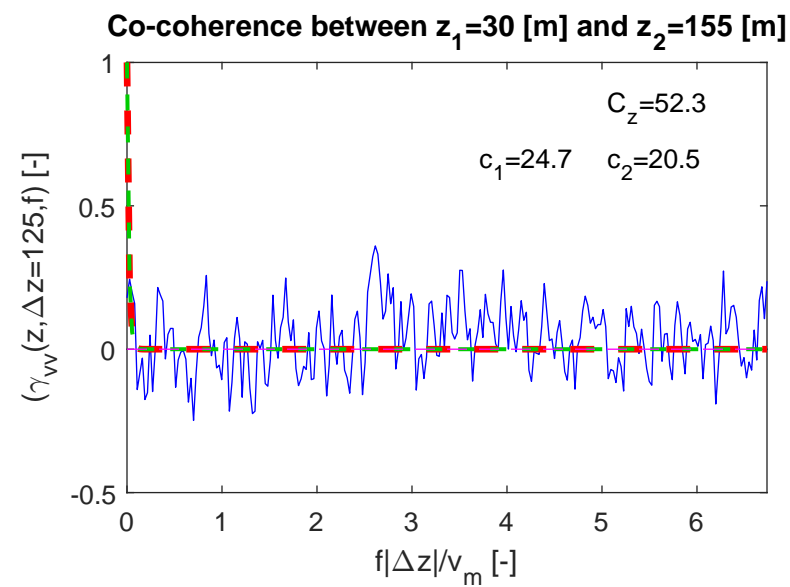
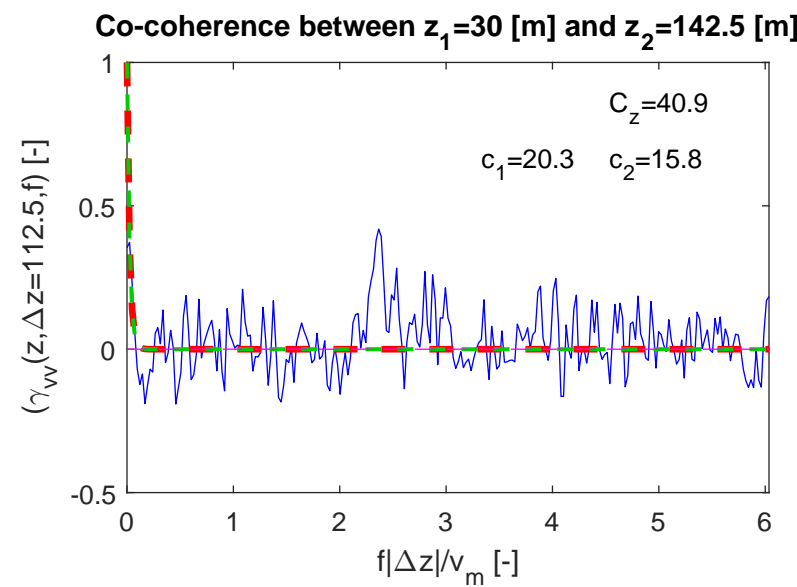
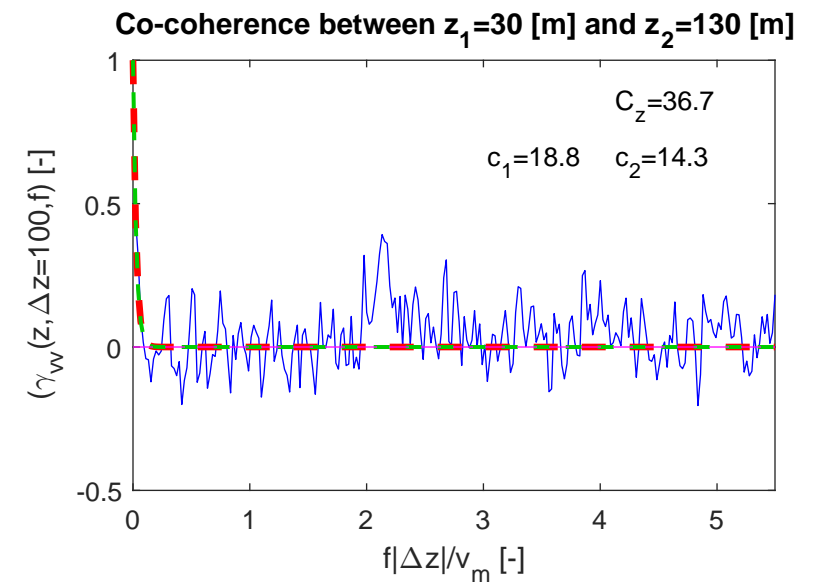
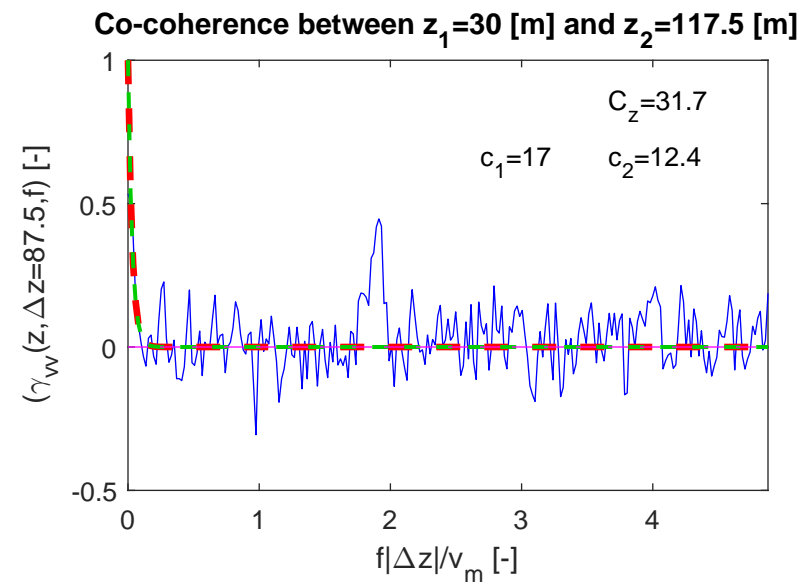
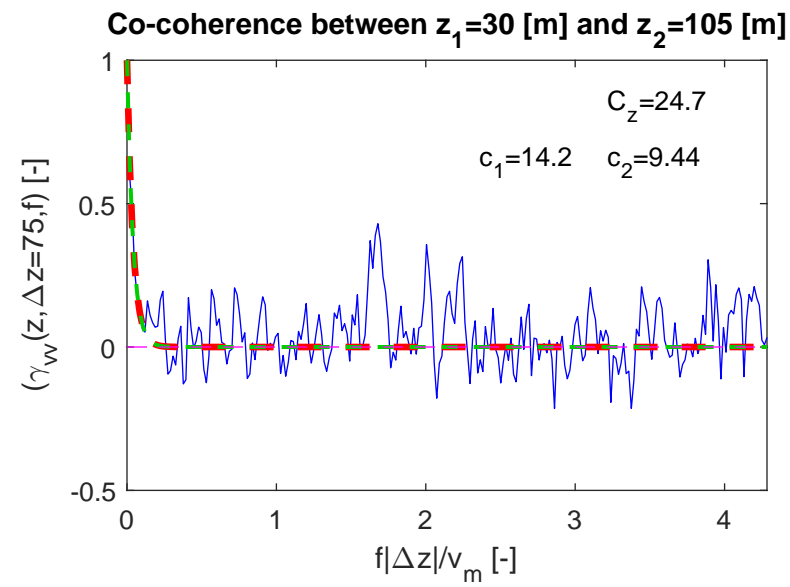
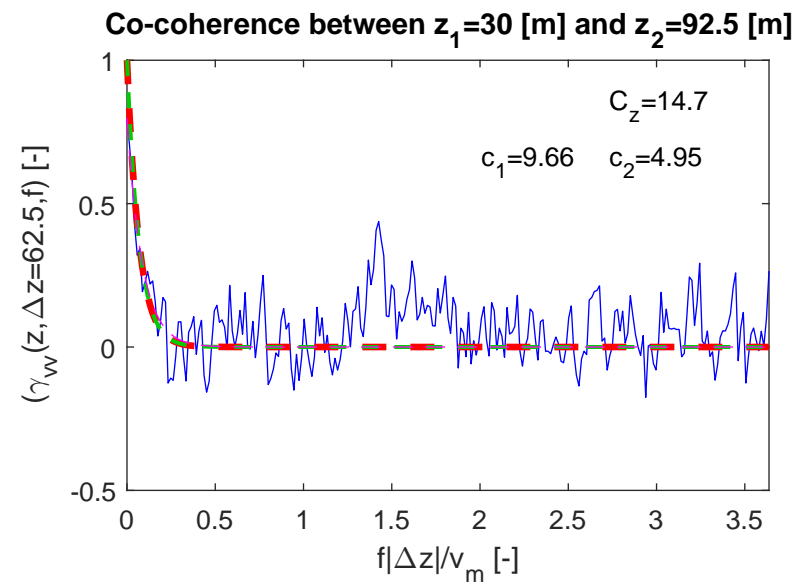
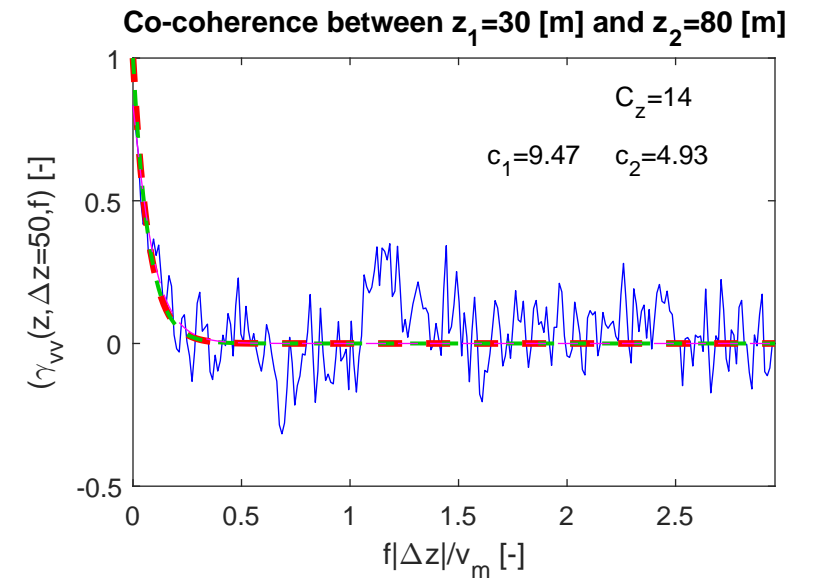
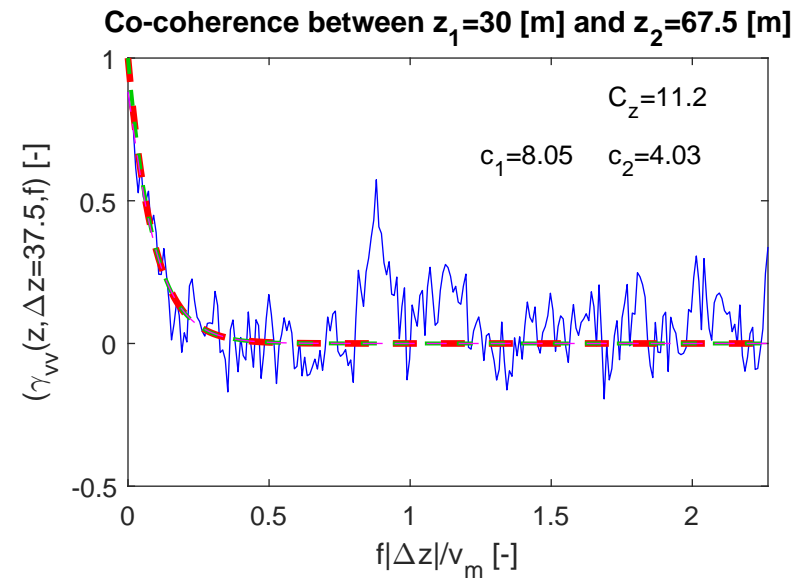
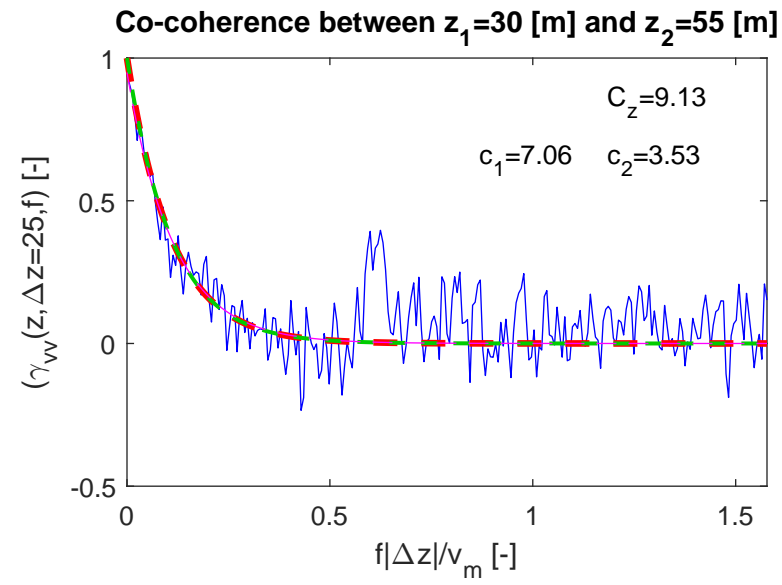
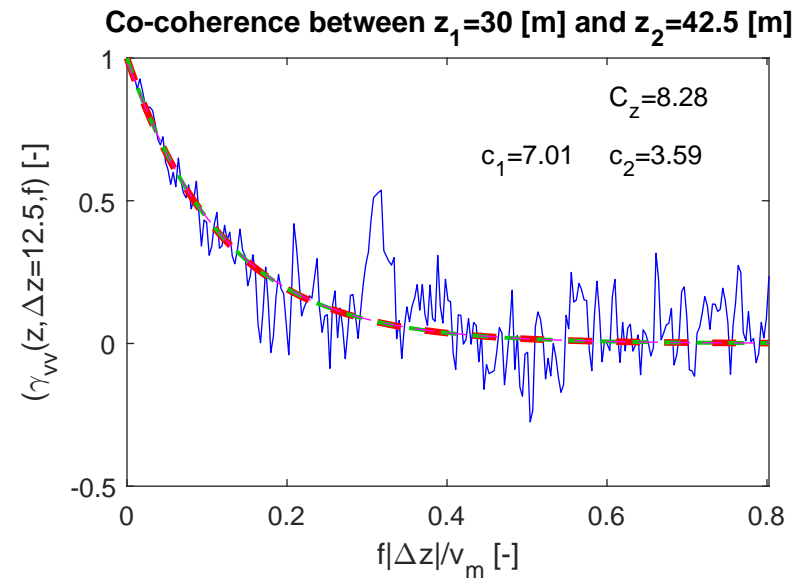
PSD at 142.5 [m] in full scale

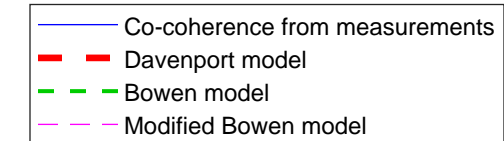
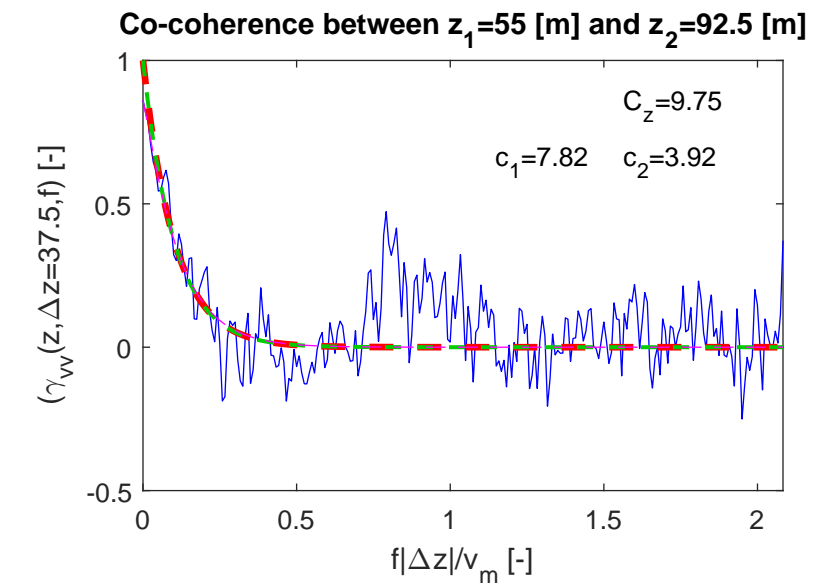
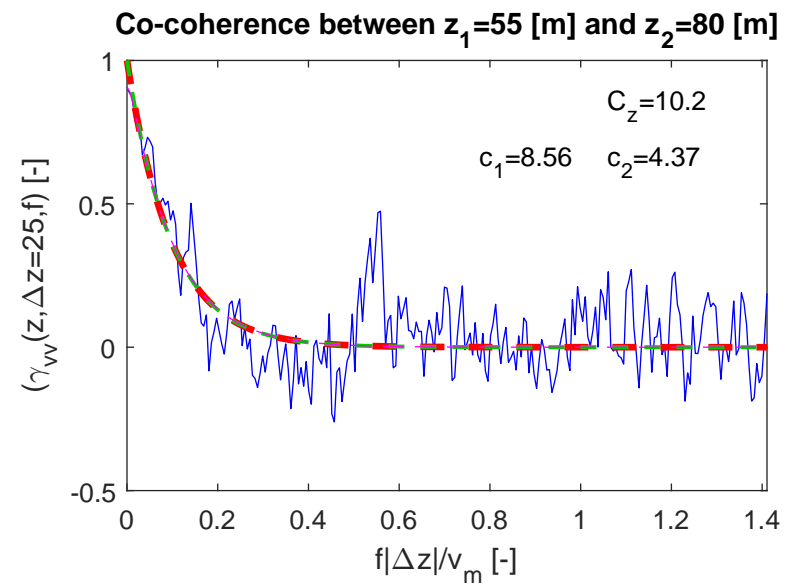
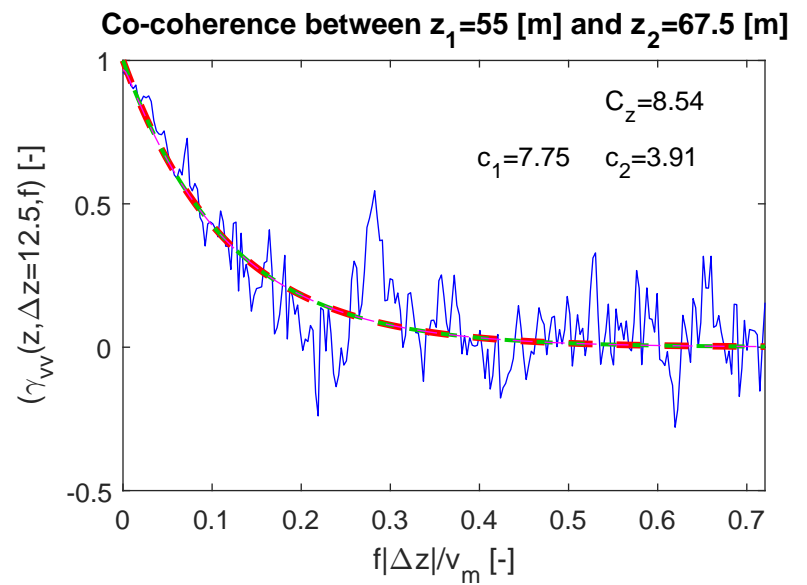
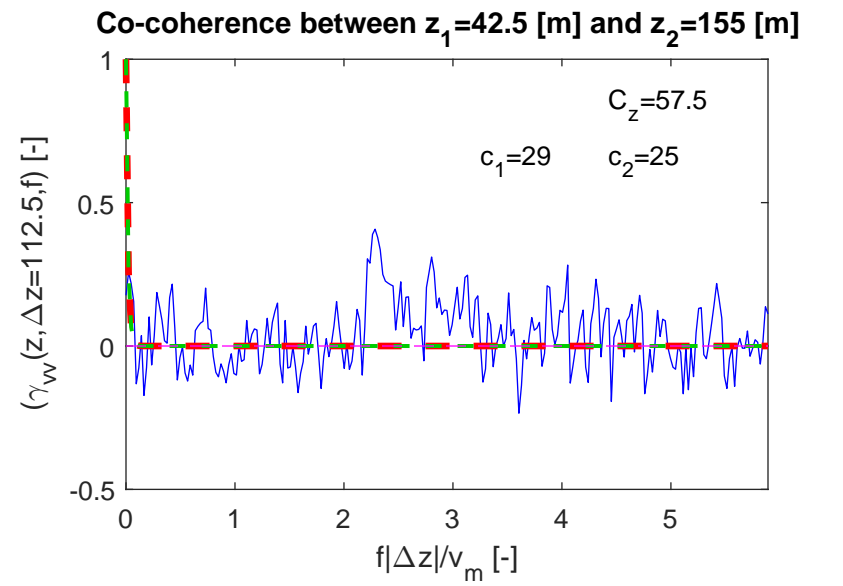
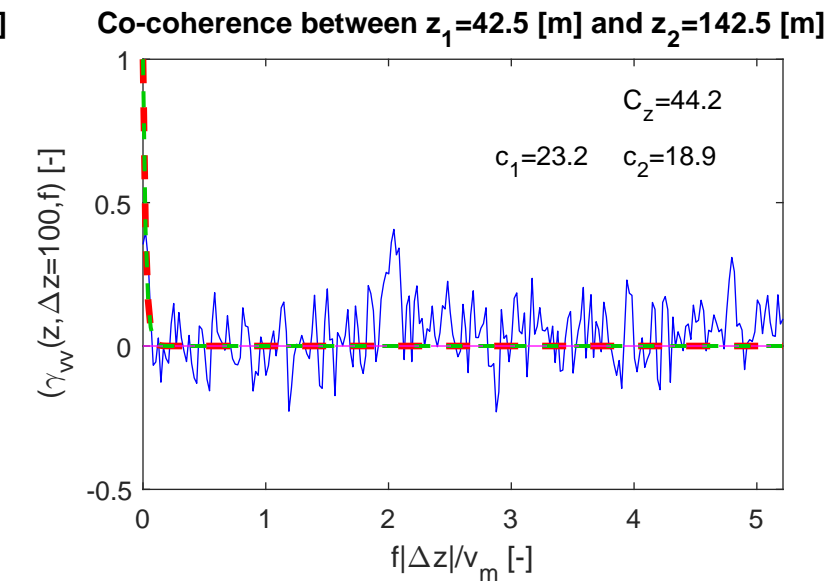
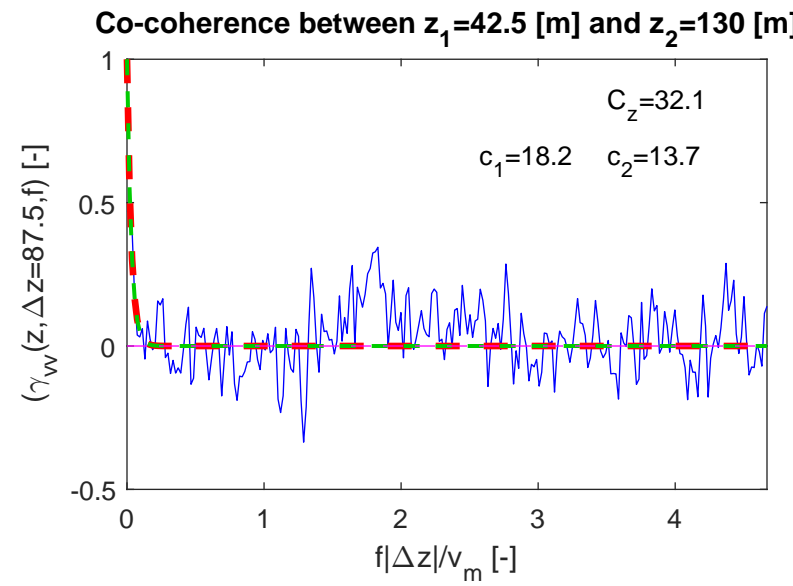
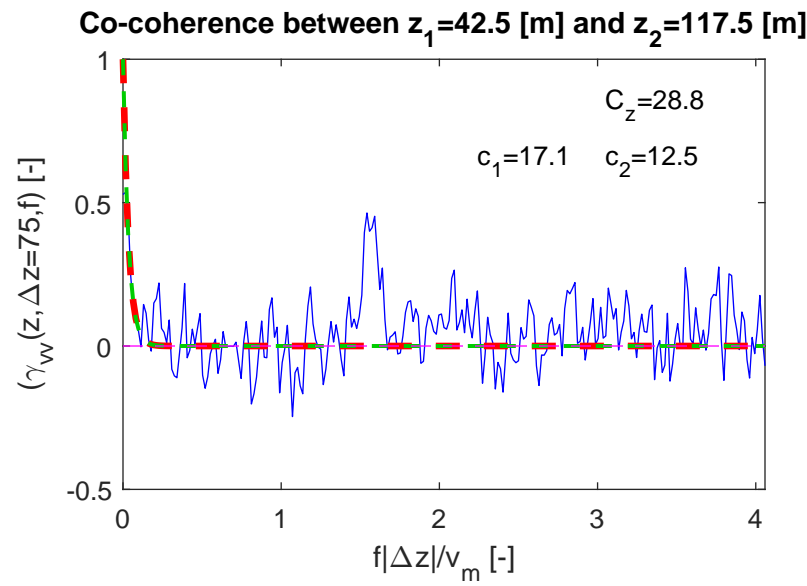
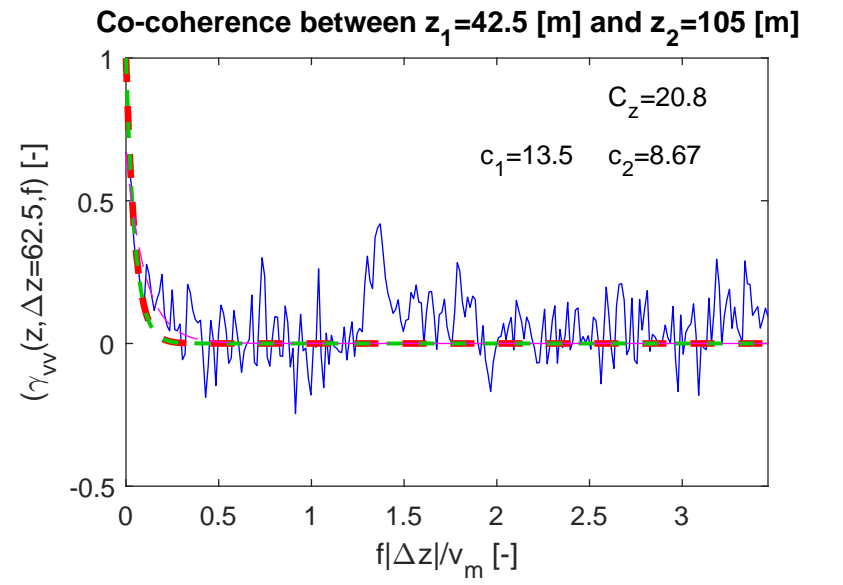
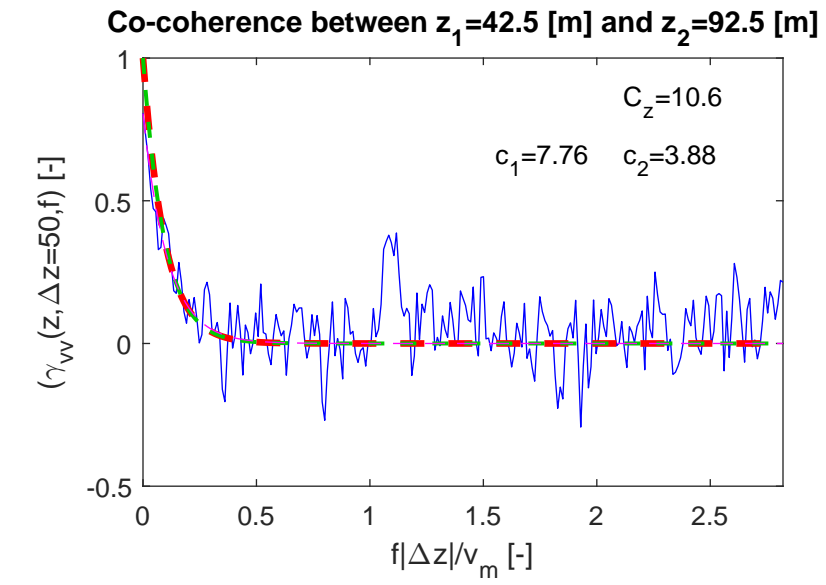
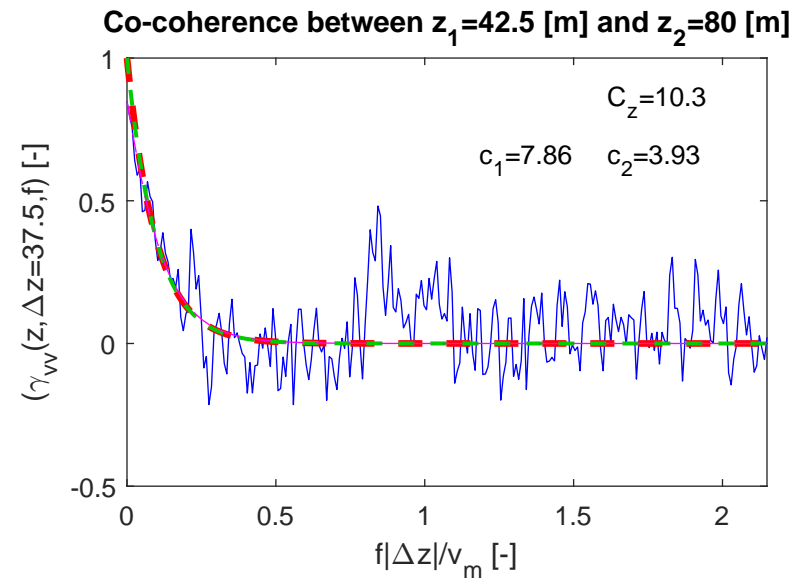
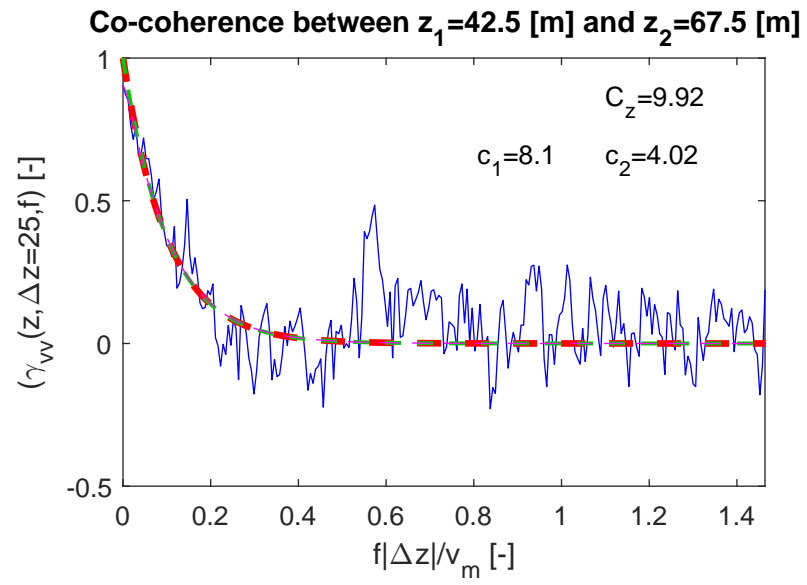


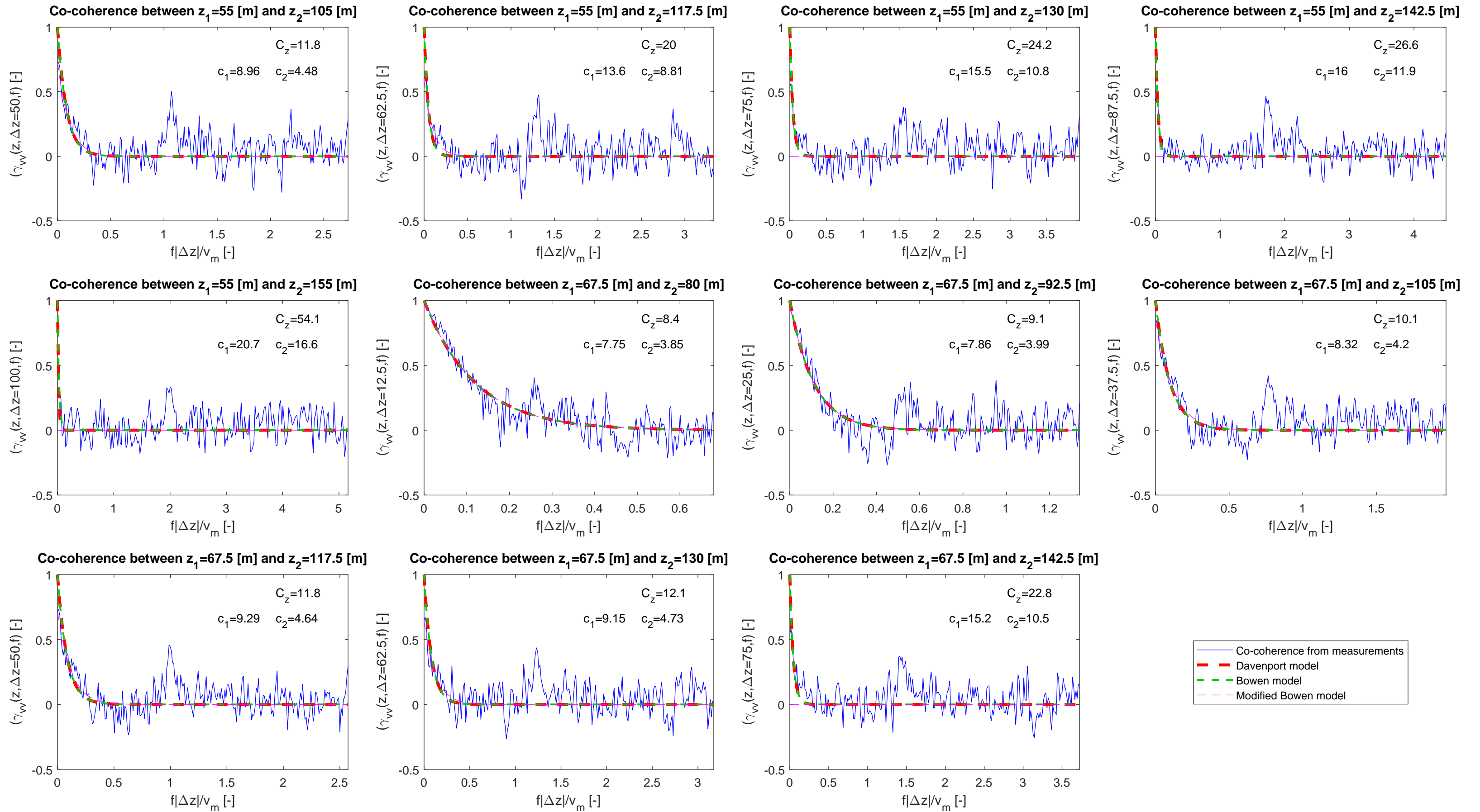
PSD at 155 [m] in full scale

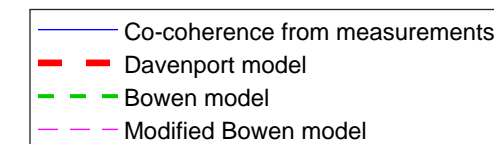
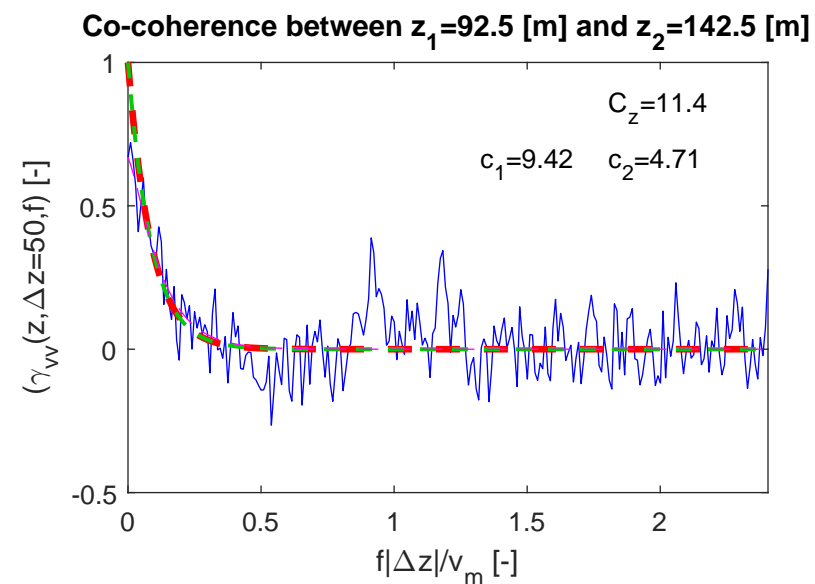
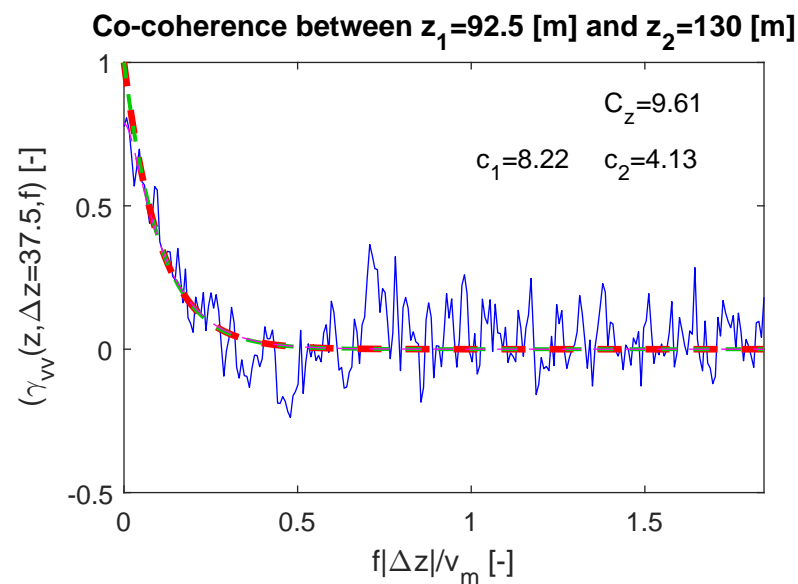
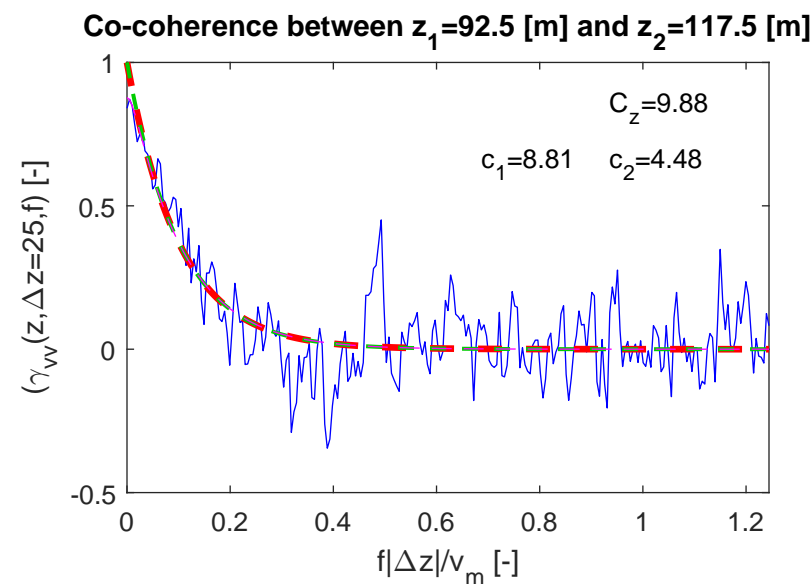
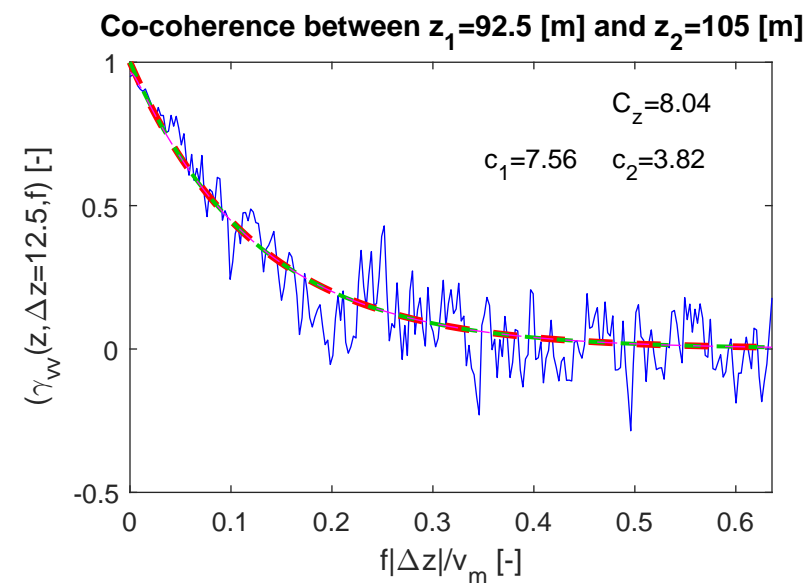
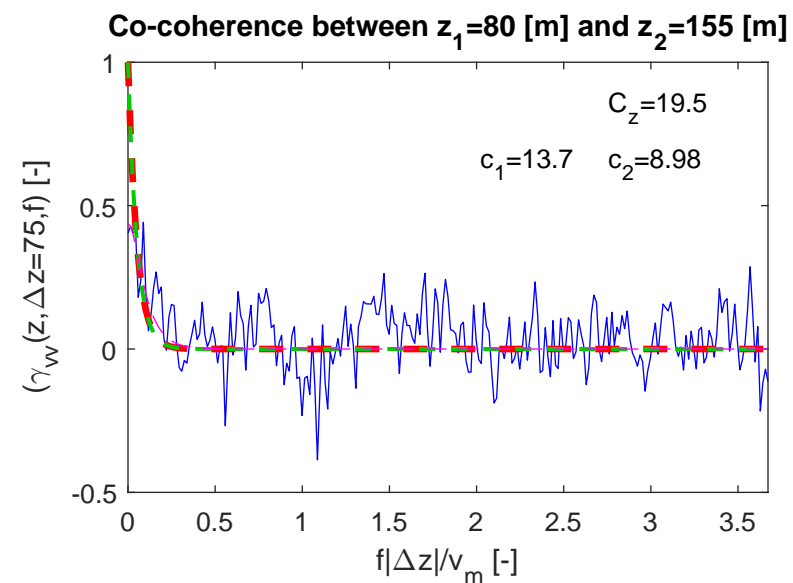
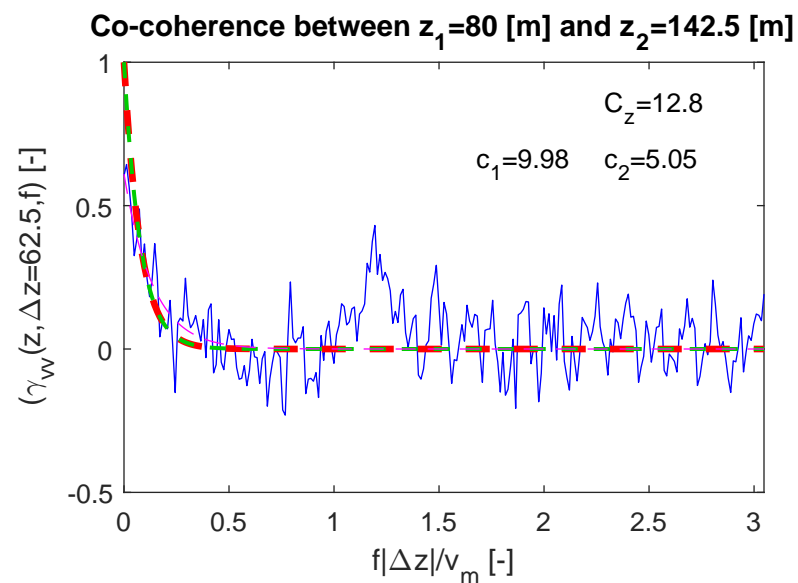
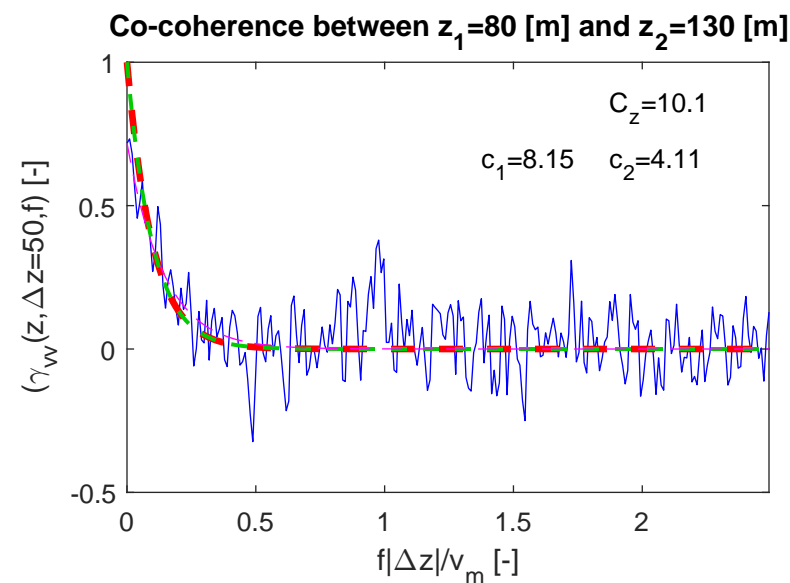
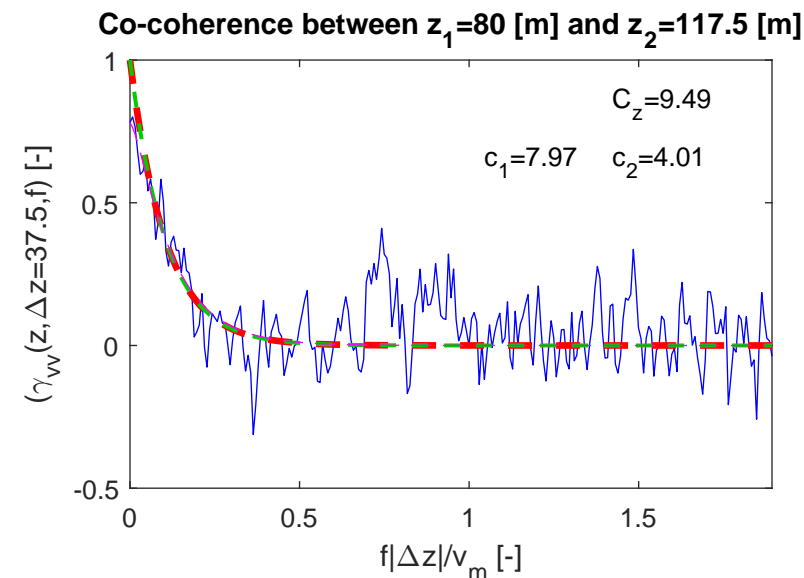
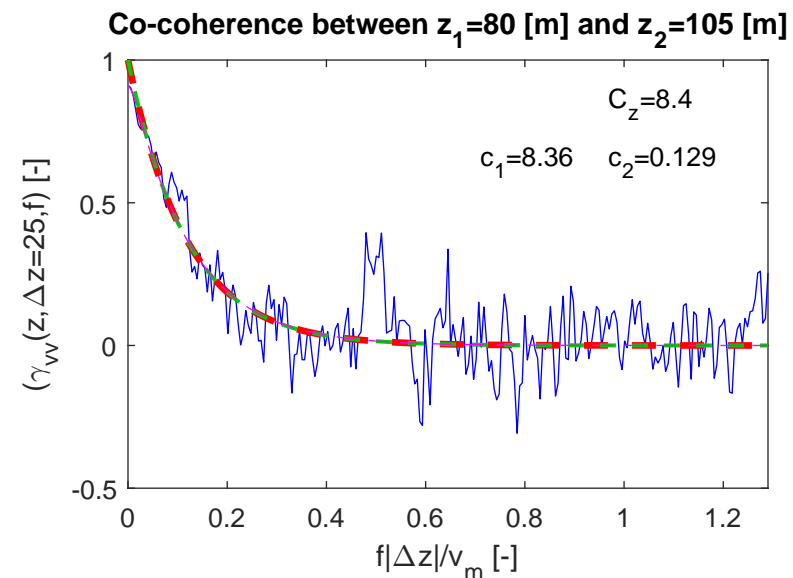
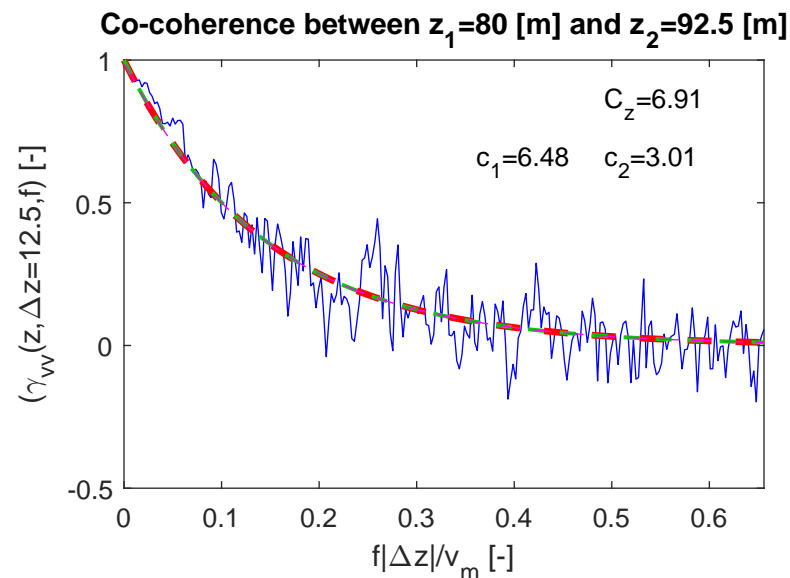
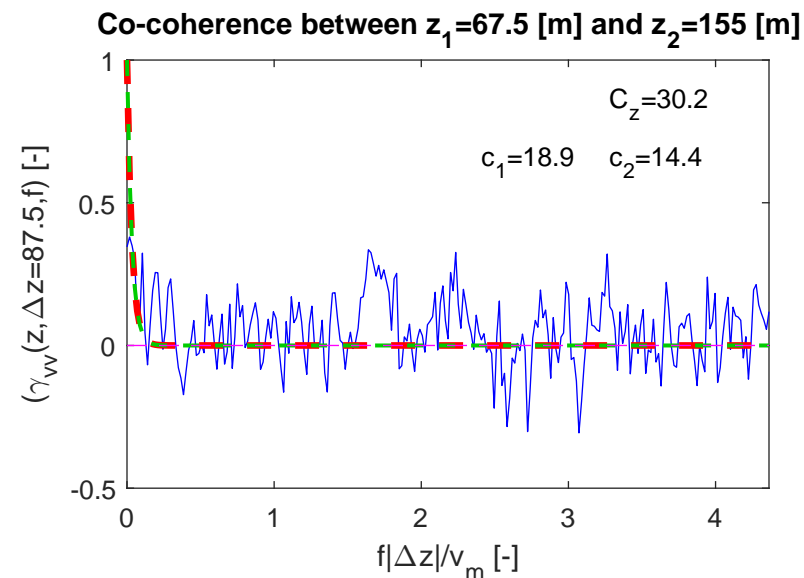


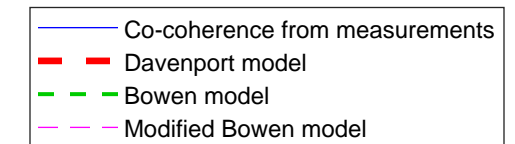
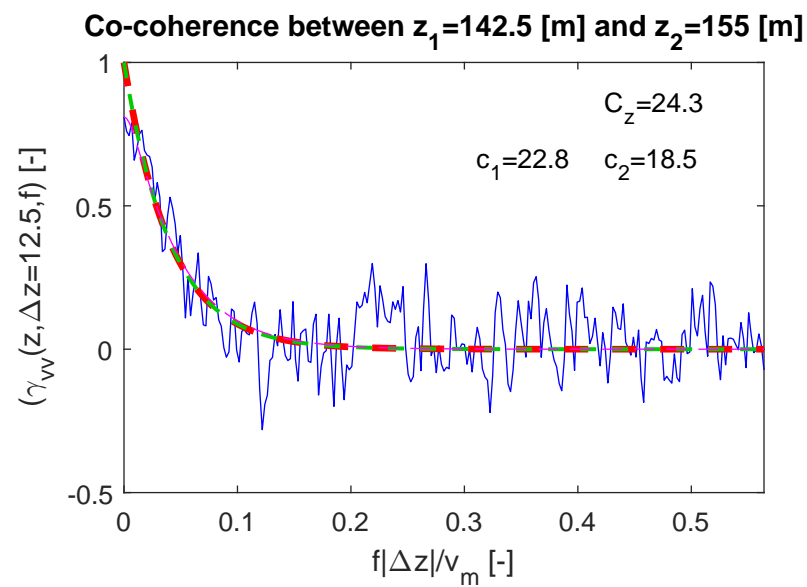
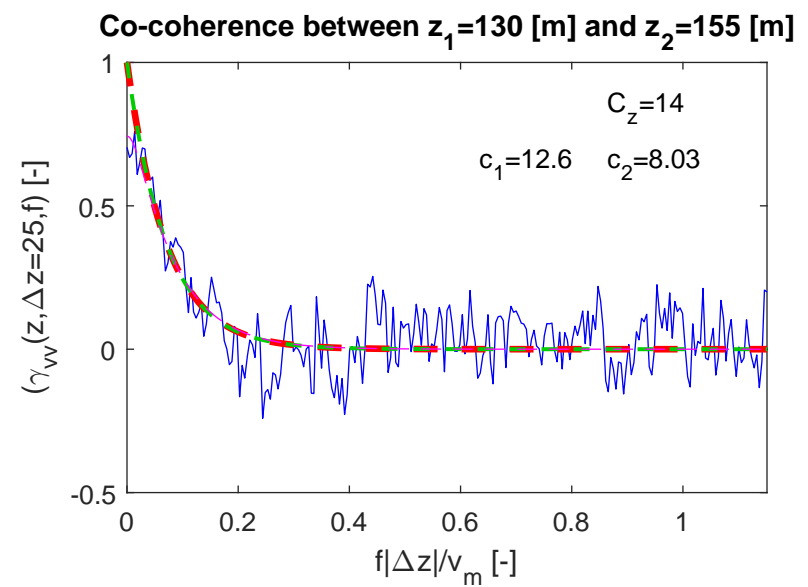
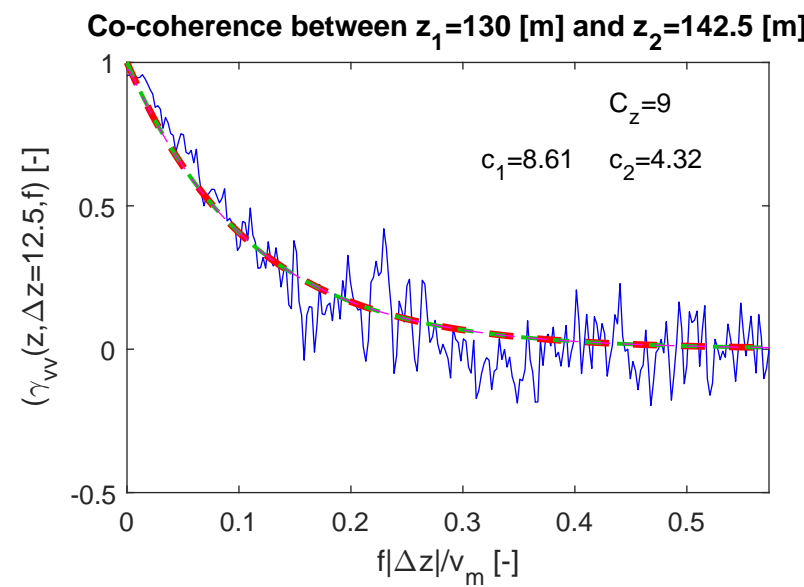
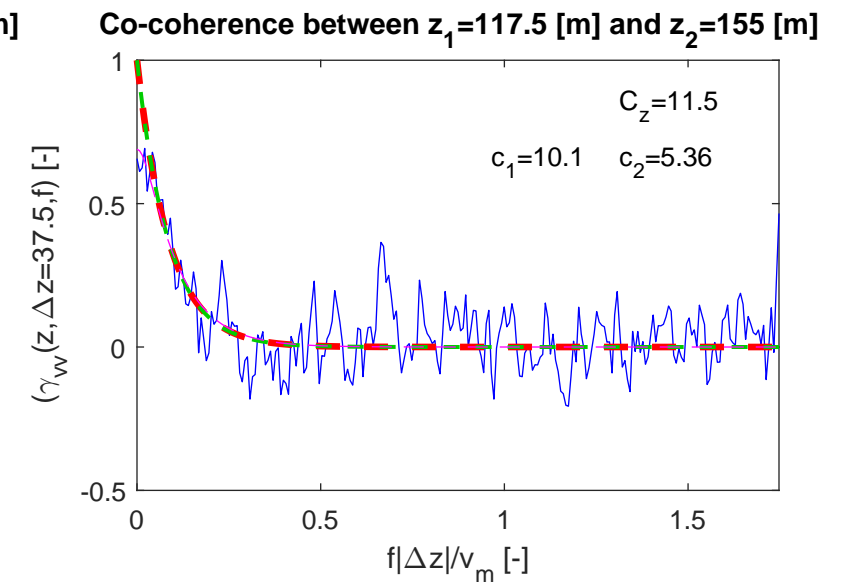
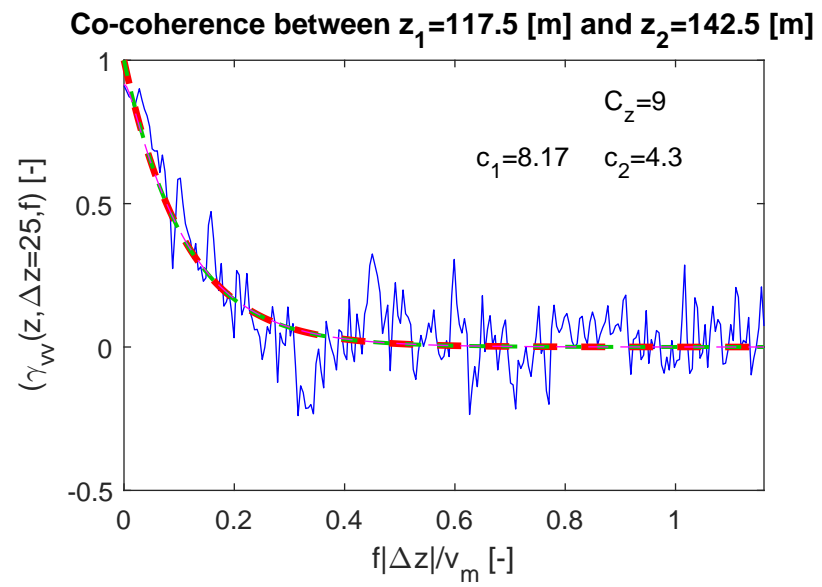
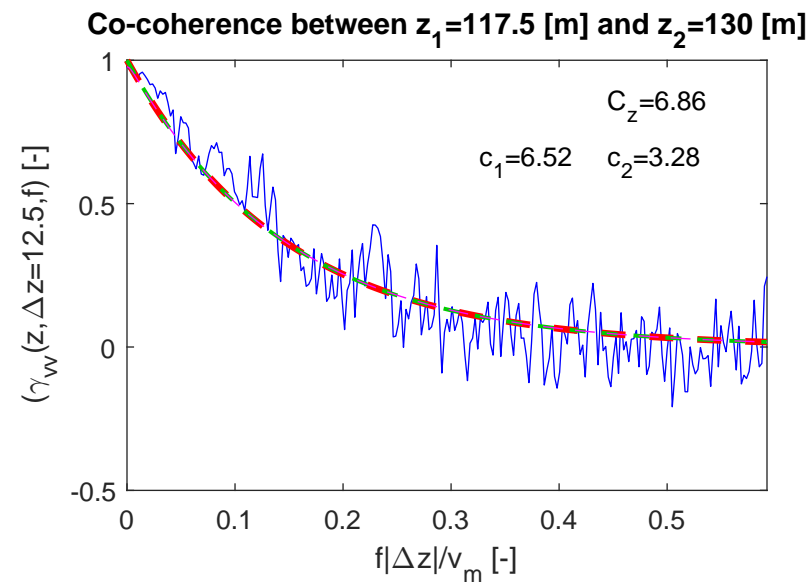
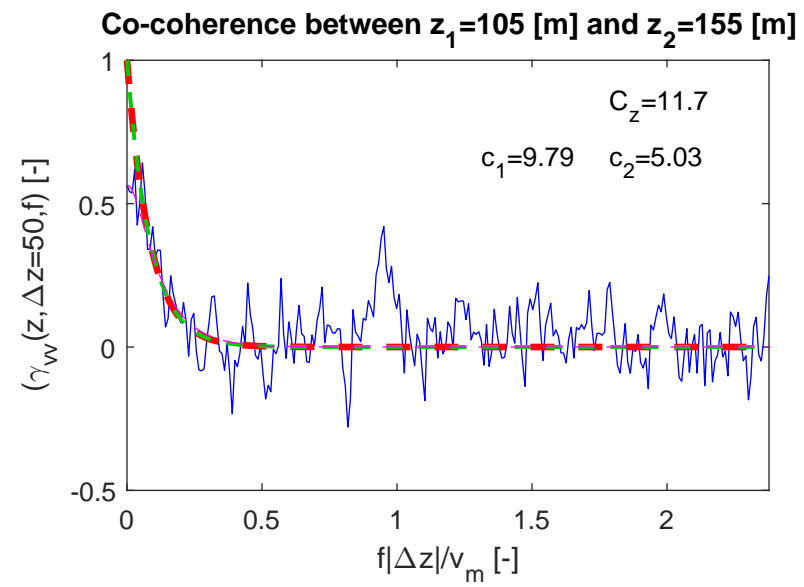
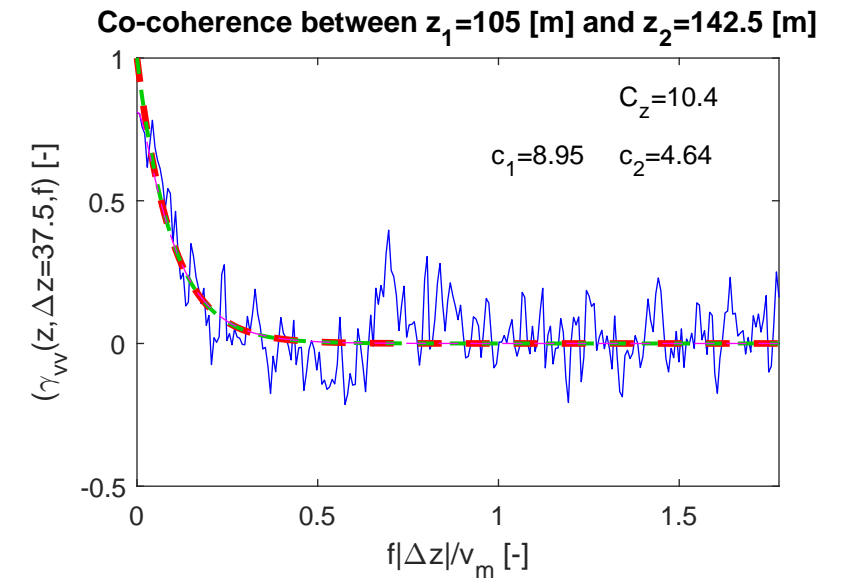
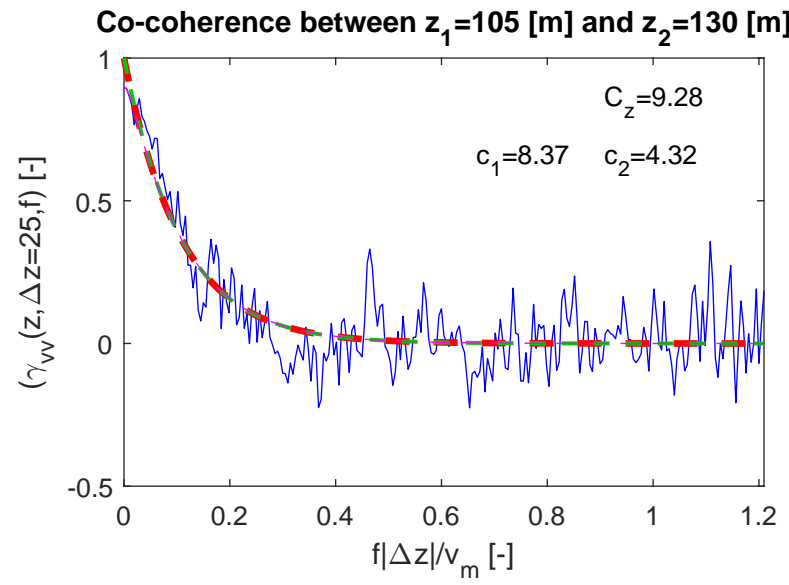
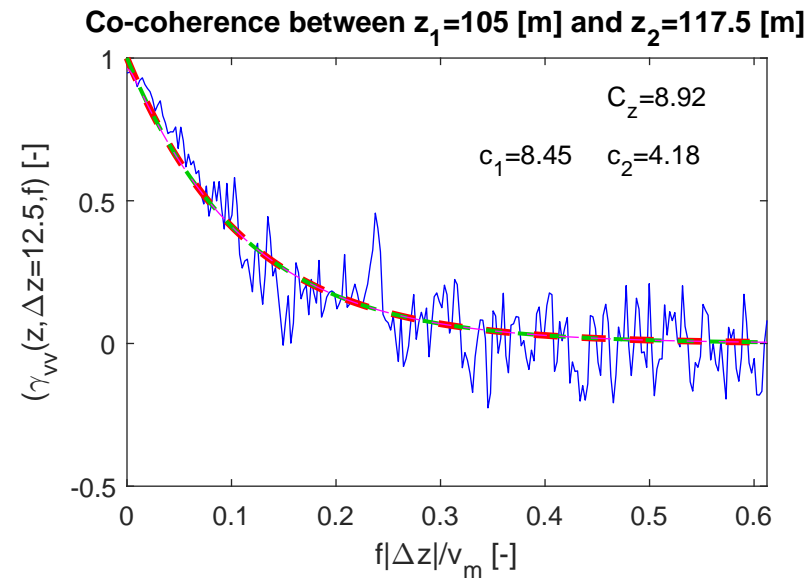
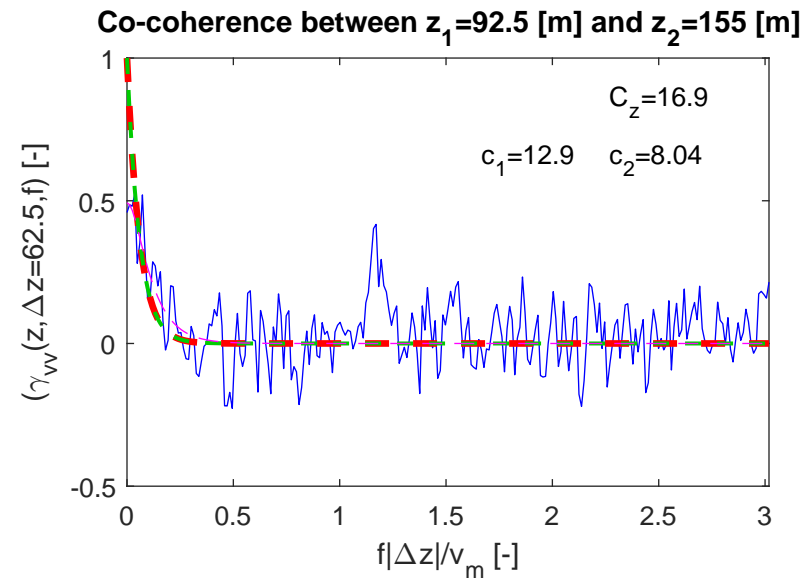




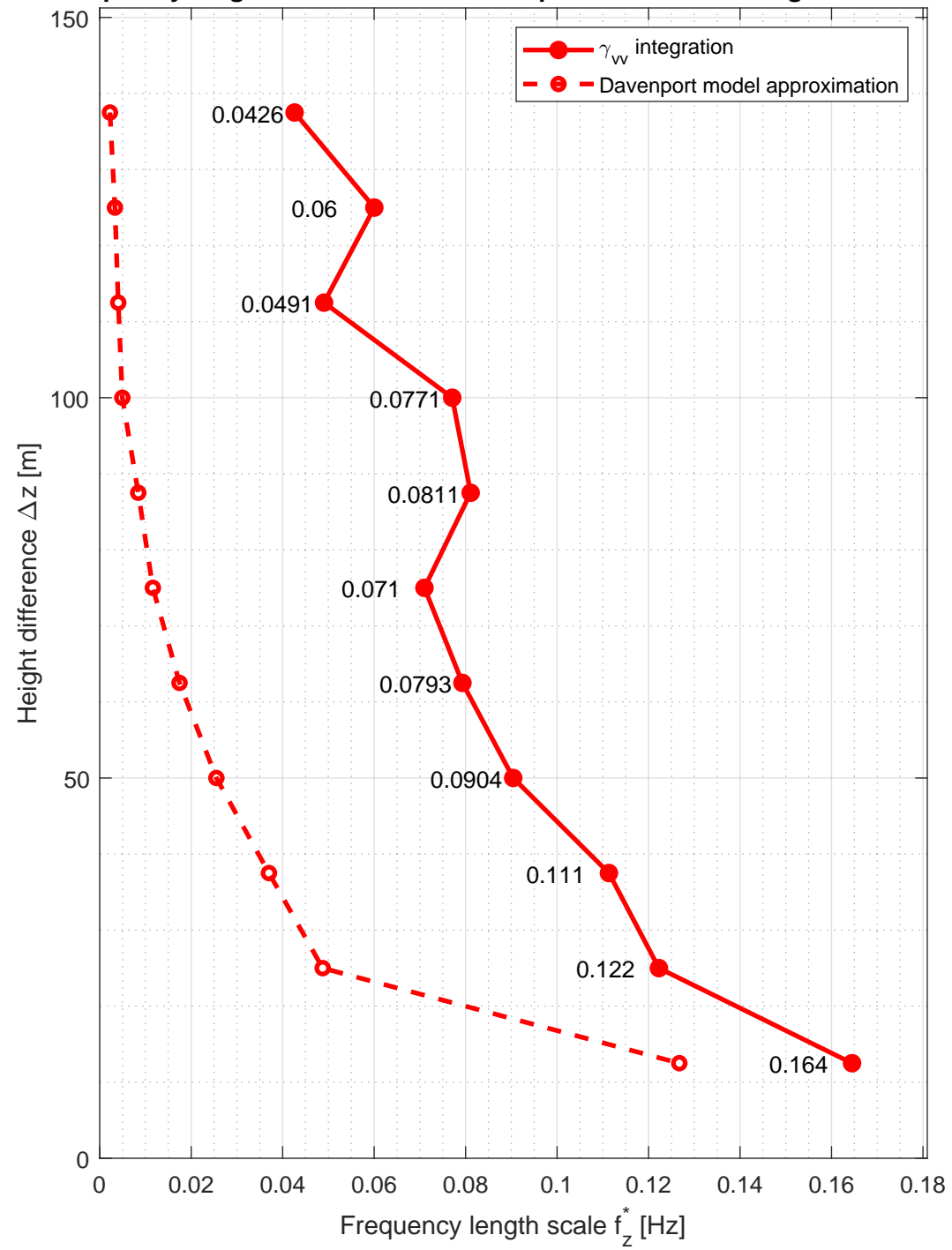




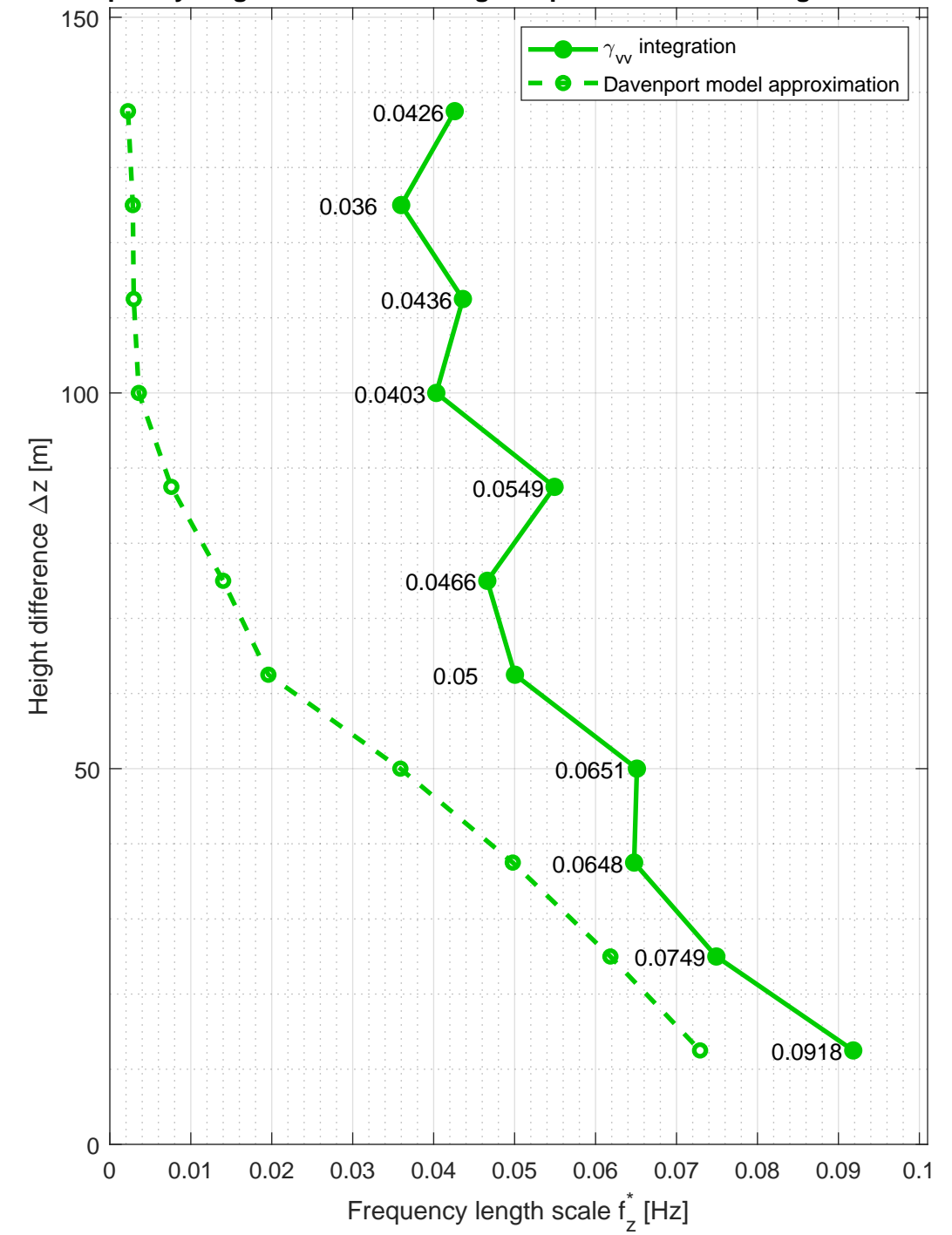




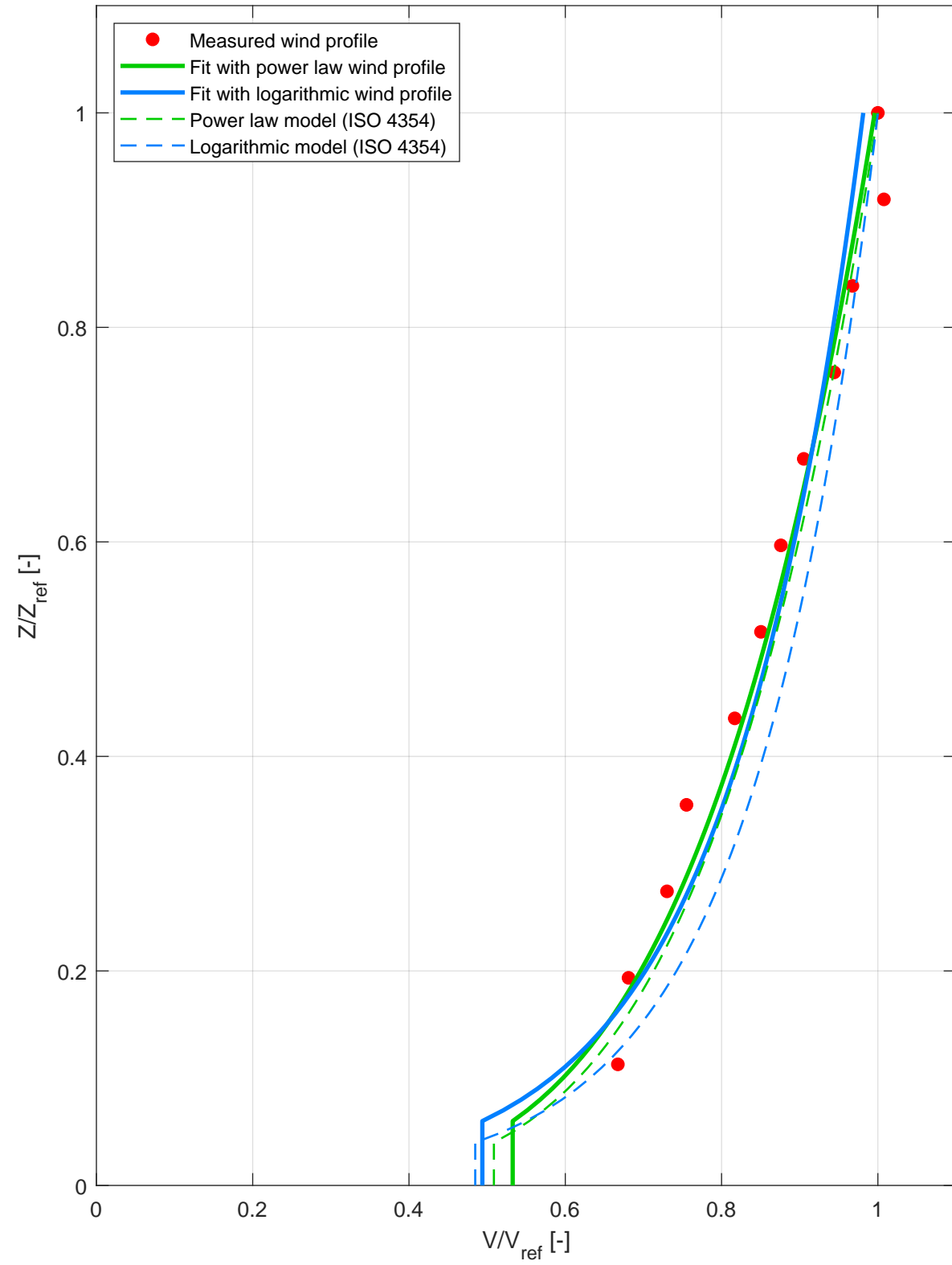
Frequency length scales for the lowest point at different height differences



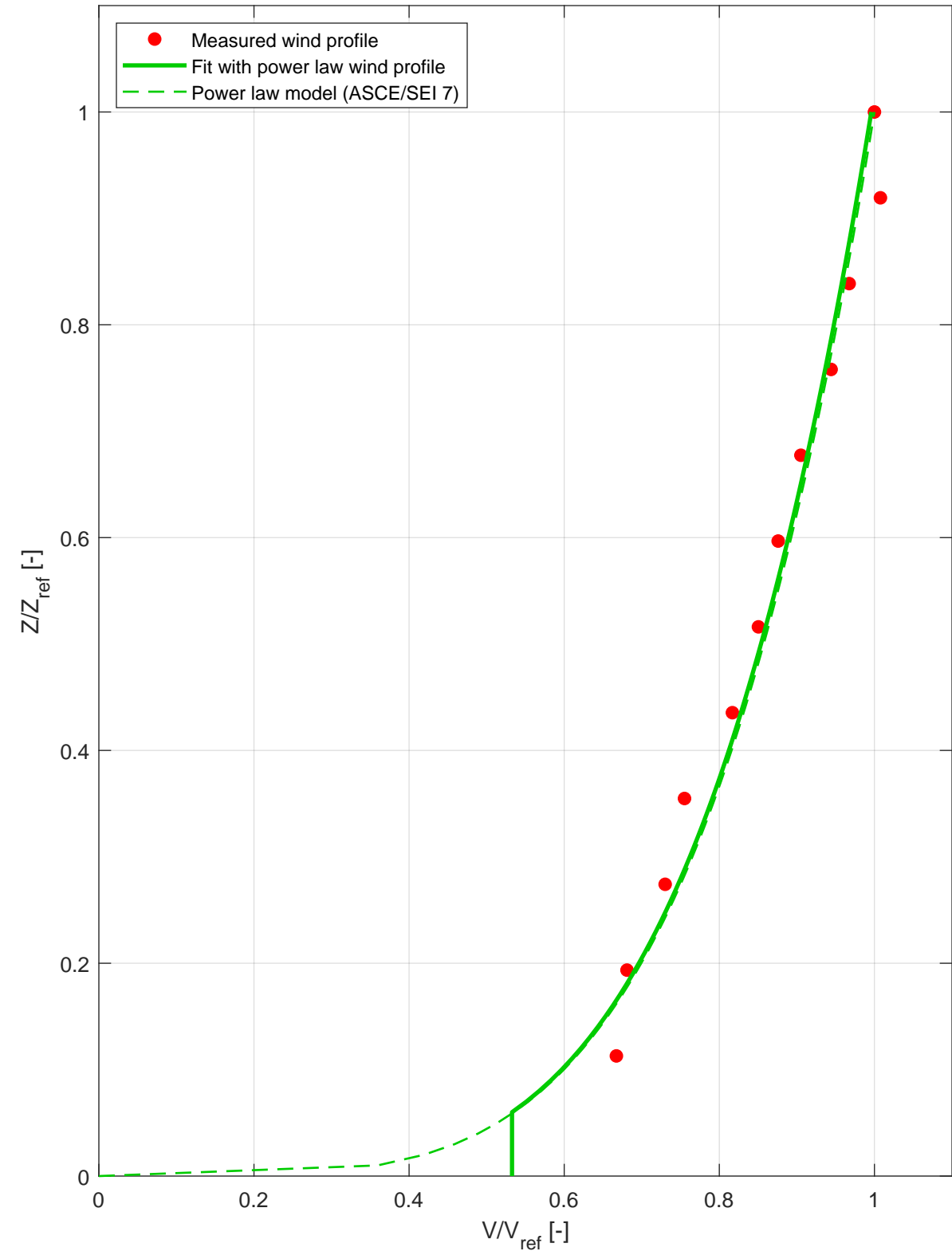
Frequency length scales for the highest point at different height differences

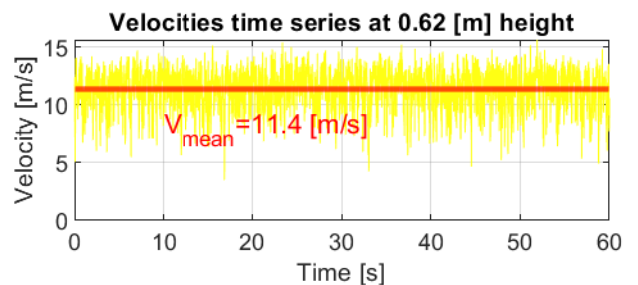
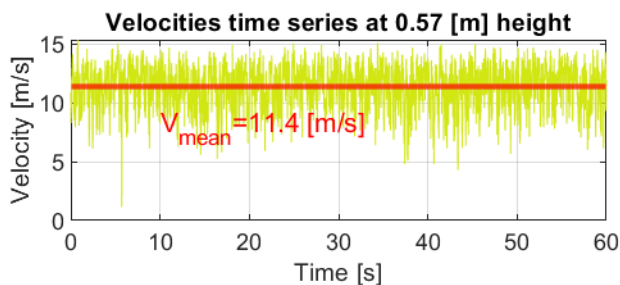
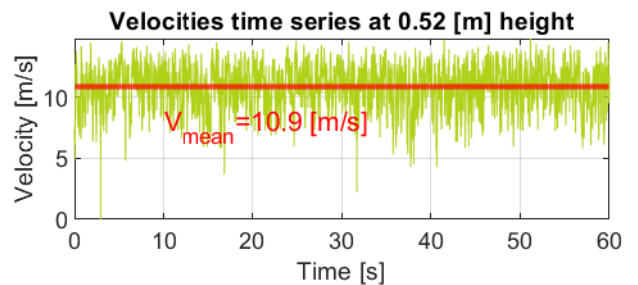
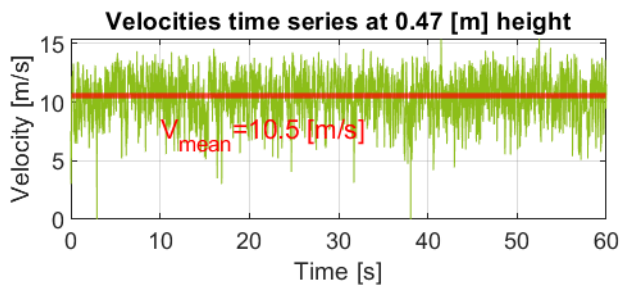
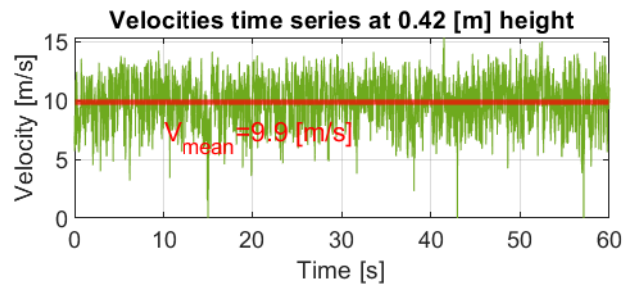
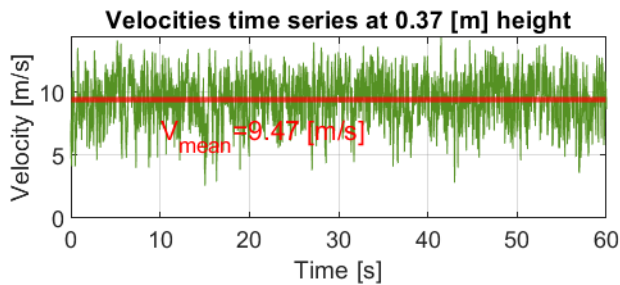
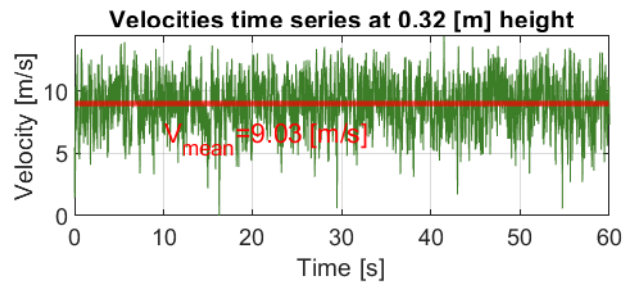
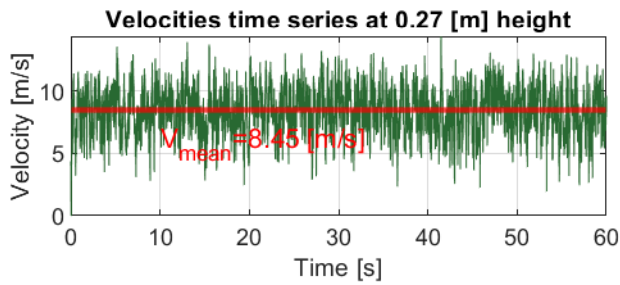
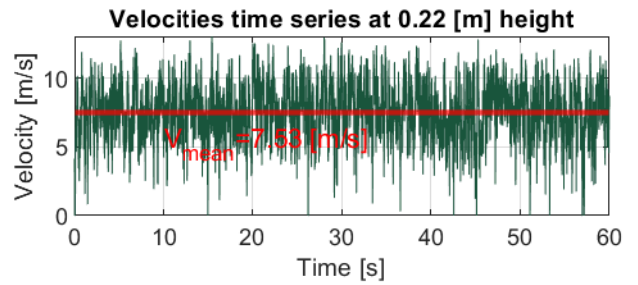
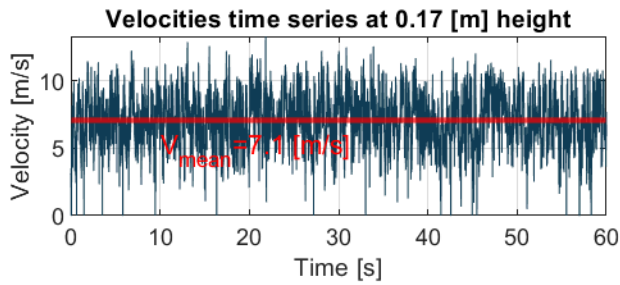
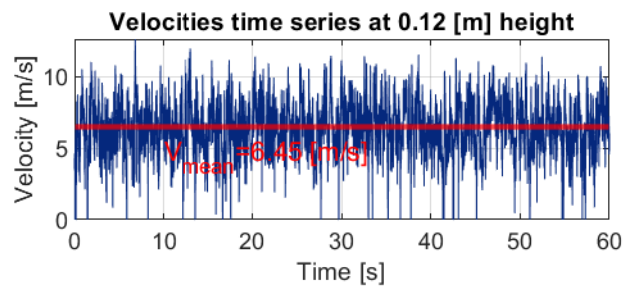
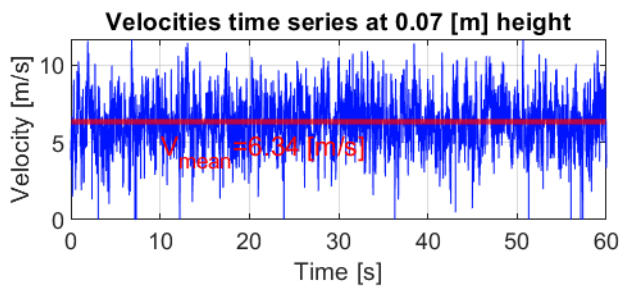


Mean wind velocity profile - comparison with ISO 4354

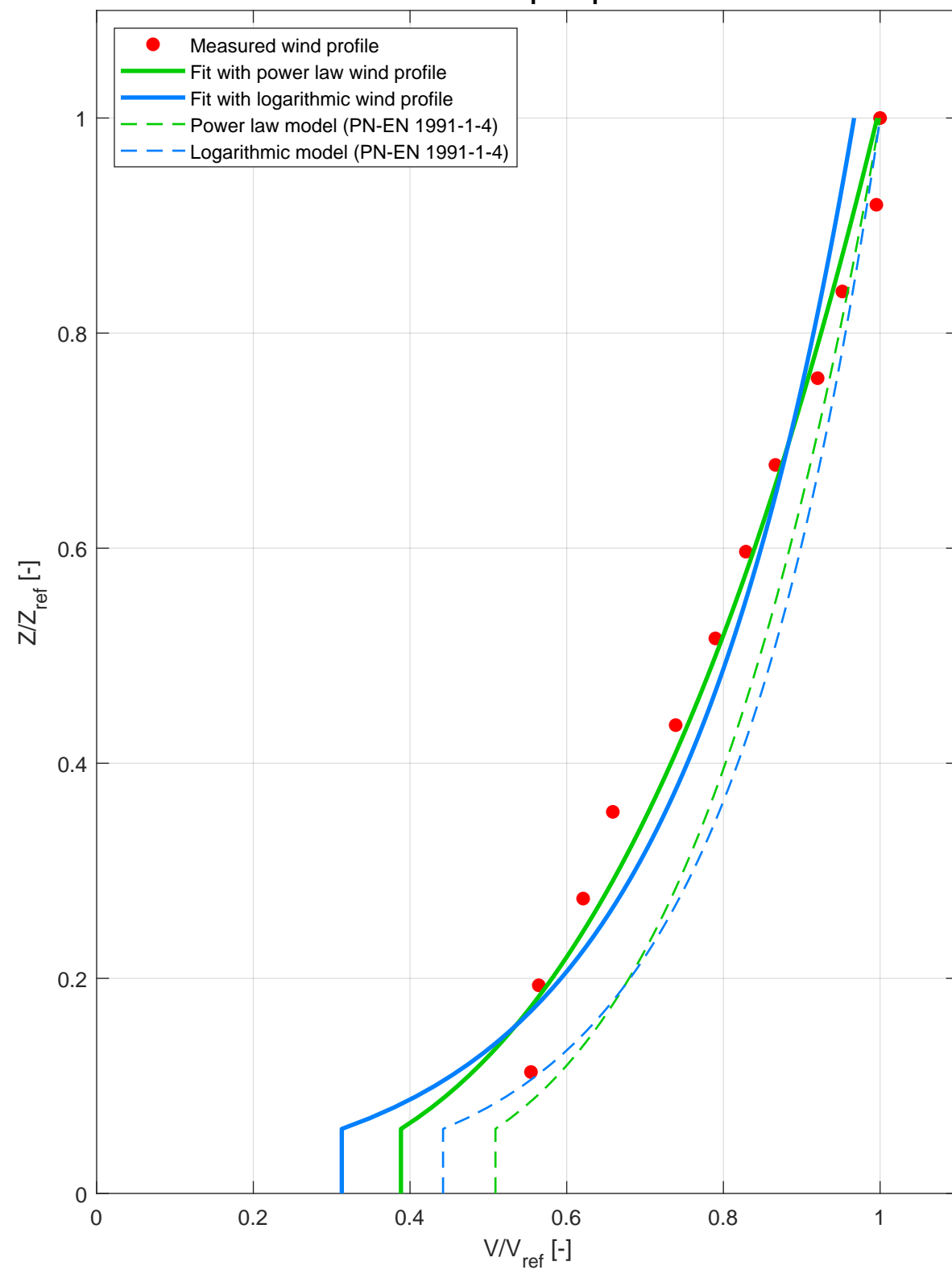


Mean wind velocity profile - comparison with ASCE/SEI 7

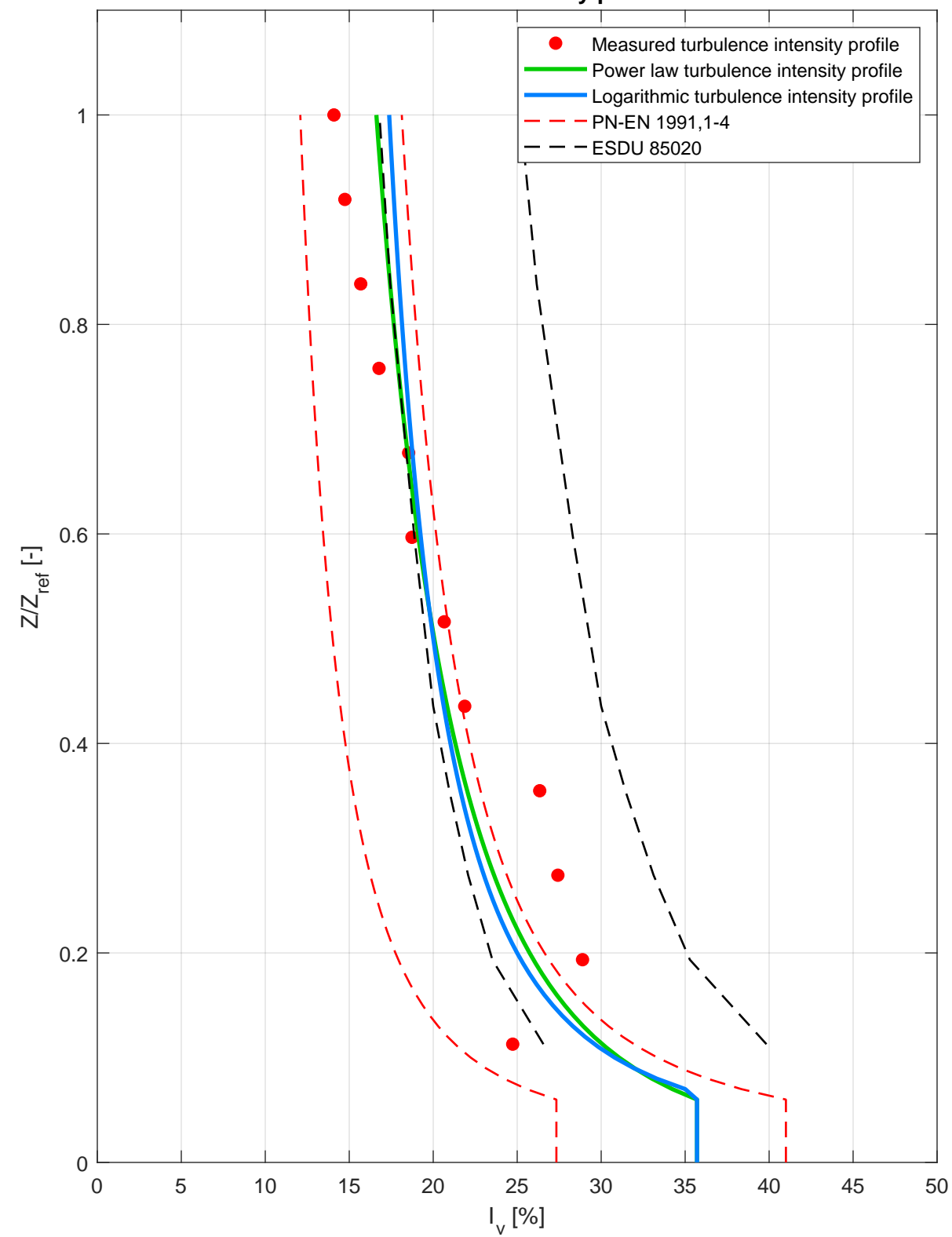




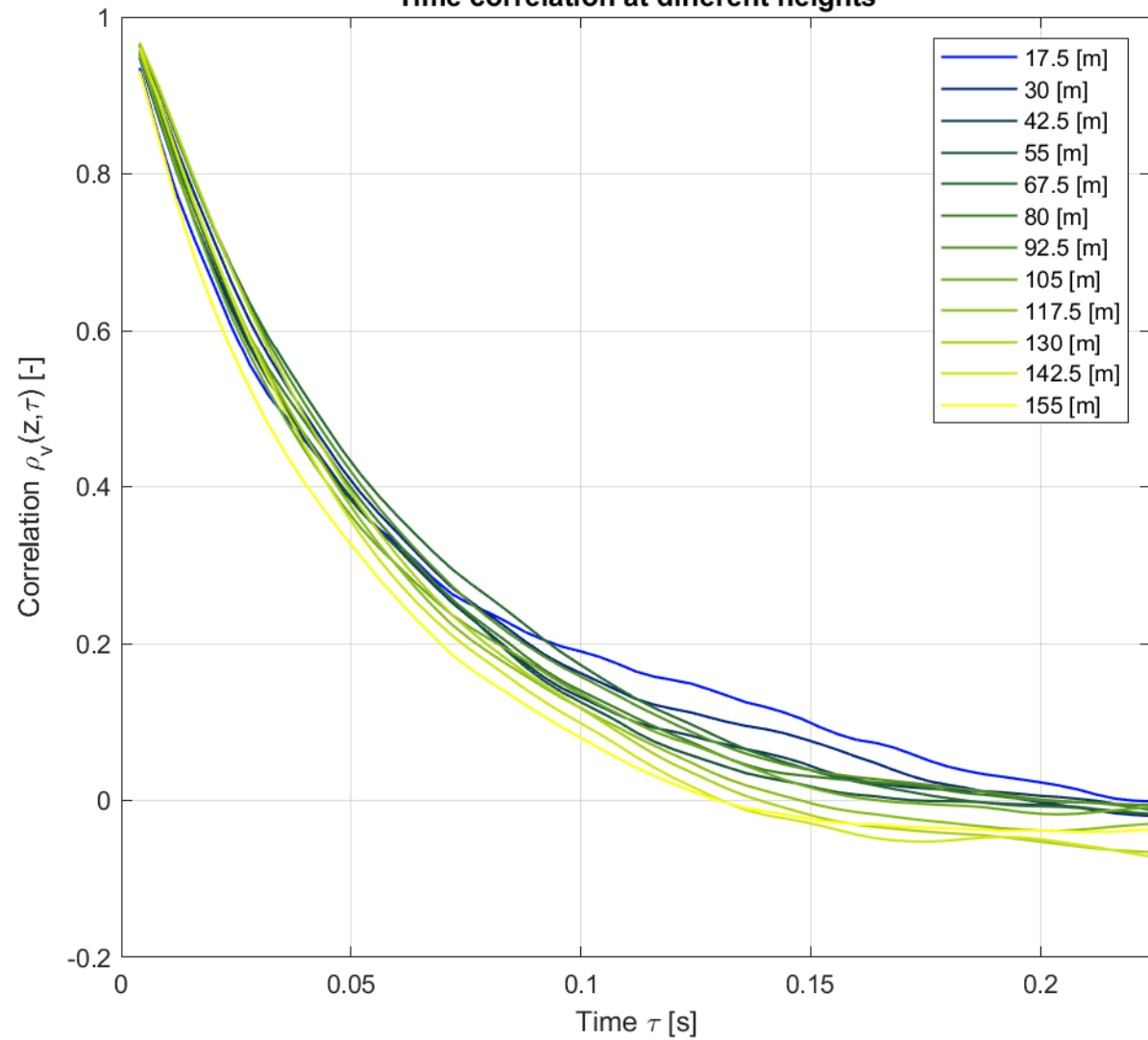
Mean wind speed profile



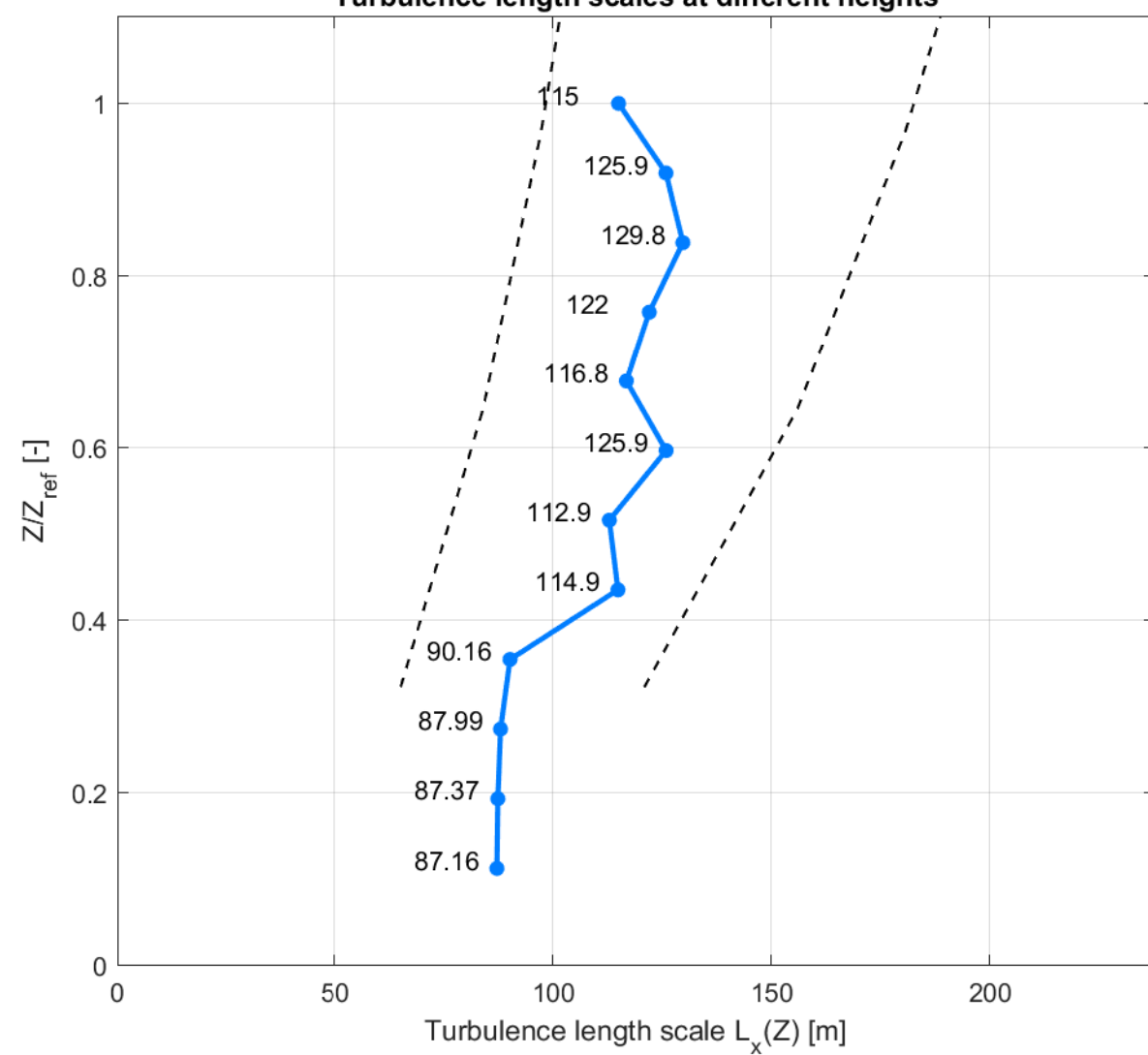
Turbulence intensity profile



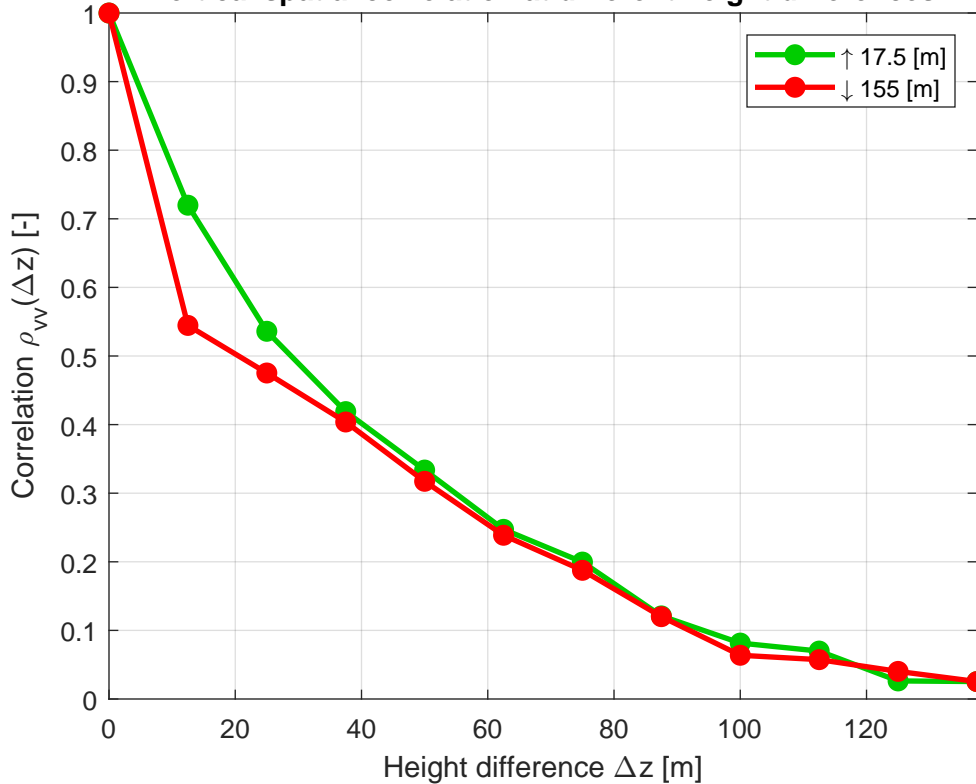
Time correlation at different heights



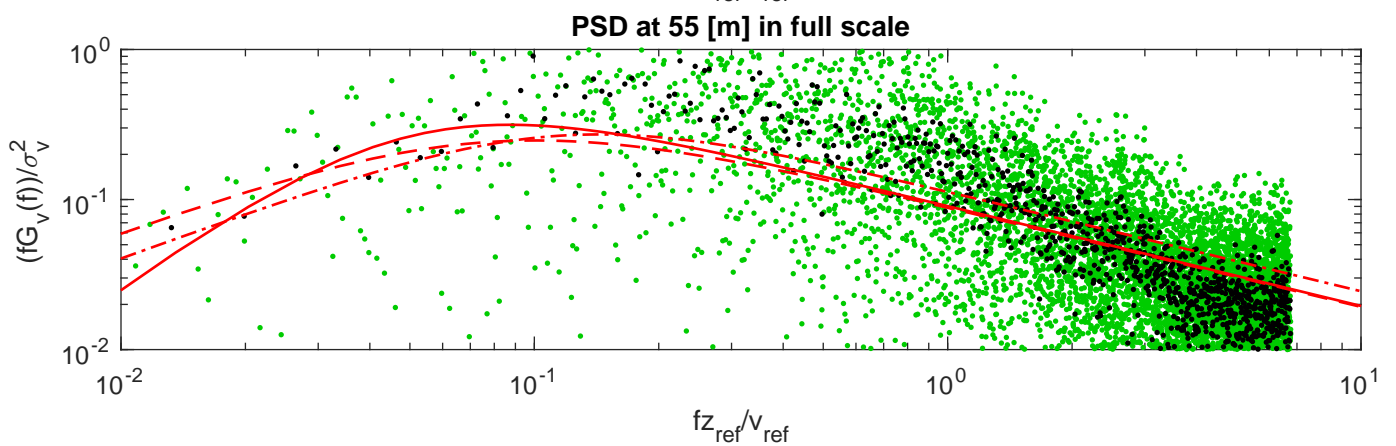
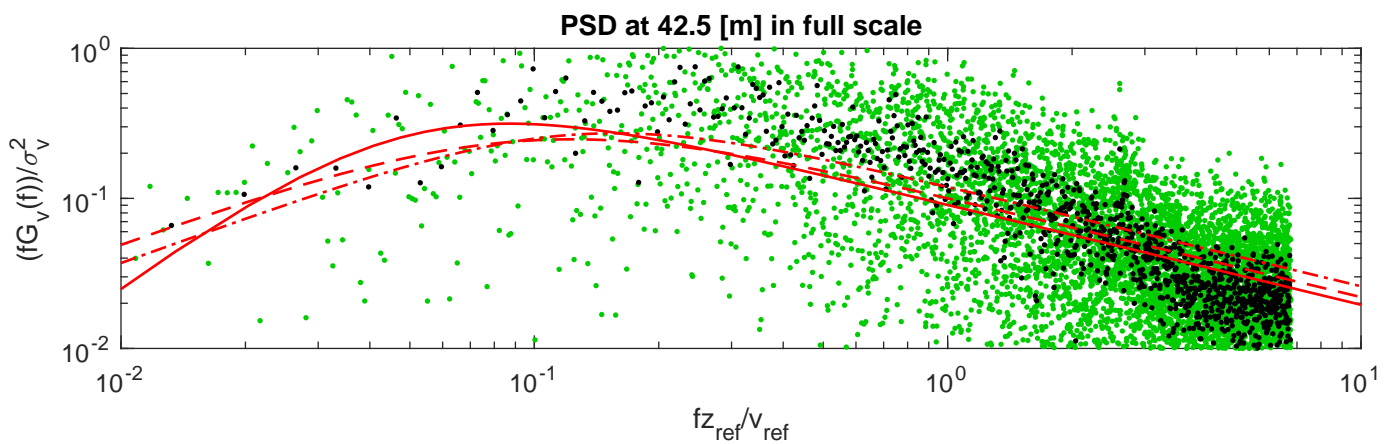
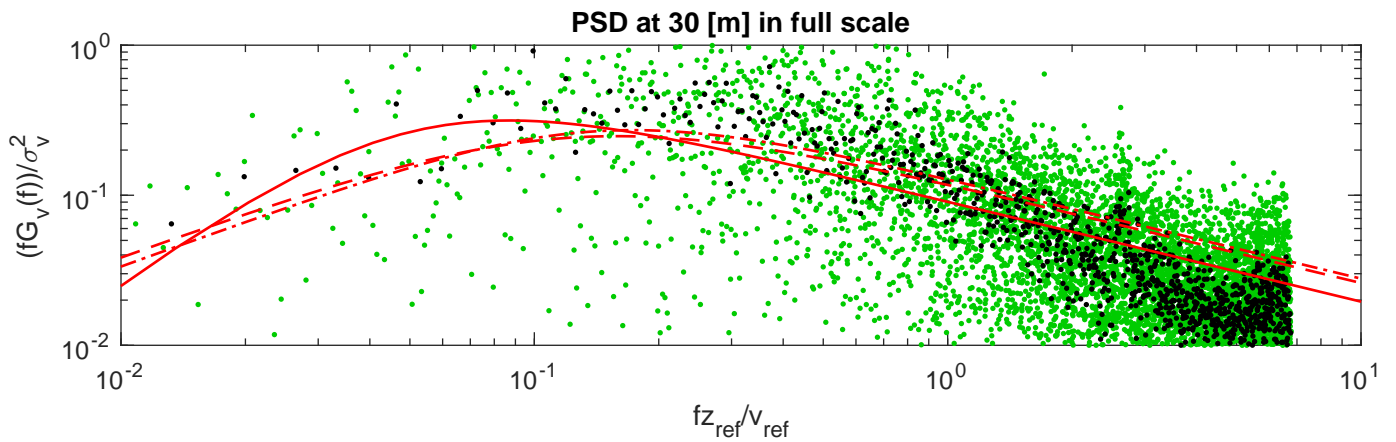
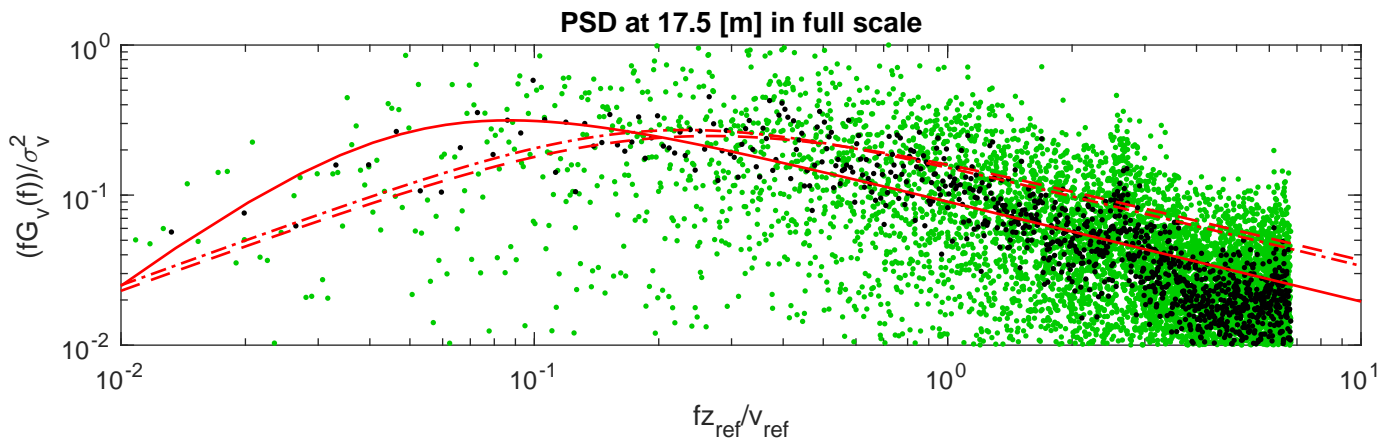
Turbulence length scales at different heights



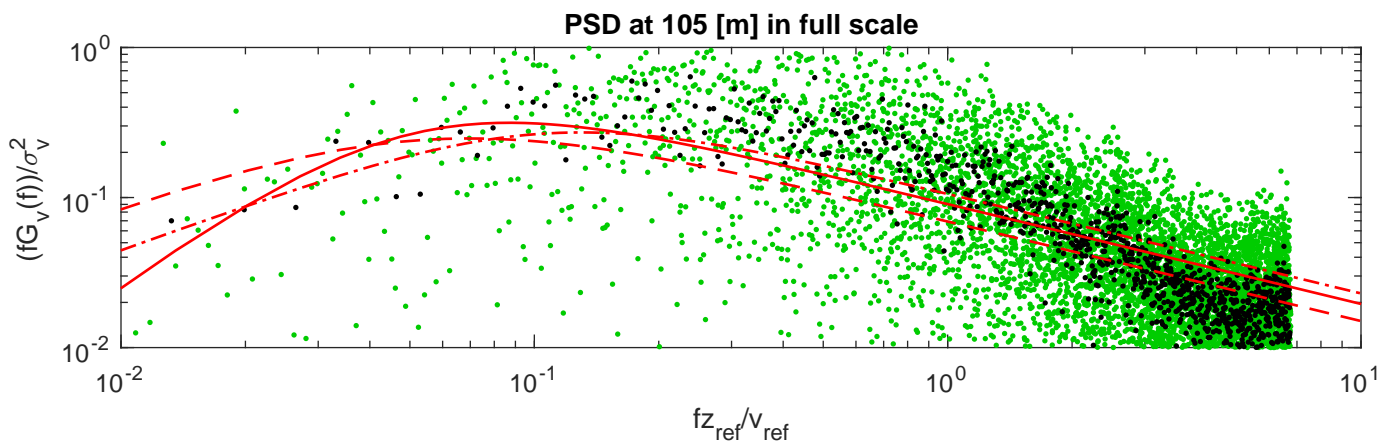
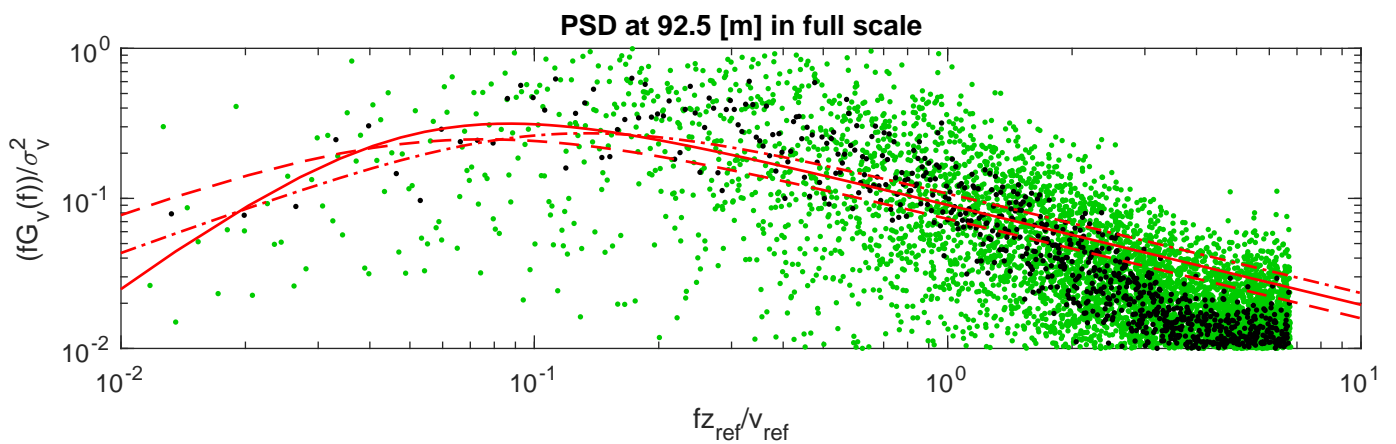
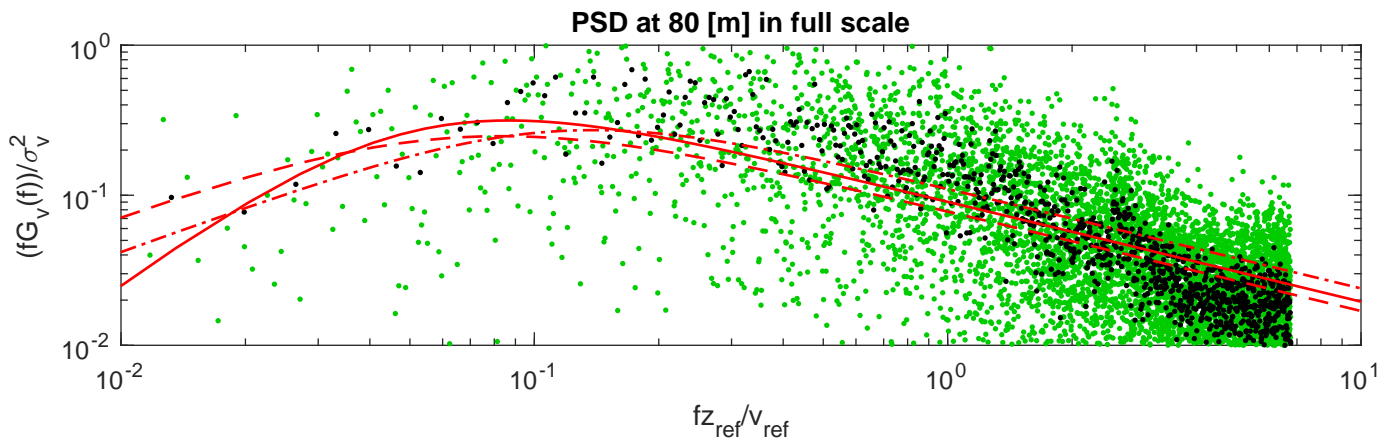
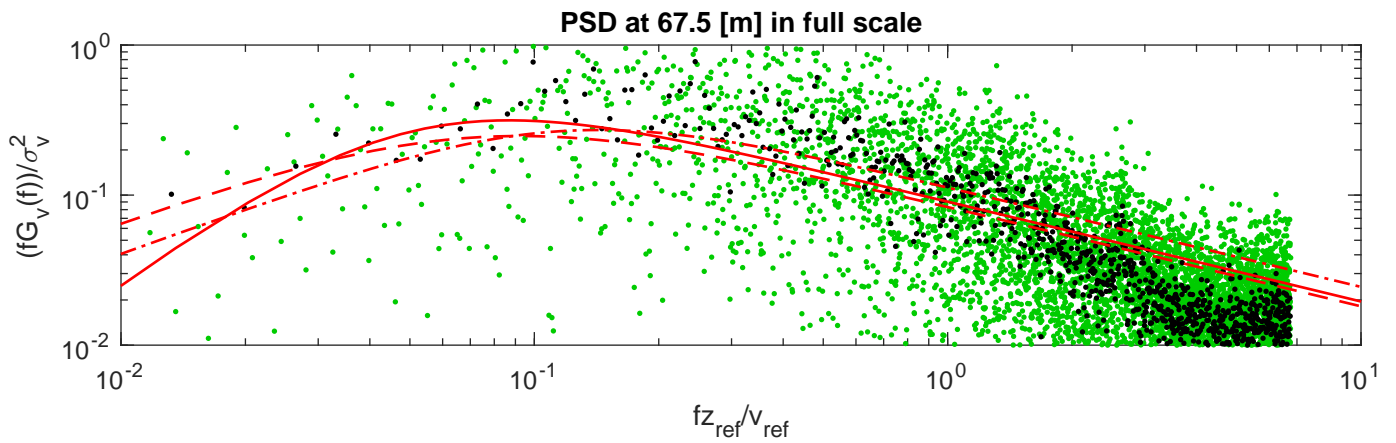
Vertical spatial correlation at different height differences



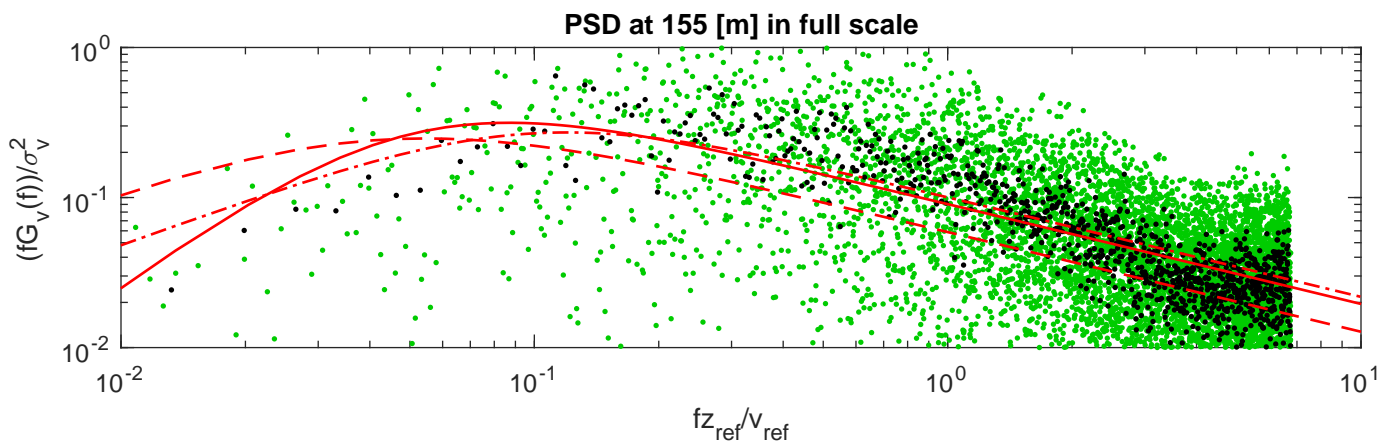
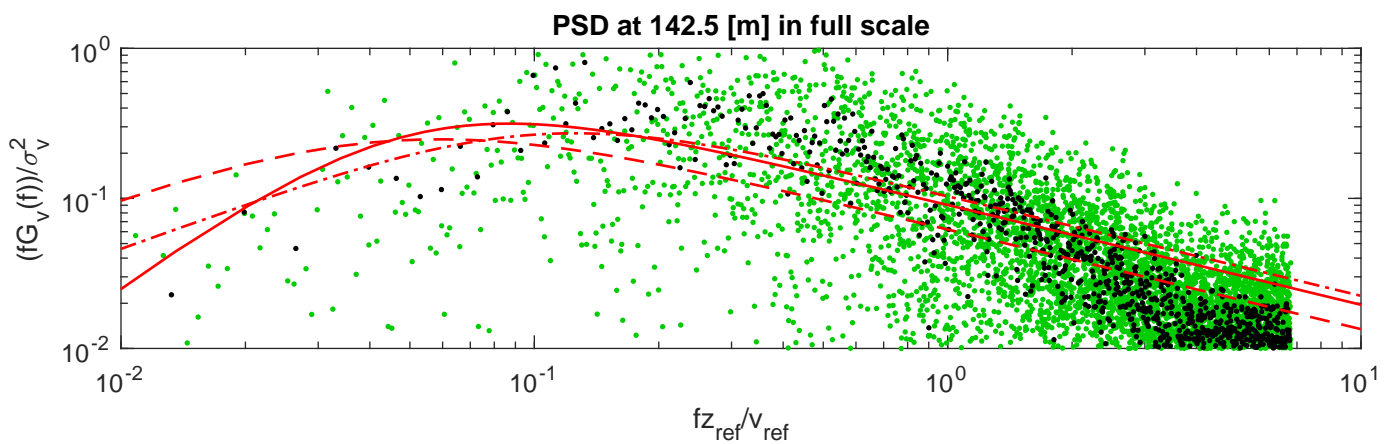
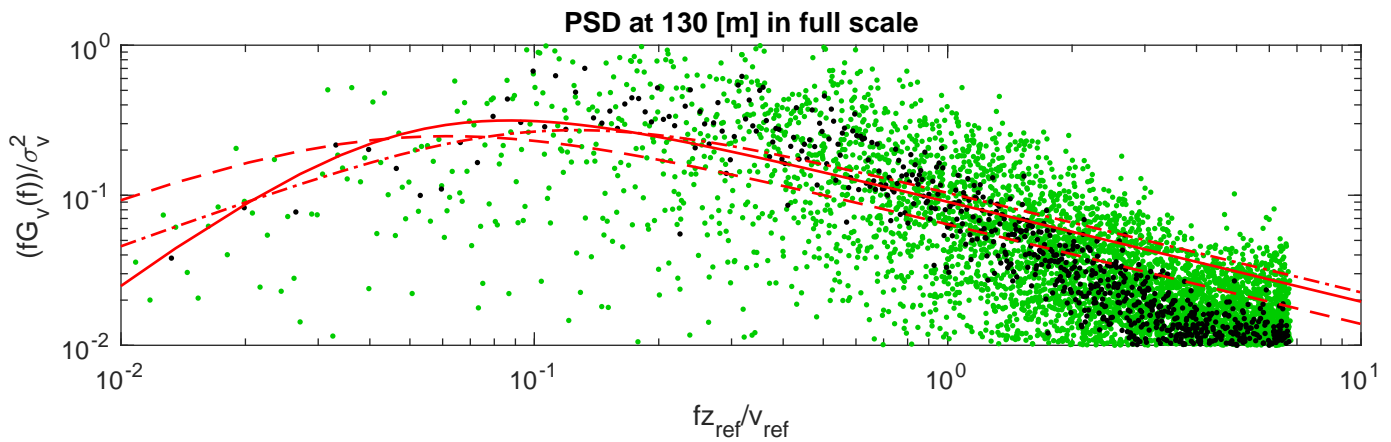
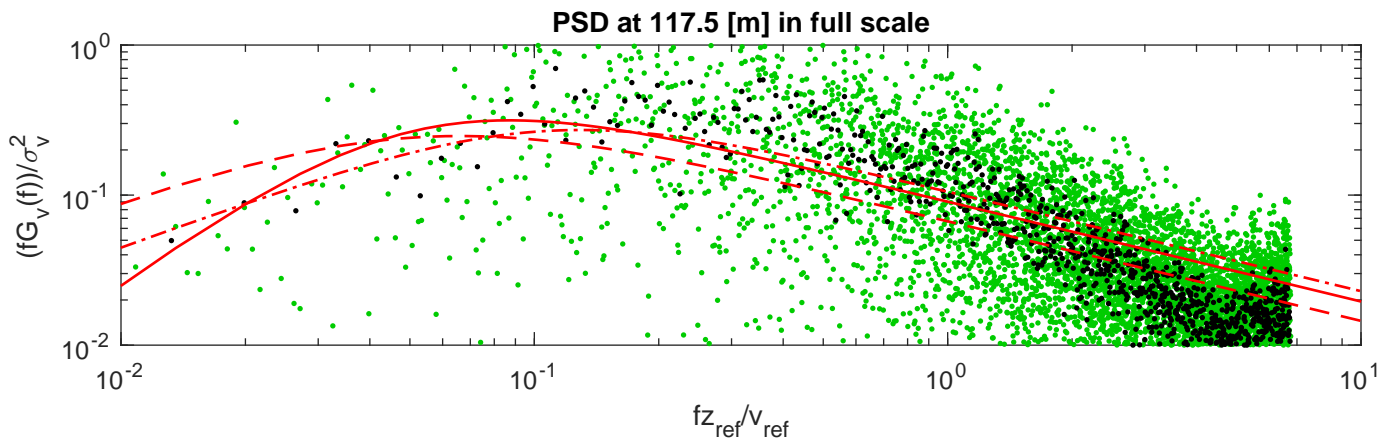
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



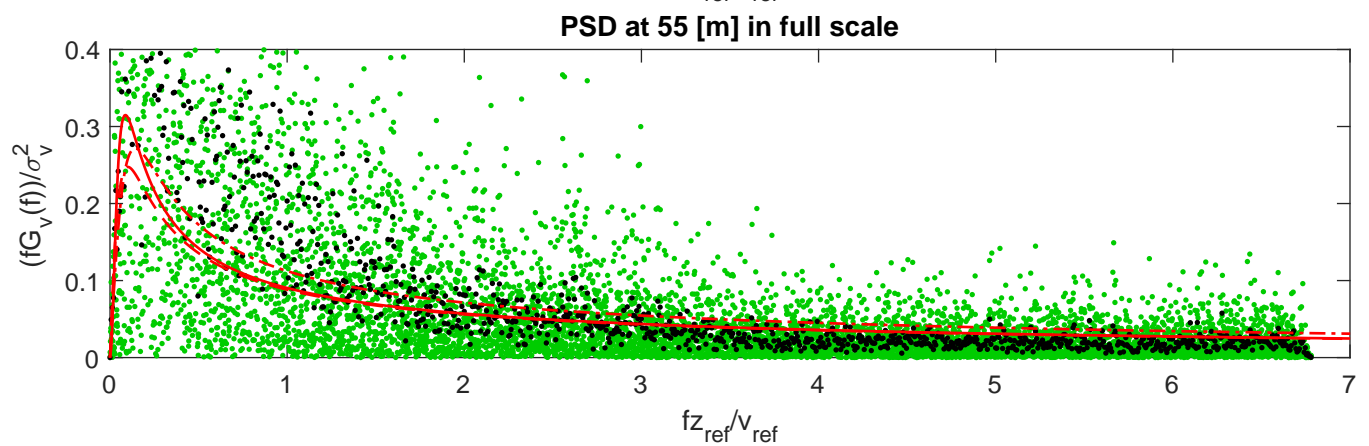
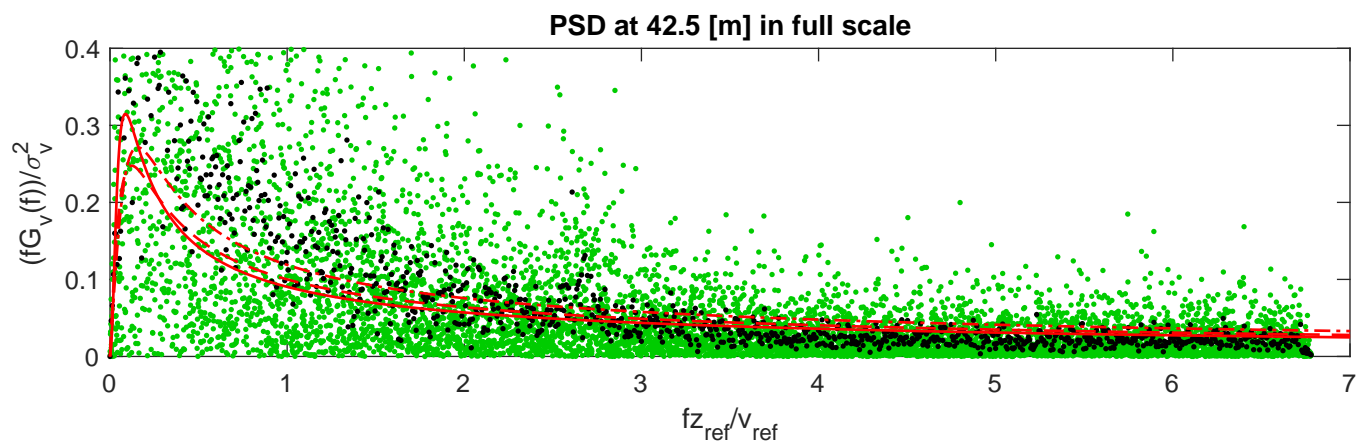
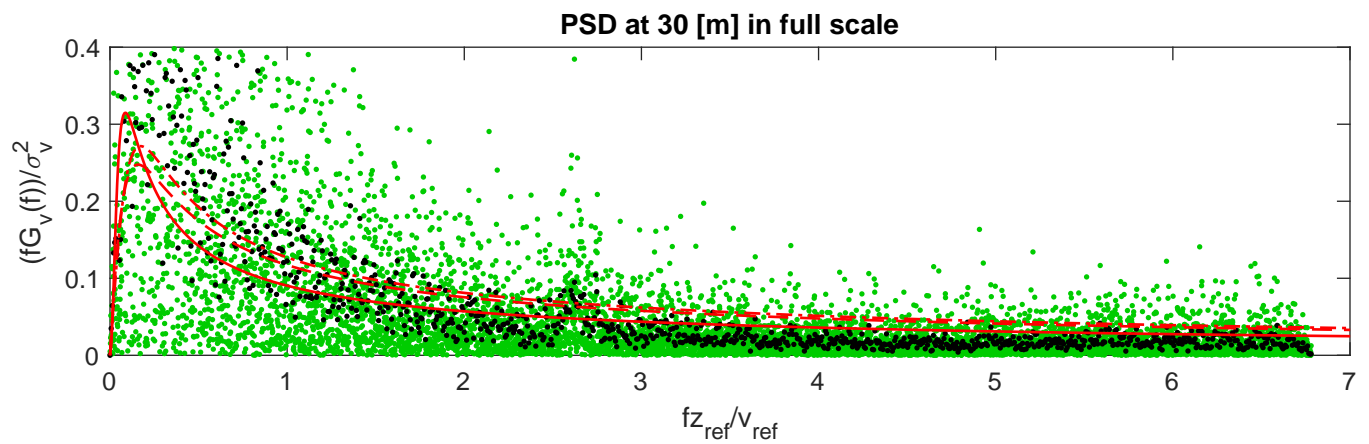
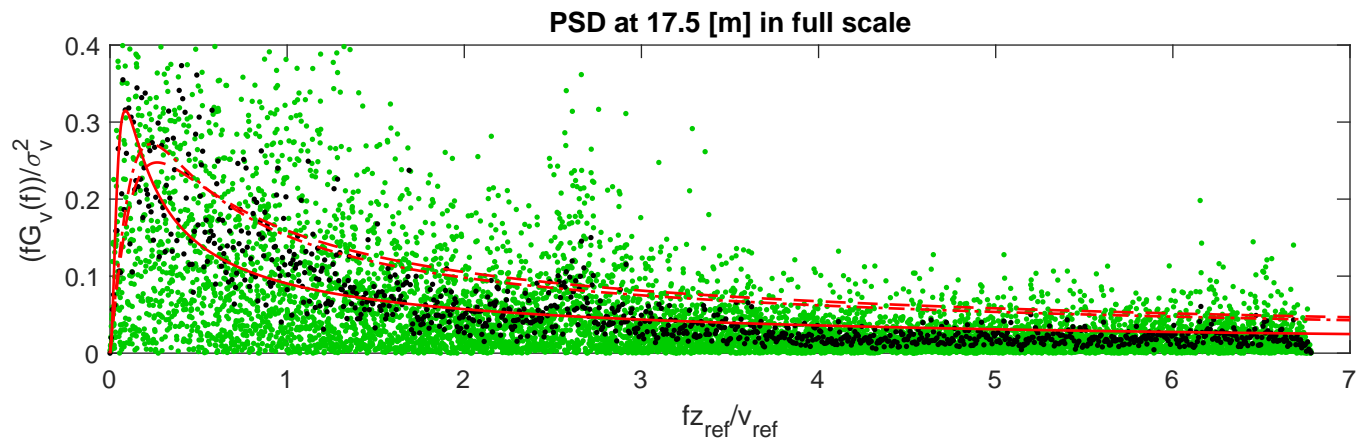
• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal



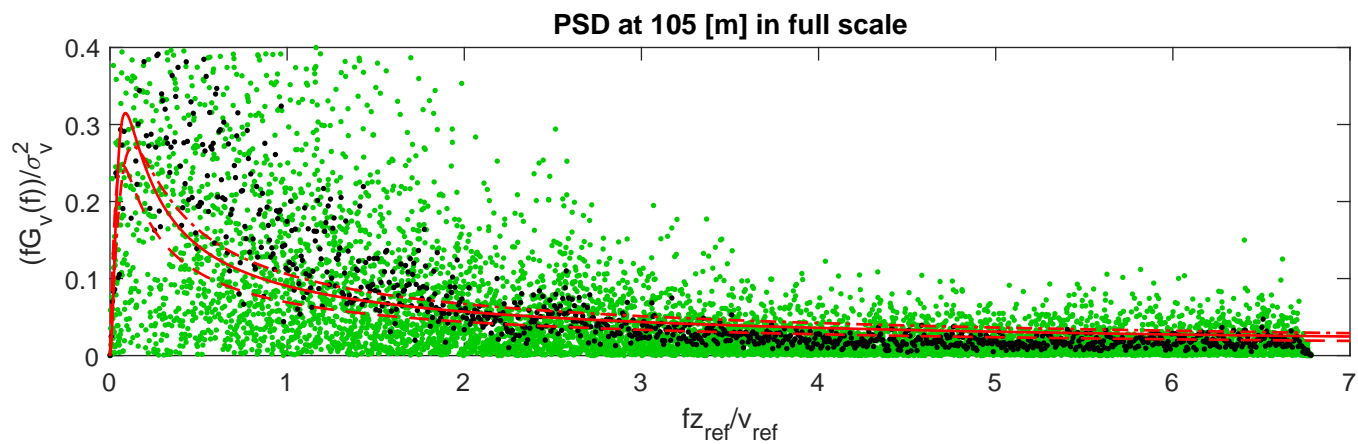
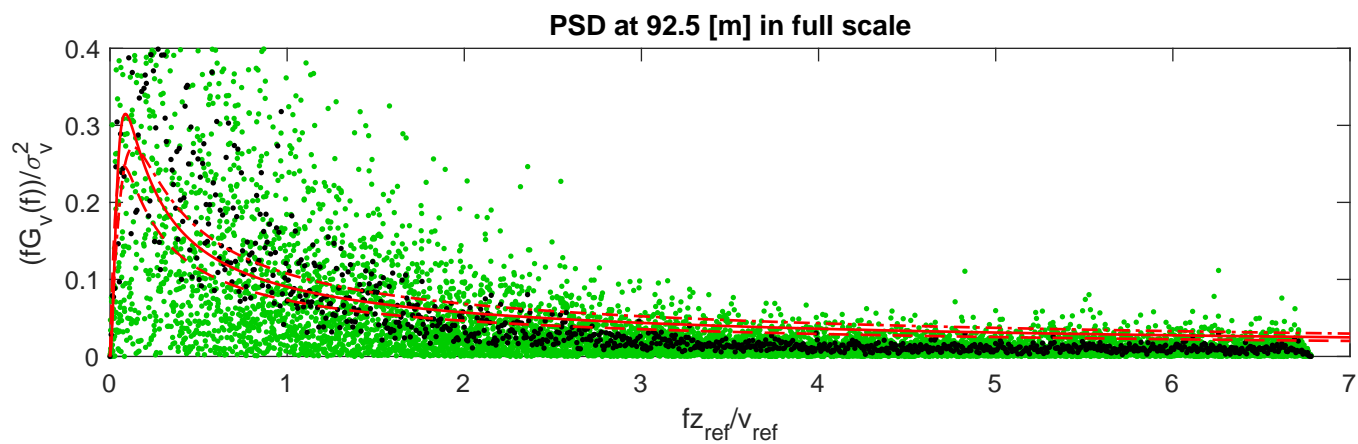
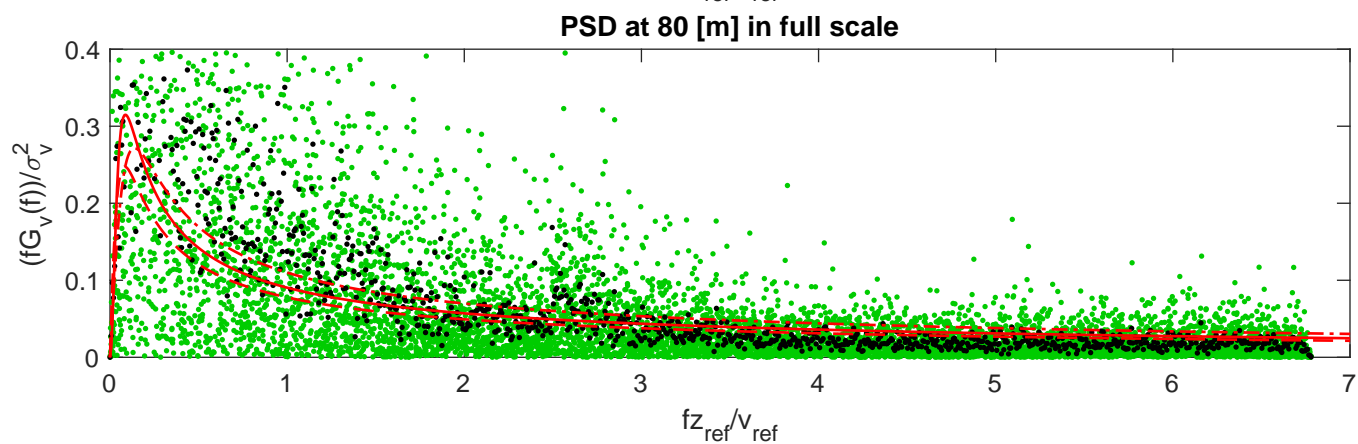
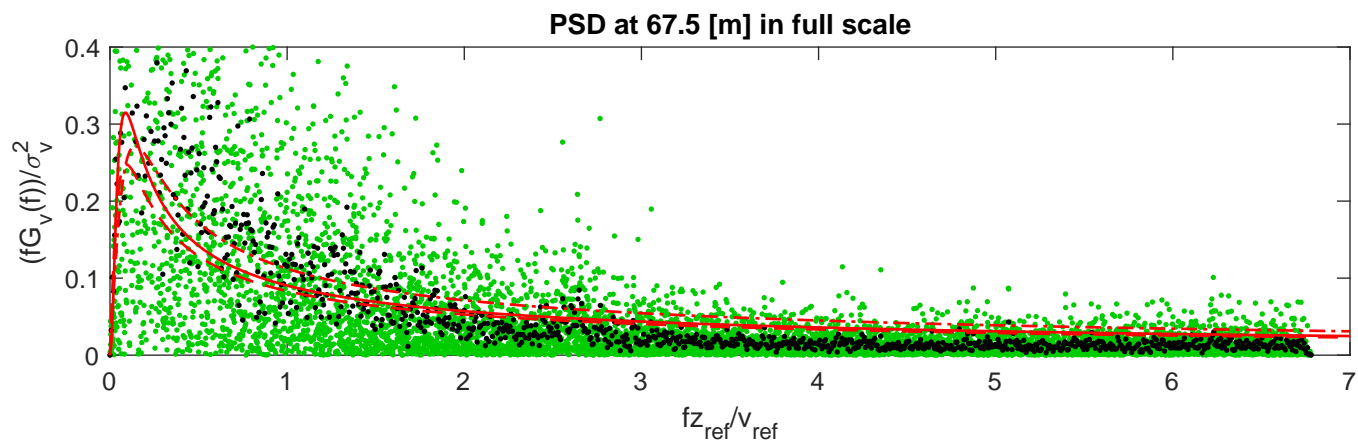
• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal



• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

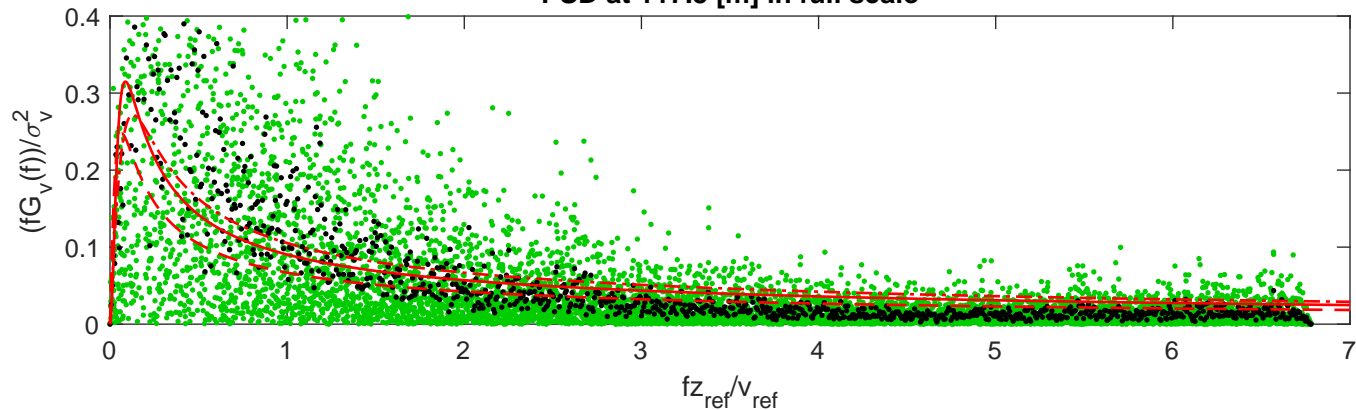


• From FFT • Welch method — Davenport - - - Kármán - - - Kaimal

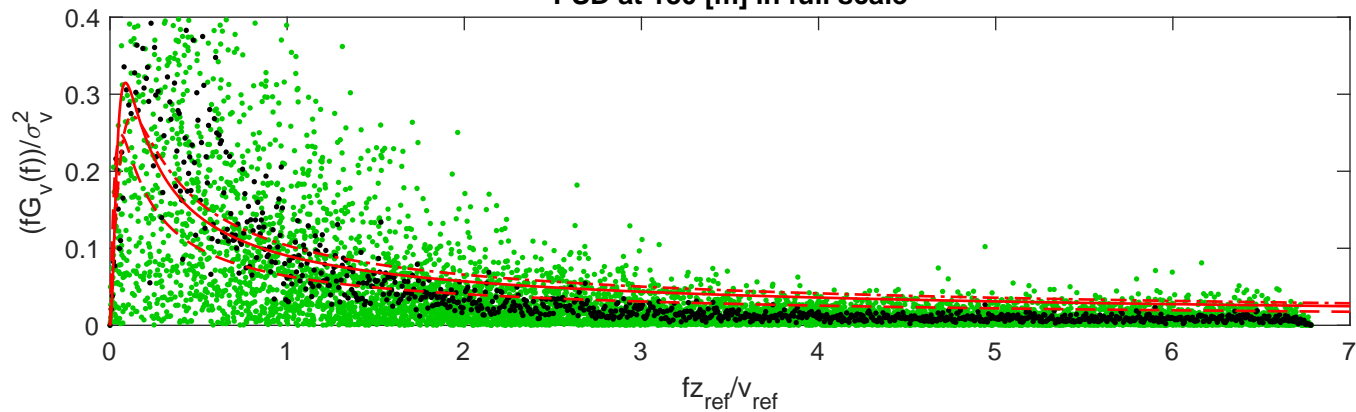


• PSD from FFT • PSD from Welch method — Davenport - - - Kármán - - - Kaimal

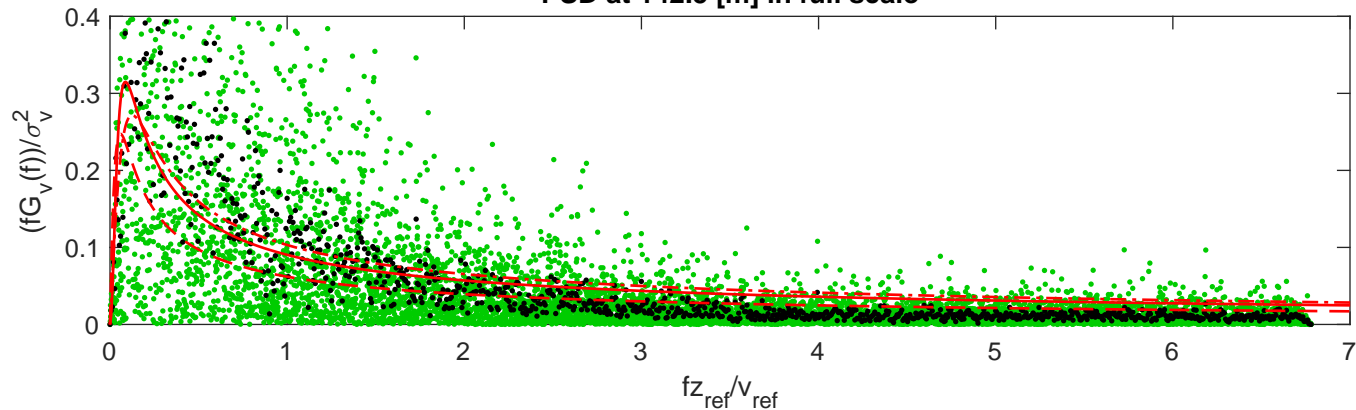
PSD at 117.5 [m] in full scale



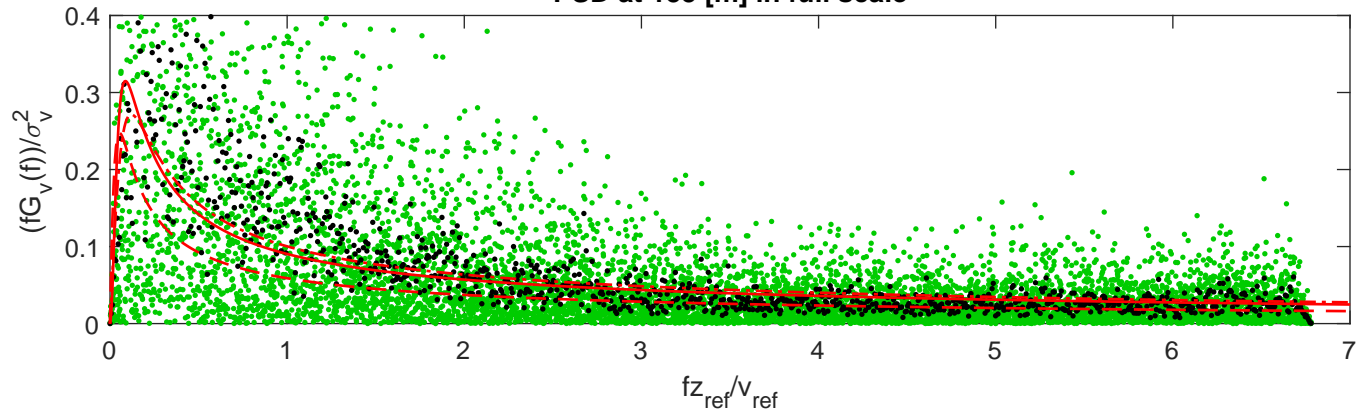
PSD at 130 [m] in full scale

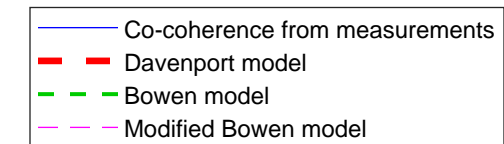
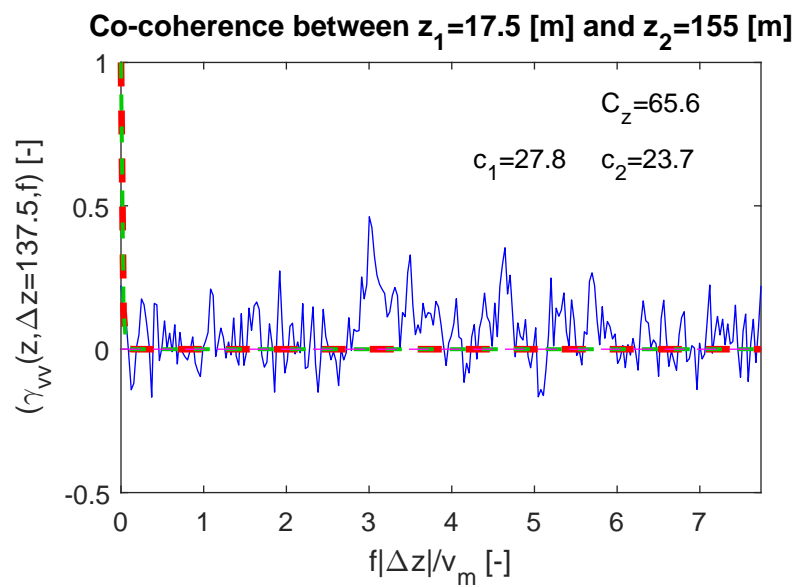
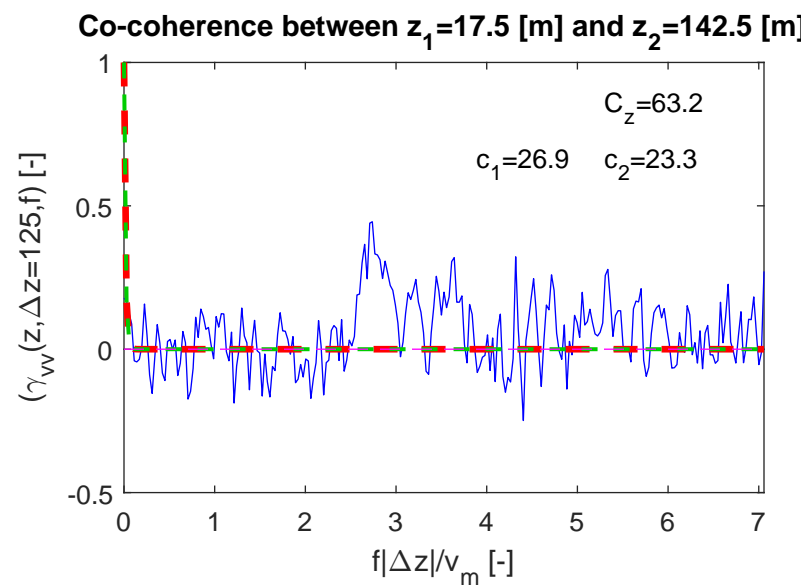
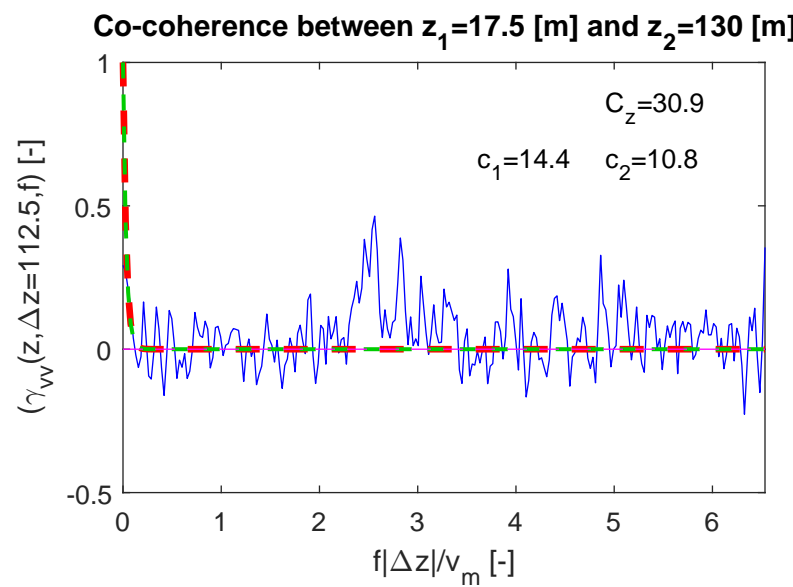
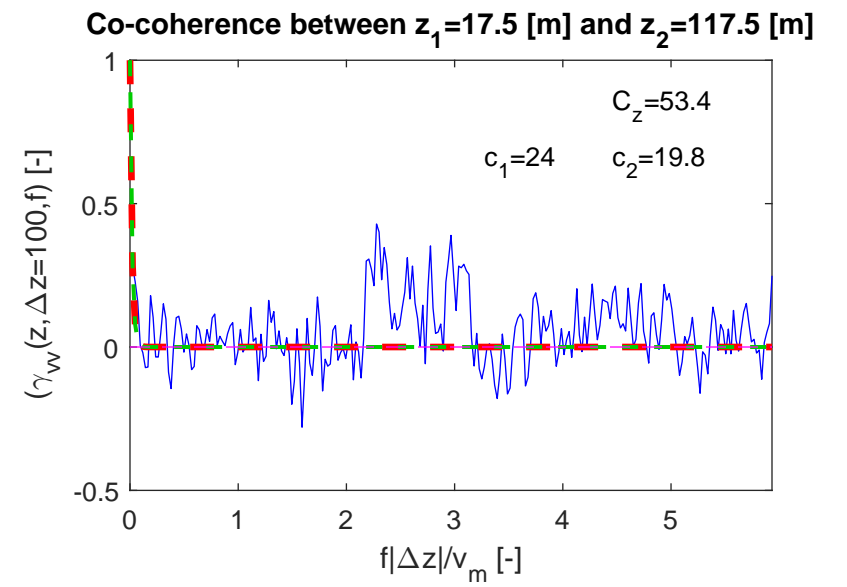
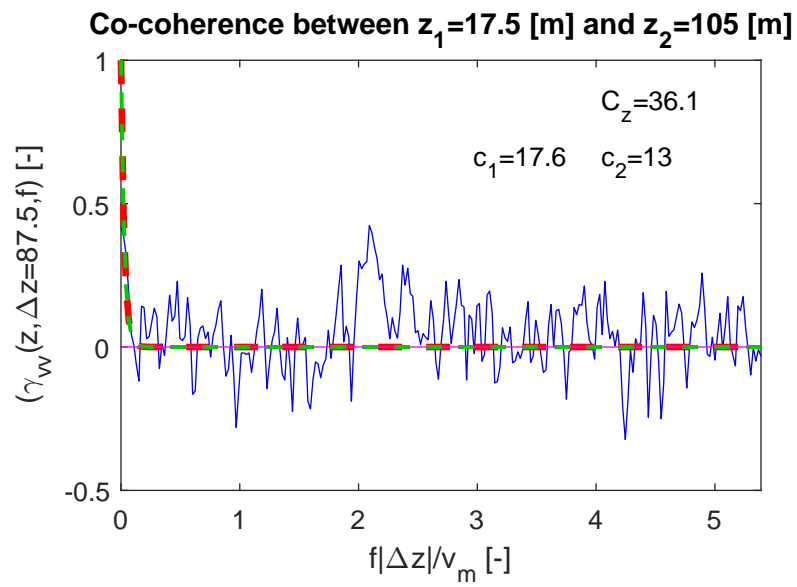
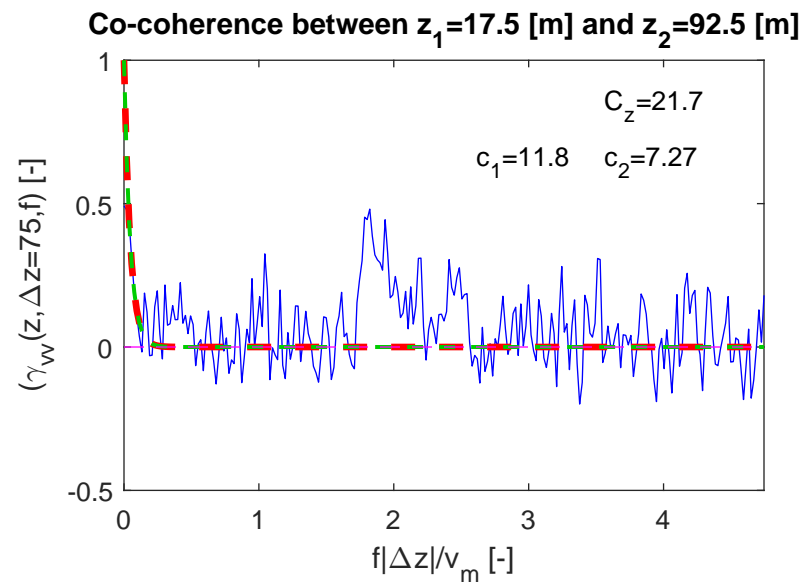
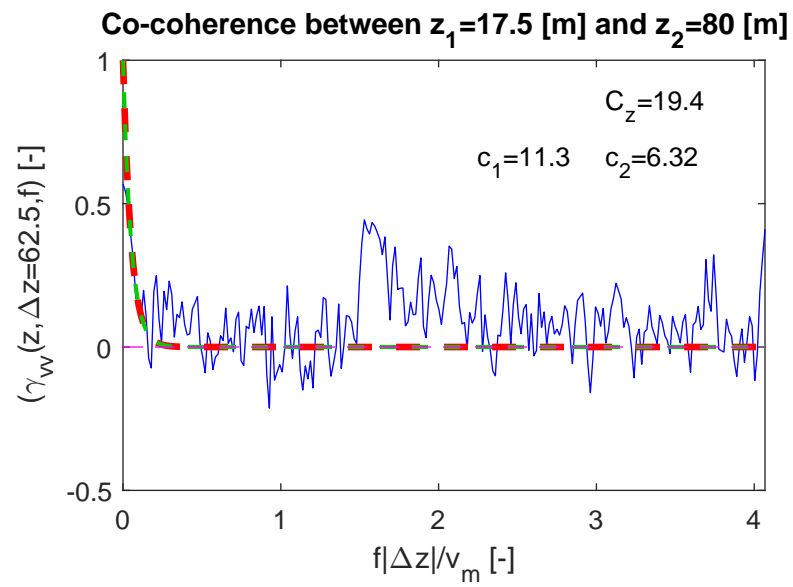
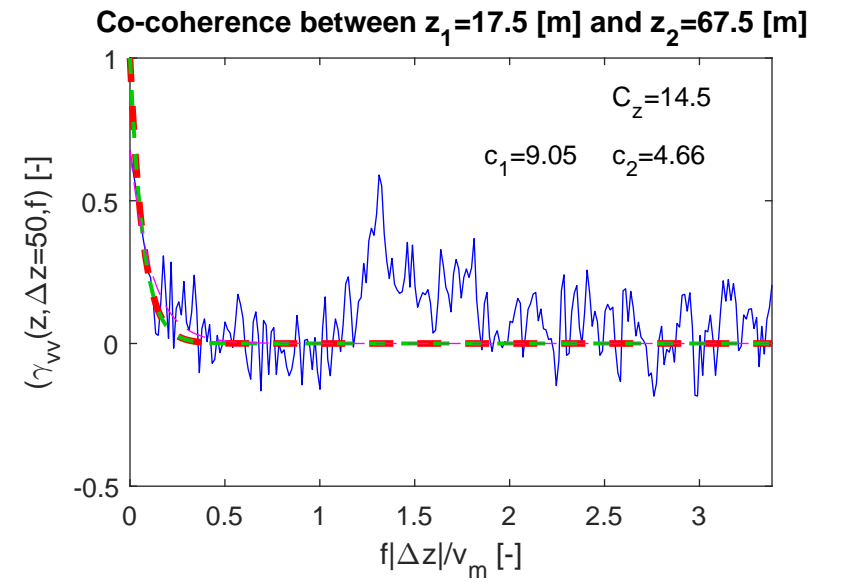
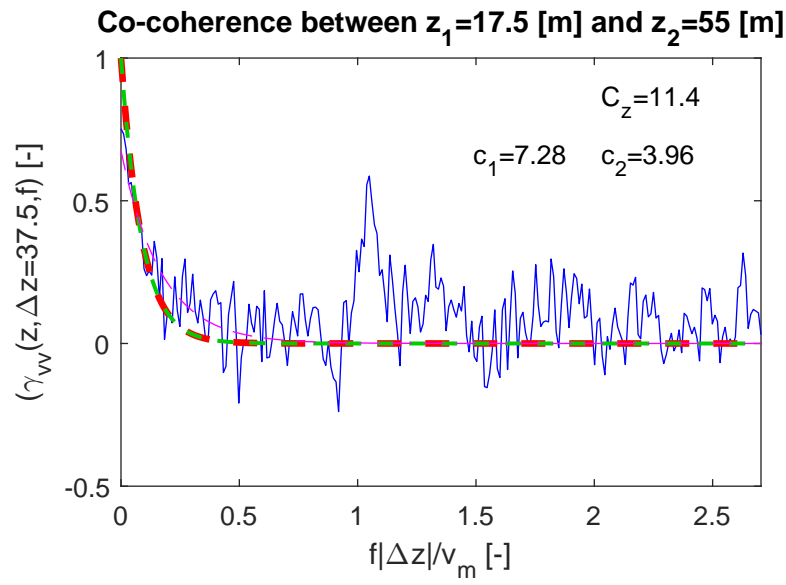
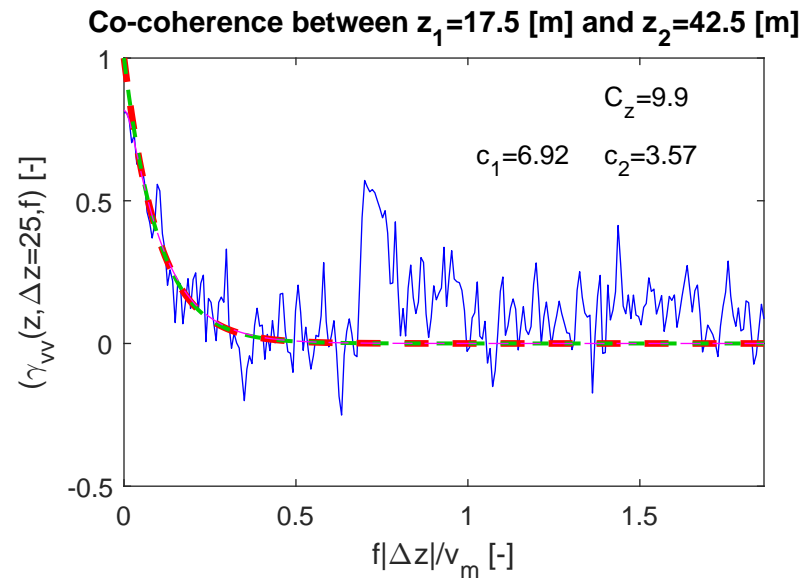
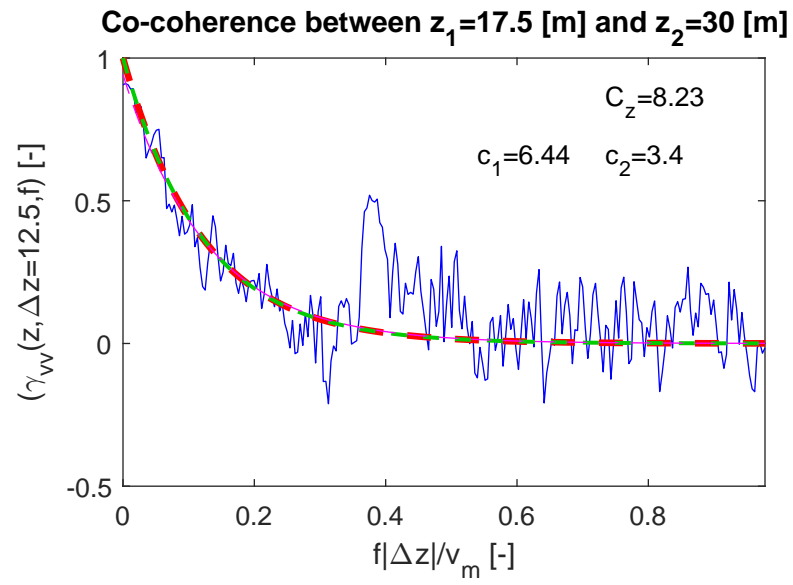


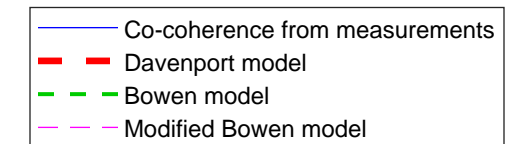
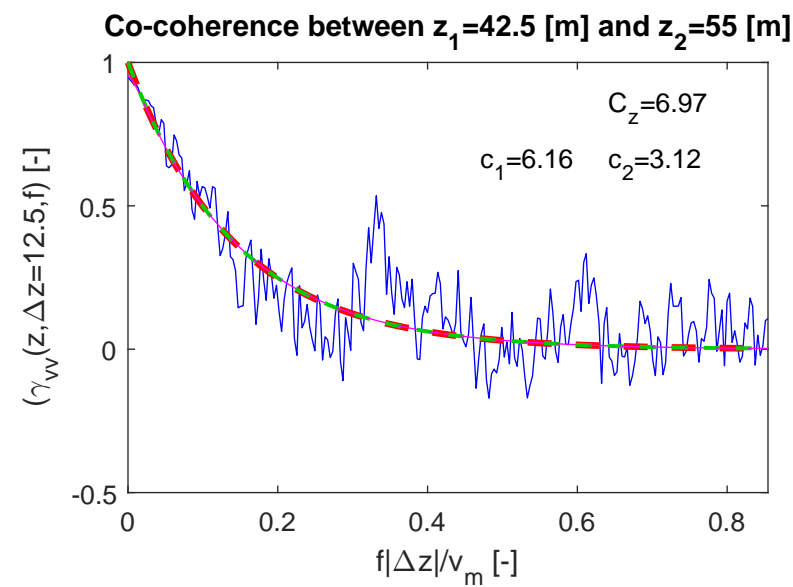
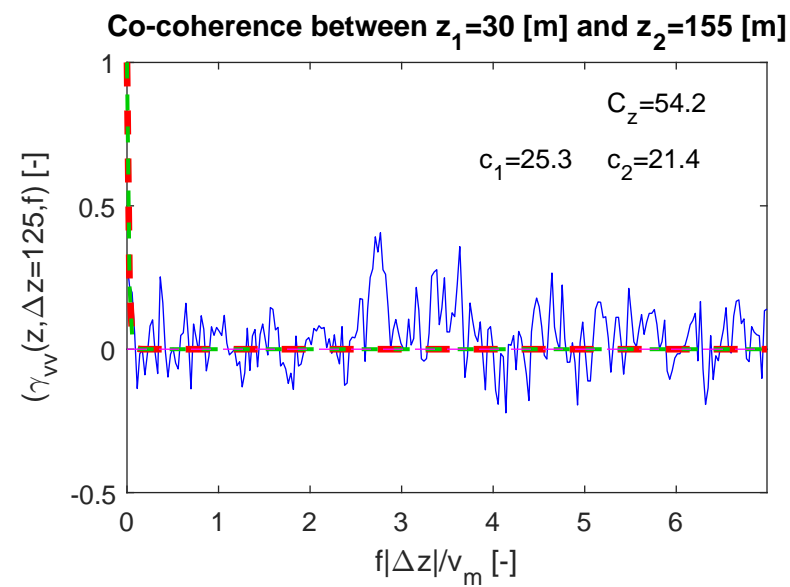
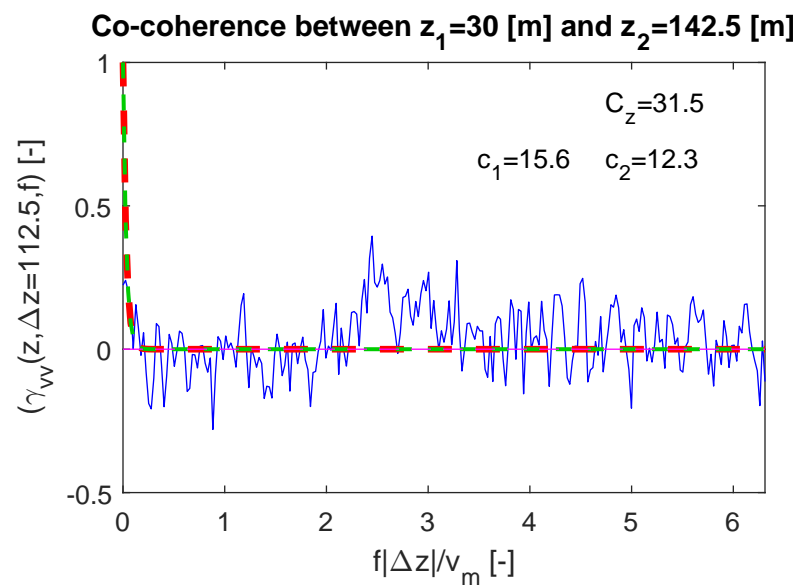
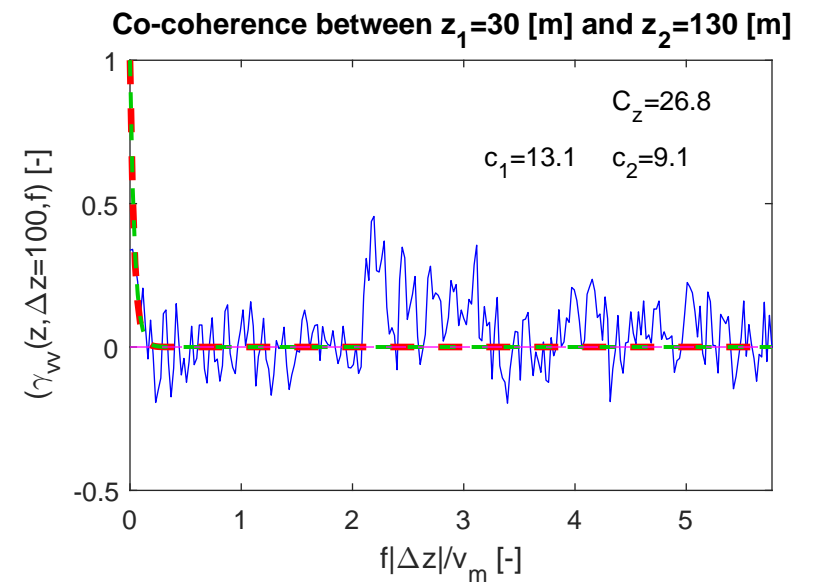
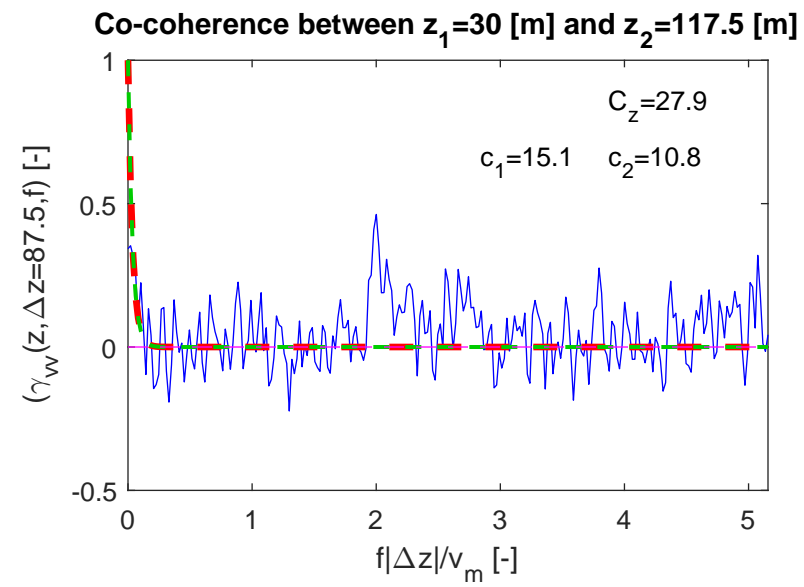
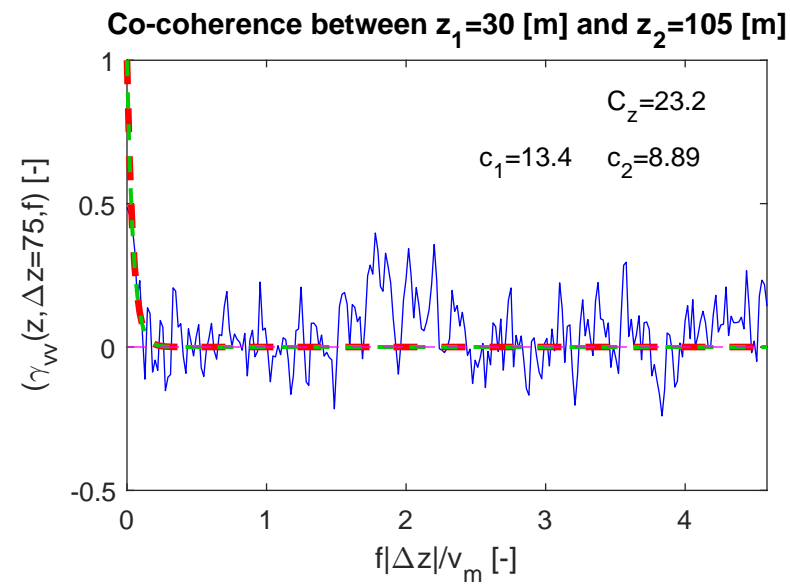
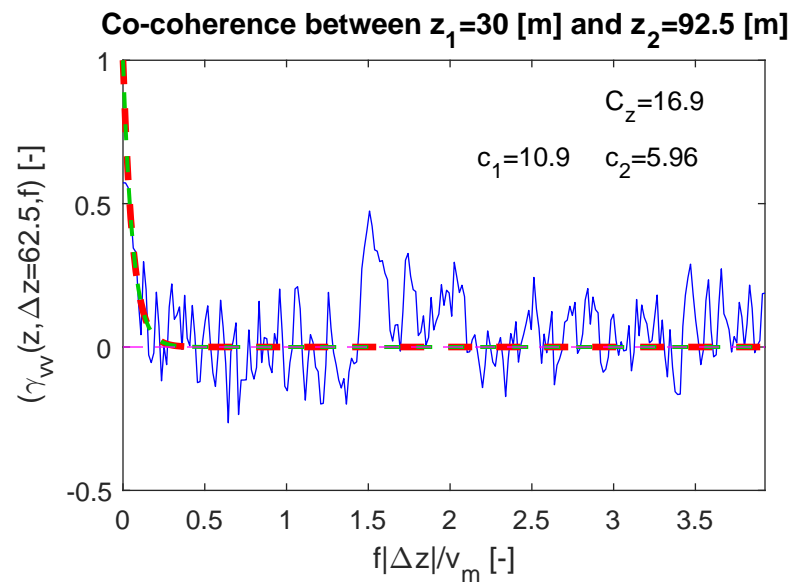
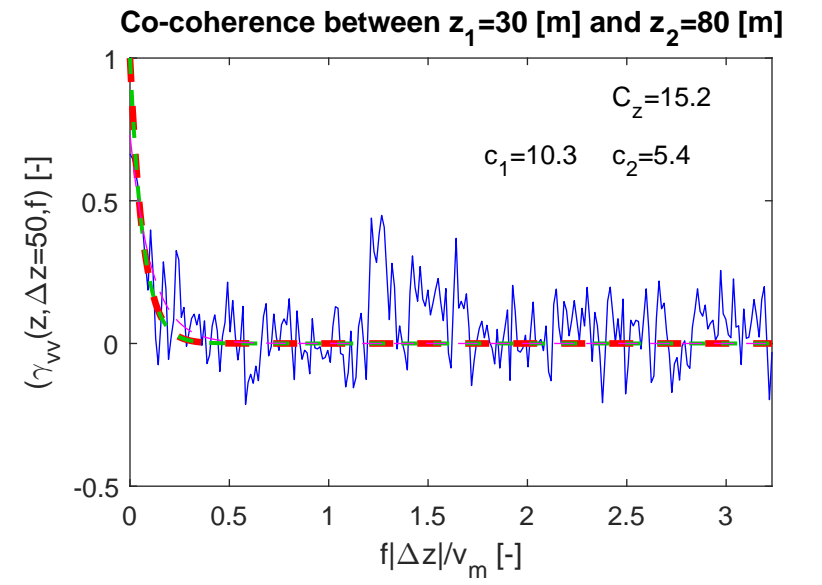
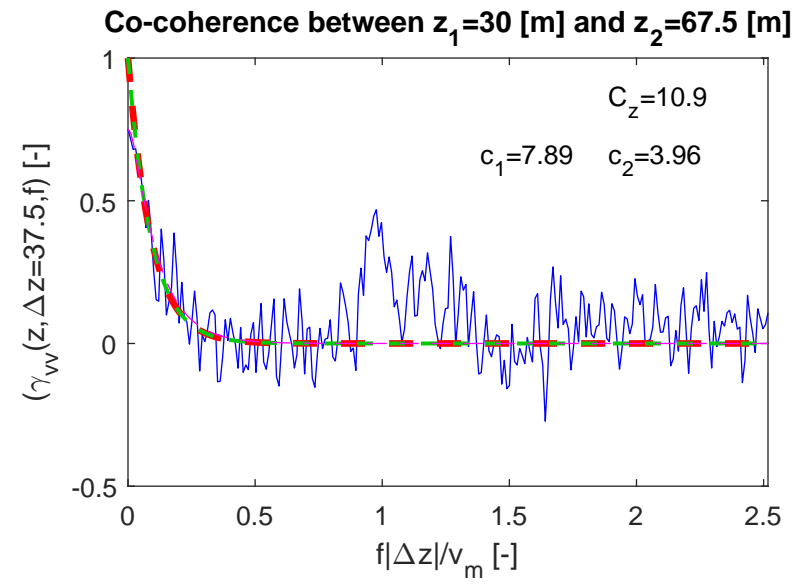
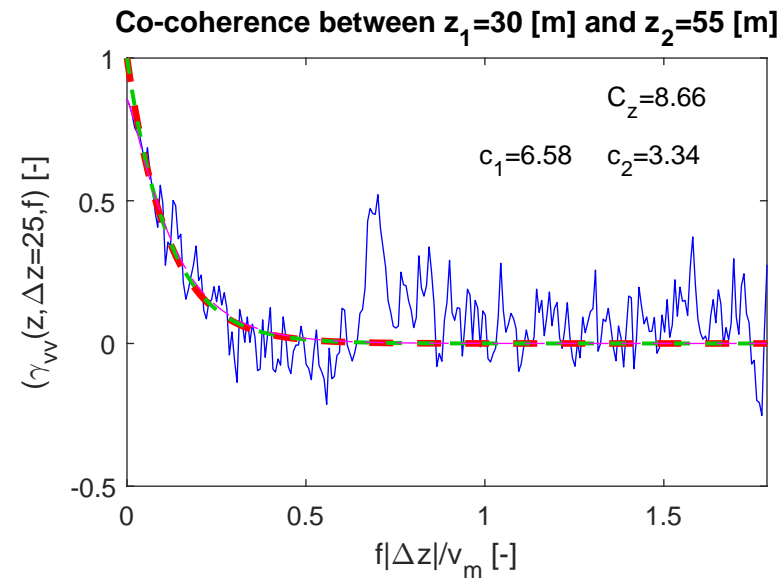
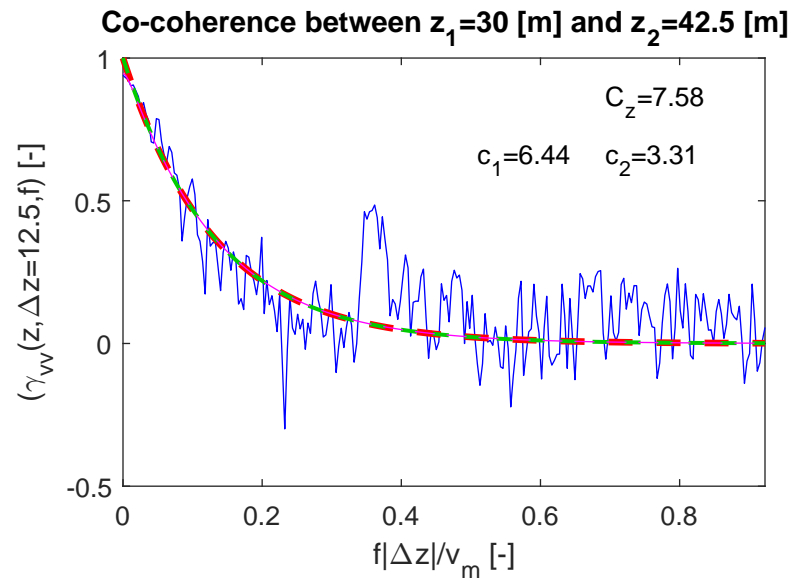
PSD at 142.5 [m] in full scale

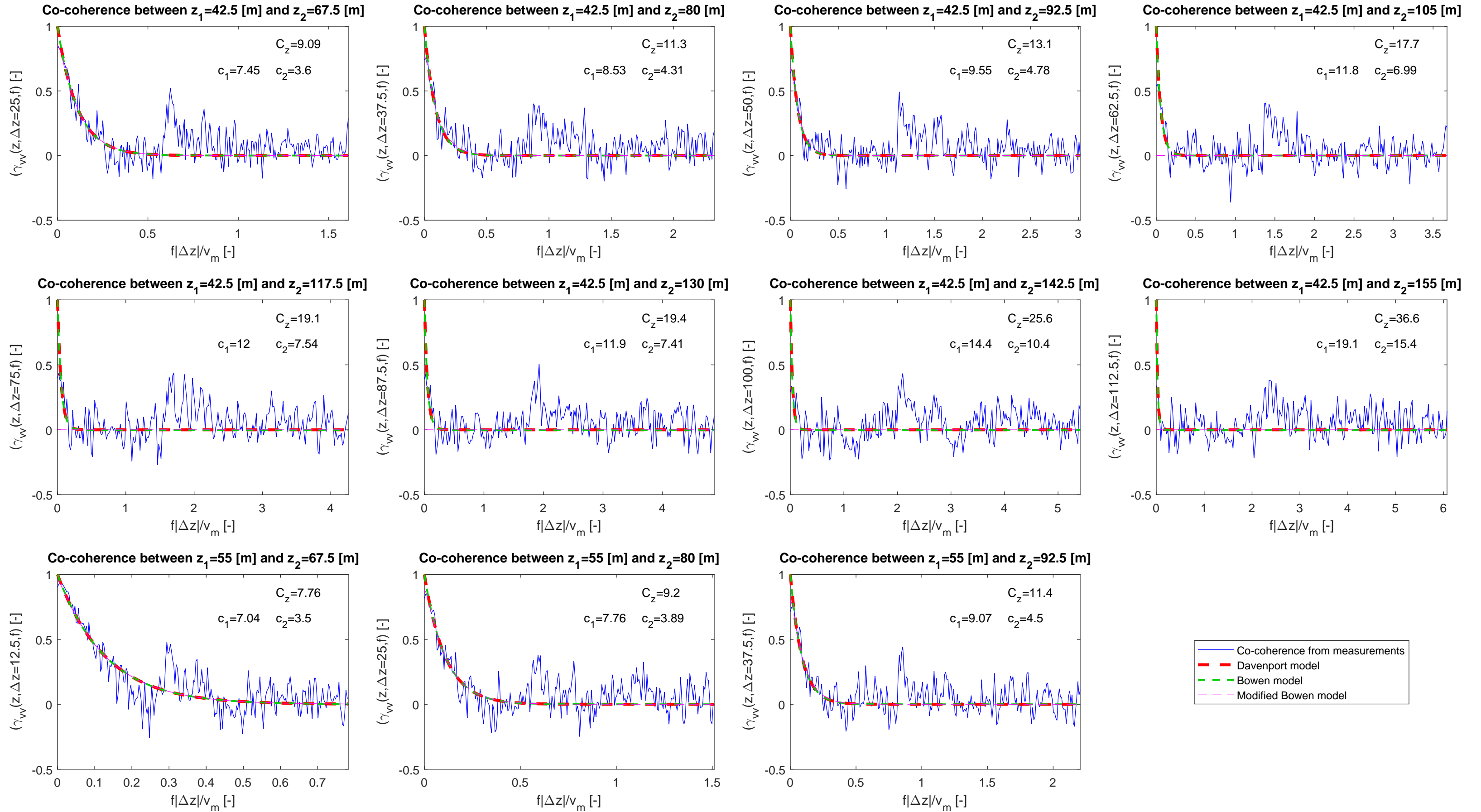


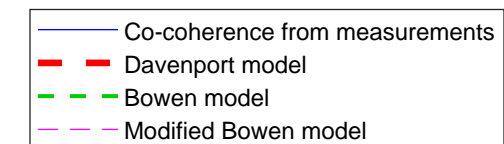
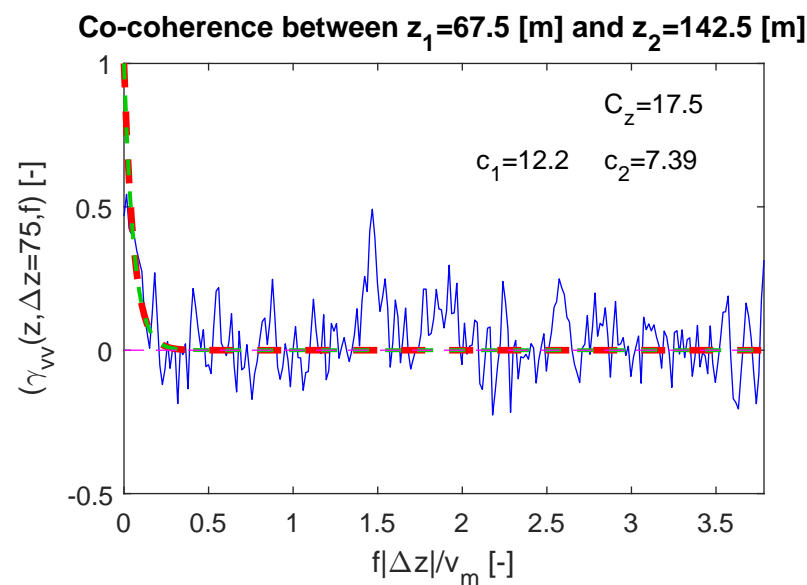
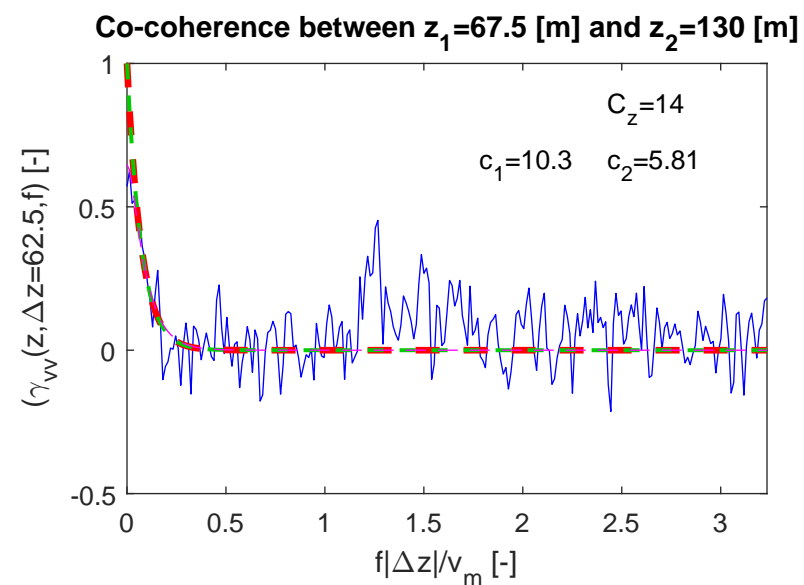
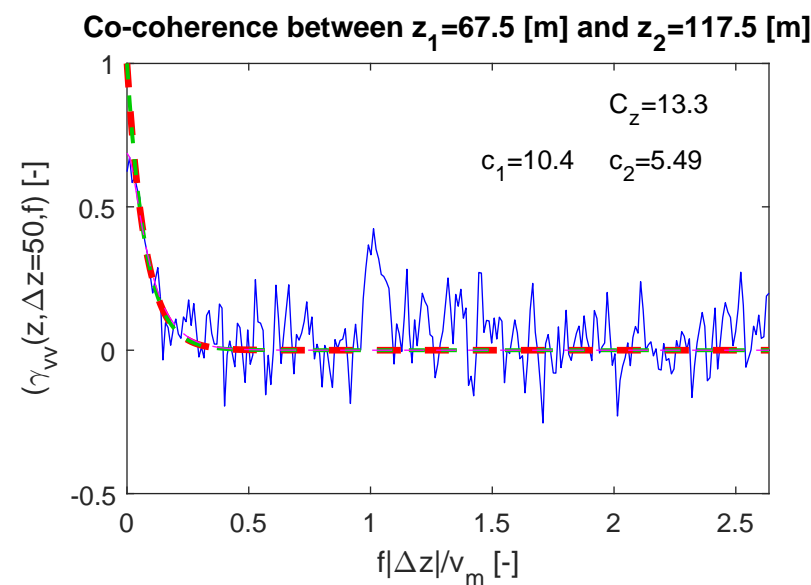
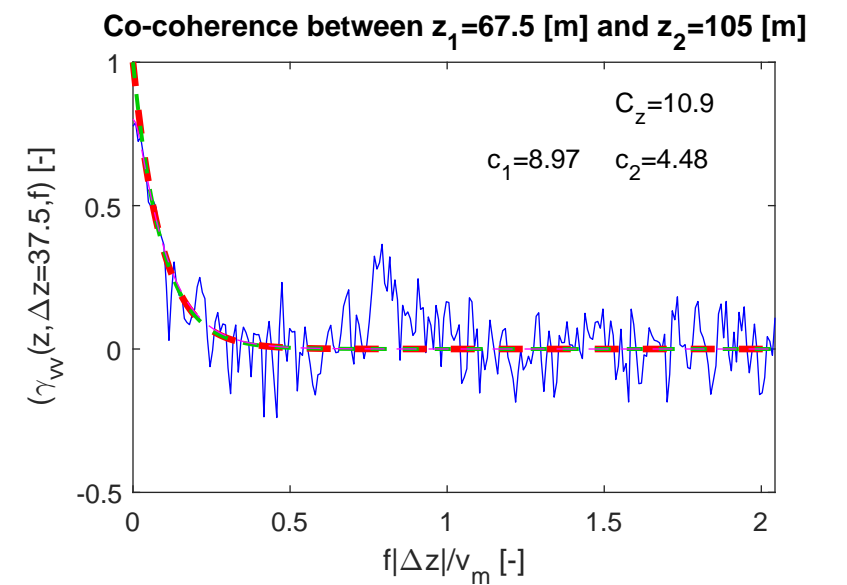
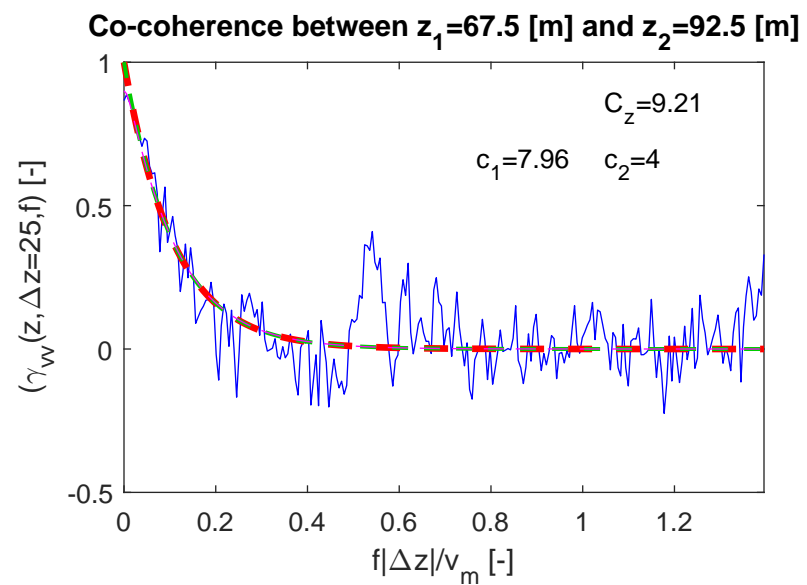
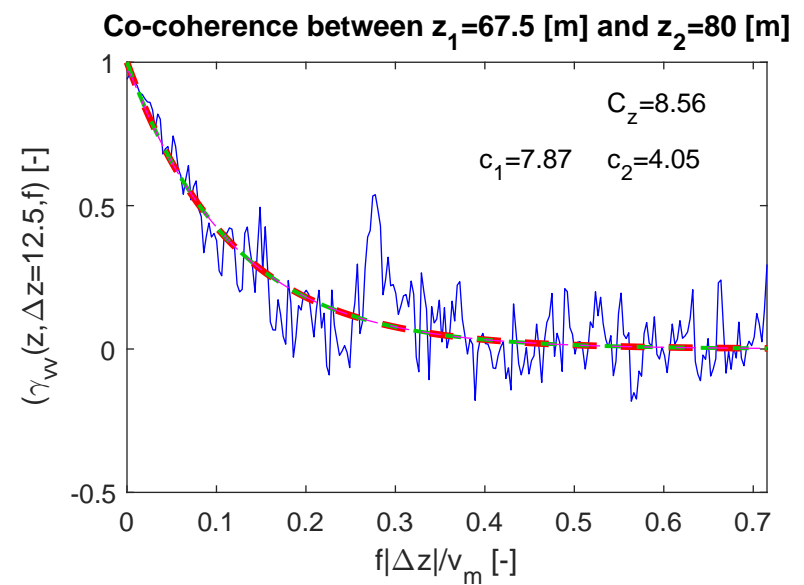
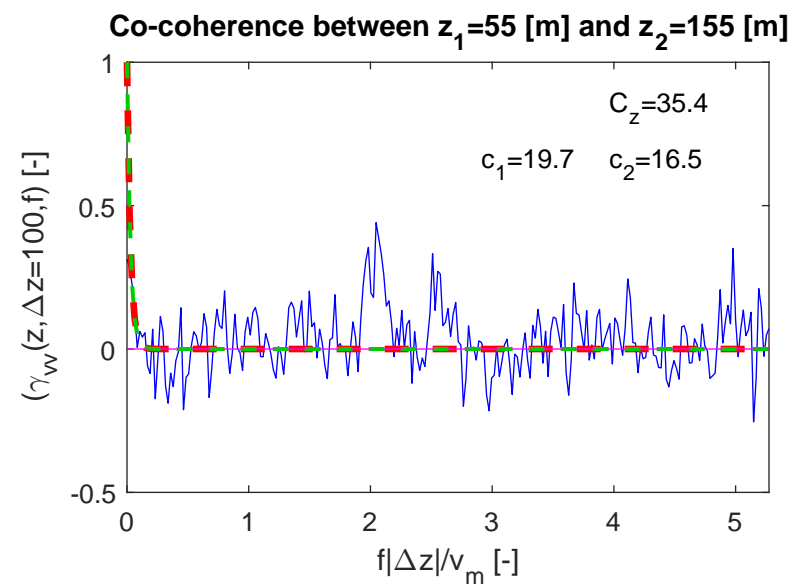
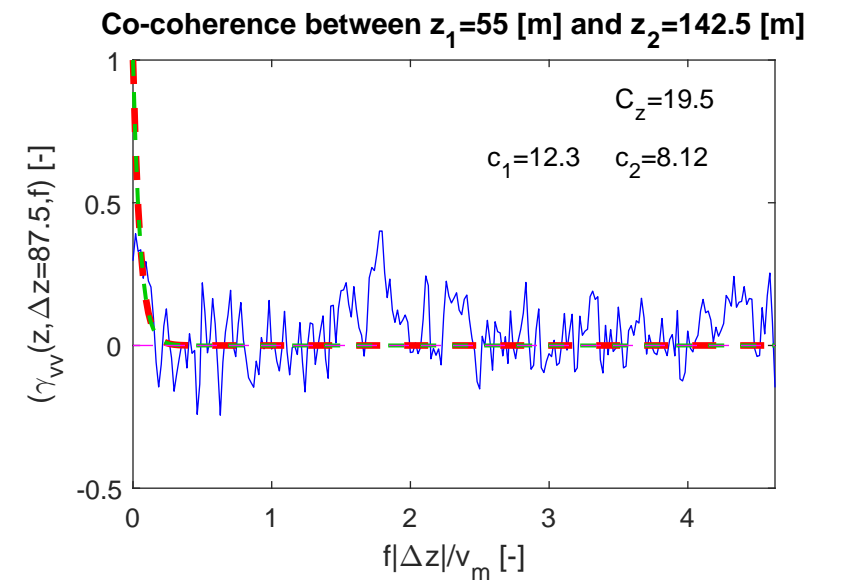
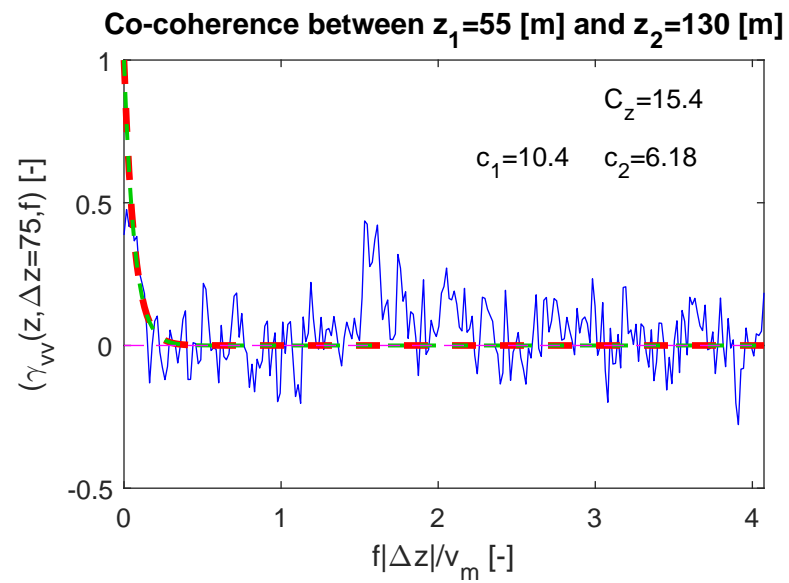
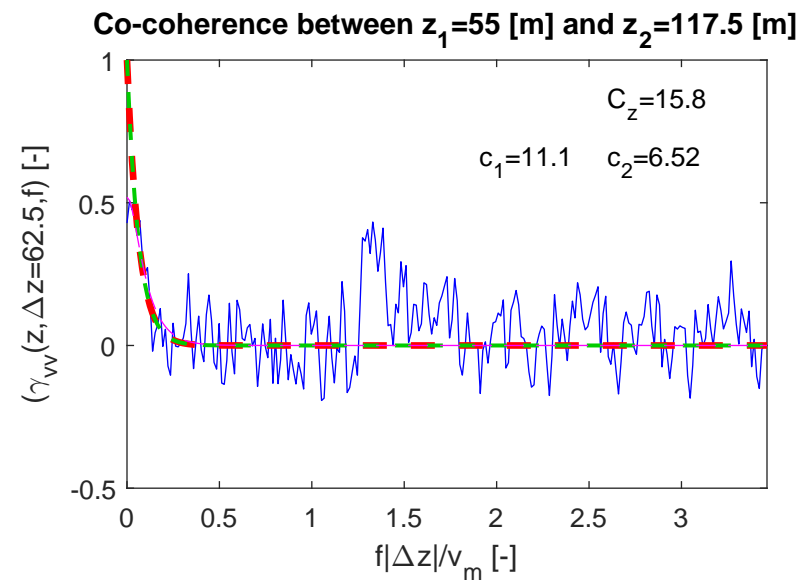
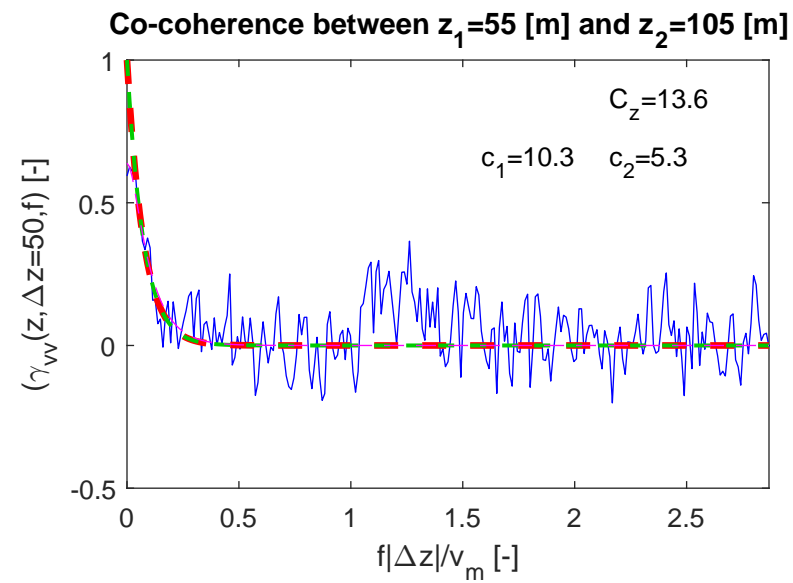
PSD at 155 [m] in full scale

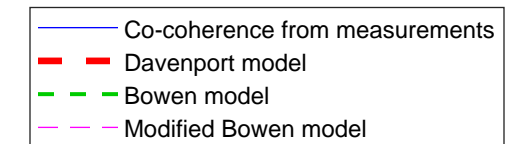
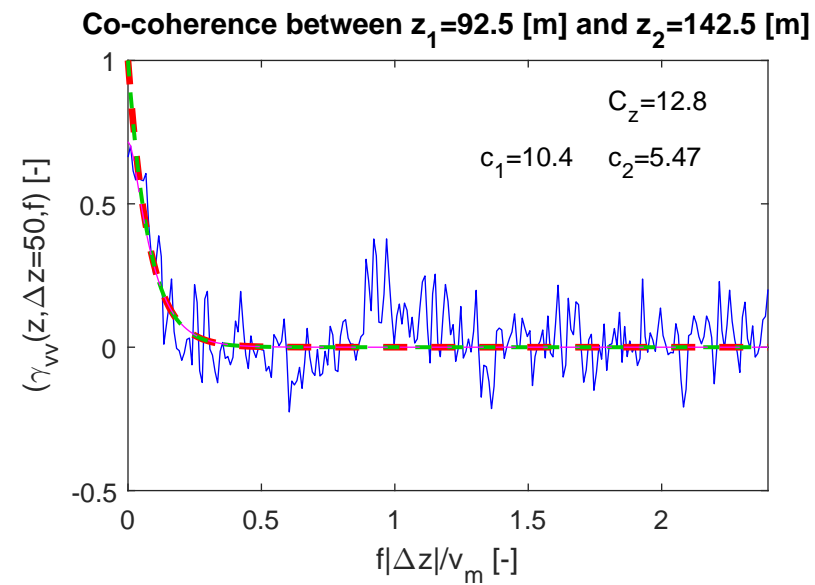
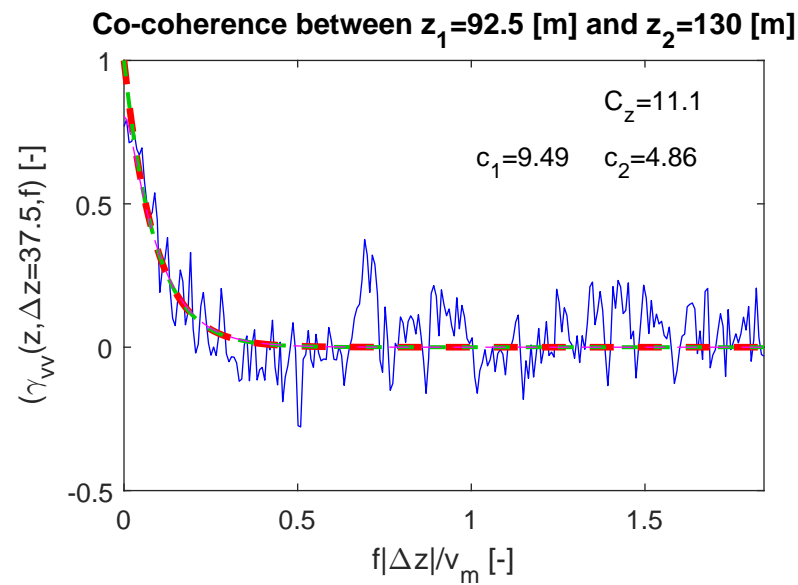
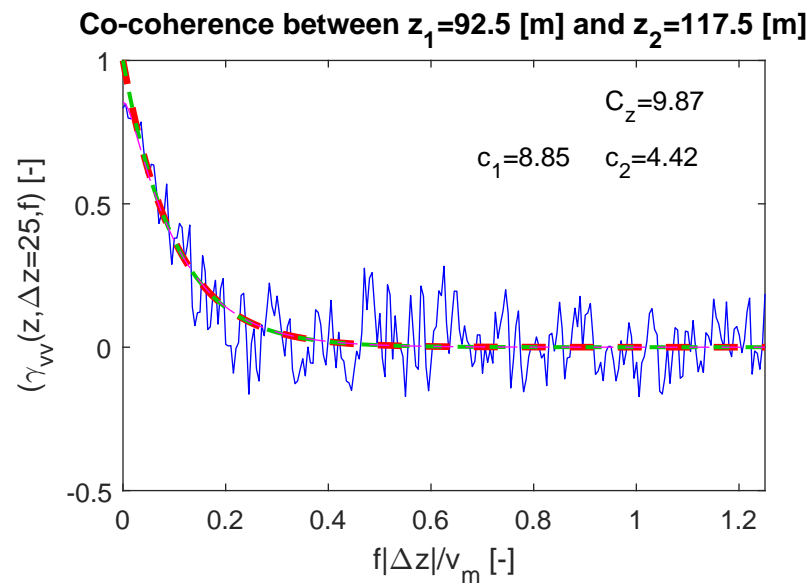
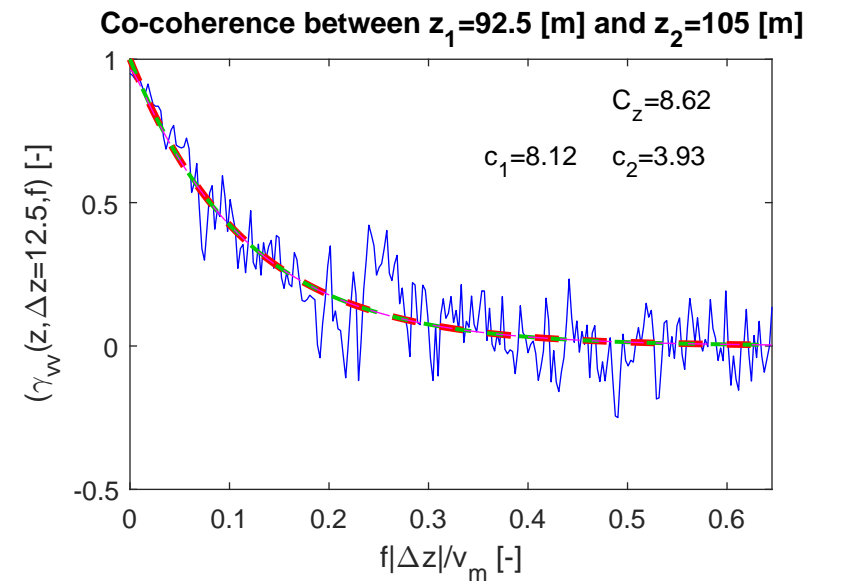
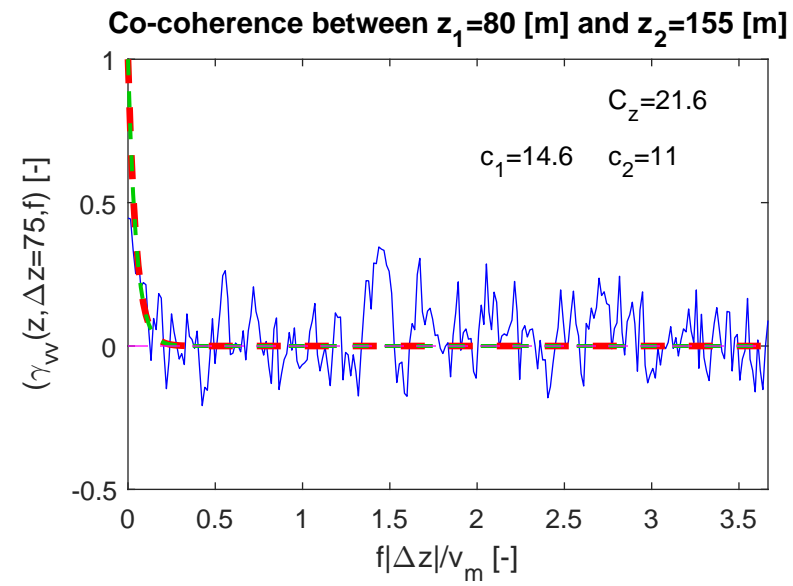
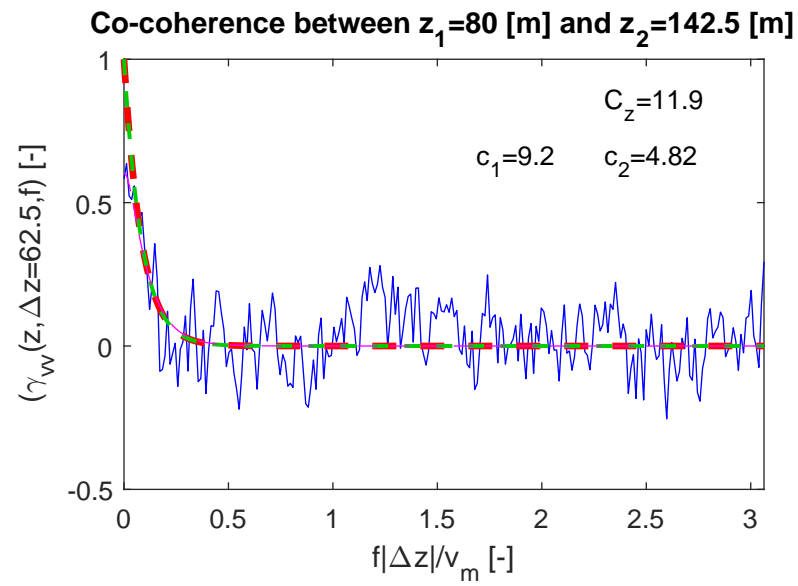
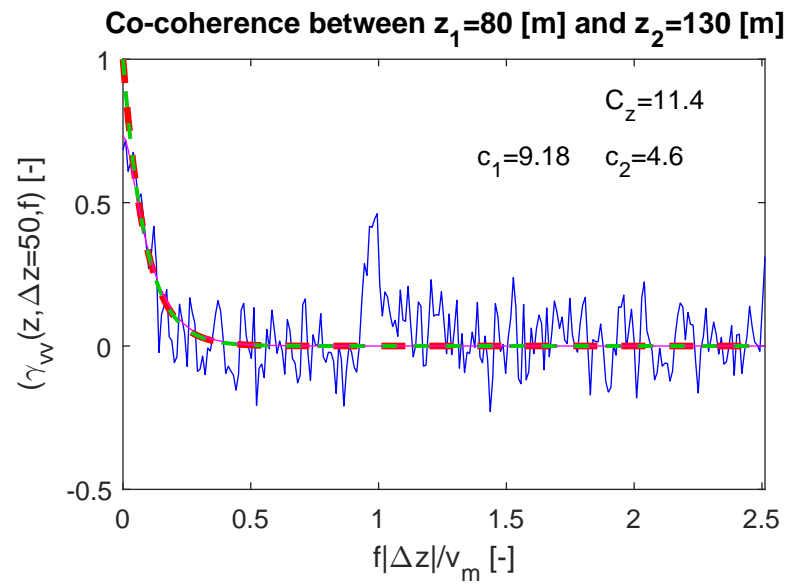
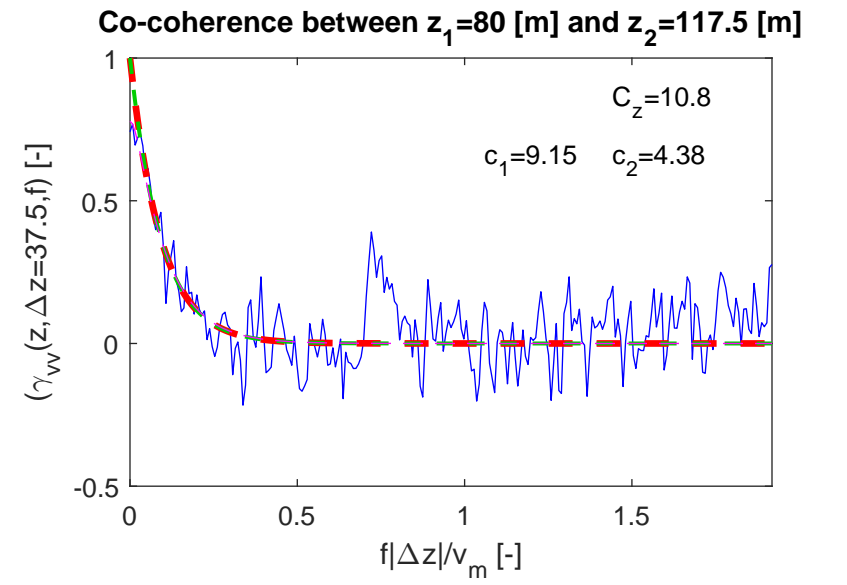
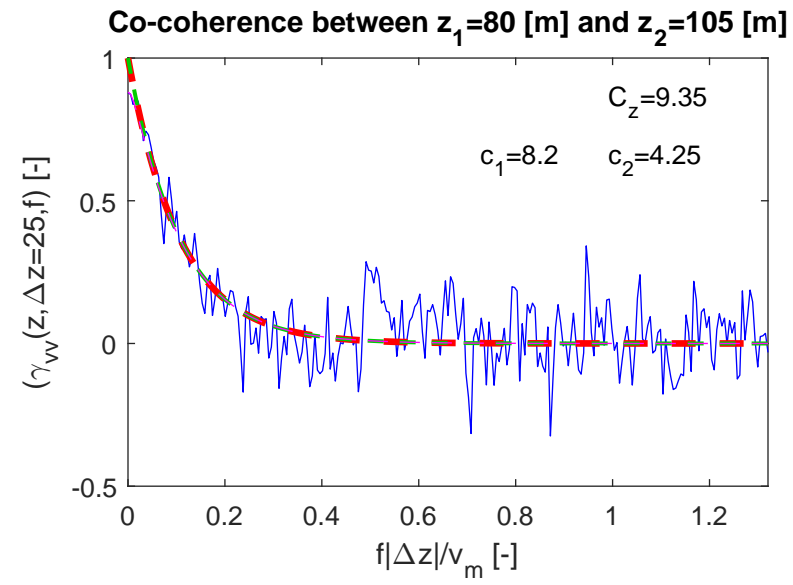
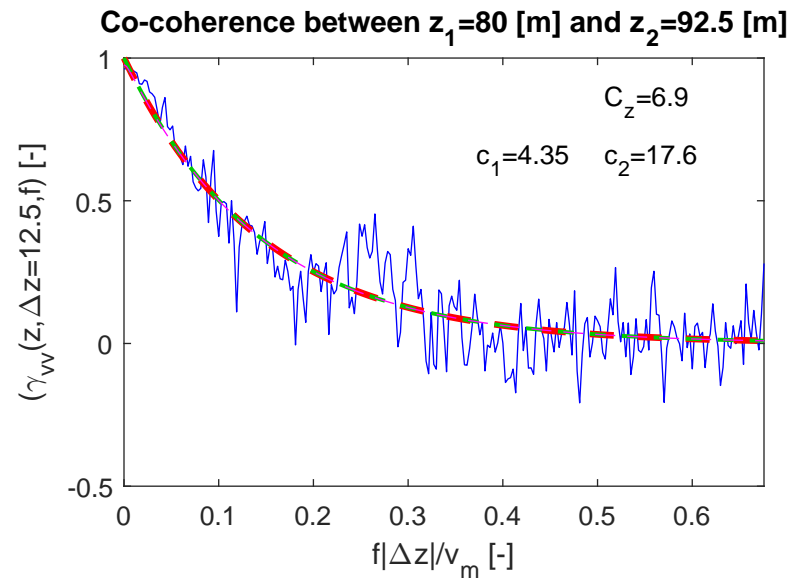
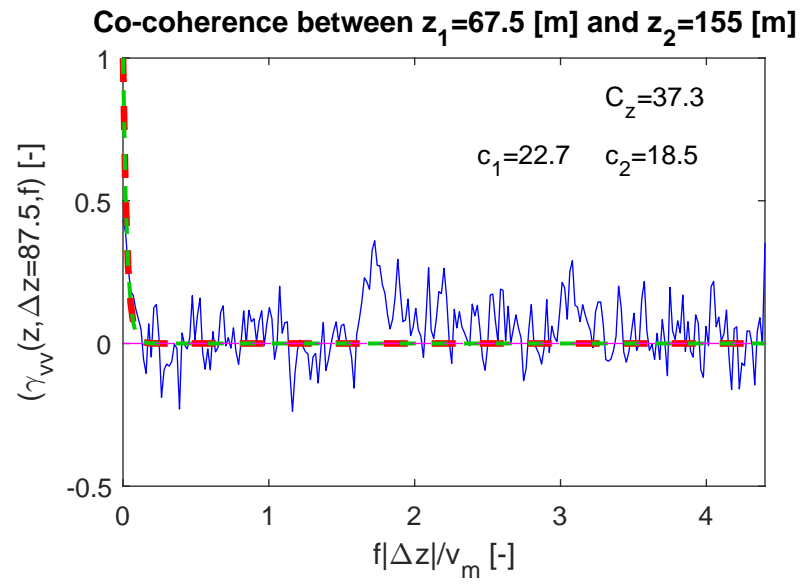


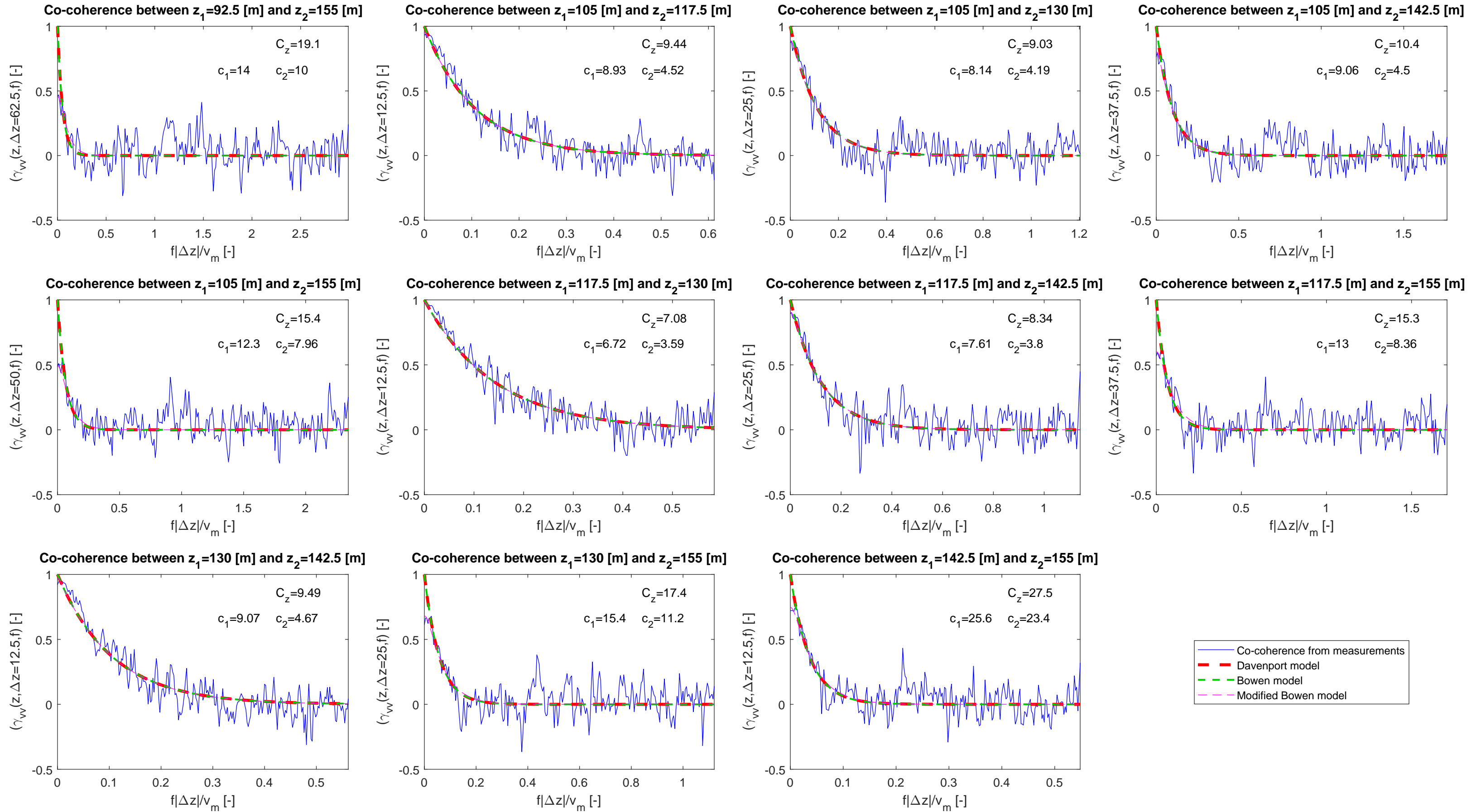




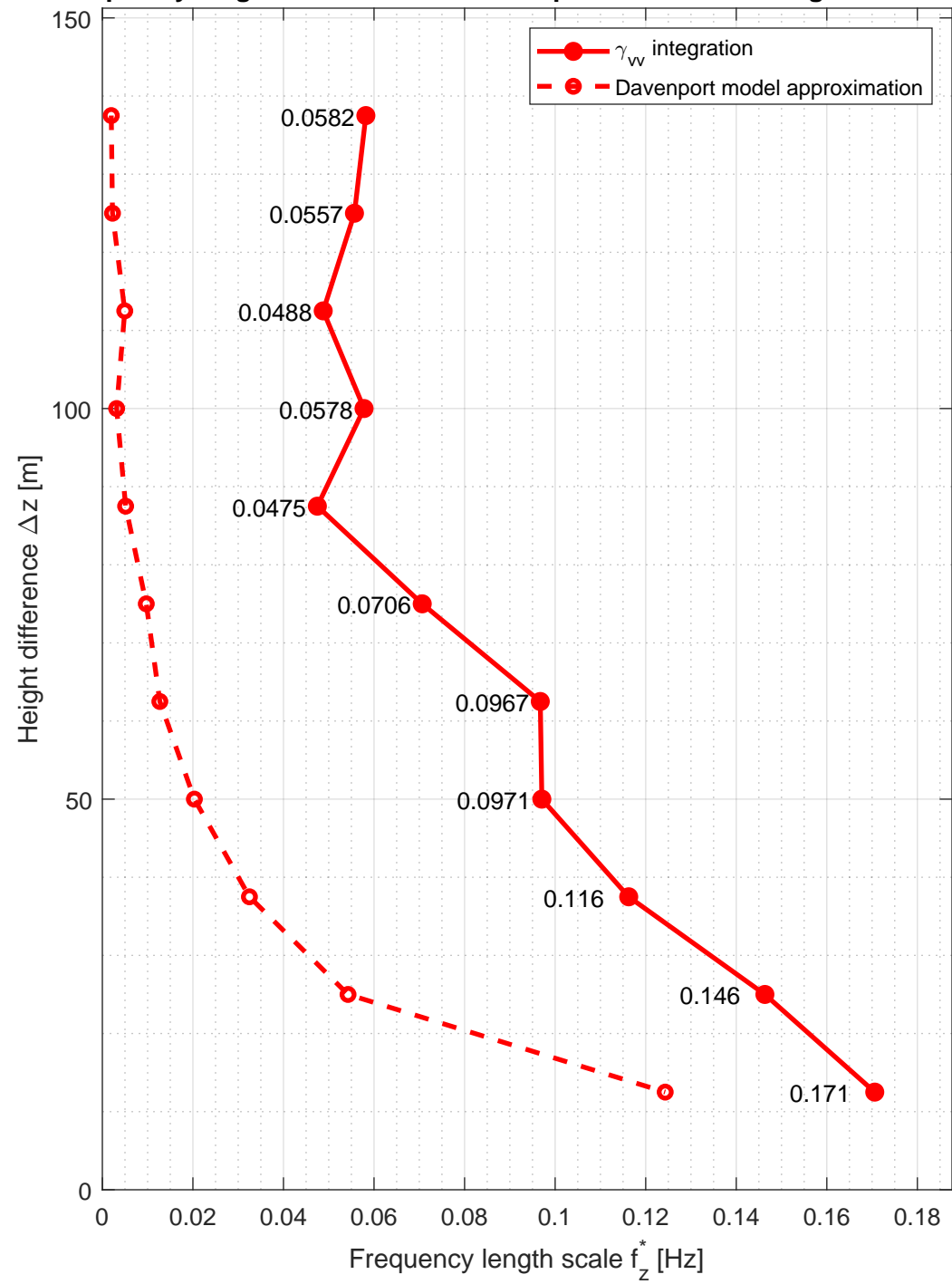




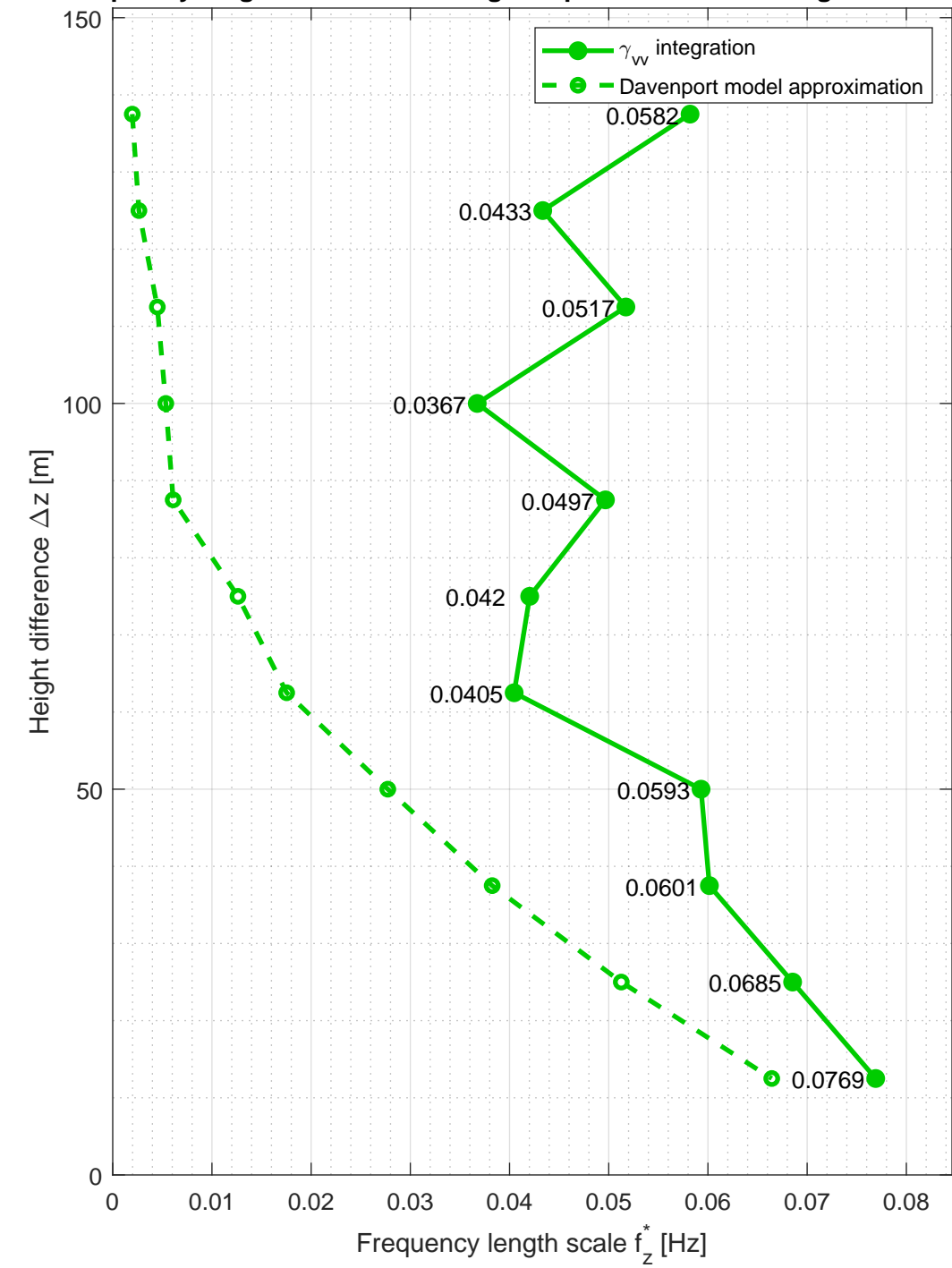




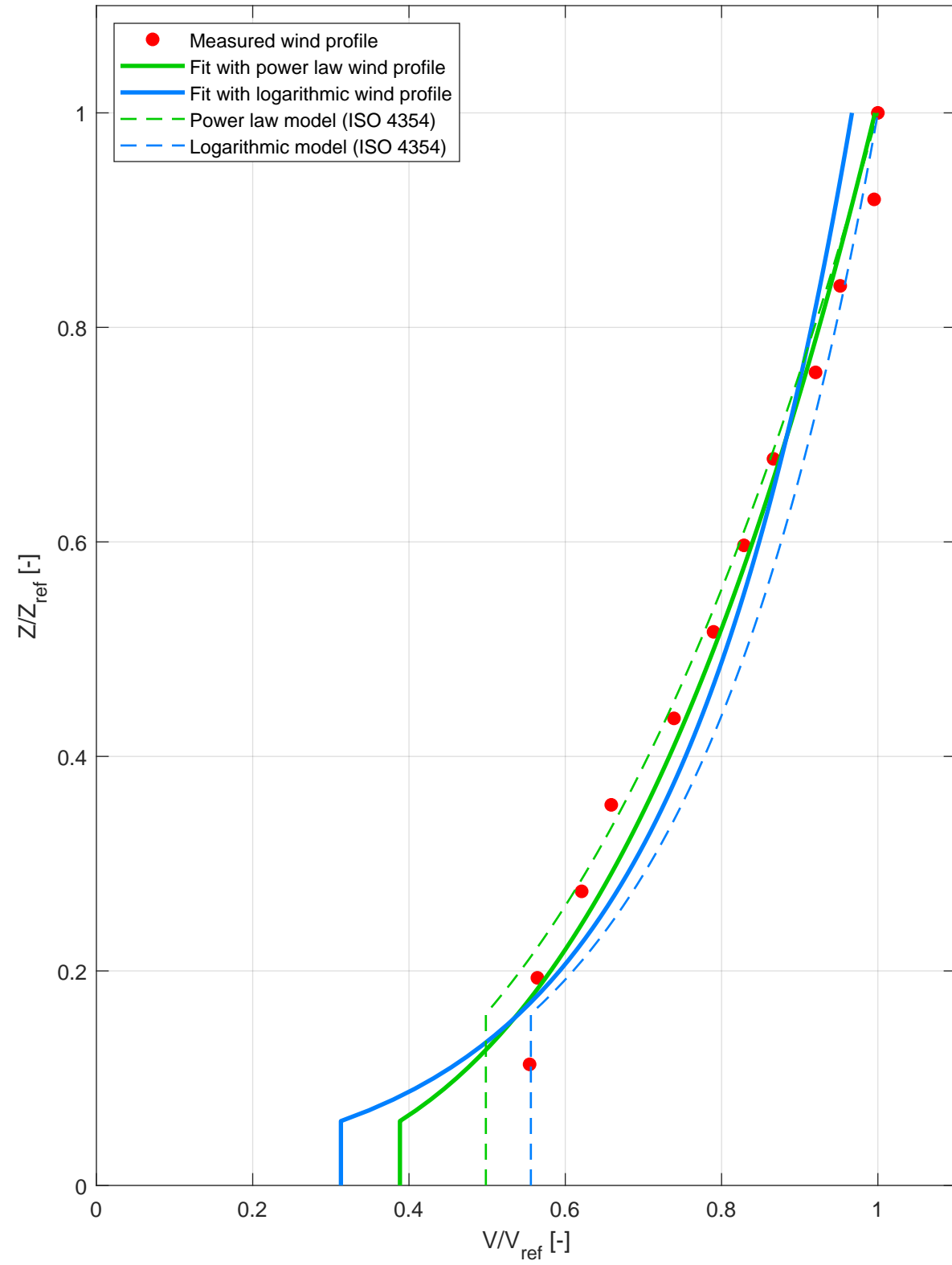
Frequency length scales for the lowest point at different height differences



Frequency length scales for the highest point at different height differences



Mean wind velocity profile - comparison with ISO 4354



Mean wind velocity profile - comparison with ASCE/SEI 7

