

The background of the top section is a photograph of a turbulent ocean with white-capped waves under a blue sky. The title "Challenging wind and waves" is overlaid in white, bold, sans-serif font. Below it, the tagline "Linking hydrodynamic research to the maritime industry" is in a smaller, orange, sans-serif font. A thin orange horizontal line is to the right of the tagline. On the left side of the image, there are four short, horizontal white dashes stacked vertically. At the top of the image, there is a series of short, vertical white lines of varying heights, resembling a scale or a horizon line.

Challenging wind and waves

Linking hydrodynamic research to the maritime industry

NAUTICAL AND RISK STUDIES FOR THE DELIMARA LNG TERMINAL IN MARSAXLOKK PORT, MALTA

Item 3: Moored ship response study

Volume I

Text Report - Final

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NAUTICAL AND RISK STUDIES FOR THE DELIMARA LNG TERMINAL IN MARSAXLOKK PORT, MALTA

Item 3: Moored ship response study

Volume I

Text Report - Final



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1 INTRODUCTION

1.1 Project background

Enemalta is developing a new gas-fired power station near the existing Delimara Power Station on the north-eastern shore of Marsaxlokk Bay. The gas for the power plant will be imported through a new to build LNG terminal in Marsaxlokk Bay. Figure 1-1 shows the approximate position of the new terminal.

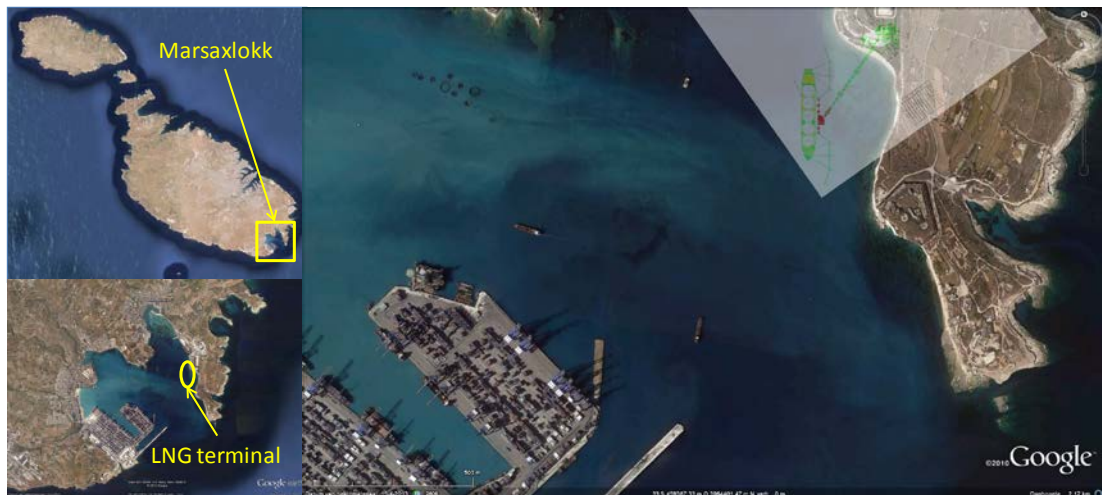


Figure 1-1: Marsaxlokk Port and approximate position of LNG terminal (source: Google Earth)

Enemalta has awarded the contract for design, construction and operation of the new power plant and LNG terminal to ElectroGas Malta. The LNG terminal proposed by ElectroGas consists of a jetty from the shore south of the power plant to a berth that is positioned where the bay is deeper, so that no or only limited dredging is required. On the jetty a converted LNG carrier will be permanently moored as Floating Storage Unit (FSU), delivering LNG through a cryogenic line over the jetty to the regasification unit onshore. The FSU berth has a conventional layout consisting of a platform, breasting dolphins and mooring dolphins (Figure 1-2). LNG will be imported by LNG carriers (further shortened to LNGCs) that will moor alongside the FSU.

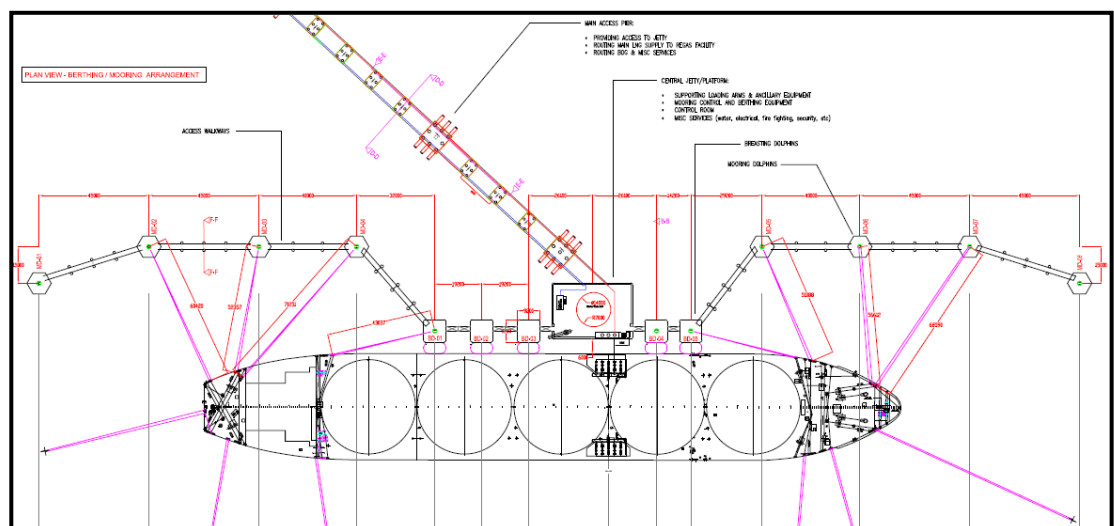


Figure 1-2: Proposed jetty configuration

To verify the design and evaluate safety aspects related to the permanent presence of the FSU in the port and to the regular call of LNGCs to the new LNG terminal, Enemalta has commissioned MARIN to carry out nautical and safety studies for the new LNG terminal. The study addresses a number of items raised by Transport Malta, the authority responsible for the port, who required:

1. Validation of proposed jetty/berth layout
2. Nautical and safety study
 - a. Determine the required minimum navigation channel/fairway
 - b. Determine the risk involved in the handling of an FSU and LNG carriers when navigating to the terminal
 - c. Determine the nautical procedures for the handling of the FSU and LNGC during routine procedures and emergency situations
3. Site specific risk (safety) assessment including
 - a. Cargo release
 - b. Collision
 - c. Fire and explosion
 - d. Grounding

The contract for the study (Ref: DPS-GEN-1190) was signed on 25 August 2014 and is based on MARIN's proposal of 24 March 2014.

1.2 Objective, approach and scope of work

Objective

The objectives of the present nautical and risk study for the Delimara LNG terminal are:

- To evaluate the dimensions of the manoeuvring area and port approach
- To determine the operational envelope for ship manoeuvres (input for nautical procedures);
- To evaluate the proposed jetty layout and to determine the limiting operational conditions for safe offloading and for staying safely at the berth (input for nautical procedures);
- To determine the risk involved in the LNG operations in the port regarding grounding of LNGCs and collisions involving FSU or LNGC,
- To determine the consequences (cargo release, fire and explosion) of incidents involving the FSU or an LNGC.

Approach

The above mentioned items are evaluated in this dedicated nautical and safety study for the Delimara LNG terminal. The study consists of the following items:

1. Wave climate study to determine the normal and extreme wave climate outside Marsaxlokk port (frequency of occurrence of directions and wave heights)
2. Wave penetration calculations to determine the wave conditions at the terminal
3. Numerical moored ship response simulations to validate the jetty/berth layout and determine operational limits for the moored FSU;
4. Real-time manoeuvring simulations to verify dimensions of the fairway and determine operational limits for sailing with LNG carriers;
5. Nautical risk study to determine the risks of grounding and collisions involving the FSU or LNG carrier
6. Quantitative Risk Assessment to determine the consequences of collisions in terms of cargo release and risk of fire and explosion

The wave studies (items 1 and 2), which serve as input for the nautical studies (items 3 and 4) were carried out by ARCADIS. Items 3 and 5 were carried out by MARIN. Item 4 was carried out by MARIN in cooperation with MMP (Malta Maritime Pilots) and MMRTC (Malta Maritime Research and Training Centre). SGS Tecnos SA carried out the QRA in item 6.

1.3 Reports

The total study is presented in a series of reports, each one treating one of the above mentioned study items. Table 1-1 gives an overview of the reports presenting the results of the study.

Table 1-1: Overview of reports

Volume	Title	Main author
27689-1-MSCN	Item 1: Wave climate study	ARCADIS
27689-2-MSCN	Item 2: Wave penetration study	ARCADIS
27689-3-PO	Item 3: Moored ship response study	MARIN
27689-4-MSCN	Item 4: Real-time manoeuvring simulations	MARIN
27689-5-MSCN	Item 5: Nautical risk study	MARIN
27689-6-MSCN	Item 6: Nautical Quantitative Risk Assessment	SGS Tecnos

To support the design of the modifications to the FSU and the storm mooring for the FSU, some additional analysis was carried out for ElectroGas Malta on the data from the wave climate and wave penetration studies. This has been reported directly to EGM.

1.4 This report

This report contains the results of the moored ship response study. The aim of the moored ship response study is:

- To determine the limiting metocean conditions for the FSU at the jetty for
 - sending out LNG to shore; limiting factor: motions of the manifold
 - staying at the berth; limiting factor: mooring line and fender forces
- To evaluate whether the FSU can stay safely in the port in a storm mooring
- To determine the limiting metocean conditions for the LNGC along the FSU for
 - transferring LNG; limiting factor: relative motions of the manifolds of the FSU and the LNGC
 - staying alongside the FSU; limiting factor: mooring line and fender forces (between LNGC and FSU and between FSU and the berth).

To reach the above objectives, the scope of this study item as part of the total nautical and risk studies for Enemalta included numerical simulations of the response of the vessel(s) for the following situations:

- the FSU moored at the jetty,
- the FSU in a special storm-mooring (possibly spread-moored),
- the LNGC moored side-by-side to the FSU at the jetty.

Input for these simulations are characteristics of the ship, the proposed layout of the terminal and mooring configuration (mooring lines and fenders) and metocean conditions. When the metocean conditions at the site of the new terminal had been

assessed in items 1 and 2 of the study (see [2] and [3]), it appeared that the design of the jetty and proposed mooring configuration had not yet been completely detailed and optimized. With permission of Enemalta, the model set-up for the evaluation of the FSU at the jetty was then used to carry out additional calculations for ElectroGas Malta and their team to optimize the design of the jetty and the mooring configuration. This report presents the results of the final, optimized configuration and aims to report to both Enemalta and ElectroGas.

Also for the storm mooring and the side-to-side configuration a design was not yet available. For the storm mooring calculations were carried out for an initial design and some variations to evaluate the sensitivity. The design of the storm mooring was included in the contract between ElectroGas and Bumi Armada, who will be supplying the FSU for the project. In the present study a number of initial mooring configurations (spread mooring with 4 bundles of anchor lines) were modeled and tested. It appeared from the results that another kind of mooring configuration was needed to keep the forces in the lines at acceptable levels. The design and verification of the storm mooring is carried out as a separate project by others. This report does therefore not present results for the final configuration, but summarizes only the work carried out by MARIN on this subject.

For the side-to-side mooring input is required with respect to the positions of the fairleads and quick release hooks on the FSU to which the LNGC will make fast when mooring alongside. This information will only be available when the design of the conversion has been prepared. As this was not available when this information was required for the present study, some preliminary assumptions were made regarding approximate positions in discussion with representatives from Bumi Armada and AECOM (engineers for ElectroGas). Based on these positions a preliminary mooring line configuration was prepared for the side-to-side mooring. This report presents results for this preliminary mooring layout. It is understood that the design by Bumi is based on the mooring line configuration as used in the numerical simulations presented in this report.

This report presents the model set-up, the simulations that were carried out and the results of the numerical simulations for the three above-mentioned configurations: FSU at the jetty, FSU in the storm mooring and the LNGC alongside the FSU. The results of the single-moored FSU and the spread-moored FSU have been reported before in MEMOs, which been included as Appendix A02 and Appendix A03, respectively.

In section 2, the sign convention that is applicable to this report is explained. Section 3 describes the software that has been used to perform the numerical study. The components of the numerical model are provided in section 4. Results are discussed in section 5 and conclusions and recommendations are given in section 6.

2 SIGN CONVENTION

2.1 Units

The following metric (SI) units are used throughout this report unless otherwise stated:

- Motions and dimensions are given in meter [m]
- Angles are given in degrees [deg]
- Forces are given in 1,000 Newton [kN]
- Moments are given in 1,000 Newton meters [kNm]

2.2 Local Coordinate System (LCS)

The applied sign convention and coordinate system are in accordance with the OCIMF [1] standard. An overview of this standard is given in Figure 2-1. The origin of the Local Coordinate System (LCS) is located at the intersection of the keel, centreline and halfway L_{pp} . A right handed coordinate system is applicable. The order of rotations is Yaw-Pitch-Roll.

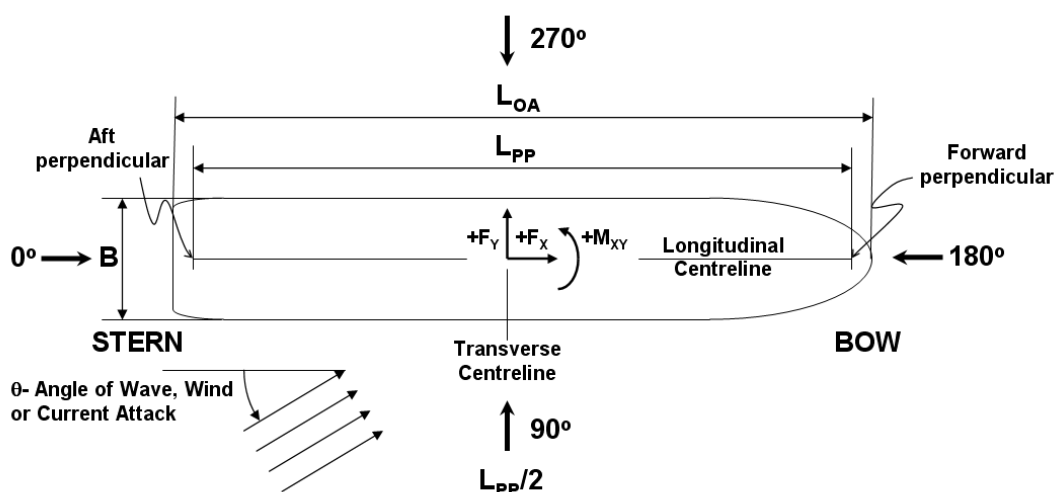


Figure 2-1: General OCIMF convention

The motions are positive in the following directions:

positive surge	(x)	: towards the bow
positive sway	(y)	: towards port side
positive heave	(z)	: upwards
positive roll	(ϕ)	: starboard side down
positive pitch	(θ)	: bow down
positive yaw	(ψ)	: bow towards port side

The forces and moments are positive in the following directions:

positive longitudinal force	(F_x)	: towards the bow
positive lateral force	(F_y)	: towards port side
positive vertical force	(F_z)	: upwards
positive roll moment	(M_x)	: starboard side down
positive pitch moment	(M_y)	: bow down
positive yaw moment	(M_z)	: bow towards port side

The relative environmental headings are defined as follows:

0 degree heading	: stern on
90 degrees heading	: starboard side on
180 degrees heading	: bow on
270 degrees heading	: port side on

2.3 Global Coordinate System (GCS)

The origin of the Global Coordinate System (GCS) is located in the Still Water Line (SWL). A right handed coordinate system is applicable. All environmental conditions are specified with respect to the GCS. By default, this sign convention is applicable.

For convenience, the environmental directions are sometimes given in nautical conventions. The environmental directions in the Global Coordinate System are then defined as follows:

0 degrees North	: coming from the North
90 degrees North	: coming from the East
180 degrees North	: coming from the South
270 degrees North	: coming from the West.

If the nautical direction convention is applicable, the direction will always be explicitly stated in 'degrees North' or 'deg N'.

3 PROVIDED DATA

3.1 FSU

The Wakaba Maru, an LNGC of 283x44.8m will be used as FSU for the new terminal. To serve as FSU the Wakaba Maru will be modified to include e.g. quick release hooks (QRHs) to moor the LNGCs delivering LNG alongside. Details of the changes that will be made were not yet available when carrying out the moored ship simulations. Data received regarding the Wakaba Maru included:

- General arrangement drawing (see Figure 3-2)
- LNG Form B (file Wakaba Maru - LNG FORM B 2014.04.24.pdf)

Some additional data was found in the SIGTTO publication [6]. Figure 3-1 shows a picture of The Wakaba Maru.

For the wind coefficients the latest values from SIGTTO for a Moss-type LNGC were used [7]. The particulars of the vessel as implemented in the simulator model are shown in Table 1 at the end of this report.



Figure 3-1: Picture of Wakaba Maru (source: MarineTraffic.com)

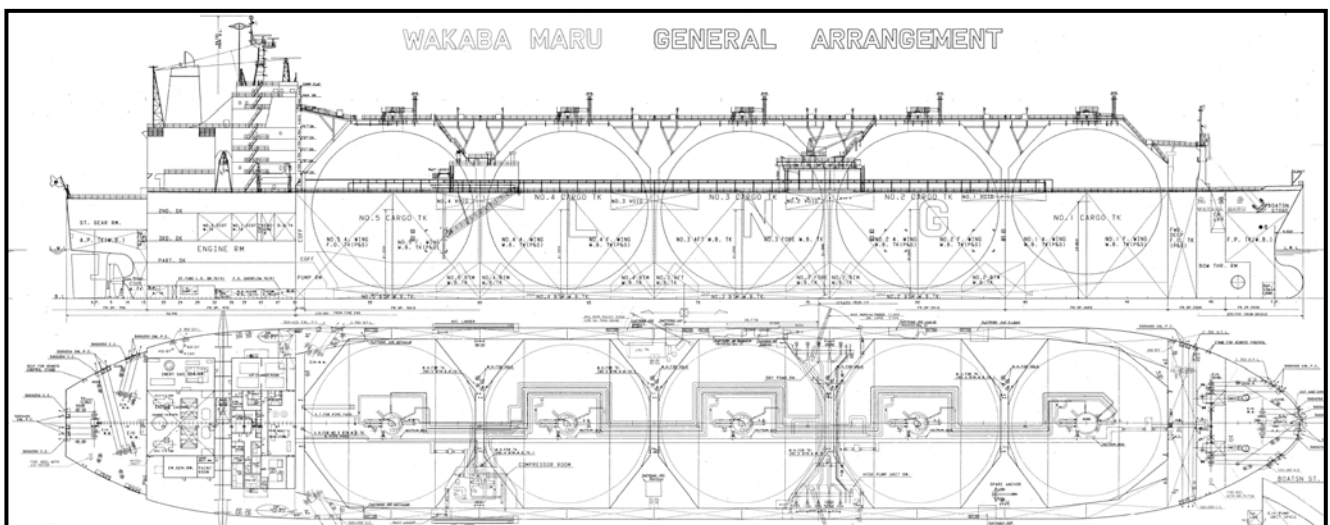


Figure 3-2: General arrangement of the Wakaba Maru

3.2 LNGC

Various LNGCs may be calling at the terminal. Socar Trading, who will be providing the LNG for the power plant, provided details ("FormB") of a few typical vessels that might be used for that purpose. Table 3-1 summarizes the main particulars of these vessels. Note that some values for the Hispania Spirit seem to be erroneous. The extreme draught looks low, while the wind areas are not in the expected order of magnitude either and the position of the manifold seems wrong.

Table 3-1: Main particulars of LNGCs that may be used for LNG delivery to the FSU

Dimension	Unit	Gemmata	Castillo de Santisteban	Trinity Arrow	Hispania Spirit
		294x46m	300x46m	289.9x44.7m	279.8x43.4m
		Moss-Rosenberg	membrane	membrane	membrane
Length over all	m	294.00	299.9	289.93	279.8
Length between perps	m	276.00	288	276.00	268.8
Beam	m	46.00	45.8	44.70	43.426
Depth	m	25.50	26.015	26.00	26
Draught (loaded)	m	11.05	11.8	11.396	11.4
Displacement	tonnes			105,000	
Capacity (98.5%)	m ³	135,342	170,410	152,655	138,517
Dead weight tonnage	tonnes	68,200	118,990	79,556	67,937
Engine-type		Steam turbine	Diesel-electric	Steam turbine	Steam turbine
Frontal wind area	m ²	1369	1330	1120	2038
Lateral wind area	m ²	6782	6300	6004	672
Distance manifold from midships	m	-1.66	1.22	0.332	16.25
Distance manifold from ship side	m	3.5	3.5	3.5	3.5
Height manifold above keel	m	31	31.1	31.3	30.8

SOCAR indicated that the Gemmata was a likely vessel to be used for delivery of LNG to the new power plant. The main data of the LNGC model used in the simulations are summarized in Table 2.

It can be seen in Table 3-1 that the position of the manifold of the first three vessels is near midships. The position of the manifold seems wrong; a drawing of the vessel in [5] shows that the manifold is a little aft of midships. A quick scan of available plans of LNGC published in various issues of Significant Ships shows that the position of the manifold on membrane-type LNGCs is usually around midships. For Moss-type LNGCs the position of the manifold is in the area between the spherical tanks. For LNGCs with 4 tanks the manifold is between tanks 2 and 3, which is for a typical design about 15 m forward of midships. For Moss-type LNGCs with 5 tanks the manifold is either between tanks 2 and 3 (like the Wakaba Maru) or between tanks 3 and 4 (e.g. the Gemmata). Data available in the SIGTTO LNG Ship Data Book [6] shows that the position of the manifold varies from 19.7 to 33 m forward of midships if it is located between tanks 2 and 3. For the simulations for the LNGC alongside the FSU it was decided in discussion with ElectroGas and AECOM to consider the two extreme situations:

- An LNGC with the manifold 30.7 m forward of midships; the LNGC is then aligned with the FSU, which has the manifold also 30.7 m forward
- An LNGC with the manifold at midships; the LNGC is then in a shifted position relative to the FSU, with the bow extending about 30 m forward of the bow of the FSU.

3.3 Layout of the terminal

Enemalta and ElectroGas/URS provided various drawings of the new LNG terminal which were used as reference for the present study. These drawings included:

- the overall layout of the terminal (Figure 1-2)
- the jetty (GDP1-OAS-MA-MP-DWG-DES-075-R4 (general layout - jetty).pdf)
- the position of the terminal in the bay (ENEM-URS-E2-00-DR-CT-00003.dwg)

Figure 3-3 shows the position of the LNG terminal with a part of the bathymetry and the geometry.

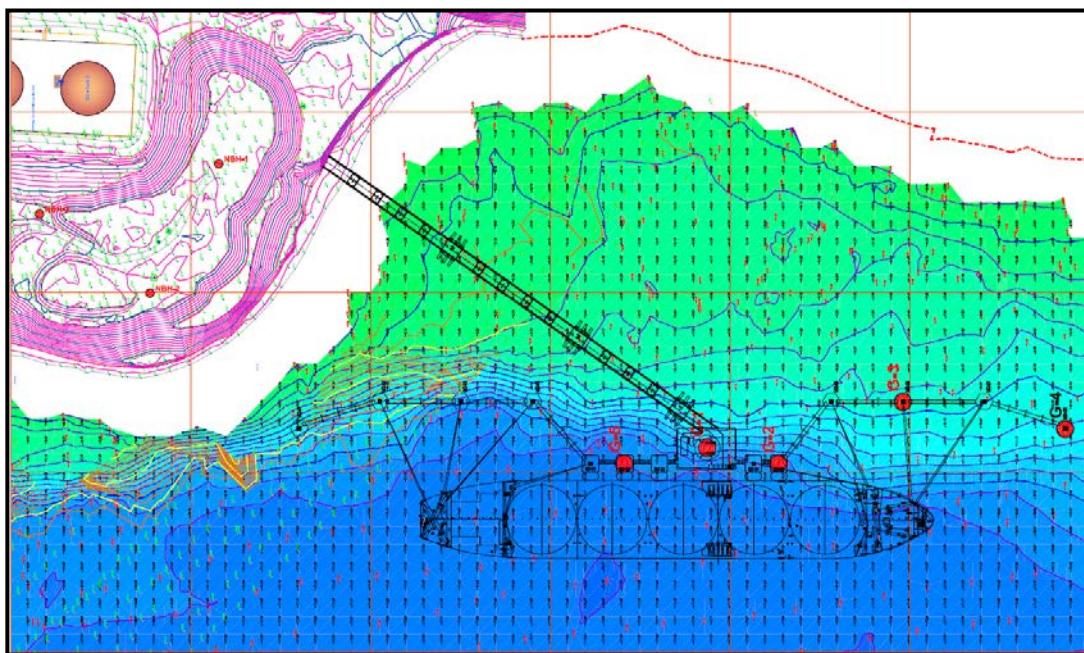


Figure 3-3: LNG terminal layout

The jetty configuration was originally designed to match another LNGC considered for conversion into FSU. As this vessel had the manifold at a different position relative to midship and different positions of the winches and fairleads, the position of the LNGC is about 10 m further astern compared to the positions shown in Figure 1-2 and Figure 3-3. Due to this shift in position of the vessel, the position of some of the breasting dolphins did not match the flat side of the FSU. The layout of the jetty was optimised using the results of the moored ship response simulations.

4 GENERAL APPROACH AND APPLIED SOFTWARE

4.1 Approach

The dynamic response of the vessels in the various considered cases has been determined by carrying out numerical time-domain simulations. The study approach includes the following steps:

- Input preparations,
- Execution of simulations,
- Analysis and reporting.

The preparation of the input consists of

- Computation of the hydrodynamic characteristics of the vessel(s),
- Schematization of the mooring arrangement including, the breasting and mooring dolphins, all the mooring lines and all the fenders.

The hydrodynamic response of the vessel(s) to waves have been calculated using the program DIFFRAC. The response of the FSU at the jetty, the FSU in the storm mooring and the LNGC alongside the FSU has been carried out with the in-house developed and validated simulation tool aNySIM. Both models are regularly used in this kind of studies, both for port terminals and offshore applications (e.g. to simulate the behaviour of an FPSO on its anchors or for side-to-side operations). DIFFRAC and aNySIM are briefly described in the following sections.

4.2 Linear diffraction analysis programs DIFFRAC / DRIFTP

The added mass, damping, wave loads and wave drift forces are calculated using MARIN's linear diffraction theory programs DIFFRAC and DRIFTP. In DIFFRAC / DRIFTP the linearized velocity potential problem is solved using a three-dimensional source distribution technique.

The mean wetted part of the vessel hull is approximated by a large number of panel elements. The distribution of source singularities on these panels forms the velocity potential describing the fluid flow around the vessel hull.

The pressure distribution on the hull is calculated from the velocity potential. The added mass and damping coefficients, as well as the first order wave forces (DIFFRAC) and second order wave drift forces (DRIFTP) are then determined from the pressure distribution and written to a hydrodynamic database. All calculations in DIFFRAC / DRIFTP are carried out in the frequency domain. More details about the Diffraction analysis is given in Appendix S01.

4.3 Time-domain simulation tool aNySIM

The time-domain simulation program aNySIM can simulate the behaviour of (multiple floating) bodies under the action of combined swell, wind seas, current and wind. The effect of mooring lines and other mechanical components on the floater motions can also be taken into account. In the simulations, the combined low frequency and wave frequency motions of each body are calculated in 6 degrees of freedom in the time-domain, using a retardation function approach. More details about time domain simulations with aNySIM are given in Appendix S03.

Equations of motion

The equations of motion derived within potential theory describe the fluid reactive forces on a floating structure under arbitrarily external loads varying in time. For 6 degrees of freedom these equations can be written as shown below.

$$\sum_{j=1}^6 (M_{kj} + m_{kj}) \ddot{x}_j + \int_{-\infty}^t R_{kj}(t-\tau) \dot{x}_j(\tau) d\tau + C_{kj} x_j = F_k(t) \quad k = 1, 2 \dots 6$$

In which :

x_j	Motion in j-th mode
$F_k(t)$	Arbitrarily in time varying external force in the k-th mode of motion
M	Inertia matrix
m	Added inertia matrix
R	Matrix of retardation functions
C	Matrix of hydrostatic restoring forces

The retardation functions R , as well as the added inertia coefficients m , are determined using the results of the diffraction calculations.

External loads acting on the vessel that can be included are:

- Wind loads
- Wave loads
- Current loads
- Fender loads
- Mooring line loads

5 MODEL

5.1 Wave loads

The wave loads are calculated from the wave load coefficients and the wave height, period and direction specified in the input.

The total wave loads (first-order wave forces and second-order wave drift forces) are computed with the DIFFRAC software package for all possible relative ship configurations.

For the simulation of the single FSU at the jetty as well as the FSU in the storm mooring, diffraction computations for the ballasted and loaded configuration have been performed.

To take wave shielding effects into account, the side-by-side wave load coefficients are determined for the combined loaded FSU/ballasted LNGC and ballasted FSU/loaded LNGC loading conditions for both the aligned and shifted configurations.

For the side-by-side cases, additional damping on the free-surface between the vessels is applied to prevent unrealistically high waves in the small gap between vessels.

Although the bathymetry is not constant, only a constant water depth is taken into account in the diffraction computation. In all diffraction computations a water depth of 18.5 m is assumed.

The loading condition and relevant hydrostatic parameters are listed in Table 1 and Table 2. The panel distributions that have been used are shown in Figures 1 through Figure 3 in the Figure pages at the end of the report.

Additional roll damping

The damping computed by diffraction analysis describes the damping due to the radiation of waves by the vessel, but this does not include viscous flow effects. Potential damping in roll is relatively small, and additional damping is added to the vessel to model viscous roll damping of the vessel. Linear roll damping was added to each of the vessels, based on our experience with similar vessels for the applicable draft to water depth ratio.

Table 5-1: Applied linear roll damping (B44) for each vessel and loading condition

	Loaded	%Bcritical	Ballasted	%Bcritical
FSRU	1.10E+06 kN.m.s/rad	7.9 %	0.75E+06 kN.m.s/rad	7.5 %
LNGC	1.30E+06 kN.m.s/rad	8.0 %	1.75E+06 kN.m.s/rad	5.0 %

5.2 Wind loads

The wind loads on the vessel are calculated within aNySIM using dimensionless coefficients, the dimensions of the vessel and the wind speed and direction using the following formulas:

$$F_x = \frac{1}{2} \rho v^2 A_f C_x$$

$$F_y = \frac{1}{2} \rho v^2 A_l C_y$$

$$M_z = \frac{1}{2} \rho v^2 A_l L_{pp} C_N$$

In which:

F_x	Force in longitudinal direction	[kN]
F_y	Force in transverse direction	[kN]
M_z	Moment about vertical z-axis	[kNm]
ρ	Air density (specified as 0.00125)	[tonne/m ³]
v	Wind velocity	[m/s]
A_f	Wind frontal area	[m ²]
A_l	Wind lateral area	[m ²]
L_{pp}	Length between perpendiculars	[m]
C	Dimensionless wind force coefficient	[-]

The wind coefficients for a Moss-type LNGC from SIGTTO [7] have been used to compute the wind loads on the FSU and LNGC. The (unshielded) wind coefficients for the FSU and LNGC are summarized in Table 3.

5.3 Side-by-side wind shielding model

Strong wind shielding effects can be expected for the side-by-side configurations, with the two vessels in real close proximity. This means that the applied wind and current coefficients of a single vessel are not valid and that dedicated coefficients should be used. As such dedicated coefficients are not available, estimated shielding factors have been used instead.

5.3.1 Aligned relative vessel position

The shielding was estimated based on the assumption that the leeward vessel will be (partly) shielded by the windward vessel. The ratio between the projected areas of the shielded and unshielded vessel is used for this:

$$f = \frac{A_s}{A_u}, \quad f \leq 1.0$$

In which:

f	Shielding factor	[-]
A_s	Projected area of shielded vessel	[m ²]
A_u	Projected area of unshielded vessel	[m ²]

The wind loads of the shielded vessel can now be scaled as follows:

$$F_s = f \cdot F_u$$

In which:

F_u	Unshielded load	[kN]
F_s	Shielded load	[kN]

The heading dependence of the shielding factor was approximated by the following empirical formulation:

Heading θ [deg]	starboard (SB) vessel shielding	port (PS) vessel shielding
0 to 180	$1 - f_1 \sin(\theta) ^{0.5}$	1.0
180 to 360	1.0	$1 - f_2 \sin(\theta) ^{0.5}$

It should be noted that significant wind and current interaction effects can occur for vessels in real close proximity, but these effects are not taken into account in the present approach. The shielded wind coefficients for the aligned relative vessel position are provided in Table 4 and Figure 4.

5.3.2 Shifted relative vessel position

When the relative vessel position is shifted rather than aligned, it can be observed that there will be an additional yaw moment acting on the shielded vessel. This moment is due to the sway force acting on the unshielded part of the shielded vessel. In the present approach the difference in sway force between the aligned and shifted relative vessel position will be used to estimate the additional yaw moment $M_{additional}^z$. The effective leverage arm r_{eff} is estimated to be halfway the unshielded part of the shielded vessel, as illustrated below in Figure 5-1.

The additional yaw moment is then given by $M_{additional}^z = (F_{shifted}^y - F_{aligned}^y) \cdot r_{eff}$, the contribution of which can be added to the yaw wind moment coefficient. The shielded wind coefficients for the shifted relative vessel position are provided in Table 5 and Figure 5

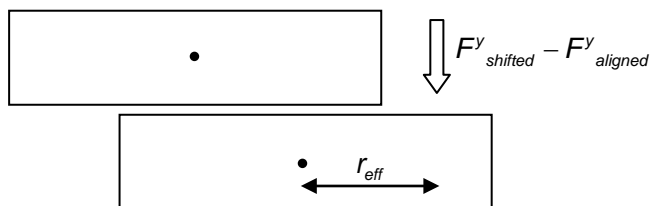


Figure 5-1: Illustration of additional yaw moment for shifted configuration.

5.4 Current loads

Current loads can be calculated in a similar way as the wind loads using current coefficients and the current conditions. As the currents in Marsaxlokk Bay are weak, no current loads are applied in any of the reported simulations.

5.5 Mooring system

The mooring systems that have been evaluated for the three considered configurations are discussed in the following sections.

5.5.1 Single jetty-moored FSU

For the FSU moored at the jetty simulations were carried out for quite a large number of variations in the mooring configuration. For some configurations calculations were made for a full set of metocean conditions, for some sensitivity runs only selected conditions were calculated (e.g. only 100 yr conditions). The calculations started with the original jetty configuration and an assumed position of the FSU manifold at 20.77m forward of midships, so that the FSU would be in the position of vessel the jetty was originally designed for. The calculations for the FSU at the jetty included the following configurations

Table 5-2: FSU at jetty configurations for which aNySIM calculations were carried out

Initial calculations: <ul style="list-style-type: none"> • Original jetty layout; manifold at 20.77m (10m shifted); • Cell fender • 0-2-2-2-2 & 2-2-2-2-0 mooring layout, 11 m nylon tail, aft spring lines to first berthing dolphin; • initial wave conditions for sector 60 – 240°N
Sensitivity runs mooring lines: <ul style="list-style-type: none"> • Original jetty layout; manifold at 20.77m (10m shifted); • Cell fender • initial wave conditions for sector 60 – 240°N • 0-3-2-1-2 & 2-1-2-3-0 mooring layout, 11 m nylon tail, aft spring lines to second berthing dolphin • 1-2-2-1-2 & 2-1-2-2-1 mooring layout, 11 m nylon tail, aft spring lines to second berthing dolphin; one line fore and aft to the outer mooring dolphin • 1-2-2-1-2 & 2-1-2-2-1 mooring layout, 22 m nylon tail, aft spring lines to second berthing dolphin; one line fore and aft to the outer mooring dolphin
Wave conditions updated following review; preliminary estimate <ul style="list-style-type: none"> • Original jetty layout; manifold at 20.77m (10m shifted); • Cell fender • 1-2-2-1-2 & 2-1-2-2-1 mooring layout, 22 m nylon tail, aft spring lines to second berthing dolphin; one line fore and aft to the outer mooring dolphin; • wave conditions corrected using updated offshore conditions
Manifold FSU on actual position, position ship 10 m aft with respect to jetty platform <ul style="list-style-type: none"> • 3 breasting dolphins (BD), aft BD moved 10m aft (with the ship), middle BD 7m to platform ; aft mooring dolphins (MD) moved 10m aft (with the ship); manifold at 30.77m; • Cell fender • 2-1-2-1-2 & 2-1-2-1-2 mooring layout (2 to outer MD), 22 m nylon tail, aft spring lines to second berthing dolphin; • wave conditions corrected using updated offshore conditions
Alternative with 2 breasting dolphins <ul style="list-style-type: none"> • 2 breasting dolphins (BD), aft BD moved 10m aft (with the ship), middle BD removed; manifold at 30.77m; • Cell fender • 2-1-2-1-2 & 2-1-2-1-2 mooring layout (2 to outer MD), 22 m nylon tail, aft spring lines to aft berthing dolphin; • updated offshore wind and waves, wave penetration estimated from 1 and 100 yr results
Aft mooring dolphins at original position <ul style="list-style-type: none"> • 3 breasting dolphins (BD), aft BD moved 10m aft (with the ship), aft MD original position; manifold at 30.77m; • Cell fender • 2-1-2-1-2 & 2-1-2-1-2 mooring layout (2 to outer MD), 22 m nylon tail, aft spring lines to middle berthing dolphin; • updated offshore wind and waves, wave penetration estimated from 1 and 100 yr results, directions 270 and 300 only
Wave conditions for all sectors <ul style="list-style-type: none"> • 3 breasting dolphins (BD), aft BD moved 10m aft (with the ship), aft MD original position; manifold at 30.77m; • Cell fender • 2-1-2-1-2 & 2-1-2-1-2 mooring layout (2 to outer MD), 22 m nylon tail, aft spring lines to middle berthing dolphin; • updated offshore wind and waves at the terminal for all sectors
Sensitivity runs fenders <ul style="list-style-type: none"> • 3 breasting dolphins (BD), aft BD moved 10m aft (with the ship), aft MD original position; manifold at 30.77m; • Different fenders • 2-1-2-1-2 & 2-1-2-1-2 mooring layout (2 to outer MD), 22 m nylon tail, aft spring lines to middle berthing dolphin; • Selected critical conditions
Final configuration <ul style="list-style-type: none"> • 3 breasting dolphins (BD), aft BD moved 10m aft (with the ship), aft MD original position; manifold at 30.77m; • Supercone fender • 2-1-2-1-2 & 2-1-2-1-2 mooring layout (2 to outer MD), 22 m nylon tail, aft spring lines to middle berthing dolphin; • updated offshore wind and waves at the terminal for all sectors

The optimized mooring line layout of the single jetty-moored FSU is shown below in Figure 5-2.

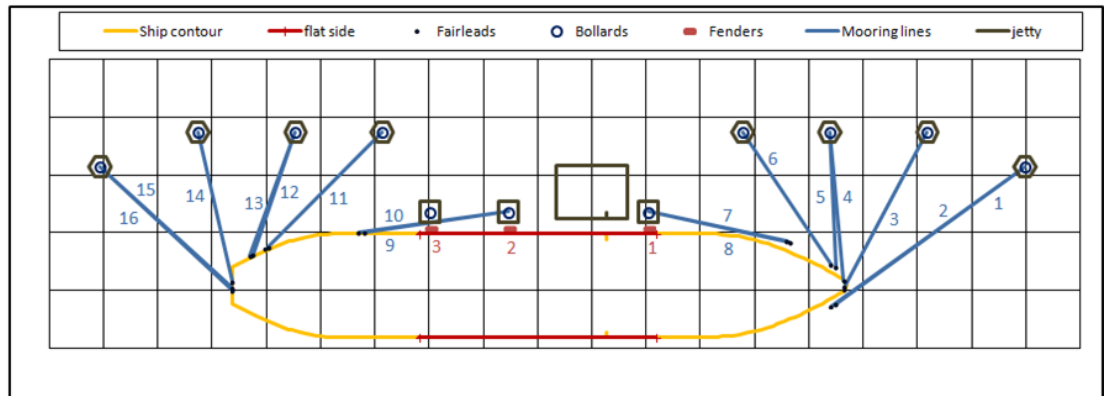


Figure 5-2: Optimized jetty-moored FSU layout.

Mooring line composition

Each simulated mooring line is composed of 42mm diameter dyneema (SK75) (breaking strength 1,275.3 kN) fitted with a 105mm diameter 22m long nylon tail (breaking strength 1,717 kN).

Fenders

All of the fenders are super cone fender of the Trelleborgh SCN 1800 E2.5 type with a the maximum fender reaction force of 3,132 kN. The fender characteristic applied in the simulations is shown in Figure 7.

5.5.2 Spread-moored FSU

In storm conditions, the FSU is taken from the jetty and brought in a special storm mooring. The initial design was a spread-mooring configuration consisting of 4x2 anchor lines. For the spread-moored FSU, a total number of six alternative mooring configurations that have been are summarized in Table 5-3. Details can be found in Appendix A03.

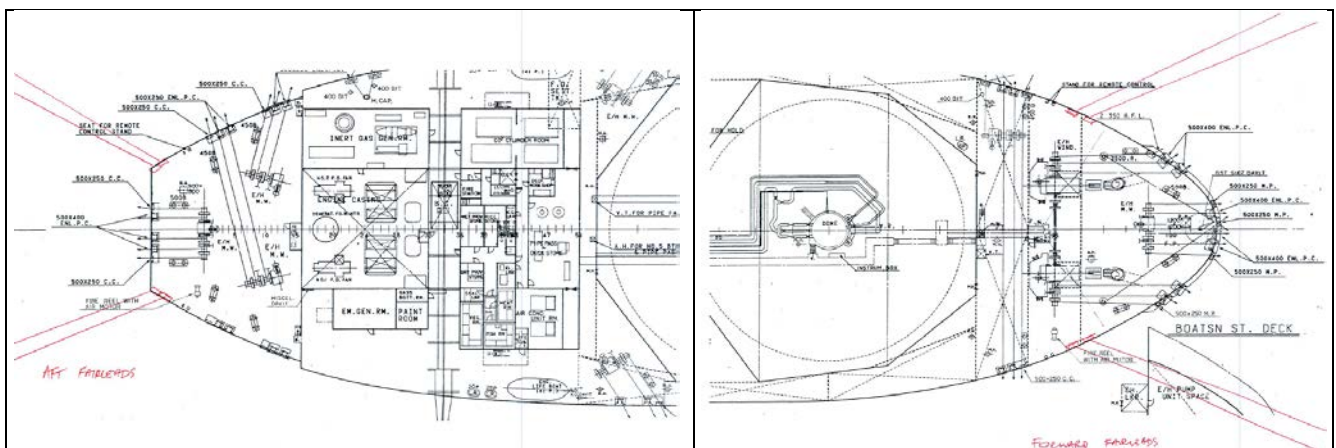


Figure 5-3: Initial layout storm mooring FSU.

Table 5-3: Overview of spread-mooring alternatives.

Alteration	chain			wire		lines	
	bottom length [m]	top length [m]	type	length [m]	type	# lines [-]	Angle [deg]
0.0	100	100	R3 76mm	600	34x6 WC, 66mm	8	
0.1	800	-	R3 76mm	-	-	8	
1	400	-	R3 76mm	400	34x6 WC, 74mm	8	
2	400	-	R3 76mm	400	34x6 WC, 74mm	10	
3	400	-	R3 102mm	400	34x6 WC, 74mm	8	
4	500	-	R3 76mm	300	34x6 WC, 74mm	8	

Table 5-4: Mooring leg configurations of the simulated spread-mooring.

Alteration	Mooring line groups (angles counter clockwise from bow to stern)							
	group 1		group 2		group 3		group 4	
	# lines	angle [deg]	# lines	angle [deg]	# lines	angle [deg]	# lines	angle [deg]
0.0	2	20	2	160	2	200	2	340
0.1	2	20	2	160	2	200	2	340
1	2	25	2	155	2	205	2	335
2	3	25	2	155	2	205	3	335
3	2	25	2	155	2	205	2	335
4	2	25	2	155	2	205	2	335

5.5.3 Side-by-side mooring FSU-LNGC

The side-by-side mooring layout of the FSU and LNGC are shown below in Figure 5-3 and Figure 5-4 for the aligned and shifted relative vessel position, respectively. The figures show the three jetty fenders, four side-by-side fenders and the mooring lines, including the numbering of each group. It is noted that the mooring lines departing from the FSU and the LNGC have received the same numbering. Mooring lines with numbers 1 through 15 depart from the FSU, whereas mooring lines with numbers 16 through 27 depart from the LNGC.

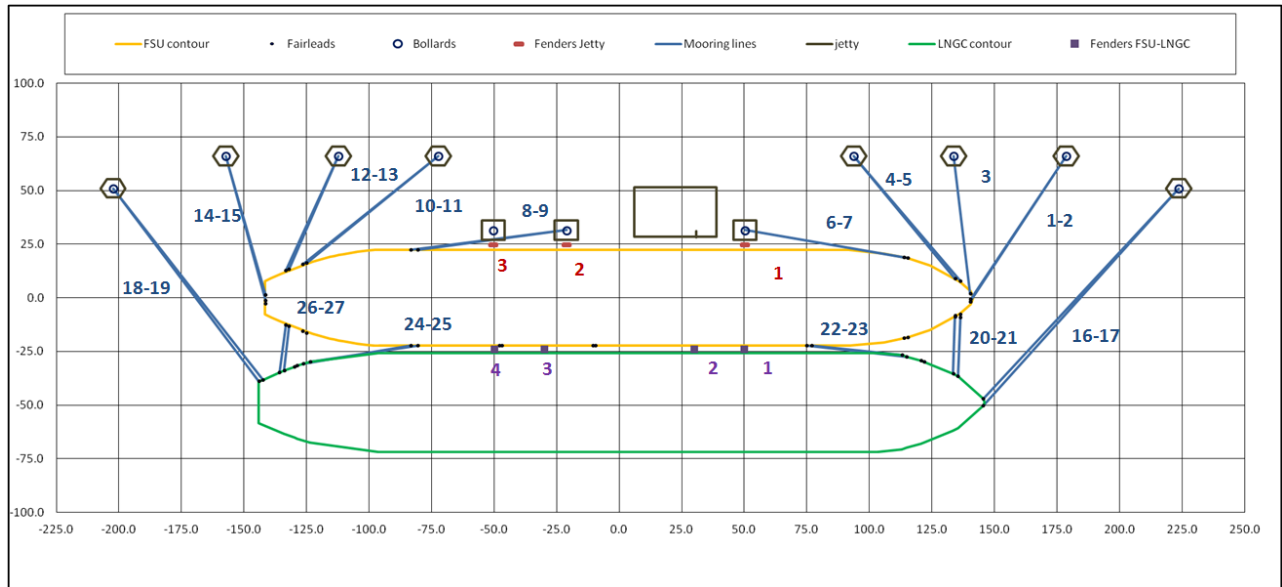


Figure 5-4: Aligned side-by-side mooring configuration.

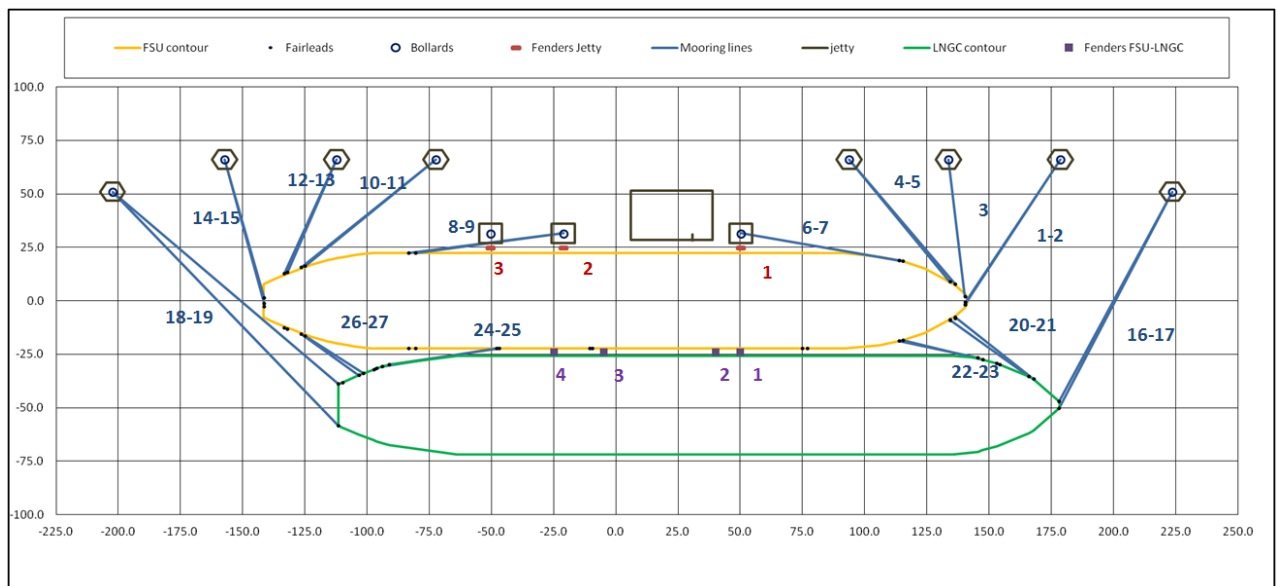


Figure 5-5: Shifted side-by-side mooring configuration.

Mooring line composition

Each simulated mooring line going from the FSU to the jetty are composed of 42mm diameter dyneema (SK75) (breaking strength 1,275.3 kN) fitted with a 105mm diameter 22m long nylon tail (breaking strength 1,717 kN).

The mooring lines going from the LNGC to the jetty and the FSU are 42mm steel wire lines (breaking strength 1341.0 kN) fitted with 88mm diameter 11m nylon tails (breaking load 2,150 kN).

Fenders

The fenders at the jetty are super cone fender of the Trelleborgh SCN 1800 E2.5 type with a the maximum fender reaction force of 3,132 kN,. The fender characteristic applied in the simulations is shown in Figure 7.

The floating side-by-side fenders are Trelleborgh Pneumatic Fenders, with a length of 6.5m and a diameter of 3.3m. The fender characteristic is given in Figure 6.

6 SIMULATION OF ENVIRONMENTAL CONDITIONS

6.1 Waves

All the waves have been generated from a Pierson-Moskowitz spectrum, see Appendix E03 for its formulation. The significant wave height (H_s) and peak period (T_p) that are relevant for the various simulation studies have been estimated from the wave penetration study that has been reported in [3].

6.2 Wind

All of the wind speed time traces have been generated from a Davenport wind spectrum, which gives the fluctuation about a specified wind speed average.

6.3 Simulated environmental conditions

In every simulation a total amount of 3.5 hours is simulated. The first half an hour (1800s) of each simulation is omitted from the (statistical) analysis, to ensure that transient effects have vanished.

6.3.1 Single jetty-moored FSU

The environmental conditions that have been applied in the simulations of the single jetty-moored FSU are provided in Appendix A02. The selected set of conditions have been estimated through constructing representative conditions occurring yearly, once per two years, once per five years, once per 10 years, once per 25 years, once per 50 years and finally once per 100 years in Marsaxlokk Bay. These conditions have been constructed for all possible wind directions in intervals of 30 degrees.

6.3.2 Spread-moored FSU

Based on the outcome of the single jetty-moored FSU, the spread-moored conditions have been taken as the once per 50 years and once per 100 years conditions that have been constructed for the single jetty-moored FSU.

6.3.3 Side-by-side mooring FSU-LNGC

For the side-by-side mooring of the FSU and LNGC a different approach was taken. From 30 years of wave data the hourly wind and wave conditions were known. Based on the results of the single jetty-moored FSU it was estimated that only conditions with a significant wave height larger than 1.5m can be a potential problem for the side-by-side mooring. The amount of qualifying conditions amount to a total of 2793. The individual conditions consists of: wind average speed and direction, and the direction, significant wave height and peak period of the sea and swell wave components. These conditions are summarized in Appendix A05.

These conditions have been computed for the aligned and shifted relative vessel positions, for both loading conditions: loaded FSU/ballasted LNGC and ballasted FSU/loaded LNGC.

A total amount of 11,172 simulations have been computed using the distributed computing system Condor, see Appendix S05.

7 RESULTS AND DISCUSSION

7.1 Single jetty-moored FSU

In Appendix A02 the results for the jetty-moored FSU are presented and discussed. The main findings will be reiterated here.

It is concluded that the high waves at the berth associated with wind from directions between 120°N and 240°N contribute significantly to the line loads. The result for the loaded FSU are shown in Figure 7-1. The corresponding limiting significant wave height at the jetty is observed to be around 2.5m for both the ballasted and loaded FSU. The loaded FSU is a somewhat more restrictive. The load in the (shortest) aft spring is generally the limiting factor. In terms of manifold motions it is observed that if the envelope of the motion in surge direction is in the order of 3.5m, the load in the aft springs exceeds the safe working load of 55% minimal breaking strength.

The maximum fender loads occurring in the simulations is 2,821 kN, which is 90% of the rated reaction force. Maximum fender loads are seen to be governed by the maximum occurring wind speeds.

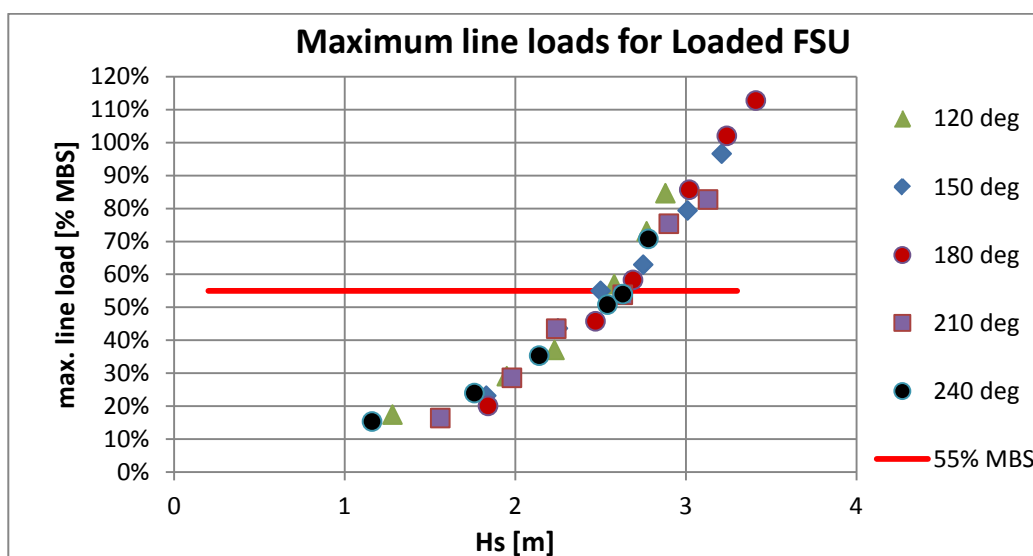


Figure 7-1: Maximum line load for the loaded jetty-moored FSU versus wave height.

7.2 Spread-moored FSU

The simulated dynamic mooring response of several candidates for the storm mooring have been reported in Appendix A02. The main findings regarding the analyzed spread-mooring are repeated here.

In all of the storm spread-mooring configurations the maximum line loads were found to be too high for the break load of the individual mooring legs. A general trend emerging from the simulations is that a stiffer mooring system results in an acceptable excursion and mooring line pick-up, also in excessive mooring line loads. A softer mooring system tends to give smaller loads, but results in larger mooring line distance from fairlead to touchdown point. The large loads are also caused by the fact that the highest wind

speeds are beam on, while the lines of the spread mooring have a relatively small angle with the ship.

To facilitate a softer mooring system within the current setup, the mooring lines should be lighter and significantly longer. This, however, does not seem to be a feasible solution for Marsaxlokk Bay, as the footprint of the mooring system will increase significantly. Especially for the mooring lines stretching out from the stern of the FSU towards the North this can be a serious challenge.

It was noted that a multi-buoy mooring system might be more feasible than a spread-mooring system in shallow water such as Marsaxlokk Bay. Permanent buoys may, however, have some effects on other operations, e.g. on manoeuvring and berthing the LNGC alongside the FSU.

The design of the storm mooring will be further elaborated, verified and reported in a separate study carried out by others.

7.3 Side-by-side moored FSU and LNGC

The main findings of the side-by-side simulation results are summarized in the Appendix A01. A data point in any of these plots represent a relevant outcome of one particular simulation. The statistics of the individual simulation runs can be found in Reference [8].

7.3.1 Maximum line loads

Comparing line loads on the FSU to the line loads on the LNGC it is seen that for both the aligned as well as the shifted configuration the short lines on the LNGC are the limiting factor. The maximum forces on the LNGC mooring lines are shown in Figure 7-2. The figure shows the strong correlation between H_s and the maximum line force. It can be observed that the safe working load is exceeded for sea states characterized by a significant wave height over 2.0m. It is seen that the safe working limit of the LNGC lines is predominantly exceeded for wind coming from the sectors of 150°N to about 180°N.

It is noted that the loading condition does not influence the maximum occurring line load significantly. Also, wind is coming from the north does not imply large line loads.

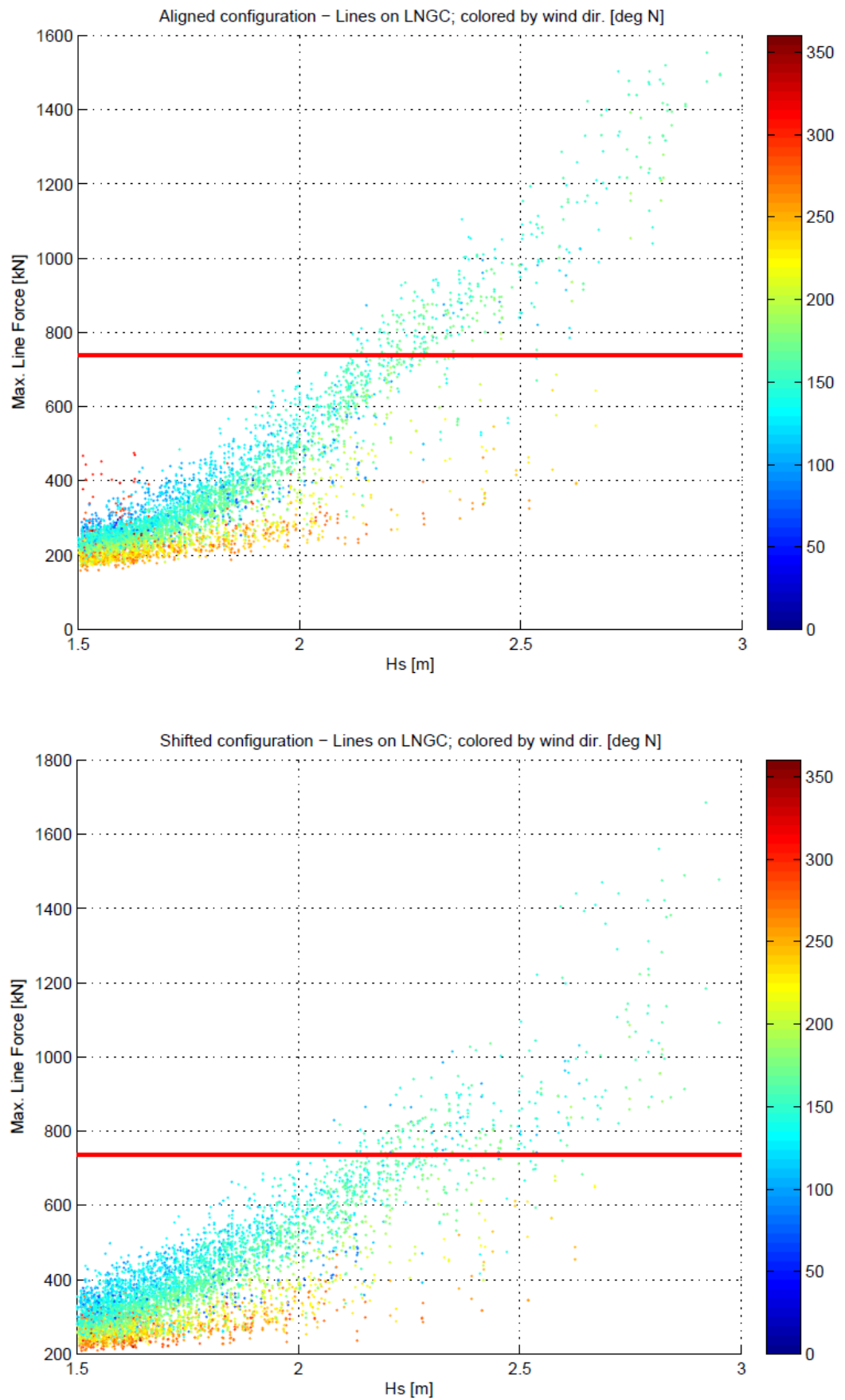


Figure 7-2: All simulated maximum forces in the lines on the LNGC for the aligned (top) and shifted (bottom) configuration.

7.3.2 Fender loads

Both the jetty as well as the side-by-side floating fender loads show a strong correlation with the wind speed, see Figure 7-3 and Figure 7-4. The correlation with the significant wave height is much less clear. Especially for wind coming from the North, it can be seen that the fender loads can approach the max. rated fender deflection. The wind speeds associated with this Northern sector are very high for sea states with a significant wave height over 1.5m.

This can be attributed to the selection of environmental conditions. With winds coming from the North, only at high wind speeds a local generation of high waves can occur. Offshore waves penetrate Marsaxlokk Bay to a much lesser degree when the wind is coming from the North.

From the manoeuvring study, Reference [4], it is known that safe manoeuvring of LNGC can only take place for wind speeds below 14 m/s. Removing simulations with wind speeds higher than 16 m/s from the simulations shows that the maximum reaction rate of neither the side-by-side fenders nor the jetty fenders will be exceeded.

7.3.3 Manifold excursion

From the plots in Appendix A01, it can be seen that the largest excursions in the relative manifold position occur for the shifted configuration. Figure 7-5 shows the maximum excursion of the relative manifold position with respect to the equilibrium position in which the manifolds are aligned. In this figure only the data points corresponding to an average wind speed maximum of 16m/s have been included.

The figures show that for a significant wave height below 2.0m the relative manifold offset between FSU and jetty will be maximally 1.0m. For the same significant wave height, the relative manifold offset between the LNGC and the FSU will be less than 1.5m.

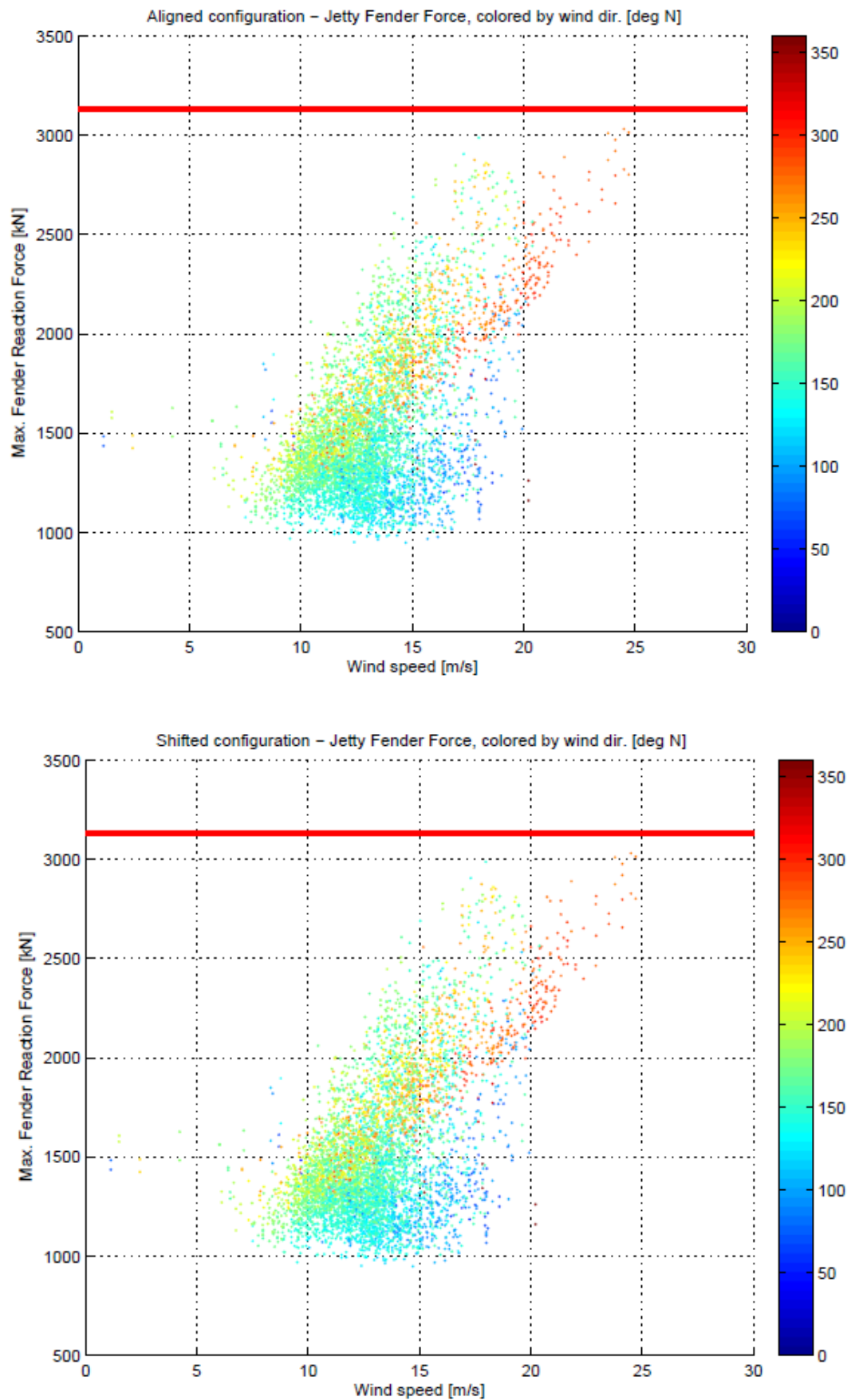


Figure 7-3: Maximum jetty fender force versus wind speed for the aligned (top) and shifted (bottom) configuration.

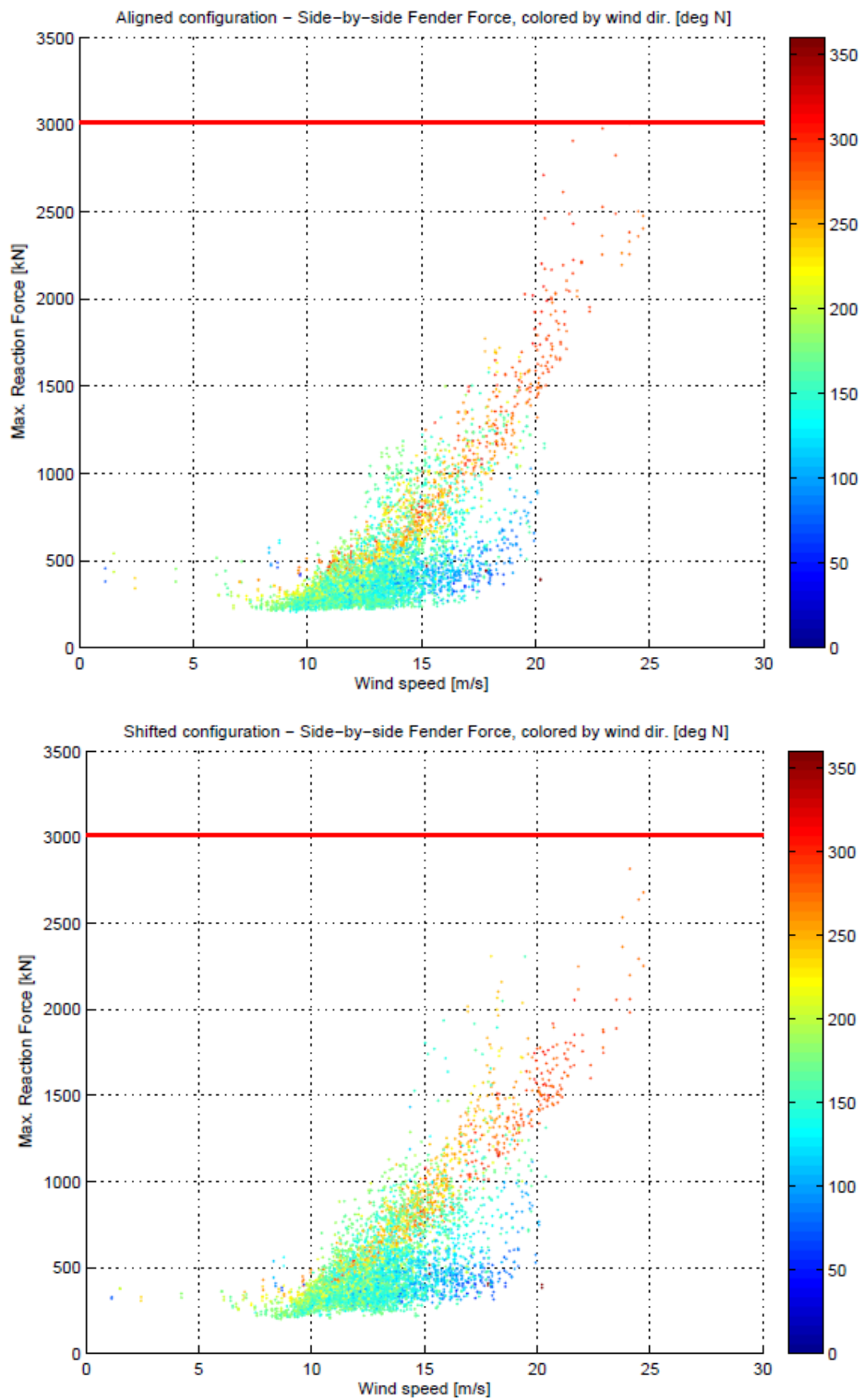


Figure 7-4: Maximum side-by-side floating fender forces for the aligned (top) and shifted (bottom) configuration.

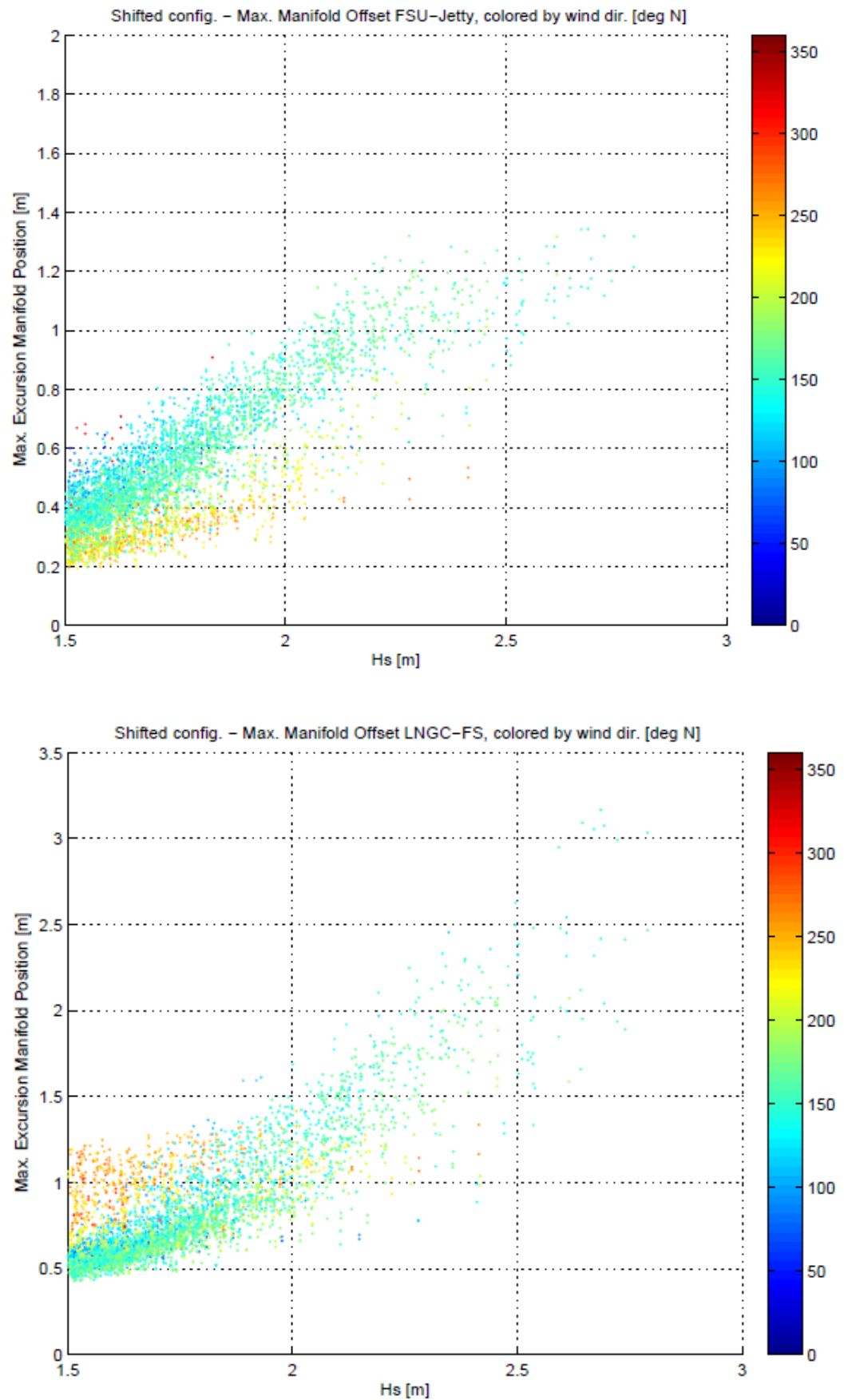


Figure 7-5: Maximum deviation from equilibrium of relative manifold positions for the FSU-jetty (top) and the FSU-LNGC (bottom) manifolds. Only simulations with wind speed smaller than 16.0 m/s are included in this plot.

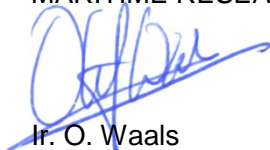
8 CONCLUSIONS AND RECOMMENDATIONS

Based on the test results presented in this report, the following conclusions and recommendations seem justified:

- For the single-moored FSU, a limit of about 2.5m significant wave height can be identified. For a significant wave height over this value, the safe working load of the mooring lines on the FSU will be exceeded. Fender loads are not an issue for these wave heights.
- The spread-mooring alternatives that have been analyzed confirm that it is challenging to construct a successful spread-mooring on shallow water. A spread mooring system that possesses the right stiffness characteristics requires a footprint that seems not feasible for Marsaxlokk Bay. It is recommended to look into alternative storm mooring systems. A multi-buoy system might provide such an alternative, but this option was not investigated in this study. The design of the storm mooring will be further elaborated, verified and reported in a separate study carried out by others.
- The side-by-side simulations show that for both the aligned and the shifted relative vessel positions, the line loads on the shortest LNGC mooring lines are critical. For a significant wave height over 2.0m the maximum line load may exceed the safe working load.
The fender loads are strongly correlated with high wind speeds. For wind speeds that are admissible for manoeuvring of the LNGC in Marsaxlokk Bay, fender loads are not a critical issue.
The relative manifold excursion between FSU and jetty will not exceed 1.0m for sea states with a significant wave height of less than 2.0m in the shifted or aligned configuration. The relative manifold excursion between FSU and LNGC will not exceed 1.5m for sea states with a significant wave height of less than 2.0m.

Wageningen, December 2015

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TABLES

TABLE 1 MAIN PARTICULARS FSU

Designation	Symbol	Unit	Values	
			Loaded	Ballasted
Length between Perpendiculars	Lpp	m	270	
Breadth	B	m	44.8	
Draft	T	m	10.8	9.35
Displacement weight	Δ	ton	100,000	80,000
Centre of Gravity above base	KG	m	20.0	13.1
Centre of Gravity forward of st10	LCG	m		
Transverse metacentric radius	KM	m	22.3	24.1
Transverse metacentric height	GMt	m	2.3	11.0
Frontal wind area	Awf	m ²	1,150	1,220
Lateral wind area	Awl	m ²	7,120	7,570
Roll radius of gyration	k _{xx}	m	15.7	
Pitch radius of gyration	k _{yy}	m	67.5	
Yaw radius of gyration	k _{zz}	m	67.5	

TABLE 2 MAIN PARTICULARS LNGC

Designation	Symbol	Unit	Values	
			Loaded	Ballasted
Length between Perpendiculars	Lpp	m	276	
Breadth	B	m	46	
Draft	T	m	11.0	9.00
Displacement weight	Δ	ton	101,000	80,000
Centre of Gravity above base	KG	m	20.3	13.1
Centre of Gravity forward of st10	LCG	m		
Transverse metacentric radius	KM	m	22.5	24.1
Transverse metacentric height	GMt	m	2.2	11.0
Frontal wind area	Awf	m ²	1,189	1,281
Lateral wind area	Awl	m ²	7,642	8,194
Roll radius of gyration	k _{xx}	m	15.0	18.1
Pitch radius of gyration	k _{yy}	m	69.0	
Yaw radius of gyration	k _{zz}	m	69.0	

TABLE 3 UNSHIELDED WIND COEFFICIENTS FSU AND LNGC

Dir [deg]	CF _x	CF _y	CM _z
0	0.834	0	0
10	0.934	0.088	-0.0371
20	0.986	0.225	-0.0726
30	0.964	0.389	-0.0991
40	0.875	0.517	-0.1091
50	0.748	0.634	-0.109
60	0.54	0.737	-0.099
70	0.295	0.813	-0.0798
80	0.109	0.869	-0.0556
90	-0.01	0.903	-0.0276
100	-0.086	0.914	-0.0009
110	-0.176	0.898	0.0223
120	-0.236	0.859	0.0419
130	-0.425	0.759	0.0519
140	-0.579	0.594	0.0522
150	-0.707	0.421	0.0444
160	-0.809	0.251	0.0289
170	-0.85	0.11	0.0153
180	-0.836	0.003	0.001
190	-0.85	-0.11	-0.0153
200	-0.809	-0.251	-0.0289
210	-0.707	-0.421	-0.0444
220	-0.579	-0.594	-0.0522
230	-0.425	-0.759	-0.0519
240	-0.236	-0.859	-0.0419
250	-0.176	-0.898	-0.0223
260	-0.086	-0.914	0.0009
270	-0.01	-0.903	0.0276
280	0.109	-0.869	0.0556
290	0.295	-0.813	0.0798
300	0.54	-0.737	0.099
310	0.748	-0.634	0.109
320	0.875	-0.517	0.1091
330	0.964	-0.389	0.0991
340	0.986	-0.225	0.0726
350	0.934	-0.088	0.0371

TABLE 4 UNSHIELDED ALIGNED WIND COEFFICIENTS FSU AND LNGC

Dir [deg]	<i>FSU ballasted – LNGC loaded</i>			<i>FSU loaded – LNGC ballasted</i>		
	CFx	CFy	CMz	CFx	CFy	CMz
0	0.834	0.000	0.000	0.834	0.000	0.000
10	0.545	0.051	-0.022	0.934	0.088	-0.037
20	0.409	0.093	-0.030	0.986	0.225	-0.073
30	0.282	0.114	-0.029	0.964	0.389	-0.099
40	0.173	0.103	-0.022	0.875	0.517	-0.109
50	0.093	0.079	-0.014	0.748	0.634	-0.109
60	0.037	0.051	-0.007	0.540	0.737	-0.099
70	0.009	0.025	-0.002	0.295	0.813	-0.080
80	0.001	0.007	0.000	0.109	0.869	-0.056
90	0.000	0.000	0.000	-0.010	0.903	-0.028
100	-0.001	0.007	0.000	-0.086	0.914	-0.001
110	-0.005	0.027	0.001	-0.176	0.898	0.022
120	-0.016	0.060	0.003	-0.236	0.859	0.042
130	-0.053	0.095	0.006	-0.425	0.759	0.052
140	-0.115	0.118	0.010	-0.579	0.594	0.052
150	-0.207	0.123	0.013	-0.707	0.421	0.044
160	-0.336	0.104	0.012	-0.809	0.251	0.029
170	-0.496	0.064	0.009	-0.850	0.110	0.015
180	-0.836	0.003	0.001	-0.836	0.003	0.001
190	-0.850	-0.110	-0.015	-0.523	-0.068	-0.009
200	-0.809	-0.251	-0.029	-0.372	-0.115	-0.013
210	-0.707	-0.421	-0.044	-0.245	-0.146	-0.015
220	-0.579	-0.594	-0.052	-0.150	-0.154	-0.014
230	-0.425	-0.759	-0.052	-0.081	-0.145	-0.010
240	-0.236	-0.859	-0.042	-0.033	-0.120	-0.006
250	-0.176	-0.898	-0.022	-0.018	-0.094	-0.002
260	-0.086	-0.914	0.001	-0.007	-0.076	0.000
270	-0.010	-0.903	0.028	-0.001	-0.069	0.002
280	0.109	-0.869	0.056	0.009	-0.072	0.005
290	0.295	-0.813	0.080	0.031	-0.085	0.008
300	0.540	-0.737	0.099	0.076	-0.103	0.014
310	0.748	-0.634	0.109	0.143	-0.121	0.021
320	0.875	-0.517	0.109	0.227	-0.134	0.028
330	0.964	-0.389	0.099	0.334	-0.135	0.034
340	0.986	-0.225	0.073	0.453	-0.103	0.033
350	0.934	-0.088	0.037	0.574	-0.054	0.023

TABLE 5 UNSHIELDED SHIFTED WIND COEFFICIENTS FSU AND LNGC

Dir [deg]	<i>FSU ballasted – LNGC loaded</i>			<i>FSU loaded – LNGC ballasted</i>		
	CFx	CFy	CMz	CFx	CFy	CMz
0	0.834	0.000	0.000	0.834	0.000	0.000
10	0.562	0.053	-0.023	0.934	0.088	-0.037
20	0.435	0.099	-0.035	0.986	0.225	-0.073
30	0.313	0.126	-0.038	0.964	0.389	-0.099
40	0.205	0.121	-0.034	0.875	0.517	-0.109
50	0.123	0.104	-0.029	0.748	0.634	-0.109
60	0.060	0.082	-0.025	0.540	0.737	-0.099
70	0.022	0.060	-0.022	0.295	0.813	-0.080
80	0.006	0.045	-0.020	0.109	0.869	-0.056
90	0.000	0.041	-0.019	-0.010	0.903	-0.028
100	-0.005	0.048	-0.018	-0.086	0.914	-0.001
110	-0.013	0.067	-0.016	-0.176	0.898	0.022
120	-0.026	0.096	-0.011	-0.236	0.859	0.042
130	-0.070	0.125	-0.005	-0.425	0.759	0.052
140	-0.136	0.139	0.003	-0.579	0.594	0.052
150	-0.230	0.137	0.009	-0.707	0.421	0.044
160	-0.357	0.111	0.010	-0.809	0.251	0.029
170	-0.512	0.066	0.008	-0.850	0.110	0.015
180	-0.836	0.003	0.001	-0.836	0.003	0.001
190	-0.850	-0.110	-0.015	-0.538	-0.070	-0.011
200	-0.809	-0.251	-0.029	-0.392	-0.121	-0.017
210	-0.707	-0.421	-0.044	-0.266	-0.158	-0.022
220	-0.579	-0.594	-0.052	-0.169	-0.174	-0.024
230	-0.425	-0.759	-0.052	-0.097	-0.173	-0.024
240	-0.236	-0.859	-0.042	-0.042	-0.154	-0.022
250	-0.176	-0.898	-0.022	-0.025	-0.130	-0.019
260	-0.086	-0.914	0.001	-0.011	-0.114	-0.017
270	-0.010	-0.903	0.028	-0.001	-0.106	-0.013
280	0.109	-0.869	0.056	0.014	-0.108	-0.009
290	0.295	-0.813	0.080	0.043	-0.118	-0.003
300	0.540	-0.737	0.099	0.097	-0.132	0.005
310	0.748	-0.634	0.109	0.170	-0.144	0.015
320	0.875	-0.517	0.109	0.256	-0.151	0.024
330	0.964	-0.389	0.099	0.363	-0.146	0.032
340	0.986	-0.225	0.073	0.477	-0.109	0.033
350	0.934	-0.088	0.037	0.591	-0.056	0.023

TABLE 6 LOAD COMPRESSION CURVE FLOATING FENDERS

Trelleborg Pneumatic Reaction Fenders

L	OD	R @50kPa	E @50kPa
6500	3300	3015	1814
[mm]	[mm]	[kN]	[kN.m]

D	Ri	Ei	Di	Ri @50kPa	Ei @50kPa
[%]	[%]	[%]	[m]	[kN]	[kN.m]
0	0.0	0.0	0	0.0	0.0
5	1.6	0.0	0.165	48.8	0.0
10	4.3	1.1	0.33	130.0	19.6
15	7.5	2.7	0.495	227.5	48.9
20	11.3	5.4	0.66	341.3	97.8
25	15.6	9.2	0.825	471.3	166.2
30	20.8	14.6	0.99	625.8	264.0
35	27.5	21.6	1.155	828.9	391.2
40	35.3	30.2	1.32	1064.6	547.6
45	45.6	42.0	1.485	1373.4	762.8
50	58.2	56.6	1.65	1755.4	1026.8
55	75.5	75.5	1.815	2275.5	1369.1
60	100.0	100.0	1.98	3015.0	1814.0

TABLE 7 LOAD COMPRESSION CURVE SCN CELL FENDERS

Trelleborg SCN cell fenders

SCN 1800 E2.5

H	E_R	D_R
1800	3153	3132
[mm]	[kNm]	[kN]

Di	Ei	Ri	Di	Ei	Ri
(%)	(%)	(%)	[m]	[kNm]	[kN]
0	0	0	0	0	0
5	1	19	0.09	31.5	595.1
10	4	39	0.18	126.1	1221.5
15	8	59	0.27	252.2	1847.9
20	15	75	0.36	473.0	2349.0
25	22	89	0.45	693.7	2787.5
30	31	97	0.54	977.4	3038.0
35	40	100	0.63	1261.2	3132.0
40	50	98	0.72	1576.5	3069.4
45	59	92	0.81	1860.3	2881.4
50	67	84	0.9	2112.5	2630.9
55	75	77	0.99	2364.8	2411.6
60	82	73	1.08	2585.5	2286.4
65	89	77	1.17	2806.2	2411.6
70	96	91	1.26	3026.9	2850.1
72	100	100	1.296	3153.0	3132.0
75	106	118	1.35	3342.2	3695.8

FIGURES

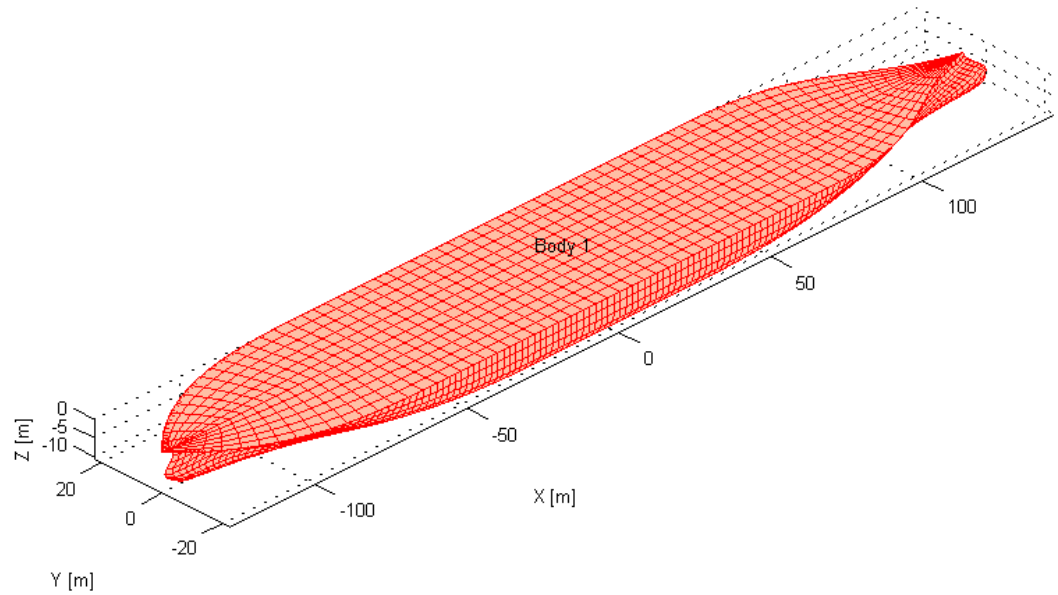
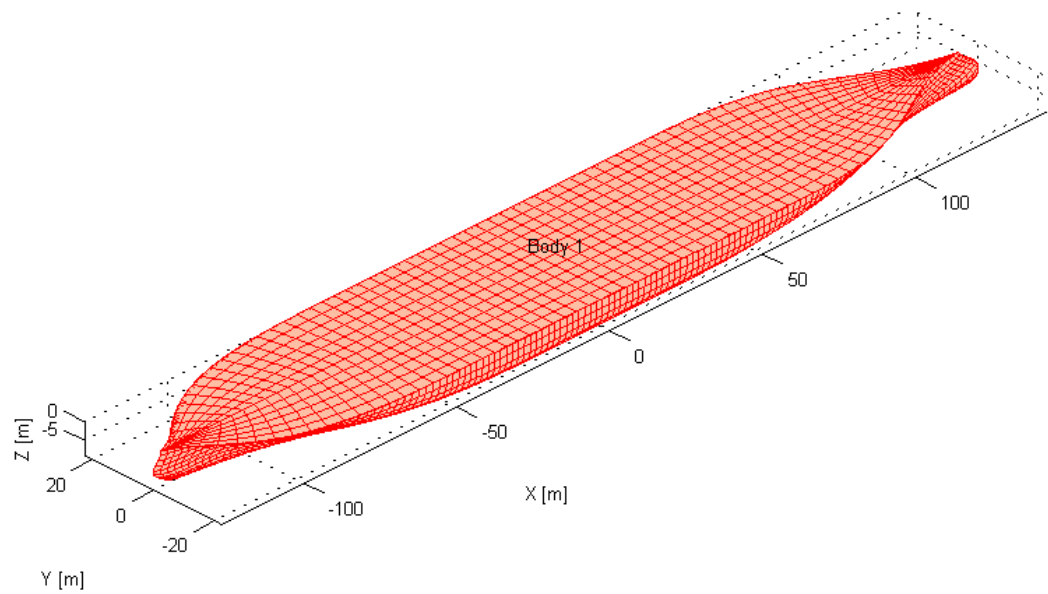
FIGURE 1 PANEL DISTRIBUTION FSU*Loaded FSU**Ballasted FSU*

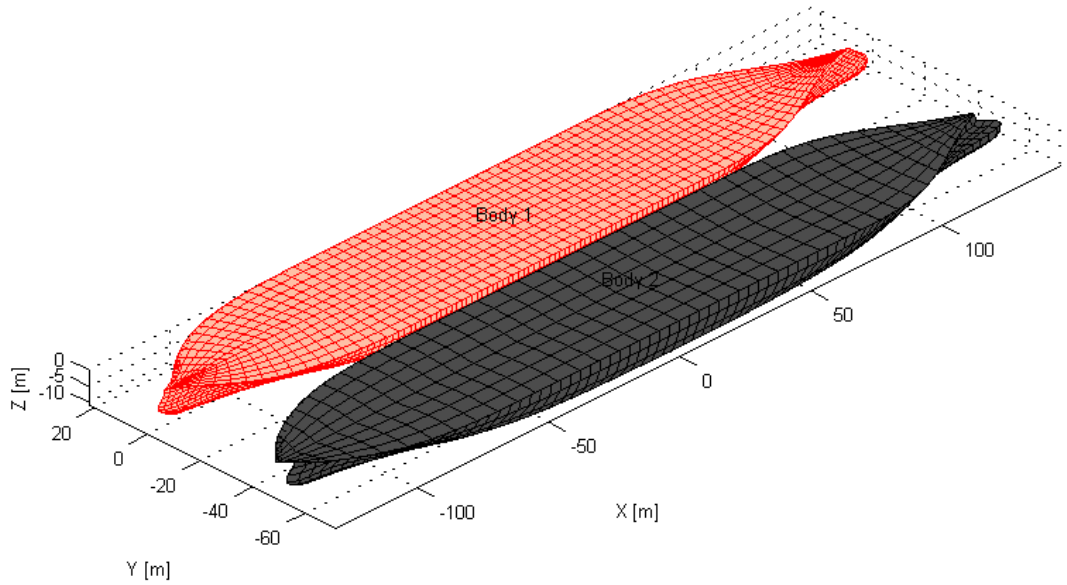
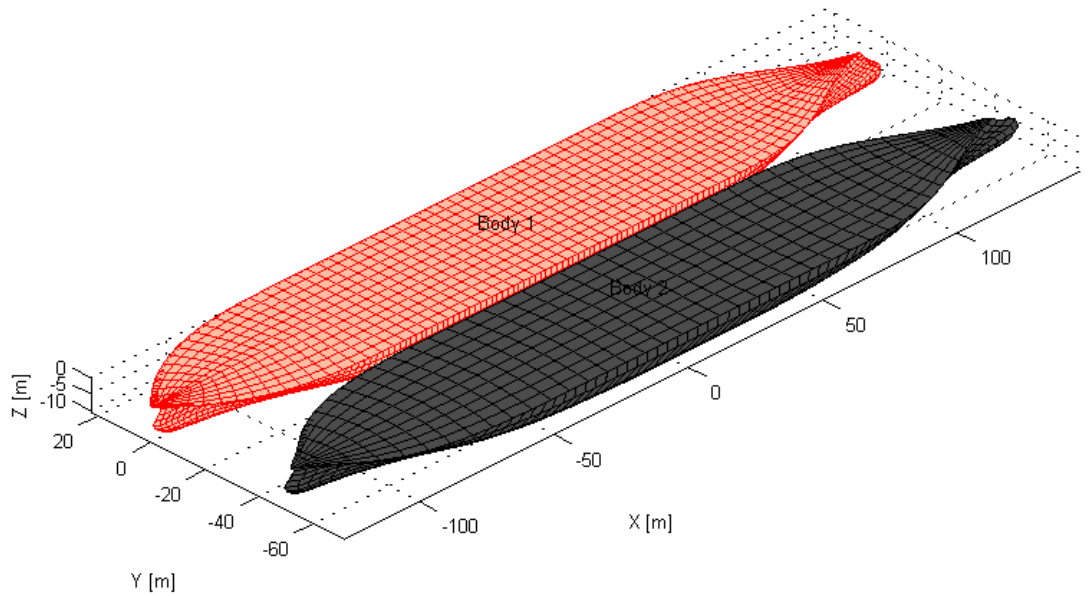
FIGURE 2 PANEL DISTRIBUTION ALIGNED SIDE-BY-SIDE CONFIGURATION*Loaded FSU – Ballasted LNGC**Ballasted FSU – Loaded LNGC*

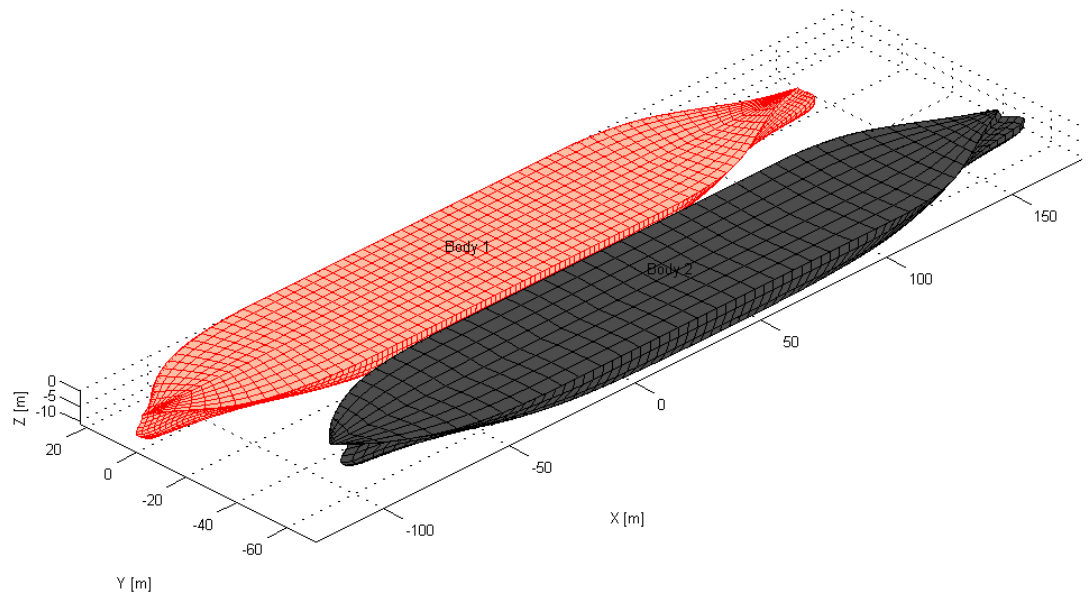
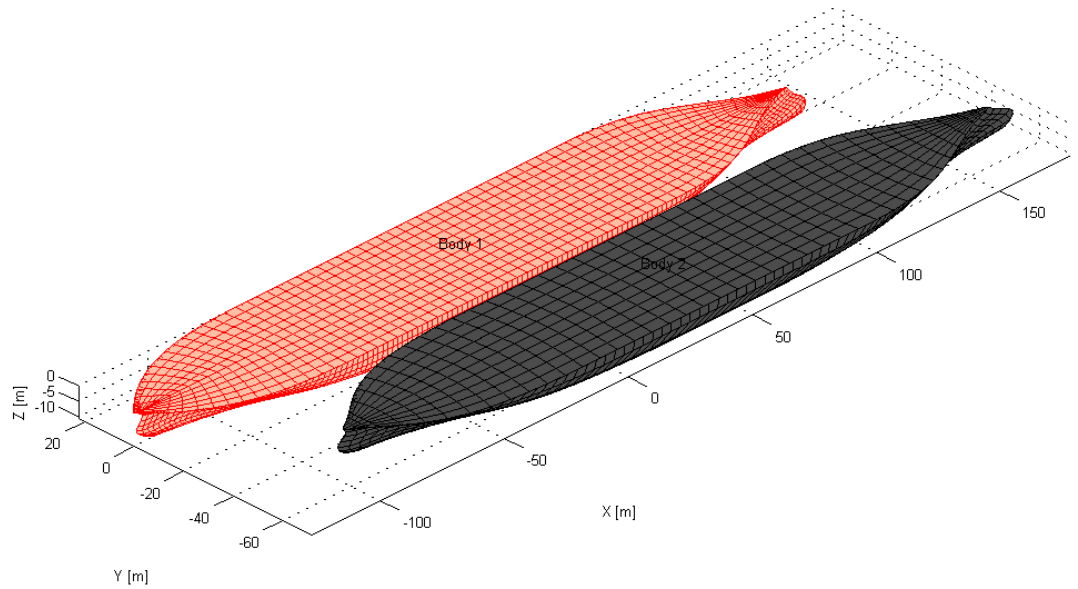
FIGURE 3 PANEL DISTRIBUTION SHIFTED SIDE-BY-SIDE CONFIGURATION*Loaded FSU – Ballasted LNGC**Ballasted FSU – Loaded LNGC*

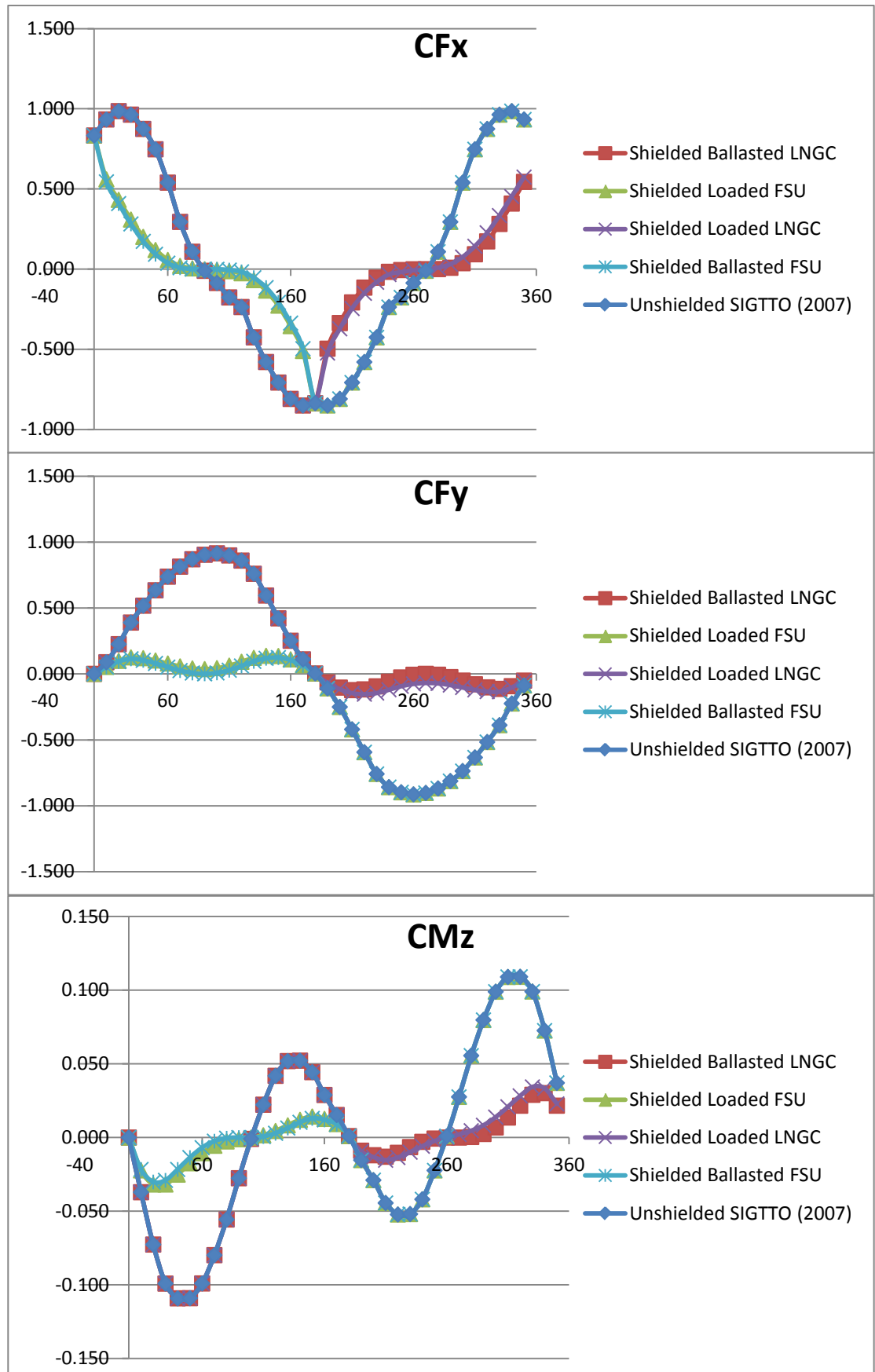
FIGURE 4 ALIGNED WIND COEFFICIENTS FSU AND LNGC

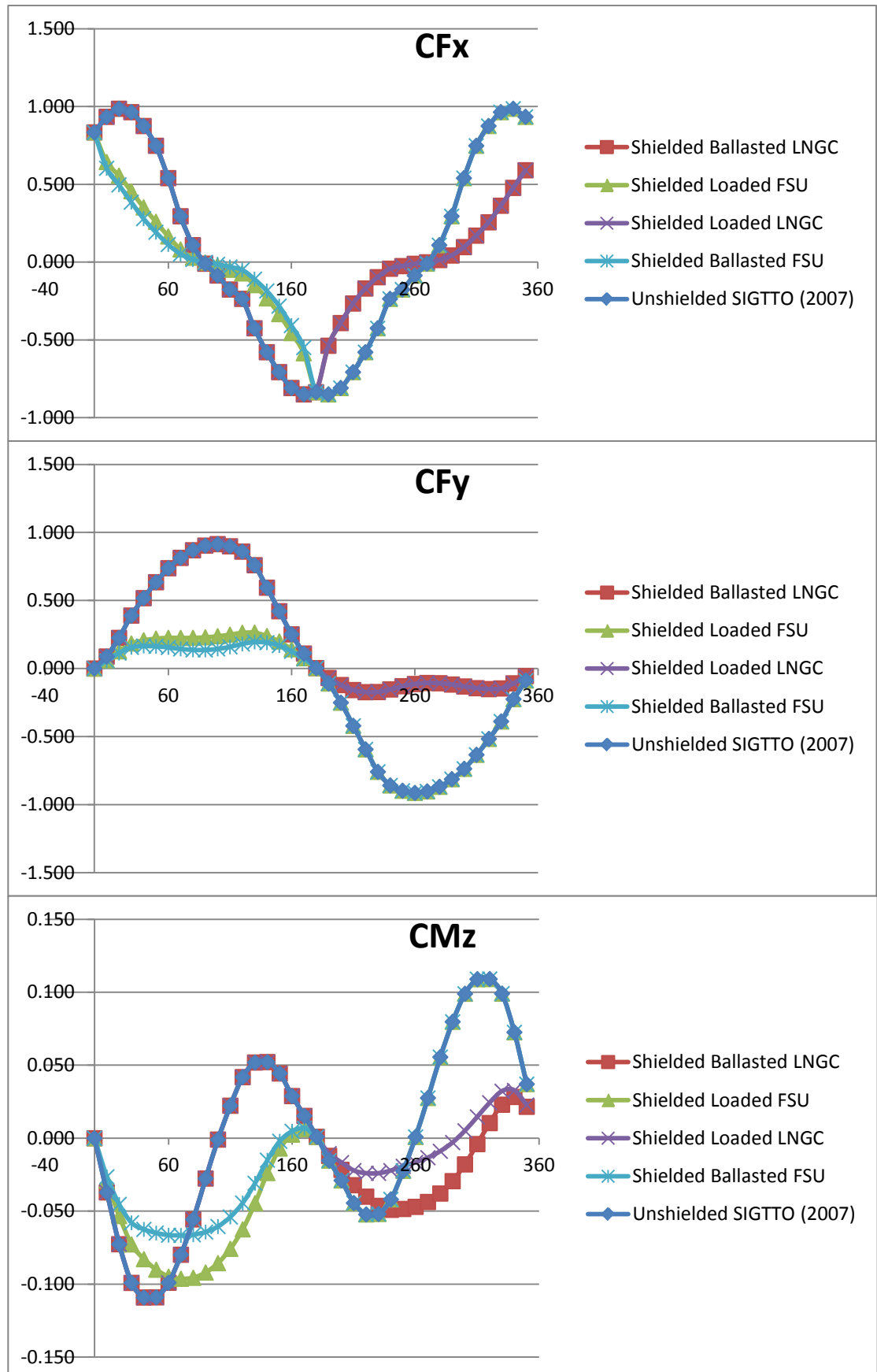
FIGURE 5 SHIFTED WIND COEFFICIENTS FSU AND LNGC

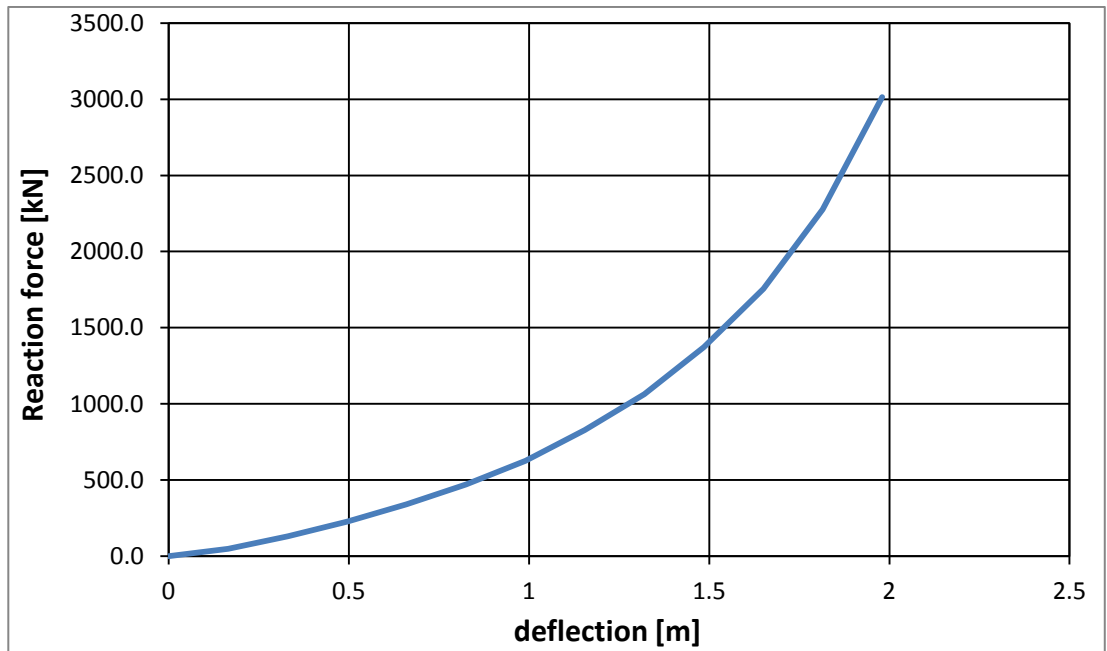
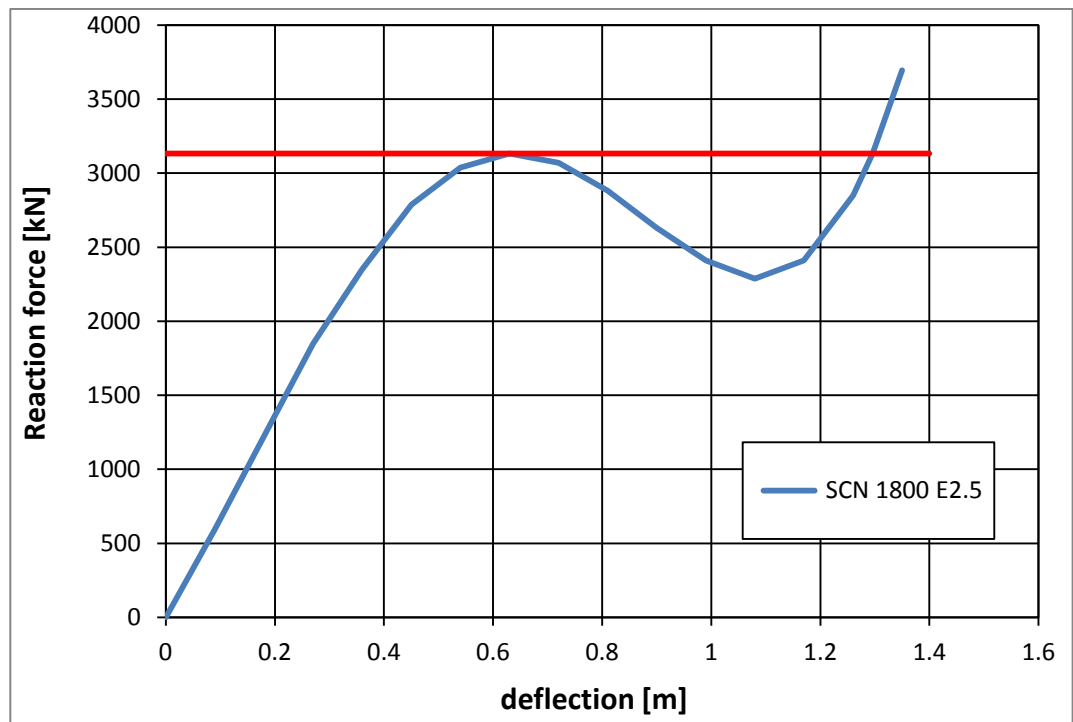
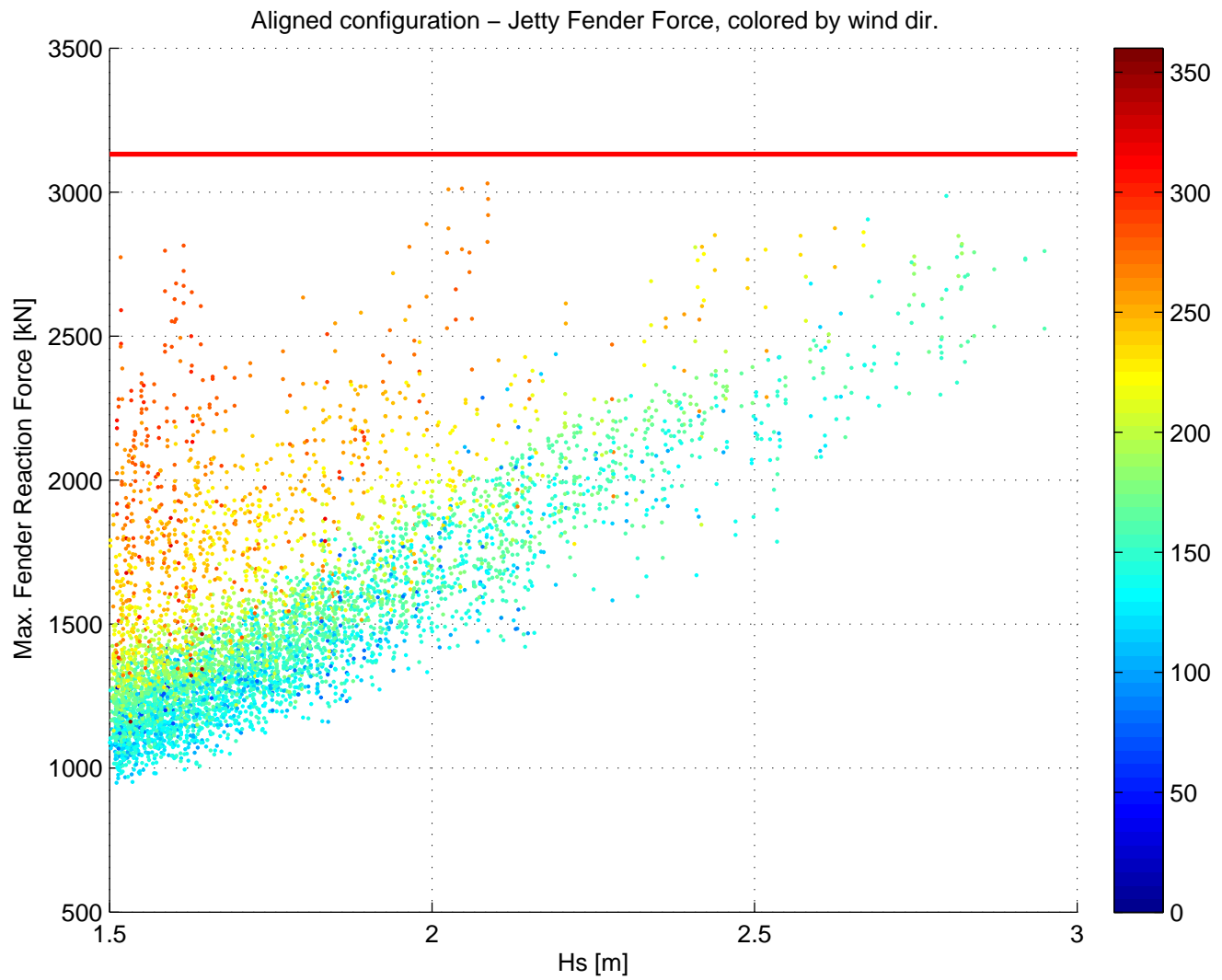
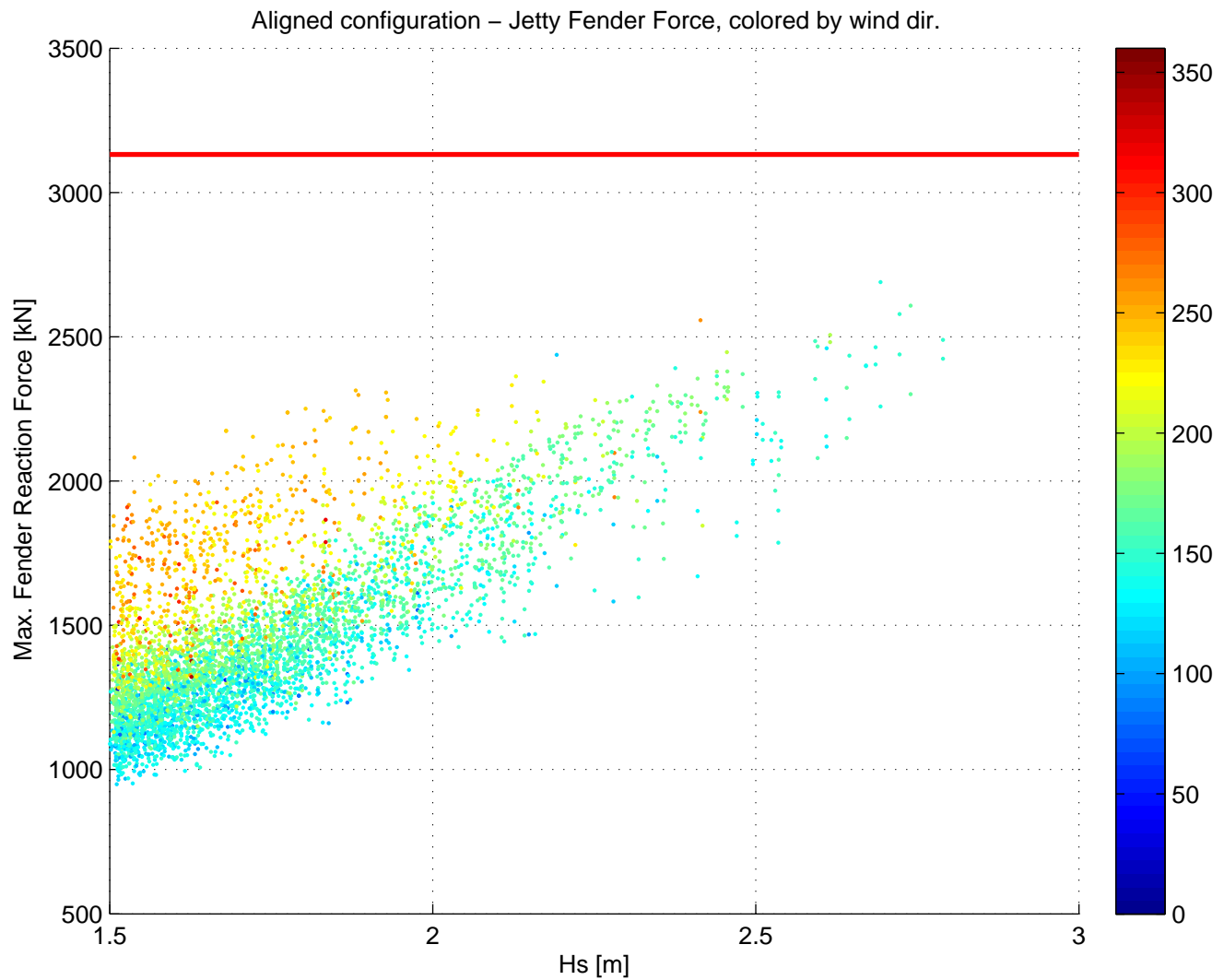
FIGURE 6 LOAD COMPRESSION CURVE FLOATING FENDERS

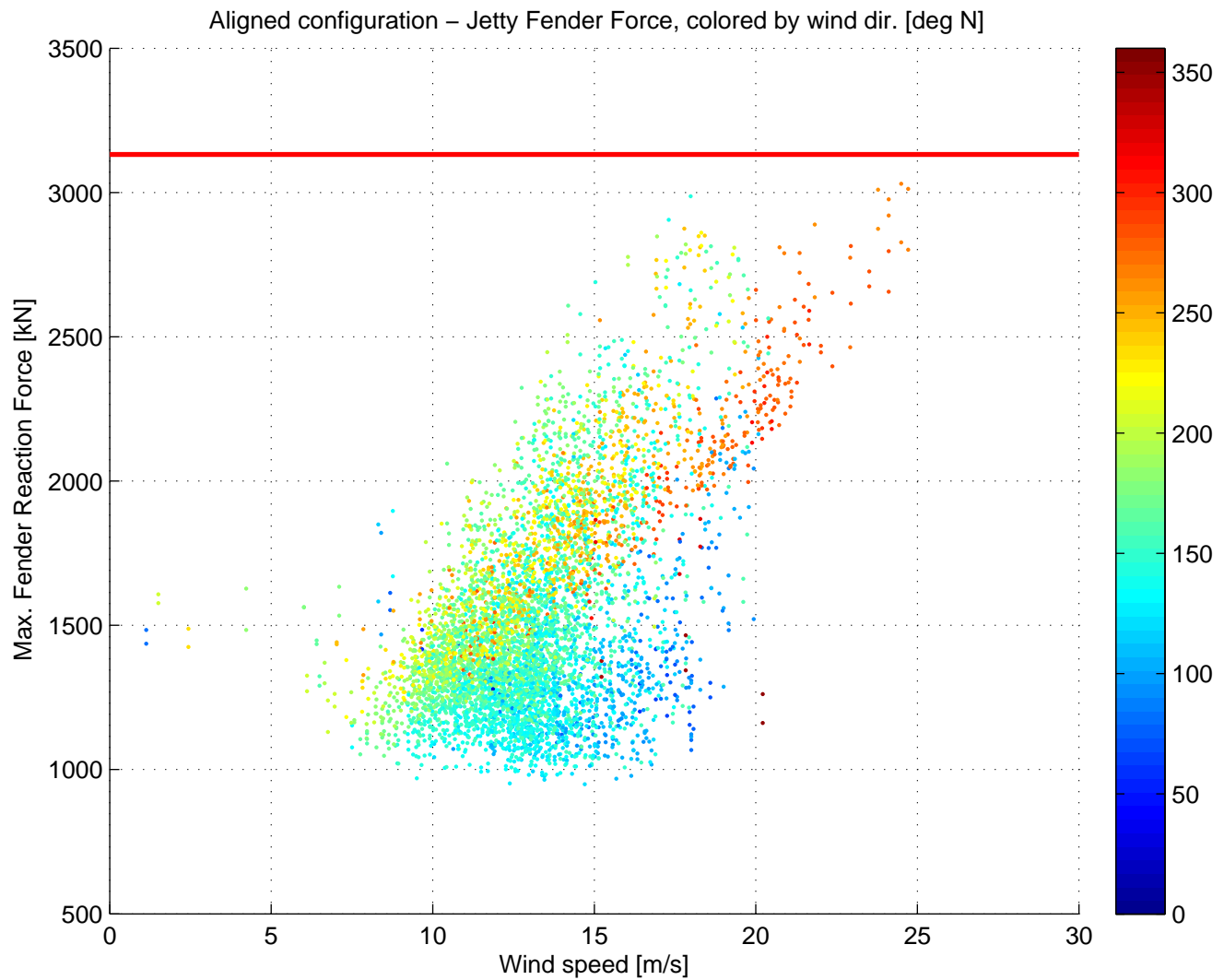
FIGURE 7 LOAD COMPRESSION CURVE SCN CELL FENDERS

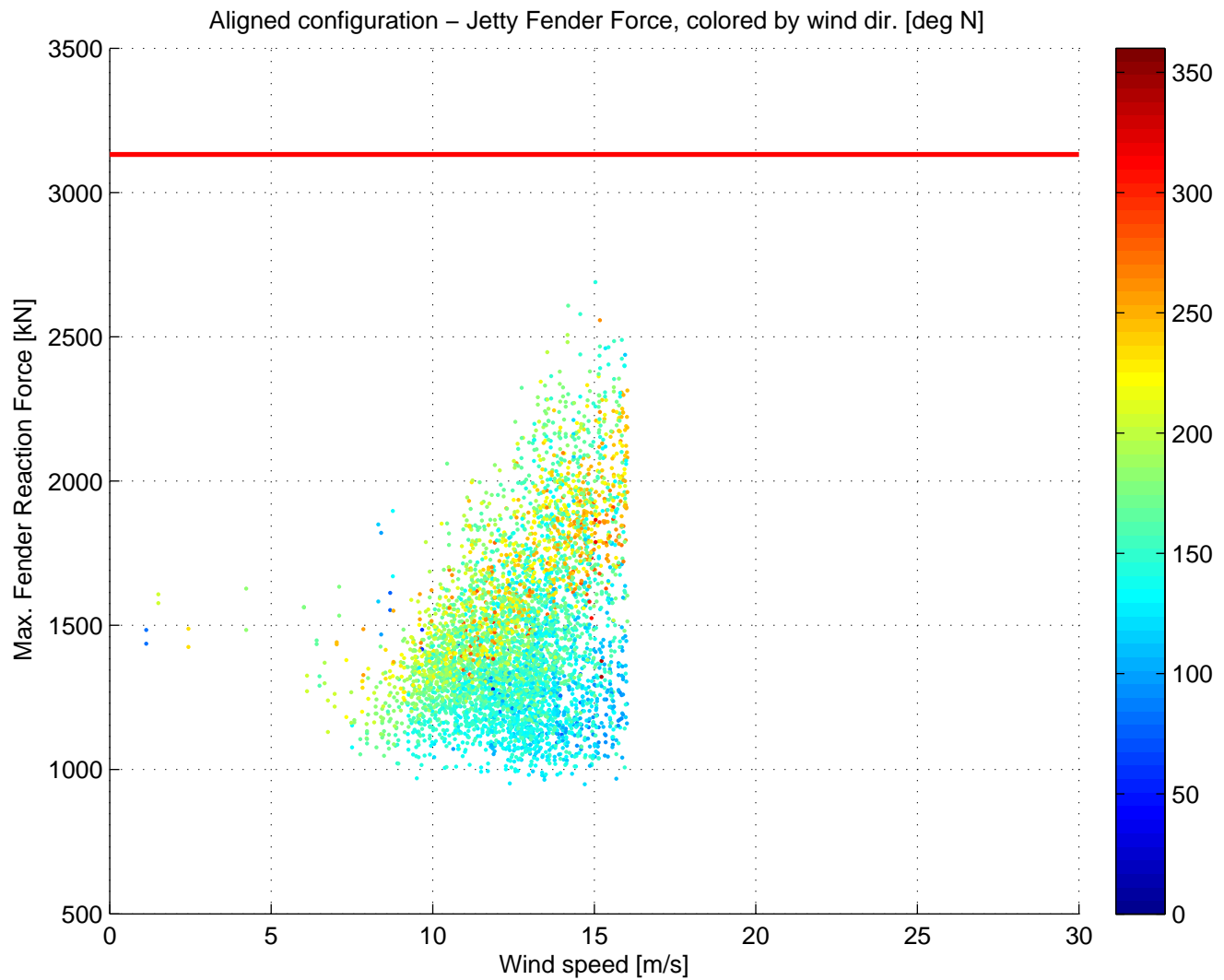
APPENDICES

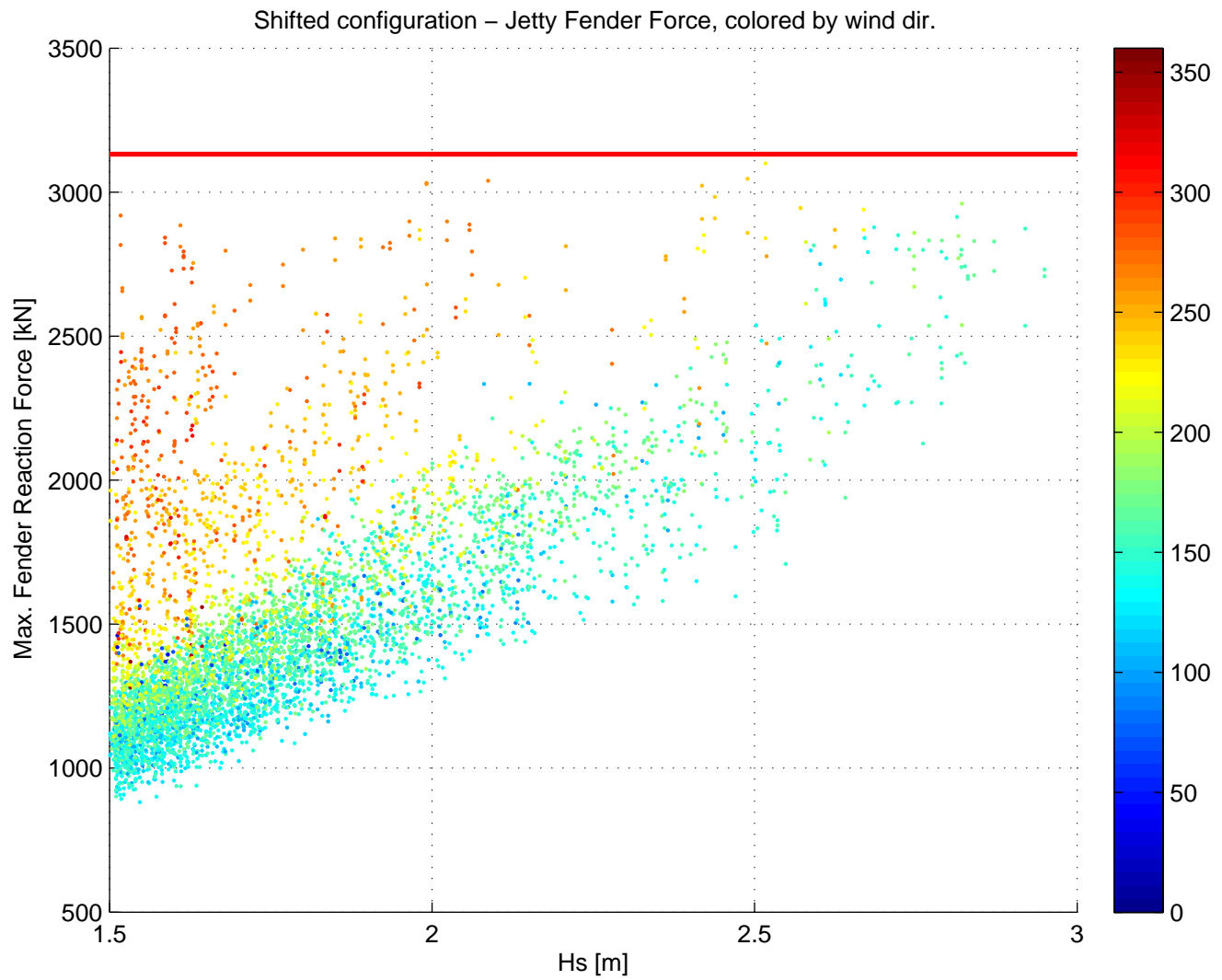
APPENDIX A01 RESULTS SIDE-BY-SIDE MOORED SHIP RESPONSE STUDY

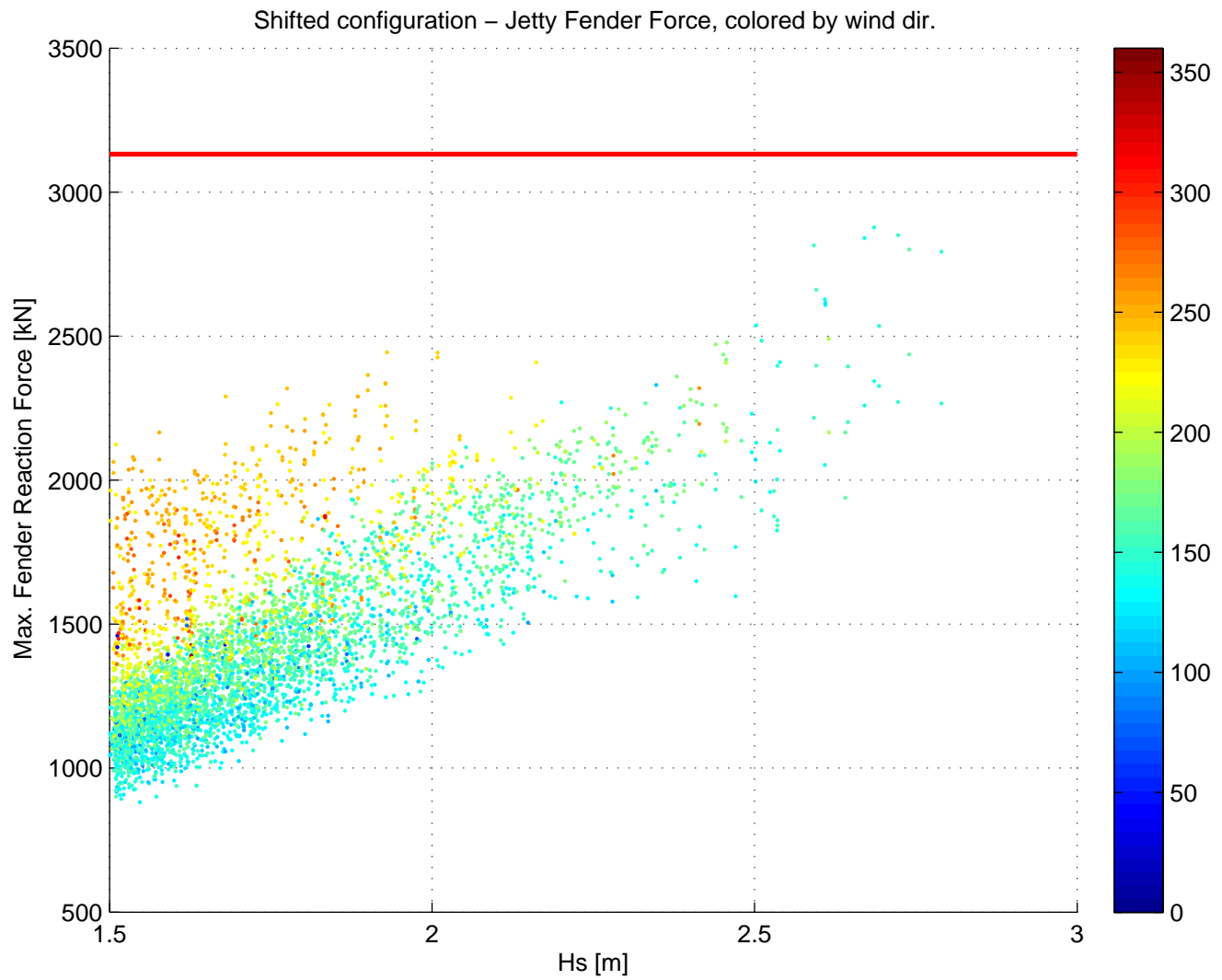


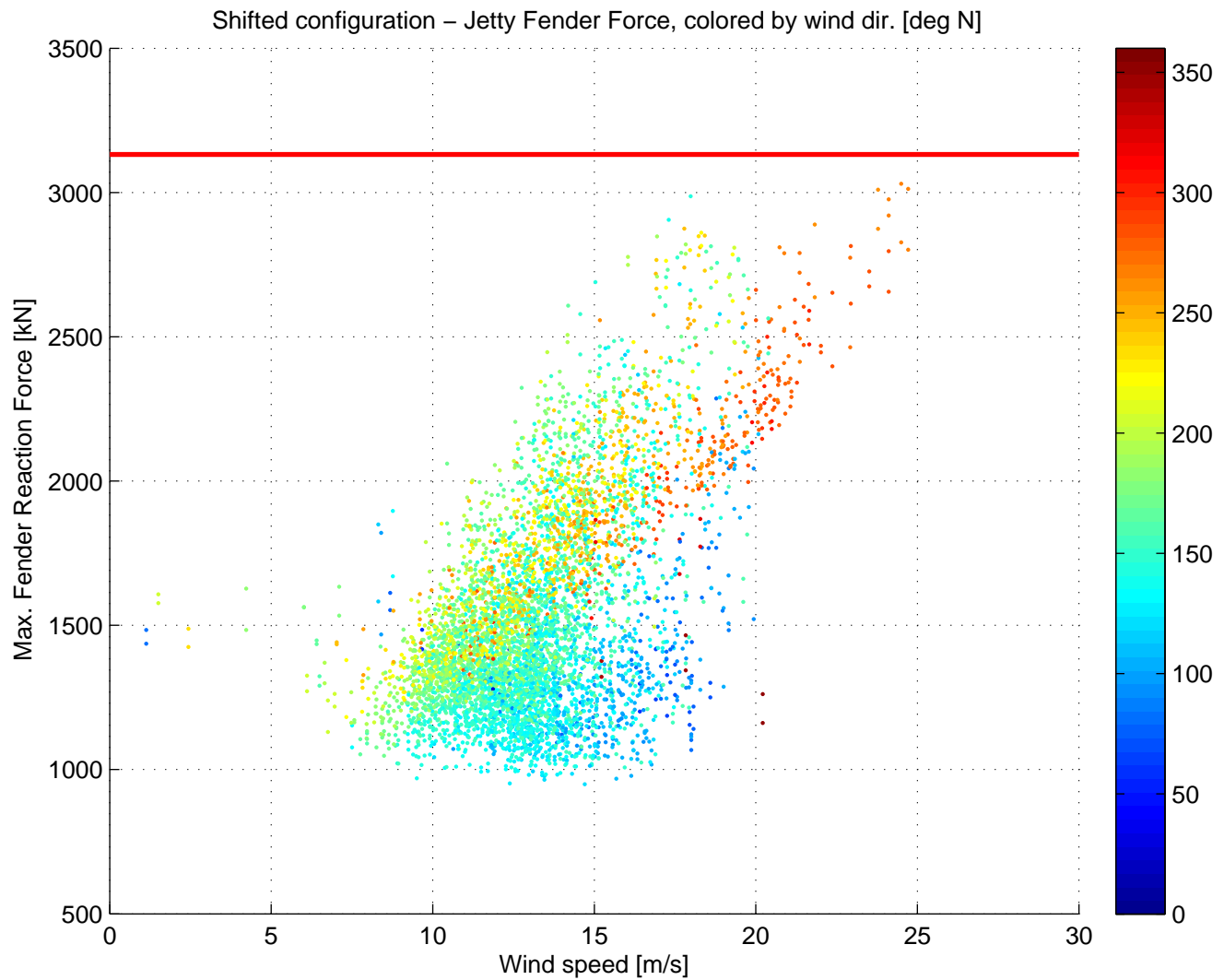


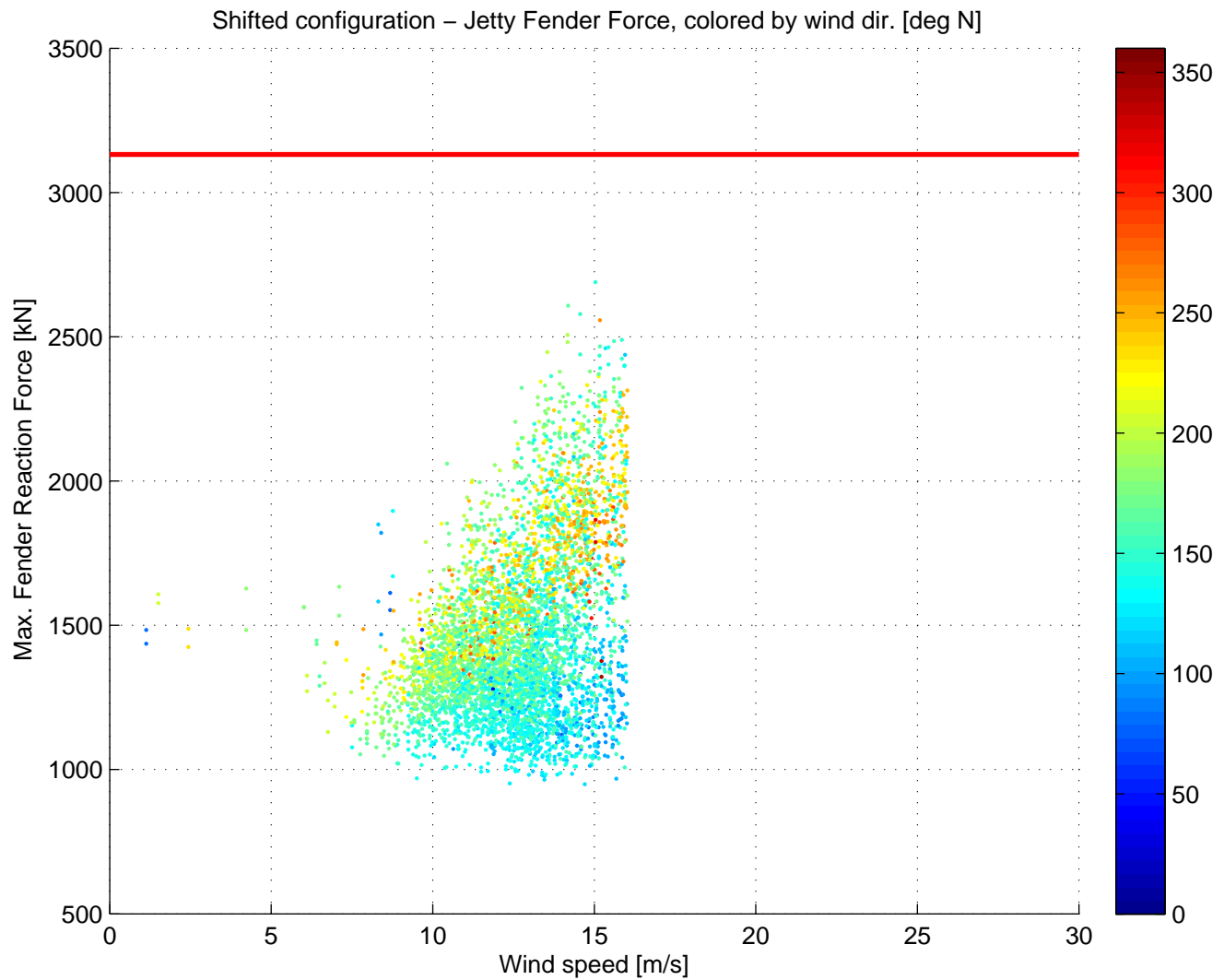


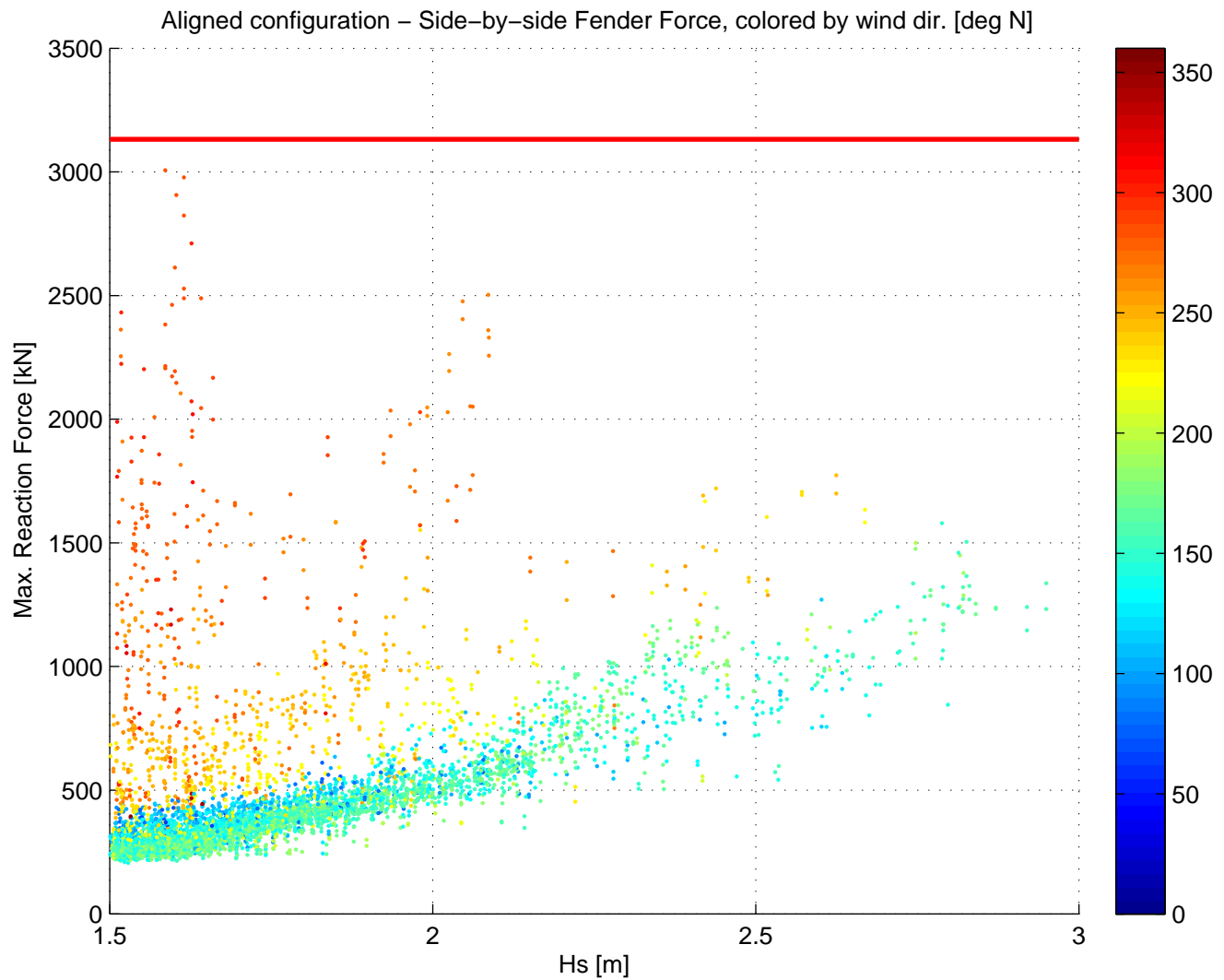


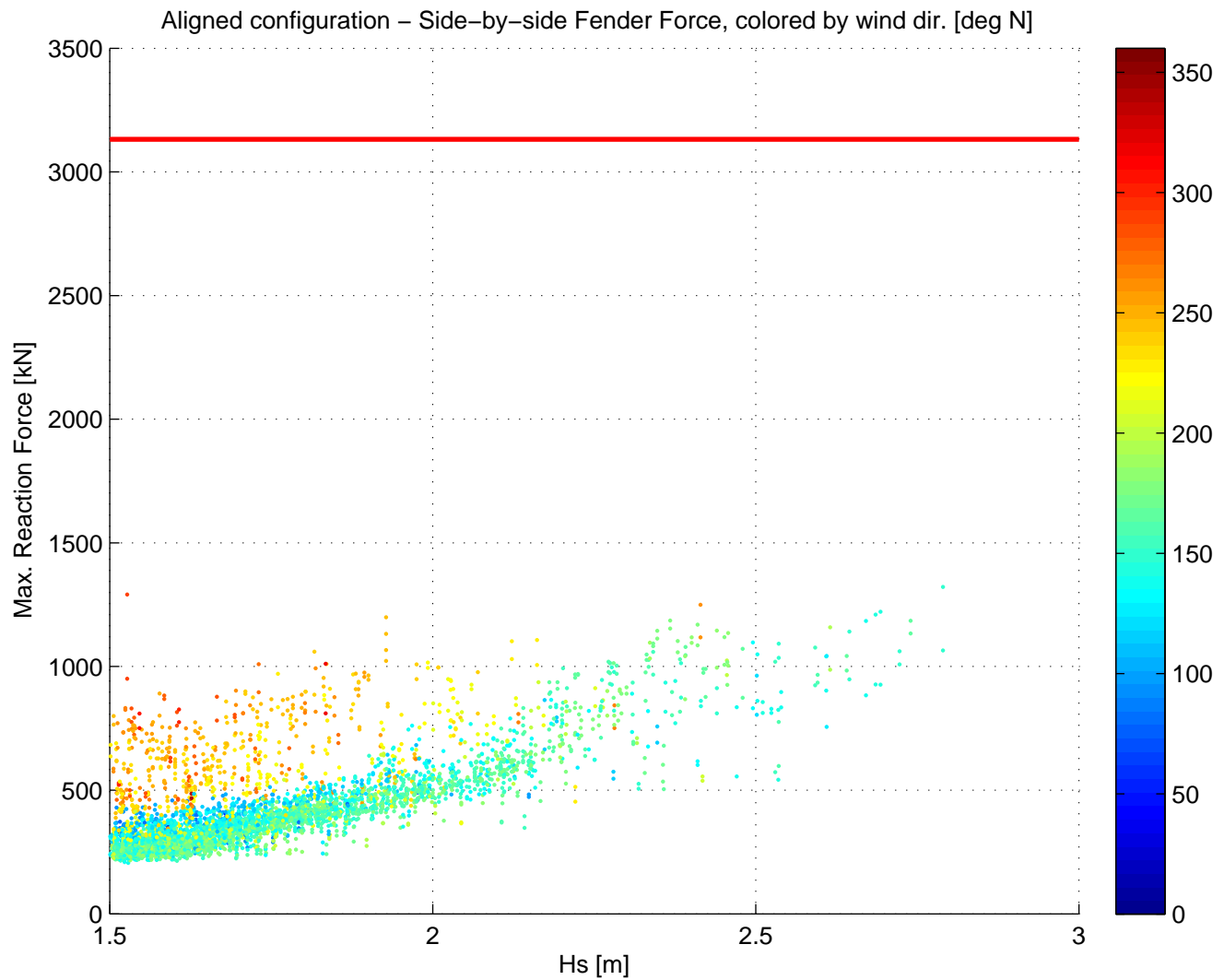




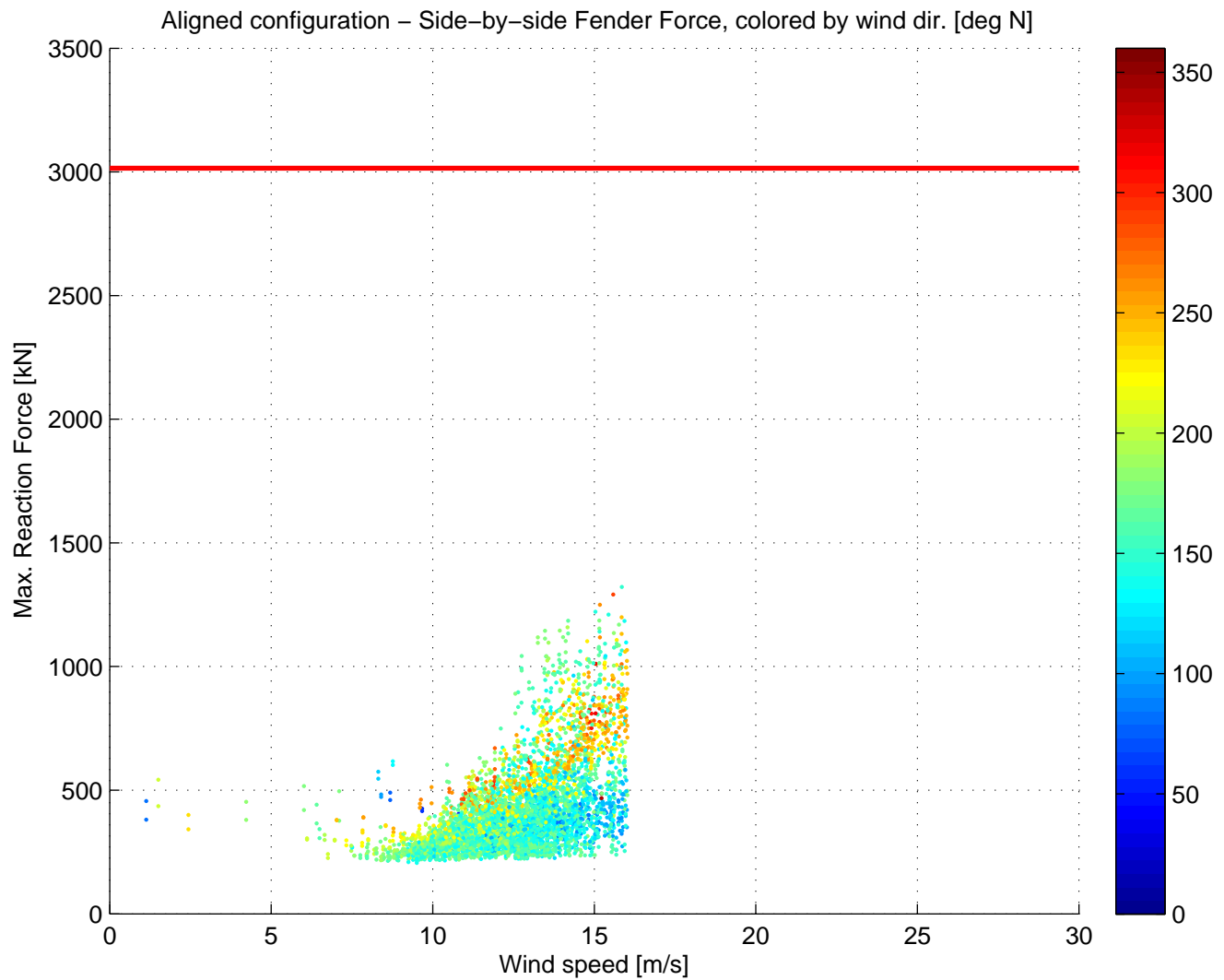


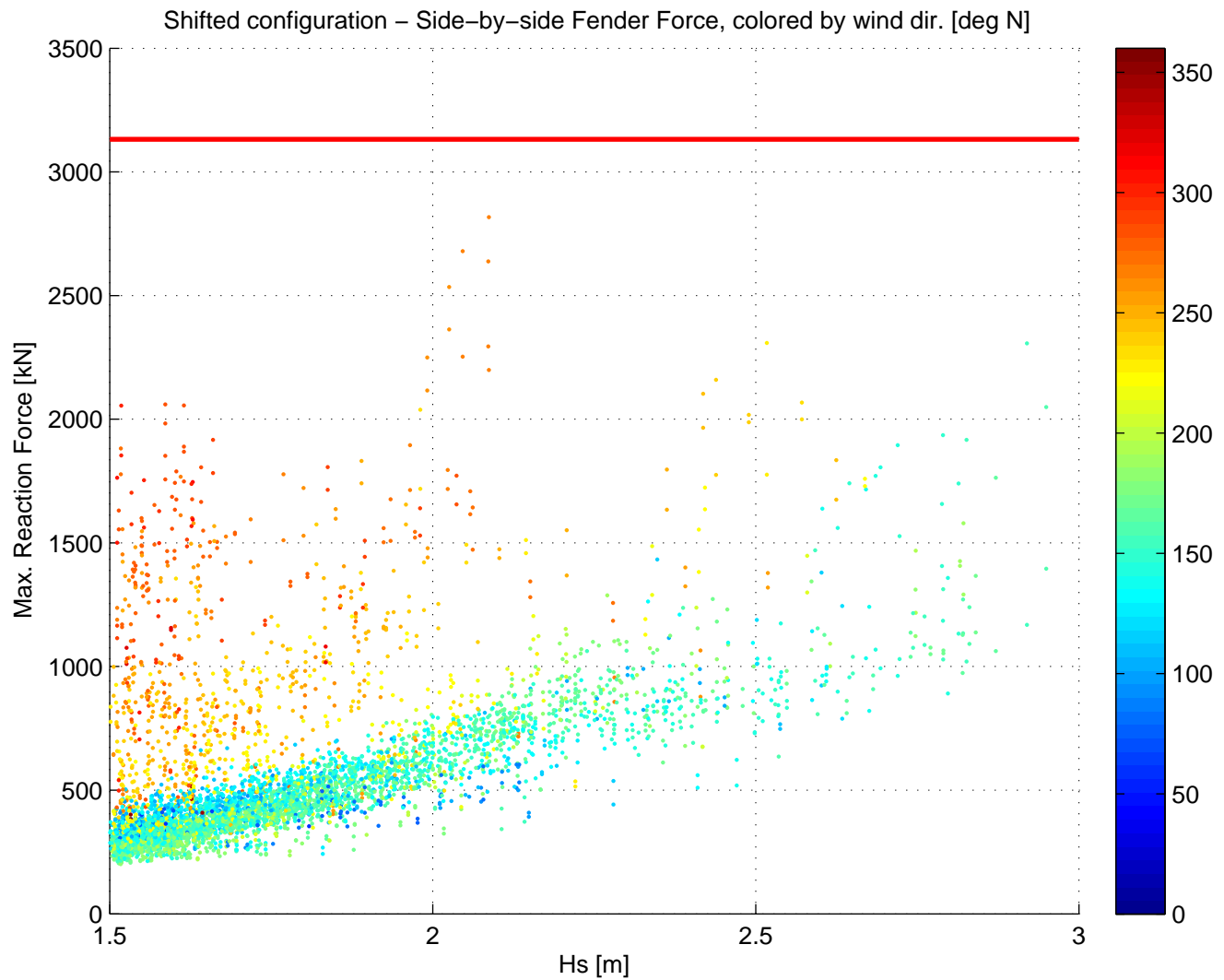


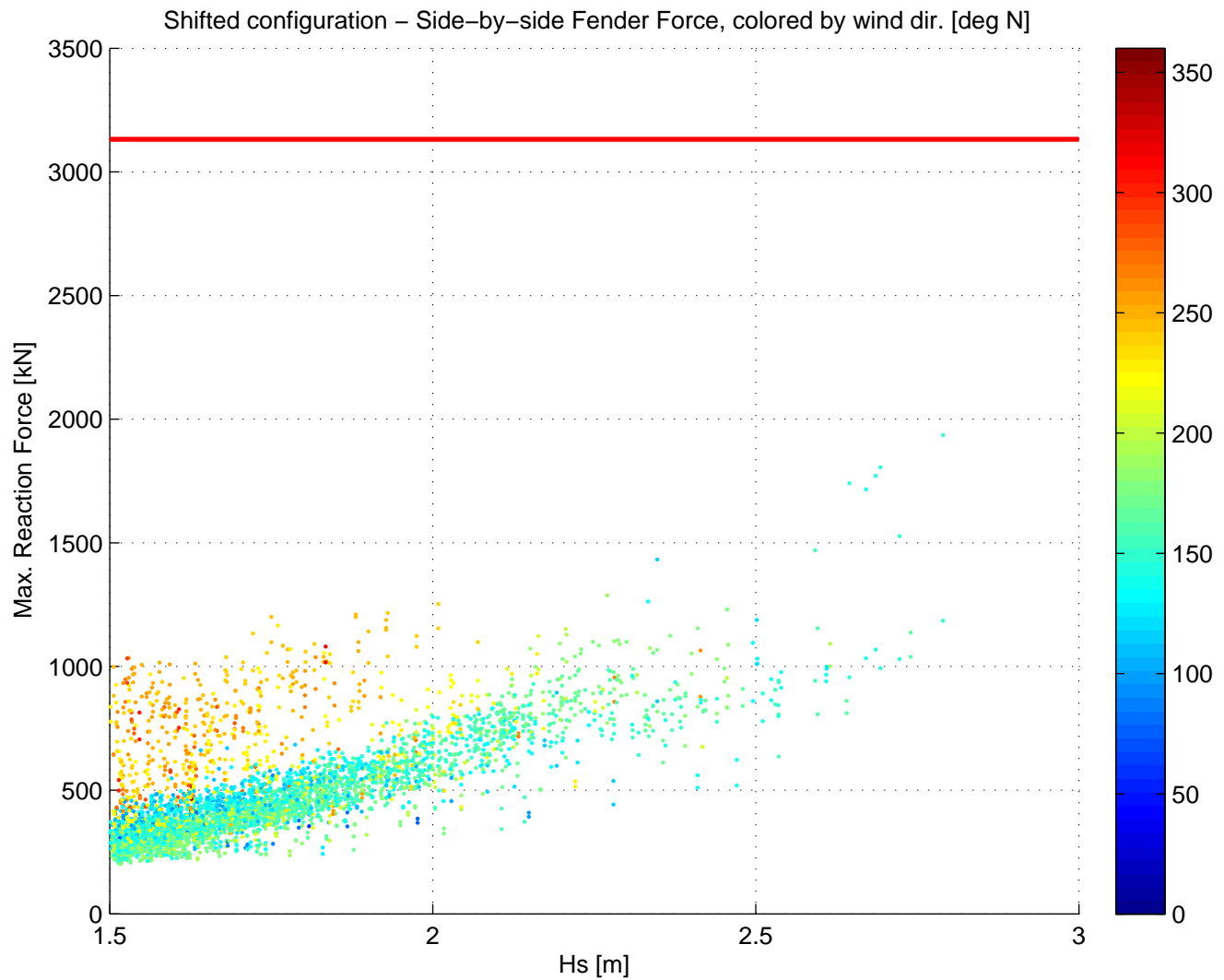


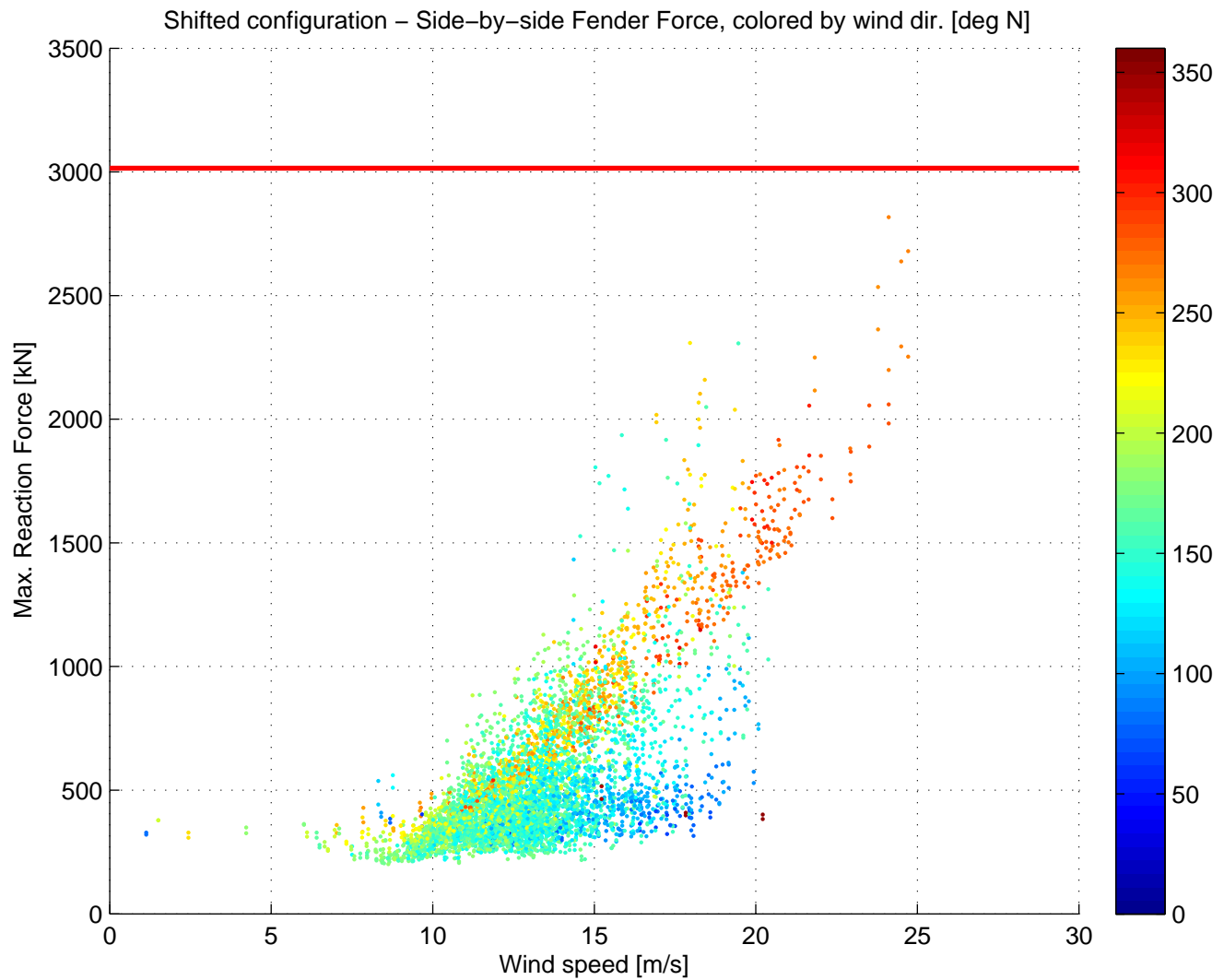


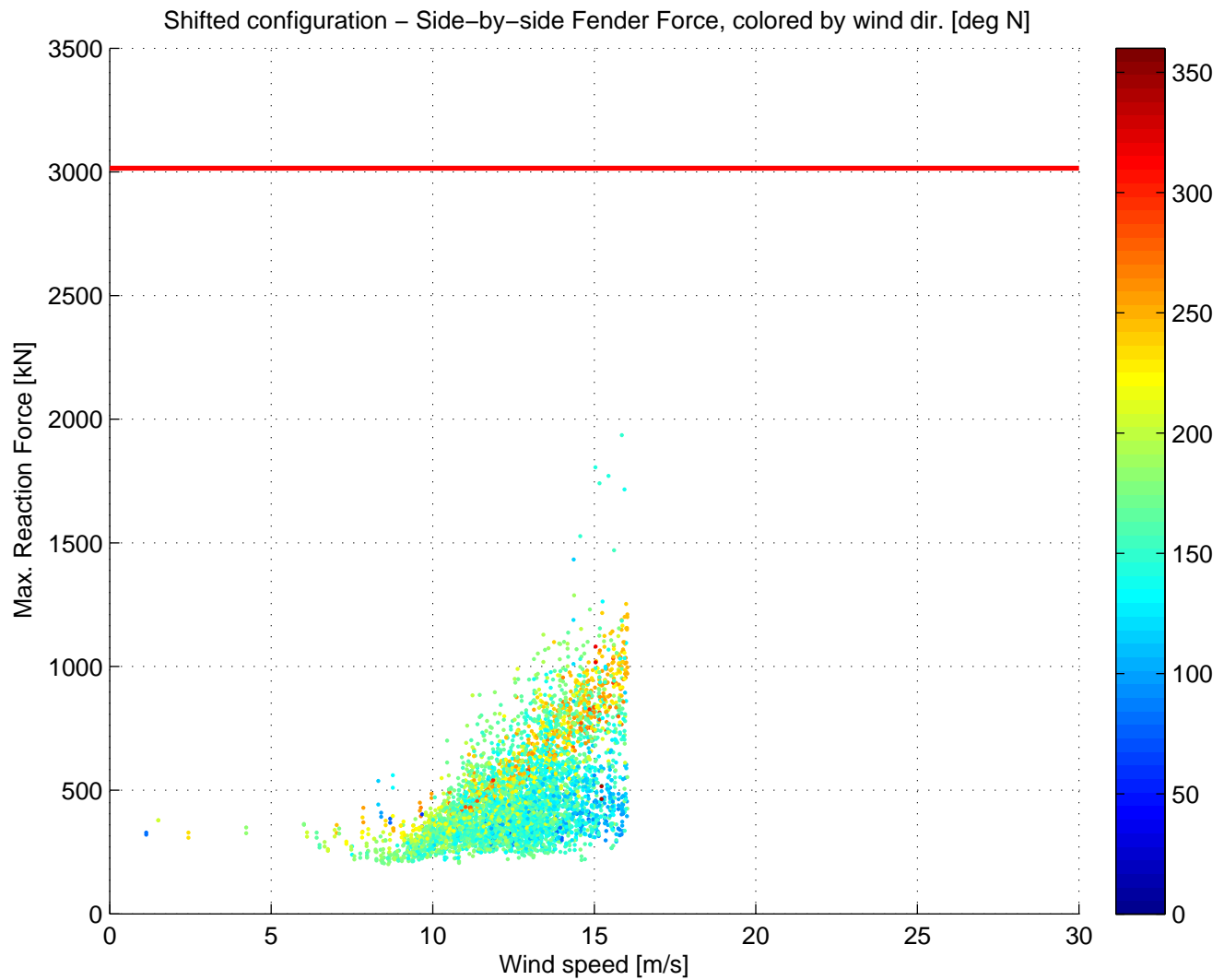


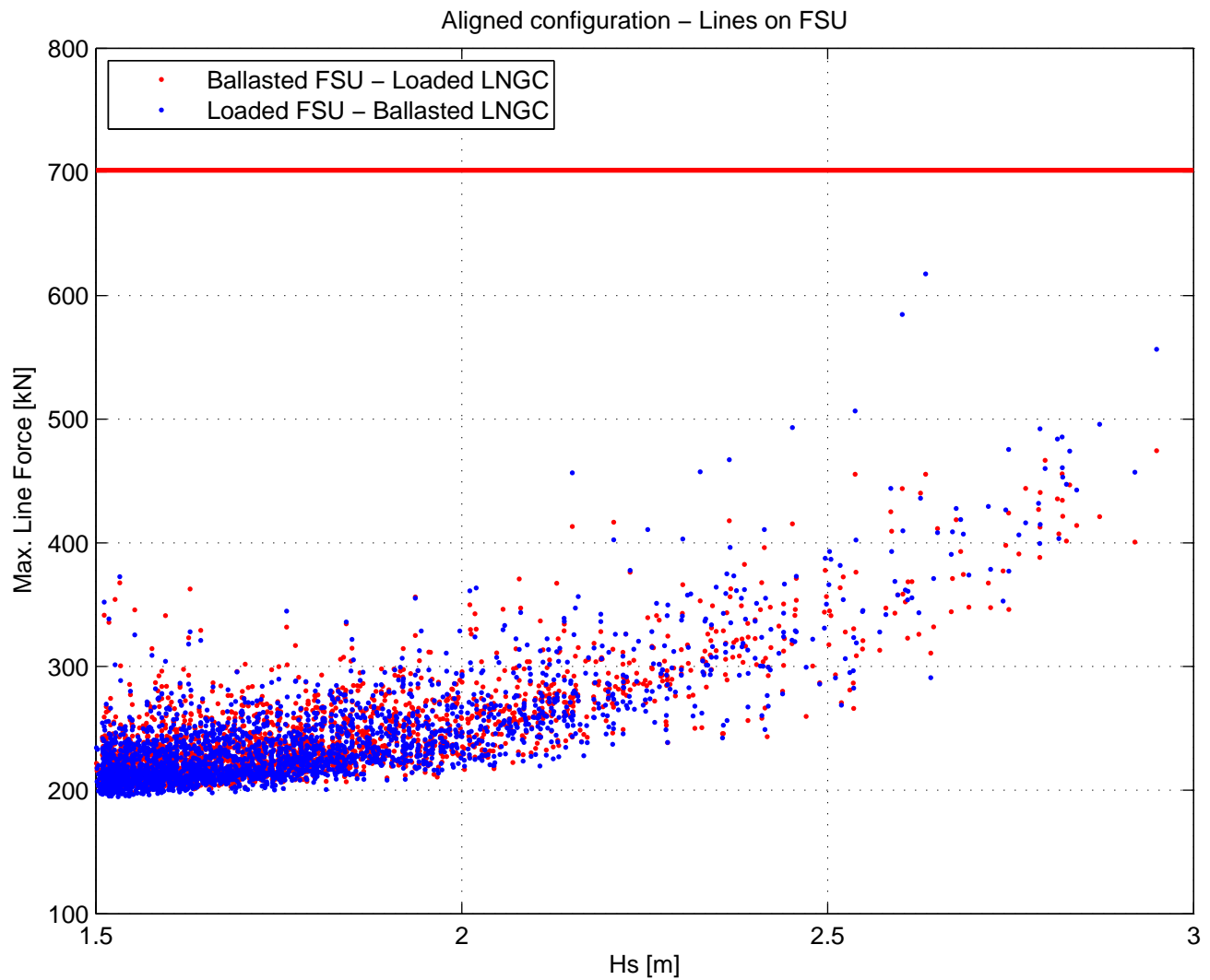


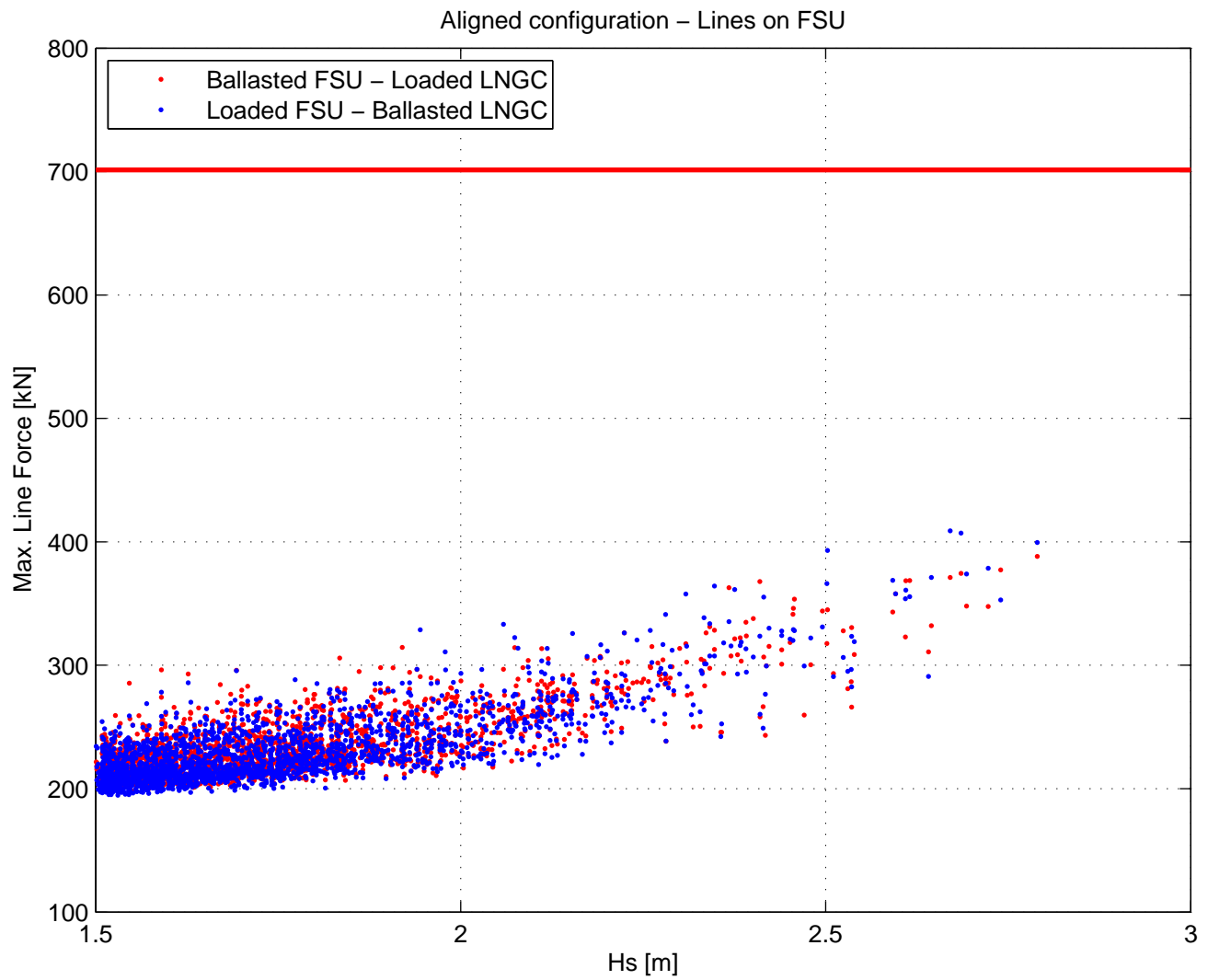


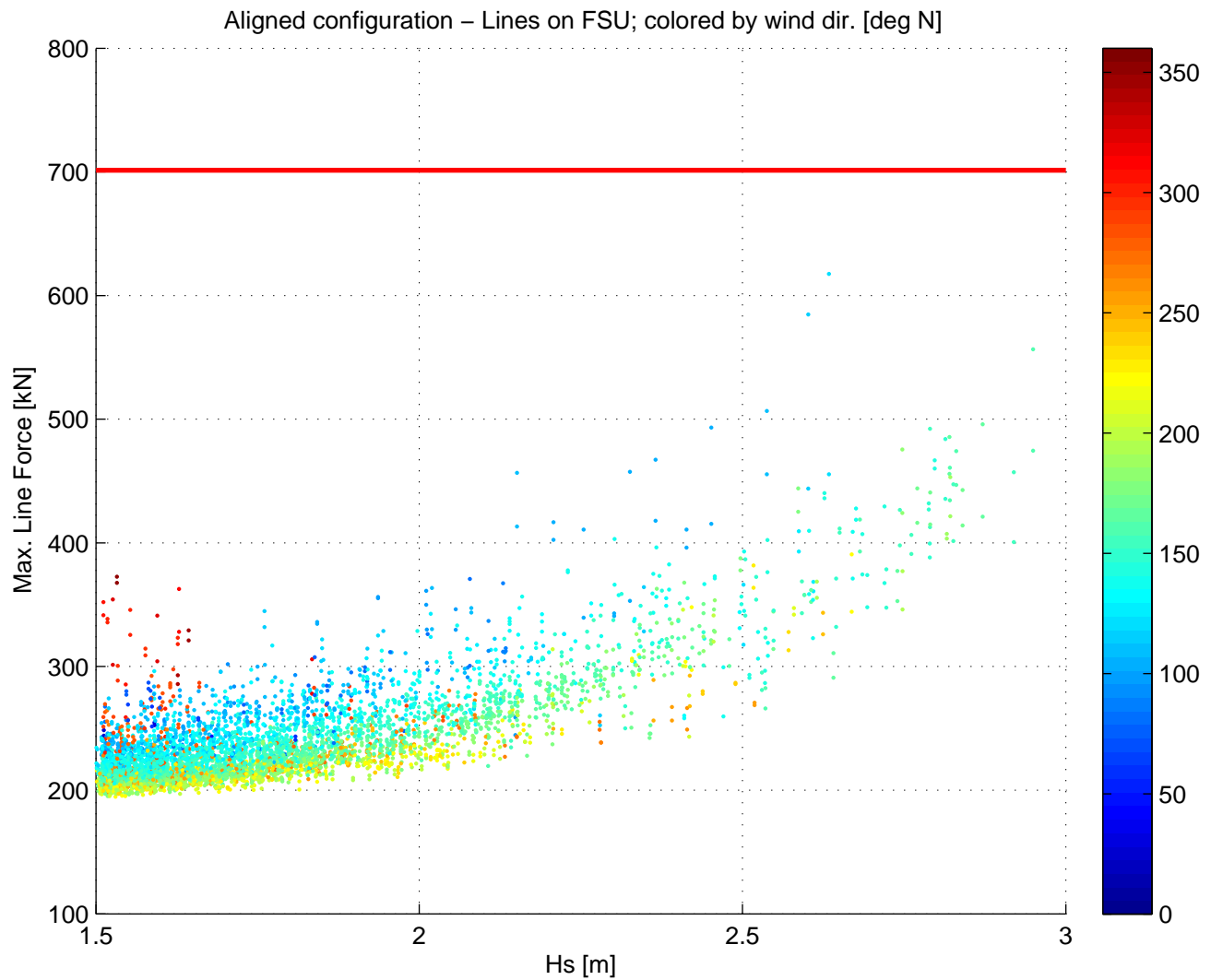


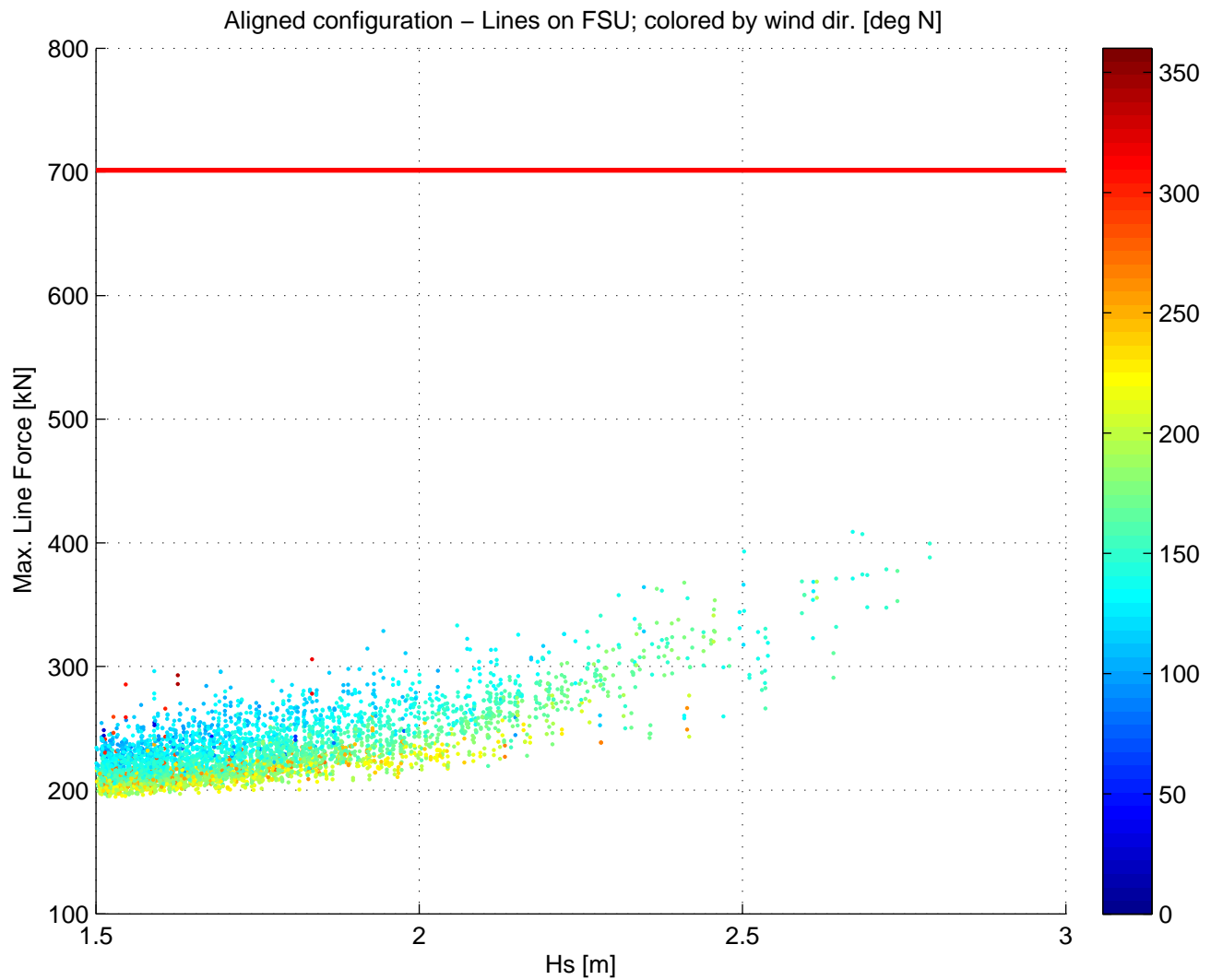


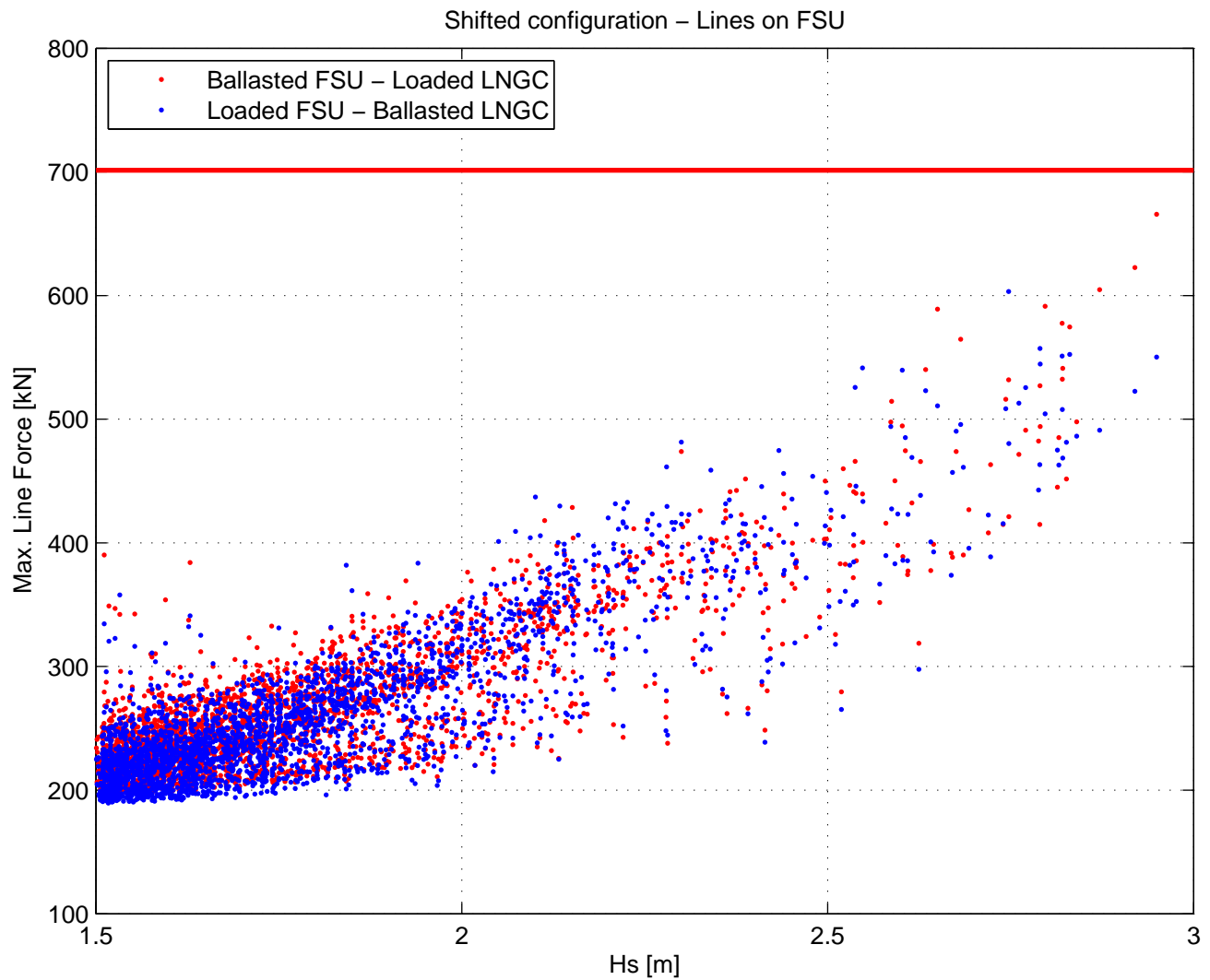


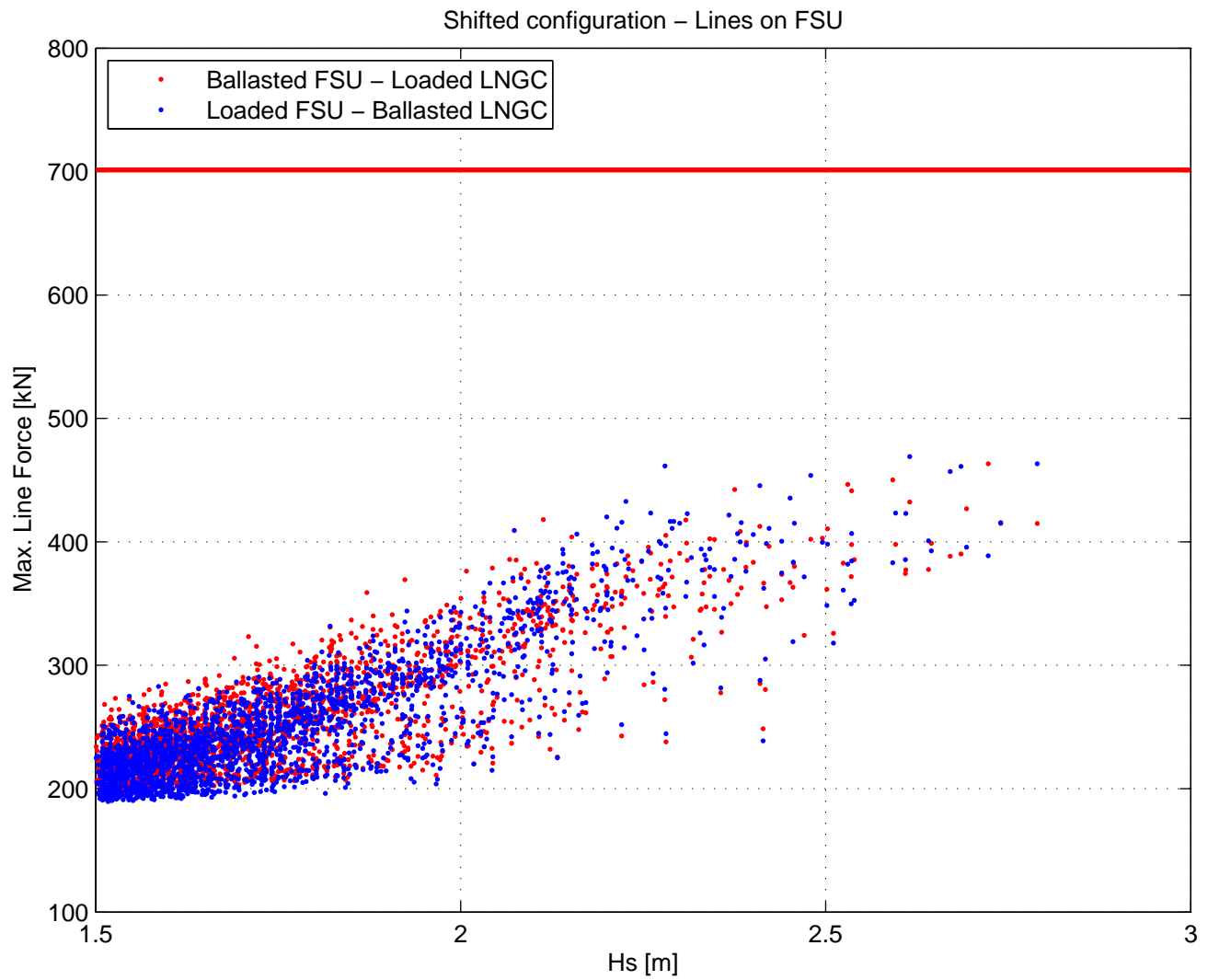


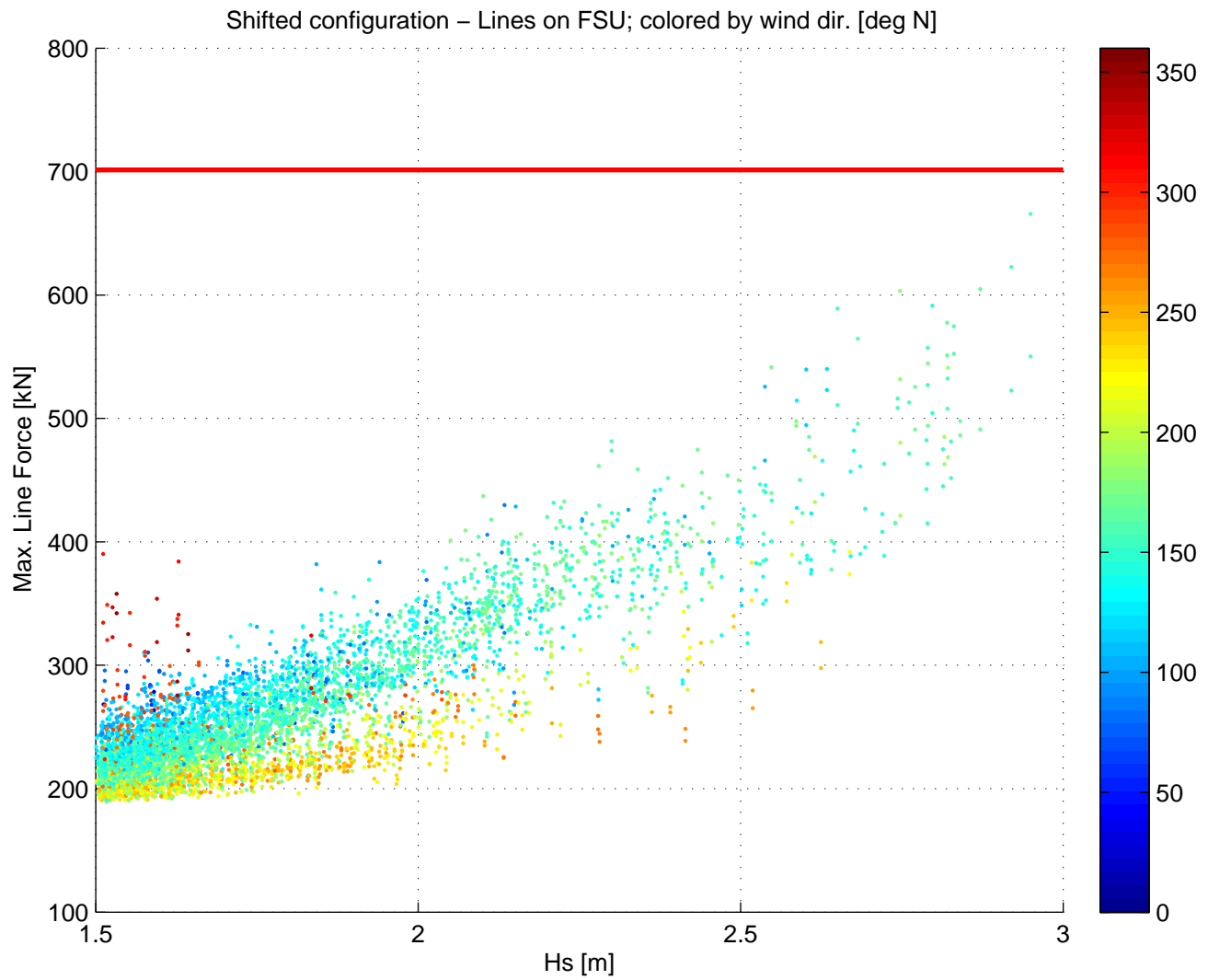


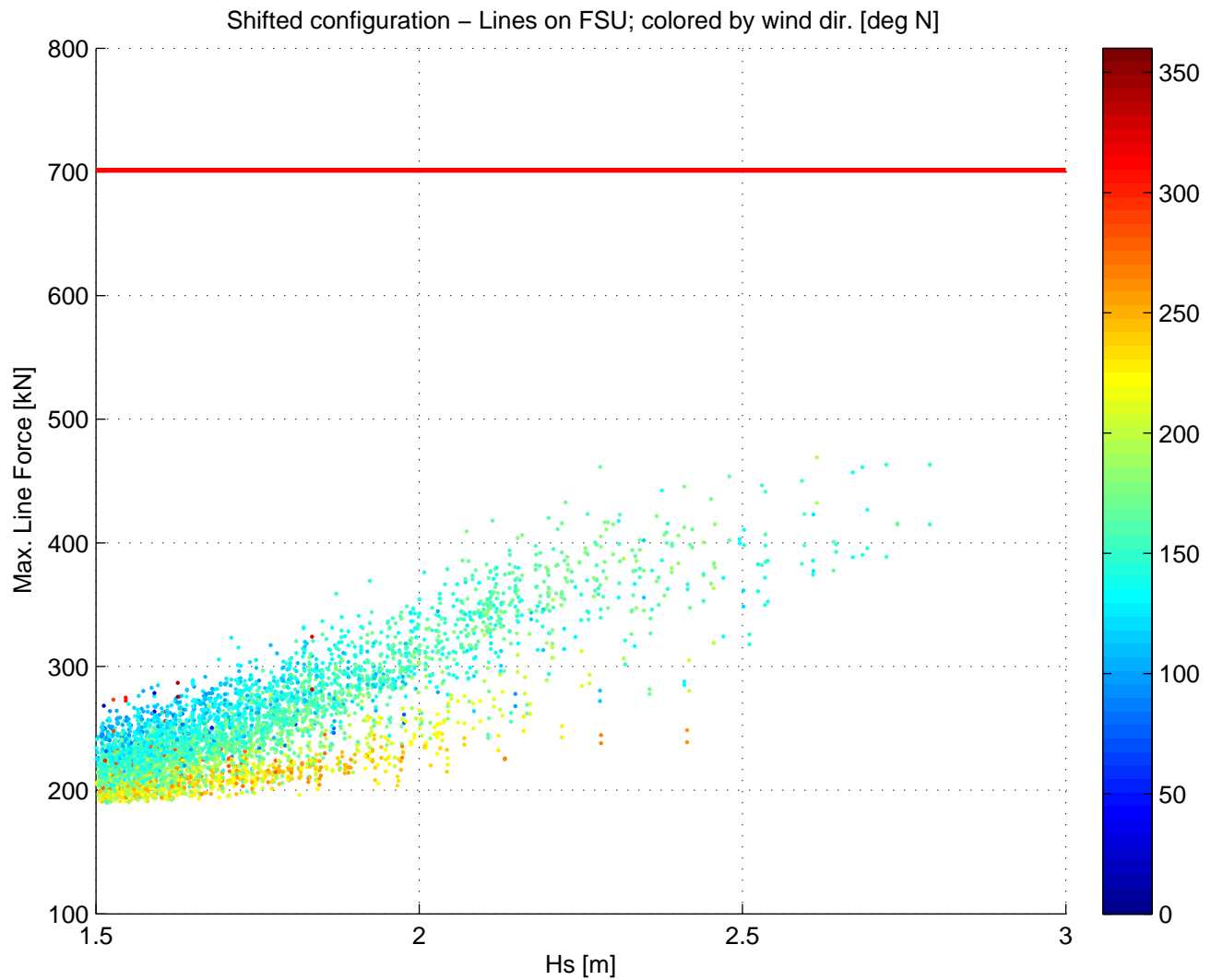


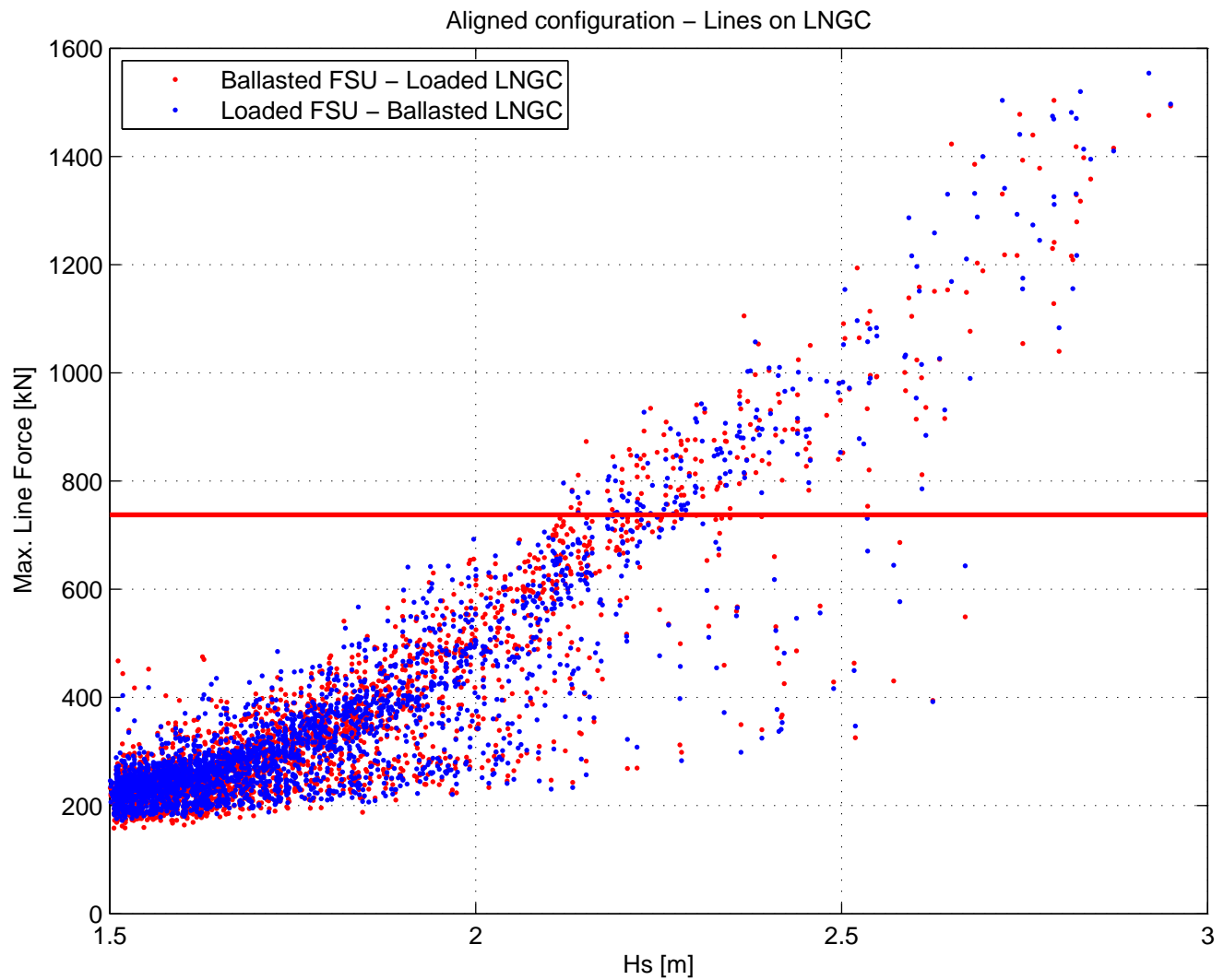


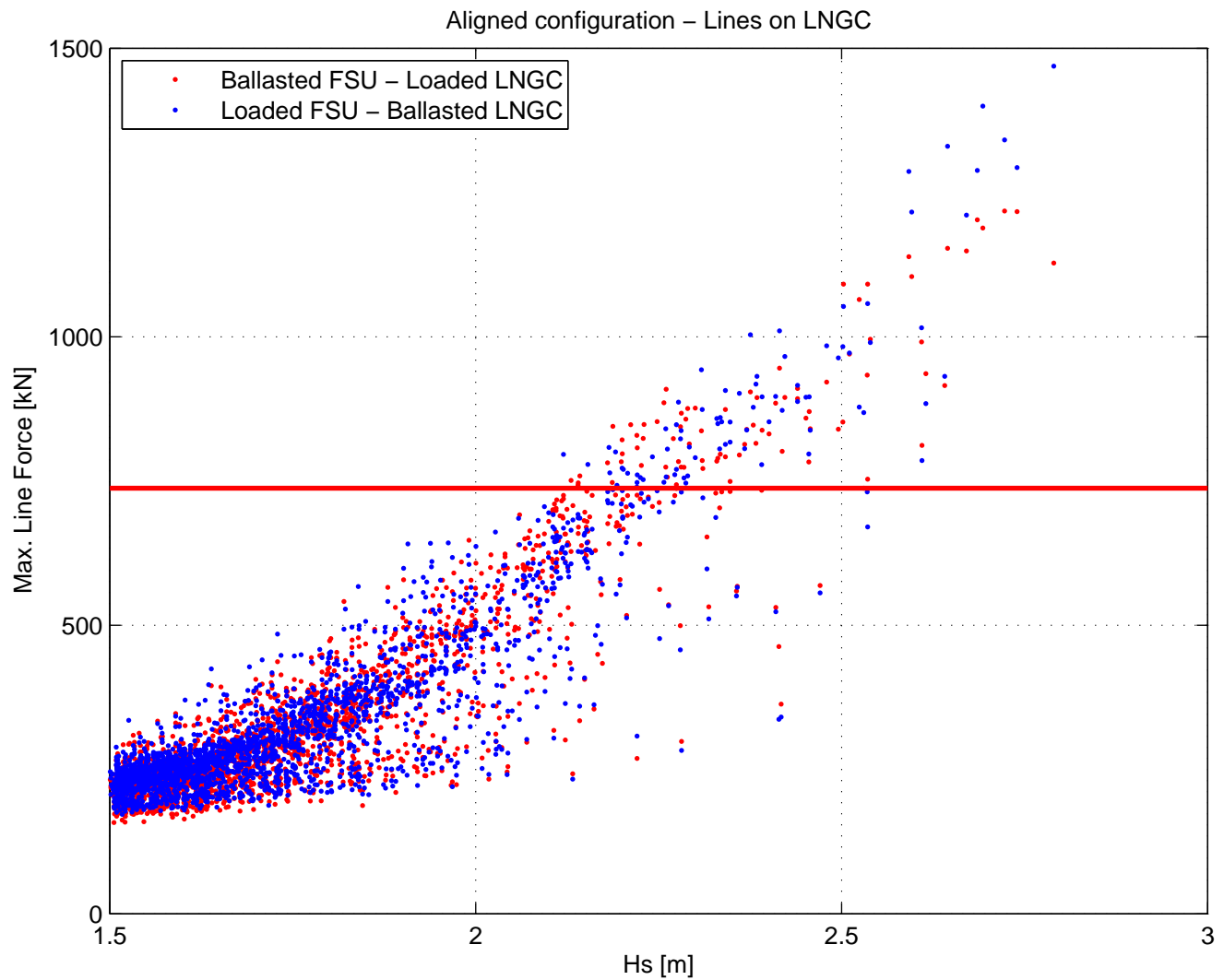


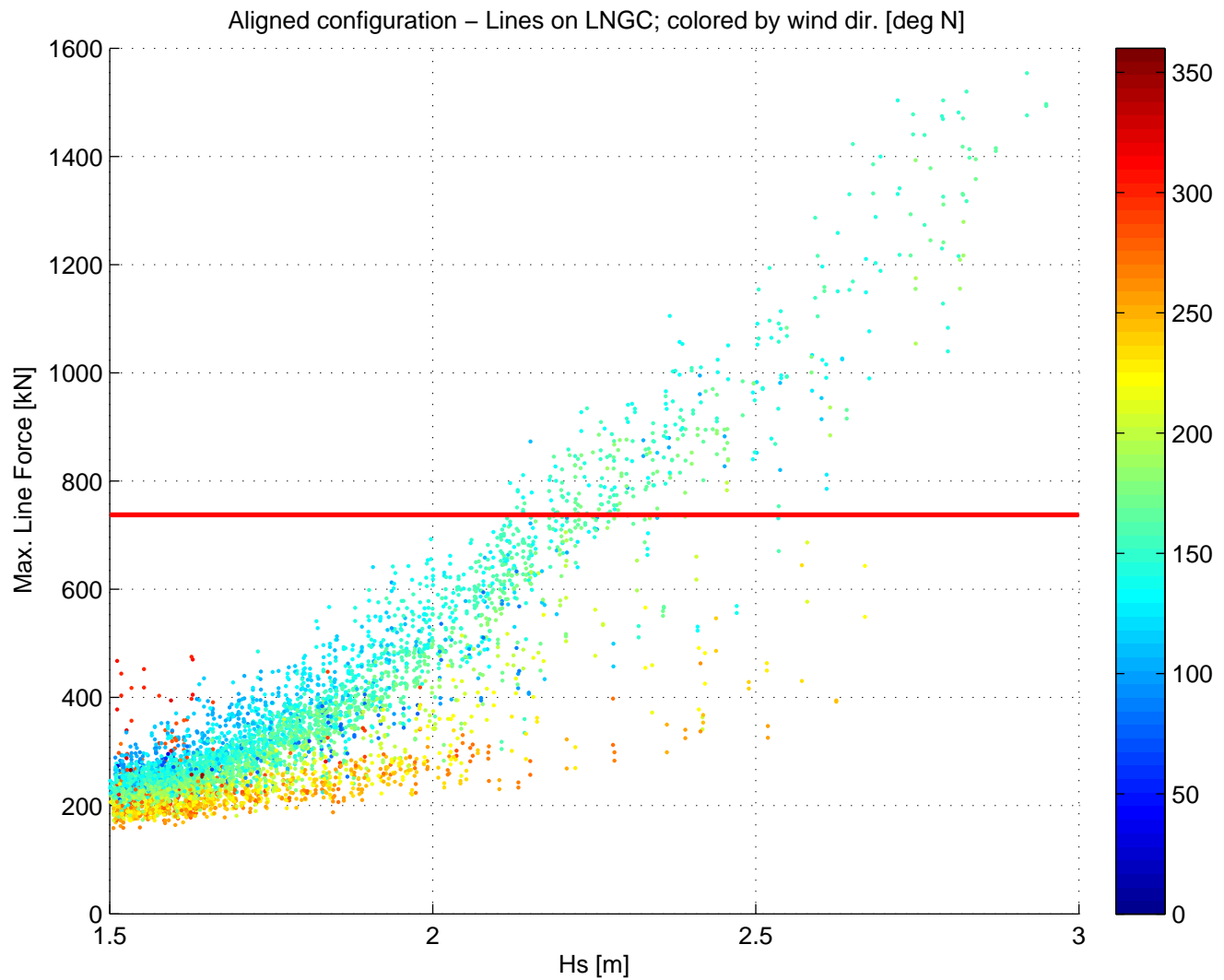


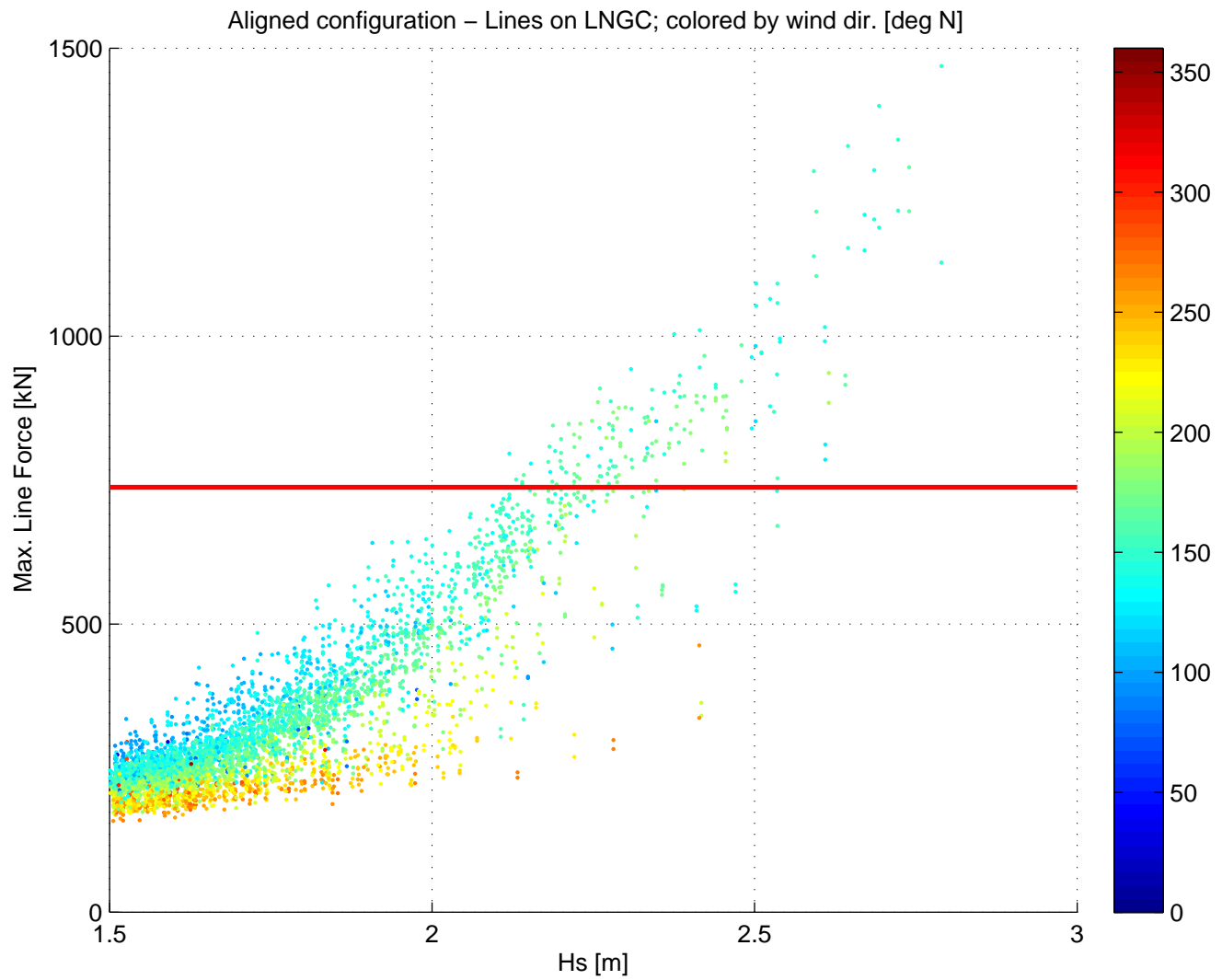


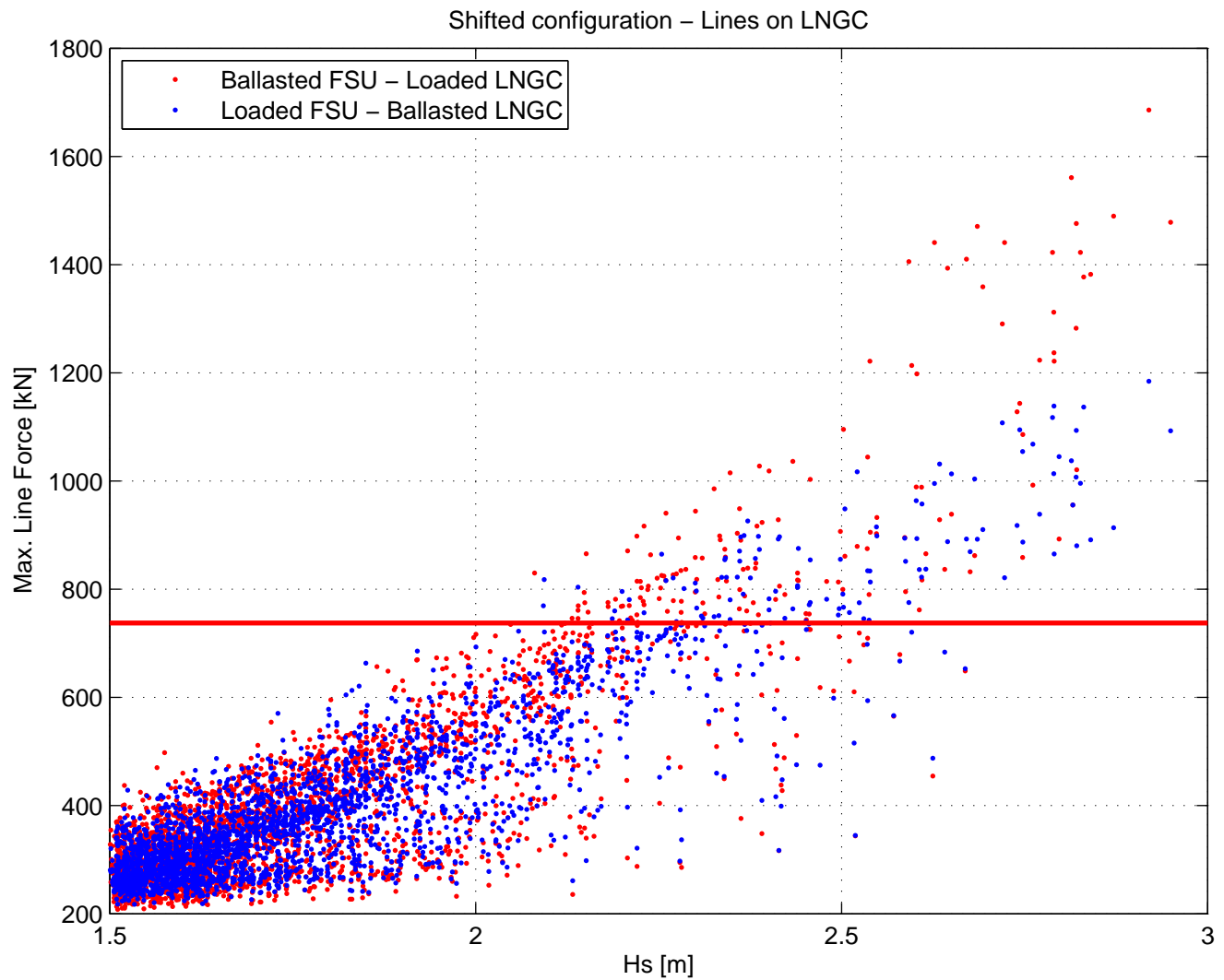


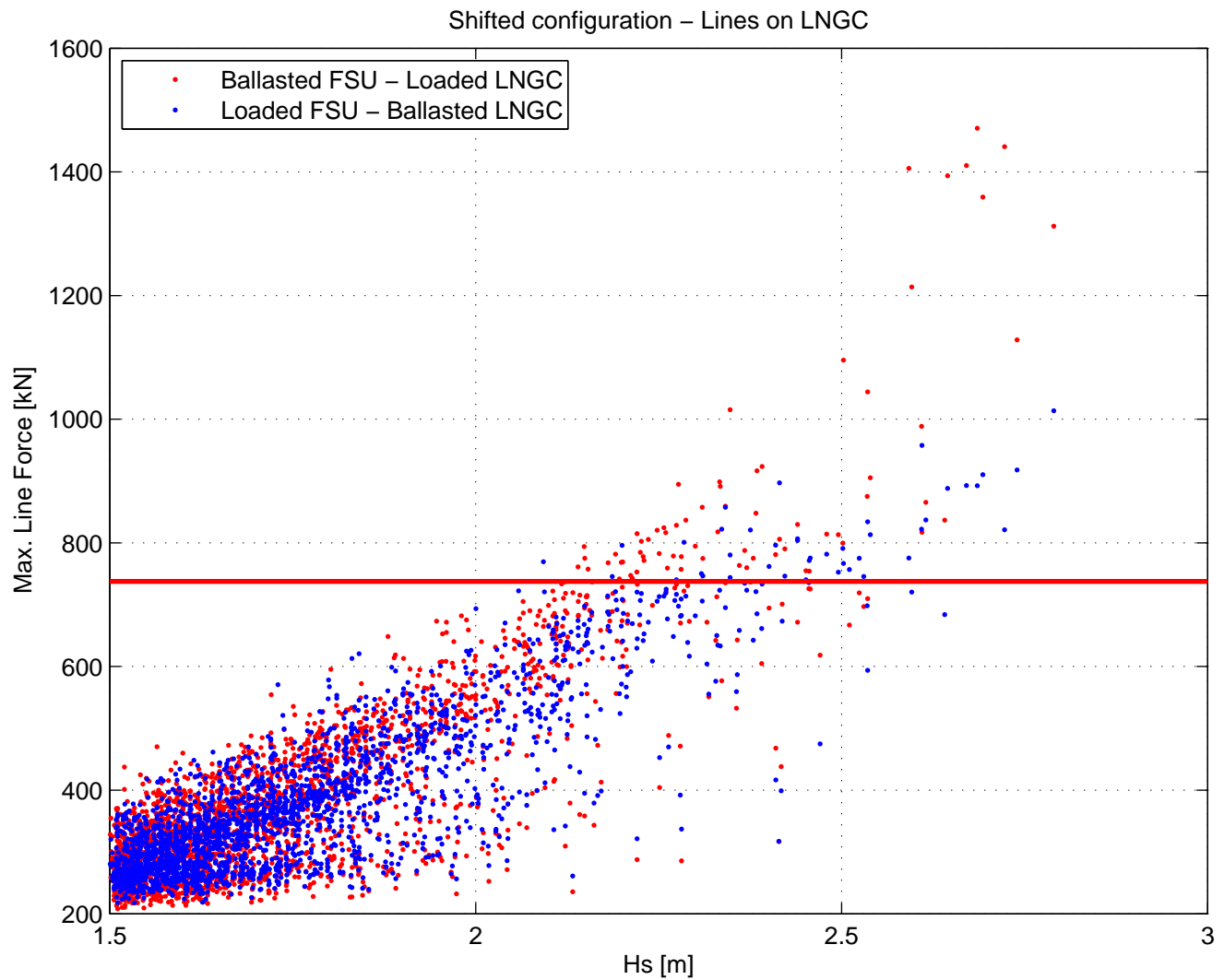


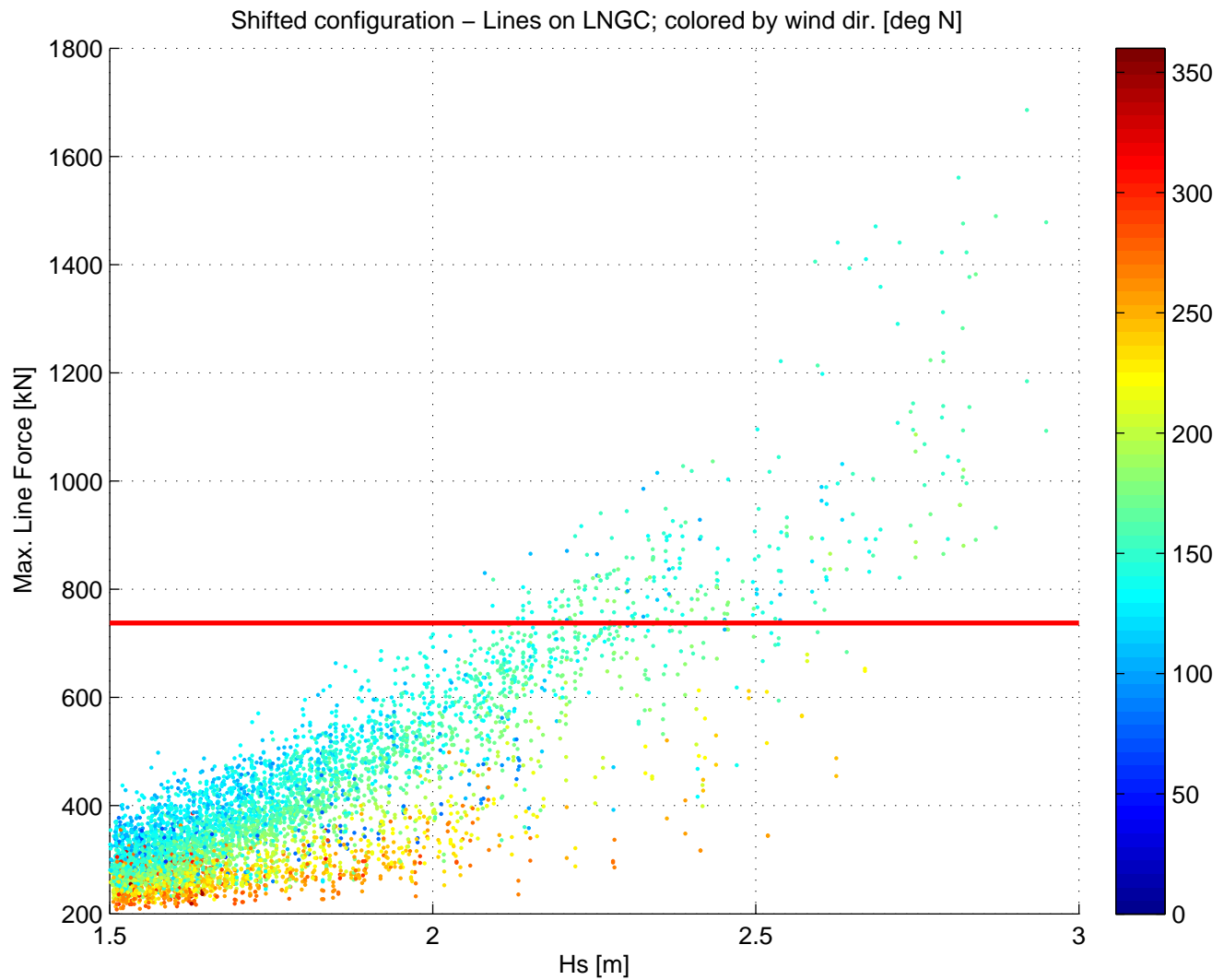


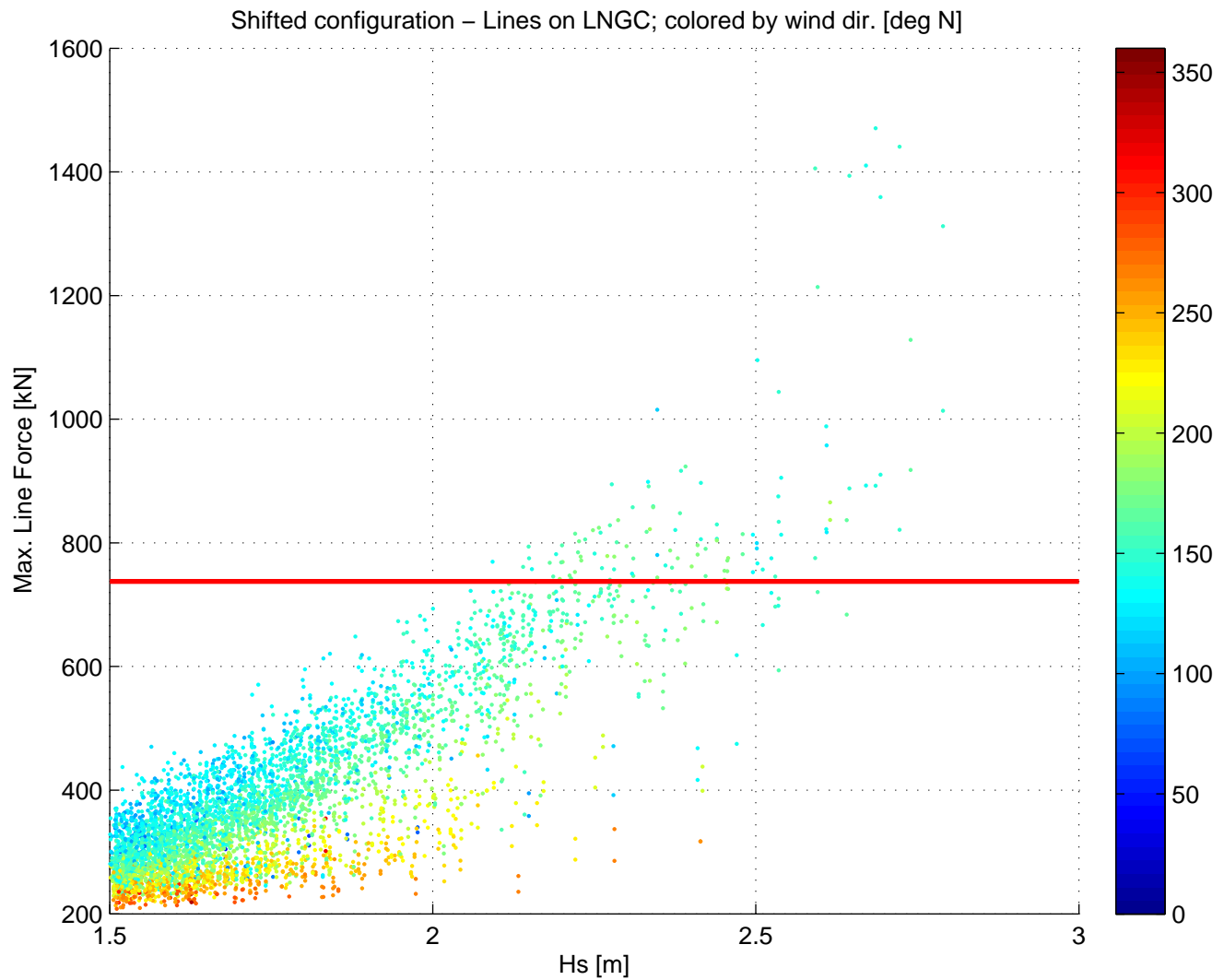


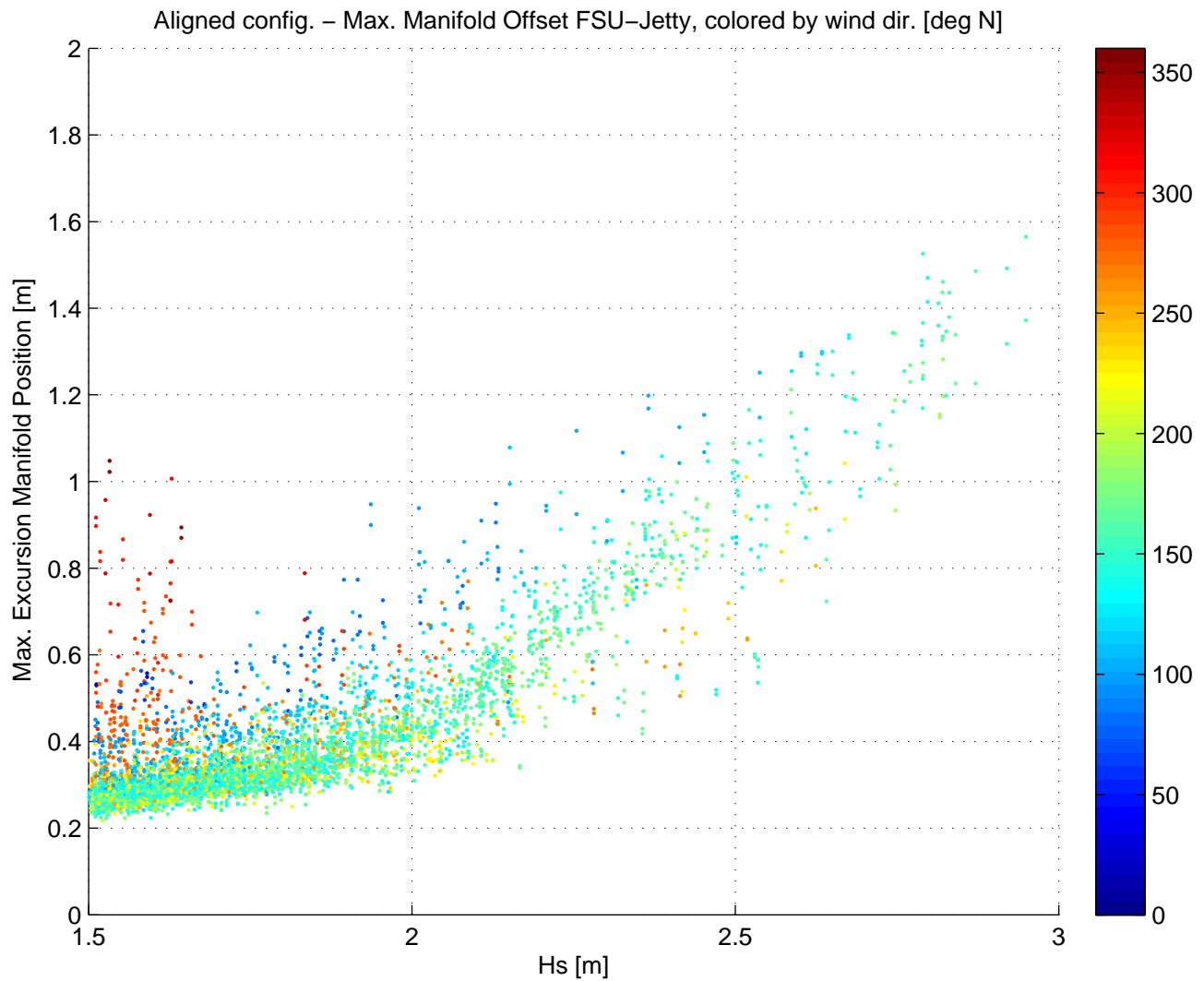


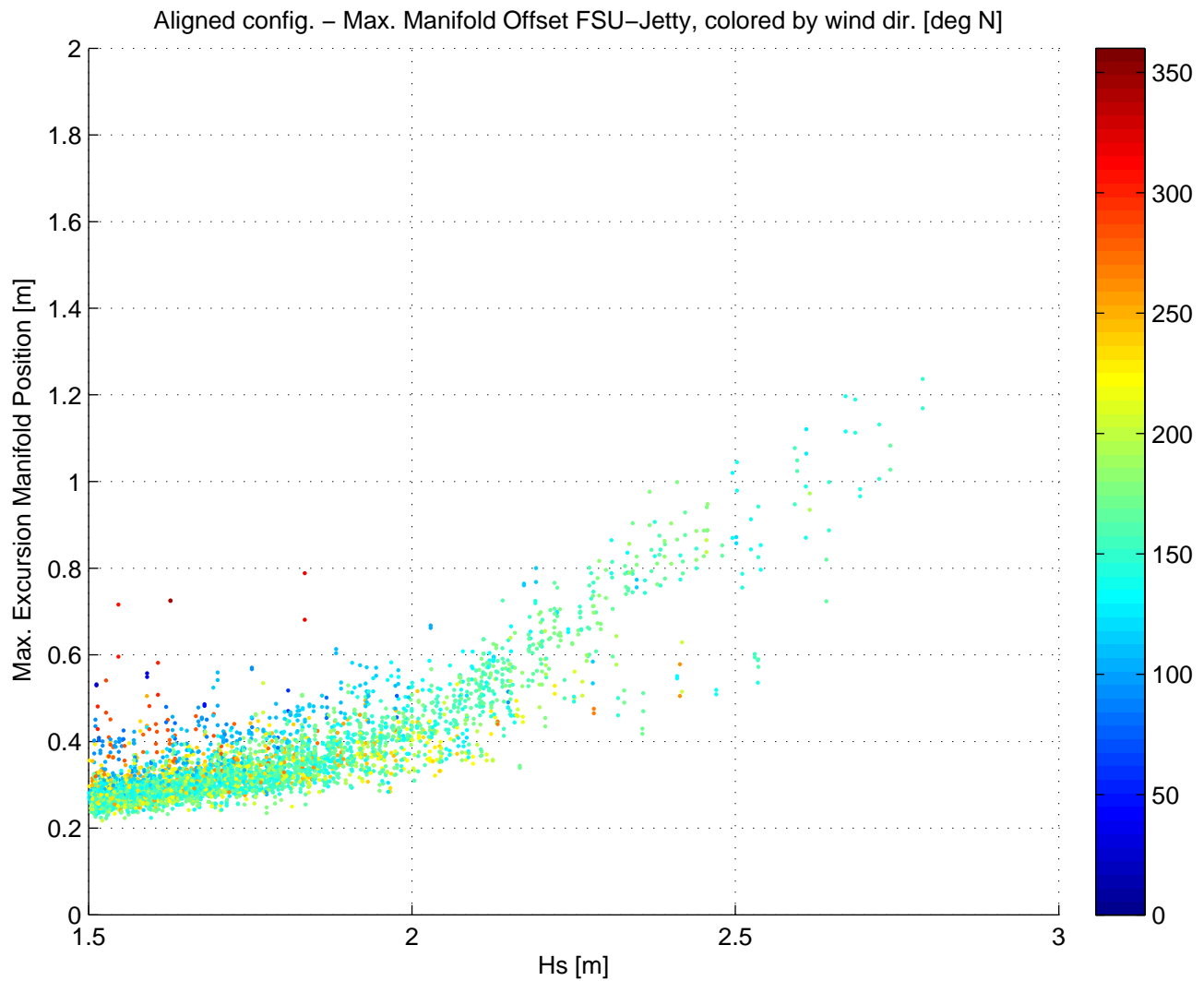




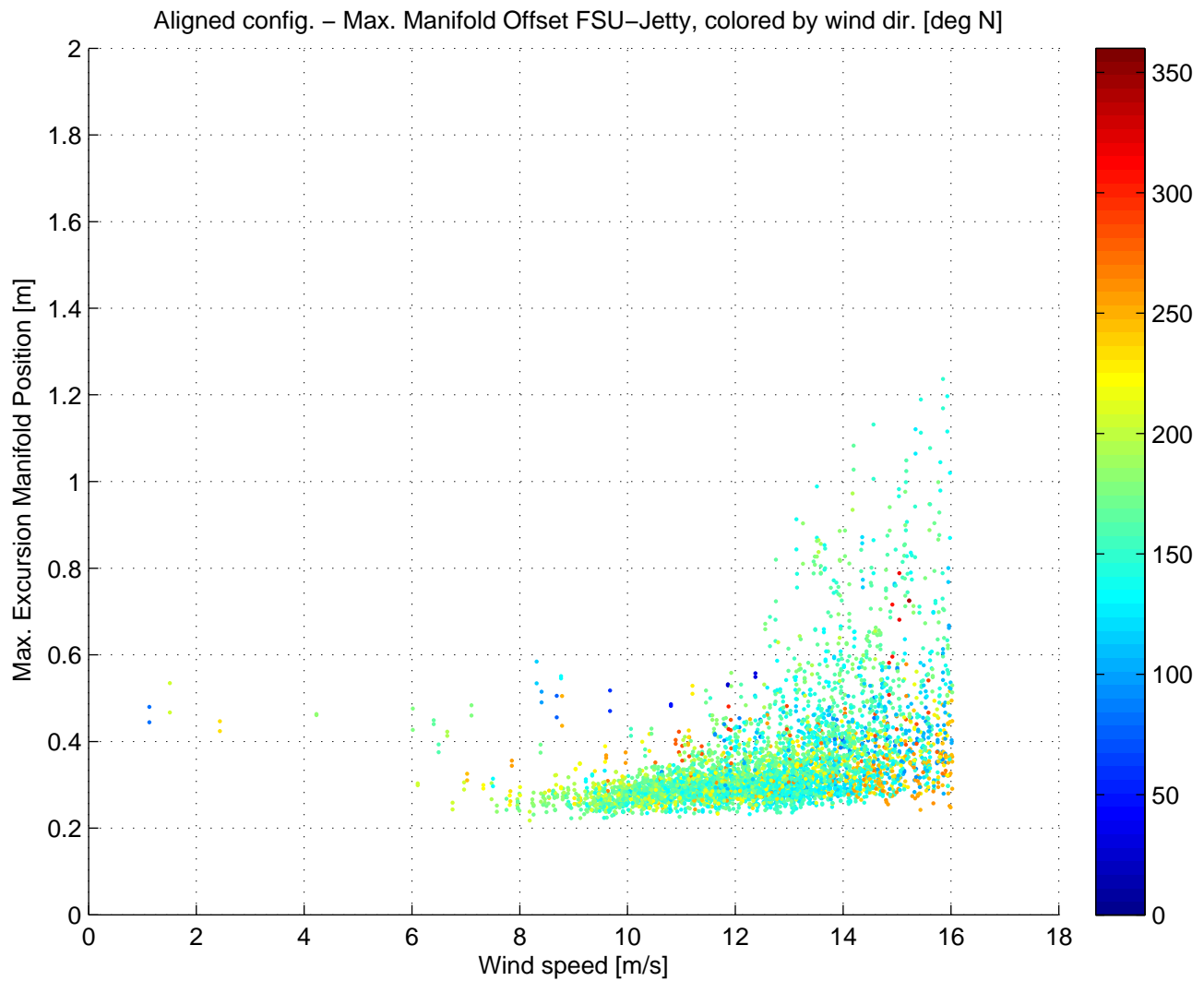


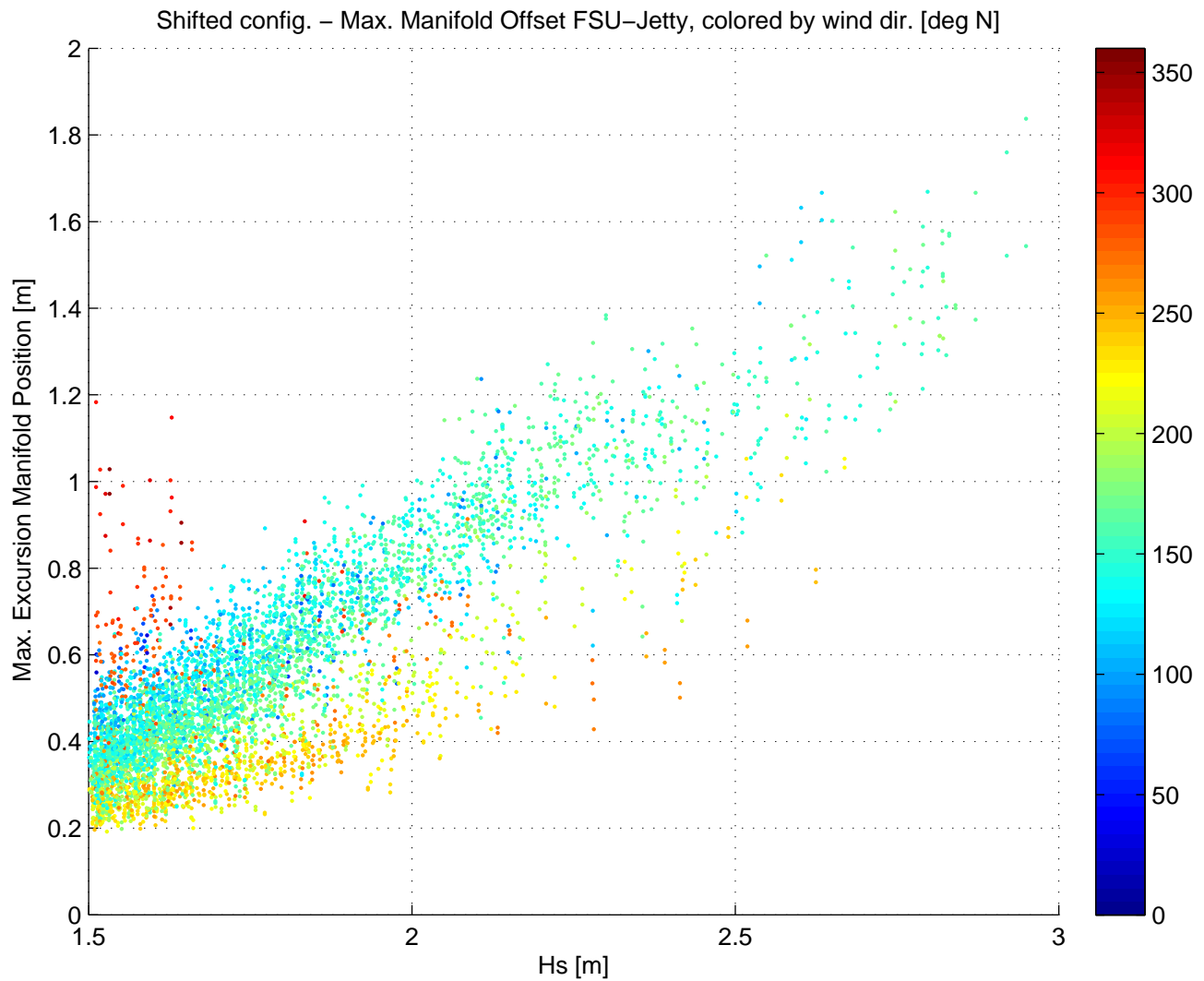


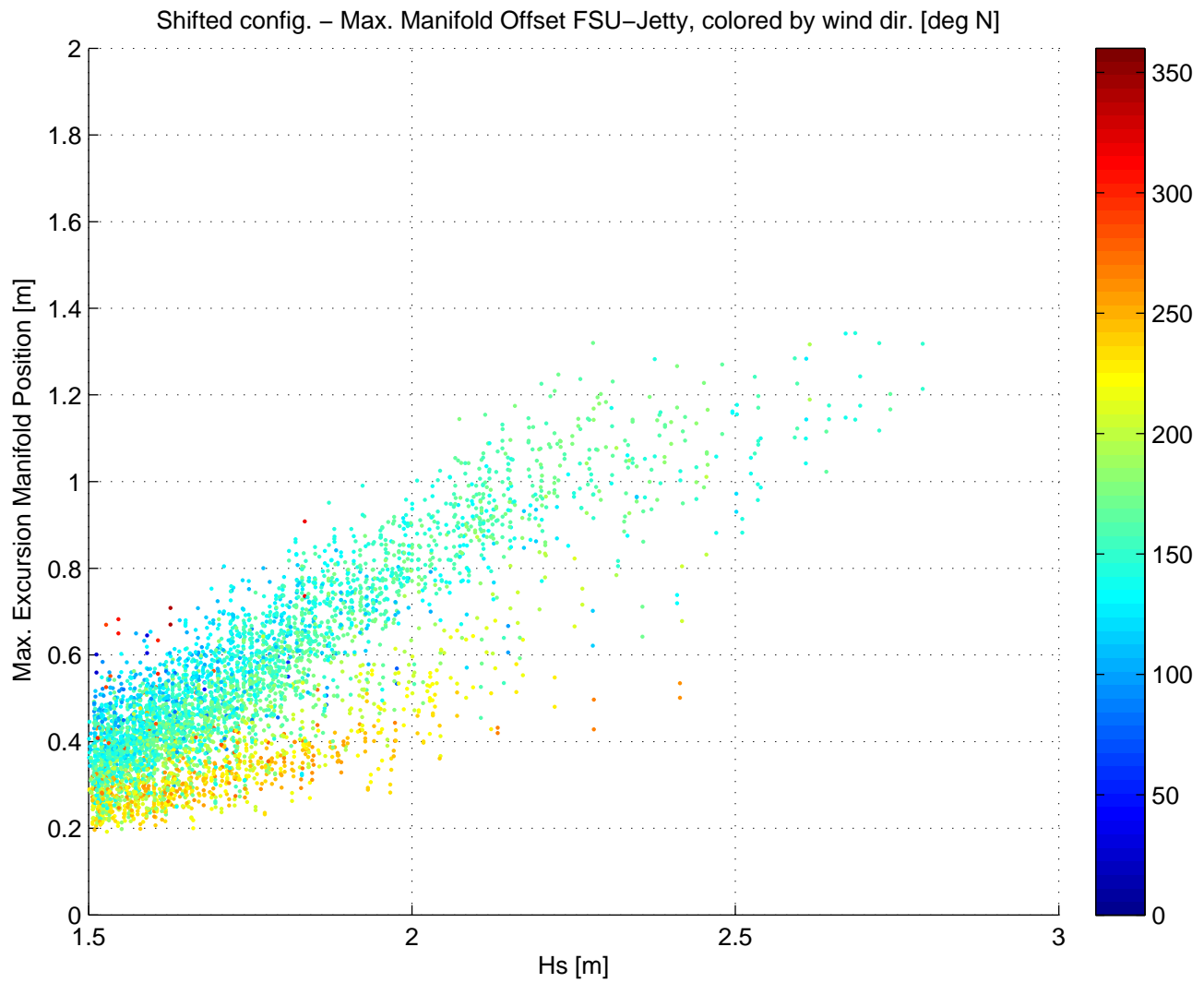


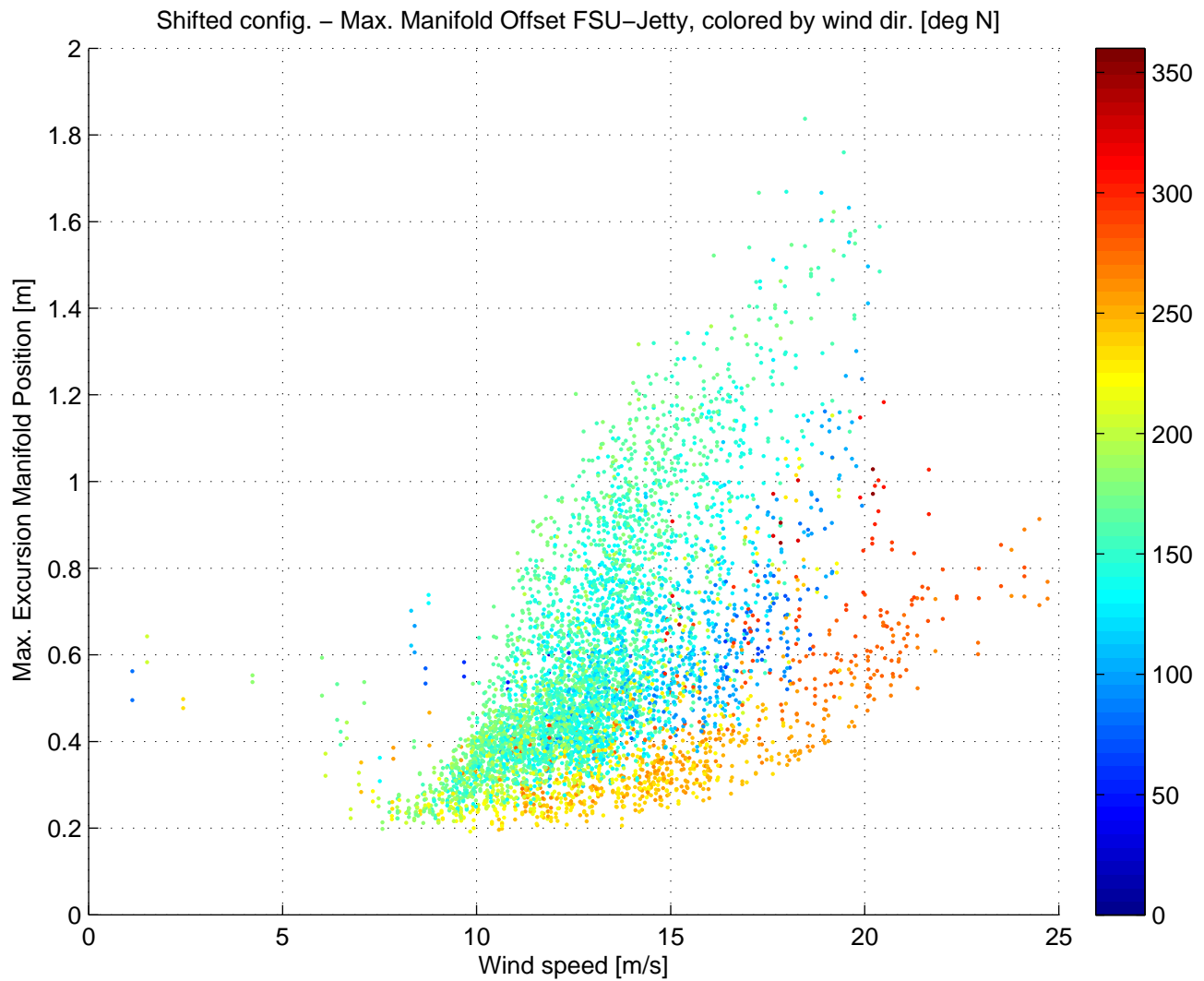


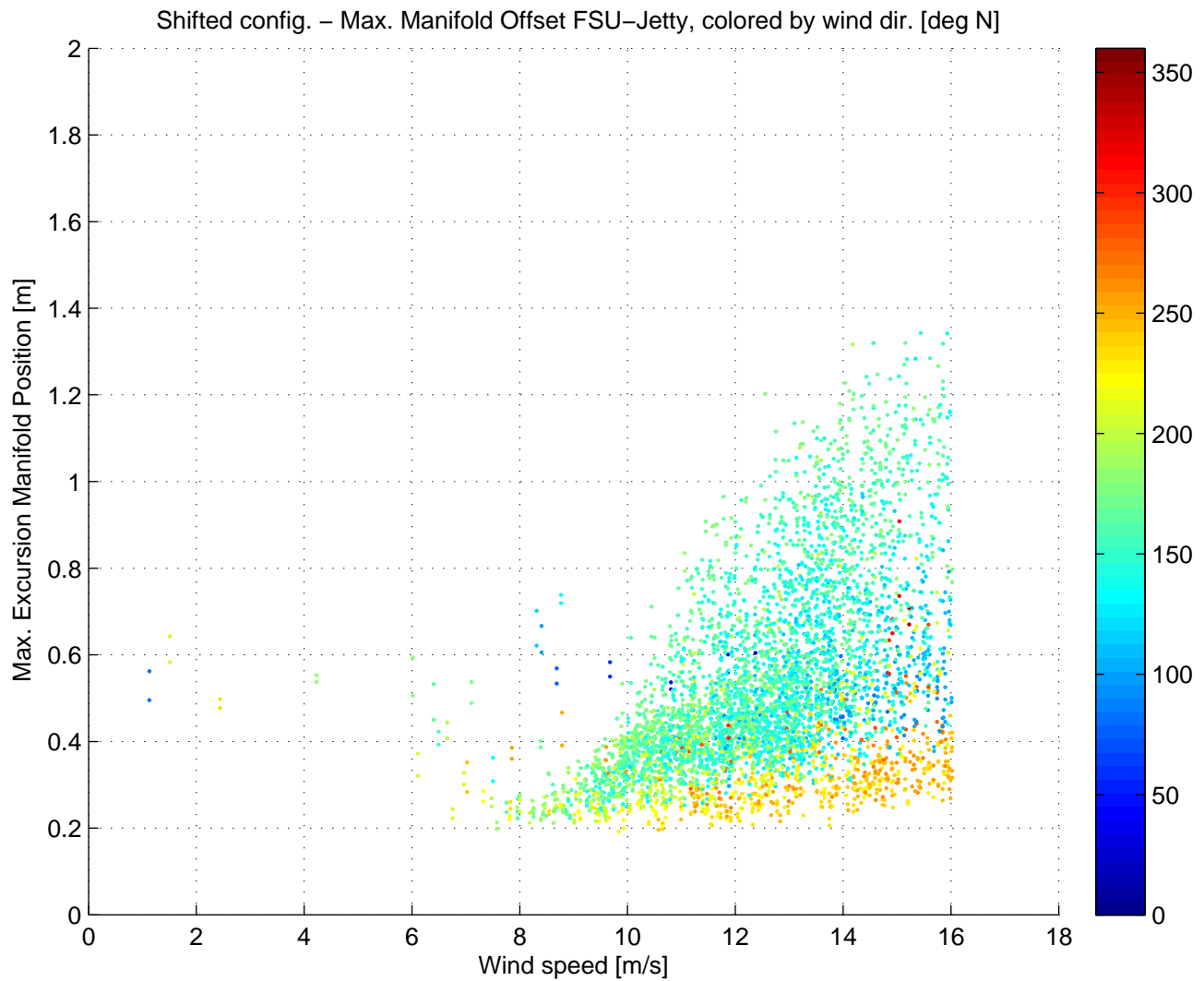


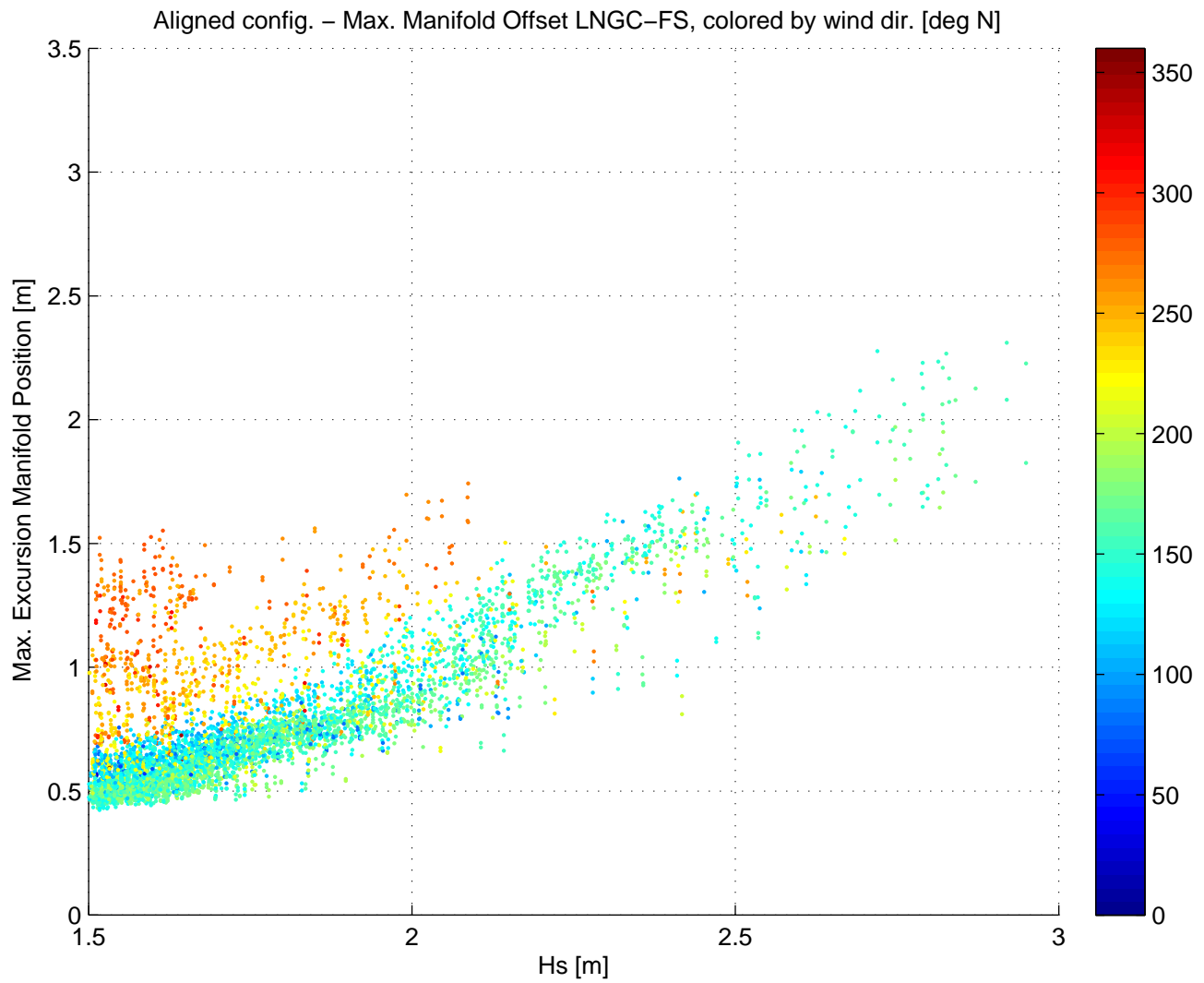


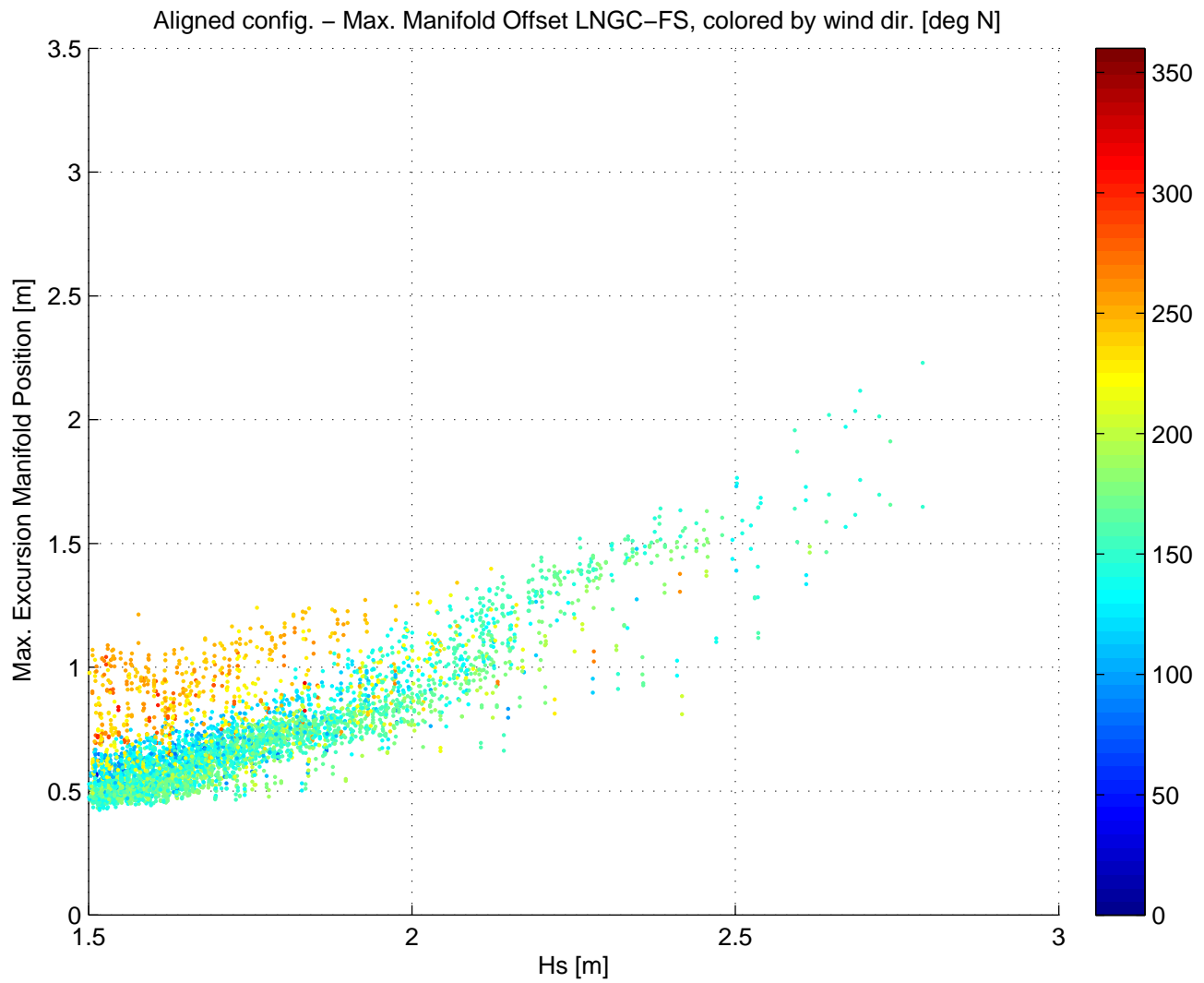


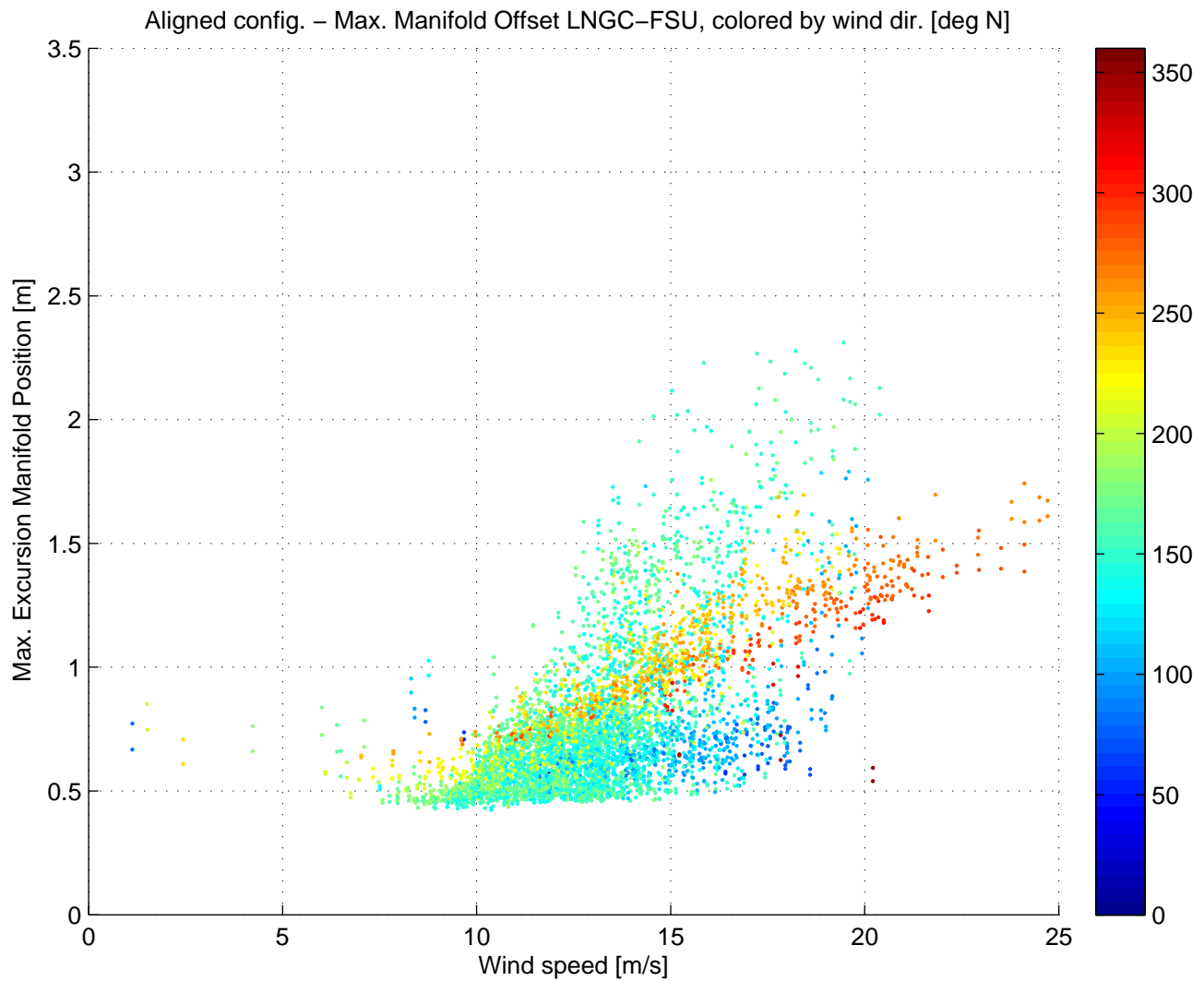


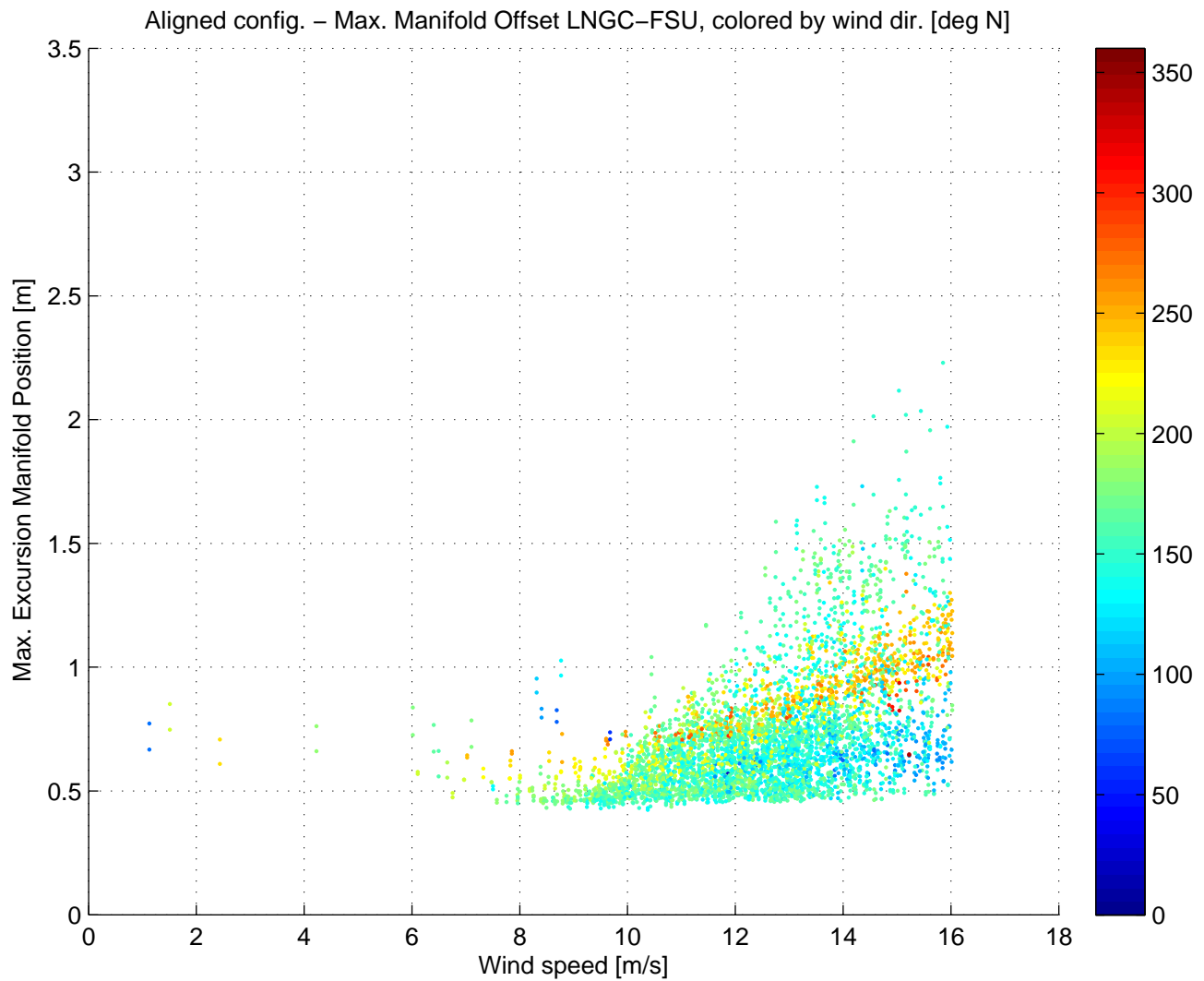


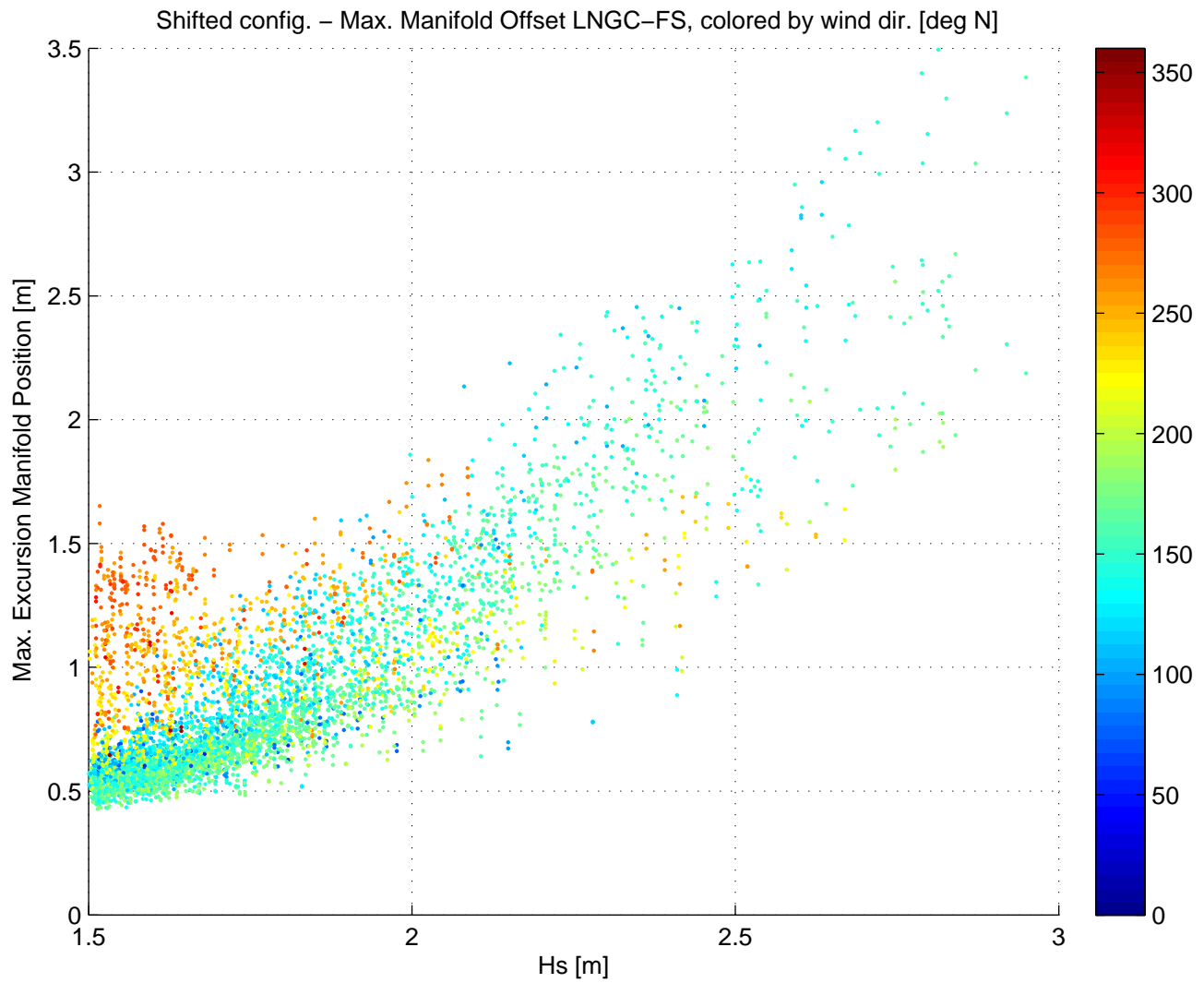


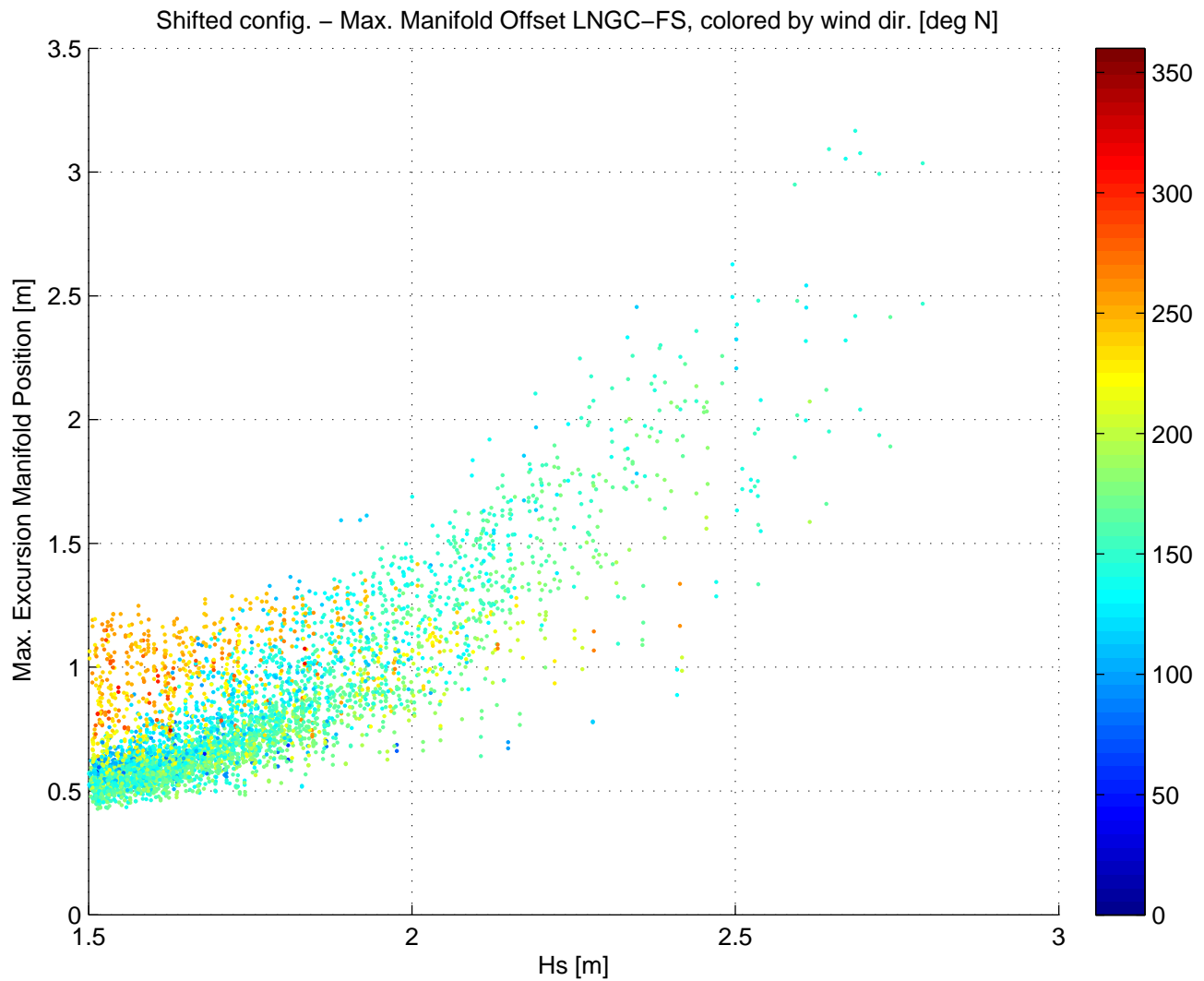


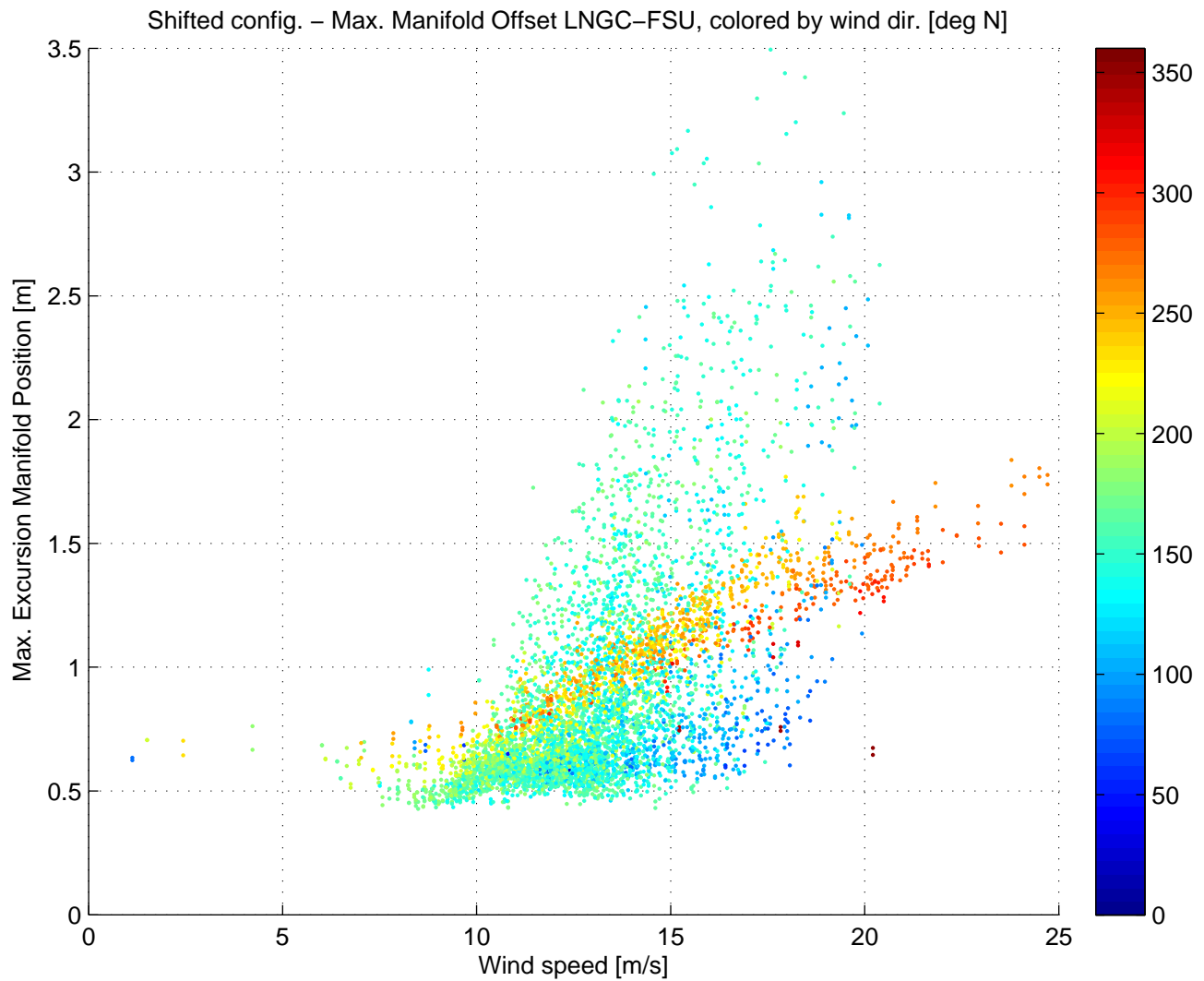


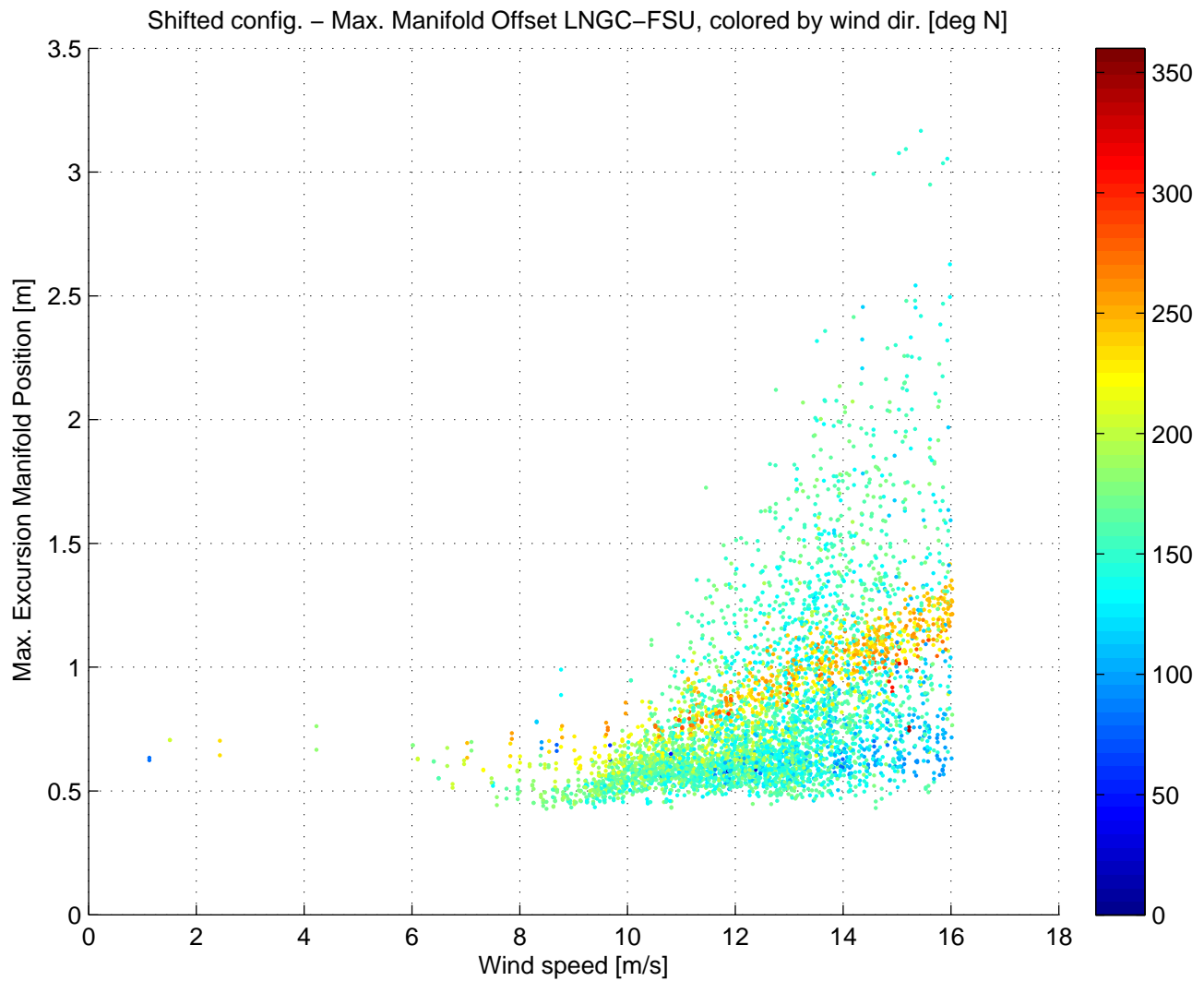












APPENDIX A02 MEMO JETTY-MOORED FSU RESPONSE

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From : Henri van der Heiden (MARIN)
CC : Johan Dekker (MARIN)
Date : March 16, 2015
Project No : 27689; Delimara LNG terminal
Subject : Summary of final results of the jetty mooring study

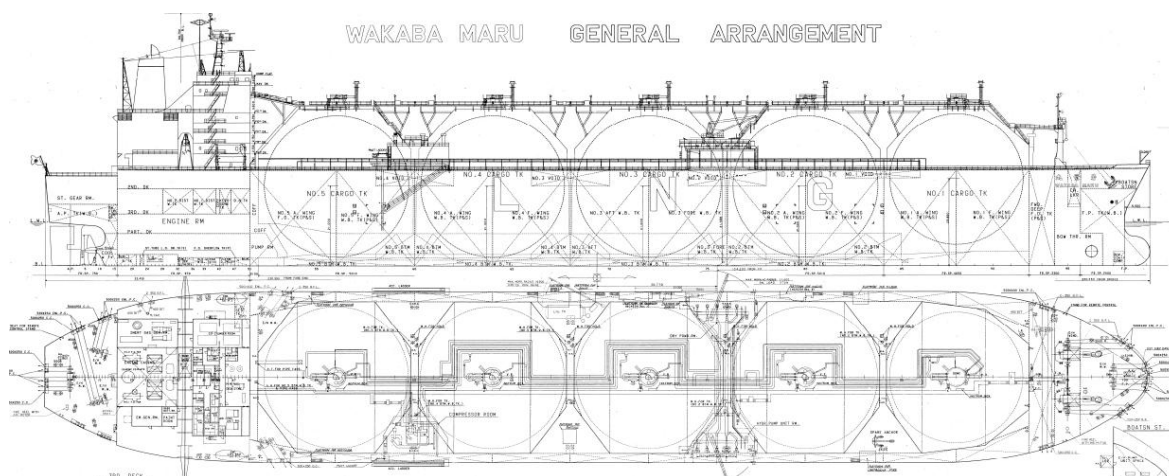
In this MEMO, a summary is given of the input data and the results of the simulation study of the jetty-moored FSU. With respect to the previous MEMO dated February 6, 2015, the original fenders have been replaced by super cone fenders.

In Appendix 1, the statistics of the time traces of each simulation run can be found.

1. FSU

Below, the general arrangement of the Wakaba Maru is shown.

Figure 1: General arrangement of the Wakaba Maru FSU.



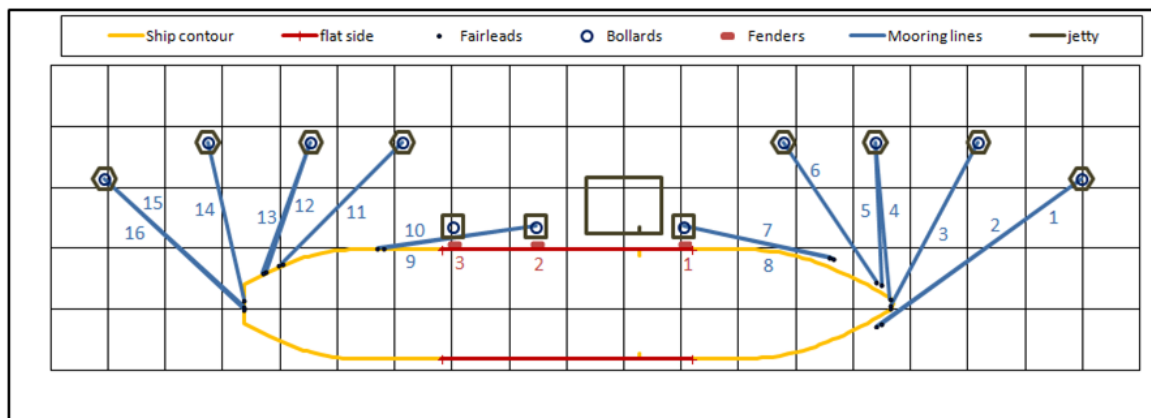
2. Diffraction computation

The first and second order wave forces, added mass and potential damping coefficients have been computed using the diffraction computation software DIFFRAC. In these calculations, a constant water depth of 18.5 m is assumed. The diffraction computation was carried out for two loading conditions: the loaded FSU and the ballasted FSU. The main particulars of the FSU in both loading conditions are summarized in Table 1.

3. Jetty configuration

The jetty configuration is as below, mooring line numbers in blue, fender numbers in red.

Figure 2: Mooring line and fender configuration for jetty-moored FSU.



In total three (3) fenders are positioned between the FSU and the berthing dolphins, all along the flat side of the FSU. The total number of mooring lines is 16. Mooring lines and fenders are specified below.

Mooring line composition

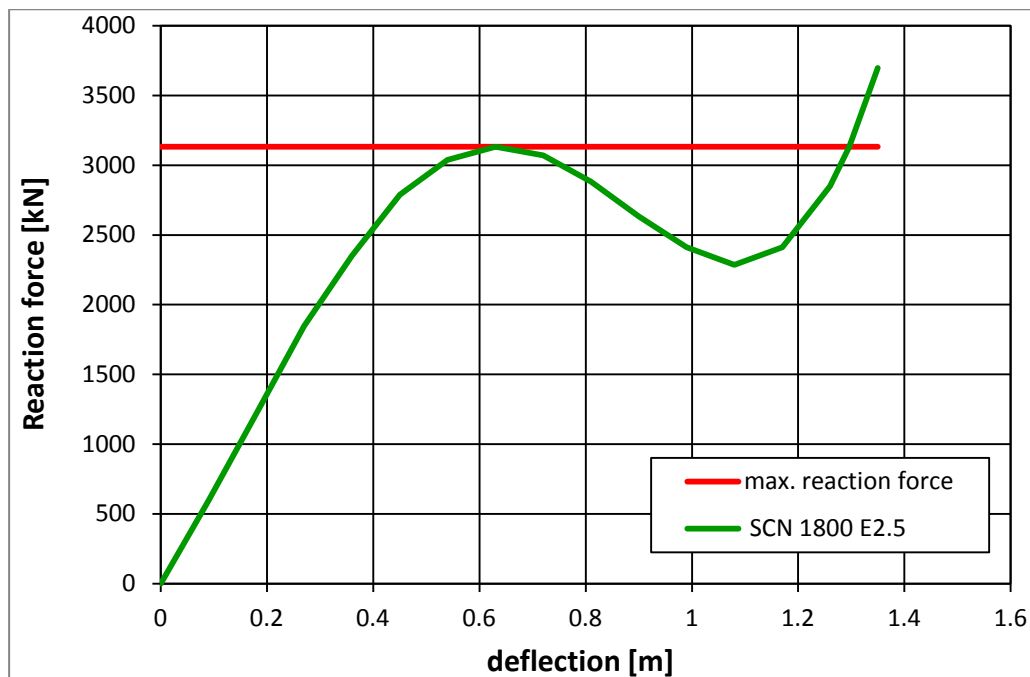
Each simulated mooring line is composed of 42mm thick dyneema (SK75) (breaking strength 1,275.3 kN) fitted with a 10.5cm thick 22m long nylon tail (breaking strength 1,717 kN). The length of the mooring lines applied in the simulation are summarized in the table below.

Mooring line number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Distance bollard-fairlead	108.0	105.7	77.2	64.7	58.8	70.4	66.8	65.2	60.4	63.3	72.6	56.6	57.6	66.7	80.5	81.3
Length on deck	14.2	8.5	8.8	8.5	14.0	12.5	7.4	7.8	6.0	4.6	10.3	9.3	20.4	20.0	7.3	7.3
Total length	122.2	114.2	86.0	73.2	72.8	82.9	74.2	73.0	66.4	67.9	82.9	65.9	78.0	86.7	87.8	88.6

Fenders

All of the fenders are super cone fender of the Trelleborg SCN 1800 E2.5 type. In Figure 3 below the force deflection curve as it has been applied in the simulations is shown. The red horizontal line indicates the maximum fender reaction force of 3,132 kN.

Figure 3: Force deflection curve for Trelleborg SCN1800 E2.5 fender.



4. Environmental conditions

The simulated environmental conditions are listed in Table 2. The time traces for the wave height have been generated from a Pierson-Moskowitz spectrum with the significant wave height (H_s) and peak-period (T_p) chosen as per Table 2 below.

Time traces of the wind speed have been generated from a Davenport wind spectrum, with an average wind speed as listed in Table 2. The set of SIGTTO wind coefficients for a Moss-type LNGC in Table 3 have been applied to compute the wind loads on the FSU (SIGTTO, 2007).

No current was considered in the simulations.

5. Results and discussion

In Tables 4 and 5, the main results from the jetty-moored FSU simulation study are summarized.

Maximum line loads

Figure 4 and Figure 5 below show the maximum line loads of the maximum loaded line for each simulated wind direction and loaded and ballasted FSU respectively. Indicated in each graph is also the safe working load of 55% of the maximum breaking strength (MBS).

Figure 4: Maximum line loads for the loaded FSU

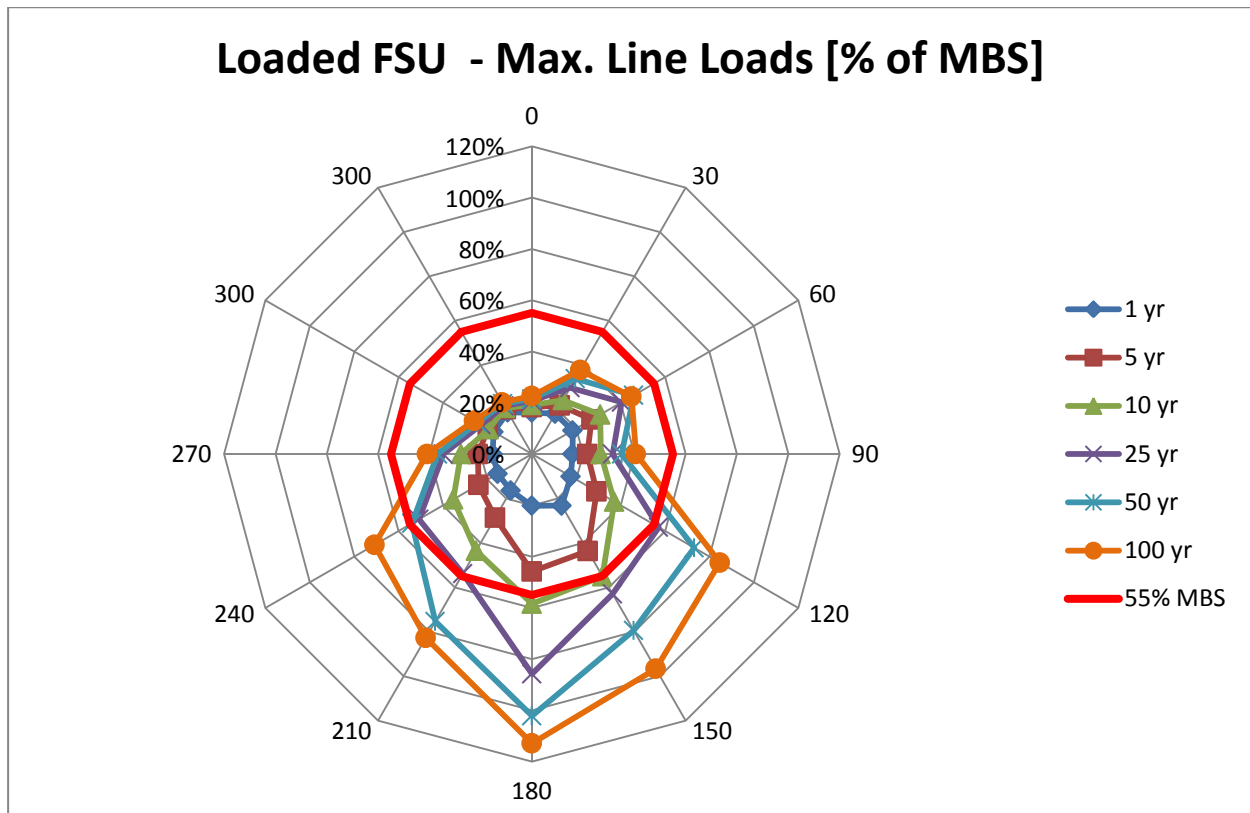
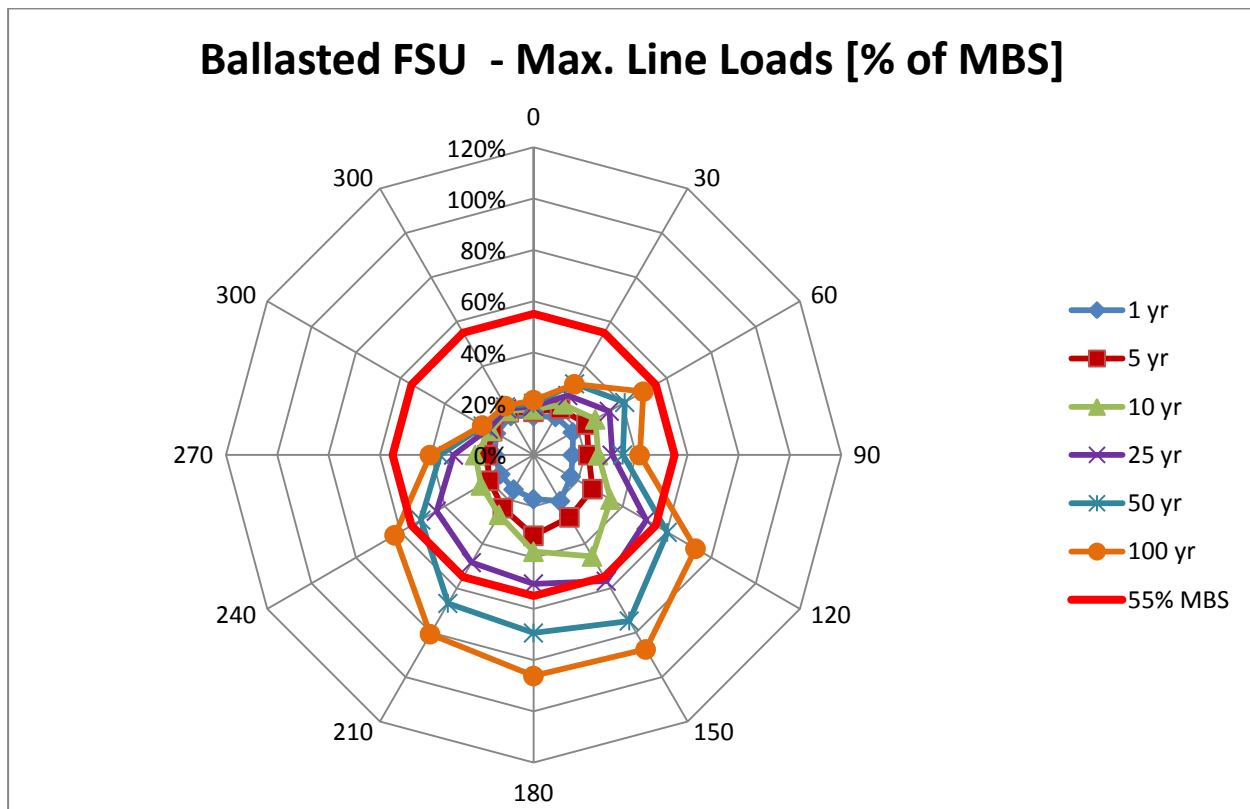


Figure 5: Maximum line loads for the ballasted FSU.



For both the ballasted and loaded FSU, the northern sector clockwise from 270°N to 90°N the line loads do not exceed 55% MBS for any of the simulated conditions. It can further be seen that the loads for the loaded FSU are generally larger than for the ballasted FSU.

Loaded FSU

For the loaded FSU, the simulation study shows that for wind directions in the sector of 120°N to 240°N the 25 yr condition gives rise to line loads exceeding or close to the safety threshold of 55% MBS. For the 150°N and 180°N directions also the 10 yr condition results in line loads exceeding 55% MBS.

Ballasted FSU

For the ballasted FSU, the simulation study shows that for wind directions in the sector of 120°N to 240°N, the 50 yr condition gives rise to line loads exceeding the safety threshold of 55% MBS. For the 150°N direction also the 25 yr condition results in line loads exceeding 55% MBS.

Figure 6: Maximum line loads for loaded FSU for wind direction sector 120°N - 240°N.

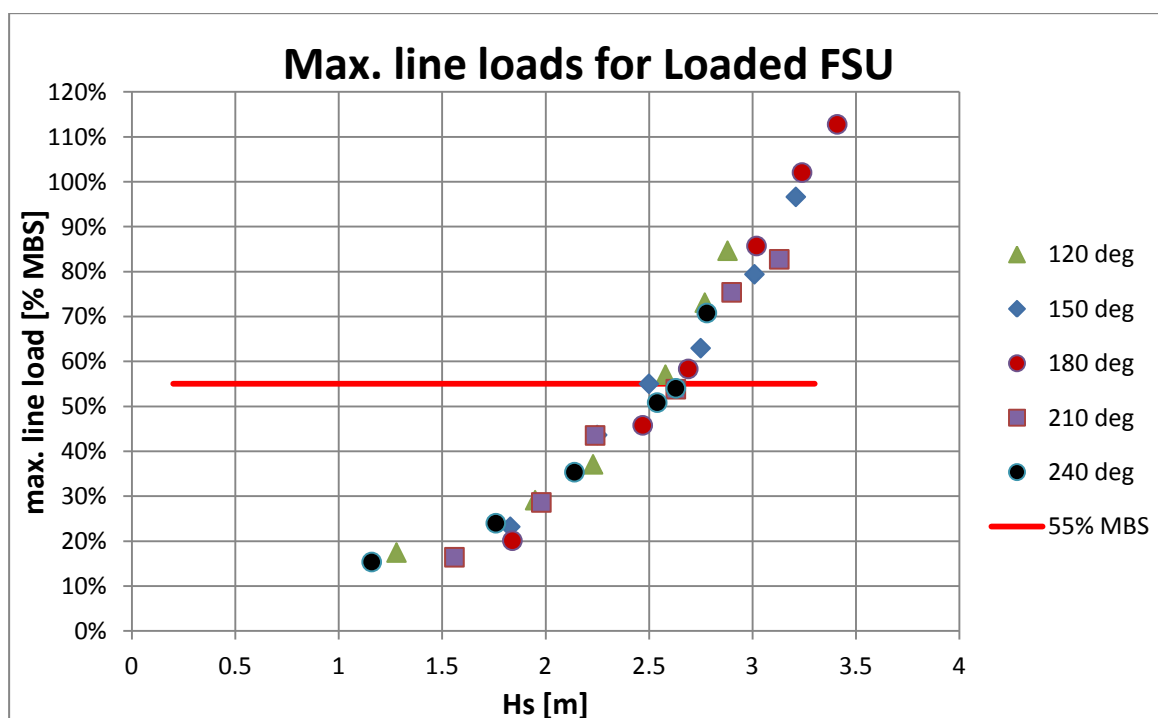
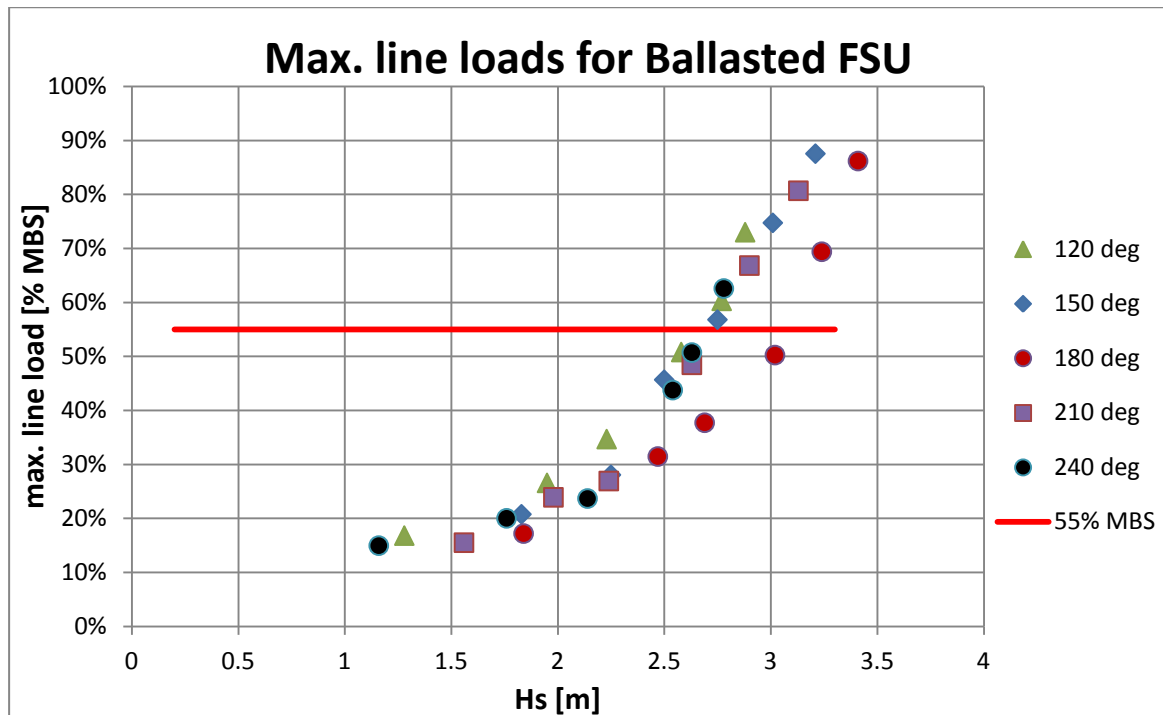


Figure 7: Maximum line loads for ballasted FSU for wind direction sector 120 - 240 °N.



From the results depicted in Figure 6 and Figure 7 it is concluded that the high waves at the berth associated with wind from directions between 120 °N and 240 °N contribute significantly to the line loads. The corresponding limiting wave height at the jetty is observed to be around $H_s = 2.5$ m for both the ballasted and loaded FSU. The load in the (shortest) aft spring is generally the limiting factor. In terms of manifold motions (Table 4), it is seen that if the envelope of the motion in surge direction is in the order of 3.5 m, the load in the aft springs exceeds the safe working load.

Maximum fender loads

The max. fender loads per simulation are shown in Figure 8 and Figure 9 below for the wind direction sector for which the highest loads are experienced. It can be seen that in none of the simulated conditions the rated reaction force of 3,132 kN is exceeded. The maximum fender load occurring in the simulations is 2,821 kN, which is 90% of the rated reaction force.

Figure 8: Max. fender loads for loaded FSU vs. average wind speed for directional sector 270 – 300 °N.

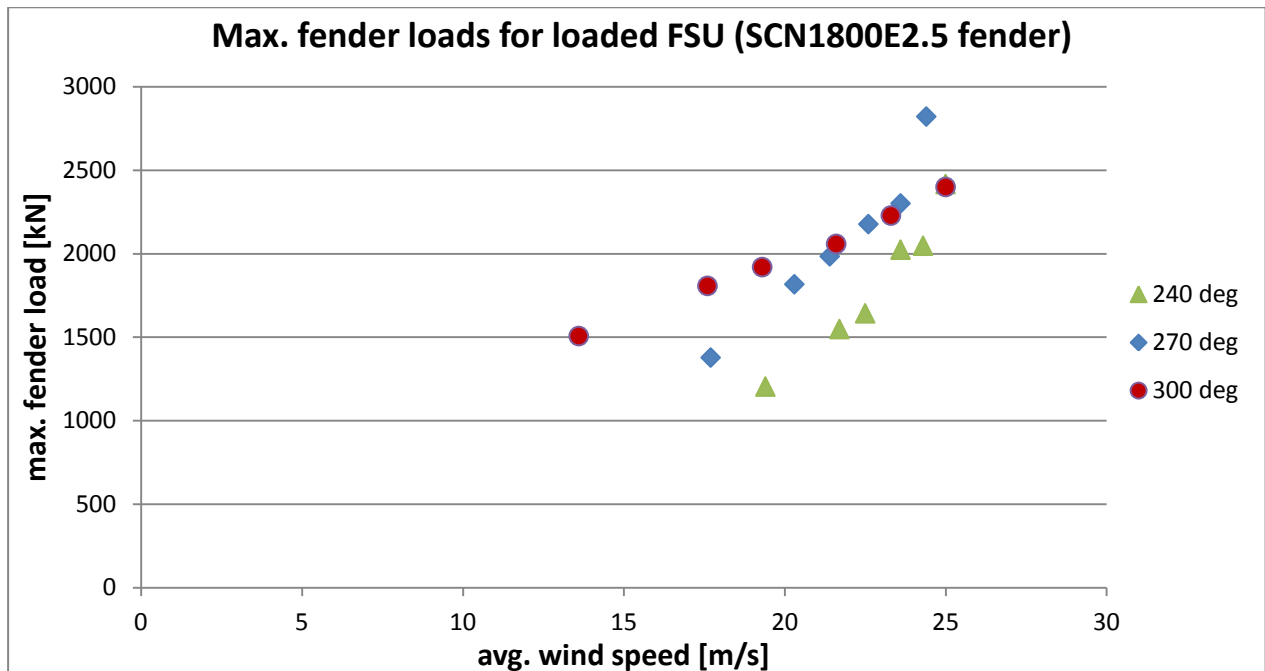


Figure 9: Max. fender loads for ballasted FSU vs. average wind speed for directional sector 270 – 300 °N.

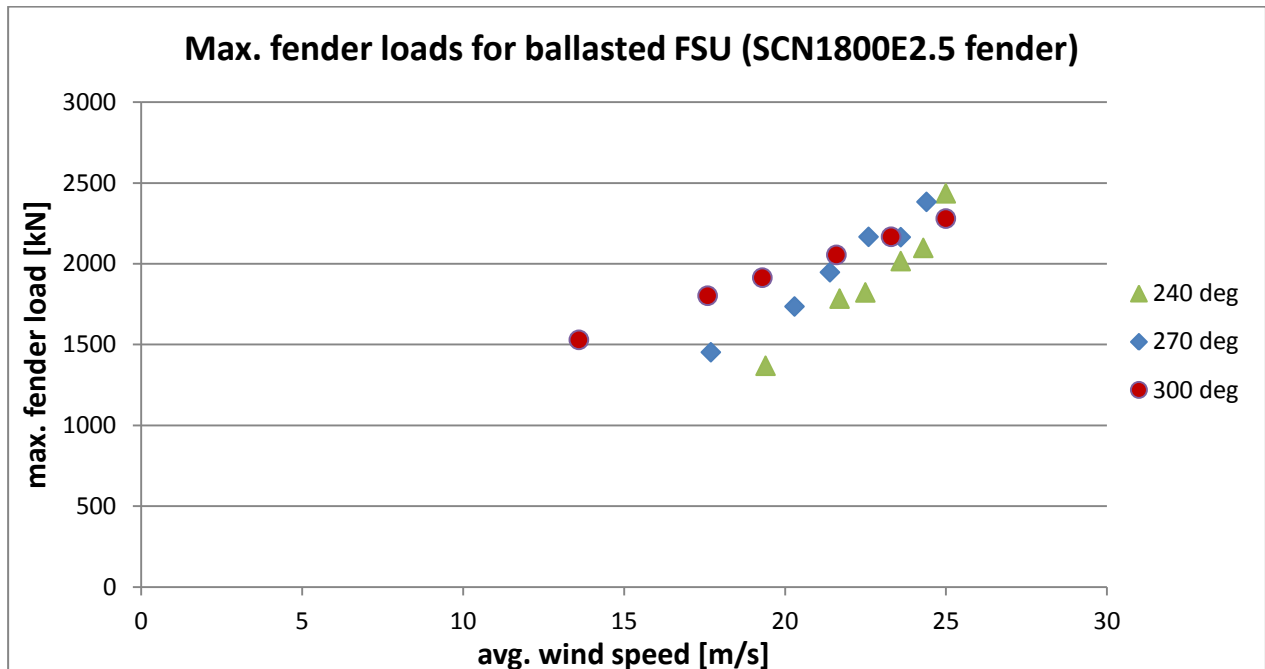


TABLE 1: Particulars of the FSU

Designation	Symbol	Unit	Values	
			Loaded	Ballasted
Length between Perpendiculars	L _{pp}	m	270	
Breadth	B	m	44.8	
Draft	T	m	10.8	9.35
Displacement weight	Δ	ton	100,000	80,000
Centre of Gravity above base	KG	m	20.0	13.1
Centre of Gravity forward of st10	LCG	m		
Transverse metacentric radius	KM	m	22.3	24.1
Transverse metacentric height	GM _t	m	2.3	11.0
Frontal wind area	A _{wf}	m ²	1,150	1,220
Lateral wind area	A _{wl}	m ²	7,120	7,570
Roll radius of gyration	k _{xx}	m	15.7	
Pitch radius of gyration	k _{yy}	m	67.5	
Yaw radius of gyration	k _{zz}	m	67.5	

TABLE 2-1: Simulated environmental conditions (1/2)

Simulation ID	Wind		Wave		
	Dir [°N]	Avg Spd [m/s]	Dir [°N]	[m]	Tp [s]
1	60	15	187	0.71	10.5
2	60	18.3	188	1.02	11.1
3	60	19.5	188	1.1	11.2
4	60	21	189	1.16	11.4
5	60	22.1	191	1.22	11.5
6	60	23.1	191	1.27	11.7
7	90	14.8	181	0.89	10
8	90	17.5	184	1.22	10.6
9	90	18.4	184	1.39	10.8
10	90	19.6	186	1.61	10.9
11	90	20.4	187	1.68	11
12	90	21.1	192	1.89	11.5
13	120	15.1	189	1.28	9.8
14	120	17.3	185	1.95	10.6
15	120	18.1	185	2.23	10.9
16	120	19.1	185	2.58	11.1
17	120	19.8	186	2.77	11.2
18	120	20.4	188	2.88	11.3
19	150	15.4	189	1.83	9.6
20	150	18	191	2.25	10.1
21	150	19	191	2.5	10.8
22	150	20.2	190	2.75	10.7
23	150	21.1	190	3.01	10.9
24	150	21.9	190	3.21	11.1
25	180	14.1	194	1.84	8.9
26	180	16.4	193	2.47	9.9
27	180	17.3	193	2.69	10.1
28	180	18.4	193	3.02	10.4
29	180	19.2	194	3.24	10.6
30	180	20	194	3.41	10.7
31	210	13.3	194	1.56	8.7
32	210	16	198	1.98	10
33	210	17.1	198	2.24	10.3
34	210	18.5	198	2.63	10.7
35	210	19.6	197	2.9	10.9
36	210	20.7	197	3.13	11

TABLE 2-2: Simulated environmental conditions (2/2)

Simulation ID	Wind		Wave		
	Dir [°N]	Avg Spd [m/s]	Dir [°N]	[m]	Tp [s]
37	240	15.3	196	1.16	9.3
38	240	17.8	194	1.76	10.1
39	240	18.8	193	2.14	10.4
40	240	19.9	194	2.54	10.8
41	240	20.7	194	2.63	11
42	240	21.4	195	2.78	11.2
43	270	18.5	195	1.15	9.8
44	270	21.3	195	1.65	10.2
45	270	22.4	195	1.96	10.5
46	270	23.6	195	2.18	10.8
47	270	24.5	195	2.29	11
48	270	25.4	195	2.42	11.1
49	300	19.4	195	1.09	8.4
50	300	21.7	195	1.31	8.9
51	300	22.5	195	1.39	9.1
52	300	23.6	195	1.49	9.5
53	300	24.3	195	1.56	9.7
54	300	25	195	1.62	9.8
55	330	17.7	187	0.28	6.5
56	330	20.3	187	0.37	7.7
57	330	21.4	187	0.4	8.2
58	330	22.6	187	0.44	8.7
59	330	23.6	187	0.48	9.2
60	330	24.4	187	0.5	9.5
61	360	13.6	187	0.25	6.5
62	360	17.6	187	0.44	8.5
63	360	19.3	187	0.51	9.3
64	360	21.6	188	0.62	10
65	360	23.3	187	0.7	10.7
66	360	25	188	0.78	11.1
67	30	14.9	187	0.47	9.3
68	30	18.8	187	0.73	10.6
69	30	20.4	188	0.84	10.8
70	30	22.4	188	0.98	11.1
71	30	23.8	188	1.05	11.2
72	30	25.2	189	1.08	11.3

TABLE 3: Wind coefficients for FSU

Wind forces and moment are defined around midships, centreline, still-water line by:

$$F_{x,y} = 0.5 \cdot \rho \cdot A_{wf,wl} \cdot CF_{x,y} \cdot V^2$$

$$M_z = 0.5 \cdot \rho \cdot A_{wl} \cdot CM_z \cdot V^2$$

Dir [deg]	CF _x	CF _y	CM _z
0	0.834	0	0
10	0.934	0.088	-0.0371
20	0.986	0.225	-0.0726
30	0.964	0.389	-0.0991
40	0.875	0.517	-0.1091
50	0.748	0.634	-0.109
60	0.54	0.737	-0.099
70	0.295	0.813	-0.0798
80	0.109	0.869	-0.0556
90	-0.01	0.903	-0.0276
100	-0.086	0.914	-0.0009
110	-0.176	0.898	0.0223
120	-0.236	0.859	0.0419
130	-0.425	0.759	0.0519
140	-0.579	0.594	0.0522
150	-0.707	0.421	0.0444
160	-0.809	0.251	0.0289
170	-0.85	0.11	0.0153
180	-0.836	0.003	0.001
190	-0.85	-0.11	-0.0153
200	-0.809	-0.251	-0.0289
210	-0.707	-0.421	-0.0444
220	-0.579	-0.594	-0.0522
230	-0.425	-0.759	-0.0519
240	-0.236	-0.859	-0.0419
250	-0.176	-0.898	-0.0223
260	-0.086	-0.914	0.0009
270	-0.01	-0.903	0.0276
280	0.109	-0.869	0.0556
290	0.295	-0.813	0.0798
300	0.54	-0.737	0.099
310	0.748	-0.634	0.109
320	0.875	-0.517	0.1091
330	0.964	-0.389	0.0991
340	0.986	-0.225	0.0726
350	0.934	-0.088	0.0371
360	0.834	0	0

TABLE 4-1: Results Loaded FSU (1/2)

Dir.	Ret.	Hs	WindSpd	Max. Line Load		Max. Fender Load			Manifold Motion Envelope			
[°N]	Per.	[yr]	[m]	[m/s]	[% MBS] Line No.	[% MRF]	[kN]	No.	x[m]	y[m]	z[m]	yaw[deg]
0		10	0.25	15	16% 7	17%	526	3	0.32	0.01	0.02	0.01
0		50	0.44	18.3	18% 7	17%	536	3	0.48	0.01	0.08	0.01
0		100	0.51	19.5	19% 7	17%	543	3	0.53	0.02	0.13	0.02
0		250	0.62	21	21% 7	18%	558	3	0.67	0.03	0.17	0.03
0		500	0.7	22.1	21% 7	18%	557	3	0.72	0.04	0.23	0.04
0		1000	0.78	23.1	23% 7	18%	571	3	0.82	0.06	0.28	0.05
30		10	0.47	14.8	18% 15	20%	624	3	0.46	0.18	0.21	0.08
30		50	0.73	17.5	22% 15	25%	784	3	0.66	0.36	0.41	0.18
30		100	0.84	18.4	24% 15	29%	923	3	0.81	0.49	0.58	0.24
30		250	0.98	19.6	30% 15	32%	1014	3	1.10	0.62	0.78	0.31
30		500	1.05	20.4	34% 15	37%	1163	3	1.29	0.82	0.95	0.35
30		1000	1.08	21.1	38% 15	39%	1230	3	1.42	0.96	1.01	0.38
60		10	0.71	15.1	18% 15	19%	601	3	0.50	0.34	0.40	0.12
60		50	1.02	17.3	27% 14	30%	927	3	0.82	0.96	0.98	0.28
60		100	1.1	18.1	31% 14	33%	1033	3	1.16	1.13	1.12	0.29
60		250	1.16	19.1	40% 14	41%	1281	3	1.28	1.47	1.26	0.40
60		500	1.22	19.8	46% 14	40%	1247	3	1.15	1.66	1.55	0.49
60		1000	1.27	20.4	45% 14	38%	1202	3	1.38	1.97	1.69	0.58
90		10	0.89	15.4	16% 15	15%	469	3	0.38	0.37	0.47	0.09
90		50	1.22	18	22% 14	30%	939	3	0.87	1.02	1.02	0.19
90		100	1.39	19	27% 12	37%	1162	3	1.04	1.25	1.26	0.23
90		250	1.61	20.2	31% 14	31%	982	1	1.72	1.46	1.29	0.25
90		500	1.68	21.1	35% 14	32%	994	3	1.84	1.78	1.44	0.31
90		1000	1.89	21.9	41% 12	34%	1054	3	2.22	1.92	1.77	0.45
120		10	1.28	14.1	17% 7	16%	496	1	0.69	0.37	0.49	0.17
120		50	1.95	16.4	29% 9	24%	746	1	2.03	0.73	0.85	0.26
120		100	2.23	17.3	37% 9	28%	871	1	2.55	1.03	1.25	0.37
120		250	2.58	18.4	57% 9	36%	1128	1	3.83	1.26	1.46	0.39
120		500	2.77	19.2	73% 9	40%	1255	1	4.54	1.58	1.63	0.41
120		1000	2.88	20	85% 9	51%	1600	1	5.15	1.88	1.78	0.47
150		10	1.83	13.3	23% 9	19%	593	1	1.44	0.22	0.55	0.16
150		50	2.25	16	44% 9	25%	778	1	2.93	0.32	0.72	0.24
150		100	2.5	17.1	55% 9	30%	951	1	3.41	0.43	0.93	0.34
150		250	2.75	18.5	63% 9	32%	996	1	3.99	0.51	1.02	0.40
150		500	3.01	19.6	79% 9	41%	1269	1	4.57	0.60	1.23	0.49
150		1000	3.21	20.7	97% 9	45%	1420	1	5.45	0.77	1.38	0.51

TABLE 4-2: Results Loaded FSU (2/2)

Dir.	Ret.	Hs	WindSpd	Max. Line Load		Max. Fender Load			Manifold Motion Envelope			
[°N]	Per.	[yr]	[m]	[m/s]	[% MBS] Line No.	[% MRF]	[kN]	No.	x[m]	y[m]	z[m]	yaw[deg]
180	1	1.84	15.3	20%	9	24%	751	3	1.16	0.15	0.43	0.13
180	5	2.47	17.8	46%	9	30%	941	3	2.96	0.28	0.75	0.24
180	10	2.69	18.8	58%	9	33%	1042	3	3.75	0.34	0.87	0.34
180	25	3.02	19.9	86%	9	42%	1302	3	5.17	0.53	1.07	0.47
180	50	3.24	20.7	102%	9	49%	1527	1	6.03	0.65	1.26	0.58
180	100	3.41	21.4	113%	9	60%	1867	1	6.55	0.70	1.36	0.69
210	1	1.56	18.5	16%	9	29%	905	3	0.72	0.17	0.38	0.12
210	5	1.98	21.3	29%	9	39%	1234	3	1.91	0.35	0.66	0.24
210	10	2.24	22.4	44%	9	44%	1389	3	2.92	0.43	0.76	0.35
210	25	2.63	23.6	54%	9	53%	1660	1	3.51	0.57	1.09	0.50
210	50	2.9	24.5	75%	9	62%	1950	1	4.36	0.63	1.23	0.66
210	100	3.13	25.4	83%	9	71%	2228	3	4.75	0.80	1.50	0.77
240	1	1.16	19.4	15%	7	38%	1204	3	0.59	0.38	0.44	0.19
240	5	1.76	21.7	24%	9	49%	1549	3	1.67	0.56	0.73	0.28
240	10	2.14	22.5	35%	9	52%	1643	3	2.46	0.63	0.89	0.33
240	25	2.54	23.6	51%	9	65%	2024	3	3.31	0.83	1.12	0.50
240	50	2.63	24.3	54%	9	65%	2048	3	3.43	0.80	1.25	0.50
240	100	2.78	25	71%	9	77%	2417	3	4.28	1.04	1.27	0.73
270	1	1.15	17.7	15%	7	44%	1378	1	0.50	0.58	0.59	0.17
270	5	1.65	20.3	21%	9	58%	1817	1	1.37	0.78	0.82	0.29
270	10	1.96	21.4	28%	9	63%	1984	1	2.03	0.90	0.95	0.40
270	25	2.18	22.6	35%	9	70%	2177	1	2.48	1.13	1.16	0.41
270	50	2.29	23.6	37%	9	73%	2301	1	2.71	1.09	1.20	0.42
270	100	2.42	24.4	41%	9	90%	2821	1	3.04	1.33	1.30	0.51
300	1	1.09	13.6	17%	7	48%	1507	1	0.47	0.55	0.49	0.17
300	5	1.31	17.6	20%	7	58%	1807	1	0.78	0.69	0.63	0.23
300	10	1.39	19.3	19%	7	61%	1920	1	0.68	0.74	0.72	0.23
300	25	1.49	21.6	23%	7	66%	2058	1	1.18	0.83	0.78	0.27
300	50	1.56	23.3	25%	7	71%	2228	1	1.22	0.91	0.87	0.33
300	100	1.62	25	26%	7	77%	2400	1	1.39	1.18	1.02	0.32
330	1	0.28	14.9	19%	7	31%	979	1	0.47	0.25	0.18	0.11
330	5	0.37	18.8	20%	7	37%	1167	1	0.53	0.34	0.25	0.14
330	10	0.4	20.4	21%	7	40%	1253	1	0.57	0.38	0.30	0.16
330	25	0.44	22.4	22%	7	43%	1361	1	0.61	0.43	0.35	0.18
330	50	0.48	23.8	23%	7	46%	1443	1	0.66	0.47	0.38	0.19
330	100	0.5	25.2	23%	7	49%	1529	1	0.71	0.50	0.41	0.21

TABLE 5-1: Results Ballasted FSU (1/2)

Dir.	Ret.	Hs	WindSpd	Max. Line Load		Max. Fender Load			Manifold Motion Envelope				
[°N]	Per.	[yr]	[m]	[m/s]	[% MBS]	Line No.	[% MRF]	[kN]	No.	x[m]	y[m]	z[m]	yaw[deg]
0		10	0.25	15	15%	7	17%	525	3	0.17	0.01	0.02	0.01
0		50	0.44	18.3	17%	7	17%	537	3	0.28	0.03	0.09	0.01
0		100	0.51	19.5	18%	7	18%	552	3	0.35	0.07	0.14	0.02
0		250	0.62	21	19%	7	18%	561	3	0.46	0.12	0.21	0.02
0		500	0.7	22.1	20%	7	18%	566	3	0.52	0.12	0.24	0.03
0		1000	0.78	23.1	21%	7	19%	593	3	0.64	0.17	0.32	0.05
30		10	0.47	14.8	17%	15	19%	586	3	0.31	0.12	0.14	0.10
30		50	0.73	17.5	21%	15	22%	694	3	0.51	0.22	0.23	0.20
30		100	0.84	18.4	23%	15	27%	839	3	0.63	0.33	0.33	0.28
30		250	0.98	19.6	27%	15	33%	1045	3	0.90	0.49	0.39	0.39
30		500	1.05	20.4	32%	15	36%	1129	3	1.16	0.58	0.44	0.41
30		1000	1.08	21.1	32%	15	38%	1187	3	1.20	0.71	0.45	0.44
60		10	0.71	15.1	18%	15	19%	586	3	0.35	0.24	0.24	0.14
60		50	1.02	17.3	24%	15	29%	922	3	0.71	0.53	0.39	0.28
60		100	1.1	18.1	28%	14	35%	1104	3	0.94	0.91	0.45	0.32
60		250	1.16	19.1	34%	14	40%	1241	3	1.33	1.26	0.47	0.42
60		500	1.22	19.8	41%	14	45%	1411	3	0.98	1.38	0.62	0.53
60		1000	1.27	20.4	49%	14	45%	1408	3	1.38	1.56	0.60	0.62
90		10	0.89	15.4	15%	8	16%	513	3	0.32	0.18	0.24	0.09
90		50	1.22	18	21%	14	28%	868	3	0.62	0.75	0.39	0.18
90		100	1.39	19	25%	12	34%	1067	3	0.89	1.08	0.51	0.22
90		250	1.61	20.2	31%	12	35%	1085	3	1.26	1.33	0.64	0.26
90		500	1.68	21.1	35%	12	40%	1266	3	1.39	1.57	0.68	0.29
90		1000	1.89	21.9	41%	12	47%	1467	3	2.14	1.93	1.00	0.39
120		10	1.28	14.1	17%	7	20%	617	3	0.62	0.36	0.45	0.16
120		50	1.95	16.4	27%	7	23%	733	3	1.77	0.57	0.64	0.22
120		100	2.23	17.3	35%	9	27%	831	3	2.40	0.82	0.79	0.26
120		250	2.58	18.4	51%	9	35%	1099	3	3.38	1.29	0.93	0.33
120		500	2.77	19.2	60%	9	37%	1158	1	3.96	1.47	1.05	0.43
120		1000	2.88	20	73%	9	46%	1440	1	4.64	1.68	1.15	0.44
150		10	1.83	13.3	21%	9	22%	694	3	1.17	0.41	0.56	0.12
150		50	2.25	16	28%	9	25%	780	3	1.66	0.60	0.91	0.20
150		100	2.5	17.1	46%	9	26%	815	1	2.94	0.71	1.09	0.24
150		250	2.75	18.5	57%	9	28%	884	3	3.48	0.73	1.07	0.28
150		500	3.01	19.6	75%	9	34%	1072	1	4.44	0.80	1.32	0.32
150		1000	3.21	20.7	88%	9	37%	1174	1	5.05	1.03	1.36	0.41

TABLE 5-2: Results Ballasted FSU (2/2)

Dir. Ret.	Hs	WindSpd	Max. Line Load		Max. Fender Load			Manifold Motion Envelope			
[°N] Per. [yr]	[m]	[m/s]	[% MBS]	Line No.	[% MRF]	[kN]	No.	x[m]	y[m]	z[m]	yaw[deg]
180	1 1.84	15.3	17%	9	24%	745	3	0.78	0.39	0.57	0.08
180	5 2.47	17.8	31%	9	29%	911	3	1.96	0.76	1.05	0.17
180	10 2.69	18.8	38%	9	31%	964	3	2.28	0.83	1.16	0.21
180	25 3.02	19.9	50%	9	34%	1066	1	3.18	0.90	1.19	0.27
180	50 3.24	20.7	69%	9	39%	1211	1	4.17	1.06	1.32	0.35
180	100 3.41	21.4	86%	9	46%	1451	1	4.97	1.16	1.52	0.41
210	1 1.56	18.5	15%	9	31%	959	3	0.59	0.30	0.47	0.11
210	5 1.98	21.3	24%	9	38%	1200	3	1.40	0.78	1.01	0.22
210	10 2.24	22.4	27%	9	43%	1359	3	1.62	0.88	1.06	0.25
210	25 2.63	23.6	48%	9	48%	1511	3	3.00	1.12	1.32	0.35
210	50 2.9	24.5	67%	9	59%	1853	3	3.99	1.11	1.54	0.41
210	100 3.13	25.4	81%	9	62%	1928	3	4.75	1.26	1.67	0.50
240	1 1.16	19.4	15%	7	44%	1368	3	0.48	0.46	0.45	0.16
240	5 1.76	21.7	20%	9	57%	1784	3	1.06	0.71	0.83	0.23
240	10 2.14	22.5	24%	9	58%	1822	3	1.61	0.80	0.85	0.27
240	25 2.54	23.6	44%	9	64%	2016	3	2.85	0.94	1.17	0.40
240	50 2.63	24.3	51%	9	67%	2098	3	3.31	1.04	1.31	0.41
240	100 2.78	25	63%	9	78%	2435	3	4.02	1.20	1.33	0.54
270	1 1.15	17.7	15%	7	46%	1452	3	0.44	0.47	0.49	0.17
270	5 1.65	20.3	18%	7	55%	1735	3	0.90	0.75	0.78	0.26
270	10 1.96	21.4	23%	9	62%	1947	1	1.56	0.83	0.89	0.35
270	25 2.18	22.6	31%	9	69%	2166	1	2.22	0.99	1.07	0.38
270	50 2.29	23.6	36%	9	69%	2164	3	2.61	1.08	1.21	0.38
270	100 2.42	24.4	40%	9	76%	2382	3	2.89	1.03	1.21	0.49
300	1 1.09	13.6	17%	7	49%	1529	1	0.36	0.32	0.30	0.20
300	5 1.31	17.6	19%	7	58%	1802	1	0.62	0.43	0.45	0.25
300	10 1.39	19.3	19%	7	61%	1913	1	0.66	0.55	0.53	0.27
300	25 1.49	21.6	20%	7	66%	2054	1	0.81	0.61	0.62	0.32
300	50 1.56	23.3	23%	7	69%	2166	1	0.96	0.69	0.66	0.36
300	100 1.62	25	23%	7	73%	2279	1	1.00	0.71	0.71	0.36
330	1 0.28	14.9	18%	7	33%	1018	1	0.28	0.11	0.06	0.13
330	5 0.37	18.8	19%	7	39%	1218	1	0.37	0.15	0.10	0.18
330	10 0.4	20.4	20%	7	42%	1314	1	0.41	0.17	0.13	0.20
330	25 0.44	22.4	21%	7	46%	1427	1	0.46	0.20	0.13	0.22
330	50 0.48	23.8	22%	7	49%	1519	1	0.51	0.23	0.19	0.24
330	100 0.5	25.2	22%	7	51%	1601	1	0.53	0.25	0.18	0.26

APPENDIX A03 MEMO SPREAD-MOORED FSU RESPONSE

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From : Henri van der Heiden (MARIN)
CC : Johan Dekker (MARIN)
Date : March 16, 2015
Project No : 27689; Delimara LNG terminal
Subject : Summary of results of the spread mooring study

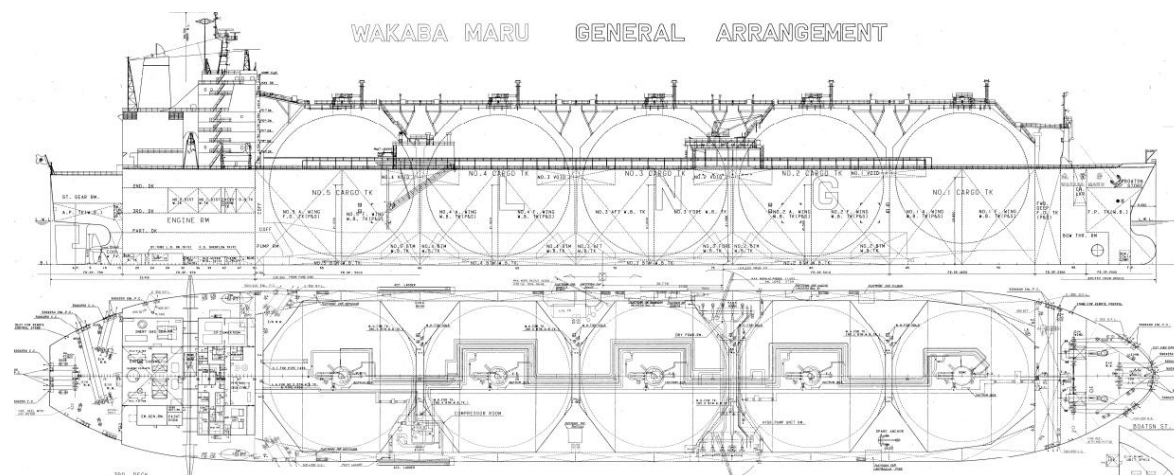
In this MEMO a summary of the results from the spread mooring dynamic time-domain simulations is given. The simulations have considered the FSU in the spread mooring system during one in 50yr or one in 100yr storm conditions. Below, a summary of the input for the simulations is given, followed by a description and discussion of the results.

The OCIMF sign convention as in Figure 5 and Figure 6 applies to the results described in this report. This holds unless it is specifically indicated that the nautical directional convention 'coming from' in degrees with respect to the true North applies, indicated with 'deg N'.

1 Wakabu Maru FSU

Below, the general arrangement of the Wakaba Maru is shown. In Table 3, the main particulars are provided.

Figure 1: General arrangement of the Wakaba Maru FSU.



2 Diffraction computation

For the computation of the added mass, the wave radiation damping and the first and second order wave forces, a water depth of 18.5 m was assumed. Two loading conditions were simulated: the loaded FSU and the ballasted FSU, the particulars of which are summarized in Table 3.

The simulation software DIFFRAC was used to perform the diffraction computation in the frequency domain, resulting in a database containing the added mass, wave radiation damping, and the wave force coefficients. This database is used to compute the hydrodynamic response in the time-domain simulations.

3 Alterations mooring system layout and mooring line composition

Various options for the spread mooring system have been considered. In Table 1, the line composition for each alteration is given. Per alteration, the mooring lines have identical line compositions. Numerical input for the simulation model is provided in Table 3 through Table 10.

Table 1: Line composition for different alterations.

Alteration	chain			wire		# lines [-]
	bottom length [m]	top length [m]	type	length [m]	type	
0.0	100	100	R3 76mm	600	34x6 WC, 66mm	8
0.1	800	-	R3 76mm	-	-	8
1	400	-	R3 76mm	400	34x6 WC, 74mm	8
2	400	-	R3 76mm	400	34x6 WC, 74mm	10
3	400	-	R3 102mm	400	34x6 WC, 74mm	8
4	500	-	R3 76mm	300	34x6 WC, 74mm	8

In Table 2, the mooring line group departure angles and the number of mooring lines per group are indicated. The departure angle for an individual mooring line is symmetric around the group departure angle in steps of 2 degrees. Mooring lines are numbered counter-clockwise starting from the bow of the ship.

Table 2: Spread mooring line-group departure angles and number of lines per group.

Alteration	Mooring line groups							
	group 1		group 2		group 3		group 4	
	# lines	angle [deg]	# lines	angle [deg]	# lines	angle [deg]	# lines	angle [deg]
0.0	2	20	2	160	2	200	2	340
0.1	2	20	2	160	2	200	2	340
1	2	25	2	155	2	205	2	335
2	3	25	2	155	2	205	3	335
3	2	25	2	155	2	205	2	335
4	2	25	2	155	2	205	2	335

4 Environmental conditions

The environmental conditions that have been applied in the simulations are summarized in Table 9 and Table 10.

Some important remarks should be made:

- The wave data was updated between the set of alterations 0.0 and 0.1 and the set of alterations 1-4 on the other hand. Therefore the environmental conditions are different between these sets.
- For the alterations 0.0 and 0.1 the environmental conditions belonging to wind directions of wind going to 60 deg N to 240 deg N in steps of 30 degrees apply.
- For alterations 1-4 a smaller set of wind directions was taken: 90 deg N, 270 deg N, and 300 deg N. These wind directions were considered to be the worst case for the spread mooring system, based on the initial alterations 0.0 and 0.1.

5 Summary and discussion of results

In the simulations 3.5 hrs are simulated, of which the first 0.5 hrs are removed to ensure that transient effects have sufficiently vanished. Statistics of the last 3 simulated hours have been computed.

The results are presented in three parts:

- In the tables below: summary of the statistics of the most significant quantities.
- In Appendix 1: complete statistics of the time-domain simulations.
- In Appendix 2: plots of the mooring line catenary shapes for which the extreme touchdown point is found. The shape of each line is plotted per simulation run. Note that the shapes have been determined by considering the largest *horizontal* distance from fairlead to anchor and computing the corresponding mooring line catenary shape.

5.1 Motions and extreme touchdown positions

Alterations 0.0 and 0.1

The first set of alterations 0.0 and 0.1 show that the motions of the (ballasted and loaded) FSU in the spread mooring system are bounded by the beam-on or near beam-on 100 yr conditions, see Table 15 through Table 18. Excursions of the FSU up to 21m in sway direction from the calm water and no wind equilibrium position are observed.

The simulations in alteration 0.0 show that for the worst conditions the touchdown point is located 725m from the fairlead position, which is about 75m from the anchor position. This is also observed in the catenary shapes of the mooring lines that are plotted in Appendix 2 for each of the simulations.

In alteration 0.1, the weight of the line was increased by replacing the wire in the mooring lines entirely with chain. This reduces the lifting of the mooring line significantly, as can be seen from the extreme line shapes in Appendix 2. The touchdown point is now 375m from the fairlead. The fairlead tensions, however, have increased significantly when compared to alterations 0.0.

Alterations 1 to 4

As mentioned before, the wind and wave data has been updated for alterations 1-4, as indicated in Table 10. As the beam-on or near beam-on environmental conditions were considered to be the worst case, only wind coming from 90 deg N, 270 deg N, and 300 deg N have been considered in these alterations.

The differences between the alterations 1-4 are evaluated below. In the discussion, alteration 1 is taken to be the base case, with respect to which the other alterations will be compared.

For alteration 1 the mooring lines consist of 400m wire and 400m chain. The max. distance from fairlead to touchdown point is about 600m, and the loads are high for all of the simulated conditions. For comparison, the minimal fairlead tension occurring in the simulated environments is 1,800 kN, which is already 42% of the break load of the mooring leg (see Table 8.) The max. fairlead tensions exceed the break load of the mooring leg significantly.

In alteration 2, two additional mooring lines have been added at the mooring line groups departing from the bow of the FSU. The max. distance from the fairlead to the touchdown point are maximally about 650m. There are differences in the motion envelope and fairlead

tensions between with respect to alternative 1. There is no clear trend towards higher or lower loads that applies to all of the simulated environmental conditions.

Alteration 3 consists of a heavier bottom chain. The simulations show around 600m of extreme distance of fairlead to touchdown point. Except for the loaded FSU in 50yr condition coming from 90 deg N, and the ballasted FSU in 100yr condition coming from 90 deg N, the loads in the simulated environments are higher than for alteration 2.

Finally, in alteration 4 the bottom chain has the same composition as in alteration 1, but is 100m longer. The wire is 100m shorter. Simulations show that the max. touchdown distance from fairlead to touchdown point is 565m.

5.2 Conclusions

It is observed that in some cases, the loads for the 50yr conditions are higher than the 100yr conditions coming from the same direction. Typically, this behaviour is a result of the change in stiffness of the mooring system. Changing the stiffness of the mooring system also changes the resonant frequency of the system. If the energy supplied to the mooring system at its natural frequency is higher at the 50yr condition with respect to the 100yr condition, the response and loads should be expected to be larger too.

In all of the simulated scenarios the max. line loads are too high for the break load of the individual mooring legs. A general trend from the simulations seems to be that a stiffer mooring system results in an acceptable excursion and mooring line pick-up, but also results in excessive mooring line loads. A softer mooring system tends to give rise to smaller loads, but results in larger mooring line distance from fairlead to touchdown point.

To facilitate a softer mooring system within the current setup, the mooring lines should be lighter and significantly longer. This, however, does not seem to be a feasible solution for Marsaxlokk Bay, especially not for the mooring lines stretching out from the stern of the FSU towards the North.

5.3 Addendum: multi-buoy mooring system feasibility

At the end of this MEMO, another MEMO dated 01/22/2015 is included. In this MEMO, a static analysis of a multi-buoy mooring system was given to examine the feasibility of this system as a storm mooring arrangement. In the example calculation, an off-the-shelf Trelleborgh buoy with a relatively large buoyancy was considered. The net restoring force of these particular buoys was concluded to be too small. Evidently, the analysis can be extended to mooring buoys with a significantly larger net buoyancy.

Table 3: Main particulars of the loaded and ballasted FSU.

Designation	Symbol	Unit	Values	
			Loaded	Ballasted
Length between Perpendiculars	Lpp	m	270	
Breadth	B	m	44.8	
Draft	T	m	10.8	9.35
Displacement weight	Δ	ton	100,000	80,000
Centre of Gravity above base	KG	m	20.0	13.1
Centre of Gravity forward of st10	LCG	m		
Transverse metacentric radius	KM	m	22.3	24.1
Transverse metacentric height	GMt	m	2.3	11.0
Frontal wind area	Awf	m ²	1,150	1,220
Lateral wind area	Awl	m ²	7,120	7,570
Roll radius of gyration	k _{xx}	m	15.7	
Pitch radius of gyration	k _{yy}	m	67.5	
Yaw radius of gyration	k _{zz}	m	67.5	

Table 4: SIGTTO wind load coefficients for the Wakaba Maru FSU

Dir [deg]	CF _x	CF _y	CM _z
0	0.834	0	0
10	0.934	0.088	-0.0371
20	0.986	0.225	-0.0726
30	0.964	0.389	-0.0991
40	0.875	0.517	-0.1091
50	0.748	0.634	-0.109
60	0.54	0.737	-0.099
70	0.295	0.813	-0.0798
80	0.109	0.869	-0.0556
90	-0.01	0.903	-0.0276
100	-0.086	0.914	-0.0009
110	-0.176	0.898	0.0223
120	-0.236	0.859	0.0419
130	-0.425	0.759	0.0519
140	-0.579	0.594	0.0522
150	-0.707	0.421	0.0444
160	-0.809	0.251	0.0289
170	-0.85	0.11	0.0153
180	-0.836	0.003	0.001
190	-0.85	-0.11	-0.0153
200	-0.809	-0.251	-0.0289
210	-0.707	-0.421	-0.0444
220	-0.579	-0.594	-0.0522
230	-0.425	-0.759	-0.0519
240	-0.236	-0.859	-0.0419
250	-0.176	-0.898	-0.0223
260	-0.086	-0.914	0.0009
270	-0.01	-0.903	0.0276
280	0.109	-0.869	0.0556
290	0.295	-0.813	0.0798
300	0.54	-0.737	0.099
310	0.748	-0.634	0.109
320	0.875	-0.517	0.1091
330	0.964	-0.389	0.0991
340	0.986	-0.225	0.0726
350	0.934	-0.088	0.0371
360	0.834	0	0

Wind forces and moment are defined around midships, centreline, still-water line by:

$$F_{x,y} = 0.5 \cdot \rho \cdot A_{wf, wl} \cdot CF_{x,y} \cdot V^2$$

$$M_z = 0.5 \cdot \rho \cdot A_{wl} \cdot CM_z \cdot V^2$$

Table 5: Mooring system layout of alteration 0.

line no.	x fair [m]	y fair [m]	departure angle [deg]	pretension [kN]	pretension [kN]
1	134.3	8.9	19	294.3	294.3
2	134.3	8.9	21	294.3	294.3
3	-143	8.6	159	294.3	294.3
4	-143	8.6	161	294.3	294.3
5	-143	-8.6	199	294.3	294.3
6	-143	-8.6	201	294.3	294.3
7	136.4	-8.2	339	294.3	294.3
8	136.4	-8.2	341	294.3	294.3

Figure 2: mooring system layout of alteration 0.

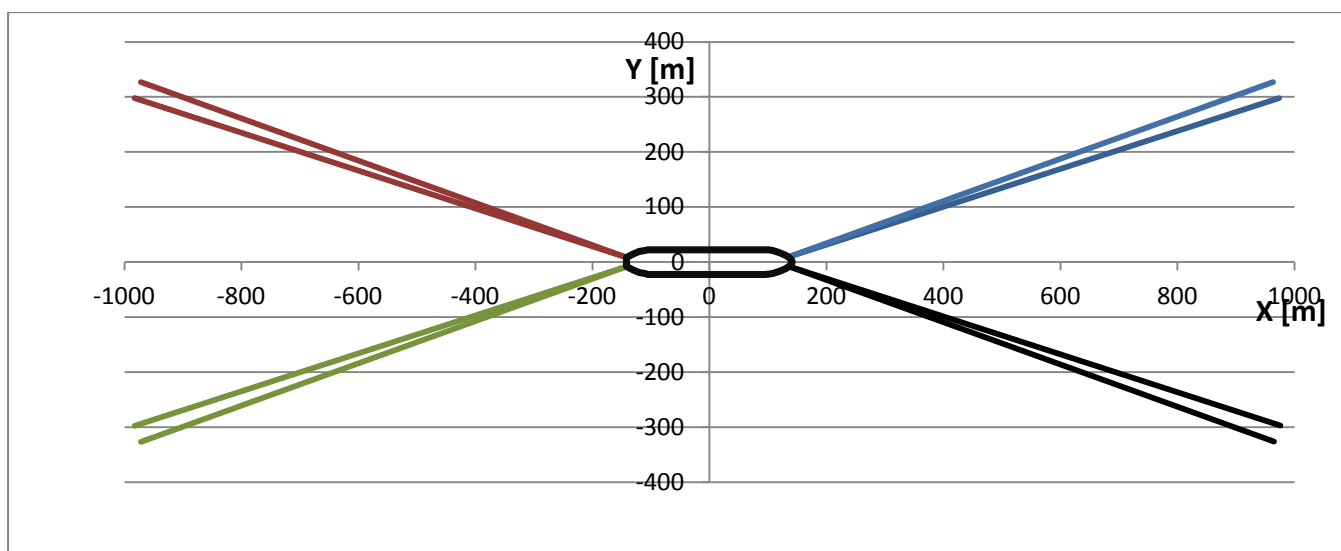


Table 6: Mooring system layout of alterations 1, 3 and 4.

line no.	x fair [m]	y fair [m]	departure angle [deg]	pretension [kN]
1	118	17.05	24	294.3
2	117	17.75	26	294.3
3	-141	8	154	294.3
4	-141.5	7.85	156	294.3
5	-143	-7.85	204	294.3
6	-143	-8	206	294.3
7	117	-17.05	334	294.3
8	118	-17.75	336	294.3

Figure 3: Mooring system layout alterations 1 and 4.

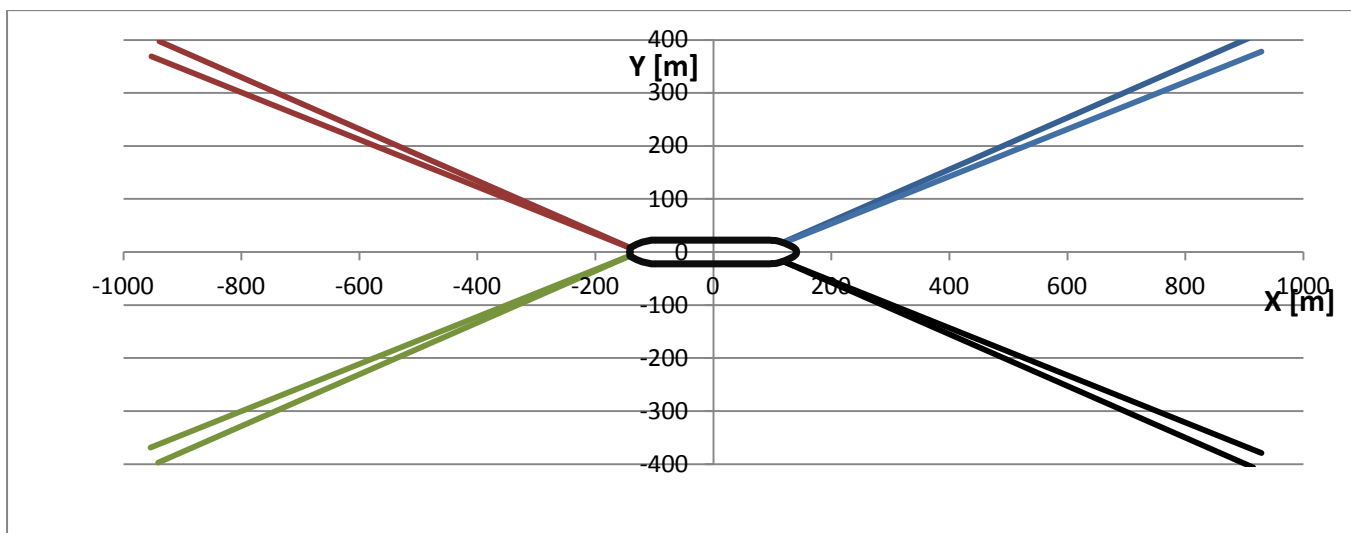


Table 7: mooring system layout alteration 2.

line no.	x fair [m]	y fair [m]	departure angle [deg]	pretension [kN]
1	118	17.25	23	294.3
2	117.5	17.5	25	294.3
3	117	17.75	27	294.3
4	-141	8	154	294.3
5	-141.5	7.85	156	294.3
6	-143	-7.85	204	294.3
7	-143	-8	206	294.3
8	117	-17.25	333	294.3
9	117.5	-17.5	335	294.3
10	118	-17.75	337	294.3

Figure 4: mooring system layout alteration 2.

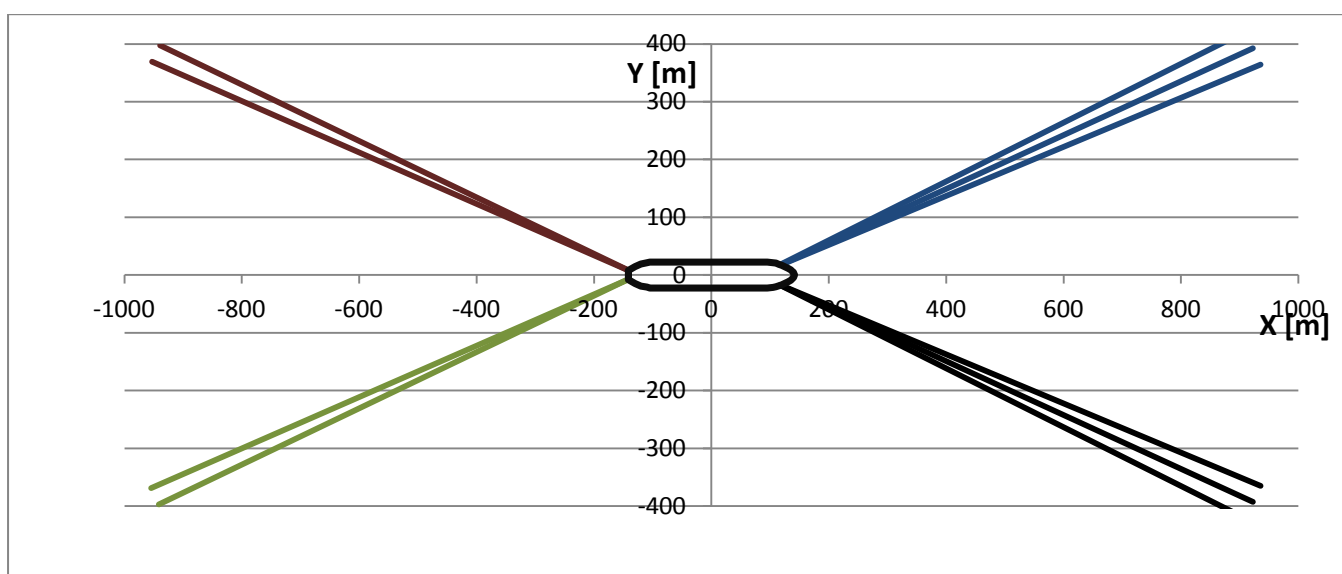


Table 8: Mooring line composition and length per alteration.

Mooring line composition alterations 0.0 and 0.1

	Mass per meter	Submerged weight	Axial stiffness	Break load
	[kg/m]	[N/m]	[kN]	[kN]
Top chain	126	1080	498,000	4,884
Wire rope	21.1	180	235,000	3,700
Bottom chain	126	1080	498,000	4,884

Mooring line composition alteration 3

	Mass per meter	Submerged weight	Axial stiffness	Break load
	[kg/m]	[N/m]	[kN]	[kN]
Wire rope	27.3	185.3	235,000	4,910
Bottom chain	208	1945	498,000	7,308

Mooring line composition alteration 1, 2 and 4

	Mass per meter	Submerged weight	Axial stiffness	Break load
	[kg/m]	[N/m]	[kN]	[kN]
Wire rope	27.3	185.3	328,000	4,910
Bottom chain	116	1080	498,000	4,293

Line segment length [m] per alteration

Alteration	0.0	0.1	1	2	3	4
Top chain	100	-	-	-	-	-
Wire rope	600	-	400	400	400	300
Bottom chain	100	800	400	400	400	500

Table 9: Environmental conditions for alterations 0.0 and 0.1.

Return Period [yr]	Wind direction coming from [°N]	Wind speed [ms-1]	Wave direction coming from [°N]	Wave Hs [m]	Pierson-Moskowitz Tp [s]
50	60	22.3	168	1.5	13.7
100	60	23.3	168	1.6	14.3
50	90	21.1	170	2.0	13.7
100	90	22.0	170	2.2	14.2
50	120	19.7	171	2.3	12.2
100	120	20.3	171	2.5	12.7
50	150	20.7	170	2.7	11.0
100	150	21.5	170	2.8	11.4
50	180	18.6	169	2.8	9.5
100	180	19.3	168	2.9	9.8
50	210	18.8	167	2.9	9.5
100	210	19.6	166	3.0	9.9
50	240	20.5	163	2.2	10.5
100	240	21.4	162	2.3	10.9

Table 10: Environmental conditions for alterations 1-4.

Return Period [yr]	Wind direction coming from [°N]	Wind speed [ms-1]	Wave direction coming from [°N]	Wave Hs [m]	Pierson-Moskowitz Tp [s]
50	90	20.4	171	1.5	11.6
100	90	21.1	171	1.7	12.2
50	270	25.6	163	2.5	13.3
100	270	26.6	162	2.7	13.7
50	300	24.0	163	1.9	13.7
100	300	24.6	162	2.0	14.1

Table 11: Summarized statistics for alteration 1.

Loading Condition		Loaded						Ballasted					
Direction	[deg N]	90		270		300		90		270		300	
Return Period	[yr]	50 100		50 100		50 100		50 100		50 100		50 100	
Max. Fairlead Tensions	[kN]	2909	2355	2959	4012	6220	4761	1800	2092	2744	2909	3430	3938
	Line No.	2	2	6	7	6	6	2	2	6	6	6	7
Max. Anchor Loads	[kN]	2903	2350	2953	4003	6212	4754	1795	2087	2737	2903	3423	3928
	Anchor No.	2	2	6	7	6	6	2	2	6	6	6	7
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-3.8	-3.1	-4.5	-5.5	-6.0	-4.9	-2.0	-2.5	-4.1	-4.3	-2.8	-3.6
	yaw_max [°]	3.0	2.6	3.8	4.5	6.8	5.7	1.0	1.6	3.3	3.3	4.5	4.9
	yaw_mean [°]	-0.4	-0.3	-0.5	-0.5	0.6	0.8	-0.6	-0.6	-0.5	-0.5	1.0	1.0
	x_min[m]	-2.8	-2.2	-3.8	-4.6	-6.7	-6.2	-1.1	-1.6	-3.9	-4.1	-3.9	-4.8
	x_max[m]	2.2	2.8	3.6	4.3	6.7	5.8	1.5	2.2	2.7	3.1	3.6	3.6
	x_mean [m]	0.1	0.0	-0.4	-0.4	0.1	0.3	0.3	0.3	-0.3	-0.3	0.5	0.5
	y_min[m]	-9.9	-9.2	2.1	1.0	3.1	3.4	-7.6	-8.4	3.3	3.1	5.4	4.9
	y_max[m]	-0.6	-1.8	10.7	12.9	15.5	17.3	-3.4	-3.2	9.6	10.2	13.5	15.1
	y_mean [m]	-5.5	-5.8	6.6	6.9	9.2	9.9	-5.5	-5.8	6.3	6.6	9.1	9.8
FSU Motion Envelope at MANIFOLD	x_min[m]	-7.1	-6.4	-6.6	-7.6	-10.0	-9.1	-5.5	-6.1	-7.1	-7.3	-7.4	-8.0
	x_max[m]	-0.2	0.3	-1.1	-0.6	1.7	1.4	-2.0	-1.1	-1.8	-2.0	-1.1	-1.0
	x_mean [m]	-3.2	-3.3	-3.7	-3.7	-3.6	-3.5	-3.5	-3.5	-4.3	-4.3	-3.9	-3.9
	y_min[m]	-10.8	-9.4	2.3	0.8	3.7	3.1	-8.2	-8.7	3.2	3.1	5.6	5.9
	y_max[m]	-0.7	-2.1	10.9	12.6	15.6	17.1	-3.5	-3.6	9.2	9.0	13.9	15.6
	y_mean [m]	-5.5	-5.8	6.1	6.4	9.2	9.9	-5.7	-6.1	6.0	6.3	9.6	10.3
Extreme touchdown point: horizontal distances fairlead- touchdownpoint	Line 1 [m]	429	402	429	402	401	402	320	402	320	347	374	374
	Line 2 [m]	429	429	429	401	401	402	320	402	320	347	374	374
	Line 3 [m]	402	402	457	429	375	402	320	375	375	375	375	375
	Line 4 [m]	402	375	457	429	375	402	320	375	375	375	375	375
	Line 5 [m]	347	347	568	513	429	457	320	347	457	484	429	429
	Line 6 [m]	347	347	596	540	457	484	320	347	484	485	456	457
	Line 7 [m]	346	346	594	566	483	538	346	292	511	538	456	456
	Line 8 [m]	346	346	594	566	483	538	346	319	510	538	456	456

Table 12: Summarized statistics for alteration 2.

Loading Condition		Loaded						Ballasted					
Direction	[deg N]	90		270		300		90		270		300	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN]	2018	1921	3011	6433	3389	5237	1594	2144	2921	4430	3805	3682
	Line No.	4	4	7	7	7	7	4	4	7	7	7	7
Max. Anchor Loads	[kN]	2014	1916	3005	6425	3383	5230	1589	2140	2915	4422	3799	3675
	Anchor No.	4	4	7	7	7	7	4	4	7	7	7	7
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-1.7	-2.6	-3.8	-5.8	-3.2	-3.7	-1.5	-1.8	-3.6	-5.1	-3.2	-3.0
	yaw_max [°]	1.0	1.2	3.0	6.0	3.4	4.9	0.6	1.1	2.4	5.0	3.6	3.9
	yaw_mean [°]	-0.5	-0.5	-0.5	-0.5	0.7	0.7	-0.5	-0.5	-0.5	-0.5	0.7	0.7
	x_min[m]	-0.5	-1.4	-2.8	-6.2	-2.4	-3.5	-0.2	-1.0	-2.4	-5.4	-3.4	-2.3
	x_max[m]	2.1	2.3	2.9	8.5	3.9	4.4	1.6	2.3	2.6	6.1	3.7	4.1
	x_mean [m]	0.7	0.8	0.2	0.2	1.0	1.0	0.7	0.8	0.2	0.3	1.1	1.1
	y_min[m]	-6.9	-7.2	2.3	-3.7	3.5	3.8	-6.2	-7.6	2.5	1.7	4.1	4.3
	y_max[m]	-2.4	-2.0	8.5	14.9	11.5	14.0	-2.8	-2.1	8.1	11.5	11.2	12.0
	y_mean [m]	-4.6	-4.9	5.3	5.7	7.6	8.2	-4.6	-4.9	5.3	5.7	7.6	8.2
FSU Motion Envelope at MANIFOLD	x_min[m]	-4.3	-5.2	-5.7	-10.5	-5.7	-6.9	-4.4	-4.9	-5.6	-9.3	-7.0	-6.1
	x_max[m]	-0.9	-0.4	-1.3	5.5	-0.4	1.3	-2.0	-1.5	-1.9	2.2	-0.9	-0.7
	x_mean [m]	-2.6	-2.6	-3.1	-3.1	-2.7	-2.7	-3.2	-3.1	-3.7	-3.7	-3.3	-3.2
	y_min[m]	-7.3	-8.1	2.2	-3.7	3.7	4.4	-6.5	-8.5	2.2	0.0	4.5	5.3
	y_max[m]	-2.4	-2.0	7.8	14.7	11.4	13.7	-3.0	-1.7	7.5	11.9	11.1	11.8
	y_mean [m]	-4.6	-4.9	4.8	5.2	7.7	8.3	-4.8	-5.2	5.0	5.4	7.9	8.5
Extreme horizontal distances fairlead- touchdown point	Line 1 [m]	428	428	373	428	427	539	427	455	400	266	400	482
	Line 2 [m]	455	455	373	428	427	539	428	455	373	266	400	482
	Line 3 [m]	455	455	400	428	428	566	428	482	400	293	427	482
	Line 4 [m]	456	455	428	456	428	511	455	456	428	456	428	483
	Line 5 [m]	455	455	428	455	428	511	428	456	428	456	428	456
	Line 6 [m]	373	427	511	594	510	623	346	373	538	538	510	566
	Line 7 [m]	319	400	511	594	510	623	293	319	538	538	510	566
	Line 8 [m]	292	292	510	593	509	649	292	292	510	537	482	565
	Line 9 [m]	292	292	510	593	509	621	292	292	510	537	482	565
	Line 10 [m]	292	319	509	565	509	621	292	292	509	510	481	565

Table 13: Summarized statistics for alteration 3.

Loading Condition		Loaded						Ballasted					
Direction	[deg N]	90		270		300		90		270		300	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN]	1921	3248	3160	9115	4051	7107	1733	1955	6254	7486	7403	4553
	Line No.	2	2	6	6	7	6	2	2	6	6	6	6
Max. Anchor Loads	[kN]	1916	3242	3154	9105	4041	7097	1728	1949	6245	7475	7392	4545
	Anchor No.	2	2	6	6	7	6	2	2	6	6	6	6
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-2.0	-2.9	-4.0	-9.1	-3.1	-6.6	-1.6	-1.9	-7.5	-7.5	-7.1	-2.7
	yaw_max [°]	1.2	2.3	3.8	9.4	3.8	6.3	0.6	0.9	6.9	8.7	9.2	4.6
	yaw_mean [°]	-0.5	-0.5	-0.5	-0.4	0.8	0.8	-0.6	-0.6	-0.4	-0.4	0.9	1.0
	x_min[m]	-1.2	-3.0	-4.2	-10.5	-3.2	-6.4	-0.8	-1.1	-7.3	-9.9	-9.2	-4.5
	x_max[m]	1.5	3.0	2.5	8.7	3.6	6.8	1.4	1.5	7.4	8.2	8.2	3.3
	x_mean [m]	0.3	0.2	-0.3	-0.4	0.4	0.4	0.4	0.4	-0.4	-0.4	0.4	0.5
	y_min[m]	-7.3	-8.4	2.6	-4.2	3.7	2.3	-6.5	-7.3	-1.2	-6.0	1.0	4.3
	y_max[m]	-2.4	-2.2	8.5	17.0	12.7	14.9	-3.1	-3.2	14.5	16.3	13.0	12.4
	y_mean [m]	-4.7	-5.1	5.5	6.3	7.9	8.5	-4.8	-5.1	5.6	5.9	7.9	8.5
FSU Motion Envelope at MANIFOLD	x_min[m]	-5.1	-6.8	-6.7	-11.6	-6.3	-9.5	-5.0	-5.4	-10.5	-12.5	-13.2	-8.4
	x_max[m]	-1.4	0.0	-1.7	3.8	-0.8	2.1	-2.2	-2.1	3.2	4.3	3.4	-1.5
	x_mean [m]	-3.1	-3.1	-3.7	-3.8	-3.4	-3.4	-3.5	-3.5	-4.3	-4.3	-3.9	-3.9
	y_min[m]	-7.5	-8.5	2.5	-3.5	3.9	2.1	-6.9	-7.8	-3.2	-4.6	1.4	4.9
	y_max[m]	-2.3	-1.8	7.8	17.1	12.6	14.5	-3.2	-3.3	15.1	17.3	17.3	12.9
	y_mean [m]	-4.8	-5.1	5.1	5.8	8.0	8.7	-5.1	-5.4	5.3	5.6	8.3	8.9
Extreme horizontal distances fairlead- touchdown point	Line 1 [m]	428	457	401	457	429	515	428	428	486	373	485	515
	Line 2 [m]	428	457	400	456	429	515	428	429	486	347	485	515
	Line 3 [m]	428	457	428	486	428	542	428	428	514	429	513	514
	Line 4 [m]	428	457	429	486	428	515	428	428	514	429	513	514
	Line 5 [m]	400	428	484	542	456	598	346	319	569	512	541	569
	Line 6 [m]	373	428	484	569	483	599	346	319	570	512	541	570
	Line 7 [m]	319	427	511	569	483	596	292	292	596	512	567	596
	Line 8 [m]	319	427	511	568	483	568	292	292	596	511	567	568

Table 14: Summarized statistics for alteration 4.

Loading Condition		Loaded						Ballasted					
Direction	[deg N]	90		270		300		90		270		300	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN]	2068	2126	3202	3387	4000	4160	1800	1923	3310	3981	3228	4151
	Line No.	2	2	6	6	6	7	2	2	6	7	7	6
Max. Anchor Loads	[kN]	2061	2120	3195	3379	3992	4149	1793	1916	3301	3969	3217	4142
	Anchor No.	2	2	6	6	6	7	2	2	6	7	7	6
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-2.5	-2.9	-3.9	-4.6	-3.6	-3.5	-1.9	-2.3	-4.1	-4.6	-2.7	-3.2
	yaw_max [°]	1.8	2.1	3.8	4.3	5.3	5.1	0.9	1.1	3.4	3.4	4.5	4.7
	yaw_mean [°]	-0.5	-0.4	-0.5	-0.5	0.7	0.8	-0.6	-0.6	-0.5	-0.5	1.0	1.0
	x_min[m]	-1.5	-2.1	-4.5	-4.6	-4.8	-4.5	-1.0	-1.2	-4.4	-4.3	-3.0	-4.5
	x_max[m]	1.9	2.3	2.9	3.1	3.7	4.0	1.4	1.9	2.9	4.1	3.1	4.1
	x_mean [m]	0.2	0.2	-0.3	-0.3	0.3	0.3	0.4	0.4	-0.3	-0.3	0.6	0.5
	y_min[m]	-8.0	-8.6	2.1	2.5	3.0	4.1	-7.1	-7.5	2.6	1.9	4.5	5.1
	y_max[m]	-1.9	-1.9	9.7	9.4	13.3	14.3	-3.2	-3.2	9.1	11.5	12.4	14.3
	y_mean [m]	-5.1	-5.4	6.0	6.2	8.5	9.2	-5.0	-5.4	5.8	6.1	8.5	9.2
FSU Motion Envelope at MANIFOLD	x_min[m]	-5.5	-6.2	-7.2	-7.1	-7.9	-7.5	-5.4	-5.5	-7.6	-7.7	-6.4	-7.8
	x_max[m]	-0.8	-0.4	-1.2	-1.3	-0.7	-0.3	-2.0	-1.4	-1.8	-0.4	-1.6	-0.7
	x_mean [m]	-3.1	-3.2	-3.7	-3.7	-3.4	-3.4	-3.5	-3.5	-4.2	-4.2	-3.8	-3.9
	y_min[m]	-8.2	-8.7	2.1	2.5	3.0	4.0	-7.5	-7.9	2.9	1.3	5.0	5.6
	y_max[m]	-2.0	-1.9	9.4	9.5	13.8	15.2	-3.3	-3.4	8.4	11.6	12.5	14.6
	y_mean [m]	-5.1	-5.4	5.5	5.7	8.6	9.3	-5.3	-5.7	5.5	5.8	8.9	9.6
Extreme horizontal distances fairlead-touchdown point	Line 1 [m]	455	455	427	427	455	455	455	455	346	427	428	482
	Line 2 [m]	455	455	427	427	455	455	455	455	319	427	428	482
	Line 3 [m]	455	455	456	456	428	455	428	455	455	455	428	455
	Line 4 [m]	455	455	456	456	428	455	428	455	455	455	428	455
	Line 5 [m]	400	427	538	538	510	510	319	400	510	538	510	511
	Line 6 [m]	400	427	538	539	510	511	319	400	510	539	511	511
	Line 7 [m]	346	346	565	565	537	537	265	265	537	565	510	565
	Line 8 [m]	346	373	565	565	537	537	265	265	537	565	510	565

Table 15: Summarized statistics for LOADED FSU alteration 0.0.

Loading Condition		Loaded													
Direction	[deg N]	60		90		120		150		180		210		240	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN] Line No.	2166	2230	2320	2548	2170	2176	1779	2139	1137	1174	1600	1784	2142	2307
		3	3	2	3	2	2	2	2	7	7	7	7	7	7
Max. Anchor Loads	[kN] Anchor No.	2156	2220	2309	2539	2159	2165	1767	2128	1121	1159	1586	1770	2129	2295
		3	3	2	3	2	2	2	2	7	7	7	7	7	7
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-1.5	-0.4	-4.2	-3.3	-3.5	-5.1	-3.8	-3.2	-2.8	-2.2	-2.6	-4.8	-2.2	-3.4
	yaw_max [°]	4.6	4.0	4.9	3.9	1.7	3.4	2.6	1.9	3.1	2.5	4.3	5.9	4.2	5.5
	yaw_mean [°]	1.6	1.8	0.2	0.2	-1.0	-1.0	-0.8	-0.9	0.1	0.2	0.8	0.8	1.0	1.1
	x_min[m]	-3.6	-3.5	-4.3	-4.2	-2.9	-3.6	-4.0	-4.8	-2.9	-3.8	-3.6	-4.6	-2.7	-3.7
	x_max[m]	1.4	1.1	3.4	3.3	3.5	3.9	3.6	3.7	1.9	2.8	2.6	3.8	3.2	3.7
	x_mean [m]	-1.1	-1.2	-0.4	-0.4	0.3	0.3	-0.1	0.0	-0.5	-0.5	-0.1	-0.2	0.3	0.3
	y_min[m]	-16.2	-17.1	-17.7	-19.0	-15.2	-16.9	-10.5	-12.0	-1.4	-1.7	4.2	4.9	12.5	12.4
	y_max[m]	-11.4	-12.2	-11.9	-12.4	-9.9	-10.1	-3.9	-4.3	4.5	5.1	13.2	14.0	19.2	20.7
	y_mean [m]	-13.8	-14.7	-14.7	-15.6	-12.8	-13.3	-7.6	-7.9	1.4	1.6	9.1	9.8	15.8	16.8
FSU Motion Envelope at MANIFOLD	x_min[m]	-8.4	-8.0	-8.9	-8.3	-6.3	-7.7	-7.7	-8.2	-7.0	-7.3	-6.6	-7.1	-5.8	-6.4
	x_max[m]	-1.8	-2.5	0.9	0.7	0.7	1.7	1.1	0.9	-0.9	-0.6	-2.1	-1.2	-1.5	-1.1
	x_mean [m]	-5.1	-5.3	-3.9	-4.0	-2.8	-2.9	-3.4	-3.2	-4.1	-4.1	-3.9	-4.0	-3.6	-3.6
	y_min[m]	-15.7	-16.3	-17.9	-19.2	-15.9	-17.9	-10.7	-12.8	-1.3	-2.0	5.1	6.2	12.1	12.6
	y_max[m]	-9.9	-10.8	-10.6	-11.9	-9.3	-9.5	-4.4	-4.4	5.2	4.9	13.5	14.1	19.4	21.6
	y_mean [m]	-12.7	-13.6	-14.4	-15.3	-13.1	-13.6	-7.9	-8.3	1.5	1.7	9.5	10.1	16.1	17.2
Extreme horizontal distances fairlead-touchdown point	Line 1 [m]	590	590	671	699	644	644	563	644	373	373	212	346	104	157
	Line 2 [m]	617	617	699	726	672	672	590	672	400	373	211	346	104	130
	Line 3 [m]	618	618	618	673	591	591	509	564	374	293	293	401	158	239
	Line 4 [m]	564	591	591	645	563	563	455	536	374	293	293	401	158	266
	Line 5 [m]	104	104	211	157	185	319	346	346	400	400	481	536	617	644
	Line 6 [m]	104	104	185	130	184	293	346	319	427	427	508	590	644	672
	Line 7 [m]	265	210	291	210	183	210	265	318	508	534	643	670	725	726
	Line 8 [m]	291	210	291	210	183	210	291	319	481	508	616	643	698	725

Table 16: Summarized statistics for BALLASTED FSU alteration 0.0.

Loading Condition		Ballasted													
Direction	[deg N]	60		90		120		150		180		210		240	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN] Line No.	2239	2377	2460	3017	2172	2403	1896	2019	1032	983	1659	1981	2158	2468
		3	3	2	3	2	2	2	2	7	7	7	7	7	7
Max. Anchor Loads	[kN] Anchor No.	2228	2367	2449	3007	2160	2392	1884	2007	1015	966	1645	1967	2145	2455
		3	3	2	3	2	2	2	2	7	7	7	7	7	7
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-0.7	-1.5	-3.5	-3.8	-4.9	-4.0	-3.2	-3.2	-3.3	-2.4	-3.6	-4.6	-1.0	-3.3
	yaw_max [°]	4.1	4.6	4.0	4.4	3.4	2.2	2.6	1.5	3.4	2.7	5.0	5.8	3.3	5.4
	yaw_mean [°]	1.7	1.8	0.2	0.2	-0.9	-1.0	-0.9	-0.9	0.2	0.2	0.8	0.8	1.2	1.1
	x_min[m]	-3.4	-4.1	-4.2	-4.4	-3.5	-2.9	-3.9	-3.6	-2.9	-3.8	-4.3	-5.0	-1.7	-3.5
	x_max[m]	1.5	1.9	3.8	3.7	3.7	3.6	3.2	3.5	1.9	2.8	3.5	3.9	2.4	3.8
	x_mean [m]	-1.1	-1.1	-0.3	-0.4	0.2	0.4	0.0	0.0	-0.5	-0.6	-0.2	-0.2	0.4	0.3
	y_min[m]	-17.4	-19.1	-19.5	-21.3	-17.7	-18.1	-11.3	-12.1	-1.5	-2.1	4.9	5.1	11.6	11.6
	y_max[m]	-10.4	-11.4	-10.6	-11.1	-8.6	-9.3	-4.3	-4.3	4.9	6.6	14.1	14.7	20.5	22.4
	y_mean [m]	-14.2	-15.2	-15.2	-16.1	-13.2	-13.8	-7.9	-8.4	1.4	1.6	9.5	10.2	16.2	17.2
FSU Motion Envelope at MANIFOLD	x_min[m]	-8.7	-9.7	-9.0	-9.4	-8.4	-7.2	-7.9	-7.2	-7.3	-7.9	-7.7	-8.0	-5.7	-6.9
	x_max[m]	-2.6	-2.0	0.3	0.3	0.9	0.4	0.2	0.1	-2.2	-1.2	-1.9	-1.7	-2.4	-1.8
	x_mean [m]	-5.7	-5.8	-4.5	-4.5	-3.5	-3.4	-3.8	-3.8	-4.7	-4.7	-4.5	-4.6	-4.0	-4.1
	y_min[m]	-17.2	-18.5	-19.8	-21.4	-18.6	-18.9	-12.2	-12.9	-1.8	-2.6	6.2	6.8	12.5	12.4
	y_max[m]	-9.4	-9.6	-9.7	-10.1	-9.0	-9.2	-5.2	-4.6	4.5	6.9	14.4	14.8	21.1	23.5
	y_mean [m]	-13.3	-14.2	-15.0	-15.9	-13.7	-14.3	-8.4	-8.9	1.5	1.7	9.9	10.5	16.8	17.7
Extreme horizontal distances fairlead-touchdown point	Line 1 [m]	617	644	699	727	644	672	617	617	400	373	266	346	104	104
	Line 2 [m]	644	672	726	728	672	726	617	644	400	400	265	346	104	104
	Line 3 [m]	645	645	673	728	591	645	536	536	347	293	374	428	104	293
	Line 4 [m]	591	618	645	700	563	618	509	509	320	293	374	401	104	293
	Line 5 [m]	104	104	130	130	319	185	373	319	400	373	508	563	617	644
	Line 6 [m]	104	104	104	104	319	184	373	319	400	400	536	590	644	699
	Line 7 [m]	291	319	264	291	238	183	265	210	507	481	643	725	725	726
	Line 8 [m]	292	319	265	292	264	183	291	210	480	454	643	670	698	726

Table 17: Summarized statistics for LOADED FSU alteration 0.1.

Loading Condition		Loaded													
Direction	[deg N]	60		90		120		150		180		210		240	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN] Line No.	3009	3155	3138	3689	2593	3282	1909	2131	1248	1487	1755	1801	2665	2961
		3	3	3	2	2	2	2	2	2	7	7	7	7	7
Max. Anchor Loads	[kN] Anchor No.	2989	3135	3118	3665	2569	3259	1885	2108	1224	1458	1726	1772	2636	2932
		3	3	3	2	2	2	2	2	2	7	7	7	7	7
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-1.1	-1.3	-2.5	-2.6	-3.2	-3.3	-3.0	-3.1	-2.1	-2.3	-2.3	-1.6	-0.7	-1.8
	yaw_max [°]	3.6	3.9	2.9	3.1	1.8	2.0	2.2	2.3	2.3	2.6	3.3	2.8	2.6	3.9
	yaw_mean [°]	1.3	1.4	0.2	0.2	-0.8	-0.8	-0.5	-0.6	0.1	0.1	0.7	0.8	1.0	1.0
	x_min[m]	-2.6	-2.9	-2.6	-2.9	-2.2	-2.4	-2.9	-2.6	-2.4	-2.9	-2.5	-2.3	-1.2	-2.1
	x_max[m]	1.4	1.4	2.2	2.6	2.3	3.1	2.2	2.2	1.7	2.2	2.0	1.9	2.0	2.7
	x_mean [m]	-0.8	-0.9	-0.3	-0.3	0.3	0.3	-0.1	-0.1	-0.4	-0.4	-0.1	0.0	0.3	0.3
	y_min[m]	-13.6	-14.8	-14.9	-16.2	-12.8	-14.0	-8.0	-8.7	-2.6	-2.3	2.6	2.4	5.9	5.2
	y_max[m]	-3.8	-3.7	-3.6	-3.4	-3.2	-2.4	-2.0	-0.8	5.1	5.4	9.4	10.6	15.3	17.3
	y_mean [m]	-8.7	-9.3	-9.3	-9.9	-8.1	-8.4	-4.9	-5.2	1.0	1.2	6.1	6.5	10.5	11.2
FSU Motion Envelope at MANIFOLD	x_min[m]	-7.1	-7.3	-6.8	-7.1	-5.9	-6.0	-6.7	-6.4	-6.6	-6.4	-5.6	-5.6	-4.7	-5.2
	x_max[m]	-1.8	-1.9	-0.8	-0.4	-0.3	0.2	-0.5	-0.6	-1.4	-1.5	-2.3	-2.0	-2.2	-1.9
	x_mean [m]	-4.7	-4.8	-3.8	-3.9	-2.9	-3.0	-3.4	-3.4	-3.9	-4.0	-3.8	-3.8	-3.5	-3.6
	y_min[m]	-13.5	-14.5	-15.5	-16.5	-13.7	-14.2	-8.6	-9.2	-2.9	-3.5	3.3	3.1	5.8	5.4
	y_max[m]	-2.4	-2.3	-2.9	-3.2	-2.7	-2.5	-2.1	-1.3	4.6	5.6	9.9	10.7	15.6	17.5
	y_mean [m]	-7.8	-8.3	-9.0	-9.5	-8.3	-8.6	-5.1	-5.3	1.0	1.3	6.3	6.8	10.8	11.4
Extreme horizontal distances fairlead-touchdown point	Line 1 [m]	321	321	321	375	294	348	266	266	212	212	131	131	104	131
	Line 2 [m]	321	321	348	375	321	348	266	293	212	212	131	131	104	104
	Line 3 [m]	321	321	321	348	294	321	240	240	186	186	186	159	104	132
	Line 4 [m]	294	321	294	321	267	321	213	240	186	186	186	159	104	132
	Line 5 [m]	104	104	104	131	158	158	185	185	185	212	239	239	294	321
	Line 6 [m]	104	104	104	131	158	158	185	185	212	212	239	239	321	321
	Line 7 [m]	212	211	184	184	130	157	184	157	238	266	293	293	347	374
	Line 8 [m]	212	211	184	184	130	157	184	157	238	239	266	266	320	347

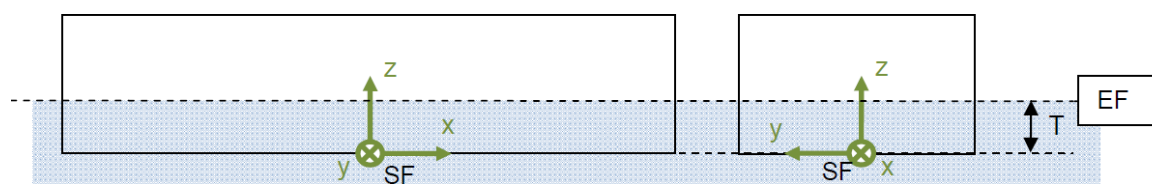
Table 18: Summarized statistics for BALLASTED FSU alteration 0.1.

Loading Condition		Ballasted													
Direction	[deg N]	60		90		120		150		180		210		240	
Return Period	[yr]	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Max. Fairlead Tensions	[kN] Line No.	2571	2936	2622	3589	2575	2995	1925	2205	1067	1031	1856	2350	2600	2990
		3	3	3	3	2	2	2	2	6	7	7	7	7	7
Max. Anchor Loads	[kN] Anchor No.	2548	2913	2600	3568	2550	2970	1899	2179	1042	999	1825	2319	2569	2960
		3	3	3	3	2	2	2	2	6	7	7	7	7	7
FSU Motion Envelope at MIDSHIPS-centerline	yaw_min [°]	-2.5	-1.4	-1.9	-3.0	-2.9	-3.7	-2.8	-3.0	-2.0	-1.7	-1.6	-2.3	-1.8	-1.2
	yaw_max [°]	4.5	4.0	2.3	3.4	1.3	2.4	1.6	2.0	2.1	2.1	2.8	3.5	3.4	3.2
	yaw_mean [°]	1.2	1.5	0.2	0.2	-0.8	-0.8	-0.6	-0.7	0.1	0.1	0.8	0.8	1.0	1.0
	x_min[m]	-3.6	-3.1	-3.0	-3.6	-2.1	-2.8	-2.8	-2.5	-2.2	-2.4	-1.9	-3.3	-2.0	-1.8
	x_max[m]	2.1	1.2	2.1	2.9	2.6	2.7	2.5	2.3	1.5	1.6	1.7	2.6	2.3	2.2
	x_mean [m]	-0.8	-1.0	-0.3	-0.4	0.3	0.3	0.0	0.0	-0.4	-0.4	0.0	-0.1	0.2	0.3
	y_min[m]	-12.5	-13.1	-14.0	-14.5	-13.1	-13.8	-9.7	-10.0	-2.4	-1.9	2.0	1.5	5.6	7.2
	y_max[m]	-5.9	-6.5	-6.0	-5.9	-4.1	-4.4	-0.5	0.2	5.2	4.6	10.0	11.1	16.1	17.0
	y_mean [m]	-9.2	-9.8	-9.8	-10.4	-8.5	-8.9	-5.0	-5.3	1.0	1.2	6.4	6.8	11.0	11.7
FSU Motion Envelope at MANIFOLD	x_min[m]	-9.1	-8.2	-7.5	-8.8	-6.4	-7.1	-7.1	-6.6	-6.4	-6.6	-5.9	-7.1	-5.6	-5.6
	x_max[m]	-1.4	-2.5	-1.6	-0.4	-0.9	-0.4	-1.0	-0.9	-2.3	-2.5	-2.8	-2.4	-2.8	-2.8
	x_mean [m]	-5.3	-5.6	-4.5	-4.5	-3.5	-3.6	-3.9	-3.9	-4.5	-4.5	-4.4	-4.4	-4.1	-4.1
	y_min[m]	-11.8	-12.4	-14.1	-14.5	-13.5	-14.6	-10.7	-10.8	-3.0	-2.0	2.2	1.9	6.2	7.4
	y_max[m]	-4.9	-5.6	-5.5	-6.2	-4.1	-4.3	-0.7	-0.3	4.2	4.9	10.5	11.5	16.5	17.1
	y_mean [m]	-8.5	-8.9	-9.7	-10.3	-8.9	-9.2	-5.3	-5.6	1.1	1.2	6.7	7.2	11.4	12.2
Extreme horizontal distances fairlead-touchdown point	Line 1 [m]	293	294	294	348	320	348	266	293	185	185	131	158	104	104
	Line 2 [m]	294	321	321	348	321	348	267	294	185	185	131	158	104	104
	Line 3 [m]	294	321	294	348	294	294	267	267	159	159	159	186	132	105
	Line 4 [m]	267	294	294	321	267	294	240	240	159	159	159	186	132	105
	Line 5 [m]	131	104	104	158	131	185	185	185	185	185	239	293	294	321
	Line 6 [m]	131	104	104	158	131	185	185	185	212	185	239	294	321	321
	Line 7 [m]	238	184	129	184	129	157	157	184	212	212	293	347	347	374
	Line 8 [m]	238	184	130	184	130	157	157	184	212	211	293	320	347	374

Figure 5: OCIMF sign convention



Figure 6: Definition of ship-fixed and earth-fixed coordinate systems



Coordinate systems

Ship fixed (SF) origin at station 10; keel amidships on the centreline of ship

Earth fixed (EF) origin of coordinate system initially coincides with station 10

To : Thomas Zarkadas, Paul Duncan, Catherine Halpin, Gianluca Orlandi
From : Henri van der Heiden
CC : Johan Dekker
Date : 2015-01-22
Project No : 27689
Subject : Feasibility analysis of multi-buoy mooring in worst case 100 yr. storm condition

In this memo the feasibility of multi-buoy storm mooring is assessed through two analyses: the static analysis of a single mooring buoy, and the static analysis of a multi-mooring buoy system.

Single mooring buoy characteristics

The following linear schematization applies to the selected mooring buoy, based on data from a typical large available mooring buoy. Assumptions on the single mooring buoy configuration are listed below:

Assumptions and Characteristics

General parameters

Water depth [D]	18.5 m
Lpp FSU	135 m
Lateral windage area FSU [A]	7,570 m ²
Cy (wind at 90 deg)	0.903
Cz (wind at 90 deg)	-0.0276

Buoy characteristics

Weight	2,500 kg
Height	2.0 m
Diameter	4.0 m
Draft (incl. chain)	0.4 m
Max. submerged height	1.6 m
Net buoyancy	20,000 kg

Chain (76mm R3) characteristics

Mass in air	126 kg/m
Submerged weight	1,080 N/m
Total length [L]	19 m

The value of S will be 2.0 m. The ratio between the horizontal restoring force and the buoyancy force is then given by:

$$F_{restoring}^{horizontal} / F_{buoyancy} = \sqrt{L^2 - (D - S)^2} / (D - S) = 0.57.$$

As the max. buoyancy force is 196.2 kN (20,000 kg), this gives the max. horizontal restoring force is 112 kN per mooring buoy.

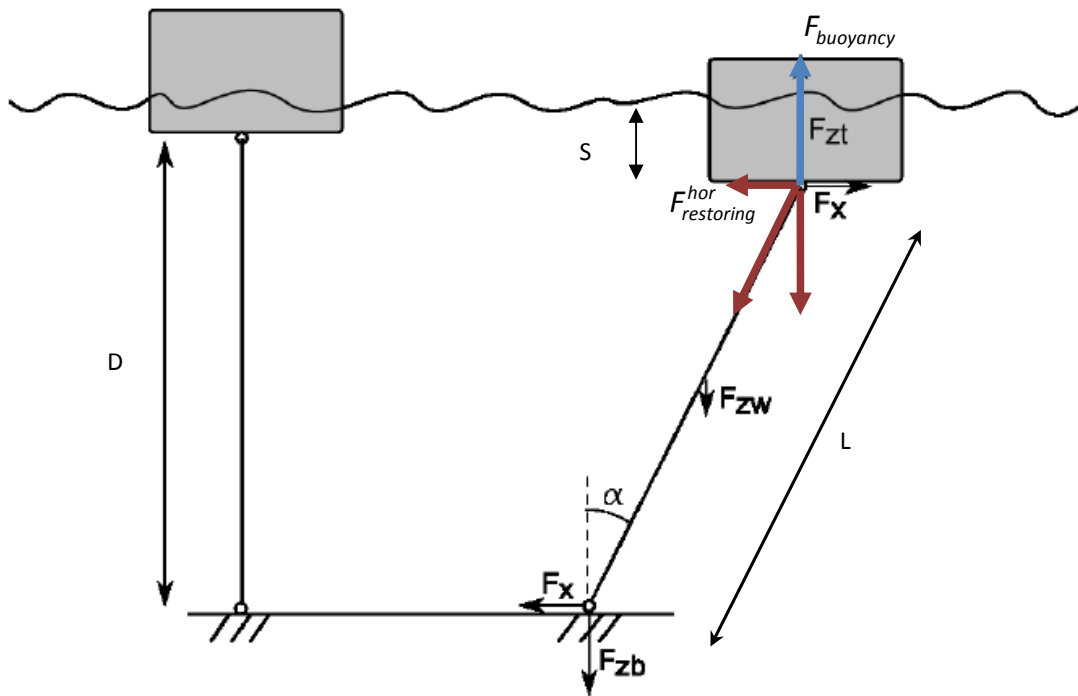


Figure 1: Single mooring buoy, schematic picture.

Note: a larger chain length can be used, to obtain a higher maximal horizontal restoring force, but will also create a stiffer mooring buoy spring. The horizontal distance in which the restoring force increases from zero to max. restoring force will become smaller, after which the system is governed by the stiffness of the chain.

Multi-buoy mooring

The feasibility of using a multi-buoy mooring as the one schematized above is examined through the system depicted in the figure below. The circles depict a (group of) mooring buoys. The static computation is based on what considered to be the worst case: the 100 yr condition, wind with an average speed of 20.4 m/s beam-on portside.

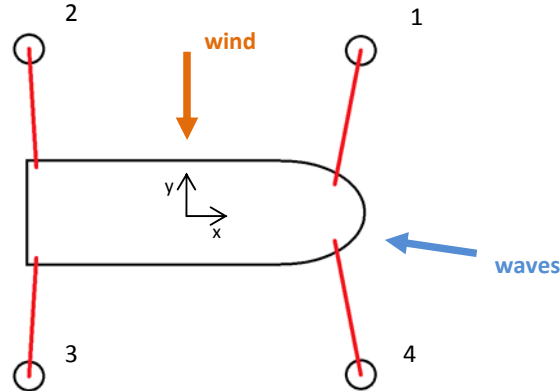


Figure 2: Schematic multi mooring buoy configuration. Mooring buoy groups are indicated by a circle. Moments are assumed around centreline mid-ship. Only wind loads are computed.

The mean wind forces acting on the FSU are summarized in the table below. The dominant contribution in this configuration is the wind load and the mean wave loads are negligible in comparison. The wind loads are given by

$$F_y = 0.5 \rho \cdot A \cdot C_y \cdot V^2$$

$$M_z = 0.5 \rho \cdot A \cdot L_{pp} \cdot C_z \cdot V^2$$

Force/Moment	Mean wind force/moments
Wind F_y	-1,778 kN
Wind M_z	14,673 kN.m

Table 1: Total mean wind forces and moments acting on the FSU in the selected environmental conditions.

To arrive at a static equilibrium, the mooring buoy groups 1 and 2 should provide around 889 kN each to compensate for the sway force. Additionally, to compensate for the positive yaw moment, group 2 should provide an additional 15,000 kN.m / 135 m = + 111 kN, and group 4 an additional -111 kN.

The maximum load on an individual group (group 1 in this example) can therefore be estimated to be at the very least 889 kN to arrive at a static equilibrium.

Conclusions and recommendations

With the single mooring buoys described here and chain length assumed above solutions can be sought in the following directions, but the possibilities are *limited*:

- Either the amount of buoys should be at least 8 per group, but this *makes the system stiffer*,



- or the chain length should be increased, at the cost of a stiffer system,
- or a mooring buoy with a significantly larger net buoyancy should be utilized.

An *alternative configuration* could involve the FSU connected to a spread-moored multi-buoy mooring system. The system will be more softly moored than the buoy exemplified above, but will also result in a larger footprint of the FSU in the Bay.

APPENDIX 1:

STATISTICS

loaded_60degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	2.41464	0.942413	-0.087802	4.88873
yCOG_FSRU	m	-13.5387	0.927274	-15.8219	-11.3921
zCOG_FSRU	m	9.1895	0.0608348	8.95352	9.41951
xREF_FSRU	m	-1.06914	0.940007	-3.56582	1.44114
yREF_FSRU	m	-13.7667	0.912236	-16.1902	-11.4302
zREF_FSRU	m	-10.8093	0.0568033	-11.029	-10.5959
ROLL_FSRU	rad	-0.00638371	0.0083591	-0.0272283	0.0136002
PITCH_FSRU	rad	2.37706E-05	0.00170439	-0.006462	0.00617678
YAW_FSRU	rad	0.028772	0.0177886	-0.025506	0.0803717
WaveHeight-COG	m	-9.69865E-05	0.377177	-1.48023	1.51036
windSpeed	ms-1	22.2955	2.39201	15.4641	29.1224
FairleadTension1	kN	1146.73	205.858	566.731	1764.11
FairleadTension2	kN	1232.74	215.875	602.49	1875.87
FairleadTension3	kN	1517.96	229.706	806.018	2165.67
FairleadTension4	kN	1337.59	215.303	664.809	1948.12
FairleadTension5	kN	52.8027	12.534	32.8289	123.657
FairleadTension6	kN	48.4208	10.8524	31.0467	109.617
FairleadTension7	kN	168.407	67.6303	63.6156	467.337
FairleadTension8	kN	181.484	69.8789	68.6968	483.578
AnchorTension1	kN	1132.73	206.868	548.281	1752.49
AnchorTension2	kN	1219.15	216.825	584.5	1864.36
AnchorTension3	kN	1506.48	230.389	791.337	2155.79
AnchorTension4	kN	1325.52	216.084	648.923	1937.86
AnchorTension5	kN	29.1031	12.5085	9.4674	99.221
AnchorTension6	kN	24.721	10.8262	7.71466	85.1871
AnchorTension7	kN	139.598	68.2392	34.7385	444.559
AnchorTension8	kN	152.763	70.6117	39.8205	461.124
xManExc	m	-5.12441	1.20807	-8.38241	-1.82603
yManExc	m	-12.6944	1.14949	-15.6569	-9.86256
zManExc	m	-20.1324	0.186291	-20.737	-19.495
xFairLeadML6	m	-4.89343	1.1054	-7.93391	-1.98441
yFairLeadML6	m	-9.81872	2.6937	-18.3538	-1.61997
zFairLeadML6	m	-20.0701	0.279143	-21.1719	-19.0633
xFairLeadML10	m	-5.15687	1.21097	-8.3412	-1.70208
yFairLeadML10	m	-16.089	1.61036	-20.2183	-11.7399
zFairLeadML10	m	-20.1511	0.218275	-20.9196	-19.5206

ballasted_60degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.00357	0.835165	0.672556	5.52012
yCOG_FSRU	m	-14.1068	1.83324	-17.2266	-10.5589
zCOG_FSRU	m	3.74234	0.055207	3.53042	3.95708
xREF_FSRU	m	-1.06063	0.833878	-3.41501	1.50692
yREF_FSRU	m	-14.2473	1.80668	-17.4073	-10.4267
zREF_FSRU	m	-9.35735	0.0502332	-9.54941	-9.16474
ROLL_FSRU	rad	-0.00165795	0.00546672	-0.0226856	0.0186872
PITCH_FSRU	rad	1.63955E-05	0.00183734	-0.00678506	0.00661551
YAW_FSRU	rad	0.029219	0.0177135	-0.0129705	0.070723
WaveHeight-COG	m	-2.43703E-05	0.377096	-1.50241	1.47088
windSpeed	ms-1	22.2955	2.39201	15.4641	29.1224
FairleadTension1	kN	1144.94	217.013	534.627	1812.86
FairleadTension2	kN	1235.23	242.153	577.651	1942.78
FairleadTension3	kN	1521.55	215.049	720.845	2239.14
FairleadTension4	kN	1336.4	197.755	618.459	2002.11
FairleadTension5	kN	56.931	11.4079	38.5473	107.395
FairleadTension6	kN	52.3038	9.97169	36.0793	96.7503
FairleadTension7	kN	172.427	69.4812	68.8836	473.957
FairleadTension8	kN	184.658	70.5018	74.2901	488.127
AnchorTension1	kN	1130.1	218.133	514.821	1800.53
AnchorTension2	kN	1220.81	243.267	558.462	1930.74
AnchorTension3	kN	1509.29	215.714	704.549	2228.45
AnchorTension4	kN	1323.53	198.503	601.119	1991.01
AnchorTension5	kN	31.4881	11.3774	13.4311	81.4075
AnchorTension6	kN	26.8607	9.94025	10.97	70.7621
AnchorTension7	kN	142.024	70.3032	38.4554	450.53
AnchorTension8	kN	154.361	71.4529	43.8412	464.987
xManExc	m	-5.6987	1.14177	-8.73483	-2.60557
yManExc	m	-13.3081	2.06087	-17.2055	-9.3507
zManExc	m	-13.1398	0.122039	-13.6083	-12.7156
xFairLeadML6	m	-5.46666	1.0297	-8.29185	-2.58229
yFairLeadML6	m	-10.3062	3.45164	-18.5242	-2.44257
zFairLeadML6	m	-13.1246	0.278449	-14.1503	-12.1224
xFairLeadML10	m	-5.73355	1.14409	-8.70286	-2.51883
yFairLeadML10	m	-16.6734	1.89367	-21.9492	-11.4087
zFairLeadML10	m	-13.1434	0.171227	-13.9672	-12.377

loaded_60degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	2.28832	0.777327	-0.0117703	4.5609
yCOG_FSRU	m	-14.4786	0.97914	-16.6931	-12.1822
zCOG_FSRU	m	9.18941	0.0653767	8.93329	9.44214
xREF_FSRU	m	-1.19468	0.776941	-3.54005	1.11049
yREF_FSRU	m	-14.7265	0.96108	-17.1437	-12.2414
zREF_FSRU	m	-10.8091	0.060767	-11.0476	-10.5778
ROLL_FSRU	rad	-0.00687905	0.00916285	-0.0297229	0.0153724
PITCH_FSRU	rad	2.52654E-05	0.00200349	-0.0073524	0.0072576
YAW_FSRU	rad	0.031658	0.0140104	-0.00734115	0.069907
WaveHeight-COG	m	7.87521E-05	0.400508	-1.58893	1.59499
windSpeed	ms-1	23.2954	2.48771	16.1626	30.4262
FairleadTension1	kN	1240.66	196.401	721.551	1812.54
FairleadTension2	kN	1333.88	208.227	783.148	1917.8
FairleadTension3	kN	1634.75	210.079	999.198	2229.75
FairleadTension4	kN	1437.36	199.316	848.615	2001.79
FairleadTension5	kN	47.8159	7.54732	33.4384	83.5265
FairleadTension6	kN	43.9923	6.47248	31.5778	73.9624
FairleadTension7	kN	160.457	54.1108	71.2289	338.903
FairleadTension8	kN	174.165	56.335	77.0373	355.973
AnchorTension1	kN	1227.13	197.251	705.125	1800.84
AnchorTension2	kN	1320.73	209.034	767.025	1906.37
AnchorTension3	kN	1623.61	210.634	985.711	2219.71
AnchorTension4	kN	1425.65	199.959	834.202	1991.67
AnchorTension5	kN	24.1105	7.50109	10.4003	59.6055
AnchorTension6	kN	20.2867	6.42403	8.54399	50.041
AnchorTension7	kN	131.493	54.3634	42.8154	312.665
AnchorTension8	kN	145.273	56.7039	48.6188	330.23
xManExc	m	-5.30641	0.970499	-8.00343	-2.46061
yManExc	m	-13.5507	1.17892	-16.2925	-10.8015
zManExc	m	-20.142	0.205147	-20.8964	-19.4814
xFairLeadML6	m	-5.04885	0.898343	-7.65682	-2.45445
yFairLeadML6	m	-10.3843	2.35648	-16.5197	-4.70885
zFairLeadML6	m	-20.0747	0.321055	-21.2869	-18.8759
xFairLeadML10	m	-5.34522	0.969231	-8.06564	-2.49342
yFairLeadML10	m	-17.2834	1.26808	-20.5991	-13.253
zFairLeadML10	m	-20.1621	0.246238	-20.9885	-19.3701

ballasted_60degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	2.92114	0.923129	-0.044597	5.92836
yCOG_FSRU	m	-15.0368	2.07678	-18.8635	-11.3484
zCOG_FSRU	m	3.74224	0.0596373	3.51466	3.97575
xREF_FSRU	m	-1.14262	0.922185	-4.1097	1.91225
yREF_FSRU	m	-15.1872	2.04823	-19.1193	-11.4027
zREF_FSRU	m	-9.35744	0.0540824	-9.56103	-9.14895
ROLL_FSRU	rad	-0.00179045	0.00553484	-0.0238657	0.0202564
PITCH_FSRU	rad	0.000017196	0.00215451	-0.00766721	0.00760076
YAW_FSRU	rad	0.0312259	0.0190841	-0.0265429	0.0809823
WaveHeight-COG	m	0.000159953	0.400508	-1.6104	1.56745
windSpeed	ms-1	23.2954	2.48771	16.1626	30.4262
FairleadTension1	kN	1239.72	256.191	551.335	1939.73
FairleadTension2	kN	1338.06	283.893	598.916	2092.88
FairleadTension3	kN	1640.89	254.424	740.907	2377
FairleadTension4	kN	1440.59	235.357	651.689	2184.09
FairleadTension5	kN	53.8742	11.5669	34.7214	112.77
FairleadTension6	kN	49.5229	10.0421	32.9218	98.979
FairleadTension7	kN	169.368	74.9198	60.9665	557.038
FairleadTension8	kN	181.917	76.4132	65.5607	577.624
AnchorTension1	kN	1225.29	257.36	531.954	1927.6
AnchorTension2	kN	1324.04	285.048	580.186	2081.02
AnchorTension3	kN	1628.95	255.125	724.834	2366.66
AnchorTension4	kN	1428.06	236.151	634.758	2173.44
AnchorTension5	kN	28.4298	11.5303	9.99133	86.7563
AnchorTension6	kN	24.0782	10.004	8.19369	72.9648
AnchorTension7	kN	138.986	75.8774	30.6128	534.854
AnchorTension8	kN	151.639	77.5017	35.1856	555.773
xManExc	m	-5.82144	1.24515	-9.67721	-1.98944
yManExc	m	-14.1838	2.31665	-18.4965	-9.59586
zManExc	m	-13.1424	0.129383	-13.6072	-12.6027
xFairLeadML6	m	-5.5782	1.12905	-9.2155	-2.1
yFairLeadML6	m	-10.9757	3.79106	-20.9067	-1.30468
zFairLeadML6	m	-13.126	0.320675	-14.2518	-11.9869
xFairLeadML10	m	-5.85333	1.24597	-9.61432	-1.8862
yFairLeadML10	m	-17.7805	2.11742	-23.0482	-11.8073
zFairLeadML10	m	-13.1464	0.194569	-14.1236	-12.3591

loaded_90degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.13129	1.533	-0.705796	6.93734
yCOG_FSRU	m	-14.5555	1.15475	-17.2761	-11.9839
zCOG_FSRU	m	9.18955	0.0810541	8.87714	9.49613
xREF_FSRU	m	-0.355911	1.52943	-4.27482	3.39236
yREF_FSRU	m	-14.7043	1.16329	-17.6753	-11.9338
zREF_FSRU	m	-10.8091	0.0758139	-11.1012	-10.5238
ROLL_FSRU	rad	-0.0068803	0.00887187	-0.02947	0.0151236
PITCH_FSRU	rad	1.16733E-05	0.00221322	-0.0084962	0.00777705
YAW_FSRU	rad	0.00323318	0.032071	-0.0730972	0.0849838
WaveHeight-COG	m	-0.000206053	0.502868	-1.97962	2.01448
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1317.19	250.486	569.222	2126.71
FairleadTension2	kN	1451.88	257.028	617.649	2319.63
FairleadTension3	kN	1473.07	272.753	621.306	2248.42
FairleadTension4	kN	1323.59	247.754	519.568	2120.02
FairleadTension5	kN	86.4161	64.1443	29.4889	413.175
FairleadTension6	kN	78.7661	58.7175	28.0936	388.622
FairleadTension7	kN	121.449	73.2718	43.7905	474.873
FairleadTension8	kN	132.193	77.9364	46.8866	496.028
AnchorTension1	kN	1303.91	251.501	550.773	2115.8
AnchorTension2	kN	1439.11	257.93	599.781	2309.02
AnchorTension3	kN	1461.41	273.629	604.99	2238.47
AnchorTension4	kN	1311.44	248.696	502.053	2109.88
AnchorTension5	kN	62.7432	64.2502	6.76914	391.987
AnchorTension6	kN	55.0826	58.7873	5.38465	366.93
AnchorTension7	kN	92.5492	73.8367	15.7303	452.266
AnchorTension8	kN	103.352	78.6177	18.8283	473.855
xManExc	m	-3.92202	2.08209	-8.88747	0.91185
yManExc	m	-14.4014	1.37814	-17.8882	-10.622
zManExc	m	-20.1415	0.212492	-20.904	-19.3879
xFairLeadML6	m	-3.94374	1.79659	-8.53544	0.20083
yFairLeadML6	m	-14.1779	4.22205	-25.0992	-1.97722
zFairLeadML6	m	-20.0728	0.360054	-21.4698	-18.7661
xFairLeadML10	m	-3.87376	2.17267	-8.95133	1.3409
yFairLeadML10	m	-14.8893	3.13144	-22.5438	-6.73351
zFairLeadML10	m	-20.1632	0.245917	-21.0197	-19.4016

ballasted_90degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.74038	1.29976	-0.172602	7.83029
yCOG_FSRU	m	-15.1364	2.2509	-19.3181	-10.7195
zCOG_FSRU	m	3.74244	0.0734963	3.46038	4.02825
xREF_FSRU	m	-0.325134	1.29959	-4.21707	3.75046
yREF_FSRU	m	-15.1734	2.239	-19.4892	-10.5805
zREF_FSRU	m	-9.35727	0.0670013	-9.61413	-9.10026
ROLL_FSRU	rad	-0.00177711	0.00563858	-0.0251785	0.020108
PITCH_FSRU	rad	5.95197E-06	0.00238293	-0.00889938	0.00835268
YAW_FSRU	rad	0.00339039	0.026779	-0.0608834	0.0705192
WaveHeight-COG	m	-0.00011163	0.502768	-2.01322	1.95505
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1306.47	296.326	534.333	2216.07
FairleadTension2	kN	1445.13	323.22	590.77	2460.19
FairleadTension3	kN	1471.77	316.021	523.544	2447.19
FairleadTension4	kN	1318.67	289.308	434.48	2325.48
FairleadTension5	kN	81.6046	41.6847	35.4668	306.173
FairleadTension6	kN	74.2872	37.0764	33.5026	281.884
FairleadTension7	kN	119.942	61.9476	48.6532	413.513
FairleadTension8	kN	130.2	65.2415	51.3566	440.834
AnchorTension1	kN	1292.29	297.579	514.458	2204.69
AnchorTension2	kN	1431.48	324.398	571.783	2449.18
AnchorTension3	kN	1459.26	317.077	505.058	2436.84
AnchorTension4	kN	1305.62	290.453	414.64	2314.96
AnchorTension5	kN	56.1646	41.6714	10.5896	281.389
AnchorTension6	kN	48.846	37.0585	8.62763	256.556
AnchorTension7	kN	89.265	62.4106	18.0851	388.615
AnchorTension8	kN	99.5698	65.8022	20.7885	416.591
xManExc	m	-4.46745	1.74911	-9.0092	0.279113
yManExc	m	-15.0209	2.45058	-19.8254	-9.74889
zManExc	m	-13.1417	0.144133	-13.7122	-12.6123
xFairLeadML6	m	-4.47158	1.51669	-8.69541	-0.092824
yFairLeadML6	m	-14.6964	4.38536	-25.3444	-2.99414
zFairLeadML6	m	-13.1242	0.362698	-14.4286	-11.7848
xFairLeadML10	m	-4.4374	1.82452	-9.03706	0.415543
yFairLeadML10	m	-15.4394	3.03366	-22.5943	-7.78928
zFairLeadML10	m	-13.1469	0.201252	-14.172	-12.2358

loaded_90degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.08134	1.35934	-0.699251	6.72439
yCOG_FSRU	m	-15.4834	1.21785	-18.485	-12.49
zCOG_FSRU	m	9.1896	0.0895465	8.83854	9.53398
xREF_FSRU	m	-0.406131	1.3573	-4.19253	3.28958
yREF_FSRU	m	-15.6463	1.21317	-19.0062	-12.4181
zREF_FSRU	m	-10.8088	0.0834167	-11.1365	-10.4875
ROLL_FSRU	rad	-0.00739925	0.00964621	-0.0310648	0.0176676
PITCH_FSRU	rad	1.25385E-05	0.00263467	-0.00999231	0.00962162
YAW_FSRU	rad	0.00429243	0.0267166	-0.0569918	0.0681697
WaveHeight-COG	m	-0.000163058	0.550289	-2.19622	2.21797
windSpeed	ms-1	21.9955	2.36314	15.2551	28.7331
FairleadTension1	kN	1407.19	270.86	541.752	2338.3
FairleadTension2	kN	1551.67	281.633	644.816	2543.06
FairleadTension3	kN	1573.6	294.339	640.428	2548.45
FairleadTension4	kN	1411.35	274.566	571.473	2350.46
FairleadTension5	kN	70.6677	37.451	29.2765	328.026
FairleadTension6	kN	64.0524	32.8382	27.8385	302.065
FairleadTension7	kN	108.954	52.9715	46.1875	327.416
FairleadTension8	kN	119.575	57.7296	49.2507	350.327
AnchorTension1	kN	1394.25	271.852	523.299	2327.79
AnchorTension2	kN	1539.22	282.519	627.644	2532.84
AnchorTension3	kN	1562.24	295.191	624.423	2539.02
AnchorTension4	kN	1399.49	275.508	554.683	2340.99
AnchorTension5	kN	46.9607	37.4333	7.1463	305.522
AnchorTension6	kN	40.3446	32.8161	5.70823	279.063
AnchorTension7	kN	79.8989	53.075	17.2882	302.271
AnchorTension8	kN	90.5522	57.9121	20.2576	325.84
xManExc	m	-3.98798	1.78431	-8.31023	0.669998
yManExc	m	-15.2918	1.42935	-19.1978	-11.8922
zManExc	m	-20.1515	0.235472	-20.9592	-19.3746
xFairLeadML6	m	-3.98312	1.56239	-8.02061	-0.0191322
yFairLeadML6	m	-14.9689	3.69417	-24.1819	-6.334
zFairLeadML6	m	-20.0774	0.421012	-21.6802	-18.5624
xFairLeadML10	m	-3.9606	1.85362	-8.42302	1.05506
yFairLeadML10	m	-15.909	2.62334	-22.3308	-9.86365
zFairLeadML10	m	-20.1746	0.277998	-21.1023	-19.2066

ballasted_90degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.69705	1.57143	-0.332196	7.78998
yCOG_FSRU	m	-16.0421	2.49267	-21.0628	-11.3013
zCOG_FSRU	m	3.74232	0.0814353	3.42932	4.06014
xREF_FSRU	m	-0.367847	1.57132	-4.4273	3.72962
yREF_FSRU	m	-16.0836	2.48409	-21.2739	-11.074
zREF_FSRU	m	-9.35735	0.0740045	-9.63784	-9.0734
ROLL_FSRU	rad	-0.00190646	0.00599184	-0.0300406	0.0244144
PITCH_FSRU	rad	5.3052E-06	0.00283756	-0.0105238	0.0105047
YAW_FSRU	rad	0.00408177	0.0315934	-0.0657419	0.0767286
WaveHeight-COG	m	-4.34654E-06	0.550293	-2.18063	2.20476
windSpeed	ms-1	21.9955	2.36314	15.2551	28.7331
FairleadTension1	kN	1410.69	359.108	587.147	2705.18
FairleadTension2	kN	1558.98	386.746	669.847	2862.59
FairleadTension3	kN	1583.38	385.201	615.007	3016.82
FairleadTension4	kN	1418.2	354.885	549.417	2733.73
FairleadTension5	kN	81.7959	47.5532	32.9515	302.791
FairleadTension6	kN	74.2666	42.1392	31.2908	283.263
FairleadTension7	kN	120.844	69.714	44.987	448.814
FairleadTension8	kN	131.288	73.7143	48.0973	475.611
AnchorTension1	kN	1396.85	360.47	568.585	2694.45
AnchorTension2	kN	1545.65	388	651.646	2852.02
AnchorTension3	kN	1571.15	386.37	598.082	3007.41
AnchorTension4	kN	1405.44	356.153	531.672	2724.04
AnchorTension5	kN	56.3554	47.5383	9.09492	278.169
AnchorTension6	kN	48.8244	42.118	7.44132	258.207
AnchorTension7	kN	90.2228	70.2973	15.5644	425.577
AnchorTension8	kN	100.732	74.4218	18.6718	452.938
xManExc	m	-4.5277	2.08992	-9.41935	0.266029
yManExc	m	-15.9086	2.70327	-21.41	-10.0951
zManExc	m	-13.1443	0.160745	-13.7623	-12.4749
xFairLeadML6	m	-4.53984	1.82349	-9.13666	-0.174646
yFairLeadML6	m	-15.5134	4.99114	-27.6459	-3.42185
zFairLeadML6	m	-13.1254	0.425582	-14.6807	-11.548
xFairLeadML10	m	-4.48357	2.17509	-9.54786	0.593269
yFairLeadML10	m	-16.4086	3.55749	-24.8626	-7.91989
zFairLeadML10	m	-13.1499	0.237756	-14.4329	-12.1826

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name	units	mean	std	min	max
xCOG_FSRU	m	3.83848	0.967221	0.670147	6.91608
yCOG_FSRU	m	-12.6953	1.01103	-14.9735	-9.83451
zCOG_FSRU	m	9.18993	0.0865831	8.8871	9.4948
xREF_FSRU	m	0.348358	0.965951	-2.87381	3.4507
yREF_FSRU	m	-12.7508	1.01065	-15.1562	-9.87665
zREF_FSRU	m	-10.8092	0.0817734	-11.0929	-10.5248
ROLL_FSRU	rad	-0.00594475	0.00706109	-0.0244035	0.0133222
PITCH_FSRU	rad	7.2588E-08	0.00193345	-0.0071741	0.00712198
YAW_FSRU	rad	-0.0181631	0.0171881	-0.0618046	0.0302442
WaveHeight-COG	m	-0.000417678	0.574479	-2.31483	2.18629
windSpeed	ms-1	19.6956	2.13925	13.6612	25.7395
FairleadTension1	kN	1157.71	234.692	421.494	2006.71
FairleadTension2	kN	1299.71	249.946	456.204	2169.87
FairleadTension3	kN	1156.55	250.892	419.157	2038.03
FairleadTension4	kN	1065.66	234.912	376.982	1932.56
FairleadTension5	kN	118.671	56.43	46.2283	398.869
FairleadTension6	kN	108.463	51.6998	43.4327	371.648
FairleadTension7	kN	87.4617	23.4284	50.4258	235.537
FairleadTension8	kN	95.6281	26.362	53.3845	255.302
AnchorTension1	kN	1143.72	235.849	400.736	1995.46
AnchorTension2	kN	1286.36	250.982	436.073	2158.92
AnchorTension3	kN	1143.68	252.06	400.254	2027.8
AnchorTension4	kN	1052.36	236.141	357.488	1922.11
AnchorTension5	kN	94.9917	56.4455	23.127	377.338
AnchorTension6	kN	84.7781	51.6981	20.3312	349.534
AnchorTension7	kN	58.376	23.3808	21.8221	206.536
AnchorTension8	kN	66.5436	26.3192	24.7769	226.8
xManExc	m	-2.80367	1.17238	-6.31796	0.724217
yManExc	m	-13.1309	1.088	-15.9394	-9.28709
zManExc	m	-20.1229	0.186689	-20.843	-19.4574
xFairLeadML6	m	-3.0197	1.03333	-6.25768	0.196365
yFairLeadML6	m	-15.1084	2.38104	-21.361	-7.23488
zFairLeadML6	m	-20.0627	0.328345	-21.2758	-18.8418
xFairLeadML10	m	-2.70609	1.23997	-6.31922	0.957163
yFairLeadML10	m	-11.1599	1.86876	-15.9929	-6.67216
zFairLeadML10	m	-20.143	0.195705	-20.7929	-19.5531

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name	units	mean	std	min	max
xCOG_FSRU	m	4.30599	1.50059	0.531518	7.688
yCOG_FSRU	m	-13.2785	1.92412	-17.4399	-8.80694
zCOG_FSRU	m	3.74249	0.079454	3.45553	4.03882
xREF_FSRU	m	0.241552	1.5018	-3.51887	3.65326
yREF_FSRU	m	-13.2342	1.94375	-17.6574	-8.58518
zREF_FSRU	m	-9.35729	0.0733308	-9.61956	-9.08533
ROLL_FSRU	rad	-0.00149985	0.00550043	-0.0226521	0.0198347
PITCH_FSRU	rad	-6.15442E-06	0.00206408	-0.00775151	0.00759176
YAW_FSRU	rad	-0.0157309	0.0336348	-0.0860334	0.0590537
WaveHeight-COG	m	-0.000342887	0.57463	-2.31865	2.23732
windSpeed	ms-1	19.6956	2.13925	13.6612	25.7395
FairleadTension1	kN	1182.17	254.12	458.617	2032.9
FairleadTension2	kN	1325.22	276.673	534.053	2171.95
FairleadTension3	kN	1177.28	287.142	448.79	1956.01
FairleadTension4	kN	1077.64	255.773	424.076	1813.04
FairleadTension5	kN	153.743	122.356	37.7584	638.01
FairleadTension6	kN	144.493	119.485	35.574	636.349
FairleadTension7	kN	110.284	58.3175	45.575	411.768
FairleadTension8	kN	119.545	61.9485	48.4497	430.543
AnchorTension1	kN	1167.47	255.369	437.734	2020.66
AnchorTension2	kN	1311.15	277.82	514.417	2160
AnchorTension3	kN	1163.61	288.506	429.45	1944.62
AnchorTension4	kN	1063.5	257.145	404.336	1801.35
AnchorTension5	kN	128.742	123.366	12.7891	619.354
AnchorTension6	kN	119.446	120.435	10.6034	617.672
AnchorTension7	kN	79.5529	58.6371	15.8153	386.661
AnchorTension8	kN	88.8509	62.3485	18.6868	405.897
xManExc	m	-3.54897	2.07366	-8.43905	0.876199
yManExc	m	-13.6845	2.03919	-18.6025	-9.04626
zManExc	m	-13.136	0.139096	-13.7222	-12.5272
xFairLeadML6	m	-3.77809	1.71287	-8.05247	-0.147083
yFairLeadML6	m	-15.3306	4.58974	-26.5885	-3.05561
zFairLeadML6	m	-13.1201	0.329075	-14.3544	-11.8239
xFairLeadML10	m	-3.41534	2.2392	-8.44324	1.56997
yFairLeadML10	m	-11.9176	3.67598	-21.1469	-3.3075
zFairLeadML10	m	-13.1417	0.166876	-13.7239	-12.5542

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name	units	mean	std	min	max
xCOG_FSRU	m	3.75632	1.3313	-0.0363068	7.34403
yCOG_FSRU	m	-13.2435	1.22094	-16.673	-9.88
zCOG_FSRU	m	9.1898	0.0970672	8.8356	9.54447
xREF_FSRU	m	0.266745	1.32954	-3.58714	3.89816
yREF_FSRU	m	-13.3089	1.22784	-16.8579	-10.1085
zREF_FSRU	m	-10.8092	0.0914613	-11.1406	-10.4791
ROLL_FSRU	rad	-0.00622726	0.00748949	-0.0239661	0.013007
PITCH_FSRU	rad	2.58094E-07	0.00228851	-0.00858538	0.00845666
YAW_FSRU	rad	-0.0169389	0.0264977	-0.0892968	0.0589403
WaveHeight-COG	m	-0.000590188	0.626096	-2.52075	2.44943
windSpeed	ms-1	20.2956	2.19809	14.0755	26.5219
FairleadTension1	kN	1230.37	276.676	492.271	2009.95
FairleadTension2	kN	1377.7	292.928	567.626	2175.74
FairleadTension3	kN	1221.44	298.315	488.335	2076.97
FairleadTension4	kN	1122.06	276.397	417.015	1881.57
FairleadTension5	kN	129.201	92.1526	34.288	670.2
FairleadTension6	kN	119.235	87.7252	32.4307	646.647
FairleadTension7	kN	93.3455	40.616	43.1353	334.182
FairleadTension8	kN	102.103	44.5498	45.7403	355.928
AnchorTension1	kN	1216.67	277.937	472.63	1998.58
AnchorTension2	kN	1364.61	294.051	549.068	2164.67
AnchorTension3	kN	1208.79	299.602	470.583	2066.91
AnchorTension4	kN	1108.98	277.749	398.241	1871.19
AnchorTension5	kN	105.633	92.5361	10.7227	653.114
AnchorTension6	kN	95.6429	88.0655	8.86409	629.312
AnchorTension7	kN	64.273	40.6545	14.8266	308.035
AnchorTension8	kN	73.0428	44.6292	17.4309	330.396
xManExc	m	-2.91394	1.71661	-7.74926	1.70138
yManExc	m	-13.6459	1.32822	-17.8763	-9.54893
zManExc	m	-20.1285	0.205059	-20.8072	-19.3473
xFairLeadML6	m	-3.13668	1.46666	-7.40074	0.67302
yFairLeadML6	m	-15.4993	3.48619	-24.4243	-6.39795
zFairLeadML6	m	-20.0654	0.381791	-21.413	-18.5895
xFairLeadML10	m	-2.7999	1.83234	-7.76669	2.32699
yFairLeadML10	m	-11.8205	2.76164	-20.0534	-4.2828
zFairLeadML10	m	-20.1494	0.219319	-20.8646	-19.3705

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name	units	mean	std	min	max
xCOG_FSRU	m	4.42402	1.10617	1.14309	7.64057
yCOG_FSRU	m	-13.8247	2.06577	-18.0139	-9.46143
zCOG_FSRU	m	3.74268	0.0884315	3.41387	4.07842
xREF_FSRU	m	0.358283	1.10689	-2.93817	3.5727
yREF_FSRU	m	-13.7719	2.06249	-18.1289	-9.29493
zREF_FSRU	m	-9.35708	0.0813082	-9.65804	-9.05039
ROLL_FSRU	rad	-0.00159149	0.00562888	-0.0220492	0.0182481
PITCH_FSRU	rad	-6.15217E-06	0.00245522	-0.00934107	0.00859561
YAW_FSRU	rad	-0.0181152	0.020793	-0.0689621	0.0380664
WaveHeight-COG	m	-0.000487793	0.62611	-2.51456	2.42862
windSpeed	ms-1	20.2956	2.19809	14.0755	26.5219
FairleadTension1	kN	1218.61	296.233	444.872	2190.39
FairleadTension2	kN	1371.11	324.397	505.357	2402.82
FairleadTension3	kN	1221.49	324.082	352.024	2261.84
FairleadTension4	kN	1120.37	299.734	321.978	2128.18
FairleadTension5	kN	122.589	63.7341	43.3325	385.84
FairleadTension6	kN	112.486	59.7066	40.352	376.166
FairleadTension7	kN	93.0472	31.5402	47.1234	267
FairleadTension8	kN	101.501	34.6503	49.9515	280.925
AnchorTension1	kN	1204.01	297.643	423.137	2178.97
AnchorTension2	kN	1357.16	325.689	484.708	2391.73
AnchorTension3	kN	1207.95	325.54	330.418	2251.38
AnchorTension4	kN	1106.38	301.257	299.856	2117.5
AnchorTension5	kN	97.196	63.854	18.2972	363.171
AnchorTension6	kN	87.08	59.7945	15.3184	353.245
AnchorTension7	kN	62.2129	31.5046	16.9162	237.287
AnchorTension8	kN	70.6709	34.6294	19.7444	251.736
xManExc	m	-3.37749	1.38351	-7.19389	0.436707
yManExc	m	-14.287	2.17634	-18.9132	-9.16211
zManExc	m	-13.1376	0.152959	-13.7522	-12.5109
xFairLeadML6	m	-3.59867	1.19951	-7.09633	-0.212942
yFairLeadML6	m	-16.1851	3.50224	-25.1253	-6.43888
zFairLeadML6	m	-13.1207	0.385332	-14.4952	-11.6513
xFairLeadML10	m	-3.27074	1.4734	-7.2331	0.8379
yFairLeadML10	m	-12.2478	2.66606	-19.9966	-5.04502
zFairLeadML10	m	-13.1435	0.192851	-13.8372	-12.4374

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name	units	mean	std	min	max
xCOG_FSRU	m	3.36707	1.18323	-0.410637	7.08988
yCOG_FSRU	m	-7.53337	1.24485	-10.4744	-4.07257
zCOG_FSRU	m	9.19012	0.0905015	8.87807	9.47723
xREF_FSRU	m	-0.121997	1.18176	-3.98818	3.59494
yREF_FSRU	m	-7.55869	1.26305	-10.5145	-3.8617
zREF_FSRU	m	-10.8095	0.0857126	-11.1073	-10.535
ROLL_FSRU	rad	-0.00369194	0.00407069	-0.0143648	0.00772756
PITCH_FSRU	rad	9.91959E-06	0.00191045	-0.00699605	0.0067362
YAW_FSRU	rad	-0.0139035	0.0252533	-0.0670867	0.0458186
WaveHeight-COG	m	-0.000763531	0.674858	-2.7052	2.58628
windSpeed	ms-1	20.6956	2.23715	14.3523	27.0429
FairleadTension1	kN	794.188	222.021	224.045	1629.53
FairleadTension2	kN	866.587	241.082	240.41	1778.85
FairleadTension3	kN	642.898	228.164	90.8457	1543.38
FairleadTension4	kN	603.501	205.215	94.2279	1395.1
FairleadTension5	kN	186.134	122.893	44.7287	751.229
FairleadTension6	kN	180.204	124.45	42.8612	746.722
FairleadTension7	kN	153.816	69.6055	57.0748	468.987
FairleadTension8	kN	164.275	71.8316	60.2474	493.926
AnchorTension1	kN	777.715	223.954	200.71	1617.48
AnchorTension2	kN	850.681	242.963	217.108	1767.18
AnchorTension3	kN	626.4	230.284	70.6409	1531.97
AnchorTension4	kN	586.66	207.227	74.043	1383.24
AnchorTension5	kN	162.891	123.763	21.7874	734.701
AnchorTension6	kN	156.951	125.324	19.9311	730.383
AnchorTension7	kN	125.005	70.1753	28.0174	446.164
AnchorTension8	kN	135.525	72.5063	31.1926	471.594
xManExc	m	-3.3588	1.51057	-7.74351	1.08272
yManExc	m	-7.87935	1.25562	-10.6988	-4.43083
zManExc	m	-20.0801	0.154594	-20.5989	-19.5594
xFairLeadML6	m	-3.54227	1.30005	-7.54839	0.396508
yFairLeadML6	m	-9.37669	3.20682	-16.9628	-1.89736
zFairLeadML6	m	-20.0439	0.325736	-21.122	-18.8671
xFairLeadML10	m	-3.26381	1.60809	-7.77582	1.42428
yFairLeadML10	m	-6.35679	2.78665	-13.5802	0.626362
zFairLeadML10	m	-20.0916	0.140951	-20.618	-19.6042

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name	units	mean	std	min	max
xCOG_FSRU	m	4.05837	1.02881	0.156679	7.28689
yCOG_FSRU	m	-7.97617	1.21249	-11.3623	-4.53479
zCOG_FSRU	m	3.74312	0.0849892	3.45342	4.02664
xREF_FSRU	m	-0.00794224	1.0283	-3.90029	3.24071
yREF_FSRU	m	-7.92285	1.22035	-11.3224	-4.25982
zREF_FSRU	m	-9.35656	0.0788289	-9.62534	-9.09922
ROLL_FSRU	rad	-0.000870006	0.00649588	-0.0251986	0.0235009
PITCH_FSRU	rad	3.61418E-06	0.00200077	-0.00715059	0.0069579
YAW_FSRU	rad	-0.0159152	0.0139293	-0.0566984	0.0446649
WaveHeight-COG	m	-0.000709552	0.675084	-2.71166	2.50882
windSpeed	ms-1	20.6956	2.23715	14.3523	27.0429
FairleadTension1	kN	780.366	233.08	267.787	1805.53
FairleadTension2	kN	855.592	252.632	278.756	1896.48
FairleadTension3	kN	635.312	224.989	116.233	1674.3
FairleadTension4	kN	598.781	208.832	117.686	1552.27
FairleadTension5	kN	170.57	73.7904	53.8101	794.604
FairleadTension6	kN	162.117	72.5075	52.1003	802.057
FairleadTension7	kN	142.694	42.9278	60.8607	444.808
FairleadTension8	kN	153.519	45.4847	64.6034	463.225
AnchorTension1	kN	762.823	235.205	242.838	1793.12
AnchorTension2	kN	838.682	254.682	253.966	1884.28
AnchorTension3	kN	617.68	227.258	94.5147	1662.5
AnchorTension4	kN	580.785	211.06	95.9579	1540.14
AnchorTension5	kN	145.276	74.2	28.8574	777.51
AnchorTension6	kN	136.801	72.8841	27.1476	785.036
AnchorTension7	kN	111.936	43.129	30.7193	420.723
AnchorTension8	kN	122.794	45.7574	34.4617	439.562
xManExc	m	-3.78056	1.10266	-7.94396	0.159858
yManExc	m	-8.38998	1.25368	-12.1605	-5.15287
zManExc	m	-13.1238	0.148047	-13.7262	-12.5462
xFairLeadML6	m	-3.96336	1.04906	-7.91604	-0.553435
yFairLeadML6	m	-10.0498	2.12557	-16.6609	-2.63321
zFairLeadML6	m	-13.1151	0.326518	-14.2629	-11.9384
xFairLeadML10	m	-3.6994	1.13091	-8.02185	0.55949
yFairLeadML10	m	-6.58884	1.76313	-12.5877	-0.0117249
zFairLeadML10	m	-13.1261	0.167101	-13.7152	-12.5434

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name	units	mean	std	min	max
xCOG_FSRU	m	3.46452	1.14887	-1.38312	7.25821
yCOG_FSRU	m	-7.86892	1.37101	-12.0087	-4.33361
zCOG_FSRU	m	9.19023	0.0983087	8.85965	9.51299
xREF_FSRU	m	-0.0252631	1.14722	-4.8339	3.68873
yREF_FSRU	m	-7.88985	1.36814	-12.041	-4.32885
zREF_FSRU	m	-10.8093	0.0930652	-11.1195	-10.4994
ROLL_FSRU	rad	-0.00392485	0.00429201	-0.0183723	0.0108181
PITCH_FSRU	rad	1.00155E-05	0.00209344	-0.00742611	0.00740016
YAW_FSRU	rad	-0.0164988	0.0131715	-0.0564851	0.0324772
WaveHeight-COG	m	-0.000542477	0.70019	-2.81469	2.59293
windSpeed	ms-1	21.4955	2.31485	14.9073	28.0836
FairleadTension1	kN	825.104	279.193	149.188	2041.13
FairleadTension2	kN	903.774	299.258	160.646	2138.59
FairleadTension3	kN	664.246	267.203	78.6268	1944.65
FairleadTension4	kN	626.472	250.778	74.2091	1821.27
FairleadTension5	kN	164.002	80.2598	47.3027	749.1
FairleadTension6	kN	155.313	77.8435	45.8994	732.296
FairleadTension7	kN	134.394	47.1371	61.3552	551.883
FairleadTension8	kN	145.282	50.855	64.5728	594.208
AnchorTension1	kN	808.732	281.433	126.449	2030.23
AnchorTension2	kN	887.991	301.437	137.476	2127.87
AnchorTension3	kN	647.904	269.435	58.508	1934.15
AnchorTension4	kN	609.806	252.962	54.0901	1810.55
AnchorTension5	kN	140.469	80.6915	23.4744	732.323
AnchorTension6	kN	131.761	78.2333	21.9736	715.362
AnchorTension7	kN	105.395	47.356	32.9994	530.534
AnchorTension8	kN	116.315	51.1578	36.2149	573.516
xManExc	m	-3.20696	1.17946	-8.2372	0.888943
yManExc	m	-8.27955	1.40514	-12.8061	-4.42345
zManExc	m	-20.0844	0.16672	-20.6852	-19.5345
xFairLeadML6	m	-3.39655	1.15281	-8.28124	0.465035
yFairLeadML6	m	-10.0518	2.14895	-15.801	-1.22421
zFairLeadML6	m	-20.0459	0.355688	-21.272	-18.8149
xFairLeadML10	m	-3.12487	1.1947	-8.16517	0.983824
yFairLeadML10	m	-6.46367	1.82308	-11.9015	-0.348135
zFairLeadML10	m	-20.0967	0.15364	-20.6574	-19.5007

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name	units	mean	std	min	max
xCOG_FSRU	m	4.05905	1.09339	0.492841	7.64566
yCOG_FSRU	m	-8.49108	1.28321	-12.054	-4.5738
zCOG_FSRU	m	3.74305	0.0916527	3.433	4.06067
xREF_FSRU	m	-0.00709077	1.09307	-3.60863	3.51853
yREF_FSRU	m	-8.43656	1.29712	-12.0895	-4.25427
zREF_FSRU	m	-9.35658	0.0849107	-9.64089	-9.06647
ROLL_FSRU	rad	-0.000935108	0.00688064	-0.0265123	0.0240256
PITCH_FSRU	rad	5.40003E-06	0.00220791	-0.00794919	0.00800481
YAW_FSRU	rad	-0.01642	0.0168195	-0.0555872	0.026799
WaveHeight-COG	m	-0.000457221	0.700468	-2.81319	2.60887
windSpeed	ms-1	21.4955	2.31485	14.9073	28.0836
FairleadTension1	kN	826.141	248.355	212.523	1870.85
FairleadTension2	kN	908.656	268.816	223.521	2018.5
FairleadTension3	kN	671.851	239.789	103.143	1729.18
FairleadTension4	kN	630.574	221.657	103.105	1595.55
FairleadTension5	kN	168.884	81.0588	59.9377	680.708
FairleadTension6	kN	160.603	79.5966	57.1827	676.064
FairleadTension7	kN	138.337	43.7085	61.6682	341.814
FairleadTension8	kN	149.122	46.5797	64.6068	358.847
AnchorTension1	kN	808.987	250.45	187.178	1858.58
AnchorTension2	kN	892.14	270.832	198.176	2006.54
AnchorTension3	kN	654.584	242.055	81.3995	1717.32
AnchorTension4	kN	612.92	223.875	81.3613	1583.34
AnchorTension5	kN	143.639	81.5071	35.0705	662.749
AnchorTension6	kN	135.33	79.9961	32.6486	658.054
AnchorTension7	kN	107.567	43.8299	31.9933	314.693
AnchorTension8	kN	118.388	46.7809	34.9321	332.255
xManExc	m	-3.77171	1.21649	-7.22266	0.0957284
yManExc	m	-8.91821	1.3105	-12.8823	-4.60136
zManExc	m	-13.1252	0.15847	-13.699	-12.5723
xFairLeadML6	m	-3.9651	1.12978	-7.48759	-0.293006
yFairLeadML6	m	-10.6308	2.39413	-17.6703	-3.23906
zFairLeadML6	m	-13.116	0.357508	-14.391	-11.821
xFairLeadML10	m	-3.68279	1.2619	-7.184	0.149976
yFairLeadML10	m	-7.06084	2.06733	-12.4416	-1.19456
zFairLeadML10	m	-13.1274	0.184103	-13.7555	-12.534

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name	units	mean	std	min	max
xCOG_FSRU	m	2.95588	0.990414	0.611744	5.42585
yCOG_FSRU	m	1.42412	1.13083	-1.36388	4.3404
zCOG_FSRU	m	9.1905	0.0699894	8.94292	9.44612
xREF_FSRU	m	-0.532795	0.989422	-2.86623	1.93642
yREF_FSRU	m	1.41367	1.14293	-1.42589	4.4512
zREF_FSRU	m	-10.8094	0.0659428	-11.0441	-10.5677
ROLL_FSRU	rad	-9.90676E-05	0.00124863	-0.00467166	0.00586616
PITCH_FSRU	rad	2.48193E-05	0.00161676	-0.00541628	0.00565476
YAW_FSRU	rad	0.00242934	0.0233394	-0.0491247	0.0538091
WaveHeight-COG	m	-0.000285632	0.699261	-2.81213	2.79061
windSpeed	ms-1	18.5957	2.03056	12.9015	24.3022
FairleadTension1	kN	308.654	129.777	83.115	881.188
FairleadTension2	kN	304.447	134.748	78.9859	913.067
FairleadTension3	kN	238.373	150.877	46.7643	1030.86
FairleadTension4	kN	236.774	142.255	49.3928	964.464
FairleadTension5	kN	304.564	142.861	74.6232	947.652
FairleadTension6	kN	312.235	155.737	71.3337	1038.92
FairleadTension7	kN	415.148	147.345	132.89	1137.37
FairleadTension8	kN	407	136.175	137.895	1073.9
AnchorTension1	kN	286.241	131.371	59.6442	865.697
AnchorTension2	kN	282.017	136.367	55.5172	897.805
AnchorTension3	kN	218.439	151.789	26.3312	1017.6
AnchorTension4	kN	216.795	143.081	28.9741	950.833
AnchorTension5	kN	282.168	144.568	51.4742	932.581
AnchorTension6	kN	289.966	157.601	48.1844	1024.39
AnchorTension7	kN	390.878	150.207	104.086	1121.26
AnchorTension8	kN	382.594	138.924	109.095	1057.42
xManExc	m	-4.07522	1.07306	-6.98752	-0.873609
yManExc	m	1.48626	1.20441	-1.31167	5.17057
zManExc	m	-20.0121	0.109949	-20.3905	-19.6404
xFairLeadML6	m	-4.08011	1.00611	-6.65499	-1.41398
yFairLeadML6	m	1.73879	3.08017	-6.12329	10.0356
zFairLeadML6	m	-20.0136	0.269215	-20.9235	-19.1222
xFairLeadML10	m	-4.05269	1.1039	-7.02545	-0.640193
yFairLeadML10	m	1.20633	2.47487	-4.9803	7.72027
zFairLeadML10	m	-20.0095	0.0934741	-20.3326	-19.6965

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name	units	mean	std	min	max
xCOG_FSRU	m	3.52933	0.993094	1.15012	5.94563
yCOG_FSRU	m	1.4189	1.07322	-1.47476	4.55693
zCOG_FSRU	m	3.74346	0.0688196	3.50246	3.99127
xREF_FSRU	m	-0.537104	0.992729	-2.88997	1.89388
yREF_FSRU	m	1.40901	1.09011	-1.49846	4.87405
zREF_FSRU	m	-9.35621	0.0635399	-9.5784	-9.12509
ROLL_FSRU	rad	8.09124E-05	0.00588915	-0.0248293	0.0270459
PITCH_FSRU	rad	2.03905E-05	0.0016889	-0.00551045	0.00571074
YAW_FSRU	rad	0.00269449	0.0200892	-0.0571899	0.0588441
WaveHeight-COG	m	-0.000298799	0.699102	-2.7653	2.84622
windSpeed	ms-1	18.5957	2.03056	12.9015	24.3022
FairleadTension1	kN	304.775	111.256	106.625	869.472
FairleadTension2	kN	300.192	115.002	98.4102	906.871
FairleadTension3	kN	233.244	125.476	54.8268	824.532
FairleadTension4	kN	232.875	119.286	59.3298	779.658
FairleadTension5	kN	298.571	120.913	93.3132	872.942
FairleadTension6	kN	304.46	130.937	88.6261	947.726
FairleadTension7	kN	406.217	128.922	184.051	1032.35
FairleadTension8	kN	398.988	120.25	186.708	966.472
AnchorTension1	kN	280.763	112.941	82.0225	853.297
AnchorTension2	kN	276.14	116.704	73.8069	890.946
AnchorTension3	kN	211.519	126.351	33.0532	809.193
AnchorTension4	kN	211.115	120.085	37.5147	763.958
AnchorTension5	kN	274.531	122.682	68.1271	856.672
AnchorTension6	kN	280.531	132.852	63.4305	932.001
AnchorTension7	kN	380.712	131.82	153.469	1015.22
AnchorTension8	kN	373.351	123.043	156.119	948.9
xManExc	m	-4.66071	1.05867	-7.29897	-2.17114
yManExc	m	1.48516	1.13986	-1.79464	4.48576
zManExc	m	-13.1059	0.12941	-13.5907	-12.6154
xFairLeadML6	m	-4.65555	1.0077	-6.8907	-2.21751
yFairLeadML6	m	1.76767	2.69671	-5.56526	9.51951
zFairLeadML6	m	-13.1085	0.275499	-14.0189	-12.1977
xFairLeadML10	m	-4.64689	1.08169	-7.29922	-2.10785
yFairLeadML10	m	1.17819	2.17356	-4.17813	9.48538
zFairLeadML10	m	-13.103	0.142742	-13.6924	-12.5002

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name	units	mean	std	min	max
xCOG_FSRU	m	2.94894	1.13704	-0.268273	6.32815
yCOG_FSRU	m	1.61327	1.34357	-1.733	5.09141
zCOG_FSRU	m	9.19055	0.0785963	8.91633	9.46964
xREF_FSRU	m	-0.540232	1.13594	-3.77289	2.81734
yREF_FSRU	m	1.60083	1.34336	-1.73064	5.14011
zREF_FSRU	m	-10.8093	0.0742116	-11.0696	-10.5459
ROLL_FSRU	rad	-0.000144725	0.00122557	-0.00473523	0.0049658
PITCH_FSRU	rad	2.53321E-05	0.00175517	-0.00585537	0.00598222
YAW_FSRU	rad	0.00273648	0.0141733	-0.0390394	0.0440671
WaveHeight-COG	m	-0.000367333	0.724649	-2.91095	2.91679
windSpeed	ms-1	19.2957	2.09985	13.3856	25.2173
FairleadTension1	kN	299.301	127.558	77.6219	871.932
FairleadTension2	kN	293.124	129.012	75.1276	891.701
FairleadTension3	kN	221.646	124.29	49.721	737.76
FairleadTension4	kN	222.976	121.908	51.724	707.729
FairleadTension5	kN	302.921	133.113	75.3028	993.587
FairleadTension6	kN	308.953	139.665	73.2406	1069.72
FairleadTension7	kN	421.973	149.73	169.821	1174.45
FairleadTension8	kN	414.203	142.704	168.594	1103.98
AnchorTension1	kN	276.768	129.098	54.0921	856.323
AnchorTension2	kN	270.542	130.539	51.5974	876.521
AnchorTension3	kN	201.532	124.896	29.6534	722.259
AnchorTension4	kN	202.857	122.495	31.3484	691.949
AnchorTension5	kN	280.46	134.712	52.1307	978.804
AnchorTension6	kN	286.579	141.359	50.0625	1055.37
AnchorTension7	kN	397.815	152.638	141.174	1158.86
AnchorTension8	kN	389.906	145.546	139.935	1087.98
xManExc	m	-4.08337	1.17461	-7.33919	-0.599758
yManExc	m	1.68755	1.38083	-1.96899	4.86865
zManExc	m	-20.0129	0.12134	-20.4226	-19.6046
xFairLeadML6	m	-4.0674	1.14809	-7.29096	-0.645658
yFairLeadML6	m	1.96942	2.23402	-5.03779	8.73496
zFairLeadML6	m	-20.014	0.294424	-20.9993	-19.0442
xFairLeadML10	m	-4.08134	1.18388	-7.35934	-0.625023
yFairLeadML10	m	1.37234	1.86688	-3.94071	7.20076
zFairLeadML10	m	-20.0105	0.0991923	-20.3451	-19.6822

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name	units	mean	std	min	max
xCOG_FSRU	m	3.50982	1.16688	0.259016	6.82466
yCOG_FSRU	m	1.63861	1.47204	-2.00756	6.34449
zCOG_FSRU	m	3.74349	0.0765333	3.47624	4.01019
xREF_FSRU	m	-0.557044	1.16638	-3.81921	2.75917
yREF_FSRU	m	1.62741	1.48045	-2.10205	6.5816
zREF_FSRU	m	-9.35606	0.0708155	-9.60272	-9.10975
ROLL_FSRU	rad	9.44023E-05	0.00723907	-0.0279782	0.0297217
PITCH_FSRU	rad	2.17453E-05	0.0018286	-0.00633128	0.00597528
YAW_FSRU	rad	0.00306022	0.0140039	-0.0415489	0.0466885
WaveHeight-COG	m	-0.000348589	0.724635	-2.90736	2.88725
windSpeed	ms-1	19.2957	2.09985	13.3856	25.2173
FairleadTension1	kN	299.792	117.49	101.212	854.017
FairleadTension2	kN	294.106	118.523	95.2509	870.519
FairleadTension3	kN	224.124	117.834	53.5588	689.374
FairleadTension4	kN	225.255	115.274	56.5287	658.226
FairleadTension5	kN	301.874	124.551	84.6612	852.441
FairleadTension6	kN	307.401	131.375	82.4085	944.615
FairleadTension7	kN	419.784	143.715	131.645	983.384
FairleadTension8	kN	412.085	136.353	135.079	934.429
AnchorTension1	kN	275.767	119.226	76.2932	837.333
AnchorTension2	kN	270.014	120.236	70.4135	853.94
AnchorTension3	kN	202.323	118.573	31.537	672.796
AnchorTension4	kN	203.445	115.984	34.507	641.309
AnchorTension5	kN	277.9	126.359	59.3259	836.107
AnchorTension6	kN	283.515	133.288	57.0593	928.975
AnchorTension7	kN	394.531	146.77	101.186	965.91
AnchorTension8	kN	386.687	139.345	104.633	916.606
xManExc	m	-4.68438	1.20369	-7.91598	-1.20999
yManExc	m	1.71617	1.50122	-2.57104	6.88656
zManExc	m	-13.1058	0.149202	-13.7326	-12.4884
xFairLeadML6	m	-4.66498	1.17777	-7.86859	-1.26352
yFairLeadML6	m	2.03586	2.27434	-6.02313	9.49391
zFairLeadML6	m	-13.1085	0.299056	-14.1096	-12.0451
xFairLeadML10	m	-4.68355	1.21302	-7.97531	-1.18681
yFairLeadML10	m	1.36798	1.97032	-4.4132	8.73091
zFairLeadML10	m	-13.1025	0.169553	-13.7631	-12.4538

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name	units	mean	std	min	max
xCOG_FSRU	m	3.34635	1.0603	-0.0113453	6.0189
yCOG_FSRU	m	9.12833	1.43089	4.37063	13.1956
zCOG_FSRU	m	9.19047	0.0733817	8.93579	9.45396
xREF_FSRU	m	-0.142289	1.05967	-3.55247	2.59525
yREF_FSRU	m	9.13383	1.44687	4.24741	13.1861
zREF_FSRU	m	-10.8093	0.0691903	-11.0509	-10.5601
ROLL_FSRU	rad	0.00279022	0.00340218	-0.00782233	0.013209
PITCH_FSRU	rad	7.05548E-06	0.00167552	-0.00559968	0.00574252
YAW_FSRU	rad	0.0144168	0.0266737	-0.044651	0.0744532
WaveHeight-COG	m	-0.000309339	0.724003	-2.77778	2.88283
windSpeed	ms-1	18.7957	2.0504	13.041	24.5638
FairleadTension1	kN	116.875	69.1674	40.9194	452.887
FairleadTension2	kN	106.975	65.0271	38.2849	435.942
FairleadTension3	kN	144.502	123.88	29.4766	714.291
FairleadTension4	kN	151.157	123.428	31.1011	701.87
FairleadTension5	kN	623.653	158.059	242.37	1266.71
FairleadTension6	kN	672.597	185.892	228.165	1375.72
FairleadTension7	kN	891.968	184.743	433.644	1599.82
FairleadTension8	kN	808.483	163.759	413.626	1524.68
AnchorTension1	kN	93.27	69.3344	18.3324	432.538
AnchorTension2	kN	83.3547	65.1518	15.4994	415.295
AnchorTension3	kN	124.252	124.351	9.21629	698.797
AnchorTension4	kN	130.91	123.892	10.8409	686.235
AnchorTension5	kN	605.571	159.864	218.889	1253.18
AnchorTension6	kN	655	187.823	204.684	1362.62
AnchorTension7	kN	874.458	186.176	410.508	1586.14
AnchorTension8	kN	790.277	165.214	389.997	1510.76
xManExc	m	-3.91591	0.707521	-6.58068	-2.05187
yManExc	m	9.48137	1.43489	5.13312	13.5143
zManExc	m	-19.9571	0.129071	-20.4446	-19.5304
xFairLeadML6	m	-3.82058	0.848567	-6.84958	-1.72738
yFairLeadML6	m	11.0255	3.42043	1.18817	19.8205
zFairLeadML6	m	-19.9856	0.281259	-20.9362	-19.0325
xFairLeadML10	m	-3.91478	0.676644	-6.52589	-2.12216
yFairLeadML10	m	7.88181	3.01678	-0.64208	15.7594
zFairLeadML10	m	-19.9464	0.117931	-20.3627	-19.5377

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name	units	mean	std	min	max
xCOG_FSRU	m	3.88597	1.30834	-0.206185	7.57822
yCOG_FSRU	m	9.52886	1.54304	5.26749	13.7986
zCOG_FSRU	m	3.74326	0.0722859	3.49414	3.99682
xREF_FSRU	m	-0.178662	1.3091	-4.30307	3.54399
yREF_FSRU	m	9.48436	1.59283	4.93186	14.1236
zREF_FSRU	m	-9.35635	0.0667863	-9.58566	-9.11755
ROLL_FSRU	rad	0.000856548	0.00731837	-0.0297013	0.0329914
PITCH_FSRU	rad	3.14694E-06	0.00175335	-0.00569833	0.00593126
YAW_FSRU	rad	0.0137069	0.0330008	-0.0625705	0.0875722
WaveHeight-COG	m	-0.000310239	0.724096	-2.73713	2.89367
windSpeed	ms-1	18.7957	2.0504	13.041	24.5638
FairleadTension1	kN	133.473	87.835	39.8544	553.099
FairleadTension2	kN	123.208	83.7486	37.6016	539.438
FairleadTension3	kN	164.004	153.94	29.919	979.864
FairleadTension4	kN	169.604	151.503	31.2725	953.209
FairleadTension5	kN	632.859	180.521	237.076	1321.55
FairleadTension6	kN	685.734	214.01	233.737	1493.61
FairleadTension7	kN	903.902	213.524	438.826	1658.91
FairleadTension8	kN	819.57	190.195	409.226	1599.79
AnchorTension1	kN	108.224	88.3479	15.0743	533.162
AnchorTension2	kN	97.9239	84.1854	12.822	519.297
AnchorTension3	kN	142.227	154.95	8.09535	965.431
AnchorTension4	kN	147.828	152.49	9.44365	938.617
AnchorTension5	kN	613.843	182.652	211.729	1307.63
AnchorTension6	kN	667.23	216.307	208.633	1480.31
AnchorTension7	kN	885.608	215.188	414.986	1644.75
AnchorTension8	kN	800.568	191.9	384.71	1585.45
xManExc	m	-4.52368	0.869911	-7.65861	-1.92525
yManExc	m	9.86658	1.52097	6.15589	14.4497
zManExc	m	-13.0912	0.147753	-13.649	-12.527
xFairLeadML6	m	-4.45325	1.05128	-8.10808	-1.48795
yFairLeadML6	m	11.3061	4.08069	0.578364	22.131
zFairLeadML6	m	-13.0996	0.286589	-14.0614	-12.1786
xFairLeadML10	m	-4.49888	0.828432	-7.51104	-1.90046
yFairLeadML10	m	8.31478	3.68232	-0.780094	16.5505
zFairLeadML10	m	-13.0873	0.168161	-13.7986	-12.3201

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name	units	mean	std	min	max
xCOG_FSRU	m	3.2679	1.3928	-1.17988	7.32903
yCOG_FSRU	m	9.80359	1.64875	5.15192	13.857
zCOG_FSRU	m	9.1903	0.0837448	8.89668	9.48289
xREF_FSRU	m	-0.220256	1.39146	-4.60021	3.76146
yREF_FSRU	m	9.81396	1.67498	4.93143	13.958
zREF_FSRU	m	-10.8094	0.0791354	-11.088	-10.5329
ROLL_FSRU	rad	0.00288186	0.00378354	-0.00875414	0.0144552
PITCH_FSRU	rad	8.20759E-06	0.00183787	-0.00607334	0.00611474
YAW_FSRU	rad	0.013546	0.0339166	-0.08297	0.102475
WaveHeight-COG	m	-0.000179579	0.747259	-2.86241	3.03019
windSpeed	ms-1	19.5956	2.12941	13.5923	25.609
FairleadTension1	kN	126.778	96.8822	32.2922	796.889
FairleadTension2	kN	116.163	91.6712	30.5667	769.086
FairleadTension3	kN	159.671	166.924	24.9116	1117.64
FairleadTension4	kN	165.315	164.969	24.9872	1107.58
FairleadTension5	kN	679.774	219.505	196.452	1498.35
FairleadTension6	kN	738.538	255.825	191.716	1706.23
FairleadTension7	kN	976.679	254.729	391.288	1783.78
FairleadTension8	kN	885.415	229.917	359.394	1667.19
AnchorTension1	kN	103.266	97.4293	9.68276	780.355
AnchorTension2	kN	92.6254	92.1645	7.95725	752.312
AnchorTension3	kN	139.588	167.792	5.17235	1104.86
AnchorTension4	kN	145.237	165.822	5.2477	1094.36
AnchorTension5	kN	662.126	221.742	173.225	1485.76
AnchorTension6	kN	721.386	258.185	168.473	1694.16
AnchorTension7	kN	959.651	256.492	367.076	1770.28
AnchorTension8	kN	867.715	231.745	334.339	1653.36
xManExc	m	-3.98338	0.976796	-7.05324	-1.19176
yManExc	m	10.1278	1.62447	6.23018	14.0791
zManExc	m	-19.9556	0.144469	-20.4637	-19.4431
xFairLeadML6	m	-3.91846	1.14427	-7.83895	-0.903697
yFairLeadML6	m	11.5852	4.22773	0.809503	22.5008
zFairLeadML6	m	-19.9851	0.311238	-21.0259	-18.9551
xFairLeadML10	m	-3.95571	0.938749	-6.94125	-1.26344
yFairLeadML10	m	8.62882	3.79649	-0.410096	19.4482
zFairLeadML10	m	-19.9444	0.12881	-20.3658	-19.542

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name	units	mean	std	min	max
xCOG_FSRU	m	3.83047	1.57858	-0.934482	7.88545
yCOG_FSRU	m	10.2246	1.60461	5.39648	14.4453
zCOG_FSRU	m	3.74308	0.0814262	3.45676	4.02247
xREF_FSRU	m	-0.23336	1.57935	-5.01669	3.85662
yREF_FSRU	m	10.1828	1.67507	5.06156	14.6516
zREF_FSRU	m	-9.3563	0.0753753	-9.62034	-9.09746
ROLL_FSRU	rad	0.000915366	0.00932868	-0.0325432	0.0346563
PITCH_FSRU	rad	3.98348E-06	0.00192073	-0.00687098	0.00635203
YAW_FSRU	rad	0.0132395	0.0388896	-0.0803269	0.101637
WaveHeight-COG	m	-0.00010196	0.747038	-2.81219	3.10447
windSpeed	ms-1	19.5956	2.12941	13.5923	25.609
FairleadTension1	kN	140.044	106.678	37.1207	756.897
FairleadTension2	kN	129.187	101.218	34.9889	726.309
FairleadTension3	kN	177.166	183.679	27.191	1143.73
FairleadTension4	kN	182.113	180.804	27.7386	1096.35
FairleadTension5	kN	685.088	216.764	191.57	1514.89
FairleadTension6	kN	747.08	256.819	188.571	1684.99
FairleadTension7	kN	985.215	255.474	420.696	1981.06
FairleadTension8	kN	892.424	231.165	396.354	1752.99
AnchorTension1	kN	114.878	107.45	12.305	739.496
AnchorTension2	kN	103.972	101.902	10.179	708.658
AnchorTension3	kN	155.556	184.978	5.27996	1130.16
AnchorTension4	kN	160.507	182.08	5.81617	1082.58
AnchorTension5	kN	666.566	219.093	166.76	1501.54
AnchorTension6	kN	729.087	259.296	163.321	1672.15
AnchorTension7	kN	967.447	257.296	396.36	1966.97
AnchorTension8	kN	873.962	233.068	371.421	1738.37
xManExc	m	-4.57571	1.06403	-7.97342	-1.66018
yManExc	m	10.5445	1.5515	6.78355	14.825
zManExc	m	-13.0906	0.178659	-13.8427	-12.3956
xFairLeadML6	m	-4.53132	1.27773	-8.76881	-1.2666
yFairLeadML6	m	11.9385	4.69162	0.866914	23.4015
zFairLeadML6	m	-13.0993	0.314961	-14.1808	-11.9613
xFairLeadML10	m	-4.52584	1.01433	-7.73264	-1.68022
yFairLeadML10	m	9.04664	4.28396	-1.54916	20.3901
zFairLeadML10	m	-13.0861	0.211044	-13.8411	-12.3303

loaded_240degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.74289	1.34293	0.742751	6.69255
yCOG_FSRU	m	15.7362	1.25987	12.6673	18.9583
zCOG_FSRU	m	9.18984	0.0703509	8.94356	9.4141
xREF_FSRU	m	0.253494	1.34095	-2.70967	3.18272
yREF_FSRU	m	15.7944	1.27755	12.4971	19.2019
zREF_FSRU	m	-10.8092	0.0666332	-11.0449	-10.5921
ROLL_FSRU	rad	0.00604772	0.00754549	-0.0129967	0.0246662
PITCH_FSRU	rad	5.74794E-07	0.00147436	-0.00532222	0.00506484
YAW_FSRU	rad	0.0179835	0.028948	-0.0384087	0.07414
WaveHeight-COG	m	-0.000227069	0.548955	-2.10529	2.27217
windSpeed	ms-1	20.4956	2.21764	14.2139	26.7825
FairleadTension1	kN	63.8887	27.7226	32.0267	205.819
FairleadTension2	kN	57.498	23.6191	30.1047	183.294
FairleadTension3	kN	88.6044	74.6645	26.4385	403.295
FairleadTension4	kN	98.4563	82.6482	27.9854	425.73
FairleadTension5	kN	1223.29	183.941	722.154	1887.89
FairleadTension6	kN	1346.73	206.609	746.69	2084.93
FairleadTension7	kN	1504.87	195.859	958.901	2141.94
FairleadTension8	kN	1331.86	185.332	829.132	1933.8
AnchorTension1	kN	40.195	27.7044	9.03023	181.927
AnchorTension2	kN	33.804	23.6003	7.10818	159.401
AnchorTension3	kN	68.1592	74.6786	6.36817	383.987
AnchorTension4	kN	78.0193	82.6862	7.84914	406.777
AnchorTension5	kN	1209.69	184.744	705.449	1876.48
AnchorTension6	kN	1333.62	207.393	730.219	2073.92
AnchorTension7	kN	1490.67	196.53	942.114	2129.35
AnchorTension8	kN	1316.99	186.101	811.359	1920.9
xManExc	m	-3.58933	0.855157	-5.84748	-1.45099
yManExc	m	16.147	1.31165	12.1243	19.4245
zManExc	m	-19.8964	0.175641	-20.4358	-19.333
xFairLeadML6	m	-3.47187	1.05068	-6.04754	-1.09149
yFairLeadML6	m	18.117	3.66587	8.48367	26.9718
zFairLeadML6	m	-19.9561	0.25979	-20.8412	-19.0236
xFairLeadML10	m	-3.5879	0.817969	-5.7543	-1.48539
yFairLeadML10	m	14.1954	3.09492	6.96955	21.2049
zFairLeadML10	m	-19.8744	0.185555	-20.4658	-19.3298

ballasted_240degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.49099	0.674815	2.38612	6.43051
yCOG_FSRU	m	16.2341	1.98652	11.8653	20.2694
zCOG_FSRU	m	3.74285	0.0668166	3.51268	3.95705
xREF_FSRU	m	0.424861	0.675364	-1.65125	2.39166
yREF_FSRU	m	16.1722	1.98821	11.551	20.5264
zREF_FSRU	m	-9.35662	0.0618614	-9.57048	-9.15499
ROLL_FSRU	rad	0.00173292	0.00892884	-0.0286273	0.0308845
PITCH_FSRU	rad	-5.46611E-06	0.00156011	-0.00559516	0.00546034
YAW_FSRU	rad	0.0208116	0.0138185	-0.0168642	0.0574839
WaveHeight-COG	m	-0.000142617	0.549012	-2.10554	2.2512
windSpeed	ms-1	20.4956	2.21764	14.2139	26.7825
FairleadTension1	kN	59.8842	12.386	38.0557	130.102
FairleadTension2	kN	54.5762	10.8068	35.6045	114.974
FairleadTension3	kN	71.0834	26.728	34.4503	209.139
FairleadTension4	kN	79.0102	30.2218	37.1479	231.697
FairleadTension5	kN	1216.94	215.777	752.653	1800.61
FairleadTension6	kN	1338.45	238.873	815.223	2002.68
FairleadTension7	kN	1486.59	236.377	955.611	2158.03
FairleadTension8	kN	1307.43	210.207	858.29	1936.92
AnchorTension1	kN	34.4416	12.3472	13.1859	104.256
AnchorTension2	kN	29.1333	10.7678	10.7343	89.131
AnchorTension3	kN	48.8835	26.7133	12.8275	186.88
AnchorTension4	kN	56.8107	30.2071	15.5237	209.287
AnchorTension5	kN	1202.47	216.763	735.432	1788.17
AnchorTension6	kN	1324.49	239.817	798.645	1990.68
AnchorTension7	kN	1471.55	237.23	938.086	2144.77
AnchorTension8	kN	1291.67	211.136	840.012	1923.23
xManExc	m	-4.04406	0.466728	-5.65599	-2.39136
yManExc	m	16.7517	2.03704	12.4694	21.0923
zManExc	m	-13.075	0.163777	-13.6846	-12.5255
xFairLeadML6	m	-3.86895	0.543728	-5.64084	-2.11951
yFairLeadML6	m	18.939	2.71436	11.6803	25.8061
zFairLeadML6	m	-13.0911	0.256412	-13.9965	-12.1716
xFairLeadML10	m	-4.08164	0.453945	-5.65479	-2.46678
yFairLeadML10	m	14.4043	2.30034	8.34208	20.4979
zFairLeadML10	m	-13.0689	0.199075	-13.7464	-12.389

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name	units	mean	std	min	max
xCOG_FSRU	m	3.74671	1.48719	-0.219803	7.21046
yCOG_FSRU	m	16.7855	1.49282	12.4757	20.4975
zCOG_FSRU	m	9.18972	0.0782701	8.92165	9.44762
xREF_FSRU	m	0.257413	1.48475	-3.66753	3.71492
yREF_FSRU	m	16.8496	1.50625	12.4423	20.6761
zREF_FSRU	m	-10.8091	0.074033	-11.0622	-10.561
ROLL_FSRU	rad	0.00642742	0.00837536	-0.0138995	0.0262484
PITCH_FSRU	rad	1.1055E-06	0.00165823	-0.00582759	0.00580589
YAW_FSRU	rad	0.018464	0.0322167	-0.059393	0.0960177
WaveHeight-COG	m	-0.000330779	0.575395	-2.13851	2.37816
windSpeed	ms-1	21.3955	2.30517	14.8379	27.9536
FairleadTension1	kN	63.2517	35.7393	30.1628	332.975
FairleadTension2	kN	56.7726	30.3839	28.5866	303.272
FairleadTension3	kN	89.0721	91.5277	25.0667	600.979
FairleadTension4	kN	98.5817	98.8675	25.1357	627.828
FairleadTension5	kN	1328.04	194.19	695.506	2014.06
FairleadTension6	kN	1463.6	219.664	722.603	2190.14
FairleadTension7	kN	1633.86	209.329	841.053	2306.71
FairleadTension8	kN	1446.45	197.813	732.029	2077.2
AnchorTension1	kN	39.5549	35.7306	6.94019	310.139
AnchorTension2	kN	33.0748	30.3698	5.36699	279.834
AnchorTension3	kN	68.675	91.7608	5.13104	584.359
AnchorTension4	kN	78.202	99.1485	5.19999	611.498
AnchorTension5	kN	1314.87	194.945	678.691	2002.82
AnchorTension6	kN	1450.9	220.403	706.048	2179.22
AnchorTension7	kN	1620.07	209.965	823.612	2294.5
AnchorTension8	kN	1432.03	198.537	713.589	2064.32
xManExc	m	-3.59737	0.917775	-6.4392	-1.12501
yManExc	m	17.2029	1.56728	12.6379	21.5915
zManExc	m	-19.8895	0.194954	-20.4883	-19.1812
xFairLeadML6	m	-3.48664	1.15351	-6.91372	-0.749418
yFairLeadML6	m	19.2301	4.14617	8.53173	29.671
zFairLeadML6	m	-19.9529	0.290872	-20.932	-18.8329
xFairLeadML10	m	-3.58541	0.86971	-6.26422	-1.16521
yFairLeadML10	m	15.2027	3.45364	6.99214	23.6901
zFairLeadML10	m	-19.8659	0.207813	-20.5384	-19.2302

ballasted_240degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.3701	1.4127	0.540168	7.86497
yCOG_FSRU	m	17.238	2.468	11.8803	22.1813
zCOG_FSRU	m	3.74255	0.0735632	3.49492	3.9902
xREF_FSRU	m	0.305332	1.41402	-3.49827	3.76787
yREF_FSRU	m	17.1845	2.48414	11.6389	22.4278
zREF_FSRU	m	-9.35673	0.0679765	-9.58033	-9.12626
ROLL_FSRU	rad	0.00183529	0.0103165	-0.031282	0.0351811
PITCH_FSRU	rad	-5.69104E-06	0.0017696	-0.0066489	0.0065544
YAW_FSRU	rad	0.0190792	0.030485	-0.0579666	0.0945649
WaveHeight-COG	m	-0.000233542	0.575435	-2.22849	2.36996
windSpeed	ms-1	21.3955	2.30517	14.8379	27.9536
FairleadTension1	kN	67.0982	34.5362	32.6693	284.867
FairleadTension2	kN	60.618	29.9439	30.8777	260.14
FairleadTension3	kN	89.9906	83.3303	26.6597	660.276
FairleadTension4	kN	99.1486	89.4716	27.0915	679.757
FairleadTension5	kN	1323.38	270.78	700.07	2019.13
FairleadTension6	kN	1460.19	303.323	745.435	2246.93
FairleadTension7	kN	1627.7	295.265	885.802	2468.18
FairleadTension8	kN	1437.08	267.202	789.632	2312.26
AnchorTension1	kN	41.6559	34.5227	8.08384	259.333
AnchorTension2	kN	35.1747	29.9261	6.23395	234.147
AnchorTension3	kN	67.8475	83.5726	5.17674	643.326
AnchorTension4	kN	77.022	89.7555	5.27247	662.821
AnchorTension5	kN	1309.31	271.889	682.288	2007.24
AnchorTension6	kN	1446.62	304.4	728.235	2235.41
AnchorTension7	kN	1613.09	296.182	867.852	2455.19
AnchorTension8	kN	1421.81	268.215	770.815	2299.07
xManExc	m	-4.14101	0.866724	-6.94953	-1.79818
yManExc	m	17.7007	2.53689	12.3893	23.4503
zManExc	m	-13.0736	0.188051	-13.7082	-12.457
xFairLeadML6	m	-4.01796	1.0921	-7.34986	-1.39277
yFairLeadML6	m	19.7132	4.4828	8.28265	31.2093
zFairLeadML6	m	-13.0904	0.288436	-14.1491	-12.0185
xFairLeadML10	m	-4.13428	0.825342	-6.65651	-1.77424
yFairLeadML10	m	15.5523	3.7968	5.87051	24.8275
zFairLeadML10	m	-13.0669	0.233224	-13.818	-12.2895

loaded_60degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	2.68876	0.669133	0.86661	4.91944
yCOG_FSRU	m	-8.47064	3.02414	-13.338	-3.39398
zCOG_FSRU	m	9.18662	0.0608164	8.95115	9.41627
xREF_FSRU	m	-0.795975	0.667632	-2.61043	1.41016
yREF_FSRU	m	-8.69481	2.97383	-13.6298	-3.76237
zREF_FSRU	m	-10.812	0.0568177	-11.0321	-10.5982
ROLL_FSRU	rad	-0.00734345	0.0085215	-0.0281278	0.0124163
PITCH_FSRU	rad	1.94007E-05	0.00169635	-0.00639531	0.00602264
YAW_FSRU	rad	0.0221759	0.0159939	-0.0194799	0.062623
WaveHeight-COG	m	-0.000106651	0.377134	-1.46887	1.49894
windSpeed	ms-1	22.2955	2.39201	15.4641	29.1224
FairleadTension1	kN	1196.28	507.388	359.353	2604.72
FairleadTension2	kN	1280.23	571.395	376.433	2773.34
FairleadTension3	kN	1609.34	494.577	575.321	3008.95
FairleadTension4	kN	1407.65	439.109	502.605	2606.19
FairleadTension5	kN	77.7215	21.4537	61.351	232.069
FairleadTension6	kN	73.9345	18.7285	61.1195	217.438
FairleadTension7	kN	236.947	148.309	68.5726	1122.09
FairleadTension8	kN	245.142	144.282	69.9499	1088.55
AnchorTension1	kN	1172.8	507.392	336.133	2581.45
AnchorTension2	kN	1256.74	571.402	353.081	2750.02
AnchorTension3	kN	1589.1	494.585	554.836	2988.71
AnchorTension4	kN	1387.4	439.115	482.814	2585.9
AnchorTension5	kN	54.0171	21.4282	38.0614	207.909
AnchorTension6	kN	50.23	18.7036	37.8323	193.254
AnchorTension7	kN	207.863	148.299	39.5831	1092.92
AnchorTension8	kN	216.058	144.271	40.9605	1059.36
xManExc	m	-4.72015	0.94816	-7.14	-1.79292
yManExc	m	-7.79183	3.22453	-13.5182	-2.37645
zManExc	m	-20.1534	0.188625	-20.8071	-19.5319
xFairLeadML6	m	-4.53477	0.832162	-6.70871	-1.95582
yFairLeadML6	m	-5.61686	4.24291	-14.8949	3.29339
zFairLeadML6	m	-20.0809	0.278352	-21.1867	-19.1004
xFairLeadML10	m	-4.75239	0.962755	-7.12449	-1.75233
yFairLeadML10	m	-10.4494	2.82643	-17.7935	-3.79042
zFairLeadML10	m	-20.1758	0.220914	-20.9324	-19.5423
xFairLeadML12	m	-4.52993	0.81364	-6.57435	-1.8746
yFairLeadML12	m	-11.5362	3.00786	-20.4104	-3.73187
zFairLeadML12	m	-20.1072	0.221802	-20.9874	-19.3506

ballasted_60degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.26275	1.16363	0.487778	6.17173
yCOG_FSRU	m	-9.11555	1.49697	-12.2846	-5.9563
zCOG_FSRU	m	3.73893	0.0552483	3.52675	3.95283
xREF_FSRU	m	-0.801545	1.16158	-3.59591	2.09434
yREF_FSRU	m	-9.2249	1.52318	-12.4644	-5.92711
zREF_FSRU	m	-9.36081	0.0503196	-9.55345	-9.16869
ROLL_FSRU	rad	-0.00188724	0.00523581	-0.0215055	0.0180582
PITCH_FSRU	rad	8.0081E-06	0.00182572	-0.00674367	0.00642101
YAW_FSRU	rad	0.0208198	0.0266103	-0.0438346	0.0789737
WaveHeight-COG	m	-3.12358E-05	0.377238	-1.49676	1.47957
windSpeed	ms-1	22.2955	2.39201	15.4641	29.1224
FairleadTension1	kN	1214.56	302.607	560.725	2131.18
FairleadTension2	kN	1301.17	310.426	609.594	2254.55
FairleadTension3	kN	1615.39	351.482	791.308	2571.06
FairleadTension4	kN	1408.76	285.785	743.881	2159.01
FairleadTension5	kN	97.2494	54.7051	62.5835	462.231
FairleadTension6	kN	92.3143	50.4407	62.3482	452.228
FairleadTension7	kN	236.901	161.036	69.3393	1084.56
FairleadTension8	kN	247.883	163.195	69.8452	1079.54
AnchorTension1	kN	1189.22	302.616	535.103	2105.87
AnchorTension2	kN	1275.84	310.435	583.974	2229.24
AnchorTension3	kN	1593.3	351.499	768.817	2548.04
AnchorTension4	kN	1386.66	285.799	721.802	2135.97
AnchorTension5	kN	71.8119	54.6985	37.7024	436.887
AnchorTension6	kN	66.8766	50.4342	37.4715	426.882
AnchorTension7	kN	206.077	161.038	39.2329	1053.77
AnchorTension8	kN	217.059	163.196	39.7389	1048.75
xManExc	m	-5.28037	1.66653	-9.06716	-1.35214
yManExc	m	-8.53676	1.53047	-11.8467	-4.94521
zManExc	m	-13.1473	0.119371	-13.6088	-12.7368
xFairLeadML6	m	-5.13103	1.46007	-8.62434	-1.75496
yFairLeadML6	m	-6.4084	3.50248	-15.2884	1.61693
zFairLeadML6	m	-13.1289	0.277018	-14.1666	-12.1321
xFairLeadML10	m	-5.28737	1.698	-9.03091	-1.1555
yFairLeadML10	m	-10.9469	3.00348	-17.8356	-3.077
zFairLeadML10	m	-13.1527	0.166897	-13.9444	-12.4236
xFairLeadML12	m	-5.06805	1.43421	-8.24426	-1.46047
yFairLeadML12	m	-11.9563	4.17412	-21.6184	-1.22858
zFairLeadML12	m	-13.1349	0.223365	-14.0757	-12.3123

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name	units	mean	std	min	max
xCOG_FSRU	m	2.61089	0.705007	0.59067	4.83169
yCOG_FSRU	m	-9.04692	3.29249	-14.4678	-3.57427
zCOG_FSRU	m	9.1863	0.0653825	8.92895	9.43754
xREF_FSRU	m	-0.873134	0.704545	-2.90362	1.36077
yREF_FSRU	m	-9.28877	3.24011	-14.7631	-3.67654
zREF_FSRU	m	-10.8121	0.0608192	-11.0522	-10.5823
ROLL_FSRU	rad	-0.00790188	0.00939227	-0.0320651	0.0136676
PITCH_FSRU	rad	0.000020469	0.00199404	-0.0073267	0.00709234
YAW_FSRU	rad	0.0240503	0.0163323	-0.022844	0.0677946
WaveHeight-COG	m	7.06191E-05	0.400578	-1.60138	1.61657
windSpeed	ms-1	23.2954	2.48771	16.1626	30.4262
FairleadTension1	kN	1294.85	569.543	318.188	2747
FairleadTension2	kN	1385.86	638.632	307.899	2872.18
FairleadTension3	kN	1736.69	558.666	623.162	3155.01
FairleadTension4	kN	1516.47	497.6	559.22	2847.32
FairleadTension5	kN	74.4943	20.7864	60.7731	230.877
FairleadTension6	kN	71.3529	18.1527	60.5377	219.414
FairleadTension7	kN	238.451	154.771	67.7613	979.178
FairleadTension8	kN	246.968	150.949	68.2874	961.894
AnchorTension1	kN	1271.38	569.552	294.842	2723.22
AnchorTension2	kN	1362.39	638.644	284.553	2848.41
AnchorTension3	kN	1716.45	558.682	603.202	3135.06
AnchorTension4	kN	1496.23	497.613	539.234	2827.15
AnchorTension5	kN	50.784	20.7596	37.7827	207.193
AnchorTension6	kN	47.6425	18.127	37.5483	195.732
AnchorTension7	kN	209.362	154.759	39.2463	949.929
AnchorTension8	kN	217.879	150.936	39.7871	932.617
xManExc	m	-4.83506	0.981534	-7.3182	-1.92333
yManExc	m	-8.3119	3.49331	-14.5451	-2.31968
zManExc	m	-20.1645	0.208471	-20.9383	-19.535
xFairLeadML6	m	-4.63561	0.868923	-6.96531	-2.04241
yFairLeadML6	m	-5.95183	4.50258	-16.5379	3.84586
zFairLeadML6	m	-20.0863	0.320105	-21.34	-18.921
xFairLeadML10	m	-4.86777	0.993604	-7.362	-1.85371
yFairLeadML10	m	-11.1931	3.08022	-18.9578	-3.28359
zFairLeadML10	m	-20.1885	0.250104	-21.0783	-19.407
xFairLeadML12	m	-4.62563	0.844279	-6.86672	-1.966
yFairLeadML12	m	-12.3713	3.24244	-21.6734	-3.10976
zFairLeadML12	m	-20.1146	0.260876	-21.1889	-19.2628

ballasted_60degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.03361	0.725707	1.02497	5.24334
yCOG_FSRU	m	-9.65779	1.56487	-12.8586	-6.6399
zCOG_FSRU	m	3.73882	0.0596091	3.51291	3.97265
xREF_FSRU	m	-1.03105	0.726119	-3.09052	1.21559
yREF_FSRU	m	-9.79093	1.5746	-13.1152	-6.54769
zREF_FSRU	m	-9.36088	0.0540876	-9.56315	-9.15174
ROLL_FSRU	rad	-0.00205124	0.00536295	-0.0224055	0.0182404
PITCH_FSRU	rad	1.21389E-05	0.00215054	-0.00774586	0.00768069
YAW_FSRU	rad	0.0261378	0.0142994	-0.0251553	0.0706765
WaveHeight-COG	m	0.00014948	0.400635	-1.59627	1.61868
windSpeed	ms-1	23.2954	2.48771	16.1626	30.4262
FairleadTension1	kN	1299.85	326.889	573.966	2279.8
FairleadTension2	kN	1386.43	348.306	611.473	2423.92
FairleadTension3	kN	1724.33	360.236	712.671	2935.95
FairleadTension4	kN	1492.12	316.265	623.902	2569.82
FairleadTension5	kN	73.8291	16.9198	62.8199	241.182
FairleadTension6	kN	70.9284	14.3486	62.5585	225.69
FairleadTension7	kN	209.629	83.0938	74.4948	667.652
FairleadTension8	kN	221.948	85.5026	79.673	682.322
AnchorTension1	kN	1274.52	326.903	548.987	2254.34
AnchorTension2	kN	1361.1	348.321	586.523	2398.46
AnchorTension3	kN	1702.24	360.259	690.316	2913.21
AnchorTension4	kN	1470.02	316.285	601.543	2547.07
AnchorTension5	kN	48.3881	16.8996	37.9433	215.649
AnchorTension6	kN	45.4872	14.3299	37.6901	200.166
AnchorTension7	kN	178.802	83.0784	44.2855	637.01
AnchorTension8	kN	191.122	85.4872	49.4641	651.632
xManExc	m	-5.6069	0.962725	-8.1812	-2.47452
yManExc	m	-8.93156	1.57003	-12.3678	-5.55369
zManExc	m	-13.1506	0.127532	-13.6282	-12.6318
xFairLeadML6	m	-5.39109	0.869103	-7.75085	-2.72767
yFairLeadML6	m	-6.25635	2.29377	-14.0511	-0.331075
zFairLeadML6	m	-13.131	0.32016	-14.271	-11.9859
xFairLeadML10	m	-5.64675	0.972108	-8.1642	-2.37478
yFairLeadML10	m	-11.9515	2.11307	-17.9023	-5.72522
zFairLeadML10	m	-13.1561	0.191845	-14.0953	-12.3955
xFairLeadML12	m	-5.38459	0.84288	-7.60268	-2.56909
yFairLeadML12	m	-13.221	2.63077	-21.2131	-4.54207
zFairLeadML12	m	-13.1366	0.266432	-14.2388	-12.1955

loaded_90degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.23109	0.850419	0.828836	5.63811
yCOG_FSRU	m	-9.13018	3.26227	-14.8663	-3.52269
zCOG_FSRU	m	9.18668	0.0811185	8.87288	9.491
xREF_FSRU	m	-0.256936	0.849283	-2.62297	2.15049
yREF_FSRU	m	-9.29955	3.20283	-14.9001	-3.57476
zREF_FSRU	m	-10.8118	0.0759141	-11.1054	-10.5287
ROLL_FSRU	rad	-0.00795343	0.00879539	-0.0307269	0.012756
PITCH_FSRU	rad	1.66804E-05	0.00220759	-0.00842274	0.00785262
YAW_FSRU	rad	0.00296427	0.0191921	-0.044375	0.0500855
WaveHeight-COG	m	-0.000243445	0.502813	-1.96643	1.99207
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1359.4	555.164	350.06	2799.28
FairleadTension2	kN	1499.1	635.941	343.934	3099.88
FairleadTension3	kN	1538.69	588.298	272.366	3138.07
FairleadTension4	kN	1379.44	535.106	264.402	2808.14
FairleadTension5	kN	102.134	44.916	61.3682	334.458
FairleadTension6	kN	95.7973	41.4302	61.1055	316.43
FairleadTension7	kN	159.517	103.343	66.6759	786.265
FairleadTension8	kN	167.755	104.268	67.0245	791.924
AnchorTension1	kN	1335.93	555.168	327.698	2775.75
AnchorTension2	kN	1475.63	635.95	321.572	3076.43
AnchorTension3	kN	1518.45	588.306	252.134	3117.81
AnchorTension4	kN	1359.2	535.111	244.17	2787.86
AnchorTension5	kN	78.4248	44.8923	38.6395	310.71
AnchorTension6	kN	72.0877	41.4063	38.383	292.664
AnchorTension7	kN	130.422	103.319	38.4558	757.131
AnchorTension8	kN	138.66	104.242	38.7926	762.765
xManExc	m	-3.80831	1.17322	-6.82224	-0.814542
yManExc	m	-8.96517	3.51785	-15.5055	-2.87993
zManExc	m	-20.1649	0.211068	-20.927	-19.4067
xFairLeadML6	m	-3.79818	1.003	-6.51424	-1.14608
yFairLeadML6	m	-8.79092	4.80922	-19.9423	1.47062
zFairLeadML6	m	-20.0859	0.359075	-21.4905	-18.7985
xFairLeadML10	m	-3.79661	1.22721	-6.84743	-0.684481
yFairLeadML10	m	-9.43961	3.03171	-16.5644	-2.25674
zFairLeadML10	m	-20.1896	0.244035	-21.113	-19.4323
xFairLeadML12	m	-3.76004	1.06417	-6.5034	-0.925633
yFairLeadML12	m	-9.59558	3.29089	-17.8151	-1.51675
zFairLeadML12	m	-20.1155	0.273533	-21.2306	-19.1311

ballasted_90degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.74617	0.536547	1.06896	6.11387
yCOG_FSRU	m	-9.78883	1.87383	-13.891	-6.05994
zCOG_FSRU	m	3.73932	0.0735251	3.45535	4.0231
xREF_FSRU	m	-0.320575	0.538411	-2.9806	2.06013
yREF_FSRU	m	-9.83041	1.86712	-13.9571	-6.04249
zREF_FSRU	m	-9.36038	0.0670606	-9.6187	-9.10515
ROLL_FSRU	rad	-0.00205578	0.0055303	-0.0235451	0.0191873
PITCH_FSRU	rad	8.6019E-06	0.00237726	-0.0089959	0.00841997
YAW_FSRU	rad	0.00360295	0.0109192	-0.0334468	0.0410146
WaveHeight-COG	m	-0.000135804	0.502816	-2.00365	1.97541
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1352.24	335.939	537.112	2350.47
FairleadTension2	kN	1493.81	378.934	578.405	2589.13
FairleadTension3	kN	1524.8	366.206	532.576	2622.04
FairleadTension4	kN	1356.45	329.44	480.517	2336.05
FairleadTension5	kN	92.1068	23.1484	63.312	219.532
FairleadTension6	kN	85.8434	21.0464	63.1227	198.067
FairleadTension7	kN	133.106	37.898	69.3692	328.175
FairleadTension8	kN	142.34	39.6747	70.7437	360.092
AnchorTension1	kN	1326.91	335.945	512.987	2325.2
AnchorTension2	kN	1468.49	378.945	554.275	2563.85
AnchorTension3	kN	1502.71	366.224	510.954	2599.56
AnchorTension4	kN	1334.35	329.455	458.844	2313.56
AnchorTension5	kN	66.6666	23.11	38.5953	194.1
AnchorTension6	kN	60.4029	21.0088	38.4059	172.568
AnchorTension7	kN	102.273	37.8505	39.4278	297.014
AnchorTension8	kN	111.508	39.6264	40.1599	329.196
xManExc	m	-4.45771	0.704443	-7.54294	-1.59636
yManExc	m	-9.657	1.95856	-14.0795	-5.53733
zManExc	m	-13.1501	0.142069	-13.7253	-12.6463
xFairLeadML6	m	-4.42886	0.615762	-7.30878	-1.84719
yFairLeadML6	m	-9.31811	2.58562	-15.9339	-2.76449
zFairLeadML6	m	-13.1301	0.361648	-14.4575	-11.7951
xFairLeadML10	m	-4.46248	0.733671	-7.56373	-1.464
yFairLeadML10	m	-10.1036	1.91021	-15.0984	-4.70023
zFairLeadML10	m	-13.156	0.199398	-14.0567	-12.3147
xFairLeadML12	m	-4.42599	0.646797	-7.33374	-1.66784
yFairLeadML12	m	-10.2816	2.12457	-16.3365	-3.58689
zFairLeadML12	m	-13.1366	0.285474	-14.2675	-12.1241

loaded_90degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.18918	0.886927	0.519499	6.03974
yCOG_FSRU	m	-9.71126	3.44551	-15.9293	-3.40522
zCOG_FSRU	m	9.18644	0.0895171	8.83323	9.52896
xREF_FSRU	m	-0.298652	0.887057	-2.93751	2.56994
yREF_FSRU	m	-9.89522	3.3834	-16.169	-3.39094
zREF_FSRU	m	-10.8118	0.0834085	-11.1421	-10.4941
ROLL_FSRU	rad	-0.00854244	0.00964751	-0.0338118	0.0152901
PITCH_FSRU	rad	1.72636E-05	0.00263053	-0.00989765	0.00944464
YAW_FSRU	rad	0.00377266	0.0191754	-0.0445334	0.0543176
WaveHeight-COG	m	-0.000178073	0.550313	-2.18017	2.19202
windSpeed	ms-1	21.9955	2.36314	15.2551	28.7331
FairleadTension1	kN	1461.31	613.777	310.81	3385.28
FairleadTension2	kN	1611.27	698.829	321.175	3688.76
FairleadTension3	kN	1651.39	648.908	313.253	3534.85
FairleadTension4	kN	1477.74	593.132	313.508	3233.44
FairleadTension5	kN	95.8137	44.2055	61.042	442.473
FairleadTension6	kN	89.9398	40.8626	60.7899	425.714
FairleadTension7	kN	156.306	104.777	66.0718	845.091
FairleadTension8	kN	164.692	106	66.3351	836.429
AnchorTension1	kN	1437.85	613.788	288.264	3361.88
AnchorTension2	kN	1587.82	698.844	298.629	3665.38
AnchorTension3	kN	1631.16	648.922	292.836	3514.78
AnchorTension4	kN	1457.5	593.144	293.1	3213.35
AnchorTension5	kN	72.098	44.1785	38.1693	418.561
AnchorTension6	kN	66.2238	40.8362	37.9321	401.801
AnchorTension7	kN	127.205	104.747	38.1569	816.314
AnchorTension8	kN	135.591	105.969	38.4174	807.652
xManExc	m	-3.86568	1.19151	-7.1191	-0.359965
yManExc	m	-9.51788	3.71149	-16.5176	-3.22192
zManExc	m	-20.1764	0.2351	-21.0555	-19.3988
xFairLeadML6	m	-3.84768	1.03054	-6.78943	-0.721128
yFairLeadML6	m	-9.26981	5.00847	-20.9906	1.6953
zFairLeadML6	m	-20.0913	0.420149	-21.6462	-18.5524
xFairLeadML10	m	-3.85627	1.2428	-7.16635	-0.186901
yFairLeadML10	m	-10.0947	3.14828	-19.0831	-1.38738
zFairLeadML10	m	-20.2029	0.278034	-21.0874	-19.2662
xFairLeadML12	m	-3.81208	1.08669	-6.74289	-0.452318
yFairLeadML12	m	-10.2908	3.35633	-20.8919	-0.150776
zFairLeadML12	m	-20.1233	0.325622	-21.3254	-18.8944

ballasted_90degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.71162	0.965534	0.464228	6.90555
yCOG_FSRU	m	-10.3994	1.77881	-14.2812	-5.99036
zCOG_FSRU	m	3.73886	0.0813419	3.42545	4.05672
xREF_FSRU	m	-0.354472	0.966954	-3.63597	2.89623
yREF_FSRU	m	-10.4444	1.78699	-14.469	-5.85827
zREF_FSRU	m	-9.3608	0.0739415	-9.64302	-9.076
ROLL_FSRU	rad	-0.00220371	0.0058246	-0.0253072	0.0196616
PITCH_FSRU	rad	7.40514E-06	0.00282996	-0.0104362	0.0101737
YAW_FSRU	rad	0.00397276	0.020568	-0.0524541	0.059704
WaveHeight-COG	m	-0.00004597	0.550353	-2.21619	2.19798
windSpeed	ms-1	21.9955	2.36314	15.2551	28.7331
FairleadTension1	kN	1468.66	373.708	427.849	2924.55
FairleadTension2	kN	1621.53	405.58	469.836	3124.93
FairleadTension3	kN	1647.98	416.173	395.639	3588.61
FairleadTension4	kN	1464.38	369.818	371.163	3195.31
FairleadTension5	kN	101.452	55.5432	62.604	658.718
FairleadTension6	kN	95.4571	51.7759	62.3893	634.321
FairleadTension7	kN	139.099	65.243	67.6484	687.054
FairleadTension8	kN	148.956	69.0583	67.9881	719.817
AnchorTension1	kN	1443.34	373.722	402.801	2898.87
AnchorTension2	kN	1596.21	405.597	444.785	3099.33
AnchorTension3	kN	1625.9	416.198	373.167	3567.69
AnchorTension4	kN	1442.29	369.841	348.69	3174.38
AnchorTension5	kN	76.0112	55.5245	37.7705	633.105
AnchorTension6	kN	70.0164	51.7578	37.5586	608.707
AnchorTension7	kN	108.266	65.2122	38.291	656.762
AnchorTension8	kN	118.123	69.0273	38.586	689.527
xManExc	m	-4.50339	1.31335	-8.78247	-0.445607
yManExc	m	-10.258	1.83892	-14.5038	-6.2258
zManExc	m	-13.1534	0.158139	-13.7565	-12.5224
xFairLeadML6	m	-4.48681	1.13447	-8.42154	-0.963791
yFairLeadML6	m	-9.88181	3.14675	-18.2928	-1.84629
zFairLeadML6	m	-13.1317	0.424134	-14.6485	-11.5764
xFairLeadML10	m	-4.49178	1.37134	-8.83794	-0.117203
yFairLeadML10	m	-10.7497	2.58743	-17.6606	-3.67893
zFairLeadML10	m	-13.1599	0.235846	-14.3146	-12.2463
xFairLeadML12	m	-4.44439	1.19491	-8.21379	-0.481734
yFairLeadML12	m	-10.9445	3.3836	-20.1692	-1.36543
zFairLeadML12	m	-13.1392	0.344511	-14.5521	-11.9219

loaded_120degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.78924	0.632969	1.24389	5.74611
yCOG_FSRU	m	-8.02353	2.47872	-12.6115	-3.07449
zCOG_FSRU	m	9.18737	0.0865623	8.88482	9.49476
xREF_FSRU	m	0.298963	0.632555	-2.23738	2.3173
yREF_FSRU	m	-8.11107	2.42978	-12.7921	-3.19419
zREF_FSRU	m	-10.8116	0.0817667	-11.0946	-10.5255
ROLL_FSRU	rad	-0.00685262	0.00697677	-0.0244145	0.0108137
PITCH_FSRU	rad	7.65465E-06	0.00193315	-0.00726429	0.00696182
YAW_FSRU	rad	-0.0141842	0.0131237	-0.0564768	0.0309517
WaveHeight-COG	m	-0.000437226	0.574478	-2.30954	2.27965
windSpeed	ms-1	19.6956	2.13925	13.6612	25.7395
FairleadTension1	kN	1207.08	405.309	250.139	2380.62
FairleadTension2	kN	1361.03	472.609	252.733	2592.77
FairleadTension3	kN	1202.37	450.29	190.855	2446.09
FairleadTension4	kN	1113.01	416.843	189.762	2209.13
FairleadTension5	kN	153.906	60.9005	62.7789	654.423
FairleadTension6	kN	144.254	59.1775	62.4873	635.805
FairleadTension7	kN	115.305	45.4063	66.7791	404.125
FairleadTension8	kN	122.604	47.3267	67.1268	410.512
AnchorTension1	kN	1183.59	405.3	226.912	2356.57
AnchorTension2	kN	1337.54	472.604	229.516	2568.73
AnchorTension3	kN	1182.1	450.288	170.57	2425.7
AnchorTension4	kN	1092.74	416.84	169.475	2188.44
AnchorTension5	kN	130.212	60.8793	39.5532	630.639
AnchorTension6	kN	120.559	59.1563	39.2622	612.058
AnchorTension7	kN	86.2161	45.365	38.3518	374.919
AnchorTension8	kN	93.5158	47.2838	38.6685	381.306
xManExc	m	-2.92478	0.826491	-5.90337	-0.346429
yManExc	m	-8.33815	2.69325	-13.6797	-2.6884
zManExc	m	-20.1429	0.185315	-20.8846	-19.517
xFairLeadML6	m	-3.08777	0.702542	-5.81206	-0.947221
yFairLeadML6	m	-9.92059	3.63964	-19.0109	-0.462083
zFairLeadML6	m	-20.0743	0.328027	-21.3236	-18.8608
xFairLeadML10	m	-2.85526	0.881455	-5.92361	0.00231712
yFairLeadML10	m	-6.83622	2.14912	-12.9782	-0.24568
zFairLeadML10	m	-20.1652	0.194053	-20.8602	-19.5774
xFairLeadML12	m	-2.97675	0.786463	-5.83875	-0.430499
yFairLeadML12	m	-6.15712	2.21612	-13.2149	1.66806
zFairLeadML12	m	-20.1017	0.22454	-20.9189	-19.2618

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name	units	mean	std	min	max
xCOG_FSRU	m	4.36119	0.664041	1.92505	6.64566
yCOG_FSRU	m	-8.53515	2.33553	-13.1249	-4.25132
zCOG_FSRU	m	3.73993	0.0794498	3.45261	4.03321
xREF_FSRU	m	0.294701	0.664653	-2.13838	2.58101
yREF_FSRU	m	-8.49947	2.31947	-13.1458	-4.09149
zREF_FSRU	m	-9.35985	0.0733513	-9.62356	-9.09158
ROLL_FSRU	rad	-0.0017269	0.00529339	-0.0195318	0.0161558
PITCH_FSRU	rad	-1.10486E-06	0.00206024	-0.00783458	0.00734445
YAW_FSRU	rad	-0.0143371	0.0141183	-0.0514645	0.022195
WaveHeight-COG	m	-0.00036961	0.574496	-2.31717	2.1867
windSpeed	ms-1	19.6956	2.13925	13.6612	25.7395
FairleadTension1	kN	1208.81	377.889	354.612	2273.12
FairleadTension2	kN	1365.36	438.867	395.946	2575.09
FairleadTension3	kN	1206.23	419.983	274.124	2374.32
FairleadTension4	kN	1112.34	384.083	267.462	2199.8
FairleadTension5	kN	157.482	64.2603	64.6753	455.069
FairleadTension6	kN	148.062	62.3412	64.3044	455.778
FairleadTension7	kN	115.803	39.4708	68.622	346.374
FairleadTension8	kN	123.268	41.3391	69.0228	366.716
AnchorTension1	kN	1183.47	377.889	329.717	2247.61
AnchorTension2	kN	1340.02	438.873	371.053	2549.64
AnchorTension3	kN	1184.12	419.993	252.131	2351.64
AnchorTension4	kN	1090.23	384.091	245.468	2177.73
AnchorTension5	kN	132.05	64.2424	39.9325	429.451
AnchorTension6	kN	122.629	62.3239	39.5639	429.996
AnchorTension7	kN	84.9703	39.4329	38.7942	315.114
AnchorTension8	kN	92.435	41.2996	39.169	335.663
xManExc	m	-3.50688	0.882109	-6.3851	-0.853175
yManExc	m	-8.89082	2.48713	-13.4924	-4.05585
zManExc	m	-13.143	0.134556	-13.6738	-12.6135
xFairLeadML6	m	-3.67183	0.743465	-6.26501	-1.25907
yFairLeadML6	m	-10.4021	3.41614	-18.043	-3.10161
zFairLeadML6	m	-13.1253	0.327645	-14.3096	-11.8518
xFairLeadML10	m	-3.43377	0.944423	-6.42469	-0.664583
yFairLeadML10	m	-7.28428	2.25292	-13.1704	-1.32846
zFairLeadML10	m	-13.1489	0.163595	-13.7374	-12.5171
xFairLeadML12	m	-3.55576	0.838956	-6.29897	-0.95284
yFairLeadML12	m	-6.58869	2.48674	-13.4944	0.346838
zFairLeadML12	m	-13.133	0.23381	-13.9727	-12.3009

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name	units	mean	std	min	max
xCOG_FSRU	m	3.74727	0.849452	1.02567	6.55359
yCOG_FSRU	m	-8.33158	2.82334	-13.8264	-2.5726
zCOG_FSRU	m	9.18716	0.0970638	8.83494	9.54009
xREF_FSRU	m	0.257178	0.848771	-2.44396	3.06352
yREF_FSRU	m	-8.42791	2.77041	-14.0284	-2.43247
zREF_FSRU	m	-10.8117	0.0914665	-11.1398	-10.4835
ROLL_FSRU	rad	-0.00718126	0.00761155	-0.0274168	0.0138382
PITCH_FSRU	rad	8.65142E-06	0.00228728	-0.0086996	0.00825868
YAW_FSRU	rad	-0.0135465	0.0178814	-0.0569244	0.0346834
WaveHeight-COG	m	-0.000614344	0.626152	-2.51405	2.4632
windSpeed	ms-1	20.2956	2.19809	14.0755	26.5219
FairleadTension1	kN	1276.69	482.434	208.021	3053.3
FairleadTension2	kN	1436.73	556.495	230.782	3282.48
FairleadTension3	kN	1269	537.139	155.378	3087.33
FairleadTension4	kN	1171.53	496.42	147.528	2914.48
FairleadTension5	kN	160.783	89.3151	62.4716	754.621
FairleadTension6	kN	151.333	86.76	62.0309	729.907
FairleadTension7	kN	121.597	59.6109	66.0197	495.791
FairleadTension8	kN	128.843	61.9501	66.3014	494.401
AnchorTension1	kN	1253.2	482.427	185.083	3029.83
AnchorTension2	kN	1413.25	556.493	207.809	3258.99
AnchorTension3	kN	1248.74	537.138	135.124	3066.88
AnchorTension4	kN	1151.27	496.416	127.296	2894.02
AnchorTension5	kN	137.086	89.2965	39.3055	730.668
AnchorTension6	kN	127.636	86.7414	39.0089	705.953
AnchorTension7	kN	92.5055	59.5707	38.1077	465.763
AnchorTension8	kN	99.7518	61.9079	38.3896	464.367
xManExc	m	-2.9806	1.11718	-6.04378	0.184833
yManExc	m	-8.62645	3.05931	-14.196	-2.48761
zManExc	m	-20.1494	0.206535	-20.8637	-19.4302
xFairLeadML6	m	-3.14403	0.946988	-5.89066	-0.20575
yFairLeadML6	m	-10.1476	4.27452	-19.7079	0.560002
zFairLeadML6	m	-20.0776	0.381763	-21.4043	-18.6129
xFairLeadML10	m	-2.90585	1.19222	-6.04022	0.350519
yFairLeadML10	m	-7.20325	2.66208	-14.1389	0.0516732
zFairLeadML10	m	-20.1726	0.221053	-20.9171	-19.4531
xFairLeadML12	m	-3.01827	1.06107	-5.92266	0.0748397
yFairLeadML12	m	-6.55512	2.95221	-14.4911	1.55461
zFairLeadML12	m	-20.106	0.266532	-21.0671	-19.0453

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name	units	mean	std	min	max
xCOG_FSRU	m	4.32405	0.874183	1.25536	6.73432
yCOG_FSRU	m	-8.90317	2.31151	-13.8611	-4.51922
zCOG_FSRU	m	3.7397	0.0884206	3.40933	4.07395
xREF_FSRU	m	0.257813	0.875093	-2.80422	2.66715
yREF_FSRU	m	-8.87063	2.29896	-13.8261	-4.4272
zREF_FSRU	m	-9.36002	0.0813206	-9.66207	-9.05486
ROLL_FSRU	rad	-0.00181589	0.00577804	-0.0230914	0.0197264
PITCH_FSRU	rad	1.49172E-07	0.00245424	-0.00943302	0.0083456
YAW_FSRU	rad	-0.0138502	0.0186444	-0.0646607	0.0417944
WaveHeight-COG	m	-0.000515021	0.626211	-2.51815	2.38361
windSpeed	ms-1	20.2956	2.19809	14.0755	26.5219
FairleadTension1	kN	1278.04	409.183	317.679	2821.28
FairleadTension2	kN	1441.54	468.234	348.387	2995.21
FairleadTension3	kN	1272.36	455.194	224.068	2613.55
FairleadTension4	kN	1169.83	416.611	223.773	2482.68
FairleadTension5	kN	162.651	91.3206	63.4663	868.258
FairleadTension6	kN	153.371	89.1078	63.2673	858.163
FairleadTension7	kN	118.255	48.8316	67.887	471.166
FairleadTension8	kN	125.874	51.3743	68.1951	477.953
AnchorTension1	kN	1252.7	409.182	292.996	2795.84
AnchorTension2	kN	1416.21	468.239	323.659	2969.79
AnchorTension3	kN	1250.26	455.204	201.875	2591.43
AnchorTension4	kN	1147.72	416.618	201.587	2460.54
AnchorTension5	kN	137.218	91.3045	38.5367	842.802
AnchorTension6	kN	127.938	89.0924	38.3386	832.706
AnchorTension7	kN	87.4216	48.7924	38.2018	439.877
AnchorTension8	kN	95.0408	51.3336	38.5307	446.663
xManExc	m	-3.55503	1.16188	-7.13793	-0.422013
yManExc	m	-9.24552	2.46832	-14.5995	-4.30994
zManExc	m	-13.145	0.153452	-13.7226	-12.5348
xFairLeadML6	m	-3.72219	0.981223	-7.00325	-1.12295
yFairLeadML6	m	-10.7071	3.6931	-21.162	-0.687031
zFairLeadML6	m	-13.1265	0.384762	-14.4516	-11.6517
xFairLeadML10	m	-3.47587	1.24277	-7.15824	-0.0463432
yFairLeadML10	m	-7.69643	2.52634	-14.487	-1.29078
zFairLeadML10	m	-13.151	0.195209	-13.8446	-12.4359
xFairLeadML12	m	-3.59007	1.10291	-7.0351	-0.482108
yFairLeadML12	m	-7.02406	3.04377	-15.5368	1.1945
zFairLeadML12	m	-13.1342	0.283369	-14.1674	-12.1218

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name	units	mean	std	min	max
xCOG_FSRU	m	3.37693	0.8769	0.630338	5.6889
yCOG_FSRU	m	-4.86634	1.02294	-7.7441	-2.00299
zCOG_FSRU	m	9.1885	0.0904197	8.87614	9.47692
xREF_FSRU	m	-0.112515	0.875498	-2.86536	2.17659
yREF_FSRU	m	-4.91902	1.03485	-8.00597	-1.96988
zREF_FSRU	m	-10.811	0.0856394	-11.1082	-10.5351
ROLL_FSRU	rad	-0.00413146	0.00429916	-0.0174529	0.0103664
PITCH_FSRU	rad	2.08028E-05	0.00191263	-0.00681799	0.00676012
YAW_FSRU	rad	-0.00857636	0.0213792	-0.0531803	0.0389453
WaveHeight-COG	m	-0.000772071	0.675155	-2.71164	2.54501
windSpeed	ms-1	20.6956	2.23715	14.3523	27.0429
FairleadTension1	kN	840.089	236.4	291.182	1720.59
FairleadTension2	kN	915.783	258.814	293.803	1909.08
FairleadTension3	kN	675.32	268.081	149.759	1572.59
FairleadTension4	kN	629.151	235.026	151.035	1421.2
FairleadTension5	kN	227.214	165.764	62.5239	1017.28
FairleadTension6	kN	223.894	171.084	62.2982	1036.15
FairleadTension7	kN	181.105	88.7079	69.0028	666.046
FairleadTension8	kN	190.109	90.4441	72.6209	686.104
AnchorTension1	kN	816.549	236.376	267.679	1696.4
AnchorTension2	kN	892.246	258.795	270.299	1884.93
AnchorTension3	kN	655	268.071	129.199	1552.26
AnchorTension4	kN	608.828	235.013	130.254	1400.77
AnchorTension5	kN	203.548	165.755	39.3237	993.146
AnchorTension6	kN	200.228	171.075	39.0995	1012.04
AnchorTension7	kN	152.048	88.6874	40.032	636.756
AnchorTension8	kN	161.052	90.4228	43.6503	657.223
xManExc	m	-3.44555	1.20375	-6.66968	-0.495559
yManExc	m	-5.05934	1.04917	-8.58644	-2.13755
zManExc	m	-20.0904	0.156646	-20.5738	-19.514
xFairLeadML6	m	-3.56011	1.00652	-6.51943	-1.04663
yFairLeadML6	m	-6.01442	2.73207	-13.756	0.327694
zFairLeadML6	m	-20.0509	0.326081	-21.1218	-18.9046
xFairLeadML10	m	-3.38621	1.28526	-6.72106	-0.21412
yFairLeadML10	m	-4.15162	2.32446	-9.6504	1.18451
zFairLeadML10	m	-20.1021	0.144391	-20.6551	-19.5573
xFairLeadML12	m	-3.45223	1.12155	-6.55471	-0.611633
yFairLeadML12	m	-3.73974	3.29489	-11.2659	3.59671
zFairLeadML12	m	-20.0631	0.205623	-20.8642	-19.2696

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name	units	mean	std	min	max
xCOG_FSRU	m	4.05269	0.72499	1.27106	6.5643
yCOG_FSRU	m	-5.04259	1.82821	-9.60712	-0.657742
zCOG_FSRU	m	3.74147	0.0850577	3.45225	4.02704
xREF_FSRU	m	-0.0139909	0.724949	-2.78979	2.50151
yREF_FSRU	m	-5.01019	1.82403	-9.70604	-0.511919
zREF_FSRU	m	-9.35815	0.0789156	-9.62651	-9.0988
ROLL_FSRU	rad	-0.000967907	0.00662562	-0.0230332	0.0220696
PITCH_FSRU	rad	1.46663E-05	0.0019986	-0.00715098	0.00706091
YAW_FSRU	rad	-0.0110848	0.0139079	-0.04827	0.0283641
WaveHeight-COG	m	-0.000711625	0.67511	-2.71487	2.65275
windSpeed	ms-1	20.6956	2.23715	14.3523	27.0429
FairleadTension1	kN	818.338	280.116	206.238	1803.8
FairleadTension2	kN	897.886	316.808	214.951	1925.13
FairleadTension3	kN	662.881	297.869	111.297	1861.54
FairleadTension4	kN	623.578	271.505	115.004	1691.62
FairleadTension5	kN	205.542	98.0791	67.2584	854.8
FairleadTension6	kN	199.624	99.7767	65.1386	848.979
FairleadTension7	kN	167.75	65.77	69.3552	568.318
FairleadTension8	kN	176.191	66.8674	70.8624	591.82
AnchorTension1	kN	792.968	280.101	181.387	1777.87
AnchorTension2	kN	872.521	316.798	190.101	1899.2
AnchorTension3	kN	640.734	297.866	89.4455	1839.71
AnchorTension4	kN	601.429	271.501	93.1529	1669.85
AnchorTension5	kN	180.116	98.0654	42.298	829.382
AnchorTension6	kN	174.197	99.7641	40.1781	823.561
AnchorTension7	kN	136.928	65.7332	39.5207	537.492
AnchorTension8	kN	145.37	66.829	41.0199	560.992
xManExc	m	-3.87563	0.886858	-7.13048	-0.956024
yManExc	m	-5.32445	1.91896	-10.7188	-0.669951
zManExc	m	-13.1277	0.148633	-13.7261	-12.5503
xFairLeadML6	m	-4.00348	0.784131	-6.99559	-1.34532
yFairLeadML6	m	-6.48657	2.74686	-15.1747	1.21706
zFairLeadML6	m	-13.1191	0.325928	-14.2654	-11.9208
xFairLeadML10	m	-3.81898	0.93232	-7.15804	-0.772942
yFairLeadML10	m	-4.07613	2.04918	-10.4632	1.97137
zFairLeadML10	m	-13.129	0.169173	-13.7101	-12.5387
xFairLeadML12	m	-3.91322	0.846303	-7.02841	-1.05296
yFairLeadML12	m	-3.53755	2.44078	-10.949	3.62906
zFairLeadML12	m	-13.1193	0.221839	-13.8981	-12.3112

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name	units	mean	std	min	max
xCOG_FSRU	m	3.41309	0.849762	0.899806	5.71451
yCOG_FSRU	m	-5.12446	1.1505	-8.65641	-0.814437
zCOG_FSRU	m	9.18846	0.0983775	8.85746	9.51154
xREF_FSRU	m	-0.0766154	0.848553	-2.63895	2.24212
yREF_FSRU	m	-5.17884	1.15581	-8.72579	-0.8207
zREF_FSRU	m	-10.811	0.0931359	-11.1225	-10.5046
ROLL_FSRU	rad	-0.00442456	0.00449973	-0.0185178	0.00871182
PITCH_FSRU	rad	2.20458E-05	0.00209329	-0.00735757	0.00749293
YAW_FSRU	rad	-0.00977171	0.0188363	-0.0534321	0.0399156
WaveHeight-COG	m	-0.000553042	0.700421	-2.81277	2.76523
windSpeed	ms-1	21.4955	2.31485	14.9073	28.0836
FairleadTension1	kN	877.201	261.501	177.824	1967.14
FairleadTension2	kN	960.073	285.343	182.82	2131.35
FairleadTension3	kN	702.134	282.547	97.0297	1898.94
FairleadTension4	kN	655.08	252.725	97.5087	1747.04
FairleadTension5	kN	214.583	142.323	62.2016	916.262
FairleadTension6	kN	209.724	145.26	61.971	925.108
FairleadTension7	kN	167.132	69.9377	70.553	525.206
FairleadTension8	kN	176.378	72.3321	75.1227	542.245
AnchorTension1	kN	853.666	261.476	154.423	1943.71
AnchorTension2	kN	936.542	285.322	159.419	2107.93
AnchorTension3	kN	681.818	282.537	76.5897	1878.8
AnchorTension4	kN	634.762	252.712	77.0591	1726.91
AnchorTension5	kN	190.914	142.311	39.4795	892.205
AnchorTension6	kN	186.054	145.248	39.2514	901.051
AnchorTension7	kN	138.072	69.9027	42.0933	494.678
AnchorTension8	kN	147.319	72.2962	46.6633	511.729
xManExc	m	-3.38564	1.11358	-6.38831	-0.56514
yManExc	m	-5.34608	1.17323	-9.20545	-1.3054
zManExc	m	-20.096	0.168734	-20.7473	-19.5276
xFairLeadML6	m	-3.50813	0.950059	-6.14152	-1.08533
yFairLeadML6	m	-6.43029	2.51517	-13.1192	-0.0478947
zFairLeadML6	m	-20.0537	0.355938	-21.2863	-18.7961
xFairLeadML10	m	-3.32677	1.18309	-6.37926	-0.398686
yFairLeadML10	m	-4.30672	2.16514	-9.29396	0.941298
zFairLeadML10	m	-20.1086	0.156393	-20.6721	-19.5302
xFairLeadML12	m	-3.40573	1.04863	-6.17492	-0.723701
yFairLeadML12	m	-3.83761	2.98538	-11.2274	2.44683
zFairLeadML12	m	-20.0668	0.225323	-20.8709	-19.1886

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name	units	mean	std	min	max
xCOG_FSRU	m	4.055	0.765842	1.61788	6.42017
yCOG_FSRU	m	-5.32398	2.2	-9.91595	-0.0675356
zCOG_FSRU	m	3.74129	0.0916708	3.43037	4.05966
xREF_FSRU	m	-0.0116547	0.765981	-2.45302	2.34028
yREF_FSRU	m	-5.29006	2.19299	-9.98095	0.194261
zREF_FSRU	m	-9.35829	0.0849485	-9.64379	-9.06886
ROLL_FSRU	rad	-0.00103868	0.00696905	-0.0256418	0.0241417
PITCH_FSRU	rad	1.69741E-05	0.00220551	-0.0078239	0.00797597
YAW_FSRU	rad	-0.0116872	0.0148351	-0.0529039	0.0343894
WaveHeight-COG	m	-0.000494929	0.700557	-2.81593	2.69255
windSpeed	ms-1	21.4955	2.31485	14.9073	28.0836
FairleadTension1	kN	865.935	317.443	180.433	2036.71
FairleadTension2	kN	953.514	361.839	185.976	2205.32
FairleadTension3	kN	701.905	339.974	100.555	1972.43
FairleadTension4	kN	658.317	310.074	105.437	1791.16
FairleadTension5	kN	204.727	101.834	64.9159	803.872
FairleadTension6	kN	198.91	103.827	64.4954	804.32
FairleadTension7	kN	166.398	71.3675	69.0374	608.984
FairleadTension8	kN	174.77	72.2264	69.5033	614.238
AnchorTension1	kN	840.569	317.429	155.655	2011.11
AnchorTension2	kN	928.153	361.83	161.198	2179.08
AnchorTension3	kN	679.761	339.973	78.9024	1950.02
AnchorTension4	kN	636.171	310.071	83.7843	1768.7
AnchorTension5	kN	179.3	101.818	39.8919	777.869
AnchorTension6	kN	173.482	103.812	39.5447	778.317
AnchorTension7	kN	135.577	71.3295	38.9988	578.009
AnchorTension8	kN	143.949	72.1865	39.3972	583.274
xManExc	m	-3.86242	0.94537	-6.60992	-0.920975
yManExc	m	-5.62107	2.30542	-10.8052	-0.263825
zManExc	m	-13.1293	0.159364	-13.7762	-12.5189
xFairLeadML6	m	-3.9985	0.830111	-6.45674	-1.45374
yFairLeadML6	m	-6.8465	3.17026	-15.1919	1.27958
zFairLeadML6	m	-13.1202	0.357261	-14.3715	-11.7801
xFairLeadML10	m	-3.80138	0.997188	-6.66534	-0.692098
yFairLeadML10	m	-4.30528	2.35113	-10.8438	3.13616
zFairLeadML10	m	-13.1305	0.184939	-13.789	-12.4979
xFairLeadML12	m	-3.90017	0.903435	-6.44459	-1.03906
yFairLeadML12	m	-3.73736	2.71445	-12.0745	4.93207
zFairLeadML12	m	-13.1201	0.246701	-14.0338	-12.1932

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name	units	mean	std	min	max
xCOG_FSRU	m	3.11002	0.668174	1.02539	5.19864
yCOG_FSRU	m	0.980085	1.22551	-2.61591	5.0457
zCOG_FSRU	m	9.18967	0.0698834	8.94466	9.44033
xREF_FSRU	m	-0.379206	0.667538	-2.44051	1.70129
yREF_FSRU	m	0.97417	1.2303	-2.58182	5.08897
zREF_FSRU	m	-10.8102	0.0658416	-11.0426	-10.5732
ROLL_FSRU	rad	2.20052E-05	0.00113822	-0.0043274	0.00493026
PITCH_FSRU	rad	3.18511E-05	0.00161717	-0.00531517	0.00570517
YAW_FSRU	rad	0.00182255	0.0172965	-0.0365315	0.040685
WaveHeight-COG	m	-0.00029114	0.69903	-2.80281	2.72331
windSpeed	ms-1	18.5957	2.03056	12.9015	24.3022
FairleadTension1	kN	331.061	148.337	92.9502	1186.29
FairleadTension2	kN	328.264	155.117	89.2069	1248
FairleadTension3	kN	261.657	162.298	60.7691	1014.62
FairleadTension4	kN	257.675	149.987	62.6164	960.816
FairleadTension5	kN	324.035	160.23	75.9859	998.983
FairleadTension6	kN	334.535	176.714	73.2979	1096.03
FairleadTension7	kN	440.398	173.455	128.521	1220.29
FairleadTension8	kN	430.218	160.115	131.691	1175.75
AnchorTension1	kN	307.452	148.322	69.6061	1162.39
AnchorTension2	kN	304.654	155.105	65.8621	1224.11
AnchorTension3	kN	241.272	162.291	40.5654	994.402
AnchorTension4	kN	237.29	149.978	42.4003	940.583
AnchorTension5	kN	300.415	160.221	52.4603	975.223
AnchorTension6	kN	310.916	176.706	49.7663	1072.28
AnchorTension7	kN	411.399	173.442	99.5558	1191.08
AnchorTension8	kN	401.218	160.1	102.728	1146.54
xManExc	m	-3.90617	0.728763	-6.61337	-1.40708
yManExc	m	1.02668	1.26989	-2.88019	4.56088
zManExc	m	-20.0108	0.109424	-20.3894	-19.6171
xFairLeadML6	m	-3.90438	0.677518	-6.31611	-1.63595
yFairLeadML6	m	1.21723	2.4686	-5.44226	8.35217
zFairLeadML6	m	-20.0143	0.269075	-20.9246	-19.1053
xFairLeadML10	m	-3.89577	0.752431	-6.64689	-1.32032
yFairLeadML10	m	0.818476	2.02684	-4.26046	6.71618
zFairLeadML10	m	-20.0071	0.0930877	-20.3277	-19.6668
xFairLeadML12	m	-3.87166	0.69326	-6.30854	-1.49982
yFairLeadML12	m	0.731351	2.74435	-6.19329	7.66615
zFairLeadML12	m	-20.0057	0.169483	-20.5675	-19.3899

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name	units	mean	std	min	max
xCOG_FSRU	m	3.66037	0.590315	1.90501	5.56501
yCOG_FSRU	m	1.03726	1.20651	-2.39929	5.02308
zCOG_FSRU	m	3.74262	0.0688237	3.50147	3.99025
xREF_FSRU	m	-0.406429	0.590275	-2.19226	1.46003
yREF_FSRU	m	1.03065	1.2206	-2.37697	5.23636
zREF_FSRU	m	-9.35702	0.0635484	-9.57918	-9.12554
ROLL_FSRU	rad	0.000107786	0.00588539	-0.0236522	0.0255869
PITCH_FSRU	rad	2.94049E-05	0.00168739	-0.00542427	0.00571795
YAW_FSRU	rad	0.00197357	0.0169954	-0.0349284	0.0371148
WaveHeight-COG	m	-0.000298026	0.699185	-2.82009	2.6238
windSpeed	ms-1	18.5957	2.03056	12.9015	24.3022
FairleadTension1	kN	322.625	119.504	107.308	796.178
FairleadTension2	kN	319.32	124.796	101.176	819.076
FairleadTension3	kN	255.125	143.758	61.8374	853.29
FairleadTension4	kN	251.543	131.709	62.3299	796.802
FairleadTension5	kN	314.286	133.655	106.796	980.136
FairleadTension6	kN	323.89	148.911	103.657	1067.18
FairleadTension7	kN	430.255	139.442	127.52	1030.1
FairleadTension8	kN	420.869	128.124	132.638	990.343
AnchorTension1	kN	297.219	119.484	82.5994	770.293
AnchorTension2	kN	293.914	124.778	76.5	793.283
AnchorTension3	kN	232.945	143.752	39.9884	830.929
AnchorTension4	kN	229.362	131.701	40.4783	774.438
AnchorTension5	kN	288.872	133.647	81.4853	954.598
AnchorTension6	kN	298.477	148.905	78.3731	1041.65
AnchorTension7	kN	399.462	139.417	97.5244	999.331
AnchorTension8	kN	390.075	128.096	102.647	959.545
xManExc	m	-4.51432	0.647783	-6.44797	-2.33856
yManExc	m	1.08491	1.23698	-3.04645	4.24612
zManExc	m	-13.1065	0.129129	-13.6005	-12.5867
xFairLeadML6	m	-4.51041	0.594315	-6.28048	-2.54816
yFairLeadML6	m	1.29267	2.38307	-5.9385	7.17922
zFairLeadML6	m	-13.1103	0.275261	-14.0354	-12.2155
xFairLeadML10	m	-4.50487	0.673865	-6.4036	-2.1742
yFairLeadML10	m	0.860876	2.02957	-4.44992	8.05099
zFairLeadML10	m	-13.1024	0.142315	-13.6668	-12.4848
xFairLeadML12	m	-4.47959	0.614569	-6.30436	-2.41699
yFairLeadML12	m	0.766675	2.73998	-6.14831	9.76092
zFairLeadML12	m	-13.1019	0.185327	-13.7543	-12.4318

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name	units	mean	std	min	max
xCOG_FSRU	m	3.05937	0.771803	0.651464	5.70333
yCOG_FSRU	m	1.21489	1.30412	-2.45603	5.29083
zCOG_FSRU	m	9.18947	0.0786298	8.91699	9.46741
xREF_FSRU	m	-0.429715	0.770974	-2.91322	2.20146
yREF_FSRU	m	1.20863	1.31193	-2.34103	5.40701
zREF_FSRU	m	-10.8104	0.0742573	-11.0688	-10.5484
ROLL_FSRU	rad	-5.96634E-06	0.00151698	-0.00672935	0.00551248
PITCH_FSRU	rad	3.47913E-05	0.0017512	-0.0057588	0.00600661
YAW_FSRU	rad	0.00176169	0.0215832	-0.0403785	0.0454183
WaveHeight-COG	m	-0.000361044	0.724548	-2.92376	2.75232
windSpeed	ms-1	19.2957	2.09985	13.3856	25.2173
FairleadTension1	kN	344.209	176.729	76.6119	1112.28
FairleadTension2	kN	341.85	184.257	73.9639	1180.48
FairleadTension3	kN	272.098	207.623	59.3317	1232.2
FairleadTension4	kN	265.809	190.99	59.5177	1164.5
FairleadTension5	kN	346.512	200.62	78.0052	1205.18
FairleadTension6	kN	361.595	223.445	74.3066	1291.86
FairleadTension7	kN	475.907	206.729	104.505	1486.71
FairleadTension8	kN	462.534	189.955	110.19	1365.16
AnchorTension1	kN	320.601	176.717	53.8592	1088.42
AnchorTension2	kN	318.242	184.247	51.2111	1156.62
AnchorTension3	kN	251.714	207.616	39.0382	1211.52
AnchorTension4	kN	245.424	190.982	39.2237	1143.79
AnchorTension5	kN	322.893	200.61	54.5754	1180.97
AnchorTension6	kN	337.977	223.437	50.8766	1268.63
AnchorTension7	kN	446.911	206.716	75.7264	1458.18
AnchorTension8	kN	433.537	189.939	81.4153	1336.19
xManExc	m	-3.95785	0.829591	-6.44922	-1.48063
yManExc	m	1.25855	1.36299	-3.45837	5.61234
zManExc	m	-20.0116	0.122472	-20.4457	-19.602
xFairLeadML6	m	-3.96544	0.76958	-6.32471	-1.40484
yFairLeadML6	m	1.44316	2.96356	-7.64456	9.61131
zFairLeadML6	m	-20.0151	0.294033	-21.006	-19.053
xFairLeadML10	m	-3.93785	0.860989	-6.52807	-1.27303
yFairLeadML10	m	1.05654	2.40908	-4.94834	8.50046
zFairLeadML10	m	-20.0076	0.100979	-20.3793	-19.6824
xFairLeadML12	m	-3.91026	0.792791	-6.31762	-1.43928
yFairLeadML12	m	0.973103	3.34041	-7.09666	10.3553
zFairLeadML12	m	-20.0059	0.182022	-20.6056	-19.3965

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name	units	mean	std	min	max
xCOG_FSRU	m	3.66239	0.630816	1.71265	5.67914
yCOG_FSRU	m	1.18247	1.25976	-1.76872	4.47257
zCOG_FSRU	m	3.7427	0.0764342	3.47358	4.00994
xREF_FSRU	m	-0.404728	0.630579	-2.35393	1.62366
yREF_FSRU	m	1.17556	1.2687	-1.91852	4.55142
zREF_FSRU	m	-9.35682	0.070722	-9.60531	-9.1086
ROLL_FSRU	rad	0.000125048	0.00714081	-0.0279117	0.0297801
PITCH_FSRU	rad	3.10997E-05	0.00182775	-0.00638187	0.00598882
YAW_FSRU	rad	0.00210344	0.0116518	-0.0305198	0.0374858
WaveHeight-COG	m	-0.000355152	0.724475	-2.92387	2.76571
windSpeed	ms-1	19.2957	2.09985	13.3856	25.2173
FairleadTension1	kN	310.32	117.649	110.921	856.872
FairleadTension2	kN	305.319	121.171	104.537	874.086
FairleadTension3	kN	235.536	110.326	71.1436	754.85
FairleadTension4	kN	235.278	104.799	74.718	708.049
FairleadTension5	kN	311.713	121.193	102.623	883.89
FairleadTension6	kN	319.574	131.822	99.7051	953.163
FairleadTension7	kN	436.328	144.815	169.099	1030.68
FairleadTension8	kN	426.953	135.293	171.624	983.682
AnchorTension1	kN	284.914	117.623	86.0163	831.343
AnchorTension2	kN	279.913	121.147	79.6318	848.558
AnchorTension3	kN	213.354	110.313	49.133	732.721
AnchorTension4	kN	213.096	104.784	52.7075	685.917
AnchorTension5	kN	286.299	121.18	77.4112	858.447
AnchorTension6	kN	294.161	131.81	74.5004	927.723
AnchorTension7	kN	405.536	144.784	138.971	999.158
AnchorTension8	kN	396.16	135.259	141.496	952.161
xManExc	m	-4.51269	0.661512	-6.55351	-2.49363
yManExc	m	1.23457	1.28129	-2.01638	4.92427
zManExc	m	-13.1063	0.147698	-13.7339	-12.4946
xFairLeadML6	m	-4.49963	0.636341	-6.47332	-2.47257
yFairLeadML6	m	1.4554	1.90496	-3.74328	6.90426
zFairLeadML6	m	-13.1103	0.298683	-14.1054	-12.0395
xFairLeadML10	m	-4.51239	0.671239	-6.54677	-2.48523
yFairLeadML10	m	0.996227	1.67344	-3.12344	5.59012
zFairLeadML10	m	-13.1018	0.167912	-13.784	-12.4195
xFairLeadML12	m	-4.48962	0.641506	-6.49135	-2.47907
yFairLeadML12	m	0.895112	2.09101	-4.83472	6.89474
zFairLeadML12	m	-13.1014	0.204301	-13.8697	-12.368

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name	units	mean	std	min	max
xCOG_FSRU	m	3.41689	0.70804	0.961941	5.52976
yCOG_FSRU	m	6.05435	1.20133	2.58361	9.30557
zCOG_FSRU	m	9.18857	0.0733087	8.93244	9.45381
xREF_FSRU	m	-0.0727733	0.707266	-2.52743	1.97923
yREF_FSRU	m	6.08053	1.20325	2.57795	9.35466
zREF_FSRU	m	-10.8111	0.0691254	-11.0544	-10.5608
ROLL_FSRU	rad	0.00340457	0.00342228	-0.00813371	0.0151055
PITCH_FSRU	rad	2.18587E-05	0.00167377	-0.00567044	0.00566034
YAW_FSRU	rad	0.0120102	0.0162533	-0.0395847	0.0575024
WaveHeight-COG	m	-0.000312715	0.724024	-2.89818	2.96123
windSpeed	ms-1	18.7957	2.0504	13.041	24.5638
FairleadTension1	kN	131.068	59.677	62.2805	519.075
FairleadTension2	kN	121.515	56.1116	62.0261	491.24
FairleadTension3	kN	165.483	116.661	58.3629	1069.24
FairleadTension4	kN	171.888	115.639	58.5316	1050.87
FairleadTension5	kN	649.088	205.448	187.985	1472.16
FairleadTension6	kN	697.481	233.242	188.343	1650.08
FairleadTension7	kN	928.808	228.13	355.593	1755.05
FairleadTension8	kN	842.798	202.791	334.636	1625.64
AnchorTension1	kN	107.412	59.656	39.1993	495.385
AnchorTension2	kN	97.8585	56.0914	38.9372	467.549
AnchorTension3	kN	145.061	116.653	38.624	1048.46
AnchorTension4	kN	151.467	115.631	38.7922	1030.09
AnchorTension5	kN	625.522	205.436	164.836	1448.35
AnchorTension6	kN	673.918	233.232	165.124	1626.28
AnchorTension7	kN	899.872	228.111	326.621	1725.7
AnchorTension8	kN	813.856	202.767	305.663	1596.65
xManExc	m	-3.7929	0.54158	-5.61255	-2.28258
yManExc	m	6.33975	1.22188	3.30197	9.91966
zManExc	m	-19.9478	0.129133	-20.3889	-19.4765
xFairLeadML6	m	-3.69528	0.604319	-5.84426	-2.01861
yFairLeadML6	m	7.64301	2.28439	0.944285	14.6569
zFairLeadML6	m	-19.9839	0.280936	-20.9363	-18.9902
xFairLeadML10	m	-3.81264	0.527731	-5.61123	-2.38212
yFairLeadML10	m	5.02586	1.98207	-0.743688	10.8136
zFairLeadML10	m	-19.9332	0.118281	-20.3553	-19.5576
xFairLeadML12	m	-3.69229	0.590437	-5.67418	-1.94014
yFairLeadML12	m	4.45036	2.65482	-2.86039	12.6896
zFairLeadML12	m	-19.9634	0.1791	-20.5674	-19.361

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name	units	mean	std	min	max
xCOG_FSRU	m	4.02485	0.634284	2.11671	5.78185
yCOG_FSRU	m	6.40193	1.50082	2.25436	9.85478
zCOG_FSRU	m	3.74138	0.0721731	3.49028	3.99856
xREF_FSRU	m	-0.0417589	0.63457	-1.91569	1.71309
yREF_FSRU	m	6.36159	1.5068	2.03444	9.9621
zREF_FSRU	m	-9.35818	0.0666692	-9.58817	-9.11736
ROLL_FSRU	rad	0.00100857	0.00724968	-0.0280376	0.032189
PITCH_FSRU	rad	1.66764E-05	0.00175142	-0.00570721	0.00588902
YAW_FSRU	rad	0.0131704	0.0145321	-0.0284691	0.049562
WaveHeight-COG	m	-0.00030594	0.724151	-2.88099	2.80788
windSpeed	ms-1	18.7957	2.0504	13.041	24.5638
FairleadTension1	kN	129.441	47.0929	64.1093	406.308
FairleadTension2	kN	120.294	44.5017	63.7904	388.962
FairleadTension3	kN	161.067	90.7165	61.3031	639.852
FairleadTension4	kN	167.936	90.3404	61.5366	635.704
FairleadTension5	kN	645.076	199.738	194.18	1474.28
FairleadTension6	kN	692.396	225.698	190.836	1589.1
FairleadTension7	kN	922.546	225.995	344	1855.92
FairleadTension8	kN	834.27	196.013	337.514	1636.49
AnchorTension1	kN	104.015	47.0641	39.4094	380.153
AnchorTension2	kN	94.8677	44.474	39.0905	362.806
AnchorTension3	kN	138.876	90.7078	39.3981	617.71
AnchorTension4	kN	145.746	90.3307	39.6333	613.53
AnchorTension5	kN	619.693	199.731	169.142	1448.92
AnchorTension6	kN	667.015	225.694	165.798	1563.76
AnchorTension7	kN	891.792	225.971	313.855	1825.15
AnchorTension8	kN	803.51	195.984	307.368	1605.71
xManExc	m	-4.36265	0.478328	-5.94198	-2.77367
yManExc	m	6.73118	1.54682	2.2433	10.4713
zManExc	m	-13.0905	0.147603	-13.6515	-12.5194
xFairLeadML6	m	-4.25156	0.535093	-5.96378	-2.60384
yFairLeadML6	m	8.11386	2.39225	1.49343	14.5135
zFairLeadML6	m	-13.1018	0.286677	-14.0361	-12.1611
xFairLeadML10	m	-4.38712	0.466153	-5.86878	-2.83037
yFairLeadML10	m	5.2441	1.98695	-0.0653507	10.7386
zFairLeadML10	m	-13.0846	0.166557	-13.7645	-12.3596
xFairLeadML12	m	-4.25661	0.528531	-5.92333	-2.63717
yFairLeadML12	m	4.60794	2.50585	-1.66457	11.8547
zFairLeadML12	m	-13.093	0.1966	-13.8113	-12.358

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name	units	mean	std	min	max
xCOG_FSRU	m	3.4451	0.724088	1.06704	5.39114
yCOG_FSRU	m	6.47288	1.29341	2.49728	10.4715
zCOG_FSRU	m	9.18842	0.0836633	8.89149	9.48414
xREF_FSRU	m	-0.0447017	0.72328	-2.32772	1.92563
yREF_FSRU	m	6.49912	1.29218	2.43534	10.5682
zREF_FSRU	m	-10.8112	0.0790529	-11.0923	-10.5322
ROLL_FSRU	rad	0.00361085	0.00379334	-0.00807359	0.0163121
PITCH_FSRU	rad	2.22823E-05	0.00183846	-0.00621124	0.00617447
YAW_FSRU	rad	0.0131756	0.0152114	-0.0286264	0.0497277
WaveHeight-COG	m	-0.000182605	0.747398	-2.87951	3.02884
windSpeed	ms-1	19.5956	2.12941	13.5923	25.609
FairleadTension1	kN	121.207	48.2882	62.3467	433.341
FairleadTension2	kN	111.926	44.4742	62.0684	404.801
FairleadTension3	kN	156.088	101.298	58.4448	808.35
FairleadTension4	kN	163.253	101.997	58.6115	781.593
FairleadTension5	kN	691.344	235.337	173.506	1561.5
FairleadTension6	kN	743.907	263.205	171.478	1685.22
FairleadTension7	kN	994.56	260.304	393.292	1801.19
FairleadTension8	kN	898.247	232.35	366.955	1657.47
AnchorTension1	kN	97.5487	48.2546	39.3379	409.358
AnchorTension2	kN	88.2664	44.4416	39.0622	380.803
AnchorTension3	kN	135.664	101.288	38.6758	787.649
AnchorTension4	kN	142.829	101.985	38.8424	760.858
AnchorTension5	kN	667.783	235.324	150.243	1537.58
AnchorTension6	kN	720.348	263.194	148.204	1661.34
AnchorTension7	kN	965.629	260.282	365.132	1771.79
AnchorTension8	kN	869.311	232.325	338.927	1628.06
xManExc	m	-3.78662	0.595091	-5.55404	-2.01267
yManExc	m	6.78775	1.31801	3.13269	10.7051
zManExc	m	-19.9441	0.14462	-20.4637	-19.4025
xFairLeadML6	m	-3.6773	0.639729	-5.72004	-1.81093
yFairLeadML6	m	8.21517	2.24878	1.43145	14.3443
zFairLeadML6	m	-19.9823	0.311295	-21.0245	-18.9518
xFairLeadML10	m	-3.8107	0.585344	-5.55067	-2.05532
yFairLeadML10	m	5.34432	1.94843	-0.318974	10.702
zFairLeadML10	m	-19.9287	0.129014	-20.3667	-19.5065
xFairLeadML12	m	-3.67971	0.631834	-5.54901	-1.83901
yFairLeadML12	m	4.71256	2.54919	-2.04319	11.9144
zFairLeadML12	m	-19.9608	0.194902	-20.6104	-19.2927

ballasted_210degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.00362	0.791709	0.795654	6.67881
yCOG_FSRU	m	6.84632	1.76575	1.76686	10.9078
zCOG_FSRU	m	3.74107	0.081259	3.45451	4.02303
xREF_FSRU	m	-0.0627801	0.791866	-3.29239	2.6465
yREF_FSRU	m	6.80609	1.77604	1.4931	11.1281
zREF_FSRU	m	-9.35829	0.0752041	-9.62206	-9.09724
ROLL_FSRU	rad	0.0010841	0.00902108	-0.0304487	0.0341603
PITCH_FSRU	rad	1.80507E-05	0.00192192	-0.00692604	0.00651366
YAW_FSRU	rad	0.0133865	0.0181307	-0.0409181	0.0612161
WaveHeight-COG	m	-0.000139691	0.747636	-2.98373	3.02659
windSpeed	ms-1	19.5956	2.12941	13.5923	25.609
FairleadTension1	kN	131.647	65.2578	63.5355	608.644
FairleadTension2	kN	122.422	61.7714	63.2625	587.487
FairleadTension3	kN	166.938	123.345	60.3732	1119.56
FairleadTension4	kN	173.08	121.5	60.5556	1113.77
FairleadTension5	kN	696.115	253.671	161.44	2043.43
FairleadTension6	kN	751.495	286.793	155.749	2303.52
FairleadTension7	kN	999.584	286.139	244.3	2349.89
FairleadTension8	kN	901.281	250.678	250.186	2230.6
AnchorTension1	kN	106.221	65.2341	38.8468	582.725
AnchorTension2	kN	96.9954	61.749	38.5907	561.567
AnchorTension3	kN	144.748	123.338	38.3327	1097.08
AnchorTension4	kN	150.89	121.492	38.4916	1091.29
AnchorTension5	kN	670.735	253.666	136.507	2017.95
AnchorTension6	kN	726.118	286.791	130.797	2278.08
AnchorTension7	kN	968.836	286.116	213.86	2319.27
AnchorTension8	kN	870.527	250.651	219.743	2199.97
xManExc	m	-4.38954	0.603443	-7.05313	-2.35568
yManExc	m	7.17852	1.81066	1.93454	11.4753
zManExc	m	-13.0897	0.1747	-13.81	-12.3966
xFairLeadML6	m	-4.28276	0.67435	-7.22521	-1.99835
yFairLeadML6	m	8.58555	2.86917	-1.99155	17.1414
zFairLeadML6	m	-13.1017	0.31526	-14.1771	-11.9587
xFairLeadML10	m	-4.40775	0.587671	-7.01721	-2.38669
yFairLeadML10	m	5.66785	2.43919	-2.23844	13.4292
zFairLeadML10	m	-13.0831	0.203902	-13.7978	-12.3365
xFairLeadML12	m	-4.27226	0.660514	-7.14205	-1.91314
yFairLeadML12	m	5.02205	3.11214	-4.61818	14.8586
zFairLeadML12	m	-13.0921	0.222253	-13.8657	-12.3079

loaded_240degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.79514	0.537465	2.29871	5.53189
yCOG_FSRU	m	10.4309	2.47552	5.76501	15.1494
zCOG_FSRU	m	9.18653	0.070295	8.94179	9.41115
xREF_FSRU	m	0.304164	0.536644	-1.17874	2.01636
yREF_FSRU	m	10.5169	2.42934	5.87119	15.2535
zREF_FSRU	m	-10.8123	0.0665848	-11.0437	-10.5951
ROLL_FSRU	rad	0.00737729	0.00765437	-0.0133774	0.0273591
PITCH_FSRU	rad	1.50954E-05	0.00147059	-0.00530665	0.00513221
YAW_FSRU	rad	0.0176253	0.011612	-0.0115568	0.0454318
WaveHeight-COG	m	-0.000230995	0.54898	-2.10047	2.26855
windSpeed	ms-1	20.4956	2.21764	14.2139	26.7825
FairleadTension1	kN	79.9181	22.2722	61.2277	173.835
FairleadTension2	kN	75.4821	18.8536	60.9905	158.586
FairleadTension3	kN	96.281	34.9767	59.0818	251.057
FairleadTension4	kN	104.732	38.1362	59.3408	266.742
FairleadTension5	kN	1272.48	398.54	420.626	2383.54
FairleadTension6	kN	1390.68	436.064	449.025	2595.57
FairleadTension7	kN	1554.35	444.698	633.088	2664.53
FairleadTension8	kN	1363.25	376.525	555.446	2359.38
AnchorTension1	kN	56.2168	22.2352	38.2442	149.723
AnchorTension2	kN	51.7806	18.818	38.0071	134.48
AnchorTension3	kN	75.8176	34.9594	39.1635	230.488
AnchorTension4	kN	84.2691	38.1187	39.424	246.052
AnchorTension5	kN	1248.99	398.536	397.371	2359.59
AnchorTension6	kN	1367.19	436.062	425.772	2571.6
AnchorTension7	kN	1525.49	444.697	604.935	2635.69
AnchorTension8	kN	1334.37	376.519	527.288	2330.87
xManExc	m	-3.5205	0.36483	-4.74172	-2.21999
yManExc	m	10.8238	2.64987	5.76411	15.5721
zManExc	m	-19.8751	0.177377	-20.4028	-19.3108
xFairLeadML6	m	-3.36978	0.430345	-4.66827	-1.93573
yFairLeadML6	m	12.7765	3.42398	5.23959	19.6863
zFairLeadML6	m	-19.9495	0.259644	-20.8738	-19.0268
xFairLeadML10	m	-3.55896	0.351487	-4.75724	-2.30652
yFairLeadML10	m	8.93613	2.20902	3.90078	14.729
zFairLeadML10	m	-19.8466	0.188016	-20.4709	-19.2973
xFairLeadML12	m	-3.3862	0.433841	-4.66352	-1.88989
yFairLeadML12	m	8.09549	2.25557	2.60853	14.5579
zFairLeadML12	m	-19.9136	0.180027	-20.645	-19.3038

ballasted_240degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.31064	0.776365	2.06843	6.33408
yCOG_FSRU	m	11.0102	2.27959	5.78459	15.9633
zCOG_FSRU	m	3.73898	0.0667907	3.50904	3.95364
xREF_FSRU	m	0.244321	0.776891	-1.98067	2.27201
yREF_FSRU	m	10.9682	2.27552	5.59901	16.0953
zREF_FSRU	m	-9.36044	0.061841	-9.57352	-9.1599
ROLL_FSRU	rad	0.00201576	0.00885285	-0.025555	0.029215
PITCH_FSRU	rad	5.94296E-06	0.0015549	-0.00560327	0.00544859
YAW_FSRU	rad	0.0168334	0.0176471	-0.030827	0.05951
WaveHeight-COG	m	-0.000155345	0.548989	-2.11454	2.26027
windSpeed	ms-1	20.4956	2.21764	14.2139	26.7825
FairleadTension1	kN	86.482	30.2735	63.0574	310.141
FairleadTension2	kN	81.2236	26.4242	62.7797	284.933
FairleadTension3	kN	112.714	67.2023	60.2403	541.047
FairleadTension4	kN	121.116	71.6597	60.4943	547.554
FairleadTension5	kN	1269.01	352.426	537.207	2174.71
FairleadTension6	kN	1394.97	394.098	573.357	2418.7
FairleadTension7	kN	1563.26	398.788	726.612	2599.92
FairleadTension8	kN	1371.08	340.577	651.069	2332.76
AnchorTension1	kN	61.0442	30.2552	38.2225	284.488
AnchorTension2	kN	55.7855	26.4069	37.9589	259.279
AnchorTension3	kN	90.5158	67.1959	38.2356	518.892
AnchorTension4	kN	98.9178	71.6529	38.4604	525.399
AnchorTension5	kN	1243.68	352.437	512.166	2148.91
AnchorTension6	kN	1369.64	394.112	548.313	2392.91
AnchorTension7	kN	1532.56	398.793	696.09	2569.05
AnchorTension8	kN	1340.37	340.576	620.545	2301.81
xManExc	m	-4.14866	0.463877	-5.58379	-2.81839
yManExc	m	11.4168	2.38894	6.17947	16.486
zManExc	m	-13.0738	0.162625	-13.6869	-12.5272
xFairLeadML6	m	-4.01197	0.594732	-5.87141	-2.46542
yFairLeadML6	m	13.1968	3.43873	4.75466	21.5679
zFairLeadML6	m	-13.0939	0.255705	-14.0181	-12.1738
xFairLeadML10	m	-4.17416	0.435771	-5.48486	-2.87353
yFairLeadML10	m	9.52837	2.58415	3.03286	16.3476
zFairLeadML10	m	-13.0654	0.197289	-13.7378	-12.3942
xFairLeadML12	m	-4.0049	0.593269	-5.65213	-2.31767
yFairLeadML12	m	8.71717	3.09048	0.63092	17.1881
zFairLeadML12	m	-13.0836	0.191424	-13.7441	-12.3821

loaded_240degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.74461	0.816877	1.35313	6.15394
yCOG_FSRU	m	11.0723	3.14849	4.94586	17.0693
zCOG_FSRU	m	9.18608	0.078232	8.91631	9.43575
xREF_FSRU	m	0.253867	0.815174	-2.10203	2.66347
yREF_FSRU	m	11.169	3.09674	5.21976	17.2708
zREF_FSRU	m	-10.8125	0.0740177	-11.0678	-10.5739
ROLL_FSRU	rad	0.00779779	0.00850125	-0.0131046	0.0284524
PITCH_FSRU	rad	0.000016269	0.00165439	-0.00586357	0.00583636
YAW_FSRU	rad	0.0169762	0.0182957	-0.0318657	0.0674338
WaveHeight-COG	m	-0.000351213	0.575368	-2.20205	2.37008
windSpeed	ms-1	21.3955	2.30517	14.8379	27.9536
FairleadTension1	kN	86.109	38.4074	60.8663	379.501
FairleadTension2	kN	81.2423	33.9944	60.6135	349.56
FairleadTension3	kN	107.778	71.0365	58.3649	608.034
FairleadTension4	kN	115.685	75.34	58.5821	604.356
FairleadTension5	kN	1383.3	514.493	446.199	2555.21
FairleadTension6	kN	1517.13	566.707	451.983	2871.19
FairleadTension7	kN	1694.11	572.146	673.196	2961.32
FairleadTension8	kN	1488.52	489.325	603.144	2623.57
AnchorTension1	kN	62.4041	38.3792	37.9115	355.531
AnchorTension2	kN	57.5372	33.9675	37.6618	325.59
AnchorTension3	kN	87.3111	71.0239	38.2219	587.629
AnchorTension4	kN	95.2178	75.3272	38.4518	583.919
AnchorTension5	kN	1359.82	514.492	422.949	2531.75
AnchorTension6	kN	1493.66	566.709	428.733	2847.88
AnchorTension7	kN	1665.26	572.15	644.454	2932.33
AnchorTension8	kN	1459.66	489.322	574.397	2594.55
xManExc	m	-3.5611	0.511375	-5.20096	-1.89876
yManExc	m	11.4409	3.33558	5.43033	17.4696
zManExc	m	-19.8678	0.197003	-20.5226	-19.1685
xFairLeadML6	m	-3.42617	0.635023	-5.41871	-1.51146
yFairLeadML6	m	13.3343	4.41416	3.58091	23.2509
zFairLeadML6	m	-19.9463	0.29073	-20.9476	-18.8343
xFairLeadML10	m	-3.5872	0.485162	-5.153	-1.92421
yFairLeadML10	m	9.6343	3.1253	1.98042	17.5915
zFairLeadML10	m	-19.8375	0.210662	-20.4809	-19.1481
xFairLeadML12	m	-3.41611	0.635473	-5.25318	-1.34695
yFairLeadML12	m	8.82694	3.4505	-0.273345	17.983
zFairLeadML12	m	-19.9083	0.203163	-20.6241	-19.1453

ballasted_240degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.36178	0.725292	2.20922	6.21933
yCOG_FSRU	m	11.7474	2.17474	7.35312	16.6508
zCOG_FSRU	m	3.73864	0.0735945	3.4907	3.98351
xREF_FSRU	m	0.295383	0.725837	-1.82978	2.19318
yREF_FSRU	m	11.7014	2.17479	7.16517	16.9785
zREF_FSRU	m	-9.3606	0.0680152	-9.58545	-9.13036
ROLL_FSRU	rad	0.00216638	0.0102026	-0.0310755	0.0356806
PITCH_FSRU	rad	6.53406E-06	0.00176237	-0.00634391	0.00629557
YAW_FSRU	rad	0.0182769	0.0160626	-0.0217926	0.0550413
WaveHeight-COG	m	-0.000242404	0.575419	-2.24571	2.36957
windSpeed	ms-1	21.3955	2.30517	14.8379	27.9536
FairleadTension1	kN	79.4861	21.056	62.8512	203.069
FairleadTension2	kN	75.115	17.5719	62.5939	183.82
FairleadTension3	kN	103.679	51.6536	60.1829	398.485
FairleadTension4	kN	111.809	56.4774	60.4369	414.312
FairleadTension5	kN	1372.81	353.099	551.85	2413.81
FairleadTension6	kN	1510.18	393.995	565.614	2705.95
FairleadTension7	kN	1691	397.144	807.82	2990.31
FairleadTension8	kN	1478.85	342.264	715.914	2692.43
AnchorTension1	kN	54.0469	21.0265	38.2338	176.99
AnchorTension2	kN	49.6755	17.5442	37.9704	157.739
AnchorTension3	kN	81.4794	51.6412	38.5045	376.036
AnchorTension4	kN	89.6099	56.4644	38.7369	391.863
AnchorTension5	kN	1347.48	353.107	526.606	2388.46
AnchorTension6	kN	1484.86	394.007	540.371	2680.61
AnchorTension7	kN	1660.31	397.144	777.325	2959.94
AnchorTension8	kN	1448.14	342.256	685.358	2662.07
xManExc	m	-4.12464	0.450622	-5.62898	-2.83377
yManExc	m	12.1895	2.26143	7.40126	17.1056
zManExc	m	-13.0716	0.187027	-13.7935	-12.4143
xFairLeadML6	m	-3.97353	0.560637	-5.78783	-2.50975
yFairLeadML6	m	14.1217	3.15877	6.30025	21.2319
zFairLeadML6	m	-13.093	0.288241	-14.1936	-12.0104
xFairLeadML10	m	-4.15541	0.428669	-5.51084	-2.90858
yFairLeadML10	m	10.1388	2.47427	4.0363	16.3824
zFairLeadML10	m	-13.0623	0.229422	-13.7959	-12.2824
xFairLeadML12	m	-3.97294	0.566799	-5.66316	-2.40064
yFairLeadML12	m	9.25784	2.93133	1.61087	16.9328
zFairLeadML12	m	-13.0818	0.22078	-13.827	-12.3374

loaded_90degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.60989	0.940489	0.646893	5.74004
yCOG_FSRU	m	-5.38844	1.72327	-9.79319	-0.641633
zCOG_FSRU	m	9.19444	0.0538422	9.01421	9.37486
xREF_FSRU	m	0.120861	0.937704	-2.82996	2.20913
yREF_FSRU	m	-5.48643	1.70122	-9.9282	-0.569596
zREF_FSRU	m	-10.8044	0.0509818	-10.9744	-10.6333
ROLL_FSRU	rad	-0.0060564	0.00899904	-0.0267451	0.0173327
PITCH_FSRU	rad	-9.25323E-06	0.0011559	-0.00407648	0.00408321
YAW_FSRU	rad	-0.00661943	0.0219368	-0.0666263	0.0520955
WaveHeight-COG	m	-0.000253958	0.375424	-1.50866	1.49898
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	1189.93	352.27	261.503	2751.1
FairleadTension2	kN	1277.84	381.328	267.907	2909.01
FairleadTension3	kN	1153.59	383.958	177.341	2614.72
FairleadTension4	kN	1087.67	346.906	193.767	2491.83
FairleadTension5	kN	198.424	234.102	23.9025	1473.16
FairleadTension6	kN	193.166	236.508	23.796	1490.67
FairleadTension7	kN	103.756	117.851	24.9383	1148.86
FairleadTension8	kN	109.906	119.96	25.082	1127.91
AnchorTension1	kN	1185.47	352.053	257.389	2745.51
AnchorTension2	kN	1273.33	381.08	263.805	2903.3
AnchorTension3	kN	1149.8	383.835	173.705	2609.98
AnchorTension4	kN	1083.9	346.803	190.134	2487.16
AnchorTension5	kN	194.166	234.096	19.7052	1468.42
AnchorTension6	kN	188.909	236.499	19.5977	1485.91
AnchorTension7	kN	98.5559	117.846	19.9032	1143.12
AnchorTension8	kN	104.706	119.954	20.0504	1122.2
xManExc	m	-3.2497	1.33259	-7.08122	-0.243407
yManExc	m	-5.50725	1.91998	-10.786	-0.708949
zManExc	m	-20.1204	0.188428	-20.654	-19.6048
xFairLeadML6	m	-3.34392	1.1046	-6.7682	-0.964723
yFairLeadML6	m	-6.29207	3.56671	-16.2097	3.05791
zFairLeadML6	m	-20.0579	0.210408	-20.8107	-19.3453
xFairLeadML10	m	-3.1973	1.42153	-7.1296	0.0593627
yFairLeadML10	m	-4.85576	2.35671	-10.9656	0.723723
zFairLeadML10	m	-20.1417	0.212174	-20.7769	-19.5777
xFairLeadML12	m	-3.24547	1.23393	-6.73401	-0.364946
yFairLeadML12	m	-4.54209	3.18949	-12.6398	3.0613
zFairLeadML12	m	-20.0863	0.169125	-20.7383	-19.4733

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name	units	mean	std	min	max
xCOG_FSRU	m	4.41504	0.502664	2.95956	5.62087
yCOG_FSRU	m	-5.48139	0.957361	-7.70568	-3.55806
zCOG_FSRU	m	3.74776	0.0499613	3.57754	3.92472
xREF_FSRU	m	0.348531	0.502889	-1.11197	1.54843
yREF_FSRU	m	-5.45889	0.943632	-7.64988	-3.44835
zREF_FSRU	m	-9.3522	0.0462745	-9.50799	-9.19082
ROLL_FSRU	rad	-0.00162504	0.00355468	-0.0142199	0.0115421
PITCH_FSRU	rad	-1.74635E-05	0.00121855	-0.00447004	0.00425718
YAW_FSRU	rad	-0.0107667	0.0112288	-0.0357518	0.016811
WaveHeight-COG	m	-0.000226527	0.375436	-1.51029	1.45526
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	1129.49	183.76	665.625	1648.87
FairleadTension2	kN	1225.15	203.068	732.844	1800.16
FairleadTension3	kN	1105.72	190.955	624.42	1701.88
FairleadTension4	kN	1051.24	176.631	603.515	1616.18
FairleadTension5	kN	138.053	96.8102	28.2495	498.606
FairleadTension6	kN	127.84	91.9357	26.1958	478.418
FairleadTension7	kN	61.0851	30.5963	26.6083	225.426
FairleadTension8	kN	66.3896	32.7507	27.4042	238.49
AnchorTension1	kN	1124.63	183.619	661.088	1643.52
AnchorTension2	kN	1220.2	202.903	728.3	1794.67
AnchorTension3	kN	1101.54	190.869	620.377	1697.31
AnchorTension4	kN	1047.09	176.558	599.471	1611.67
AnchorTension5	kN	133.418	96.8105	23.6559	493.935
AnchorTension6	kN	123.205	91.936	21.6019	473.811
AnchorTension7	kN	55.5167	30.5941	21.0856	219.803
AnchorTension8	kN	60.8211	32.7484	21.8722	232.866
xManExc	m	-3.51873	0.704965	-5.47872	-1.95183
yManExc	m	-5.74189	1.10431	-8.1849	-3.45253
zManExc	m	-13.1326	0.0853103	-13.4736	-12.7987
xFairLeadML6	m	-3.639	0.583971	-5.32505	-2.30549
yFairLeadML6	m	-6.88281	2.01817	-11.2089	-2.06472
zFairLeadML6	m	-13.1144	0.196719	-13.7974	-12.3965
xFairLeadML10	m	-3.46715	0.755237	-5.50678	-1.80314
yFairLeadML10	m	-4.54083	1.09358	-7.10384	-1.96307
zFairLeadML10	m	-13.1402	0.0995975	-13.4963	-12.7879
xFairLeadML12	m	-3.56029	0.660048	-5.36043	-2.05997
yFairLeadML12	m	-4.01936	1.4787	-7.09118	-0.791962
zFairLeadML12	m	-13.1261	0.136567	-13.6375	-12.622

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name	units	mean	std	min	max
xCOG_FSRU	m	3.53804	1.04708	1.20669	6.3455
yCOG_FSRU	m	-5.72187	1.61151	-8.96366	-1.99223
zCOG_FSRU	m	9.19429	0.064023	8.96779	9.42086
xREF_FSRU	m	0.0490264	1.04377	-2.24895	2.81413
yREF_FSRU	m	-5.83164	1.60464	-9.17744	-1.81424
zREF_FSRU	m	-10.8043	0.0604922	-11.0178	-10.5948
ROLL_FSRU	rad	-0.00646688	0.00990076	-0.0285126	0.0165729
PITCH_FSRU	rad	-8.7687E-06	0.00143383	-0.00539324	0.0051201
YAW_FSRU	rad	-0.00559176	0.0240283	-0.0538712	0.0455859
WaveHeight-COG	m	-0.00021009	0.424685	-1.69796	1.71227
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1271.6	352.338	369.599	2241.52
FairleadTension2	kN	1363.14	371.605	405.608	2355.13
FairleadTension3	kN	1223.82	402.764	226.862	2202.27
FairleadTension4	kN	1150.2	357.065	234.779	2043.56
FairleadTension5	kN	212.322	265.245	24.2287	1107.81
FairleadTension6	kN	206.164	262.366	24.1085	1093.1
FairleadTension7	kN	101.92	111.517	25.1334	711.375
FairleadTension8	kN	108.809	115.502	25.2765	717.338
AnchorTension1	kN	1267.1	352.104	365.464	2236.35
AnchorTension2	kN	1358.57	371.349	401.47	2349.88
AnchorTension3	kN	1220	402.629	223.241	2197.99
AnchorTension4	kN	1146.41	356.956	231.157	2039.37
AnchorTension5	kN	208.063	265.235	20.0326	1103.3
AnchorTension6	kN	201.905	262.357	19.9208	1088.69
AnchorTension7	kN	96.7188	111.518	19.8913	706.172
AnchorTension8	kN	103.608	115.504	20.0311	712.131
xManExc	m	-3.34205	1.47889	-6.44609	0.301849
yManExc	m	-5.80905	1.74036	-9.40479	-2.11835
zManExc	m	-20.1285	0.211086	-20.7796	-19.5327
xFairLeadML6	m	-3.43047	1.22786	-6.13915	-0.365922
yFairLeadML6	m	-6.49388	3.51195	-14.6544	1.42299
zFairLeadML6	m	-20.0617	0.254597	-21.0382	-19.1282
xFairLeadML10	m	-3.28855	1.57617	-6.47248	0.575813
yFairLeadML10	m	-5.28206	2.64691	-10.1974	0.0312681
zFairLeadML10	m	-20.1509	0.237136	-20.7658	-19.4903
xFairLeadML12	m	-3.32523	1.36992	-6.12848	0.173922
yFairLeadML12	m	-5.0186	3.64381	-11.3439	1.50092
zFairLeadML12	m	-20.0917	0.199918	-20.786	-19.3487

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name	units	mean	std	min	max
xCOG_FSRU	m	4.41512	0.586561	2.49146	6.23333
yCOG_FSRU	m	-5.82307	0.995824	-8.4256	-3.33192
zCOG_FSRU	m	3.74764	0.05874	3.53492	3.96559
xREF_FSRU	m	0.348661	0.586874	-1.5693	2.16845
yREF_FSRU	m	-5.80123	0.985537	-8.40178	-3.23446
zREF_FSRU	m	-9.35228	0.0542163	-9.54731	-9.15275
ROLL_FSRU	rad	-0.00173038	0.00417355	-0.016818	0.0138575
PITCH_FSRU	rad	-1.69462E-05	0.00152695	-0.00578666	0.00545903
YAW_FSRU	rad	-0.0109426	0.0125492	-0.0431689	0.0272198
WaveHeight-COG	m	-0.000173017	0.4247	-1.70659	1.66145
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1197.88	209.475	508.544	1960.8
FairleadTension2	kN	1299.38	226.572	566.949	2092.4
FairleadTension3	kN	1172.6	221.617	521.854	1819.25
FairleadTension4	kN	1112.21	205.449	516.03	1721.42
FairleadTension5	kN	138.122	110.336	25.2337	843.076
FairleadTension6	kN	127.891	104.747	25.0939	819.322
FairleadTension7	kN	58.6641	32.3316	26.0764	295.088
FairleadTension8	kN	63.8852	34.8011	26.2687	315.062
AnchorTension1	kN	1192.96	209.308	504.105	1955.03
AnchorTension2	kN	1294.38	226.383	562.5	2086.51
AnchorTension3	kN	1168.39	221.508	517.835	1814.58
AnchorTension4	kN	1108.03	205.356	512.017	1716.77
AnchorTension5	kN	133.487	110.336	20.6496	838.378
AnchorTension6	kN	123.256	104.747	20.5095	814.635
AnchorTension7	kN	53.0952	32.3288	20.5178	289.484
AnchorTension8	kN	58.3163	34.7983	20.7099	309.454
xManExc	m	-3.51577	0.806139	-6.08179	-1.11177
yManExc	m	-6.08673	1.1362	-8.65052	-3.57974
zManExc	m	-13.1348	0.103043	-13.5494	-12.7135
xFairLeadML6	m	-3.6397	0.674249	-5.87284	-1.63933
yFairLeadML6	m	-7.24743	2.13251	-12.3444	-1.89474
zFairLeadML6	m	-13.1156	0.243072	-14.0048	-12.1682
xFairLeadML10	m	-3.46155	0.861145	-6.12402	-0.863716
yFairLeadML10	m	-4.86748	1.26459	-8.12121	-1.52033
zFairLeadML10	m	-13.1426	0.125079	-13.6283	-12.6823
xFairLeadML12	m	-3.55543	0.757032	-5.9014	-1.21318
yFairLeadML12	m	-4.33746	1.72651	-9.40049	-0.369796
zFairLeadML12	m	-13.1275	0.174184	-13.7769	-12.4907

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name	units	mean	std	min	max
xCOG_FSRU	m	3.59312	1.77914	-3.18736	10.1855
yCOG_FSRU	m	9.05513	2.12238	2.9362	15.2838
zCOG_FSRU	m	9.19292	0.0999319	8.80859	9.56963
xREF_FSRU	m	0.103116	1.77265	-6.65024	6.71789
yREF_FSRU	m	9.20374	2.12852	3.11202	15.4514
zREF_FSRU	m	-10.803	0.0933974	-11.1632	-10.4579
ROLL_FSRU	rad	0.0092183	0.0178553	-0.049011	0.0738739
PITCH_FSRU	rad	-8.84279E-06	0.00275641	-0.0103608	0.0097015
YAW_FSRU	rad	0.0102	0.0354543	-0.103854	0.118229
WaveHeight-COG	m	-0.000478816	0.627692	-2.43796	2.55763
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	86.607	185.545	22.6	2294.19
FairleadTension2	kN	77.6	169.416	22.4983	2213.98
FairleadTension3	kN	246.577	421.883	21.5885	3465.53
FairleadTension4	kN	251.125	409.96	21.6971	3179.68
FairleadTension5	kN	1695.85	652.763	33.1482	5909.39
FairleadTension6	kN	1808.15	713.458	29.5032	6219.62
FairleadTension7	kN	2058.09	647.887	402.054	5175.61
FairleadTension8	kN	1903.04	639.34	342.523	5063.05
AnchorTension1	kN	82.3152	185.508	18.4439	2288.61
AnchorTension2	kN	73.308	169.385	18.3493	2208.44
AnchorTension3	kN	242.853	421.812	17.8987	3460.42
AnchorTension4	kN	247.402	409.899	18.0086	3174.94
AnchorTension5	kN	1691.01	652.319	29.0571	5901.63
AnchorTension6	kN	1803.22	712.971	25.4605	6211.73
AnchorTension7	kN	2051.46	647.179	396.814	5166.11
AnchorTension8	kN	1896.58	638.636	337.408	5053.63
xManExc	m	-3.59424	1.30516	-9.98075	1.69441
yManExc	m	9.21339	2.20853	3.72638	15.6415
zManExc	m	-19.8349	0.371458	-21.2746	-18.5522
xFairLeadML6	m	-3.56605	1.51507	-10.0685	2.17652
yFairLeadML6	m	10.434	4.78962	-4.51719	27.4945
zFairLeadML6	m	-19.9227	0.465517	-21.6812	-18.1562
xFairLeadML10	m	-3.55468	1.24128	-9.91084	1.77056
yFairLeadML10	m	8.20315	3.99739	-4.07857	19.9308
zFairLeadML10	m	-19.8002	0.438919	-21.3469	-18.2055
xFairLeadML12	m	-3.42799	1.453	-10.0034	2.59608
yFairLeadML12	m	7.73248	5.53124	-7.97059	24.0894
zFairLeadML12	m	-19.8851	0.389173	-21.4376	-18.5839

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name	units	mean	std	min	max
xCOG_FSRU	m	4.60034	1.07993	0.132254	7.74106
yCOG_FSRU	m	9.16614	1.36201	5.4613	13.183
zCOG_FSRU	m	3.74623	0.0907973	3.3978	4.09803
xREF_FSRU	m	0.53446	1.0815	-3.93477	3.61105
yREF_FSRU	m	9.12998	1.38059	5.36543	13.4924
zREF_FSRU	m	-9.35288	0.0823488	-9.66883	-9.03746
ROLL_FSRU	rad	0.00264622	0.0113542	-0.0373437	0.0434845
PITCH_FSRU	rad	-1.54024E-05	0.00299146	-0.0112043	0.0107487
YAW_FSRU	rad	0.0174159	0.0210112	-0.0487341	0.0777537
WaveHeight-COG	m	-0.000210543	0.627733	-2.47745	2.55766
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	34.5931	34.7876	23.8175	532.866
FairleadTension2	kN	32.25	29.1648	23.7036	471.284
FairleadTension3	kN	133.405	194.051	22.8831	1766.7
FairleadTension4	kN	145.006	203.457	22.9937	1766.73
FairleadTension5	kN	1647.45	388.762	282.473	3172.17
FairleadTension6	kN	1744.23	422.263	266.12	3430.13
FairleadTension7	kN	1964.04	389.009	689.168	3289.74
FairleadTension8	kN	1793.98	381.1	576.38	3166.58
AnchorTension1	kN	29.947	34.7855	19.3227	528.235
AnchorTension2	kN	27.6035	29.1627	19.2119	466.654
AnchorTension3	kN	129.323	194.045	18.928	1762.08
AnchorTension4	kN	140.924	203.45	19.0185	1762.1
AnchorTension5	kN	1642.14	388.431	277.798	3165.38
AnchorTension6	kN	1738.84	421.902	261.416	3423.15
AnchorTension7	kN	1956.86	388.515	683.794	3280.8
AnchorTension8	kN	1787.02	380.608	571.053	3158.11
xManExc	m	-3.87214	0.77969	-7.38248	-1.11346
yManExc	m	9.57487	1.44338	5.587	13.895
zManExc	m	-13.0547	0.227295	-13.8876	-12.1884
xFairLeadML6	m	-3.73762	0.903583	-7.77441	-0.876598
yFairLeadML6	m	11.4269	2.95816	2.38806	19.3519
zFairLeadML6	m	-13.0783	0.454465	-14.7034	-11.321
xFairLeadML10	m	-3.89059	0.751901	-7.19609	-1.24761
yFairLeadML10	m	7.63045	2.37556	0.241132	15.1931
zFairLeadML10	m	-13.0459	0.315217	-14.2513	-11.8391
xFairLeadML12	m	-3.71218	0.892621	-7.47689	-0.82871
yFairLeadML12	m	6.79306	3.26293	-2.89023	17.4484
zFairLeadML12	m	-13.0709	0.377424	-14.4987	-11.7266

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name	units	mean	std	min	max
xCOG_FSRU	m	3.76023	1.71684	-2.80581	9.32532
yCOG_FSRU	m	9.70995	2.33204	3.6655	16.9442
zCOG_FSRU	m	9.19285	0.109475	8.76758	9.6077
xREF_FSRU	m	0.269687	1.71223	-6.22463	5.84509
yREF_FSRU	m	9.85794	2.32137	3.42027	17.2526
zREF_FSRU	m	-10.8027	0.101818	-11.1986	-10.4196
ROLL_FSRU	rad	0.00972906	0.0185266	-0.043414	0.068253
PITCH_FSRU	rad	-7.68828E-06	0.00324445	-0.0122744	0.0117412
YAW_FSRU	rad	0.0133092	0.0324768	-0.0855528	0.0996522
WaveHeight-COG	m	-0.000180027	0.678707	-2.65338	2.78873
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	63.6028	132.105	22.789	1881.89
FairleadTension2	kN	57.5342	121.32	22.6789	1780.35
FairleadTension3	kN	203.041	349.998	21.8965	2579.48
FairleadTension4	kN	215.467	362.877	21.9926	2550.88
FairleadTension5	kN	1802.63	684.845	36.2713	4522.81
FairleadTension6	kN	1928.67	730.895	33.4879	4761.15
FairleadTension7	kN	2183.4	687.208	207.033	4620.71
FairleadTension8	kN	2005.15	672.114	177.366	4494.29
AnchorTension1	kN	59.3115	132.089	18.677	1876.48
AnchorTension2	kN	53.242	121.306	18.5848	1775.03
AnchorTension3	kN	199.322	349.952	18.2506	2574.87
AnchorTension4	kN	211.747	362.829	18.348	2546.29
AnchorTension5	kN	1797.71	684.365	31.9589	4515.7
AnchorTension6	kN	1923.67	730.377	29.2227	4754.2
AnchorTension7	kN	2176.64	686.463	201.998	4612.04
AnchorTension8	kN	1998.57	671.379	172.316	4485.06
xManExc	m	-3.48398	1.31043	-9.13364	1.42583
yManExc	m	9.9482	2.49169	3.14259	17.0527
zManExc	m	-19.8256	0.391842	-21.2269	-18.5019
xFairLeadML6	m	-3.41844	1.48101	-9.52065	1.77133
yFairLeadML6	m	11.499	4.78343	-4.66035	25.0373
zFairLeadML6	m	-19.9183	0.53388	-21.8581	-18.0025
xFairLeadML10	m	-3.46278	1.26512	-8.89237	1.38207
yFairLeadML10	m	8.59183	3.7066	-2.30108	19.6225
zFairLeadML10	m	-19.7886	0.468141	-21.2092	-18.3515
xFairLeadML12	m	-3.31058	1.44496	-9.17835	1.86484
yFairLeadML12	m	7.97052	5.02671	-6.35168	22.2901
zFairLeadML12	m	-19.8781	0.443226	-21.4386	-18.2945

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name	units	mean	std	min	max
xCOG_FSRU	m	4.61341	1.23512	-0.738423	7.71581
yCOG_FSRU	m	9.86615	1.50619	5.23244	14.8568
zCOG_FSRU	m	3.74597	0.0998949	3.36609	4.13298
xREF_FSRU	m	0.547718	1.23745	-4.82805	3.64493
yREF_FSRU	m	9.82967	1.52948	4.868	15.1125
zREF_FSRU	m	-9.35293	0.0903017	-9.69128	-9.00769
ROLL_FSRU	rad	0.00283869	0.0124744	-0.0425017	0.0499575
PITCH_FSRU	rad	-1.34728E-05	0.00351469	-0.0126917	0.0126795
YAW_FSRU	rad	0.0181161	0.0235822	-0.0621329	0.0860086
WaveHeight-COG	m	0.000110865	0.678865	-2.66252	2.74135
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	34.472	41.2748	23.4458	797.279
FairleadTension2	kN	32.0737	34.4026	23.3265	701.951
FairleadTension3	kN	141.245	223.116	22.4481	1638.05
FairleadTension4	kN	152.375	229.94	22.5498	1646.57
FairleadTension5	kN	1778.39	453.36	320.785	3583.75
FairleadTension6	kN	1885.1	489.443	294.648	3750.3
FairleadTension7	kN	2123.69	454.845	849.48	3937.79
FairleadTension8	kN	1941.37	447.499	720.993	3679.7
AnchorTension1	kN	29.8251	41.2727	19.1322	792.509
AnchorTension2	kN	27.4265	34.4008	19.013	697.226
AnchorTension3	kN	137.161	223.105	18.5092	1633.54
AnchorTension4	kN	148.29	229.928	18.6092	1642.06
AnchorTension5	kN	1772.96	452.975	316.092	3576.93
AnchorTension6	kN	1879.58	489.027	289.921	3743.39
AnchorTension7	kN	2116.32	454.285	844.208	3928.16
AnchorTension8	kN	1934.23	446.936	715.512	3670.91
xManExc	m	-3.87402	0.911466	-8.02802	-0.983929
yManExc	m	10.2885	1.5797	5.85537	15.5559
zManExc	m	-13.0516	0.252569	-14.0282	-12.142
xFairLeadML6	m	-3.74006	1.04428	-8.60324	-0.743791
yFairLeadML6	m	12.2169	3.26525	2.58533	21.4104
zFairLeadML6	m	-13.0771	0.526276	-14.9939	-11.1394
xFairLeadML10	m	-3.88688	0.881973	-7.80177	-1.05112
yFairLeadML10	m	8.26724	2.69034	0.120106	16.7355
zFairLeadML10	m	-13.0417	0.364931	-14.6177	-11.4741
xFairLeadML12	m	-3.69861	1.03259	-8.15852	-0.753862
yFairLeadML12	m	7.39701	3.69429	-3.64572	19.7989
zFairLeadML12	m	-13.0683	0.447898	-14.8556	-11.3255

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name	units	mean	std	min	max
xCOG_FSRU	m	3.11555	1.56525	-0.364969	7.05646
yCOG_FSRU	m	6.39897	1.35079	2.17566	10.303
zCOG_FSRU	m	9.1936	0.0770393	8.89493	9.48562
xREF_FSRU	m	-0.371189	1.55964	-3.81015	3.55325
yREF_FSRU	m	6.5654	1.38802	2.14418	10.7107
zREF_FSRU	m	-10.8044	0.071792	-11.0814	-10.5339
ROLL_FSRU	rad	0.00686609	0.0123657	-0.0264199	0.0383647
PITCH_FSRU	rad	-1.09029E-05	0.00222497	-0.00841202	0.00809355
YAW_FSRU	rad	-0.00838342	0.0340165	-0.0781249	0.065553
WaveHeight-COG	m	-0.000114686	0.477754	-1.86178	1.9274
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	208.592	274.681	23.5454	1635.42
FairleadTension2	kN	192.815	258.082	23.4341	1646.03
FairleadTension3	kN	194.095	311.712	22.2294	1617.49
FairleadTension4	kN	200.722	316.966	22.3342	1611.7
FairleadTension5	kN	1423.65	472.829	227.002	2689.94
FairleadTension6	kN	1534.94	547.729	213.817	2959.3
FairleadTension7	kN	1394.99	409.123	282.227	2776.63
FairleadTension8	kN	1317.21	425.678	248.068	2737.18
AnchorTension1	kN	204.311	274.666	19.4022	1630.56
AnchorTension2	kN	188.534	258.068	19.3032	1641.16
AnchorTension3	kN	190.389	311.693	18.6394	1613.45
AnchorTension4	kN	197.016	316.948	18.7444	1607.66
AnchorTension5	kN	1419.01	472.517	222.724	2684.56
AnchorTension6	kN	1530.21	547.358	209.701	2953.44
AnchorTension7	kN	1389.09	408.659	277.091	2768.83
AnchorTension8	kN	1311.39	425.206	242.945	2729.42
xManExc	m	-3.72096	1.01665	-6.57551	-1.06771
yManExc	m	6.08006	1.33598	2.31521	10.9213
zManExc	m	-19.8775	0.26473	-20.6663	-19.0937
xFairLeadML6	m	-3.86844	1.32259	-7.03143	-0.682645
yFairLeadML6	m	5.33633	4.15255	-5.22926	17.1481
zFairLeadML6	m	-19.9433	0.366968	-21.3008	-18.601
xFairLeadML10	m	-3.62121	0.898785	-6.33588	-1.09987
yFairLeadML10	m	7.15082	3.66011	-0.653969	14.7904
zFairLeadML10	m	-19.853	0.31368	-20.7567	-18.9262
xFairLeadML12	m	-3.66834	1.13678	-6.61082	-0.472783
yFairLeadML12	m	7.57696	5.24256	-3.2806	18.1813
zFairLeadML12	m	-19.9165	0.300258	-20.9352	-18.8515

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name	units	mean	std	min	max
xCOG_FSRU	m	3.72056	1.21212	0.0843434	6.7551
yCOG_FSRU	m	6.28464	1.04464	3.46151	9.35257
zCOG_FSRU	m	3.747	0.0700887	3.47983	4.01962
xREF_FSRU	m	-0.344591	1.21145	-3.94211	2.73817
yREF_FSRU	m	6.34377	1.10493	3.2779	9.55541
zREF_FSRU	m	-9.3526	0.0635159	-9.5925	-9.10862
ROLL_FSRU	rad	0.00191078	0.00794027	-0.0272163	0.0309504
PITCH_FSRU	rad	-1.76559E-05	0.00239662	-0.00884246	0.00879959
YAW_FSRU	rad	-0.0083898	0.0250821	-0.0720036	0.0578842
WaveHeight-COG	m	6.08285E-06	0.47778	-1.88	1.93422
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	139.061	162.941	24.6116	1025.15
FairleadTension2	kN	127.002	151.905	24.5056	989.684
FairleadTension3	kN	110.851	182.803	22.8085	1501.06
FairleadTension4	kN	117.167	189.21	22.9042	1476.19
FairleadTension5	kN	1356.81	357.305	347.028	2559.43
FairleadTension6	kN	1468.57	414.338	364.874	2743.71
FairleadTension7	kN	1313.19	336.004	414.468	2574.34
FairleadTension8	kN	1235.84	352.705	357.442	2557.98
AnchorTension1	kN	134.418	162.937	20.0095	1020.39
AnchorTension2	kN	122.359	151.901	19.9054	984.948
AnchorTension3	kN	106.77	182.799	18.8127	1496.61
AnchorTension4	kN	113.086	189.206	18.9134	1471.76
AnchorTension5	kN	1351.74	357.02	342.353	2553.2
AnchorTension6	kN	1463.41	413.999	360.208	2737.35
AnchorTension7	kN	1306.84	335.571	408.956	2566.23
AnchorTension8	kN	1229.58	352.262	351.931	2549.89
xManExc	m	-4.26488	0.805415	-7.08552	-1.81572
yManExc	m	6.01887	0.921697	3.20781	9.24712
zManExc	m	-13.0671	0.166033	-13.6605	-12.4468
xFairLeadML6	m	-4.38473	1.03563	-7.74935	-1.71197
yFairLeadML6	m	5.18683	2.88337	-2.15109	14.4113
zFairLeadML6	m	-13.0837	0.360648	-14.3704	-11.7189
xFairLeadML10	m	-4.19473	0.717377	-6.8309	-1.86403
yFairLeadML10	m	7.00757	2.86281	0.119111	13.6198
zFairLeadML10	m	-13.0618	0.238235	-14.0659	-12.0458
xFairLeadML12	m	-4.25471	0.894718	-7.16029	-1.7285
yFairLeadML12	m	7.42216	4.03946	-2.65195	17.0121
zFairLeadML12	m	-13.0802	0.300883	-14.2623	-11.9034

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name	units	mean	std	min	max
xCOG_FSRU	m	3.13139	1.58132	-1.07634	7.69456
yCOG_FSRU	m	6.7134	1.61625	1.07128	12.6359
zCOG_FSRU	m	9.19353	0.081469	8.87737	9.5065
xREF_FSRU	m	-0.355398	1.57619	-4.55071	4.26517
yREF_FSRU	m	6.88353	1.63459	1.01785	12.8624
zREF_FSRU	m	-10.8044	0.0755974	-11.0932	-10.5192
ROLL_FSRU	rad	0.00713977	0.0125447	-0.0246438	0.0414372
PITCH_FSRU	rad	-8.54005E-06	0.00252217	-0.00915378	0.00922665
YAW_FSRU	rad	-0.00787407	0.0341563	-0.0951978	0.0787479
WaveHeight-COG	m	-0.000119972	0.500643	-1.96136	2.06791
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	199.396	284.526	23.485	1874.94
FairleadTension2	kN	185.486	271.005	23.3963	1861.48
FairleadTension3	kN	179.366	319.847	21.9866	2426.74
FairleadTension4	kN	186.261	324.823	22.1091	2413.83
FairleadTension5	kN	1477.82	498.194	200.683	3255.22
FairleadTension6	kN	1597.49	568.847	195.38	3607.57
FairleadTension7	kN	1443.61	468.487	269.122	4011.89
FairleadTension8	kN	1366.53	469.718	248.401	3489.41
AnchorTension1	kN	195.11	284.495	19.272	1869.93
AnchorTension2	kN	181.2	270.976	19.1779	1856.49
AnchorTension3	kN	175.656	319.814	18.3616	2422.38
AnchorTension4	kN	182.551	324.791	18.4818	2409.49
AnchorTension5	kN	1473.14	497.859	196.377	3249.35
AnchorTension6	kN	1592.72	568.454	191.006	3601.49
AnchorTension7	kN	1437.64	467.973	263.875	4003.4
AnchorTension8	kN	1360.65	469.206	243.149	3481.24
xManExc	m	-3.71475	1.03917	-7.6181	-0.581863
yManExc	m	6.40523	1.66524	0.83692	12.586
zManExc	m	-19.8725	0.273454	-20.7241	-18.9505
xFairLeadML6	m	-3.85731	1.34223	-7.8643	-0.137172
yFairLeadML6	m	5.71892	4.36472	-5.71687	17.7557
zFairLeadML6	m	-19.9412	0.407546	-21.4076	-18.4235
xFairLeadML10	m	-3.61668	0.923474	-7.48648	-0.554503
yFairLeadML10	m	7.42249	3.69793	-1.94323	17.7539
zFairLeadML10	m	-19.8467	0.327808	-20.8901	-18.8498
xFairLeadML12	m	-3.65906	1.15685	-7.68673	0.156307
yFairLeadML12	m	7.82442	5.24798	-5.13879	22.2715
zFairLeadML12	m	-19.9126	0.333007	-21.0498	-18.7086

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name	units	mean	std	min	max
xCOG_FSRU	m	3.71944	1.27441	-0.0875198	7.12401
yCOG_FSRU	m	6.58239	1.05888	3.26859	9.80824
zCOG_FSRU	m	3.74685	0.0744683	3.46363	4.03487
xREF_FSRU	m	-0.345597	1.27416	-4.11933	3.06964
yREF_FSRU	m	6.643	1.12614	3.05131	10.1856
zREF_FSRU	m	-9.35267	0.0673028	-9.60598	-9.0964
ROLL_FSRU	rad	0.00200372	0.0085166	-0.0331735	0.0374178
PITCH_FSRU	rad	-1.54235E-05	0.00271025	-0.00974386	0.0100954
YAW_FSRU	rad	-0.00845616	0.0263009	-0.0753202	0.0577325
WaveHeight-COG	m	0.000041301	0.50057	-1.95477	2.06685
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	137.231	164.305	24.3956	1231.31
FairleadTension2	kN	124.927	152.702	24.2941	1168.85
FairleadTension3	kN	113.073	184.531	22.7102	1600.54
FairleadTension4	kN	119.791	191.287	22.8016	1598.08
FairleadTension5	kN	1418.19	365.463	370.903	2661.97
FairleadTension6	kN	1535.16	425.799	366.541	2909.1
FairleadTension7	kN	1374.11	344.374	414.95	2581.28
FairleadTension8	kN	1299.03	363.465	382.702	2592.53
AnchorTension1	kN	132.588	164.3	19.7709	1226.29
AnchorTension2	kN	120.283	152.698	19.6711	1163.92
AnchorTension3	kN	108.991	184.526	18.7884	1596.22
AnchorTension4	kN	115.71	191.282	18.8823	1593.77
AnchorTension5	kN	1413.07	365.167	366.364	2655.93
AnchorTension6	kN	1529.94	425.447	361.986	2902.86
AnchorTension7	kN	1367.68	343.929	409.38	2573.04
AnchorTension8	kN	1292.7	363.001	377.132	2584.28
xManExc	m	-4.26559	0.839591	-7.26401	-1.95499
yManExc	m	6.31248	0.912494	3.12373	8.96026
zManExc	m	-13.0656	0.180044	-13.7388	-12.3514
xFairLeadML6	m	-4.38951	1.08719	-7.92917	-1.58782
yFairLeadML6	m	5.47555	2.99141	-2.69969	14.1824
zFairLeadML6	m	-13.0834	0.402683	-14.5357	-11.6656
xFairLeadML10	m	-4.1915	0.744762	-6.82624	-1.98163
yFairLeadML10	m	7.31017	3.00144	0.563265	14.0744
zFairLeadML10	m	-13.0597	0.268595	-14.4288	-11.9525
xFairLeadML12	m	-4.25051	0.935998	-7.25279	-1.48891
yFairLeadML12	m	7.72847	4.24044	-1.63955	17.3776
zFairLeadML12	m	-13.0788	0.3442	-14.5606	-11.7956

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name	units	mean	std	min	max
xCOG_FSRU	m	4.2126	0.405613	3.03413	5.62282
yCOG_FSRU	m	-4.47129	1.04416	-6.74796	-2.48413
zCOG_FSRU	m	9.19376	0.0538244	9.01333	9.37342
xREF_FSRU	m	0.722724	0.404904	-0.456568	2.0898
yREF_FSRU	m	-4.56629	1.03161	-6.88501	-2.44351
zREF_FSRU	m	-10.805	0.0509548	-10.9753	-10.6344
ROLL_FSRU	rad	-0.00626361	0.00888764	-0.027901	0.0130662
PITCH_FSRU	rad	3.89092E-06	0.00115375	-0.00410428	0.00407241
YAW_FSRU	rad	-0.00867217	0.00874519	-0.0292173	0.0177175
WaveHeight-COG	m	-0.000247945	0.37544	-1.50959	1.47271
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	756.881	146.115	365.817	1313.06
FairleadTension2	kN	831.826	170.693	385.996	1456.31
FairleadTension3	kN	870.256	183.539	396.836	1524.87
FairleadTension4	kN	1137.05	215.228	593.157	2017.74
FairleadTension5	kN	1094.79	206.24	573.857	1947.73
FairleadTension6	kN	183.873	93.1574	41.2015	566.775
FairleadTension7	kN	168.628	88.5101	37.6034	548.297
FairleadTension8	kN	58.4372	29.8177	25.7185	199.929
AnchorTension1	kN	752.65	146.081	361.575	1308.51
AnchorTension2	kN	827.573	170.637	381.755	1451.65
AnchorTension3	kN	865.988	183.471	392.594	1520.16
AnchorTension4	kN	1133.3	215.15	589.431	2013.53
AnchorTension5	kN	1091.05	206.17	570.124	1943.56
AnchorTension6	kN	179.617	93.1575	36.9527	562.475
AnchorTension7	kN	164.372	88.5101	33.354	543.997
AnchorTension8	kN	53.2372	29.8146	20.6391	194.674
xManExc	m	-2.60297	0.557792	-4.25347	-0.909448
yManExc	m	-4.64027	1.2135	-7.26076	-2.38452
zManExc	m	-20.1254	0.186504	-20.6129	-19.5823
xFairLeadML6	m	-2.69857	0.468122	-4.10158	-1.20103
yFairLeadML6	m	-5.64317	1.96019	-9.97172	-0.704423
zFairLeadML6	m	-20.0621	0.209754	-20.8272	-19.3388
xFairLeadML10	m	-2.56485	0.592766	-4.28895	-0.836414
yFairLeadML10	m	-3.75715	0.839277	-6.34274	-1.80416
zFairLeadML10	m	-20.1459	0.209798	-20.7532	-19.6275
xFairLeadML12	m	-2.64101	0.51967	-4.13614	-1.03768
yFairLeadML12	m	-3.34574	0.997092	-6.40795	-0.910441
zFairLeadML12	m	-20.0879	0.167937	-20.6976	-19.4868

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name	units	mean	std	min	max
xCOG_FSRU	m	4.80831	0.30055	3.81997	5.67301
yCOG_FSRU	m	-4.63077	0.691927	-6.12689	-2.89215
zCOG_FSRU	m	3.74681	0.0499656	3.57662	3.92375
xREF_FSRU	m	0.741388	0.300726	-0.234801	1.60837
yREF_FSRU	m	-4.61569	0.681382	-6.17335	-2.78993
zREF_FSRU	m	-9.35308	0.0462826	-9.50888	-9.19174
ROLL_FSRU	rad	-0.00166743	0.00359031	-0.0142602	0.01147
PITCH_FSRU	rad	-1.37941E-06	0.00121822	-0.00445939	0.00429579
YAW_FSRU	rad	-0.00908038	0.00660453	-0.0268997	0.010254
WaveHeight-COG	m	-0.000225191	0.375455	-1.50741	1.44623
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	751.269	97.2646	476.771	1041.9
FairleadTension2	kN	831.416	114.183	522.456	1153.13
FairleadTension3	kN	869.333	123.038	545.52	1207.86
FairleadTension4	kN	1134.25	149.968	740.59	1593.78
FairleadTension5	kN	1090.68	142.306	720.873	1511.81
FairleadTension6	kN	180.05	74.3091	61.3163	474.572
FairleadTension7	kN	165.225	70.5427	56.061	448.234
FairleadTension8	kN	55.6035	17.4849	27.2351	129.88
AnchorTension1	kN	746.625	97.2349	472.21	1037.1
AnchorTension2	kN	826.742	114.13	517.896	1148.2
AnchorTension3	kN	864.639	122.974	540.954	1202.89
AnchorTension4	kN	1130.07	149.893	736.562	1589.34
AnchorTension5	kN	1086.52	142.239	716.85	1507.43
AnchorTension6	kN	175.415	74.3084	56.7233	469.934
AnchorTension7	kN	160.589	70.542	51.4693	443.595
AnchorTension8	kN	50.0356	17.481	21.7932	124.303
xManExc	m	-3.15552	0.416396	-4.39423	-1.98642
yManExc	m	-4.8444	0.793382	-6.54396	-2.9981
zManExc	m	-13.1348	0.0854426	-13.4703	-12.8074
xFairLeadML6	m	-3.25316	0.347702	-4.33478	-2.28611
yFairLeadML6	m	-5.81209	1.33385	-9.225	-2.43944
zFairLeadML6	m	-13.1179	0.196604	-13.8056	-12.4041
xFairLeadML10	m	-3.11669	0.443531	-4.41821	-1.87952
yFairLeadML10	m	-3.83632	0.660348	-5.9234	-2.01556
zFairLeadML10	m	-13.1407	0.100026	-13.4968	-12.7979
xFairLeadML12	m	-3.19716	0.388373	-4.34742	-2.09698
yFairLeadML12	m	-3.39738	0.837106	-5.81574	-1.32433
zFairLeadML12	m	-13.1254	0.136649	-13.6394	-12.6152

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name	units	mean	std	min	max
xCOG_FSRU	m	4.24116	0.469156	2.09536	5.77618
yCOG_FSRU	m	-4.76505	1.07037	-7.11051	-1.976
zCOG_FSRU	m	9.19367	0.0640186	8.96897	9.41878
xREF_FSRU	m	0.751195	0.468495	-1.3788	2.28504
yREF_FSRU	m	-4.86701	1.05929	-7.23075	-1.96391
zREF_FSRU	m	-10.8049	0.0604883	-11.0163	-10.596
ROLL_FSRU	rad	-0.00667652	0.00955978	-0.0293566	0.0150706
PITCH_FSRU	rad	4.28346E-06	0.0014307	-0.00541164	0.00510639
YAW_FSRU	rad	-0.00904451	0.00961202	-0.044525	0.0211676
WaveHeight-COG	m	-0.000216865	0.424671	-1.70711	1.65769
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	797.975	161.46	375.001	1289.39
FairleadTension2	kN	878.429	187.166	394.033	1402.75
FairleadTension3	kN	920.216	199.769	403.4	1468.97
FairleadTension4	kN	1201.81	237.376	476.749	1920.7
FairleadTension5	kN	1153.78	229.352	478.67	1829.57
FairleadTension6	kN	180.783	105.977	25.3036	885.281
FairleadTension7	kN	165.348	100.584	25.1328	859.573
FairleadTension8	kN	55.2871	30.7251	25.3161	288.447
AnchorTension1	kN	793.735	161.415	370.955	1284.71
AnchorTension2	kN	874.159	187.096	389.912	1397.98
AnchorTension3	kN	915.929	199.684	399.28	1464.31
AnchorTension4	kN	1198.03	237.282	473.142	1916.45
AnchorTension5	kN	1150.02	229.267	475.062	1825.37
AnchorTension6	kN	176.526	105.977	21.0868	881
AnchorTension7	kN	161.091	100.584	20.9157	855.302
AnchorTension8	kN	50.0851	30.7217	20.1765	283.232
xManExc	m	-2.56762	0.630188	-5.20584	-0.415041
yManExc	m	-4.93995	1.24493	-8.09706	-1.97438
zManExc	m	-20.1334	0.205276	-20.8624	-19.4811
xFairLeadML6	m	-2.66825	0.534521	-5.04268	-0.944145
yFairLeadML6	m	-5.9882	2.05067	-12.6968	-0.793583
zFairLeadML6	m	-20.0659	0.25305	-21.0702	-19.1296
xFairLeadML10	m	-2.52698	0.667798	-5.23572	-0.161857
yFairLeadML10	m	-4.02142	0.925297	-7.10957	-0.9369
zFairLeadML10	m	-20.1551	0.230218	-20.8139	-19.4829
xFairLeadML12	m	-2.60601	0.58982	-5.076	-0.515829
yFairLeadML12	m	-3.59247	1.14237	-7.38521	-0.150637
zFairLeadML12	m	-20.0934	0.196997	-20.7619	-19.363

ballasted_90degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.84336	0.386877	3.10986	6.3251
yCOG_FSRU	m	-4.93183	0.808172	-7.67527	-2.1083
zCOG_FSRU	m	3.7467	0.058741	3.53445	3.96432
xREF_FSRU	m	0.776459	0.387234	-0.956671	2.25731
yREF_FSRU	m	-4.91625	0.794789	-7.62994	-2.10925
zREF_FSRU	m	-9.35316	0.0542221	-9.54758	-9.15371
ROLL_FSRU	rad	-0.00177477	0.00415933	-0.0170349	0.013969
PITCH_FSRU	rad	-9.59087E-07	0.00152655	-0.00576788	0.00542454
YAW_FSRU	rad	-0.00954881	0.0078392	-0.031978	0.0184819
WaveHeight-COG	m	-0.000180273	0.424708	-1.71414	1.63923
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	791.594	125.121	309.558	1473.11
FairleadTension2	kN	877.547	144.624	319.933	1604.42
FairleadTension3	kN	921.294	158.34	326.201	1979.86
FairleadTension4	kN	1199.19	189.162	488.431	2144.38
FairleadTension5	kN	1152.14	181.233	465.663	2066.04
FairleadTension6	kN	177.222	85.3419	45.9565	593.17
FairleadTension7	kN	162.044	80.4095	42.5309	553.68
FairleadTension8	kN	53.2144	21.4869	26.0076	232.237
AnchorTension1	kN	786.933	125.07	304.92	1468.01
AnchorTension2	kN	872.845	144.548	315.295	1599.2
AnchorTension3	kN	916.568	158.246	321.568	1974.23
AnchorTension4	kN	1194.97	189.063	484.39	2139.62
AnchorTension5	kN	1147.94	181.143	461.621	2061.34
AnchorTension6	kN	172.587	85.341	41.4348	588.528
AnchorTension7	kN	157.409	80.4086	38.009	549.038
AnchorTension8	kN	47.6461	21.4828	20.5817	226.593
xManExc	m	-3.11194	0.514394	-4.90302	-1.45303
yManExc	m	-5.15632	0.93377	-8.50675	-1.70642
zManExc	m	-13.137	0.102762	-13.5623	-12.7052
xFairLeadML6	m	-3.21573	0.437862	-4.89251	-1.66336
yFairLeadML6	m	-6.17416	1.58681	-11.8253	-0.583865
zFairLeadML6	m	-13.119	0.242968	-14.0077	-12.1647
xFairLeadML10	m	-3.06995	0.545182	-4.88359	-1.36762
yFairLeadML10	m	-4.09665	0.755626	-6.35718	-1.99548
zFairLeadML10	m	-13.1432	0.124796	-13.6176	-12.6831
xFairLeadML12	m	-3.15407	0.48332	-4.85575	-1.534
yFairLeadML12	m	-3.635	0.965235	-6.40547	-1.16605
zFairLeadML12	m	-13.1269	0.174084	-13.7728	-12.4922

loaded_270degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.53888	0.894237	1.09578	7.50867
yCOG_FSRU	m	7.46846	1.3819	3.39034	11.2091
zCOG_FSRU	m	9.19244	0.0997398	8.81129	9.56733
xREF_FSRU	m	1.04788	0.893712	-2.42564	3.94663
yREF_FSRU	m	7.61437	1.38967	3.54115	11.5083
zREF_FSRU	m	-10.8039	0.0931308	-11.1605	-10.4596
ROLL_FSRU	rad	0.00954843	0.0164286	-0.0275477	0.0514951
PITCH_FSRU	rad	6.48022E-06	0.00275696	-0.0104634	0.00975254
YAW_FSRU	rad	0.0128936	0.0177353	-0.0558055	0.0599012
WaveHeight-COG	m	-0.000444787	0.627736	-2.46739	2.55248
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	35.0221	37.3656	23.5034	633.282
FairleadTension2	kN	33.2098	34.4346	23.4118	612.575
FairleadTension3	kN	32.4116	32.8566	23.3729	598.245
FairleadTension4	kN	162.969	204.941	23.1534	1514.6
FairleadTension5	kN	180.43	215.566	23.2652	1563.32
FairleadTension6	kN	1679.11	423.042	216.324	3229.42
FairleadTension7	kN	1758.22	447.419	204.007	3389.31
FairleadTension8	kN	1418.7	343.445	412.862	2691.75
AnchorTension1	kN	30.7337	37.364	19.3584	629.02
AnchorTension2	kN	28.9207	34.4333	19.2646	608.313
AnchorTension3	kN	28.1218	32.8554	19.2231	593.984
AnchorTension4	kN	159.26	204.937	19.4645	1510.42
AnchorTension5	kN	176.721	215.561	19.5907	1559.11
AnchorTension6	kN	1674.3	422.732	212.284	3223.33
AnchorTension7	kN	1753.35	447.089	199.966	3383.12
AnchorTension8	kN	1412.79	343.049	407.855	2684.43
xManExc	m	-2.68779	0.682882	-5.71954	-0.351074
yManExc	m	7.70529	1.54228	3.70734	11.4056
zManExc	m	-19.8294	0.347479	-20.9206	-18.797
xFairLeadML6	m	-2.5866	0.771337	-5.82727	-0.0696037
yFairLeadML6	m	9.20641	2.8507	-0.461432	16.6448
zFairLeadML6	m	-19.9224	0.461405	-21.6466	-18.2359
xFairLeadML10	m	-2.70745	0.66004	-5.71702	-0.46347
yFairLeadML10	m	6.39426	1.92802	0.490243	12.1098
zFairLeadML10	m	-19.7921	0.409964	-21.154	-18.6171
xFairLeadML12	m	-2.57726	0.749189	-5.78892	0.0217011
yFairLeadML12	m	5.78879	2.60597	-1.77318	14.8333
zFairLeadML12	m	-19.8793	0.378007	-21.4679	-18.4878

ballasted_270degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	5.11923	0.844564	0.622483	7.73494
yCOG_FSRU	m	7.63118	1.09604	4.35093	10.953
zCOG_FSRU	m	3.74534	0.090675	3.39815	4.0978
xREF_FSRU	m	1.0527	0.846178	-3.3965	3.69005
yREF_FSRU	m	7.61409	1.12149	4.08702	11.1876
zREF_FSRU	m	-9.35372	0.0822391	-9.66871	-9.03658
ROLL_FSRU	rad	0.00272442	0.0112005	-0.0386389	0.0437521
PITCH_FSRU	rad	1.75208E-06	0.00298634	-0.0111655	0.0108739
YAW_FSRU	rad	0.0129793	0.0175641	-0.0563521	0.0632293
WaveHeight-COG	m	-0.000215601	0.62768	-2.48089	2.54907
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	33.2875	28.4318	24.1351	690.369
FairleadTension2	kN	31.5637	25.2043	24.0286	626
FairleadTension3	kN	30.8226	23.5797	23.9778	592.186
FairleadTension4	kN	168.232	210.135	23.0387	1570.53
FairleadTension5	kN	184.568	216.633	23.124	1583.54
FairleadTension6	kN	1672.38	377.556	181.719	3588.42
FairleadTension7	kN	1751.88	409.819	171.736	3805.4
FairleadTension8	kN	1416.15	294.765	378.155	2554.5
AnchorTension1	kN	28.6417	28.4285	19.7427	685.649
AnchorTension2	kN	26.9177	25.2012	19.6143	621.285
AnchorTension3	kN	26.1764	23.5766	19.5568	587.467
AnchorTension4	kN	164.149	210.126	19.1979	1566.12
AnchorTension5	kN	180.485	216.624	19.2843	1579.07
AnchorTension6	kN	1667.05	377.236	176.913	3581.88
AnchorTension7	kN	1746.48	409.472	166.951	3798.72
AnchorTension8	kN	1409.68	294.375	372.756	2546.31
xManExc	m	-3.26576	0.62574	-7.03667	-0.889529
yManExc	m	7.92265	1.12701	4.52555	11.0766
zManExc	m	-13.0545	0.22581	-13.9587	-12.1427
xFairLeadML6	m	-3.16183	0.720957	-7.31074	-0.67359
yFairLeadML6	m	9.31553	2.34827	0.354784	15.8872
zFairLeadML6	m	-13.0807	0.454085	-14.7252	-11.2763
xFairLeadML10	m	-3.28409	0.600051	-6.856	-0.933229
yFairLeadML10	m	6.48628	2.04582	-0.136579	14.0207
zFairLeadML10	m	-13.0436	0.31197	-14.2232	-11.8287
xFairLeadML12	m	-3.153	0.692603	-7.07815	-0.696063
yFairLeadML12	m	5.8633	2.80587	-3.09445	15.9932
zFairLeadML12	m	-13.0684	0.375642	-14.4987	-11.7171

loaded_270degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.49405	1.14519	-0.00473304	8.02703
yCOG_FSRU	m	8.07593	1.52274	4.35955	13.5653
zCOG_FSRU	m	9.1921	0.109407	8.76788	9.60674
xREF_FSRU	m	1.00311	1.14393	-3.538	4.43855
yREF_FSRU	m	8.23813	1.54101	3.81777	13.9764
zREF_FSRU	m	-10.8033	0.101818	-11.1958	-10.4197
ROLL_FSRU	rad	0.01013	0.0186358	-0.0393797	0.0658068
PITCH_FSRU	rad	0.000008797	0.0032376	-0.012041	0.0116665
YAW_FSRU	rad	0.0115514	0.0237329	-0.0643518	0.0861248
WaveHeight-COG	m	-0.000199475	0.678881	-2.66695	2.74184
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	40.4861	65.6331	23.2079	1283.66
FairleadTension2	kN	38.0738	61.1351	23.1369	1260.69
FairleadTension3	kN	36.9551	58.644	23.1034	1241.66
FairleadTension4	kN	201.47	295.776	22.4074	2071.68
FairleadTension5	kN	216.918	302.238	22.5051	2047.04
FairleadTension6	kN	1818.52	514.682	264.77	5032.21
FairleadTension7	kN	1913.7	551.866	244.48	5237.36
FairleadTension8	kN	1550.06	412.491	379.962	4318.59
AnchorTension1	kN	36.1949	65.6287	19.1203	1279
AnchorTension2	kN	33.7819	61.1309	19.0474	1256.05
AnchorTension3	kN	32.6625	58.6401	19.0123	1237.04
AnchorTension4	kN	197.756	295.755	18.8904	2067.56
AnchorTension5	kN	213.205	302.217	18.9885	2042.94
AnchorTension6	kN	1813.61	514.311	260.737	5024.97
AnchorTension7	kN	1908.71	551.464	240.452	5230.01
AnchorTension8	kN	1544	412.021	374.869	4309.72
xManExc	m	-2.71002	0.851795	-6.88707	1.31816
yManExc	m	8.26676	1.63269	4.44579	13.6556
zManExc	m	-19.8193	0.393371	-20.8733	-18.6097
xFairLeadML6	m	-2.63387	0.981922	-6.77093	1.10624
yFairLeadML6	m	9.64018	3.35172	-1.51773	20.0391
zFairLeadML6	m	-19.9176	0.533059	-21.8375	-18.0021
xFairLeadML10	m	-2.71276	0.813639	-6.96026	1.28761
yFairLeadML10	m	7.11841	2.65157	-0.630792	15.3684
zFairLeadML10	m	-19.7789	0.470774	-21.0993	-18.3499
xFairLeadML12	m	-2.58965	0.936824	-6.80854	1.16891
yFairLeadML12	m	6.58066	3.65362	-3.92868	17.9482
zFairLeadML12	m	-19.8713	0.443954	-21.3306	-18.3451

ballasted_270degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	5.15418	0.977576	1.73857	8.01005
yCOG_FSRU	m	8.22636	1.17155	4.52485	11.3992
zCOG_FSRU	m	3.74505	0.0998603	3.36499	4.13176
xREF_FSRU	m	1.0878	0.980241	-2.32109	4.05383
yREF_FSRU	m	8.21153	1.20687	4.30672	11.962
zREF_FSRU	m	-9.35382	0.0902941	-9.6943	-9.00957
ROLL_FSRU	rad	0.00292308	0.0122613	-0.0463094	0.0513347
PITCH_FSRU	rad	3.93609E-06	0.00349974	-0.0127211	0.0130961
YAW_FSRU	rad	0.0130608	0.0201218	-0.0523967	0.0675423
WaveHeight-COG	m	9.81128E-05	0.678999	-2.67401	2.74409
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	32.37	22.0393	23.7426	284.481
FairleadTension2	kN	30.7057	18.6384	23.6432	248.443
FairleadTension3	kN	29.9951	17.0199	23.6012	230.14
FairleadTension4	kN	180.539	240.393	23.1789	1778.79
FairleadTension5	kN	198.89	256.987	23.2879	2043.24
FairleadTension6	kN	1804.99	420.213	387.838	3462.55
FairleadTension7	kN	1893.57	457.545	403.498	3681.53
FairleadTension8	kN	1533.87	330.734	291.642	2919.39
AnchorTension1	kN	27.7235	22.0362	19.4797	279.755
AnchorTension2	kN	26.059	18.6353	19.3855	243.711
AnchorTension3	kN	25.3482	17.0168	19.3403	225.434
AnchorTension4	kN	176.454	240.38	19.1894	1773.83
AnchorTension5	kN	194.804	256.972	19.3006	2038.58
AnchorTension6	kN	1799.54	419.854	383.354	3455.9
AnchorTension7	kN	1888.04	457.155	399.009	3674.84
AnchorTension8	kN	1527.25	330.301	286.149	2910.94
xManExc	m	-3.23358	0.717766	-6.07774	-0.706382
yManExc	m	8.51522	1.17349	5.284	11.8098
zManExc	m	-13.0514	0.249885	-13.9902	-12.1157
xFairLeadML6	m	-3.13421	0.830983	-6.13107	-0.581129
yFairLeadML6	m	9.92047	2.5752	2.46483	17.7633
zFairLeadML6	m	-13.0795	0.524699	-14.985	-11.1029
xFairLeadML10	m	-3.24647	0.689332	-5.92192	-0.791182
yFairLeadML10	m	7.07277	2.35781	0.697982	15.7193
zFairLeadML10	m	-13.0392	0.359648	-14.5864	-11.4875
xFairLeadML12	m	-3.11217	0.801207	-5.97888	-0.618507
yFairLeadML12	m	6.44679	3.24781	-1.85756	18.2055
zFairLeadML12	m	-13.0658	0.444243	-14.8489	-11.3277

loaded_300degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.67608	0.980012	0.720528	6.40219
yCOG_FSRU	m	5.1702	0.951798	2.33153	8.09118
zCOG_FSRU	m	9.19308	0.0770594	8.89453	9.48576
xREF_FSRU	m	0.188661	0.977569	-2.75344	2.922
yREF_FSRU	m	5.34207	0.983893	2.29787	8.48013
zREF_FSRU	m	-10.8051	0.0717776	-11.0813	-10.5327
ROLL_FSRU	rad	0.00706003	0.0113167	-0.0196221	0.034362
PITCH_FSRU	rad	6.98351E-06	0.00221615	-0.0083658	0.0081313
YAW_FSRU	rad	-0.00880778	0.0229451	-0.0671367	0.0524012
WaveHeight-COG	m	-0.000127349	0.47782	-1.87942	1.92755
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	118.708	129.539	24.2041	1095.6
FairleadTension2	kN	112.186	125.86	24.0999	1099.51
FairleadTension3	kN	108.601	123.088	24.0538	1095.01
FairleadTension4	kN	139.019	207.556	22.796	1421.75
FairleadTension5	kN	147.76	214.106	22.9027	1399.05
FairleadTension6	kN	1402.91	361.857	449.701	2857.8
FairleadTension7	kN	1495.93	412.671	434.678	3011.03
FairleadTension8	kN	926.489	234.112	324.989	2248.18
AnchorTension1	kN	114.432	129.541	20.0322	1091.2
AnchorTension2	kN	107.909	125.862	19.9331	1095.11
AnchorTension3	kN	104.323	123.091	19.8897	1090.62
AnchorTension4	kN	135.315	207.55	19.2226	1417.7
AnchorTension5	kN	144.056	214.1	19.331	1395.01
AnchorTension6	kN	1398.3	361.607	445.481	2851.98
AnchorTension7	kN	1491.25	412.379	430.459	3005.09
AnchorTension8	kN	921.098	233.894	319.875	2241.16
xManExc	m	-3.1441	0.618989	-5.70359	-1.33272
yManExc	m	4.84354	0.946508	2.21004	7.7767
zManExc	m	-19.8747	0.247524	-20.6126	-19.0993
xFairLeadML6	m	-3.26323	0.820951	-6.04355	-1.01709
yFairLeadML6	m	4.0558	2.81197	-3.17522	12.7572
zFairLeadML6	m	-19.9445	0.363331	-21.2907	-18.6264
xFairLeadML10	m	-3.07809	0.544044	-5.53427	-1.29833
yFairLeadML10	m	5.96747	2.48604	-0.068088	11.9348
zFairLeadML10	m	-19.8477	0.292494	-20.7386	-18.8743
xFairLeadML12	m	-3.14425	0.694504	-5.78952	-0.983412
yFairLeadML12	m	6.41172	3.54955	-2.4125	14.7643
zFairLeadML12	m	-19.9121	0.291655	-20.9405	-18.8429

ballasted_300degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.26458	0.871147	1.64814	6.65159
yCOG_FSRU	m	5.22608	0.820391	2.63197	7.85925
zCOG_FSRU	m	3.74622	0.0700387	3.47887	4.01885
xREF_FSRU	m	0.198701	0.871293	-2.37077	2.61343
yREF_FSRU	m	5.28696	0.866941	2.53076	8.14301
zREF_FSRU	m	-9.3533	0.063461	-9.59292	-9.10926
ROLL_FSRU	rad	0.0019613	0.00789373	-0.0303233	0.0338358
PITCH_FSRU	rad	1.47634E-06	0.00239684	-0.00887991	0.00888946
YAW_FSRU	rad	-0.00865426	0.0195614	-0.0620933	0.0412822
WaveHeight-COG	m	-2.26044E-06	0.477744	-1.88229	1.91634
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	103.578	98.9045	24.8498	757.866
FairleadTension2	kN	97.022	95.086	24.7423	736.519
FairleadTension3	kN	93.605	92.4531	24.6951	720.479
FairleadTension4	kN	112.559	168.932	23.1871	1247.35
FairleadTension5	kN	120.881	175.726	23.2915	1255.13
FairleadTension6	kN	1378.46	329.839	474.862	2706.24
FairleadTension7	kN	1471.79	373.208	481.128	2920.91
FairleadTension8	kN	909.397	225.944	290.205	1733.74
AnchorTension1	kN	98.9361	98.904	20.3314	753.182
AnchorTension2	kN	92.3803	95.0856	20.216	731.856
AnchorTension3	kN	88.9631	92.4527	20.166	715.822
AnchorTension4	kN	108.477	168.93	19.2991	1243
AnchorTension5	kN	116.8	175.724	19.4059	1250.76
AnchorTension6	kN	1373.37	329.569	470.303	2700.21
AnchorTension7	kN	1466.62	372.898	476.541	2914.72
AnchorTension8	kN	903.546	225.696	284.696	1726.51
xManExc	m	-3.7123	0.581075	-5.60865	-1.91722
yManExc	m	4.95459	0.750087	2.17858	7.48578
zManExc	m	-13.0674	0.16531	-13.645	-12.4344
xFairLeadML6	m	-3.82258	0.743482	-6.20118	-1.81645
yFairLeadML6	m	4.09476	2.28247	-2.11584	10.998
zFairLeadML6	m	-13.0866	0.360608	-14.3874	-11.7378
xFairLeadML10	m	-3.65533	0.523514	-5.40003	-1.96197
yFairLeadML10	m	5.97487	2.21279	0.756912	11.9585
zFairLeadML10	m	-13.0598	0.237458	-14.0771	-12.0579
xFairLeadML12	m	-3.72367	0.640019	-5.60279	-1.81968
yFairLeadML12	m	6.40131	3.12794	-0.959167	15.0439
zFairLeadML12	m	-13.0777	0.300683	-14.2738	-11.9027

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name	units	mean	std	min	max
xCOG_FSRU	m	3.72063	1.51856	-2.71376	12.0498
yCOG_FSRU	m	5.48708	1.78994	-3.44029	14.0125
zCOG_FSRU	m	9.19275	0.0813225	8.87648	9.50604
xREF_FSRU	m	0.233297	1.51257	-6.15283	8.49939
yREF_FSRU	m	5.66319	1.78728	-3.71853	14.9253
zREF_FSRU	m	-10.8043	0.0756196	-11.0905	-10.5186
ROLL_FSRU	rad	0.00725978	0.0151332	-0.0549342	0.0680759
PITCH_FSRU	rad	8.9684E-06	0.00252888	-0.00927058	0.00932572
YAW_FSRU	rad	-0.00888329	0.0291131	-0.100961	0.104354
WaveHeight-COG	m	-0.00011986	0.500654	-1.9781	2.03587
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	154.011	282.159	22.8176	3934.34
FairleadTension2	kN	148.511	286.731	22.7905	4046.15
FairleadTension3	kN	146.45	295.426	22.7768	4088.87
FairleadTension4	kN	199.722	370.935	22.1926	3547.95
FairleadTension5	kN	208.498	374.577	22.3209	3538.68
FairleadTension6	kN	1519.17	664.697	24.3883	6302.19
FairleadTension7	kN	1619.32	712.587	24.4008	6432.74
FairleadTension8	kN	1013.83	509.893	24.6789	5471.98
AnchorTension1	kN	149.722	282.053	18.6688	3927.43
AnchorTension2	kN	144.22	286.621	18.644	4039.16
AnchorTension3	kN	142.158	295.309	18.6318	4081.84
AnchorTension4	kN	196.006	370.865	18.5882	3542.91
AnchorTension5	kN	204.781	374.507	18.6775	3533.65
AnchorTension6	kN	1514.45	664.254	20.2163	6294.24
AnchorTension7	kN	1614.53	712.108	20.2241	6424.74
AnchorTension8	kN	1008.31	509.406	19.7058	5462.42
xManExc	m	-3.10229	1.27744	-10.5434	5.46808
yManExc	m	5.15213	1.87545	-3.66147	14.6665
zManExc	m	-19.8719	0.31693	-21.0772	-18.5086
xFairLeadML6	m	-3.23933	1.40024	-10.1188	5.20107
yFairLeadML6	m	4.36215	3.9804	-12.8215	24.9468
zFairLeadML6	m	-19.943	0.415863	-21.4667	-18.4249
xFairLeadML10	m	-3.01795	1.23515	-10.5336	5.50603
yFairLeadML10	m	6.28724	3.2776	-4.56916	20.8953
zFairLeadML10	m	-19.843	0.377833	-21.3004	-18.371
xFairLeadML12	m	-3.07697	1.30746	-9.93234	5.3303
yFairLeadML12	m	6.73745	4.53223	-7.71222	25.6144
zFairLeadML12	m	-19.9091	0.35098	-21.1079	-18.7196

ballasted_300degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.31662	1.21605	-1.39092	10.2435
yCOG_FSRU	m	5.64427	1.40988	1.57609	11.5123
zCOG_FSRU	m	3.74591	0.0743448	3.46607	4.03564
xREF_FSRU	m	0.25123	1.21553	-5.41698	6.12575
yREF_FSRU	m	5.70358	1.42899	1.68472	11.4861
zREF_FSRU	m	-9.35354	0.067179	-9.60221	-9.09642
ROLL_FSRU	rad	0.00204912	0.00843067	-0.0313074	0.0341139
PITCH_FSRU	rad	3.27838E-06	0.00271334	-0.00968248	0.00997008
YAW_FSRU	rad	-0.00798843	0.0257446	-0.0891097	0.0875704
WaveHeight-COG	m	3.22484E-05	0.500504	-1.95534	2.0479
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	129.785	204.612	23.8914	2005.75
FairleadTension2	kN	123.724	201.863	23.7868	1993.59
FairleadTension3	kN	120.363	199.269	23.7328	1979.39
FairleadTension4	kN	151.139	299.686	22.4841	2445.14
FairleadTension5	kN	159.355	300.197	22.5876	2386.02
FairleadTension6	kN	1481.05	504.677	57.2911	4219.68
FairleadTension7	kN	1577.75	547.611	54.8415	4429.74
FairleadTension8	kN	977.891	388.084	57.3632	3653.29
AnchorTension1	kN	125.136	204.566	19.3054	2000.11
AnchorTension2	kN	119.075	201.817	19.2102	1987.96
AnchorTension3	kN	115.714	199.225	19.1671	1973.77
AnchorTension4	kN	147.047	299.625	18.4406	2440.19
AnchorTension5	kN	155.263	300.138	18.5442	2381.08
AnchorTension6	kN	1475.86	504.28	52.9332	4212.4
AnchorTension7	kN	1572.48	547.177	50.4802	4422.33
AnchorTension8	kN	971.92	387.664	51.966	3643.91
xManExc	m	-3.67636	0.914221	-9.29034	2.21851
yManExc	m	5.38637	1.50638	-0.0384139	11.9078
zManExc	m	-13.0662	0.178772	-13.7014	-12.3764
xFairLeadML6	m	-3.79408	1.07968	-9.4057	2.12019
yFairLeadML6	m	4.5984	3.49334	-6.04494	18.8675
zFairLeadML6	m	-13.0863	0.40282	-14.5475	-11.6732
xFairLeadML10	m	-3.60636	0.858011	-9.17016	2.16626
yFairLeadML10	m	6.33156	2.77834	-3.17355	15.6637
zFairLeadML10	m	-13.058	0.267805	-14.3769	-11.9119
xFairLeadML12	m	-3.66201	0.965868	-9.29987	2.12583
yFairLeadML12	m	6.72705	3.91114	-7.38405	19.804
zFairLeadML12	m	-13.0766	0.3445	-14.5201	-11.8206

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name	units	mean	std	min	max
xCOG_FSRU	m	3.75674	0.550752	2.23833	4.92265
yCOG_FSRU	m	-4.6502	1.0668	-6.9846	-2.41405
zCOG_FSRU	m	9.19454	0.0538284	9.01362	9.37438
xREF_FSRU	m	0.267264	0.549511	-1.24805	1.46266
yREF_FSRU	m	-4.7404	1.05665	-7.26563	-2.37478
zREF_FSRU	m	-10.8043	0.0509593	-10.975	-10.6332
ROLL_FSRU	rad	-0.00605282	0.00893242	-0.0262829	0.0140398
PITCH_FSRU	rad	-1.03152E-05	0.00115389	-0.00410179	0.00405593
YAW_FSRU	rad	-0.00883755	0.0126422	-0.0350201	0.0206506
WaveHeight-COG	m	-0.000253444	0.375454	-1.50649	1.48881
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	1151.26	242.294	613.296	1786.96
FairleadTension2	kN	1249.72	269.471	662.03	1920.83
FairleadTension3	kN	1124.22	252.879	454.283	1812.33
FairleadTension4	kN	1066.65	232.364	448.983	1684.04
FairleadTension5	kN	160.455	136.218	41.0083	695.155
FairleadTension6	kN	151.119	131.061	40.841	685.92
FairleadTension7	kN	76.4628	47.08	41.4641	328.118
FairleadTension8	kN	81.4484	50.308	41.6956	339.325
AnchorTension1	kN	1146.82	242.121	609.166	1782
AnchorTension2	kN	1245.21	269.262	657.903	1915.74
AnchorTension3	kN	1120.45	252.787	450.643	1808.2
AnchorTension4	kN	1062.9	232.288	445.342	1679.95
AnchorTension5	kN	156.2	136.218	36.7678	690.941
AnchorTension6	kN	146.864	131.061	36.5973	681.706
AnchorTension7	kN	71.2641	47.0787	36.3229	322.929
AnchorTension8	kN	76.2489	50.3067	36.5542	334.136
xManExc	m	-3.05702	0.781376	-5.06746	-1.43619
yManExc	m	-4.82684	1.23985	-7.48673	-2.3107
zManExc	m	-20.1202	0.187281	-20.6356	-19.6099
xFairLeadML6	m	-3.15852	0.64551	-4.90964	-1.84637
yFairLeadML6	m	-5.84281	2.25905	-10.6979	-0.797821
zFairLeadML6	m	-20.0576	0.209967	-20.821	-19.3387
xFairLeadML10	m	-3.01319	0.835048	-5.10813	-1.25815
yFairLeadML10	m	-3.92145	1.2326	-6.90623	-1.12996
zFairLeadML10	m	-20.1416	0.210714	-20.7468	-19.616
xFairLeadML12	m	-3.08875	0.726015	-4.94402	-1.54487
yFairLeadML12	m	-3.50125	1.66969	-7.17883	0.0661055
zFairLeadML12	m	-20.0863	0.16831	-20.7254	-19.4785

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name	units	mean	std	min	max
xCOG_FSRU	m	4.42483	0.35601	3.28432	5.42162
yCOG_FSRU	m	-4.80436	0.658483	-6.51771	-3.19308
zCOG_FSRU	m	3.7477	0.0499652	3.57732	3.92469
xREF_FSRU	m	0.358194	0.356216	-0.768259	1.35473
yREF_FSRU	m	-4.78273	0.648124	-6.52135	-3.11223
zREF_FSRU	m	-9.35226	0.0462809	-9.50818	-9.19063
ROLL_FSRU	rad	-0.00162289	0.00356012	-0.0141811	0.0113746
PITCH_FSRU	rad	-0.000017766	0.0012182	-0.00446415	0.00427789
YAW_FSRU	rad	-0.0105461	0.00785159	-0.0286581	0.0108923
WaveHeight-COG	m	-0.000226198	0.375447	-1.51071	1.46334
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	1130.58	153.952	716.947	1598.61
FairleadTension2	kN	1234.2	170.892	773.686	1733.11
FairleadTension3	kN	1109.67	156.69	713.283	1714.01
FairleadTension4	kN	1055.12	145.643	677.908	1620.32
FairleadTension5	kN	141.189	75.0012	42.5494	531.688
FairleadTension6	kN	130.707	70.9451	42.2876	510.997
FairleadTension7	kN	62.9941	21.6737	42.3784	175.168
FairleadTension8	kN	67.6957	23.6872	42.6295	185.886
AnchorTension1	kN	1125.68	153.813	712.349	1593.26
AnchorTension2	kN	1229.21	170.728	769.078	1727.61
AnchorTension3	kN	1105.48	156.605	709.23	1709.43
AnchorTension4	kN	1050.96	145.57	673.854	1615.81
AnchorTension5	kN	136.555	75.0008	37.927	527.047
AnchorTension6	kN	126.072	70.9447	37.6648	506.356
AnchorTension7	kN	57.4265	21.6706	36.9483	169.535
AnchorTension8	kN	62.128	23.6839	37.2023	180.249
xManExc	m	-3.51219	0.496936	-5.01167	-2.21569
yManExc	m	-5.05837	0.77154	-6.91061	-3.21852
zManExc	m	-13.1326	0.0851841	-13.4677	-12.808
xFairLeadML6	m	-3.62666	0.412787	-4.92119	-2.52179
yFairLeadML6	m	-6.1768	1.42525	-9.2982	-2.32746
zFairLeadML6	m	-13.1144	0.196607	-13.7952	-12.4016
xFairLeadML10	m	-3.46531	0.531145	-5.01608	-2.08558
yFairLeadML10	m	-3.88229	0.730687	-6.18903	-2.26422
zFairLeadML10	m	-13.1402	0.0996354	-13.5002	-12.7939
xFairLeadML12	m	-3.5581	0.464743	-4.94381	-2.31359
yFairLeadML12	m	-3.37183	0.998958	-6.29702	-1.0412
zFairLeadML12	m	-13.1261	0.136565	-13.6409	-12.6165

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name	units	mean	std	min	max
xCOG_FSRU	m	3.7237	0.718301	0.509808	6.52657
yCOG_FSRU	m	-4.95589	1.16666	-8.29585	-2.20967
zCOG_FSRU	m	9.19437	0.0640259	8.96932	9.41972
xREF_FSRU	m	0.234251	0.716471	-2.9661	3.01797
yREF_FSRU	m	-5.05614	1.15875	-8.39645	-2.24629
zREF_FSRU	m	-10.8042	0.0604795	-11.0162	-10.5951
ROLL_FSRU	rad	-0.00644304	0.0100612	-0.0386143	0.0310625
PITCH_FSRU	rad	-9.70043E-06	0.00143291	-0.00540189	0.00506511
YAW_FSRU	rad	-0.00819265	0.0154615	-0.0512219	0.0396626
WaveHeight-COG	m	-0.000216093	0.424691	-1.7063	1.67418
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1231.4	317.027	299.071	3148.1
FairleadTension2	kN	1335.01	339.718	339.027	3248.18
FairleadTension3	kN	1195.14	340.186	141.511	3136.4
FairleadTension4	kN	1137.54	317.797	148.946	2954.73
FairleadTension5	kN	172.617	175.939	39.5498	1281.93
FairleadTension6	kN	163.72	170.559	39.4279	1271.69
FairleadTension7	kN	80.8089	64.737	40.5833	842.139
FairleadTension8	kN	86.0628	68.7032	40.7715	894.877
AnchorTension1	kN	1226.89	316.788	294.92	3141.95
AnchorTension2	kN	1330.42	339.447	334.874	3241.93
AnchorTension3	kN	1191.33	340.043	137.819	3131.2
AnchorTension4	kN	1133.75	317.67	145.255	2949.63
AnchorTension5	kN	168.361	175.936	35.3264	1277.35
AnchorTension6	kN	159.464	170.555	35.2068	1267.11
AnchorTension7	kN	75.6083	64.7352	35.484	836.737
AnchorTension8	kN	80.8614	68.7008	35.6717	889.415
xManExc	m	-3.10314	0.979564	-6.79868	0.0153394
yManExc	m	-5.11146	1.33107	-8.47647	-1.75714
zManExc	m	-20.1279	0.213721	-20.9023	-19.2865
xFairLeadML6	m	-3.20184	0.825362	-6.63316	-0.279724
yFairLeadML6	m	-6.0668	2.535	-13.5993	0.547363
zFairLeadML6	m	-20.0613	0.254818	-21.0332	-19.1229
xFairLeadML10	m	-3.05772	1.04	-6.82982	0.13447
yFairLeadML10	m	-4.28652	1.58225	-9.48005	-0.439249
zFairLeadML10	m	-20.1504	0.240736	-21.0405	-19.1934
xFairLeadML12	m	-3.12567	0.913363	-6.66658	-0.0890612
yFairLeadML12	m	-3.89794	2.17246	-11.258	1.77406
zFairLeadML12	m	-20.0914	0.201517	-20.7952	-19.3153

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name	units	mean	std	min	max
xCOG_FSRU	m	4.44129	0.419752	2.87844	5.49127
yCOG_FSRU	m	-5.09595	0.724342	-7.31802	-3.29364
zCOG_FSRU	m	3.74757	0.0587376	3.5351	3.96527
xREF_FSRU	m	0.374678	0.420183	-1.14404	1.46294
yREF_FSRU	m	-5.0739	0.71338	-7.32179	-3.24067
zREF_FSRU	m	-9.35236	0.0542166	-9.54723	-9.15319
ROLL_FSRU	rad	-0.00172797	0.00411766	-0.0160558	0.0130902
PITCH_FSRU	rad	-1.72331E-05	0.00152648	-0.00580898	0.00538885
YAW_FSRU	rad	-0.0109883	0.00895318	-0.0330938	0.0155321
WaveHeight-COG	m	-0.000179622	0.424696	-1.70583	1.65589
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1197.68	179.627	612.92	1829.66
FairleadTension2	kN	1308.23	197.009	670.71	1955.13
FairleadTension3	kN	1176.43	185.955	649.109	1746.04
FairleadTension4	kN	1117.46	173.717	602.646	1662.49
FairleadTension5	kN	139.648	83.7336	41.9181	482.234
FairleadTension6	kN	129.071	78.8901	41.7446	460.655
FairleadTension7	kN	61.0101	23.1021	41.9592	201.169
FairleadTension8	kN	65.3648	25.4298	42.1938	216.291
AnchorTension1	kN	1192.72	179.458	608.47	1824.08
AnchorTension2	kN	1303.16	196.813	666.25	1949.38
AnchorTension3	kN	1172.2	185.846	644.994	1741.43
AnchorTension4	kN	1113.27	173.622	598.535	1657.95
AnchorTension5	kN	135.013	83.7331	37.3541	477.503
AnchorTension6	kN	124.436	78.8896	37.1382	455.915
AnchorTension7	kN	55.442	23.0986	36.5505	195.602
AnchorTension8	kN	59.7966	25.426	36.7858	210.724
xManExc	m	-3.48772	0.576656	-5.39572	-2.05728
yManExc	m	-5.36017	0.850671	-7.8384	-3.34723
zManExc	m	-13.1348	0.102444	-13.5501	-12.7129
xFairLeadML6	m	-3.60815	0.482411	-5.29806	-2.42892
yFairLeadML6	m	-6.52599	1.5958	-10.1664	-2.30219
zFairLeadML6	m	-13.1156	0.242996	-13.9976	-12.1658
xFairLeadML10	m	-3.43769	0.615301	-5.35147	-1.89697
yFairLeadML10	m	-4.13547	0.832037	-6.34118	-2.20134
zFairLeadML10	m	-13.1427	0.124196	-13.6184	-12.6859
xFairLeadML12	m	-3.53384	0.540981	-5.30595	-2.15904
yFairLeadML12	m	-3.60356	1.14735	-6.58356	-0.899843
zFairLeadML12	m	-13.1276	0.17391	-13.7732	-12.491

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name	units	mean	std	min	max
xCOG_FSRU	m	3.85828	1.12233	0.232467	7.2432
yCOG_FSRU	m	7.77058	1.50784	3.77856	12.3675
zCOG_FSRU	m	9.19293	0.0997323	8.81131	9.56612
xREF_FSRU	m	0.367629	1.12019	-3.21104	3.64042
yREF_FSRU	m	7.90765	1.51752	3.67864	12.7178
zREF_FSRU	m	-10.8034	0.0931401	-11.1593	-10.4617
ROLL_FSRU	rad	0.00923321	0.0166133	-0.0337225	0.053321
PITCH_FSRU	rad	-8.31545E-06	0.00275907	-0.0104282	0.00973022
YAW_FSRU	rad	0.0136191	0.0224482	-0.0541168	0.0670999
WaveHeight-COG	m	-0.000439716	0.627699	-2.44388	2.57608
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	56.702	64.4083	38.3608	1032.69
FairleadTension2	kN	53.3733	56.9016	38.1776	980.799
FairleadTension3	kN	181.693	258.922	37.6054	1885.99
FairleadTension4	kN	193.072	269.081	37.7696	1928.17
FairleadTension5	kN	1675.75	493.248	213.626	3416.9
FairleadTension6	kN	1780.98	536.625	194.091	3580.65
FairleadTension7	kN	2020.15	499.029	712.724	4050.69
FairleadTension8	kN	1845.67	484.808	640.143	3863.96
AnchorTension1	kN	52.4153	64.4049	34.2825	1028.25
AnchorTension2	kN	49.0853	56.8981	34.1341	976.399
AnchorTension3	kN	177.984	258.908	33.8664	1881.55
AnchorTension4	kN	189.363	269.066	34.0301	1923.7
AnchorTension5	kN	1670.85	492.828	209.599	3410.52
AnchorTension6	kN	1775.98	536.161	190.055	3574.21
AnchorTension7	kN	2013.27	498.324	707.627	4041.4
AnchorTension8	kN	1839.04	484.122	635.062	3854.9
xManExc	m	-3.3849	0.794299	-6.32589	-0.757393
yManExc	m	8.02874	1.62946	3.9354	12.5988
zManExc	m	-19.8344	0.35068	-20.9731	-18.8269
xFairLeadML6	m	-3.28729	0.934172	-6.49808	-0.479992
yFairLeadML6	m	9.60049	3.25765	-0.0293933	17.7975
zFairLeadML6	m	-19.9228	0.46225	-21.6229	-18.1668
xFairLeadML10	m	-3.3952	0.75761	-6.25027	-0.847059
yFairLeadML10	m	6.62931	2.50009	-0.194606	14.1381
zFairLeadML10	m	-19.7999	0.413616	-21.1036	-18.6702
xFairLeadML12	m	-3.25329	0.909594	-6.39324	-0.308345
yFairLeadML12	m	5.98904	3.43053	-2.78297	15.4452
zFairLeadML12	m	-19.8849	0.379502	-21.4274	-18.6245

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name	units	mean	std	min	max
xCOG_FSRU	m	4.51185	1.71388	-5.13964	12.2462
yCOG_FSRU	m	7.95511	1.38076	1.14741	13.3635
zCOG_FSRU	m	3.74572	0.0907578	3.39812	4.09886
xREF_FSRU	m	0.446485	1.71183	-9.19081	8.15679
yREF_FSRU	m	7.92694	1.40985	0.953607	13.0392
zREF_FSRU	m	-9.3534	0.0823264	-9.6686	-9.03617
ROLL_FSRU	rad	0.00263394	0.0113179	-0.0356047	0.0410565
PITCH_FSRU	rad	-1.43809E-05	0.00300004	-0.0111186	0.0110621
YAW_FSRU	rad	0.0154127	0.0276604	-0.124349	0.16016
WaveHeight-COG	m	-0.000264281	0.627919	-2.3623	2.55439
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	98.1132	317.766	37.5011	4648.48
FairleadTension2	kN	98.7691	342.034	37.399	4648.91
FairleadTension3	kN	216.587	489.385	35.6641	5541
FairleadTension4	kN	229.347	492.888	35.8062	5530.73
FairleadTension5	kN	1719.12	818.755	38.6349	7120.83
FairleadTension6	kN	1809.29	862.227	38.5869	7402.61
FairleadTension7	kN	2050.76	818.142	42.6478	7068.1
FairleadTension8	kN	1870.5	804.51	42.4401	6866.57
AnchorTension1	kN	93.4436	317.552	32.9476	4639.86
AnchorTension2	kN	94.0956	341.793	32.8426	4640.08
AnchorTension3	kN	212.468	489.149	31.6541	5533.43
AnchorTension4	kN	225.227	492.655	31.7968	5523.17
AnchorTension5	kN	1713.58	817.996	34.0341	7109.97
AnchorTension6	kN	1803.66	861.427	33.9839	7391.54
AnchorTension7	kN	2043.12	816.997	37.0921	7053.95
AnchorTension8	kN	1863.14	803.378	36.8737	6852.61
xManExc	m	-3.92622	1.55384	-13.2486	3.4241
yManExc	m	8.30815	1.47304	1.42606	17.2699
zManExc	m	-13.0554	0.227223	-13.8841	-12.1949
xFairLeadML6	m	-3.82507	1.63055	-13.038	3.52928
yFairLeadML6	m	9.9538	3.65316	-6.13924	33.8738
zFairLeadML6	m	-13.079	0.455499	-14.7781	-11.2889
xFairLeadML10	m	-3.92295	1.5243	-13.1566	3.26331
yFairLeadML10	m	6.59178	2.96187	-5.90468	21.1408
zFairLeadML10	m	-13.0466	0.315242	-14.2224	-11.8047
xFairLeadML12	m	-3.75671	1.57377	-12.717	3.50142
yFairLeadML12	m	5.85292	4.19823	-12.3392	26.8514
zFairLeadML12	m	-13.0714	0.378487	-14.4935	-11.6887

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name	units	mean	std	min	max
xCOG_FSRU	m	3.85199	1.49227	-2.89328	10.4936
yCOG_FSRU	m	8.40092	1.7075	2.56131	14.6096
zCOG_FSRU	m	9.19257	0.109377	8.76869	9.60637
xREF_FSRU	m	0.361038	1.48785	-6.38425	6.84867
yREF_FSRU	m	8.5468	1.73053	2.34886	14.8733
zREF_FSRU	m	-10.8017	0.101712	-11.1958	-10.4201
ROLL_FSRU	rad	0.00976686	0.0215595	-0.0719878	0.0986894
PITCH_FSRU	rad	-0.000006588	0.00325027	-0.0121465	0.0116743
YAW_FSRU	rad	0.0141364	0.0280805	-0.115439	0.109408
WaveHeight-COG	m	-0.000213295	0.678939	-2.6585	2.7515
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	77.3112	190.021	36.4387	3024.95
FairleadTension2	kN	72.9351	180.955	36.2756	2950.49
FairleadTension3	kN	214.988	406.005	35.9886	4664.99
FairleadTension4	kN	228.134	415.017	36.1915	4663.79
FairleadTension5	kN	1830.11	695.402	40.7541	6763.08
FairleadTension6	kN	1944.51	749.713	40.7526	7106.9
FairleadTension7	kN	2212.34	691.3	44.0342	6690.31
FairleadTension8	kN	2017.44	678.227	43.8472	6454.57
AnchorTension1	kN	73.0142	189.938	32.5442	3018.71
AnchorTension2	kN	68.6376	180.879	32.3812	2944.31
AnchorTension3	kN	211.261	405.882	32.1543	4658.36
AnchorTension4	kN	224.406	414.896	32.3737	4657.14
AnchorTension5	kN	1825.05	694.815	36.5309	6753.4
AnchorTension6	kN	1939.36	749.076	36.5259	7096.99
AnchorTension7	kN	2205.2	690.381	38.7135	6678.65
AnchorTension8	kN	2010.57	677.326	38.5219	6443.13
xManExc	m	-3.40458	1.16984	-9.48322	2.13486
yManExc	m	8.66251	1.8288	2.08037	14.4645
zManExc	m	-19.8259	0.44367	-21.6071	-18.076
xFairLeadML6	m	-3.31814	1.31133	-9.57147	2.20559
yFairLeadML6	m	10.2992	3.89878	-3.92917	24.7652
zFairLeadML6	m	-19.918	0.543948	-21.8489	-18.0315
xFairLeadML10	m	-3.40016	1.12753	-9.52765	2.14314
yFairLeadML10	m	7.21232	3.1028	-4.25862	21.4323
zFairLeadML10	m	-19.7876	0.529326	-21.7893	-17.5424
xFairLeadML12	m	-3.24625	1.26334	-9.36937	2.81312
yFairLeadML12	m	6.55021	4.3055	-9.20106	27.1168
zFairLeadML12	m	-19.8773	0.466937	-21.4081	-18.0442

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name	units	mean	std	min	max
xCOG_FSRU	m	4.57986	1.09251	-0.56272	7.42135
yCOG_FSRU	m	8.5335	1.2778	4.62981	12.241
zCOG_FSRU	m	3.74563	0.0998969	3.36516	4.1323
xREF_FSRU	m	0.513875	1.09509	-4.53691	3.34801
yREF_FSRU	m	8.50303	1.31138	4.32938	12.3904
zREF_FSRU	m	-9.35327	0.0903262	-9.69427	-9.00869
ROLL_FSRU	rad	0.00284621	0.0124931	-0.0475355	0.052468
PITCH_FSRU	rad	-1.27895E-05	0.00350908	-0.0127311	0.0130237
YAW_FSRU	rad	0.0166614	0.0211089	-0.0478991	0.0811478
WaveHeight-COG	m	0.000109686	0.678908	-2.6614	2.76555
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	48.2732	37.9199	38.8754	781.941
FairleadTension2	kN	46.2339	31.0027	38.7084	650.424
FairleadTension3	kN	166.883	238.362	37.4223	1870.76
FairleadTension4	kN	179.902	251.445	37.5426	1892.91
FairleadTension5	kN	1797.74	479.124	94.9582	4304.6
FairleadTension6	kN	1906.41	524.488	86.2482	4552.55
FairleadTension7	kN	2161.15	478.561	493.285	4267.17
FairleadTension8	kN	1966.14	476.321	442.217	4185.4
AnchorTension1	kN	43.6273	37.917	34.4203	777.083
AnchorTension2	kN	41.5876	30.9999	34.2528	645.62
AnchorTension3	kN	162.798	238.343	33.6696	1865.8
AnchorTension4	kN	175.816	251.425	33.7903	1887.93
AnchorTension5	kN	1792.16	478.64	90.0859	4296.85
AnchorTension6	kN	1900.71	523.954	81.3994	4544.58
AnchorTension7	kN	2153.35	477.815	487.955	4255.76
AnchorTension8	kN	1958.65	475.573	436.933	4173.99
xManExc	m	-3.87802	0.798791	-8.44512	-1.47988
yManExc	m	8.91841	1.28769	4.8933	12.8847
zManExc	m	-13.0518	0.252872	-13.9941	-12.102
xFairLeadML6	m	-3.75019	0.922827	-8.55303	-1.35906
yFairLeadML6	m	10.6957	2.74447	2.62119	19.0439
zFairLeadML6	m	-13.0775	0.525743	-14.9797	-11.1008
xFairLeadML10	m	-3.89494	0.769736	-8.24424	-1.24248
yFairLeadML10	m	7.06349	2.48399	-0.95869	14.5917
zFairLeadML10	m	-13.0418	0.364261	-14.5983	-11.4782
xFairLeadML12	m	-3.72394	0.904948	-8.39801	-1.22
yFairLeadML12	m	6.26315	3.40819	-4.86364	16.2036
zFairLeadML12	m	-13.0685	0.446852	-14.844	-11.3105

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name	units	mean	std	min	max
xCOG_FSRU	m	3.14143	1.09562	-0.802175	6.00463
yCOG_FSRU	m	5.36016	1.0401	2.6773	8.20618
zCOG_FSRU	m	9.19376	0.0770127	8.89589	9.48578
xREF_FSRU	m	-0.34602	1.09277	-4.23323	2.49371
yREF_FSRU	m	5.5245	1.07509	2.5993	8.51698
zREF_FSRU	m	-10.8043	0.0716962	-11.0815	-10.5336
ROLL_FSRU	rad	0.00682915	0.0121237	-0.0281631	0.0468821
PITCH_FSRU	rad	-1.03191E-05	0.00221713	-0.00826627	0.00806653
YAW_FSRU	rad	-0.00797473	0.0233323	-0.0706605	0.0656747
WaveHeight-COG	m	-0.000132191	0.477759	-1.86527	1.95051
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	161.597	202.033	39.5211	1737.02
FairleadTension2	kN	150.263	194.507	39.3606	2149.93
FairleadTension3	kN	134.693	236.697	37.0167	1754.16
FairleadTension4	kN	138.463	235.46	37.1691	1738.33
FairleadTension5	kN	1379.53	405.495	251.834	2963.83
FairleadTension6	kN	1499.87	470.983	236.927	3160.02
FairleadTension7	kN	1338.72	378.411	391.323	2974.89
FairleadTension8	kN	1266.87	393.408	346.376	2987.3
AnchorTension1	kN	157.319	202.019	35.3613	1731.94
AnchorTension2	kN	145.984	194.491	35.2025	2144.46
AnchorTension3	kN	130.989	236.678	33.46	1750.02
AnchorTension4	kN	134.759	235.443	33.6123	1734.22
AnchorTension5	kN	1374.87	405.175	247.619	2957.59
AnchorTension6	kN	1495.11	470.596	232.713	3153.65
AnchorTension7	kN	1332.78	377.893	386.369	2966.67
AnchorTension8	kN	1261.01	392.88	341.437	2979.08
xManExc	m	-3.69452	0.713528	-6.74707	-1.658
yManExc	m	5.05863	0.936585	2.51879	7.81055
zManExc	m	-19.878	0.260822	-20.6584	-19.0872
xFairLeadML6	m	-3.80556	0.929271	-7.46312	-1.45819
yFairLeadML6	m	4.35327	2.71586	-3.19448	13.9181
zFairLeadML6	m	-19.9435	0.365607	-21.3013	-18.6815
xFairLeadML10	m	-3.63123	0.628155	-6.38442	-1.76263
yFairLeadML10	m	6.08352	2.67476	-0.803653	12.5969
zFairLeadML10	m	-19.8536	0.308217	-20.9084	-18.8612
xFairLeadML12	m	-3.68964	0.795888	-6.76395	-1.41248
yFairLeadML12	m	6.48696	3.75939	-3.5717	15.5734
zFairLeadML12	m	-19.9167	0.297241	-20.9117	-18.8361

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name	units	mean	std	min	max
xCOG_FSRU	m	3.70859	1.73389	-3.28041	11.4803
yCOG_FSRU	m	5.59238	1.66256	-0.968302	14.1976
zCOG_FSRU	m	3.74639	0.0701027	3.47981	4.01992
xREF_FSRU	m	-0.355595	1.73136	-7.30364	7.35325
yREF_FSRU	m	5.64796	1.70282	-1.24141	14.471
zREF_FSRU	m	-9.35322	0.0635636	-9.59268	-9.10818
ROLL_FSRU	rad	0.00190398	0.00779017	-0.027069	0.0311928
PITCH_FSRU	rad	-1.84629E-05	0.00240568	-0.00919118	0.00836627
YAW_FSRU	rad	-0.00754575	0.03423	-0.13146	0.120494
WaveHeight-COG	m	-2.70348E-05	0.47772	-1.80372	1.93083
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	248.524	468.562	36.9782	4082.32
FairleadTension2	kN	233.501	452.448	36.8023	4219.74
FairleadTension3	kN	232.327	588.878	35.8609	5208.44
FairleadTension4	kN	237.354	581.394	36.0719	5100.26
FairleadTension5	kN	1457.77	803.999	39.0766	5969.93
FairleadTension6	kN	1581.62	871.493	38.9165	6254.43
FairleadTension7	kN	1427.42	702.338	41.2008	5732.4
FairleadTension8	kN	1358.63	702.223	41.4392	5598.77
AnchorTension1	kN	243.821	468.281	32.4419	4074.07
AnchorTension2	kN	228.802	452.179	32.2644	4211.36
AnchorTension3	kN	228.189	588.581	31.8919	5201.5
AnchorTension4	kN	233.217	581.106	32.1044	5092.91
AnchorTension5	kN	1452.47	803.266	34.528	5960.38
AnchorTension6	kN	1576.2	870.693	34.3671	6244.66
AnchorTension7	kN	1420.74	701.335	35.7826	5719.79
AnchorTension8	kN	1352.04	701.222	36.0052	5586.46
xManExc	m	-4.29975	1.40235	-10.5068	3.19017
yManExc	m	5.34437	1.69823	-3.17842	15.1421
zManExc	m	-13.0678	0.164768	-13.6356	-12.4698
xFairLeadML6	m	-4.43865	1.57705	-11.1287	2.9578
yFairLeadML6	m	4.60241	4.36905	-15.4356	26.8404
zFairLeadML6	m	-13.0843	0.361933	-14.391	-11.7389
xFairLeadML10	m	-4.20252	1.35409	-10.2612	3.27143
yFairLeadML10	m	6.23543	3.74526	-9.24968	23.1352
zFairLeadML10	m	-13.0626	0.235959	-14.078	-12.0512
xFairLeadML12	m	-4.24188	1.466	-10.5181	3.09592
yFairLeadML12	m	6.61131	5.29649	-14.0615	28.6412
zFairLeadML12	m	-13.081	0.301094	-14.2725	-11.9474

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name	units	mean	std	min	max
xCOG_FSRU	m	3.05387	2.46761	-6.90273	12.1434
yCOG_FSRU	m	6.08966	2.22144	-3.99963	15.9819
zCOG_FSRU	m	9.19255	0.0816101	8.87407	9.50358
xREF_FSRU	m	-0.433617	2.45388	-10.4547	8.65999
yREF_FSRU	m	6.26057	2.2823	-4.23294	16.976
zREF_FSRU	m	-10.7971	0.0792417	-11.0969	-10.4773
ROLL_FSRU	rad	0.00724692	0.0312594	-0.128677	0.152922
PITCH_FSRU	rad	-9.0399E-06	0.00256103	-0.00993783	0.00887497
YAW_FSRU	rad	-0.00757174	0.0505254	-0.158325	0.163377
WaveHeight-COG	m	-0.000115299	0.500572	-1.90665	2.06937
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	415.186	857.275	37.0631	6572.54
FairleadTension2	kN	396.11	842.196	36.8621	6572.21
FairleadTension3	kN	430.406	1041.62	34.389	6581.38
FairleadTension4	kN	435.008	1030.73	34.5716	6520.02
FairleadTension5	kN	1684.31	1181.04	38.2276	8613.74
FairleadTension6	kN	1820.29	1277.84	38.146	9115.38
FairleadTension7	kN	1691.41	1060.48	41.1134	6995.84
FairleadTension8	kN	1606.01	1044.93	41.1104	6597.19
AnchorTension1	kN	410.745	856.708	32.7057	6563.7
AnchorTension2	kN	391.675	841.635	32.5311	6563.38
AnchorTension3	kN	426.556	1041.09	30.7335	6574.12
AnchorTension4	kN	431.159	1030.21	30.9219	6512.78
AnchorTension5	kN	1679.32	1180.09	34.0636	8603.83
AnchorTension6	kN	1815.19	1276.81	33.9743	9105.21
AnchorTension7	kN	1684.92	1059.16	35.7467	6981.98
AnchorTension8	kN	1599.62	1043.62	35.908	6583.61
xManExc	m	-3.81518	2.00444	-11.5619	3.82828
yManExc	m	5.76805	2.3961	-3.53422	17.1361
zManExc	m	-19.8761	0.603744	-22.73	-17.1835
xFairLeadML6	m	-4.02873	2.25615	-13.8927	4.27094
yFairLeadML6	m	5.12606	6.5612	-14.6668	31.1747
zFairLeadML6	m	-19.9388	0.485173	-21.9411	-18.0147
xFairLeadML10	m	-3.64205	1.92715	-11.1402	4.12429
yFairLeadML10	m	6.74802	5.25042	-9.70974	23.7228
zFairLeadML10	m	-19.843	0.720792	-23.1474	-16.3742
xFairLeadML12	m	-3.64835	2.07794	-11.4177	4.58157
yFairLeadML12	m	7.14531	7.54953	-16.8496	30.794
zFairLeadML12	m	-19.9091	0.50719	-22.2116	-17.4207

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name	units	mean	std	min	max
xCOG_FSRU	m	3.70003	2.54236	-5.81365	12.2749
yCOG_FSRU	m	5.85885	2.46799	-5.72721	16.1447
zCOG_FSRU	m	3.74579	0.0745338	3.46556	4.03593
xREF_FSRU	m	-0.362966	2.53769	-9.88151	8.15584
yREF_FSRU	m	5.91352	2.48806	-6.02063	16.3138
zREF_FSRU	m	-9.35371	0.0674257	-9.60272	-9.09579
ROLL_FSRU	rad	0.0019652	0.00870042	-0.0304443	0.0360262
PITCH_FSRU	rad	-1.73761E-05	0.00275454	-0.00999243	0.00985427
YAW_FSRU	rad	-0.00712286	0.0424475	-0.130459	0.151864
WaveHeight-COG	m	-2.82477E-05	0.50043	-1.90081	2.05723
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	369.119	754.78	37.785	6285.57
FairleadTension2	kN	351.946	738.686	37.5761	6413.81
FairleadTension3	kN	349.525	758.87	35.6259	5506.85
FairleadTension4	kN	353.241	753.262	35.8065	5448.36
FairleadTension5	kN	1632.56	1232.27	38.4935	7029.68
FairleadTension6	kN	1767.32	1306.43	38.3652	7485.76
FairleadTension7	kN	1603.7	1158.39	41.027	6820.83
FairleadTension8	kN	1529.29	1131.15	41.0018	6530.7
AnchorTension1	kN	364.325	754.225	33.0766	6275.76
AnchorTension2	kN	347.16	738.144	32.8778	6403.9
AnchorTension3	kN	345.34	758.487	31.6289	5499.18
AnchorTension4	kN	349.056	752.884	31.7799	5440.73
AnchorTension5	kN	1627.02	1231.17	33.8987	7019
AnchorTension6	kN	1761.65	1305.26	33.7707	7475.35
AnchorTension7	kN	1596.68	1156.81	35.3977	6807.57
AnchorTension8	kN	1522.38	1129.61	35.4685	6517.73
xManExc	m	-4.32449	2.32874	-12.4843	4.25427
yManExc	m	5.61495	2.63436	-4.62721	17.2987
zManExc	m	-13.0674	0.184354	-13.7573	-12.372
xFairLeadML6	m	-4.49166	2.44183	-13.6551	4.16197
yFairLeadML6	m	4.92086	5.87281	-14.5031	30.9415
zFairLeadML6	m	-13.0845	0.408528	-14.5726	-11.627
xFairLeadML10	m	-4.19315	2.28755	-12.0316	4.19969
yFairLeadML10	m	6.45782	4.60506	-10.7214	21.8935
zFairLeadML10	m	-13.0618	0.273927	-14.46	-11.9554
xFairLeadML12	m	-4.21346	2.33581	-12.4153	4.16715
yFairLeadML12	m	6.81626	6.4439	-13.4856	27.6187
zFairLeadML12	m	-13.0806	0.350732	-14.6558	-11.8186

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name	units	mean	std	min	max
xCOG_FSRU	m	3.71445	0.70635	1.96711	5.39556
yCOG_FSRU	m	-4.97549	1.42642	-7.85944	-2.05157
zCOG_FSRU	m	9.19424	0.0538388	9.01344	9.37473
xREF_FSRU	m	0.225113	0.704434	-1.5228	1.88046
yREF_FSRU	m	-5.07302	1.40821	-8.01459	-1.88813
zREF_FSRU	m	-10.8046	0.050971	-10.9751	-10.6331
ROLL_FSRU	rad	-0.00627185	0.00885375	-0.0260252	0.0134589
PITCH_FSRU	rad	-8.95271E-06	0.00115424	-0.00407988	0.00407164
YAW_FSRU	rad	-0.00799065	0.0165313	-0.0433154	0.030666
WaveHeight-COG	m	-0.000252196	0.375428	-1.50871	1.49507
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	1167.67	293.586	531.798	1961.1
FairleadTension2	kN	1257.86	322.009	568.091	2067.67
FairleadTension3	kN	1134.88	306.361	365.187	1968.97
FairleadTension4	kN	1075.83	280.853	367.594	1863.88
FairleadTension5	kN	173.824	175.328	29.9249	859.802
FairleadTension6	kN	165.064	169.918	29.8081	797.708
FairleadTension7	kN	86.4931	74.9133	30.6037	474.98
FairleadTension8	kN	92.2035	78.0287	30.781	483.126
AnchorTension1	kN	1162.57	293.179	527.462	1955
AnchorTension2	kN	1252.63	321.567	563.721	2061.46
AnchorTension3	kN	1130.66	306.061	361.518	1963.87
AnchorTension4	kN	1071.67	280.58	363.928	1858.88
AnchorTension5	kN	169.555	175.295	25.7256	855.03
AnchorTension6	kN	160.797	169.89	25.5971	793.027
AnchorTension7	kN	81.2923	74.9101	25.4393	469.656
AnchorTension8	kN	87.0015	78.0244	25.605	477.782
xManExc	m	-3.11666	1.00756	-5.45896	-0.791569
yManExc	m	-5.12752	1.62809	-8.24999	-2.03633
zManExc	m	-20.1247	0.185959	-20.639	-19.622
xFairLeadML6	m	-3.21486	0.830806	-5.24698	-1.33235
yFairLeadML6	m	-6.05899	2.92323	-12.247	0.131191
zFairLeadML6	m	-20.0601	0.209771	-20.8269	-19.3351
xFairLeadML10	m	-3.07017	1.07709	-5.49892	-0.566279
yFairLeadML10	m	-4.32276	1.69172	-7.94826	-0.59012
zFairLeadML10	m	-20.1467	0.208991	-20.7751	-19.5968
xFairLeadML12	m	-3.13552	0.934425	-5.27528	-0.915252
yFairLeadML12	m	-3.94367	2.26451	-8.33844	0.644238
zFairLeadML12	m	-20.0893	0.167552	-20.7373	-19.4764

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name	units	mean	std	min	max
xCOG_FSRU	m	4.42703	0.422768	2.98921	5.50905
yCOG_FSRU	m	-5.06759	0.826661	-7.09383	-3.25944
zCOG_FSRU	m	3.74742	0.0499628	3.57694	3.92449
xREF_FSRU	m	0.360426	0.422959	-1.03917	1.43221
yREF_FSRU	m	-5.04674	0.813772	-7.08092	-3.16789
zREF_FSRU	m	-9.35254	0.0462789	-9.50851	-9.19094
ROLL_FSRU	rad	-0.00167331	0.00355336	-0.0140336	0.0112378
PITCH_FSRU	rad	-1.68767E-05	0.00121823	-0.00446947	0.00427265
YAW_FSRU	rad	-0.0105158	0.0093934	-0.033211	0.0154925
WaveHeight-COG	m	-0.000225978	0.375443	-1.51027	1.45997
windSpeed	ms-1	20.3956	2.20787	14.1447	26.6522
FairleadTension1	kN	1134.81	170.656	686.092	1672.9
FairleadTension2	kN	1229.66	187.851	748.739	1799.56
FairleadTension3	kN	1108.57	174.69	572.011	1694.32
FairleadTension4	kN	1055.68	163.698	564.335	1585.92
FairleadTension5	kN	141.042	84.3773	30.9463	480.683
FairleadTension6	kN	130.609	80.1667	30.7542	466.152
FairleadTension7	kN	62.7379	26.7361	31.5509	230.99
FairleadTension8	kN	68.0141	28.5833	31.801	244.499
AnchorTension1	kN	1129.16	170.383	681.205	1666.41
AnchorTension2	kN	1223.86	187.555	743.759	1792.9
AnchorTension3	kN	1103.85	174.48	567.937	1688.92
AnchorTension4	kN	1051.03	163.501	560.265	1580.64
AnchorTension5	kN	136.407	84.3766	26.419	476.022
AnchorTension6	kN	125.973	80.1663	26.2266	461.51
AnchorTension7	kN	57.1695	26.7334	26.0794	225.352
AnchorTension8	kN	62.4455	28.5806	26.3298	238.86
xManExc	m	-3.51089	0.590337	-5.44182	-2.01888
yManExc	m	-5.32011	0.959627	-7.45055	-3.29749
zManExc	m	-13.1339	0.0852331	-13.4693	-12.8071
xFairLeadML6	m	-3.62642	0.490145	-5.27146	-2.40898
yFairLeadML6	m	-6.43612	1.73538	-10.2939	-2.04937
zFairLeadML6	m	-13.1153	0.196654	-13.7964	-12.4016
xFairLeadML10	m	-3.46266	0.631577	-5.42458	-1.8753
yFairLeadML10	m	-4.14842	0.893981	-6.8784	-1.8185
zFairLeadML10	m	-13.1415	0.099543	-13.4963	-12.7843
xFairLeadML12	m	-3.55454	0.552456	-5.29783	-2.14417
yFairLeadML12	m	-3.63941	1.20328	-6.93916	-0.661322
zFairLeadML12	m	-13.127	0.136525	-13.6394	-12.6184

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name	units	mean	std	min	max
xCOG_FSRU	m	3.66032	0.850966	1.33922	5.82239
yCOG_FSRU	m	-5.30296	1.41866	-8.42897	-1.81812
zCOG_FSRU	m	9.19405	0.0640203	8.9675	9.41932
xREF_FSRU	m	0.170999	0.84846	-2.14454	2.32218
yREF_FSRU	m	-5.41154	1.40976	-8.551	-1.91311
zREF_FSRU	m	-10.8046	0.060487	-11.0184	-10.596
ROLL_FSRU	rad	-0.00669676	0.00972456	-0.0292684	0.0153694
PITCH_FSRU	rad	-8.42143E-06	0.00143212	-0.00538917	0.00507575
YAW_FSRU	rad	-0.00725468	0.019164	-0.0501545	0.0370441
WaveHeight-COG	m	-0.000213568	0.424685	-1.70032	1.71081
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1249.42	321.126	319.288	2019.85
FairleadTension2	kN	1343.48	342.093	350.283	2125.8
FairleadTension3	kN	1207.99	352.886	309.194	2121.29
FairleadTension4	kN	1141.4	318.872	303.143	1980.95
FairleadTension5	kN	186.987	215.434	29.1891	1170.57
FairleadTension6	kN	179.115	210.592	29.0845	1159.55
FairleadTension7	kN	88.5979	83.7787	30.4223	548.321
FairleadTension8	kN	94.5174	87.2137	30.5743	567.371
AnchorTension1	kN	1244.21	320.686	315.165	2013.83
AnchorTension2	kN	1338.14	341.629	346.163	2119.67
AnchorTension3	kN	1203.69	352.541	305.51	2116.01
AnchorTension4	kN	1137.17	318.561	299.466	1975.82
AnchorTension5	kN	182.701	215.357	25.0507	1165.34
AnchorTension6	kN	174.831	210.52	24.9354	1154.33
AnchorTension7	kN	83.3937	83.7704	25.1917	542.606
AnchorTension8	kN	89.3115	87.2021	25.3402	561.611
xManExc	m	-3.18576	1.19402	-6.20805	-0.41467
yManExc	m	-5.43114	1.5777	-8.66665	-1.93675
zManExc	m	-20.1331	0.208069	-20.768	-19.4914
xFairLeadML6	m	-3.28103	0.994046	-5.94877	-0.912833
yFairLeadML6	m	-6.29307	3.02241	-13.0763	0.569198
zFairLeadML6	m	-20.064	0.253756	-21.0362	-19.1155
xFairLeadML10	m	-3.1372	1.27149	-6.24836	-0.187988
yFairLeadML10	m	-4.71782	2.05055	-9.48902	0.188296
zFairLeadML10	m	-20.1563	0.23357	-20.7606	-19.4683
xFairLeadML12	m	-3.19376	1.10759	-5.96098	-0.53823
yFairLeadML12	m	-4.37479	2.80221	-10.9646	1.93937
zFairLeadML12	m	-20.0949	0.198418	-20.7759	-19.3797

ballasted_90degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.43767	0.49339	2.90583	6.00874
yCOG_FSRU	m	-5.39238	0.868371	-7.5896	-3.29039
zCOG_FSRU	m	3.74727	0.0587392	3.53436	3.9652
xREF_FSRU	m	0.371099	0.493726	-1.15661	1.94042
yREF_FSRU	m	-5.37145	0.857308	-7.54128	-3.21503
zREF_FSRU	m	-9.35265	0.0542186	-9.54797	-9.15326
ROLL_FSRU	rad	-0.00178336	0.00413632	-0.0167469	0.0136779
PITCH_FSRU	rad	-1.64185E-05	0.00152659	-0.00577191	0.00542518
YAW_FSRU	rad	-0.0108903	0.0105361	-0.0395567	0.0186218
WaveHeight-COG	m	-0.000175303	0.424693	-1.70825	1.67063
windSpeed	ms-1	21.0955	2.27607	14.6296	27.5635
FairleadTension1	kN	1201.85	192.986	553.584	1788.31
FairleadTension2	kN	1302.68	208.879	614.563	1922.69
FairleadTension3	kN	1174.47	202.448	585.601	1874.53
FairleadTension4	kN	1117.19	189.528	553.054	1784.96
FairleadTension5	kN	139.079	94.1119	30.8256	507.816
FairleadTension6	kN	129.135	91.0541	30.648	794.531
FairleadTension7	kN	59.9054	28.5021	31.245	215.857
FairleadTension8	kN	64.9756	30.6928	31.4504	232.298
AnchorTension1	kN	1196.1	192.68	549.035	1781.53
AnchorTension2	kN	1296.77	208.555	609.932	1915.73
AnchorTension3	kN	1169.67	202.205	581.47	1868.77
AnchorTension4	kN	1112.46	189.3	548.947	1779.29
AnchorTension5	kN	134.443	94.109	26.2389	503.114
AnchorTension6	kN	124.499	91.0503	26.0623	789.384
AnchorTension7	kN	54.3365	28.4988	25.7153	210.238
AnchorTension8	kN	59.4065	30.6894	25.9	226.678
xManExc	m	-3.49355	0.676153	-5.5235	-1.40577
yManExc	m	-5.65324	1.00241	-7.90905	-3.40911
zManExc	m	-13.1362	0.102541	-13.5585	-12.7084
xFairLeadML6	m	-3.61451	0.566277	-5.37647	-1.87889
yFairLeadML6	m	-6.8097	1.85683	-11.3616	-2.14033
zFairLeadML6	m	-13.1165	0.24297	-14.0062	-12.1628
xFairLeadML10	m	-3.44225	0.72163	-5.55826	-1.19436
yFairLeadML10	m	-4.44075	1.02818	-7.00297	-1.87464
zFairLeadML10	m	-13.1441	0.12453	-13.6307	-12.6887
xFairLeadML12	m	-3.53681	0.634761	-5.41047	-1.51551
yFairLeadML12	m	-3.91358	1.40043	-7.68991	-0.742533
zFairLeadML12	m	-13.1285	0.174037	-13.784	-12.5006

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name	units	mean	std	min	max
xCOG_FSRU	m	3.80629	1.39347	-1.33994	7.19944
yCOG_FSRU	m	8.39041	2.02277	2.99678	13.2637
zCOG_FSRU	m	9.19241	0.0996831	8.81087	9.56492
xREF_FSRU	m	0.315896	1.38966	-4.81908	3.6793
yREF_FSRU	m	8.53863	2.01057	2.9679	13.3283
zREF_FSRU	m	-10.8039	0.0930537	-11.1642	-10.4628
ROLL_FSRU	rad	0.00966519	0.0164528	-0.0282651	0.0556032
PITCH_FSRU	rad	-7.44099E-06	0.00276076	-0.0103537	0.00980894
YAW_FSRU	rad	0.012888	0.0277795	-0.062995	0.0917468
WaveHeight-COG	m	-0.00044986	0.627571	-2.45328	2.58573
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	63.3456	94.4301	28.1411	1020.84
FairleadTension2	kN	58.3527	86.4652	28.0196	971.384
FairleadTension3	kN	189.171	306.569	27.1827	2348.9
FairleadTension4	kN	200.409	315.879	27.276	2328.96
FairleadTension5	kN	1682.75	558.903	63.4305	3727.49
FairleadTension6	kN	1783.76	602.115	59.1225	3999.62
FairleadTension7	kN	2016.73	565.062	369.894	3759.68
FairleadTension8	kN	1860.15	542.213	318.908	3695.49
AnchorTension1	kN	59.053	94.4051	24.1686	1015.98
AnchorTension2	kN	54.0599	86.4467	24.0395	966.591
AnchorTension3	kN	185.422	306.429	23.5539	2343.26
AnchorTension4	kN	196.657	315.733	23.6533	2323.34
AnchorTension5	kN	1676.97	558.208	59.0866	3719.65
AnchorTension6	kN	1777.86	601.38	54.7923	3991.59
AnchorTension7	kN	2008.56	564.141	364.856	3749.73
AnchorTension8	kN	1852.24	541.294	313.905	3685.6
xManExc	m	-3.42634	1.00513	-7.89651	-0.723075
yManExc	m	8.6214	2.23173	3.04545	13.8364
zManExc	m	-19.8268	0.347786	-20.95	-18.7039
xFairLeadML6	m	-3.34905	1.1729	-8.1456	-0.384934
yFairLeadML6	m	10.1259	4.29318	-0.237742	22.3685
zFairLeadML6	m	-19.9195	0.461764	-21.6475	-18.1776
xFairLeadML10	m	-3.42005	0.959014	-7.78045	-0.78434
yFairLeadML10	m	7.31247	3.02049	-1.27179	15.9081
zFairLeadML10	m	-19.7907	0.41085	-21.1721	-18.5726
xFairLeadML12	m	-3.27885	1.13527	-7.97663	-0.277811
yFairLeadML12	m	6.70973	4.12171	-4.70735	18.6016
zFairLeadML12	m	-19.8796	0.378887	-21.4784	-18.5224

ballasted_270degN_RP50yr

name	units	mean	std	min	max
xCOG_FSRU	m	4.6335	0.969282	1.06824	7.17107
yCOG_FSRU	m	8.53229	1.28666	4.63696	12.202
zCOG_FSRU	m	3.74549	0.0907592	3.39737	4.09809
xREF_FSRU	m	0.567439	0.971095	-2.99041	3.07775
yREF_FSRU	m	8.49769	1.30187	4.47577	12.4218
zREF_FSRU	m	-9.35362	0.082298	-9.66912	-9.03743
ROLL_FSRU	rad	0.00275335	0.0113718	-0.0382799	0.0443858
PITCH_FSRU	rad	-1.45505E-05	0.0029914	-0.011193	0.0107423
YAW_FSRU	rad	0.0173775	0.0191782	-0.046967	0.0785217
WaveHeight-COG	m	-0.000221467	0.62768	-2.47417	2.54709
windSpeed	ms-1	25.5952	2.70467	17.779	33.4187
FairleadTension1	kN	38.3325	33.1137	28.8953	591.955
FairleadTension2	kN	36.3831	28.2407	28.775	522.814
FairleadTension3	kN	136.345	183.774	28.1231	1428.8
FairleadTension4	kN	148.01	192.286	28.2268	1455.45
FairleadTension5	kN	1657.48	358.745	437.688	3015.27
FairleadTension6	kN	1748.86	390.157	450.201	3213.87
FairleadTension7	kN	1969.67	361.506	953.666	3227.88
FairleadTension8	kN	1802.81	352.368	857.588	3019.49
AnchorTension1	kN	33.686	33.1101	24.4336	587.054
AnchorTension2	kN	31.7363	28.2377	24.3074	517.999
AnchorTension3	kN	132.249	183.716	24.1377	1423.44
AnchorTension4	kN	143.913	192.225	24.2472	1450.06
AnchorTension5	kN	1651.05	358.233	432.732	3007.16
AnchorTension6	kN	1742.31	389.611	445.199	3205.56
AnchorTension7	kN	1960.74	360.857	946.97	3216.95
AnchorTension8	kN	1794.18	351.706	851.085	3008.82
xManExc	m	-3.83723	0.681449	-6.35524	-1.6154
yManExc	m	8.93878	1.37933	5.03284	12.5408
zManExc	m	-13.0534	0.227508	-13.9	-12.1782
xFairLeadML6	m	-3.69924	0.801671	-6.79494	-1.38068
yFairLeadML6	m	10.7883	2.76622	2.15671	18.8602
zFairLeadML6	m	-13.0782	0.454421	-14.7117	-11.3601
xFairLeadML10	m	-3.85986	0.654179	-6.36976	-1.73016
yFairLeadML10	m	7.00061	2.15437	0.872836	13.6176
zFairLeadML10	m	-13.0442	0.315665	-14.2551	-11.8361
xFairLeadML12	m	-3.68363	0.791026	-6.35419	-1.36115
yFairLeadML12	m	6.16492	2.9524	-2.28514	14.7744
zFairLeadML12	m	-13.0701	0.377609	-14.4921	-11.7364

loaded_270degN_RP100yr

name	units	mean	std	min	max
xCOG_FSRU	m	3.81834	1.5058	-1.02812	7.44649
yCOG_FSRU	m	9.06632	2.08105	4.10208	14.3004
zCOG_FSRU	m	9.19213	0.109446	8.76805	9.60487
xREF_FSRU	m	0.327651	1.50226	-4.51663	3.99515
yREF_FSRU	m	9.22375	2.07699	4.09559	14.3474
zREF_FSRU	m	-10.8033	0.101783	-11.1983	-10.4197
ROLL_FSRU	rad	0.0102653	0.0184194	-0.0327796	0.0611985
PITCH_FSRU	rad	-6.19025E-06	0.00324499	-0.0118818	0.0116871
YAW_FSRU	rad	0.0136816	0.0296603	-0.0619117	0.0890202
WaveHeight-COG	m	-0.000203123	0.678771	-2.60306	2.78705
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	60.0283	94.875	27.7785	1202.76
FairleadTension2	kN	55.3151	87.7285	27.6518	1115.74
FairleadTension3	kN	198.46	334.283	27.2415	2186.49
FairleadTension4	kN	208.552	338.833	27.3478	2183.8
FairleadTension5	kN	1812.91	596.27	66.6724	3900.29
FairleadTension6	kN	1924.3	643.094	61.6565	4108.77
FairleadTension7	kN	2179.46	601.829	273.594	4160.37
FairleadTension8	kN	2010.24	583.035	258.864	3980.1
AnchorTension1	kN	55.7325	94.8425	23.8101	1197.48
AnchorTension2	kN	51.0186	87.7002	23.6846	1110.57
AnchorTension3	kN	194.699	334.117	23.5509	2181.02
AnchorTension4	kN	204.79	338.666	23.661	2178.35
AnchorTension5	kN	1806.98	595.542	62.3642	3892.46
AnchorTension6	kN	1918.24	642.324	57.3385	4100.82
AnchorTension7	kN	2171.04	600.892	268.425	4149.34
AnchorTension8	kN	2002.09	582.088	253.709	3969.24
xManExc	m	-3.43075	1.09224	-7.46486	-0.345197
yManExc	m	9.31024	2.25946	3.99037	15.2442
zManExc	m	-19.8163	0.38989	-20.9742	-18.562
xFairLeadML6	m	-3.35283	1.27002	-7.80206	-0.15121
yFairLeadML6	m	10.908	4.41707	-0.576952	23.3026
zFairLeadML6	m	-19.9144	0.533521	-21.871	-17.9647
xFairLeadML10	m	-3.42015	1.04387	-7.31717	-0.329045
yFairLeadML10	m	7.92065	3.29353	-1.46578	15.9444
zFairLeadML10	m	-19.7772	0.466475	-21.1179	-18.2188
xFairLeadML12	m	-3.26851	1.2328	-7.5641	-0.0959597
yFairLeadML12	m	7.28144	4.49908	-4.68771	18.5304
zFairLeadML12	m	-19.8715	0.442902	-21.3587	-18.2399

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name	units	mean	std	min	max
xCOG_FSRU	m	4.60362	1.1827	-0.368788	8.11965
yCOG_FSRU	m	9.20843	1.45191	5.4911	13.992
zCOG_FSRU	m	3.74515	0.0998972	3.36515	4.13223
xREF_FSRU	m	0.537762	1.18499	-4.49866	4.09815
yREF_FSRU	m	9.17657	1.47521	5.14026	14.2911
zREF_FSRU	m	-9.35375	0.0903073	-9.69275	-9.00878
ROLL_FSRU	rad	0.00295238	0.0124437	-0.0416267	0.0494595
PITCH_FSRU	rad	-1.28051E-05	0.00351286	-0.0126144	0.0127265
YAW_FSRU	rad	0.0173455	0.0224468	-0.056409	0.0815038
WaveHeight-COG	m	0.000104684	0.678799	-2.67458	2.74188
windSpeed	ms-1	26.5952	2.79765	18.4858	34.7156
FairleadTension1	kN	39.7293	43.4186	28.6984	1044.97
FairleadTension2	kN	37.3292	36.5259	28.5716	944.509
FairleadTension3	kN	151.487	227.915	27.4081	2042.82
FairleadTension4	kN	163.449	236.747	27.5194	2027.43
FairleadTension5	kN	1790.72	465.817	178.255	3978.55
FairleadTension6	kN	1892.17	503.63	167.956	4151.48
FairleadTension7	kN	2135.98	462.365	517.962	4036.18
FairleadTension8	kN	1958.54	454.732	411.747	3880.44
AnchorTension1	kN	35.0814	43.4017	24.2391	1039.69
AnchorTension2	kN	32.6811	36.5125	24.1406	939.369
AnchorTension3	kN	147.381	227.82	23.5542	2037.2
AnchorTension4	kN	159.341	236.649	23.6638	2021.87
AnchorTension5	kN	1784.12	465.181	173.499	3969.49
AnchorTension6	kN	1885.44	502.958	163.21	4142.27
AnchorTension7	kN	2126.78	461.584	512.303	4023.92
AnchorTension8	kN	1949.65	453.927	406.275	3868.31
xManExc	m	-3.8682	0.885938	-7.84488	-0.683188
yManExc	m	9.6089	1.52008	5.62291	14.5883
zManExc	m	-13.0503	0.252835	-14.0117	-12.1492
xFairLeadML6	m	-3.73781	1.00846	-8.21907	-0.450949
yFairLeadML6	m	11.4592	3.11112	1.69668	20.2404
zFairLeadML6	m	-13.077	0.526368	-14.9848	-11.1172
xFairLeadML10	m	-3.88291	0.857911	-7.81186	-0.664935
yFairLeadML10	m	7.67763	2.57531	0.228493	17.1213
zFairLeadML10	m	-13.0399	0.364168	-14.5662	-11.4761
xFairLeadML12	m	-3.70365	0.993511	-7.82889	-0.415791
yFairLeadML12	m	6.84465	3.52894	-3.68875	19.9341
zFairLeadML12	m	-13.0676	0.4473	-14.8155	-11.3246

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name	units	mean	std	min	max
xCOG_FSRU	m	3.15713	1.38856	-0.980815	6.38767
yCOG_FSRU	m	5.82566	1.22674	2.05108	9.59892
zCOG_FSRU	m	9.19317	0.0770779	8.8945	9.4863
xREF_FSRU	m	-0.329747	1.38372	-4.45063	2.8962
yREF_FSRU	m	5.9979	1.26378	2.05323	9.71721
zREF_FSRU	m	-10.8049	0.0718422	-11.0803	-10.5323
ROLL_FSRU	rad	0.00717558	0.0118062	-0.0281568	0.0380415
PITCH_FSRU	rad	-1.10771E-05	0.00222194	-0.00841521	0.00790659
YAW_FSRU	rad	-0.00826502	0.0302707	-0.0682397	0.0669293
WaveHeight-COG	m	-0.000134273	0.477732	-1.85473	1.93183
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	195.445	256.901	28.6677	1839.71
FairleadTension2	kN	182.91	246.527	28.5623	1804.38
FairleadTension3	kN	175.763	280.603	27.1677	1591.62
FairleadTension4	kN	182.608	285.442	27.2755	1573.84
FairleadTension5	kN	1416.41	445.411	183.592	3004.27
FairleadTension6	kN	1526.8	515.615	172.751	3202.17
FairleadTension7	kN	1377.75	388.579	362.933	3094.44
FairleadTension8	kN	1308.35	405.132	321.586	3084.11
AnchorTension1	kN	191.118	256.76	24.6177	1833.59
AnchorTension2	kN	178.587	246.395	24.5119	1798.31
AnchorTension3	kN	172.027	280.497	23.5897	1586.93
AnchorTension4	kN	178.871	285.335	23.6971	1569.18
AnchorTension5	kN	1410.95	444.83	179.272	2996.97
AnchorTension6	kN	1521.21	514.955	168.442	3194.69
AnchorTension7	kN	1370.65	387.833	357.878	3084.83
AnchorTension8	kN	1301.39	404.345	316.533	3074.52
xManExc	m	-3.67845	0.897203	-7.16412	-1.23477
yManExc	m	5.50886	1.18879	2.1344	9.40535
zManExc	m	-19.872	0.255556	-20.6749	-19.0483
xFairLeadML6	m	-3.81194	1.17256	-7.68863	-1.20441
yFairLeadML6	m	4.7813	3.66238	-3.57197	15.6302
zFairLeadML6	m	-19.941	0.365202	-21.3004	-18.6088
xFairLeadML10	m	-3.59272	0.788811	-6.88565	-1.22079
yFairLeadML10	m	6.57194	3.29701	-0.540887	13.9542
zFairLeadML10	m	-19.8465	0.302458	-20.789	-18.8188
xFairLeadML12	m	-3.64464	1.00298	-7.23963	-1.09493
yFairLeadML12	m	6.99177	4.70527	-3.65634	17.2941
zFairLeadML12	m	-19.9129	0.295879	-20.8819	-18.8111

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name	units	mean	std	min	max
xCOG_FSRU	m	3.75274	1.17479	-0.289004	7.05015
yCOG_FSRU	m	5.75082	1.05741	2.77617	8.69163
zCOG_FSRU	m	3.74642	0.0699737	3.47862	4.01779
xREF_FSRU	m	-0.312485	1.17405	-4.37209	2.94968
yREF_FSRU	m	5.81035	1.1182	2.56934	9.11663
zREF_FSRU	m	-9.35318	0.0633885	-9.59363	-9.11052
ROLL_FSRU	rad	0.00198395	0.00796016	-0.0289085	0.0327575
PITCH_FSRU	rad	-1.84018E-05	0.00239845	-0.00871429	0.00878681
YAW_FSRU	rad	-0.00825236	0.0243949	-0.0718588	0.0587878
WaveHeight-COG	m	-0.000005465	0.477603	-1.8798	1.94119
windSpeed	ms-1	23.9953	2.5542	16.6531	31.3384
FairleadTension1	kN	149.259	190.616	29.5987	1473.03
FairleadTension2	kN	139.536	186.48	29.492	1457.53
FairleadTension3	kN	123.736	215.921	27.806	1724.34
FairleadTension4	kN	131.514	225.653	27.9188	1687.68
FairleadTension5	kN	1370.6	392.635	256.413	3060.81
FairleadTension6	kN	1479.53	449.522	242.913	3310.04
FairleadTension7	kN	1322.43	363.112	328.032	2969.68
FairleadTension8	kN	1255.44	378.598	301.326	2965.35
AnchorTension1	kN	144.588	190.501	25.0326	1466.84
AnchorTension2	kN	134.866	186.367	24.9219	1451.28
AnchorTension3	kN	119.634	215.822	23.8478	1718.94
AnchorTension4	kN	127.408	225.548	23.964	1682.33
AnchorTension5	kN	1364.59	392.051	251.987	3052.3
AnchorTension6	kN	1473.37	448.868	238.474	3301.27
AnchorTension7	kN	1314.76	362.34	322.578	2958.91
AnchorTension8	kN	1247.92	377.784	295.877	2954.57
xManExc	m	-4.23481	0.794709	-7.57053	-1.78275
yManExc	m	5.48773	0.906885	2.94415	8.39048
zManExc	m	-13.0663	0.166203	-13.6186	-12.4644
xFairLeadML6	m	-4.35141	1.00933	-8.15224	-1.52203
yFairLeadML6	m	4.67096	2.76082	-3.34979	13.5523
zFairLeadML6	m	-13.0836	0.360927	-14.3764	-11.7316
xFairLeadML10	m	-4.16721	0.71282	-7.33411	-1.88009
yFairLeadML10	m	6.46207	2.83852	-0.833243	13.6828
zFairLeadML10	m	-13.0608	0.238147	-14.0902	-12.0916
xFairLeadML12	m	-4.22681	0.875031	-7.69569	-1.49349
yFairLeadML12	m	6.86996	3.98262	-3.60484	16.866
zFairLeadML12	m	-13.0799	0.300897	-14.2787	-11.8974

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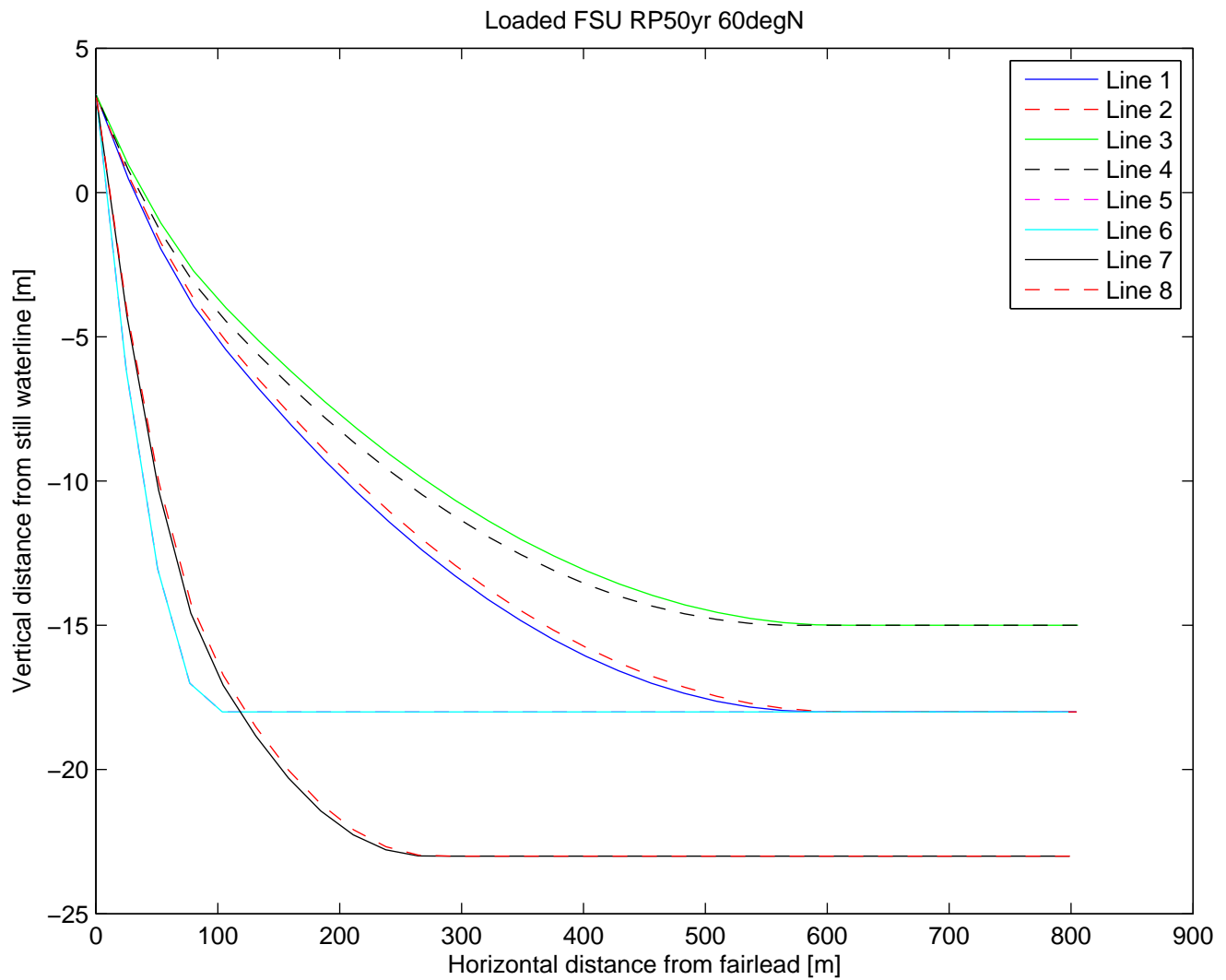
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xCOG_FSRU	m	3.14502	1.35686	-1.13797	6.56373
yCOG_FSRU	m	6.04605	1.26398	2.42602	9.1831
zCOG_FSRU	m	9.19311	0.0813717	8.87533	9.50567
xREF_FSRU	m	-0.341995	1.35266	-4.59264	3.08137
yREF_FSRU	m	6.22546	1.29999	2.48968	9.39137
zREF_FSRU	m	-10.8047	0.0754941	-11.0936	-10.5197
ROLL_FSRU	rad	0.00747741	0.0124317	-0.0308725	0.0447043
PITCH_FSRU	rad	-8.51637E-06	0.00251533	-0.00918121	0.00912049
YAW_FSRU	rad	-0.00858949	0.029245	-0.0799607	0.0743436
WaveHeight-COG	m	-0.000120675	0.500559	-1.95224	2.06728
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	176.858	249.693	28.9406	1736.53
FairleadTension2	kN	164.694	237.964	28.808	1682.62
FairleadTension3	kN	157.617	294.115	27.1559	1839.7
FairleadTension4	kN	161.357	292.292	27.2592	1839.14
FairleadTension5	kN	1463.28	455.854	91.6472	3113.39
FairleadTension6	kN	1579.42	522.063	81.7308	3387.09
FairleadTension7	kN	1423.13	404.513	394.06	3130.35
FairleadTension8	kN	1350.77	419.239	365.894	3142.08
AnchorTension1	kN	172.533	249.543	24.7663	1730.64
AnchorTension2	kN	160.373	237.826	24.6321	1676.79
AnchorTension3	kN	153.875	293.976	23.5121	1834.85
AnchorTension4	kN	157.616	292.158	23.6155	1834.29
AnchorTension5	kN	1457.77	455.266	87.5304	3106.01
AnchorTension6	kN	1573.77	521.403	77.624	3379.49
AnchorTension7	kN	1415.96	403.748	388.831	3120.4
AnchorTension8	kN	1343.73	418.437	360.772	3132.12
xManExc	m	-3.68367	0.89237	-7.05478	-1.32626
yManExc	m	5.71736	1.19958	2.50303	9.47525
zManExc	m	-19.8666	0.271498	-20.7469	-18.9985
xFairLeadML6	m	-3.81764	1.15416	-7.80972	-1.01368
yFairLeadML6	m	4.96116	3.51431	-3.57771	17.514
zFairLeadML6	m	-19.9386	0.406335	-21.4517	-18.3901
xFairLeadML10	m	-3.59994	0.790286	-6.70561	-1.39101
yFairLeadML10	m	6.82268	3.25116	-1.67728	14.906
zFairLeadML10	m	-19.8395	0.325578	-20.8102	-18.7448
xFairLeadML12	m	-3.65616	0.99005	-7.12192	-0.919437
yFairLeadML12	m	7.25866	4.60622	-4.64275	18.315
zFairLeadML12	m	-19.9085	0.331662	-21.0016	-18.7356

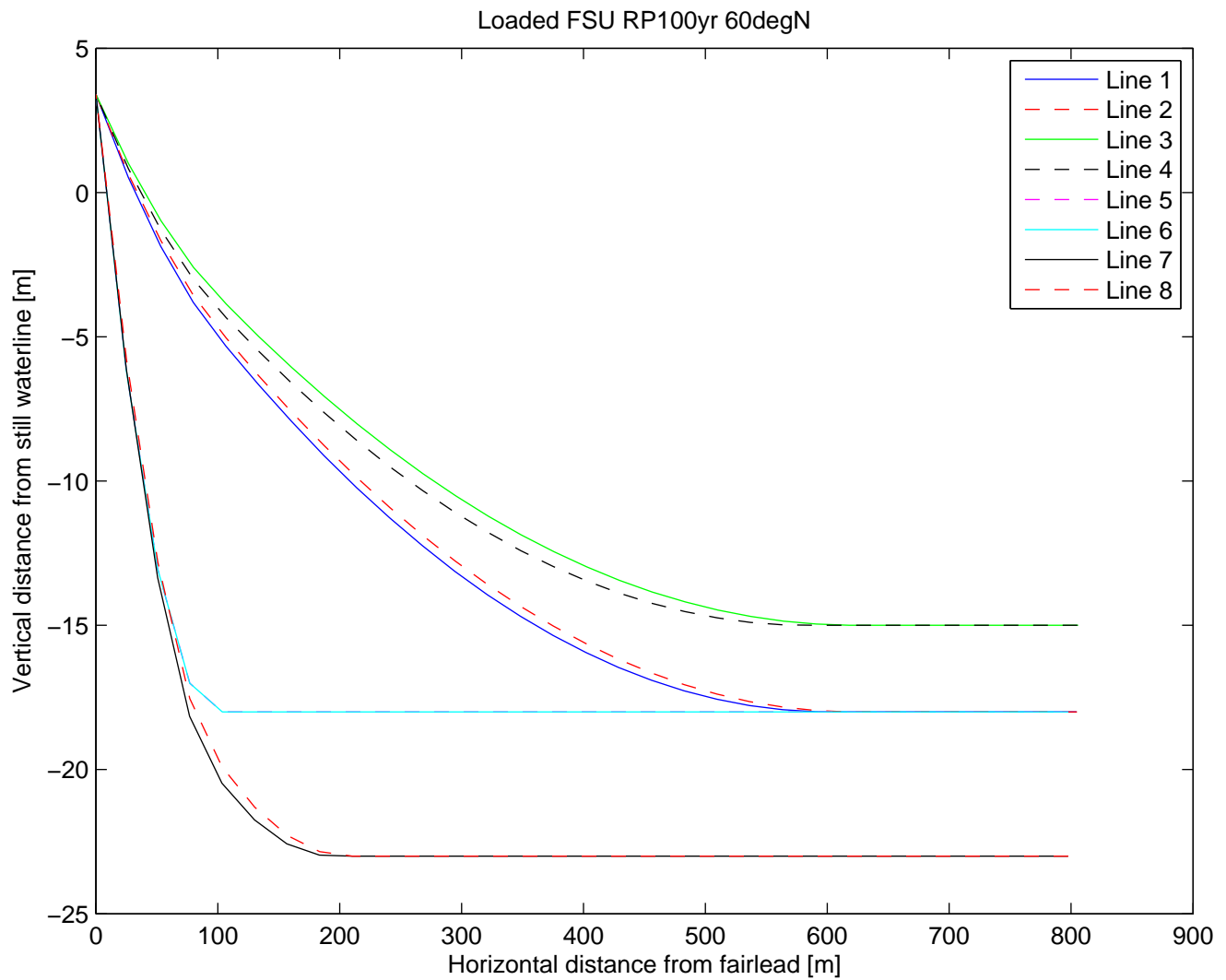
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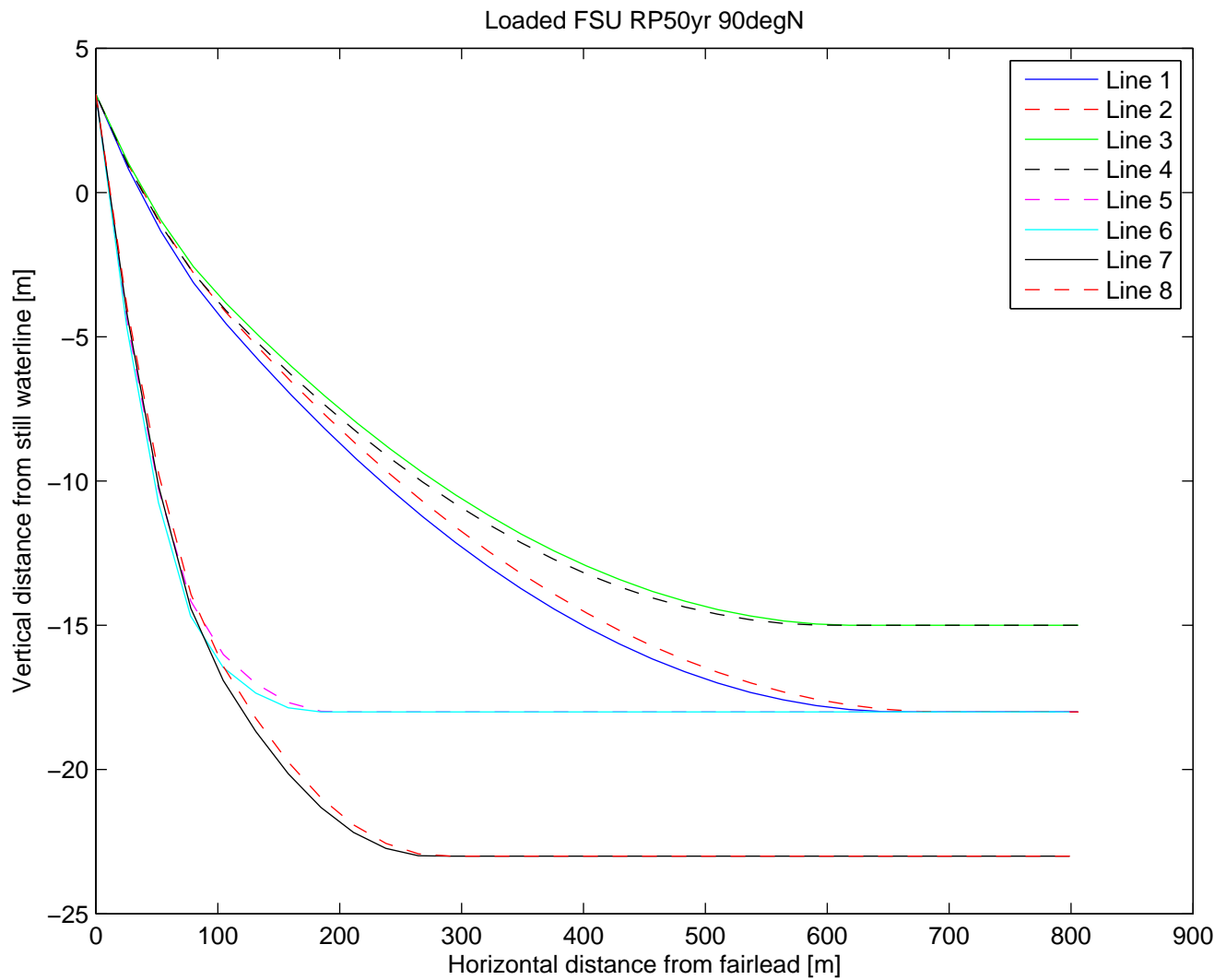
name	units	mean	std	min	max
xCOG_FSRU	m	3.75704	1.23911	-0.300625	8.25986
yCOG_FSRU	m	6.03492	1.17535	2.22854	11.4992
zCOG_FSRU	m	3.74629	0.0744329	3.46211	4.03254
xREF_FSRU	m	-0.308161	1.23887	-4.34254	4.12895
yREF_FSRU	m	6.09558	1.2224	1.86342	11.5136
zREF_FSRU	m	-9.35323	0.0672758	-9.60797	-9.0989
ROLL_FSRU	rad	0.0020772	0.00849757	-0.0306188	0.033617
PITCH_FSRU	rad	-0.000016227	0.00271158	-0.00982879	0.0101117
YAW_FSRU	rad	-0.00823003	0.0246224	-0.0808943	0.0594313
WaveHeight-COG	m	3.66737E-05	0.500442	-1.98267	2.06581
windSpeed	ms-1	24.5953	2.61087	17.0746	32.1193
FairleadTension1	kN	143.841	177.188	28.8233	2062.33
FairleadTension2	kN	135.39	184.354	28.744	2297.77
FairleadTension3	kN	116.056	195.085	27.5776	1920.62
FairleadTension4	kN	121.504	198.201	27.6798	1924.03
FairleadTension5	kN	1430.97	432.627	97.1703	3445.97
FairleadTension6	kN	1544.47	483.149	98.3095	3628.12
FairleadTension7	kN	1383.57	412.334	135.018	3980.6
FairleadTension8	kN	1302.9	418.755	128.402	3814.96
AnchorTension1	kN	139.175	177.098	24.3658	2054.89
AnchorTension2	kN	130.723	184.239	24.285	2290.53
AnchorTension3	kN	111.959	195.011	23.6866	1915.18
AnchorTension4	kN	117.407	198.127	23.7968	1918.59
AnchorTension5	kN	1424.87	432.003	92.6265	3437.45
AnchorTension6	kN	1538.22	482.465	93.7668	3619.43
AnchorTension7	kN	1375.78	411.491	129.643	3968.95
AnchorTension8	kN	1295.29	417.881	123.027	3803.49
xManExc	m	-4.23108	0.886157	-7.74278	-0.35232
yManExc	m	5.77055	1.11638	1.33152	11.5604
zManExc	m	-13.0648	0.179935	-13.7356	-12.3664
xFairLeadML6	m	-4.34811	1.08282	-8.1407	-0.190496
yFairLeadML6	m	4.9578	2.96715	-5.6823	15.2949
zFairLeadML6	m	-13.0832	0.402799	-14.5638	-11.6558
xFairLeadML10	m	-4.16285	0.815145	-7.58372	-0.489319
yFairLeadML10	m	6.74388	2.81369	-0.773693	15.3783
zFairLeadML10	m	-13.0587	0.268568	-14.367	-11.919
xFairLeadML12	m	-4.22195	0.959241	-7.83786	-0.207509
yFairLeadML12	m	7.15093	3.94597	-3.52259	19.3493
zFairLeadML12	m	-13.0785	0.344426	-14.5221	-11.7786

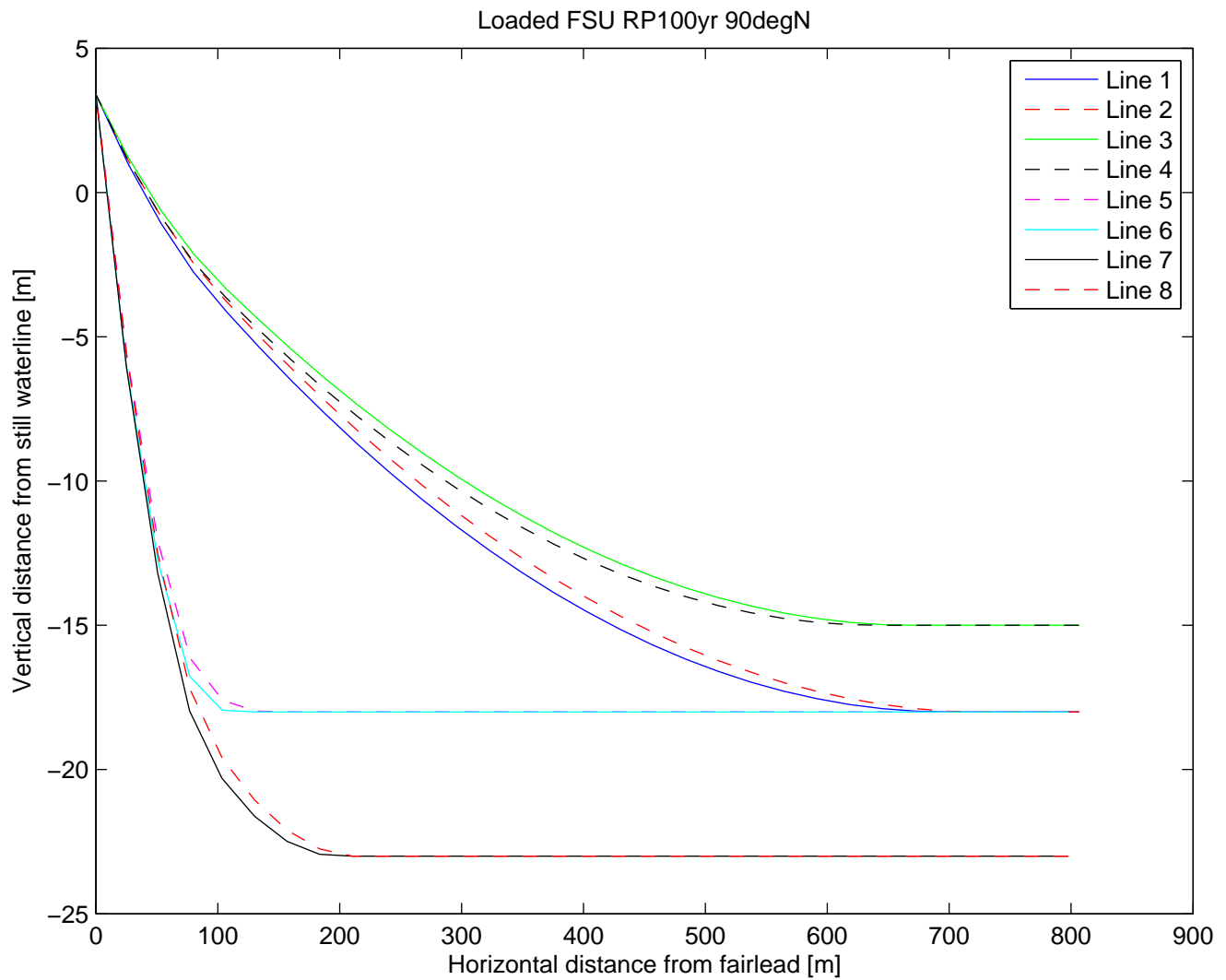
APPENDIX 2:

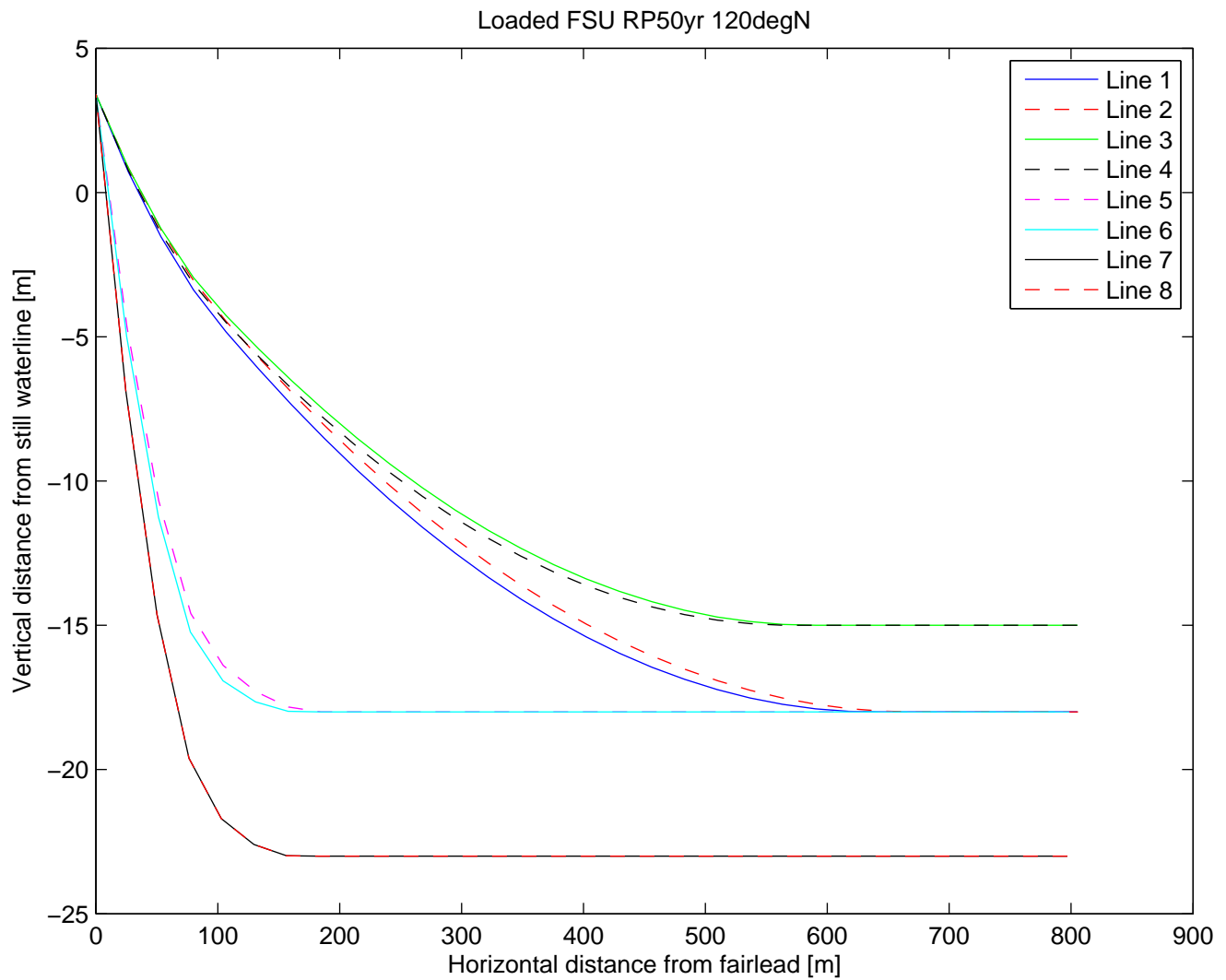
EXTREME TOUCHDOWN POINT MOORING LINE CATENARY SHAPES

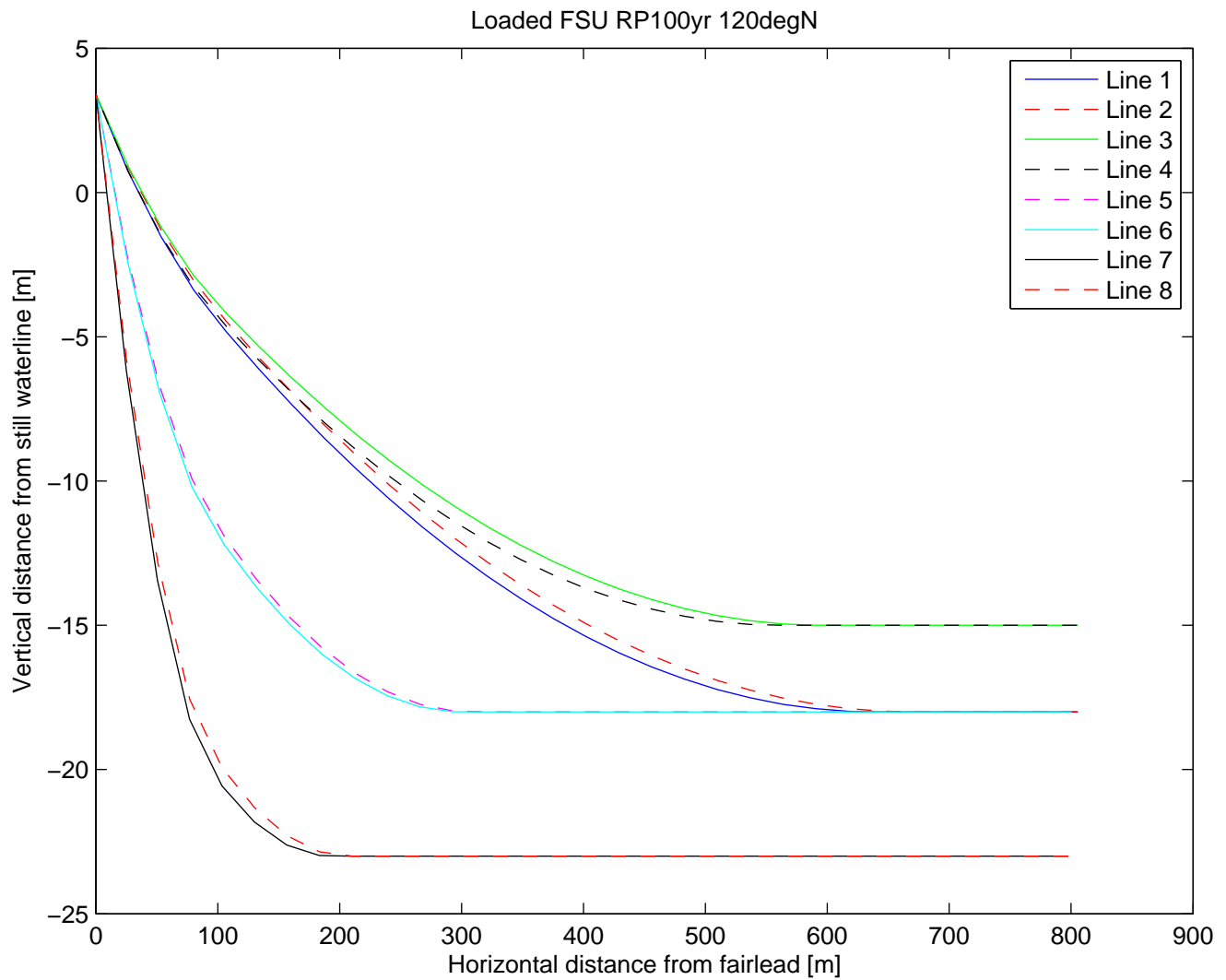


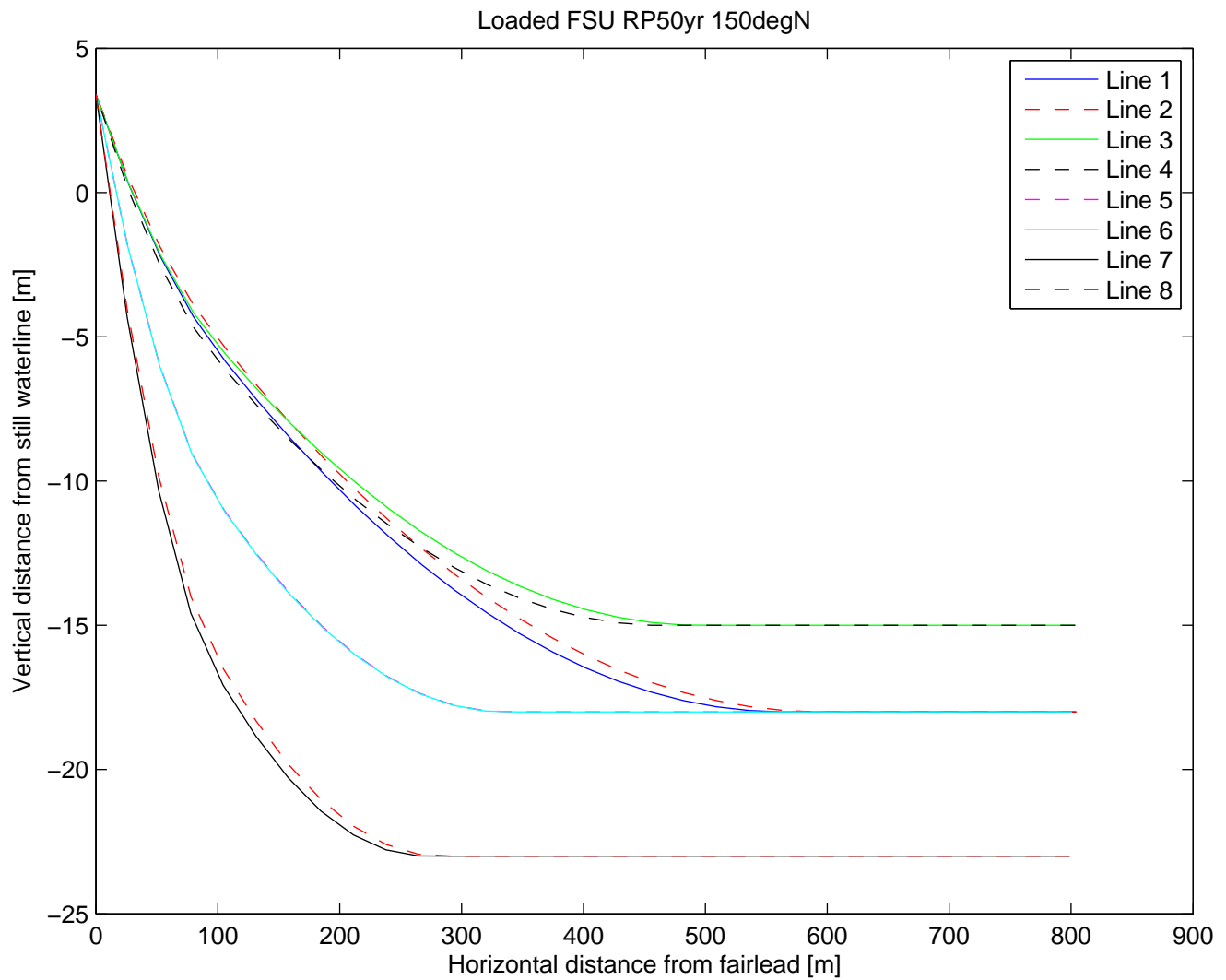


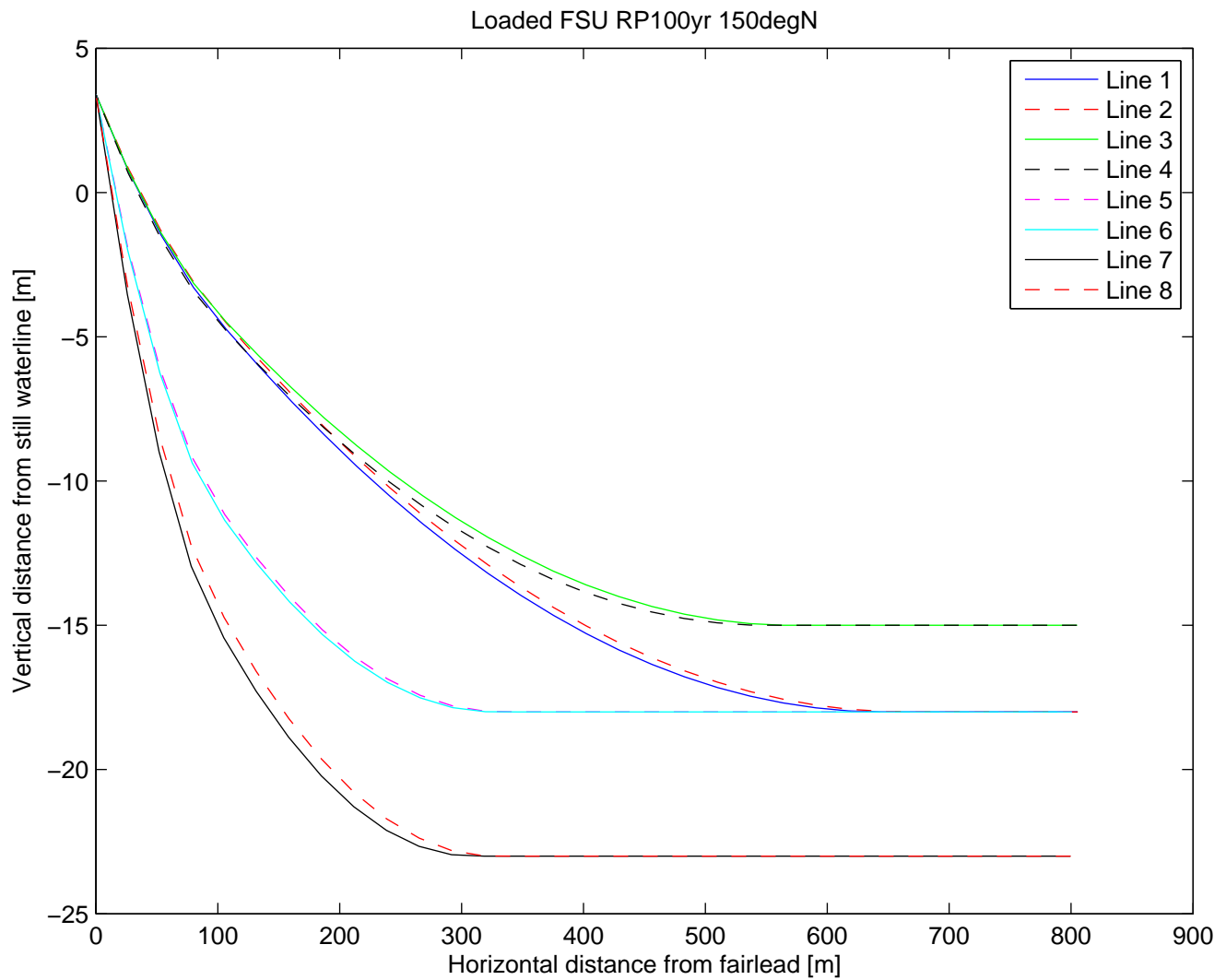


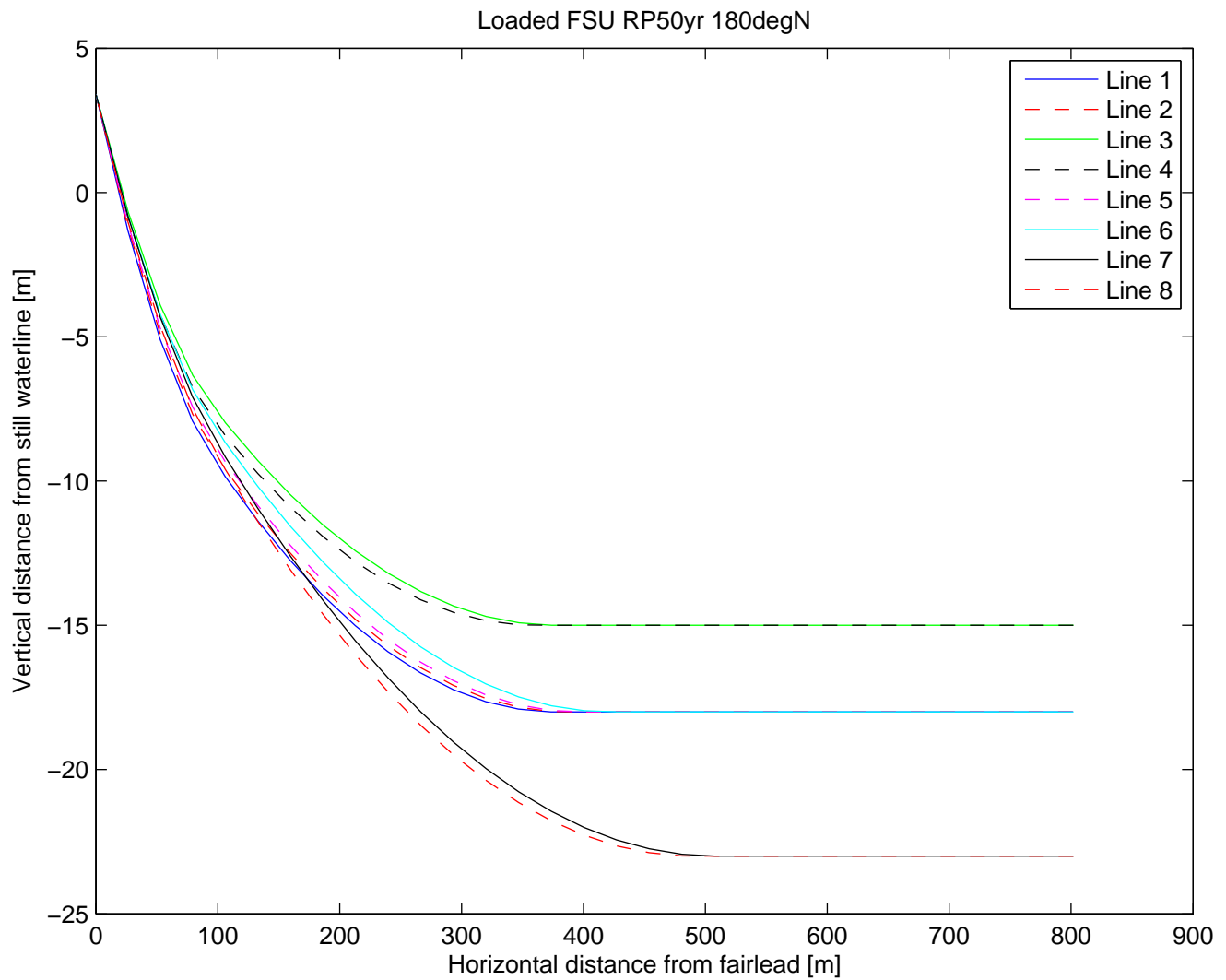


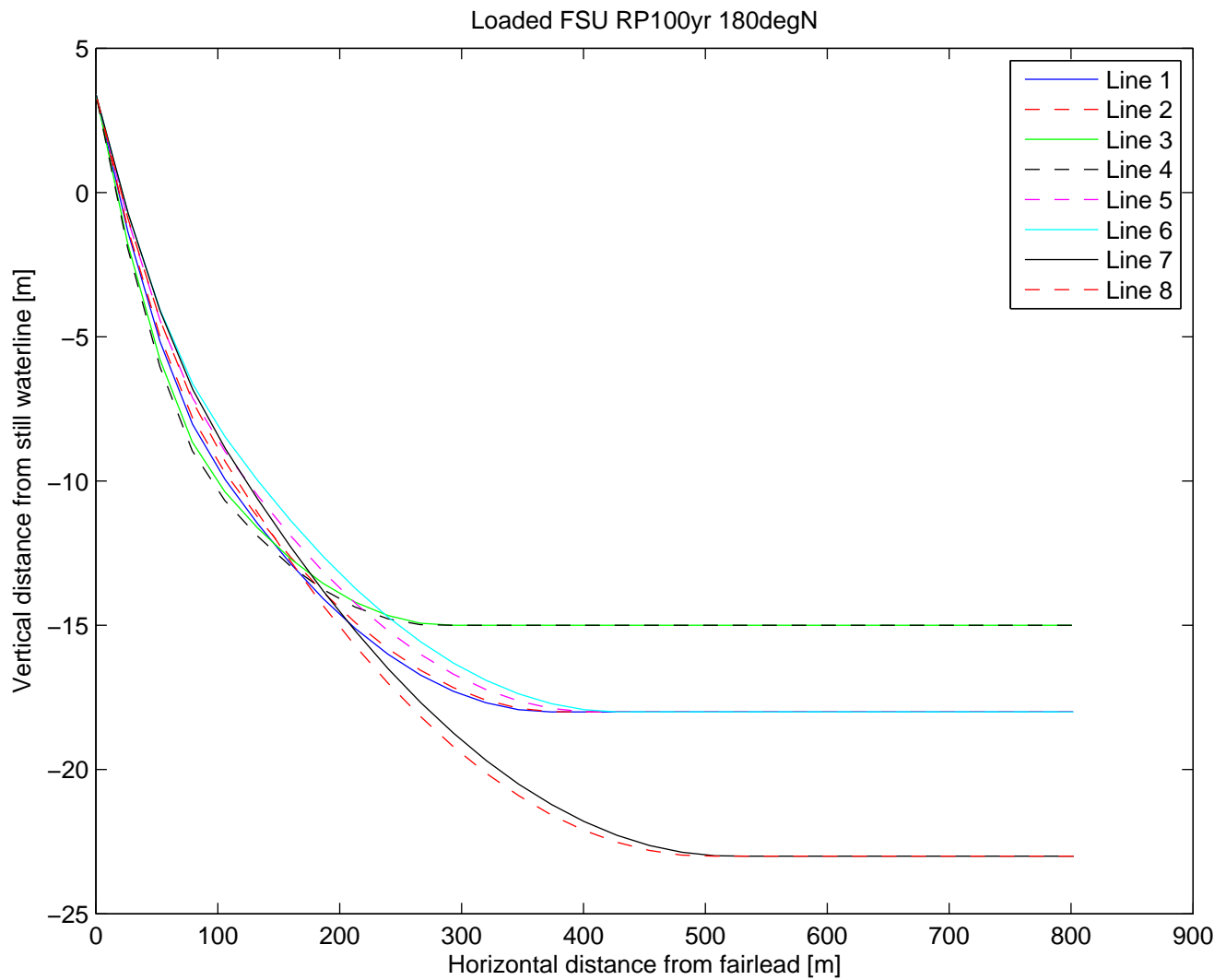


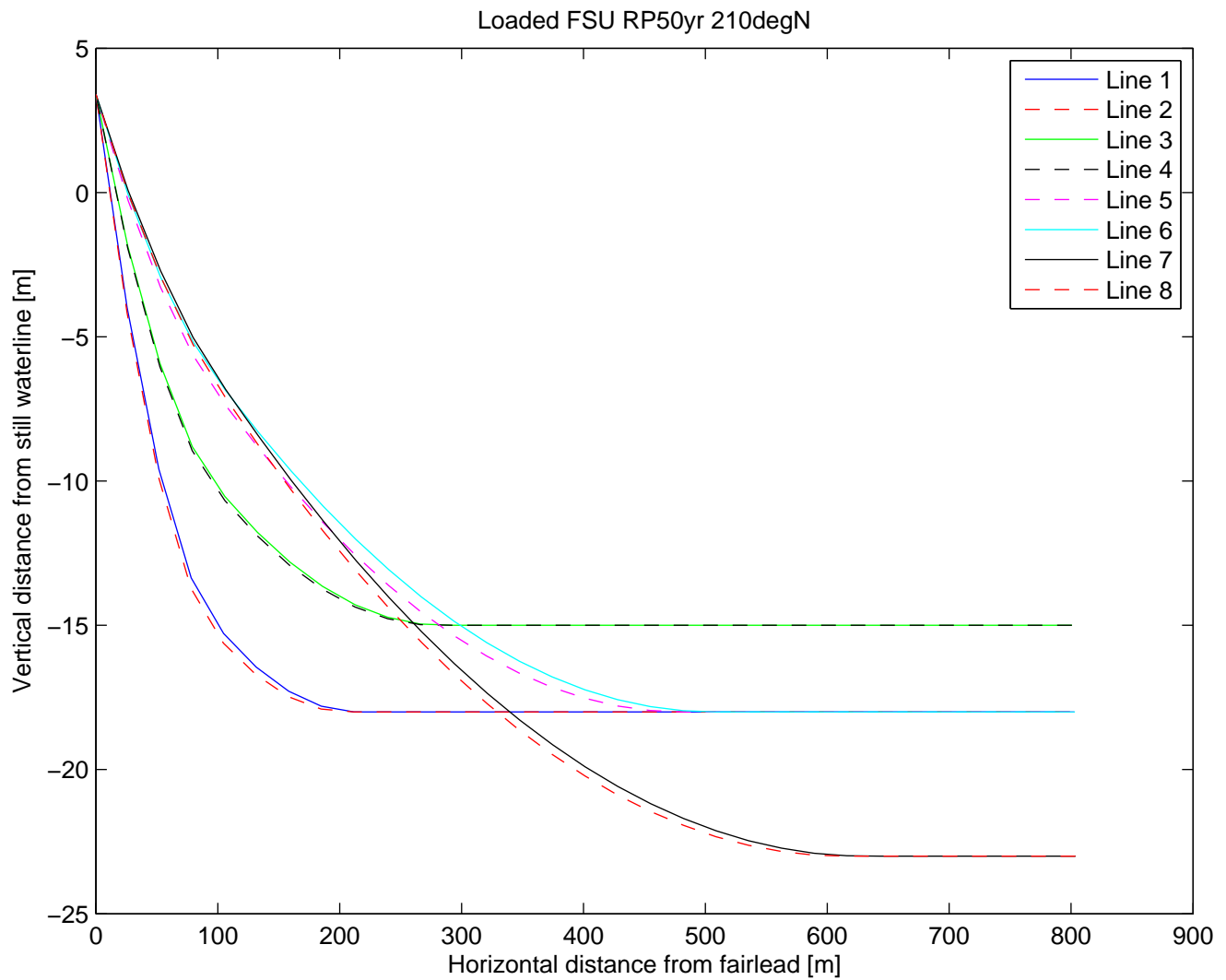


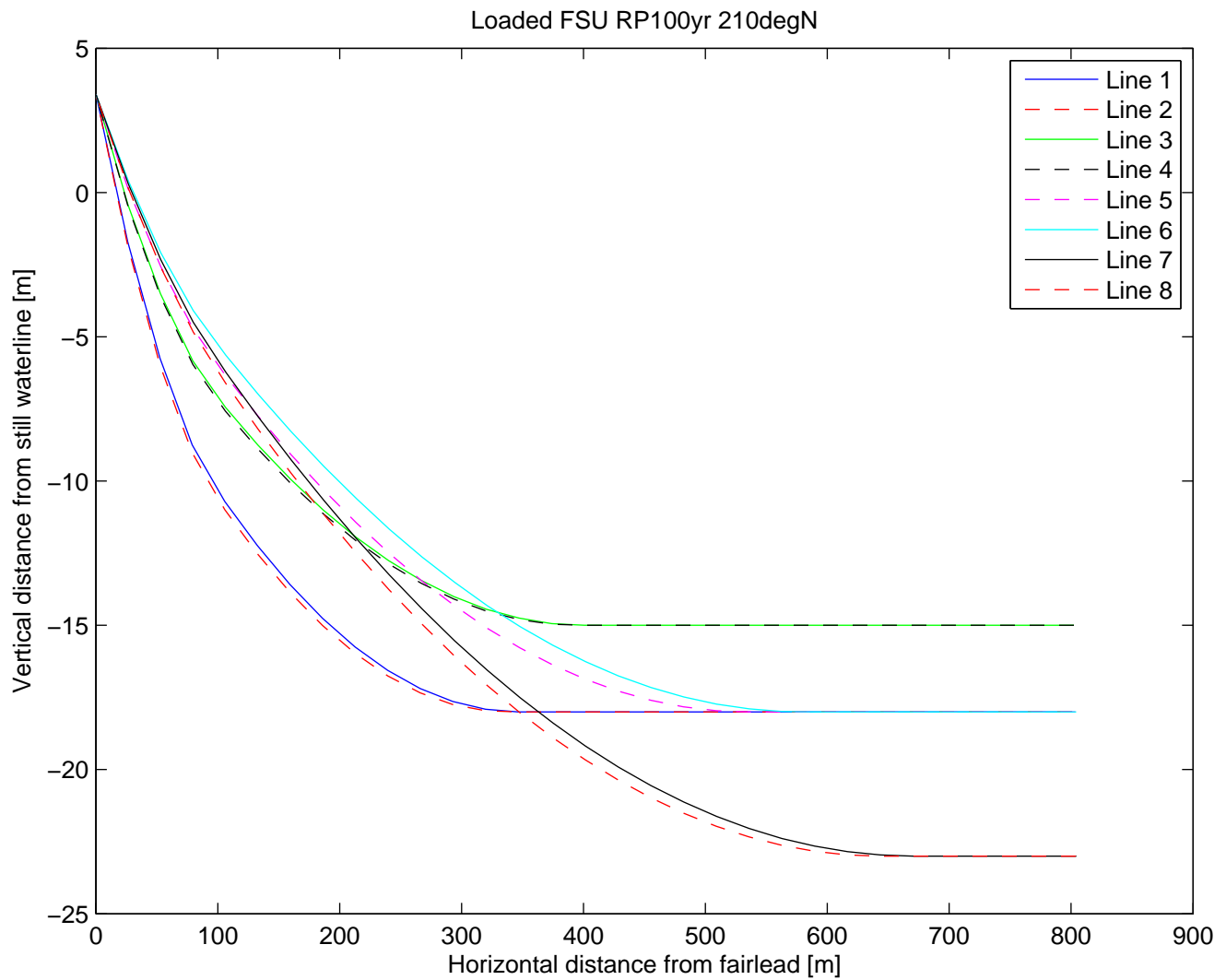


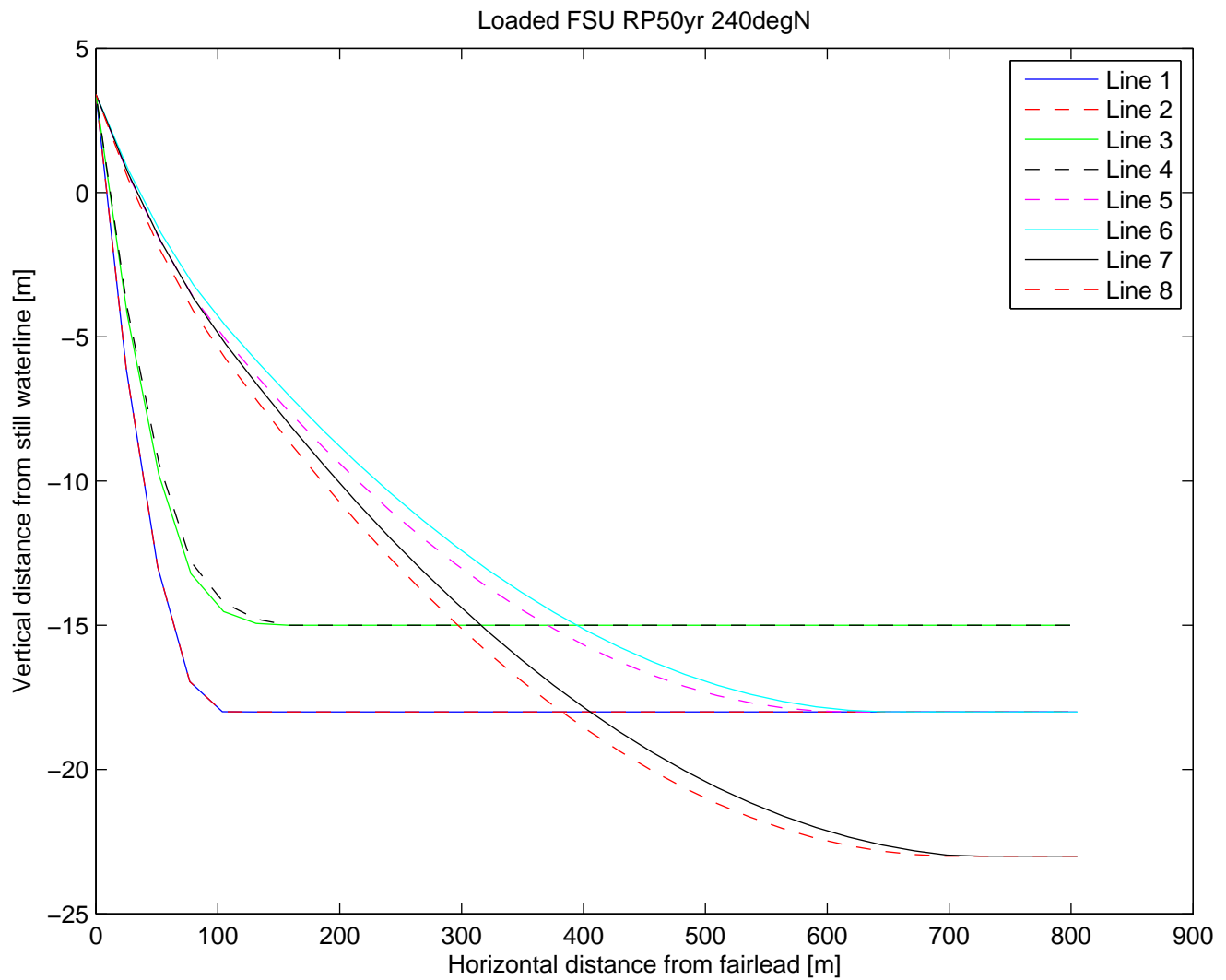


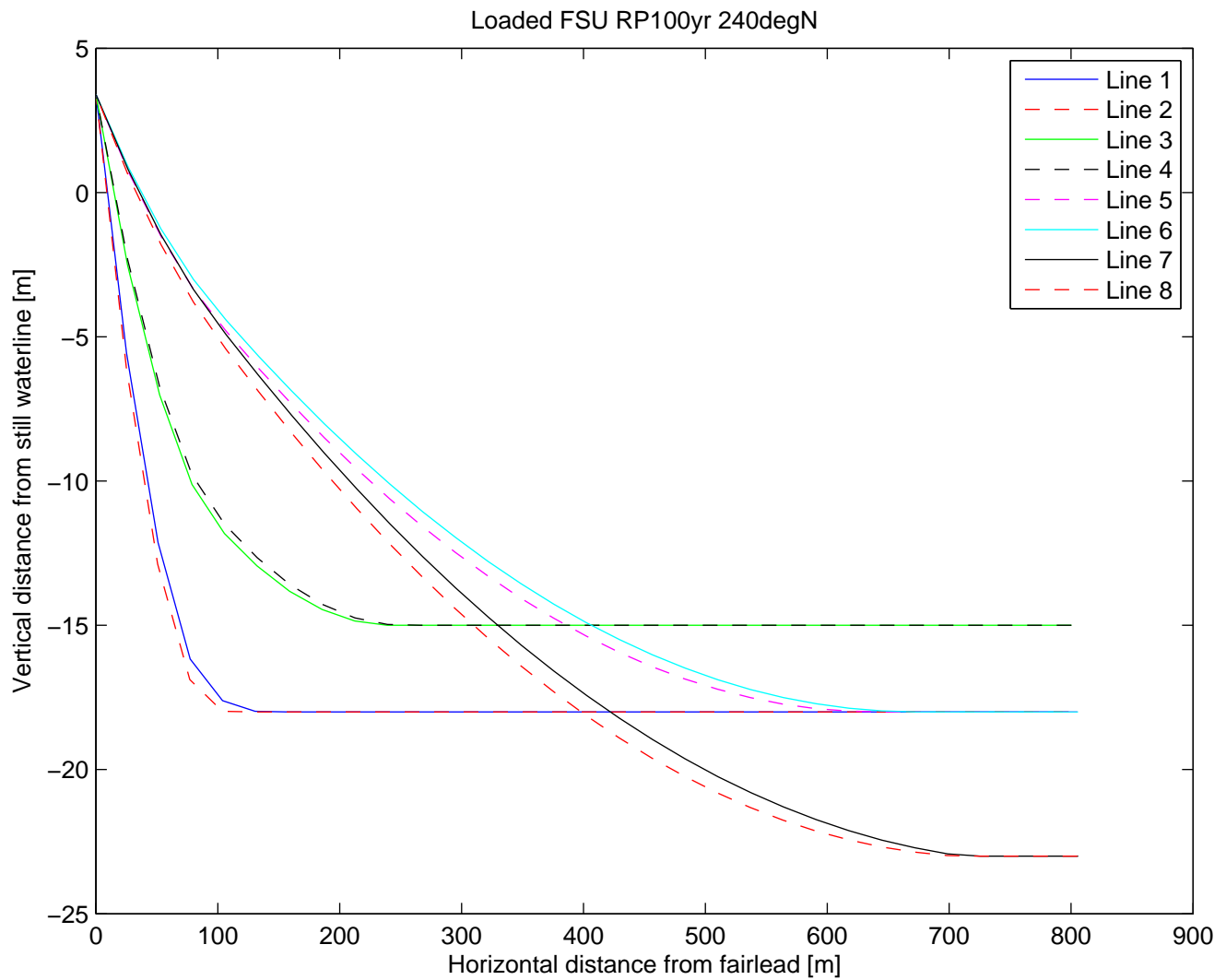


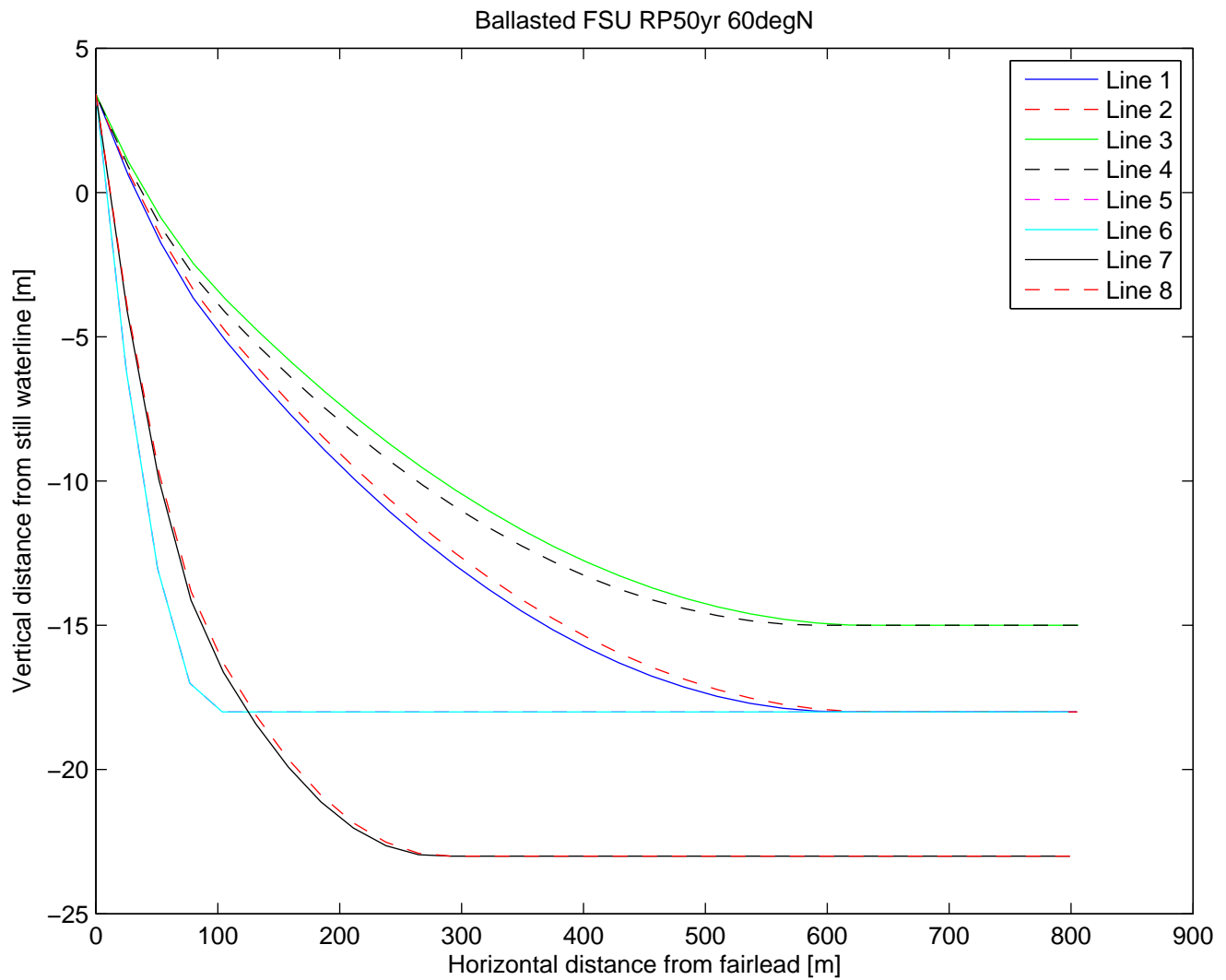


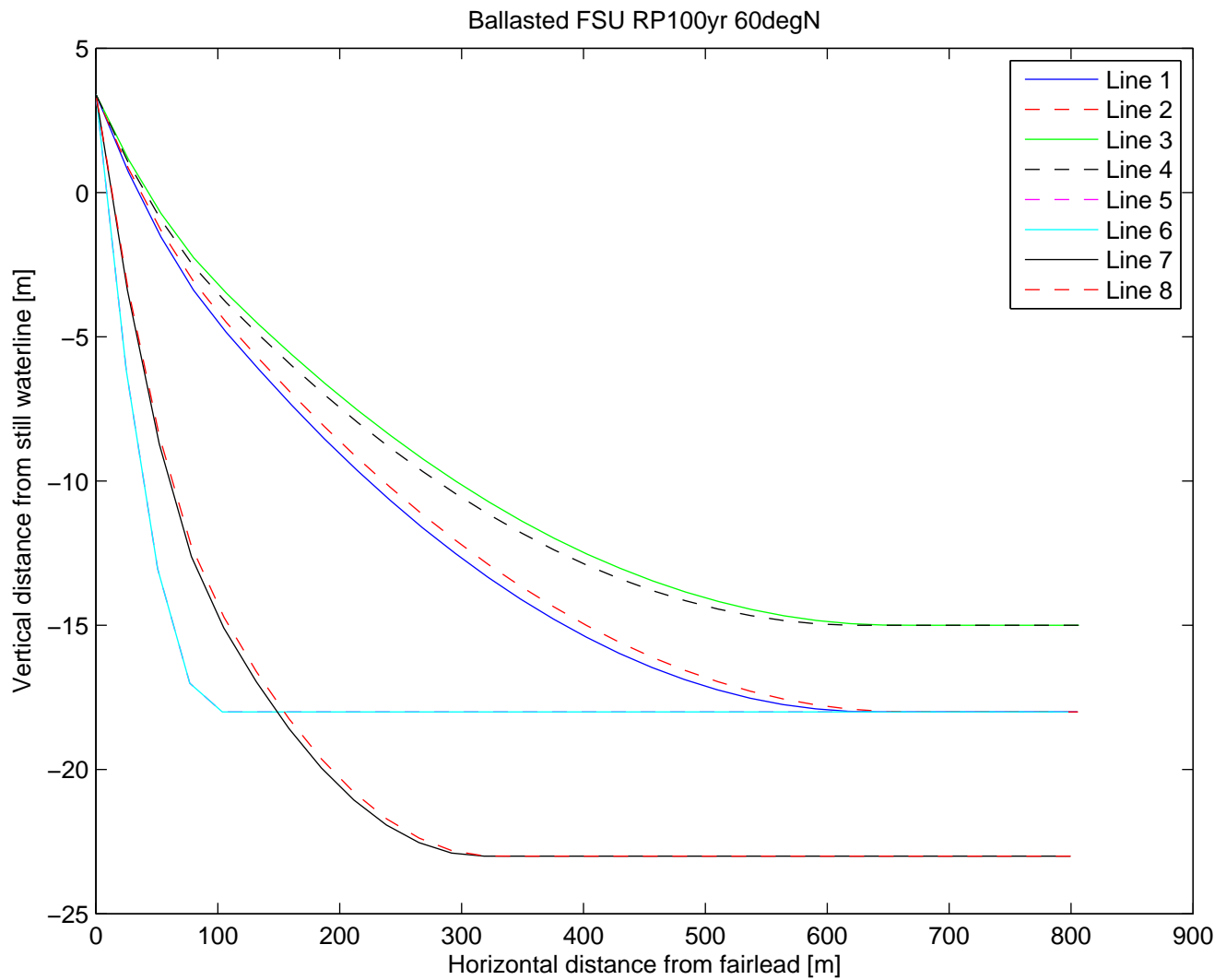


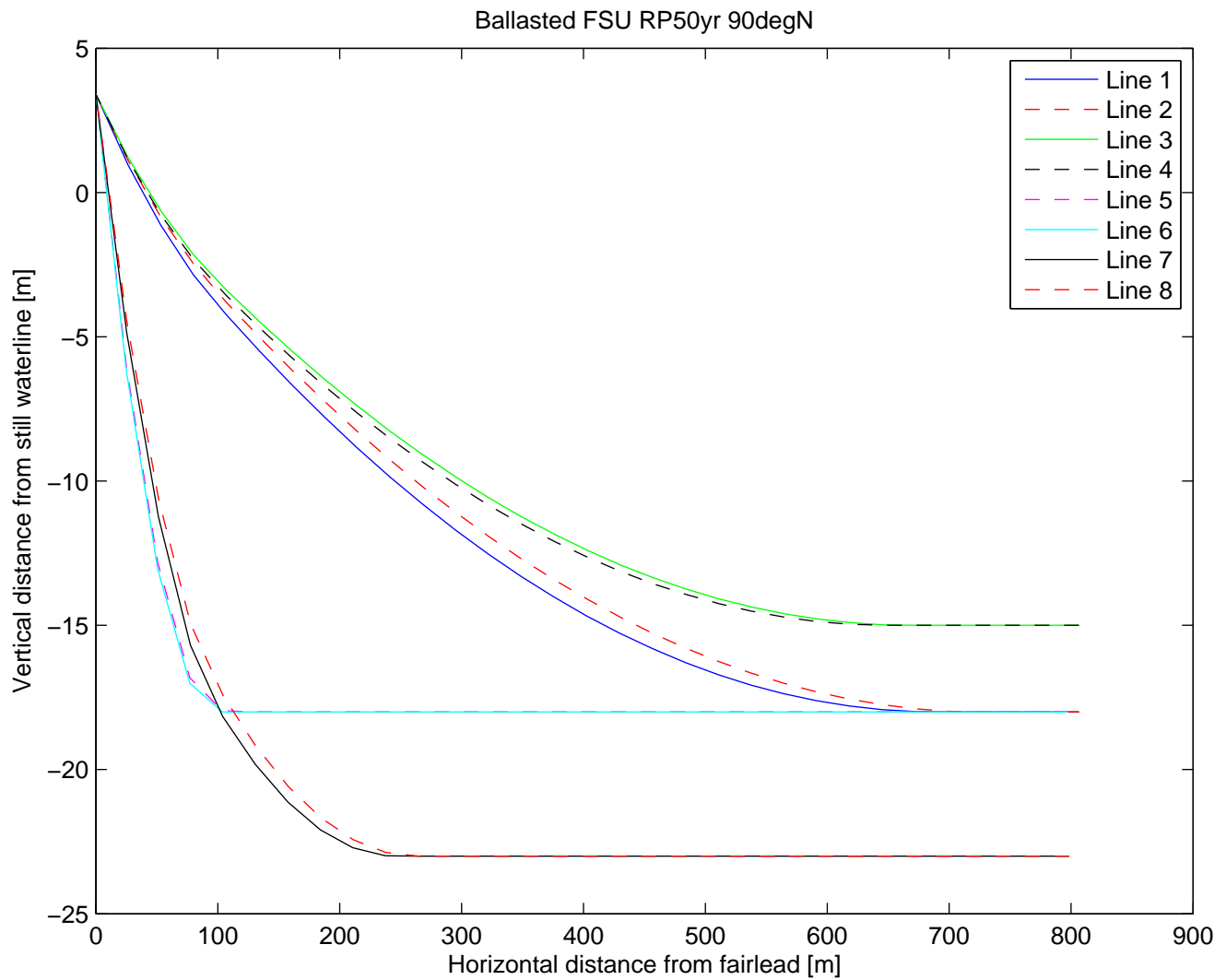


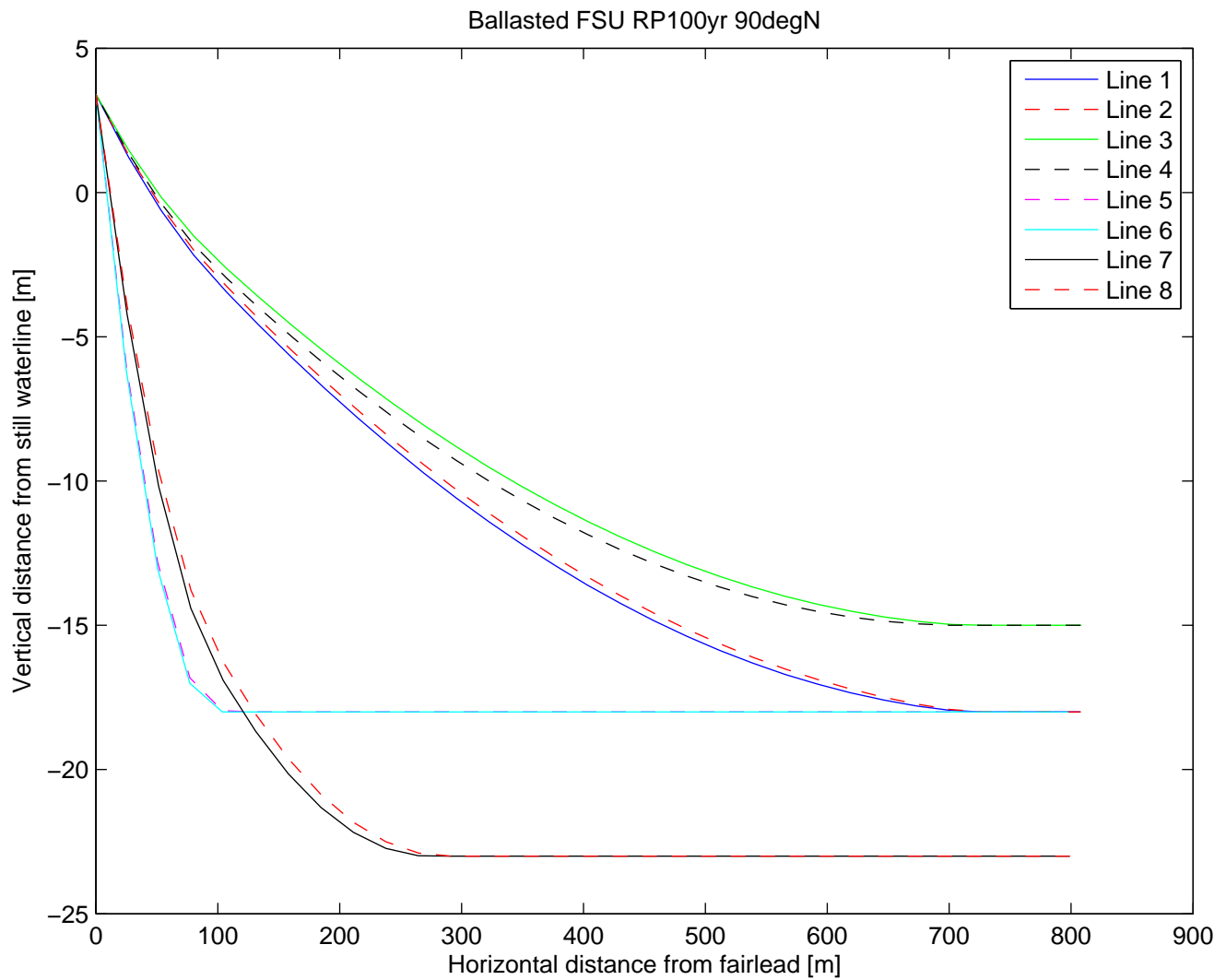


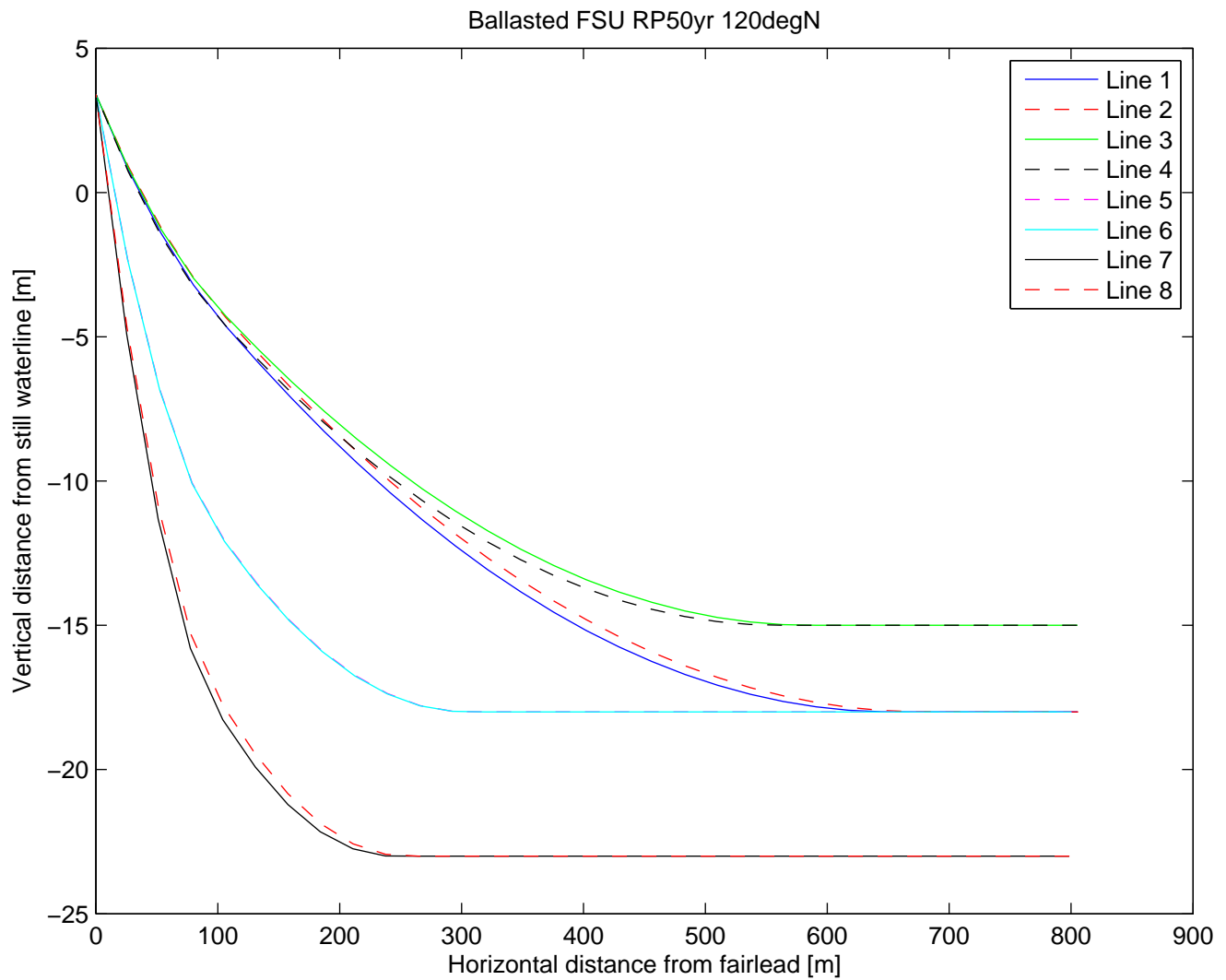


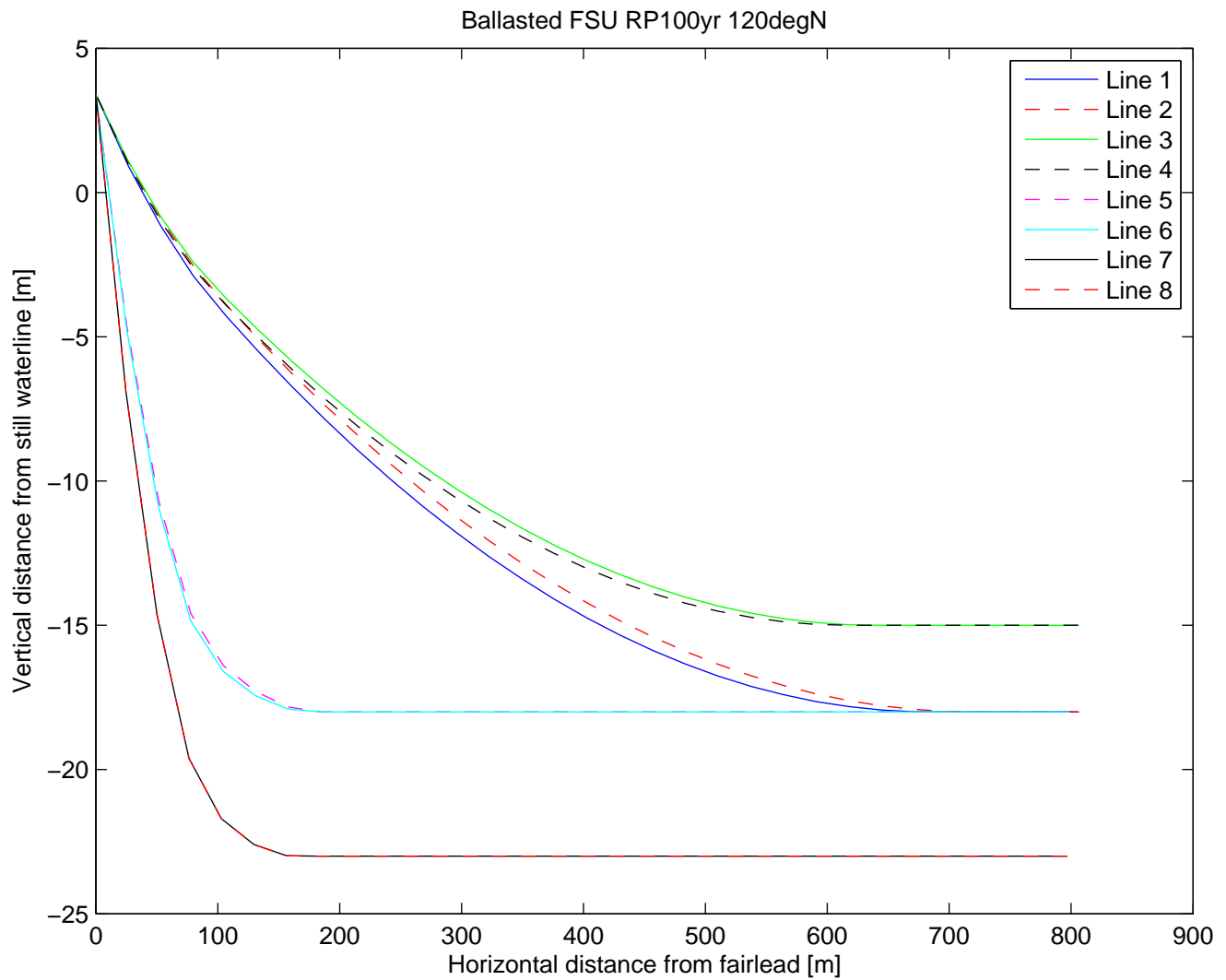


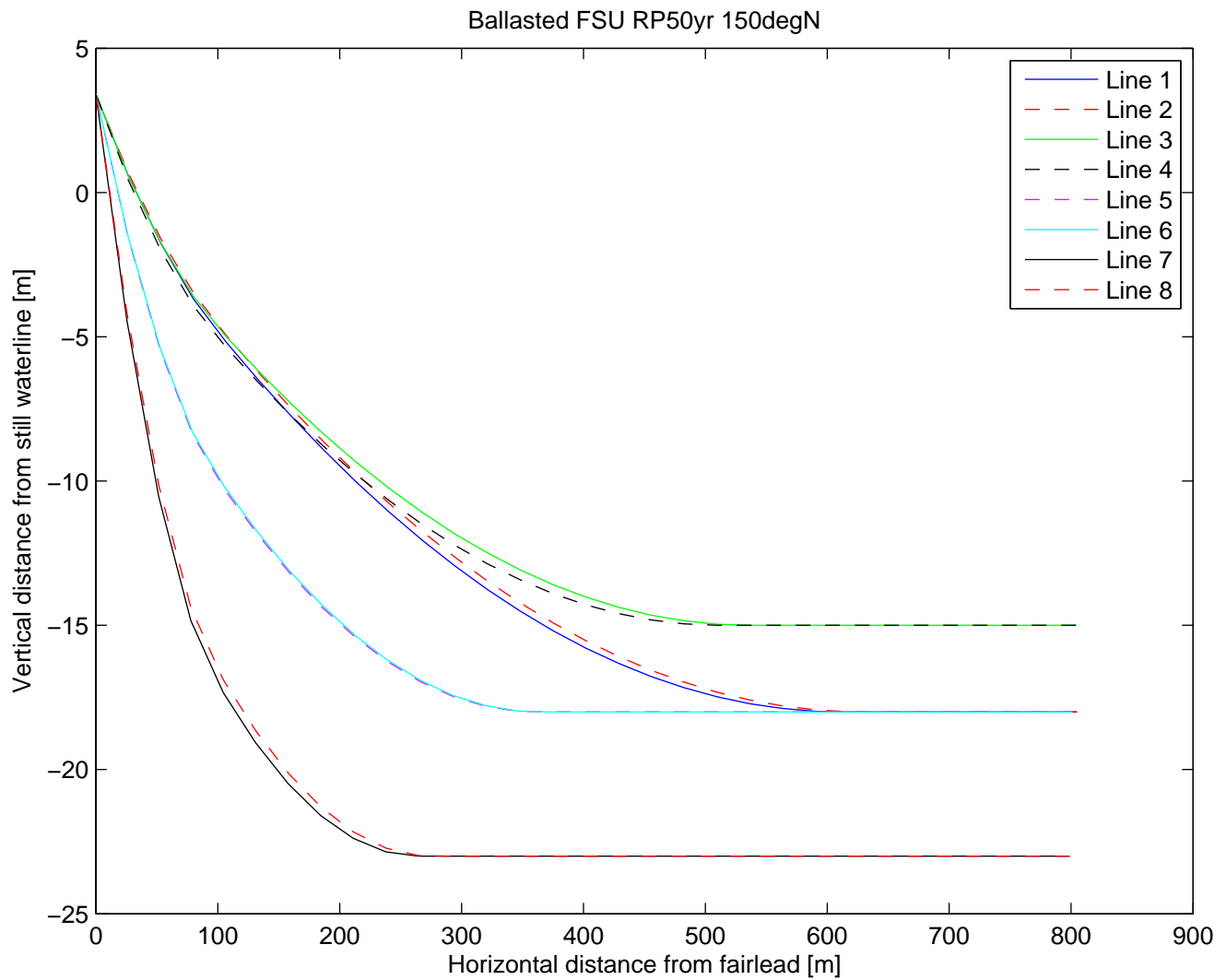


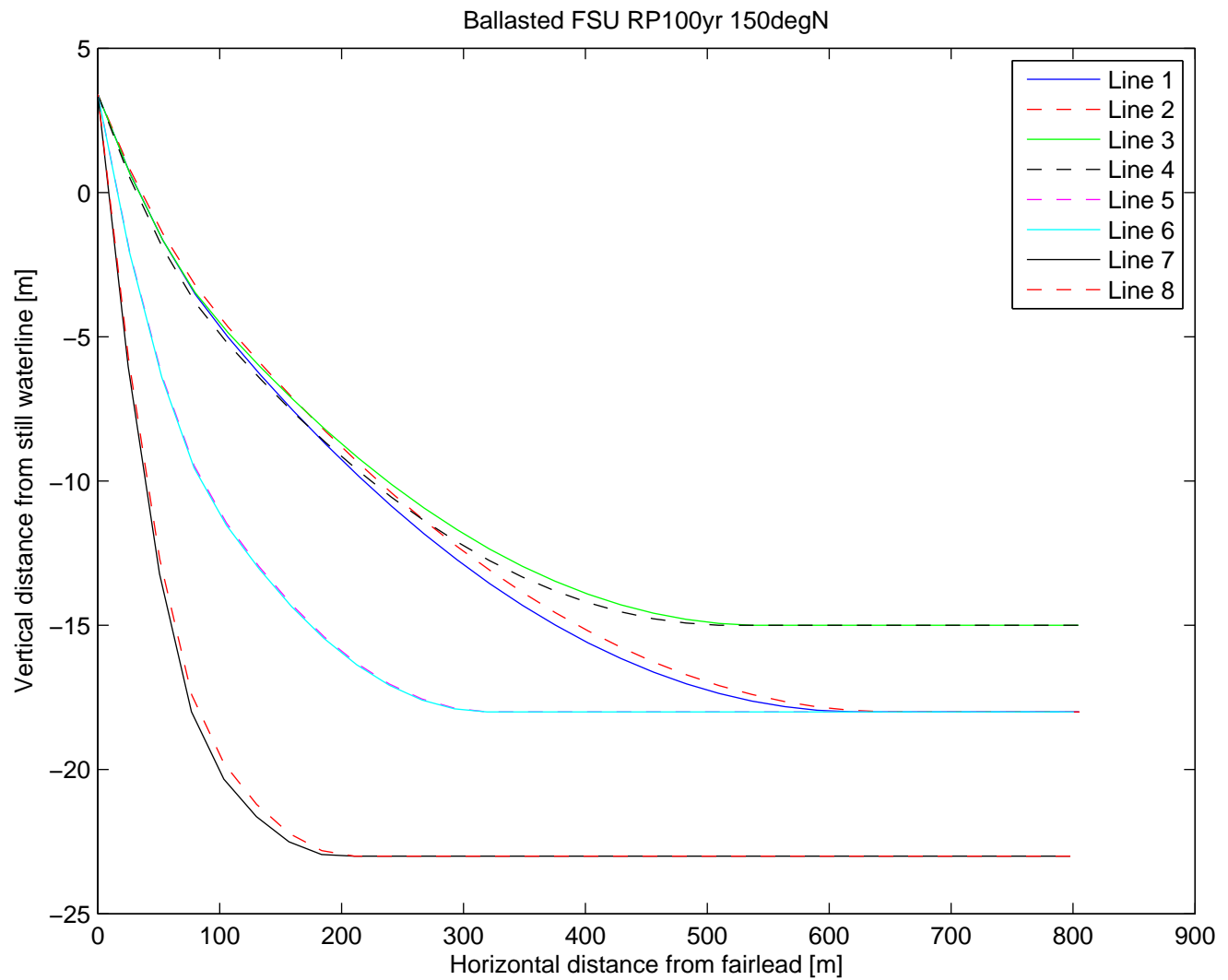


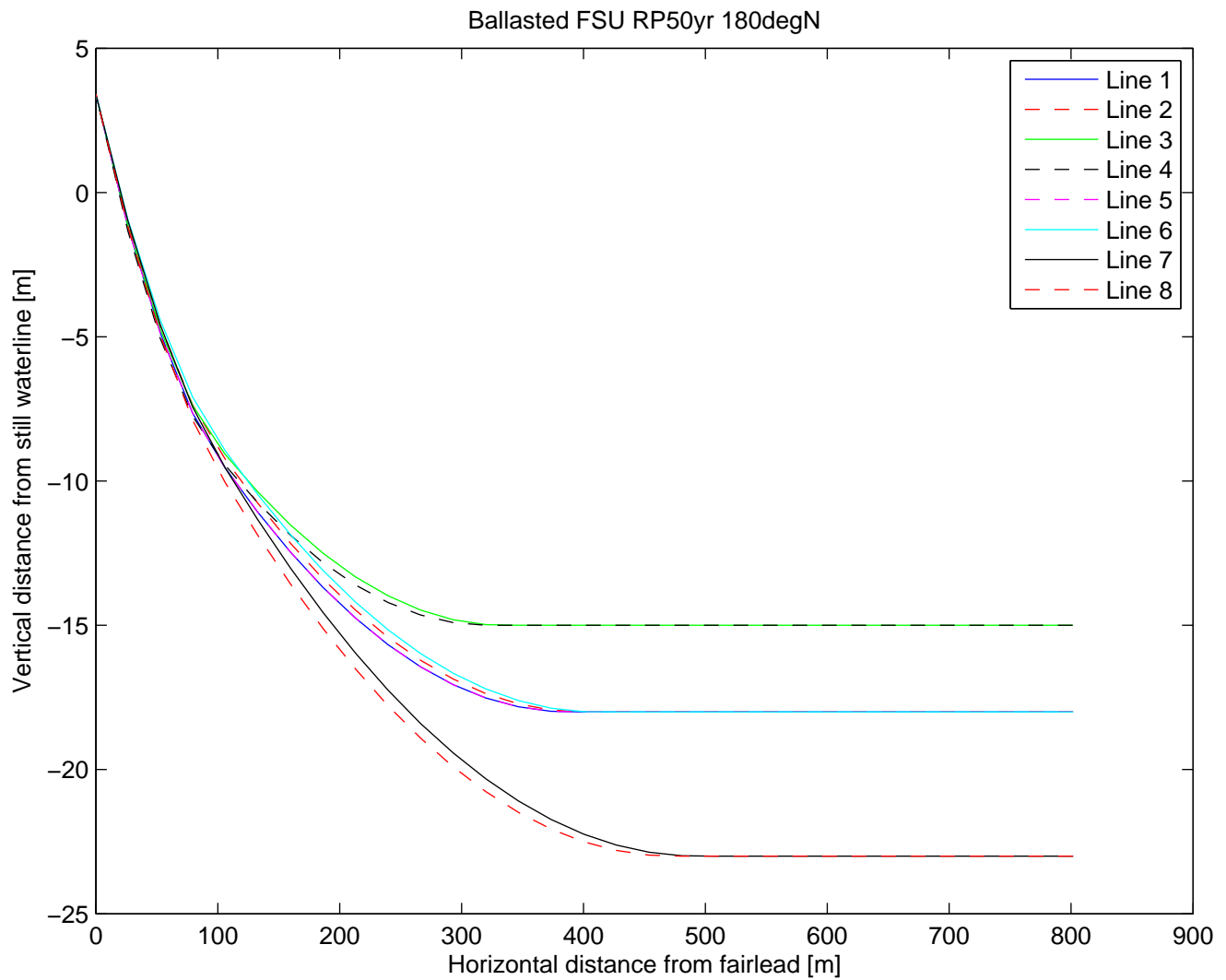


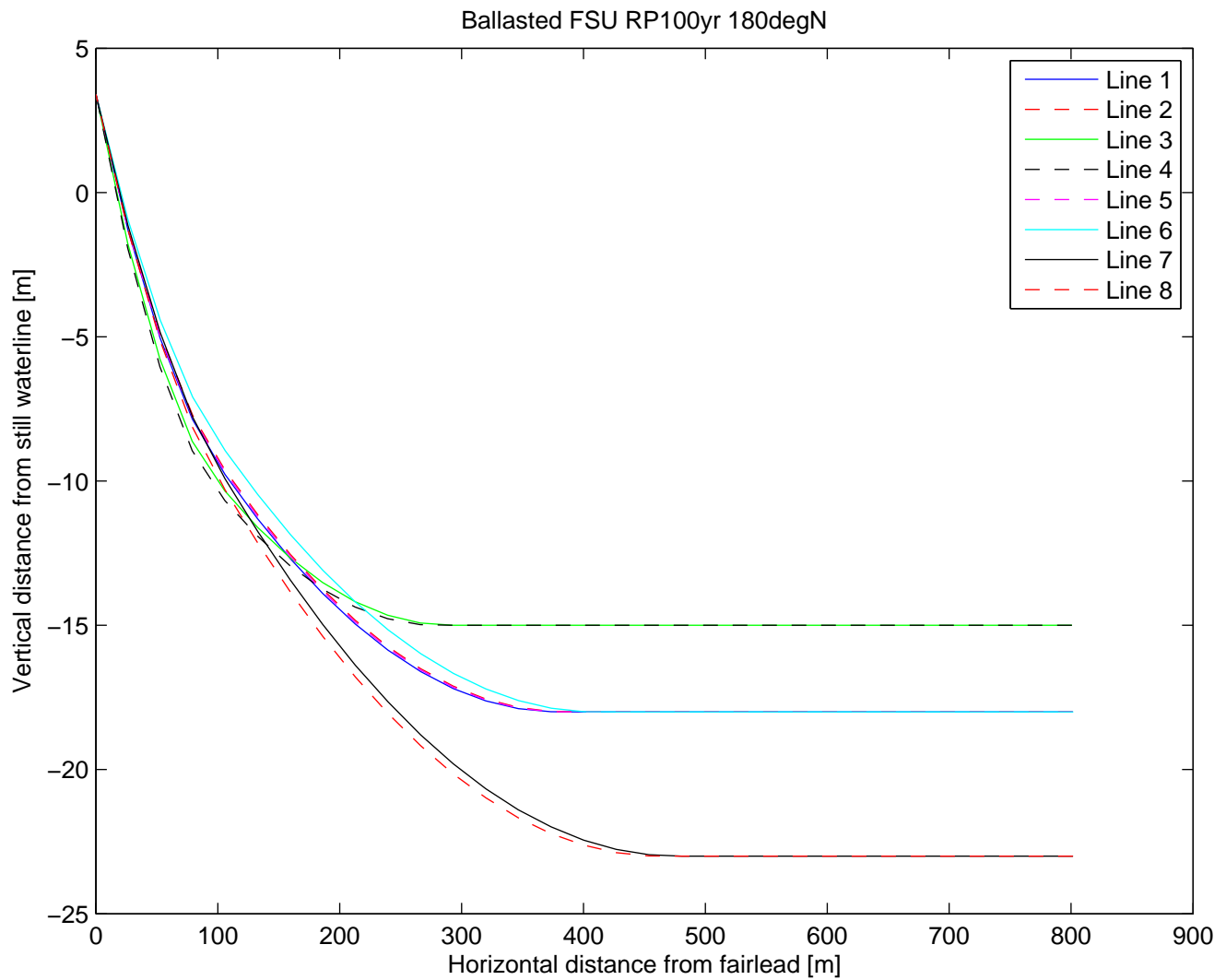


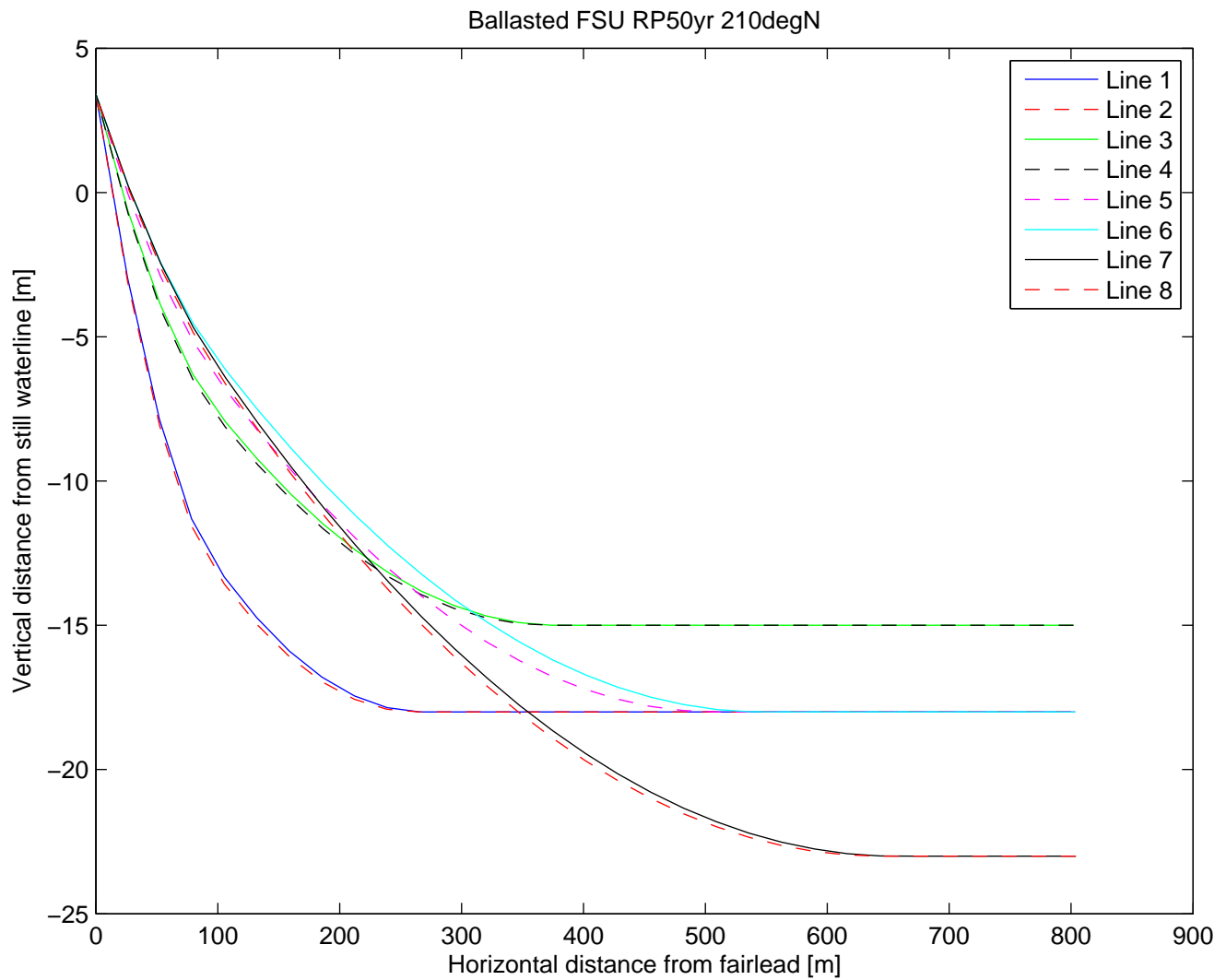


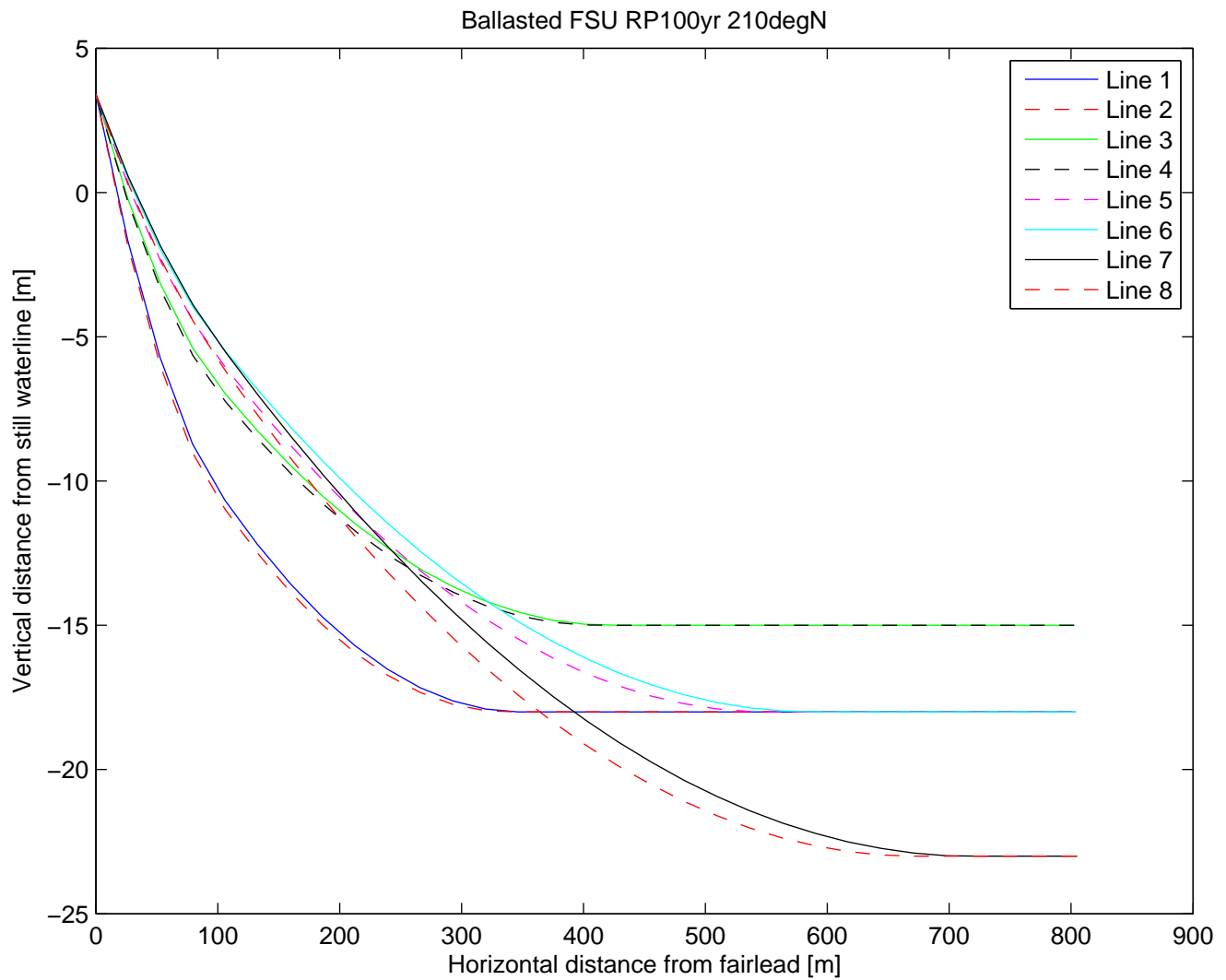


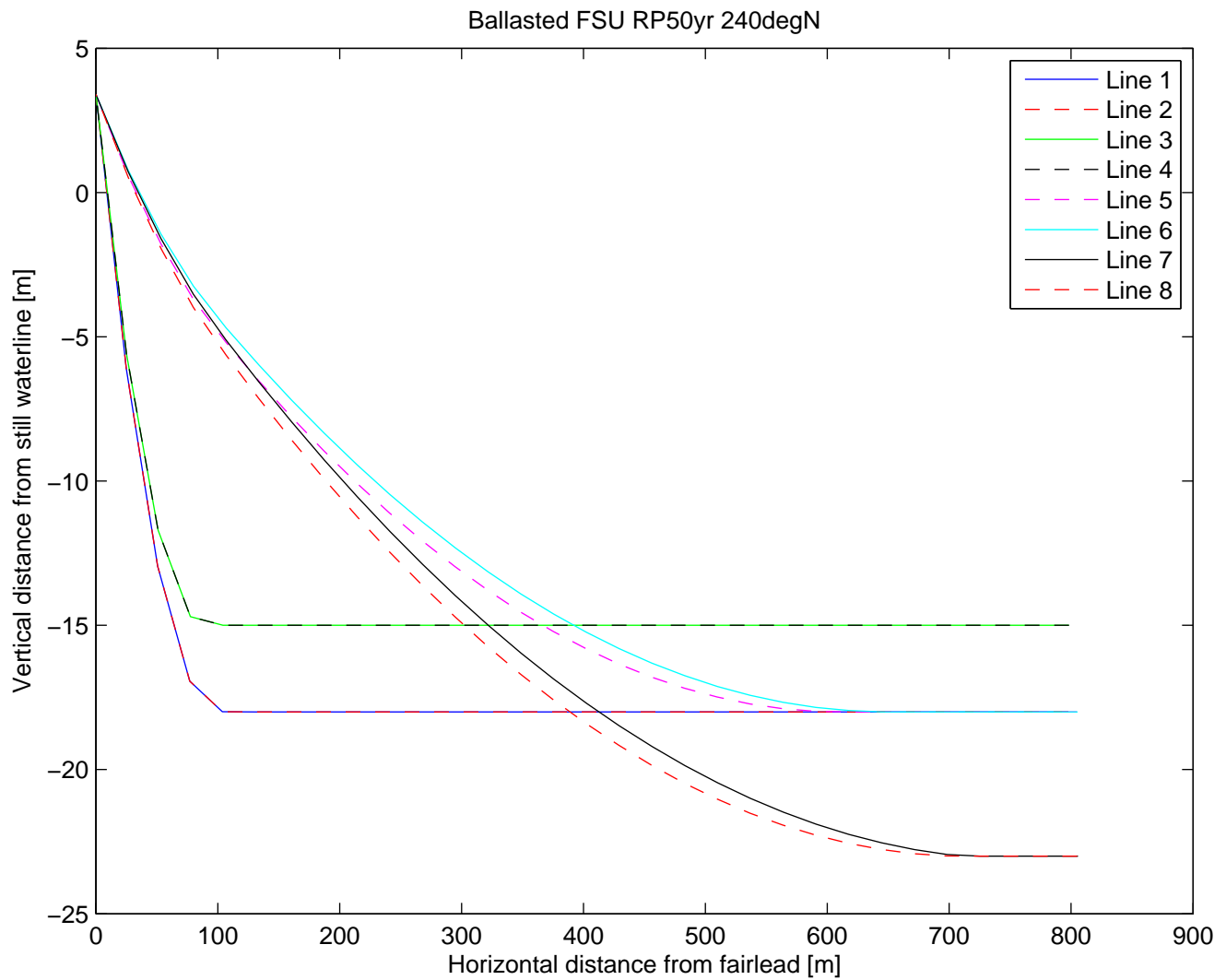


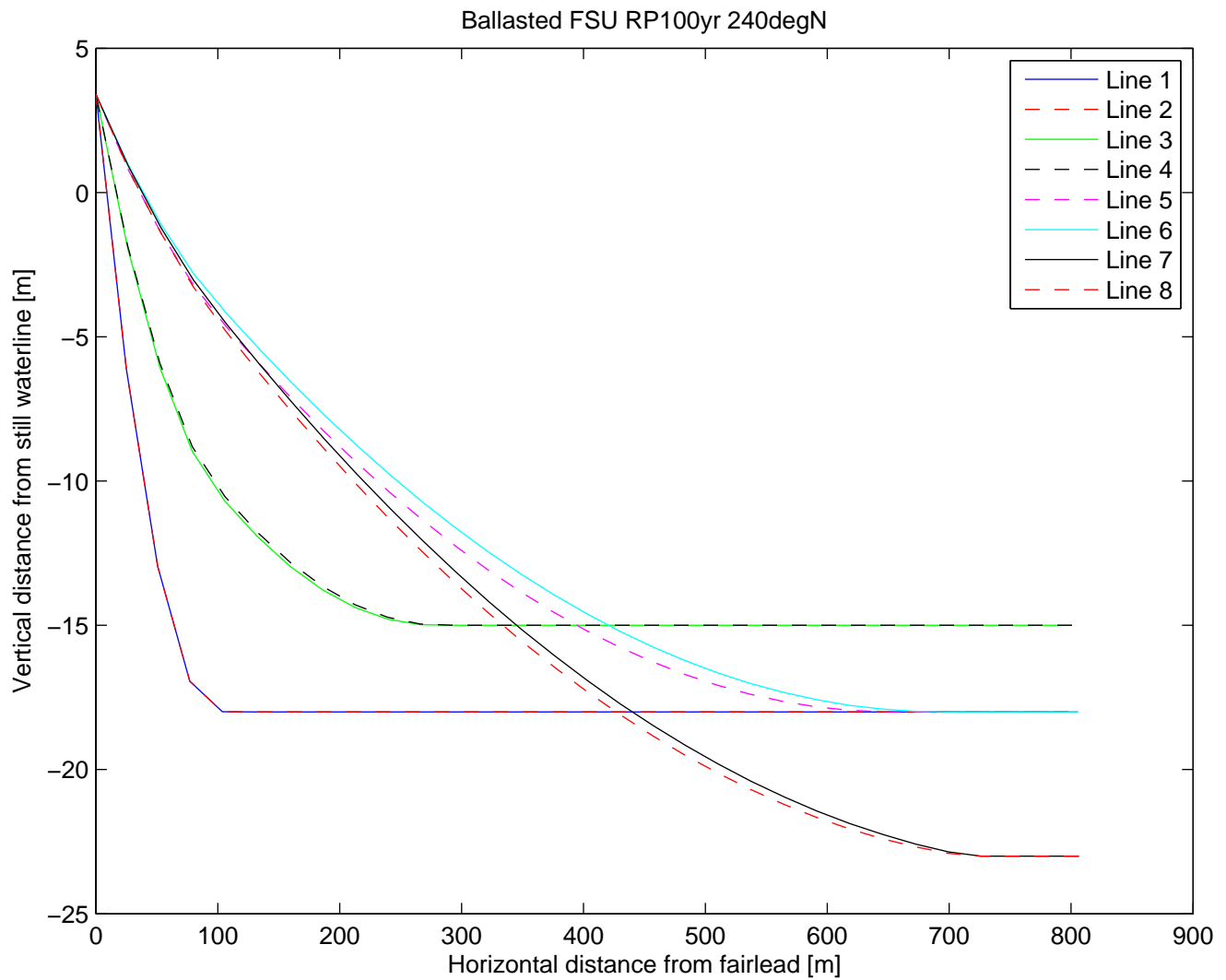


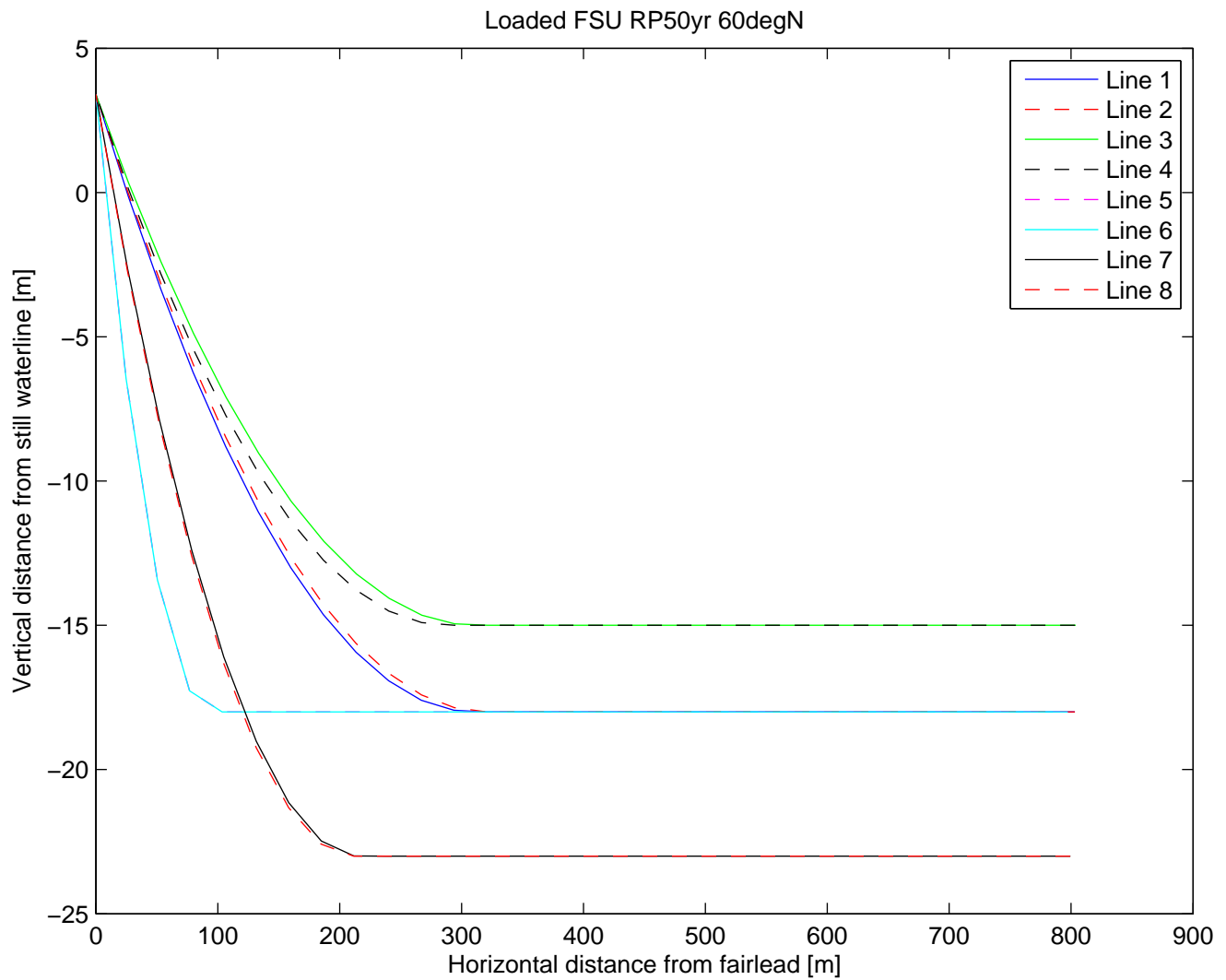


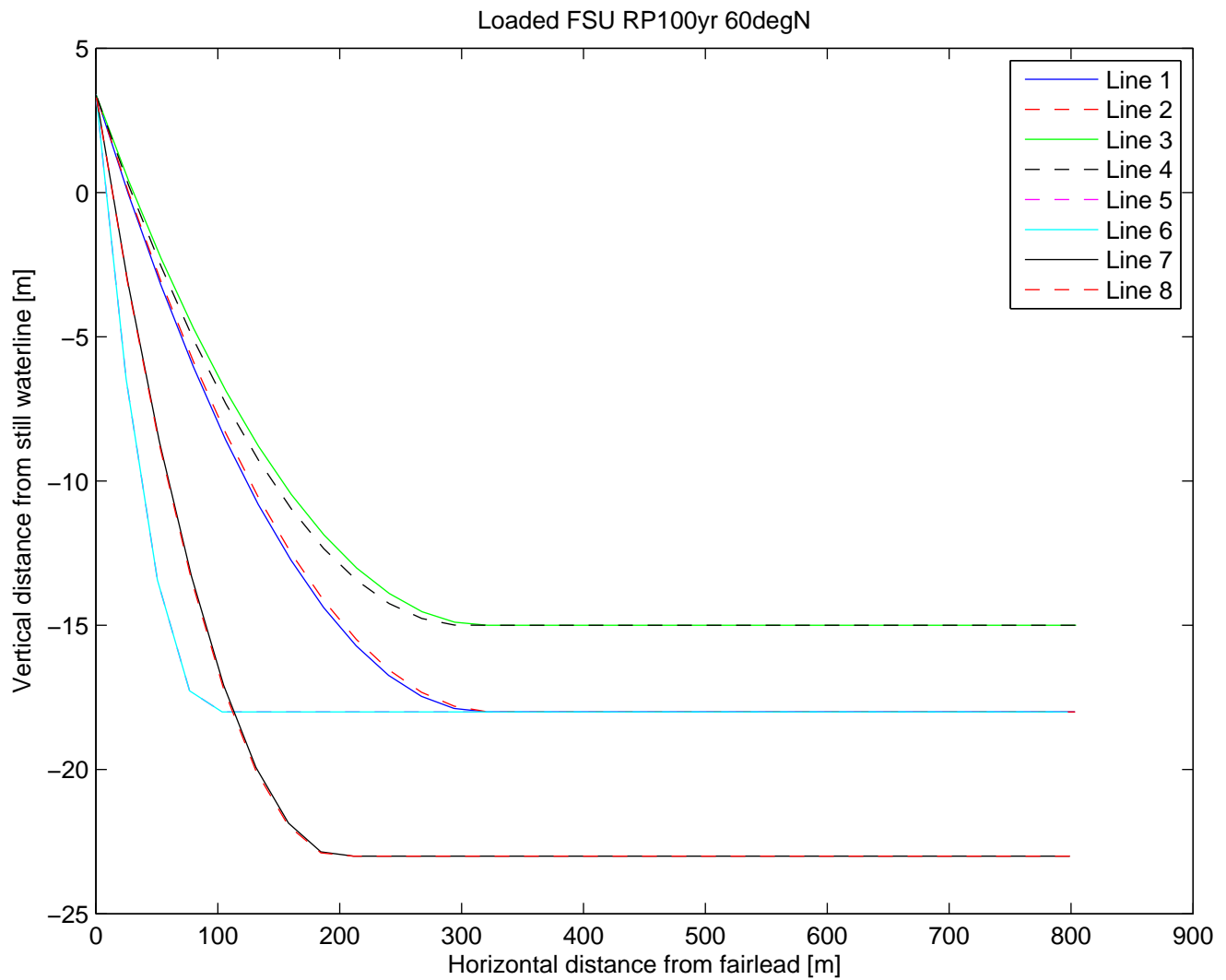


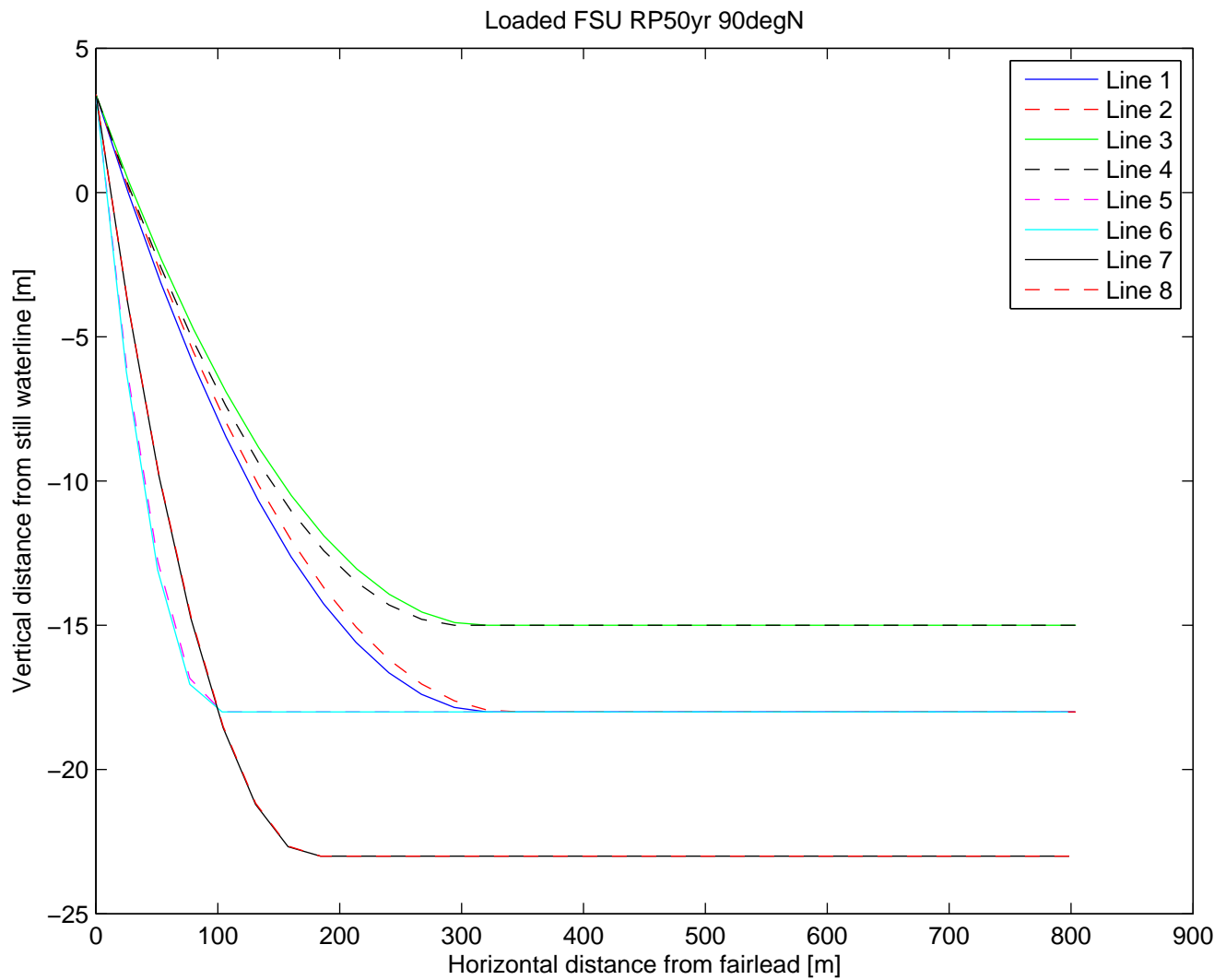


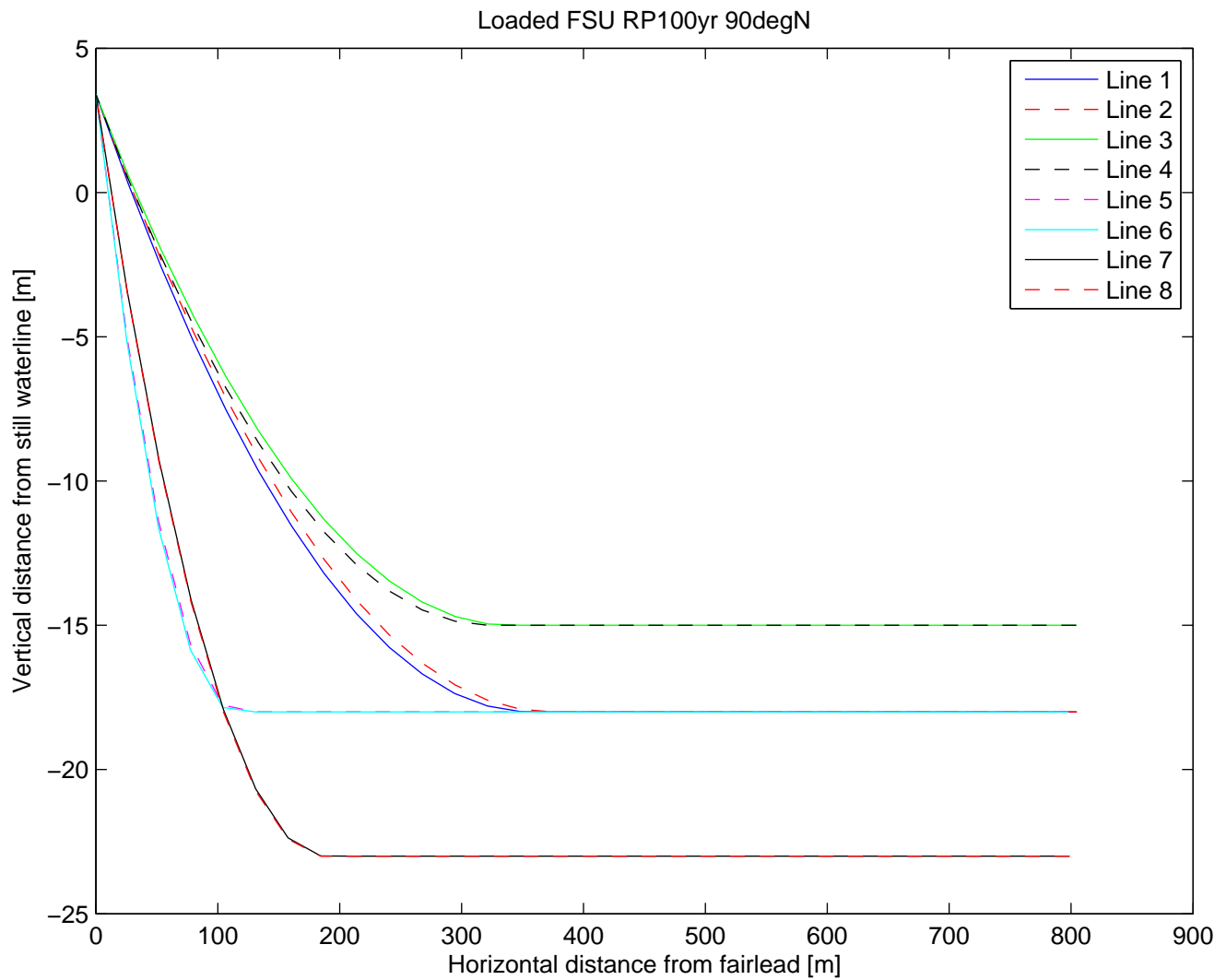


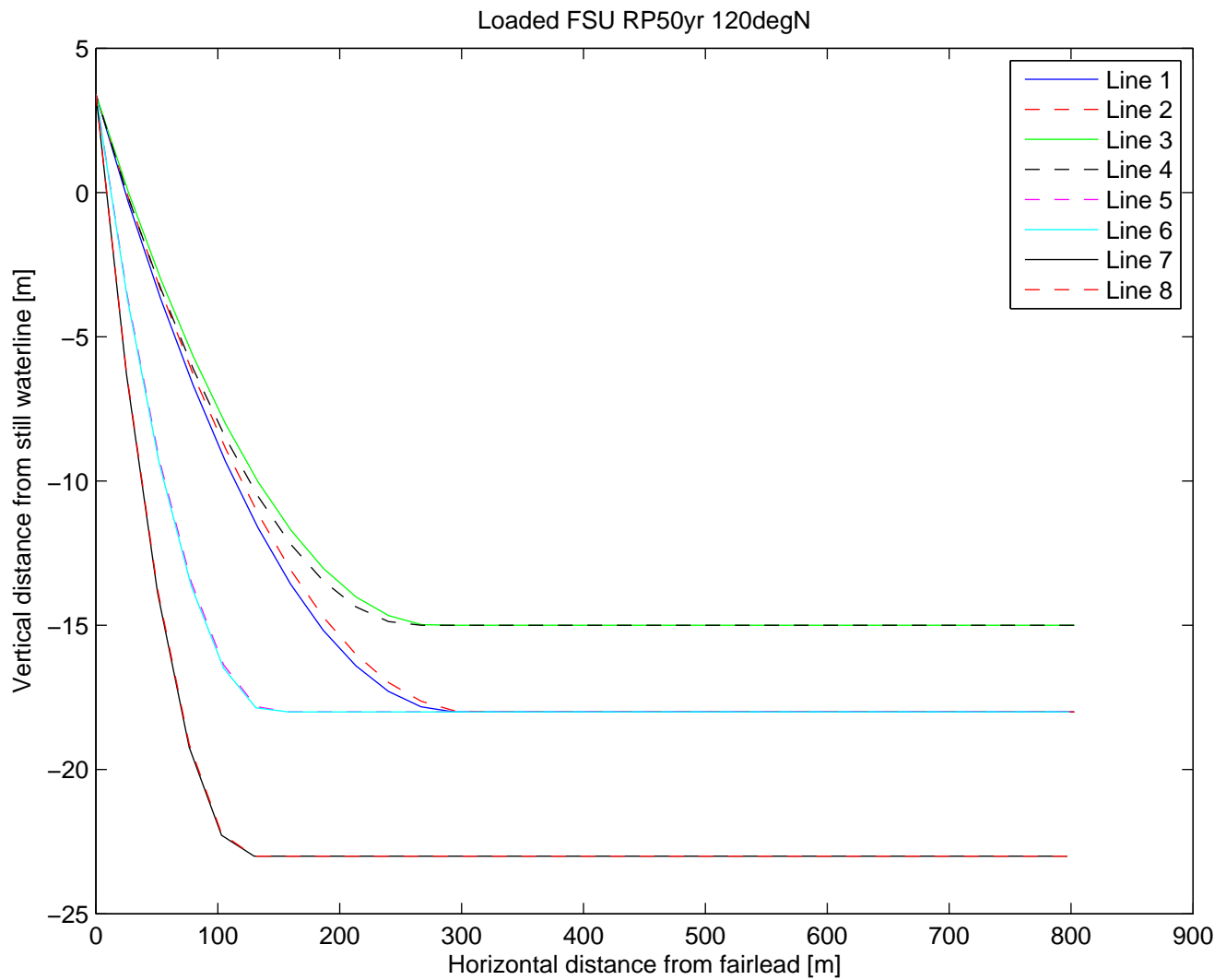


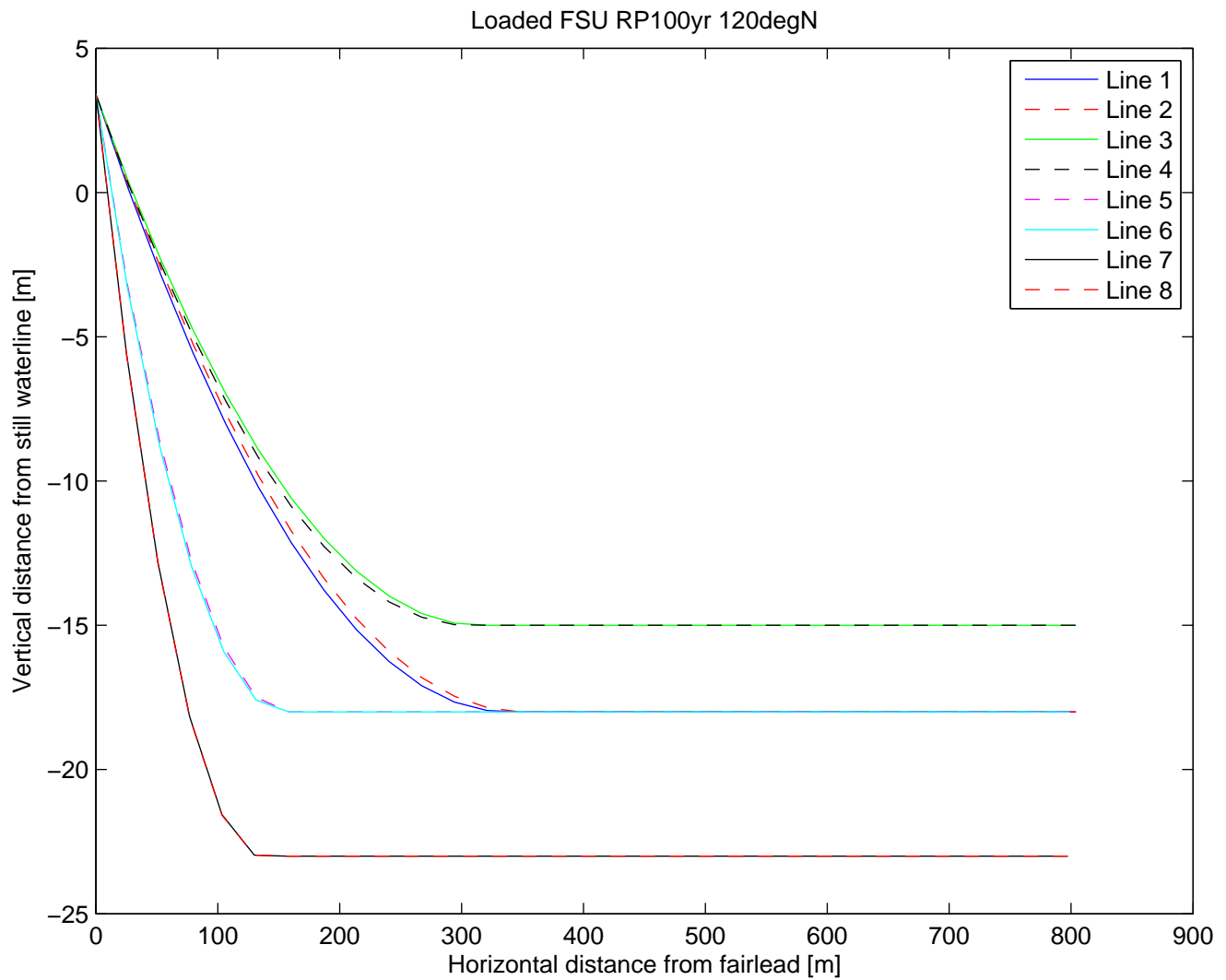


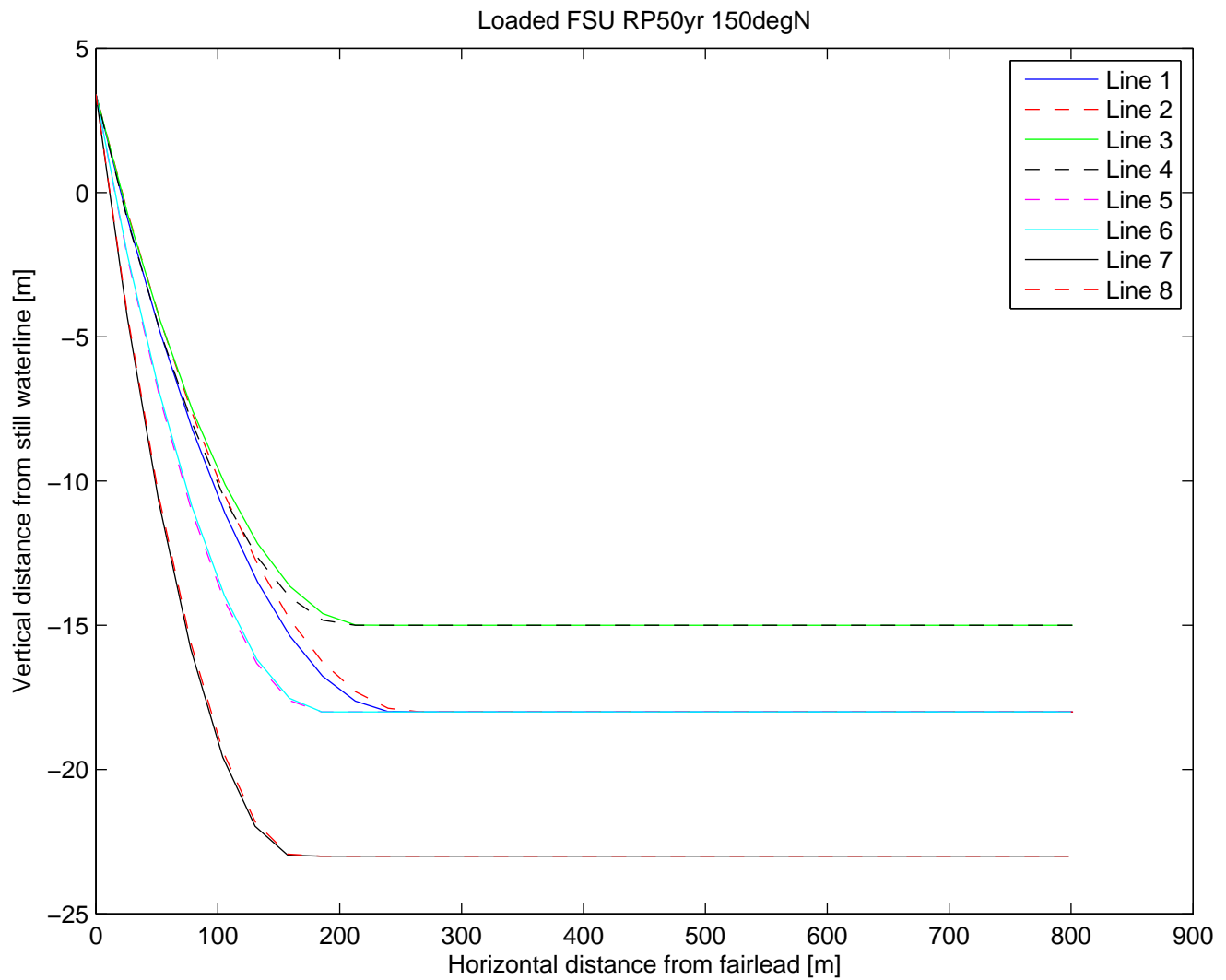


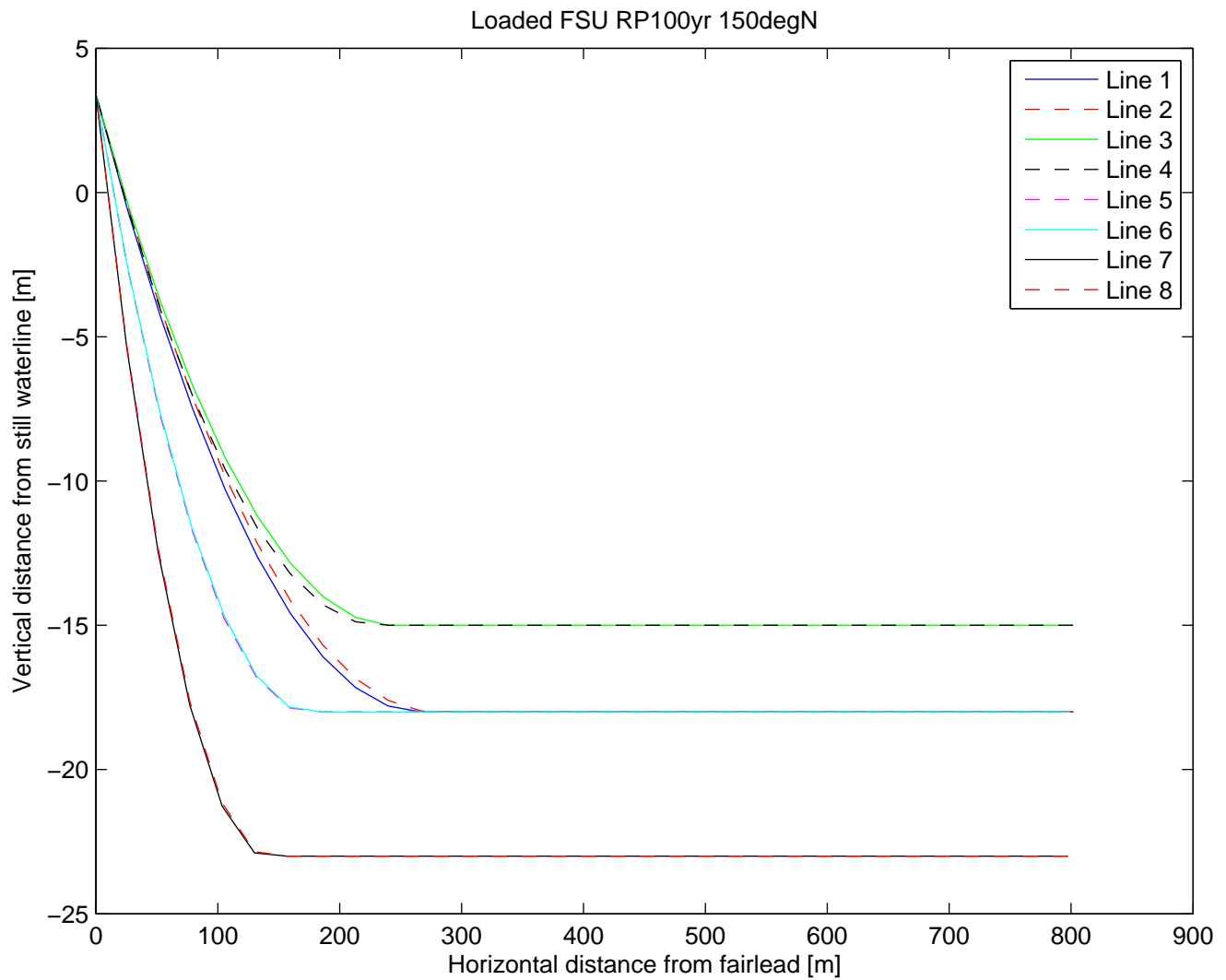


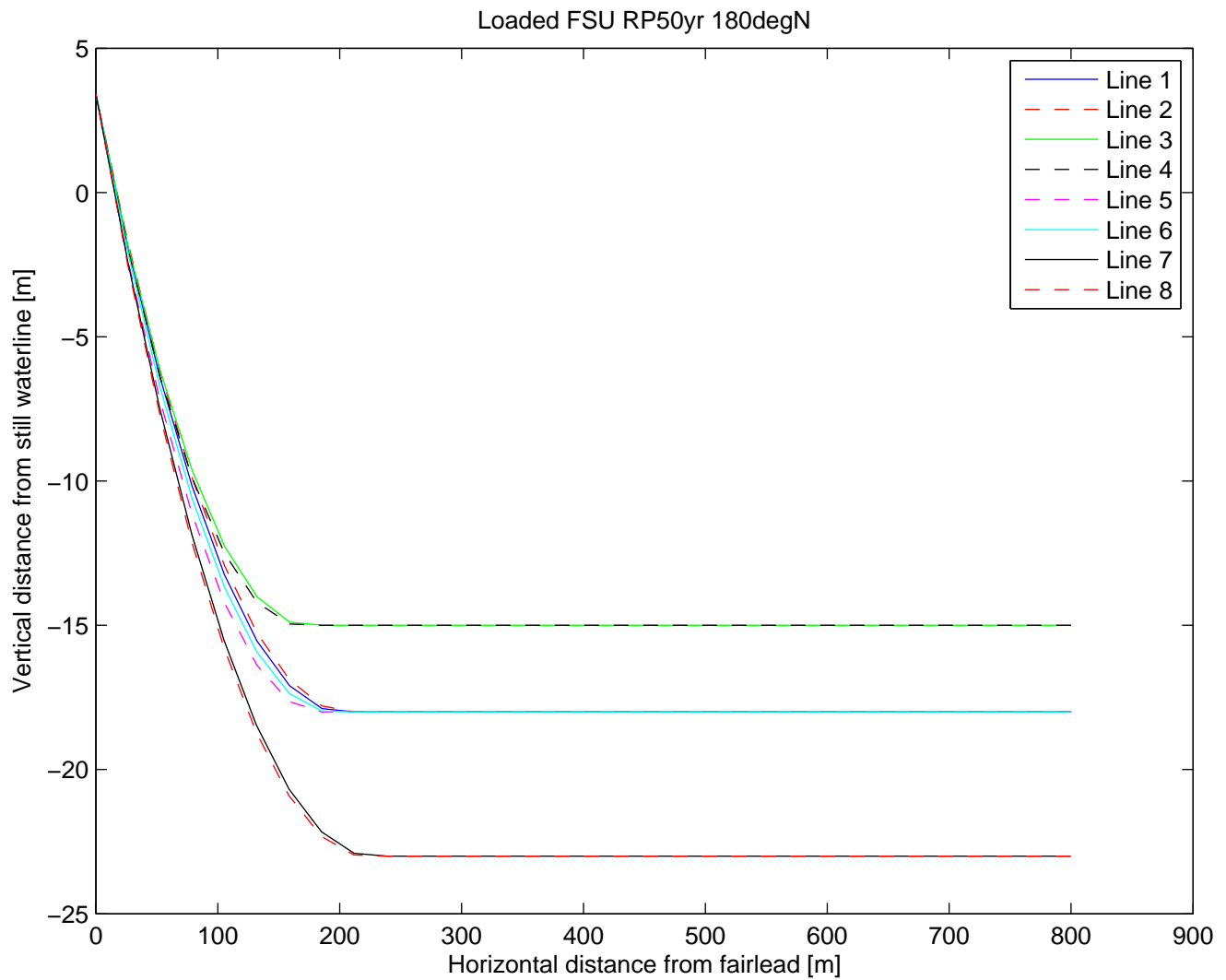


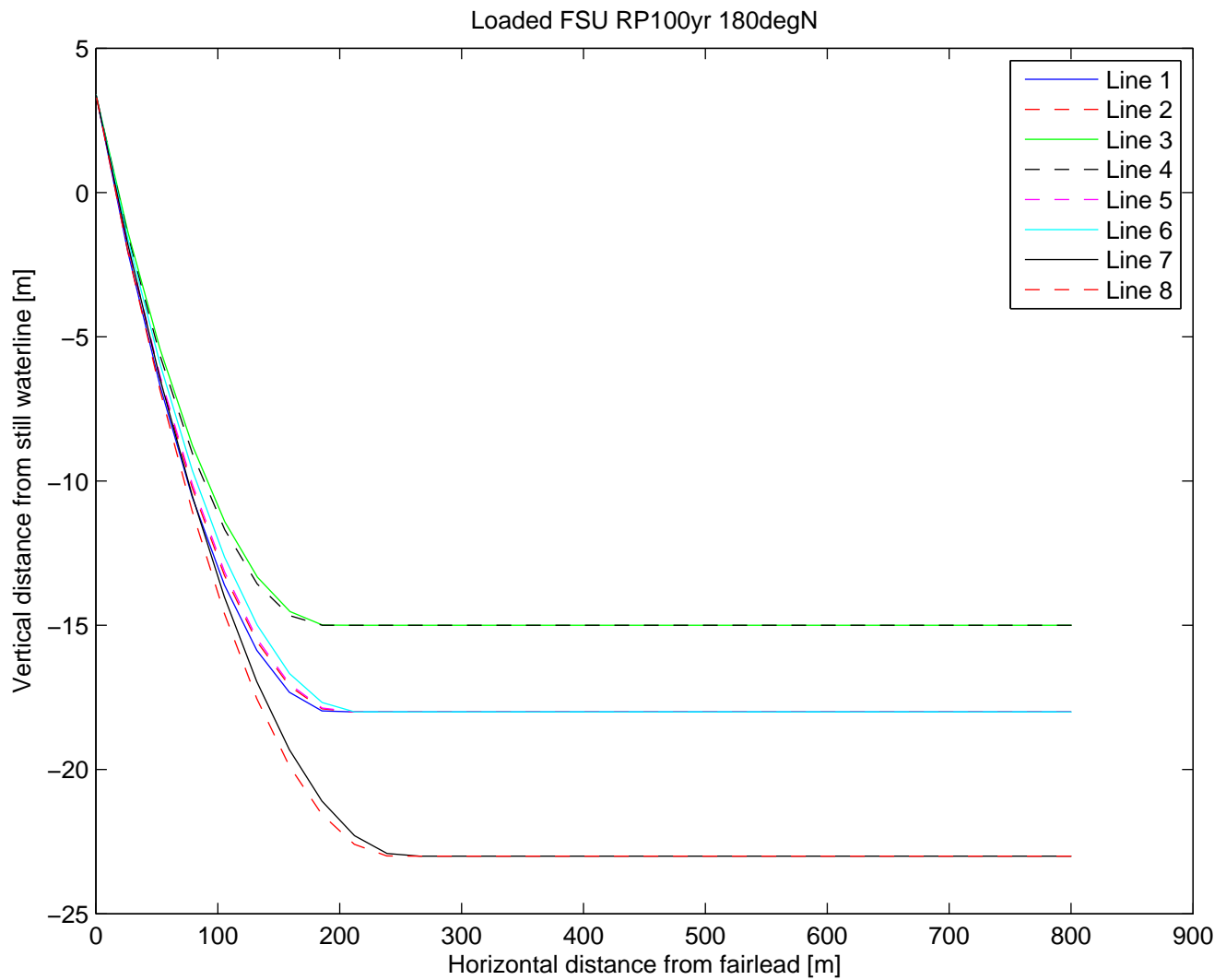


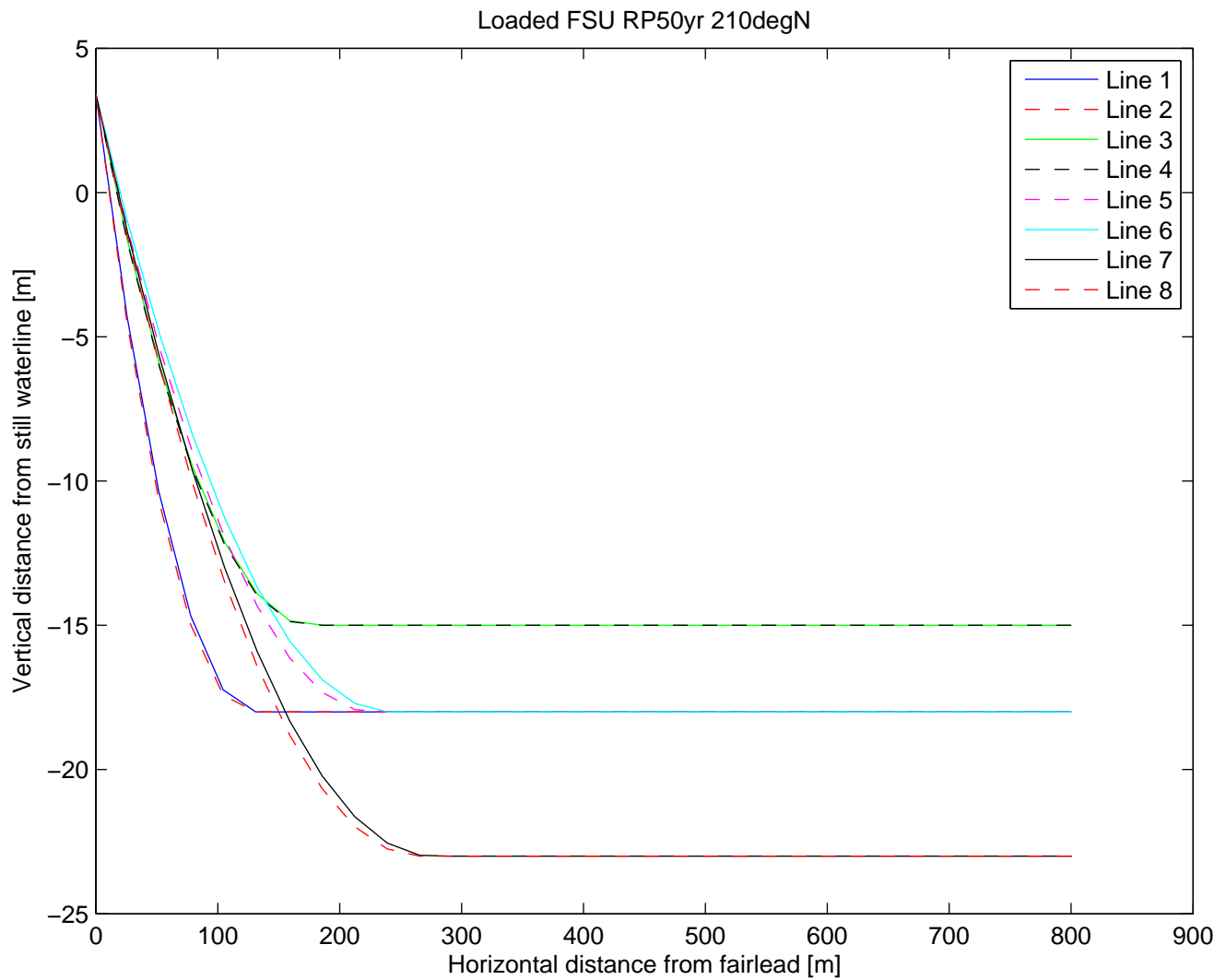


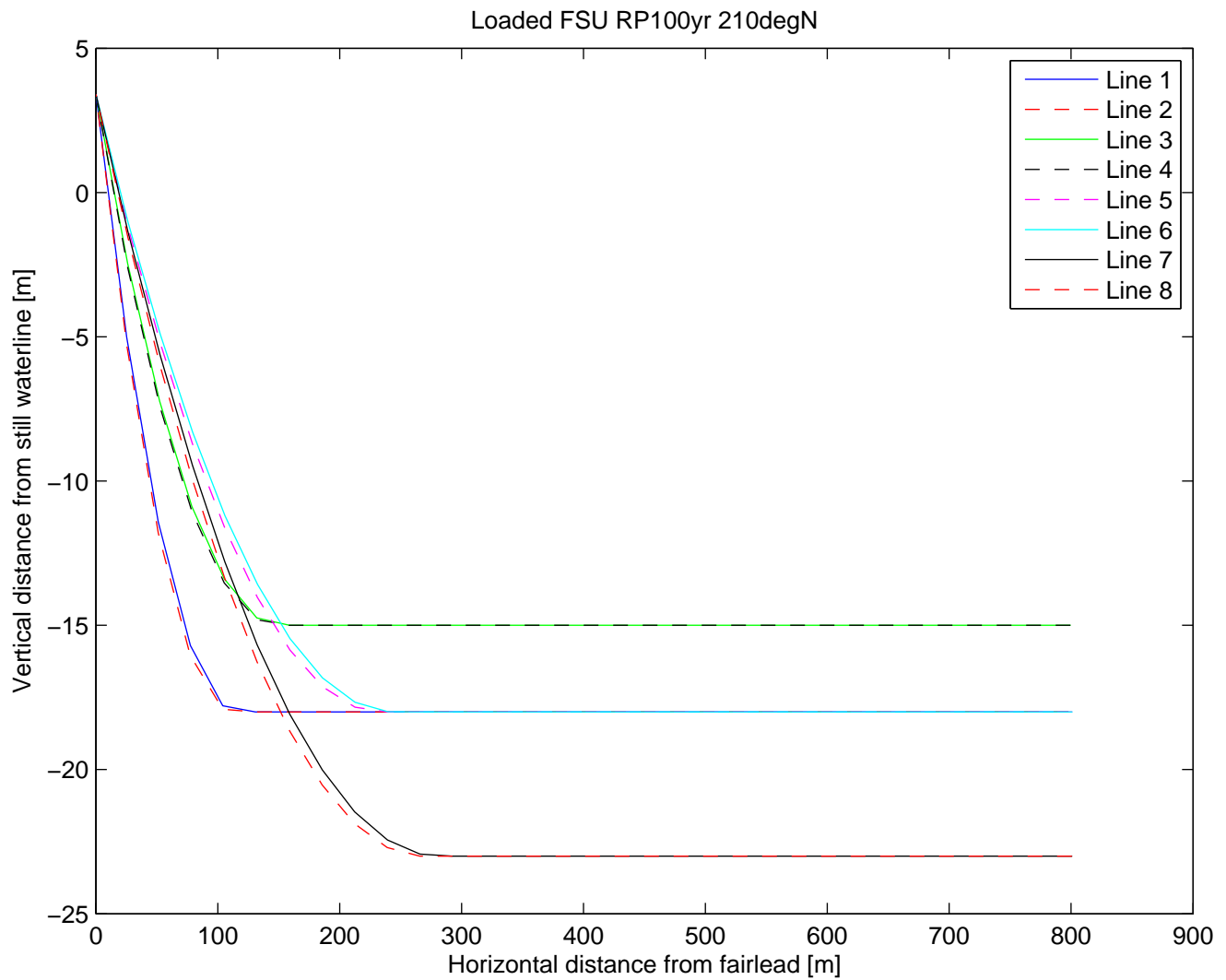


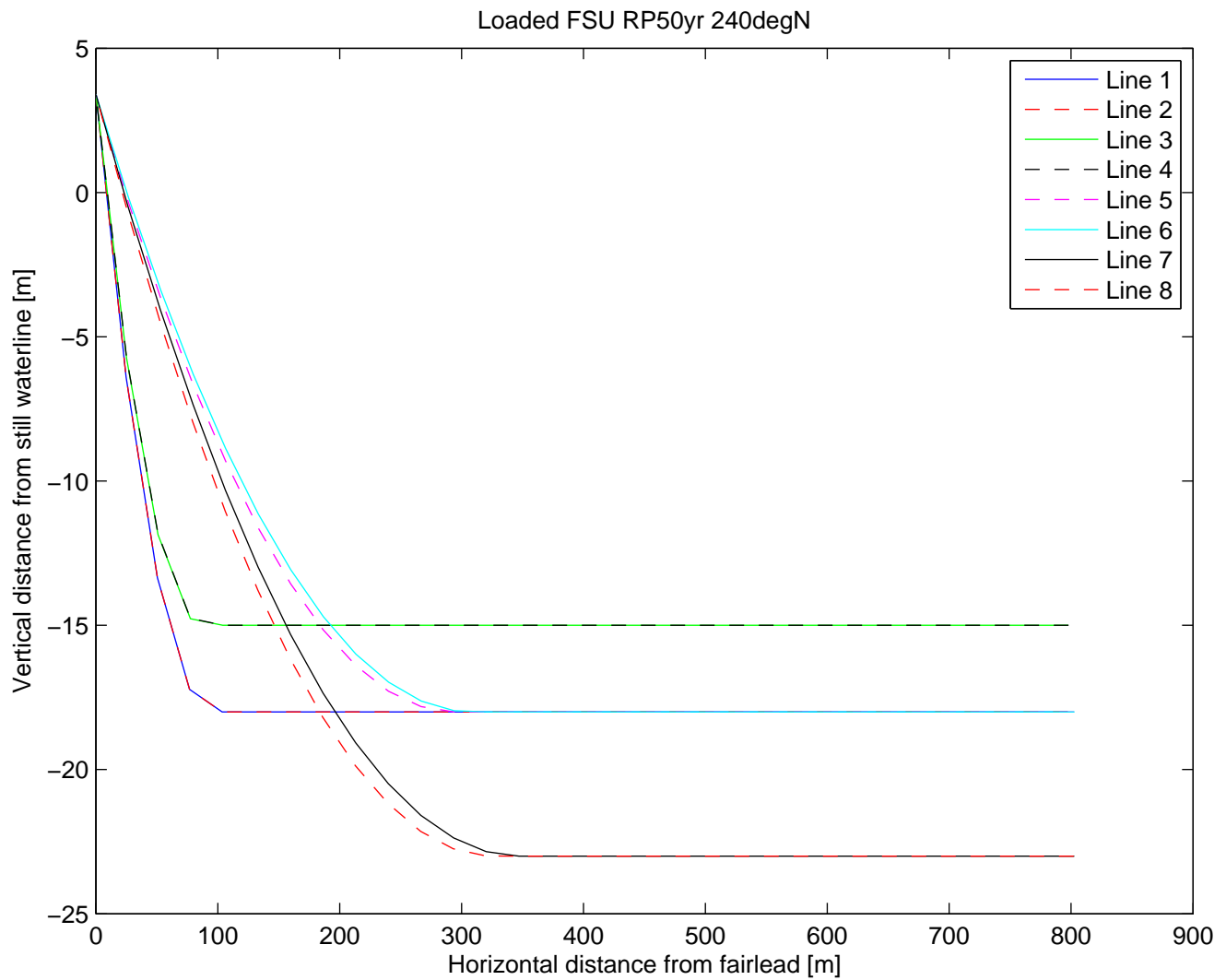


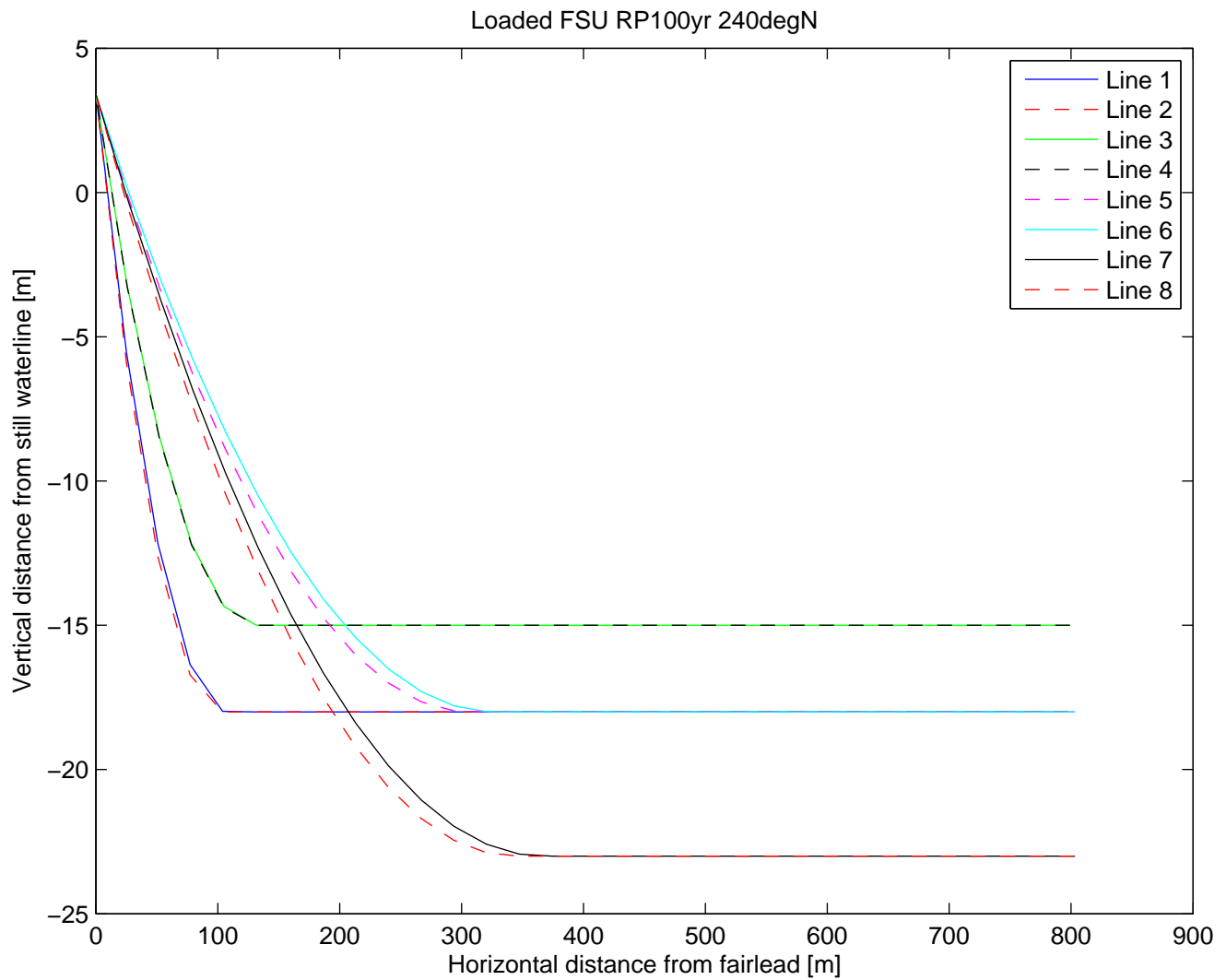


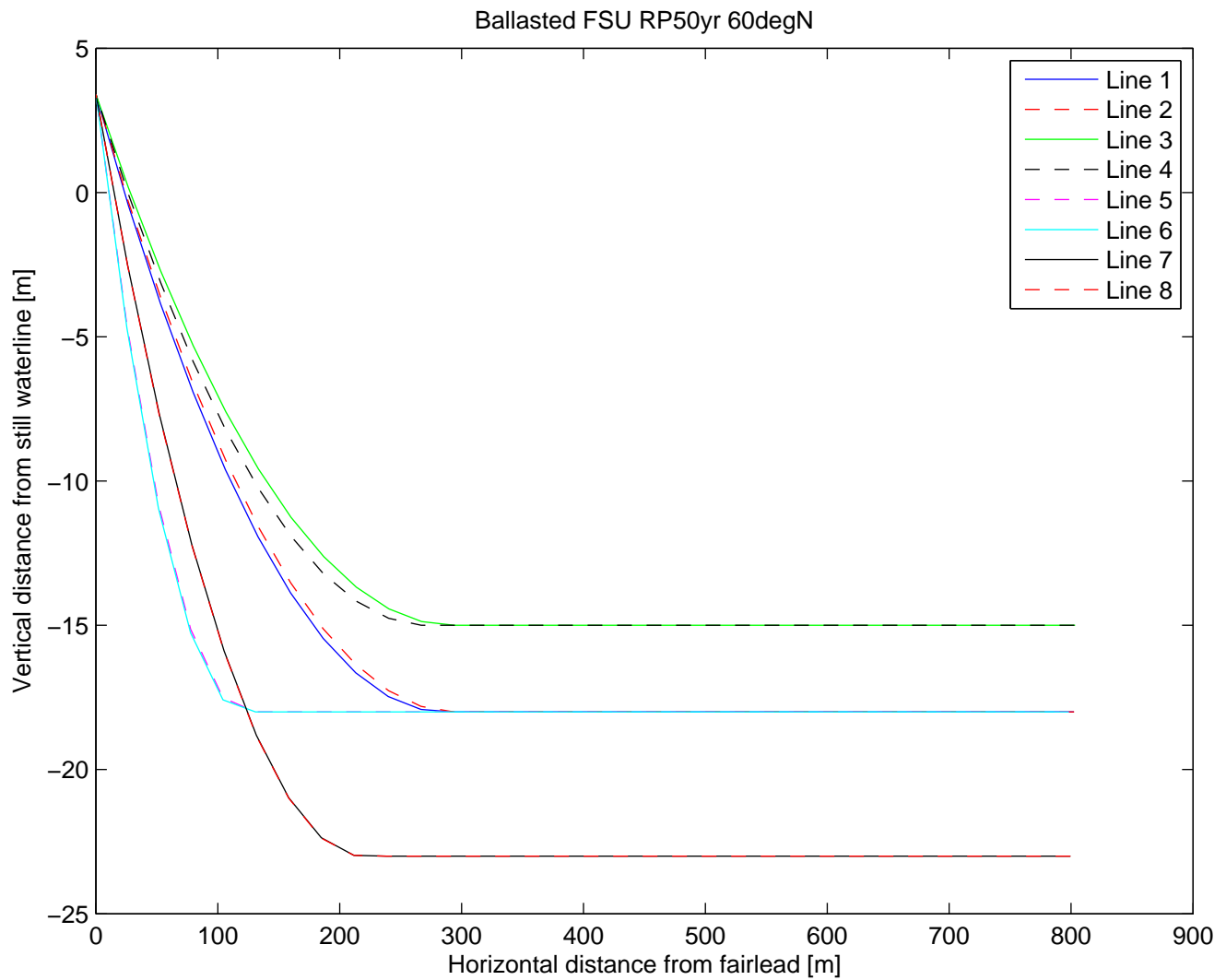


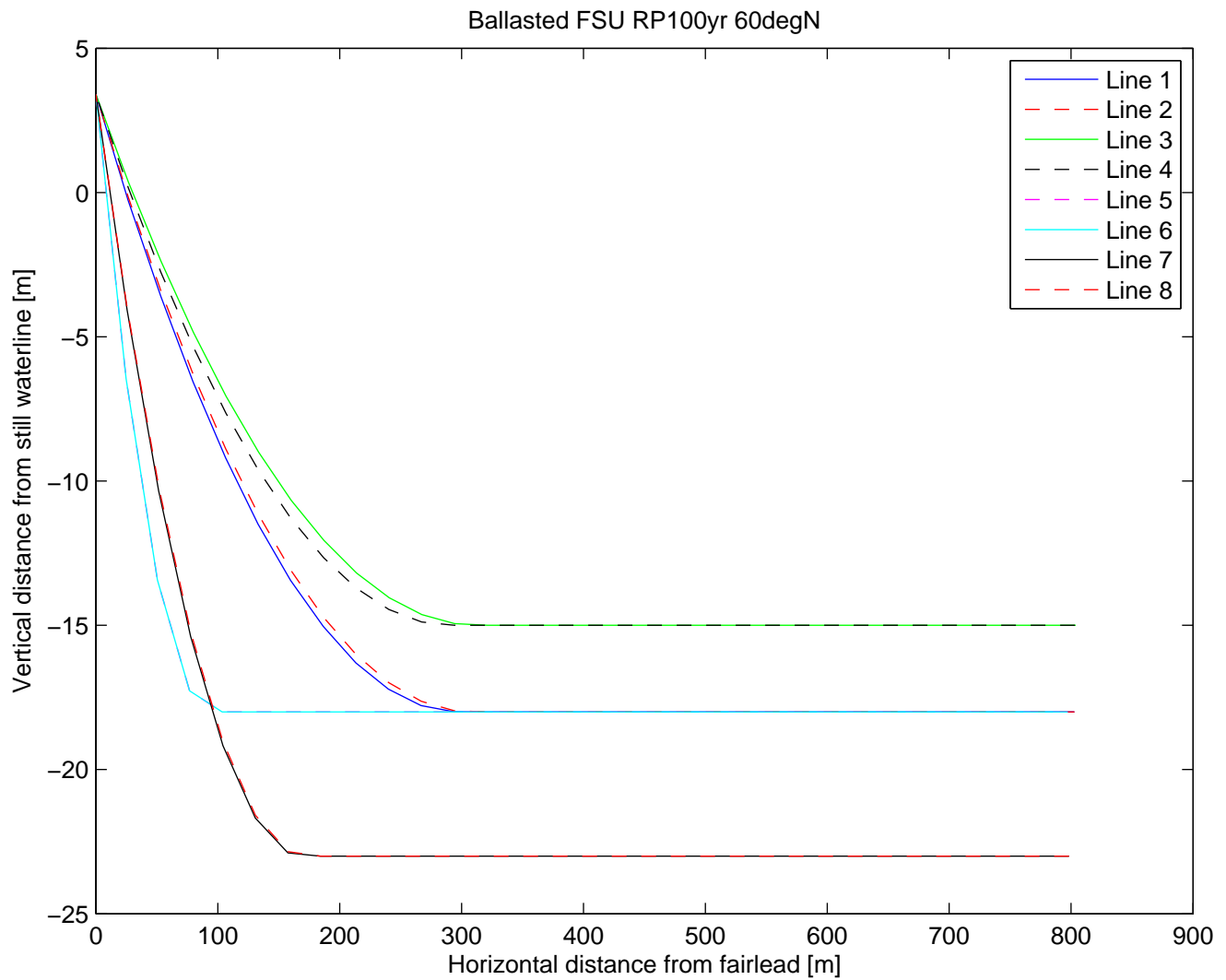


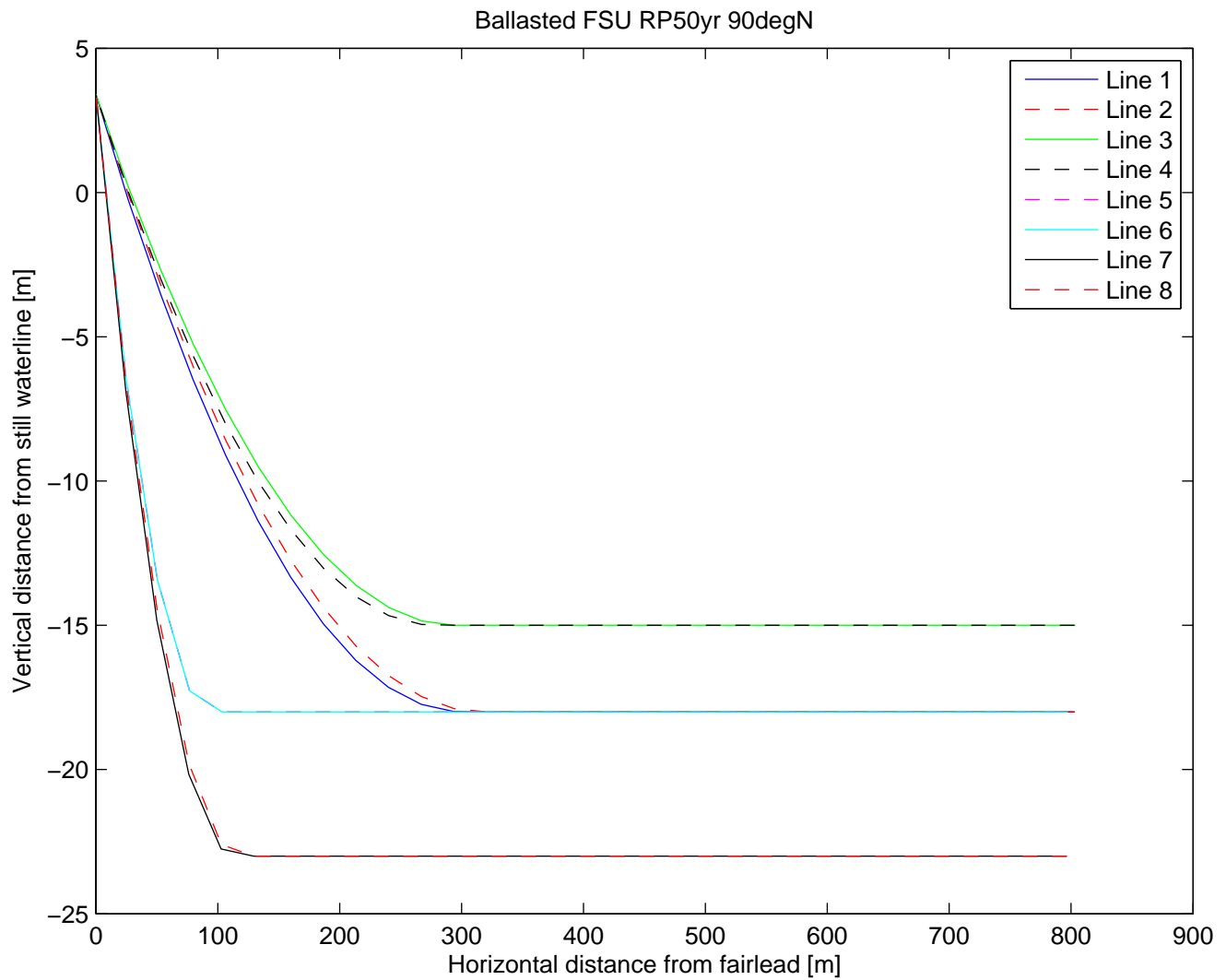


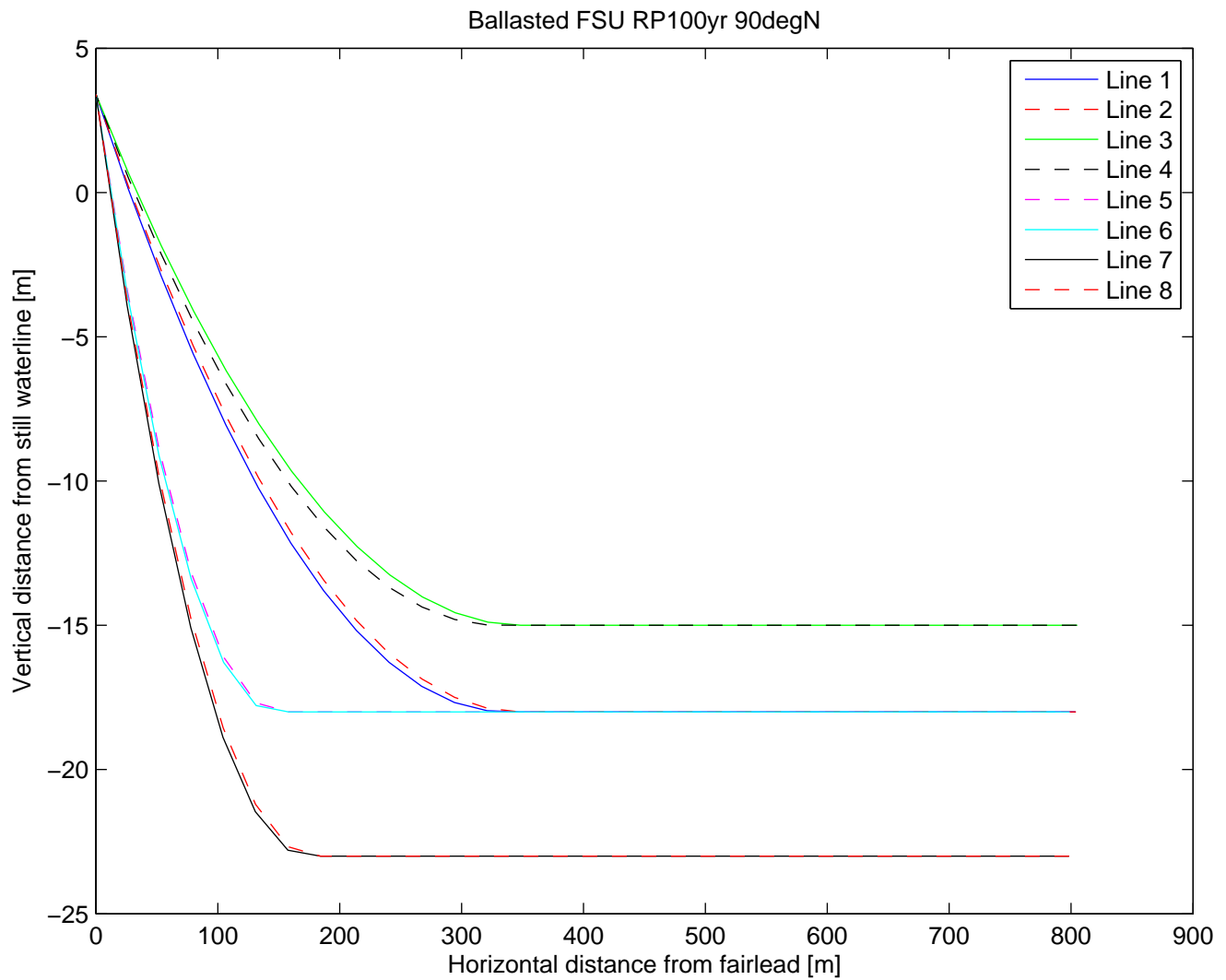


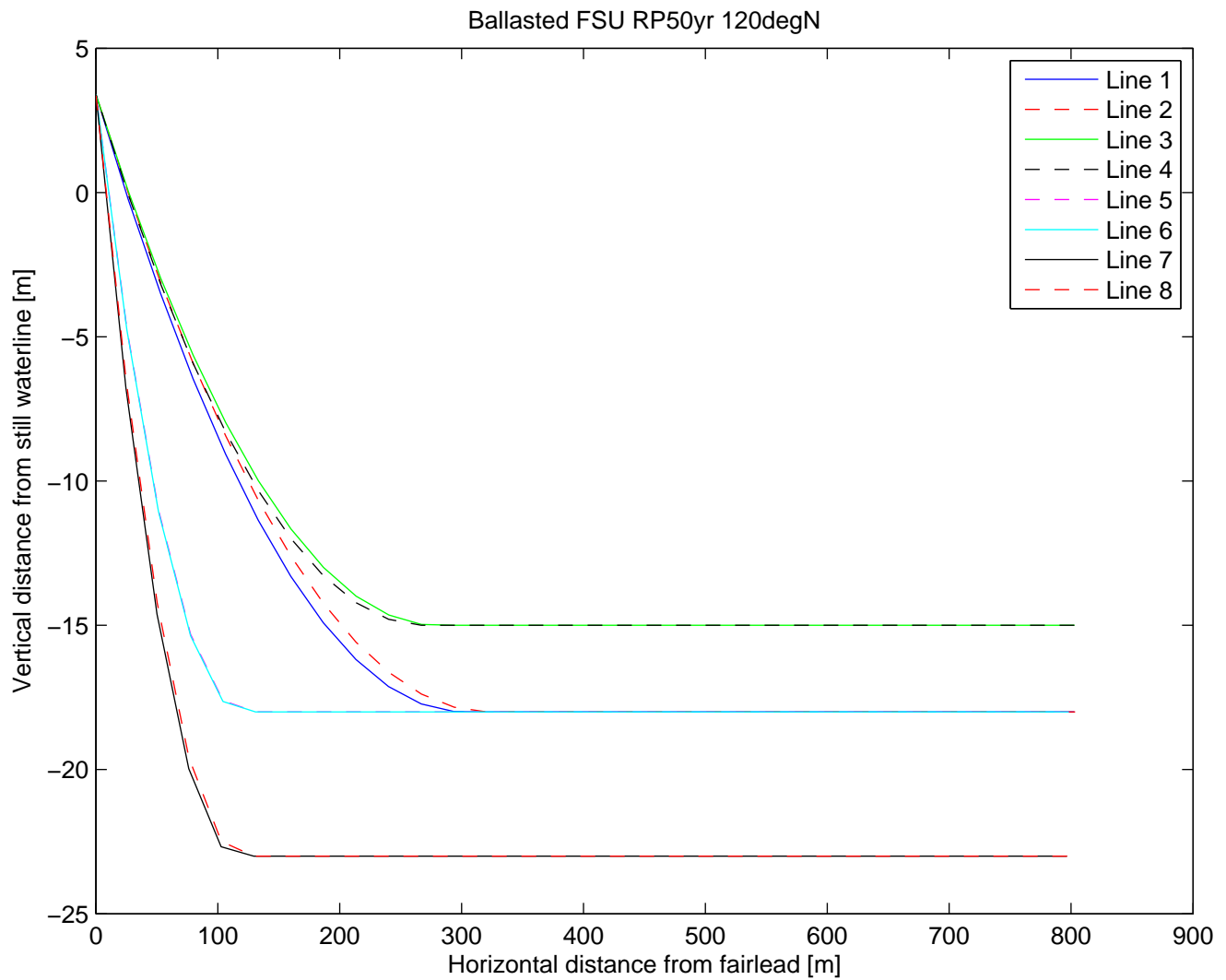


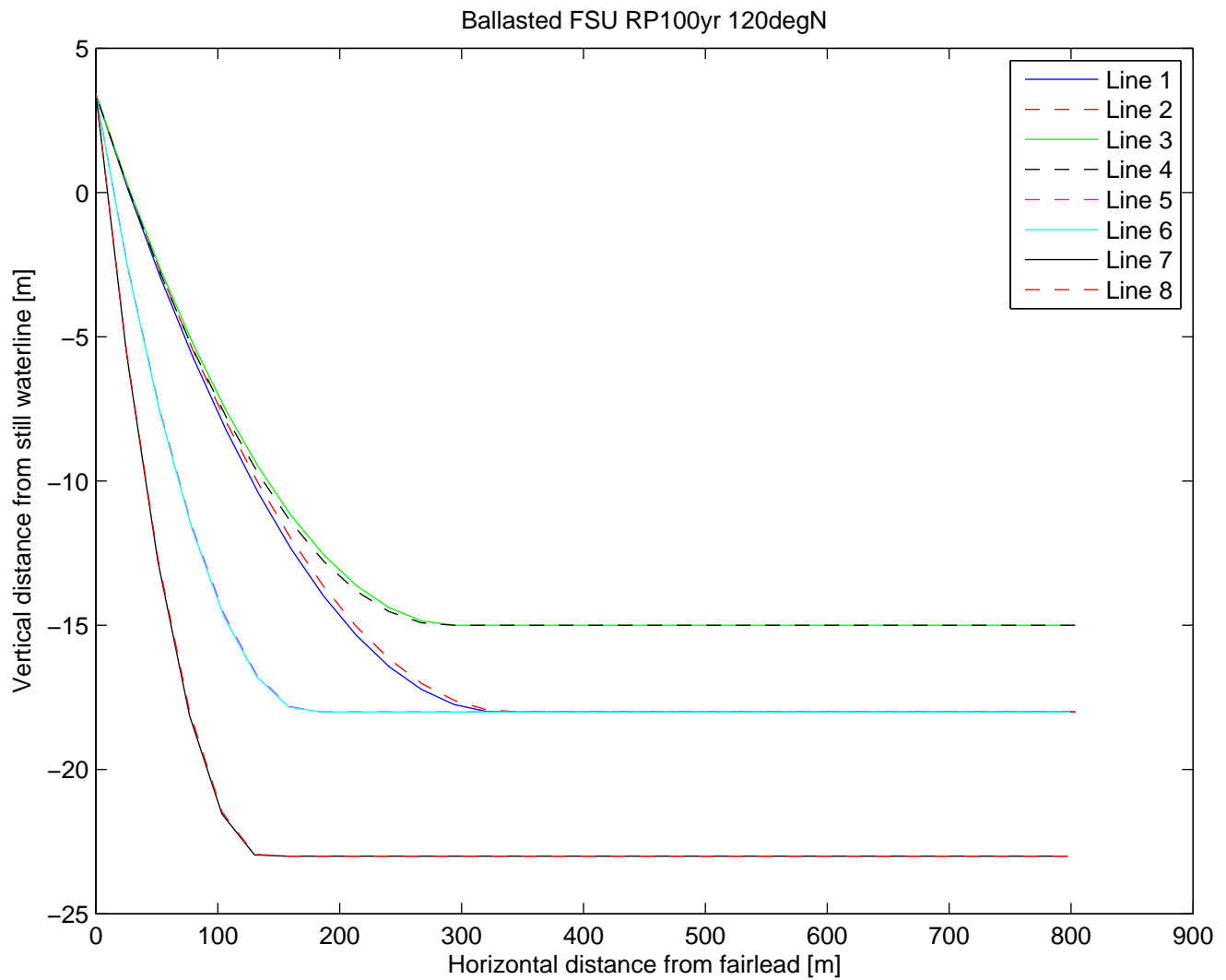


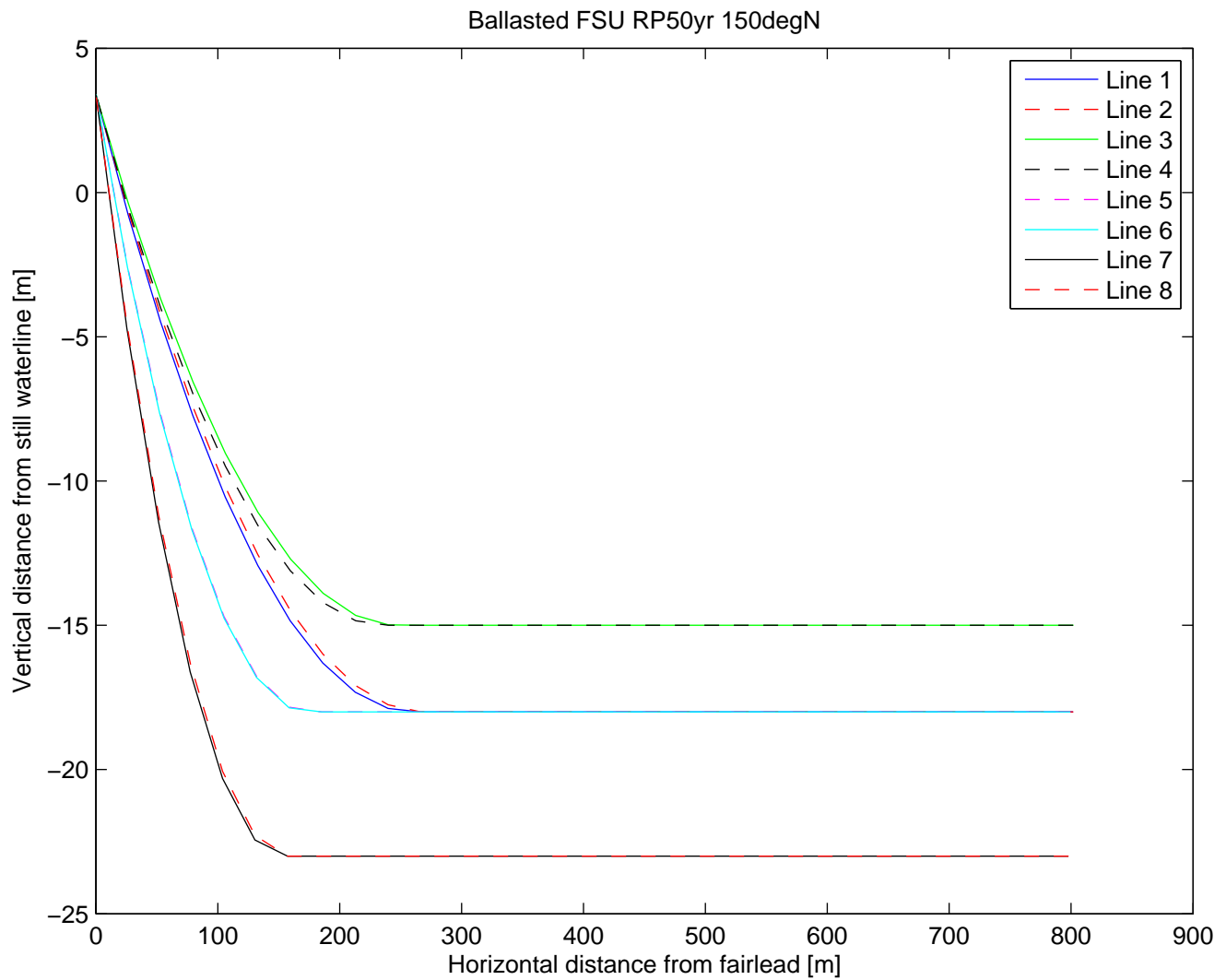


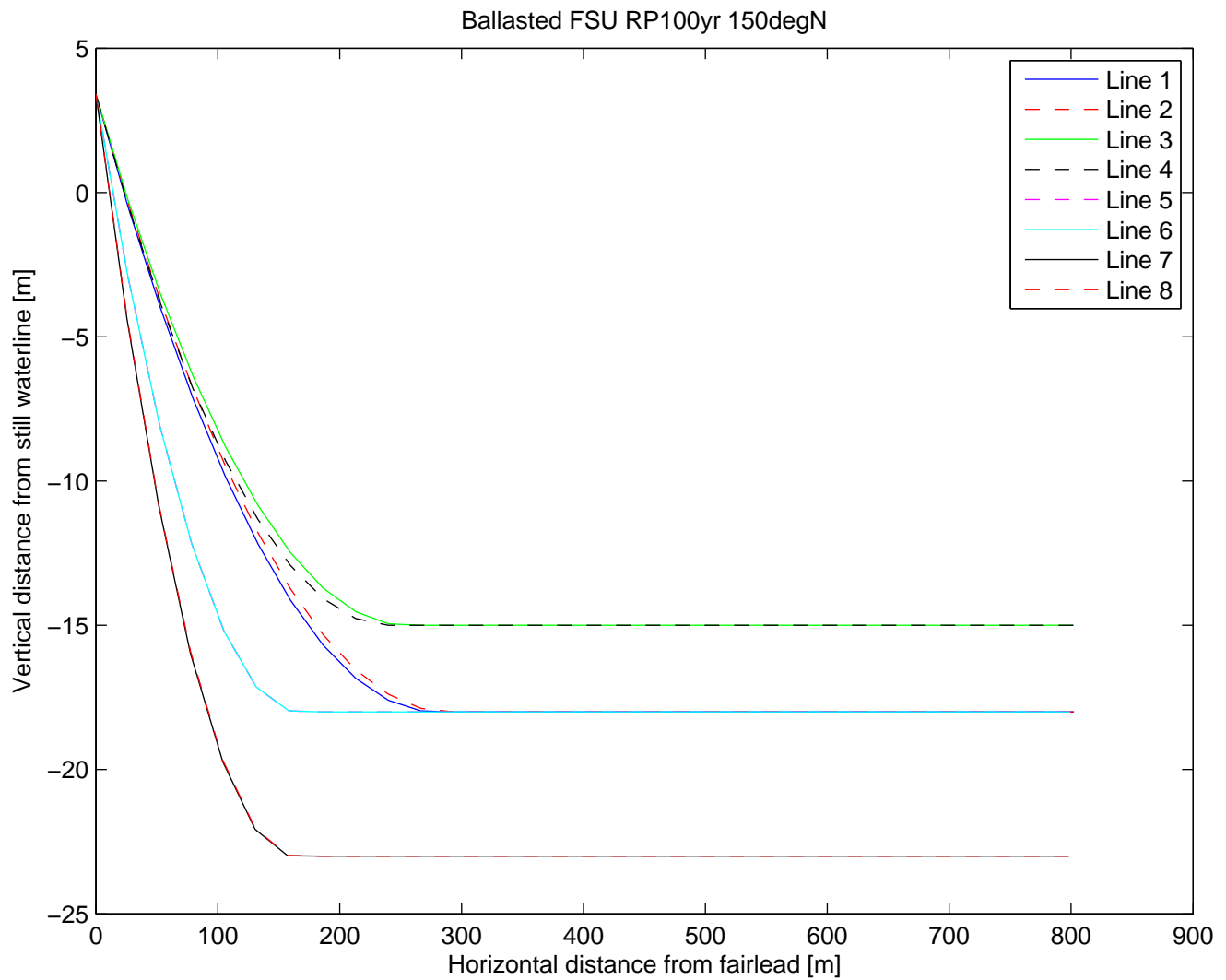


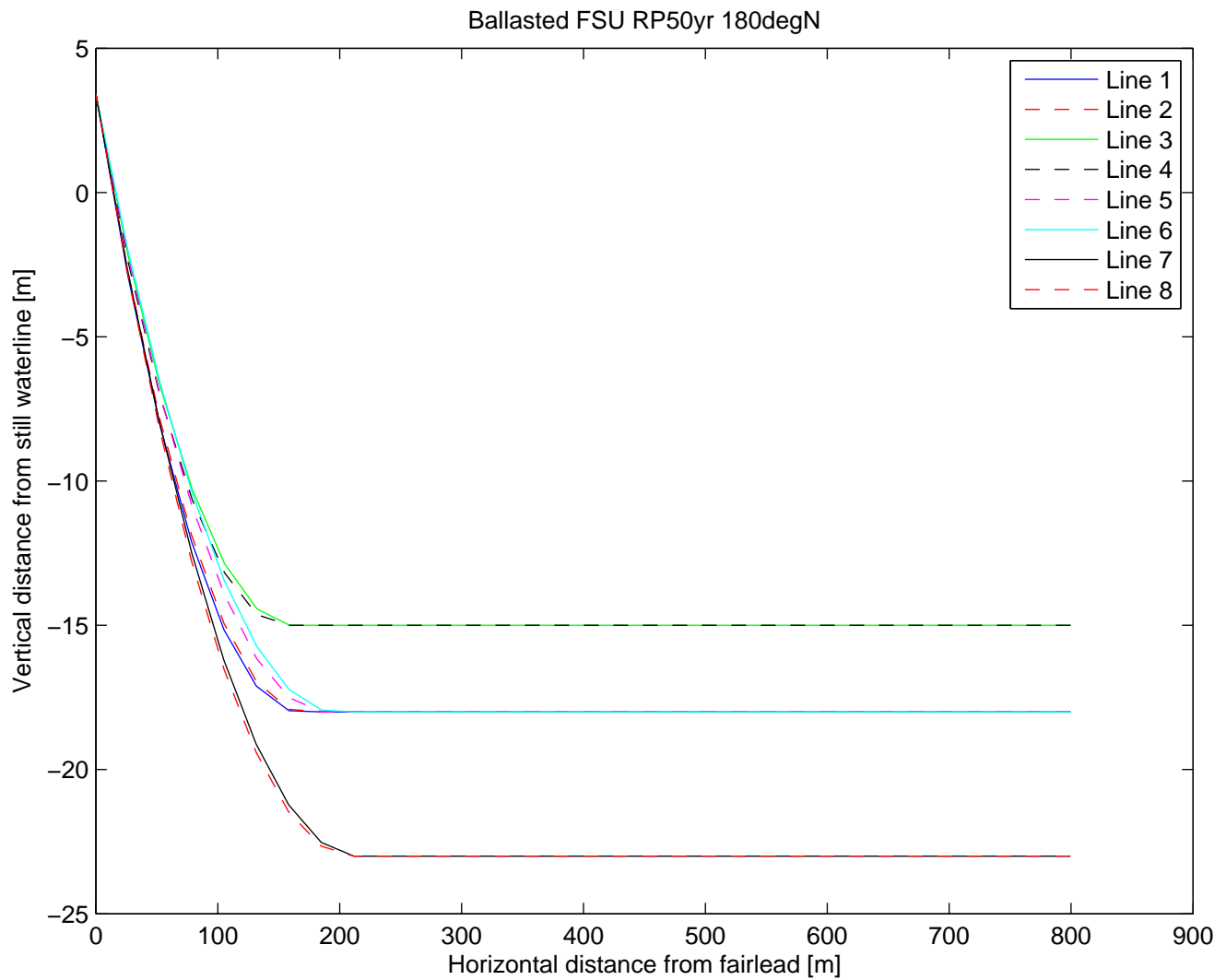


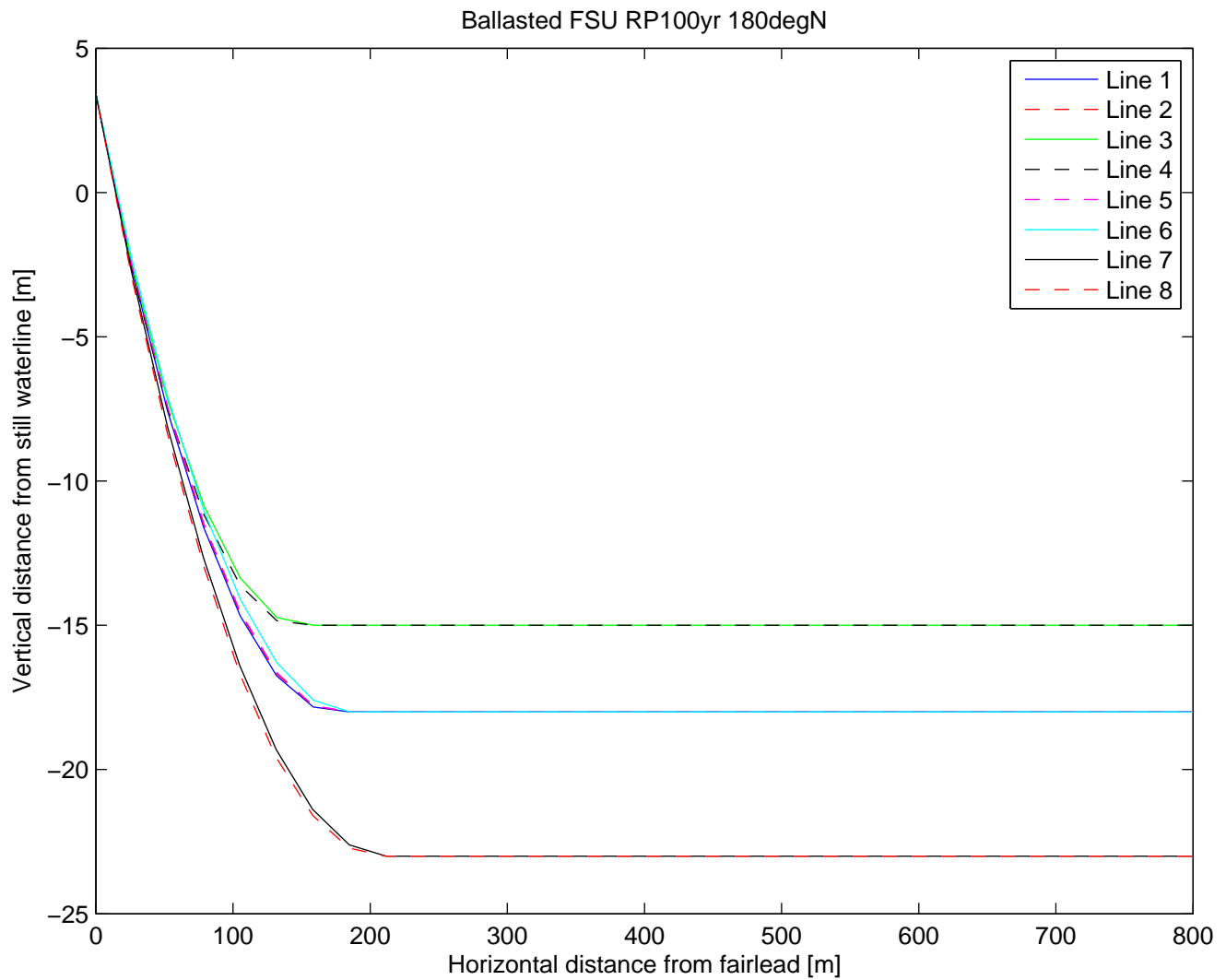


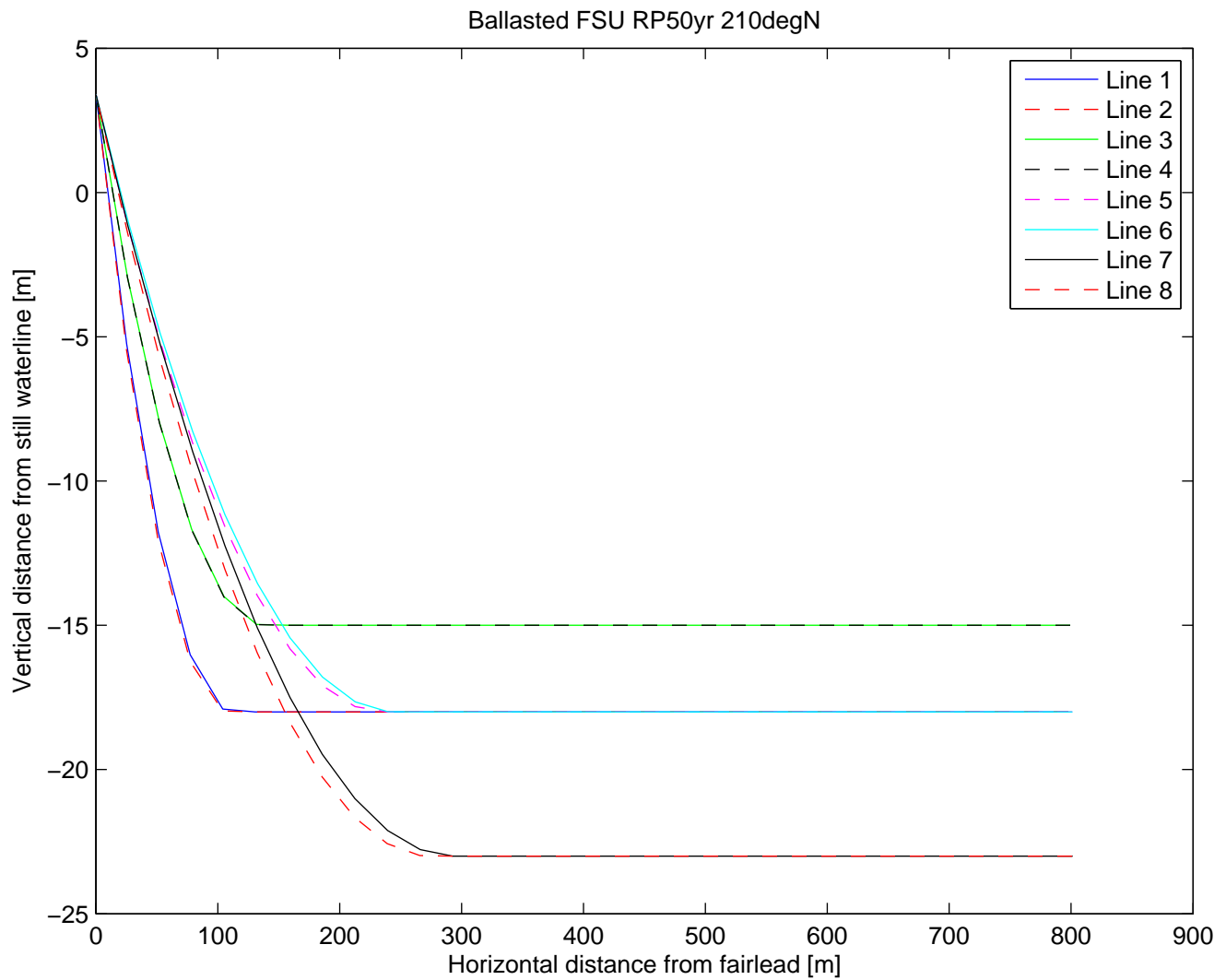


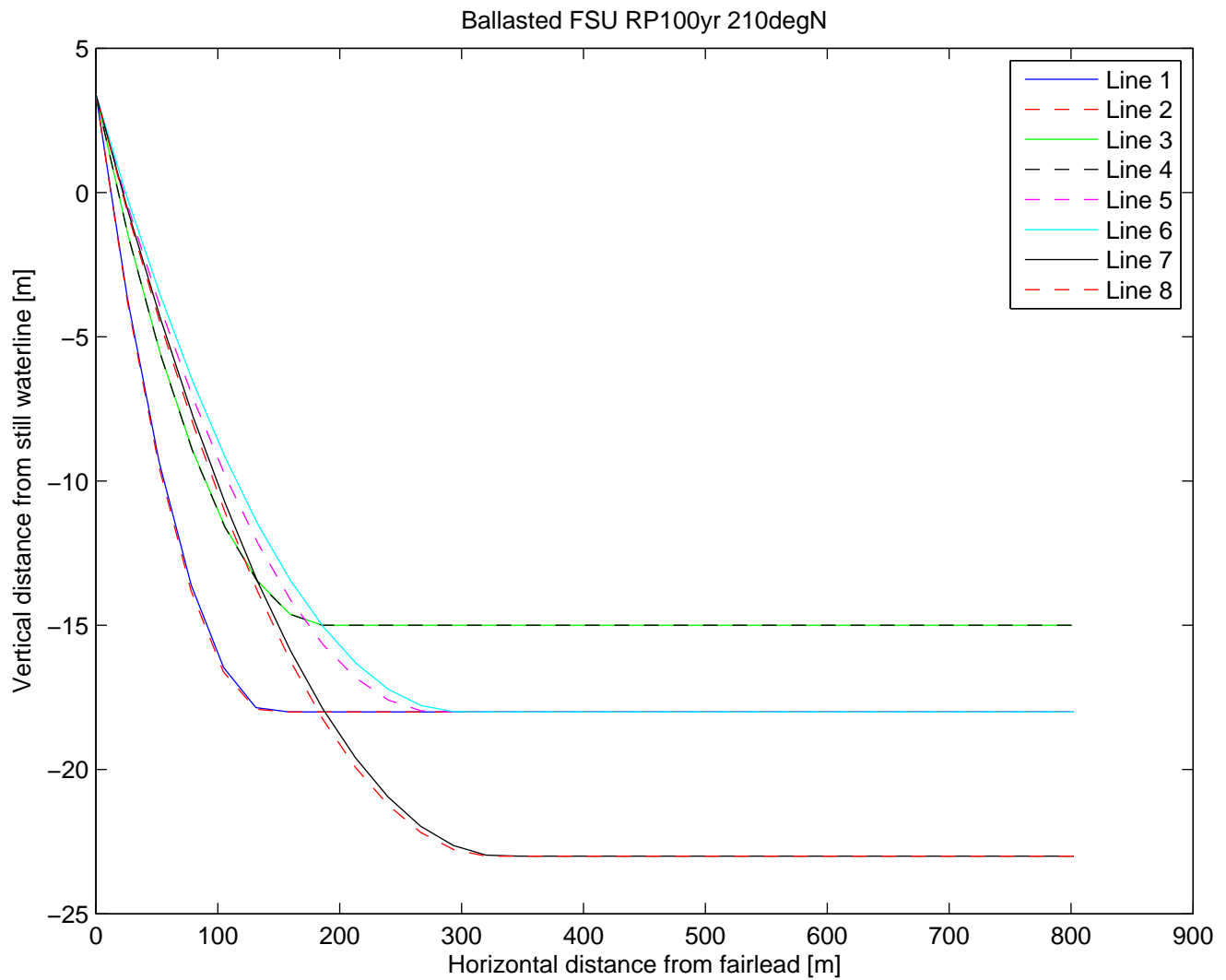


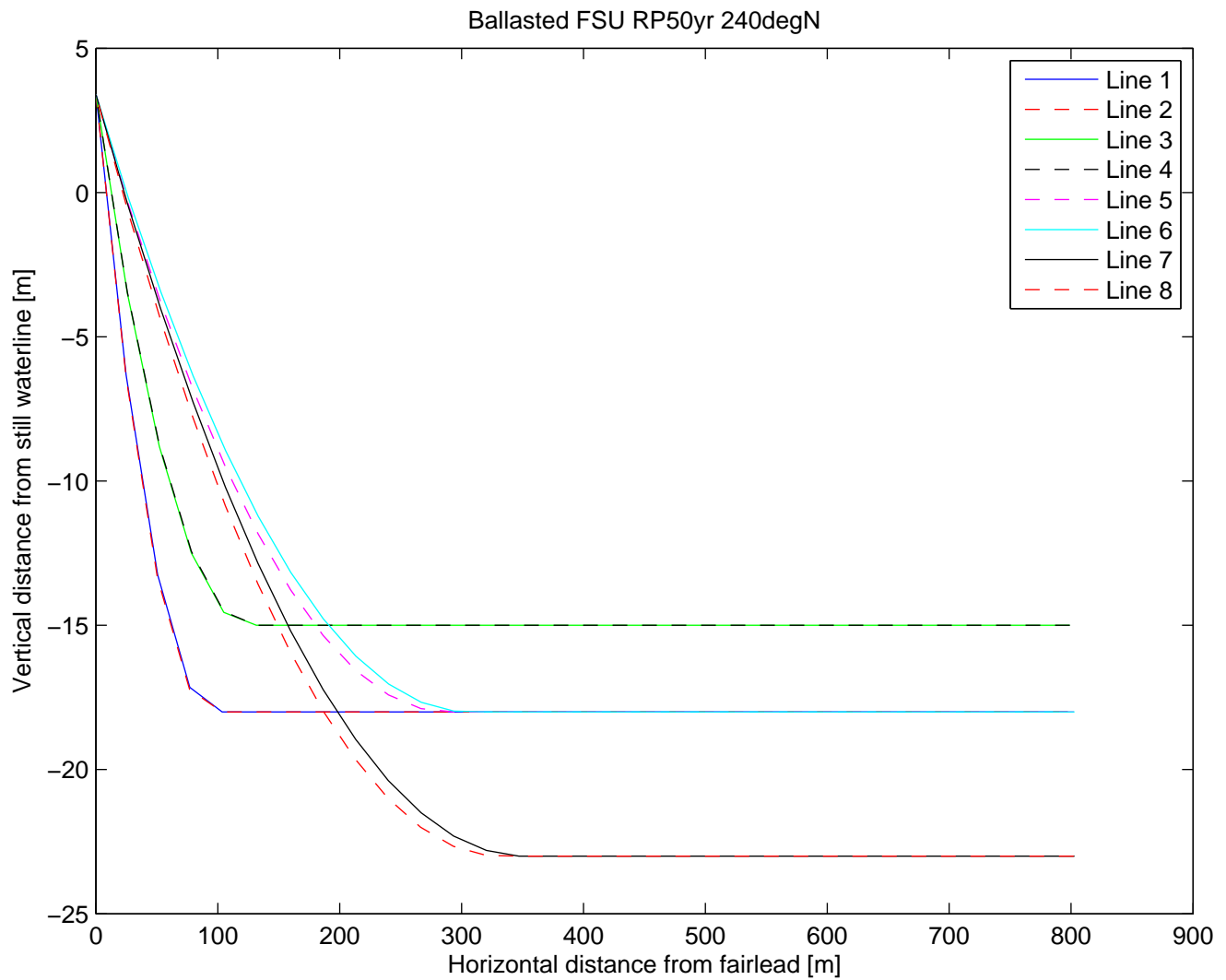


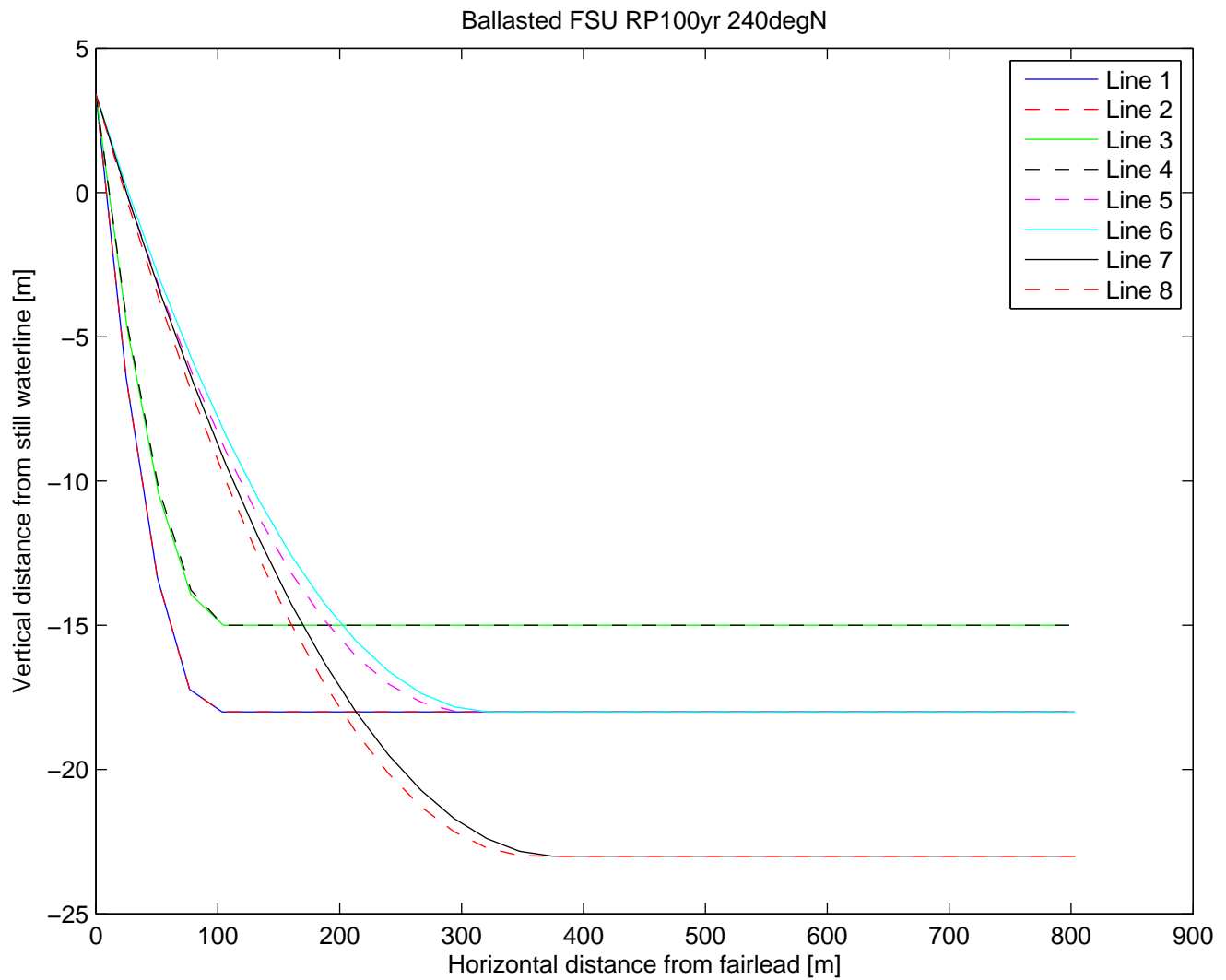


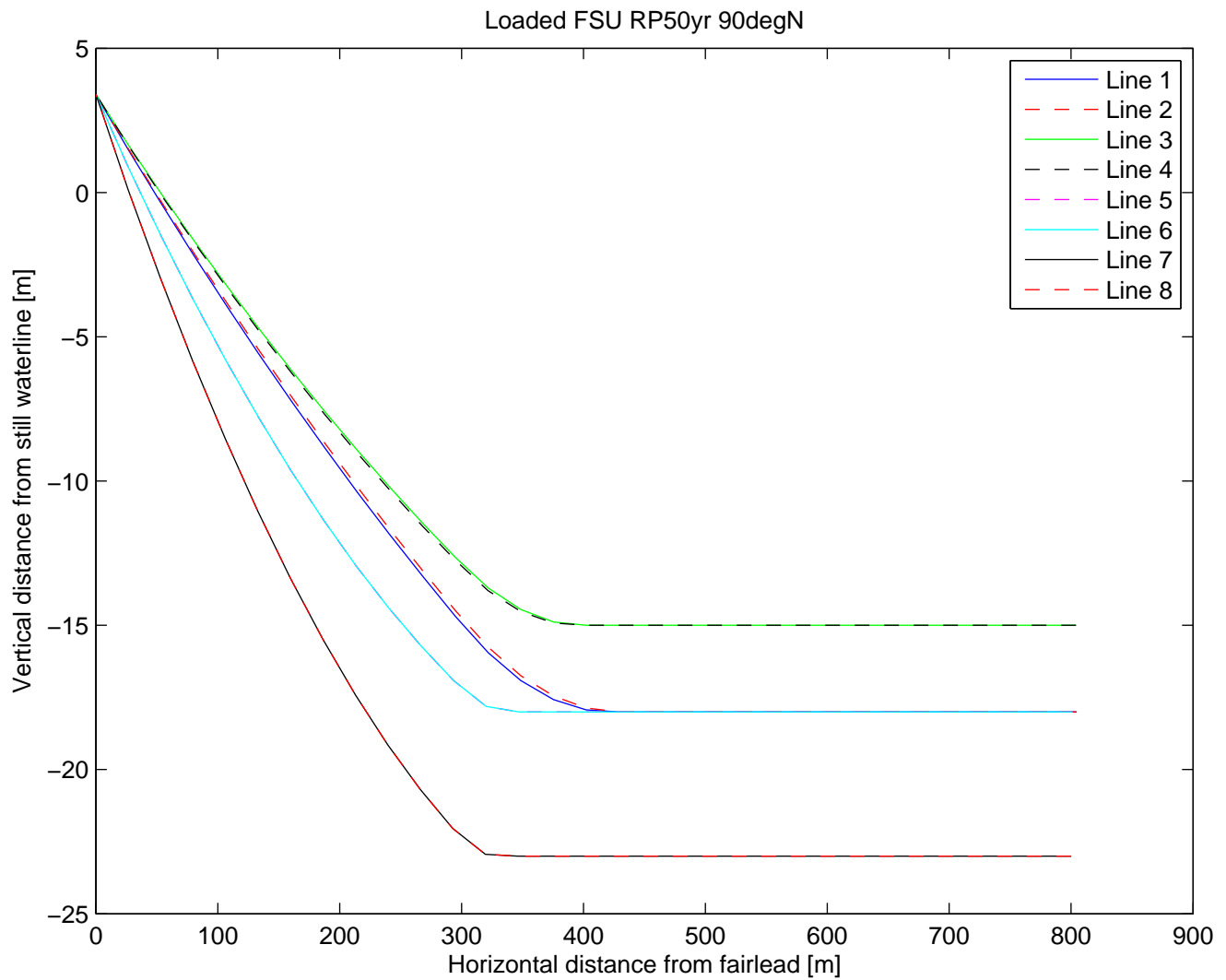


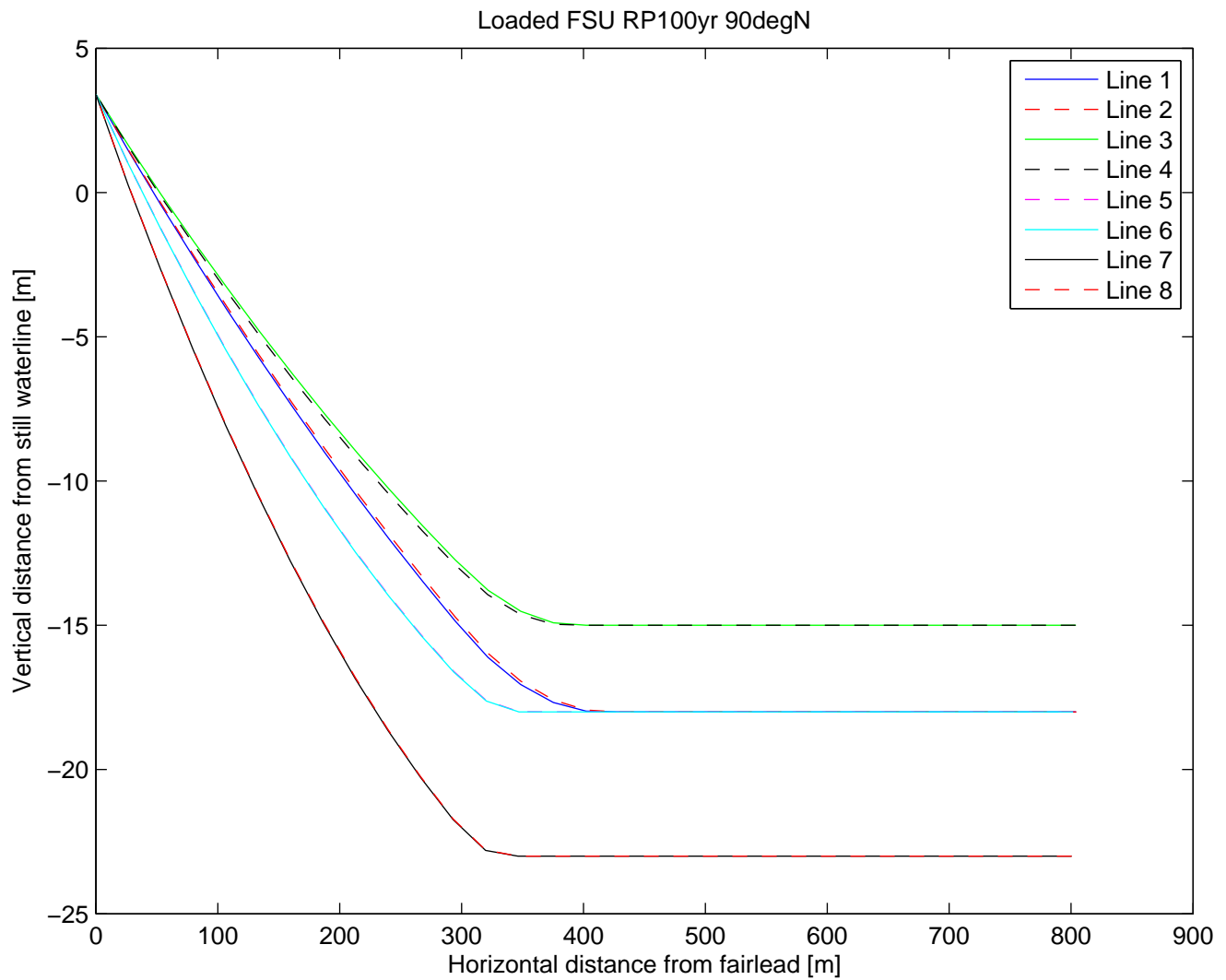


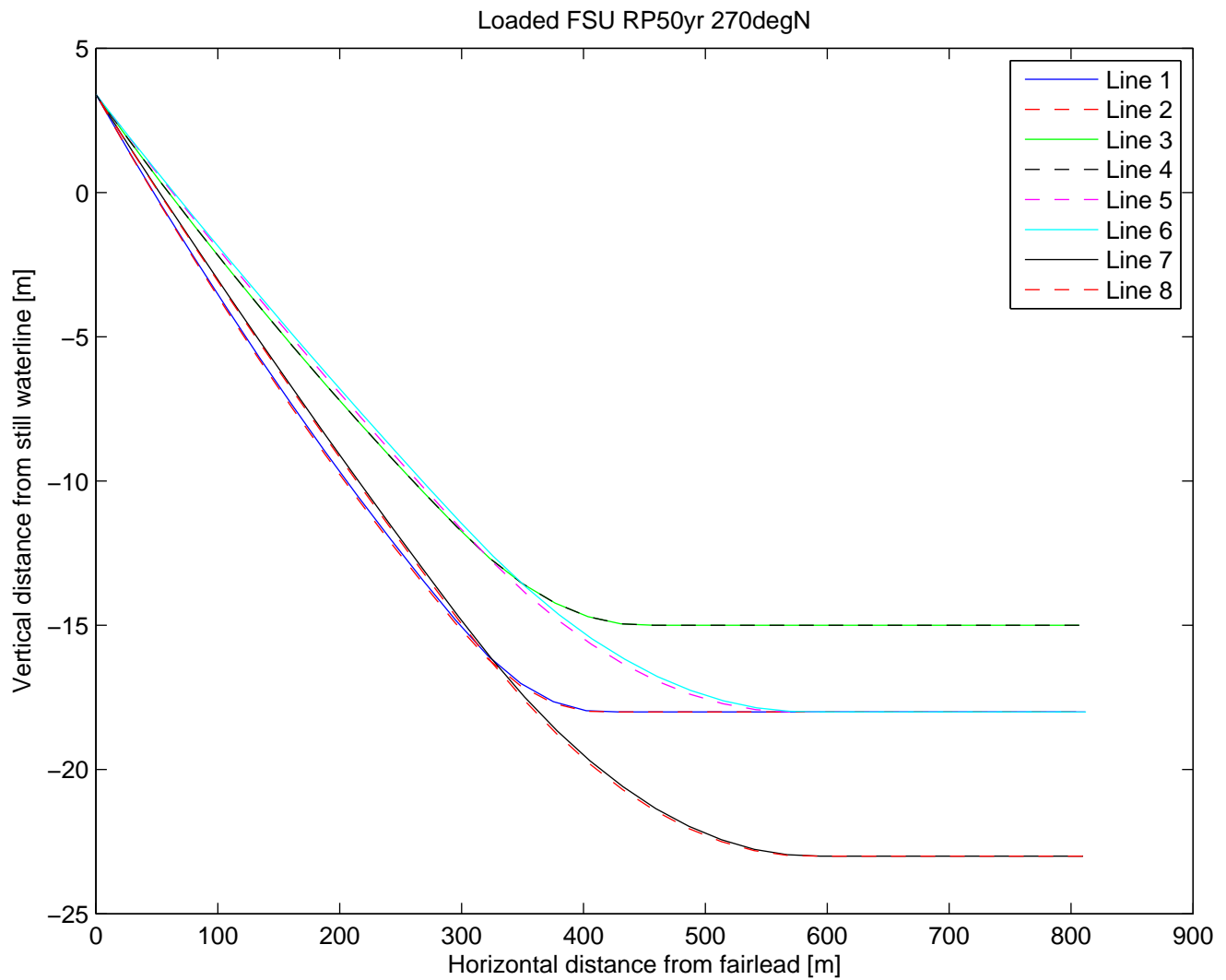


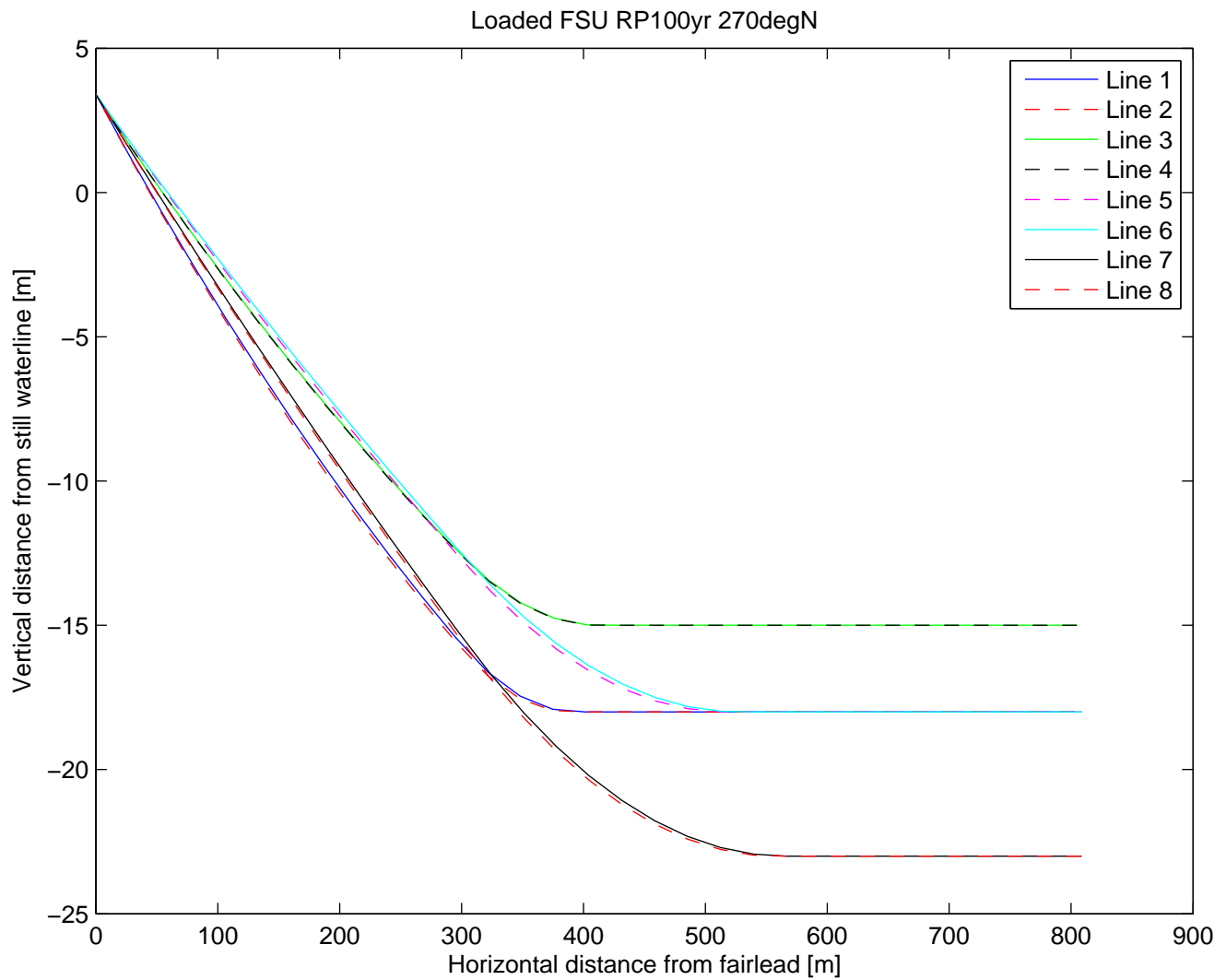


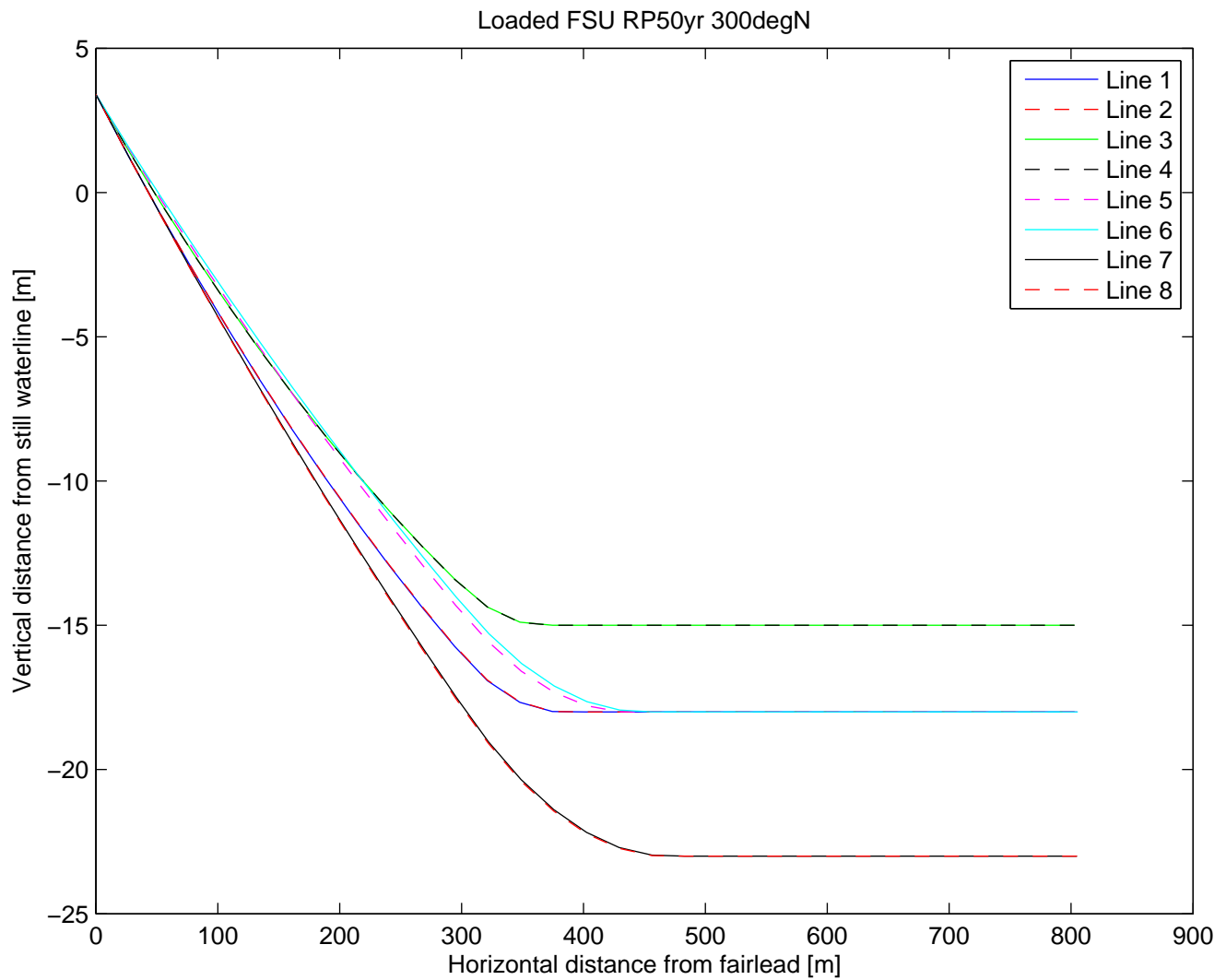


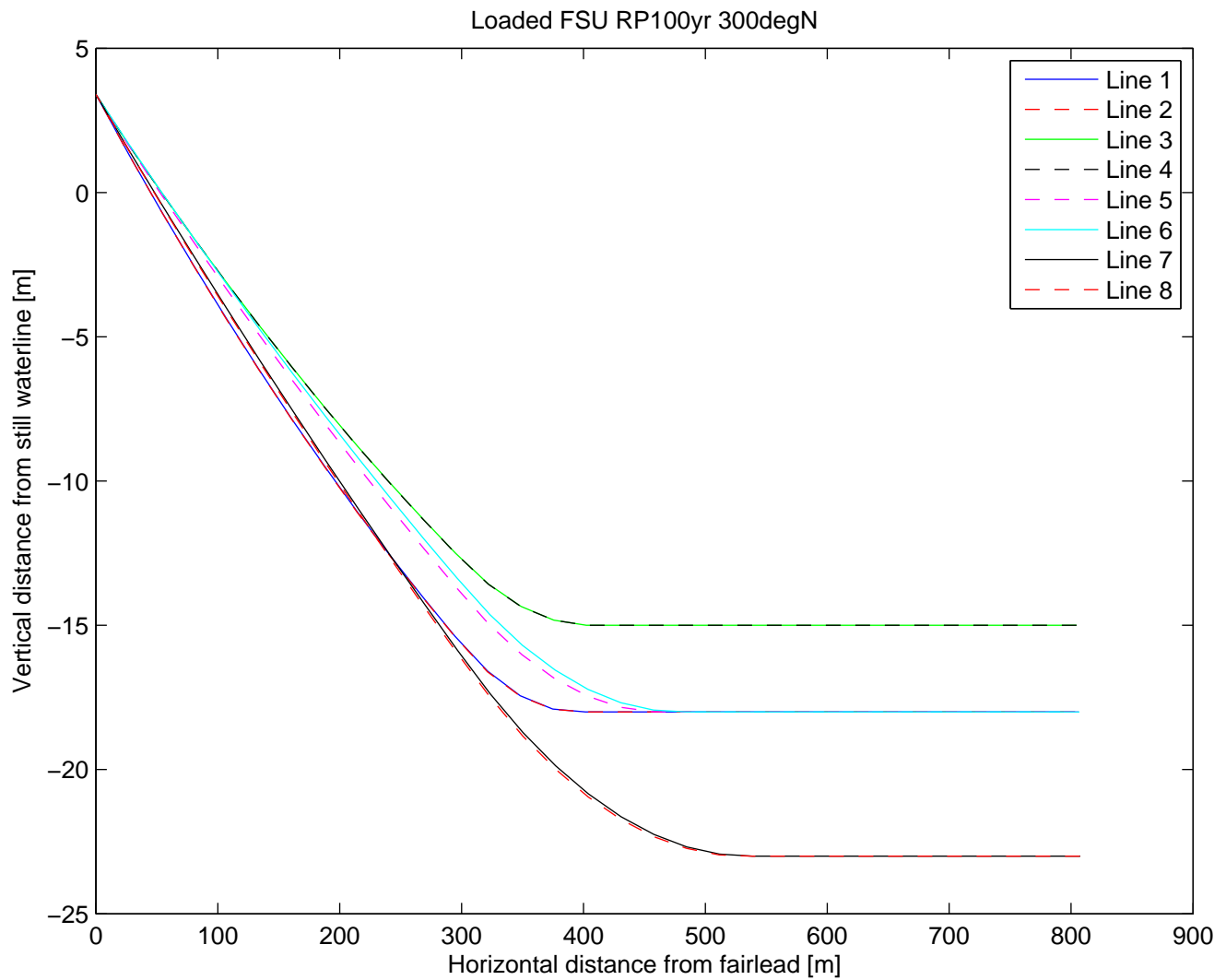


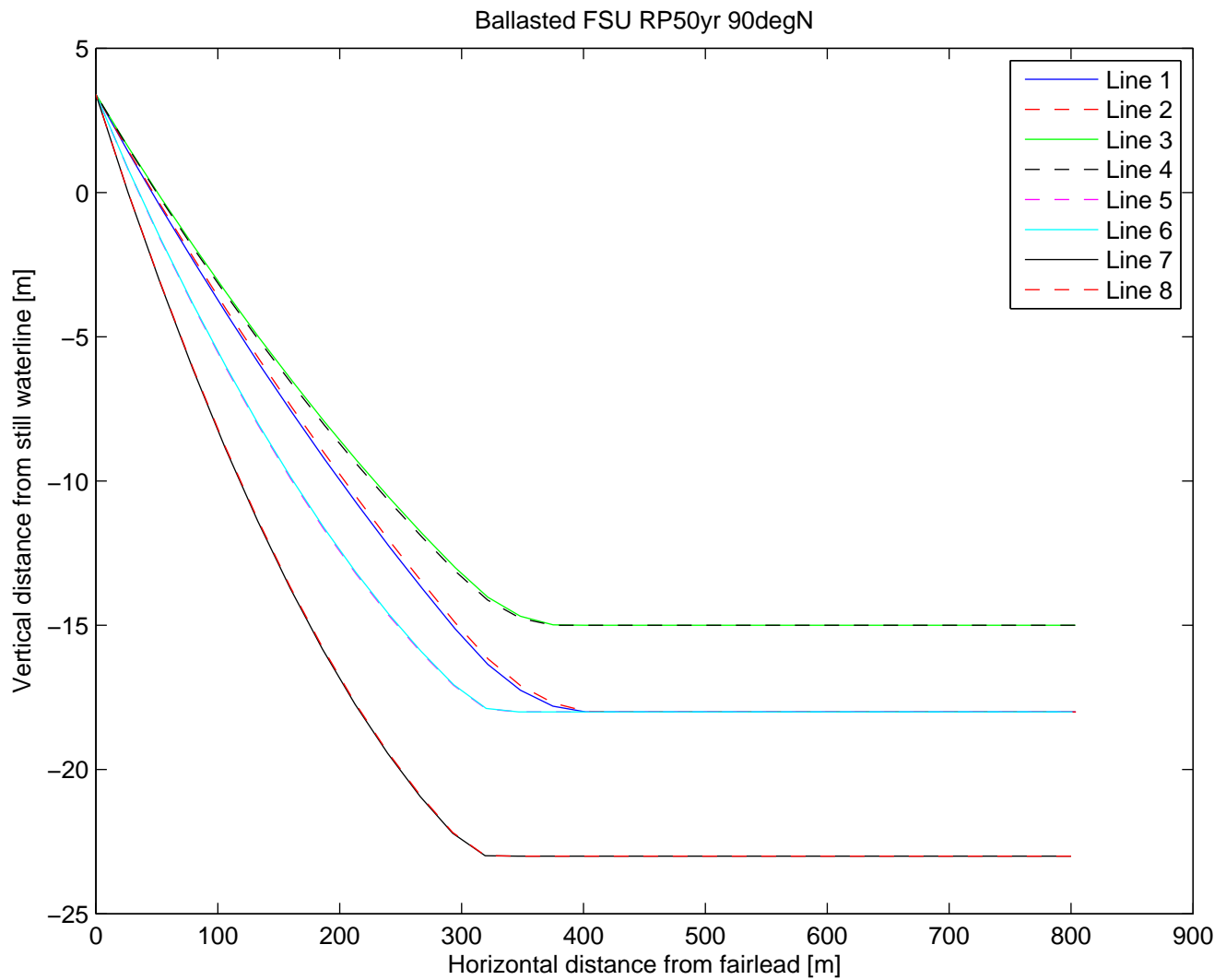


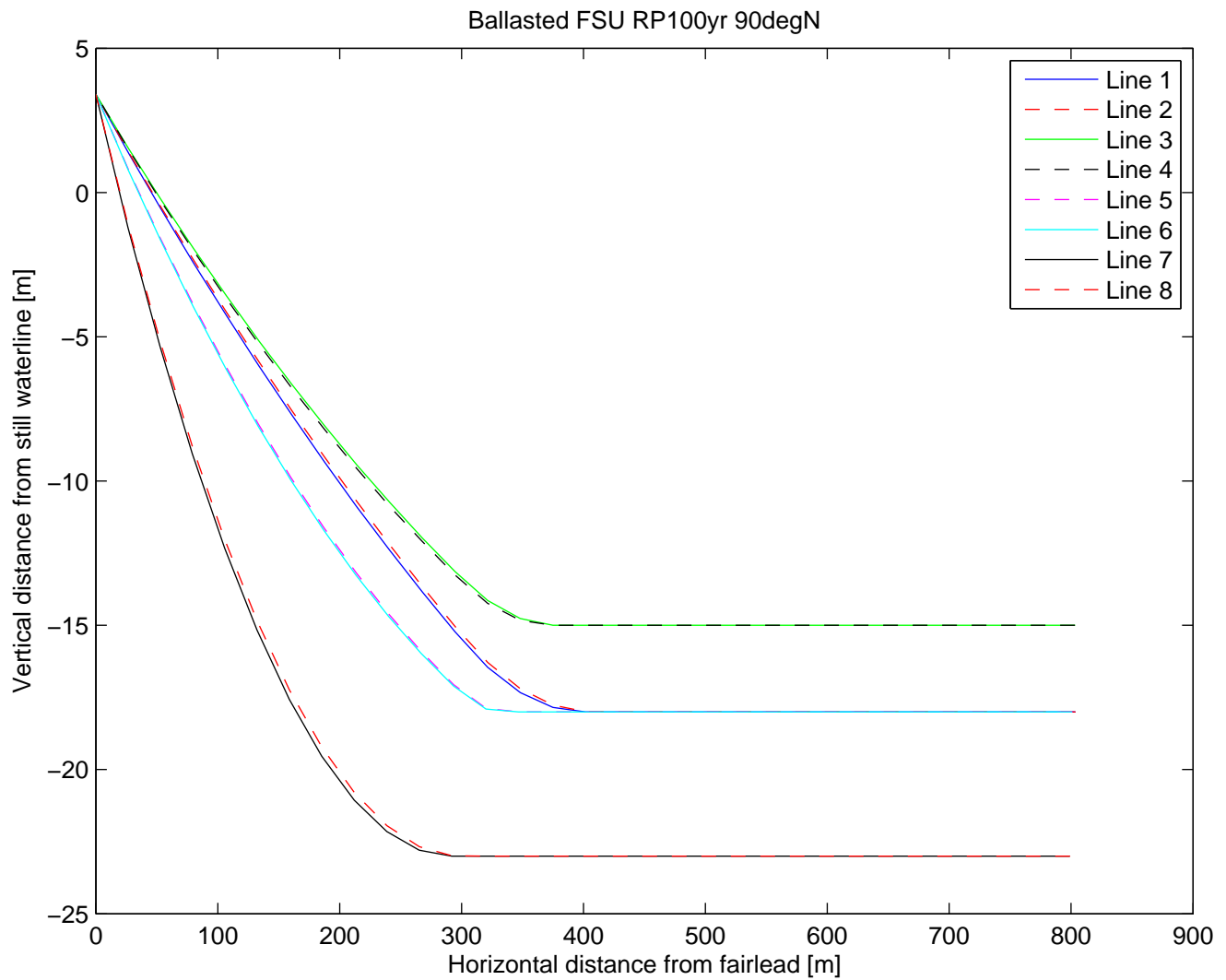


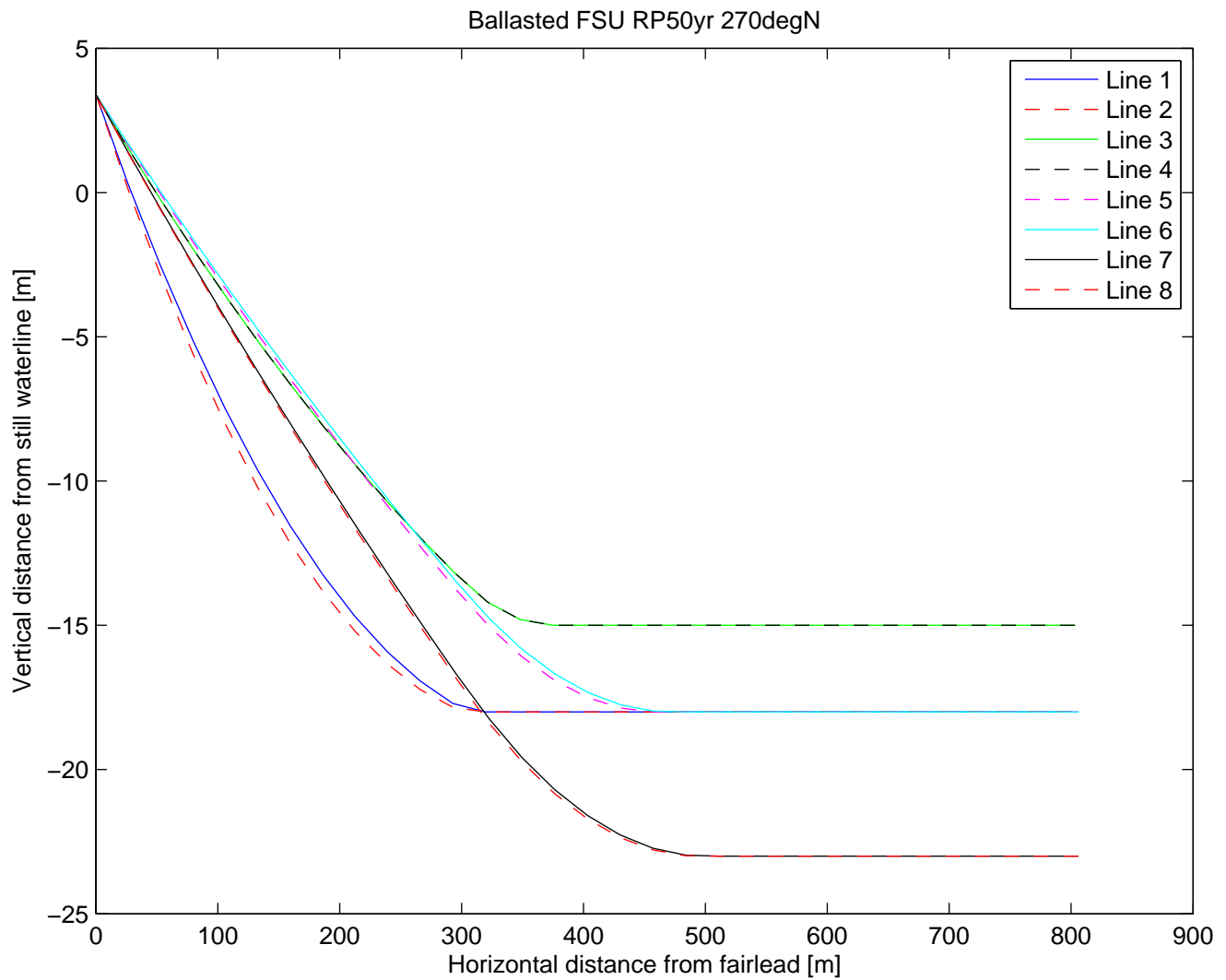


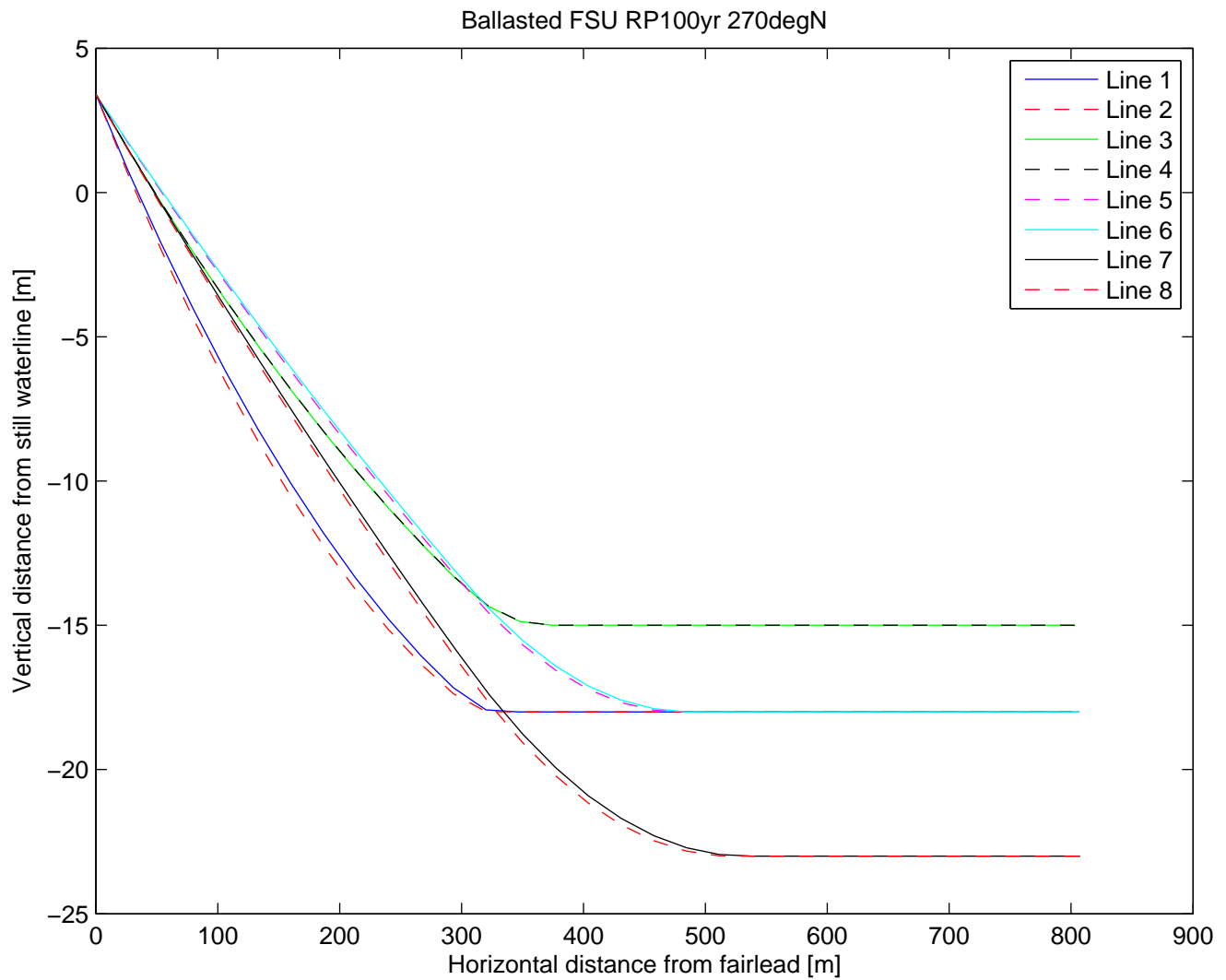


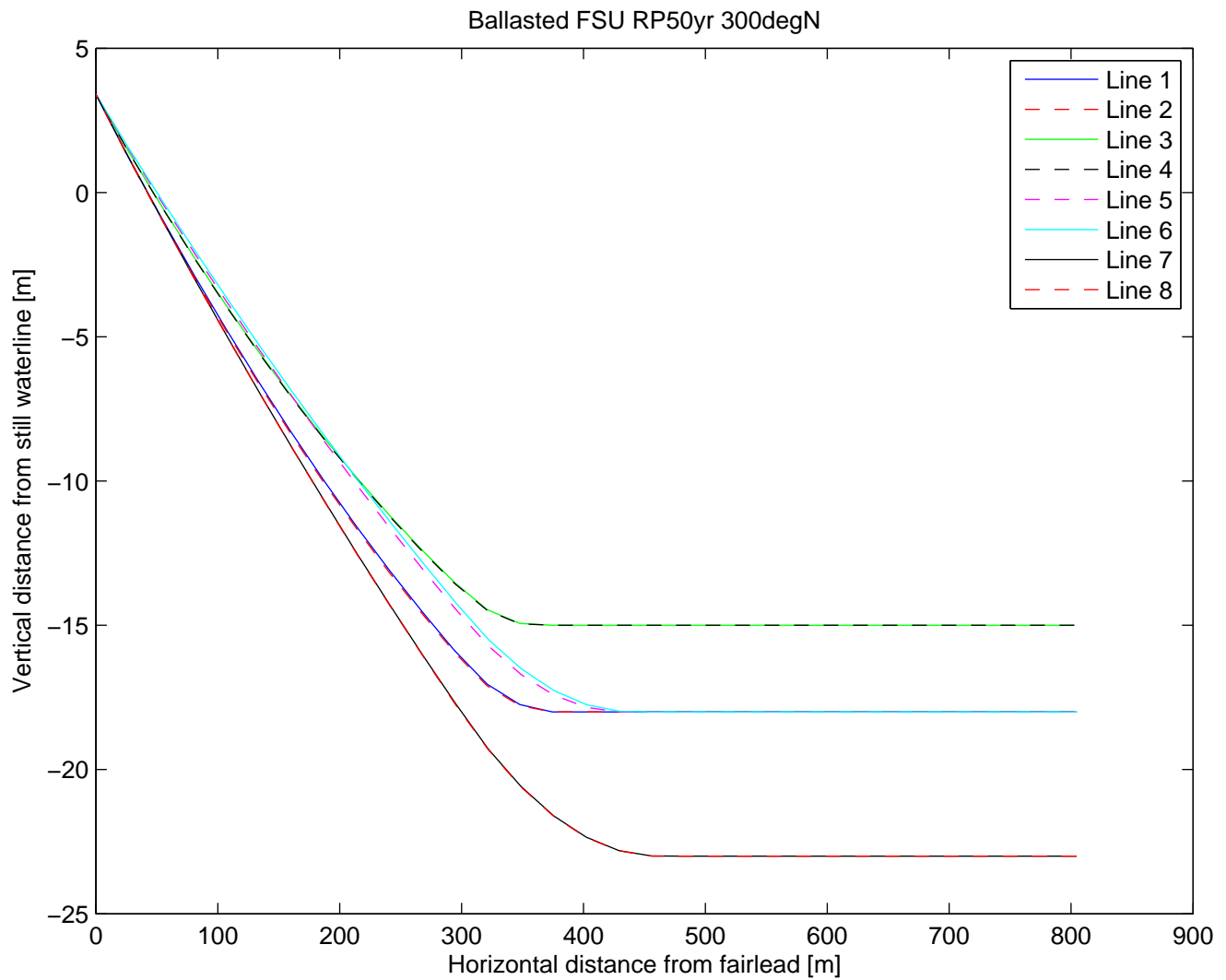


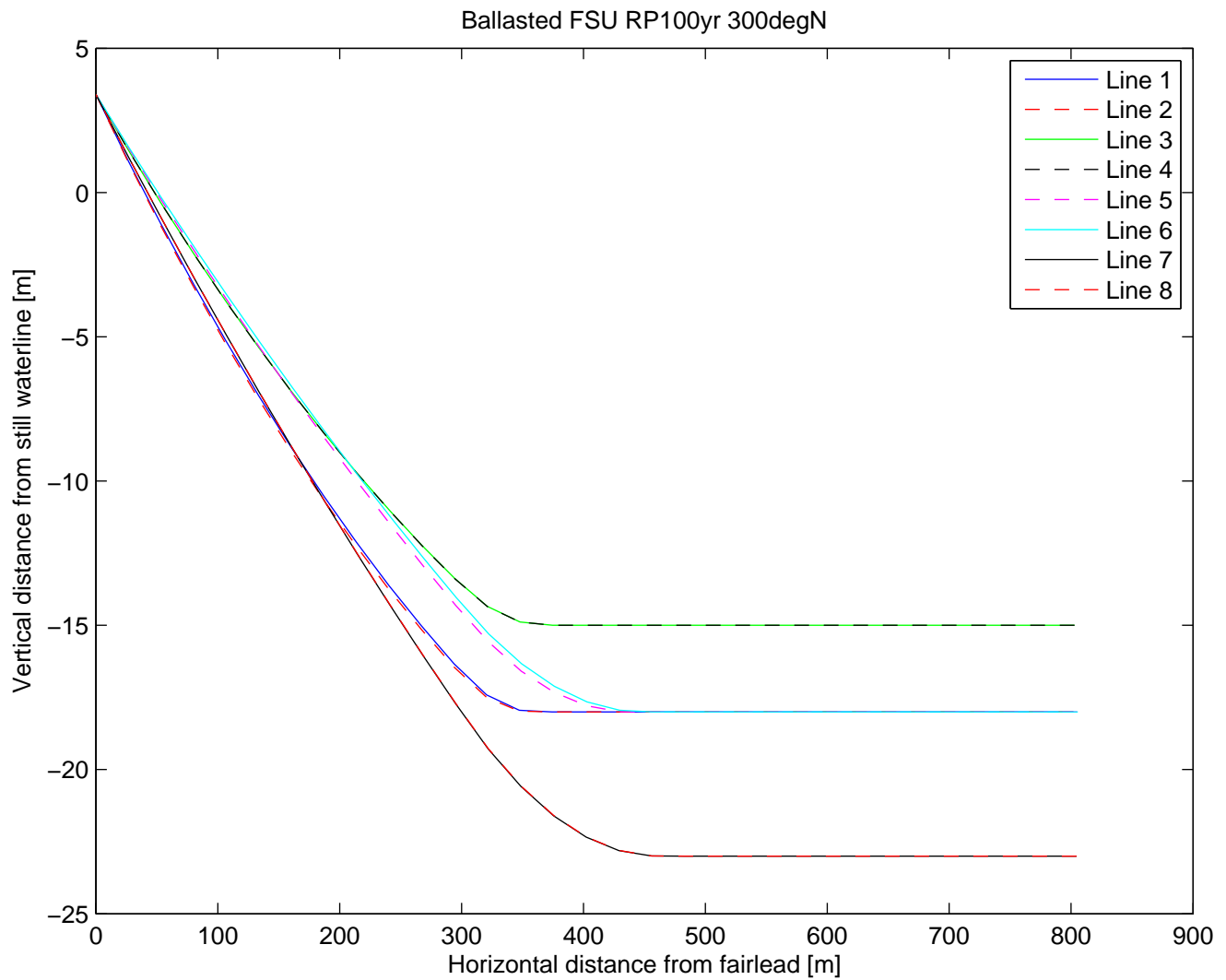


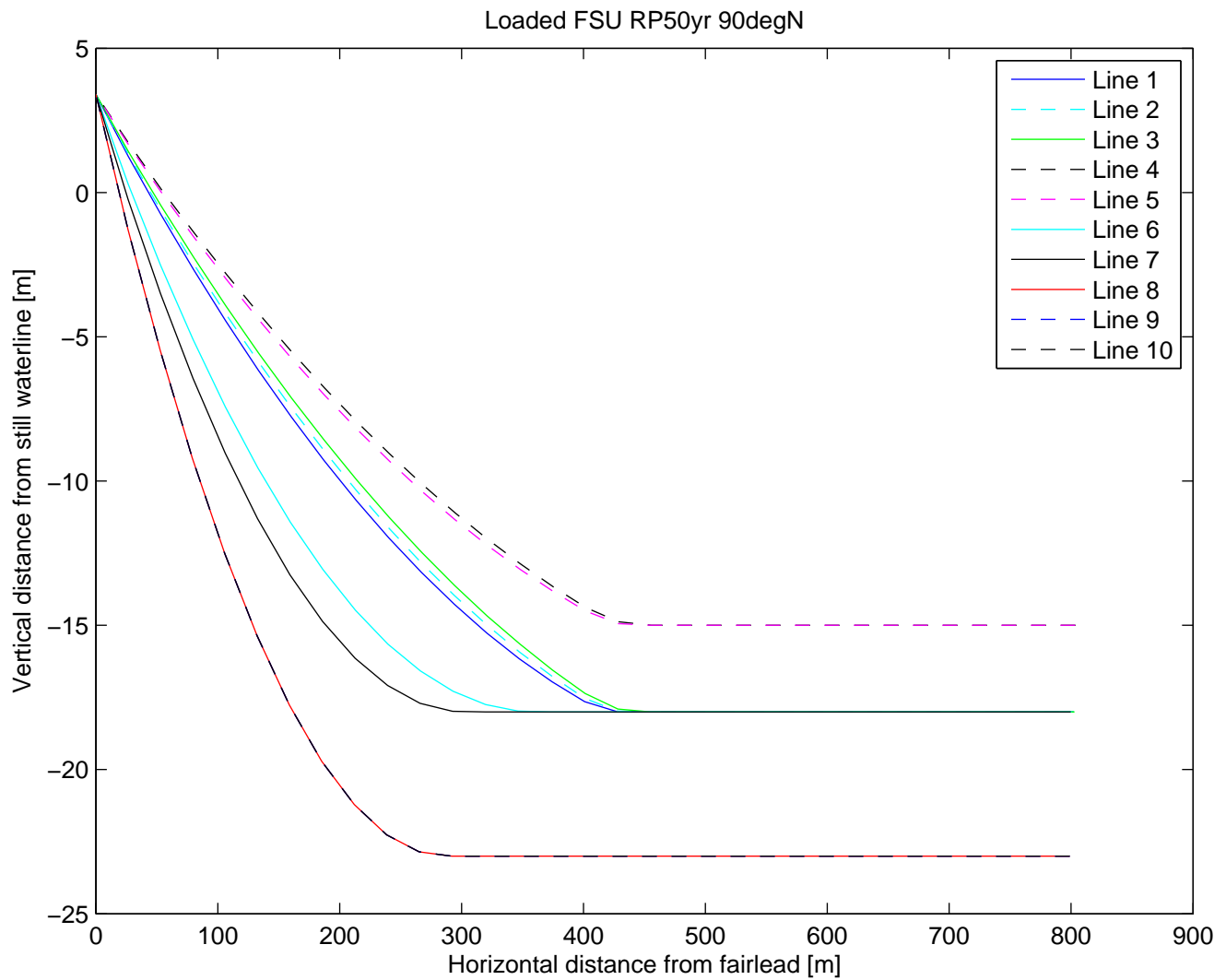


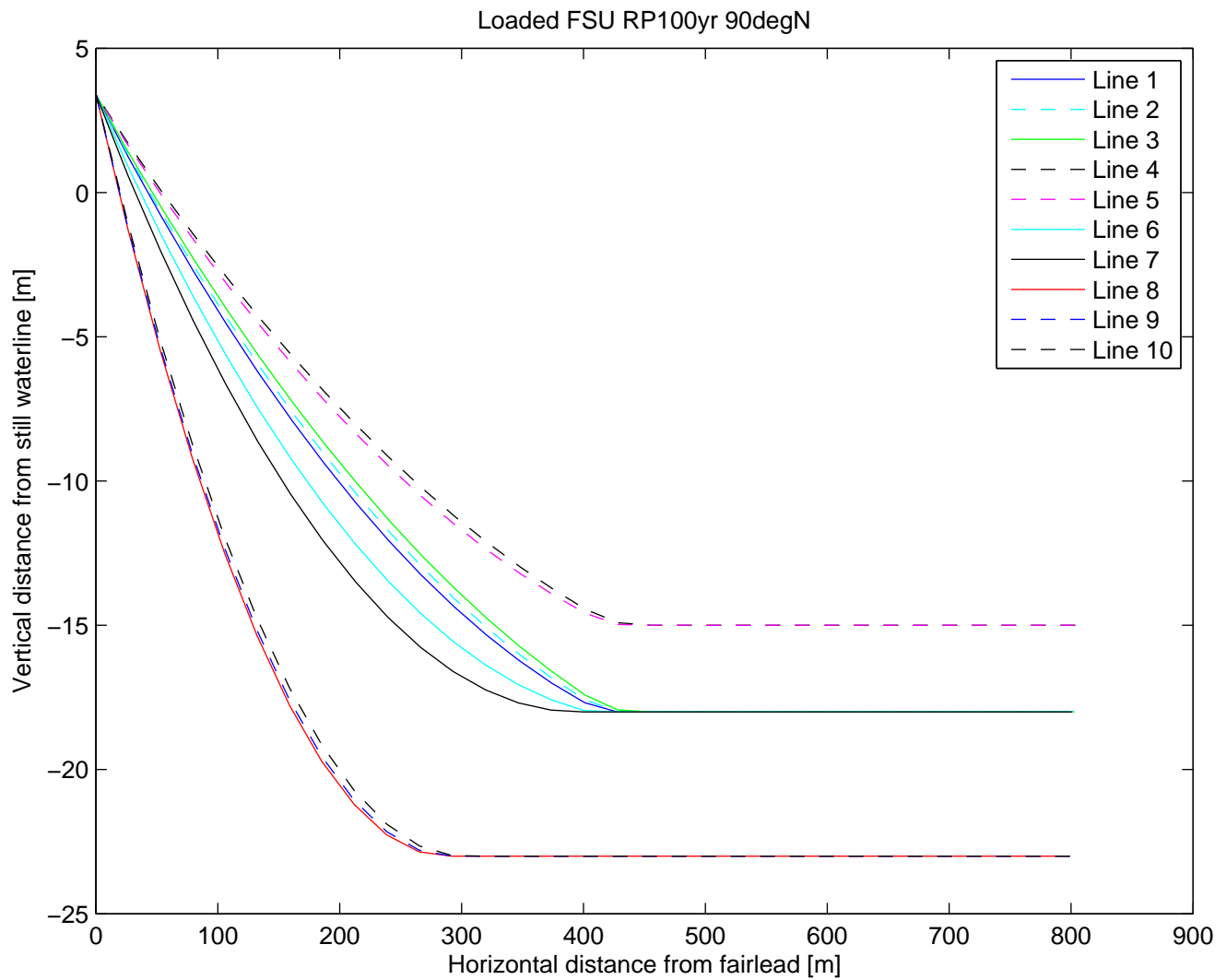


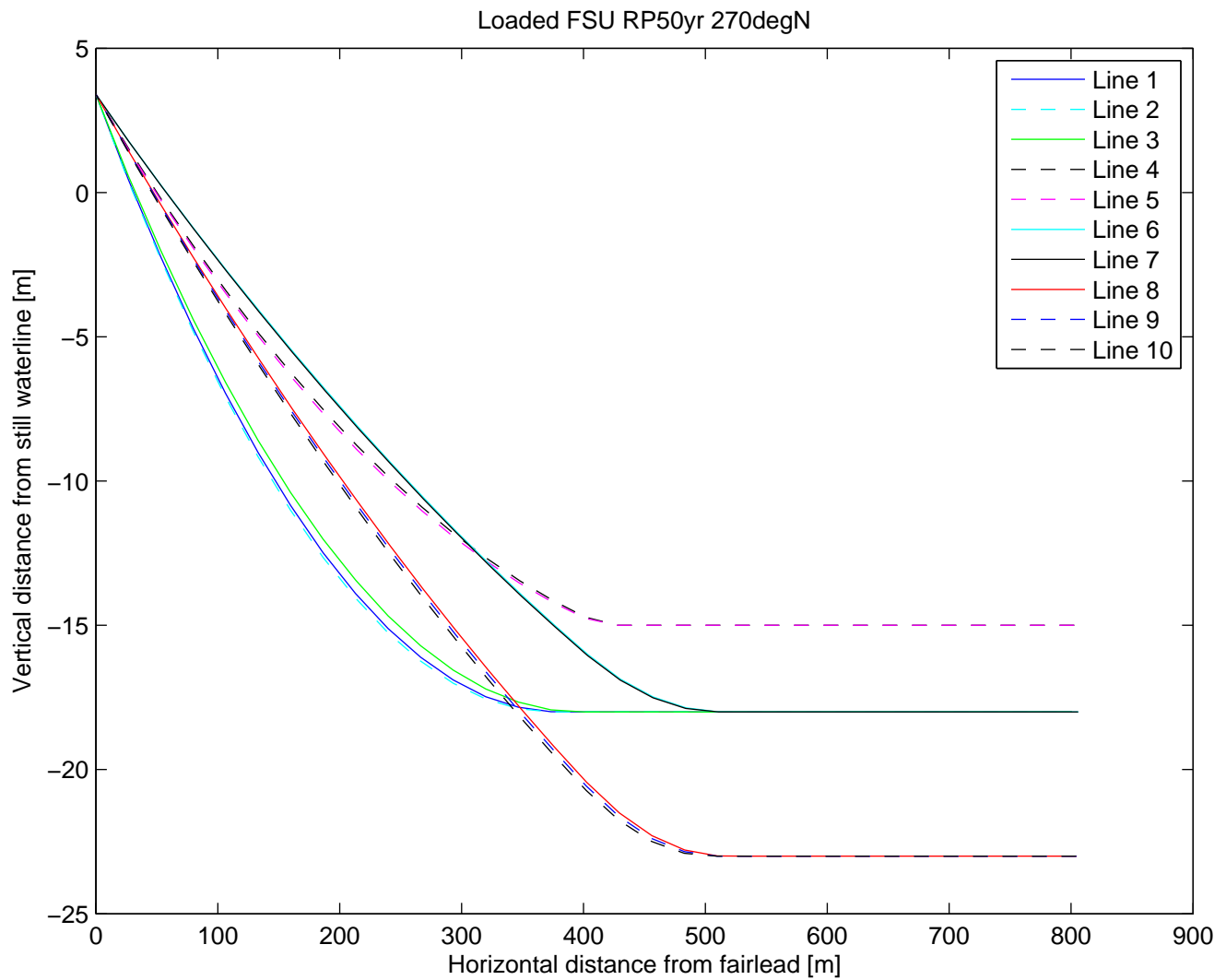


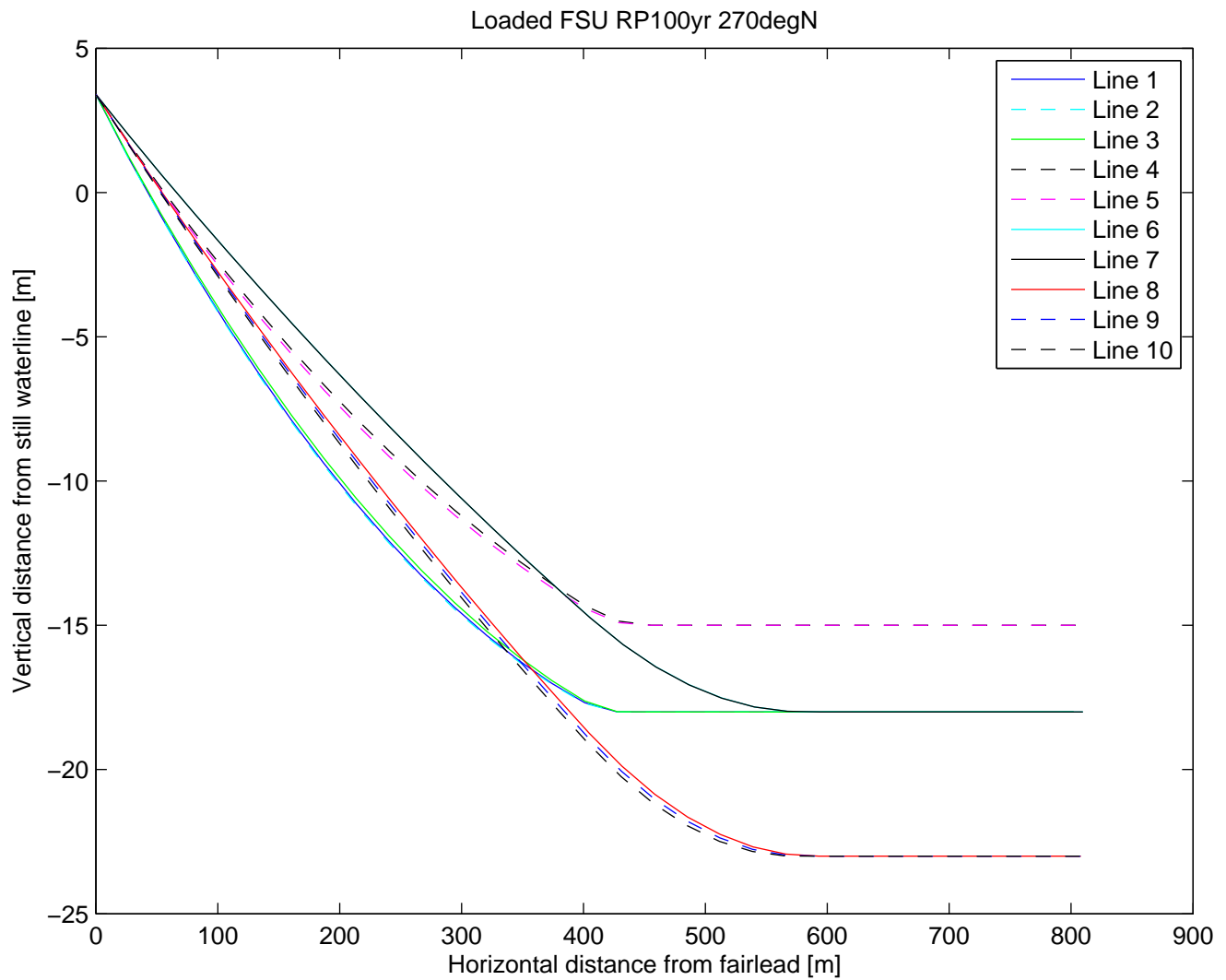


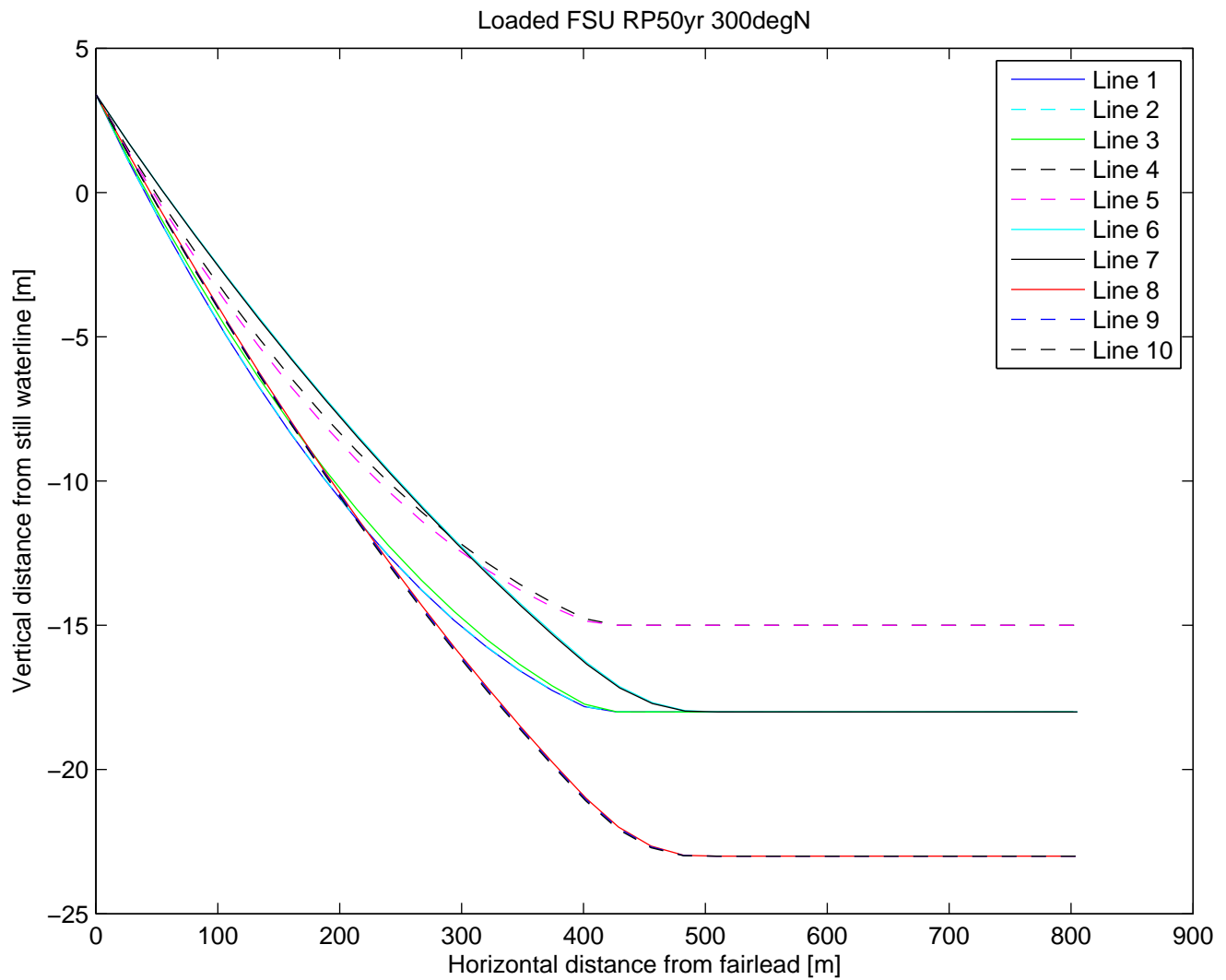


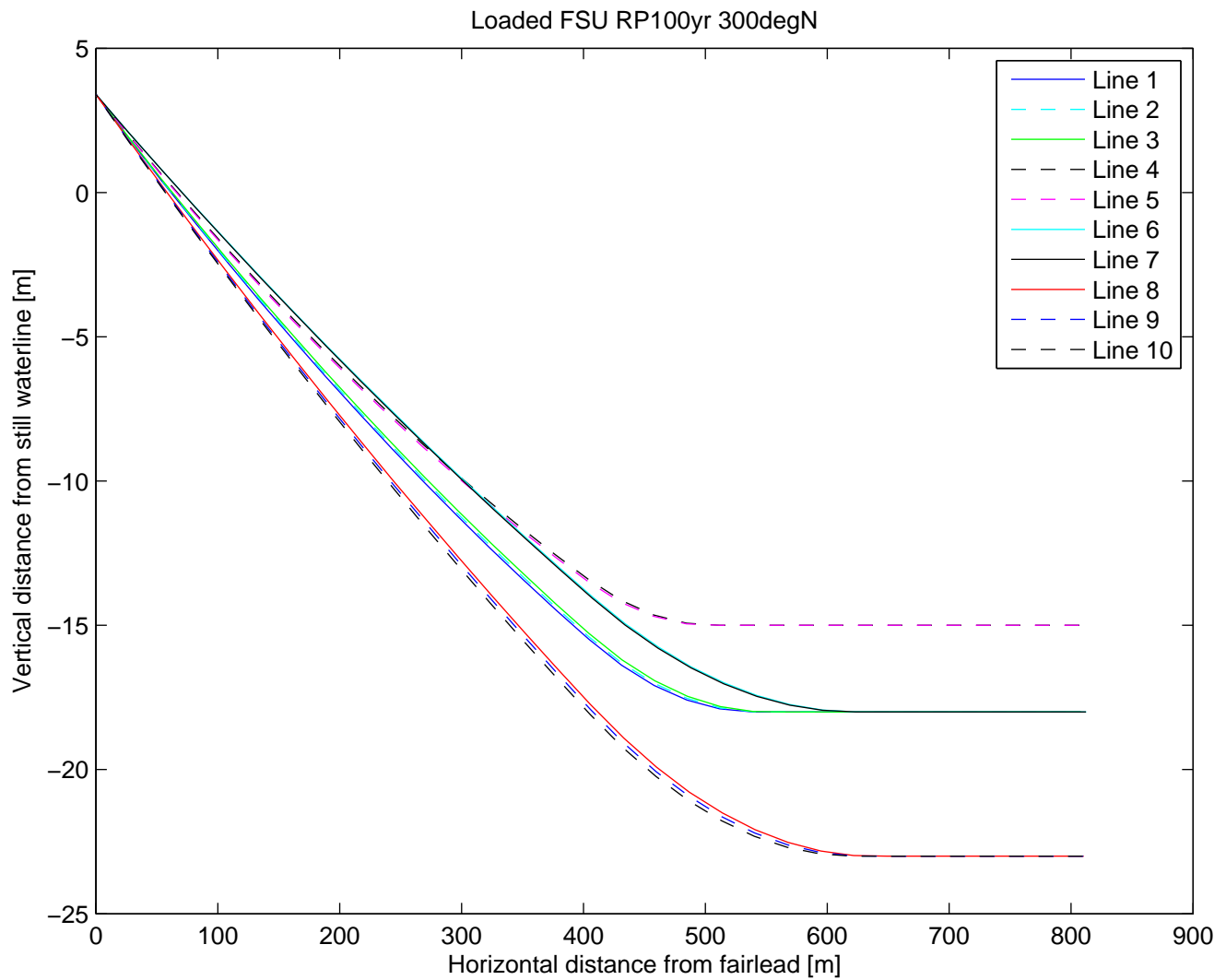


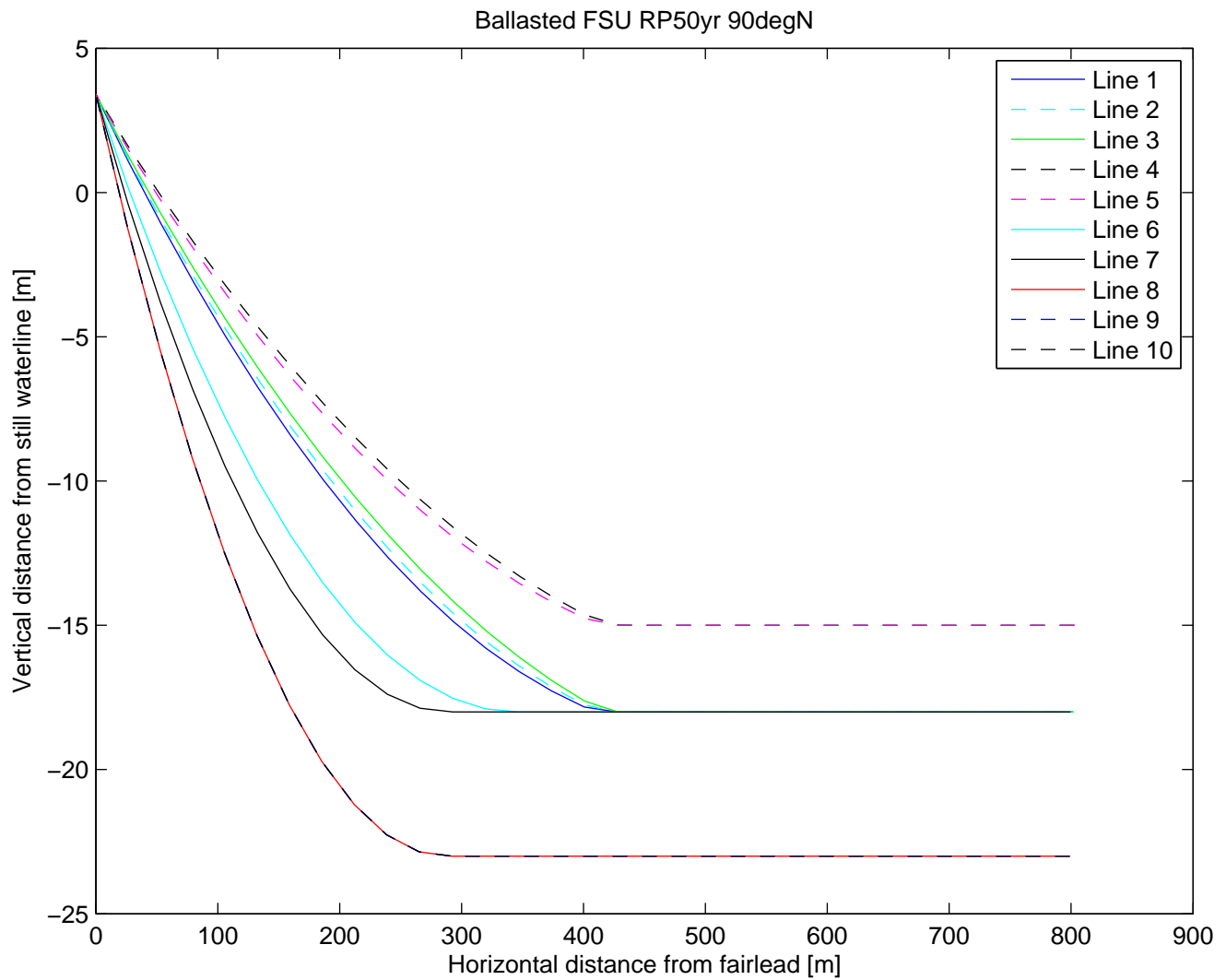


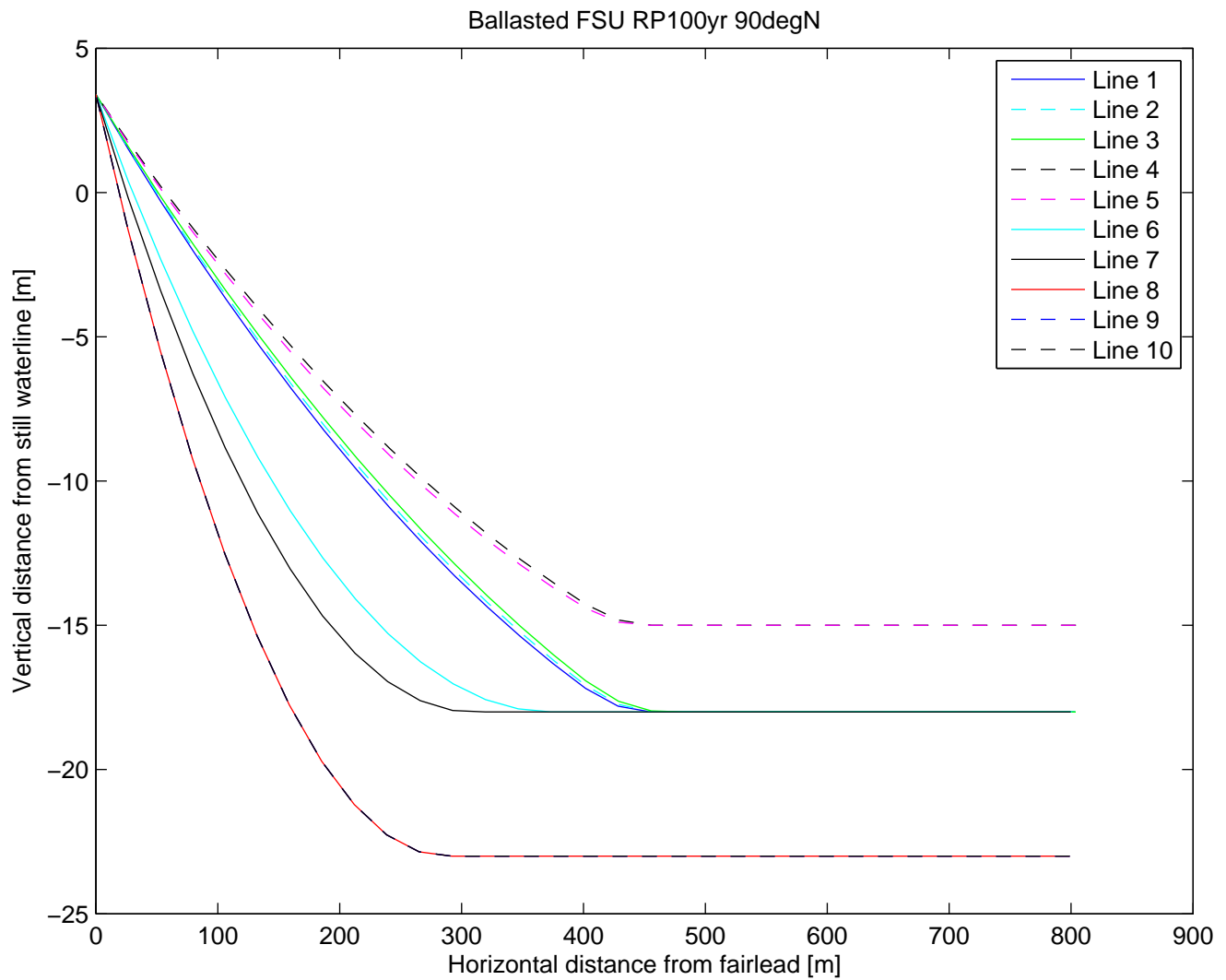


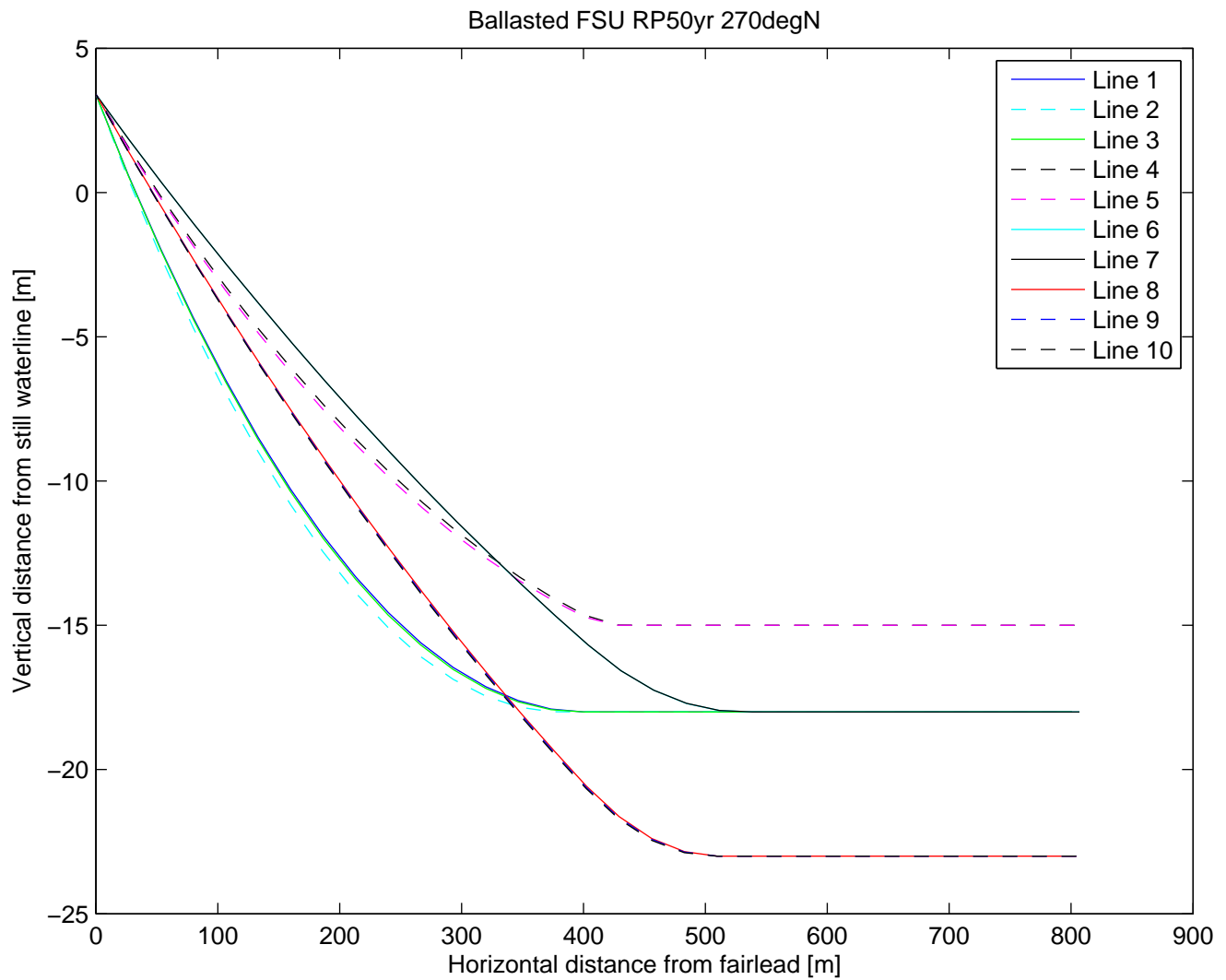


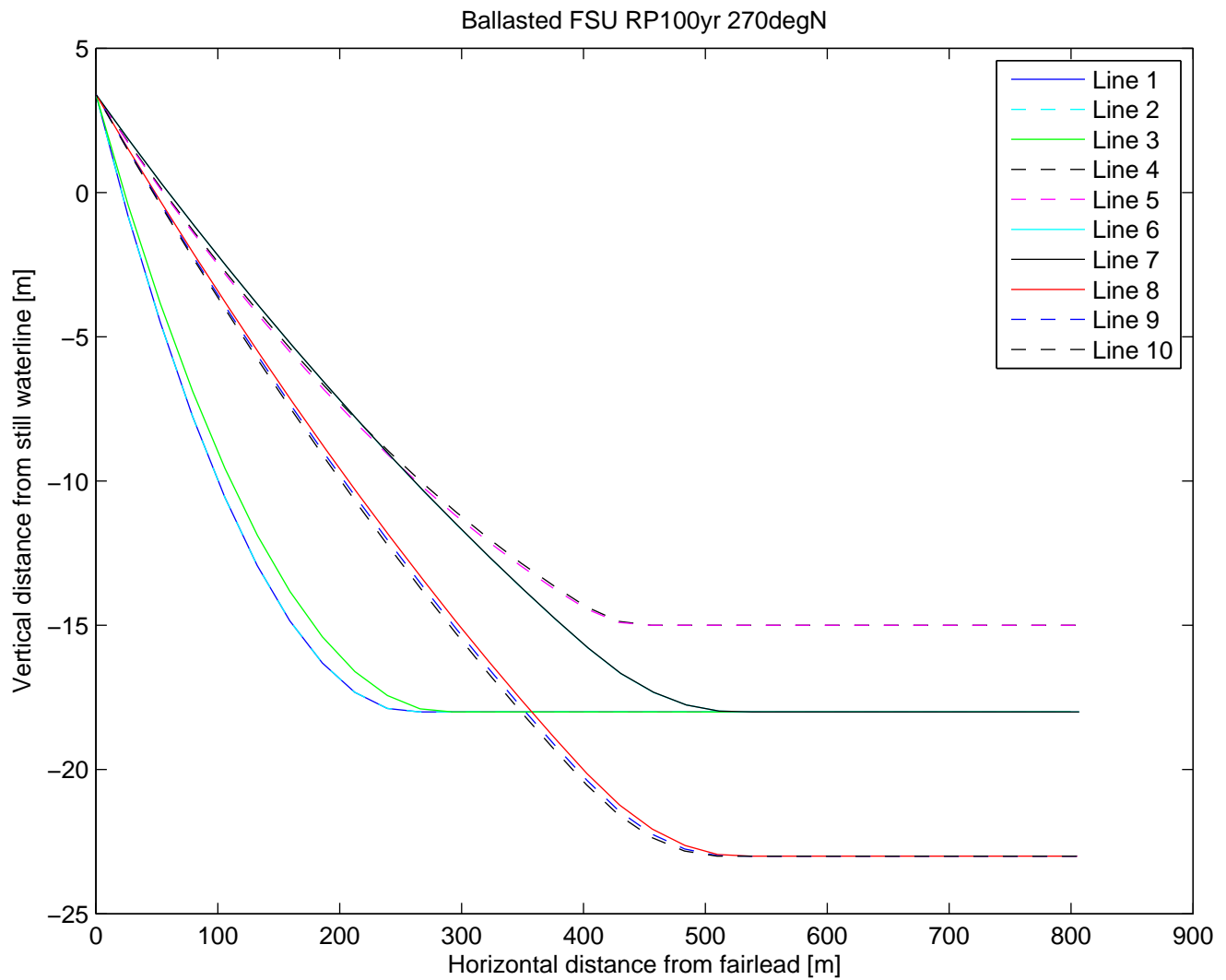


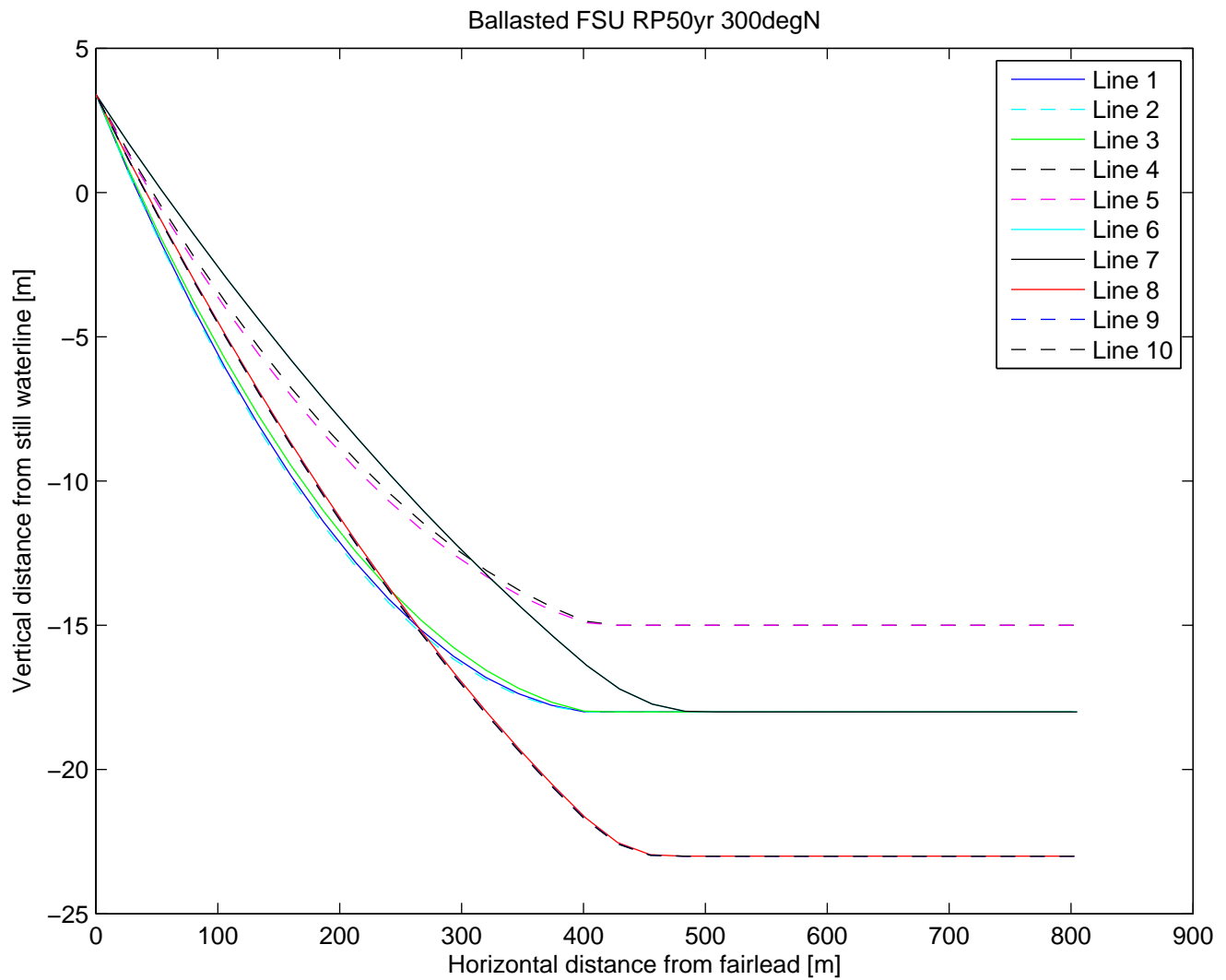


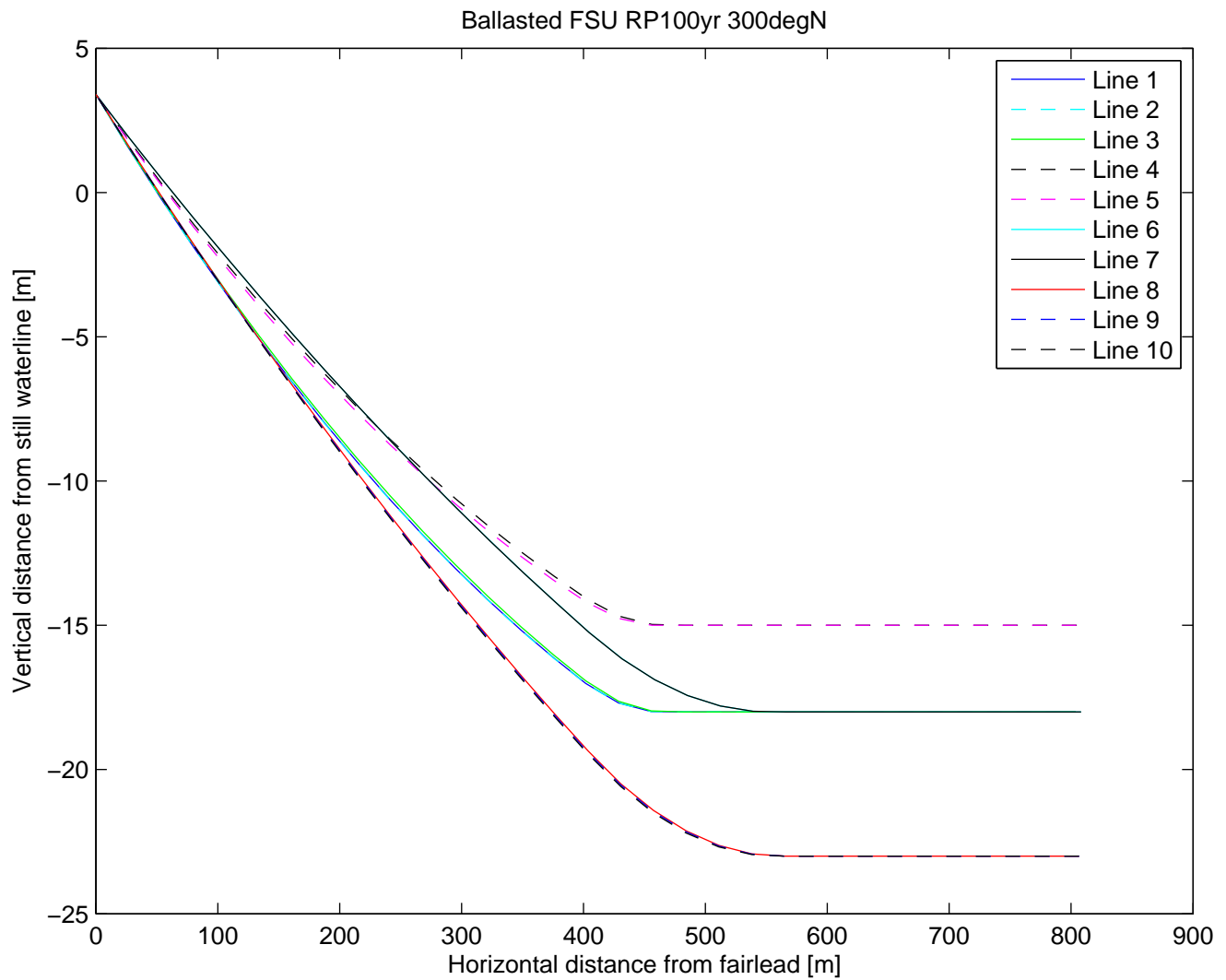


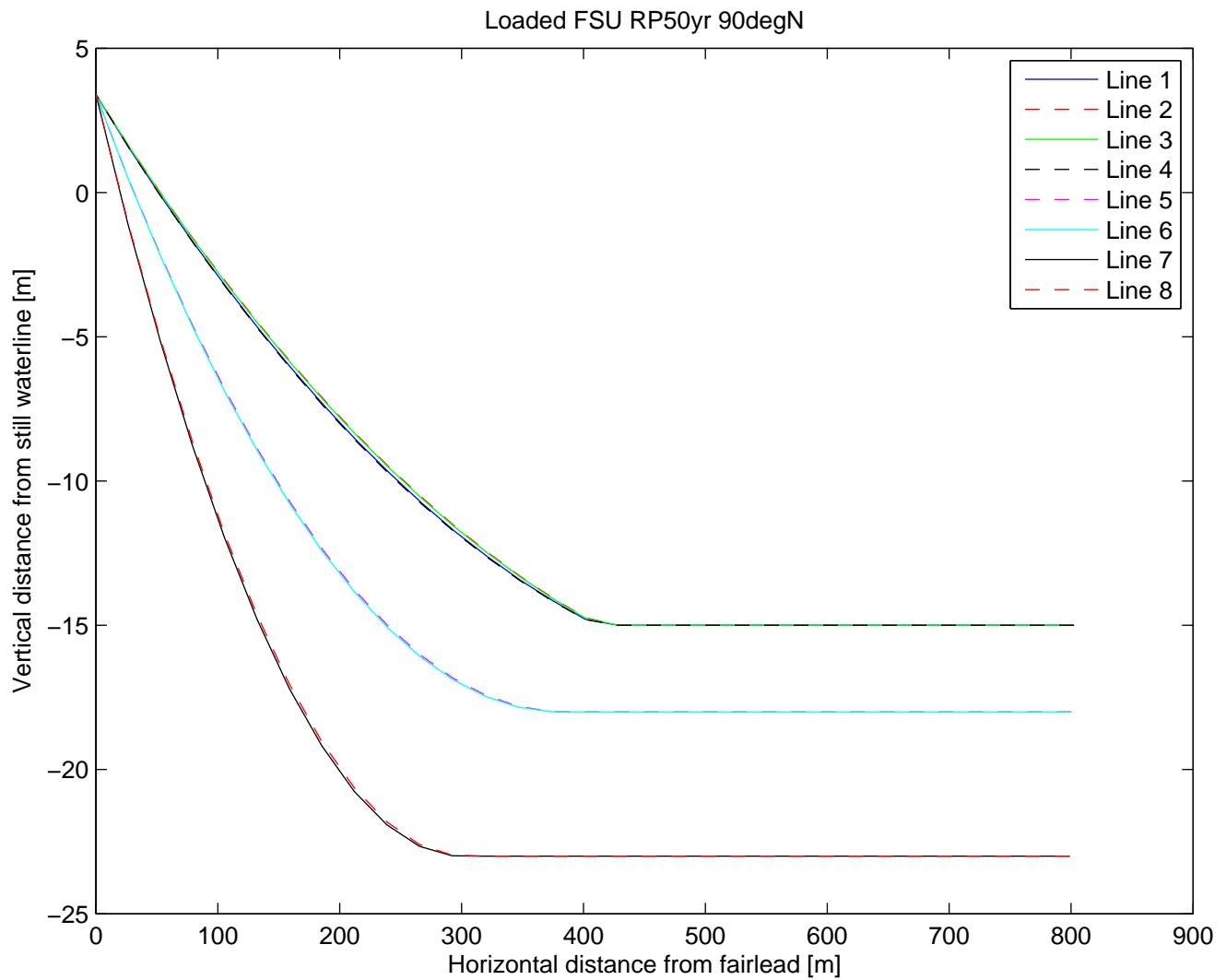


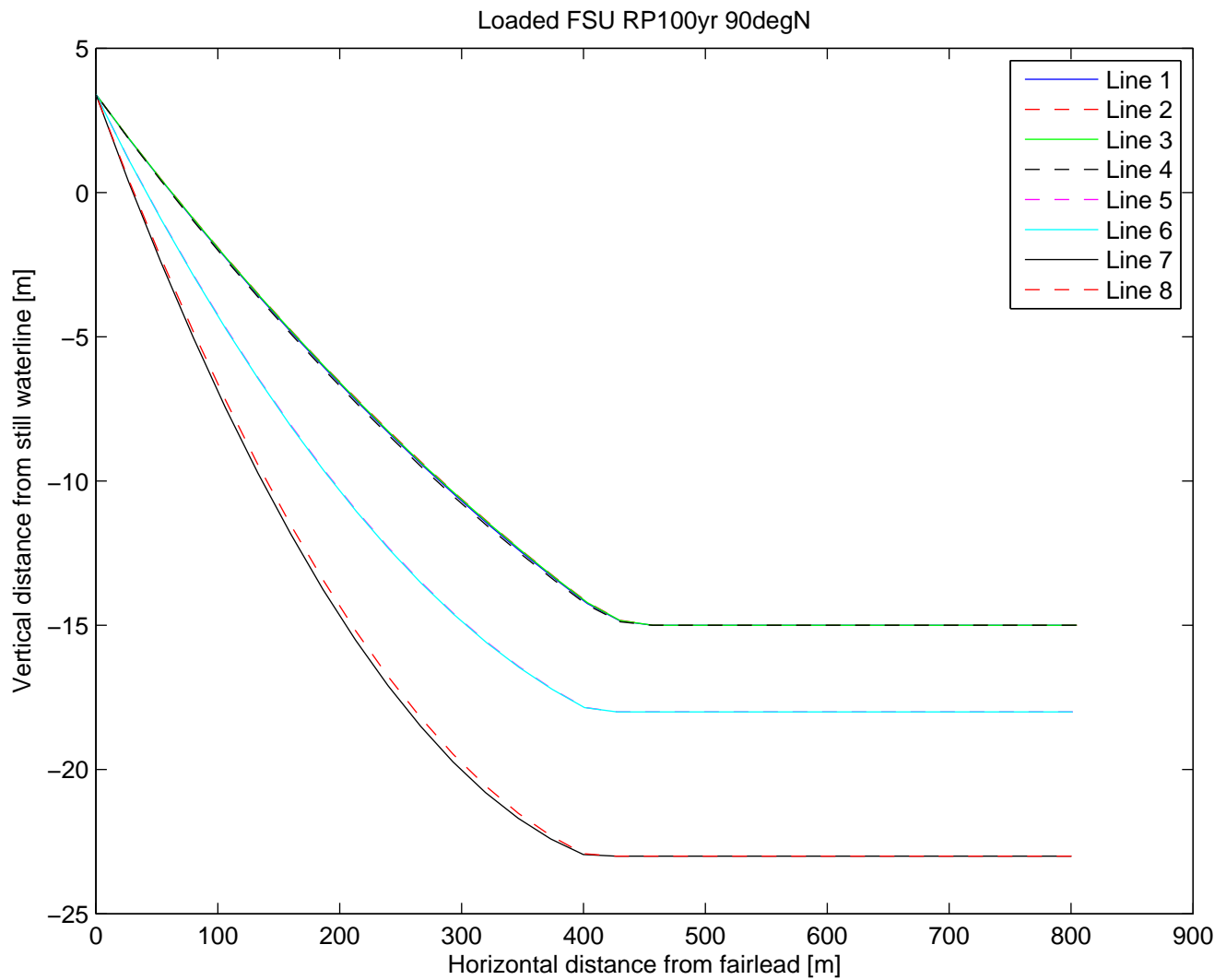


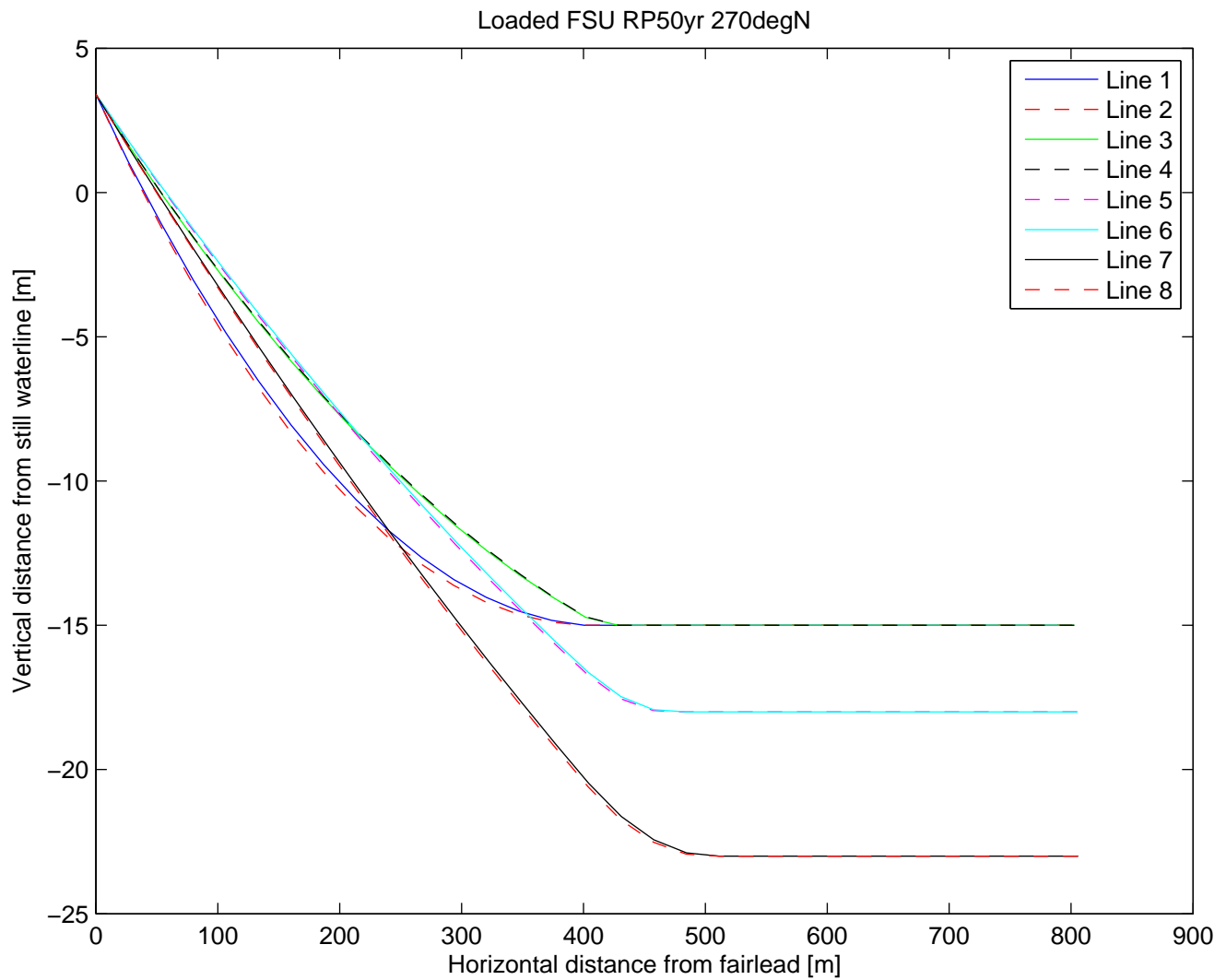


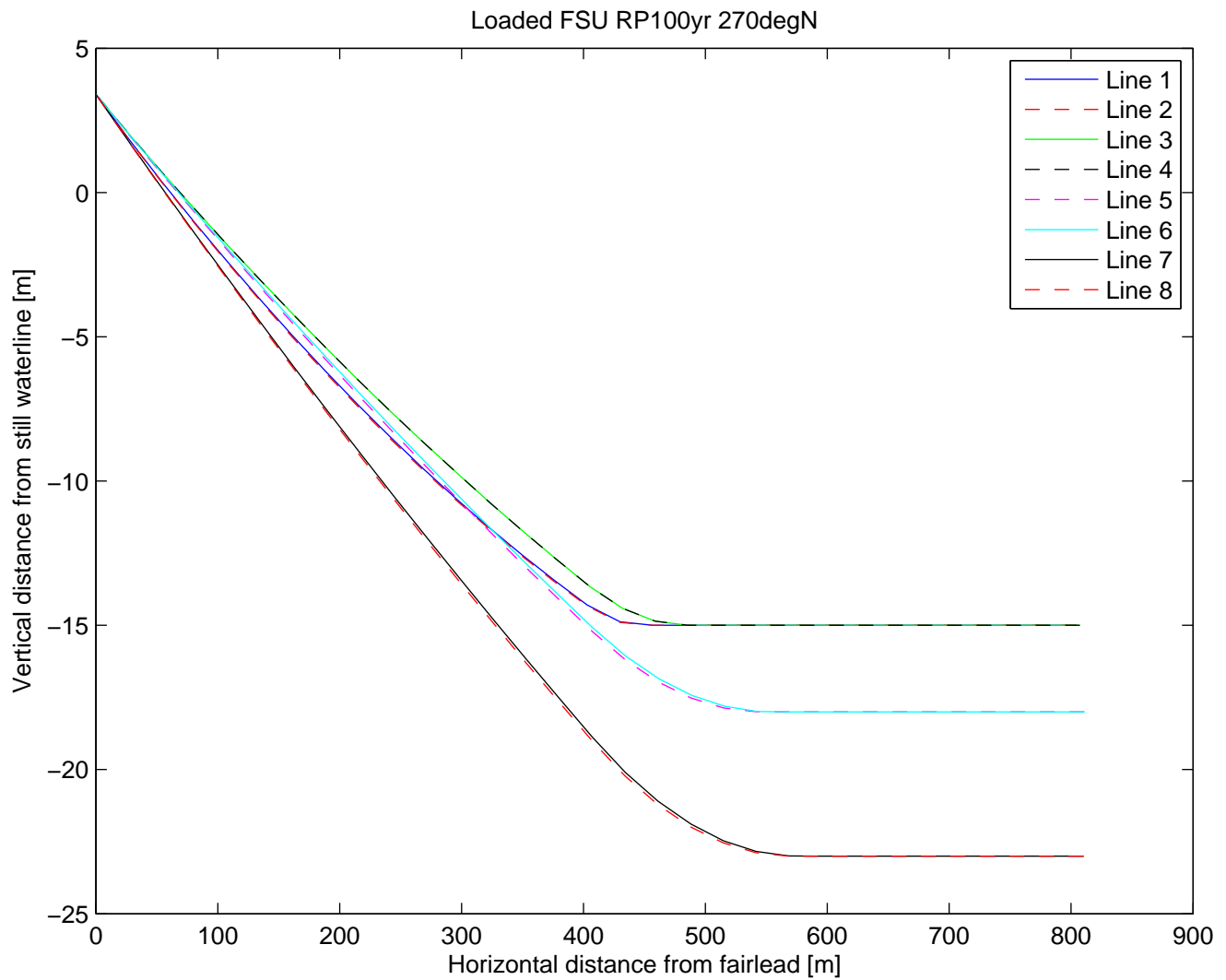


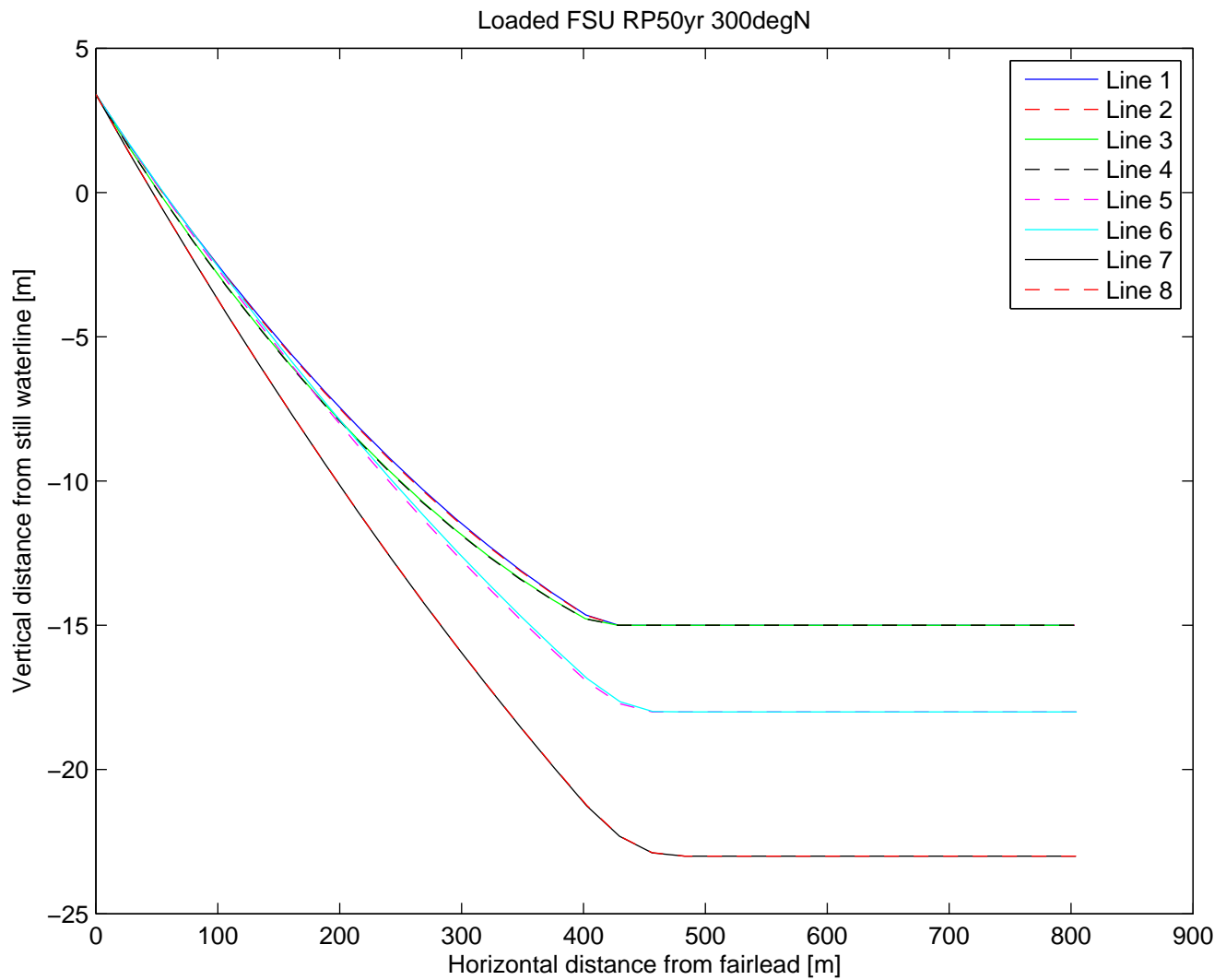


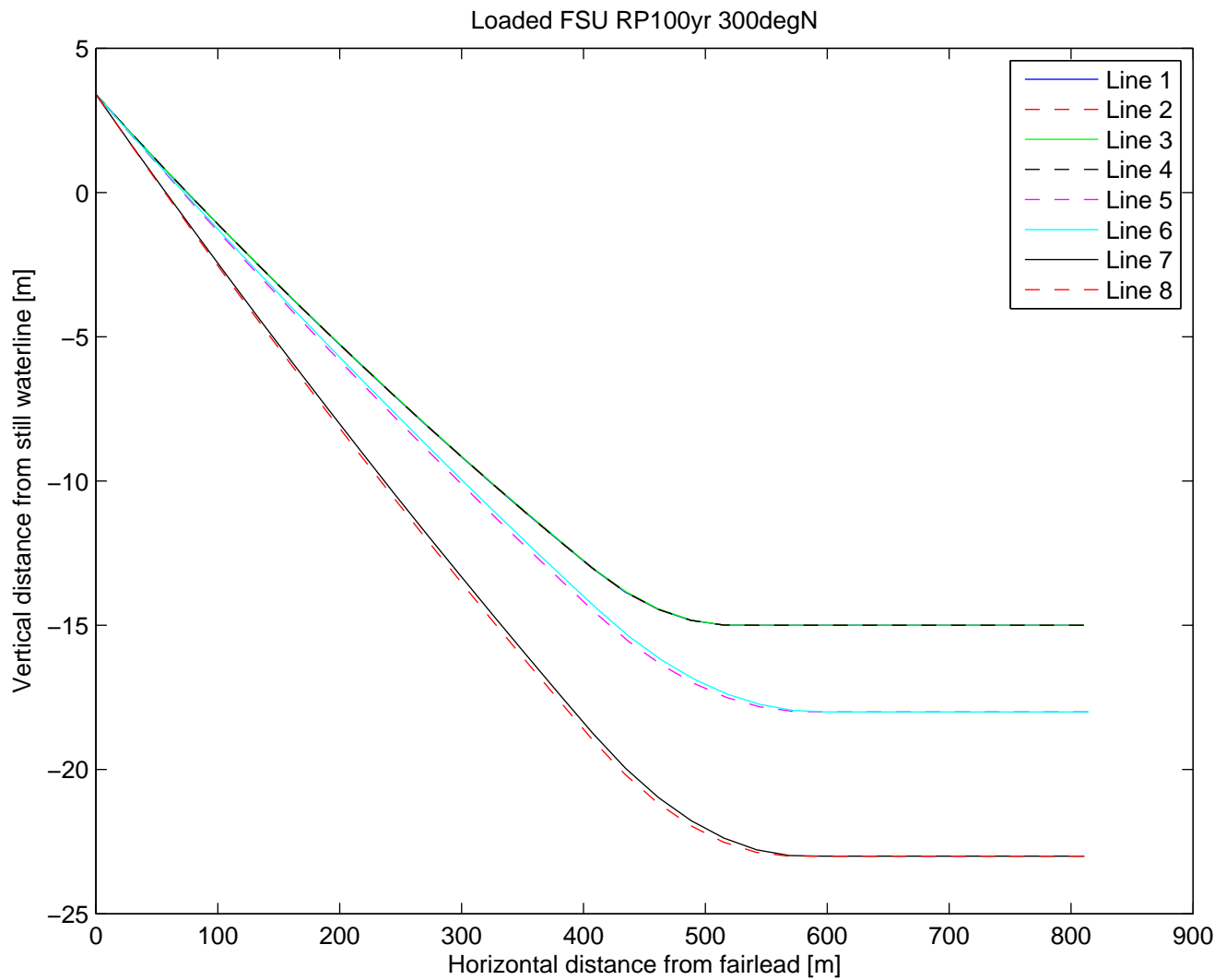


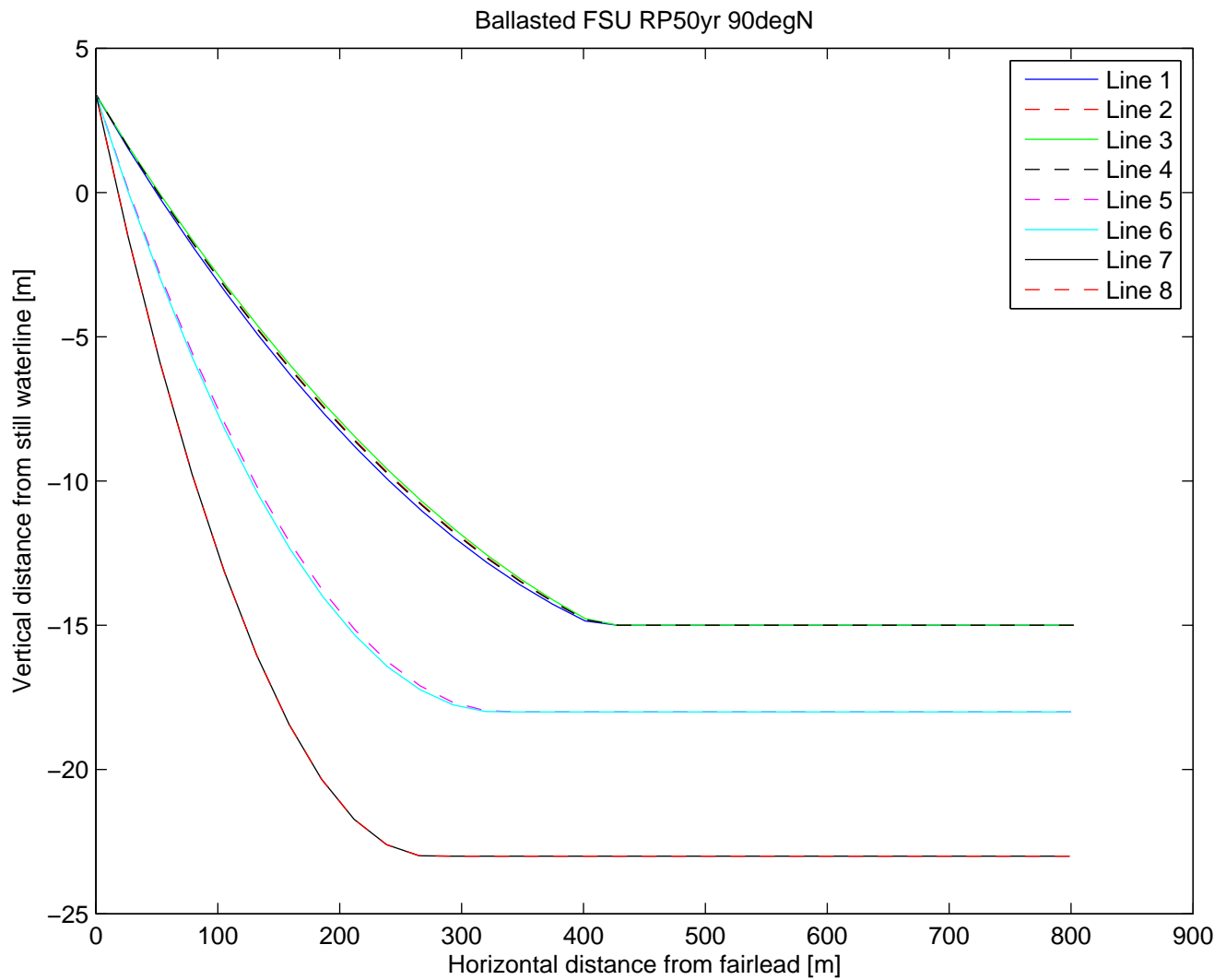


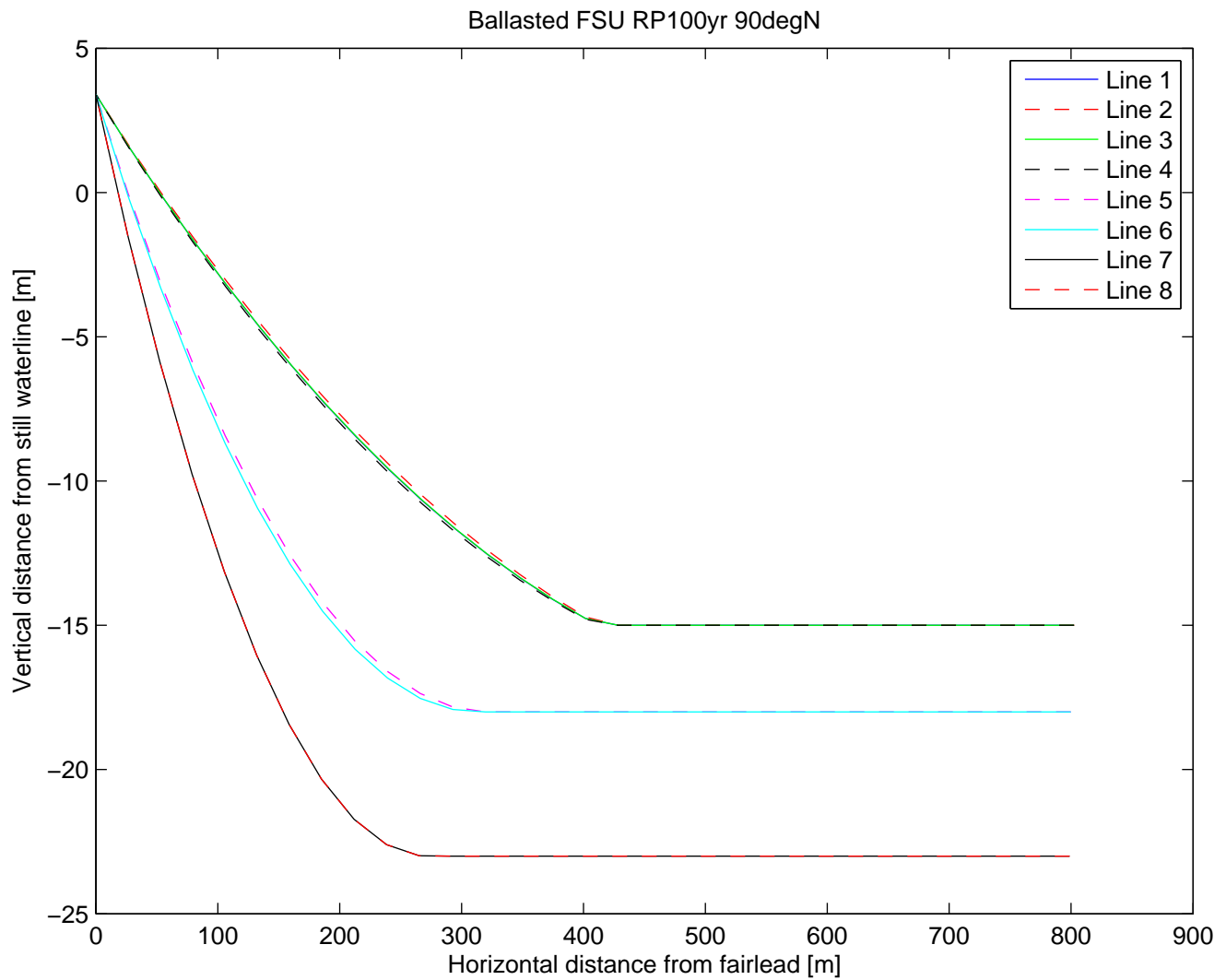


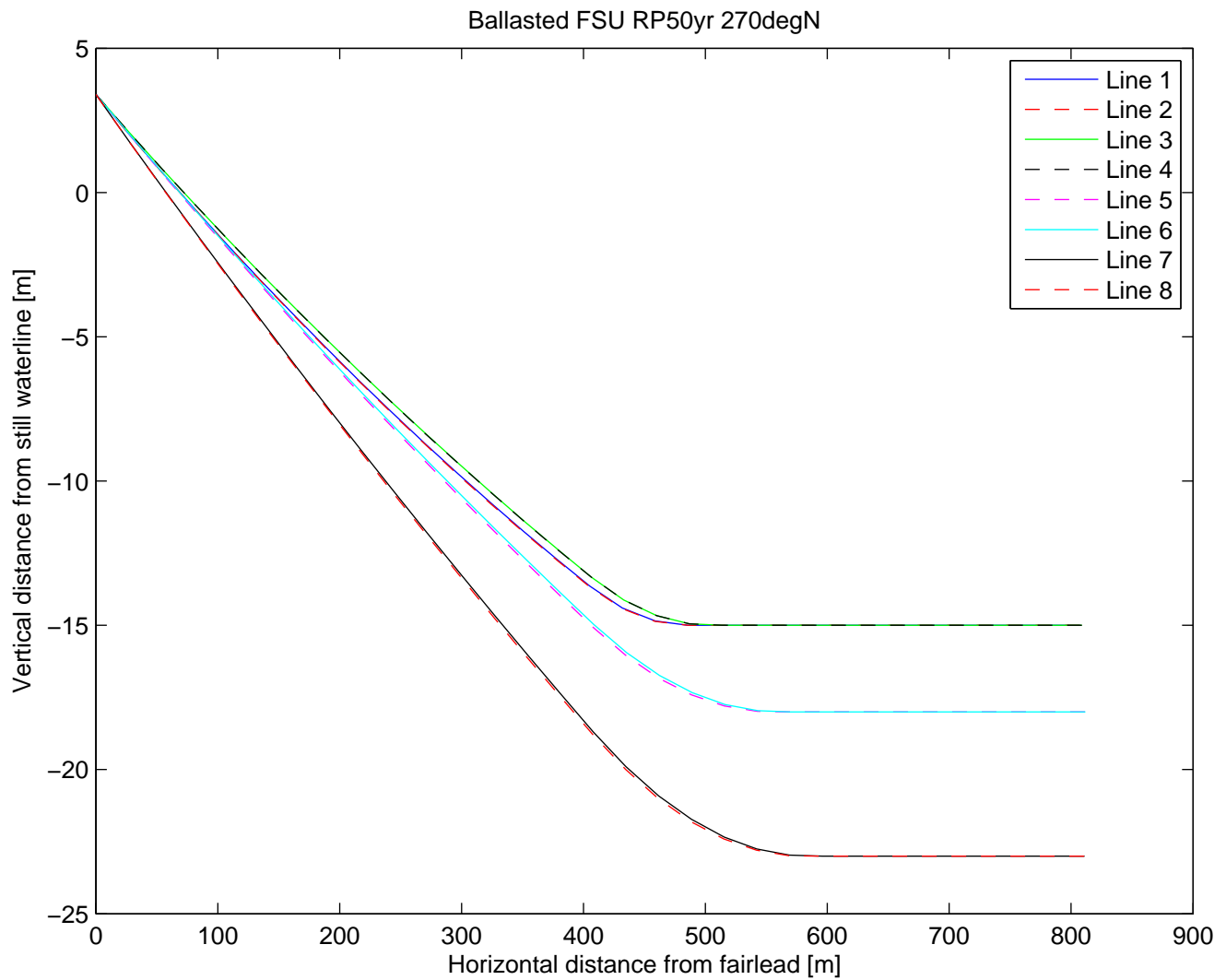


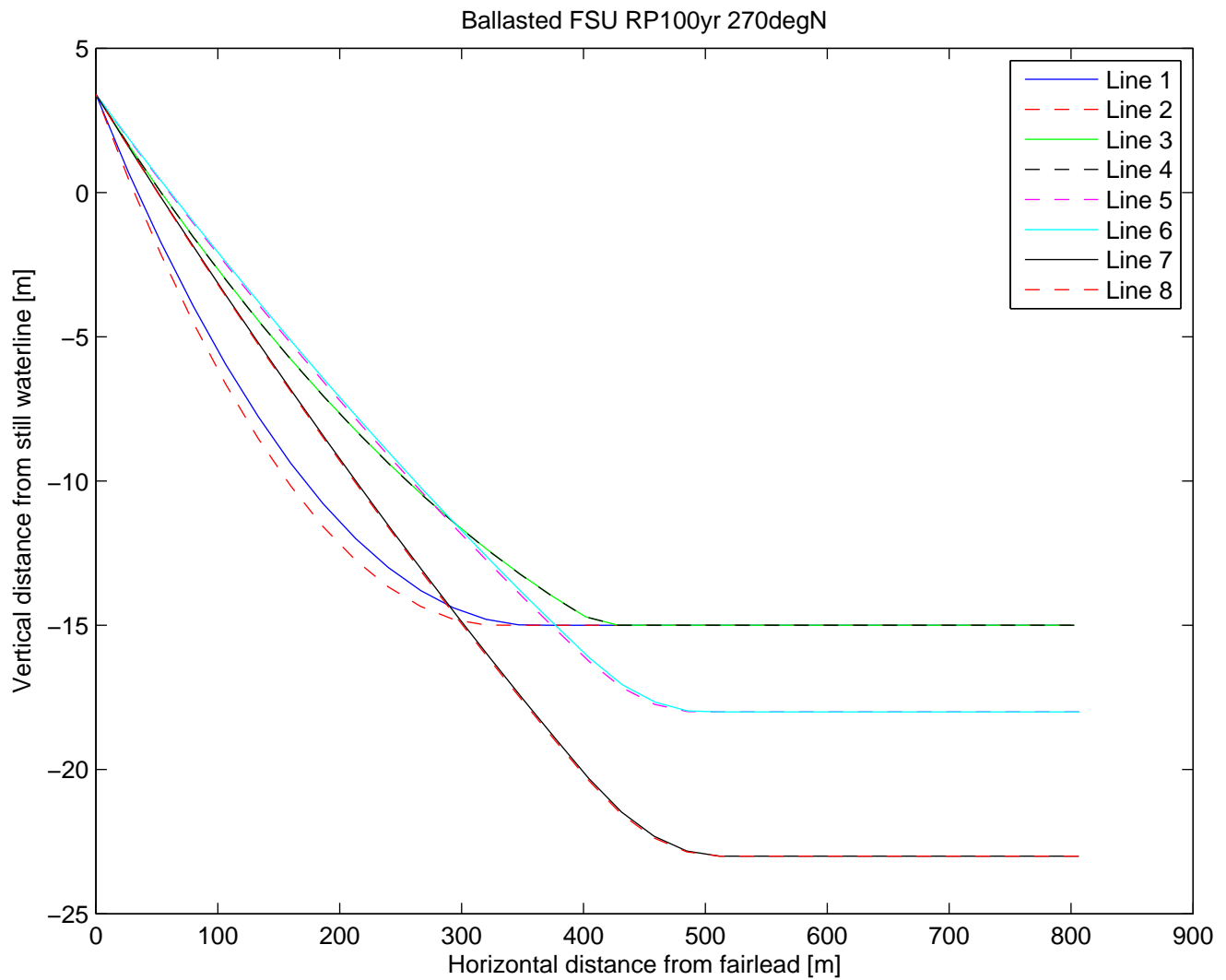


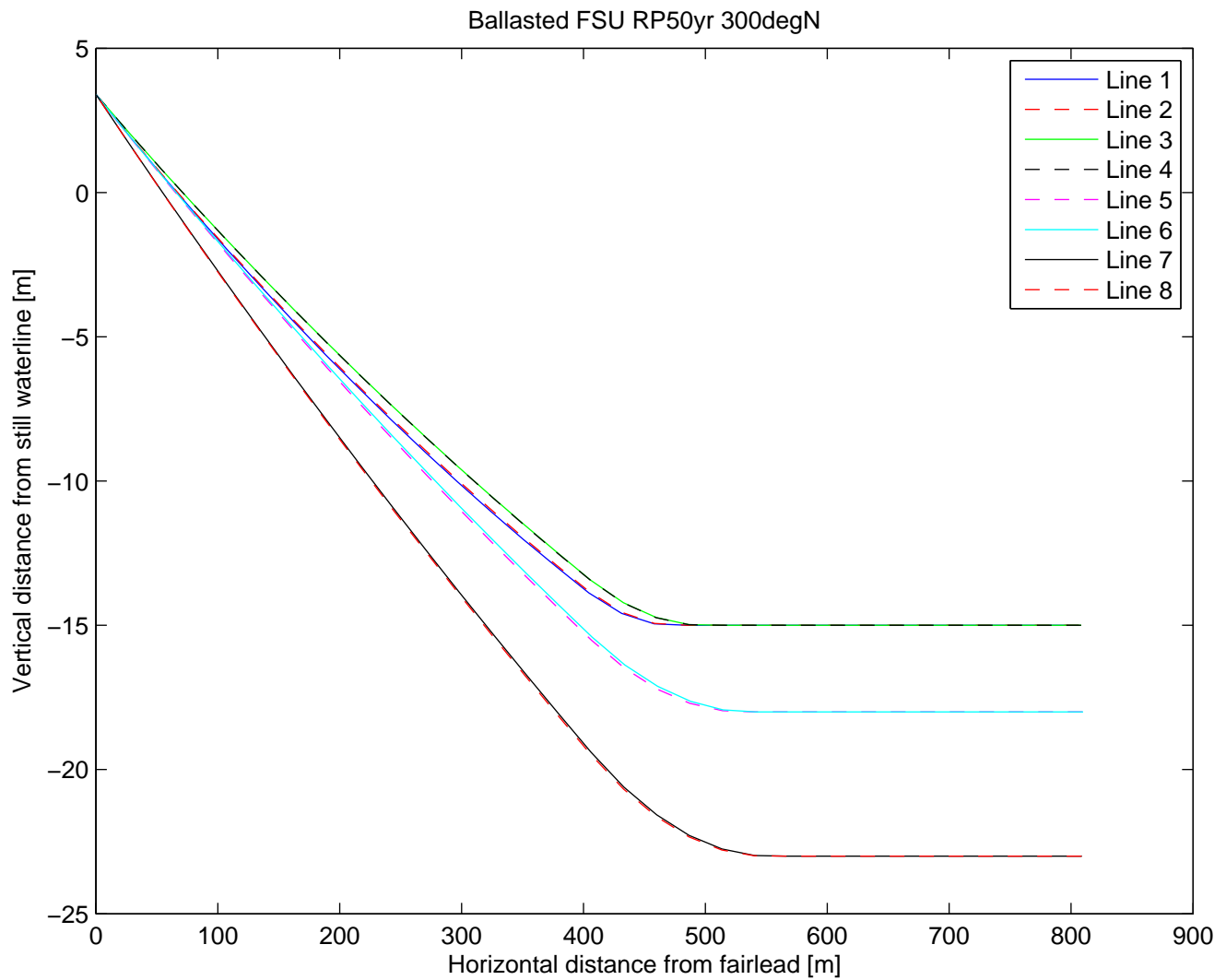


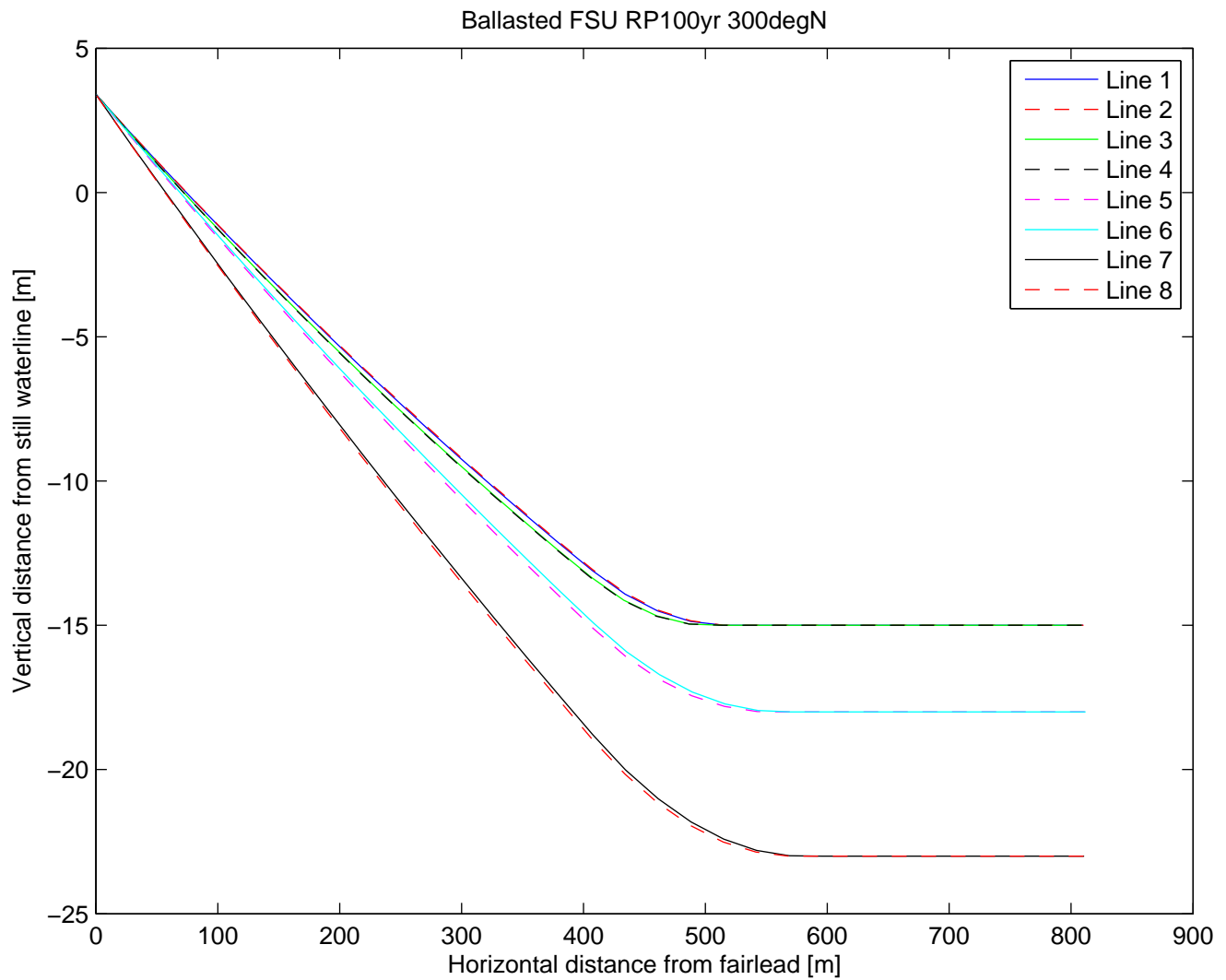


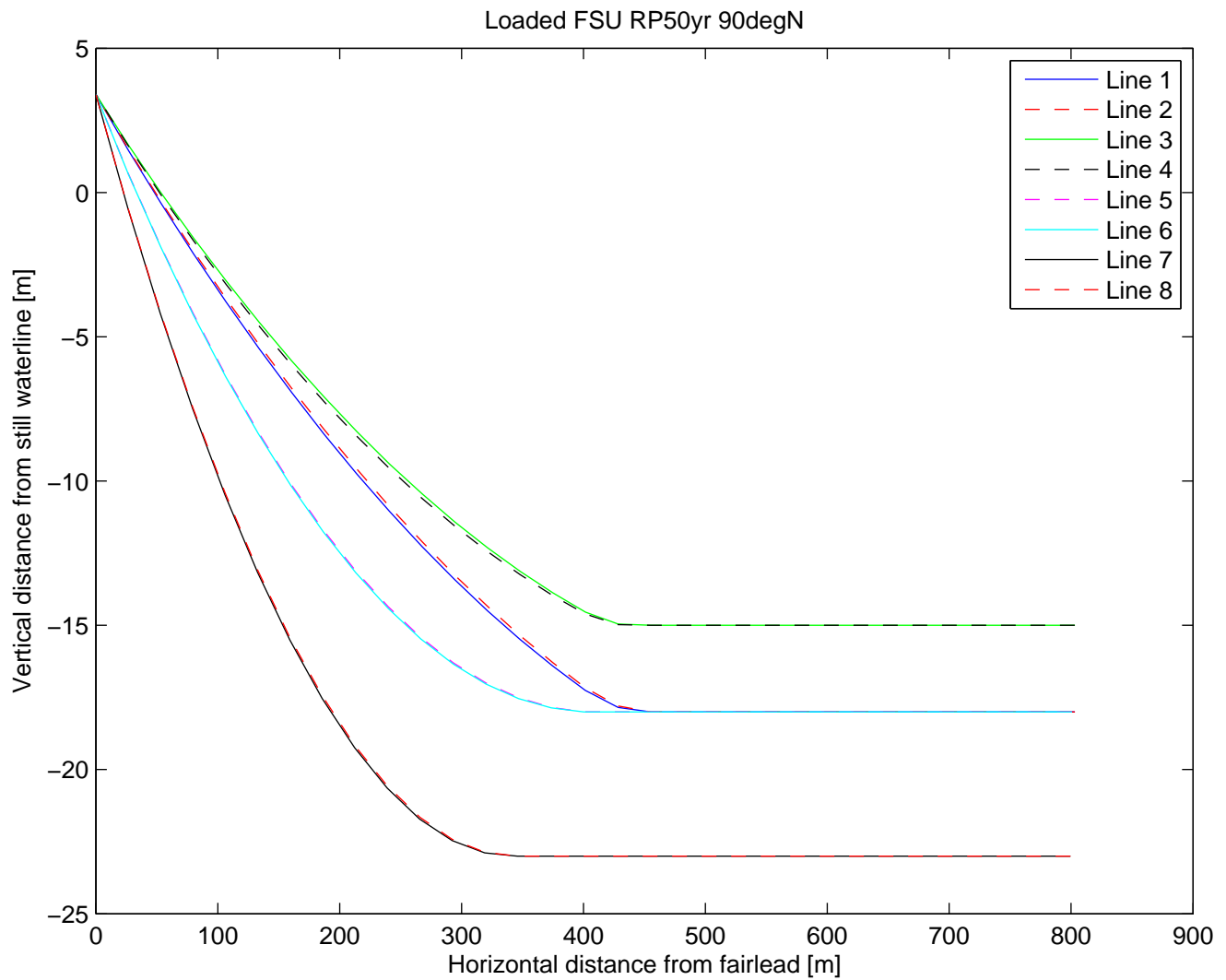


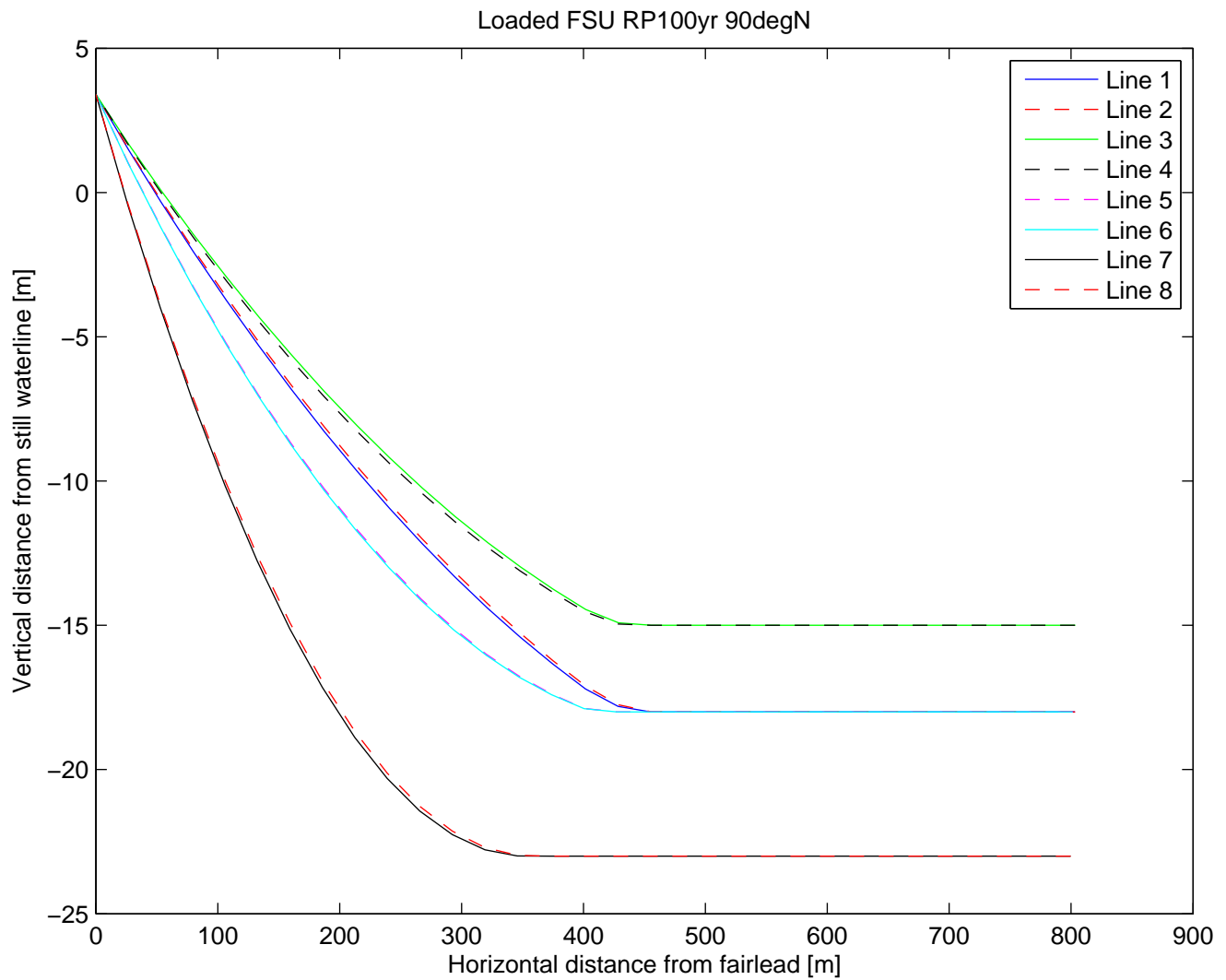


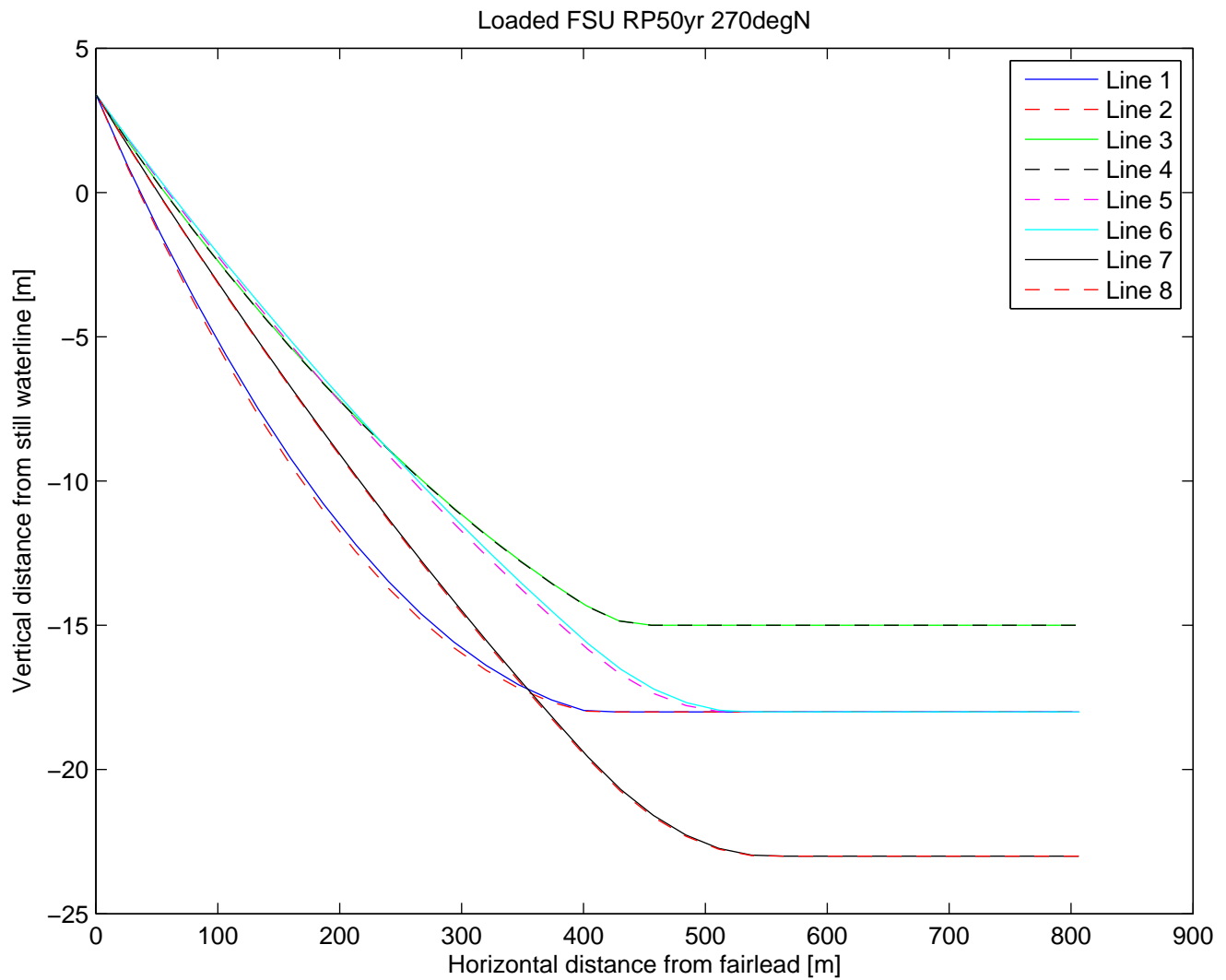


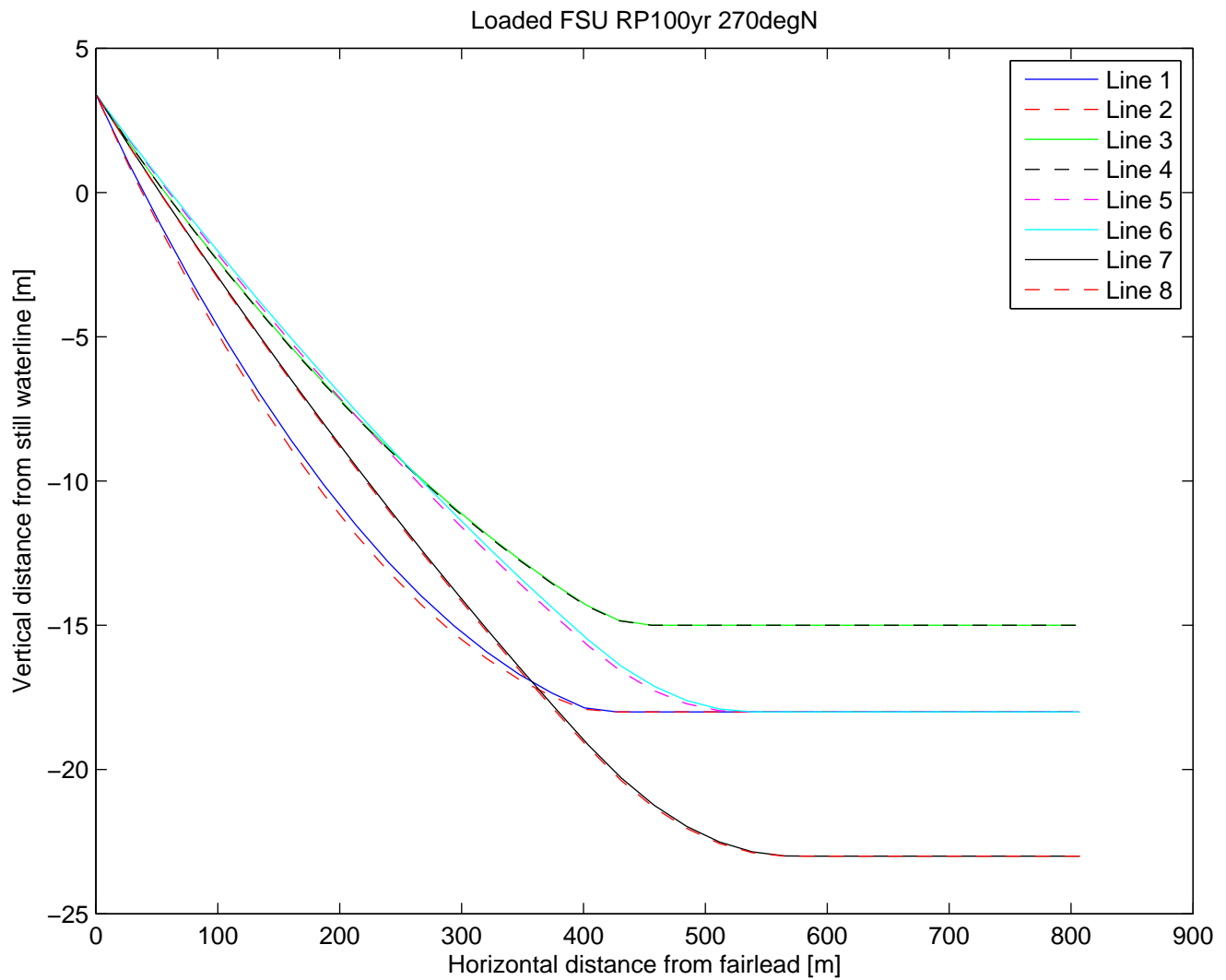


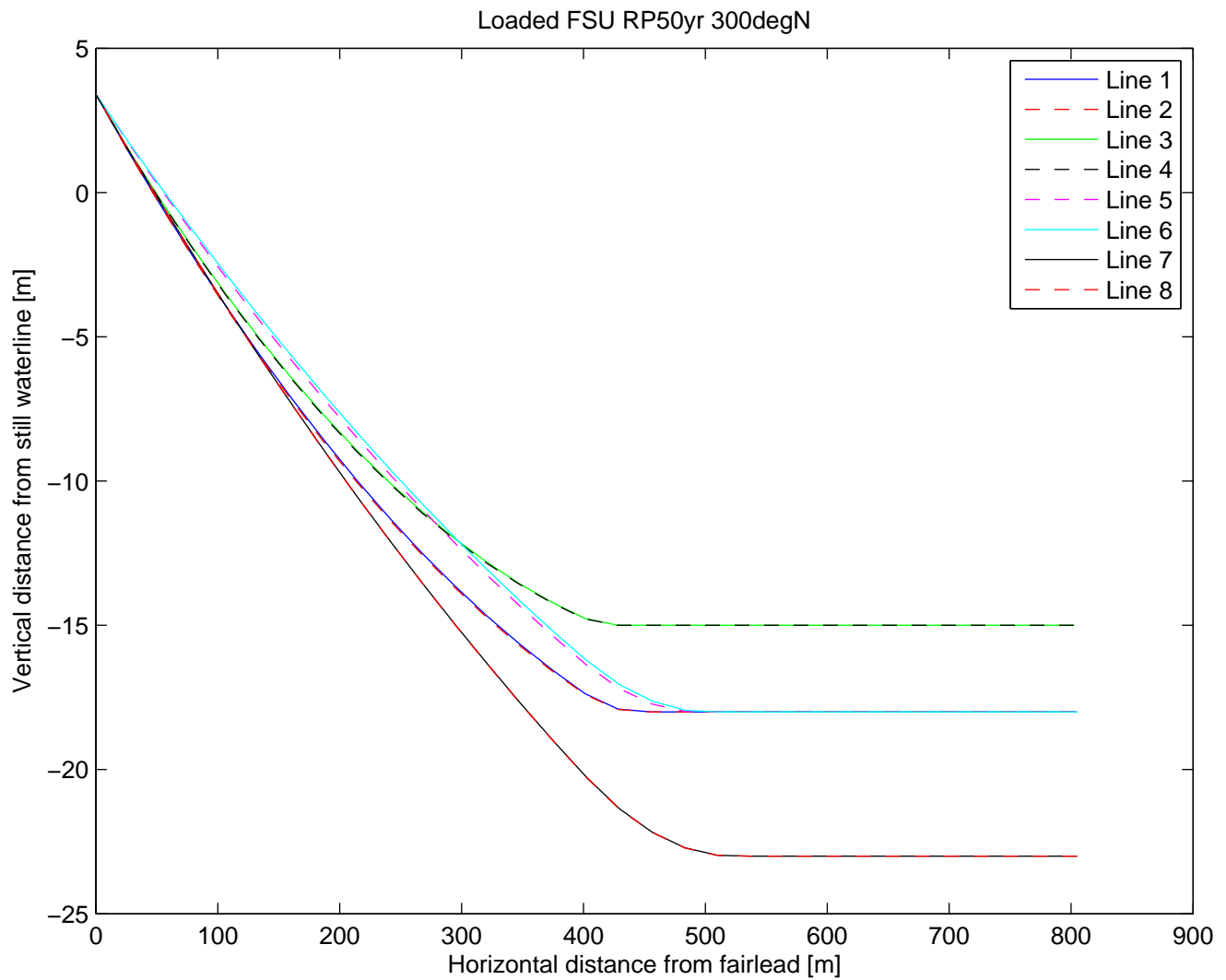


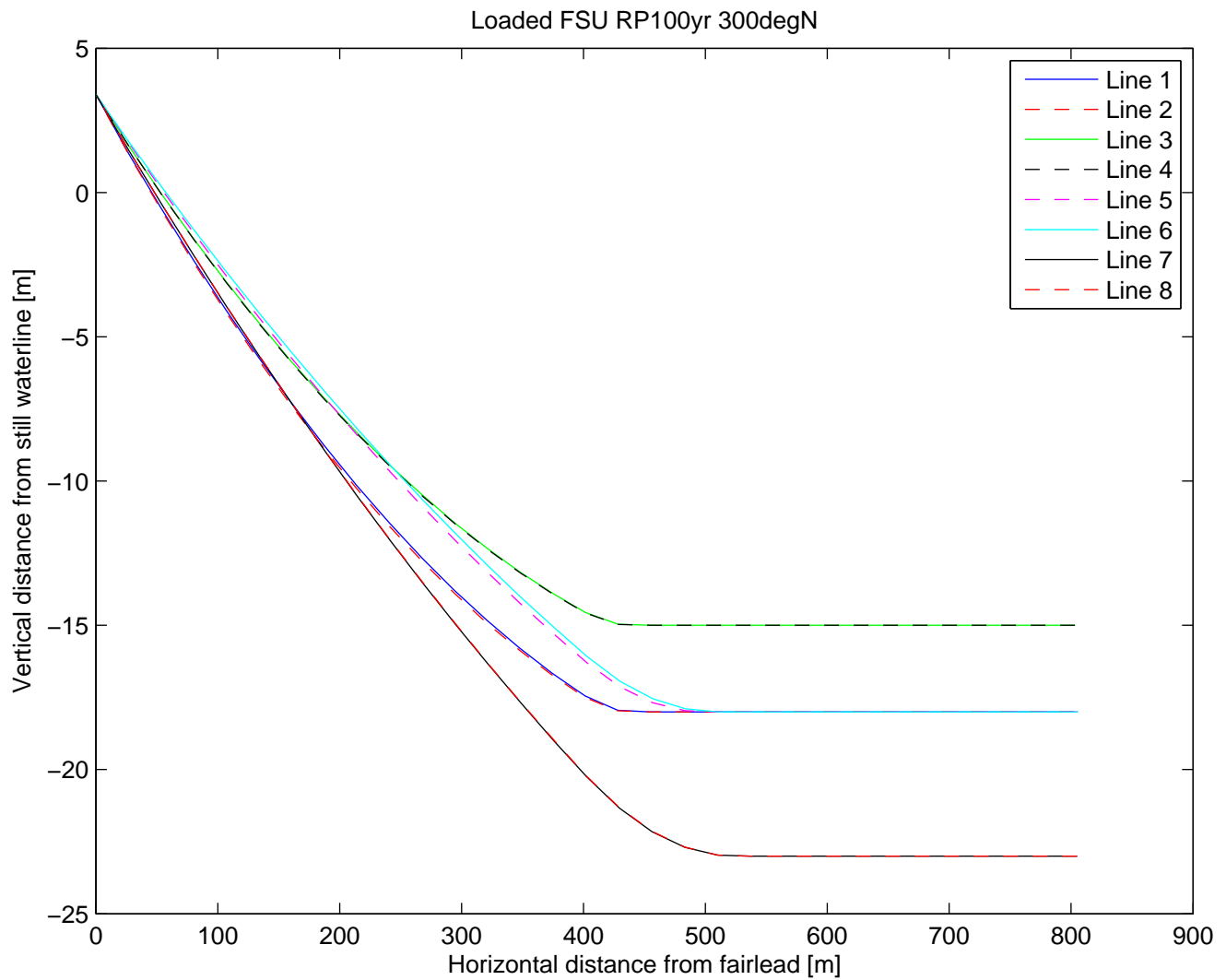


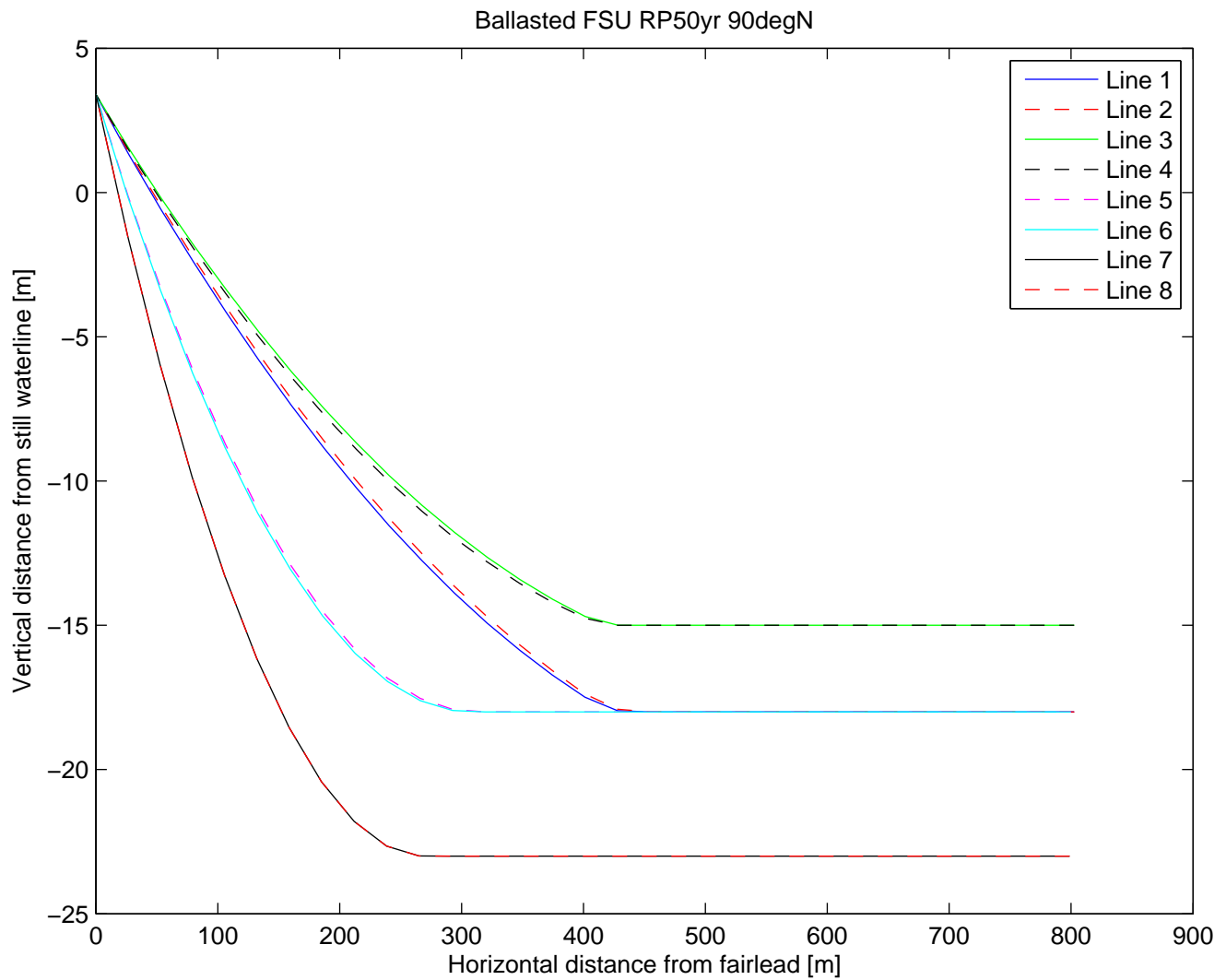


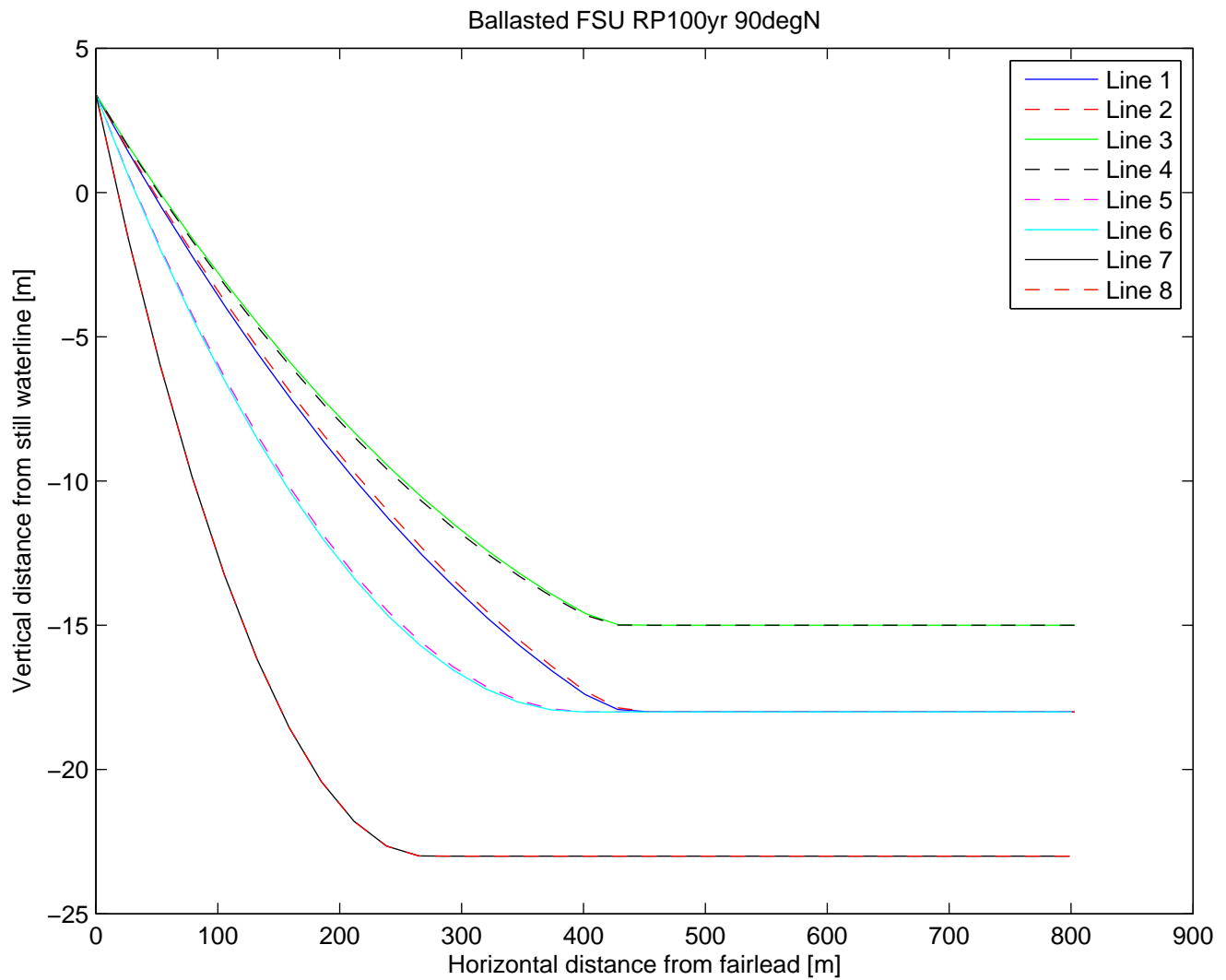


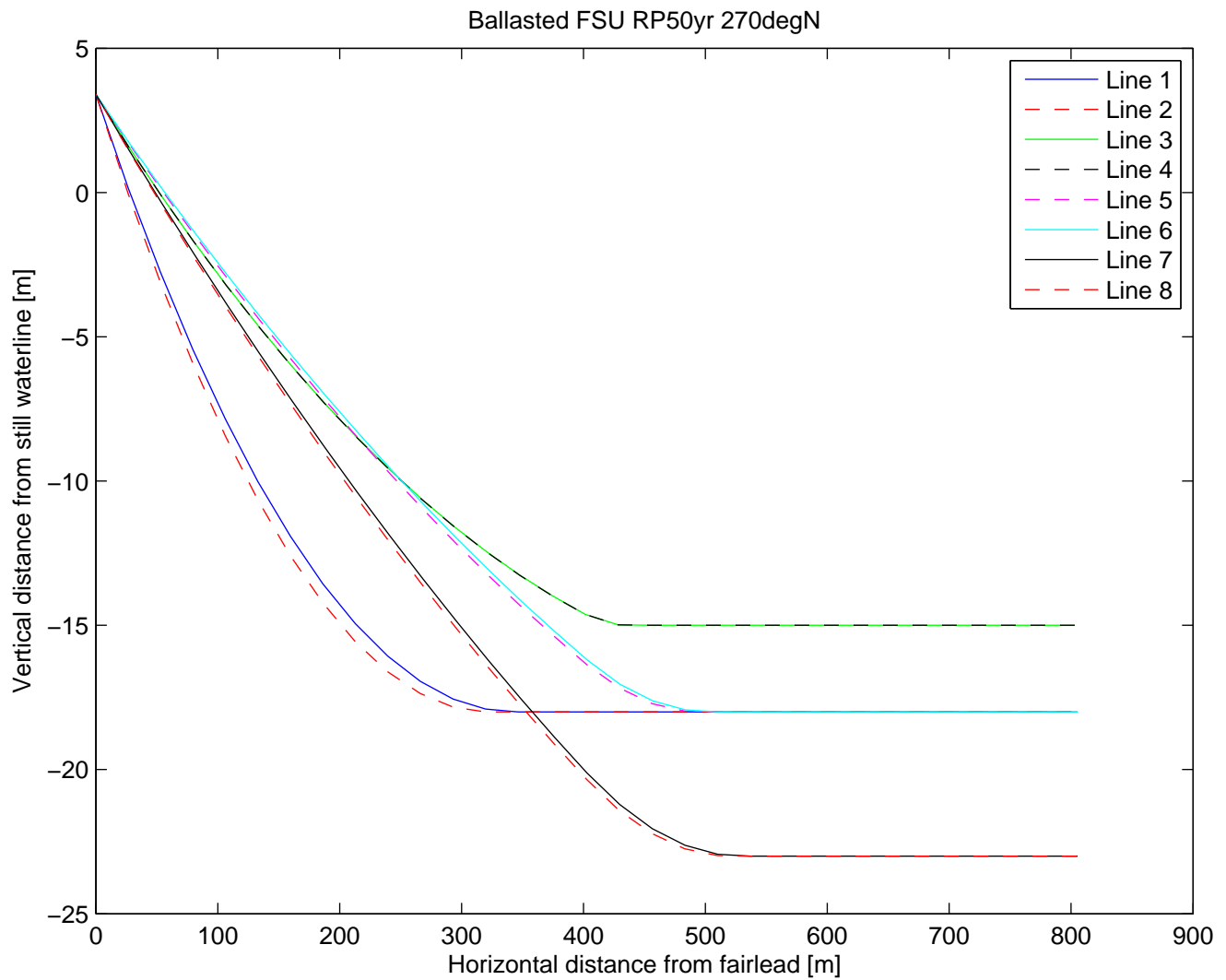


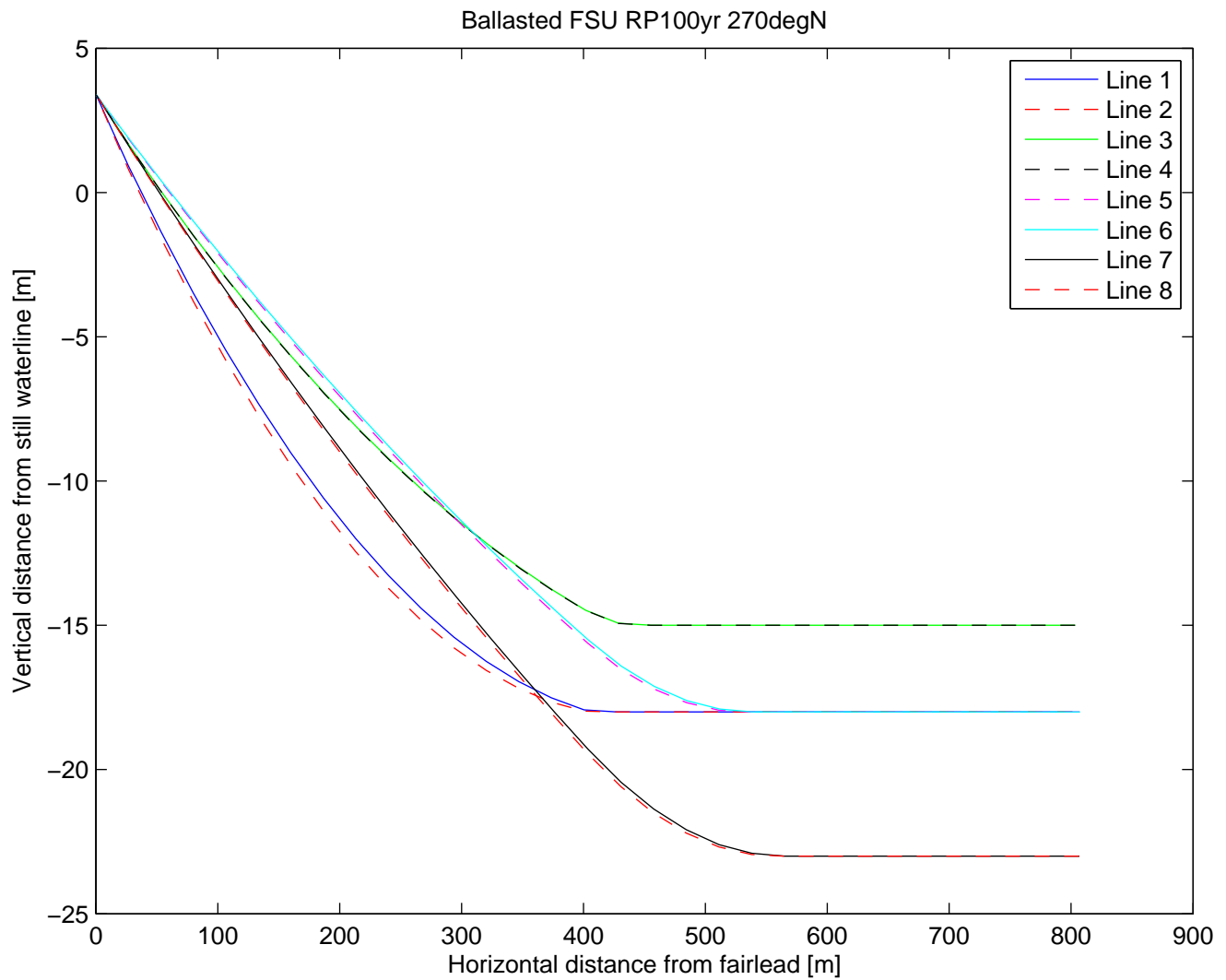


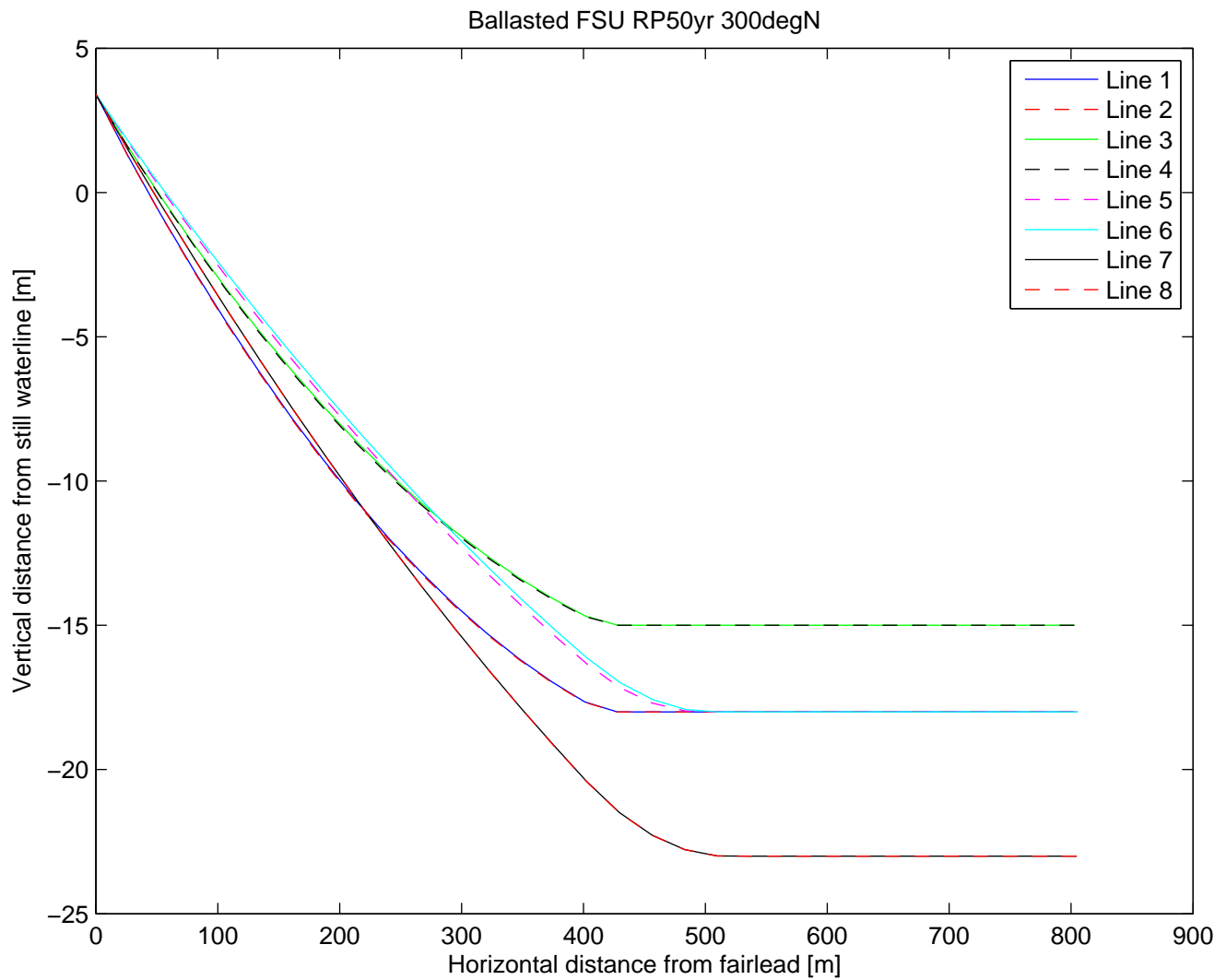


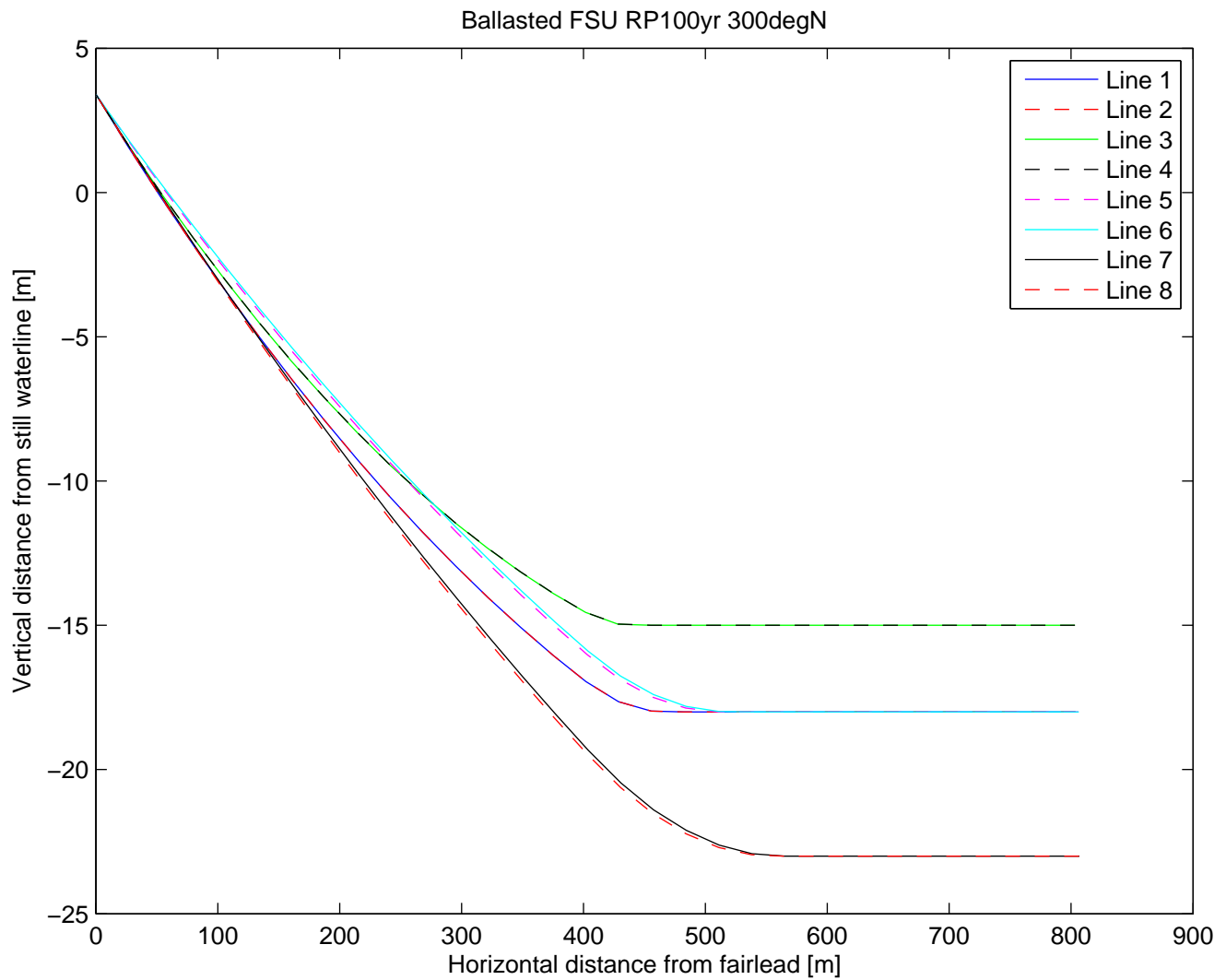












APPENDIX A04 MEMO MULTI-BUOY MOORING FEASIBILITY

To : Thomas Zarkadas, Paul Duncan, Catherine Halpin, Gianluca Orlandi
From : Henri van der Heiden
CC : Johan Dekker
Date : 2015-01-22
Project No : 27689
Subject : Feasibility analysis of multi-buoy mooring in worst case 100 yr. storm condition

In this memo the feasibility of multi-buoy storm mooring is assessed through two analyses: the static analysis of a single mooring buoy, and the static analysis of a multi-mooring buoy system.

Single mooring buoy characteristics

The following linear schematization applies to the selected mooring buoy, based on data from a typical large available mooring buoy. Assumptions on the single mooring buoy configuration are listed below:

Assumptions and Characteristics

General parameters

Water depth [D]	18.5 m
Lpp FSU	135 m
Lateral windage area FSU [A]	7,570 m ²
Cy (wind at 90 deg)	0.903
Cz (wind at 90 deg)	-0.0276

Buoy characteristics

Weight	2,500 kg
Height	2.0 m
Diameter	4.0 m
Draft (incl. chain)	0.4 m
Max. submerged height	1.6 m
Net buoyancy	20,000 kg

Chain (76mm R3) characteristics

Mass in air	126 kg/m
Submerged weight	1,080 N/m
Total length [L]	19 m

The value of S will be 2.0 m. The ratio between the horizontal restoring force and the buoyancy force is then given by:

$$F_{restoring}^{horizontal} / F_{buoyancy} = \sqrt{L^2 - (D - S)^2} / (D - S) = 0.57.$$

As the max. buoyancy force is 196.2 kN (20,000 kg), this gives the max. horizontal restoring force is 112 kN per mooring buoy.

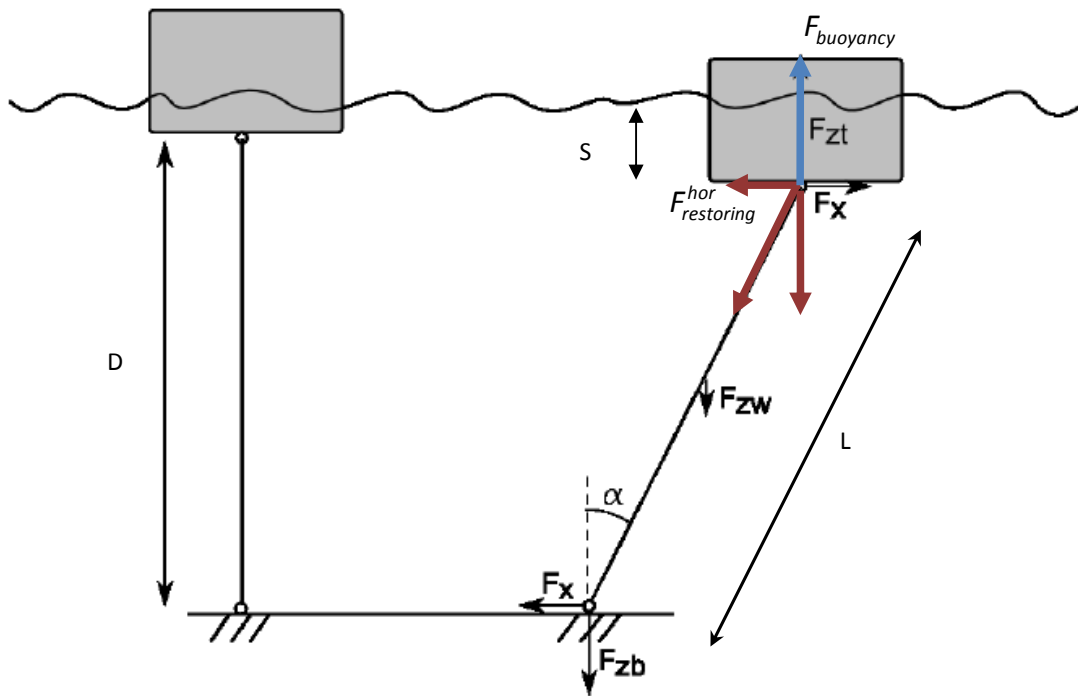


Figure 1: Single mooring buoy, schematic picture.

Note: a larger chain length can be used, to obtain a higher maximal horizontal restoring force, but will also create a stiffer mooring buoy spring. The horizontal distance in which the restoring force increases from zero to max. restoring force will become smaller, after which the system is governed by the stiffness of the chain.

Multi-buoy mooring

The feasibility of using a multi-buoy mooring as the one schematized above is examined through the system depicted in the figure below. The circles depict a (group of) mooring buoys. The static computation is based on what considered to be the worst case: the 100 yr condition, wind with an average speed of 20.4 m/s beam-on portside.

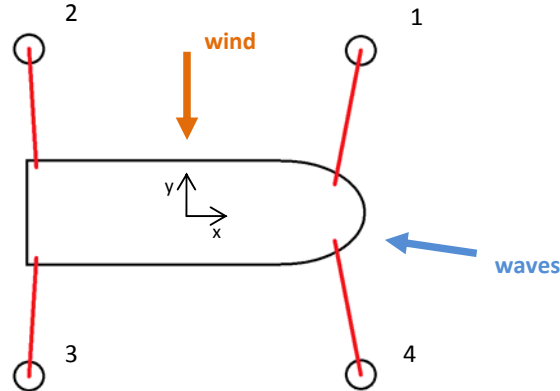


Figure 2: Schematic multi mooring buoy configuration. Mooring buoy groups are indicated by a circle. Moments are assumed around centreline mid-ship. Only wind loads are computed.

The mean wind forces acting on the FSU are summarized in the table below. The dominant contribution in this configuration is the wind load and the mean wave loads are negligible in comparison. The wind loads are given by

$$F_y = 0.5 \rho \cdot A \cdot C_y \cdot V^2$$

$$M_z = 0.5 \rho \cdot A \cdot L_{pp} \cdot C_z \cdot V^2$$

Force/Moment	Mean wind force/moments
Wind F_y	-1,778 kN
Wind M_z	14,673 kN.m

Table 1: Total mean wind forces and moments acting on the FSU in the selected environmental conditions.

To arrive at a static equilibrium, the mooring buoy groups 1 and 2 should provide around 889 kN each to compensate for the sway force. Additionally, to compensate for the positive yaw moment, group 2 should provide an additional 15,000 kN.m / 135 m = + 111 kN, and group 4 an additional -111 kN.

The maximum load on an individual group (group 1 in this example) can therefore be estimated to be at the very least 889 kN to arrive at a static equilibrium.

Conclusions and recommendations

With the single mooring buoys described here and chain length assumed above solutions can be sought in the following directions, but the possibilities are *limited*:

- Either the amount of buoys should be at least 8 per group, but this *makes the system stiffer*,



- or the chain length should be increased, at the cost of a stiffer system,
- or a mooring buoy with a significantly larger net buoyancy should be utilized.

An *alternative configuration* could involve the FSU connected to a spread-moored multi-buoy mooring system. The system will be more softly moored than the buoy exemplified above, but will also result in a larger footprint of the FSU in the Bay.

**APPENDIX A05 SIDE-BY-SIDE STUDY ENVIRONMENTAL
CONDITIONS**

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1	207	13.80	188	1.54	4.95	251	0.00	0.00
2	203	12.34	188	1.58	5.06	237	0.01	0.32
3	199	12.11	188	1.59	5.15	231	0.04	1.07
4	193	12.27	188	1.59	5.17	229	0.06	1.38
5	201	12.53	188	1.63	5.24	234	0.02	0.80
6	207	12.67	188	1.66	5.26	240	0.00	0.00
7	210	11.76	188	1.65	5.26	228	0.02	1.74
8	215	11.46	188	1.60	5.21	190	0.30	5.86
9	216	10.41	188	1.51	5.07	192	0.44	6.05
10	145	13.37	185	1.55	5.19	197	0.05	5.38
11	145	14.19	186	1.68	5.43	195	0.01	6.17
12	142	15.98	187	1.83	5.63	191	0.18	5.81
13	148	15.59	188	2.01	5.93	181	0.01	3.92
14	154	14.88	188	2.11	6.15	190	0.20	6.44
15	160	14.40	189	2.18	6.29	195	0.03	4.62
16	165	13.53	189	2.18	6.36	196	0.18	7.12
17	171	12.65	188	2.10	6.19	195	0.31	7.08
18	159	10.65	187	1.81	5.62	193	0.67	6.94
19	173	10.33	186	1.69	5.47	194	0.63	6.96
20	192	9.31	185	1.41	4.94	193	0.74	6.94
21	243	15.85	194	1.46	4.91	191	0.37	5.75
22	114	16.22	186	1.52	6.14	94	0.01	2.52
23	113	16.41	186	1.57	6.35	334	0.00	0.00
24	106	16.35	186	1.58	6.54	231	0.01	1.44
25	104	17.24	187	1.59	6.68	231	0.01	1.34
26	104	18.01	187	1.63	6.85	319	0.00	0.00
27	107	17.08	187	1.68	7.03	191	0.05	7.41
28	104	18.29	187	1.75	7.24	354	0.00	0.00
29	102	19.01	188	1.84	7.42	199	0.09	7.85
30	99	19.16	188	1.93	7.67	201	0.16	7.94
31	97	18.88	188	1.99	7.91	194	0.29	8.33
32	96	18.64	188	2.04	8.09	197	0.26	8.16
33	92	19.94	189	2.09	8.22	197	0.27	8.15
34	87	19.17	189	2.09	8.36	197	0.41	8.32
35	83	18.98	189	2.10	8.39	197	0.38	8.82
36	80	18.78	189	2.02	8.37	195	0.49	8.68
37	78	18.55	189	1.95	8.33	194	0.50	8.70
38	77	18.34	188	1.89	8.31	194	0.50	8.74
39	78	16.16	188	1.77	8.15	193	0.63	8.79
40	76	17.66	188	1.78	8.25	194	0.42	8.78
41	76	18.03	189	1.78	8.51	196	0.46	8.34
42	71	17.36	188	1.61	7.61	196	0.63	8.43
43	62	16.91	188	1.43	7.09	195	0.84	8.38
44	58	16.42	188	1.34	6.85	195	0.85	8.41
45	153	13.81	186	1.57	5.16	19	0.00	0.00
46	144	13.24	186	1.60	5.28	202	0.03	4.79
47	139	12.98	186	1.58	5.30	191	0.13	5.85

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
48	137	12.89	186	1.54	5.29	191	0.11	5.83
49	138	13.16	185	1.54	5.31	216	0.05	1.89
50	143	12.71	186	1.56	5.34	189	0.01	3.97
51	149	12.76	186	1.59	5.40	177	0.01	3.72
52	151	13.32	186	1.66	5.49	195	0.02	6.04
53	156	13.12	186	1.72	5.57	195	0.02	6.10
54	160	13.05	187	1.76	5.67	199	0.04	6.06
55	161	13.08	187	1.79	5.73	195	0.02	4.63
56	158	14.13	187	1.83	5.78	195	0.02	4.68
57	170	12.15	187	1.79	5.65	195	0.18	6.60
58	118	15.02	185	1.54	5.50	190	0.31	6.07
59	121	14.77	185	1.65	5.69	191	0.24	6.66
60	124	14.33	186	1.72	5.86	190	0.26	6.58
61	133	10.34	184	1.46	5.38	191	0.62	6.69
62	129	10.70	185	1.46	5.44	192	0.61	6.91
63	131	10.76	185	1.46	5.54	193	0.57	7.03
64	169	13.16	185	1.54	5.00	25	0.00	0.00
65	172	13.66	186	1.62	5.13	330	0.00	0.00
66	173	13.77	186	1.70	5.29	200	0.03	5.47
67	174	13.98	187	1.77	5.44	199	0.02	4.03
68	171	13.26	187	1.78	5.48	192	0.08	5.68
69	171	14.40	187	1.80	5.51	231	0.01	0.66
70	173	14.49	187	1.83	5.55	231	0.01	0.70
71	175	14.11	187	1.85	5.57	201	0.02	6.07
72	179	12.93	187	1.82	5.57	192	0.18	5.70
73	184	11.57	187	1.78	5.53	199	0.07	6.80
74	185	7.58	183	1.16	4.26	190	1.03	6.08
75	161	12.78	185	1.51	5.06	196	0.07	5.34
76	157	12.65	185	1.55	5.15	190	0.12	4.98
77	153	12.74	186	1.59	5.24	191	0.11	5.09
78	151	12.93	186	1.63	5.33	223	0.02	1.29
79	149	10.64	186	1.56	5.21	190	0.33	5.72
80	145	11.47	186	1.56	5.34	191	0.19	5.78
81	146	11.94	186	1.56	5.34	199	0.04	5.06
82	146	12.32	186	1.58	5.36	200	0.04	4.97
83	147	12.47	186	1.61	5.38	202	0.03	4.73
84	148	12.50	186	1.64	5.43	206	0.02	4.25
85	145	12.66	186	1.67	5.47	191	0.14	5.76
86	146	13.16	186	1.70	5.52	209	0.04	3.74
87	148	13.26	186	1.74	5.58	254	0.00	0.00
88	155	13.71	187	1.80	5.66	196	0.07	5.97
89	161	13.30	187	1.86	5.76	197	0.03	6.69
90	168	12.91	187	1.89	5.80	196	0.16	6.65
91	170	12.25	187	1.88	5.74	194	0.28	6.57
92	175	11.53	188	1.93	5.94	198	0.22	7.22
93	176	10.67	187	1.77	5.52	192	0.53	6.63
94	176	10.23	186	1.70	5.44	192	0.58	6.66

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
95	183	9.40	185	1.50	5.01	191	0.73	6.64
96	189	8.40	184	1.30	4.60	191	0.81	6.62
97	151	9.92	186	1.49	5.34	190	0.26	5.76
98	143	11.86	186	1.51	5.47	213	0.01	3.96
99	141	12.88	186	1.54	5.50	230	0.02	0.79
100	137	11.97	186	1.55	5.51	211	0.05	3.44
101	138	12.65	186	1.57	5.58	212	0.05	3.32
102	135	13.90	186	1.63	5.68	203	0.04	5.02
103	135	15.07	186	1.72	5.81	204	0.04	4.97
104	136	16.06	187	1.85	5.98	202	0.04	5.66
105	139	17.05	187	2.00	6.19	203	0.04	5.23
106	138	16.90	188	2.14	6.49	228	0.02	0.97
107	142	16.69	189	2.23	6.68	194	0.15	7.03
108	143	16.81	189	2.31	6.82	199	0.12	7.23
109	144	17.06	189	2.37	6.95	200	0.09	7.32
110	151	16.05	190	2.40	7.01	201	0.12	7.94
111	162	14.83	189	2.36	6.78	200	0.33	7.90
112	171	11.22	187	1.92	5.68	197	0.87	7.60
113	190	8.91	184	1.39	4.67	195	1.11	7.63
114	223	7.33	182	0.99	4.08	195	1.17	7.65
115	220	10.66	186	1.31	4.74	197	0.82	7.60
116	214	11.58	187	1.44	4.94	197	0.72	7.63
117	210	12.63	187	1.56	5.04	198	0.64	7.65
118	211	12.88	188	1.62	5.18	198	0.61	7.66
119	217	12.48	189	1.58	5.13	198	0.60	7.63
120	222	12.14	190	1.51	5.06	198	0.60	7.62
121	236	12.05	191	1.43	4.91	197	0.61	7.61
122	233	11.92	191	1.42	4.91	198	0.59	7.64
123	232	12.09	191	1.44	4.94	198	0.55	7.68
124	231	11.55	191	1.42	4.94	198	0.54	7.69
125	226	9.02	189	1.15	4.43	193	1.09	7.13
126	232	8.55	189	1.01	4.10	192	1.21	7.11
127	235	7.83	189	0.84	3.73	192	1.26	7.04
128	128	15.57	185	1.55	5.84	198	0.05	6.64
129	131	16.08	186	1.70	6.06	200	0.09	6.96
130	135	16.73	186	1.86	6.30	201	0.14	7.25
131	135	16.54	187	1.99	6.46	201	0.17	7.44
132	137	16.84	188	2.15	6.76	201	0.20	7.52
133	139	16.77	189	2.27	6.97	201	0.23	7.67
134	139	16.83	189	2.36	7.09	201	0.18	8.03
135	139	16.88	190	2.45	7.30	201	0.19	8.03
136	143	17.34	190	2.53	7.40	201	0.21	8.06
137	142	17.97	190	2.62	7.52	201	0.19	8.01
138	144	18.23	190	2.71	7.62	201	0.23	8.00
139	146	17.95	191	2.77	7.76	200	0.32	7.94
140	149	17.58	191	2.81	7.69	200	0.15	8.60
141	151	17.23	191	2.82	7.71	201	0.19	8.64

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
142	147	14.57	191	2.68	7.49	197	0.48	8.38
143	147	15.17	191	2.63	7.55	199	0.28	8.56
144	151	15.62	190	2.58	7.49	200	0.25	8.63
145	158	15.18	191	2.56	7.52	199	0.43	8.23
146	165	13.46	190	2.33	6.68	198	0.65	8.09
147	175	11.83	188	2.01	6.03	197	0.91	7.97
148	180	11.33	187	1.81	5.56	196	0.95	7.93
149	202	9.37	185	1.46	4.94	195	1.12	7.99
150	221	9.04	184	1.18	4.45	195	1.13	8.00
151	230	9.40	184	1.13	4.36	196	1.08	7.95
152	107	14.87	184	1.44	5.62	192	0.55	7.18
153	111	15.07	185	1.56	5.82	193	0.45	7.31
154	108	15.57	185	1.59	5.89	193	0.50	7.27
155	105	16.26	185	1.61	5.97	193	0.54	7.19
156	105	16.47	186	1.66	6.10	193	0.55	7.14
157	107	16.12	186	1.75	6.22	193	0.51	7.20
158	108	15.90	186	1.82	6.43	193	0.51	7.15
159	116	14.40	187	1.88	6.62	194	0.43	7.10
160	115	14.73	187	1.94	6.76	195	0.39	7.28
161	114	14.73	187	1.95	6.85	196	0.42	7.46
162	110	14.51	187	1.91	6.68	196	0.50	7.65
163	107	14.10	187	1.85	6.63	197	0.56	7.64
164	104	13.75	187	1.78	6.57	197	0.57	7.61
165	107	12.37	186	1.59	6.28	198	0.71	7.62
166	106	12.40	186	1.59	6.57	198	0.68	7.68
167	103	12.17	186	1.50	6.33	198	0.68	7.74
168	101	11.82	185	1.38	5.99	198	0.68	7.76
169	135	13.96	185	1.52	5.67	194	0.04	6.38
170	136	14.56	185	1.59	5.71	194	0.04	6.39
171	133	14.40	186	1.65	5.79	194	0.03	6.37
172	144	13.40	186	1.69	5.77	199	0.12	6.68
173	155	11.95	186	1.63	5.54	200	0.23	6.85
174	163	11.10	186	1.58	5.44	199	0.29	6.91
175	165	10.84	186	1.55	5.39	199	0.30	7.03
176	167	10.27	185	1.46	5.07	199	0.38	7.26
177	181	11.48	186	1.59	5.25	222	0.05	2.17
178	182	10.93	187	1.65	5.47	190	0.32	5.75
179	184	9.46	185	1.47	4.99	190	0.57	6.23
180	186	10.67	186	1.60	5.34	192	0.28	6.56
181	198	12.00	186	1.62	5.35	194	0.27	6.66
182	229	13.81	185	1.42	4.85	192	0.53	6.41
183	126	13.55	185	1.52	5.57	117	0.01	3.22
184	129	14.26	186	1.65	5.82	131	0.01	3.20
185	130	14.73	186	1.79	6.01	166	0.02	5.21
186	133	13.94	187	1.90	6.24	200	0.08	6.73
187	133	13.54	187	1.96	6.34	193	0.33	7.19
188	130	12.80	187	1.89	6.23	193	0.64	7.23

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
189	134	12.51	187	1.92	6.35	193	0.66	7.26
190	139	11.89	187	1.88	6.15	194	0.66	7.21
191	149	11.83	187	1.93	6.18	196	0.46	7.19
192	160	10.37	186	1.68	5.51	196	0.72	7.25
193	173	9.20	185	1.40	4.95	195	0.82	7.18
194	284	19.77	206	1.25	4.46	191	0.90	6.74
195	139	12.89	186	1.56	5.27	191	0.21	5.90
196	144	12.83	186	1.70	5.56	190	0.23	5.76
197	150	11.53	187	1.76	5.62	190	0.29	6.57
198	157	10.76	186	1.71	5.57	191	0.42	6.62
199	165	10.27	186	1.63	5.45	191	0.45	6.62
200	122	15.50	185	1.61	5.70	191	0.05	7.01
201	127	13.60	186	1.69	5.89	192	0.20	6.50
202	133	11.02	186	1.71	5.91	195	0.34	7.06
203	186	11.70	185	1.58	4.89	194	0.13	5.17
204	193	9.22	185	1.56	5.01	190	0.32	5.69
205	204	6.76	181	0.87	3.62	190	1.23	5.54
206	183	11.79	186	1.55	5.08	212	0.01	3.21
207	191	10.28	185	1.53	5.09	190	0.26	5.68
208	192	10.53	186	1.56	5.26	190	0.22	5.67
209	197	10.43	186	1.52	5.19	190	0.29	5.86
210	171	12.99	185	1.52	5.02	337	0.00	0.00
211	171	13.36	186	1.62	5.16	198	0.00	5.05
212	171	14.08	187	1.74	5.38	243	0.00	0.00
213	178	13.07	187	1.80	5.52	190	0.16	5.63
214	185	12.18	187	1.82	5.58	197	0.08	6.74
215	177	9.72	186	1.59	5.10	190	0.71	6.13
216	193	9.68	185	1.52	5.04	190	0.61	6.24
217	214	9.84	185	1.41	4.91	190	0.59	6.26
218	229	15.59	192	1.53	5.10	196	0.32	6.99
219	236	14.58	193	1.62	5.30	196	0.32	6.92
220	301	11.88	199	0.84	3.62	191	1.26	6.84
221	179	12.34	186	1.52	5.25	201	0.02	6.30
222	172	11.07	186	1.56	5.32	246	0.00	0.00
223	178	11.98	186	1.60	5.39	201	0.02	6.31
224	188	12.64	186	1.60	5.20	196	0.20	6.64
225	209	13.51	185	1.51	4.79	193	0.48	6.67
226	236	13.75	187	1.35	4.54	193	0.68	6.79
227	232	12.78	189	1.40	4.68	194	0.63	6.95
228	270	19.01	209	1.51	5.24	196	0.07	9.67
229	276	18.72	210	1.49	5.22	191	0.36	7.73
230	281	18.33	215	1.42	5.04	191	0.54	7.79
231	273	22.93	219	1.51	5.06	193	0.15	9.70
232	266	21.37	217	1.61	5.46	4	0.00	0.00
233	268	20.08	213	1.68	5.70	33	0.00	0.17
234	278	18.73	214	1.70	5.68	191	0.61	4.85
235	289	21.28	218	1.75	5.89	194	0.56	8.27

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
236	298	17.07	224	1.71	5.88	191	0.81	5.96
237	322	15.05	230	1.49	5.39	197	1.07	9.40
238	342	15.23	252	1.12	4.31	203	1.18	7.84
239	350	17.84	263	1.09	4.05	200	1.23	8.66
240	353	20.22	292	0.99	3.57	200	1.17	8.50
241	128	14.31	185	1.51	5.40	122	0.01	2.31
242	128	14.97	185	1.58	5.52	193	0.11	5.80
243	130	15.62	185	1.68	5.70	194	0.13	5.81
244	132	16.29	186	1.80	5.93	124	0.01	2.50
245	136	17.12	187	1.92	6.12	200	0.04	6.79
246	138	17.76	187	2.04	6.31	196	0.18	6.62
247	133	18.02	188	2.14	6.51	350	0.00	0.00
248	136	18.43	188	2.23	6.70	107	0.01	3.58
249	138	18.65	189	2.30	6.82	200	0.10	7.31
250	138	18.26	189	2.35	6.92	198	0.24	7.20
251	139	17.21	189	2.37	7.04	198	0.28	7.21
252	139	16.53	189	2.36	6.96	197	0.07	7.82
253	129	13.65	188	2.20	6.78	196	0.43	7.62
254	131	13.68	188	2.11	6.73	198	0.26	7.62
255	132	12.78	188	2.00	6.58	199	0.33	7.84
256	133	11.51	186	1.75	6.02	197	0.60	7.32
257	131	11.01	186	1.64	5.88	197	0.63	7.37
258	129	11.25	186	1.62	5.92	197	0.55	7.40
259	144	9.66	184	1.35	5.20	197	0.67	7.42
260	125	14.93	186	1.59	6.15	199	0.03	6.73
261	124	14.81	186	1.69	6.38	201	0.06	7.43
262	121	14.64	187	1.75	6.56	199	0.09	7.35
263	119	14.63	187	1.80	6.75	198	0.11	7.29
264	117	14.79	187	1.83	6.92	216	0.07	1.99
265	115	14.18	187	1.83	6.97	200	0.13	8.26
266	115	14.67	188	1.84	7.10	198	0.08	6.53
267	115	15.21	188	1.86	7.15	204	0.06	5.74
268	114	16.00	188	1.89	7.17	209	0.04	4.95
269	116	15.50	188	1.92	7.19	211	0.02	4.77
270	116	14.86	188	1.93	7.21	211	0.02	4.78
271	117	13.65	187	1.88	6.93	200	0.25	8.25
272	115	13.13	187	1.82	6.77	200	0.32	8.26
273	115	12.90	187	1.78	6.71	200	0.34	8.26
274	116	13.18	187	1.80	6.95	200	0.29	8.30
275	115	13.46	188	1.81	7.14	200	0.21	8.31
276	115	13.73	188	1.82	7.18	201	0.15	8.28
277	111	14.78	188	1.81	7.18	191	0.22	5.14
278	109	14.99	188	1.80	7.12	191	0.21	5.21
279	108	15.27	187	1.78	7.06	192	0.19	7.67
280	109	15.49	187	1.77	7.01	191	0.19	5.28
281	106	15.40	187	1.76	6.97	192	0.19	7.78
282	106	15.17	187	1.74	6.94	192	0.17	7.81

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
283	108	14.42	187	1.71	6.89	195	0.20	7.74
284	107	15.59	187	1.70	6.87	192	0.17	7.77
285	106	15.86	187	1.69	6.84	191	0.18	7.33
286	105	15.88	187	1.69	6.79	191	0.18	7.38
287	105	15.61	187	1.67	6.75	191	0.18	7.38
288	106	15.23	187	1.64	6.69	192	0.20	7.26
289	112	15.09	187	1.63	6.62	192	0.21	7.16
290	114	14.86	187	1.63	6.55	194	0.04	6.92
291	117	14.35	186	1.62	6.47	199	0.07	7.19
292	120	13.77	186	1.60	6.38	201	0.10	7.34
293	122	13.11	186	1.56	6.21	201	0.13	7.35
294	125	12.25	185	1.51	5.93	201	0.18	7.44
295	138	14.69	185	1.61	5.40	195	0.01	6.15
296	139	14.93	186	1.74	5.61	190	0.17	5.71
297	139	15.19	187	1.85	5.84	204	0.04	4.99
298	124	16.60	187	1.87	5.93	191	0.43	6.62
299	130	16.32	187	1.97	6.15	190	0.30	6.53
300	135	15.91	188	2.05	6.35	190	0.19	6.43
301	138	15.62	188	2.12	6.50	23	0.00	0.00
302	143	15.72	189	2.19	6.62	200	0.07	7.32
303	147	15.42	189	2.25	6.72	198	0.21	7.19
304	139	10.88	186	1.75	5.63	195	0.87	7.24
305	147	11.29	187	1.88	6.03	196	0.71	7.41
306	152	10.71	186	1.72	5.65	197	0.82	7.56
307	154	9.42	185	1.43	5.01	196	0.97	7.58
308	153	8.62	183	1.23	4.58	196	1.03	7.60
309	143	11.05	187	1.68	6.00	198	0.68	7.74
310	154	9.66	185	1.42	5.24	197	0.83	7.70
311	128	13.04	185	1.52	5.39	191	0.15	5.66
312	133	12.32	186	1.59	5.58	190	0.23	5.74
313	137	11.56	186	1.63	5.55	191	0.29	6.57
314	139	11.05	186	1.61	5.54	191	0.45	6.65
315	124	11.84	186	1.58	5.55	191	0.62	6.80
316	126	10.96	185	1.52	5.44	191	0.71	6.86
317	134	9.25	184	1.29	4.91	192	0.81	6.85
318	128	13.24	185	1.52	5.53	164	0.01	5.03
319	133	11.55	185	1.52	5.52	192	0.11	6.59
320	169	13.19	186	1.56	5.21	241	0.00	0.00
321	165	12.19	186	1.60	5.26	242	0.00	0.00
322	160	10.70	185	1.53	5.15	234	0.02	0.76
323	146	12.44	185	1.52	5.42	199	0.17	7.88
324	150	11.93	185	1.54	5.38	200	0.20	7.91
325	150	11.01	185	1.52	5.30	201	0.23	8.01
326	136	12.55	185	1.57	5.50	198	0.09	5.97
327	147	11.23	186	1.57	5.50	198	0.05	6.57
328	141	10.75	185	1.51	5.42	192	0.14	6.48
329	142	12.82	185	1.54	5.57	201	0.13	7.45

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
330	143	12.88	185	1.59	5.65	201	0.13	7.73
331	140	11.75	185	1.59	5.65	201	0.20	7.87
332	145	11.11	185	1.55	5.50	200	0.24	7.65
333	147	11.09	185	1.54	5.50	201	0.23	7.68
334	148	11.35	186	1.55	5.54	201	0.20	7.79
335	149	11.12	186	1.54	5.49	201	0.19	7.70
336	151	10.89	186	1.53	5.44	201	0.19	7.58
337	153	10.15	186	1.50	5.28	196	0.16	5.97
338	150	11.24	186	1.53	5.33	191	0.09	6.58
339	150	11.51	186	1.55	5.36	197	0.04	5.79
340	150	11.24	186	1.56	5.38	191	0.05	6.38
341	150	11.08	186	1.56	5.38	191	0.07	6.29
342	152	11.30	186	1.56	5.38	201	0.02	6.59
343	151	11.26	186	1.55	5.38	201	0.02	6.46
344	148	11.05	186	1.54	5.35	201	0.03	4.79
345	145	10.69	186	1.51	5.32	191	0.11	5.74
346	169	13.05	186	1.57	5.06	198	0.17	4.46
347	170	13.73	187	1.71	5.29	207	0.07	3.94
348	176	16.03	188	1.90	5.57	190	0.08	5.69
349	174	15.67	189	2.07	5.87	191	0.12	6.56
350	176	15.78	190	2.18	6.10	191	0.29	6.56
351	180	15.31	190	2.26	6.30	191	0.31	6.57
352	187	14.38	190	2.27	6.35	201	0.03	7.37
353	194	13.43	190	2.20	6.28	193	0.18	6.95
354	202	13.94	190	2.15	6.22	199	0.10	7.31
355	212	13.62	190	2.03	5.96	195	0.25	7.09
356	219	13.54	189	1.87	5.67	191	0.45	6.59
357	224	13.32	189	1.80	5.46	191	0.45	6.59
358	224	13.16	190	1.75	5.39	191	0.41	6.59
359	223	13.14	191	1.71	5.39	192	0.36	6.60
360	224	13.10	191	1.68	5.38	192	0.33	6.59
361	215	13.15	191	1.72	5.47	191	0.29	6.56
362	215	13.31	192	1.71	5.50	192	0.25	6.60
363	220	12.58	192	1.66	5.41	193	0.27	6.72
364	226	12.41	192	1.63	5.39	193	0.27	6.70
365	230	12.50	192	1.61	5.35	196	0.21	7.13
366	225	14.22	193	1.64	5.42	197	0.21	7.16
367	225	15.08	194	1.72	5.55	197	0.21	7.17
368	225	15.94	194	1.82	5.71	197	0.21	7.18
369	222	15.81	195	1.90	5.85	194	0.28	7.03
370	222	15.33	195	1.95	5.96	193	0.41	7.07
371	225	14.47	195	1.95	6.02	192	0.49	7.13
372	240	15.25	195	1.91	5.93	195	0.28	7.03
373	255	14.83	195	1.79	5.80	192	0.62	7.10
374	266	15.49	196	1.61	5.36	192	0.81	7.19
375	265	15.00	198	1.54	5.17	192	0.76	7.19
376	260	14.61	198	1.57	5.28	192	0.55	7.16

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
377	254	14.27	198	1.56	5.29	193	0.30	7.02
378	243	13.78	198	1.55	5.31	197	0.18	7.20
379	243	12.84	197	1.50	5.23	195	0.23	7.06
380	194	11.80	186	1.55	5.03	215	0.08	2.60
381	189	12.05	187	1.65	5.29	265	0.00	0.00
382	199	11.50	187	1.67	5.37	190	0.25	5.68
383	216	10.98	186	1.52	4.99	190	0.46	5.89
384	227	10.40	186	1.39	4.81	190	0.58	5.99
385	245	16.59	195	1.62	5.22	195	0.22	6.73
386	245	15.95	196	1.74	5.56	195	0.19	6.69
387	245	15.60	197	1.78	5.72	192	0.43	7.12
388	248	16.96	197	1.81	5.79	193	0.28	6.97
389	253	17.48	198	1.85	5.86	193	0.17	6.48
390	259	16.84	199	1.84	5.90	193	0.38	7.74
391	264	15.32	200	1.73	5.62	191	0.65	7.68
392	263	13.09	200	1.58	5.32	191	0.79	7.71
393	259	11.85	199	1.37	4.82	194	0.83	6.99
394	242	15.77	198	1.68	5.77	188	0.03	6.38
395	242	14.47	197	1.71	5.74	347	0.00	0.00
396	243	13.77	197	1.67	5.69	209	0.16	4.48
397	243	12.38	197	1.54	5.37	209	0.26	4.58
398	162	13.76	185	1.54	5.04	195	0.01	4.28
399	163	14.20	186	1.65	5.21	190	0.11	4.99
400	165	13.87	187	1.75	5.43	197	0.01	5.97
401	166	13.52	187	1.80	5.54	190	0.20	5.76
402	156	13.14	187	1.82	5.66	191	0.34	5.79
403	161	13.48	187	1.87	5.73	190	0.18	5.76
404	166	13.74	188	1.92	5.82	195	0.01	4.26
405	169	13.72	188	1.96	5.90	197	0.02	6.69
406	171	13.34	188	1.97	5.92	191	0.10	6.53
407	175	12.41	188	1.91	5.85	193	0.22	6.53
408	158	10.20	187	1.72	5.49	191	0.53	6.62
409	177	9.05	184	1.39	4.74	190	0.68	6.50
410	166	15.59	185	1.60	5.02	197	0.01	5.59
411	169	15.02	186	1.69	5.21	194	0.16	5.21
412	178	13.65	186	1.70	5.25	199	0.09	6.09
413	180	12.96	186	1.67	5.23	198	0.12	6.09
414	186	12.06	186	1.61	5.15	197	0.17	6.06
415	185	11.43	186	1.56	5.10	197	0.16	6.07
416	191	10.65	185	1.49	5.02	196	0.21	6.03
417	100	14.57	186	1.51	6.36	196	0.22	7.12
418	100	14.03	187	1.52	6.57	197	0.26	7.18
419	77	18.01	188	1.49	7.33	196	0.27	8.38
420	72	18.08	189	1.53	7.47	197	0.23	8.33
421	70	18.60	189	1.56	7.57	199	0.26	8.44
422	67	17.96	189	1.54	7.58	197	0.43	8.38
423	64	17.26	189	1.46	7.18	197	0.52	8.43

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
424	68	17.51	190	1.55	7.88	198	0.33	8.53
425	137	11.37	186	1.53	5.36	190	0.25	5.72
426	143	10.67	186	1.56	5.43	190	0.24	6.61
427	143	11.80	186	1.65	5.62	153	0.01	2.74
428	148	12.12	187	1.69	5.69	152	0.01	2.73
429	148	11.57	187	1.72	5.74	191	0.08	6.50
430	151	10.40	186	1.63	5.50	191	0.35	6.58
431	183	10.82	185	1.49	5.22	195	0.29	6.68
432	161	11.19	186	1.56	5.46	199	0.08	6.79
433	159	11.60	186	1.60	5.54	261	0.00	0.00
434	157	10.65	186	1.57	5.45	194	0.19	6.58
435	153	11.33	186	1.58	5.53	212	0.03	4.85
436	152	11.80	186	1.58	5.51	214	0.03	4.43
437	149	11.76	186	1.57	5.45	214	0.03	4.23
438	147	12.44	186	1.56	5.42	214	0.02	4.25
439	145	13.17	186	1.59	5.44	215	0.02	4.17
440	143	12.47	186	1.59	5.46	206	0.03	7.07
441	144	13.37	186	1.61	5.50	227	0.01	2.72
442	147	13.94	186	1.66	5.56	246	0.00	0.00
443	150	14.23	186	1.74	5.68	266	0.00	0.00
444	153	14.44	187	1.83	5.84	272	0.00	0.00
445	156	14.77	187	1.94	5.98	286	0.00	0.00
446	154	14.53	188	2.03	6.13	191	0.18	6.46
447	151	15.49	189	2.14	6.32	254	0.00	0.00
448	151	16.11	189	2.26	6.54	238	0.00	0.32
449	154	15.20	190	2.33	6.67	194	0.23	6.99
450	158	14.34	190	2.37	6.74	192	0.04	7.40
451	163	13.59	190	2.32	6.69	199	0.21	7.79
452	161	10.44	187	1.80	5.56	195	0.88	7.31
453	167	9.89	186	1.60	5.15	195	0.90	7.32
454	183	8.26	183	1.27	4.57	194	0.98	7.23
455	122	14.03	185	1.59	5.87	196	0.14	6.63
456	128	13.06	186	1.65	6.12	198	0.18	6.68
457	118	13.84	186	1.68	6.17	193	0.18	6.54
458	124	12.92	186	1.68	6.15	197	0.13	7.19
459	128	12.19	186	1.64	6.03	200	0.18	7.30
460	131	11.13	185	1.55	5.85	199	0.30	7.38
461	137	14.14	185	1.48	5.03	191	0.33	5.21
462	139	14.74	185	1.59	5.23	191	0.31	5.15
463	141	15.11	186	1.71	5.46	191	0.06	6.03
464	146	15.32	186	1.82	5.63	192	0.10	5.74
465	152	15.65	187	1.95	5.85	195	0.11	5.89
466	148	14.04	188	2.01	6.00	190	0.21	6.49
467	155	15.96	188	2.11	6.15	195	0.02	6.64
468	162	16.18	189	2.22	6.32	197	0.15	6.66
469	166	16.20	190	2.34	6.55	198	0.05	7.26
470	169	16.65	190	2.43	6.71	199	0.13	7.24

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
471	174	16.21	191	2.48	6.91	198	0.29	7.18
472	185	13.94	190	2.41	6.68	198	0.38	7.68
473	216	10.28	187	1.71	5.37	194	1.12	7.44
474	257	7.86	183	0.79	3.62	194	1.42	7.53
475	138	9.51	184	1.25	5.03	192	0.88	7.09
476	141	9.49	184	1.29	5.09	192	0.90	7.15
477	129	12.27	185	1.42	5.15	190	0.52	5.59
478	128	11.50	184	1.42	5.09	190	0.53	5.91
479	128	12.67	186	1.55	5.62	191	0.22	6.90
480	135	13.43	186	1.64	5.76	235	0.00	0.39
481	140	10.27	185	1.48	5.47	192	0.53	6.88
482	139	10.76	186	1.56	5.64	192	0.51	7.07
483	148	9.57	185	1.38	5.15	193	0.66	6.99
484	138	12.75	185	1.50	5.26	190	0.20	6.16
485	138	13.13	186	1.64	5.49	190	0.31	5.83
486	139	14.37	187	1.84	5.77	190	0.32	6.34
487	141	15.80	188	2.08	6.13	190	0.36	6.63
488	144	16.25	189	2.31	6.43	192	0.39	7.17
489	149	16.63	190	2.51	6.88	192	0.44	7.15
490	154	18.81	191	2.74	7.25	197	0.14	7.60
491	156	19.47	192	2.90	7.50	194	0.34	7.72
492	161	18.47	192	2.94	7.60	198	0.24	7.59
493	167	17.28	192	2.86	7.54	198	0.26	7.63
494	170	18.12	192	2.79	7.42	197	0.06	7.83
495	169	18.63	192	2.77	7.36	196	0.06	7.80
496	166	19.76	192	2.82	7.40	194	0.05	7.68
497	169	17.70	192	2.84	7.47	195	0.05	7.71
498	168	14.20	192	2.69	7.43	198	0.52	7.74
499	170	10.45	187	1.91	5.60	194	1.38	8.15
500	177	7.11	182	1.07	3.99	192	1.71	8.30
501	185	4.23	177	0.45	2.74	192	1.70	8.33
502	233	2.44	193	0.00	0.12	192	1.58	8.27
503	166	9.55	185	1.43	5.04	190	0.51	6.28
504	169	11.56	187	1.66	5.49	100	0.01	1.68
505	173	11.71	187	1.75	5.60	193	0.12	6.56
506	176	14.14	188	1.88	5.78	190	0.02	3.96
507	177	15.66	188	2.03	5.91	194	0.02	4.20
508	177	15.95	189	2.13	6.03	199	0.04	6.74
509	176	15.02	189	2.14	6.07	191	0.23	6.60
510	177	14.41	189	2.13	6.09	191	0.25	6.57
511	179	13.71	189	2.11	6.12	191	0.26	6.57
512	185	14.18	189	2.15	6.20	194	0.07	6.59
513	199	14.60	190	2.20	6.31	196	0.16	7.09
514	209	12.63	189	2.04	5.96	193	0.56	7.07
515	222	11.64	188	1.73	5.34	193	0.87	7.04
516	232	11.18	186	1.49	4.86	193	0.96	7.08
517	158	17.74	186	1.78	5.48	196	0.04	6.00

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
518	158	19.62	188	2.08	5.89	194	0.24	5.83
519	157	19.74	189	2.30	6.23	211	0.02	4.15
520	157	19.17	189	2.37	6.38	190	0.29	6.50
521	141	12.89	188	2.18	6.20	191	0.56	7.17
522	150	12.42	188	2.03	6.17	191	0.33	6.46
523	164	10.79	186	1.79	5.56	195	0.36	6.64
524	183	9.13	185	1.44	4.96	193	0.59	6.30
525	189	10.64	186	1.52	5.11	199	0.03	5.97
526	181	9.99	186	1.52	5.09	191	0.30	5.77
527	180	12.25	186	1.60	5.26	332	0.00	0.00
528	164	10.95	186	1.56	5.13	191	0.29	5.88
529	152	13.22	185	1.51	5.09	192	0.12	5.08
530	153	13.54	186	1.63	5.28	196	0.01	6.02
531	156	14.79	186	1.76	5.50	196	0.01	6.09
532	161	12.78	187	1.82	5.63	195	0.02	4.19
533	153	11.23	187	1.79	5.60	190	0.33	6.54
534	147	9.92	185	1.56	5.15	190	0.75	6.44
535	143	10.64	186	1.68	5.50	191	0.61	6.68
536	139	9.86	185	1.48	5.12	191	0.83	6.64
537	141	9.98	185	1.51	5.32	191	0.81	6.70
538	147	10.66	186	1.69	5.61	191	0.60	6.74
539	153	10.90	187	1.80	5.97	192	0.50	6.78
540	158	10.82	187	1.80	5.91	192	0.49	6.85
541	164	9.81	185	1.55	5.16	193	0.73	6.92
542	168	12.01	188	1.95	6.09	196	0.23	7.09
543	168	12.90	189	2.07	6.29	200	0.08	7.36
544	158	13.90	189	2.11	6.31	188	0.02	4.82
545	155	13.29	189	2.06	6.22	204	0.14	4.84
546	153	13.16	188	1.98	6.04	213	0.07	3.68
547	150	13.07	188	1.92	5.94	213	0.07	3.75
548	150	13.19	187	1.89	5.87	211	0.06	3.98
549	150	13.12	187	1.87	5.85	194	0.11	6.21
550	148	12.84	187	1.83	5.80	190	0.15	6.53
551	146	12.74	187	1.79	5.79	190	0.13	6.50
552	145	12.59	186	1.76	5.77	191	0.13	6.50
553	156	13.69	187	1.80	5.82	198	0.03	6.67
554	157	12.54	187	1.78	5.74	195	0.17	6.61
555	157	12.09	186	1.74	5.68	195	0.18	6.61
556	157	11.45	186	1.68	5.56	195	0.20	6.62
557	136	13.14	185	1.53	5.23	191	0.16	5.79
558	137	12.95	186	1.59	5.36	190	0.26	5.76
559	134	12.82	186	1.61	5.43	191	0.42	5.93
560	132	12.56	186	1.60	5.47	191	0.50	6.22
561	134	11.94	186	1.60	5.51	191	0.51	6.53
562	134	11.25	186	1.54	5.44	191	0.57	6.67
563	137	10.67	185	1.49	5.37	191	0.59	6.71
564	133	10.79	185	1.47	5.33	191	0.57	6.74

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
565	128	10.79	185	1.40	5.18	191	0.58	6.72
566	133	13.21	185	1.52	5.35	190	0.09	5.70
567	141	12.97	186	1.58	5.44	190	0.08	5.68
568	134	11.15	185	1.51	5.38	190	0.42	5.97
569	127	12.05	185	1.50	5.41	190	0.41	6.40
570	125	13.35	185	1.53	5.49	191	0.27	6.24
571	134	13.60	186	1.60	5.54	200	0.04	4.90
572	142	13.70	186	1.66	5.62	236	0.00	0.37
573	146	13.52	186	1.71	5.70	171	0.01	3.60
574	137	11.79	186	1.63	5.58	190	0.17	6.55
575	132	11.48	185	1.53	5.50	190	0.25	6.02
576	160	12.91	185	1.53	5.00	200	0.11	7.17
577	178	14.22	186	1.64	5.18	200	0.16	5.61
578	178	13.36	187	1.76	5.40	201	0.12	6.95
579	190	12.45	187	1.78	5.51	197	0.25	6.04
580	209	9.34	185	1.49	4.95	190	0.72	6.04
581	145	14.93	186	1.58	5.15	195	0.42	5.44
582	144	16.28	187	1.83	5.49	191	0.54	6.33
583	140	16.98	188	2.02	5.79	191	0.72	6.91
584	138	17.40	188	2.16	6.12	191	0.88	7.09
585	141	18.92	189	2.36	6.47	191	0.82	7.22
586	150	15.34	190	2.44	6.66	191	0.69	7.29
587	169	11.46	188	2.13	6.13	193	0.94	7.20
588	200	9.79	186	1.67	5.38	193	1.03	7.19
589	210	9.87	186	1.60	5.28	194	0.91	7.15
590	214	10.07	186	1.56	5.22	194	0.78	7.09
591	203	10.34	188	1.71	5.55	196	0.57	7.21
592	204	11.22	188	1.75	5.62	197	0.43	7.30
593	209	11.47	189	1.76	5.62	197	0.38	7.30
594	214	11.32	189	1.77	5.62	197	0.36	7.26
595	211	10.91	189	1.76	5.66	196	0.49	7.46
596	209	10.78	189	1.73	5.54	193	0.70	7.50
597	208	9.55	187	1.46	4.91	192	0.98	7.15
598	204	9.76	187	1.52	5.10	191	0.88	7.15
599	205	10.63	188	1.64	5.32	191	0.62	7.14
600	205	11.15	189	1.69	5.47	191	0.52	7.07
601	202	11.14	189	1.68	5.39	197	0.49	6.28
602	200	11.12	189	1.67	5.34	198	0.53	6.18
603	207	6.11	181	0.72	3.30	191	1.34	7.09
604	249	16.03	194	1.53	5.10	192	0.16	6.69
605	252	15.96	196	1.59	5.25	191	0.37	6.57
606	255	15.34	197	1.63	5.38	194	0.15	7.00
607	260	14.41	198	1.56	5.27	191	0.43	7.13
608	149	12.78	185	1.49	5.01	191	0.37	5.78
609	150	12.57	186	1.59	5.22	191	0.42	6.05
610	150	13.07	186	1.70	5.44	191	0.36	6.31
611	152	13.21	187	1.78	5.60	191	0.28	6.44

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
612	150	12.95	187	1.82	5.72	191	0.29	6.49
613	148	12.64	187	1.84	5.79	191	0.25	6.63
614	150	10.23	186	1.67	5.48	191	0.55	6.64
615	143	11.48	187	1.74	5.79	190	0.33	6.61
616	142	13.00	187	1.74	5.83	219	0.05	1.91
617	147	13.77	187	1.77	5.86	128	0.01	3.92
618	152	13.40	187	1.81	5.90	195	0.01	6.62
619	154	13.06	187	1.83	5.92	197	0.10	6.68
620	154	12.69	187	1.82	5.93	196	0.13	6.63
621	151	11.95	187	1.78	5.91	195	0.16	6.59
622	147	11.75	187	1.72	5.85	196	0.11	6.63
623	147	12.02	186	1.68	5.78	192	0.02	7.44
624	148	11.87	186	1.64	5.72	198	0.05	7.93
625	149	11.56	186	1.60	5.65	200	0.09	6.84
626	129	12.82	186	1.57	5.73	228	0.03	1.00
627	131	11.84	185	1.56	5.76	202	0.12	8.42
628	134	11.69	185	1.55	5.78	201	0.23	8.37
629	137	11.94	185	1.57	5.85	200	0.29	8.40
630	145	11.99	185	1.59	5.77	199	0.38	8.34
631	156	11.42	185	1.54	5.44	198	0.45	7.51
632	145	11.34	185	1.55	5.55	198	0.51	8.17
633	118	15.06	185	1.53	5.62	191	0.11	5.75
634	120	14.65	185	1.61	5.79	224	0.03	1.32
635	123	14.32	186	1.67	5.91	190	0.11	6.50
636	124	13.06	186	1.67	5.97	192	0.21	6.50
637	126	13.14	186	1.68	5.99	192	0.16	6.47
638	127	13.76	186	1.70	5.99	205	0.09	3.12
639	132	13.42	186	1.72	6.00	201	0.05	6.78
640	139	13.21	186	1.74	6.01	199	0.10	6.69
641	147	13.07	187	1.78	6.03	200	0.12	6.73
642	162	12.74	187	1.78	5.74	199	0.22	6.79
643	171	10.19	185	1.56	5.11	195	0.54	6.64
644	147	10.72	186	1.54	5.63	198	0.20	6.76
645	149	15.14	185	1.59	5.11	191	0.20	5.09
646	146	15.56	186	1.72	5.32	191	0.10	5.75
647	144	14.38	186	1.78	5.49	190	0.32	5.74
648	149	12.10	186	1.76	5.63	190	0.37	5.69
649	155	8.94	184	1.33	4.68	190	0.73	5.98
650	140	14.40	185	1.52	5.10	191	0.13	5.03
651	143	13.06	185	1.55	5.18	197	0.04	5.39
652	144	12.19	186	1.55	5.25	200	0.02	6.67
653	145	12.43	186	1.57	5.32	199	0.01	6.59
654	145	12.50	186	1.62	5.39	190	0.10	6.43
655	145	12.53	186	1.68	5.50	191	0.22	6.48
656	144	12.85	187	1.74	5.65	191	0.29	6.59
657	146	12.01	187	1.74	5.62	191	0.38	6.78
658	145	10.92	186	1.64	5.51	191	0.62	6.81

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
659	133	9.99	185	1.41	5.02	191	0.83	6.88
660	142	9.75	185	1.41	5.11	192	0.79	7.02
661	141	9.57	185	1.37	5.06	192	0.82	7.12
662	140	9.44	184	1.33	4.99	193	0.86	7.18
663	154	11.97	185	1.51	5.21	202	0.03	4.61
664	156	12.56	186	1.62	5.38	191	0.11	5.73
665	155	11.19	186	1.65	5.49	190	0.41	5.84
666	158	12.38	187	1.75	5.66	193	0.08	5.81
667	160	13.34	187	1.84	5.78	195	0.02	4.24
668	161	13.99	188	1.93	5.88	195	0.02	4.26
669	163	14.08	188	1.99	5.96	190	0.11	6.53
670	166	14.17	188	2.03	6.01	190	0.14	6.56
671	163	14.53	188	2.06	6.04	190	0.17	6.61
672	167	14.93	189	2.09	6.08	190	0.08	6.50
673	171	14.75	189	2.11	6.10	190	0.16	6.56
674	174	14.25	189	2.10	6.11	192	0.18	6.46
675	176	13.29	189	2.06	6.10	190	0.25	6.47
676	178	12.30	188	1.99	6.06	190	0.29	6.50
677	160	11.12	187	1.82	5.66	191	0.49	6.67
678	166	10.31	187	1.69	5.48	191	0.49	6.66
679	172	9.43	185	1.48	5.06	190	0.62	6.58
680	174	13.05	185	1.52	5.03	195	0.07	5.27
681	180	12.66	186	1.58	5.16	193	0.17	5.16
682	188	12.32	186	1.60	5.15	196	0.16	5.99
683	179	10.67	186	1.59	5.19	193	0.19	5.83
684	186	10.73	186	1.55	5.19	193	0.21	5.95
685	197	11.45	185	1.52	5.11	194	0.23	6.03
686	172	13.01	186	1.61	5.11	216	0.13	2.97
687	166	13.59	186	1.69	5.28	212	0.21	3.43
688	170	12.77	187	1.78	5.46	214	0.14	3.21
689	177	12.27	187	1.82	5.56	191	0.32	5.95
690	182	11.57	187	1.82	5.59	212	0.11	3.79
691	187	10.24	187	1.72	5.44	191	0.45	6.62
692	192	8.83	184	1.36	4.73	190	0.91	6.50
693	176	9.09	185	1.43	4.97	191	0.84	6.56
694	171	7.97	183	1.13	4.38	191	1.02	6.54
695	171	8.44	184	1.24	4.62	191	0.90	6.55
696	180	9.38	185	1.46	5.09	191	0.66	6.59
697	234	17.64	194	1.60	5.11	215	0.09	2.95
698	228	15.03	195	1.69	5.37	221	0.11	2.51
699	231	15.88	195	1.76	5.52	218	0.04	3.27
700	237	15.96	196	1.81	5.68	194	0.16	6.66
701	246	14.79	196	1.78	5.68	205	0.18	5.03
702	257	13.87	196	1.66	5.53	191	0.49	7.12
703	267	13.00	197	1.45	4.99	191	0.73	7.18
704	280	11.18	200	1.15	4.40	191	0.98	7.18
705	169	12.37	186	1.56	5.26	205	0.02	4.85

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
706	170	13.39	186	1.65	5.40	205	0.02	4.75
707	174	13.06	187	1.75	5.56	199	0.04	6.06
708	178	12.62	187	1.82	5.75	194	0.09	6.59
709	177	10.49	187	1.70	5.46	191	0.43	6.60
710	181	10.84	187	1.69	5.50	192	0.43	6.74
711	184	10.75	186	1.65	5.43	193	0.47	6.91
712	187	10.45	186	1.60	5.33	194	0.51	6.96
713	187	9.82	185	1.47	5.02	193	0.58	6.97
714	128	14.14	185	1.55	5.52	122	0.01	2.54
715	132	13.60	185	1.59	5.62	194	0.01	6.01
716	129	12.17	185	1.61	5.66	193	0.14	6.51
717	133	13.51	186	1.65	5.79	58	0.00	0.79
718	141	14.48	186	1.72	5.87	169	0.01	5.59
719	146	14.87	187	1.83	5.98	195	0.03	6.47
720	144	14.36	187	1.92	6.09	197	0.12	6.66
721	141	13.43	188	1.98	6.20	220	0.05	1.68
722	136	13.50	188	2.02	6.30	192	0.22	7.10
723	132	14.73	188	2.08	6.44	192	0.23	7.21
724	138	16.51	189	2.18	6.57	219	0.06	1.95
725	146	16.47	189	2.30	6.70	196	0.04	7.08
726	145	15.19	189	2.36	6.84	195	0.27	7.03
727	143	15.28	190	2.40	6.95	194	0.27	7.01
728	139	16.31	190	2.42	6.96	192	0.32	7.15
729	150	17.64	190	2.52	7.04	201	0.08	7.37
730	156	19.18	191	2.65	7.15	194	0.04	7.68
731	156	20.39	191	2.79	7.28	193	0.04	7.67
732	158	19.63	191	2.83	7.35	196	0.07	7.66
733	158	18.62	191	2.82	7.34	197	0.07	7.74
734	155	17.21	191	2.75	7.27	193	0.25	7.82
735	162	17.03	191	2.68	7.17	201	0.10	7.98
736	168	16.58	191	2.60	6.99	201	0.18	7.93
737	171	16.12	190	2.54	6.89	200	0.20	7.92
738	175	14.87	190	2.44	6.74	200	0.28	7.93
739	179	13.48	190	2.32	6.59	200	0.36	7.87
740	178	8.54	184	1.41	4.68	193	1.10	7.15
741	184	8.24	183	1.25	4.36	193	1.02	7.11
742	121	13.40	185	1.51	5.59	83	0.00	2.13
743	119	13.62	185	1.57	5.74	190	0.14	6.48
744	114	12.33	185	1.49	5.56	191	0.40	6.59
745	112	12.83	185	1.51	5.77	191	0.46	6.74
746	112	12.88	185	1.54	5.88	192	0.47	6.96
747	113	12.95	185	1.56	5.97	192	0.47	7.08
748	119	11.64	185	1.53	5.97	193	0.47	7.00
749	114	11.91	186	1.53	6.33	194	0.36	7.15
750	122	12.19	186	1.63	6.50	195	0.17	7.09
751	129	12.00	186	1.65	6.48	201	0.14	7.44
752	152	9.37	185	1.42	4.99	190	0.52	5.88

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
753	114	13.91	184	1.46	5.32	191	0.55	5.81
754	114	13.08	185	1.54	5.56	191	0.44	6.60
755	109	11.86	184	1.43	5.45	191	0.53	6.62
756	203	12.62	188	1.57	5.08	231	0.02	1.10
757	214	12.68	189	1.62	5.19	199	0.03	6.04
758	202	13.12	189	1.68	5.29	225	0.06	1.85
759	197	13.60	189	1.74	5.38	225	0.08	1.84
760	206	14.49	189	1.83	5.51	201	0.03	7.96
761	208	14.87	190	1.92	5.65	199	0.04	4.75
762	209	15.26	191	2.00	5.78	194	0.06	6.60
763	206	12.52	190	1.96	5.79	197	0.41	5.82
764	211	11.52	190	1.92	5.76	191	0.38	7.15
765	208	11.25	190	1.87	5.71	191	0.43	7.17
766	206	11.45	189	1.82	5.70	191	0.56	6.73
767	220	12.27	190	1.78	5.60	191	0.37	6.67
768	232	13.18	190	1.71	5.44	191	0.47	6.69
769	258	14.22	192	1.45	4.91	191	0.78	6.67
770	264	12.58	193	1.27	4.59	191	0.95	6.70
771	266	11.92	195	1.18	4.39	191	1.00	6.76
772	252	15.44	197	1.48	5.07	194	0.46	7.15
773	252	14.28	198	1.53	5.19	194	0.40	7.20
774	253	14.10	199	1.52	5.21	194	0.38	7.20
775	258	14.84	201	1.49	5.15	194	0.39	7.15
776	187	11.99	186	1.54	5.21	194	0.06	5.90
777	192	11.12	186	1.53	5.15	193	0.21	5.91
778	194	10.41	185	1.50	5.06	192	0.32	5.97
779	192	9.84	185	1.46	4.99	191	0.40	6.10
780	193	10.16	185	1.49	5.07	191	0.35	6.35
781	197	10.33	185	1.48	5.04	191	0.36	6.42
782	213	11.40	186	1.45	4.93	191	0.41	6.52
783	219	12.10	186	1.45	4.96	191	0.48	6.56
784	225	12.33	187	1.47	4.93	191	0.52	6.62
785	227	12.43	187	1.51	4.92	192	0.50	6.68
786	228	12.46	188	1.50	4.94	192	0.49	6.72
787	223	13.66	189	1.58	5.09	193	0.40	6.78
788	233	12.33	190	1.43	4.83	192	0.51	6.72
789	134	12.41	185	1.50	5.17	191	0.26	5.85
790	134	11.65	185	1.49	5.16	191	0.38	5.84
791	128	13.18	185	1.50	5.26	191	0.36	5.86
792	126	13.86	185	1.52	5.32	191	0.39	5.87
793	127	13.39	185	1.53	5.35	191	0.43	5.87
794	127	12.63	185	1.52	5.36	191	0.50	5.86
795	127	12.37	185	1.50	5.36	191	0.50	5.93
796	287	11.02	206	0.99	3.99	191	1.20	7.55
797	147	13.14	186	1.59	5.37	161	0.01	3.14
798	151	12.39	186	1.63	5.44	193	0.08	5.83
799	156	11.39	186	1.62	5.51	194	0.19	5.80

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
800	171	9.77	186	1.54	5.32	191	0.44	6.57
801	189	10.41	186	1.54	5.28	196	0.38	6.65
802	153	11.33	185	1.52	5.23	201	0.07	6.79
803	156	11.55	186	1.55	5.29	201	0.07	6.80
804	157	11.73	186	1.58	5.34	201	0.07	6.79
805	161	11.91	186	1.61	5.38	200	0.07	6.76
806	164	11.74	186	1.64	5.43	201	0.07	6.79
807	165	11.50	186	1.66	5.47	200	0.09	6.44
808	160	12.45	187	1.71	5.53	200	0.05	6.57
809	159	12.20	187	1.75	5.61	201	0.05	6.39
810	161	11.96	187	1.77	5.66	200	0.04	6.76
811	163	11.39	187	1.76	5.63	192	0.15	6.50
812	162	10.60	186	1.69	5.50	191	0.38	6.62
813	161	9.95	186	1.58	5.36	190	0.59	6.50
814	169	9.80	186	1.54	5.30	190	0.51	6.44
815	170	9.24	185	1.41	4.99	190	0.57	6.50
816	192	13.11	185	1.52	4.98	201	0.03	4.16
817	192	12.87	186	1.57	5.07	196	0.07	5.31
818	207	11.63	186	1.48	5.03	191	0.36	5.15
819	171	10.66	186	1.58	5.53	191	0.15	6.61
820	179	11.55	187	1.72	5.72	193	0.17	6.63
821	158	7.97	182	1.16	4.29	192	0.98	6.87
822	177	9.10	185	1.42	5.01	193	0.88	7.07
823	191	9.94	186	1.56	5.26	194	0.80	7.20
824	203	8.66	184	1.24	4.55	194	1.01	7.36
825	176	12.33	186	1.50	4.91	216	0.19	2.97
826	176	12.20	186	1.58	5.07	214	0.20	3.17
827	176	12.19	186	1.67	5.20	217	0.15	2.85
828	172	12.75	187	1.77	5.44	216	0.16	2.91
829	168	12.50	187	1.85	5.58	213	0.12	3.62
830	168	13.87	188	1.97	5.85	218	0.07	2.96
831	170	14.89	189	2.11	6.08	215	0.07	3.39
832	177	14.46	190	2.23	6.30	198	0.02	7.18
833	185	13.95	190	2.27	6.42	193	0.30	7.03
834	179	15.16	190	2.36	6.61	193	0.19	7.03
835	181	13.52	191	2.35	6.76	193	0.44	7.08
836	179	12.56	190	2.23	6.44	193	0.53	7.16
837	181	11.93	189	2.10	6.14	194	0.55	7.21
838	192	9.91	186	1.66	5.15	194	0.92	7.25
839	205	8.47	184	1.30	4.56	193	1.09	7.19
840	192	7.48	182	1.03	3.97	193	1.19	7.17
841	144	12.36	185	1.52	5.27	165	0.01	3.22
842	151	10.30	185	1.50	5.21	190	0.37	5.83
843	145	11.06	186	1.57	5.41	190	0.31	6.06
844	143	12.81	186	1.67	5.59	343	0.00	0.00
845	142	13.82	187	1.77	5.76	216	0.05	1.79
846	141	14.09	187	1.87	5.89	191	0.17	6.62

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
847	140	14.14	188	1.94	6.00	191	0.28	6.61
848	137	10.86	186	1.68	5.50	191	0.81	6.83
849	133	11.75	186	1.70	5.61	192	0.78	7.09
850	130	13.15	187	1.80	5.91	192	0.63	7.18
851	134	13.42	187	1.86	5.97	192	0.51	7.17
852	140	12.61	187	1.87	5.97	192	0.52	7.25
853	144	12.21	187	1.86	5.96	192	0.53	7.31
854	149	10.96	187	1.72	5.62	192	0.72	7.22
855	148	10.85	186	1.68	5.60	192	0.72	7.24
856	149	11.22	187	1.74	5.75	192	0.57	7.28
857	150	11.18	187	1.73	5.74	192	0.49	7.23
858	150	10.64	186	1.63	5.53	192	0.55	7.14
859	148	10.01	186	1.51	5.29	192	0.63	7.00
860	142	11.34	186	1.62	5.58	191	0.30	6.85
861	142	10.21	185	1.48	5.26	191	0.51	6.78
862	295	19.97	232	1.45	5.13	191	0.50	4.67
863	301	21.66	235	1.44	5.12	191	0.48	4.88
864	119	12.90	184	1.42	5.26	190	0.49	6.05
865	121	13.28	185	1.52	5.50	190	0.45	6.48
866	124	13.65	186	1.64	5.70	191	0.35	6.74
867	127	13.77	186	1.74	5.91	191	0.31	6.64
868	125	11.94	185	1.61	5.64	191	0.60	6.77
869	132	13.63	187	1.87	6.19	193	0.15	7.08
870	135	14.62	188	1.99	6.38	73	0.00	1.14
871	133	15.65	188	2.09	6.51	193	0.13	7.04
872	132	16.21	189	2.18	6.65	193	0.21	6.97
873	131	16.33	189	2.25	6.81	194	0.27	6.98
874	137	14.57	189	2.30	6.84	197	0.20	7.51
875	123	9.58	184	1.39	4.98	194	1.19	7.47
876	95	10.64	184	1.23	5.52	195	1.08	7.62
877	120	10.05	184	1.27	5.26	196	0.97	7.59
878	194	9.60	184	1.30	4.79	197	0.81	7.49
879	173	11.10	186	1.55	5.50	199	0.28	7.29
880	156	12.78	185	1.52	5.10	191	0.08	5.00
881	160	12.12	186	1.59	5.26	195	0.01	3.78
882	157	9.14	185	1.45	4.99	190	0.61	5.87
883	155	14.24	185	1.54	5.07	212	0.02	3.20
884	157	13.79	186	1.64	5.23	190	0.20	4.97
885	159	13.65	186	1.73	5.43	195	0.02	4.14
886	164	13.18	187	1.79	5.55	191	0.17	5.65
887	169	12.77	187	1.82	5.68	191	0.23	5.70
888	173	12.65	187	1.84	5.68	200	0.05	6.74
889	168	11.65	187	1.81	5.64	190	0.20	6.58
890	172	12.39	187	1.81	5.69	198	0.02	6.61
891	173	12.38	187	1.79	5.66	200	0.04	6.14
892	173	12.47	187	1.77	5.59	200	0.03	6.13
893	174	12.41	187	1.75	5.54	200	0.03	6.10

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
894	175	12.30	187	1.72	5.49	200	0.03	6.08
895	166	11.02	186	1.66	5.41	191	0.26	5.79
896	167	10.66	186	1.60	5.32	191	0.22	5.79
897	166	9.62	185	1.47	5.07	191	0.41	5.87
898	174	14.58	186	1.57	5.10	200	0.03	5.47
899	174	13.26	186	1.62	5.19	198	0.06	5.41
900	175	12.33	186	1.62	5.24	201	0.02	6.05
901	177	11.13	186	1.59	5.23	194	0.09	5.87
902	178	9.84	185	1.50	5.04	190	0.29	5.68
903	170	13.43	186	1.59	5.09	217	0.02	2.46
904	178	11.27	186	1.64	5.26	190	0.17	5.71
905	184	12.55	187	1.72	5.45	191	0.11	5.72
906	192	14.69	188	1.87	5.70	195	0.13	5.87
907	209	15.44	188	1.95	5.69	192	0.31	6.56
908	217	14.20	188	1.91	5.58	191	0.52	6.56
909	223	13.07	188	1.81	5.44	191	0.63	6.66
910	217	10.22	187	1.57	4.96	191	0.91	6.83
911	220	10.71	187	1.52	4.97	191	0.74	6.74
912	224	10.48	187	1.45	4.88	191	0.69	6.68
913	151	11.48	185	1.50	5.09	190	0.32	5.07
914	144	11.06	185	1.46	5.09	191	0.49	5.23
915	146	10.43	185	1.44	5.11	191	0.49	5.21
916	113	14.16	185	1.50	5.59	190	0.17	6.54
917	117	14.19	185	1.56	5.75	192	0.12	6.53
918	122	13.51	185	1.61	5.85	193	0.15	6.51
919	123	13.66	186	1.65	5.94	192	0.15	6.50
920	125	13.31	186	1.70	6.05	192	0.18	6.48
921	113	13.93	186	1.69	6.09	191	0.34	6.63
922	131	12.05	186	1.73	6.00	195	0.27	7.09
923	139	10.10	184	1.45	5.35	195	0.66	6.99
924	125	10.80	185	1.47	5.76	193	0.57	7.01
925	128	13.50	187	1.73	6.22	46	0.00	0.46
926	122	14.45	186	1.71	6.17	191	0.15	7.18
927	114	15.98	186	1.68	6.09	191	0.21	6.68
928	113	15.53	185	1.63	5.95	191	0.19	6.70
929	117	13.88	185	1.56	5.85	191	0.14	6.65
930	145	11.77	185	1.51	5.22	174	0.02	4.79
931	150	10.22	185	1.48	5.21	191	0.36	6.12
932	156	9.95	185	1.49	5.24	190	0.42	5.84
933	158	9.99	186	1.51	5.32	190	0.36	5.82
934	159	9.72	185	1.47	5.20	190	0.42	5.88
935	103	12.99	187	1.53	7.01	196	0.55	8.68
936	108	15.86	189	1.87	8.26	197	0.22	8.99
937	107	17.50	189	2.06	8.65	197	0.21	9.00
938	98	17.52	189	2.10	8.78	194	0.37	8.91
939	89	17.25	189	2.04	8.75	194	0.38	8.92
940	78	16.43	188	1.83	8.31	193	0.58	8.84

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
941	75	16.71	189	1.78	8.43	193	0.53	8.88
942	77	17.24	189	1.85	8.85	193	0.41	8.88
943	79	17.44	189	1.88	8.90	193	0.37	8.90
944	79	16.97	189	1.81	8.61	194	0.42	8.94
945	78	16.46	189	1.73	8.27	194	0.45	8.94
946	78	14.83	188	1.49	7.35	194	0.67	8.72
947	78	13.85	188	1.35	7.16	194	0.77	8.66
948	76	14.00	188	1.36	7.33	195	0.67	8.68
949	172	12.67	185	1.51	4.95	200	0.09	7.40
950	172	12.62	186	1.62	5.19	198	0.14	7.23
951	181	12.37	187	1.71	5.39	197	0.14	6.01
952	189	11.96	187	1.76	5.58	193	0.31	5.85
953	189	10.15	187	1.70	5.40	192	0.34	6.55
954	184	9.97	186	1.60	5.21	190	0.53	6.30
955	178	10.68	187	1.69	5.49	191	0.21	6.51
956	186	10.59	187	1.65	5.40	192	0.25	6.58
957	192	9.90	186	1.53	5.13	190	0.43	6.38
958	194	9.45	185	1.44	4.97	190	0.49	6.41
959	151	12.07	185	1.55	5.16	191	0.26	5.14
960	149	11.72	186	1.57	5.22	191	0.28	5.97
961	153	11.96	186	1.62	5.38	191	0.15	5.91
962	153	12.24	186	1.65	5.44	191	0.07	5.66
963	155	12.40	186	1.67	5.48	207	0.02	4.19
964	158	12.52	186	1.69	5.50	195	0.02	4.16
965	165	12.21	186	1.70	5.55	197	0.11	5.96
966	170	12.17	187	1.70	5.59	196	0.15	5.97
967	168	11.68	186	1.69	5.53	200	0.04	6.85
968	172	9.87	185	1.51	5.08	192	0.41	6.05
969	178	13.90	186	1.62	5.07	240	0.00	0.00
970	180	13.56	187	1.74	5.32	273	0.00	0.00
971	182	13.11	187	1.80	5.50	190	0.18	5.73
972	173	11.03	187	1.78	5.53	191	0.17	6.62
973	174	11.84	187	1.76	5.59	190	0.14	5.74
974	177	12.54	187	1.75	5.57	27	0.00	0.00
975	182	12.96	187	1.75	5.56	176	0.01	5.71
976	189	12.14	187	1.74	5.56	194	0.16	5.84
977	194	11.20	187	1.68	5.40	194	0.15	6.58
978	186	10.43	186	1.61	5.32	190	0.33	5.81
979	189	10.13	185	1.52	5.10	191	0.34	5.85
980	152	13.96	185	1.51	5.05	196	0.00	3.54
981	153	13.04	186	1.68	5.38	190	0.12	5.71
982	152	11.99	187	1.77	5.61	190	0.16	6.61
983	141	11.13	186	1.69	5.52	191	0.58	6.74
984	140	10.02	185	1.49	5.16	191	0.83	6.73
985	137	9.26	184	1.33	4.93	191	0.87	6.75
986	149	14.88	185	1.55	5.14	195	0.01	5.51
987	157	15.53	186	1.74	5.44	196	0.01	6.06

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
988	162	15.57	187	1.90	5.68	196	0.13	5.93
989	165	15.46	188	2.03	5.92	198	0.03	6.63
990	166	15.04	188	2.10	6.07	193	0.13	6.56
991	148	14.05	188	2.07	6.12	191	0.47	6.61
992	156	12.43	188	2.02	6.17	190	0.45	6.62
993	162	11.60	188	1.96	6.00	192	0.26	7.07
994	164	11.87	188	1.92	6.03	190	0.21	6.47
995	165	12.38	188	1.88	5.93	197	0.02	6.63
996	166	12.44	187	1.84	5.86	197	0.02	6.62
997	155	11.68	187	1.78	5.78	191	0.14	6.60
998	160	11.25	187	1.73	5.69	193	0.09	6.56
999	162	10.23	186	1.61	5.41	191	0.27	6.59
1000	156	13.25	185	1.53	5.05	230	0.01	0.69
1001	159	13.04	186	1.59	5.17	192	0.13	5.04
1002	161	13.06	186	1.65	5.31	196	0.01	3.93
1003	163	13.10	186	1.71	5.43	198	0.01	5.98
1004	158	13.76	187	1.77	5.53	199	0.01	6.02
1005	164	12.62	187	1.79	5.62	190	0.23	5.64
1006	174	10.90	187	1.74	5.51	194	0.23	6.60
1007	186	9.44	185	1.48	4.99	190	0.61	6.19
1008	181	12.38	186	1.54	5.03	200	0.00	4.43
1009	180	12.39	186	1.62	5.21	199	0.00	3.47
1010	175	10.64	186	1.62	5.21	191	0.33	5.75
1011	169	12.08	187	1.68	5.40	203	0.07	4.34
1012	165	13.31	187	1.74	5.50	213	0.03	3.30
1013	166	14.27	187	1.85	5.67	238	0.00	0.15
1014	169	14.50	188	1.98	5.90	227	0.01	1.03
1015	170	14.69	188	2.07	6.06	190	0.16	6.61
1016	176	14.57	189	2.15	6.26	191	0.20	6.44
1017	174	14.61	189	2.22	6.38	199	0.03	4.29
1018	172	15.16	190	2.28	6.49	241	0.00	0.00
1019	173	15.70	190	2.34	6.57	198	0.08	7.24
1020	177	15.77	190	2.40	6.64	193	0.22	6.97
1021	181	15.61	191	2.44	6.72	193	0.29	7.00
1022	181	13.26	191	2.39	6.64	197	0.23	7.54
1023	186	13.59	190	2.30	6.62	194	0.41	7.02
1024	192	12.54	189	2.13	6.11	194	0.54	7.10
1025	198	10.98	187	1.85	5.54	194	0.77	7.06
1026	210	8.68	184	1.33	4.56	193	1.10	7.14
1027	255	18.21	203	1.52	5.03	194	0.11	8.76
1028	260	15.68	203	1.52	5.12	222	0.06	2.63
1029	267	16.17	204	1.48	5.08	191	0.37	7.14
1030	270	15.91	205	1.45	5.08	191	0.47	7.15
1031	228	10.03	191	1.31	4.78	193	0.80	9.46
1032	223	10.53	191	1.36	4.87	193	0.78	9.49
1033	223	11.01	192	1.43	5.09	193	0.76	9.47
1034	228	9.91	191	1.31	4.72	193	0.84	9.44

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1035	235	11.92	192	1.45	5.09	194	0.72	9.40
1036	241	12.98	193	1.47	5.07	194	0.71	9.36
1037	247	13.52	193	1.49	5.07	194	0.71	9.33
1038	251	13.14	194	1.47	5.04	194	0.73	9.31
1039	254	12.71	196	1.44	5.10	194	0.74	9.27
1040	253	8.79	196	0.93	3.69	191	1.29	9.38
1041	220	14.23	189	1.62	5.17	194	0.19	6.50
1042	237	13.75	190	1.65	5.23	191	0.26	6.51
1043	251	13.88	191	1.49	4.96	191	0.63	6.68
1044	256	14.81	192	1.46	4.90	191	0.62	6.73
1045	258	15.77	194	1.48	4.95	191	0.59	6.74
1046	258	14.20	195	1.47	5.04	191	0.61	6.74
1047	263	14.74	197	1.47	5.02	192	0.52	7.20
1048	265	14.80	200	1.45	5.03	192	0.43	7.18
1049	168	14.24	185	1.51	5.20	199	0.12	6.08
1050	171	14.99	186	1.74	5.50	200	0.18	6.15
1051	174	15.24	187	1.92	5.71	201	0.17	6.88
1052	169	15.04	188	2.08	6.02	200	0.18	6.93
1053	163	14.54	189	2.14	6.18	199	0.22	6.86
1054	165	14.44	189	2.17	6.27	199	0.22	6.94
1055	167	14.50	189	2.19	6.32	200	0.20	7.10
1056	173	14.64	189	2.22	6.28	201	0.17	7.43
1057	176	14.67	189	2.25	6.30	201	0.18	7.43
1058	176	14.07	189	2.24	6.30	200	0.19	7.41
1059	175	13.14	189	2.19	6.23	200	0.22	7.36
1060	180	11.58	188	2.05	6.03	197	0.38	7.23
1061	189	10.37	187	1.74	5.46	194	0.62	6.82
1062	182	8.44	184	1.32	4.62	191	0.84	6.72
1063	190	10.68	186	1.62	5.37	196	0.43	6.82
1064	197	11.04	186	1.59	5.29	197	0.37	6.83
1065	204	10.97	185	1.45	4.98	196	0.42	6.67
1066	211	10.81	187	1.48	5.04	196	0.29	6.60
1067	218	10.95	188	1.50	5.10	196	0.31	6.60
1068	224	9.48	187	1.33	4.73	190	0.74	6.52
1069	126	12.36	185	1.51	5.62	191	0.19	6.68
1070	129	12.45	186	1.56	5.69	197	0.03	6.51
1071	133	12.89	186	1.60	5.75	132	0.01	2.88
1072	133	12.61	186	1.64	5.80	200	0.04	6.77
1073	132	12.63	186	1.65	5.85	193	0.12	6.57
1074	131	12.58	186	1.66	5.90	193	0.15	6.51
1075	118	13.16	186	1.64	5.96	190	0.30	6.52
1076	127	11.94	186	1.66	5.97	194	0.14	7.01
1077	166	12.56	185	1.51	5.17	197	0.01	5.49
1078	154	13.11	186	1.59	5.33	195	0.01	6.03
1079	162	12.07	186	1.61	5.37	196	0.14	5.95
1080	88	16.53	187	1.51	6.92	199	0.14	7.77
1081	89	17.57	187	1.60	7.09	199	0.14	7.77

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1082	88	18.01	187	1.69	7.28	199	0.22	7.74
1083	88	17.85	188	1.78	7.61	199	0.32	7.84
1084	81	17.07	187	1.74	7.45	196	0.56	8.23
1085	79	16.30	187	1.67	7.42	195	0.78	8.28
1086	82	13.96	186	1.40	6.79	194	1.12	8.25
1087	89	11.63	185	1.10	5.79	191	1.31	8.67
1088	87	12.08	185	1.13	5.99	191	1.34	8.74
1089	89	11.80	185	1.08	5.88	190	1.33	8.78
1090	79	14.58	188	1.48	7.53	192	1.14	8.62
1091	87	12.47	187	1.20	6.55	192	1.18	8.67
1092	140	12.93	185	1.53	5.21	218	0.03	1.46
1093	140	13.07	186	1.60	5.35	191	0.16	5.80
1094	141	12.73	186	1.64	5.44	191	0.23	5.79
1095	142	12.42	186	1.67	5.51	191	0.26	5.82
1096	137	12.61	186	1.66	5.53	191	0.34	5.98
1097	137	12.75	186	1.67	5.57	191	0.29	6.03
1098	137	12.83	186	1.69	5.62	191	0.27	6.02
1099	137	13.07	186	1.72	5.68	191	0.24	5.93
1100	136	13.24	186	1.75	5.68	191	0.17	6.62
1101	138	13.13	187	1.78	5.76	191	0.20	6.63
1102	140	13.04	187	1.81	5.81	191	0.22	6.62
1103	141	13.34	187	1.84	5.87	191	0.17	6.62
1104	146	12.46	187	1.84	5.86	191	0.16	6.43
1105	147	10.55	186	1.66	5.50	191	0.48	6.59
1106	153	10.96	186	1.66	5.53	190	0.30	6.58
1107	147	13.36	188	1.89	5.93	190	0.27	6.56
1108	139	12.94	188	1.93	6.03	191	0.70	6.74
1109	133	12.37	188	1.97	6.01	192	0.69	7.23
1110	126	13.69	187	1.95	6.05	192	0.70	7.22
1111	129	13.56	188	2.00	6.15	192	0.59	7.21
1112	133	13.74	188	2.06	6.37	192	0.48	7.12
1113	131	14.22	189	2.13	6.60	193	0.48	7.09
1114	131	12.03	187	1.92	6.10	194	0.80	7.18
1115	130	9.23	184	1.35	4.92	194	1.10	7.41
1116	130	7.51	180	0.92	3.86	194	1.24	7.56
1117	158	6.50	179	0.79	3.56	194	1.43	7.96
1118	167	6.41	180	0.80	3.56	193	1.62	8.10
1119	174	6.02	179	0.71	3.31	193	1.74	8.16
1120	203	1.51	180	0.00	0.00	193	1.77	8.15
1121	81	1.13	186	0.00	0.00	193	1.62	8.06
1122	155	12.20	186	1.62	5.49	200	0.02	6.09
1123	160	13.22	187	1.79	5.74	195	0.02	4.30
1124	163	14.21	188	1.94	5.95	197	0.03	6.62
1125	166	14.55	188	2.03	6.07	197	0.10	6.67
1126	169	14.35	188	2.08	6.17	194	0.18	6.58
1127	172	14.79	189	2.11	6.24	195	0.18	6.62
1128	176	13.94	189	2.12	6.18	201	0.09	7.36

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1129	187	11.07	188	1.95	5.93	195	0.44	7.09
1130	208	8.19	183	1.18	4.26	191	0.96	6.78
1131	124	12.69	185	1.47	5.35	190	0.45	6.09
1132	124	12.48	185	1.53	5.51	190	0.48	6.51
1133	123	12.14	185	1.55	5.48	191	0.55	6.73
1134	120	10.80	184	1.38	5.12	191	0.78	6.72
1135	158	12.84	185	1.51	5.03	233	0.00	0.80
1136	167	13.48	185	1.51	5.03	350	0.00	0.00
1137	170	13.57	185	1.54	5.06	343	0.00	0.00
1138	212	12.36	185	1.51	5.00	198	0.32	6.02
1139	193	12.60	186	1.54	5.15	199	0.11	5.43
1140	229	14.91	186	1.54	4.99	194	0.35	5.80
1141	229	16.23	187	1.65	5.09	193	0.34	5.79
1142	225	17.00	190	1.84	5.50	193	0.36	5.80
1143	233	19.36	192	1.94	5.64	192	0.40	6.48
1144	219	18.05	194	2.14	6.06	198	0.26	6.99
1145	216	18.78	196	2.29	6.50	193	0.48	7.01
1146	223	19.29	197	2.39	6.78	197	0.39	7.51
1147	237	18.43	198	2.42	7.00	197	0.30	7.08
1148	246	18.28	199	2.36	7.03	196	0.53	8.12
1149	252	17.91	200	2.23	6.89	195	0.78	8.26
1150	252	17.98	202	2.13	6.73	195	0.58	8.22
1151	252	17.38	203	2.03	6.53	194	0.55	8.25
1152	254	16.25	204	1.90	6.29	191	0.44	8.22
1153	258	15.25	204	1.76	6.03	192	0.39	8.04
1154	262	14.39	205	1.64	5.74	192	0.43	8.18
1155	267	16.28	206	1.51	5.44	192	0.24	6.71
1156	310	20.50	246	1.40	4.91	191	0.57	5.11
1157	305	20.27	244	1.46	5.15	191	0.53	4.80
1158	305	20.36	242	1.52	5.41	191	0.58	4.90
1159	316	19.89	244	1.48	5.32	191	0.68	5.93
1160	323	18.29	253	1.31	4.69	196	0.91	9.44
1161	324	17.65	256	1.24	4.46	196	0.89	9.47
1162	147	14.11	185	1.51	5.10	257	0.00	0.00
1163	147	14.96	185	1.58	5.23	182	0.01	5.21
1164	147	15.34	186	1.67	5.44	342	0.00	0.00
1165	150	15.52	186	1.75	5.58	196	0.09	5.96
1166	152	15.64	187	1.83	5.75	196	0.13	5.94
1167	153	17.84	187	1.98	5.96	193	0.02	6.83
1168	153	16.57	188	2.11	6.16	195	0.15	6.60
1169	154	16.69	189	2.23	6.37	194	0.20	6.57
1170	157	16.49	189	2.36	6.58	199	0.05	7.39
1171	166	15.15	190	2.37	6.65	197	0.32	7.18
1172	174	14.12	190	2.37	6.67	201	0.21	7.96
1173	184	11.06	187	1.90	5.62	194	0.84	7.15
1174	195	10.50	187	1.72	5.43	194	0.86	7.17
1175	212	9.60	185	1.43	4.91	194	0.93	7.14

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1176	238	11.39	185	1.26	4.63	194	0.88	7.09
1177	157	15.54	185	1.51	4.97	219	0.03	2.14
1178	154	17.44	186	1.68	5.19	213	0.04	2.79
1179	153	17.94	186	1.84	5.44	201	0.05	8.08
1180	160	15.24	187	1.92	5.65	191	0.16	5.64
1181	174	11.68	187	1.86	5.62	198	0.13	6.71
1182	148	12.85	185	1.53	5.14	191	0.07	5.05
1183	148	13.09	186	1.56	5.20	206	0.03	3.68
1184	146	12.59	186	1.57	5.24	205	0.02	4.52
1185	141	13.65	186	1.58	5.26	198	0.07	4.93
1186	140	14.23	186	1.62	5.31	198	0.07	5.00
1187	141	14.45	186	1.66	5.38	191	0.09	5.74
1188	144	14.58	186	1.73	5.49	192	0.07	5.79
1189	147	14.75	187	1.79	5.59	190	0.11	5.67
1190	137	17.20	187	1.89	5.74	191	0.30	5.75
1191	145	16.33	188	2.02	5.97	201	0.03	6.75
1192	151	15.46	188	2.10	6.13	190	0.18	6.44
1193	155	15.12	188	2.14	6.22	191	0.19	6.44
1194	157	14.94	189	2.18	6.34	192	0.17	6.49
1195	160	14.70	189	2.20	6.38	197	0.04	7.07
1196	149	13.03	189	2.12	6.25	192	0.37	7.14
1197	153	13.29	189	2.12	6.37	192	0.21	7.18
1198	160	12.48	188	2.06	6.30	195	0.17	7.04
1199	168	11.40	188	1.93	6.00	194	0.34	7.00
1200	176	10.35	186	1.67	5.45	193	0.59	6.91
1201	181	9.49	185	1.46	5.00	193	0.70	6.88
1202	177	11.16	186	1.52	5.23	198	0.03	3.74
1203	186	10.31	186	1.50	5.20	194	0.11	5.85
1204	156	11.54	186	1.56	5.23	191	0.16	5.79
1205	159	11.89	186	1.63	5.37	190	0.15	5.74
1206	165	10.89	186	1.64	5.41	191	0.37	5.85
1207	170	9.71	185	1.52	5.09	191	0.67	6.02
1208	175	9.55	185	1.49	5.05	190	0.64	6.05
1209	164	13.28	186	1.55	5.19	194	0.01	4.21
1210	177	15.94	187	1.83	5.58	200	0.03	6.13
1211	185	14.71	189	2.09	6.06	191	0.18	6.45
1212	201	11.24	188	2.02	5.96	193	0.66	7.09
1213	244	7.03	182	0.88	3.74	192	1.44	7.17
1214	183	13.16	186	1.61	5.20	197	0.02	4.66
1215	175	12.50	186	1.69	5.36	196	0.02	4.69
1216	179	12.67	187	1.71	5.42	196	0.02	4.68
1217	183	12.14	187	1.71	5.43	196	0.07	5.95
1218	187	11.55	187	1.67	5.38	192	0.14	5.71
1219	191	11.30	186	1.63	5.32	194	0.15	5.83
1220	195	10.88	186	1.57	5.21	193	0.20	5.78
1221	182	10.84	185	1.51	5.15	199	0.02	6.07
1222	178	11.49	186	1.56	5.25	198	0.02	3.60

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1223	178	10.38	186	1.55	5.24	190	0.23	5.75
1224	185	11.53	185	1.50	5.03	191	0.18	5.10
1225	185	11.28	185	1.51	5.08	191	0.21	5.09
1226	157	12.04	186	1.57	5.26	224	0.01	1.87
1227	158	12.30	186	1.65	5.43	159	0.01	4.67
1228	161	12.23	187	1.71	5.54	190	0.13	5.66
1229	165	11.61	187	1.73	5.62	347	0.00	0.00
1230	168	10.96	187	1.71	5.57	190	0.21	6.52
1231	171	10.32	186	1.63	5.42	190	0.30	6.52
1232	166	9.73	186	1.53	5.26	190	0.51	6.34
1233	163	9.66	186	1.50	5.21	190	0.49	6.34
1234	160	9.79	185	1.48	5.21	191	0.40	6.27
1235	210	12.63	189	1.52	5.01	230	0.01	1.25
1236	215	11.96	189	1.53	5.04	201	0.03	6.19
1237	165	11.87	186	1.57	5.26	333	0.00	0.00
1238	172	11.91	186	1.65	5.39	194	0.01	6.09
1239	173	12.23	187	1.73	5.51	198	0.06	6.02
1240	173	13.28	187	1.82	5.67	199	0.06	6.05
1241	173	13.74	188	1.92	5.85	200	0.04	6.68
1242	173	12.61	188	1.93	5.89	194	0.19	6.57
1243	173	11.26	187	1.82	5.63	193	0.33	6.56
1244	177	9.66	185	1.54	5.09	191	0.59	6.54
1245	124	16.74	185	1.61	5.55	191	0.20	5.80
1246	127	17.26	186	1.77	5.89	200	0.10	3.47
1247	132	16.35	187	1.91	6.19	196	0.19	6.62
1248	134	14.76	187	2.00	6.40	197	0.04	7.14
1249	141	13.04	187	1.94	6.21	198	0.34	7.24
1250	152	10.94	186	1.77	5.92	197	0.64	7.29
1251	164	7.76	182	1.09	4.21	195	1.05	7.28
1252	223	11.68	185	1.34	5.15	197	0.76	7.63
1253	230	14.15	187	1.57	5.62	197	0.69	7.84
1254	233	14.93	186	1.43	4.65	197	0.75	7.84
1255	235	15.55	190	1.53	4.86	197	0.75	7.92
1256	235	17.91	193	1.77	5.33	197	0.66	8.10
1257	232	17.46	195	1.98	5.79	197	0.54	8.26
1258	231	17.07	196	2.07	6.15	197	0.56	8.34
1259	229	15.70	196	2.11	6.27	198	0.47	8.27
1260	231	14.79	196	2.07	6.29	199	0.47	8.02
1261	232	13.40	196	1.97	6.06	199	0.50	7.96
1262	238	15.99	196	1.96	6.21	197	0.44	8.56
1263	237	15.32	196	1.93	6.10	198	0.42	8.56
1264	241	16.62	197	1.92	6.04	198	0.41	8.56
1265	247	16.91	198	1.90	6.03	198	0.39	8.56
1266	251	15.91	199	1.84	5.91	198	0.41	8.45
1267	254	14.66	199	1.75	5.72	200	0.41	8.10
1268	256	14.69	200	1.68	5.67	199	0.36	8.49
1269	254	12.67	199	1.52	5.27	200	0.38	8.08

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1270	194	12.75	186	1.54	4.92	193	0.13	7.19
1271	199	12.33	187	1.61	5.10	198	0.17	7.38
1272	201	11.22	187	1.61	5.13	197	0.14	7.22
1273	205	10.26	187	1.53	5.03	200	0.24	7.40
1274	145	13.06	185	1.55	5.15	190	0.19	4.98
1275	147	12.60	186	1.62	5.32	191	0.08	5.71
1276	159	8.96	184	1.40	4.96	190	0.61	5.91
1277	150	9.92	185	1.45	5.16	190	0.47	5.89
1278	145	10.88	186	1.53	5.38	190	0.20	6.03
1279	144	11.73	186	1.54	5.39	180	0.01	3.84
1280	150	11.64	186	1.55	5.42	196	0.01	6.02
1281	157	11.01	186	1.56	5.47	197	0.01	6.52
1282	168	13.51	185	1.56	5.07	197	0.05	5.58
1283	171	14.02	186	1.69	5.30	201	0.07	5.55
1284	161	14.69	187	1.77	5.43	196	0.03	6.03
1285	146	13.20	186	1.67	5.29	191	0.43	6.02
1286	135	11.83	185	1.47	5.13	191	0.61	6.03
1287	156	16.46	185	1.61	5.06	199	0.04	6.15
1288	168	15.47	186	1.75	5.32	196	0.17	5.34
1289	180	13.08	187	1.79	5.45	196	0.18	5.96
1290	190	11.26	187	1.75	5.48	198	0.16	6.67
1291	228	15.68	193	1.51	4.94	237	0.01	0.39
1292	227	16.21	194	1.66	5.25	239	0.00	0.18
1293	231	14.72	195	1.73	5.47	220	0.10	2.75
1294	225	16.16	195	1.81	5.62	227	0.01	2.03
1295	221	16.29	195	1.90	5.79	224	0.04	2.35
1296	223	16.54	195	1.96	5.91	226	0.03	2.08
1297	239	17.25	196	1.98	5.96	193	0.16	7.03
1298	257	18.27	197	1.89	5.89	191	0.63	7.15
1299	272	17.88	200	1.75	5.60	193	0.69	7.78
1300	279	19.40	203	1.59	5.26	193	0.80	7.73
1301	278	21.08	206	1.56	5.21	193	0.66	7.75
1302	278	20.73	208	1.55	5.25	192	0.55	7.76
1303	277	20.07	210	1.55	5.29	193	0.35	7.80
1304	277	20.10	210	1.53	5.28	192	0.29	7.81
1305	281	20.53	216	1.51	5.23	192	0.35	7.74
1306	279	19.66	220	1.51	5.26	191	0.30	6.02
1307	281	21.11	224	1.52	5.26	191	0.30	5.77
1308	284	22.02	228	1.54	5.31	190	0.38	4.12
1309	285	21.64	231	1.56	5.39	190	0.37	4.05
1310	286	21.22	233	1.56	5.41	190	0.36	4.09
1311	284	20.42	234	1.57	5.44	191	0.29	4.14
1312	293	18.24	236	1.52	5.24	191	0.56	5.54
1313	296	16.63	236	1.48	5.29	196	0.54	8.69
1314	294	15.59	237	1.40	5.13	191	0.61	4.89
1315	150	14.30	186	1.63	5.49	303	0.00	0.00
1316	153	14.42	187	1.78	5.71	195	0.02	6.00

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1317	154	13.88	187	1.90	5.91	194	0.12	6.58
1318	154	13.29	188	1.95	6.04	192	0.19	6.50
1319	160	11.61	187	1.85	5.74	195	0.37	6.71
1320	169	9.48	185	1.51	5.04	194	0.68	6.83
1321	222	8.77	187	1.14	4.37	192	1.15	6.98
1322	214	8.01	185	1.02	4.08	192	1.24	7.02
1323	204	6.97	183	0.85	3.72	192	1.30	7.06
1324	157	12.19	186	1.55	5.41	193	0.02	5.96
1325	165	14.72	187	1.85	5.81	195	0.04	6.47
1326	165	15.76	188	2.11	6.15	196	0.04	6.56
1327	162	14.88	189	2.26	6.44	196	0.04	7.03
1328	160	13.73	190	2.27	6.51	193	0.26	7.00
1329	160	13.96	190	2.27	6.56	197	0.14	7.19
1330	162	14.12	190	2.27	6.56	200	0.10	7.32
1331	171	13.22	189	2.19	6.36	197	0.31	7.17
1332	173	14.12	189	2.21	6.44	199	0.22	7.27
1333	177	14.70	189	2.22	6.38	200	0.20	7.33
1334	184	13.92	189	2.18	6.21	198	0.27	7.26
1335	197	12.08	188	2.05	5.99	196	0.46	7.13
1336	213	11.02	187	1.72	5.37	193	0.70	6.75
1337	223	7.82	183	1.07	4.11	191	1.05	6.71
1338	135	12.83	186	1.55	5.60	200	0.04	6.54
1339	138	13.14	186	1.65	5.80	202	0.03	6.19
1340	157	11.15	185	1.60	5.49	196	0.40	6.78
1341	194	9.35	184	1.32	4.85	195	0.75	6.99
1342	215	11.69	185	1.41	5.02	197	0.66	7.40
1343	213	12.92	185	1.38	4.65	197	0.64	7.38
1344	204	12.97	187	1.57	4.99	197	0.54	7.44
1345	207	12.88	188	1.65	5.18	197	0.51	7.39
1346	209	13.55	188	1.72	5.32	198	0.47	7.40
1347	209	13.98	189	1.78	5.44	198	0.43	7.38
1348	206	14.83	190	1.89	5.63	198	0.36	7.35
1349	204	15.96	191	2.02	5.85	197	0.35	7.13
1350	208	17.63	193	2.19	6.16	199	0.27	7.39
1351	204	19.34	194	2.40	6.54	200	0.20	7.91
1352	211	19.17	195	2.55	6.91	197	0.39	7.50
1353	225	18.32	196	2.57	7.10	194	0.72	7.67
1354	238	16.93	197	2.45	6.94	197	0.44	8.07
1355	256	16.84	199	2.19	6.62	195	0.96	8.22
1356	274	18.16	203	1.95	6.26	195	1.18	8.26
1357	276	19.10	205	1.92	6.35	195	0.97	8.29
1358	276	20.09	207	1.90	6.30	196	0.53	8.12
1359	276	21.02	209	1.89	6.27	197	0.36	8.08
1360	272	20.88	209	1.91	6.32	197	0.31	8.11
1361	268	20.74	210	1.93	6.30	197	0.37	8.08
1362	266	20.89	209	1.95	6.29	193	0.54	8.22
1363	263	21.83	209	1.99	6.30	192	0.08	7.97

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1364	265	23.79	210	2.01	6.30	198	0.25	7.86
1365	268	24.72	210	2.03	6.28	197	0.26	7.93
1366	267	24.51	211	2.03	6.29	192	0.48	8.23
1367	268	24.12	211	2.04	6.36	194	0.44	7.72
1368	274	21.36	211	2.03	6.44	195	0.34	8.59
1369	276	20.48	211	2.01	6.51	190	0.46	4.05
1370	284	20.01	212	1.92	6.30	197	0.68	8.76
1371	290	19.53	212	1.86	6.13	197	0.68	8.75
1372	292	18.32	212	1.78	5.97	197	0.65	8.77
1373	295	17.26	216	1.64	5.63	196	0.87	8.73
1374	289	18.24	213	1.63	5.67	194	0.61	8.28
1375	290	17.56	214	1.57	5.55	194	0.58	8.27
1376	292	17.04	215	1.51	5.42	193	0.55	8.26
1377	292	16.93	217	1.46	5.32	194	0.48	8.27
1378	293	17.12	221	1.40	5.16	194	0.57	8.27
1379	150	10.98	186	1.59	5.47	197	0.09	8.04
1380	148	10.57	186	1.64	5.54	199	0.19	6.81
1381	147	10.03	186	1.58	5.42	195	0.43	6.86
1382	197	13.13	186	1.57	5.06	297	0.00	0.00
1383	205	12.33	187	1.60	5.18	196	0.08	5.95
1384	206	11.23	186	1.56	5.13	190	0.23	5.67
1385	200	10.67	186	1.53	5.13	190	0.21	5.74
1386	122	16.84	184	1.55	5.61	191	0.28	6.85
1387	132	17.47	186	1.74	5.91	166	0.03	5.29
1388	147	14.88	187	1.87	6.07	199	0.14	6.68
1389	160	13.55	187	1.95	6.10	196	0.13	7.04
1390	148	12.89	187	1.95	6.15	194	0.07	6.97
1391	154	12.48	187	1.92	6.12	196	0.07	7.06
1392	161	11.75	187	1.87	5.99	201	0.16	7.34
1393	172	11.34	187	1.82	5.87	199	0.25	7.30
1394	188	9.77	185	1.44	4.97	195	0.63	6.91
1395	228	13.27	193	1.52	5.12	235	0.01	0.66
1396	237	12.78	194	1.51	5.12	201	0.16	5.15
1397	140	12.78	186	1.58	5.43	156	0.02	4.52
1398	142	13.39	186	1.66	5.50	143	0.02	4.02
1399	157	11.57	186	1.70	5.58	169	0.02	4.76
1400	175	9.90	186	1.57	5.35	194	0.34	6.62
1401	172	10.11	186	1.57	5.37	193	0.29	6.60
1402	168	12.04	186	1.57	5.20	196	0.01	5.57
1403	167	12.11	186	1.63	5.33	242	0.00	0.00
1404	164	12.14	187	1.69	5.44	191	0.16	5.79
1405	164	11.68	187	1.72	5.53	191	0.26	5.83
1406	158	11.88	187	1.73	5.57	191	0.32	6.13
1407	156	12.21	187	1.74	5.58	191	0.24	6.62
1408	157	12.22	187	1.76	5.63	191	0.23	6.60
1409	158	11.90	187	1.76	5.62	191	0.26	6.61
1410	156	11.67	187	1.73	5.58	191	0.32	6.66

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1411	161	10.42	186	1.63	5.42	191	0.56	6.60
1412	155	10.39	186	1.57	5.34	191	0.54	6.61
1413	154	10.11	186	1.51	5.21	191	0.53	6.56
1414	156	9.68	185	1.43	5.07	191	0.54	6.50
1415	167	11.41	186	1.54	5.28	198	0.02	6.21
1416	167	11.52	186	1.57	5.34	197	0.02	6.19
1417	170	11.31	186	1.58	5.38	199	0.02	6.23
1418	169	11.04	186	1.59	5.40	198	0.02	6.18
1419	169	10.62	186	1.56	5.38	195	0.10	6.54
1420	169	10.32	186	1.53	5.32	193	0.15	6.44
1421	179	12.92	186	1.58	5.21	196	0.17	5.39
1422	189	12.27	186	1.62	5.17	196	0.24	5.98
1423	198	11.59	186	1.58	5.10	193	0.40	5.97
1424	206	10.05	185	1.45	4.95	192	0.54	6.05
1425	136	13.51	185	1.45	5.04	191	0.45	6.14
1426	135	13.80	185	1.51	5.17	191	0.44	6.30
1427	134	13.59	185	1.56	5.26	191	0.45	6.18
1428	132	13.51	185	1.59	5.40	191	0.49	6.07
1429	139	12.91	186	1.67	5.55	191	0.38	6.13
1430	132	13.01	186	1.63	5.56	191	0.47	6.52
1431	132	13.86	186	1.70	5.68	191	0.36	6.74
1432	131	13.32	186	1.71	5.69	191	0.38	6.75
1433	128	12.90	186	1.69	5.71	191	0.49	6.78
1434	126	12.76	186	1.66	5.73	191	0.55	6.80
1435	107	11.92	184	1.32	5.32	192	0.80	7.03
1436	109	13.02	185	1.38	5.47	192	0.72	7.13
1437	114	13.11	185	1.44	5.54	192	0.58	7.12
1438	119	13.19	185	1.50	5.63	192	0.45	7.09
1439	131	12.07	185	1.58	5.74	192	0.21	6.98
1440	128	12.12	185	1.57	5.74	192	0.28	6.88
1441	132	12.53	186	1.64	5.85	200	0.04	6.91
1442	134	12.20	186	1.67	5.90	193	0.15	6.75
1443	133	11.84	186	1.67	5.95	192	0.25	6.84
1444	132	11.92	186	1.70	6.06	193	0.24	6.93
1445	138	15.42	187	1.82	6.28	193	0.02	7.05
1446	134	13.01	187	1.86	6.35	199	0.09	7.32
1447	132	12.39	187	1.83	6.39	196	0.19	7.09
1448	129	11.85	187	1.75	6.28	196	0.30	7.21
1449	127	11.73	186	1.69	6.27	195	0.33	7.22
1450	125	11.86	186	1.67	6.34	195	0.30	7.26
1451	142	12.17	187	1.72	6.45	200	0.18	7.44
1452	139	10.71	185	1.47	5.52	198	0.51	7.50
1453	169	11.20	186	1.52	5.19	95	0.00	2.47
1454	174	11.95	186	1.57	5.26	200	0.02	5.85
1455	178	12.08	186	1.63	5.35	201	0.02	6.07
1456	180	12.22	187	1.70	5.43	199	0.05	6.06
1457	176	11.34	187	1.72	5.52	190	0.26	5.67

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1458	177	12.15	187	1.74	5.56	199	0.05	6.04
1459	179	12.98	187	1.79	5.62	201	0.03	6.22
1460	179	12.86	187	1.83	5.71	201	0.03	6.83
1461	177	12.51	187	1.85	5.76	201	0.02	6.75
1462	175	12.19	187	1.84	5.76	192	0.10	6.56
1463	170	10.03	186	1.64	5.40	190	0.55	6.46
1464	167	10.30	186	1.65	5.43	191	0.36	6.59
1465	168	10.79	187	1.67	5.57	190	0.21	6.51
1466	170	10.97	187	1.65	5.56	190	0.13	6.56
1467	171	10.66	186	1.61	5.49	190	0.14	6.54
1468	172	10.33	186	1.56	5.36	190	0.15	6.50
1469	161	10.43	186	1.53	5.36	193	0.15	6.64
1470	161	10.68	186	1.57	5.46	193	0.13	6.68
1471	162	10.63	186	1.58	5.47	194	0.18	6.72
1472	161	10.30	186	1.55	5.39	194	0.26	6.78
1473	162	9.96	186	1.51	5.29	194	0.35	6.85
1474	159	9.62	185	1.46	5.17	194	0.42	6.87
1475	123	13.04	185	1.49	5.56	191	0.24	6.35
1476	125	13.22	185	1.54	5.68	191	0.12	6.59
1477	131	12.54	185	1.58	5.76	127	0.01	2.60
1478	132	12.95	186	1.61	5.81	129	0.01	2.70
1479	129	13.53	186	1.65	5.87	125	0.01	2.62
1480	121	14.32	186	1.67	5.91	191	0.16	6.62
1481	113	14.83	186	1.66	5.95	190	0.27	6.59
1482	108	15.29	185	1.63	5.98	191	0.36	6.62
1483	98	15.58	185	1.47	5.91	192	0.40	6.97
1484	101	16.57	185	1.55	6.01	192	0.29	6.90
1485	105	16.71	186	1.63	6.15	191	0.21	6.78
1486	110	16.65	186	1.72	6.29	192	0.16	7.14
1487	119	17.19	186	1.85	6.44	28	0.00	0.00
1488	122	16.37	187	1.93	6.56	198	0.16	7.18
1489	124	16.50	187	2.01	6.68	196	0.18	7.11
1490	127	16.38	188	2.08	6.78	196	0.20	7.09
1491	129	16.28	188	2.15	6.89	199	0.15	7.26
1492	131	16.13	188	2.19	6.93	132	0.01	3.37
1493	133	13.96	188	2.14	6.81	199	0.24	7.73
1494	129	14.02	188	2.11	6.88	199	0.19	7.74
1495	128	13.69	188	2.07	6.87	199	0.19	7.73
1496	129	13.12	188	2.00	6.74	199	0.26	7.79
1497	134	12.17	187	1.90	6.50	199	0.39	7.91
1498	142	11.34	186	1.71	5.97	198	0.59	7.76
1499	160	12.89	187	1.90	6.44	200	0.33	8.03
1500	170	11.20	187	1.73	5.82	198	0.63	7.81
1501	178	10.67	186	1.59	5.36	197	0.74	7.79
1502	185	10.13	185	1.47	4.98	197	0.81	7.80
1503	190	10.12	185	1.42	4.95	197	0.82	7.85
1504	194	9.58	184	1.35	4.85	197	0.84	7.86

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1505	159	10.52	186	1.56	5.41	197	0.64	8.04
1506	165	10.61	186	1.54	5.34	197	0.64	8.07
1507	151	14.14	185	1.60	5.10	191	0.43	5.32
1508	150	14.32	186	1.76	5.43	191	0.32	5.91
1509	142	13.13	187	1.78	5.70	191	0.60	5.88
1510	145	14.28	187	1.89	5.80	191	0.25	6.65
1511	147	14.56	188	1.97	5.97	191	0.22	6.68
1512	148	14.58	188	2.04	6.07	190	0.23	6.55
1513	147	14.72	188	2.09	6.18	190	0.29	6.56
1514	146	14.81	189	2.15	6.26	191	0.16	7.19
1515	139	13.61	188	2.09	6.17	192	0.54	7.20
1516	136	14.36	188	2.09	6.22	192	0.52	7.21
1517	137	14.16	188	2.09	6.26	192	0.50	7.21
1518	140	13.48	188	2.07	6.26	192	0.49	7.21
1519	132	12.94	187	1.95	6.08	192	0.66	7.26
1520	125	12.61	186	1.76	5.91	192	0.87	7.17
1521	108	13.34	185	1.55	5.52	192	0.99	7.15
1522	109	12.68	185	1.50	5.49	192	0.95	7.15
1523	102	11.89	183	1.29	5.11	193	1.00	7.15
1524	173	13.10	186	1.59	5.09	184	0.01	5.09
1525	175	13.27	186	1.69	5.30	194	0.01	5.29
1526	178	13.63	187	1.78	5.46	195	0.01	5.21
1527	177	16.27	188	1.91	5.63	195	0.02	5.11
1528	174	16.05	188	2.05	5.85	199	0.04	6.04
1529	172	16.05	189	2.14	6.03	197	0.12	5.78
1530	173	16.20	189	2.21	6.15	190	0.22	6.55
1531	176	15.53	190	2.27	6.32	190	0.28	6.52
1532	178	14.80	190	2.30	6.40	199	0.03	4.54
1533	172	10.51	187	1.89	5.59	192	1.06	7.03
1534	170	11.79	188	2.04	6.09	192	0.48	7.17
1535	174	11.61	188	1.99	6.04	193	0.32	7.06
1536	185	9.89	186	1.61	5.12	192	0.80	6.86
1537	110	15.69	184	1.45	5.37	190	0.47	6.06
1538	105	16.15	184	1.44	5.39	190	0.53	6.03
1539	103	16.78	184	1.43	5.58	190	0.51	6.36
1540	103	16.34	184	1.46	5.61	191	0.45	6.65
1541	101	15.87	184	1.44	5.63	191	0.47	6.63
1542	105	15.33	185	1.48	5.78	191	0.45	6.65
1543	108	15.03	185	1.53	5.89	191	0.44	6.71
1544	104	16.19	185	1.55	5.96	192	0.52	6.98
1545	110	16.94	186	1.72	6.21	193	0.38	7.11
1546	115	16.25	186	1.84	6.42	195	0.21	7.08
1547	121	15.44	187	1.90	6.53	198	0.17	7.19
1548	127	14.83	187	1.93	6.57	197	0.20	7.16
1549	132	14.33	187	1.96	6.60	200	0.18	7.28
1550	131	13.13	188	1.95	6.76	197	0.34	7.19
1551	136	12.95	187	1.96	6.56	202	0.10	7.99

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1552	141	12.54	187	1.93	6.51	200	0.18	7.82
1553	144	12.38	187	1.91	6.48	201	0.15	7.95
1554	145	12.74	188	1.93	6.64	200	0.11	7.27
1555	148	12.84	188	1.90	6.51	197	0.08	7.11
1556	145	11.99	187	1.84	6.37	199	0.19	7.34
1557	148	11.82	187	1.79	6.25	200	0.17	7.32
1558	152	10.86	186	1.60	5.56	198	0.39	7.25
1559	155	9.91	184	1.41	5.05	196	0.53	7.16
1560	154	10.47	185	1.49	5.39	197	0.39	7.17
1561	154	10.80	185	1.51	5.45	198	0.30	7.11
1562	145	10.38	185	1.46	5.38	197	0.36	7.02
1563	140	11.02	186	1.55	5.77	199	0.19	7.28
1564	135	11.55	186	1.56	5.90	200	0.12	6.82
1565	250	18.12	203	1.54	5.19	192	0.35	6.97
1566	249	18.01	205	1.60	5.44	193	0.45	7.72
1567	247	17.20	205	1.63	5.64	213	0.15	4.25
1568	246	16.85	205	1.62	5.58	196	0.24	7.50
1569	247	16.56	205	1.62	5.71	215	0.11	3.87
1570	249	17.80	205	1.60	5.51	194	0.29	7.68
1571	249	16.00	205	1.57	5.42	211	0.15	4.60
1572	251	15.42	204	1.53	5.32	210	0.14	4.67
1573	255	15.98	205	1.50	5.31	193	0.30	7.77
1574	146	15.95	186	1.64	5.24	189	0.01	4.21
1575	149	15.07	186	1.72	5.42	196	0.01	5.95
1576	154	14.52	186	1.76	5.51	196	0.01	6.09
1577	157	13.90	186	1.76	5.54	196	0.07	5.98
1578	162	12.56	186	1.69	5.48	197	0.13	5.97
1579	168	11.19	186	1.57	5.27	196	0.19	5.97
1580	161	11.63	185	1.52	5.14	190	0.13	5.00
1581	162	12.74	186	1.60	5.27	195	0.01	4.09
1582	166	13.46	186	1.70	5.41	197	0.01	5.97
1583	176	12.90	187	1.76	5.50	195	0.11	5.91
1584	194	10.65	187	1.70	5.42	193	0.27	6.57
1585	210	9.47	185	1.44	4.93	190	0.66	6.08
1586	126	12.88	185	1.48	5.30	190	0.40	5.97
1587	127	11.40	184	1.41	5.19	190	0.54	6.33
1588	122	12.75	185	1.44	5.29	191	0.46	6.74
1589	124	12.53	185	1.46	5.32	191	0.43	6.72
1590	129	11.63	185	1.47	5.33	191	0.41	6.66
1591	126	12.39	185	1.48	5.38	191	0.41	6.67
1592	127	12.90	185	1.54	5.47	191	0.35	6.62
1593	128	13.02	186	1.59	5.56	190	0.32	6.52
1594	131	13.10	186	1.66	5.63	190	0.23	6.59
1595	133	13.08	186	1.72	5.77	190	0.21	6.54
1596	138	12.44	186	1.75	5.85	190	0.26	6.54
1597	137	12.34	187	1.77	5.91	191	0.30	6.60
1598	139	12.64	187	1.82	6.03	190	0.24	6.56

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1599	141	13.03	187	1.88	6.12	190	0.18	6.52
1600	144	13.38	188	1.95	6.21	200	0.05	6.78
1601	150	13.86	188	2.04	6.31	174	0.02	4.23
1602	150	16.51	189	2.21	6.46	171	0.01	4.18
1603	146	16.25	189	2.35	6.62	193	0.19	6.99
1604	147	14.98	190	2.36	6.70	193	0.34	7.02
1605	166	13.92	190	2.33	6.66	198	0.07	7.84
1606	156	13.10	189	2.19	6.50	194	0.28	7.01
1607	153	12.84	188	2.08	6.38	195	0.15	7.05
1608	156	13.37	188	1.97	6.20	193	0.03	7.04
1609	148	13.07	187	1.86	6.02	230	0.01	1.48
1610	139	13.48	187	1.77	5.91	206	0.11	4.51
1611	138	13.35	186	1.73	5.89	206	0.10	4.49
1612	140	13.33	186	1.72	5.91	204	0.09	4.80
1613	142	13.19	186	1.72	5.95	193	0.15	6.51
1614	148	14.65	187	1.79	6.03	200	0.07	6.70
1615	154	12.53	187	1.79	5.97	200	0.14	7.35
1616	153	12.37	187	1.77	5.97	200	0.14	7.35
1617	147	12.24	187	1.75	6.00	201	0.10	7.38
1618	150	13.61	187	1.78	6.06	198	0.06	7.19
1619	157	14.18	187	1.83	6.05	200	0.10	7.39
1620	169	13.52	187	1.87	5.97	200	0.21	7.42
1621	178	12.25	187	1.84	5.89	199	0.34	7.36
1622	188	11.70	186	1.60	5.10	197	0.55	7.10
1623	199	11.03	184	1.46	4.74	196	0.66	7.11
1624	141	12.40	186	1.58	5.32	191	0.22	5.82
1625	139	13.28	186	1.70	5.55	191	0.33	5.90
1626	138	14.41	187	1.85	5.74	191	0.29	6.68
1627	157	12.10	187	1.93	5.91	190	0.34	6.55
1628	159	11.32	188	1.93	5.97	192	0.42	7.18
1629	141	12.72	188	1.90	6.02	191	0.57	6.96
1630	163	12.63	188	1.97	6.14	201	0.06	6.79
1631	173	11.63	188	1.89	5.97	200	0.13	7.30
1632	190	9.49	185	1.45	4.98	193	0.65	6.74
1633	184	11.02	186	1.52	5.15	245	0.00	0.00
1634	183	10.13	187	1.55	5.22	191	0.32	5.86
1635	181	10.02	187	1.56	5.26	191	0.38	5.97
1636	180	10.18	187	1.59	5.33	191	0.33	6.07
1637	176	10.38	187	1.61	5.37	191	0.24	6.26
1638	173	10.49	187	1.62	5.38	191	0.16	6.37
1639	172	10.14	186	1.58	5.32	191	0.29	6.21
1640	165	10.21	186	1.57	5.32	191	0.28	6.01
1641	160	10.84	186	1.59	5.36	221	0.02	2.32
1642	158	11.15	186	1.61	5.41	220	0.02	2.38
1643	153	10.99	186	1.62	5.44	196	0.17	5.85
1644	151	11.05	186	1.64	5.49	191	0.22	6.59
1645	165	10.36	186	1.62	5.47	190	0.33	6.38

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1646	172	10.48	186	1.63	5.47	190	0.30	6.44
1647	221	14.44	186	1.47	4.80	194	0.52	6.79
1648	215	16.32	188	1.75	5.21	195	0.42	6.96
1649	220	15.80	190	1.87	5.50	194	0.51	6.90
1650	226	13.16	191	1.84	5.53	191	0.64	6.61
1651	240	11.28	192	1.74	5.46	193	0.84	7.12
1652	260	10.60	191	1.29	4.62	192	1.32	7.17
1653	281	11.93	194	1.18	4.59	192	1.33	7.31
1654	285	11.38	196	1.08	4.39	192	1.32	7.38
1655	285	10.96	200	0.90	3.83	192	1.33	7.44
1656	285	11.15	201	0.87	3.74	192	1.26	7.45
1657	175	13.13	185	1.50	5.04	201	0.16	7.11
1658	175	13.36	186	1.64	5.26	201	0.15	7.11
1659	175	13.12	187	1.74	5.46	200	0.19	7.09
1660	177	12.58	187	1.81	5.58	201	0.15	7.06
1661	183	11.70	187	1.78	5.53	197	0.29	6.78
1662	190	10.96	187	1.71	5.43	196	0.41	6.71
1663	150	13.62	185	1.53	5.11	168	0.01	4.71
1664	156	13.80	186	1.65	5.32	171	0.01	4.85
1665	161	14.13	186	1.75	5.50	194	0.02	5.56
1666	165	14.31	187	1.85	5.64	197	0.03	6.01
1667	163	13.69	187	1.92	5.80	194	0.02	5.48
1668	175	13.58	188	1.97	5.91	200	0.08	6.73
1669	191	12.77	187	1.90	5.68	194	0.35	6.59
1670	205	11.76	188	1.89	5.83	197	0.37	7.17
1671	211	9.74	185	1.47	4.93	190	0.74	6.55
1672	121	14.71	184	1.47	5.32	190	0.35	5.97
1673	122	14.32	185	1.51	5.42	190	0.33	5.95
1674	122	14.45	185	1.55	5.51	190	0.31	6.32
1675	132	12.58	185	1.60	5.60	191	0.18	6.61
1676	126	12.56	185	1.55	5.58	191	0.36	6.73
1677	124	12.34	185	1.51	5.54	191	0.43	6.81
1678	124	11.47	185	1.44	5.48	191	0.51	6.81
1679	162	11.90	186	1.60	5.33	195	0.02	3.88
1680	167	12.10	187	1.68	5.46	195	0.01	3.90
1681	172	12.66	187	1.74	5.57	195	0.01	3.96
1682	174	12.06	187	1.75	5.62	198	0.03	4.17
1683	174	11.82	187	1.72	5.57	199	0.03	4.17
1684	175	12.33	187	1.69	5.50	199	0.02	4.16
1685	181	12.75	187	1.67	5.45	201	0.02	6.10
1686	186	13.07	187	1.66	5.42	200	0.03	6.12
1687	198	12.82	186	1.62	5.29	194	0.20	5.90
1688	200	13.16	186	1.61	5.21	194	0.19	5.91
1689	205	12.39	186	1.54	5.03	193	0.30	5.93
1690	205	16.87	186	1.59	5.09	200	0.08	5.43
1691	219	14.17	187	1.64	5.11	194	0.27	5.84
1692	219	12.18	187	1.59	5.03	191	0.34	5.72

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1693	208	10.64	186	1.52	4.98	190	0.29	5.68
1694	191	11.98	186	1.56	5.13	199	0.13	6.09
1695	190	12.07	187	1.68	5.41	199	0.13	6.11
1696	193	11.21	187	1.72	5.44	196	0.25	6.67
1697	201	9.97	186	1.52	5.00	191	0.60	6.59
1698	217	9.61	185	1.38	4.85	192	0.72	6.76
1699	201	13.28	189	1.54	5.09	227	0.05	1.68
1700	216	13.67	190	1.63	5.21	335	0.00	0.00
1701	228	14.06	191	1.67	5.32	195	0.08	6.67
1702	237	13.93	192	1.66	5.32	192	0.16	6.51
1703	244	12.94	193	1.60	5.29	191	0.43	6.56
1704	253	12.07	193	1.49	5.10	192	0.46	7.16
1705	155	12.40	186	1.63	5.41	199	0.07	6.27
1706	159	12.25	187	1.76	5.60	200	0.09	6.77
1707	164	11.72	187	1.81	5.69	195	0.29	6.75
1708	166	10.63	187	1.73	5.52	192	0.69	6.92
1709	180	9.47	185	1.50	5.04	192	0.86	6.91
1710	191	7.96	183	1.15	4.29	192	1.00	6.86
1711	103	15.43	185	1.51	5.97	191	0.26	6.57
1712	104	15.52	185	1.55	6.06	191	0.27	6.57
1713	100	16.62	186	1.57	6.17	191	0.34	6.61
1714	101	16.50	186	1.63	6.21	193	0.31	7.20
1715	102	16.46	186	1.67	6.35	193	0.32	7.11
1716	102	16.37	186	1.70	6.44	193	0.34	7.08
1717	102	15.90	186	1.71	6.48	193	0.38	7.08
1718	100	15.50	186	1.68	6.46	193	0.43	7.09
1719	93	17.94	186	1.63	6.44	193	0.53	7.17
1720	96	16.69	186	1.61	6.44	193	0.50	7.11
1721	95	15.90	186	1.56	6.39	193	0.49	7.08
1722	93	15.75	186	1.52	6.36	193	0.49	7.08
1723	93	15.80	186	1.50	6.34	193	0.47	7.08
1724	92	15.85	186	1.48	6.33	193	0.45	7.06
1725	279	20.92	220	1.50	5.27	191	0.39	3.97
1726	282	20.70	223	1.52	5.28	191	0.39	4.03
1727	282	19.28	225	1.49	5.25	190	0.38	4.03
1728	270	20.68	217	1.52	5.34	103	0.01	4.31
1729	279	18.99	218	1.50	5.29	191	0.42	4.04
1730	135	10.93	185	1.40	5.05	191	0.59	5.84
1731	151	10.72	185	1.44	4.97	191	0.47	5.18
1732	138	11.72	185	1.49	5.15	191	0.35	6.15
1733	141	12.10	186	1.56	5.32	191	0.27	6.53
1734	144	12.41	186	1.63	5.44	191	0.21	6.70
1735	142	12.51	186	1.67	5.50	191	0.32	6.88
1736	141	12.55	186	1.69	5.54	191	0.37	6.75
1737	136	9.40	183	1.30	4.73	190	0.86	6.53
1738	136	9.92	184	1.38	5.03	191	0.73	6.68
1739	140	10.52	185	1.48	5.31	191	0.55	6.76

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1740	146	10.47	186	1.52	5.35	191	0.41	6.73
1741	263	13.80	193	1.30	4.62	191	0.76	6.84
1742	280	13.02	197	1.26	4.62	192	1.04	7.22
1743	289	12.96	202	0.95	3.68	191	1.28	7.38
1744	286	15.00	200	1.34	4.91	192	0.99	7.76
1745	280	15.75	202	1.29	4.60	191	0.92	7.64
1746	279	16.25	203	1.34	4.70	191	0.80	7.63
1747	148	11.93	186	1.57	5.39	194	0.04	5.97
1748	143	11.84	186	1.60	5.45	164	0.02	4.85
1749	133	11.76	186	1.56	5.44	190	0.38	5.95
1750	126	11.71	185	1.44	5.24	191	0.54	6.44
1751	118	13.78	185	1.44	5.21	191	0.50	6.40
1752	140	11.78	186	1.55	5.47	167	0.02	4.97
1753	137	12.18	186	1.58	5.50	165	0.02	4.94
1754	132	12.60	186	1.57	5.50	190	0.30	6.20
1755	123	12.98	185	1.50	5.38	191	0.47	6.36
1756	121	13.74	185	1.52	5.44	191	0.44	6.33
1757	121	14.06	185	1.55	5.50	191	0.44	6.42
1758	130	15.81	186	1.72	5.77	93	0.01	2.16
1759	132	14.66	186	1.81	5.91	196	0.10	6.65
1760	131	13.86	187	1.84	6.03	190	0.20	6.42
1761	131	13.50	187	1.85	6.10	191	0.24	6.57
1762	130	13.53	187	1.85	6.15	192	0.27	6.91
1763	130	13.49	187	1.87	6.16	193	0.23	7.23
1764	131	13.35	187	1.88	6.22	193	0.20	7.22
1765	130	13.46	187	1.89	6.25	193	0.20	7.24
1766	129	13.24	187	1.87	6.22	193	0.24	7.20
1767	130	12.47	187	1.80	6.12	194	0.40	7.29
1768	135	11.88	187	1.75	6.03	194	0.40	7.21
1769	140	11.44	187	1.73	6.04	195	0.38	7.12
1770	144	13.38	187	1.83	6.16	195	0.06	6.98
1771	147	12.21	187	1.84	6.07	198	0.09	7.21
1772	149	13.08	187	1.87	6.09	197	0.08	7.16
1773	149	13.86	187	1.94	6.17	197	0.08	7.15
1774	145	13.71	188	1.99	6.28	196	0.06	7.03
1775	142	13.36	188	1.99	6.34	199	0.12	7.27
1776	141	11.39	187	1.83	6.00	195	0.40	7.10
1777	137	11.05	186	1.73	5.91	195	0.44	7.09
1778	130	11.18	186	1.67	5.91	193	0.43	7.07
1779	126	11.24	186	1.59	5.90	193	0.49	7.21
1780	125	10.86	186	1.50	5.87	193	0.50	7.03
1781	126	13.61	186	1.52	5.91	200	0.14	3.70
1782	220	10.71	189	1.49	5.04	194	0.23	6.62
1783	217	12.01	189	1.59	5.26	195	0.19	6.73
1784	216	12.53	190	1.67	5.42	195	0.18	6.74
1785	217	12.18	191	1.74	5.58	191	0.25	6.53
1786	219	12.16	191	1.78	5.65	194	0.21	6.99

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1787	231	13.43	192	1.83	5.79	196	0.16	7.05
1788	240	13.25	192	1.80	5.75	193	0.38	7.03
1789	250	12.97	193	1.63	5.36	192	0.76	7.24
1790	256	11.32	193	1.46	5.03	192	0.95	7.28
1791	258	11.29	193	1.39	4.94	192	0.94	7.32
1792	261	11.48	193	1.35	4.87	192	0.91	7.37
1793	269	11.21	194	1.11	4.31	192	1.04	7.27
1794	266	11.71	193	1.24	4.69	192	0.88	7.43
1795	155	12.97	186	1.59	5.26	196	0.03	6.05
1796	162	13.82	186	1.70	5.44	198	0.05	6.04
1797	168	14.12	187	1.81	5.57	201	0.07	6.11
1798	177	14.32	187	1.91	5.70	200	0.07	6.66
1799	194	13.02	187	1.90	5.66	197	0.23	6.66
1800	201	11.20	188	1.85	5.74	200	0.15	7.26
1801	199	9.96	186	1.63	5.33	192	0.38	6.56
1802	195	9.47	185	1.45	4.97	192	0.46	6.01
1803	141	16.90	184	1.53	5.16	194	0.18	5.17
1804	140	15.76	185	1.62	5.41	230	0.01	1.32
1805	144	16.20	185	1.65	5.51	200	0.08	6.04
1806	153	15.05	185	1.63	5.50	199	0.15	6.04
1807	157	13.36	185	1.53	5.32	199	0.16	6.09
1808	177	10.82	184	1.43	4.57	190	0.51	4.41
1809	185	10.68	185	1.51	4.91	190	0.24	4.97
1810	147	11.50	186	1.53	5.40	198	0.03	6.03
1811	148	10.84	186	1.54	5.45	191	0.01	4.07
1812	145	11.52	186	1.55	5.52	185	0.01	3.91
1813	146	11.89	186	1.56	5.56	186	0.01	3.90
1814	149	12.14	186	1.57	5.60	179	0.01	3.55
1815	150	11.60	186	1.57	5.62	196	0.01	6.56
1816	150	11.02	186	1.56	5.62	198	0.05	6.71
1817	164	14.44	185	1.59	5.20	201	0.07	6.13
1818	170	10.80	185	1.52	5.08	198	0.17	6.05
1819	169	11.63	185	1.53	5.09	359	0.00	0.00
1820	173	11.29	186	1.55	5.15	199	0.02	3.80
1821	185	11.34	186	1.57	5.21	201	0.02	6.10
1822	190	10.28	186	1.55	5.18	195	0.12	5.88
1823	216	11.53	188	1.50	5.05	192	0.14	5.85
1824	217	11.83	189	1.52	5.08	192	0.15	5.88
1825	217	11.45	189	1.52	5.09	191	0.16	5.94
1826	216	11.49	189	1.52	5.09	191	0.16	6.00
1827	209	10.56	189	1.49	5.07	193	0.31	6.09
1828	257	18.59	204	1.54	5.17	77	0.00	2.07
1829	264	19.74	206	1.63	5.41	190	0.15	6.34
1830	267	20.25	207	1.71	5.63	195	0.17	7.78
1831	267	20.14	209	1.76	5.85	196	0.18	9.74
1832	261	19.79	209	1.80	6.02	357	0.00	0.00
1833	256	19.68	209	1.85	6.15	341	0.00	0.00

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1834	252	19.60	208	1.89	6.24	328	0.00	0.00
1835	256	17.29	208	1.86	6.21	211	0.10	5.92
1836	270	14.57	207	1.68	5.69	210	0.30	5.53
1837	288	14.60	209	1.58	5.77	195	0.61	8.74
1838	303	14.86	211	1.40	5.46	195	0.79	8.70
1839	308	14.92	223	1.25	4.97	195	0.91	8.65
1840	166	12.77	185	1.56	5.06	233	0.01	0.71
1841	173	12.84	186	1.64	5.18	354	0.00	0.00
1842	179	13.07	186	1.71	5.34	199	0.04	6.12
1843	192	10.76	186	1.63	5.15	193	0.33	5.82
1844	195	12.21	187	1.67	5.35	196	0.22	6.00
1845	196	12.45	187	1.68	5.35	196	0.21	6.02
1846	197	12.30	187	1.67	5.31	196	0.22	6.03
1847	203	11.91	187	1.61	5.21	196	0.28	6.00
1848	211	11.40	186	1.54	5.03	194	0.34	5.95
1849	214	13.00	187	1.55	5.04	195	0.29	6.00
1850	227	12.32	187	1.47	4.89	193	0.39	5.89
1851	143	12.44	185	1.51	5.11	202	0.16	4.58
1852	143	13.24	186	1.59	5.30	196	0.19	5.32
1853	143	13.51	186	1.67	5.44	191	0.26	5.88
1854	144	13.79	187	1.75	5.57	191	0.24	5.85
1855	145	14.10	187	1.84	5.75	191	0.20	5.87
1856	148	14.97	188	1.94	5.91	239	0.00	0.18
1857	149	15.38	188	2.04	6.06	192	0.12	6.43
1858	150	15.94	189	2.14	6.21	191	0.20	6.62
1859	151	16.84	189	2.27	6.43	245	0.00	0.00
1860	151	17.52	190	2.40	6.66	203	0.07	5.42
1861	150	17.59	190	2.49	6.80	192	0.27	7.12
1862	149	13.67	190	2.41	6.74	194	0.38	7.71
1863	144	13.83	190	2.30	6.77	192	0.53	7.21
1864	147	13.49	189	2.23	6.67	192	0.38	7.22
1865	154	12.65	189	2.16	6.58	193	0.31	7.13
1866	157	12.11	189	2.08	6.44	193	0.33	7.11
1867	162	11.11	188	1.90	5.98	194	0.46	7.12
1868	169	8.88	184	1.36	4.69	193	0.88	7.04
1869	170	8.65	184	1.30	4.64	193	0.87	7.01
1870	172	8.50	183	1.26	4.61	193	0.84	6.98
1871	147	13.62	185	1.51	5.14	354	0.00	0.00
1872	148	14.50	186	1.60	5.31	184	0.00	3.79
1873	150	14.98	186	1.71	5.48	126	0.00	2.38
1874	151	15.22	187	1.82	5.62	193	0.07	5.82
1875	154	15.12	187	1.91	5.80	194	0.11	5.83
1876	162	13.60	187	1.95	5.91	198	0.09	6.70
1877	169	12.71	187	1.91	5.91	195	0.22	6.61
1878	172	11.17	187	1.87	5.91	197	0.20	7.17
1879	177	9.42	185	1.48	5.01	191	0.67	6.61
1880	133	11.34	185	1.52	5.47	190	0.16	6.56

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1881	128	14.44	185	1.53	5.34	191	0.29	5.91
1882	128	14.54	186	1.63	5.50	190	0.38	5.88
1883	129	13.72	186	1.72	5.61	191	0.37	6.67
1884	128	14.45	186	1.80	5.82	191	0.46	6.69
1885	132	14.27	187	1.90	6.09	191	0.48	6.71
1886	135	13.69	188	1.99	6.16	192	0.43	7.21
1887	126	15.56	188	2.00	6.25	192	0.55	7.23
1888	137	13.28	188	2.02	6.31	192	0.49	7.15
1889	154	9.55	184	1.45	5.03	194	0.88	7.09
1890	162	12.59	185	1.53	5.26	200	0.05	6.13
1891	167	12.73	186	1.57	5.26	198	0.14	6.08
1892	169	13.98	186	1.64	5.36	198	0.15	6.09
1893	164	13.34	186	1.68	5.45	198	0.15	6.08
1894	161	12.67	186	1.65	5.45	198	0.14	6.12
1895	166	13.01	186	1.59	5.36	199	0.14	6.22
1896	160	16.65	186	1.67	5.19	197	0.06	5.37
1897	159	17.14	187	1.86	5.50	195	0.02	4.13
1898	159	17.83	187	2.00	5.75	190	0.24	5.69
1899	159	18.39	188	2.13	5.95	194	0.02	4.42
1900	161	17.88	189	2.22	6.14	196	0.08	6.65
1901	165	16.54	189	2.24	6.22	190	0.24	6.50
1902	177	9.91	186	1.68	5.16	191	0.99	6.68
1903	177	8.81	184	1.39	4.68	191	1.05	6.77
1904	171	9.52	185	1.50	5.09	191	0.87	6.80
1905	170	10.82	187	1.77	5.81	191	0.44	6.68
1906	175	10.51	187	1.67	5.50	191	0.38	6.60
1907	180	9.88	186	1.57	5.30	191	0.46	6.65
1908	164	13.46	186	1.57	5.21	211	0.01	3.37
1909	165	13.26	186	1.65	5.32	349	0.00	0.00
1910	166	12.90	186	1.70	5.43	51	0.00	0.56
1911	168	12.74	187	1.72	5.48	191	0.11	5.71
1912	168	12.95	187	1.75	5.53	192	0.09	5.74
1913	168	13.14	187	1.78	5.58	192	0.09	5.74
1914	162	13.81	187	1.83	5.64	207	0.02	4.18
1915	164	14.15	187	1.89	5.74	208	0.01	4.05
1916	166	14.10	188	1.94	5.85	246	0.00	0.00
1917	168	13.82	188	1.98	5.93	255	0.00	0.00
1918	170	13.53	188	1.99	5.97	190	0.12	6.56
1919	172	13.25	188	1.98	5.98	190	0.17	6.55
1920	174	14.04	188	2.00	6.00	198	0.03	4.40
1921	175	12.96	188	1.98	5.99	192	0.16	6.47
1922	176	12.05	188	1.93	5.97	190	0.23	6.44
1923	175	11.37	188	1.89	5.95	190	0.26	6.48
1924	172	10.91	187	1.80	5.77	190	0.31	6.55
1925	170	10.58	187	1.71	5.57	191	0.31	6.58
1926	170	9.83	186	1.57	5.32	191	0.45	6.58
1927	169	10.16	186	1.59	5.41	190	0.28	6.52

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1928	168	10.47	186	1.59	5.47	190	0.15	6.55
1929	168	10.67	186	1.57	5.44	191	0.08	6.50
1930	169	10.99	186	1.56	5.40	203	0.02	5.27
1931	169	11.21	186	1.54	5.31	208	0.02	4.00
1932	167	11.61	186	1.54	5.27	208	0.02	3.97
1933	166	10.99	186	1.54	5.27	208	0.02	3.97
1934	165	10.72	186	1.53	5.26	190	0.11	5.72
1935	165	10.59	186	1.53	5.26	190	0.10	5.68
1936	165	10.54	186	1.52	5.25	191	0.11	5.71
1937	166	10.53	186	1.52	5.25	192	0.12	5.74
1938	164	10.18	186	1.50	5.22	192	0.17	5.74
1939	163	10.42	186	1.50	5.24	192	0.10	5.76
1940	163	11.24	185	1.51	5.23	288	0.00	0.00
1941	158	11.90	186	1.52	5.24	304	0.00	0.00
1942	159	11.87	186	1.54	5.27	323	0.00	0.00
1943	158	11.90	186	1.56	5.31	333	0.00	0.00
1944	157	12.02	186	1.58	5.34	206	0.03	5.04
1945	150	11.75	186	1.59	5.37	191	0.17	5.83
1946	151	12.44	186	1.62	5.41	208	0.03	4.80
1947	154	12.98	186	1.66	5.46	208	0.02	4.68
1948	159	13.34	186	1.73	5.53	194	0.02	6.05
1949	163	13.81	187	1.79	5.62	200	0.05	6.09
1950	167	14.22	187	1.87	5.74	194	0.02	6.55
1951	170	14.77	188	1.96	5.89	195	0.01	6.58
1952	176	13.61	188	1.98	5.94	194	0.18	6.56
1953	183	11.69	188	1.95	5.93	197	0.19	7.18
1954	190	10.50	187	1.71	5.43	192	0.52	6.61
1955	188	9.41	185	1.48	4.99	191	0.70	6.61
1956	185	8.80	184	1.33	4.67	191	0.75	6.65
1957	177	10.14	186	1.57	5.32	192	0.42	6.66
1958	179	10.11	186	1.55	5.29	192	0.38	6.66
1959	184	9.89	185	1.45	5.05	192	0.44	6.61
1960	159	10.85	186	1.54	5.26	197	0.11	5.96
1961	158	11.88	186	1.52	5.25	220	0.02	1.57
1962	156	11.37	186	1.55	5.31	191	0.10	5.74
1963	153	11.96	186	1.58	5.35	219	0.02	1.62
1964	152	12.51	186	1.61	5.41	219	0.02	1.62
1965	153	12.93	186	1.65	5.47	219	0.02	1.61
1966	154	13.39	186	1.70	5.53	220	0.02	1.56
1967	154	13.89	187	1.78	5.62	221	0.02	1.48
1968	161	14.49	187	1.87	5.78	195	0.02	4.12
1969	159	14.42	188	1.95	5.91	195	0.02	4.21
1970	158	14.29	188	2.01	6.01	192	0.11	6.54
1971	155	14.15	188	2.05	6.10	190	0.25	6.54
1972	158	13.97	189	2.09	6.21	190	0.20	6.43
1973	161	13.85	189	2.14	6.28	195	0.02	4.52
1974	158	11.51	188	2.03	6.07	192	0.49	7.09

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
1975	158	12.02	188	2.03	6.19	192	0.38	7.10
1976	163	12.21	189	2.05	6.30	193	0.27	7.05
1977	169	11.18	188	1.92	5.97	193	0.47	7.09
1978	174	9.79	186	1.58	5.20	193	0.81	7.03
1979	179	8.70	184	1.33	4.68	193	0.92	7.01
1980	182	8.47	184	1.27	4.62	193	0.88	6.97
1981	242	14.22	193	1.52	5.15	192	0.08	6.62
1982	243	14.49	193	1.56	5.19	192	0.08	6.64
1983	243	14.51	194	1.59	5.25	191	0.19	6.64
1984	244	14.49	194	1.63	5.34	191	0.22	6.60
1985	246	14.20	194	1.65	5.38	191	0.17	7.19
1986	252	12.69	194	1.53	5.15	191	0.53	7.19
1987	256	11.26	194	1.27	4.58	191	0.83	7.14
1988	227	13.65	190	1.61	5.14	194	0.12	6.21
1989	226	12.79	191	1.75	5.54	194	0.12	6.44
1990	221	12.22	192	1.83	5.71	194	0.12	6.82
1991	236	11.17	191	1.63	5.35	192	1.10	7.27
1992	256	9.97	191	1.26	4.61	192	1.41	7.48
1993	258	9.61	190	1.09	4.22	192	1.49	7.59
1994	245	11.13	192	1.46	5.12	192	1.28	7.74
1995	247	12.28	193	1.65	5.62	193	1.08	7.96
1996	257	12.60	193	1.58	5.47	193	1.09	7.97
1997	271	11.83	194	1.40	5.15	192	1.18	7.86
1998	287	11.92	200	0.90	3.65	192	1.35	7.64
1999	232	12.99	194	1.53	5.20	222	0.06	2.44
2000	227	14.33	194	1.62	5.37	236	0.00	0.57
2001	225	13.76	194	1.69	5.53	222	0.03	2.65
2002	224	13.46	194	1.71	5.60	215	0.10	3.60
2003	224	13.50	195	1.73	5.65	215	0.11	3.64
2004	224	13.61	194	1.73	5.66	217	0.08	3.38
2005	224	13.67	194	1.73	5.64	219	0.07	3.00
2006	225	15.11	194	1.73	5.64	284	0.00	0.00
2007	231	15.61	195	1.78	5.67	357	0.00	0.00
2008	237	15.87	195	1.80	5.68	193	0.11	9.61
2009	244	14.28	195	1.76	5.63	191	0.27	7.09
2010	249	13.22	195	1.64	5.44	191	0.42	7.11
2011	253	12.51	195	1.51	5.18	191	0.48	7.15
2012	254	15.39	195	1.56	5.35	194	0.15	7.09
2013	262	13.74	196	1.47	5.03	191	0.42	7.16
2014	236	14.20	194	1.53	5.13	201	0.10	5.21
2015	238	14.50	194	1.57	5.21	197	0.13	5.81
2016	241	14.63	195	1.61	5.32	193	0.16	6.30
2017	239	13.62	195	1.64	5.40	191	0.15	7.15
2018	238	14.56	195	1.68	5.51	193	0.08	3.87
2019	242	15.51	195	1.72	5.60	193	0.08	3.88
2020	243	14.60	195	1.72	5.61	197	0.17	6.27
2021	247	13.07	195	1.63	5.45	199	0.27	5.95

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2022	262	11.65	195	1.39	4.91	191	0.63	7.23
2023	127	13.09	185	1.56	5.63	191	0.12	6.72
2024	126	13.78	186	1.66	5.83	191	0.09	6.47
2025	125	13.85	186	1.72	5.98	191	0.12	6.68
2026	124	13.74	186	1.77	6.11	192	0.16	7.05
2027	123	13.66	187	1.79	6.23	192	0.18	7.18
2028	125	13.22	187	1.79	6.28	193	0.21	7.11
2029	124	12.93	187	1.78	6.28	193	0.27	7.14
2030	125	13.25	187	1.81	6.36	194	0.21	7.21
2031	124	13.32	187	1.82	6.37	194	0.20	7.26
2032	123	13.52	187	1.83	6.37	194	0.20	7.31
2033	121	13.75	187	1.83	6.38	194	0.20	7.27
2034	116	13.37	186	1.76	6.25	194	0.37	7.21
2035	116	13.67	187	1.78	6.31	194	0.31	7.25
2036	117	13.85	187	1.79	6.34	194	0.27	7.24
2037	116	13.51	186	1.76	6.32	194	0.31	7.16
2038	114	13.35	186	1.72	6.27	194	0.38	7.20
2039	112	13.42	186	1.68	6.26	194	0.44	7.26
2040	112	13.28	186	1.67	6.28	194	0.42	7.30
2041	110	13.41	186	1.65	6.27	195	0.43	7.38
2042	109	13.72	186	1.66	6.30	195	0.40	7.48
2043	108	13.89	186	1.66	6.29	195	0.37	7.49
2044	108	13.86	186	1.65	6.27	195	0.36	7.49
2045	107	13.76	186	1.62	6.23	195	0.37	7.49
2046	103	14.65	186	1.61	6.21	194	0.37	7.42
2047	101	13.92	185	1.53	6.05	195	0.42	7.34
2048	100	13.85	185	1.49	6.01	195	0.43	7.34
2049	159	14.29	185	1.63	5.34	200	0.12	6.15
2050	168	13.71	187	1.79	5.66	199	0.21	6.17
2051	164	12.18	187	1.82	5.65	201	0.12	6.80
2052	169	10.84	186	1.71	5.50	198	0.25	6.73
2053	189	11.07	186	1.61	5.37	198	0.30	6.72
2054	170	11.96	186	1.54	5.19	200	0.02	5.55
2055	174	11.79	186	1.58	5.30	199	0.02	4.02
2056	169	10.45	186	1.58	5.32	190	0.26	5.68
2057	178	11.00	186	1.60	5.38	193	0.18	5.82
2058	189	10.41	186	1.57	5.30	195	0.21	6.63
2059	152	14.02	186	1.63	5.38	180	0.03	5.34
2060	148	12.18	186	1.63	5.42	200	0.07	6.03
2061	149	12.28	186	1.61	5.43	196	0.05	5.97
2062	153	12.02	186	1.59	5.41	200	0.06	6.03
2063	153	11.76	186	1.58	5.40	199	0.09	6.01
2064	148	10.58	186	1.54	5.39	193	0.24	5.81
2065	151	11.21	186	1.53	5.38	198	0.11	5.97
2066	158	11.38	186	1.54	5.38	198	0.12	5.97
2067	164	10.97	185	1.50	5.20	197	0.18	5.99
2068	168	11.88	186	1.52	5.21	209	0.01	4.70

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2069	174	11.48	186	1.53	5.22	192	0.02	6.79
2070	178	11.03	186	1.52	5.19	195	0.02	6.22
2071	170	12.27	186	1.55	5.22	209	0.01	4.73
2072	167	14.23	186	1.70	5.39	208	0.02	4.94
2073	169	15.08	188	1.92	5.69	218	0.03	2.62
2074	168	15.58	189	2.11	6.04	195	0.12	6.13
2075	165	15.88	189	2.20	6.21	191	0.25	6.56
2076	162	16.53	190	2.27	6.32	191	0.22	6.60
2077	159	14.00	189	2.21	6.23	191	0.34	7.16
2078	165	13.15	189	2.14	6.20	191	0.23	7.18
2079	176	10.35	187	1.79	5.52	191	0.83	6.79
2080	178	8.00	183	1.20	4.31	191	1.08	6.74
2081	173	8.26	183	1.24	4.56	191	0.95	6.68
2082	171	8.66	184	1.28	4.70	191	0.81	6.64
2083	121	13.46	184	1.41	5.09	191	0.55	6.96
2084	123	13.39	185	1.45	5.15	191	0.54	6.95
2085	125	13.23	185	1.49	5.26	191	0.53	6.95
2086	128	12.64	185	1.52	5.32	191	0.55	6.93
2087	130	12.79	185	1.57	5.43	191	0.53	6.97
2088	133	12.95	186	1.65	5.59	191	0.48	7.00
2089	134	12.70	186	1.68	5.64	191	0.51	6.94
2090	134	12.30	186	1.68	5.58	191	0.54	6.91
2091	135	11.99	186	1.67	5.59	191	0.56	6.92
2092	130	11.00	185	1.48	5.23	191	0.76	6.93
2093	130	11.64	186	1.57	5.48	192	0.62	7.04
2094	134	12.42	187	1.71	5.78	191	0.36	6.97
2095	139	12.58	187	1.76	5.85	191	0.21	6.93
2096	140	12.64	187	1.77	5.86	191	0.20	6.70
2097	141	12.67	187	1.79	5.89	190	0.17	6.61
2098	139	12.22	187	1.77	5.87	190	0.25	6.57
2099	139	11.82	187	1.73	5.84	191	0.28	6.61
2100	142	11.41	186	1.70	5.80	191	0.28	6.62
2101	144	10.23	185	1.54	5.44	191	0.42	6.63
2102	128	13.96	185	1.51	5.59	200	0.05	6.09
2103	129	13.58	185	1.58	5.79	195	0.03	6.97
2104	122	13.04	185	1.59	5.89	191	0.13	6.50
2105	116	13.13	185	1.57	5.94	190	0.18	6.49
2106	109	13.15	185	1.50	5.97	190	0.32	6.58
2107	128	13.11	185	1.59	6.08	197	0.13	7.51
2108	150	10.30	185	1.38	5.48	197	0.65	8.22
2109	155	9.58	184	1.32	4.90	196	0.75	8.21
2110	183	11.14	186	1.52	5.04	220	0.07	2.31
2111	199	10.44	186	1.50	5.03	192	0.14	5.80
2112	183	12.98	186	1.55	5.09	226	0.05	1.47
2113	200	15.60	187	1.67	5.15	200	0.04	7.66
2114	212	14.52	188	1.72	5.21	192	0.27	6.02
2115	229	12.67	188	1.62	5.06	190	0.54	5.86

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2116	239	10.66	188	1.38	4.69	190	0.77	5.94
2117	171	10.47	186	1.56	5.33	192	0.29	5.79
2118	175	10.49	186	1.61	5.38	194	0.21	6.60
2119	176	10.75	186	1.62	5.40	194	0.22	6.62
2120	176	11.87	186	1.66	5.50	197	0.12	6.68
2121	181	11.11	186	1.62	5.43	194	0.30	6.27
2122	188	9.83	185	1.44	4.98	193	0.45	6.31
2123	135	16.21	185	1.62	5.40	191	0.01	5.87
2124	135	17.00	186	1.78	5.65	190	0.16	5.66
2125	136	17.55	187	1.94	5.92	190	0.09	6.50
2126	135	14.79	187	1.96	6.08	190	0.33	6.52
2127	139	16.09	188	2.02	6.20	190	0.17	6.48
2128	145	16.89	188	2.13	6.36	200	0.09	6.71
2129	150	16.35	189	2.22	6.55	195	0.04	7.08
2130	150	15.85	189	2.27	6.66	198	0.18	7.20
2131	151	15.11	189	2.29	6.77	197	0.30	7.18
2132	146	13.88	189	2.28	6.76	199	0.06	7.94
2133	153	12.75	189	2.18	6.60	200	0.31	7.88
2134	162	11.39	187	1.94	6.01	197	0.64	7.44
2135	170	10.19	186	1.66	5.43	197	0.82	7.44
2136	176	8.90	184	1.33	4.65	196	0.91	7.38
2137	128	14.15	185	1.60	5.48	191	0.23	5.98
2138	131	13.77	186	1.70	5.68	190	0.28	5.94
2139	131	12.71	186	1.70	5.66	191	0.41	6.67
2140	132	11.77	186	1.65	5.61	191	0.55	6.70
2141	130	9.95	184	1.37	5.05	191	0.78	6.67
2142	152	12.71	186	1.53	5.30	196	0.01	6.08
2143	153	10.33	185	1.52	5.21	190	0.27	5.68
2144	143	10.72	185	1.51	5.32	190	0.28	5.93
2145	144	11.90	186	1.53	5.35	195	0.01	6.09
2146	137	13.37	186	1.53	5.37	197	0.07	5.08
2147	139	14.13	186	1.58	5.41	216	0.05	1.85
2148	149	11.72	186	1.60	5.44	193	0.14	5.77
2149	164	10.00	186	1.56	5.36	195	0.19	6.62
2150	124	12.27	185	1.47	5.39	190	0.42	6.04
2151	128	11.00	185	1.45	5.41	192	0.58	6.96
2152	133	11.10	186	1.52	5.57	192	0.56	7.12
2153	143	10.09	185	1.46	5.43	193	0.62	7.05
2154	144	11.08	185	1.50	5.20	190	0.14	5.68
2155	144	11.30	185	1.51	5.29	192	0.07	5.79
2156	146	11.29	185	1.51	5.30	195	0.01	6.03
2157	147	11.04	185	1.51	5.30	195	0.01	6.03
2158	219	15.45	191	1.63	5.09	199	0.29	7.08
2159	219	14.92	193	1.89	5.69	199	0.25	7.21
2160	214	15.14	194	2.10	6.29	197	0.35	7.19
2161	213	15.37	195	2.23	6.56	199	0.31	7.76
2162	220	16.22	196	2.31	6.76	199	0.30	7.71

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2163	224	17.23	196	2.40	6.95	200	0.24	7.70
2164	226	17.97	197	2.51	7.16	200	0.19	7.41
2165	233	18.24	198	2.54	7.25	197	0.40	8.04
2166	243	17.79	198	2.49	7.26	194	0.83	8.22
2167	256	16.61	198	2.22	6.64	194	1.19	8.20
2168	263	15.18	198	1.96	6.24	194	1.41	8.21
2169	268	14.04	198	1.71	5.56	193	1.51	8.07
2170	269	13.54	199	1.60	5.37	193	1.41	8.05
2171	271	13.56	200	1.44	4.95	192	1.35	8.02
2172	274	13.60	201	1.36	4.79	192	1.26	7.97
2173	279	13.56	203	1.22	4.50	192	1.22	7.85
2174	280	14.35	204	1.24	4.62	192	1.06	7.75
2175	281	14.77	205	1.24	4.63	191	0.91	7.73
2176	178	10.53	186	1.51	5.15	199	0.00	2.92
2177	178	10.72	186	1.53	5.18	233	0.00	0.50
2178	179	10.90	186	1.54	5.20	338	0.00	0.00
2179	175	9.37	185	1.45	5.00	191	0.41	5.88
2180	173	10.10	186	1.51	5.18	191	0.20	5.79
2181	176	10.65	186	1.52	5.20	198	0.00	3.48
2182	178	10.49	186	1.52	5.20	197	0.01	3.56
2183	180	10.04	186	1.51	5.18	190	0.16	5.72
2184	174	12.66	185	1.54	5.13	198	0.01	3.92
2185	175	12.30	186	1.56	5.20	198	0.04	5.41
2186	176	11.83	186	1.56	5.20	197	0.06	5.98
2187	177	9.93	185	1.46	5.06	192	0.36	5.62
2188	181	12.40	185	1.54	5.03	201	0.07	6.62
2189	185	14.80	186	1.70	5.22	201	0.07	6.57
2190	192	14.14	187	1.83	5.48	200	0.09	6.17
2191	196	13.42	188	1.89	5.61	200	0.07	6.60
2192	201	12.82	188	1.89	5.70	198	0.10	6.66
2193	207	11.83	188	1.79	5.50	191	0.31	6.50
2194	214	10.58	187	1.64	5.28	190	0.50	6.58
2195	228	11.37	187	1.56	5.18	191	0.46	6.55
2196	163	14.61	185	1.52	4.82	210	0.17	3.21
2197	166	16.23	187	1.81	5.32	208	0.14	3.78
2198	170	17.14	189	2.10	5.83	212	0.06	3.77
2199	168	15.86	190	2.26	6.26	191	0.48	6.60
2200	173	16.99	191	2.43	6.53	192	0.22	7.21
2201	178	17.74	191	2.57	6.78	192	0.29	7.15
2202	182	19.21	192	2.73	7.02	192	0.31	7.15
2203	186	17.84	193	2.82	7.25	200	0.09	7.91
2204	190	16.95	193	2.80	7.27	196	0.30	7.54
2205	194	16.05	193	2.72	7.21	195	0.39	7.62
2206	195	14.18	192	2.55	6.84	194	0.58	7.66
2207	200	13.55	192	2.41	6.63	196	0.47	7.60
2208	208	13.30	191	2.18	6.21	195	0.61	7.26
2209	216	13.35	190	2.09	6.02	194	0.59	7.20

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2210	221	13.49	190	2.01	5.90	194	0.59	7.15
2211	219	13.34	191	2.01	5.90	195	0.55	7.21
2212	226	13.96	192	1.96	5.83	195	0.55	7.24
2213	225	13.88	192	1.96	5.89	196	0.52	7.38
2214	222	13.98	193	1.97	5.94	197	0.48	7.46
2215	222	14.44	193	1.98	5.97	197	0.44	7.57
2216	221	14.53	193	1.99	5.98	198	0.41	7.62
2217	216	15.33	193	2.04	6.03	198	0.35	7.69
2218	215	14.36	193	2.03	6.00	197	0.35	7.54
2219	214	14.08	193	2.01	5.97	195	0.34	7.24
2220	217	14.22	193	2.00	5.96	197	0.31	7.56
2221	223	14.31	193	1.96	5.91	197	0.33	7.51
2222	227	14.12	194	1.92	5.87	195	0.35	7.21
2223	220	13.98	194	1.90	5.87	193	0.43	7.08
2224	222	12.51	193	1.80	5.61	191	0.76	7.26
2225	220	11.58	192	1.70	5.44	195	0.71	6.74
2226	216	10.53	190	1.54	5.07	200	0.73	5.95
2227	221	9.93	190	1.41	4.92	195	0.88	6.62
2228	227	9.13	189	1.21	4.49	192	1.00	7.08
2229	112	16.15	186	1.52	6.15	190	0.12	6.55
2230	112	16.82	186	1.64	6.46	191	0.14	4.02
2231	114	17.50	187	1.76	6.67	197	0.05	7.11
2232	111	17.12	187	1.84	6.91	197	0.18	7.12
2233	107	17.58	187	1.90	7.05	191	0.18	4.39
2234	106	17.86	188	1.95	7.17	192	0.17	7.71
2235	108	18.44	188	2.01	7.26	195	0.20	7.70
2236	107	18.63	188	2.07	7.35	197	0.21	7.56
2237	106	19.36	188	2.14	7.44	197	0.22	7.51
2238	104	19.34	188	2.19	7.54	197	0.28	7.56
2239	103	18.90	188	2.23	7.64	197	0.33	7.53
2240	103	18.55	189	2.27	7.62	195	0.38	8.43
2241	101	19.10	189	2.28	7.63	196	0.46	8.33
2242	101	19.79	189	2.31	7.68	196	0.51	8.26
2243	102	19.52	189	2.35	7.72	196	0.55	8.19
2244	102	19.68	189	2.38	7.79	196	0.59	8.15
2245	107	20.09	189	2.49	8.03	196	0.49	8.18
2246	114	19.60	189	2.59	8.16	198	0.25	8.34
2247	118	18.89	189	2.62	8.17	198	0.27	8.36
2248	123	17.65	189	2.57	8.09	198	0.30	8.38
2249	113	14.37	188	2.25	7.50	196	0.67	8.21
2250	120	12.37	187	1.84	6.60	196	0.98	8.02
2251	136	9.35	183	1.23	4.86	193	1.20	8.22
2252	255	18.98	209	1.55	5.53	352	0.00	0.00
2253	259	19.07	209	1.63	5.70	359	0.00	0.00
2254	268	18.26	209	1.63	5.71	196	0.25	9.92
2255	277	17.29	210	1.57	5.62	190	0.31	3.94
2256	280	16.47	210	1.47	5.49	191	0.52	4.93

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2257	177	11.41	186	1.55	5.19	198	0.01	4.91
2258	174	11.56	186	1.60	5.30	199	0.01	4.83
2259	172	11.32	186	1.63	5.36	191	0.10	5.74
2260	172	11.42	186	1.64	5.39	192	0.08	5.65
2261	171	11.23	186	1.65	5.42	191	0.17	5.76
2262	177	11.92	187	1.66	5.44	200	0.02	6.07
2263	183	12.17	187	1.67	5.46	194	0.12	5.90
2264	193	11.82	186	1.60	5.29	194	0.29	6.08
2265	206	10.30	185	1.45	4.95	192	0.47	6.15
2266	114	12.51	185	1.50	5.80	192	0.18	6.50
2267	113	13.30	185	1.53	5.88	192	0.11	6.53
2268	112	13.39	185	1.55	5.97	190	0.17	6.51
2269	109	13.78	185	1.58	6.04	191	0.14	7.17
2270	105	14.23	185	1.60	6.12	192	0.22	7.18
2271	106	14.07	186	1.61	6.18	193	0.21	7.02
2272	104	15.32	186	1.64	6.28	192	0.20	7.21
2273	103	15.76	186	1.66	6.33	193	0.19	7.13
2274	99	15.09	186	1.61	6.26	194	0.29	7.02
2275	93	15.14	186	1.51	6.13	194	0.42	7.03
2276	89	15.36	185	1.45	6.09	194	0.46	7.07
2277	102	16.02	187	1.57	6.59	3	0.00	0.00
2278	99	14.12	186	1.50	6.54	196	0.35	7.19
2279	96	14.13	186	1.47	6.54	195	0.38	7.15
2280	96	14.60	187	1.50	6.65	195	0.32	7.19
2281	96	14.61	187	1.52	6.74	195	0.31	7.21
2282	89	14.47	187	1.47	6.70	197	0.34	7.59
2283	89	15.38	187	1.52	6.91	197	0.29	7.56
2284	88	14.97	187	1.49	6.82	198	0.31	7.60
2285	156	13.00	185	1.53	5.38	194	0.02	6.02
2286	160	13.59	186	1.74	5.67	194	0.03	6.39
2287	165	13.65	187	1.89	5.91	201	0.08	6.75
2288	171	13.65	188	1.98	6.14	195	0.27	6.62
2289	187	11.23	187	1.76	5.50	193	0.62	6.78
2290	215	9.67	185	1.40	4.90	193	0.89	6.97
2291	182	14.39	186	1.63	5.07	199	0.04	5.99
2292	183	15.00	187	1.87	5.50	199	0.07	6.02
2293	183	14.45	188	2.01	5.77	199	0.03	6.03
2294	185	13.79	189	2.05	5.93	190	0.13	6.48
2295	189	12.81	189	2.00	5.91	190	0.21	6.43
2296	191	11.94	188	1.90	5.80	191	0.21	6.44
2297	195	11.24	187	1.77	5.56	191	0.23	6.50
2298	205	10.65	187	1.63	5.31	192	0.30	6.55
2299	133	13.94	185	1.54	5.65	197	0.09	6.79
2300	150	10.57	185	1.52	5.39	200	0.27	6.93
2301	150	11.34	185	1.56	5.50	200	0.22	7.09
2302	152	12.18	186	1.64	5.67	200	0.20	7.33
2303	160	12.25	186	1.70	5.63	200	0.23	7.36

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2304	168	10.37	186	1.63	5.43	199	0.32	6.97
2305	147	12.15	186	1.65	5.79	200	0.20	7.67
2306	163	11.32	186	1.62	5.50	200	0.29	7.51
2307	179	10.10	185	1.47	5.03	198	0.44	7.32
2308	172	11.19	187	1.66	5.48	200	0.37	8.01
2309	202	11.86	187	1.65	5.35	199	0.45	7.96
2310	207	12.58	189	1.76	5.58	199	0.45	8.07
2311	202	12.74	190	1.90	5.82	199	0.40	8.26
2312	195	12.83	190	1.95	5.90	199	0.39	8.27
2313	187	13.00	190	1.99	5.87	199	0.43	8.25
2314	173	13.82	190	2.02	5.90	198	0.68	8.07
2315	168	13.96	189	2.08	5.96	196	1.11	7.91
2316	160	14.35	189	2.14	6.03	193	1.36	7.86
2317	151	14.44	189	2.14	6.06	191	1.35	7.72
2318	144	13.92	189	2.12	6.07	192	1.39	7.68
2319	138	13.39	187	1.94	5.72	192	1.53	7.68
2320	130	8.77	183	1.33	4.64	194	2.01	7.86
2321	115	8.32	182	1.13	4.45	194	1.98	7.86
2322	97	8.41	183	1.11	4.80	193	1.84	7.82
2323	76	8.69	182	0.86	4.54	194	1.78	7.80
2324	59	9.68	183	0.67	4.75	193	1.68	7.79
2325	48	10.81	186	0.51	5.70	193	1.60	7.73
2326	35	12.38	187	0.50	5.78	193	1.51	7.64
2327	29	11.87	188	0.43	4.92	193	1.45	7.60
2328	116	12.19	186	1.50	5.92	192	0.23	7.10
2329	118	12.98	186	1.55	6.07	191	0.09	7.18
2330	132	13.75	186	1.62	6.12	120	0.01	2.26
2331	138	13.81	186	1.70	6.15	192	0.02	7.03
2332	140	14.45	187	1.79	6.21	192	0.02	6.97
2333	142	14.00	187	1.88	6.28	193	0.02	6.98
2334	148	13.57	187	1.95	6.33	201	0.09	7.36
2335	153	12.83	187	1.94	6.20	198	0.24	7.24
2336	144	11.51	187	1.86	6.03	196	0.42	7.23
2337	142	11.91	187	1.87	6.26	196	0.34	7.19
2338	148	11.39	187	1.79	5.99	197	0.39	7.33
2339	152	10.54	186	1.64	5.54	197	0.54	7.29
2340	148	10.08	186	1.57	5.50	196	0.58	7.24
2341	145	9.71	185	1.46	5.25	196	0.60	7.19
2342	147	12.12	187	1.74	6.15	197	0.08	7.30
2343	152	11.61	187	1.70	5.94	201	0.14	7.48
2344	151	11.01	186	1.65	5.81	200	0.24	7.40
2345	148	10.71	186	1.60	5.68	200	0.25	7.41
2346	143	10.68	186	1.57	5.69	201	0.20	7.45
2347	139	10.65	186	1.52	5.68	201	0.18	7.45
2348	131	13.19	185	1.51	5.50	201	0.04	6.09
2349	131	13.18	186	1.63	5.79	197	0.07	6.70
2350	131	13.17	186	1.70	5.96	193	0.15	6.50

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2351	125	13.03	186	1.73	6.09	191	0.25	6.57
2352	127	13.34	187	1.77	6.15	192	0.18	7.20
2353	129	13.52	187	1.80	6.23	198	0.03	7.15
2354	128	13.54	187	1.81	6.26	195	0.03	7.01
2355	137	11.74	186	1.72	6.01	195	0.26	7.09
2356	282	16.85	204	1.15	4.16	193	1.09	7.16
2357	280	17.85	205	1.24	4.46	194	0.98	7.26
2358	278	19.22	205	1.40	4.81	195	0.67	7.15
2359	278	20.45	207	1.53	5.16	199	0.47	7.97
2360	280	20.33	209	1.58	5.44	198	0.53	7.77
2361	281	20.16	210	1.62	5.60	199	0.34	8.48
2362	282	18.50	211	1.56	5.56	198	0.36	8.44
2363	282	19.31	214	1.51	5.44	199	0.28	8.61
2364	139	11.59	185	1.51	5.26	191	0.40	6.08
2365	139	11.81	186	1.57	5.38	191	0.43	6.26
2366	141	11.61	186	1.61	5.47	191	0.45	6.50
2367	144	12.64	187	1.73	5.67	191	0.21	6.73
2368	149	12.06	187	1.77	5.74	191	0.22	6.68
2369	155	11.97	187	1.80	5.81	190	0.16	6.56
2370	157	11.86	187	1.81	5.82	190	0.17	6.56
2371	159	11.57	187	1.80	5.81	192	0.17	6.48
2372	163	11.16	187	1.78	5.79	191	0.21	6.45
2373	161	13.15	187	1.82	5.85	196	0.02	6.48
2374	168	11.70	187	1.81	5.81	193	0.18	6.52
2375	174	10.85	186	1.69	5.50	194	0.33	6.62
2376	178	9.97	185	1.53	5.11	192	0.49	6.58
2377	129	12.66	185	1.49	5.21	190	0.38	5.89
2378	127	12.63	185	1.51	5.37	191	0.49	5.93
2379	122	13.08	185	1.51	5.44	191	0.54	6.39
2380	121	13.33	185	1.54	5.55	191	0.51	6.70
2381	120	14.03	185	1.59	5.58	191	0.44	6.82
2382	122	14.49	186	1.66	5.74	191	0.37	6.84
2383	125	13.74	186	1.69	5.81	191	0.32	6.78
2384	129	13.03	186	1.70	5.85	191	0.26	6.60
2385	132	12.73	186	1.71	5.88	190	0.18	6.49
2386	132	12.10	186	1.68	5.84	191	0.28	6.55
2387	133	10.78	185	1.53	5.48	191	0.47	6.61
2388	147	13.53	185	1.59	5.27	196	0.01	6.01
2389	151	13.38	186	1.71	5.47	197	0.02	6.04
2390	148	10.02	186	1.65	5.44	190	0.45	6.63
2391	136	12.56	185	1.48	5.15	191	0.32	6.21
2392	136	10.73	185	1.43	5.04	191	0.57	6.17
2393	130	10.38	184	1.33	5.01	191	0.73	6.55
2394	132	10.37	184	1.35	4.97	191	0.69	6.73
2395	142	9.75	184	1.35	5.03	191	0.72	6.78
2396	185	12.82	186	1.59	5.07	268	0.00	0.00
2397	193	12.16	186	1.65	5.22	151	0.01	4.28

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2398	202	9.88	186	1.53	5.00	190	0.52	5.79
2399	89	13.89	189	1.50	8.05	196	0.18	8.98
2400	150	11.91	185	1.52	5.26	227	0.01	0.93
2401	150	12.27	186	1.54	5.32	228	0.01	0.87
2402	153	12.74	186	1.59	5.37	229	0.01	0.79
2403	156	12.82	186	1.64	5.43	229	0.01	0.83
2404	159	12.13	186	1.67	5.49	193	0.12	5.80
2405	162	11.37	186	1.68	5.53	195	0.02	4.18
2406	152	10.45	186	1.63	5.45	190	0.25	6.51
2407	158	9.88	186	1.56	5.38	190	0.45	6.26
2408	162	9.30	185	1.42	5.02	190	0.54	6.45
2409	154	9.75	186	1.50	5.29	190	0.48	6.51
2410	153	11.61	187	1.63	5.58	223	0.02	1.32
2411	154	12.95	187	1.67	5.63	223	0.02	1.28
2412	154	14.04	187	1.74	5.72	224	0.02	1.23
2413	157	13.95	187	1.81	5.80	225	0.01	1.15
2414	161	13.52	187	1.85	5.85	195	0.02	4.30
2415	165	12.73	187	1.85	5.85	195	0.11	6.61
2416	169	11.81	187	1.78	5.76	193	0.18	6.50
2417	175	10.94	186	1.66	5.47	194	0.29	6.62
2418	178	10.35	185	1.51	5.13	193	0.38	6.53
2419	107	15.12	185	1.47	5.73	192	0.34	6.94
2420	130	15.60	185	1.59	5.56	194	0.03	5.97
2421	134	14.50	185	1.69	5.74	184	0.02	5.97
2422	135	13.76	186	1.73	5.86	194	0.03	6.38
2423	134	13.64	186	1.75	5.91	195	0.04	6.46
2424	137	13.95	186	1.78	5.94	194	0.02	6.39
2425	136	14.54	187	1.81	5.97	185	0.02	6.07
2426	143	16.06	187	1.90	6.04	194	0.03	6.31
2427	146	16.09	188	1.99	6.12	194	0.03	6.37
2428	149	15.79	188	2.04	6.17	194	0.03	6.40
2429	146	15.06	188	2.02	6.15	194	0.03	6.38
2430	148	14.35	188	1.96	6.09	195	0.03	6.44
2431	152	13.44	187	1.90	6.02	195	0.03	6.47
2432	159	14.02	187	1.87	5.96	198	0.06	6.55
2433	172	12.25	187	1.77	5.60	199	0.19	6.74
2434	196	12.49	187	1.72	5.67	200	0.24	7.29
2435	164	11.79	185	1.51	5.21	195	0.03	5.97
2436	172	12.84	185	1.55	5.13	201	0.03	5.77
2437	171	12.97	186	1.65	5.32	199	0.02	6.12
2438	168	13.01	187	1.73	5.47	195	0.01	6.20
2439	168	14.19	187	1.83	5.62	346	0.00	0.00
2440	165	13.80	188	1.92	5.81	204	0.02	4.98
2441	163	14.13	188	2.00	5.99	206	0.04	4.67
2442	161	13.81	188	2.06	6.12	190	0.15	6.44
2443	160	14.09	189	2.13	6.27	191	0.11	6.52
2444	159	14.49	189	2.20	6.45	196	0.02	7.05

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2445	160	14.53	189	2.27	6.58	196	0.14	7.13
2446	160	14.80	190	2.33	6.71	197	0.14	7.15
2447	164	15.79	190	2.42	6.87	199	0.11	7.27
2448	167	15.14	190	2.47	6.88	199	0.22	7.74
2449	178	14.04	190	2.40	6.68	199	0.50	7.81
2450	193	13.20	189	2.17	6.15	197	0.81	7.65
2451	236	11.79	187	1.56	5.16	195	1.20	7.74
2452	277	10.90	187	0.92	3.93	194	1.34	7.83
2453	241	14.77	195	1.51	5.13	198	0.25	6.83
2454	241	14.44	195	1.56	5.26	197	0.26	6.77
2455	242	14.09	195	1.59	5.35	199	0.19	7.10
2456	243	13.88	195	1.59	5.38	199	0.19	7.11
2457	236	13.60	195	1.59	5.40	198	0.19	7.12
2458	231	13.66	195	1.62	5.44	199	0.15	7.22
2459	231	13.82	194	1.65	5.50	199	0.14	7.22
2460	239	14.83	195	1.70	5.57	198	0.15	7.01
2461	245	15.61	195	1.76	5.67	198	0.17	7.11
2462	260	15.82	196	1.74	5.68	192	0.53	7.15
2463	273	15.85	199	1.54	5.15	191	0.79	7.23
2464	284	15.37	203	1.30	4.62	191	0.94	7.24
2465	102	14.36	188	1.57	7.40	195	0.04	8.26
2466	100	14.81	188	1.63	7.56	247	0.00	0.00
2467	99	15.54	188	1.67	7.59	252	0.00	0.00
2468	97	16.17	188	1.71	7.63	191	0.29	4.06
2469	96	13.82	187	1.65	7.25	198	0.29	8.54
2470	92	15.01	188	1.74	7.85	197	0.21	8.21
2471	94	16.65	188	1.78	7.97	191	0.29	4.27
2472	95	17.57	188	1.84	8.00	191	0.28	4.38
2473	96	17.65	188	1.92	8.11	191	0.28	4.53
2474	99	17.74	189	2.01	8.27	198	0.09	8.42
2475	103	15.97	189	2.02	8.23	199	0.19	9.07
2476	107	16.06	189	2.04	8.29	198	0.21	9.07
2477	114	16.39	189	2.11	8.37	197	0.17	8.91
2478	114	16.36	189	2.16	8.40	199	0.20	9.07
2479	113	15.96	189	2.17	8.29	197	0.31	9.02
2480	114	14.96	189	2.10	7.97	195	0.56	8.79
2481	122	13.84	188	1.99	7.47	194	0.75	8.66
2482	132	12.84	187	1.85	6.58	192	0.87	8.71
2483	136	13.40	187	1.92	6.67	193	0.79	8.70
2484	135	14.21	188	2.09	7.24	194	0.69	8.80
2485	132	15.26	189	2.27	7.64	195	0.54	8.87
2486	131	15.99	189	2.46	8.07	196	0.42	8.90
2487	117	14.36	189	2.36	7.67	193	0.83	8.68
2488	124	15.35	190	2.54	8.35	195	0.60	8.79
2489	135	17.31	190	2.66	8.37	198	0.29	9.00
2490	141	17.99	190	2.77	8.32	197	0.39	8.85
2491	147	15.86	190	2.69	7.75	195	0.74	8.55

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2492	164	12.76	189	2.31	6.67	191	1.28	8.72
2493	207	12.80	188	1.88	5.85	191	1.52	8.73
2494	227	11.21	186	1.54	5.17	191	1.60	8.74
2495	234	11.14	186	1.35	4.89	191	1.50	8.71
2496	230	10.41	183	1.05	3.97	191	1.43	8.68
2497	222	9.59	183	1.05	4.01	192	1.28	8.56
2498	217	9.12	183	1.07	4.10	193	1.15	8.42
2499	223	10.53	184	1.12	4.20	194	1.04	8.32
2500	150	13.11	185	1.54	5.12	196	0.08	4.63
2501	153	12.70	186	1.63	5.37	199	0.02	6.80
2502	145	10.37	186	1.61	5.41	190	0.28	6.56
2503	173	13.12	185	1.51	4.98	200	0.03	5.57
2504	173	16.17	186	1.69	5.19	200	0.03	5.67
2505	182	16.91	187	1.90	5.49	199	0.06	6.15
2506	195	16.16	188	2.03	5.74	193	0.37	5.84
2507	199	16.53	189	2.13	5.85	197	0.21	6.71
2508	208	15.75	190	2.13	5.96	194	0.38	6.59
2509	237	13.76	190	1.99	5.82	194	0.57	6.98
2510	265	11.65	191	1.49	5.11	192	1.06	7.04
2511	274	10.52	191	1.34	4.90	192	1.09	7.09
2512	266	9.64	192	0.85	3.73	191	1.31	6.88
2513	241	14.34	191	1.49	4.85	191	0.25	5.76
2514	262	18.67	206	1.53	5.17	8	0.00	0.00
2515	263	18.94	207	1.59	5.38	7	0.00	0.00
2516	262	18.96	207	1.64	5.50	356	0.00	0.00
2517	267	18.54	208	1.64	5.56	190	0.24	7.69
2518	273	16.62	208	1.60	5.55	196	0.19	8.35
2519	287	15.17	209	1.46	5.28	192	0.47	8.24
2520	155	15.69	185	1.53	5.00	201	0.02	5.72
2521	132	12.42	185	1.61	5.18	191	0.45	5.82
2522	134	13.41	186	1.65	5.38	191	0.35	5.88
2523	137	11.85	185	1.58	5.36	191	0.44	5.79
2524	140	11.02	185	1.51	5.32	190	0.37	5.74
2525	235	16.97	190	1.60	5.03	198	0.33	6.38
2526	240	17.61	194	1.80	5.50	198	0.27	6.71
2527	244	18.10	196	1.94	5.92	199	0.27	7.14
2528	240	13.69	197	1.88	5.87	195	0.80	7.62
2529	246	14.67	198	1.85	6.07	199	0.37	7.74
2530	249	15.16	200	1.76	5.91	200	0.29	7.79
2531	250	14.91	202	1.67	5.79	200	0.29	7.82
2532	248	14.27	203	1.56	5.56	209	0.32	5.04
2533	143	12.94	186	1.64	5.47	190	0.10	5.68
2534	144	13.00	187	1.78	5.69	190	0.15	6.60
2535	143	14.28	187	1.90	5.91	190	0.17	6.62
2536	144	14.84	188	2.00	6.04	190	0.18	6.62
2537	149	14.69	188	2.07	6.13	190	0.13	6.56
2538	153	14.20	188	2.10	6.20	190	0.15	6.51

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2539	155	13.84	188	2.10	6.24	190	0.15	6.51
2540	142	12.32	188	1.94	6.07	191	0.65	6.89
2541	149	13.60	188	2.00	6.16	306	0.00	0.00
2542	167	12.86	188	1.97	6.15	199	0.10	6.71
2543	201	10.09	186	1.59	5.32	193	0.63	6.69
2544	120	16.42	185	1.61	5.68	192	0.15	5.74
2545	120	15.47	186	1.73	5.98	192	0.17	6.47
2546	118	14.21	186	1.79	6.15	193	0.15	7.13
2547	119	12.92	186	1.75	6.12	194	0.30	7.02
2548	122	11.72	186	1.66	5.98	195	0.46	7.08
2549	174	12.38	186	1.60	5.26	199	0.02	4.00
2550	182	12.99	187	1.71	5.46	193	0.19	5.81
2551	188	11.81	187	1.74	5.49	196	0.19	6.66
2552	191	11.06	187	1.68	5.43	194	0.27	6.60
2553	182	8.63	184	1.33	4.65	190	0.73	6.32
2554	175	9.61	185	1.46	5.14	191	0.38	6.29
2555	210	10.89	187	1.49	5.07	190	0.24	5.92
2556	256	12.44	195	1.44	5.04	192	0.49	7.12
2557	242	14.74	198	1.56	5.25	195	0.20	6.95
2558	242	14.96	198	1.64	5.47	192	0.36	7.07
2559	242	15.16	198	1.71	5.65	192	0.34	7.08
2560	245	15.90	198	1.77	5.77	196	0.14	6.64
2561	247	16.77	198	1.83	5.91	197	0.11	6.50
2562	249	16.58	198	1.86	5.99	196	0.23	7.56
2563	249	16.36	198	1.89	6.05	192	0.36	7.68
2564	248	16.02	198	1.89	6.10	191	0.38	7.64
2565	248	15.85	198	1.89	6.11	191	0.38	7.64
2566	247	15.57	198	1.88	6.09	196	0.28	6.79
2567	248	16.37	198	1.88	6.09	191	0.25	7.68
2568	248	16.55	199	1.87	6.04	192	0.32	7.70
2569	248	16.03	199	1.85	5.99	191	0.34	7.64
2570	247	15.06	198	1.82	5.92	201	0.24	6.08
2571	246	14.24	198	1.77	5.81	202	0.22	5.80
2572	248	14.68	198	1.73	5.79	193	0.12	6.62
2573	246	14.44	198	1.68	5.65	212	0.07	4.03
2574	247	14.60	198	1.64	5.51	219	0.04	3.14
2575	248	14.69	198	1.61	5.42	193	0.17	7.09
2576	252	14.92	198	1.58	5.35	192	0.20	7.17
2577	256	15.03	199	1.55	5.28	191	0.22	7.19
2578	255	15.29	199	1.55	5.25	192	0.15	7.11
2579	260	15.39	200	1.52	5.20	191	0.21	7.15
2580	286	20.58	223	1.48	5.15	191	0.32	4.19
2581	278	19.14	224	1.50	5.26	190	0.35	3.96
2582	287	18.68	224	1.51	5.41	190	0.39	3.82
2583	297	17.01	226	1.48	5.42	191	0.53	5.27
2584	124	13.55	185	1.54	5.58	191	0.08	6.42
2585	133	14.44	186	1.69	5.80	126	0.01	2.53

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2586	129	13.66	186	1.79	6.00	191	0.21	6.54
2587	128	13.77	187	1.87	6.19	192	0.39	7.03
2588	123	14.21	187	1.90	6.23	193	0.58	7.29
2589	123	15.15	188	2.03	6.59	193	0.58	7.37
2590	124	15.68	188	2.15	6.86	194	0.57	7.62
2591	133	16.70	189	2.38	7.19	200	0.10	7.89
2592	137	15.81	190	2.49	7.39	197	0.25	7.54
2593	139	16.05	190	2.59	7.61	198	0.26	7.66
2594	138	15.94	191	2.66	7.64	197	0.24	8.17
2595	140	15.45	190	2.66	7.64	197	0.37	8.22
2596	142	15.04	190	2.65	7.62	197	0.48	8.28
2597	135	13.52	190	2.46	7.35	195	0.87	8.19
2598	134	13.14	189	2.30	7.15	195	1.04	8.17
2599	138	13.66	190	2.41	7.36	195	0.80	8.31
2600	144	13.15	190	2.32	7.23	195	0.96	8.26
2601	148	11.54	187	1.94	6.09	193	1.27	8.36
2602	153	10.07	186	1.63	5.44	192	1.39	8.44
2603	159	10.33	186	1.65	5.47	193	1.31	8.40
2604	170	8.39	183	1.24	4.56	192	1.41	8.46
2605	191	6.66	180	0.85	3.79	192	1.45	8.49
2606	144	12.21	186	1.57	5.34	242	0.00	0.00
2607	157	10.30	186	1.60	5.43	191	0.37	6.67
2608	161	11.00	187	1.70	5.67	191	0.22	6.53
2609	164	11.84	187	1.79	5.85	195	0.03	6.48
2610	173	12.07	187	1.84	5.92	195	0.03	7.02
2611	202	9.42	185	1.40	4.91	192	0.70	6.74
2612	145	13.68	185	1.58	5.32	167	0.01	3.56
2613	146	12.04	186	1.64	5.45	191	0.15	5.68
2614	155	12.26	186	1.68	5.55	199	0.06	6.05
2615	167	11.34	186	1.69	5.56	201	0.07	6.78
2616	176	9.96	186	1.58	5.36	194	0.35	6.62
2617	164	13.73	186	1.58	5.06	221	0.11	2.09
2618	167	12.31	186	1.60	5.15	215	0.16	2.82
2619	170	11.67	186	1.57	5.17	214	0.14	3.00
2620	167	12.86	186	1.55	5.15	218	0.09	2.51
2621	165	12.97	185	1.53	5.10	215	0.10	2.81
2622	140	10.45	185	1.48	5.32	191	0.40	6.76
2623	172	11.75	185	1.52	5.09	199	0.13	6.07
2624	182	12.13	186	1.58	5.15	197	0.26	6.04
2625	199	11.86	186	1.66	5.40	197	0.30	6.68
2626	221	10.20	186	1.50	5.15	194	0.58	6.56
2627	153	14.94	186	1.60	5.15	191	0.11	5.09
2628	156	14.18	186	1.73	5.41	222	0.02	1.38
2629	159	13.69	187	1.81	5.57	190	0.22	5.70
2630	160	13.36	187	1.86	5.72	190	0.23	5.70
2631	158	13.61	188	1.91	5.82	200	0.03	6.75
2632	156	13.90	188	1.95	5.91	191	0.17	6.62

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2633	156	14.70	188	2.02	6.01	191	0.16	6.62
2634	156	14.60	188	2.07	6.09	191	0.23	6.58
2635	157	14.38	189	2.11	6.20	191	0.25	6.57
2636	160	13.97	189	2.14	6.26	195	0.02	4.57
2637	163	13.36	189	2.14	6.32	196	0.10	7.15
2638	166	12.75	189	2.10	6.28	193	0.18	7.01
2639	161	11.20	188	1.96	6.00	192	0.49	7.12
2640	165	10.95	188	1.88	5.98	192	0.52	6.94
2641	169	10.79	187	1.80	5.80	192	0.45	6.88
2642	171	10.58	187	1.70	5.59	192	0.41	6.82
2643	172	9.94	186	1.58	5.36	192	0.49	6.79
2644	174	9.26	185	1.41	4.97	192	0.55	6.72
2645	224	14.68	192	1.54	5.01	228	0.03	1.38
2646	223	14.39	192	1.65	5.24	297	0.00	0.00
2647	224	14.10	193	1.71	5.39	213	0.12	3.62
2648	226	13.48	193	1.73	5.50	204	0.22	4.85
2649	229	13.45	193	1.74	5.52	201	0.06	7.60
2650	234	13.13	194	1.72	5.56	194	0.14	6.96
2651	237	12.56	194	1.68	5.49	191	0.34	7.13
2652	236	12.26	194	1.64	5.45	191	0.36	7.10
2653	236	12.13	194	1.62	5.47	191	0.36	7.10
2654	243	11.24	193	1.49	5.11	191	0.62	7.25
2655	238	11.57	194	1.53	5.24	191	0.48	7.20
2656	239	12.33	194	1.60	5.51	191	0.29	7.10
2657	241	12.30	194	1.60	5.49	191	0.32	7.12
2658	241	11.73	194	1.53	5.24	194	0.43	6.76
2659	240	11.29	193	1.46	5.15	195	0.50	6.55
2660	240	11.82	194	1.52	5.33	205	0.21	5.09
2661	177	10.82	185	1.52	4.89	211	0.14	3.09
2662	181	11.25	185	1.53	5.00	198	0.04	5.56
2663	186	11.46	185	1.53	5.05	196	0.10	5.38
2664	192	11.02	186	1.52	5.12	194	0.20	5.21
2665	198	10.27	185	1.50	5.03	193	0.17	5.79
2666	230	15.15	193	1.50	4.99	213	0.07	3.14
2667	223	13.14	193	1.51	5.07	215	0.12	3.37
2668	231	15.21	195	1.53	5.09	233	0.01	0.98
2669	231	14.91	195	1.66	5.40	224	0.03	2.35
2670	232	14.76	196	1.76	5.69	218	0.09	3.22
2671	232	15.77	197	1.84	5.91	221	0.06	2.77
2672	234	14.69	197	1.87	5.94	207	0.16	5.09
2673	237	14.03	197	1.87	5.96	204	0.24	5.56
2674	241	13.44	197	1.85	5.92	203	0.30	5.79
2675	245	12.66	196	1.77	5.75	203	0.40	5.80
2676	248	11.74	195	1.54	5.25	196	0.76	6.86
2677	248	11.00	194	1.39	4.95	196	0.82	6.82
2678	247	10.58	194	1.28	4.73	196	0.80	6.66
2679	160	14.72	185	1.52	4.98	173	0.01	4.03

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2680	160	14.89	186	1.74	5.38	194	0.01	4.57
2681	163	14.63	187	1.91	5.74	191	0.21	5.68
2682	171	13.91	188	2.02	5.96	194	0.18	6.56
2683	176	13.19	189	2.10	6.11	199	0.13	7.29
2684	182	12.20	189	2.08	6.09	196	0.33	7.10
2685	180	11.66	188	2.04	6.05	194	0.42	7.05
2686	200	11.04	188	1.90	5.86	194	0.61	7.09
2687	219	10.26	186	1.53	5.16	193	0.84	7.02
2688	224	9.10	184	1.20	4.44	193	0.95	7.05
2689	283	24.12	220	1.54	5.16	195	0.38	7.61
2690	285	23.52	221	1.60	5.37	197	0.22	7.57
2691	284	22.95	223	1.60	5.40	198	0.22	7.77
2692	284	22.38	223	1.61	5.42	197	0.24	7.89
2693	287	21.49	224	1.61	5.41	196	0.32	8.07
2694	294	20.71	227	1.54	5.24	193	0.62	8.24
2695	299	20.20	230	1.47	5.04	194	0.57	8.23
2696	135	14.10	186	1.59	5.37	191	0.12	6.02
2697	136	15.20	186	1.72	5.56	190	0.14	5.74
2698	141	14.87	187	1.85	5.81	213	0.03	2.02
2699	143	14.08	187	1.94	6.00	191	0.16	6.43
2700	145	13.82	188	1.99	6.15	190	0.19	6.42
2701	148	13.79	188	2.06	6.25	173	0.01	3.80
2702	152	13.56	188	2.10	6.38	170	0.01	3.78
2703	154	13.57	189	2.12	6.44	194	0.02	7.07
2704	161	13.98	189	2.14	6.47	196	0.04	7.15
2705	168	14.70	189	2.18	6.50	199	0.05	7.26
2706	166	14.52	189	2.22	6.53	198	0.05	7.26
2707	167	13.78	189	2.22	6.53	197	0.15	7.16
2708	166	12.99	189	2.18	6.50	194	0.24	7.02
2709	163	10.57	187	1.81	5.61	194	0.74	7.08
2710	165	10.46	187	1.75	5.58	194	0.70	7.10
2711	166	10.09	187	1.66	5.52	194	0.73	7.12
2712	162	9.52	185	1.49	5.15	194	0.81	7.15
2713	156	8.85	184	1.31	4.73	193	0.91	7.14
2714	140	8.91	184	1.28	4.83	193	0.86	7.11
2715	198	10.73	186	1.55	5.08	197	0.21	6.06
2716	196	11.40	186	1.62	5.26	197	0.17	6.04
2717	179	13.16	187	1.71	5.38	201	0.05	6.19
2718	182	11.45	187	1.68	5.34	199	0.07	6.09
2719	191	9.95	186	1.52	5.07	194	0.24	5.85
2720	107	14.08	185	1.51	5.88	191	0.16	6.46
2721	105	13.32	185	1.51	5.99	192	0.29	6.61
2722	103	13.54	185	1.51	6.07	192	0.31	6.81
2723	101	14.40	185	1.55	6.08	193	0.26	7.06
2724	104	13.83	186	1.58	6.19	194	0.24	7.03
2725	103	15.05	186	1.65	6.35	193	0.18	7.07
2726	104	15.76	186	1.70	6.44	193	0.17	7.05

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2727	106	16.20	187	1.77	6.56	194	0.16	6.99
2728	109	16.10	187	1.84	6.71	195	0.18	7.03
2729	113	15.54	187	1.93	6.85	190	0.03	7.44
2730	116	14.30	187	1.93	6.80	199	0.24	7.77
2731	122	13.27	187	1.90	6.70	199	0.35	7.78
2732	126	12.60	187	1.86	6.58	199	0.44	7.80
2733	127	12.04	186	1.80	6.47	199	0.53	7.86
2734	127	11.60	186	1.67	6.05	198	0.64	7.77
2735	125	11.23	185	1.59	5.93	198	0.67	7.76
2736	112	11.59	185	1.55	6.11	198	0.63	7.64
2737	112	10.86	185	1.38	5.88	197	0.71	7.66
2738	168	12.73	185	1.53	5.13	199	0.01	5.56
2739	167	12.73	186	1.64	5.32	198	0.01	6.00
2740	147	11.70	186	1.58	5.23	191	0.40	5.91
2741	145	13.73	186	1.60	5.32	192	0.18	5.82
2742	144	14.44	186	1.62	5.32	202	0.06	4.59
2743	152	13.29	186	1.62	5.33	219	0.02	1.72
2744	156	12.68	186	1.62	5.35	220	0.02	1.65
2745	161	12.15	186	1.60	5.36	195	0.02	4.14
2746	171	10.94	186	1.55	5.31	194	0.15	5.82
2747	168	10.98	186	1.53	5.29	197	0.07	6.01
2748	136	12.39	186	1.52	5.37	90	0.00	1.60
2749	133	12.60	186	1.62	5.56	190	0.15	6.24
2750	132	12.63	186	1.67	5.68	191	0.21	6.79
2751	129	12.82	186	1.68	5.74	191	0.27	6.79
2752	127	13.16	186	1.67	5.78	191	0.28	6.81
2753	123	12.19	185	1.57	5.61	191	0.45	6.79
2754	122	12.52	186	1.57	5.68	191	0.39	6.85
2755	123	12.88	186	1.59	5.74	191	0.26	6.78
2756	122	12.81	186	1.58	5.74	191	0.25	6.74
2757	120	12.49	185	1.55	5.71	191	0.28	6.69
2758	120	12.15	185	1.52	5.68	191	0.30	6.68
2759	116	11.80	185	1.46	5.57	191	0.36	6.65
2760	144	12.61	185	1.52	5.41	201	0.05	6.09
2761	143	12.40	185	1.53	5.43	201	0.05	6.10
2762	142	12.14	185	1.52	5.41	190	0.10	5.68
2763	138	12.25	185	1.50	5.39	197	0.07	5.12
2764	137	13.03	185	1.51	5.38	193	0.08	5.91
2765	139	13.27	185	1.54	5.40	197	0.07	5.18
2766	144	13.11	185	1.58	5.43	197	0.02	6.03
2767	147	13.37	186	1.62	5.46	199	0.03	6.09
2768	149	13.87	186	1.68	5.51	199	0.04	6.12
2769	151	14.07	186	1.76	5.59	200	0.05	6.13
2770	153	13.85	187	1.84	5.70	200	0.10	6.12
2771	158	13.27	187	1.88	5.77	199	0.06	6.68
2772	171	11.91	187	1.82	5.63	197	0.25	6.67
2773	192	9.02	184	1.32	4.62	192	0.74	6.52

Simulation no.	Wind Direction [deg N]	Wind Speed [m/s]	Dir Sea [deg N]	Hs Sea [m]	Tp Sea [s]	Dir Swell [deg N]	Hs Swell [m]	Tp Swell [s]
2774	133	13.61	185	1.50	5.26	191	0.05	6.86
2775	138	13.25	186	1.59	5.42	190	0.10	5.69
2776	137	13.51	186	1.66	5.56	190	0.17	5.74
2777	134	15.49	186	1.77	5.73	191	0.11	5.74
2778	139	13.74	187	1.84	5.88	190	0.14	6.56
2779	149	11.20	186	1.74	5.63	190	0.37	6.50
2780	143	10.16	185	1.57	5.42	191	0.60	6.68
2781	131	12.69	187	1.75	5.97	191	0.33	6.75
2782	133	14.94	187	1.82	6.05	195	0.07	6.23
2783	136	15.03	187	1.88	6.10	224	0.03	1.29
2784	139	14.07	187	1.91	6.15	225	0.03	1.21
2785	143	12.99	187	1.90	6.17	191	0.14	6.59
2786	147	11.99	187	1.86	6.06	197	0.13	7.18
2787	163	9.59	185	1.48	5.05	194	0.63	6.85
2788	167	9.96	186	1.56	5.36	194	0.52	6.88
2789	171	9.86	185	1.47	5.09	194	0.54	6.89
2790	254	18.30	204	1.52	5.09	227	0.02	1.99
2791	256	18.34	205	1.55	5.18	228	0.01	1.79
2792	261	18.06	206	1.56	5.26	219	0.04	3.13
2793	268	17.36	207	1.53	5.27	196	0.24	9.63