

Folkestone Directional WaveRider Buoy

Location

OS: 619711E 132538N
 WGS84: Latitude: 51°03.5335'N Longitude: 01°08.2988'E

Water Depth

12.7m CD

Instrument Type

Datawell Directional WaveRider Buoy Mk III

Data Quality

C1(%)	Sample interval
97	30 minutes

Monthly Means

All times GMT

Month	H _s	T _p	T _z	Direction	SST	No. of days
	(m)	(s)	(s)	(°)	(°C)	
January	0.71	4.9	3.6	140	6.9	28
February	0.58	6.0	3.9	137	5.3	27
March	0.62	5.3	3.6	147	5.1	29
April	0.44	4.5	3.4	152	8.5	27
May	0.56	5.1	3.6	162	11.2	31
June	0.35	4.7	3.3	135	14.4	30
July	0.37	4.2	3.2	151	17.7	31
August	0.45	4.9	3.5	161	18.3	31
September	0.51	4.8	3.3	158	18.4	30
October	0.75	4.8	3.4	168	16.7	31
November	0.79	5.7	3.9	163	13.4	30
December	0.90	5.4	3.7	162	10.7	31

Tables and plots of these values, together with the minimum and maximum values and the standard deviation are available on the website

Highest storm events in 2006									
Date/Time	H _s	T _p	T _z	Dir.	Water level elevation* (OD)	Tidal stage (hours re. HW)	Tidal range (m)	Tidal surge* (m)	Max. surge* (m)
03-Dec-2006 09:00	3.13	7.1	5.3	180	6.05	HW	5.7	0.44	0.77
07-Dec-2006 06:00	2.57	7.1	4.9	177	1.54	HW + 6	5.9	-0.01	-0.64
30-Dec-2006 05:30	2.55	7.1	4.8	179	4.91	HW - 1	4.5	-0.60	-0.71

* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Dover). The surge shown is the residual at the time of the highest H_s. The maximum tidal surge is the largest positive surge during the storm event.

Year	Annual H_s exceedance* (m)						Annual Maximum H_s	
	0.05%	0.5%	1%	2%	5%	10%	Date	A_{max} (m)
2003	2.79	2.23	2.03	1.75	1.37	1.16	29-Nov-2003 13:30	3.07
2004	2.91	2.30	1.97	1.75	1.44	1.18	08-Oct-2004 12:00	3.25
2005	2.90	2.15	1.81	1.54	1.25	0.97	30-Dec-2005 14:00	3.15
2006	2.55	2.08	1.84	1.68	1.42	1.17	03-Dec-2006 09:00	3.13

* i.e. 5 % of the H_s values measured in 2003 exceeded 1.37m

Distribution plots

The distribution of wave parameters are shown in the accompanying graphs of:

- Percentage of occurrence of H_s , T_p , T_z and Direction for 2006
- Percentage wave height exceedance (all recorded years) – note that the statistics for 2003 were based on measurements from July to December only
- Joint distribution of all parameters for 2006, given both as number of observations and as percentage of occurrence
- Cumulative joint distribution of parameters from start of records (percentage of occurrence only)
- Incidence of storms during 2006 and for all previous years. Storm events are defined using the Peaks-over-Threshold method. The highest H_s of each storm event is shown.
- Annual time series of H_s (red line is storm wave threshold)

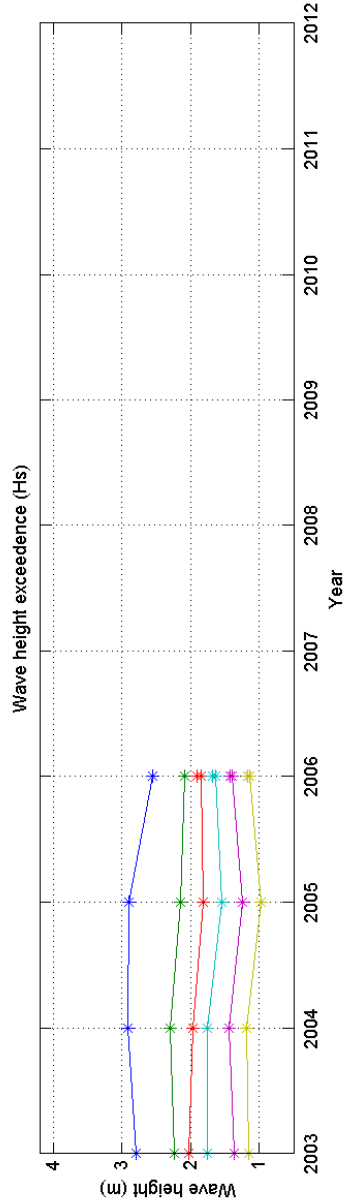
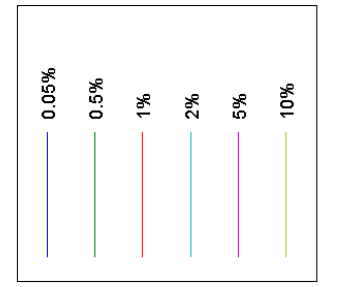
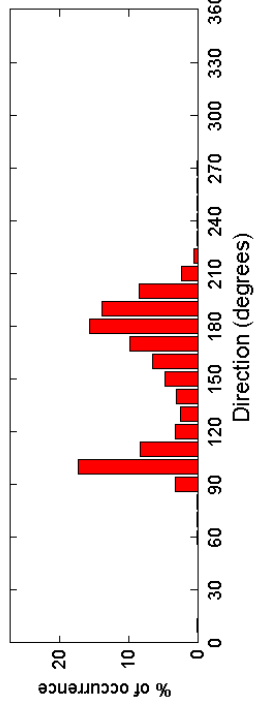
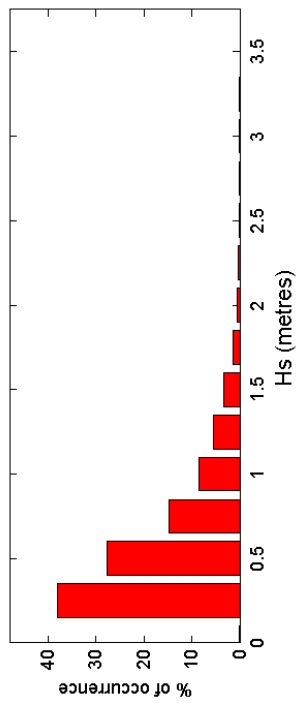
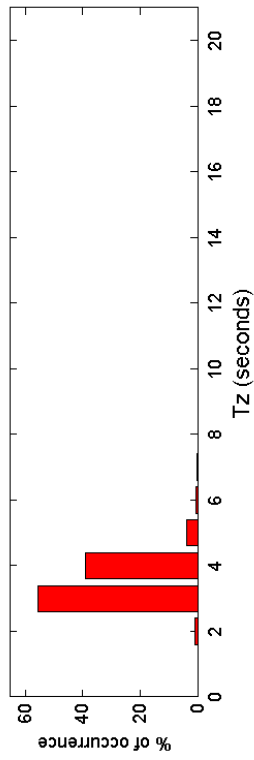
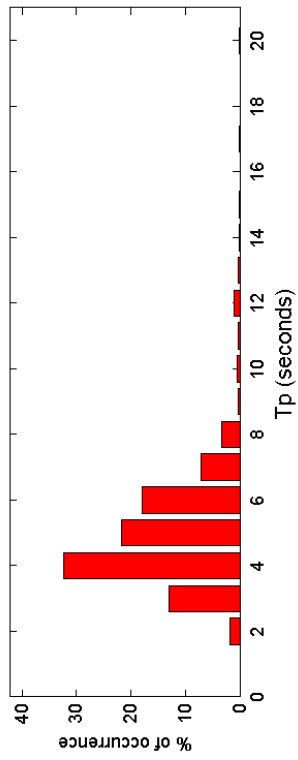
General

The buoy was first deployed on 08 July 2003. The wave directions recorded by the Datawell Directional WaveRider Mk III were found to be contaminated by a significant tidal signature, compounded by the on-board data processing. The buoy received new electronics to fix this problem in February 2004; wave directions measured before April 2004 were excluded from the analysis.

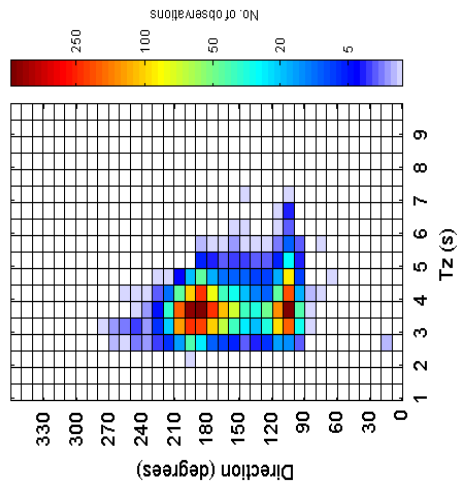
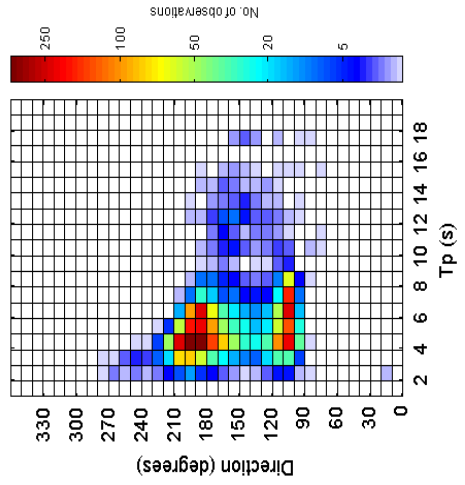
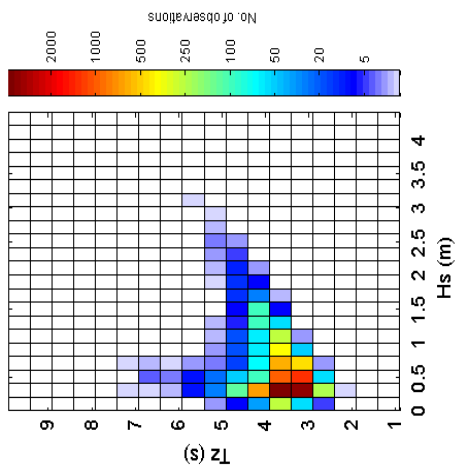
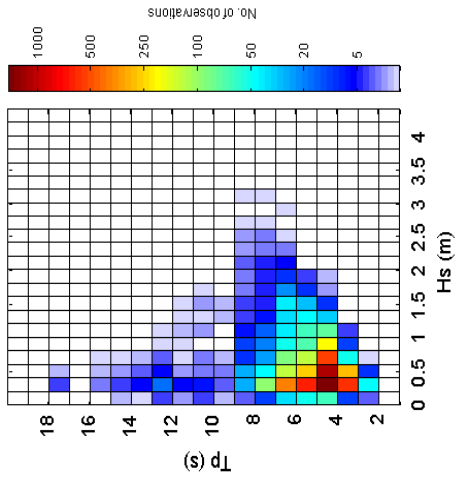
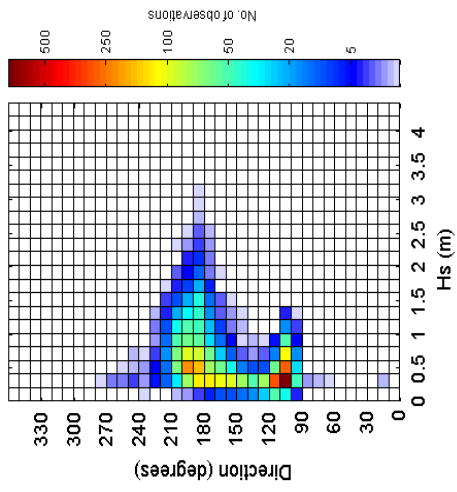
Acknowledgements

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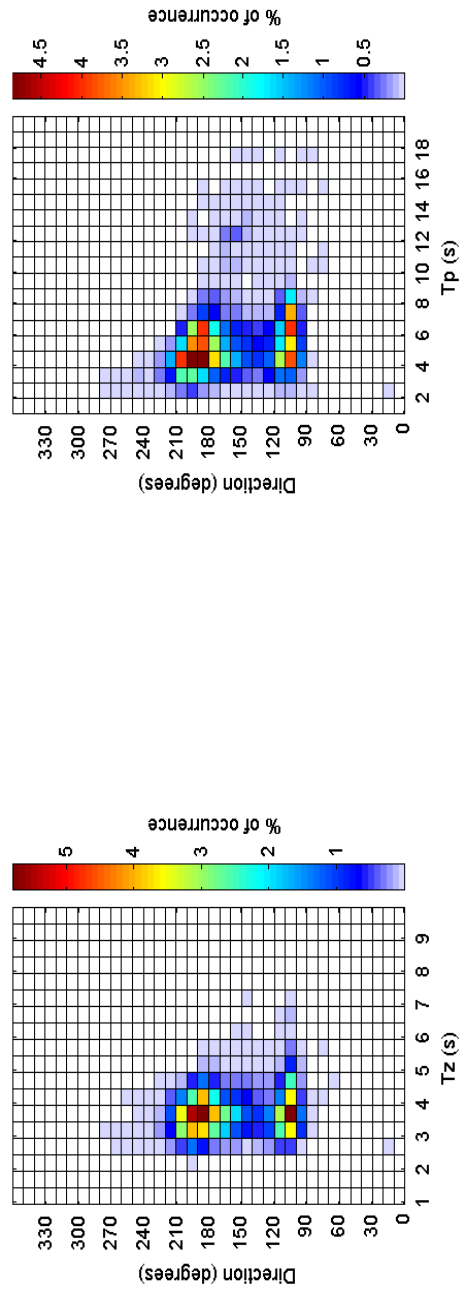
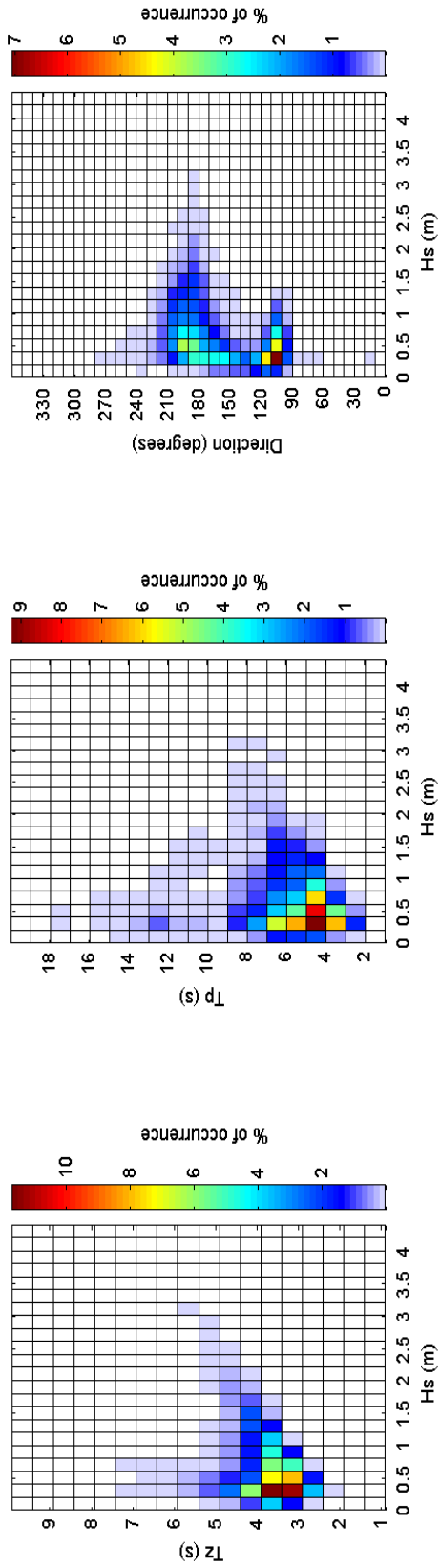
Folkestone 2006



Folkestone 2006 - Joint distribution



Folkestone 2006 - Joint distribution (% of occurrence)



Folkestone 2003 to 2006 - Joint distribution (% of occurrence)

