

Milford Directional Waverider Buoy

Location

OS: 427264E 90396N
 WGS84: Latitude: 50° 42.75' N Longitude: 001° 36.91' W

Water Depth

Approx. 10m CD

Instrument Type

Datawell WaveRider Buoy Mk III (from 17 November 2005)
 Datawell WaveRider Buoy Mk II

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	1.13	10.1	4.5	213	8.7	31
February	0.65	10.1	4.4	210	8.3	28
March	0.90	8.2	4.4	216	8.4	31
April	0.52	7.9	3.8	213	9.7	30
May	0.28	7.7	4.0	201	13.2	31
June	0.54	6.8	3.8	216	16.1	28
July	0.67	6.3	3.6	215	17.5	29
August	0.86	5.7	3.8	217	17.9	29
September	0.60	7.1	3.9	208	16.5	29
October	0.78	7.1	4.1	215	14.3	31
November	0.63	6.9	3.9	210	11.0	28
December	0.53	9.5	4.5	209	8.0	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 2008									
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)
10-Mar-2008 20:00	3.42	-	7.4	-	-0.18	HW -4	2.5	0.37	0.63
31-Jan-2008 12:00	3.27	10.0	6.2	219	-0.18	HW -5	1.0	0.39	0.40

* Tidal information is obtained from the nearest recording tide gauge (the gauge on Royal Lympington Yacht Club starting platform). 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. Note – surge was calculated using the old UKHO constituents.

Year	Annual H_s exceedance* (m)						Annual Maximum H_s (m)	
	0.05%	0.5%	1%	2%	5%	10%	Date	A_{max}
1996	-	-	-	-	-	-	28-Oct-1996 21:00	4.05
1997	3.08	2.39	2.15	1.97	1.59	1.20	24-Feb-1997 23:00	3.32
1998	2.89	2.47	2.28	2.00	1.66	1.37	27-Oct-1998 13:00	3.21
1999	3.01	2.32	2.11	1.85	1.56	1.29	24-Dec-1999 22:00	3.23
2000	3.90	2.85	2.50	2.19	1.74	1.41	31-Dec-2000 19:00	4.09
2001	3.71	2.63	2.24	1.91	1.52	1.20	01-Jan-2001 00:00	4.07
2002	3.54	2.92	2.61	2.35	1.96	1.62	15-Oct-2002 18:00	4.06
2003	2.82	2.20	2.02	1.76	1.37	1.12	14-Nov-2003 15:00	2.92
2004	3.21	2.49	2.29	2.05	1.69	1.42	31-Jan-2004 17:00	3.44
2005	3.09	1.86	1.72	1.56	1.28	1.05	02-Dec-2005 18:30	3.53
2006	2.89	2.46	2.31	2.10	1.73	1.41	03-Dec-2006 06:30	3.51
2007	3.21	2.53	2.25	2.04	1.74	1.46	18-Jan-2007 12:00	3.64
2008	3.09	2.40	2.16	1.96	1.70	1.42	10-Mar-2008 20:00	3.42

* i.e. 5 % of the H_s values measured in 2004 exceeded 1.69m

Distribution plots

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

- Percentage of occurrence of H_s , and T_z for 2008
- Percentage wave height exceedance (all recorded years) – note that the statistics for 1996 were based on measurements from May to December only
- Joint distribution of all parameters for 2008, given both as number of observations and as percentage of occurrence – note that measurement of T_p began in December 2004
- Cumulative joint distribution of parameters from start of records (percentage of occurrence only)
- Incidence of storms above a given threshold, for 2008 and for all years. Storms are defined by 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 threshold)

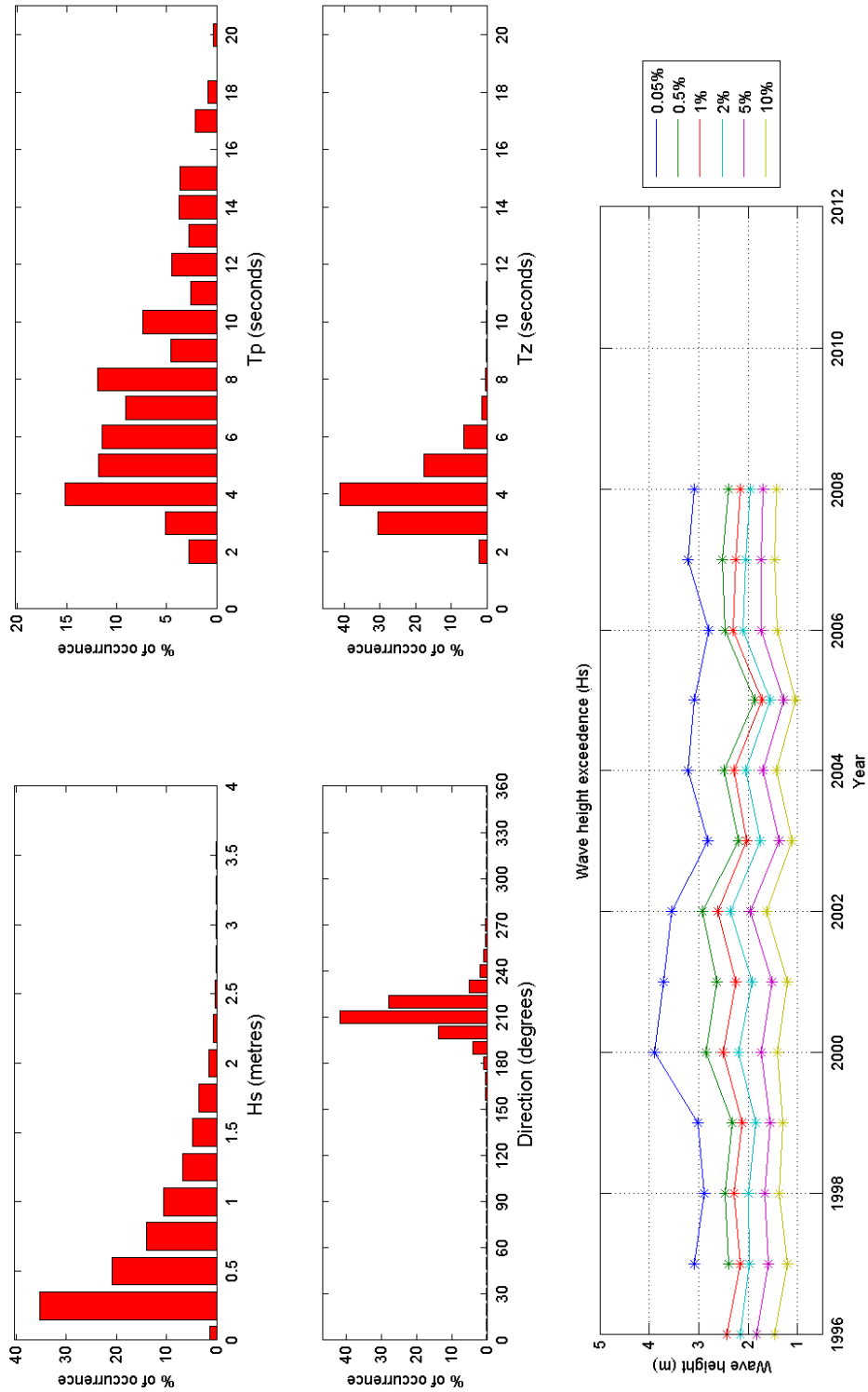
General

The buoy was first deployed in May 1996. The buoy was badly damaged in early October 2005 and was replaced with a directional wave buoy on 17 November 2005.

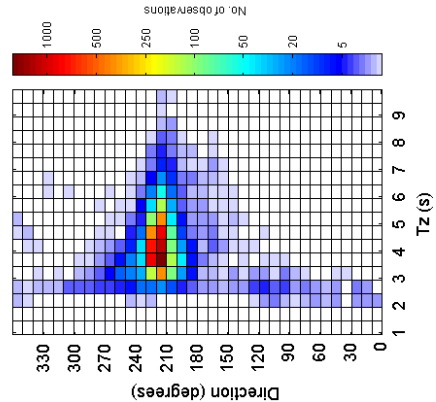
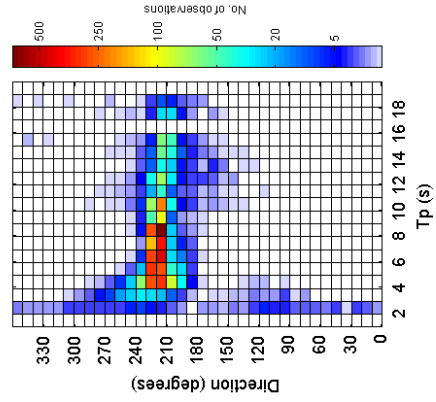
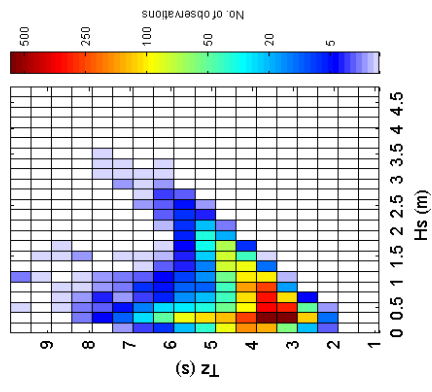
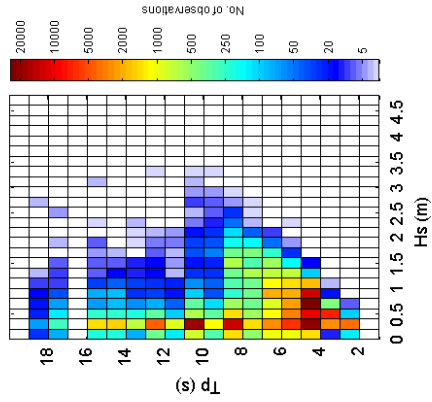
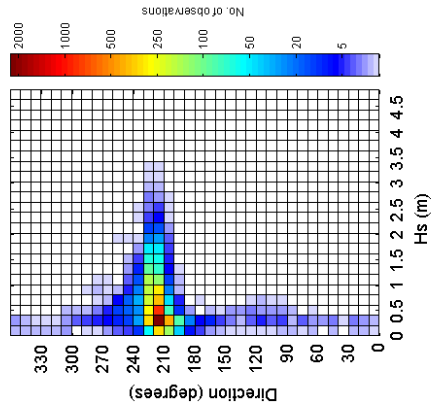
Acknowledgements

Tidal predictions for Lyminster were kindly supplied by the UK Hydrographic Office.

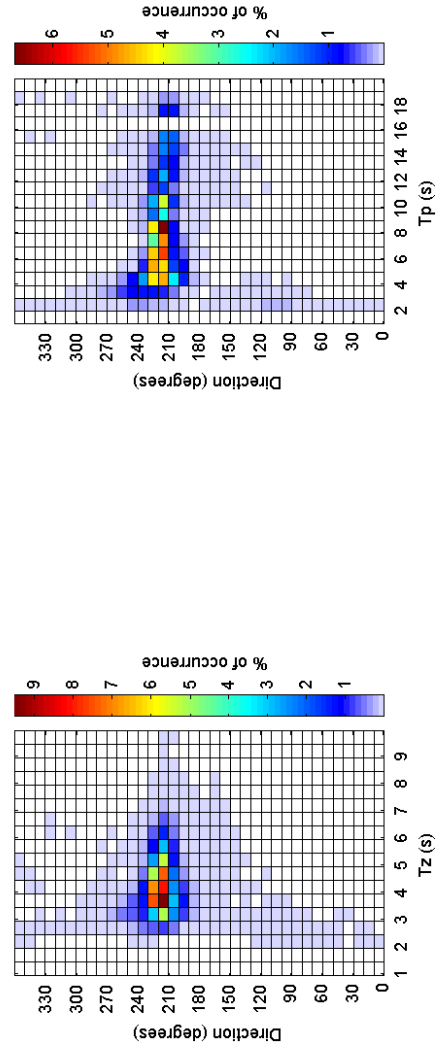
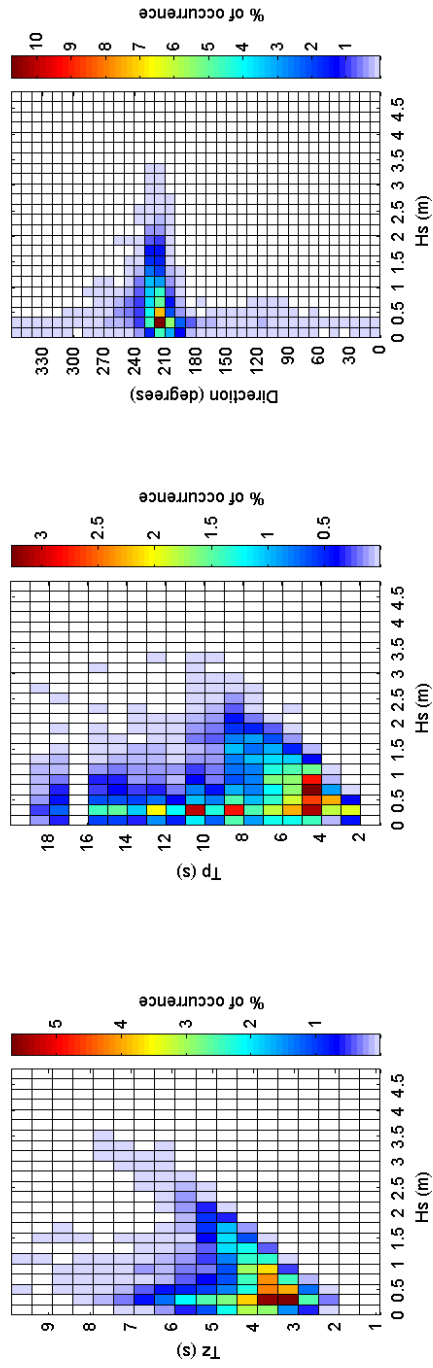
Milford 2008



Milford 2008 - Joint distribution



Milford 2008 - Joint distribution (% of occurrence)



Milford 1996 to 2008 - Joint distribution (% of occurrence)

