

Start Bay Directional Waverider Buoy

Location

OS: 284870E 44683N
 WGS84: Latitude: 50° 17.45' N Longitude: 003° 37.06' W

Water Depth

Approx. 10m CD

Instrument Type

Datwell Directional Waverider Mk III

Data Quality

C1(%)	Sample interval
99	30 minutes

Monthly Means

All times GMT

Month	H _s	T _p	T _z	Direction	SST	No. of days
	(m)	(s)	(s)	(°)	(°C)	
January	1.07	10.6	5.0	177	10.2	31
February	0.91	8.1	4.5	150	9.7	29
March	0.75	8.5	4.6	165	9.5	31
April	0.67	8.1	4.3	150	10.1	30
May	0.60	6.4	3.8	124	12.4	31
June	0.37	7.9	4.0	168	13.9	30
July	0.55	6.8	4.0	161	14.8	31
August	0.66	7.2	4.1	176	15.5	30
September	0.71	6.7	4.1	143	15.7	30
October	0.70	8.3	4.6	171	14.8	30
November	0.70	7.1	4.4	145	12.3	30
December	0.85	8.5	4.5	144	10.4	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)
17-Apr-2008 20:30	3.94	9.1	6.7	96	-0.92	HW +4	3.50	0.10	0.25
13-Jan-2008 18:00	3.49	8.3	6.3	153	0.78	HW -3	3.70	0.15	0.65
03-Jan-2008 08:30	3.29	8.3	6.0	89	-0.64	HW -5	1.80	0.25	0.30
03-Feb-2008 13:30	3.20	8.3	6.0	153	1.28	HW -1	2.20	0.40	0.52
10-Mar-2008 04:30	3.17	9.1	5.8	176	1.28	HW -2	5.30	0.20	0.65

* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Devonport). 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)
2007	-	-	1.93	1.71	1.43	1.15	17-Dec-2007 23:30	3.41
2008	3.60	2.98	2.66	2.34	1.78	1.38	17-Apr-2008 20:30	3.94

* i.e. 5 % of the H_s values measured in 2007 exceeded 1.43m

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 2008
- Percentage wave height exceedance
- Joint distribution of all parameters for 2008, given both as number of observations and as percentage of occurrence
- Incidence of storms during 2008 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 threshold)

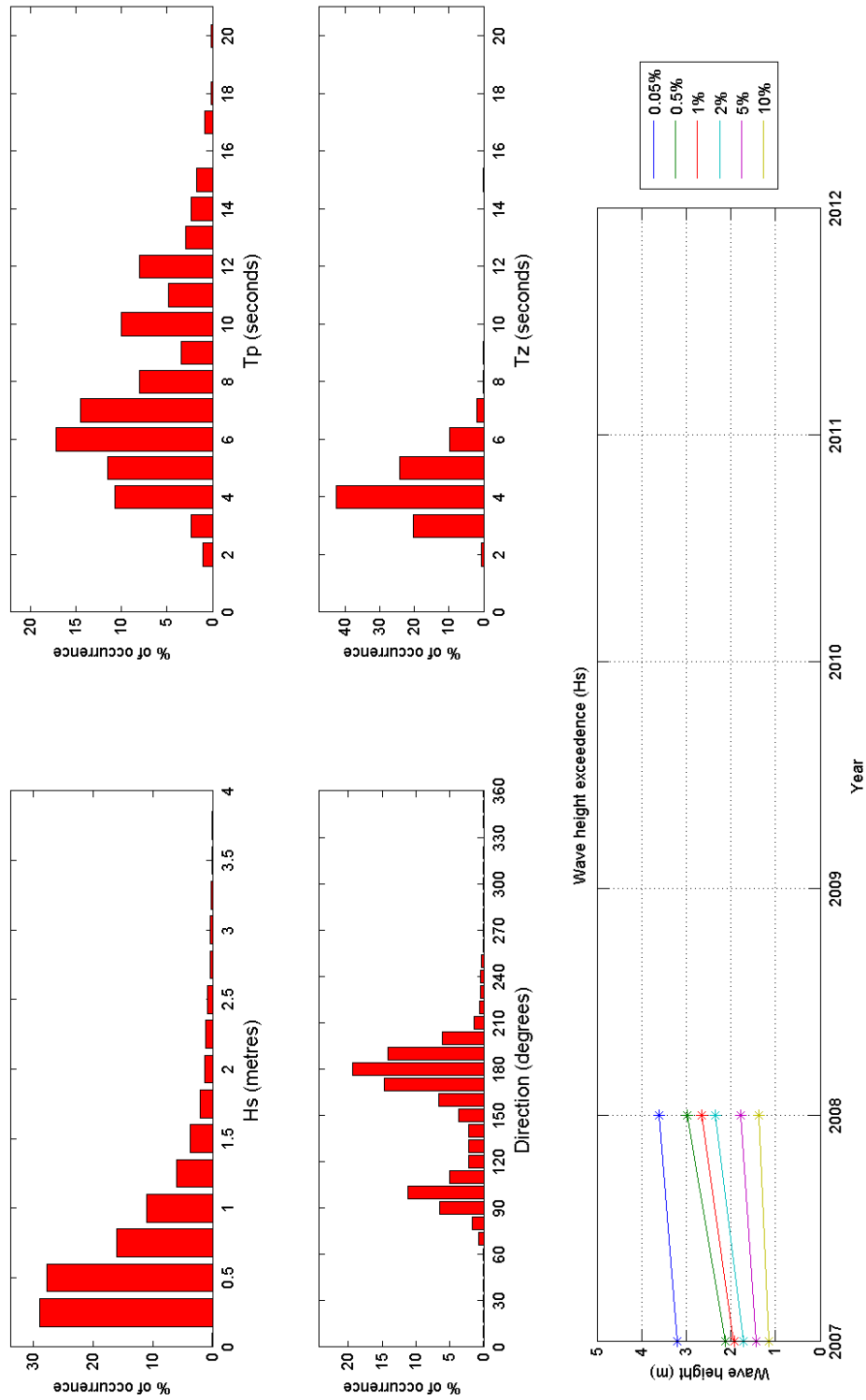
General

The buoy was first deployed on 4 April 2007.

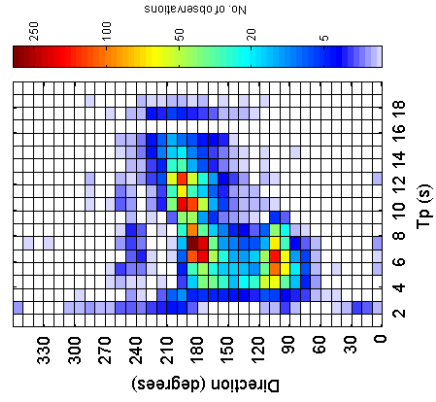
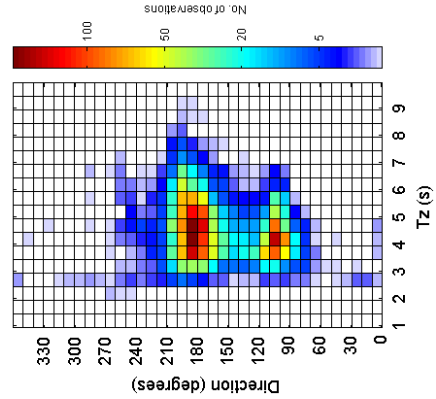
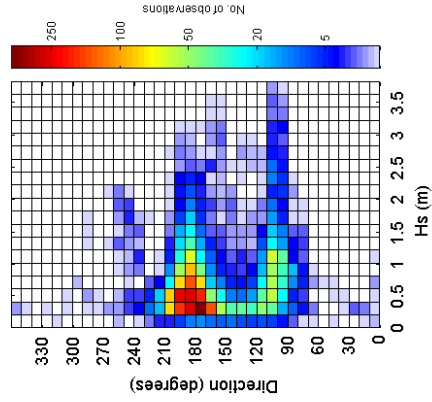
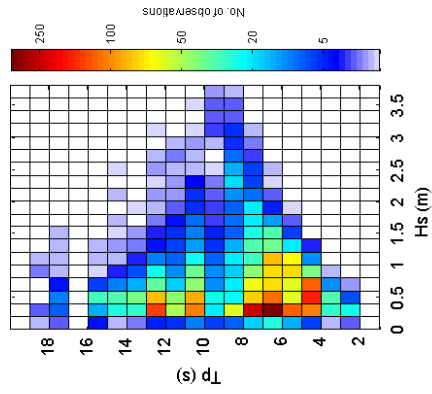
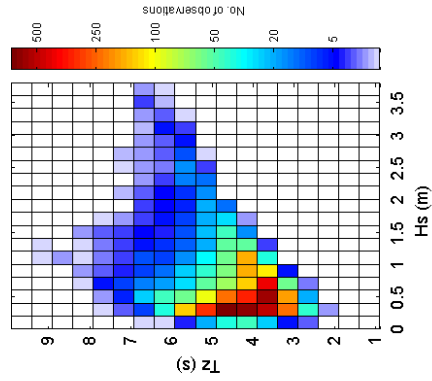
Acknowledgements

Tidal data were supplied by the British Oceanographic Data Centre as part of the function of the National Tidal and Sea Level Facility, hosted by the Proudman Oceanographic Laboratory and funded by DEFRA and the Natural Environment Research Council.

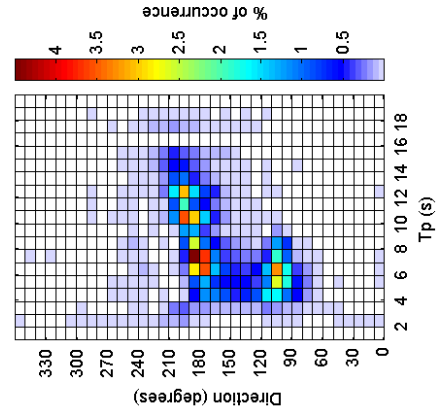
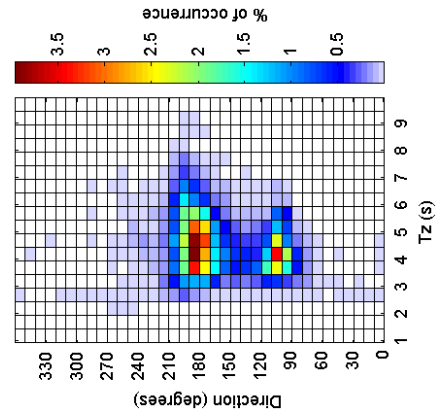
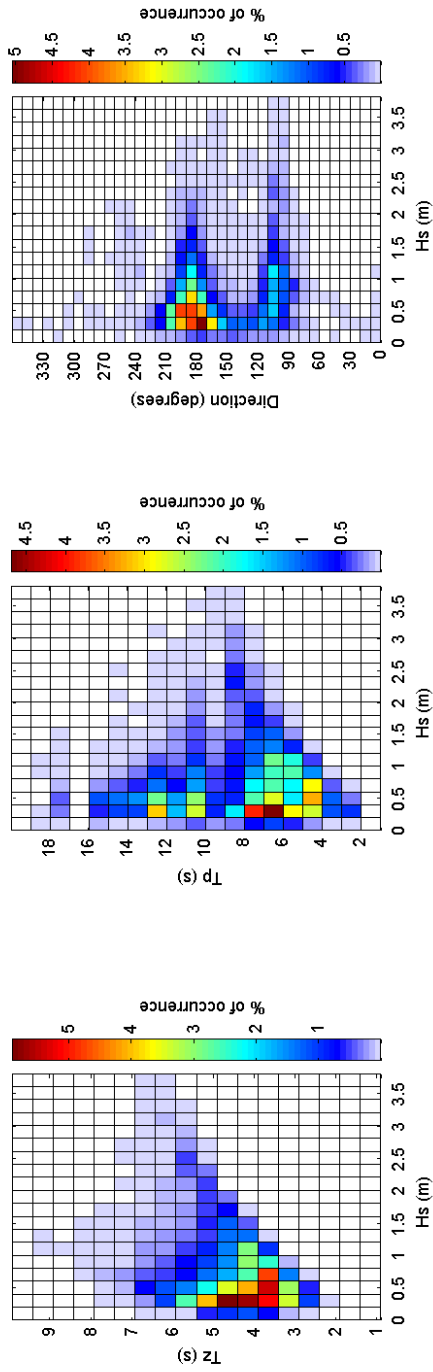
Start Bay 2008



Start Bay 2008 - Joint distribution



Start Bay 2008 - Joint distribution (% of occurrence)



Start Bay 2007 to 2008 - Joint distribution (% of occurrence)

