

Weymouth Directional Waverider Buoy

Location

OS: E 371646 N 81037

WGS84: Latitude: 50° 37.699' N Longitude: 002° 24.133' W

Water Depth

10m CD

Instrument Type

Datawell Directional WaveRider Buoy Mk III

Data Quality

C1(%)	Sample interval
98	30 minutes

Monthly Means

All times GMT

Month	H _s	T _p	T _z	Direction	SST	No. of days
	(m)	(s)	(s)	(°)	(°C)	
January	0.62	8.0	4.1	161	10.0	30
February	0.65	9.1	4.1	156	9.2	27
March	0.46	8.0	4.2	159	9.8	30
April	0.32	6.2	3.5	139	11.0	30
May	0.47	6.0	3.7	158	12.9	30
June	0.36	5.8	3.7	159	15.6	29
July	0.41	5.3	3.5	164	16.6	30
August	0.32	4.9	3.5	147	17.6	31
September	0.28	4.9	3.5	157	17.5	30
October	0.41	6.0	3.8	147	15.7	31
November	0.38	5.5	3.9	156	13.0	30
December	0.67	7.0	4.0	152	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 2007									
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)
18-Nov-2007 13:30	2.56	7.7	5.6	162	-	HW + 2	0.6	-	-
06-Mar-2007 02:00	2.20	8.3	5.2	162	0.34	HW - 6	2.0	0.81	0.82
04-Mar-2007 14:30	2.07	6.3	5.1	141	-0.14	HW - 5	1.8	0.48	0.55
08-Feb-2007 03:30	2.02	6.3	4.8	132	0.25	HW - 6	1.4	0.54	0.55

* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Weymouth). 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	2.29	1.72	1.43	1.24	1.03	0.85	18-Nov-2007 13:30	2.56

* i.e. 5 % of the H_s values measured in 2007 exceeded 1.03m

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 2007
- Percentage wave height exceedance
- Joint distribution of all parameters for 2007, given both as number of observations and as percentage of occurrence
- Cumulative joint distribution of parameters from start of records
- Incidence of storm waves for 2007. 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)

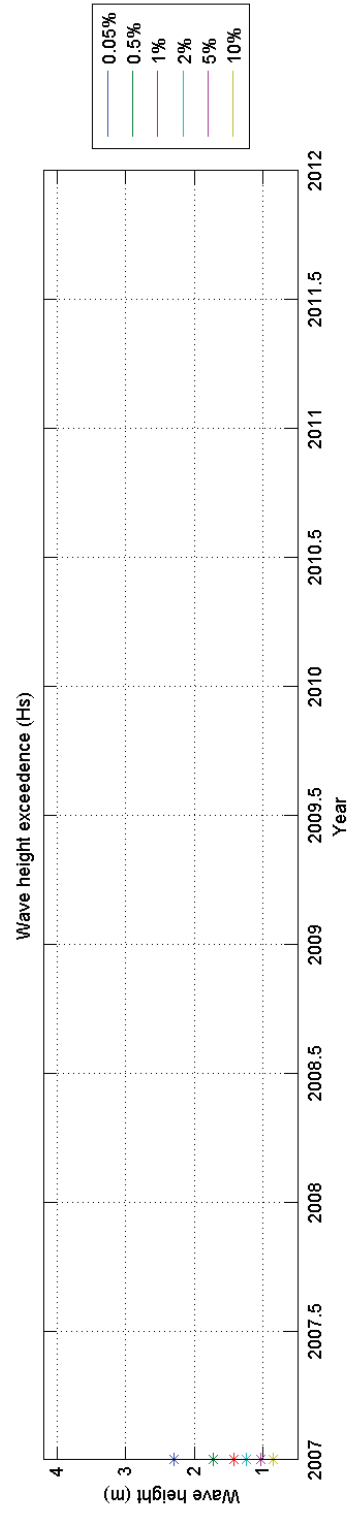
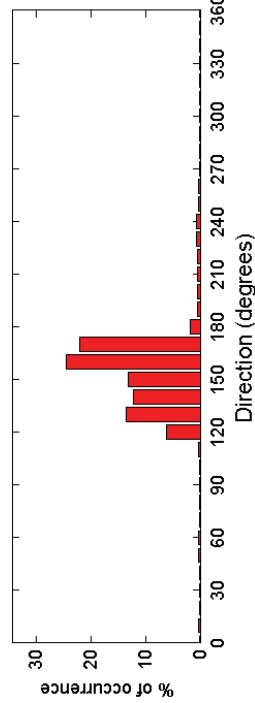
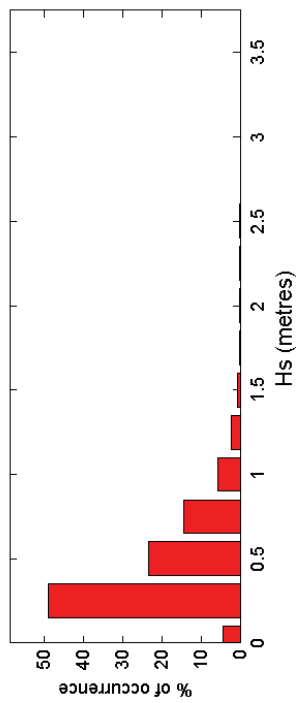
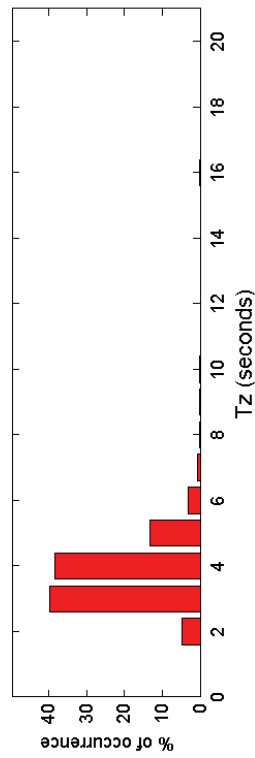
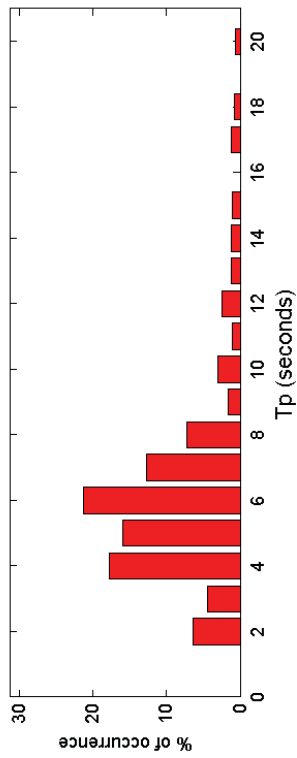
General

The WaveRider was first deployed on the 18 December 2006.

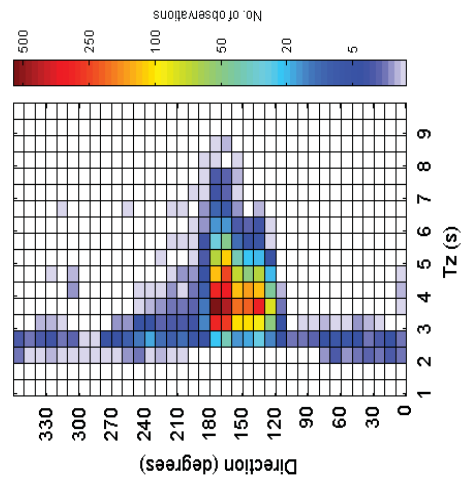
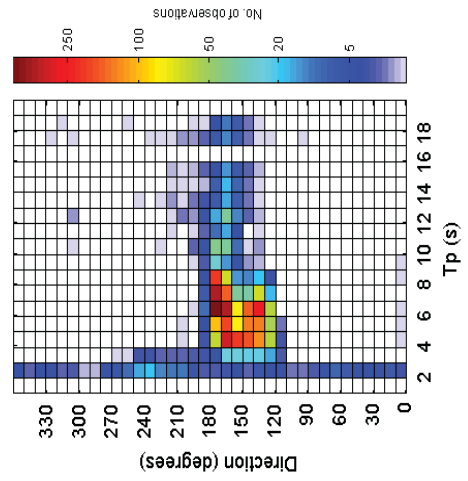
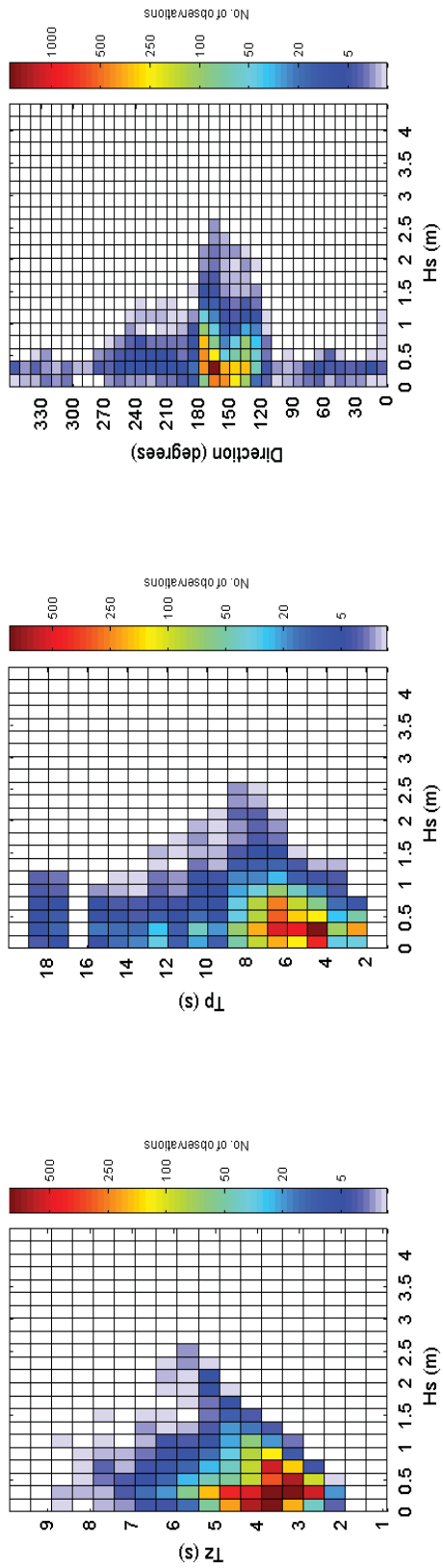
Acknowledgements

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.

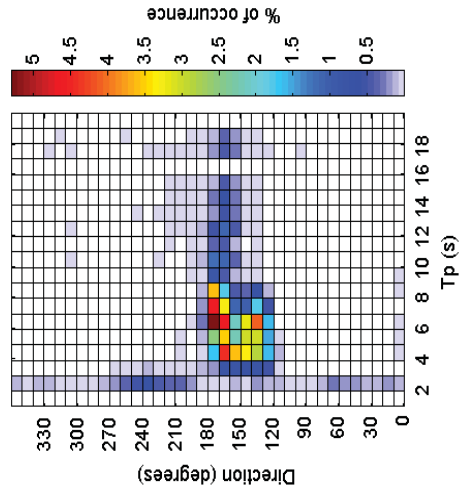
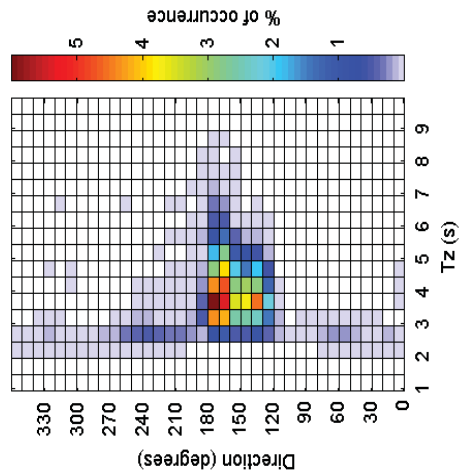
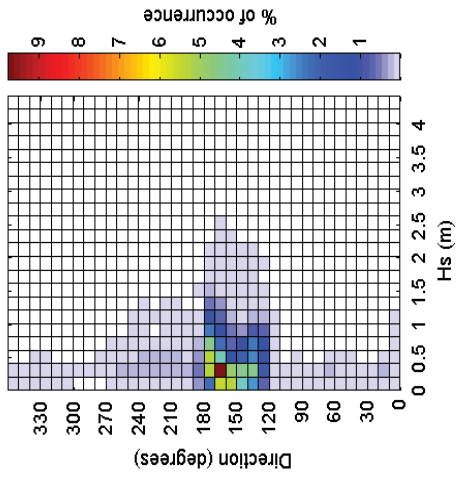
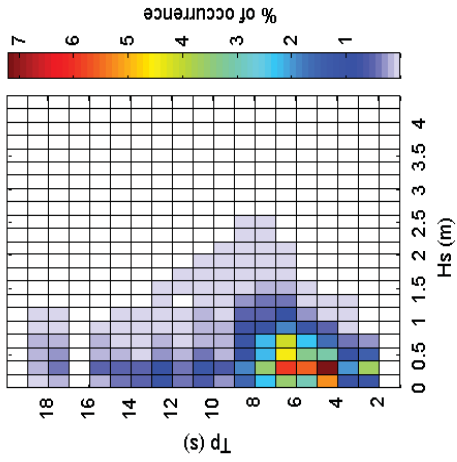
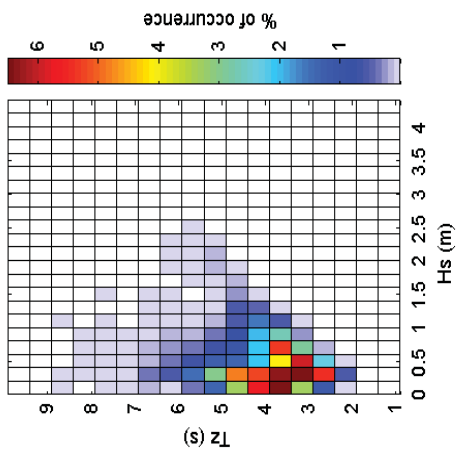
Weymouth 2007



Weymouth 2007 - Joint distribution



Weymouth 2007 - Joint distribution (% of occurrence)



Weymouth 2006 to 2007 - Joint distribution (% of occurrence)

