

Penzance Directional Waverider Buoy

Location

OS: E 149633 N 29525
 WGS84: Latitude: 50° 06.773' N Longitude: 005° 30.201' W

Water Depth

10.4m CD

Instrument Type

Datowell Directional Waverider Mk III

Data Quality

C1(%)	Sample interval
73	30 minutes

Monthly Means

All times GMT

Month	H _s	T _p	T _z	Direction	SST	No. of days
	(m)	(s)	(s)	(°)	(°C)	
January	-	-	-	-	-	-
February	-	-	-	-	-	-
March	-	-	-	-	-	-
April	0.33	9.5	4.1	175	12.3	24
May	0.57	8.1	4.3	186	13.1	31
June	0.62	7.8	4.1	190	15.3	30
July	0.56	6.5	4.1	189	14.9	31
August	0.37	7.2	4.0	167	15.8	31
September	0.30	7.2	4.0	179	16.4	30
October	0.52	8.4	4.5	179	15.2	31
November	0.39	8.1	4.5	191	13.6	30
December	1.00	8.5	4.4	180	11.6	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)
20-Jun-2007 09:00	2.96	10.5	6.3	191	1.02	HW + 1	3.5	0.34	0.38
18-Nov-2007 02:00	2.74	7.1	5.7	187	-0.23	HW + 5	2.5	0.07	-0.16

* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Newlyn). 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	2.7	2.05	1.84	1.63	1.34	1.1	20-Jun-2007 09:00	2.96

* i.e. 5 % of the H_s values measured in 2007 exceeded 1.34m

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
- Incidence of storms in 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).

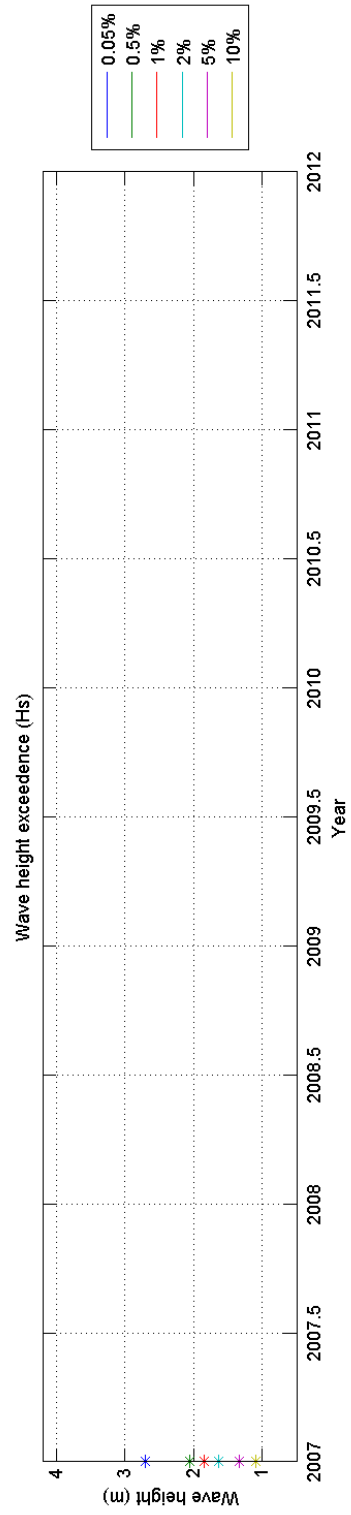
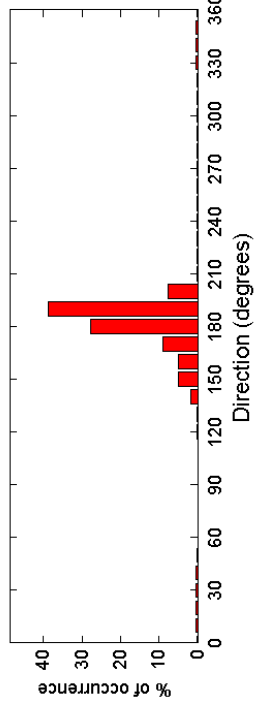
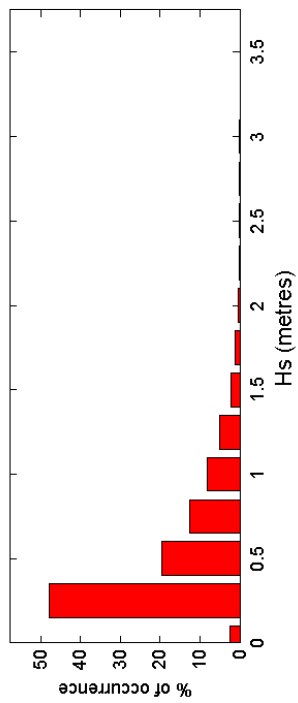
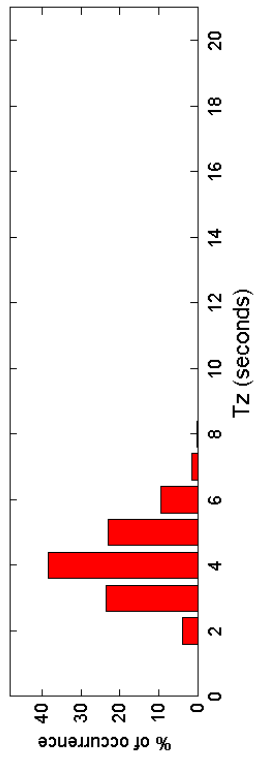
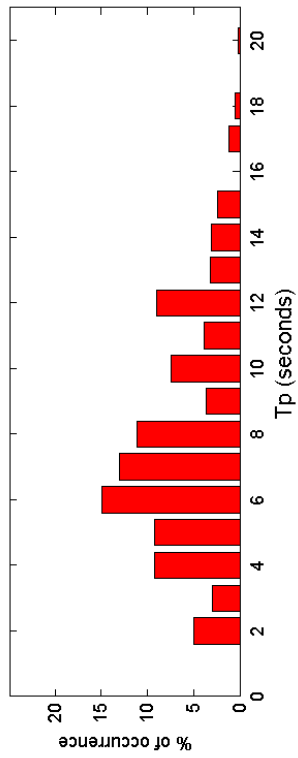
General

The Directional Waverider buoy was first deployed on 5 April 2007.

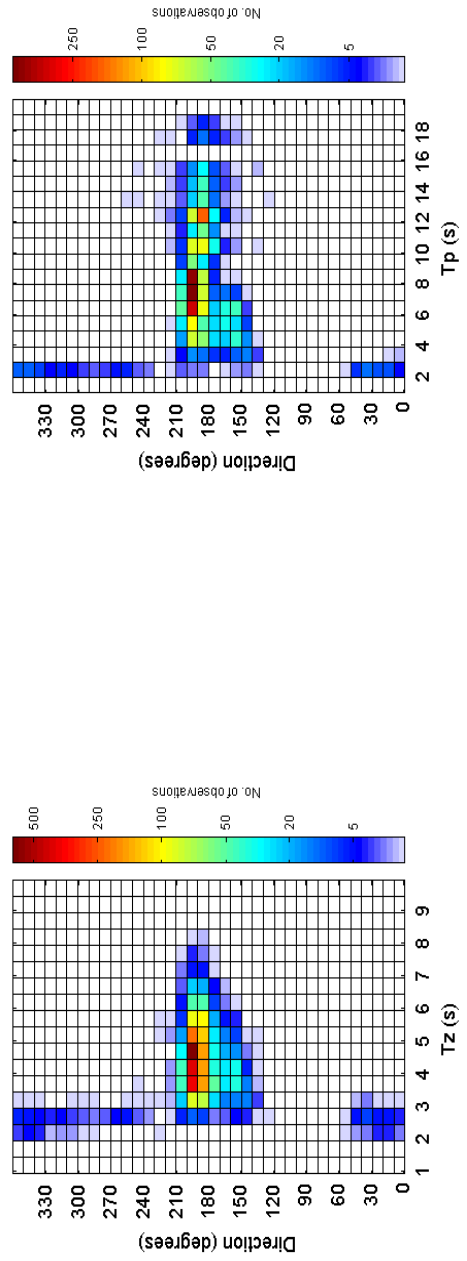
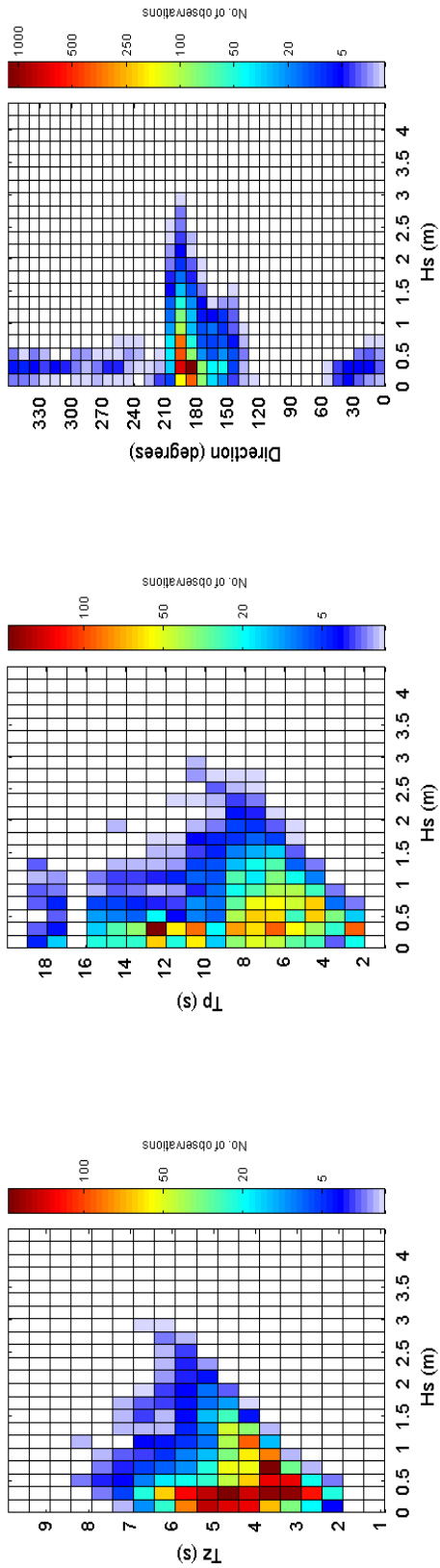
Acknowledgements

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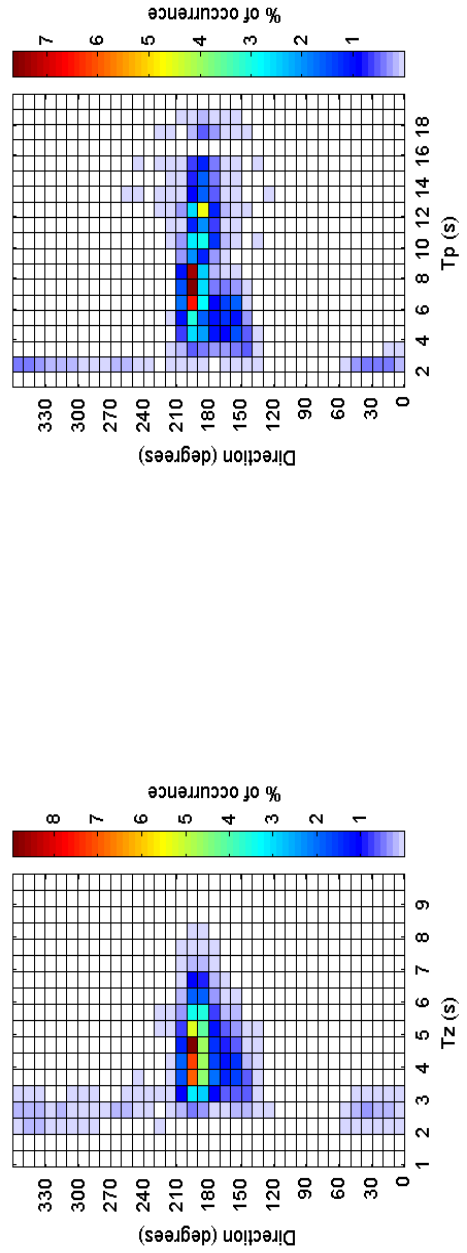
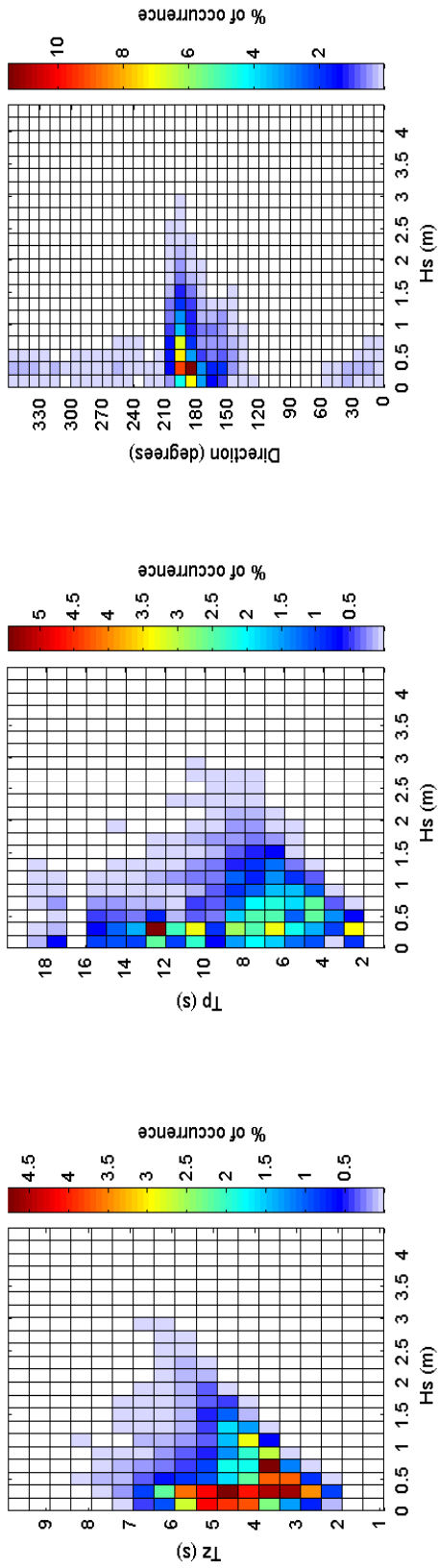
Penzance 2007

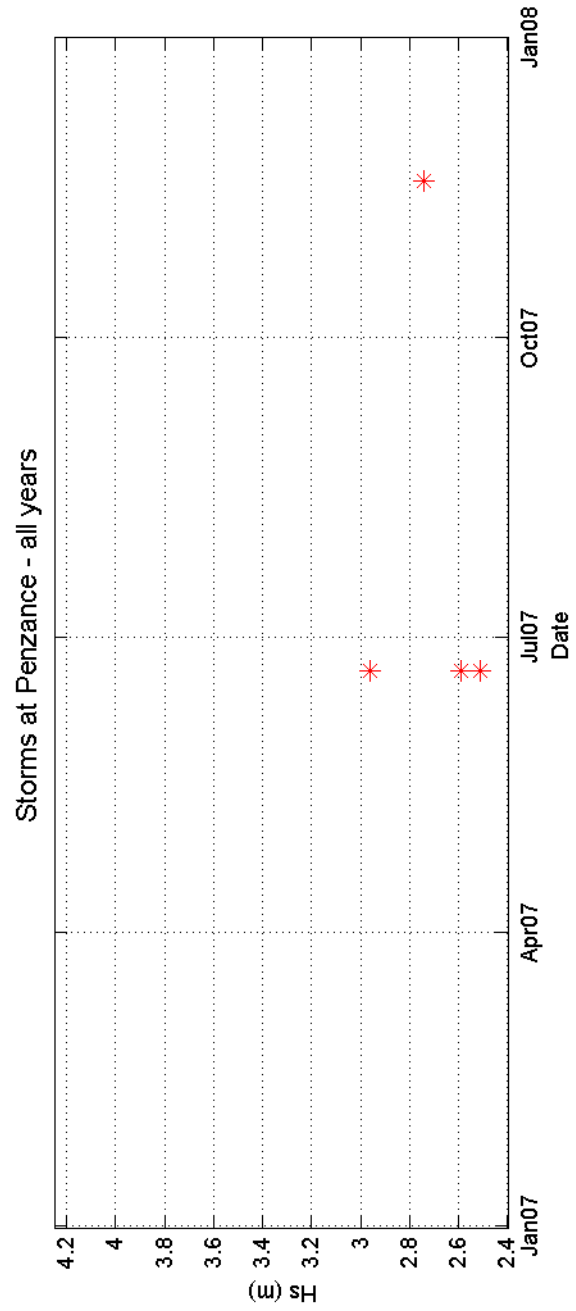
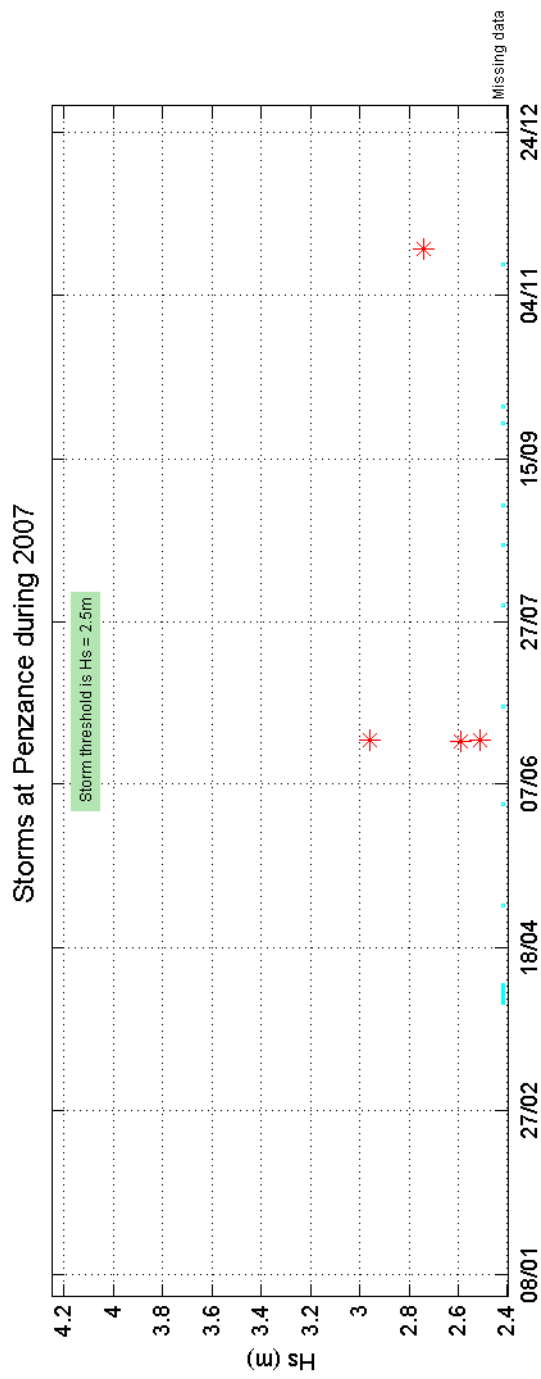


Penzance 2007 - Joint distribution



Penzance 2007 - Joint distribution (% of occurrence)





Penzance- Significant Wave Height (H_s) during 2007

