

Port Isaac Step Gauge

Location

OS: 199489E 80997N
 WGS84: Latitude: 50° 35.65' N Longitude: 004° 50.07' W

Water Depth

N/A

Instrument Type

Etrometa Step Gauge

Data Quality

C1 (%)	Sample interval
42	20 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	-	-	-	-	-	-
May	-	-	-	-	-	-
June	-	-	-	-	-	-
July	0.36	7.0	3.9	-	-	6
August	0.47	13.9	4.0	-	-	30
September	0.74	10.0	4.9	-	-	30
October	0.92	9.3	4.7	-	-	30
November	1.31	9.5	4.8	-	-	29
December	0.80	7.6	4.2	-	-	31

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

Highest events in 2010									
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)
11-Nov-2010 23:00	5.67	7.1	6.5	-	1.57	HW +3	4.23	-	-
08-Nov-2010 19:00	4.89	18.2	6.3	-	3.83	HW	6.54	-	-
05-Oct-2010 12:00	4.30	7.7	6.5	-	0.37	HW -3	5.91	-	-
18-Nov-2010 00:20	3.92	13.3	7.0	-	1.16	HW -2	4.03	-	-

* Tidal information is obtained from the nearest recording tide gauge (the step gauge also provides tidal data). 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 (m)	
	0.05%	0.5%	1%	2%	5%	10%	Date	A_{max}
2010	-	-	2.94	1.97	1.52	3.82	11-Nov-2010 23:00	5.67

* i.e. 5 % of the H_s values measured in 2010 exceeded 1.52m

Distribution plots

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

- Percentage of occurrence of H_s , T_p , T_z for 2010
- Percentage wave height exceedance
- Joint distribution of all parameters for 2010, given both as number of observations and as percentage of occurrence
- Incidence of storms during 2010. 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 waves threshold)

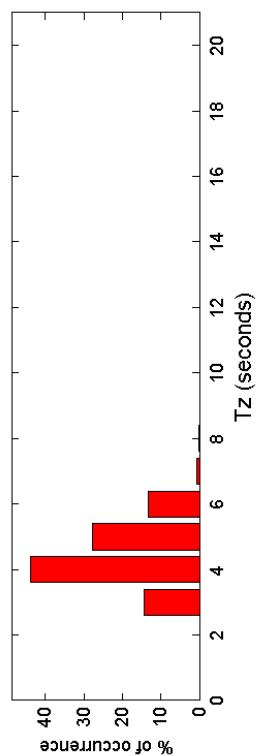
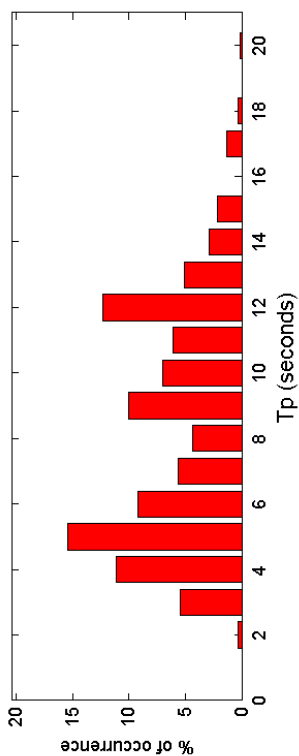
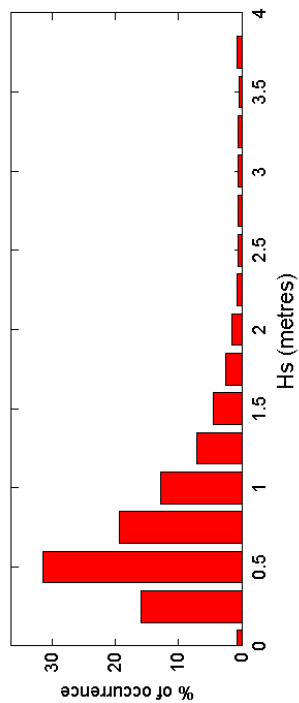
General

The Step Gauge was first deployed on 15 July 2010. The instrument is deployed primarily as a tide gauge, but measures waves also. Some reflection can occur from the breakwater on which the instrument is mounted.

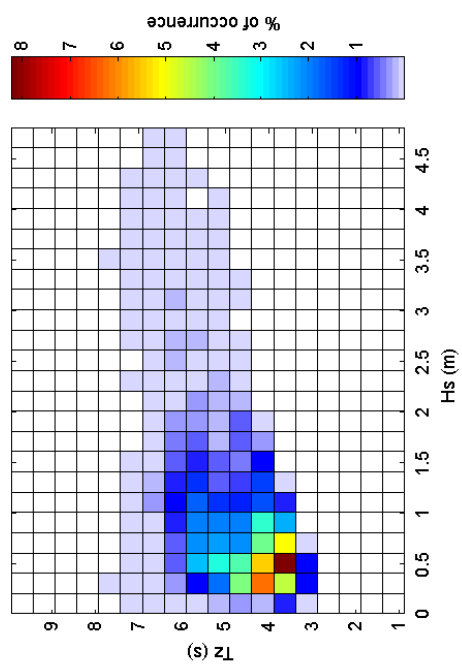
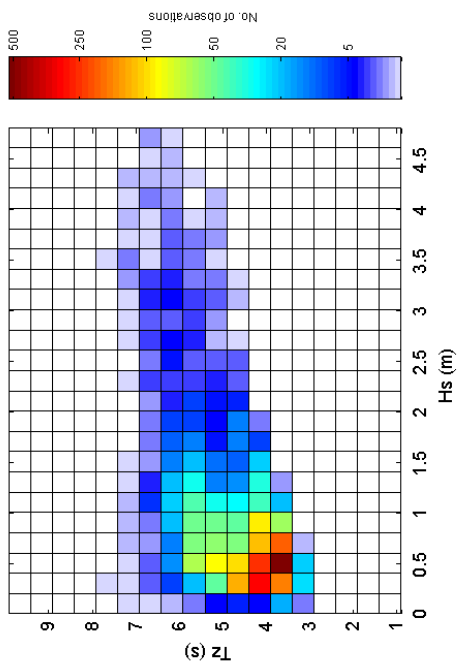
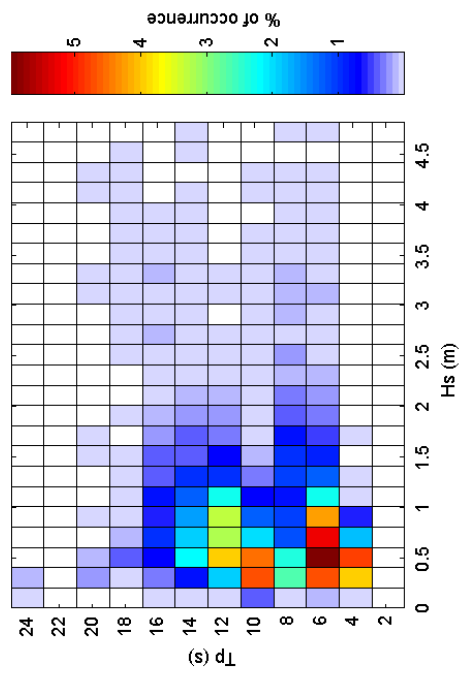
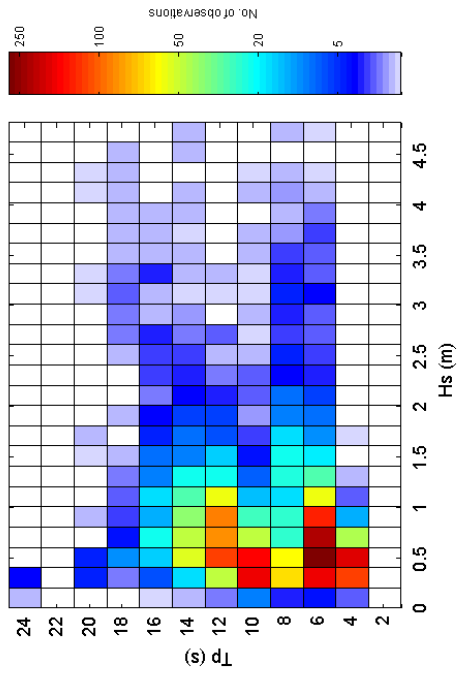
Acknowledgements

The instrument is sited on Port Isaac breakwater by kind permission of Port Isaac Harbour Commissioners and the shore station is kindly hosted by Port Isaac Aquarium. TASK2000 tidal prediction software was kindly provided by the Permanent Service for Mean Sea Level, Proudman Oceanographic Laboratory.

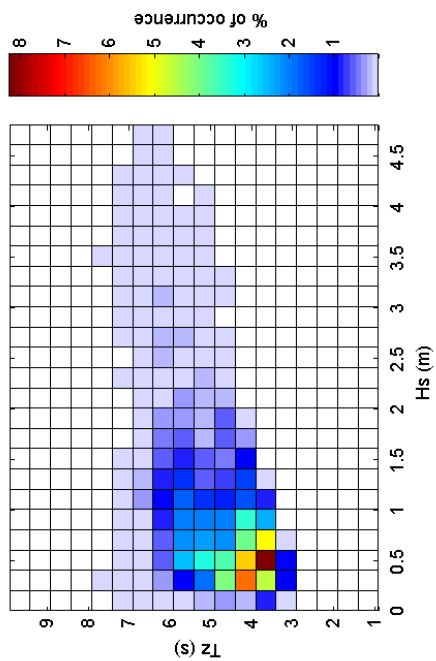
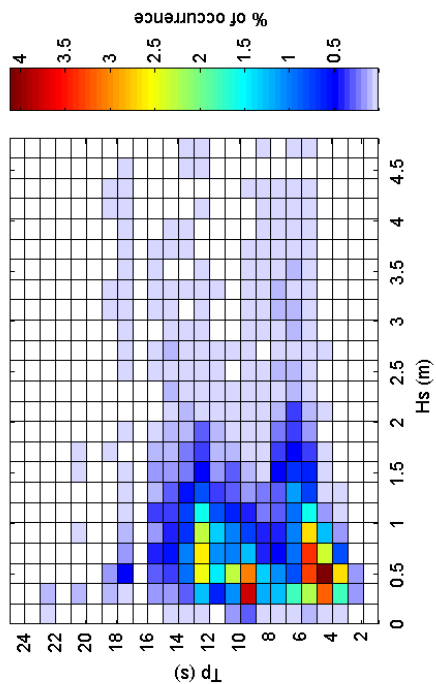
Port Isaac 2010

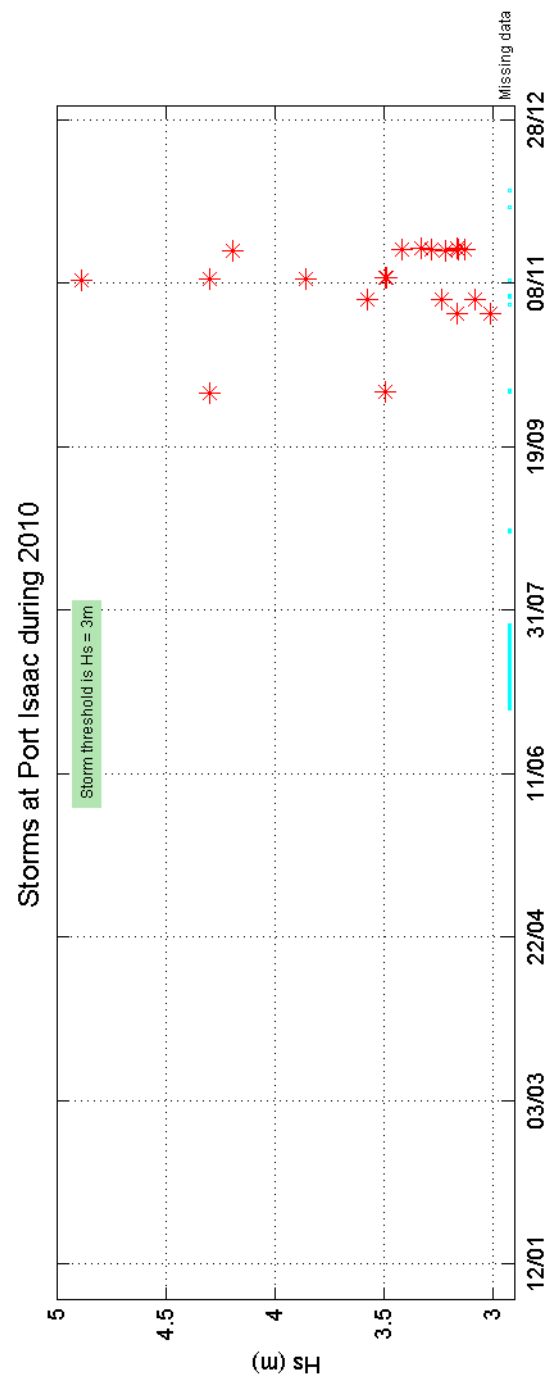


Port Isaac 2010 - Joint distribution



Port Isaac 2010 to 2010 - Joint distribution (% of occurrence)





Significant wave height, H_s , at Port Isaac during 2010

