

Port Isaac Step Gauge

Location

OS: 199489E 80998N

WGS84: Latitude: 50° 35.651' N Longitude: 04° 50.065' W

Water Depth

N/A

Instrument Type

Etrometa Step Gauge

Data Quality

Recovery rate (%)	Sample interval
95	20 minutes

Statistics - 2012

All times are GMT

Month	H _s (m)	T _p (s)	T _z (s)	Dir. (°)	SST (°C)	No. of days
January	0.57	9.3	5.0	-	-	27
February	0.46	8.6	4.9	-	-	26
March	0.45	9.4	4.9	-	-	28
April	0.49	7.4	4.4	-	-	29
May	0.19	5.7	4.0	-	-	30
June	0.23	6.0	3.5	-	-	26
July	0.23	4.5	2.7	-	-	31
August	0.27	5.3	3.0	-	-	31
September	0.33	4.8	2.8	-	-	30
October	0.42	5.6	3.0	-	-	31
November	0.54	6.4	3.1	-	-	29
December	0.72	8.2	3.4	-	-	31

Storm Analysis

Date/Time	H _s (m)	T _p (s)	T _z (s)	Dir. (°)	Water level elevation* (OD)	Tidal stage (hours re. HW)	Tidal range (m)	Tidal surge* (m)	Max. surge* (m)
29-Apr-2012 10:00	2.44	7.7	6.4	-	1.9	HW	3.5	-	-

* 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.

Annual Statistics

Year	Annual H_s exceedance* (m)						Annual Maximum H_s	
	0.05%	0.5%	1%	2%	5%	10%	Date	A_{max} (m)
2010	-	-	3.37	2.93	1.97	1.52	11-Nov-2010 22:40	5.09
2011	3.23	2.39	1.91	1.54	1.30	1.17	15-Jan-2011 19:20	3.60
2012	1.99	1.62	1.48	1.32	1.00	0.77	29-Apr-2012 10:00	2.44

* i.e. 5 % of the H_s values measured in 2010 exceeded 1.96 m

Distribution plots

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

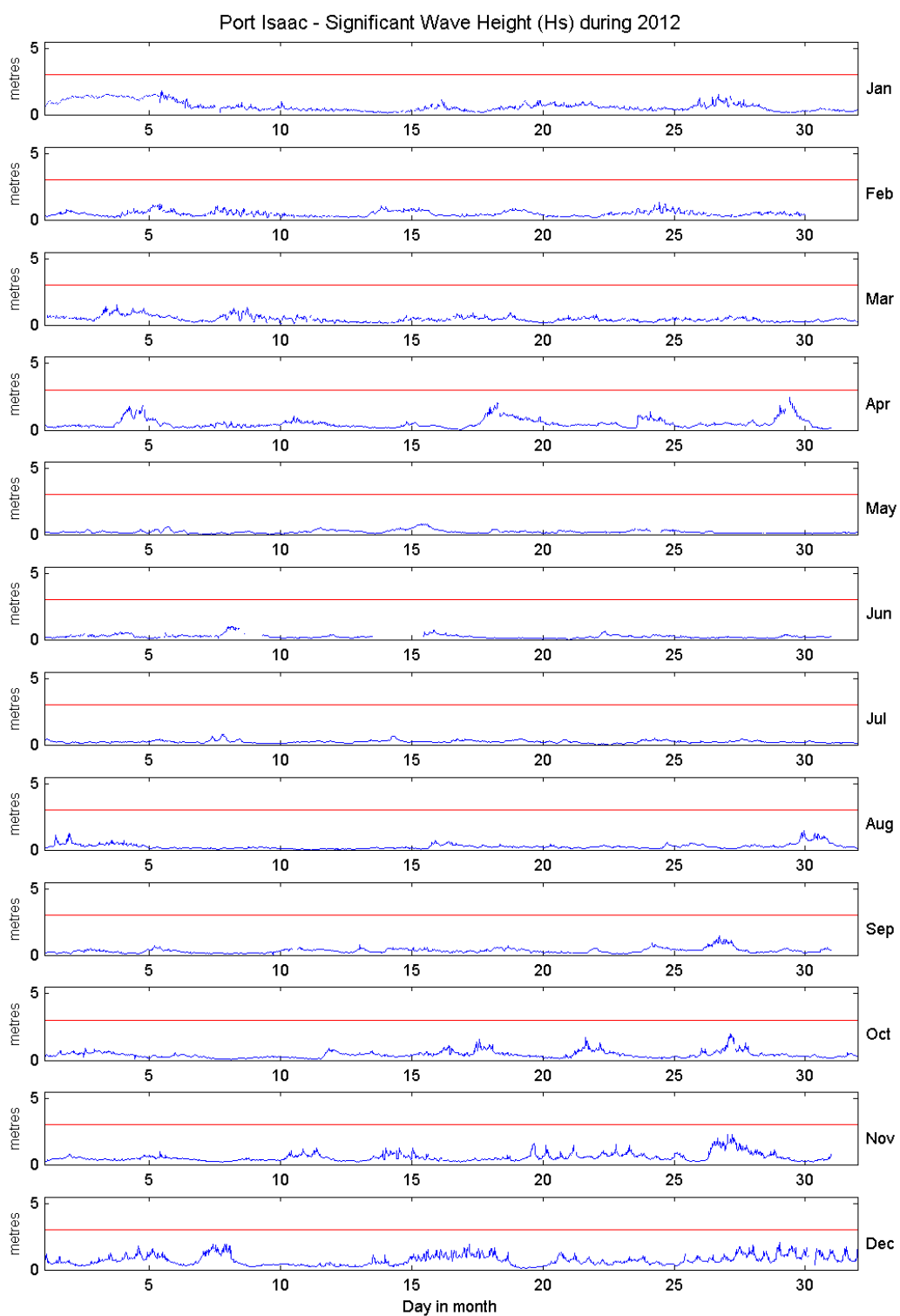
- Annual time series of H_s (red line is 3.0 m storm threshold)
- Percentage of occurrence of H_s , T_p and T_z for 2012
- Incidence of storm waves for 2012. Storm events are defined using the Peaks-over-Threshold method. The highest H_s of each storm event is shown
- Joint distribution of all parameters for all measured data, given as percentage of occurrence

General

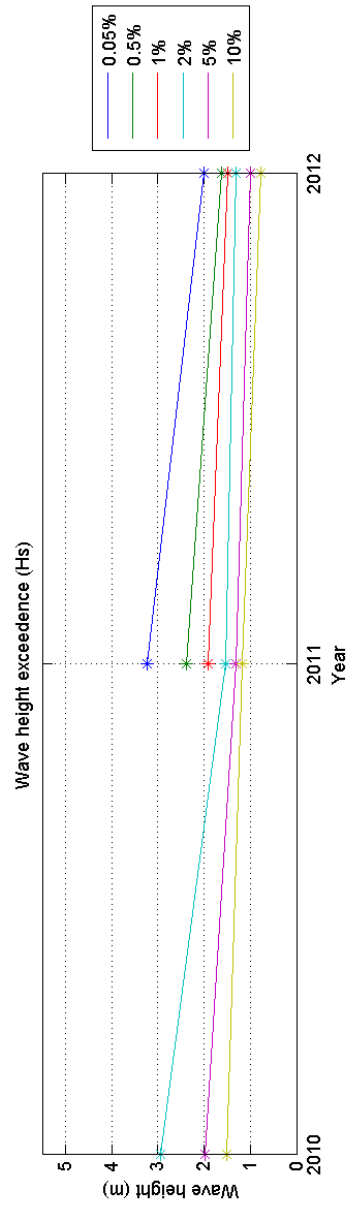
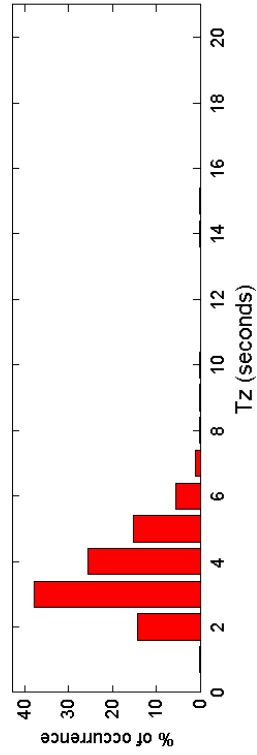
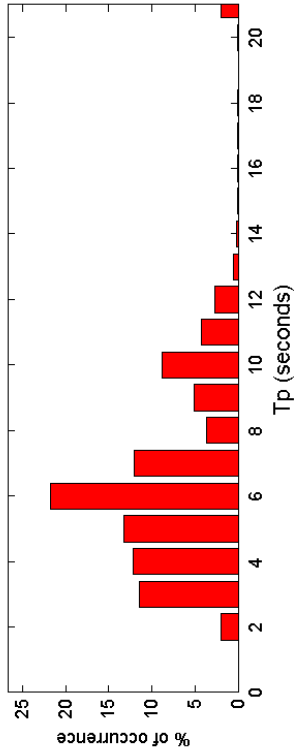
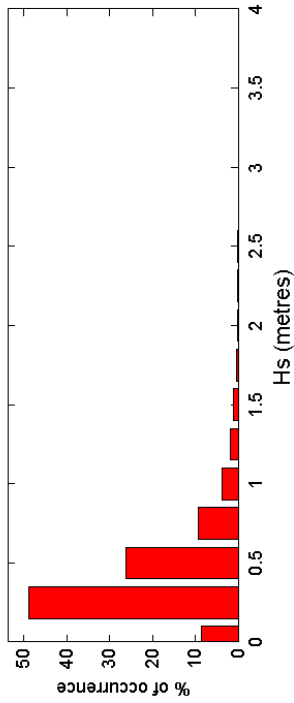
The Step Gauge was installed on 15 July 2010. The instrument is deployed primarily as a tide gauge, but measures waves also. Some reflection can occur from the breakwater on which the instrument is mounted.

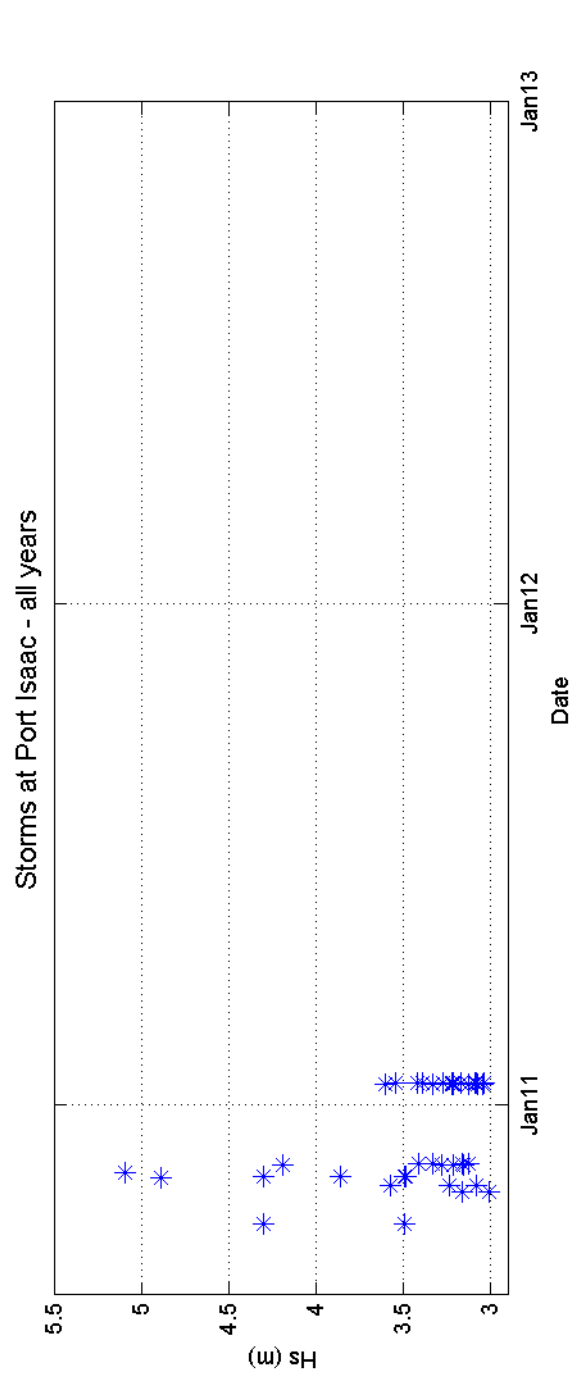
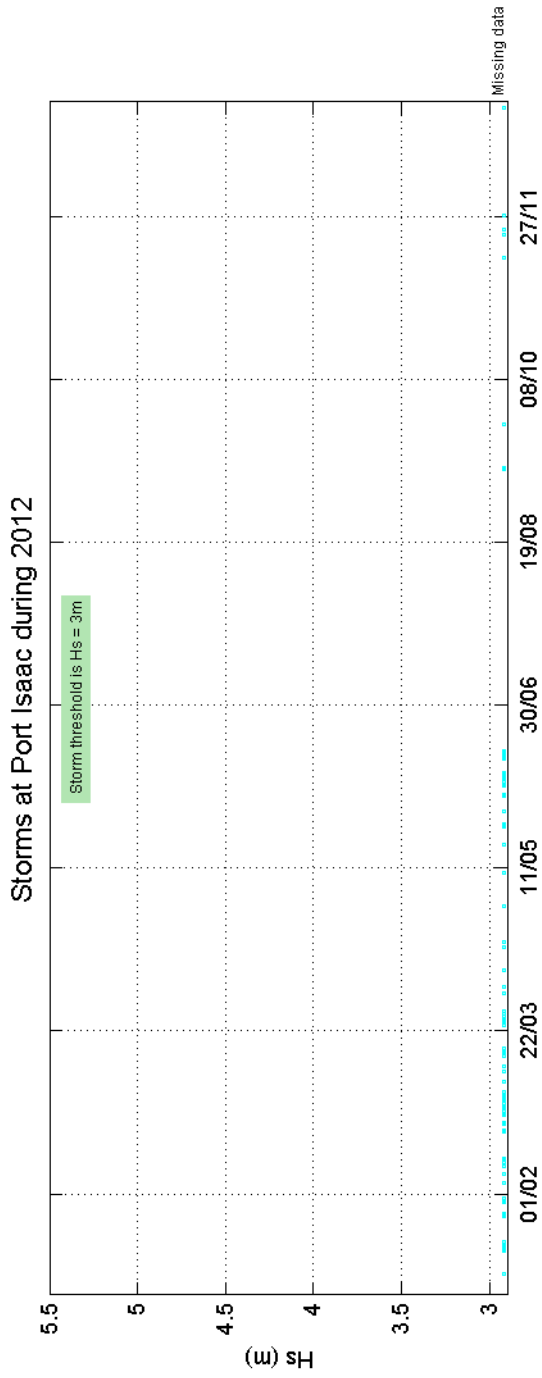
Acknowledgements

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 2012





Port Isaac 2010 to 2012 - Joint distribution (% of occurrence)

