

Lymington Step Gauge

Location

OS: 434874 E 93526 N

WGS84: Latitude: 50° 44' 25.18947" N Longitude: 01° 30' 25.60798"W

Water Depth

Approx. 3m

Instrument Type

Etrometa Step Gauge

Data Quality

C1 (%)	Sample interval
94	20 minutes

Monthly Means

All times GMT

Month	H _s	T _z	T _p	Direction	SST	No. of days
	(m)	(s)	(s)	(°)	(°C)	
January	0.23	3.1	3.0	-	-	29
February	0.16	2.9	3.0	-	-	29
March	0.17	3.1	3.0	-	-	28
April	0.15	2.9	3.0	-	-	30
May	0.12	2.6	2.9	-	-	29
June	0.13	2.6	2.9	-	-	29
July	0.15	2.5	2.9	-	-	31
August	0.21	2.7	2.8	-	-	25
September	0.15	2.7	2.9	-	-	28
October	0.16	3.0	3.0	-	-	31
November	0.14	3.0	3.0	-	-	26
December	0.13	3.1	3.0	-	-	30

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)
10-Mar-2008 11:40	0.91	3.3	3.1	-	1.80	HW	2.6	~0.74	~1.05

* Tidal information is obtained from the nearest recording tide gauge (the step gauge also measures tidal elevation). 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}
2003	-	-	-	-	0.44	0.34	03-Nov-2003 04:00	0.81
2004	1.03	0.79	0.70	0.62	0.49	0.36	23-Jun-2004 12:00	1.11
2005	1.15	0.91	0.81	0.71	0.53	0.37	03-Nov-2005 06:00	1.43
2006	1.27	1.00	0.95	0.86	0.72	0.58	03-Dec-2006 05:00	1.31
2007	1.13	0.78	0.64	0.52	0.41	0.32	18-Jan-2007 08:00	1.44
2008	0.79	0.6	0.54	0.49	0.41	0.32	10-Mar-2008 11:40	0.91

* i.e. 5 % of the H_s values measured in 2003 exceeded 0.44m

Distribution plots

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

- Percentage of occurrence of H_s , T_p , and T_z for 2008
- Percentage wave height exceedance (all recorded years) – note that the statistics for 2006 were based on measurements from July to December only
- Joint distribution of all parameters for 2008, given both as number of observations and as percentage of occurrence
- Cumulative joint distribution of parameters from start of records (percentage of occurrence only)
- 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 waves threshold)

General

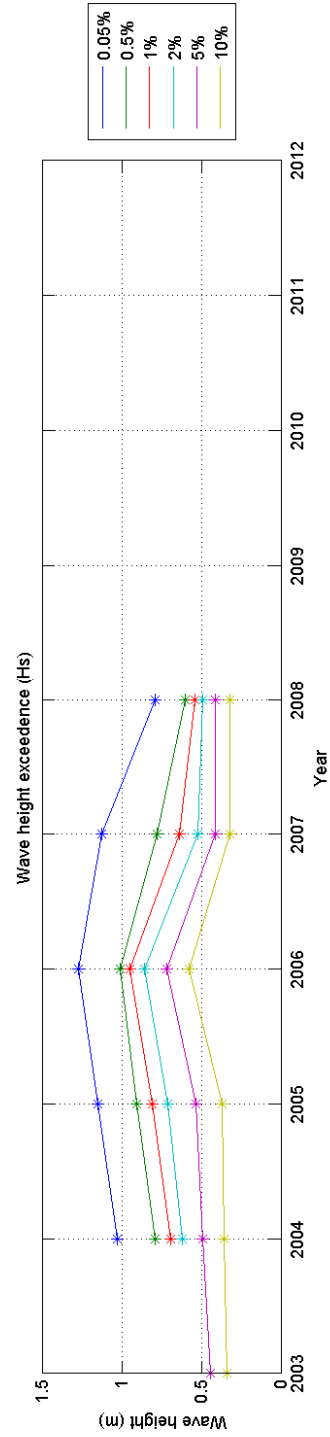
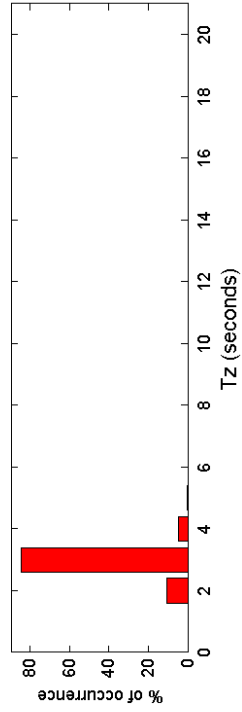
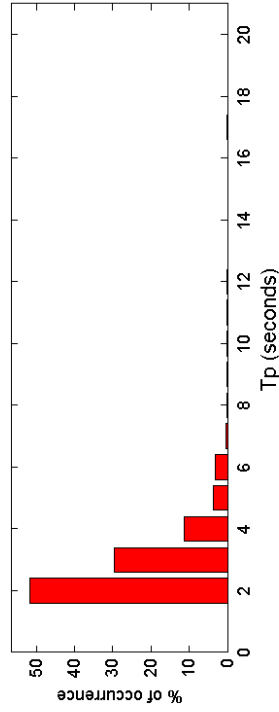
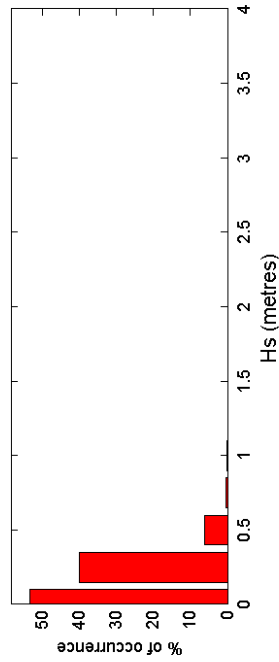
The Etrometa Step Gauge was installed on 19 April 2007, replacing the pressure transducer deployed in August 2003.

Acknowledgements

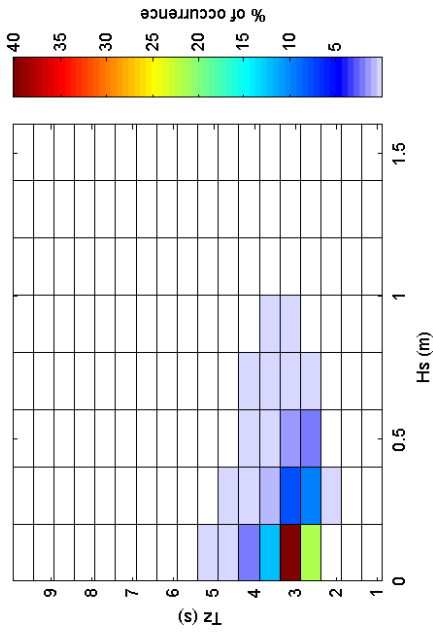
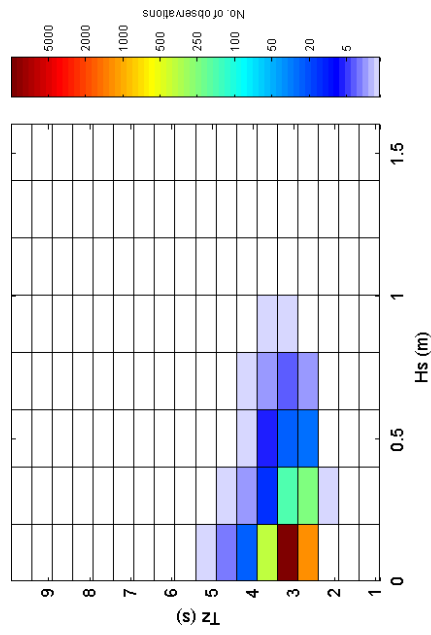
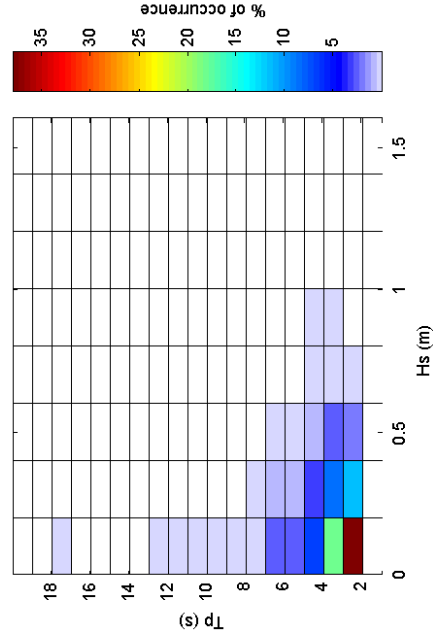
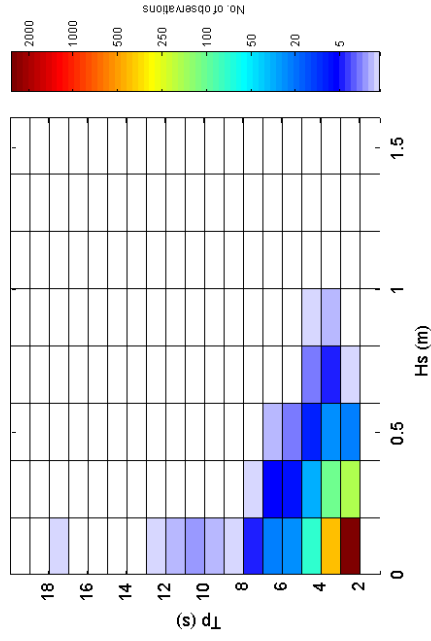
The step gauge is mounted on their Starting Platform by kind permission of Royal Lymington Yacht Club.

Tidal predictions were kindly supplied by the UK Hydrographic Office.

Lymington 2008



Lymington 2008 - Joint distribution



Lymington 2003 to 2008 - Joint distribution (% of occurrence)

