

## Deal Pier Tide Gauge

### Location

OS: 638145E 152700N  
 WGS84 Latitude: 51° 13.427' N Longitude: 001° 24.550' E

### Instrument

Rosemount WaveRadar Rex



### Site of Gauge

Front of Deal Pier, lower deck

### Benchmarks

Benchmark	OS Co-ordinates		Description
TGBM		3.893 OD	Top corner of NW leg of frame baseplate
Aux1	638119.760E 152660.266N	3.813 OD	Top of bolt

TGZ = 6.986m above Ordnance Datum Newlyn

TGZ = 10.386m above Admiralty Chart Datum

TGZ = 3.093m above TGBM

### Datum information

All data are to Ordnance Datum Newlyn. The height of Chart Datum relative to Ordnance Datum at Deal is -3.40m.

### Survey information

The site was last surveyed on 25 August 2005.

### Site characteristics

The Pier is on open coast, with no nearby estuaries. Spring tidal range is 5.4m. Some wave reflection from the Pier legs can occur.

### Service history

No re-calibration of the instrument is required.

### Data Quality

C1(%)	Sample interval	Missing days
98	10 minutes	27 Mar, 01-02 Apr, 13 Aug

**Residuals and Elevations**

Residuals and Elevations (OD and CD) for the whole year are shown in Figures 1 to 3 respectively. Tidal elevations are derived as the one minute average of the 4Hz readings. The time stamp is the start of the measuring burst.

**Statistics***All times GMT*

Month	Surge maxima		Surge minima	
	Value (m)	Date/Time	Value (m)	Date/Time
January	0.715	11-Jan-2006 17:10	-0.750	12-Jan-2006 19:30
February	0.856	08-Feb-2006 14:50	-0.488	24-Feb-2006 16:00
March	0.462	29-Mar-2006 09:40	-0.799	13-Mar-2006 10:50
April	0.427	07-Apr-2006 04:10	-0.462	22-Apr-2006 14:20
May	0.458	21-May-2006 03:20	-0.408	01-May-2006 13:40
June	0.290	21-Jun-2006 17:50	-0.339	06-Jun-2006 03:00
July	0.269	13-Jul-2006 23:40	-0.552	15-Jul-2006 12:00
August	0.465	11-Aug-2006 08:30	-0.281	08-Aug-2006 22:50
September	0.515	29-Sep-2006 00:20	-0.440	08-Sep-2006 09:20
October	1.596	31-Oct-2006 22:10	-0.392	27-Oct-2006 01:20
November	1.418	01-Nov-2006 00:30	-0.996	20-Nov-2006 10:00
December	0.775	08-Dec-2006 15:10	-0.872	11-Dec-2006 02:40

Month	Extreme maxima		Extreme minima	
	Elevation (OD)	Date/Time	Elevation (OD)	Date/Time
January	2.879	01-Jan-2006 12:00	-2.855	31-Jan-2006 07:40
February	3.327	28-Feb-2006 23:50	-2.965	01-Feb-2006 08:30
March	3.290	03-Mar-2006 01:10	-3.018	02-Mar-2006 08:10
April	2.988	28-Apr-2006 23:40	-2.883	28-Apr-2006 06:30
May	2.740	28-May-2006 11:50	-2.488	01-May-2006 08:30
June	2.782	14-Jun-2006 00:40	-2.385	15-Jun-2006 21:00
July	2.875	13-Jul-2006 12:30	-2.746	14-Jul-2006 20:50
August	3.258	12-Aug-2006 13:10	-2.712	11-Aug-2006 20:00
September	3.212	10-Sep-2006 12:40	-3.047	08-Sep-2006 19:00
October	3.581	07-Oct-2006 10:50	-2.883	08-Oct-2006 19:10
November	3.339	06-Nov-2006 11:10	-2.508	05-Nov-2006 18:00
December	3.039	04-Dec-2006 10:10	-2.750	03-Dec-2006 16:30

Month	Mean Sea Level	
	No. of days	MSL (OD)
January	31	0.023
February	28	0.150
March	30	0.033
April	28	0.086
May	31	0.115
June	30	0.073
July	31	0.099
August	30	0.219
September	30	0.239
October	31	0.306
November	30	0.320
December	31	0.136

10 Highest Values in 2006			
Surge		Extreme	
Value (m)	Date/Time	Elevation (OD) (surge component)	Date/Time
1.596	31-Oct-2006 22:10	3.581 (0.33)	07-Oct-2006 10:50
1.247	01-Nov-2006 08:40	3.339 (0.22)	06-Nov-2006 11:10
0.937	20-Nov-2006 21:10	3.327 (0.28)	28-Feb-2006 23:50
0.931	12-Nov-2006 09:10	3.290 (0.06)	03-Mar-2006 01:10
0.909	11-Nov-2006 12:50	3.289 (0.06)	31-Mar-2006 00:00
0.856	08-Feb-2006 14:50	3.286 (0.18)	05-Nov-2006 10:30
0.847	12-Nov-2006 14:20	3.258 (0.12)	12-Aug-2006 13:10
0.828	13-Nov-2006 21:20	3.236 (-0.10)	08-Oct-2006 11:30
0.824	11-Nov-2006 11:40	3.234 (0.03)	02-Mar-2006 00:30
0.813	20-Nov-2006 19:50	3.213 (0.10)	10-Oct-2006 12:50

Year	Annual surge maxima		Annual extreme maxima		Annual Mean Sea Level (OD)	Recovery rate (C1)
	Value (m)	Date	Elevation (OD) (surge component)	Date		
2006	1.596	31-Oct-2006 22:10	3.581 (0.333)	07-Oct-2006 10:50	0.151	98%
2007						
2008						

### General

The time series of 10 minute tidal elevations for one year is quality-checked, flagged and archived. The archived time series is continuous and monotonic, with missing data given as 9999. The missing data shown are days where the entire 24 hours of data are missing.

Monthly **extreme maxima/minima** are the maximum and minimum water levels from all measured data for that month. Monthly **surge maxima/minima** (residuals) are calculated in a similar manner from the time series of residuals. Residuals are derived as the measured tidal elevation minus the predicted tidal elevation.

The monthly Mean Sea Level is calculated as the average of all readings for the given month. The annual MSL is the average of all readings for the given year. These average values should not be used for any purpose without consideration of the recovery rate.

### Acknowledgements

Tidal predictions were produced using the TASK2000 software, kindly provided by the Permanent Service for Mean Sea Level (PSMSL), Proudman Oceanographic Laboratory.

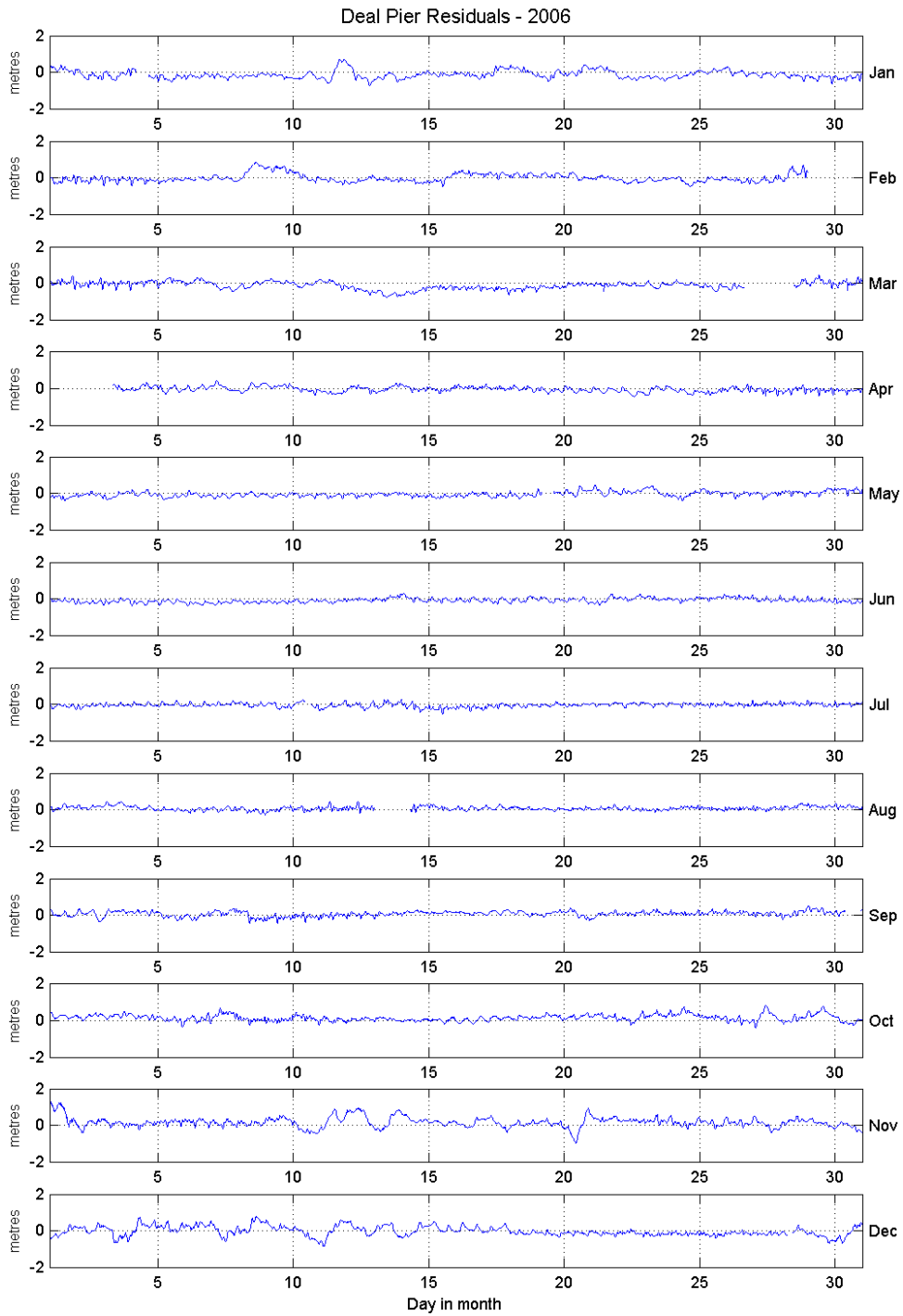


Figure 1 Residuals for 2006

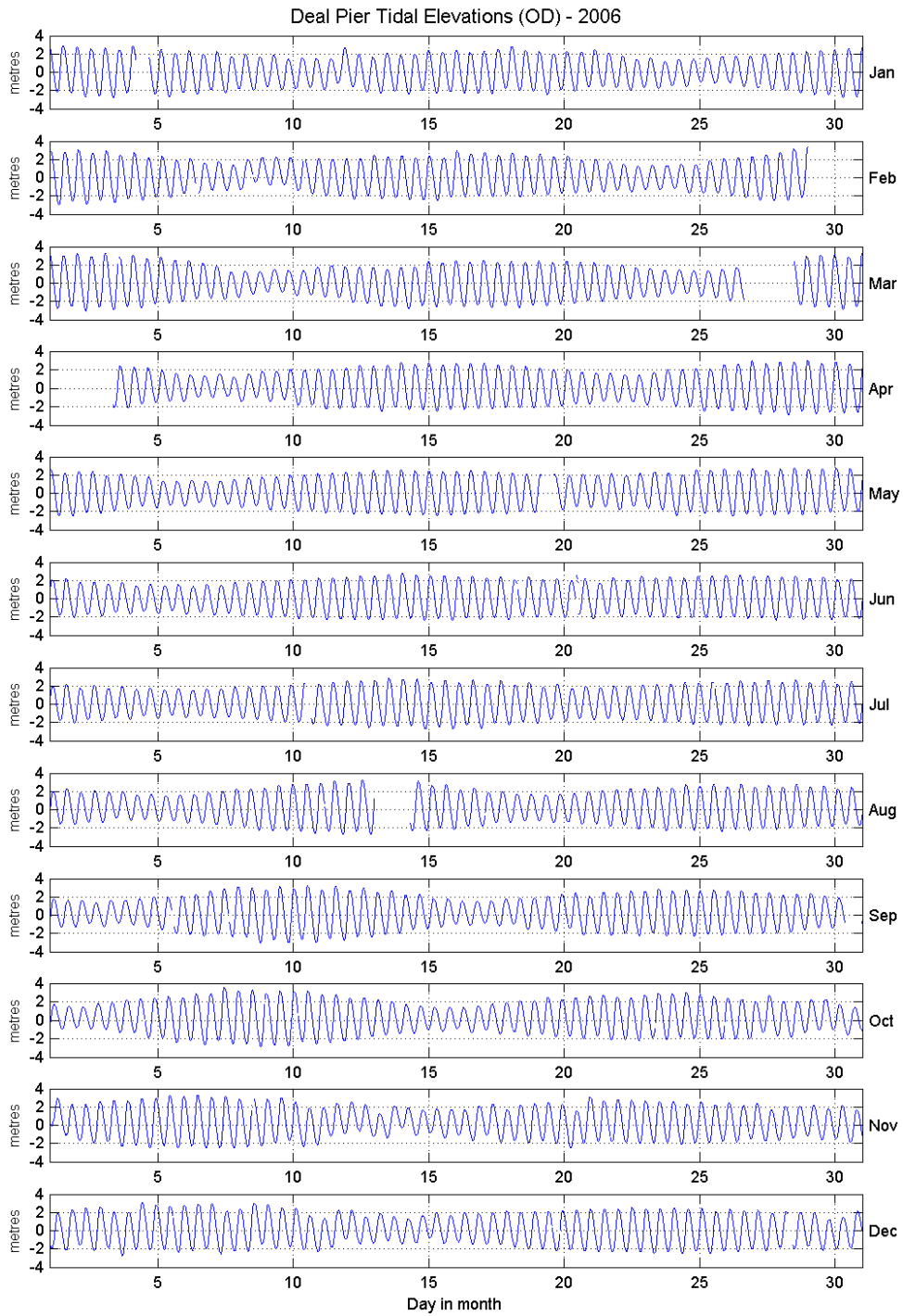


Figure 2 Tidal elevations relative to Ordnance Datum for 2006

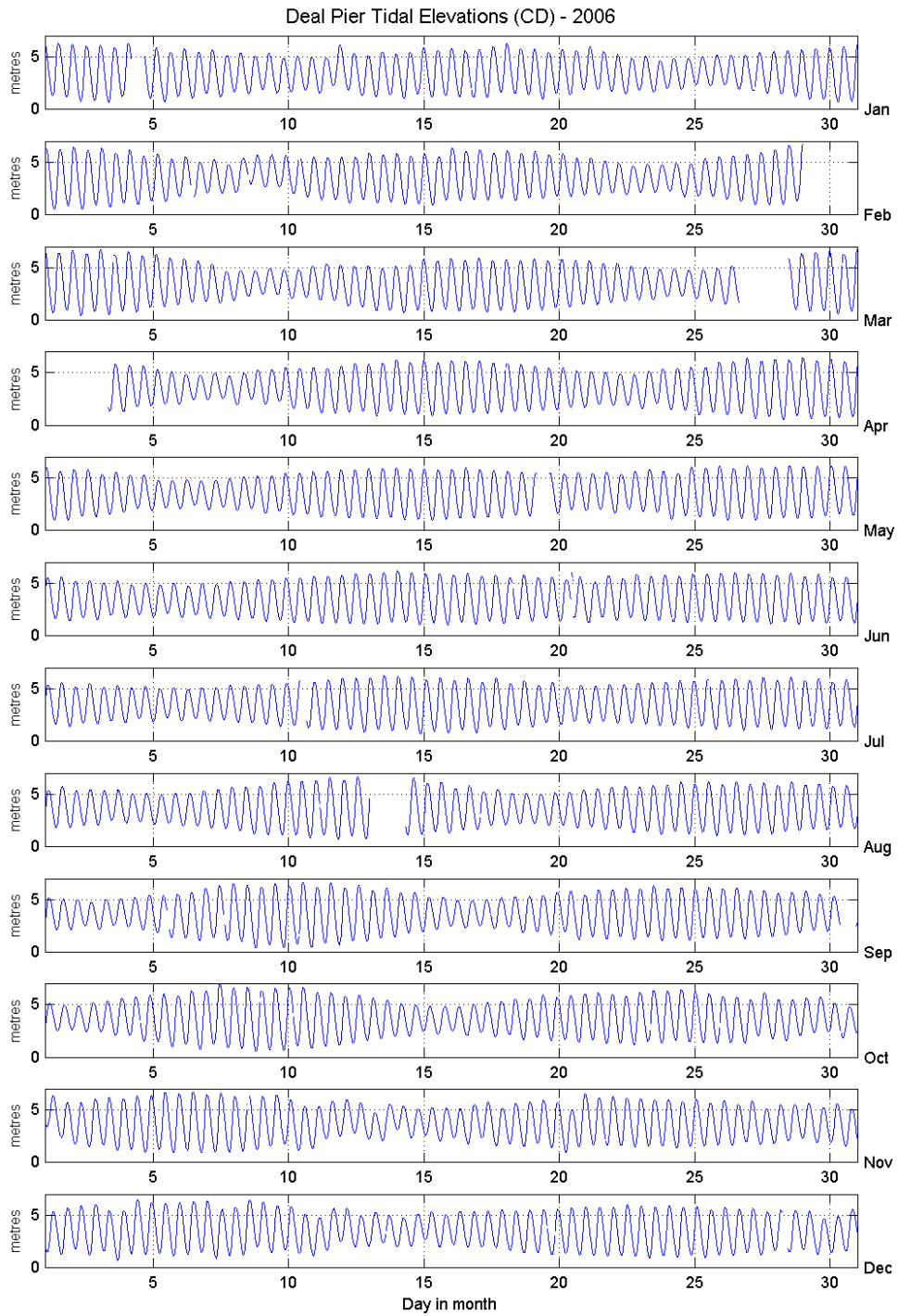


Figure 3 Tidal elevations relative to Chart Datum for 2006