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QUARTERLY REPORT ON DRIFTING BUOYS IN THE NORTH ATLANTIC

By Sue Holton
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14th October 2002

This report has not been published.
Permission to quote from it should be obtained from the
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1. INTRODUCTION

Drifting buoys operated by European countries, the United States, Canada and E.G.O.S. (European Group on Ocean Stations) provide valuable meteorological data in the North Atlantic Ocean. This report is a summary of the performance of these buoys giving information on the number of buoys operating, the accuracy of reported locations and data quality, timeliness and availability. It is compiled by looking at observations received in the Met. Office Meteorological Data Base (Met.D.B.) and by comparisons of observations with background fields from the Met. Office forecast model. Additional information on buoy operations and data quality is extracted from E.G.O.S. Technical Secretariat reports.

2. GENERAL PERFORMANCE

The following few sub-sections describe the general performance of the drifting buoys throughout the quarter.

(a) Location Accuracy

71 out of 73 of the buoys reporting, gave a '% of observations with acceptable positions' greater than 95% (58 out of 64 last quarter).

(b) Data timeliness

(see note 9 of section 6 for definition of terms.)

Timeliness	Last quarter.	This quarter
Very Good	25	26
Good	36	39
Satisfactory	3	8
Poor	0	0
Very poor	0	0
Total no. of buoys	64	73

c) Data availability

(see note 9 of section 6 for definition of terms.)

Availability	South of 50 deg N		North of 50 deg N	
	Previous Quarter	Present Quarter	Previous Quarter	Present Quarter
Very Good	3	1	13	8
Good	8	17	3	4
Satisfactory	18	22	12	12
Poor	4	7	3	2
Very Poor	0	0	0	0

The total number of buoy days in the quarter was 5189 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 4746) and the number of 'buoy hours' with at least one observation was 108814 (compared with 94625 last quarter). Thus, the mean number of hours per day, for days with at least one observation (averaged over all buoys operating in the area) was 20.97 (last quarter the figure was 19.94).

3. SUMMARY OF PRESSURE PERFORMANCE

(a) Buoy deployments, etc.

North of 50deg N

There were 23 buoys reporting at the beginning of the period. 20 buoys were operating at the end of the period. 3 buoys were deployed during the period (44611, 62712 and 65517). 6 buoys ceased reporting (44621, 44728, 44742, 44779, 62694 and 64549).

South of 50deg N

There were 33 buoys reporting at the beginning of the period. 43 buoys were reporting at the end of the period. 14 buoys were deployed during the period (41640, 44511, 44606, 44607, 44608, 44609, 44610, 62508, 62513, 62514, 62515, 62517, 62519 and 62573). 4 buoys ceased reporting (41625, 41657, 42533 and 44778).

(b) Data Quality - Pressure

Revised RMS Differences

The technique used to assess the quality of pressure data in this report is based on the Revised RMS differences between the observations and the background field from the Global Forecast Model (see note 8 in Explanatory Notes). For buoys south of 50°N the Revised RMS differences should be less than (or equal to) 2.0 hPa and for buoys north of 50°N they should be below (or equal to) 3.0 hPa. The buoys whose revised RMS differences were found to lie outside these limits have had their performances described as 'suspect' and are included in the section below. Examination of the time-series plots (see Annex B) indicates the performances of these buoys :-

41665 - Pressure from this buoy showed a positive bias until it stopped reporting pressure on 24/08/02.

44511 - Pressure from this buoy was erratic during the period it was reporting.

44517 - Pressure from this buoy showed a large scatter toward the end of the quarter.

62697 - Pressure from this buoy showed an large positive scatter towards the end of the period, until it ceased reporting pressure on 24/05/02.

Biases

17 buoys (excluding those mentioned in the previous section) showed pressure biases greater than 0.5 hPa (pressure biases are determined using the mean value for unflagged data from Annex A). Those buoys whose pressure data showed a bias of greater than 0.5 hPa have had their performance described as 'suspect'.

WMO No.	Buoy bias (hPa)	Period of reports
41640	1.7	14/07 – 30/09
41650	0.7	01/07 – 30/09
41657	-0.8	01/07 – 28/08
41658	-0.6	01/07 – 30/09
42533	-0.8	01/07 – 09/07
44549	-0.6	01/07 – 30/09
44606	0.6	12/08 – 30/09
44608	0.7	12/08 – 30/09
44609	-0.7	12/08 – 30/09
44610	-0.6	12/08 – 30/09
44728	-0.8	01/07 – 24/07
44770	-0.6	01/07 – 30/09
44775	-0.6	01/07 – 30/09
62503	-0.8	01/07 – 30/09
62506	-0.8	01/07 – 30/09
62512	-0.6	01/07 – 30/09
62513	0.6	23/09 – 30/09

Summary of Pressure Performance

Pressure Summary	Last Quarter	This Quarter
Acceptable	51	52
Suspect – RMS	3	4
Suspect – Bias	10	17
Total no. of buoys	64	73

4) Air Temperatures

The following table shows the mean and standard deviation of observation minus background differences for air temperatures.

(Note : The calculations below exclude the majority of gross errors. However, gross errors within +/-20 °C of the background value are included. Therefore, in some instances, the figures may be slightly misleading.)

Air Temperature				Air Temperature			
WMO No.	Mean	St.Dev	No. of Obs	WMO No.	Mean	St. Dev	No. of Obs
44779	0.62	0.74	220	62573	-2.25	9.68	15
64549	1.29	2.23	142	64553	0.09	0.89	2056

Summary

Only 4 buoys reported **air temperatures** this quarter. No significant **air temperature** bias was indicated. Buoy 62573 (9.68) showed a significant **standard deviation**.

(5) Winds

The following table shows the mean and standard deviation of observation minus background differences for wind speed and direction.

Wind Speed (kt)				Wind Direction (deg)		
WMO No.	Mean	St. Dev.	No. of Obs	Mean	St. Dev.	No. of Obs
41647	0.22	3.27	1994	9.79	32.09	1737
41648	-0.09	3.16	2077	55.89	51.45	1738
41652	3.49	6.11	2000	-2.80	38.09	1714
44601	1.00	3.42	2641	6.96	29.22	2223
44602	1.89	4.36	1918	9.83	35.80	1773
62502	1.53	3.67	1955	-5.18	32.57	1784
62573	-1.18	2.96	621	2.37	22.30	577
62711	1.39	3.86	3026	-0.47	30.17	2921

Summary

There was a significant **wind speed** bias (3.49) and a significant standard deviation (6.11) for buoy 41652.

There was also a significant **wind direction** bias (55.89) and a significant standard deviation (51.45) for buoy 41648.

6. EXPLANATORY NOTES:

1. Buoy owners are as follows,

CA	- Canada	P	- Portugal
F	- France	UK	- United Kingdom
D	- Germany	US	- United States
N	- Norway	IC	- Iceland
NL	- Netherlands	EG	- EGOS
IR	- Ireland		

2. Number of observations received is the number received at Bracknell in the Meteorological Data Base (Met.DB). If identical reports are received which have originated at different Collecting Centres, the earliest one received at Bracknell is stored in the Met.DB.

3. An observation with valid Time and Date is one that contains no coding errors in the Date/Time group.

4. An acceptable position for an observation is within a distance d of the last acceptable position where $d=vt$ and,

v = maximum drift speed = 1/4 knot
 t = time between observations.

5. The percentage of elements present is calculated from the total number of observations received.

6. The delay is (Time of Receipt at Bracknell) - (Time of Observation).

7. The mean number of observations per day is calculated from the total number of observations received divided by the number of days in the period. It therefore includes 'quasi-identical' observations, i.e. those made within a few minutes of one another. For this reason the mean number of hours per day with at least one observation and the % of hour periods without an observation has been included, where an 'hour period' is defined as the period from HH-30 to HH+29 minutes.

8. Mean (OB-BG) is the mean value of (Observation-Background) Pressure, where the Background is the 6-hour forecast from the Global Forecast Model. RMS (OB-BG) is the Root Mean Square value of (Observation- Background) Pressure differences.
Unflagged data are those data used in model analyses.

Flagged data (i.e. unused observations) are those observations of suspect quality and all observations reported by a buoy at a frequency greater than 5 times every 6 hours, with accepted observations being at

least one hour apart. Thus, those buoys which report most frequently have a higher percentage of flagged data.

The Mean calculated over Unflagged Data gives an indication of the instrument bias, since any gross errors have been excluded from the calculation.

The Revised RMS is based on all data except for the few that contain gross errors (as indicated on the time-series graphs - see Annex B).

9. The performance categories are defined in the table below.

Performance	Availability (mean no. of obs/day)	Timeliness (median delay in mins)
Very Good	> 35	< 60
Good	25 - 35	60 - 119
Satisfactory	15 - 24	120 - 179
Poor	5 - 14	180 - 239
Very Poor	< 5	> 240

(N.B. WMO requirements state the need for only 4 observations per day from marine stations).

The availability (mean no. of obs/day) is based on the number of observation reports received. Because observations may have been received both via CLS Argos and a Local User Terminal (LUT) such as Søndre Strømfjord, the overall number of reports received may not represent the number of observations actually available.

As most drifters are reporting hourly measurements, the mean number of observations should not normally exceed 24 which corresponds to category 'satisfactory'.

The pressure quality is assessed from the Revised RMS and the Mean for unflagged data).

Performance	Pressure Quality (in hPa)			
	North of 50 degN		South of 50 degN	
	RMS	MEAN	RMS	MEAN
Acceptable	≤ 3.0	≤ 0.5	≤ 2.0	≤ 0.5
Suspect	> 3.0	> 0.5	> 2.0	> 0.5



Annex A - TABLE OF STATISTICS

WMO No./Country	41523/US	41625	41640
Argos Id No.	28840		
Period Within Area	01/07 - 30/09	01/07 - 17/08	14/07 - 30/09
Mean Latitude	26.9	24.8	37.4
Mean Longitude	-45.3	-52.7	-63.3
No. of Obs Received	1270	273	2105
% of obs with Acceptable Position	100.0	100.0	98.7
% of Present Pressure	95.7	95.2	100.0
P. Tendency	0.0	93.4	100.0
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	96.0	96.7	100.0
Median delay (min)	35	67	122
Number of days	92	48	79
Mean No. of obs/day	13.8	5.7	26.6
No. of Hours with obs	1012	259	1727
Mean no. of hours/day with obs	11.0	5.4	21.9
% of hour periods without an ob	54.1	77.1	8.5
Mean (Ob-Bg)	0.4	0.4	1.7
RMS (Ob-Bg) unflagged data	0.7	0.6	1.9
Mean (Ob-Bg)	0.4	-0.3	1.7
RMS (Ob-Bg) all data	0.7	10.7	1.9
Revised RMS (Ob-Bg)	0.7	0.6	1.9
% of data flagged	35	2	17
Operating at end of period	YES	NO	YES
Performance Availability	Poor	Poor	Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Good	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	41647	41648	41650/US
Argos Id No.			7776
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	26.4	25.3	29.4
Mean Longitude	-70.8	-69.8	-66.9
No. of Obs Received	2104	2185	2019
% of obs with Acceptable Position	99.8	100.0	100.0
% of Present Pressure	99.9	100.0	100.0
P. Tendency	99.7	99.9	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	99.4/ 99.5	99.7/ 99.8	0.0/ 0.0
Sea-Surface Temp.	100.0	99.9	99.8
Median delay (min)	129	126	117
Number of days	92	92	92
Mean No. of obs/day	22.9	23.8	21.9
No. of Hours with obs	1891	1945	1975
Mean no. of hours/day with obs	20.6	21.1	21.5
% of hour periods without an ob	14.4	11.9	10.5
Mean (Ob-Bg)	0.1	0.3	0.7
RMS (Ob-Bg)	0.6	0.6	0.9
unflagged data			
Mean (Ob-Bg)	0.1	0.3	0.7
RMS (Ob-Bg)	0.8	0.6	1.1
all data			
Revised RMS (Ob-Bg)	0.8	0.6	1.1
% of data flagged	10	12	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Acceptable	Acceptable	Good
Comments			

Annex A - cont'd

WMO No./Country	41652/US	41657/US	41658/US
Argos Id No.	7897	27063	27064
Period Within Area	01/07 - 30/09	01/07 - 28/08	01/07 - 30/09
Mean Latitude	28.4	40.7	35.8
Mean Longitude	-68.5	-30.1	-51.1
No. of Obs Received	2264	710	2459
% of obs with Acceptable Position	100.0	99.9	99.9
% of Present Pressure	99.9	99.9	99.9
P. Tendency	99.8	99.4	99.9
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	99.5/ 99.7	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	0.0	99.9
Median delay (min)	129	113	126
Number of days	92	59	92
Mean No. of obs/day	24.6	12.0	26.7
No. of Hours with obs	1928	666	2009
Mean no. of hours/day with obs	21.0	11.3	21.8
% of hour periods without an ob	12.6	52.3	9.0
Mean (Ob-Bg)	0.3	-0.8	-0.6
RMS (Ob-Bg) unflagged data	0.7	1.0	0.9
Mean (Ob-Bg)	0.3	-0.8	-0.6
RMS (Ob-Bg) all data	0.7	1.0	0.9
Revised RMS (Ob-Bg)	0.7	1.0	0.9
% of data flagged	17	4	19
Operating at end of period	YES	NO	YES
Performance			
Availability	Acceptable	Poor	Good
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Acceptable	Good	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	41659/US	41665	41666
Argos Id No.	27065		
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	33.3	40.9	37.9
Mean Longitude	-32.0	-47.7	-51.7
No. of Obs Received	2062	2400	2455
% of obs with Acceptable Position	100.0	98.8	98.6
% of Present			
Pressure	99.9	65.1	100.0
P. Tendency	99.8	65.0	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	99.9	99.9
Median delay (min)	112	123	126
Number of days	92	92	92
Mean No. of obs/day	22.4	26.1	26.7
No. of Hours with obs	2000	2012	2013
Mean no. of hours/day with obs	21.7	21.9	21.9
% of hour periods without an ob	9.3	8.7	8.7
Mean (Ob-Bg)	0.4	3.7	0.0
RMS (Ob-Bg)	0.6	4.0	0.8
unflagged data			
Mean (Ob-Bg)	0.4	10.9	0.0
RMS (Ob-Bg)	0.6	11.7	0.8
all data			
Revised RMS (Ob-Bg)	0.6	11.1	0.8
% of data flagged	2	100	17
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Good	Acceptable	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	42533	44504	44511
Argos Id No.			
Period Within Area	01/07 - 09/07	01/07 - 30/09	20/08 - 30/09
Mean Latitude	40.1	47.3	45.0
Mean Longitude	-48.8	-42.0	-40.1
No. of Obs Received	243	1302	437
% of obs with Acceptable Position	100.0	98.8	97.9
% of Present Pressure	100.0	99.6	98.2
P. Tendency	99.6	99.2	94.7
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	100.0	81.5	98.4
Median delay (min)	126	56	65
Number of days	9	92	42
Mean No. of obs/day	27.0	14.2	10.4
No. of Hours with obs	188	1208	403
Mean no. of hours/day with obs	20.9	13.1	9.6
% of hour periods without an ob	7.4	45.2	59.5
Mean (Ob-Bg)	-0.8	-0.3	-0.2
RMS (Ob-Bg) unflagged data	1.0	0.8	1.1
Mean (Ob-Bg)	-0.9	-0.3	1.6
RMS (Ob-Bg) all data	1.0	0.8	8.0
Revised RMS (Ob-Bg)	1.0	0.8	6.9
% of data flagged	25	8	22
Operating at end of period	NO	YES	YES
Performance			
Availability	Good	Poor	Poor
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Acceptable	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44517/US	44549/UK	44550/UK
Argos Id No.	28867	22648	23703
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	43.1	56.2	55.4
Mean Longitude	-44.2	-22.8	-19.6
No. of Obs Received	1251	3892	3677
% of obs with Acceptable Position	95.0	96.4	97.0
% of Present Pressure	89.0	99.9	99.9
P. Tendency	88.9	99.9	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.9	99.8
Median delay (min)	65	47	51
Number of days	92	92	92
Mean No. of obs/day	13.6	42.3	40.0
No. of Hours with obs	1210	2156	2126
Mean no. of hours/day with obs	13.2	23.4	23.1
% of hour periods without an ob	45.0	2.3	3.7
Mean (Ob-Bg)	-0.2	-0.6	-0.3
RMS (Ob-Bg)	0.9	0.9	0.8
unflagged data			
Mean (Ob-Bg)	-0.9	-0.7	-0.3
RMS (Ob-Bg)	4.5	1.5	1.2
all data			
Revised RMS (Ob-Bg)	4.1	1.5	1.3
% of data flagged	27	45	42
Operating at end of period	YES	YES	YES
Performance			
Availability	Poor	Very Good	Very Good
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44601/F	44602/F	44606/UK
Argos Id No.	32791	32792	19893
Period Within Area	01/07 - 30/09	01/07 - 30/09	12/08 - 30/09
Mean Latitude	39.2	44.3	35.5
Mean Longitude	-38.8	-53.1	-50.5
No. of Obs Received	2712	1995	1216
% of obs with Acceptable Position	99.8	100.0	100.0
% of Present Pressure	99.9	37.4	99.9
P. Tendency	99.8	37.4	99.7
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	99.4/ 99.3	99.4/ 98.3	0.0/ 0.0
Sea-Surface Temp.	99.7	99.8	99.8
Median delay (min)	85	61.5	66
Number of days	92	92	50
Mean No. of obs/day	29.5	21.7	24.3
No. of Hours with obs	1988	1955	1168
Mean no. of hours/day with obs	21.6	21.3	23.4
% of hour periods without an ob	9.9	11.5	2.3
Mean (Ob-Bg)	-0.3	-0.5	0.6
RMS (Ob-Bg) unflagged data	0.6	0.9	0.9
Mean (Ob-Bg)	-0.3	-0.5	0.6
RMS (Ob-Bg) all data	0.6	2.4	0.9
Revised RMS (Ob-Bg)	0.7	0.9	0.9
% of data flagged	29	3	4
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44607/UK	44608/UK	44609/UK
Argos Id No.	19906	20211	20946
Period Within Area	12/08 - 30/09	12/08 - 30/09	12/08 - 30/09
Mean Latitude	40.8	42.0	49.5
Mean Longitude	-42.9	-42.4	-41.1
No. of Obs Received	1142	1175	1221
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	99.9	100.0
P. Tendency	99.7	99.7	99.7
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	20.9	99.8	99.8
Median delay (min)	61	60	56.5
Number of days	50	50	50
Mean No. of obs/day	22.8	23.5	24.4
No. of Hours with obs	1134	1164	1159
Mean no. of hours/day with obs	22.7	23.3	23.2
% of hour periods without an ob	3.5	2.8	3.3
Mean (Ob-Bg)	-0.3	0.7	-0.7
RMS (Ob-Bg)	0.8	1.0	1.1
unflagged data			
Mean (Ob-Bg)	-0.4	0.7	-0.6
RMS (Ob-Bg)	2.5	1.0	1.8
all data			
Revised RMS (Ob-Bg)	0.8	1.0	1.1
% of data flagged	0	1	5
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44610/UK	44611/UK	44616/UK
Argos Id No.	21131	13695	17149
Period Within Area	12/08 - 30/09	27/09 - 30/09	01/07 - 30/09
Mean Latitude	45.5	52.8	41.1
Mean Longitude	-49.5	-45.2	-19.6
No. of Obs Received	1170	90	2636
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	98.9	99.7
P. Tendency	99.9	98.9	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	100.0	100.0	99.7
Median delay (min)	58	50	71
Number of days	50	4	92
Mean No. of obs/day	23.4	22.5	28.7
No. of Hours with obs	1155	90	2119
Mean no. of hours/day with obs	23.1	22.5	23.0
% of hour periods without an ob	3.6	4.3	4.0
Mean (Ob-Bg)	-0.6	-0.2	-0.4
RMS (Ob-Bg) unflagged data	0.9	0.8	0.7
Mean (Ob-Bg)	-0.6	-0.2	-0.4
RMS (Ob-Bg) all data	0.9	0.8	0.8
Revised RMS (Ob-Bg)	0.9	0.8	0.8
% of data flagged	1	0	20
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44621/UK	44624/UK	44625/UK
Argos Id No.	17150	17151	17153
Period Within Area	01/07 - 17/07	01/07 - 30/09	01/07 - 30/09
Mean Latitude	61.2	40.7	34.2
Mean Longitude	-50.2	-18.9	-21.3
No. of Obs Received	659	2627	2210
% of obs with Acceptable Position	97.1	100.0	100.0
% of Present Pressure	100.0	99.9	99.8
P. Tendency	99.4	99.7	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.8	99.8
Median delay (min)	43	68	60
Number of days	17	92	92
Mean No. of obs/day	38.8	28.6	24.0
No. of Hours with obs	327	2143	2153
Mean no. of hours/day with obs	19.2	23.3	23.4
% of hour periods without an ob	16.8	2.9	2.4
Mean (Ob-Bg)	-0.4	0.1	0.0
RMS (Ob-Bg)	1.1	0.6	0.4
unflagged data			
Mean (Ob-Bg)	-0.4	0.1	0.0
RMS (Ob-Bg)	1.1	0.6	0.5
all data			
Revised RMS (Ob-Bg)	1.1	0.6	0.5
% of data flagged	50	19	3
Operating at end of period	NO	YES	YES
Performance			
Availability	Very Good	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44627/NL	44721/UK	44723/UK
Argos Id No.	13698	18702	21562
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	40.1	30.7	44.7
Mean Longitude	-24.3	-42.4	-23.8
No. of Obs Received	2357	2678	2132
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.8	99.9	99.9
P. Tendency	99.7	100.0	99.4
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	99.9	99.6
Median delay (min)	111	69	60
Number of days	92	92	92
Mean No. of obs/day	25.6	29.1	23.2
No. of Hours with obs	1915	2160	2090
Mean no. of hours/day with obs	20.8	23.5	22.7
% of hour periods without an ob	13.2	2.2	5.3
Mean (Ob-Bg)	-0.4	-0.2	0.3
RMS (Ob-Bg) unflagged data	0.7	0.5	0.7
Mean (Ob-Bg)	-0.4	-0.2	0.3
RMS (Ob-Bg) all data	0.7	0.5	0.8
Revised RMS (Ob-Bg)	0.7	0.5	0.8
% of data flagged	22	21	2
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44726/UK	44728/UK	44730/UK
Argos Id No.	23460	23553	23856
Period Within Area	01/07 - 30/09	01/07 - 24/07	01/07 - 30/09
Mean Latitude	58.1	50.8	58.9
Mean Longitude	-42.6	-22.5	-19.3
No. of Obs Received	4039	739	4286
% of obs with Acceptable Position	96.2	97.7	96.8
% of Present Pressure	100.0	100.0	99.9
P. Tendency	99.9	98.2	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	0.0	99.9
Median delay (min)	38	50	49
Number of days	92	24	92
Mean No. of obs/day	43.9	30.8	46.6
No. of Hours with obs	2172	452	2149
Mean no. of hours/day with obs	23.6	18.8	23.4
% of hour periods without an ob	1.6	19.7	2.7
Mean (Ob-Bg)	0.0	-0.8	-0.1
RMS (Ob-Bg) unflagged data	0.9	1.1	0.7
Mean (Ob-Bg)	0.0	-0.7	-0.1
RMS (Ob-Bg) all data	3.1	1.0	3.0
Revised RMS (Ob-Bg)	1.7	1.1	1.7
% of data flagged	46	39	50
Operating at end of period	YES	NO	YES
Performance			
Availability	Very Good	Good	Very Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44742/UK	44743/D	44763/UK
Argos Id No.	21667	4270	17574
Period Within Area	01/07 - 30/08	01/07 - 30/09	01/07 - 30/09
Mean Latitude	60.0	62.0	44.1
Mean Longitude	-11.4	-20.7	-25.0
No. of Obs Received	2404	3298	2503
% of obs with Acceptable Position	95.8	99.9	100.0
% of Present Pressure	99.8	97.1	99.8
P. Tendency	99.7	95.2	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	0.0	99.8
Median delay (min)	45.5	15	66
Number of days	61	92	92
Mean No. of obs/day	39.4	35.8	27.2
No. of Hours with obs	1368	1625	2127
Mean no. of hours/day with obs	22.4	17.7	23.1
% of hour periods without an ob	5.2	26.3	3.7
Mean (Ob-Bg)	-0.2	-0.1	0.0
RMS (Ob-Bg)	1.0	0.9	0.6
unflagged data			
Mean (Ob-Bg)	-0.4	-0.1	0.0
RMS (Ob-Bg)	2.3	3.4	1.0
all data			
Revised RMS (Ob-Bg)	2.1	1.6	0.7
% of data flagged	45	61	15
Operating at end of period	NO	YES	YES
Performance			
Availability	Very Good	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44764/UK	44767/UK	44769/UK
Argos Id No.	23913	16977	13694
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	51.7	52.1	55.1
Mean Longitude	-32.0	-35.5	-38.6
No. of Obs Received	2143	2119	2152
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	99.8	99.7
P. Tendency	99.6	99.8	99.7
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	99.8	99.9
Median delay (min)	55.5	90.5	47
Number of days	92	92	92
Mean No. of obs/day	23.3	23.0	23.4
No. of Hours with obs	2089	1946	2102
Mean no. of hours/day with obs	22.7	21.2	22.8
% of hour periods without an ob	5.4	11.8	4.8
Mean (Ob-Bg)	-0.4	0.0	-0.1
RMS (Ob-Bg) unflagged data	0.9	0.8	0.8
Mean (Ob-Bg)	-0.4	0.0	-0.1
RMS (Ob-Bg) all data	1.0	1.1	1.7
Revised RMS (Ob-Bg)	1.0	1.1	1.7
% of data flagged	2	10	3
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44770/UK	44772/UK	44773/UK
Argos Id No.	16976	16978	21468
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	53.6	58.1	45.0
Mean Longitude	-40.7	-37.3	-31.7
No. of Obs Received	2041	2038	2125
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.9	99.9	99.8
P. Tendency	99.6	99.7	99.4
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	92.8	100.0	99.7
Median delay (min)	77	80	67
Number of days	92	92	92
Mean No. of obs/day	22.2	22.2	23.1
No. of Hours with obs	2006	2005	2082
Mean no. of hours/day with obs	21.8	21.8	22.6
% of hour periods without an ob	9.1	9.2	5.7
Mean (Ob-Bg)	-0.6	-0.3	0.4
RMS (Ob-Bg) unflagged data	1.0	0.8	0.8
Mean (Ob-Bg)	-0.5	-0.2	0.5
RMS (Ob-Bg) all data	1.9	1.4	1.0
Revised RMS (Ob-Bg)	1.6	1.4	1.0
% of data flagged	2	2	2
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44775/UK	44778/UK	44779/D
Argos Id No.	25372	25370	6669
Period Within Area	01/07 - 30/09	01/07 - 20/08	01/07 - 23/07
Mean Latitude	30.8	49.0	55.4
Mean Longitude	-44.5	-2.5	-9.7
No. of Obs Received	2208	1387	254
% of obs with Acceptable Position	100.0	98.1	100.0
% of Present Pressure	100.0	99.9	89.8
P. Tendency	100.0	99.6	83.9
Air Temperature	0.0	0.0	87.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	100.0	99.5	86.2
Median delay (min)	64	65	18
Number of days	92	51	23
Mean No. of obs/day	24.0	27.2	11.0
No. of Hours with obs	2164	971	180
Mean no. of hours/day with obs	23.5	19.0	7.8
% of hour periods without an ob	2.0	20.1	66.4
Mean (Ob-Bg)	-0.6	-0.5	0.0
RMS (Ob-Bg) unflagged data	0.8	0.8	0.6
Mean (Ob-Bg)	-0.6	-0.4	0.1
RMS (Ob-Bg) all data	0.8	0.8	0.6
Revised RMS (Ob-Bg)	0.8	0.8	0.6
% of data flagged	2	30	38
Operating at end of period	YES	NO	NO
Performance			
Availability	Acceptable	Good	Poor
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44780/IR	62501/F	62502/F
Argos Id No.	1153	7139	28700
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	55.3	32.5	48.8
Mean Longitude	-25.4	-39.6	-20.8
No. of Obs Received	1801	2173	1999
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	86.3	99.9	99.6
P. Tendency	79.5	99.9	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	99.4/ 99.0
Sea-Surface Temp.	0.0	99.9	99.6
Median delay (min)	26	72	62
Number of days	92	92	92
Mean No. of obs/day	19.6	23.6	21.7
No. of Hours with obs	1333	2125	1956
Mean no. of hours/day with obs	14.5	23.1	21.3
% of hour periods without an ob	39.5	3.8	11.4
Mean (Ob-Bg)	-0.1	0.2	-0.3
RMS (Ob-Bg) unflagged data	0.7	0.5	0.7
Mean (Ob-Bg)	-0.1	0.2	-0.3
RMS (Ob-Bg) all data	0.8	0.5	0.8
Revised RMS (Ob-Bg)	0.8	0.5	0.8
% of data flagged	34	2	2
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	62503/F	62504/F	62505/F
Argos Id No.	17926	17928	17188
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	26.3	35.1	54.7
Mean Longitude	-36.7	-17.6	-33.2
No. of Obs Received	2941	2050	2690
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.9	99.5	99.9
P. Tendency	99.8	99.6	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	99.8	99.9
Median delay (min)	77	70	67
Number of days	92	92	92
Mean No. of obs/day	32.0	22.3	29.2
No. of Hours with obs	2165	2008	2106
Mean no. of hours/day with obs	23.5	21.8	22.9
% of hour periods without an ob	1.9	9.1	4.6
Mean (Ob-Bg)	-0.8	-0.1	-0.2
RMS (Ob-Bg) unflagged data	0.9	0.5	0.8
Mean (Ob-Bg)	-0.8	-0.1	-0.2
RMS (Ob-Bg) all data	1.0	0.6	1.3
Revised RMS (Ob-Bg)	1.0	0.6	1.1
% of data flagged	27	2	24
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Acceptable	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62506/F	62507/F	62508/F
Argos Id No.	17189	28695	32789
Period Within Area	01/07 - 30/09	01/07 - 30/09	07/07 - 30/09
Mean Latitude	45.7	51.1	43.6
Mean Longitude	-15.5	-17.6	-15.9
No. of Obs Received	2442	2115	1978
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.5	99.8	99.7
P. Tendency	99.5	99.6	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.4	99.7	99.8
Median delay (min)	75	58.5	62
Number of days	92	92	86
Mean No. of obs/day	26.5	23.0	23.0
No. of Hours with obs	2067	2068	1949
Mean no. of hours/day with obs	22.5	22.5	22.7
% of hour periods without an ob	6.4	6.3	4.7
Mean (Ob-Bg)	-0.8	-0.5	-0.1
RMS (Ob-Bg) unflagged data	1.0	0.8	0.6
Mean (Ob-Bg)	-0.7	-0.5	-0.1
RMS (Ob-Bg) all data	1.0	1.4	1.6
Revised RMS (Ob-Bg)	1.0	0.9	0.7
% of data flagged	16	2	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Acceptable	Acceptable
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62509/F	62512/F	62513
Argos Id No.	32790	28692	
Period Within Area	01/07 - 30/09	01/07 - 30/09	23/09 - 30/09
Mean Latitude	52.2	41.1	37.3
Mean Longitude	-21.6	-14.8	-31.4
No. of Obs Received	2093	2808	184
% of obs with Acceptable Position	100.0	95.0	100.0
% of Present Pressure	99.7	99.8	100.0
P. Tendency	99.1	99.8	100.0
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.7	99.9	100.0
Median delay (min)	60	63	57
Number of days	92	92	8
Mean No. of obs/day	22.8	30.5	23.0
No. of Hours with obs	2062	2069	184
Mean no. of hours/day with obs	22.4	22.5	23.0
% of hour periods without an ob	6.6	6.3	4.2
Mean (Ob-Bg)	0.5	-0.6	0.6
RMS (Ob-Bg)	0.9	1.0	1.0
unflagged data			
Mean (Ob-Bg)	0.6	-0.6	0.6
RMS (Ob-Bg)	1.2	1.1	1.1
all data			
Revised RMS (Ob-Bg)	1.2	1.1	1.1
% of data flagged	1	26	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Acceptable
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	62514	62515	62517
Argos Id No.			
Period Within Area	23/09 - 30/09	15/09 - 30/09	11/09 - 30/09
Mean Latitude	34.6	34.9	32.9
Mean Longitude	-35.2	-28.2	-26.0
No. of Obs Received	326	356	441
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	99.7	99.8
P. Tendency	100.0	100.0	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	100.0	100.0	100.0
Median delay (min)	89	60	70
Number of days	8	16	20
Mean No. of obs/day	40.8	22.3	22.0
No. of Hours with obs	187	355	437
Mean no. of hours/day with obs	23.4	22.2	21.8
% of hour periods without an ob	2.6	1.7	4.6
Mean (Ob-Bg)	0.0	0.0	-0.2
RMS (Ob-Bg) unflagged data	0.5	0.5	0.5
Mean (Ob-Bg)	0.0	0.0	-0.2
RMS (Ob-Bg) all data	0.5	0.6	0.5
Revised RMS (Ob-Bg)	0.5	0.6	0.5
% of data flagged	46	1	0
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62519	62573	62694/UK
Argos Id No.			17577
Period Within Area	29/09 - 30/09	10/09 - 30/09	01/07 - 18/07
Mean Latitude	43.5	46.0	57.1
Mean Longitude	-11.9	-6.5	-21.0
No. of Obs Received	18	677	407
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	99.6	99.8
P. Tendency	100.0	98.5	99.5
Air Temperature	0.0	2.5	0.0
Wind Speed/Dir	0.0/ 0.0	96.9/ 98.5	0.0/ 0.0
Sea-Surface Temp.	100.0	97.8	0.0
Median delay (min)	87.5	102	52
Number of days	2	21	18
Mean No. of obs/day	9.0	32.2	22.6
No. of Hours with obs	18	448	394
Mean no. of hours/day with obs	9.0	21.3	21.9
% of hour periods without an ob	33.3	8.8	7.5
Mean (Ob-Bg)	0.0	0.1	-0.3
RMS (Ob-Bg) unflagged data	0.6	0.7	0.7
Mean (Ob-Bg)	0.0	-0.1	-0.3
RMS (Ob-Bg) all data	0.6	5.3	0.8
Revised RMS (Ob-Bg)	0.6	0.9	0.8
% of data flagged	0	32	3
Operating at end of period	YES	YES	NO
Performance			
Availability	Poor	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	62696/UK	62697/UK	62711/UK
Argos Id No.	18222	19894	21375
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	54.6	49.3	61.2
Mean Longitude	-19.5	-11.0	-31.7
No. of Obs Received	3610	2722	3127
% of obs with Acceptable Position	96.1	97.4	100.0
% of Present Pressure	99.8	66.3	99.9
P. Tendency	99.6	65.8	99.6
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	99.7/ 99.4
Sea-Surface Temp.	99.8	99.8	99.7
Median delay (min)	52	55	87
Number of days	92	92	92
Mean No. of obs/day	39.2	29.6	34.0
No. of Hours with obs	2136	2099	2090
Mean no. of hours/day with obs	23.2	22.8	22.7
% of hour periods without an ob	3.3	4.9	5.3
Mean (Ob-Bg)	-0.4	-0.3	0.1
RMS (Ob-Bg)	0.8	1.0	0.8
unflagged data			
Mean (Ob-Bg)	-0.4	4.2	0.1
RMS (Ob-Bg)	3.5	10.7	1.9
all data			
Revised RMS (Ob-Bg)	1.0	9.8	1.6
% of data flagged	41	51	35
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Good	Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Very Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62712/UK	64549/UK	64553/IR
Argos Id No.	21512	3678	3038
Period Within Area	27/08 - 30/09	01/07 - 23/07	01/07 - 30/09
Mean Latitude	56.8	58.4	58.1
Mean Longitude	-34.7	-6.7	-21.6
No. of Obs Received	813	174	2317
% of obs with Acceptable Position	100.0	97.7	100.0
% of Present Pressure	99.9	26.4	90.7
P. Tendency	100.0	13.2	85.3
Air Temperature	0.0	82.8	89.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	92.5	63.9
Median delay (min)	47	10	24
Number of days	35	23	92
Mean No. of obs/day	23.2	7.6	25.2
No. of Hours with obs	802	141	1541
Mean no. of hours/day with obs	22.9	6.1	16.8
% of hour periods without an ob	4.0	73.4	30.0
Mean (Ob-Bg)	0.2	-0.4	-0.3
RMS (Ob-Bg) unflagged data	0.8	1.3	0.7
Mean (Ob-Bg)	0.3	-0.5	-0.3
RMS (Ob-Bg) all data	1.6	1.8	1.7
Revised RMS (Ob-Bg)	1.6	1.8	1.6
% of data flagged	2	44	41
Operating at end of period	YES	NO	YES
Performance			
Availability	Acceptable	Poor	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

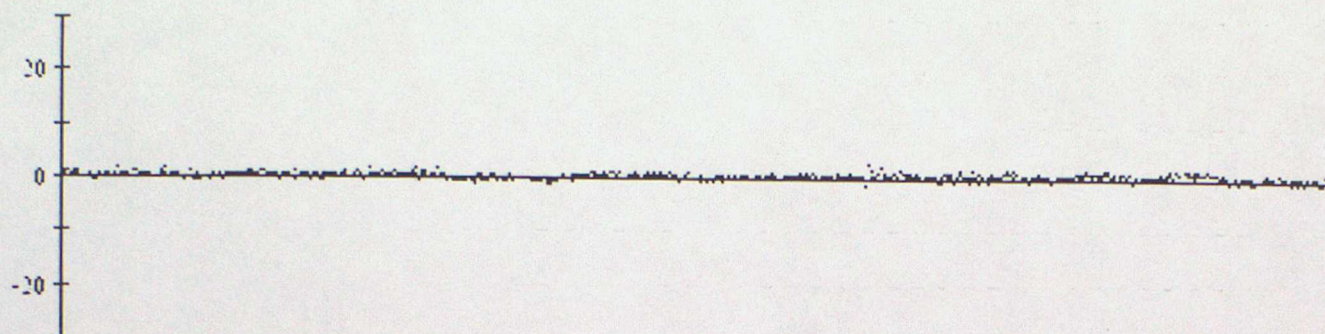
Annex A - cont'd

WMO No./Country	65517/UK		
Argos Id No.	21570		
Period Within Area	09/08 - 30/09		
Mean Latitude	59.5		
Mean Longitude	-41.8		
No. of Obs Received	1199		
% of obs with Acceptable Position	100.0		
% of Present Pressure	99.9		
P. Tendency	99.7		
Air Temperature	0.0		
Wind Speed/Dir	0.0/ 0.0		
Sea-Surface Temp.	100.0		
Median delay (min)	50		
Number of days	53		
Mean No. of obs/day	22.6		
No. of Hours with obs	1188		
Mean no. of hours/day with obs	22.4		
% of hour periods without an ob	5.9		
Mean (Ob-Bg)	0.5		
RMS (Ob-Bg)	1.1		
unflagged data			
Mean (Ob-Bg)	0.5		
RMS (Ob-Bg)	1.8		
all data			
Revised RMS (Ob-Bg)	1.8		
% of data flagged	2		
Operating at end of period	YES		
Performance			
Availability	Acceptable		
Pressure Quality	Acceptable		
Timeliness	Very Good		
Comments			

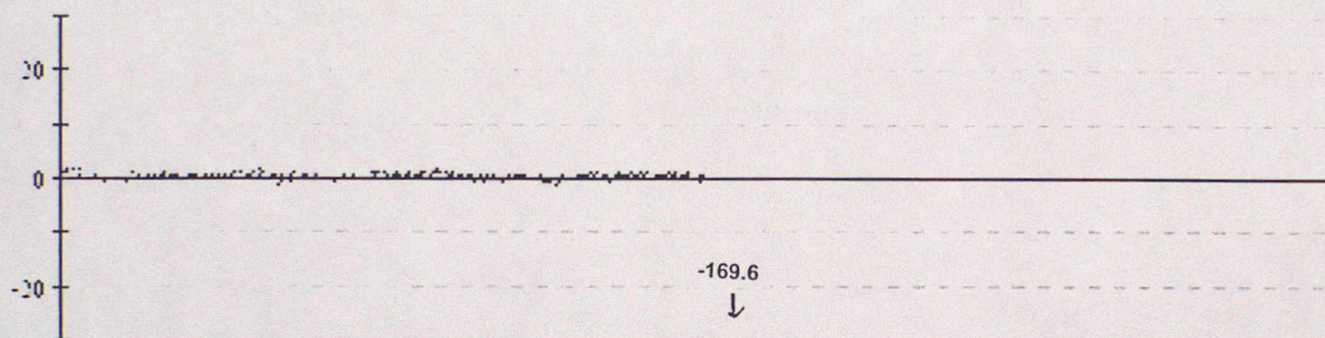
ANNEX B - TIME SERIES PLOTS OF PRESSURE

Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

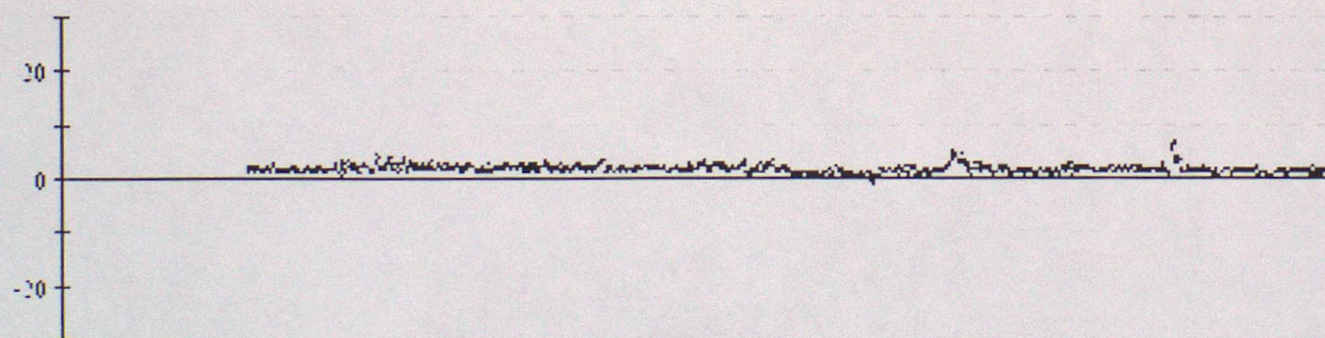
41523 Pressure



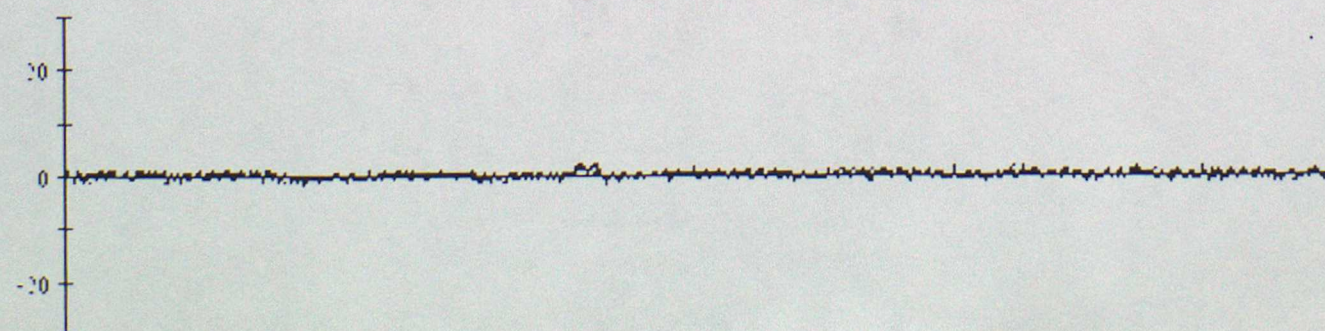
41625 Pressure



41640 Pressure

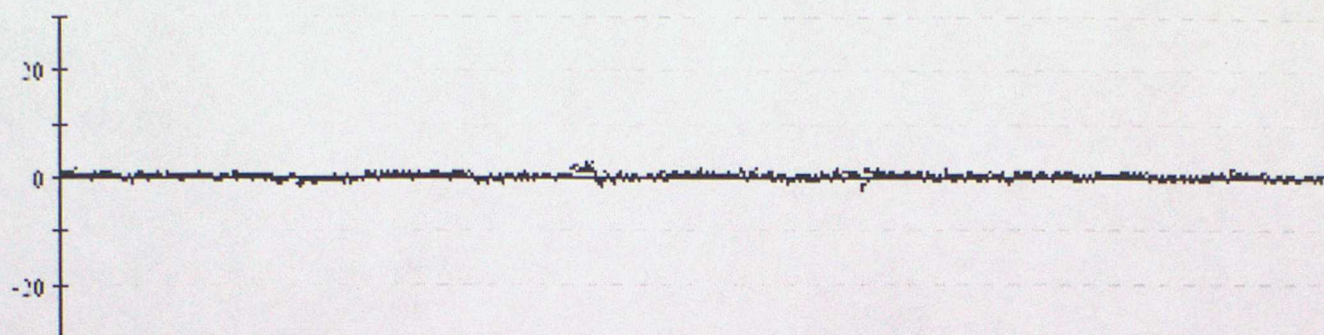


41647 Pressure

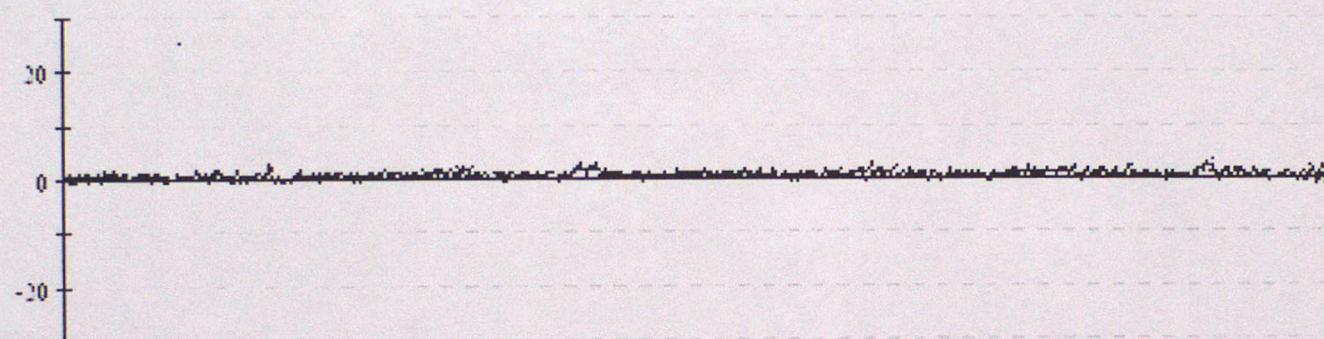


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

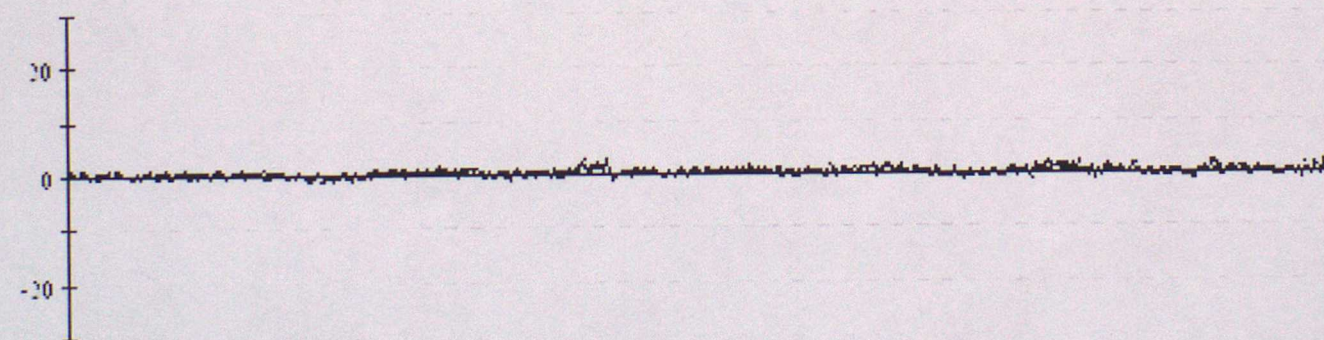
41648 Pressure



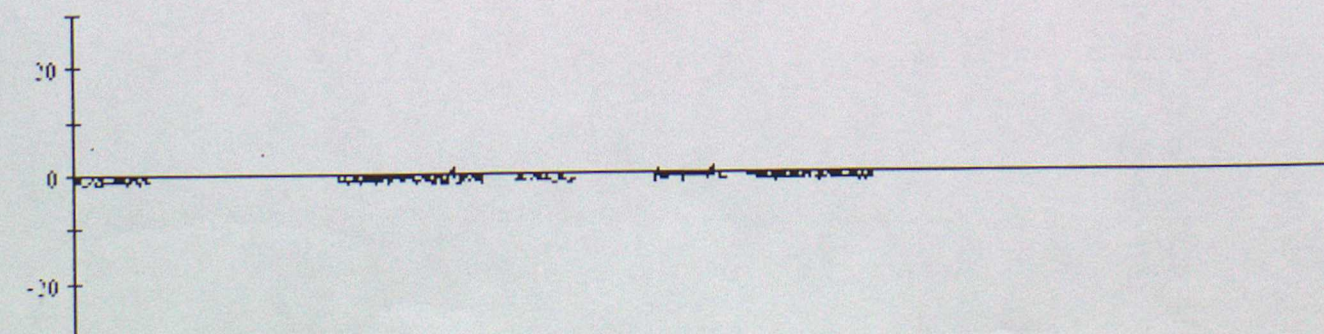
41650 Pressure



41652 Pressure

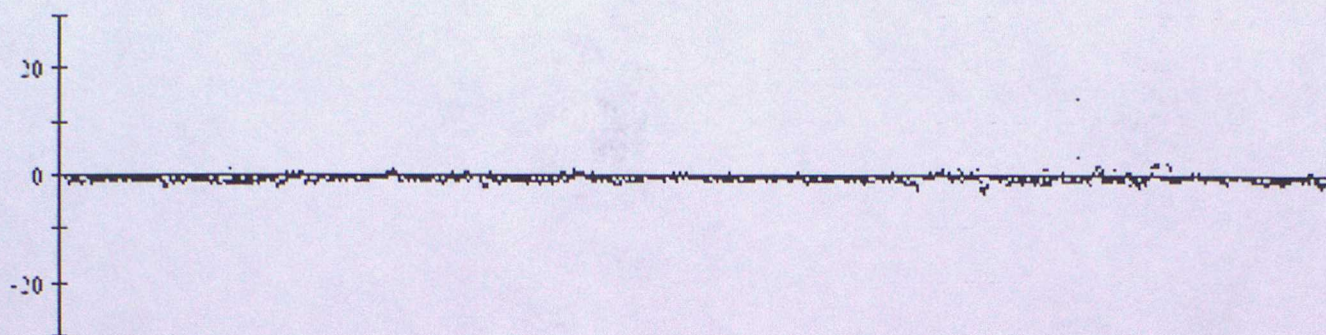


41657 Pressure

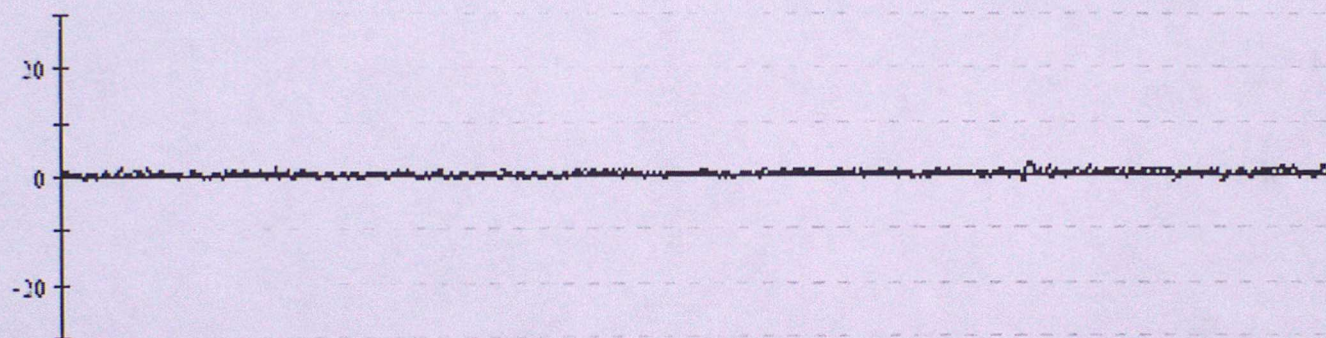


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

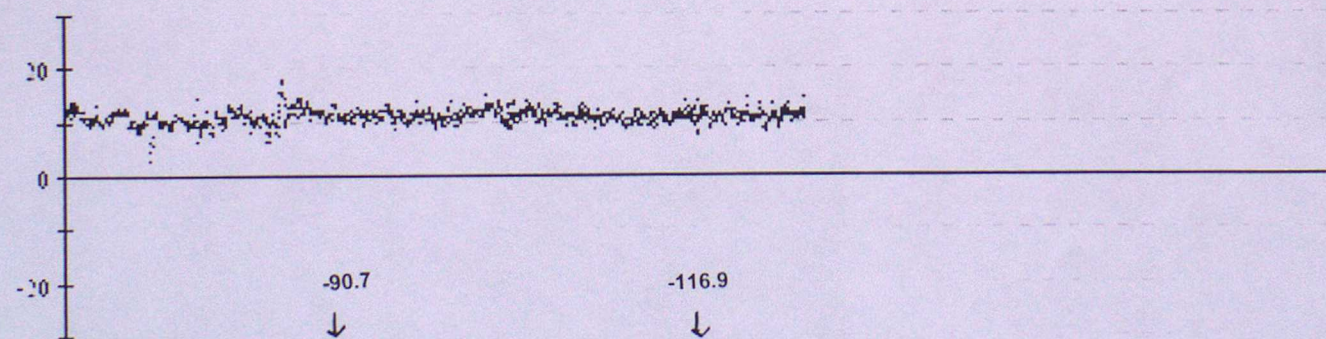
41658 Pressure



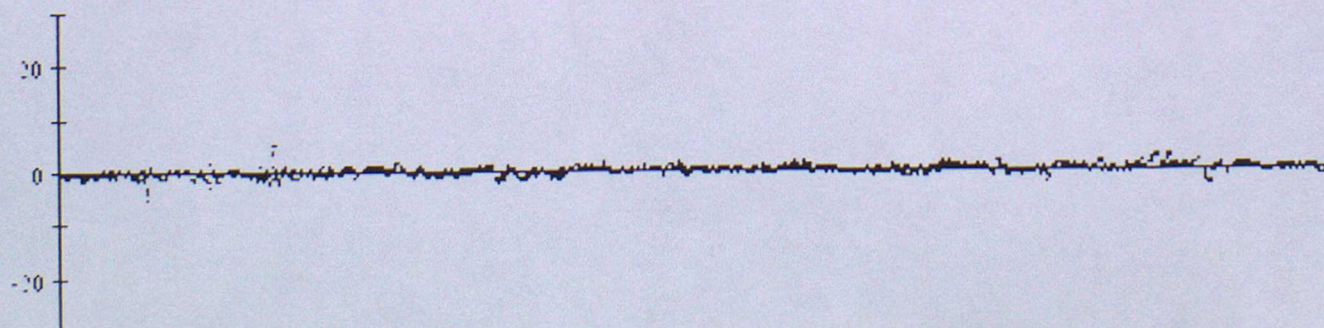
41659 Pressure



41665 Pressure

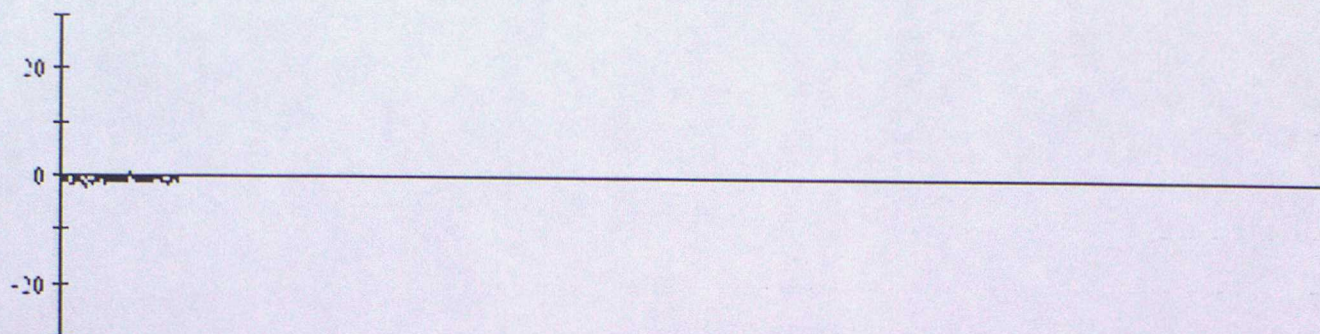


41666 Pressure

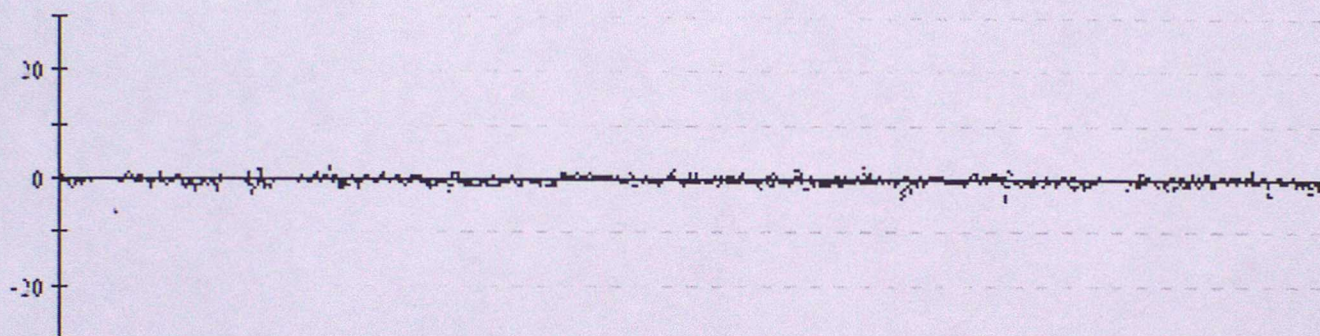


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

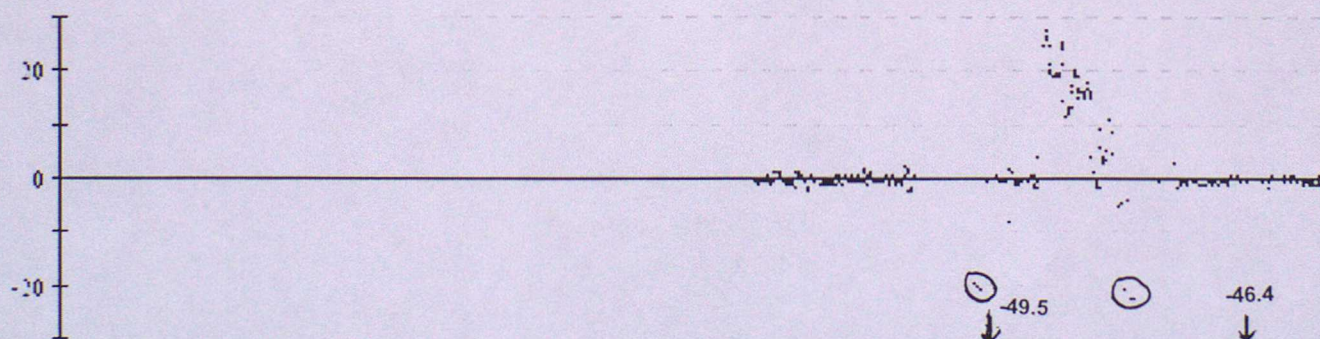
42533 Pressure



44504 Pressure



44511 Pressure

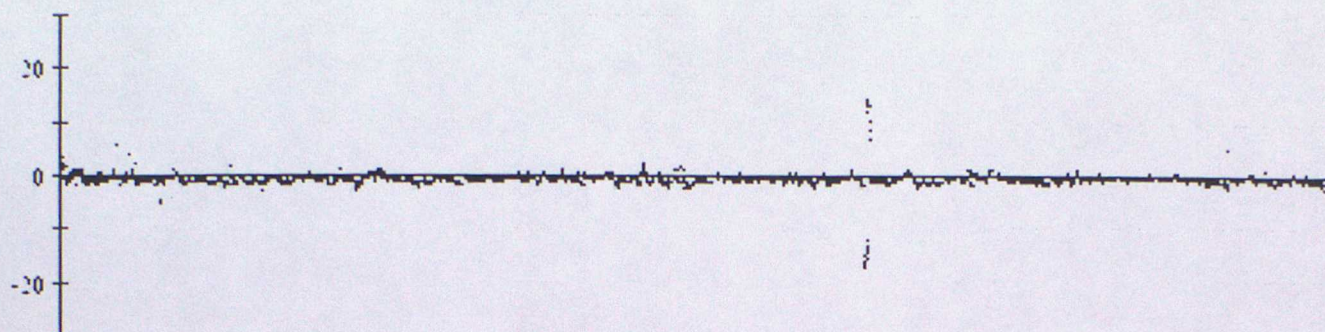


44517 Pressure

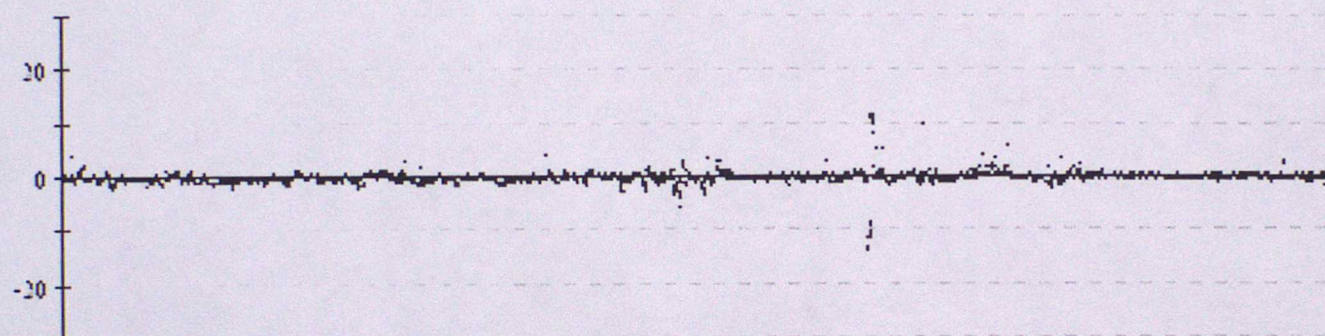


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

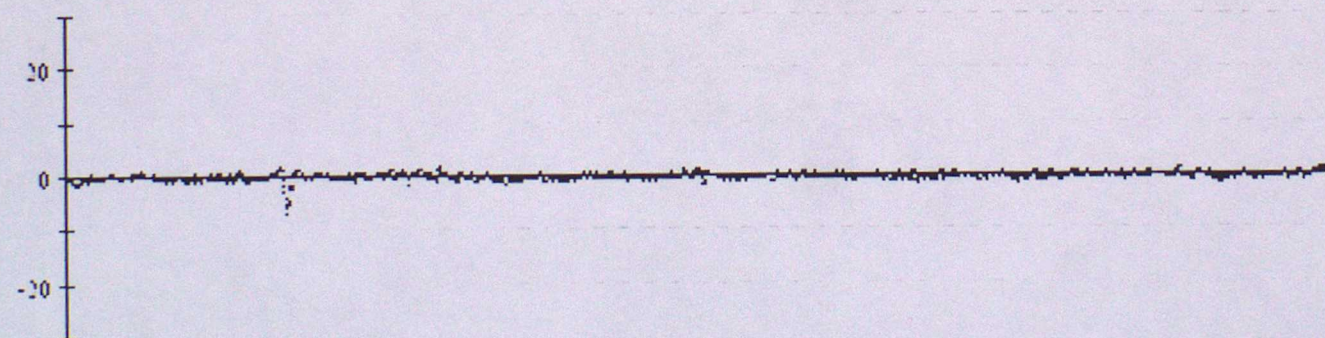
44549 Pressure



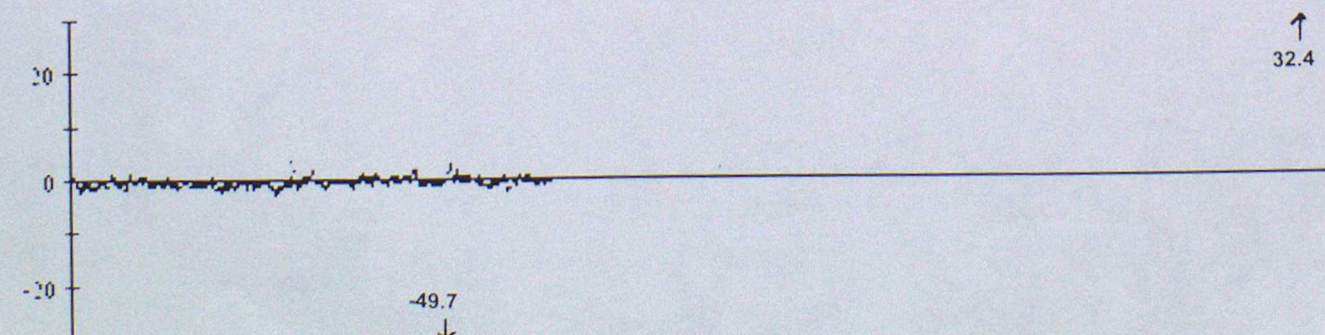
44550 Pressure



44601 Pressure

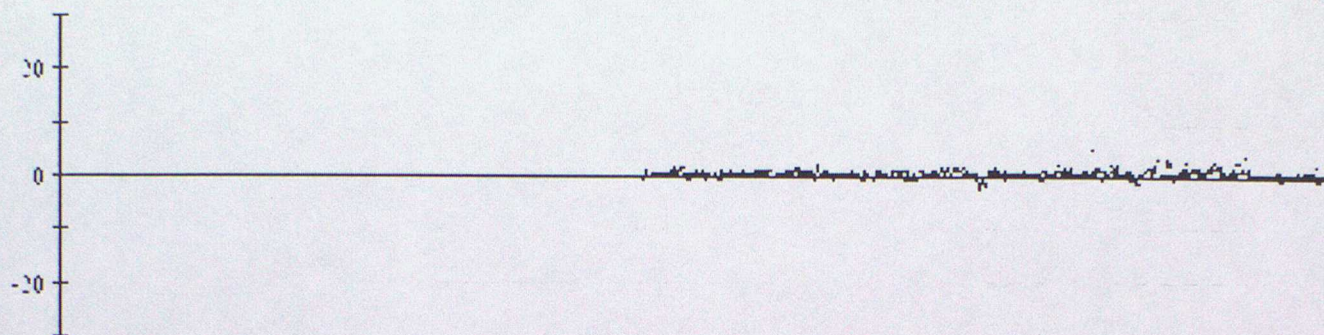


44602 Pressure

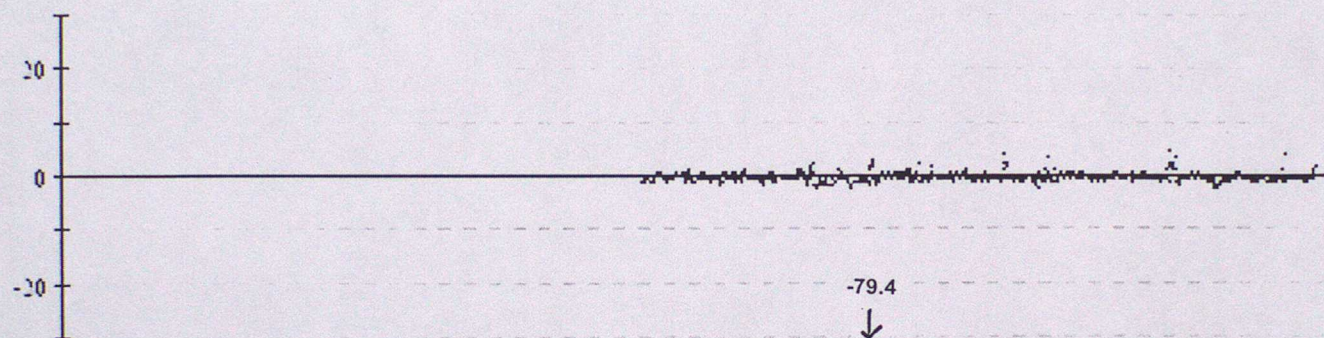


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

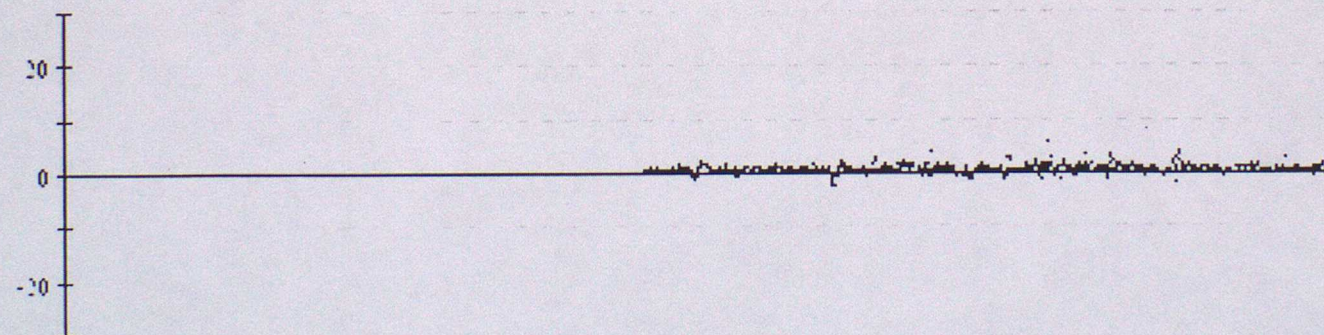
44606 Pressure



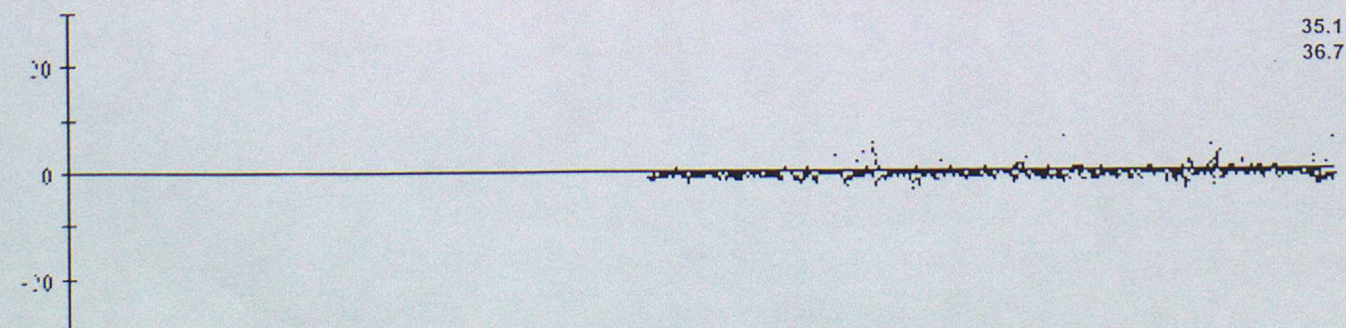
44607 Pressure



44608 Pressure

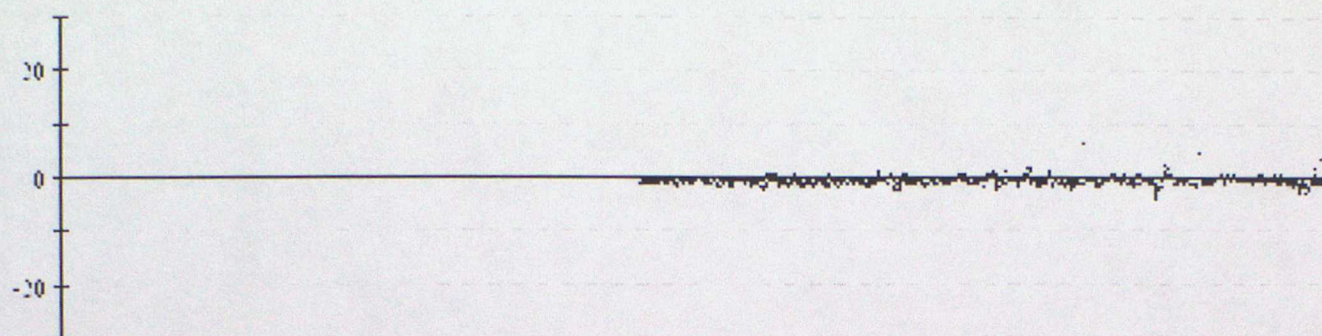


44609 Pressure

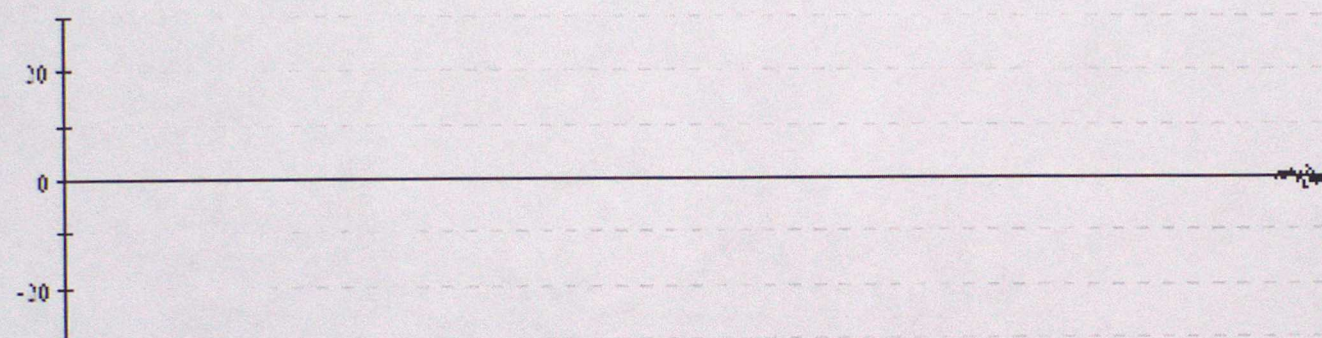


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

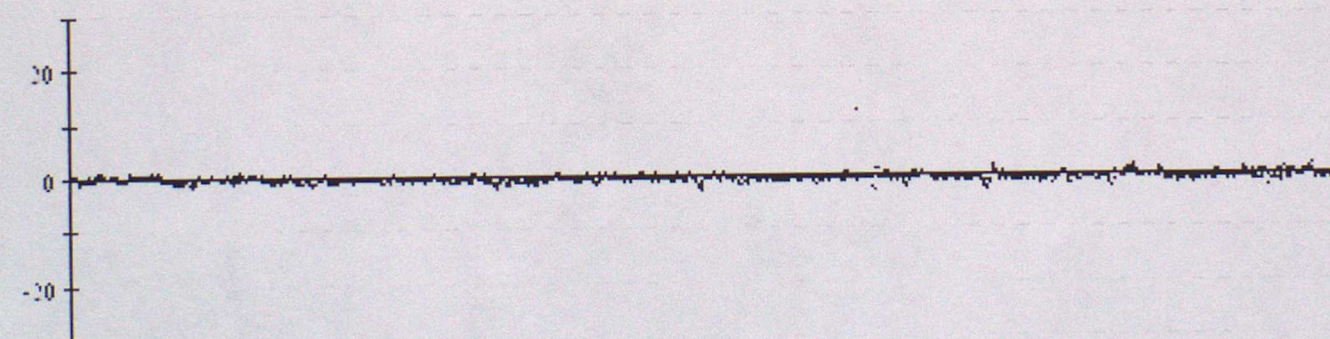
44610 Pressure



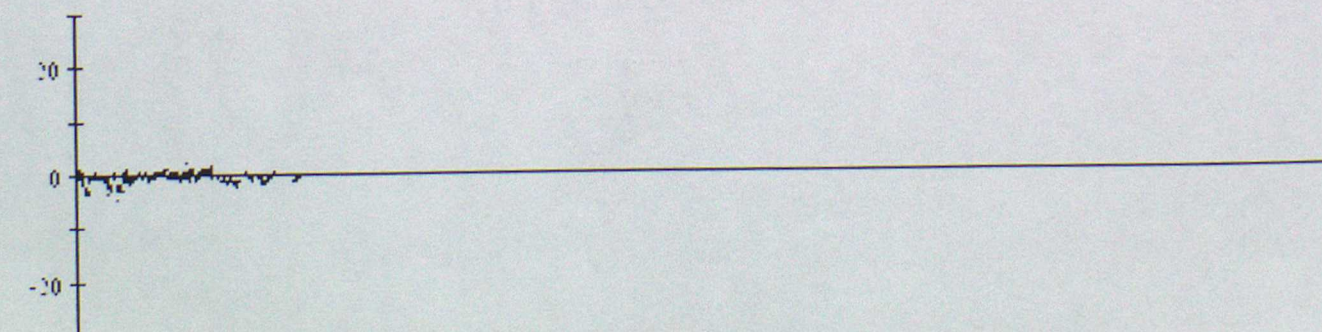
44611 Pressure



44616 Pressure

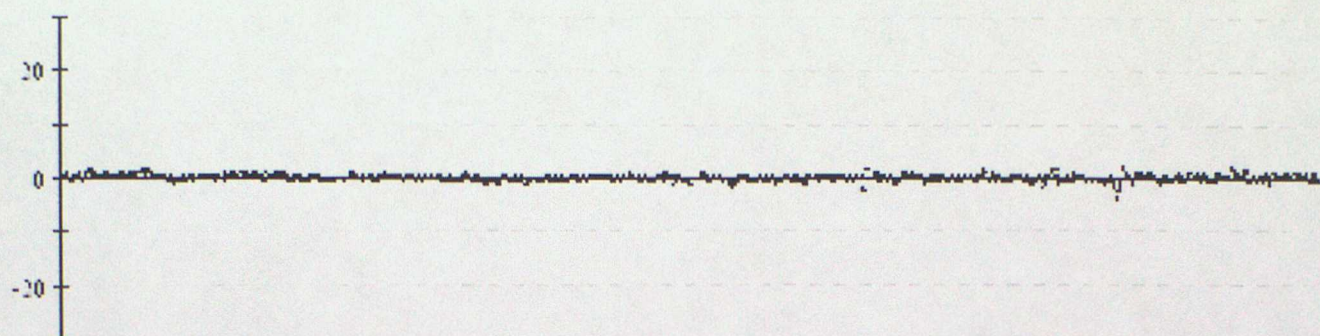


44621 Pressure

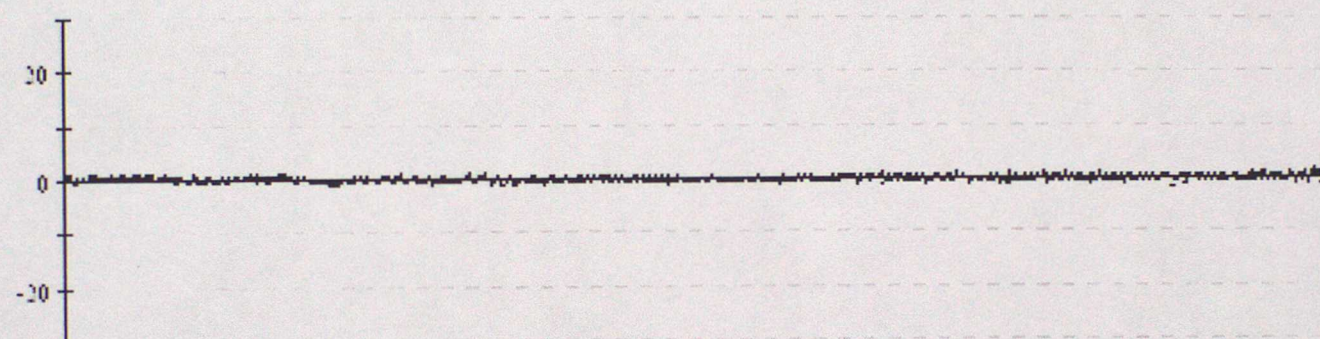


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

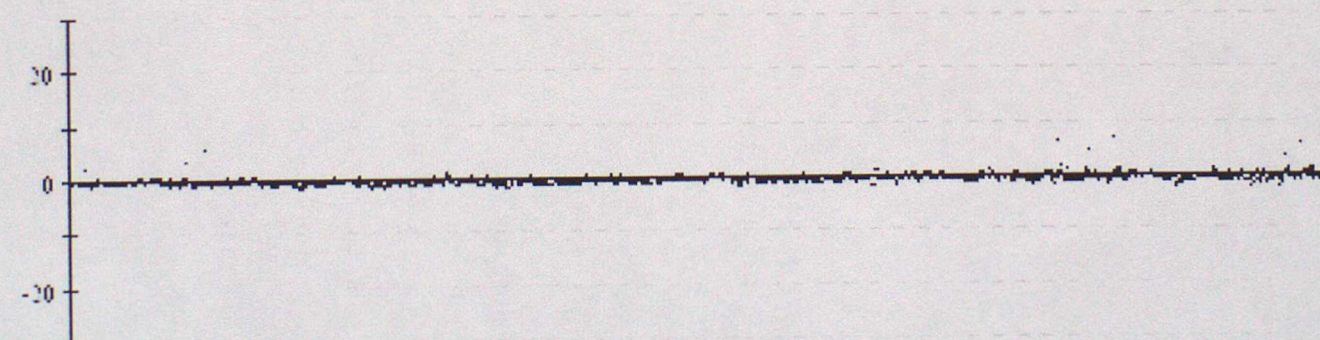
44624 Pressure



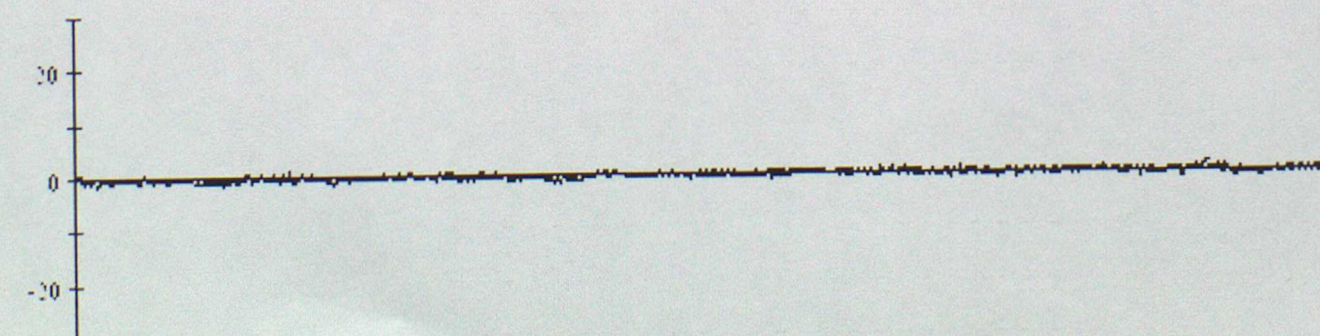
44625 Pressure



44627 Pressure

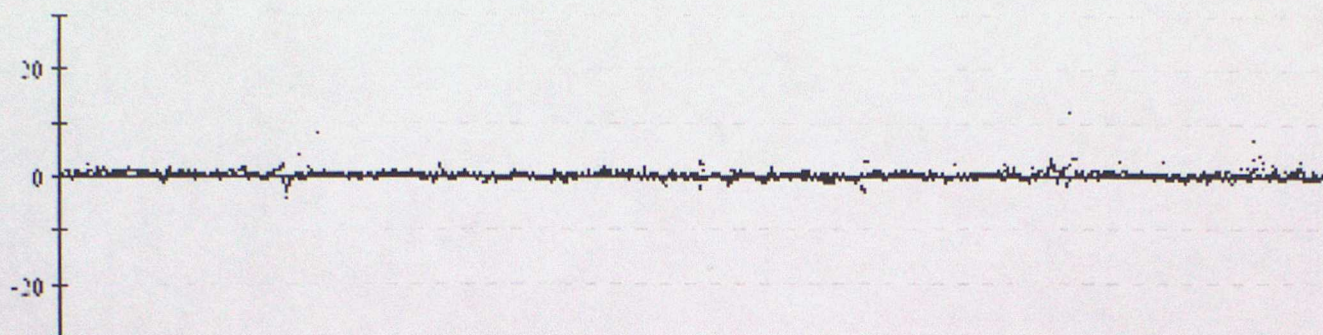


44721 Pressure

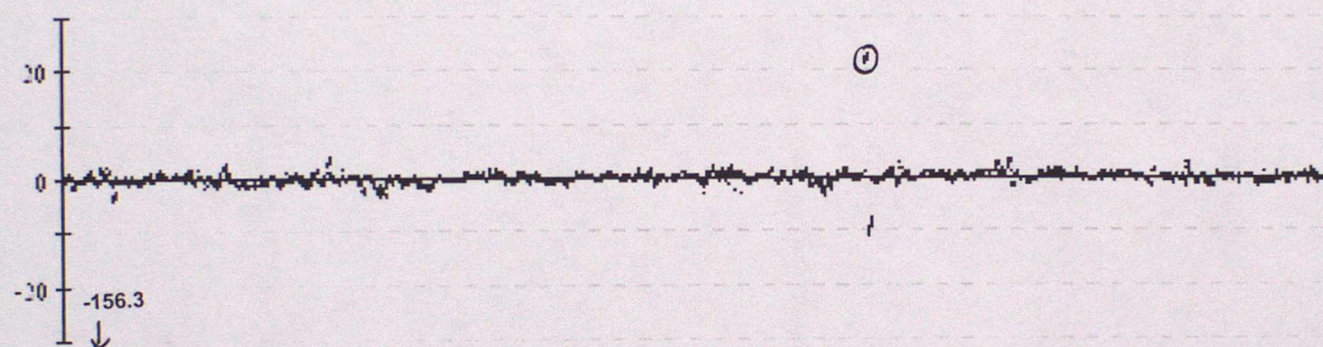


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

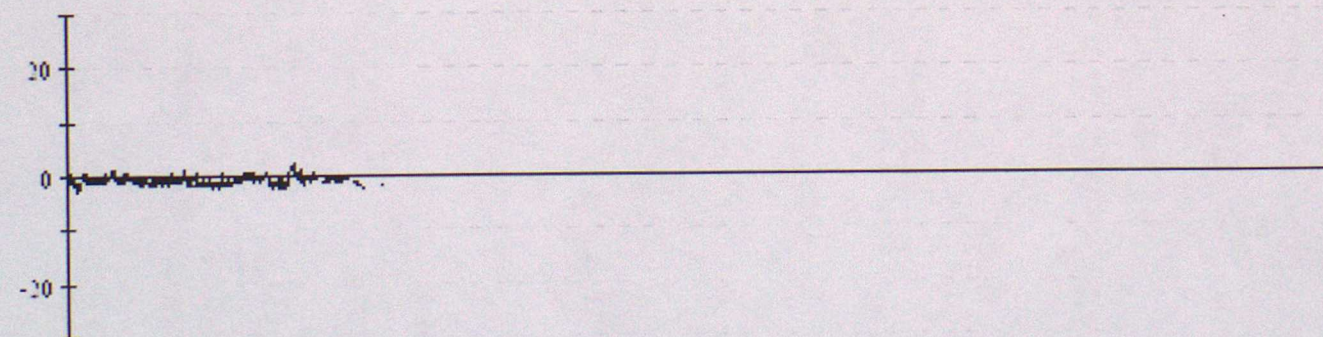
44723 Pressure



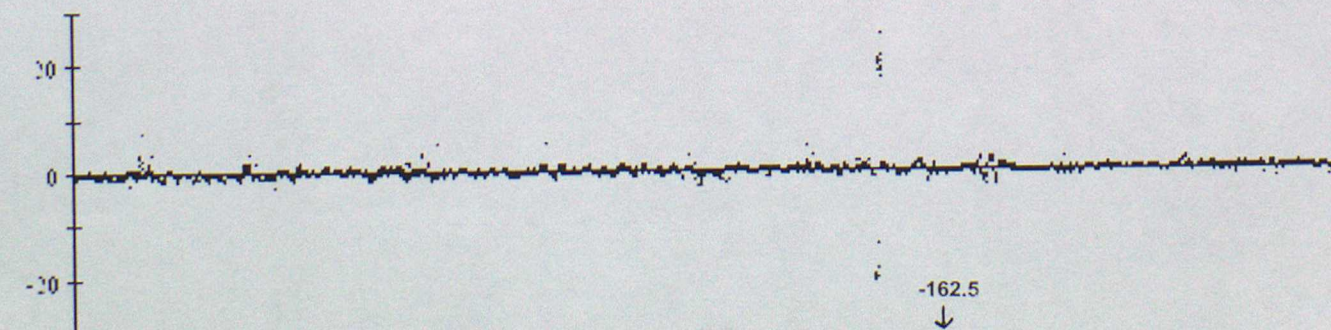
44726 Pressure



44728 Pressure

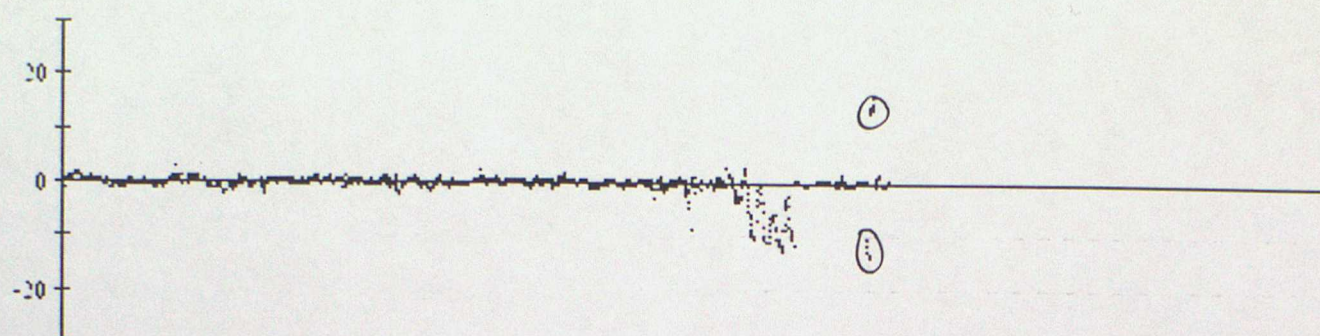


44730 Pressure

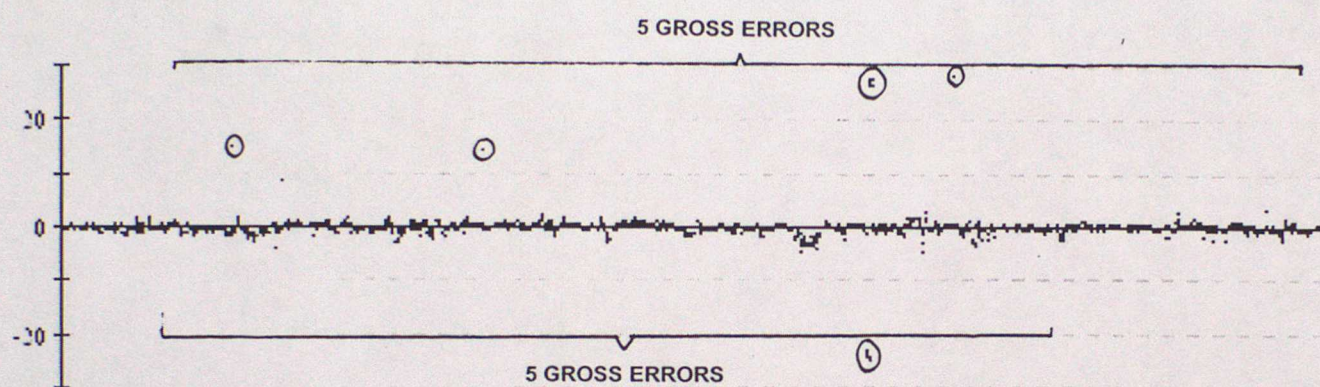


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

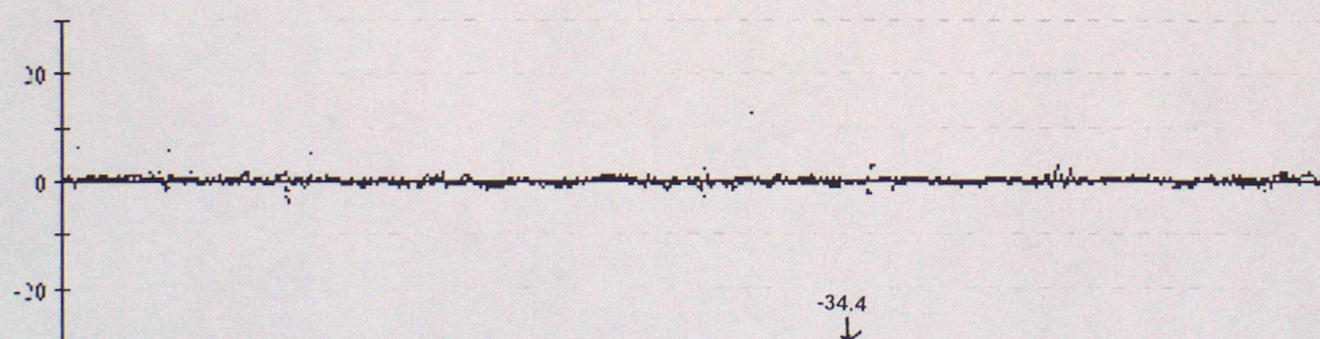
44742 Pressure



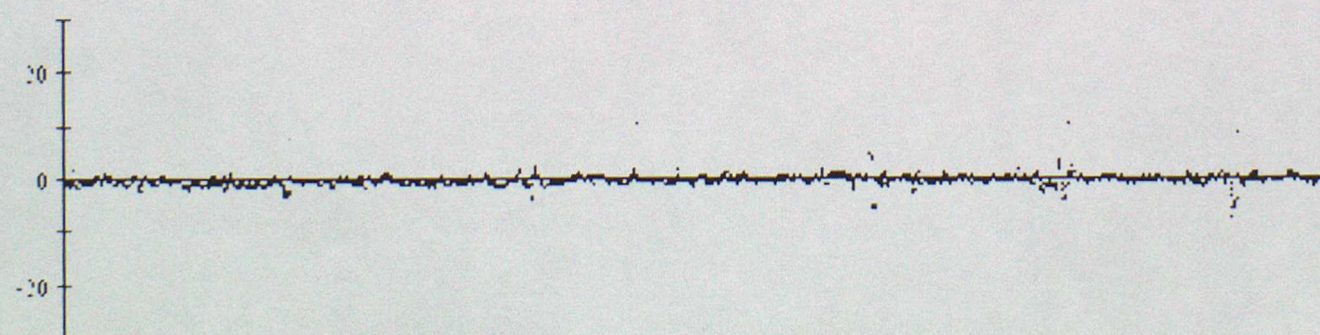
44743 Pressure



44763 Pressure

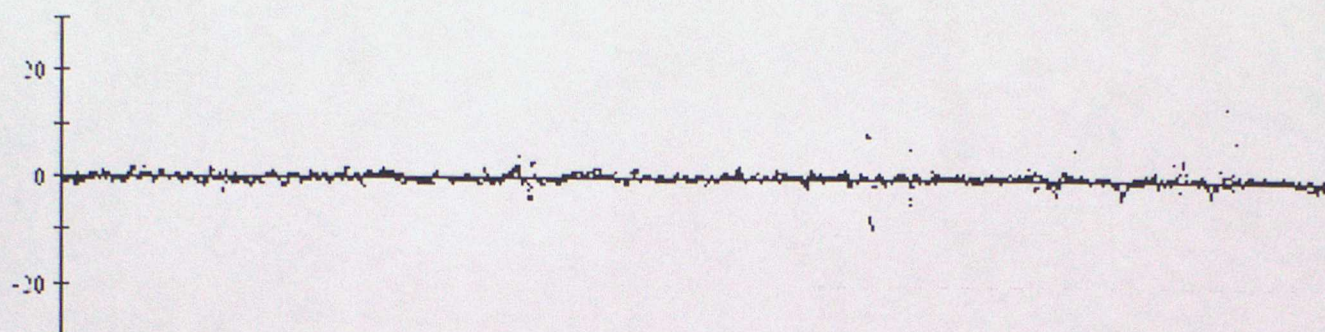


44764 Pressure

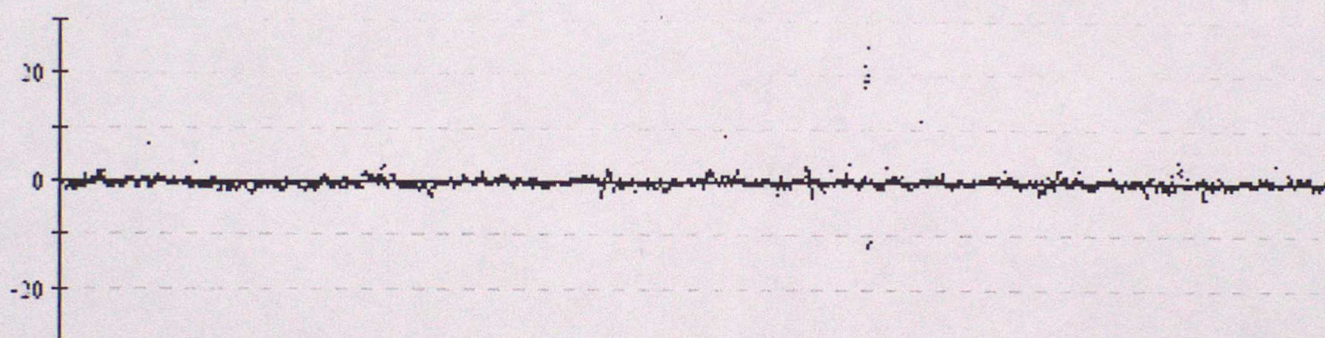


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

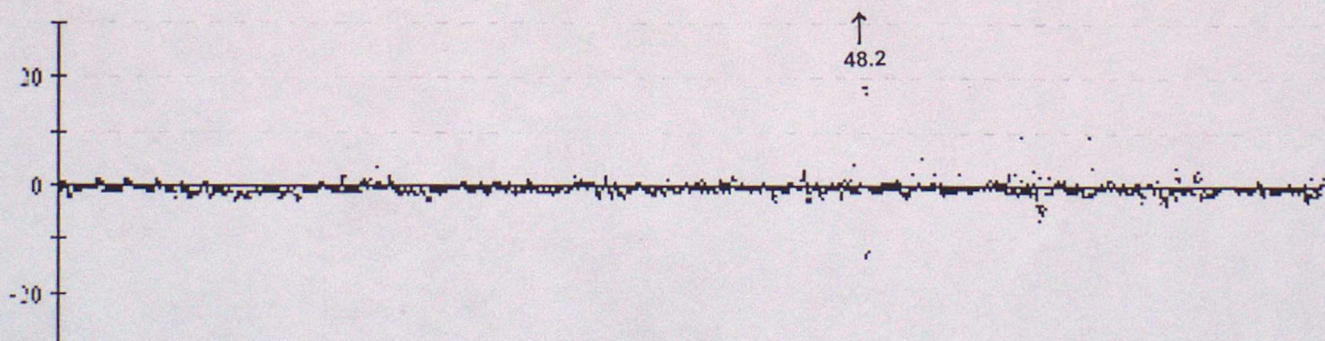
44767 Pressure



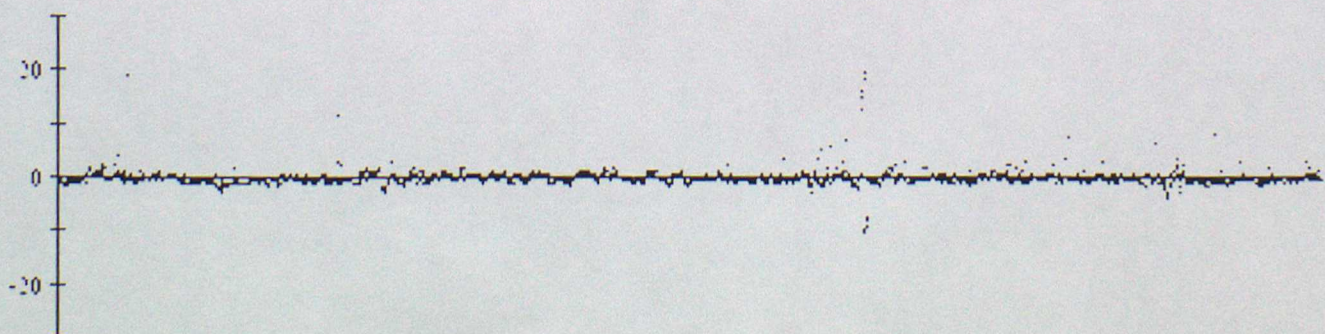
44769 Pressure



44770 Pressure

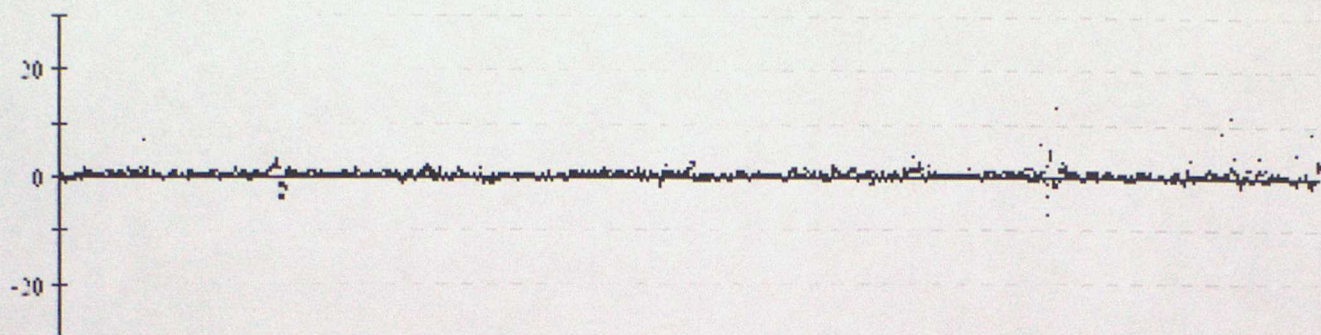


44772 Pressure

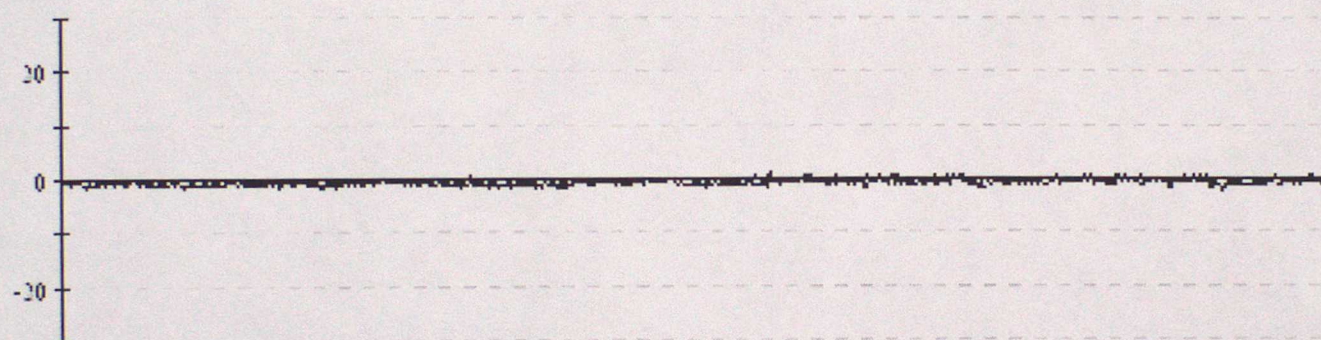


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

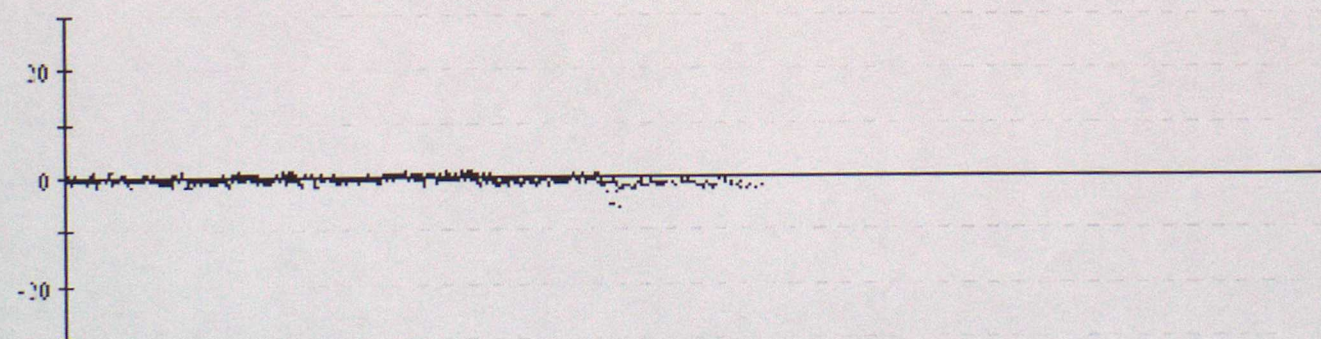
44773 Pressure



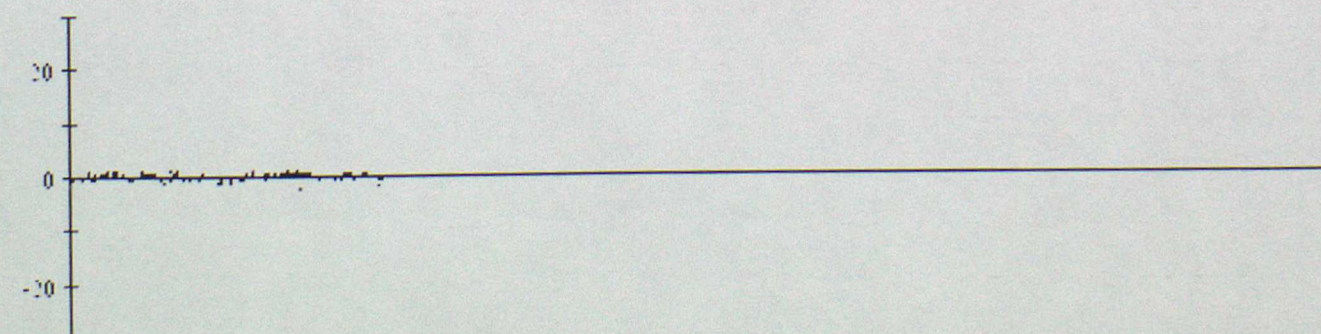
44775 Pressure



44778 Pressure

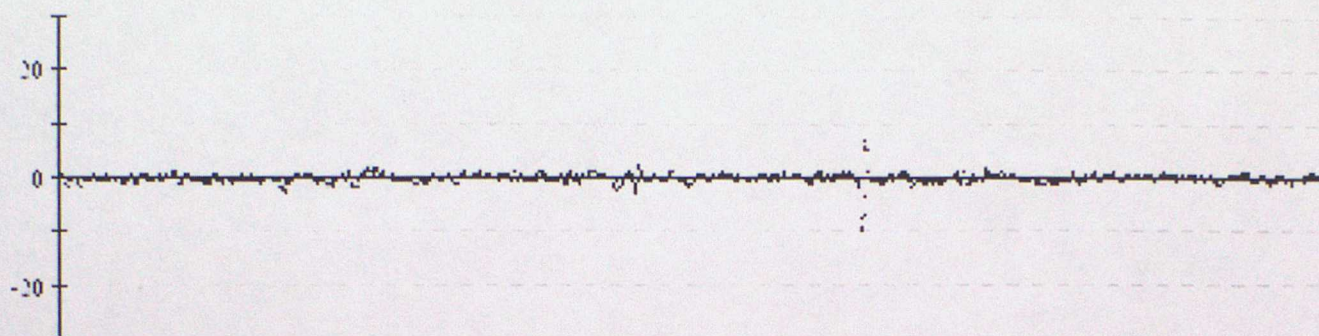


44779 Pressure

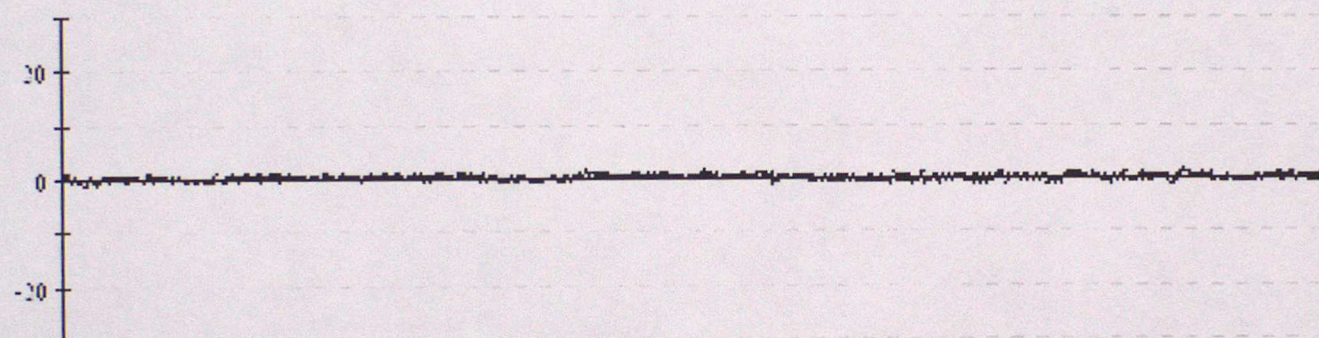


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

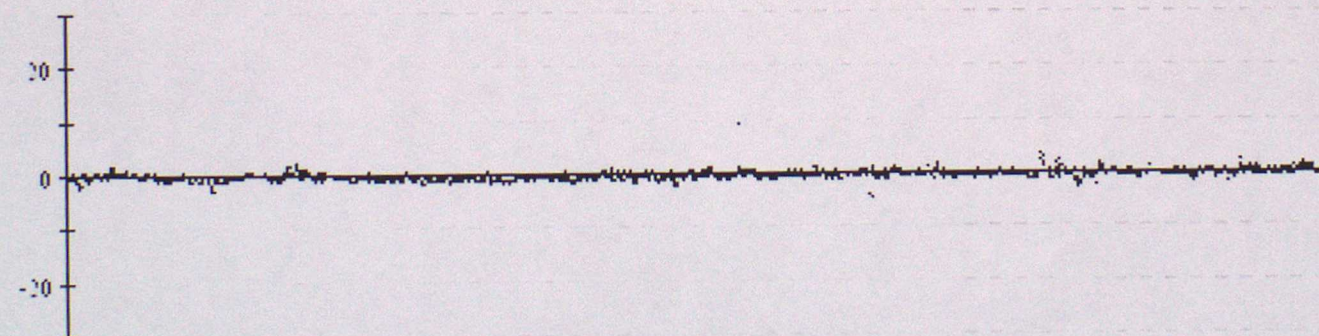
44780 Pressure



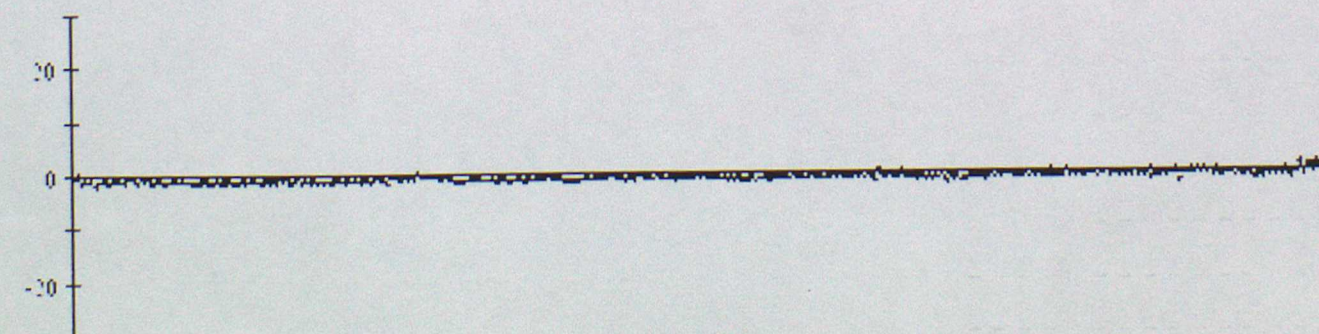
62501 Pressure



62502 Pressure

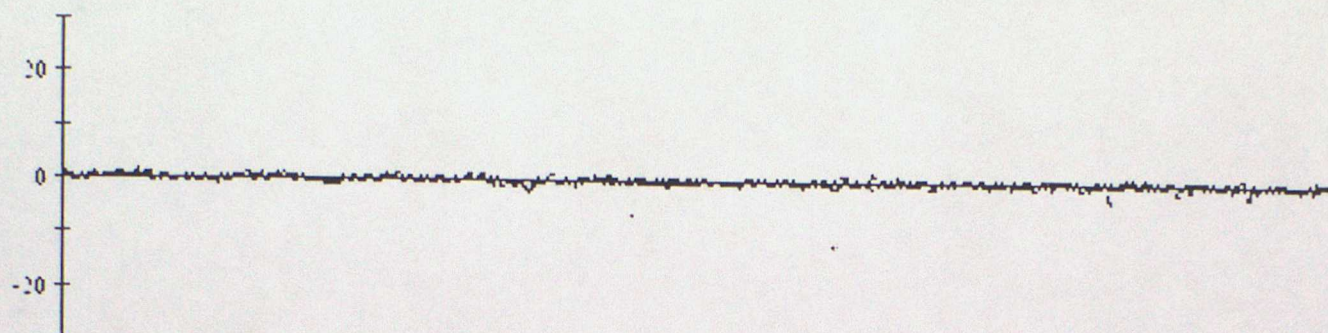


62503 Pressure

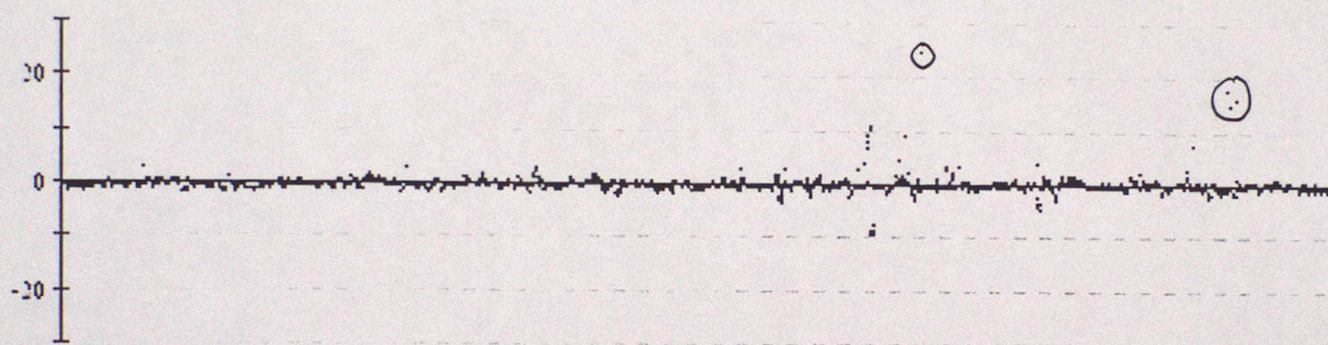


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

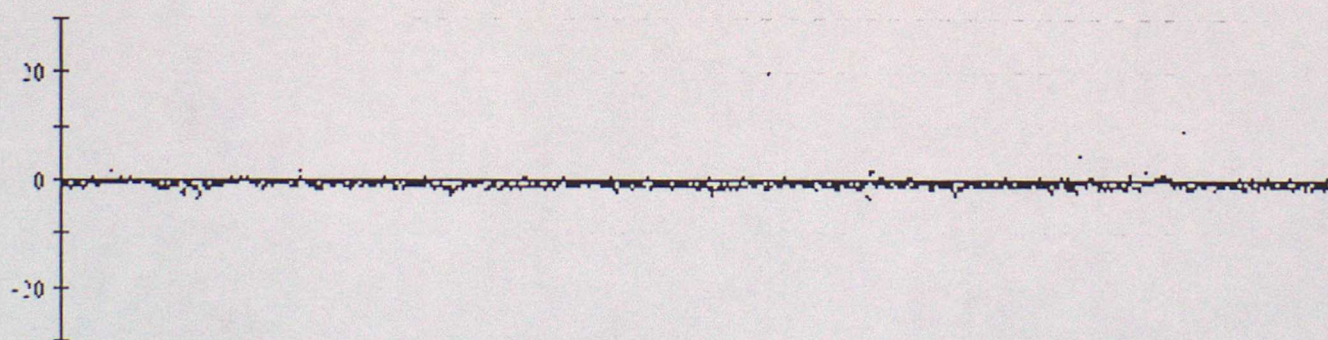
62504 Pressure



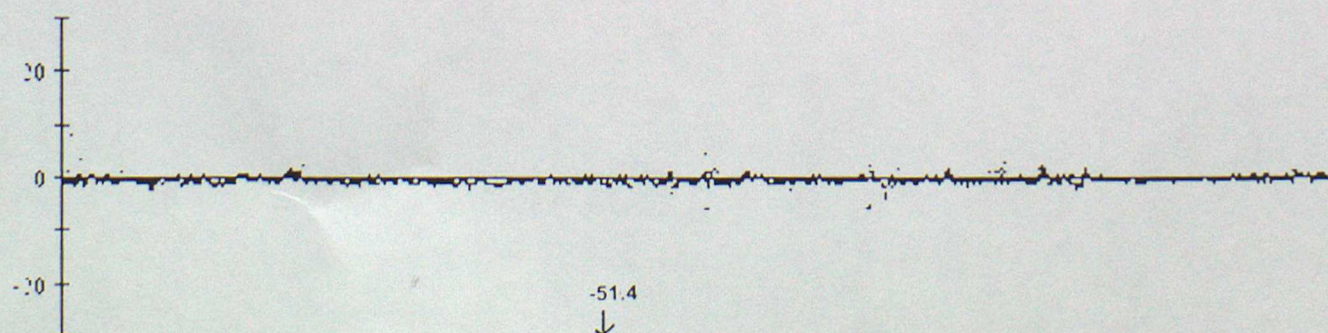
62505 Pressure



62506 Pressure

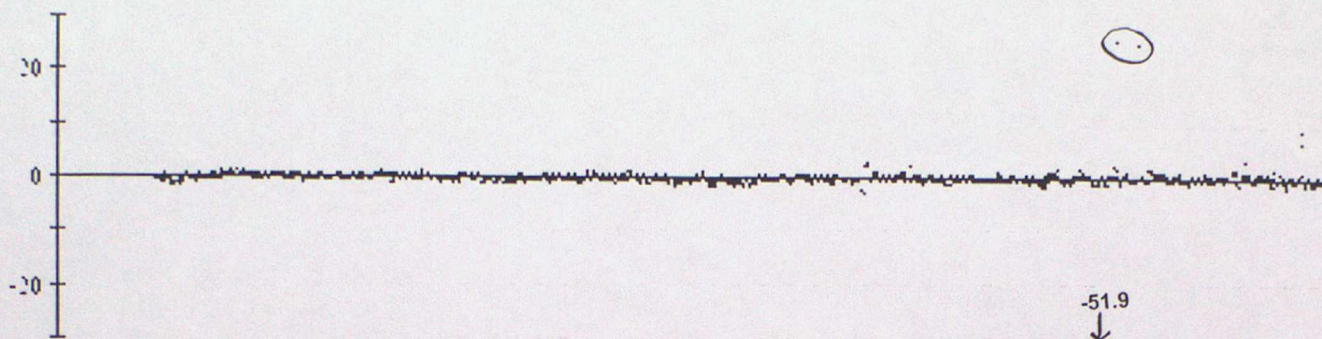


62507 Pressure

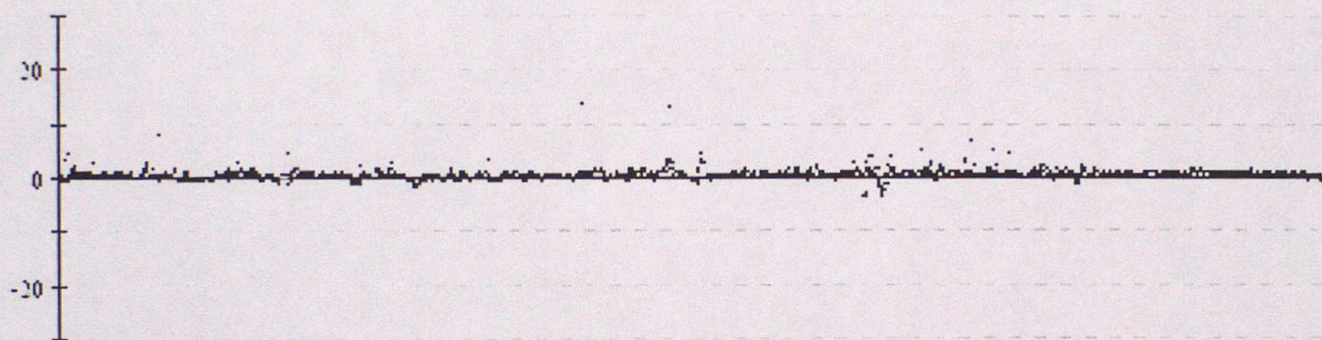


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

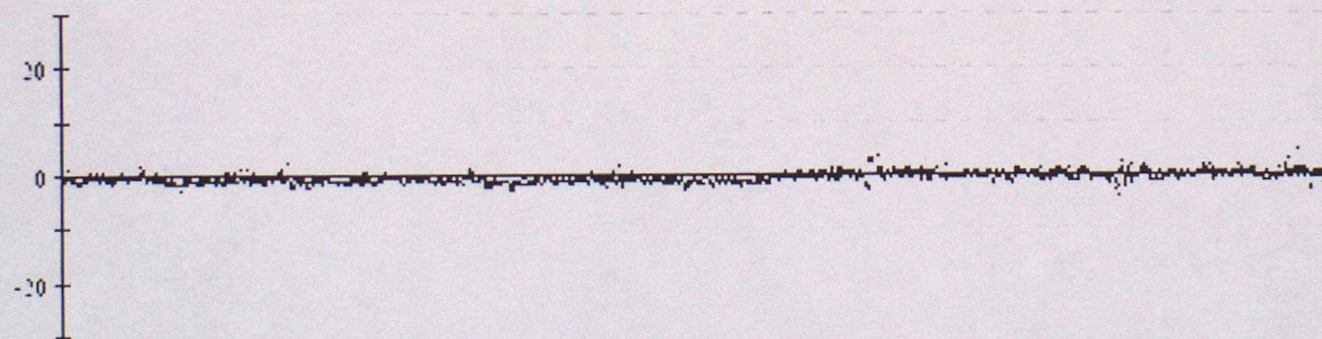
62508 Pressure



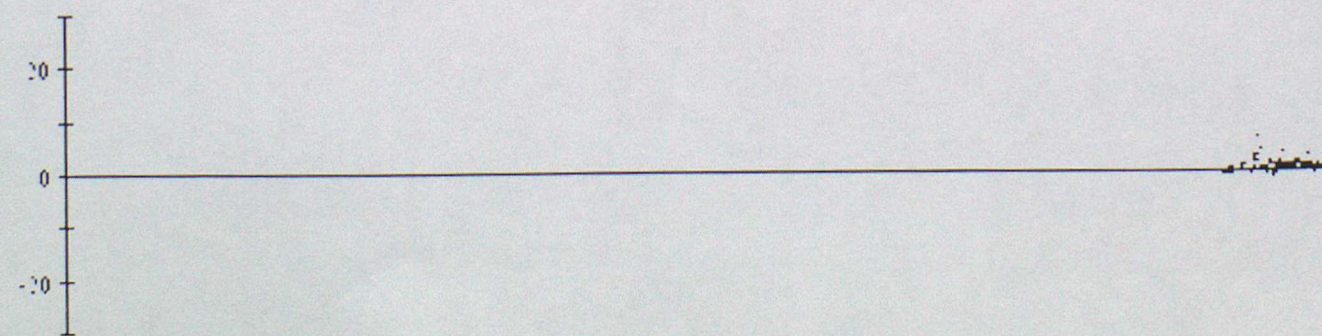
62509 Pressure



62512 Pressure

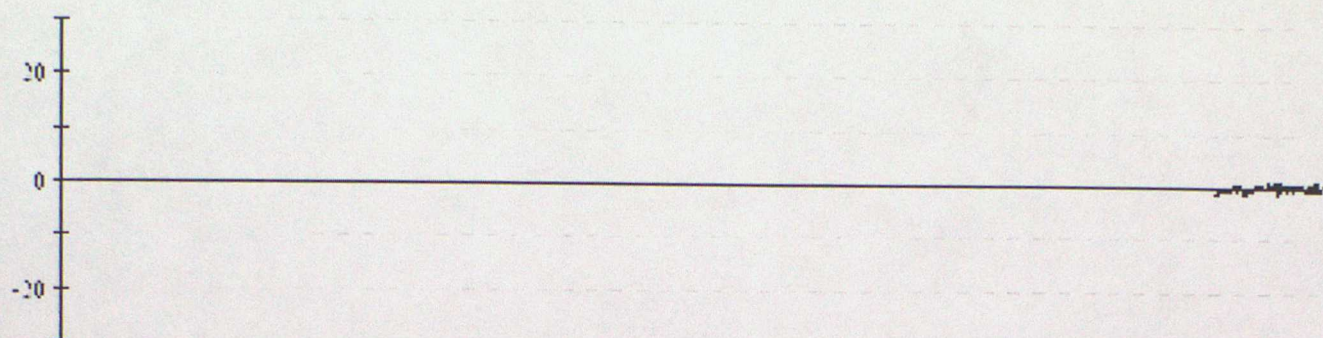


62513 Pressure

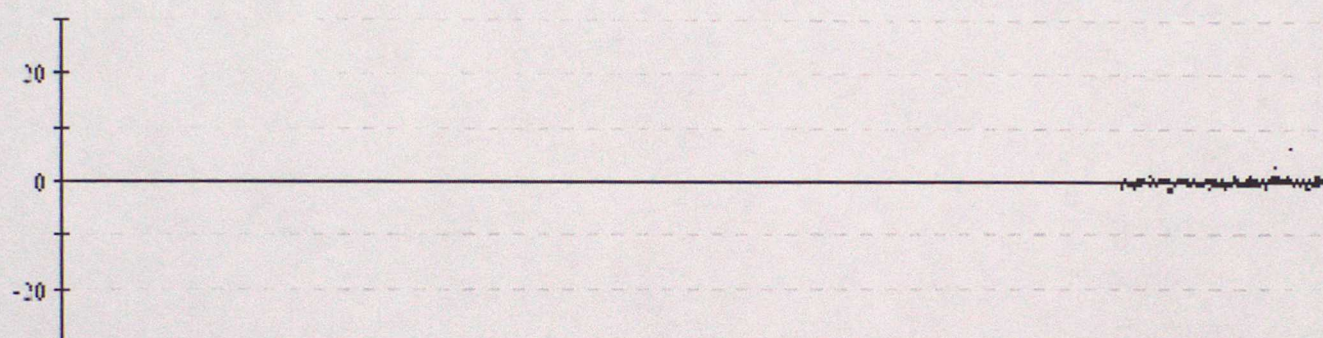


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

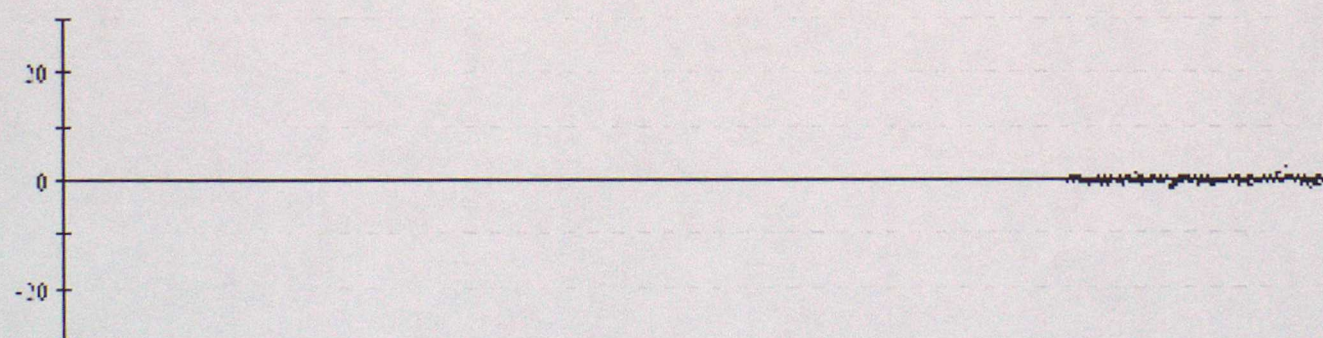
62514 Pressure



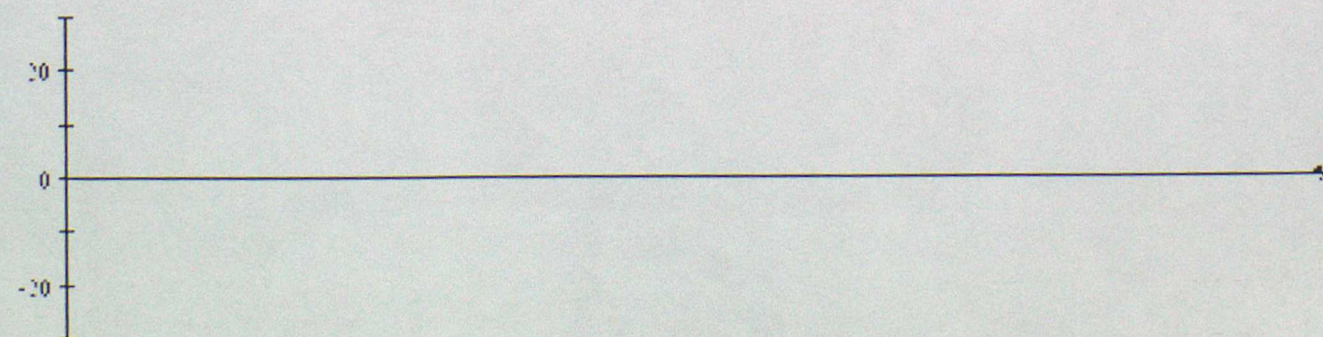
62515 Pressure



62517 Pressure

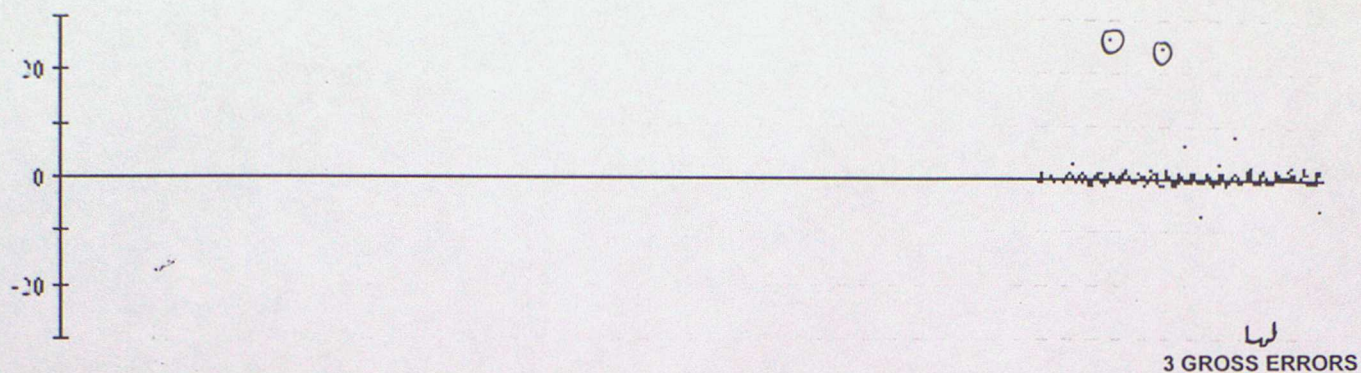


62519 Pressure

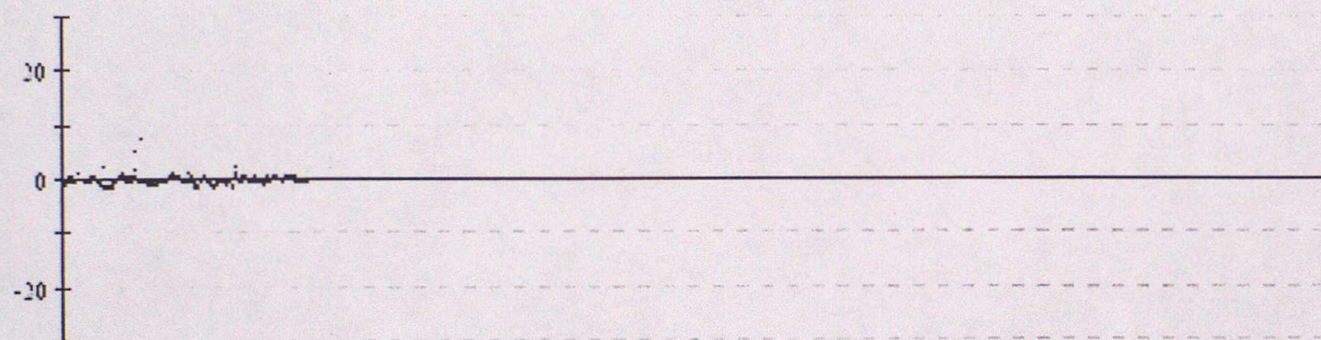


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

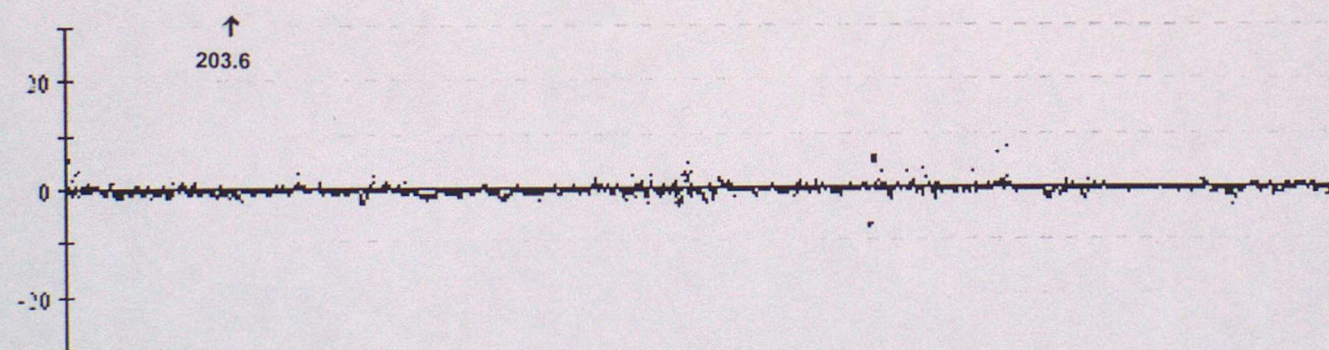
62573 Pressure



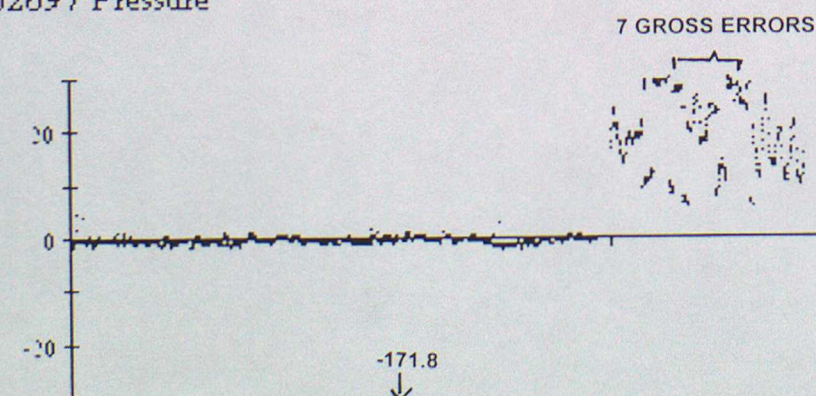
62694 Pressure



62696 Pressure



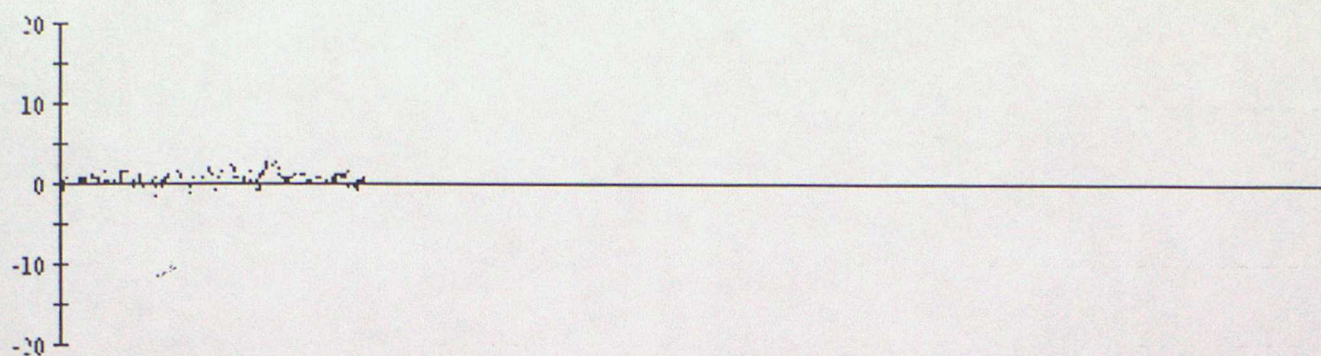
62697 Pressure



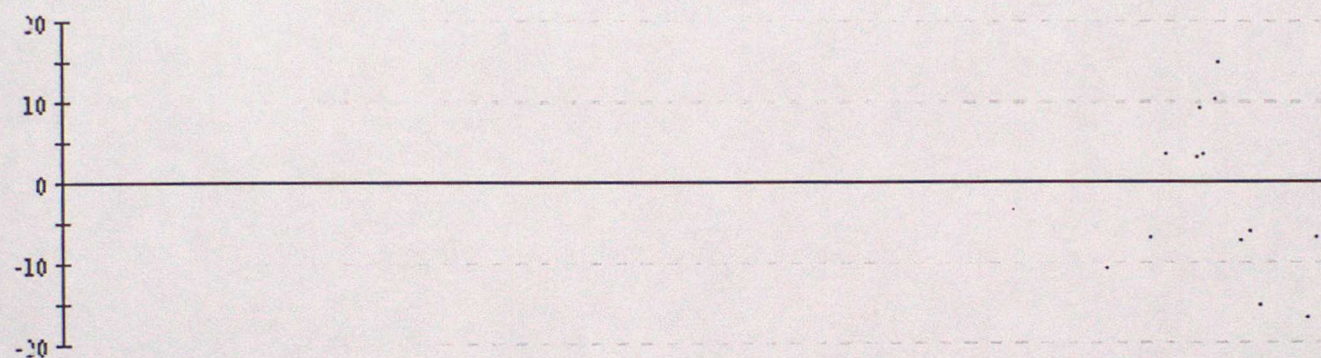
ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

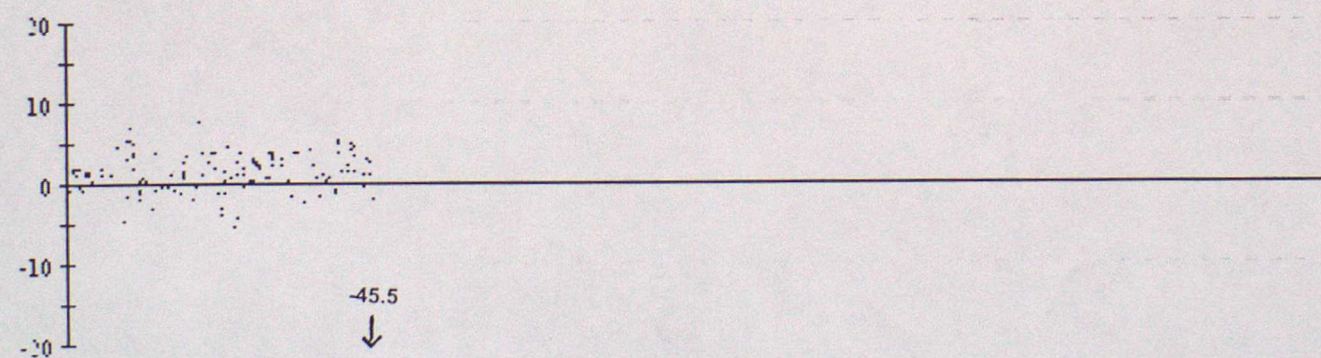
44779 Air Temperature



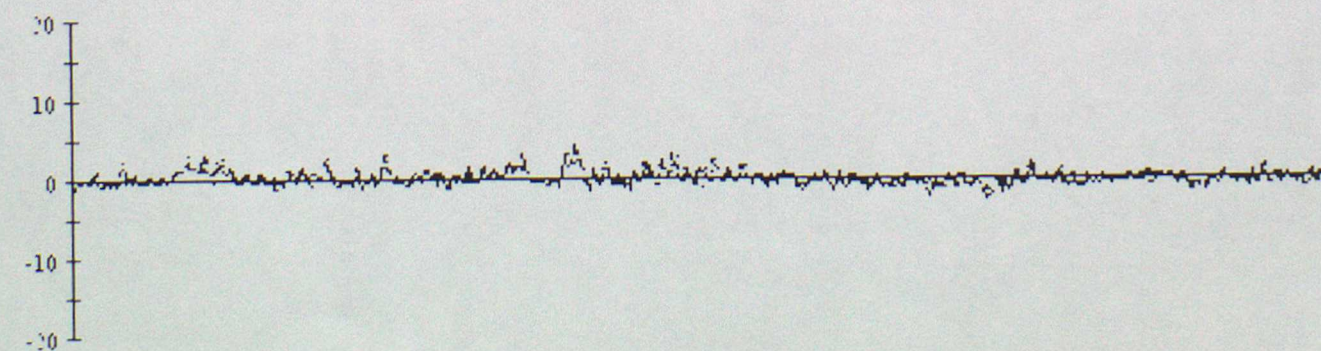
62573 Air Temperature



64549 Air Temperature



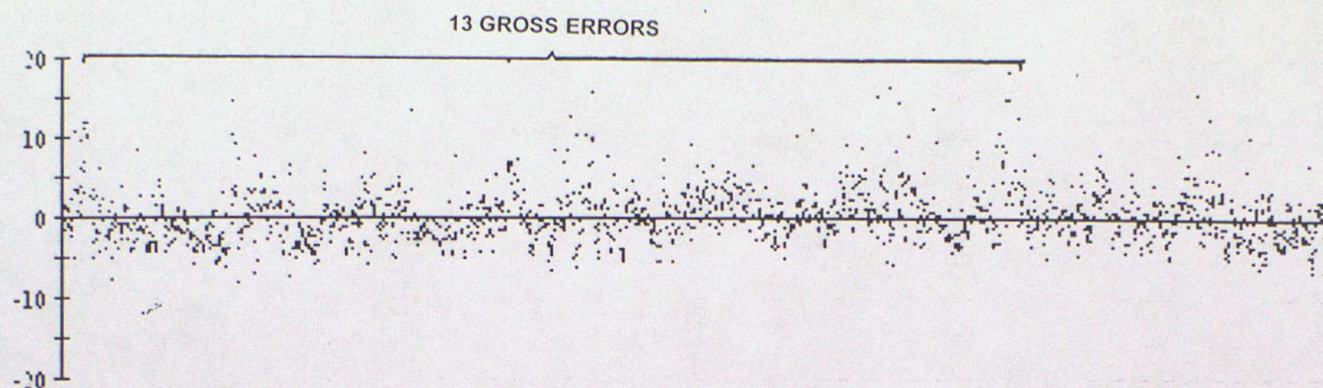
64553 Air Temperature



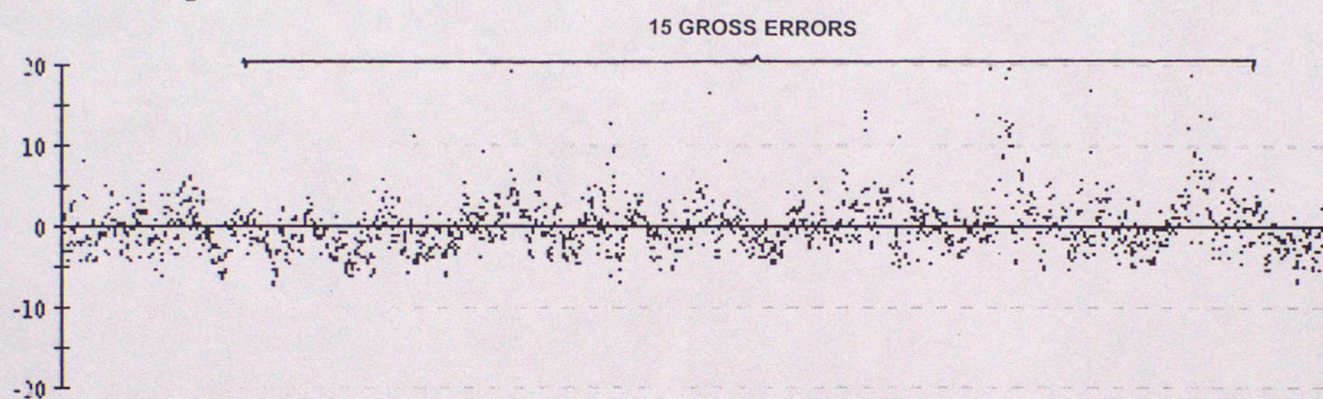
ANNEX D - TIME SERIES PLOTS OF WIND SPEED

Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

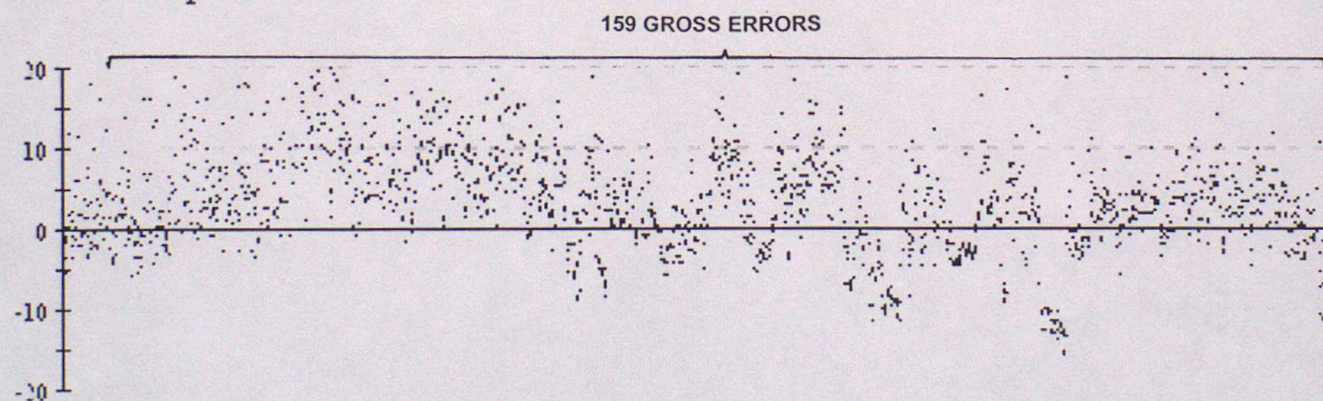
41647 Wind speed



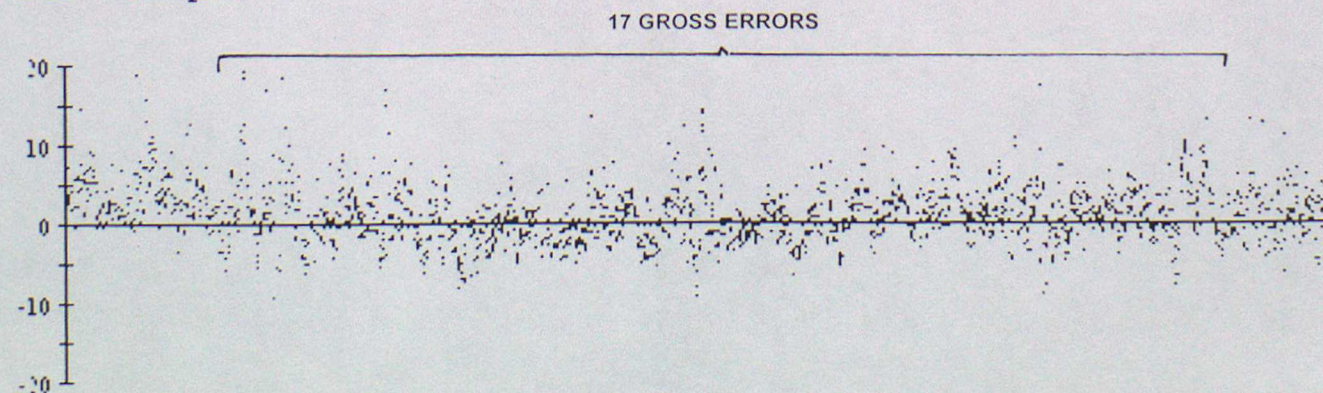
41648 Wind speed



41652 Wind speed

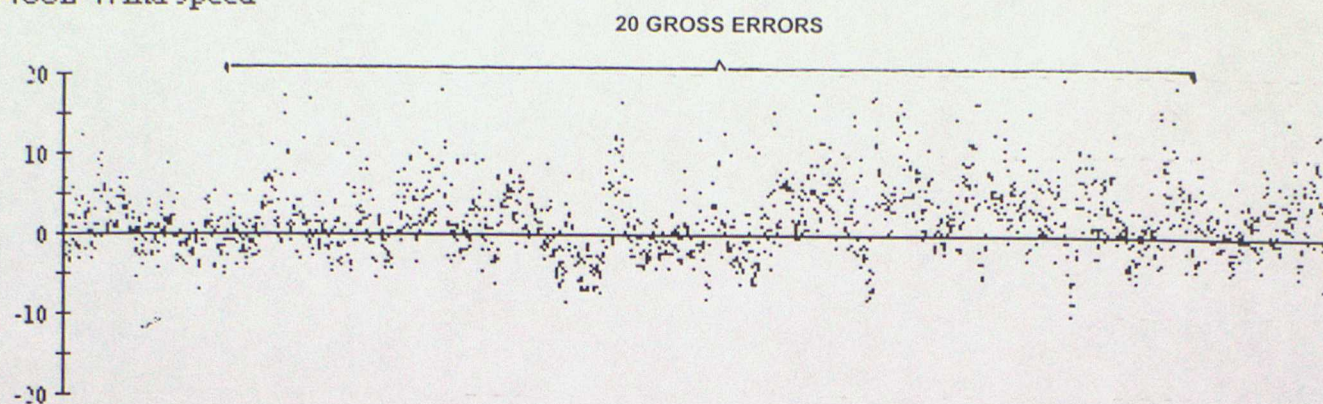


44601 Wind speed

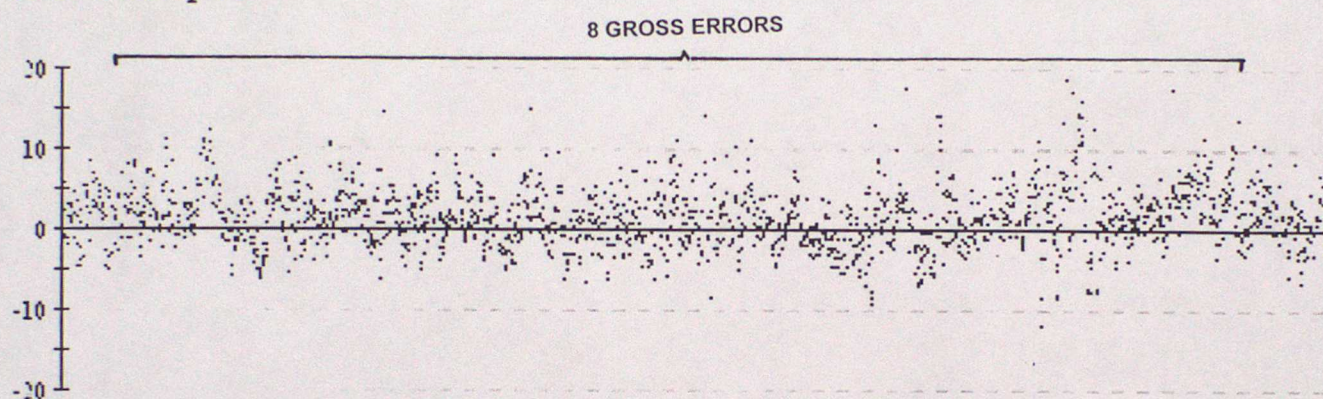


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

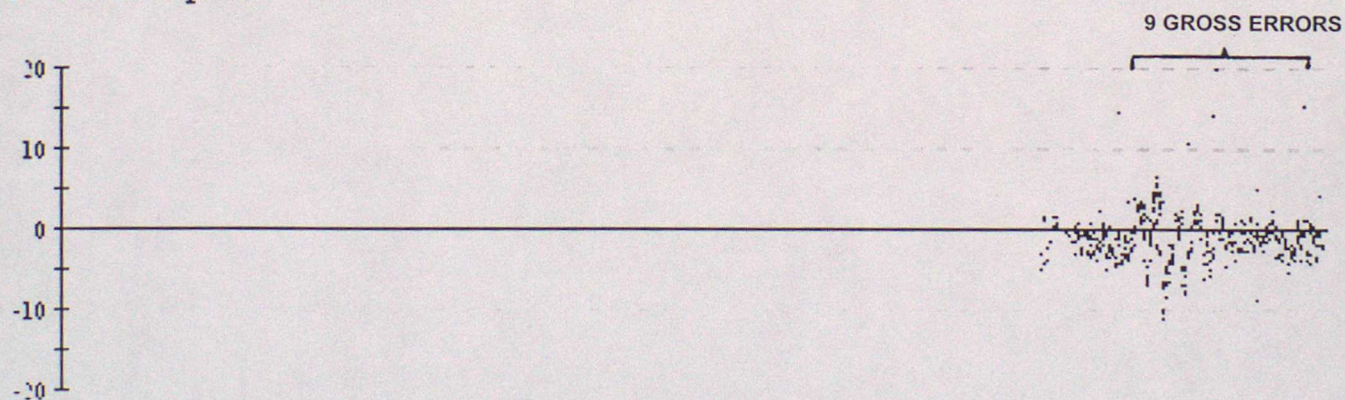
44602 Wind speed



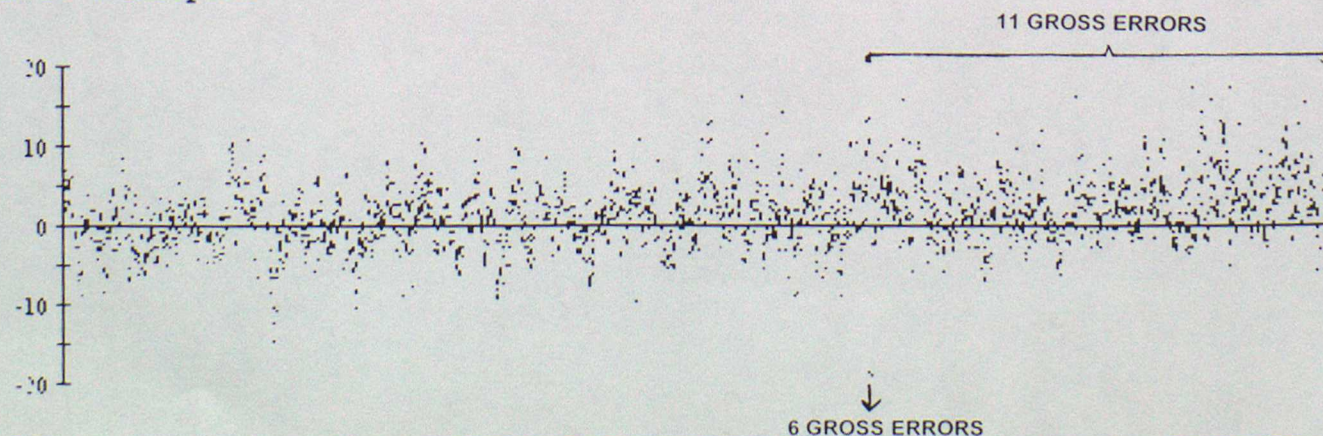
62502 Wind speed



62573 Wind speed



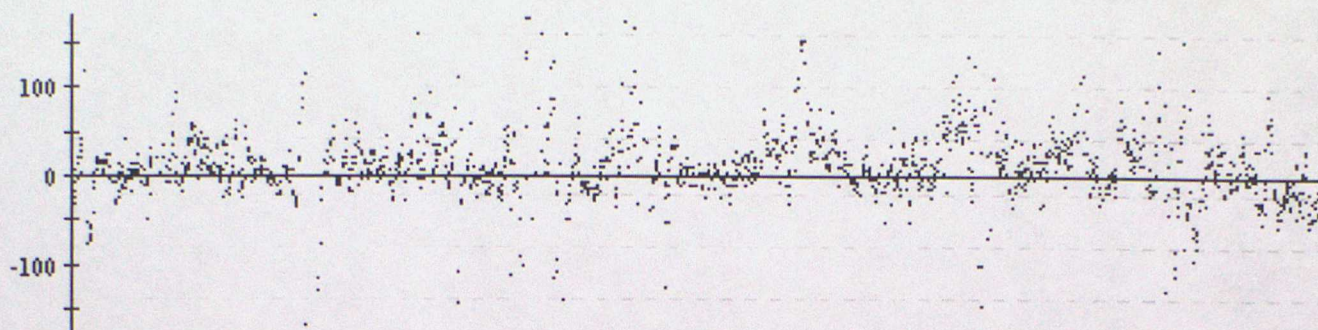
62711 Wind speed



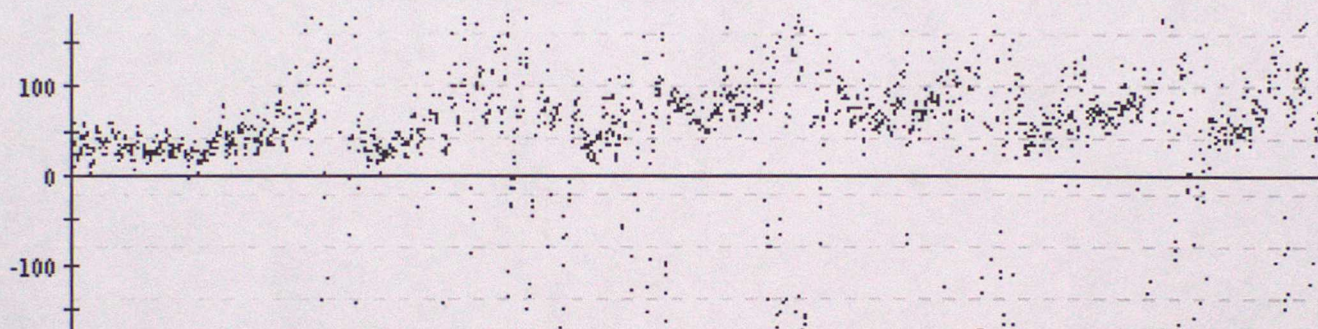
ANNEX E - TIME SERIES PLOTS OF WIND DIRECTION

Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

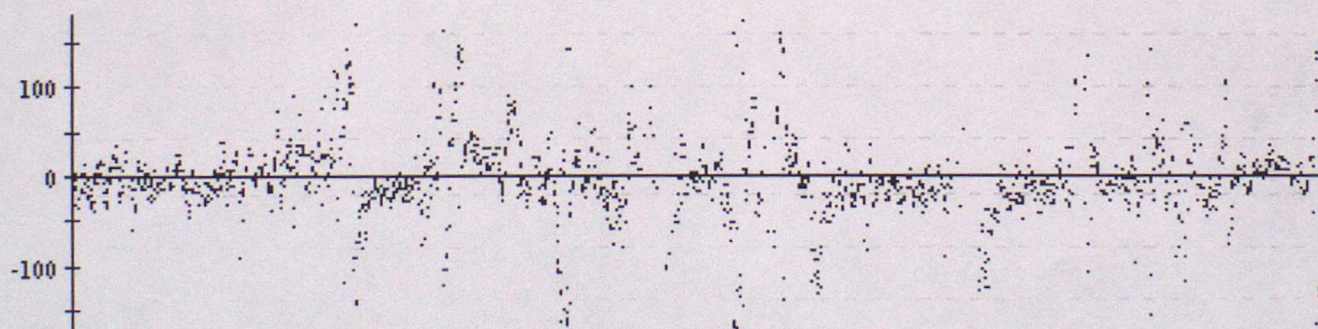
41647 Wind direction



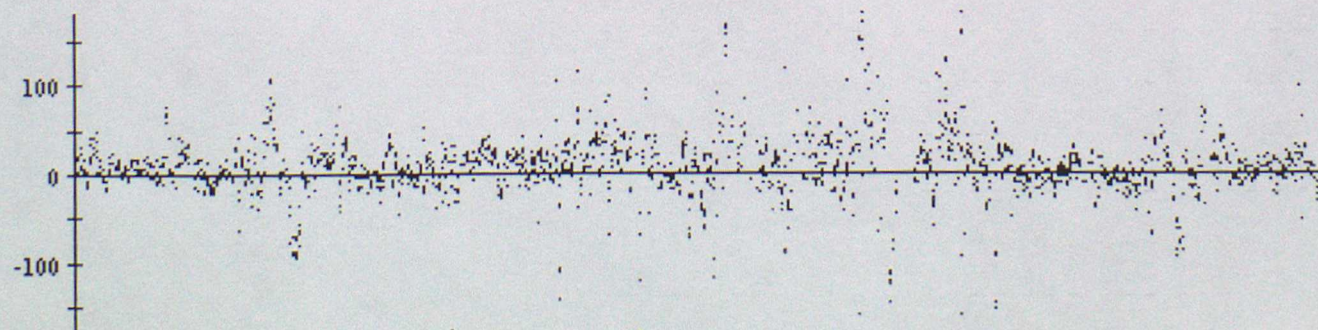
41648 Wind direction



41652 Wind direction

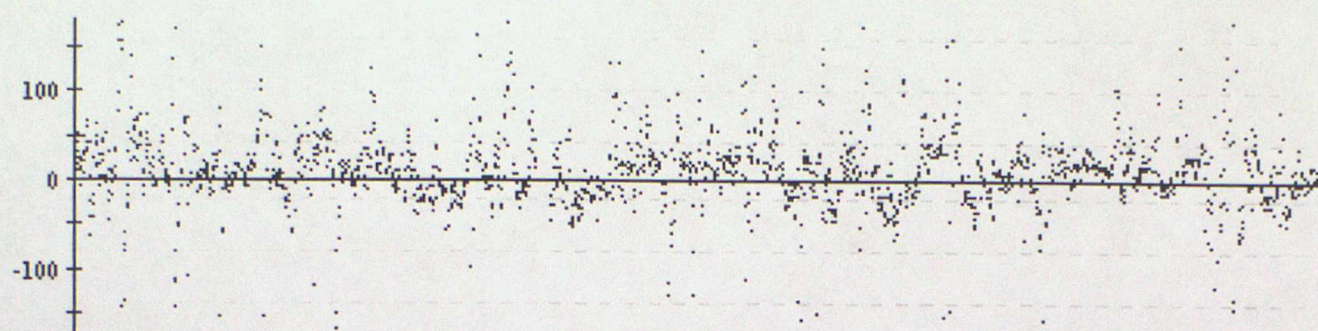


44601 Wind direction

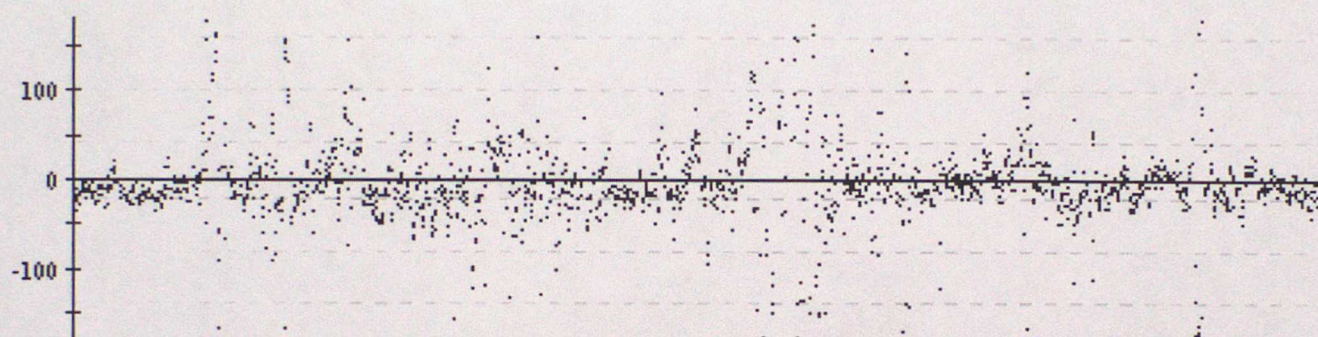


Data from 00z on 01/07/2002 to 23z on 30/09/2002 (OBS - Background field)

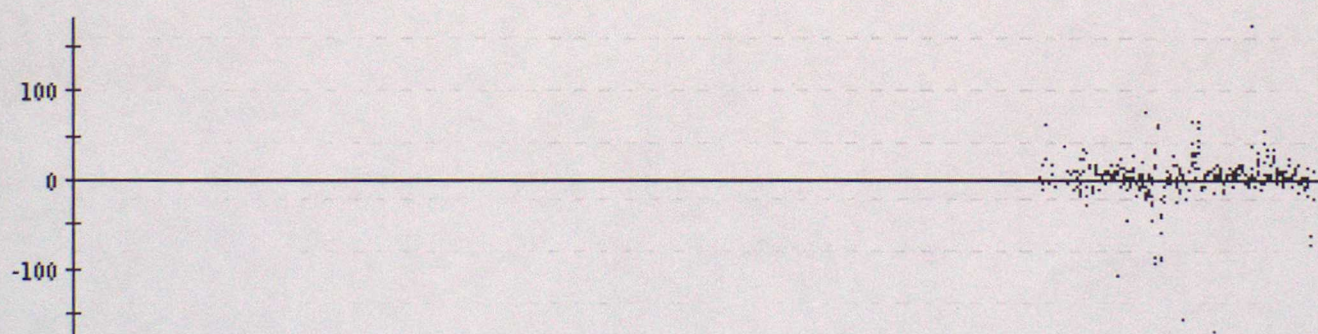
44602 Wind direction



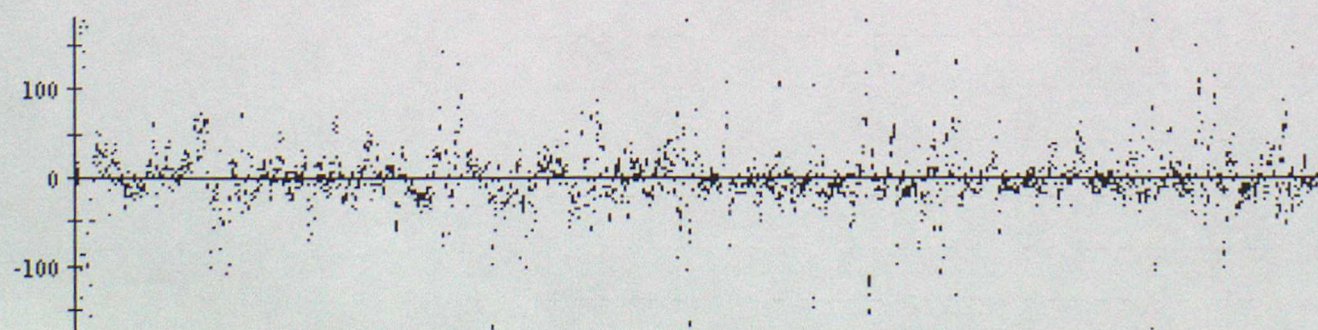
62502 Wind direction



62573 Wind direction



62711 Wind direction



ANNEX F - SUMMARY TABLE OF OPERATIONAL DRIFTING BUOYS

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
41523	28840	US	*					*	01/07 - 30/09
41625	?		*	*				*	01/07 - 17/08
41640	?		*	*				*	14/07 - 30/09
41647	?		*	*		*	*	*	01/07 - 30/09
41648	?		*	*		*	*	*	01/07 - 30/09
41650	7776	US	*	*				*	01/07 - 30/09
41652	7897	US	*	*		*	*	*	01/07 - 30/09
41657	27063	US	*	*					01/07 - 28/08
41658	27064	US	*	*				*	01/07 - 30/09
41659	27065	US	*	*				*	01/07 - 30/09
41665	?		*	*				*	01/07 - 30/09
41666	?		*	*				*	01/07 - 30/09
42533	?		*	*				*	01/07 - 09/07
44504	?		*	*				*	01/07 - 30/09
44511	?		*	*				*	20/08 - 30/09
44517	28867	US	*	*				*	01/07 - 30/09
44549	22648	UK	*	*				*	01/07 - 30/09
44550	23703	UK	*	*				*	01/07 - 30/09
44601	32791	F	*	*		*	*	*	01/07 - 30/09
44602	32792	F	*	*		*	*	*	01/07 - 30/09
44606	19893	UK	*	*				*	12/08 - 30/09
44607	19906	UK	*	*				*	12/08 - 30/09
44608	20211	UK	*	*				*	12/08 - 30/09
44609	20946	UK	*	*				*	12/08 - 30/09
44610	21131	UK	*	*				*	12/08 - 30/09
44611	13695	UK	*	*				*	27/09 - 30/09
44616	17149	UK	*	*				*	01/07 - 30/09
44621	17150	UK	*	*				*	01/07 - 17/07
44624	17151	UK	*	*				*	01/07 - 30/09
44625	17153	UK	*	*				*	01/07 - 30/09
44627	13698	NL	*	*				*	01/07 - 30/09
44721	18702	UK	*	*				*	01/07 - 30/09
44723	21562	UK	*	*				*	01/07 - 30/09
44726	23460	UK	*	*				*	01/07 - 30/09
44728	23553	UK	*	*					01/07 - 24/07
44730	23856	UK	*	*				*	01/07 - 30/09

ANNEX F - CONT'd

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
44742	21667	UK	*	*				*	01/07 - 30/08
44743	4270	D	*	*					01/07 - 30/09
44763	17574	UK	*	*				*	01/07 - 30/09
44764	23913	UK	*	*				*	01/07 - 30/09
44767	16977	UK	*	*				*	01/07 - 30/09
44769	13694	UK	*	*				*	01/07 - 30/09
44770	16976	UK	*	*				*	01/07 - 30/09
44772	16978	UK	*	*				*	01/07 - 30/09
44773	21468	UK	*	*				*	01/07 - 30/09
44775	25372	UK	*	*				*	01/07 - 30/09
44778	25370	UK	*	*				*	01/07 - 20/08
44779	6669	D	*	*	*			*	01/07 - 23/07
44780	1153	IR	*	*					01/07 - 30/09
62501	7139	F	*	*				*	01/07 - 30/09
62502	28700	F	*	*		*	*	*	01/07 - 30/09
62503	17926	F	*	*				*	01/07 - 30/09
62504	17928	F	*	*				*	01/07 - 30/09
62505	17188	F	*	*				*	01/07 - 30/09
62506	17189	F	*	*				*	01/07 - 30/09
62507	28695	F	*	*				*	01/07 - 30/09
62508	32789	F	*	*				*	07/07 - 30/09
62509	32790	F	*	*				*	01/07 - 30/09
62512	28692	F	*	*				*	01/07 - 30/09
62513	?		*	*				*	23/09 - 30/09
62514	?		*	*				*	23/09 - 30/09
62515	?		*	*				*	15/09 - 30/09
62517	?		*	*				*	11/09 - 30/09
62519	?		*	*				*	29/09 - 30/09
62573	?		*	*	*	*	*	*	10/09 - 30/09
62694	17577	UK	*	*					01/07 - 18/07
62696	18222	UK	*	*				*	01/07 - 30/09
62697	19894	UK	*	*				*	01/07 - 30/09
62711	21375	UK	*	*		*	*	*	01/07 - 30/09
62712	21512	UK	*	*				*	27/08 - 30/09
64549	3678	UK	*	*	*			*	01/07 - 23/07
64553	3038	IR	*	*	*			*	01/07 - 30/09
65517	21570	UK	*	*				*	09/08 - 30/09

