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FIFTY-SEVENTH QUARTERLY REPORT ON DRIFTING BUOYS IN THE NORTH ATLANTIC

By Sue Holton
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30th June 2001

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

65 out of 67 of the buoys reporting, gave a '% of observations with acceptable positions' greater than 95% (76 out of 78 last quarter).

(b) Data timeliness

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

Timeliness	Last quarter.	This quarter
Very Good	30	22
Good	36	29
Satisfactory	9	10
Poor	0	1
Very poor	3	5
Total no. of buoys	78	67

(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	11	6	12	9
Good	7	20	2	9
Satisfactory	17	12	9	4
Poor	19	6	1	1
Very Poor	0	0	0	0

The total number of buoy days in the quarter was 4754 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 5667) and the number of 'buoy hours' with at least one observation was 92943 (compared with 104434 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 19.55 (last quarter the figure was 18.43).

3. SUMMARY OF PRESSURE PERFORMANCE

(a) Buoy deployments, etc.

North of 50deg N

There were 21 buoys reporting pressure at the beginning of the period. 20 buoys were operating at the end of the period. 2 buoys were deployed during the period (44549 and 65595). 3 buoys ceased reporting pressure (44622, 63662 and 64699).

South of 50deg N

There were 32 buoys reporting pressure at the beginning of the period. 33 buoys were reporting at the end of the period.

12 buoys were deployed during the period (41571, 44550, 61538, 61539, 62501, 62504, 62505, 62551, 62564, 62585, 62783 and 62784)

11 buoys ceased reporting pressure (41521, 44723, 44727, 62507, 62508, 62509, 62517, 62519, 62551, 62564 and 62585).

(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:-

- 44723 - Data from this buoy developed an increasing negative bias from 08/02/01 until it ceased reporting altogether on 13/02/01.
- 62783 - Data from this buoy was erratic for the few days it was reporting pressure from 25/02/01 to 02/03/01.
- 62784 - Data from this buoy was erratic for the few days it was reporting pressure from 25/02/01 to 02/03/01.
- 64699 - Data from this buoy showed an increasing positive bias for the two days it was reporting at the beginning of the quarter.

65601 - Data from this buoy became erratic from the middle of January until it ceased reporting pressure on 31/01/01.

Biases

18 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
41505	-0.9	01/01 – 31/03
44548	-0.8	01/01 – 31/03
44611	0.7	01/01 – 31/03
44727	-0.7	01/01 – 10/03
44778	0.7	01/01 – 31/03
61522	-1.1	01/01 – 31/03
62509	-0.6	01/01 – 08/01
62513	-0.9	01/01 – 31/03
62519	-0.6	01/01 – 08/02
62551	0.9	13/02 – 17/03
62585	-1.3	25/02 – 01/03
64517	-0.6	01/01 – 31/03
64548	-0.7	01/01 – 31/03
64698	-0.7	01/01 – 31/03
65593	-0.6	01/01 – 31/03
65600	-0.6	01/01 – 31/03
65602	-0.7	01/01 – 31/03
65663	-0.8	01/01 – 31/03

Summary of Pressure Performance

Pressure Summary	Last Quarter	This Quarter
Acceptable	48	44
Suspect – RMS	7	5
Suspect – Bias	23	18
Total no. of buoys	78	67

(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
41521	-0.04	1.05	820	44612	0.28	0.61	2229
44628	0.17	1.38	2897	44743	0.79	1.51	3241
44765	-0.35	1.51	1715	44772	1.01	0.05	3174
44774	1.20	-0.06	3737	48581	3.38	1.97	1196
61538	0.07	1.62	77	61539	-0.06	1.50	81
62508	0.35	1.39	463	62585	-0.19	0.94	9
62783	0.33	3.99	296	62784	0.16	0.95	296
63662	0.25	5.97	157	64548	-0.08	0.88	4061
65593	-0.48	0.88	5259	65595	0.15	0.61	543
65600	-0.16	0.86	5546	65601	-0.12	1.24	3812
65602	-0.17	1.00	3897	65662	-0.19	0.86	1597
65663	-0.23	1.00	1483	65663	-0.23	1.00	1483

Summary

Buoys 44774 (1.20) , 44772 (1.01) and (48581 (3.38) all showed significant air temperature bias. Also buoy 62783 (3.99) and 63662 (5.97) also showed a significant standard deviations.

Note: 9 observations were received from buoy 62585 which only reported for a few days (25/02 to 01/03).

(5) Winds

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

WMO No.	Wind Speed (kt)			Wind Direction (deg)		
	Mean	St. Dev.	No. of Obs	Mean	St. Dev.	No. of Obs
41523	3.29	4.83	597	14.94	68.40	522
44743	-2.40	4.17	3704	-3.79	21.28	3124
44762	-1.53	10.29	6	28.82	123.46	6
44772	69.37	37.79	3	-80.67	171.53	3
62504	-0.84	3.54	665	-5.80	14.51	658
62505	-8.69	5.99	251	5.44	12.30	169
62551	0.32	3.14	548	-4.78	18.17	478
62564	-0.57	2.96	652	-10.62	13.19	616

Summary

Buoys 41523 (3.29), 44772 (69.37) and 62505 (-8.69), showed a significant **wind speed** bias throughout their reporting lives. Buoy 44762 (10.29) and 44772 (37.79) also showed a significant standard deviation for **wind speed**.

Note: All observations from Buoy 44772 were gross errors.

Buoys 44762 (28.82) and 44772 (-80.67) showed a significant **wind direction** bias. Thses Buoy 44762 (123.46) and 44772 (171.53) also showed a significant standard deviation for **wind direction**.

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 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	41505	41521	41523
Argos Id No.			
Period Within Area	01/01 - 31/03	01/01 - 28/03	01/01 - 31/03
Mean Latitude	26.3	29.6	29.2
Mean Longitude	-65.7	-70.8	-58.8
No. of Obs Received	816	868	1104
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	69.1	95.7	89.3
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	94.9	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	57.0/ 88.1
Sea-Surface Temp.	85.4	95.5	89.5
Median delay (min)	27	23	27
Number of days	90	87	90
Mean No. of obs/day	9.1	10.0	12.3
No. of Hours with obs	713	804	793
Mean no. of hours/day with obs	7.9	9.2	8.8
% of hour periods without an ob	66.9	61.2	63.2
Mean (Ob-Bg)	-0.9	0.3	0.1
RMS (Ob-Bg) unflagged data	1.4	0.8	0.9
Mean (Ob-Bg)	-0.9	0.3	0.1
RMS (Ob-Bg) all data	1.4	0.8	1.3
Revised RMS (Ob-Bg)	1.4	0.8	1.1
% of data flagged	12	10	28
Operating at end of period	YES	NO	YES
Performance			
Availability	Poor	Poor	Poor
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	41571	41644	44546/UK
Argos Id No.			25374
Period Within Area	08/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	32.3	29.6	58.1
Mean Longitude	-50.2	-45.9	-33.3
No. of Obs Received	1134	1058	2377
% of obs with Acceptable Position	98.7	100.0	100.0
% of Present			
Pressure	98.2	90.7	88.5
P. Tendency	0.0	0.0	87.9
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.	98.3	91.2	88.3
Median delay (min)	165.5	31	70
Number of days	83	90	90
Mean No. of obs/day	13.7	11.8	26.4
No. of Hours with obs	1133	785	2150
Mean no. of hours/day with obs	13.7	8.7	23.9
% of hour periods without an ob	42.5	63.6	0.5
Mean (Ob-Bg)	0.4	0.3	-0.5
RMS (Ob-Bg) unflagged data	0.8	1.0	1.6
Mean (Ob-Bg)	0.4	0.3	-0.3
RMS (Ob-Bg) all data	0.8	1.5	2.6
Revised RMS (Ob-Bg)	0.8	1.5	1.9
% of data flagged	0	26	5
Operating at end of period	YES	YES	YES
Performance			
Availability	Poor	Poor	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Acceptable	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44548/UK	44549/UK	44550/UK
Argos Id No.	27617	22648	23703
Period Within Area	01/01 - 31/03	01/03 - 31/03	01/03 - 31/03
Mean Latitude	47.1	51.1	48.9
Mean Longitude	-44.9	-42.8	-45.3
No. of Obs Received	1929	780	765
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	83.5	91.4	91.9
P. Tendency	83.2	90.9	92.3
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.	83.6	91.2	92.3
Median delay (min)	143	69.5	69
Number of days	90	31	31
Mean No. of obs/day	21.4	25.2	24.7
No. of Hours with obs	1852	740	740
Mean no. of hours/day with obs	20.6	23.9	23.9
% of hour periods without an ob	14.2	0.0	0.0
Mean (Ob-Bg)	-0.8	-0.1	-0.4
RMS (Ob-Bg) unflagged data	1.7	1.2	1.1
Mean (Ob-Bg)	-0.6	0.0	-0.4
RMS (Ob-Bg) all data	2.6	1.4	1.2
Revised RMS (Ob-Bg)	2.0	1.4	1.2
% of data flagged	2	1	1
Operating at end of period	YES	YES	YES
Performance Availability	Acceptable	Good	Acceptable
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Acceptable	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44608/F	44610/F	44611/UK
Argos Id No.	14540	12734	27616
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	23.8	53.5	44.5
Mean Longitude	-38.1	-23.5	-7.3
No. of Obs Received	9841	7881	2265
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	61.2	62.1	85.3
P. Tendency	61.1	61.9	84.8
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.	61.2	62.0	85.1
Median delay (min)	158	138	83
Number of days	90	90	90
Mean No. of obs/day	109.3	87.6	25.2
No. of Hours with obs	2161	2134	2135
Mean no. of hours/day with obs	24.0	23.7	23.7
% of hour periods without an ob	0.0	1.2	1.2
Mean (Ob-Bg)	0.4	0.1	0.7
RMS (Ob-Bg) unflagged data	0.8	1.2	1.1
Mean (Ob-Bg)	0.3	0.2	0.7
RMS (Ob-Bg) all data	1.0	1.9	1.1
Revised RMS (Ob-Bg)	0.7	1.5	1.1
% of data flagged	94	86	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Acceptable	Acceptable	Good
Comments			

Annex A - cont'd

WMO No./Country	44612/UK	44613/UK	44620/UK
Argos Id No.	27619	28467	27622
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	37.5	32.8	28.6
Mean Longitude	-32.8	-46.0	-45.7
No. of Obs Received	2993	2359	2202
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	94.4	97.5	95.9
P. Tendency	94.1	95.0	95.7
Air Temperature	0.0	97.4	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	94.3	0.0	95.8
Median delay (min)	109	63	103
Number of days	90	90	90
Mean No. of obs/day	33.3	26.2	24.5
No. of Hours with obs	2154	1458	2154
Mean no. of hours/day with obs	23.9	16.2	23.9
% of hour periods without an ob	0.3	32.3	0.3
Mean (Ob-Bg)	0.2	0.2	0.1
RMS (Ob-Bg) unflagged data	0.9	0.8	0.7
Mean (Ob-Bg)	0.2	0.2	0.1
RMS (Ob-Bg) all data	1.0	0.8	0.7
Revised RMS (Ob-Bg)	1.0	0.8	0.7
% of data flagged	26	46	0
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	44622/UK	44623/UK	44628/UK
Argos Id No.	27622	27624	12287
Period Within Area	01/01 - 25/02	01/01 - 31/03	01/01 - 31/03
Mean Latitude	56.8	36.0	33.3
Mean Longitude	-10.4	-30.1	-17.5
No. of Obs Received	1419	2270	3089
% of obs with Acceptable Position	100.0	100.0	94.9
% of Present			
Pressure	85.3	90.0	97.2
P. Tendency	85.4	89.8	93.1
Air Temperature	0.0	0.0	96.8
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	85.6	90.0	97.4
Median delay (min)	66	102	26
Number of days	56	90	90
Mean No. of obs/day	25.3	25.2	34.3
No. of Hours with obs	1315	2149	1557
Mean no. of hours/day with obs	23.5	23.9	17.3
% of hour periods without an ob	0.7	0.5	27.7
Mean (Ob-Bg)	0.3	0.5	0.4
RMS (Ob-Bg) unflagged data	1.0	1.0	0.8
Mean (Ob-Bg)	0.3	0.4	-0.1
RMS (Ob-Bg) all data	1.0	1.7	6.8
Revised RMS (Ob-Bg)	1.0	1.7	0.8
% of data flagged	0	2	59
Operating at end of period	NO	YES	YES
Performance			
Availability	Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44723/NL	44724/UK	44725/UK
Argos Id No.	16392	27922	27925
Period Within Area	01/01 - 13/02	01/01 - 31/03	01/01 - 31/03
Mean Latitude	46.4	35.8	49.9
Mean Longitude	-11.8	-19.5	-42.3
No. of Obs Received	876	2449	2254
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	88.1	85.7	89.4
P. Tendency	87.8	85.6	89.3
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.	0.0	85.8	89.4
Median delay (min)	96.5	146.5	81.5
Number of days	44	90	90
Mean No. of obs/day	19.9	27.2	25.0
No. of Hours with obs	842	2057	2145
Mean no. of hours/day with obs	19.1	22.9	23.8
% of hour periods without an ob	19.7	4.8	0.7
Mean (Ob-Bg)	-0.5	0.3	-0.3
RMS (Ob-Bg) unflagged data	1.2	0.8	1.1
Mean (Ob-Bg)	-2.8	0.2	-0.3
RMS (Ob-Bg) all data	7.3	0.8	1.1
Revised RMS (Ob-Bg)	5.8	0.8	1.1
% of data flagged	16	16	1
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Good	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Acceptable	Good
Comments			

Annex A - cont'd

WMO No./Country	44727/UK	44729/UK	44741/UK
Argos Id No.	27925	25375	25373
Period Within Area	01/01 - 10/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	28.0	48.3	61.2
Mean Longitude	-35.6	-15.7	-33.2
No. of Obs Received	1740	2327	2316
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	92.0	84.0	86.9
P. Tendency	91.8	84.1	87.0
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.	0.0	84.1	87.0
Median delay (min)	111	87	62
Number of days	69	90	90
Mean No. of obs/day	25.2	25.9	25.7
No. of Hours with obs	1634	2143	2149
Mean no. of hours/day with obs	23.7	23.8	23.9
% of hour periods without an ob	0.5	0.8	0.5
Mean (Ob-Bg)	-0.7	0.2	0.3
RMS (Ob-Bg) unflagged data	1.0	1.0	1.0
Mean (Ob-Bg)	-0.7	0.2	0.3
RMS (Ob-Bg) all data	0.9	1.0	1.0
Revised RMS (Ob-Bg)	1.0	1.0	1.0
% of data flagged	3	2	1
Operating at end of period	NO	YES	YES
Performance			
Availability	Good	Good	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44743	44761/UK	44762/UK
Argos Id No.		27615	19073
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	49.5	52.0	45.6
Mean Longitude	-3.9	-20.7	-12.8
No. of Obs Received	4167	2319	2284
% of obs with Acceptable Position	99.2	99.9	100.0
% of Present Pressure	97.2	86.7	60.6
P. Tendency	93.9	86.5	59.9
Air Temperature	79.5	0.0	0.0
Wind Speed/Dir	91.5/ 91.1	0.0/ 0.0	0.3/ 0.3
Sea-Surface Temp.	80.0	86.6	60.5
Median delay (min)	22	75	123
Number of days	90	90	90
Mean No. of obs/day	46.3	25.8	25.4
No. of Hours with obs	1558	2149	1994
Mean no. of hours/day with obs	17.3	23.9	22.2
% of hour periods without an ob	27.5	0.5	7.7
Mean (Ob-Bg)	0.4	-0.3	0.1
RMS (Ob-Bg) unflagged data	0.9	1.0	0.9
Mean (Ob-Bg)	0.3	-0.3	0.1
RMS (Ob-Bg) all data	4.8	1.1	5.3
Revised RMS (Ob-Bg)	1.0	1.1	0.9
% of data flagged	69	1	5
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	44765/UK	44770/UK	44771/UK
Argos Id No.	28466	21627	25377
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	34.5	52.5	53.3
Mean Longitude	-45.3	-23.3	-35.5
No. of Obs Received	1798	2333	2250
% of obs with Acceptable Position	82.5	100.0	100.0
% of Present Pressure	97.6	83.6	86.8
P. Tendency	95.4	83.4	86.5
Air Temperature	97.8	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	0.0	83.7	86.6
Median delay (min)	17	89	79
Number of days	90	90	90
Mean No. of obs/day	20.0	25.9	25.0
No. of Hours with obs	1137	2137	2105
Mean no. of hours/day with obs	12.6	23.7	23.4
% of hour periods without an ob	47.2	1.1	2.5
Mean (Ob-Bg)	0.0	0.1	0.1
RMS (Ob-Bg) unflagged data	1.1	1.1	1.2
Mean (Ob-Bg)	-0.7	0.1	0.1
RMS (Ob-Bg) all data	8.3	1.3	1.2
Revised RMS (Ob-Bg)	1.8	1.3	1.2
% of data flagged	45	1	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44772/UK	44774/UK	44775/UK
Argos Id No.	12412	12286	25372
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	44.9	46.9	41.8
Mean Longitude	-9.4	-25.2	-56.0
No. of Obs Received	4043	3918	2257
% of obs with Acceptable Position	99.5	99.5	100.0
% of Present Pressure	97.0	97.5	91.1
P. Tendency	93.7	93.7	90.6
Air Temperature	80.1	97.2	0.0
Wind Speed/Dir	68.3/ 0.1	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	0.7	97.8	91.0
Median delay (min)	22	20	85
Number of days	90	90	90
Mean No. of obs/day	44.9	43.5	25.1
No. of Hours with obs	1621	1619	2146
Mean no. of hours/day with obs	18.0	18.0	23.8
% of hour periods without an ob	24.8	24.8	0.6
Mean (Ob-Bg)	-0.2	-0.3	0.1
RMS (Ob-Bg) unflagged data	0.9	1.0	1.2
Mean (Ob-Bg)	-0.5	-0.8	0.1
RMS (Ob-Bg) all data	5.3	6.5	1.5
Revised RMS (Ob-Bg)	1.1	1.1	1.3
% of data flagged	67	66	1
Operating at end of period	YES	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	44776/UK	44778/UK	48581
Argos Id No.	25371	25370	
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	46.2	42.4	71.3
Mean Longitude	-44.0	-46.2	-65.7
No. of Obs Received	3044	2253	1359
% of obs with Acceptable Position	100.0	100.0	95.9
% of Present			
Pressure	91.7	91.3	99.9
P. Tendency	91.7	91.1	44.9
Air Temperature	0.0	0.0	88.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	91.8	91.2	0.0
Median delay (min)	100	87	72
Number of days	90	90	90
Mean No. of obs/day	33.8	25.0	15.1
No. of Hours with obs	2149	2148	1358
Mean no. of hours/day with obs	23.9	23.9	15.1
% of hour periods without an ob	0.5	0.6	37.1
Mean (Ob-Bg)	0.4	0.7	-0.3
RMS (Ob-Bg) unflagged data	1.3	1.4	1.1
Mean (Ob-Bg)	0.5	0.8	-0.3
RMS (Ob-Bg) all data	1.6	1.7	1.1
Revised RMS (Ob-Bg)	1.4	1.5	1.1
% of data flagged	27	1	0
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Acceptable
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	61522	61538	61539
Argos Id No.			
Period Within Area	01/01 - 31/03	28/03 - 31/03	28/03 - 31/03
Mean Latitude	40.0	45.2	45.2
Mean Longitude	8.3	12.4	12.4
No. of Obs Received	970	104	106
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	96.9	97.1	99.1
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	97.1	99.1
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	97.8	100.0	98.1
Median delay (min)	27	147	146
Number of days	90	4	4
Mean No. of obs/day	10.8	26.0	26.5
No. of Hours with obs	915	74	74
Mean no. of hours/day with obs	10.2	18.5	18.5
% of hour periods without an ob	57.5	0.0	0.0
Mean (Ob-Bg)	-1.1	-0.2	-0.3
RMS (Ob-Bg) unflagged data	1.4	0.8	0.9
Mean (Ob-Bg)	-1.1	-0.3	-0.3
RMS (Ob-Bg) all data	1.4	0.8	0.9
Revised RMS (Ob-Bg)	1.4	0.8	0.9
% of data flagged	9	28	31
Operating at end of period	YES	YES	YES
Performance Availability	Poor	Good	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Acceptable	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	62501/F	62504/F	62505/F
Argos Id No.	7139	17928	17929
Period Within Area	02/03 - 31/03	27/02 - 31/03	06/03 - 31/03
Mean Latitude	41.1	39.5	43.0
Mean Longitude	-16.6	-19.9	-16.2
No. of Obs Received	836	833	626
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	91.5	84.3	81.6
P. Tendency	91.0	83.8	81.3
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	83.8/ 83.7	42.8/ 43.1
Sea-Surface Temp.	91.5	84.0	81.2
Median delay (min)	149	100	100
Number of days	30	33	26
Mean No. of obs/day	27.9	25.2	24.1
No. of Hours with obs	687	778	589
Mean no. of hours/day with obs	22.9	23.6	22.7
% of hour periods without an ob	3.1	1.1	2.6
Mean (Ob-Bg)	0.4	0.3	0.5
RMS (Ob-Bg)	1.0	1.0	0.9
unflagged data			
Mean (Ob-Bg)	0.6	0.4	0.6
RMS (Ob-Bg)	1.9	1.0	2.5
all data			
Revised RMS (Ob-Bg)	1.3	1.0	0.9
% of data flagged	18	1	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Acceptable	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62507/F	62508/F	62509/F
Argos Id No.	10111	5822	14537
Period Within Area	01/01 - 22/02	01/01 - 25/01	01/01 - 08/01
Mean Latitude	34.5	34.2	46.5
Mean Longitude	-17.5	-8.8	-2.6
No. of Obs Received	1885	696	318
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	96.8	96.1	92.1
P. Tendency	90.1	89.2	92.1
Air Temperature	0.0	68.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	97.6	96.0	92.8
Median delay (min)	25	27	99
Number of days	53	25	8
Mean No. of obs/day	35.6	27.8	39.8
No. of Hours with obs	991	456	171
Mean no. of hours/day with obs	18.7	18.2	21.4
% of hour periods without an ob	21.4	23.5	2.8
Mean (Ob-Bg)	0.1	-0.3	-0.6
RMS (Ob-Bg) unflagged data	0.7	1.3	1.1
Mean (Ob-Bg)	-0.1	-0.4	-0.6
RMS (Ob-Bg) all data	3.3	2.9	1.1
Revised RMS (Ob-Bg)	0.9	1.4	1.1
% of data flagged	57	44	44
Operating at end of period	NO	NO	NO
Performance			
Availability	Very Good	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62513/F	62514/F	62517/F
Argos Id No.	12731	7119	18674
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 02/03
Mean Latitude	48.1	55.5	33.5
Mean Longitude	-14.5	-14.0	-15.7
No. of Obs Received	2227	2281	1524
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	84.9	80.8	88.0
P. Tendency	0.0	80.5	87.8
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.	44.5	80.5	88.4
Median delay (min)	428	83	106
Number of days	90	90	61
Mean No. of obs/day	24.7	25.3	25.0
No. of Hours with obs	1435	2102	1448
Mean no. of hours/day with obs	15.9	23.4	23.7
% of hour periods without an ob	33.5	2.7	1.1
Mean (Ob-Bg)	-0.9	0.3	-0.1
RMS (Ob-Bg) unflagged data	1.3	1.2	0.7
Mean (Ob-Bg)	-0.9	0.5	-0.1
RMS (Ob-Bg) all data	1.3	2.0	0.8
Revised RMS (Ob-Bg)	1.3	1.4	0.8
% of data flagged	30	3	1
Operating at end of period	YES	YES	NO
Performance			
Availability	Acceptable	Good	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Poor	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62519/F	62551/F	62564/F
Argos Id No.	18693	15501	15516
Period Within Area	01/01 - 08/02	13/02 - 17/03	20/02 - 30/03
Mean Latitude	43.0	43.4	37.8
Mean Longitude	-11.6	-17.5	-16.6
No. of Obs Received	969	634	779
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	86.0	33.4	33.0
P. Tendency	85.6	0.0	0.0
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	98.1/ 98.4	98.2/ 98.5
Sea-Surface Temp.	86.1	97.9	98.3
Median delay (min)	106.5	202	242
Number of days	39	33	39
Mean No. of obs/day	24.8	19.2	20.0
No. of Hours with obs	910	617	767
Mean no. of hours/day with obs	23.3	18.7	19.7
% of hour periods without an ob	1.1	20.8	15.9
Mean (Ob-Bg)	-0.6	0.9	0.2
RMS (Ob-Bg) unflagged data	1.1	1.6	0.8
Mean (Ob-Bg)	-0.6	0.9	0.2
RMS (Ob-Bg) all data	1.1	1.6	0.8
Revised RMS (Ob-Bg)	1.1	1.6	0.8
% of data flagged	1	2	1
Operating at end of period	NO	NO	NO
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Good	Poor	Very Poor
Comments			

Annex A - cont'd

WMO No./Country	62585	62596/NL	62783
Argos Id No.		16391	
Period Within Area	25/02 - 01/03	01/01 - 31/03	25/02 - 31/03
Mean Latitude	43.5	62.1	43.7
Mean Longitude	-17.5	-30.0	-16.5
No. of Obs Received	90	2112	866
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	75.6	90.3	12.1
P. Tendency	0.0	90.1	0.0
Air Temperature	75.6	0.0	29.9
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	75.6	90.2	73.9
Median delay (min)	743	83	515
Number of days	5	90	35
Mean No. of obs/day	18.0	23.5	24.7
No. of Hours with obs	73	2029	815
Mean no. of hours/day with obs	14.6	22.5	23.3
% of hour periods without an ob	26.3	6.1	2.7
Mean (Ob-Bg)	-1.3	-0.4	-1.9
RMS (Ob-Bg) unflagged data	1.9	1.0	2.3
Mean (Ob-Bg)	-1.3	-0.4	-2.0
RMS (Ob-Bg) all data	1.9	1.0	2.6
Revised RMS (Ob-Bg)	1.9	1.0	2.6
% of data flagged	0	1	3
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Very Poor	Good	Very Poor
Comments			

Annex A - cont'd

WMO No./Country	62784	63662	64517/F
Argos Id No.			14178
Period Within Area	25/02 - 31/03	01/01 - 26/02	01/01 - 31/03
Mean Latitude	41.1	72.5	54.7
Mean Longitude	-15.8	-12.5	-16.1
No. of Obs Received	890	325	4107
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	12.9	90.5	86.5
P. Tendency	0.0	0.0	86.1
Air Temperature	75.4	50.2	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	75.7	0.0	86.1
Median delay (min)	513	146	98
Number of days	35	57	90
Mean No. of obs/day	25.4	5.7	45.6
No. of Hours with obs	824	305	2127
Mean no. of hours/day with obs	23.5	5.4	23.6
% of hour periods without an ob	1.7	77.5	1.5
Mean (Ob-Bg)	-0.8	-0.2	-0.6
RMS (Ob-Bg) unflagged data	2.1	1.4	1.1
Mean (Ob-Bg)	-0.8	-0.3	-0.6
RMS (Ob-Bg) all data	2.1	2.0	1.1
Revised RMS (Ob-Bg)	2.1	2.0	1.1
% of data flagged	0	6	48
Operating at end of period	YES	NO	YES
Performance Availability	Good	Poor	Very Good
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Very Poor	Acceptable	Good
Comments			

Annex A - cont'd

WMO No./Country	64548/IR	64698/F	64699/F
Argos Id No.	1153	29867	29868
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 02/03
Mean Latitude	60.2	60.2	55.3
Mean Longitude	-10.1	-31.1	-49.9
No. of Obs Received	4543	3625	2381
% of obs with Acceptable Position	98.7	100.0	100.0
% of Present Pressure	91.6	91.3	2.4
P. Tendency	88.8	91.2	21.5
Air Temperature	91.3	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	74.9	91.4	92.5
Median delay (min)	18	50	52
Number of days	90	90	61
Mean No. of obs/day	50.5	40.3	39.0
No. of Hours with obs	1630	2155	1439
Mean no. of hours/day with obs	18.1	23.9	23.6
% of hour periods without an ob	24.4	0.2	0.6
Mean (Ob-Bg)	-0.7	-0.7	2.2
RMS (Ob-Bg) unflagged data	1.2	1.2	2.9
Mean (Ob-Bg)	-0.8	-0.7	9.1
RMS (Ob-Bg) all data	2.9	2.2	10.6
Revised RMS (Ob-Bg)	1.2	1.2	10.7
% of data flagged	71	38	77
Operating at end of period	YES	YES	NO
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Suspect	Suspect	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	65593/NL	65595/NL	65600/N
Argos Id No.	4228	4229	3676
Period Within Area	01/01 - 31/03	07/03 - 31/03	01/01 - 31/03
Mean Latitude	61.2	58.0	60.8
Mean Longitude	-35.8	-42.0	-12.4
No. of Obs Received	5563	630	5848
% of obs with Acceptable Position	99.7	99.5	99.4
% of Present Pressure	96.7	91.4	98.0
P. Tendency	62.0	86.8	68.2
Air Temperature	96.4	91.0	97.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	78.6	65.9	78.5
Median delay (min)	17	21	18
Number of days	90	25	90
Mean No. of obs/day	61.8	25.2	65.0
No. of Hours with obs	1721	425	1778
Mean no. of hours/day with obs	19.1	17.0	19.8
% of hour periods without an ob	20.1	27.8	17.5
Mean (Ob-Bg)	-0.6	0.0	-0.6
RMS (Ob-Bg) unflagged data	1.4	1.1	1.3
Mean (Ob-Bg)	-0.6	0.0	-0.7
RMS (Ob-Bg) all data	2.4	1.0	1.7
Revised RMS (Ob-Bg)	1.4	1.0	1.3
% of data flagged	74	43	75
Operating at end of period	YES	YES	YES
Performance Availability	Very Good	Good	Very Good
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	65601/D	65602/IR	65662/D
Argos Id No.	3039	6667	9307
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	60.8	58.4	57.3
Mean Longitude	-27.8	-31.5	-37.5
No. of Obs Received	4094	4251	1881
% of obs with Acceptable Position	98.2	98.7	98.1
% of Present			
Pressure	24.2	94.8	88.5
P. Tendency	23.8	92.5	84.3
Air Temperature	94.9	94.0	88.3
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	85.3	84.1	76.2
Median delay (min)	18	17	22
Number of days	90	90	90
Mean No. of obs/day	45.5	47.2	20.9
No. of Hours with obs	1577	1597	1223
Mean no. of hours/day with obs	17.5	17.7	13.6
% of hour periods without an ob	26.9	25.9	43.2
Mean (Ob-Bg)	-0.6	-0.7	-0.5
RMS (Ob-Bg) unflagged data	1.4	1.4	1.2
Mean (Ob-Bg)	5.1	-0.7	-0.4
RMS (Ob-Bg) all data	14.1	2.7	1.6
Revised RMS (Ob-Bg)	7.4	1.4	1.3
% of data flagged	76	69	44
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Acceptable
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

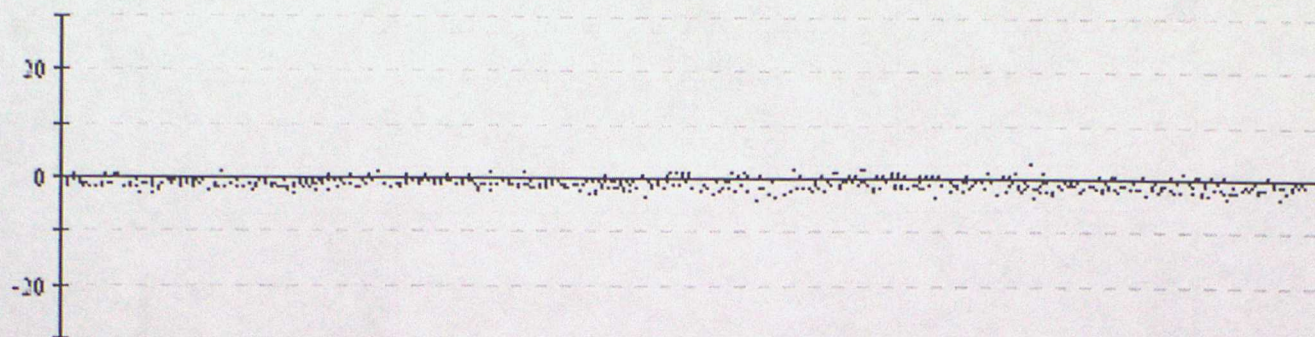
Annex A - cont'd

WMO No./Country	65663/D		
Argos Id No.	9308		
Period Within Area	01/01 - 31/03		
Mean Latitude	53.9		
Mean Longitude	-40.3		
No. of Obs Received	1714		
% of obs with Acceptable Position	98.9		
% of Present Pressure	89.7		
P. Tendency	86.9		
Air Temperature	89.6		
Wind Speed/Dir	0.0/ 0.0		
Sea-Surface Temp.	78.1		
Median delay (min)	22		
Number of days	90		
Mean No. of obs/day	19.0		
No. of Hours with obs	1193		
Mean no. of hours/day with obs	13.3		
% of hour periods without an ob	44.5		
Mean (Ob-Bg)	-0.7		
RMS (Ob-Bg) unflagged data	1.6		
Mean (Ob-Bg)	-0.8		
RMS (Ob-Bg) all data	3.2		
Revised RMS (Ob-Bg)	1.8		
% of data flagged	40		
Operating at end of period	YES		
Performance			
Availability	Acceptable		
Pressure Quality	Suspect		
Timeliness	Very Good		
Comments			

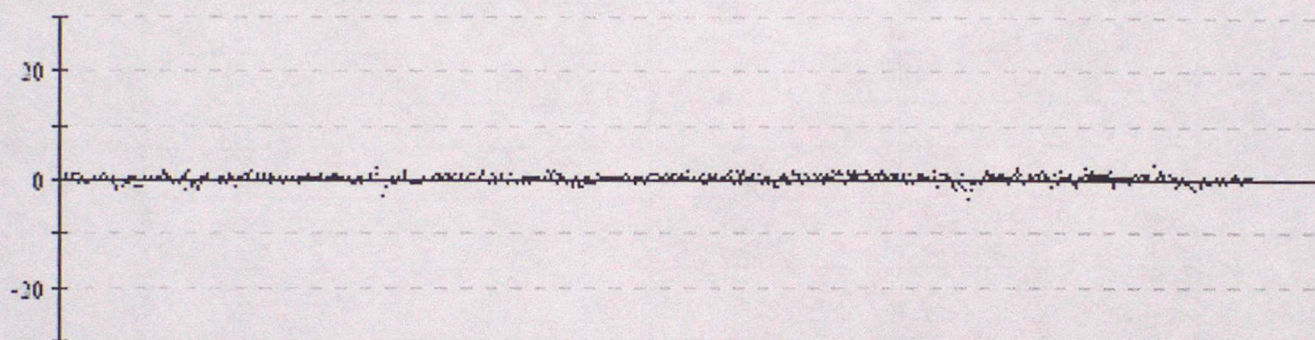
ANNEX B - TIME SERIES PLOTS OF PRESSURE

Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

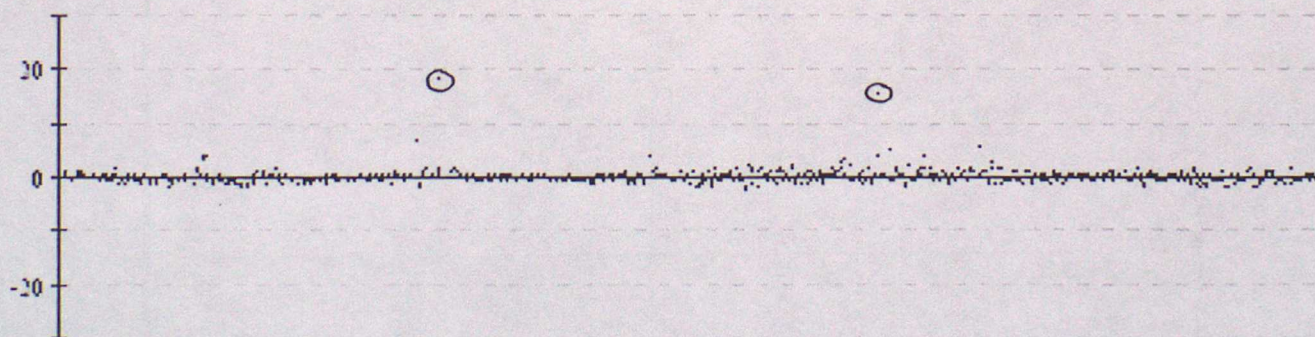
41505 Pressure



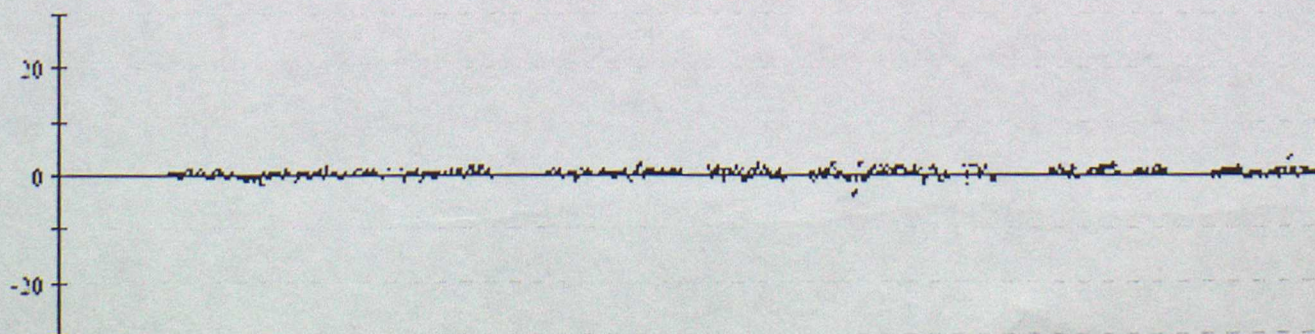
41521 Pressure



41523 Pressure

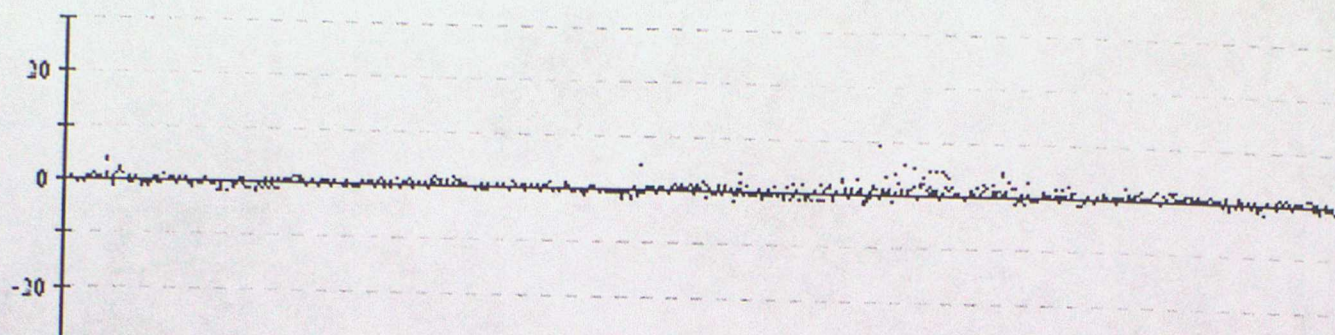


41571 Pressure

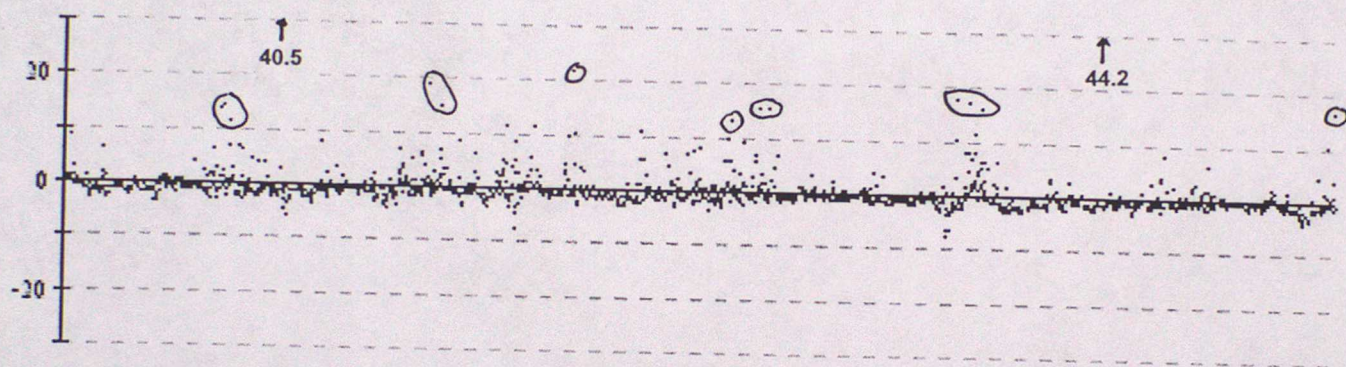


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

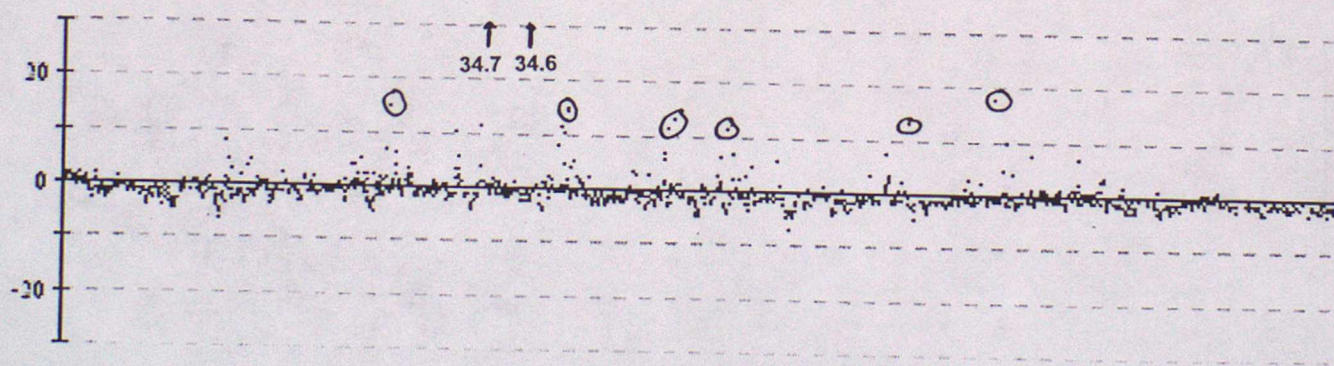
41644 Pressure



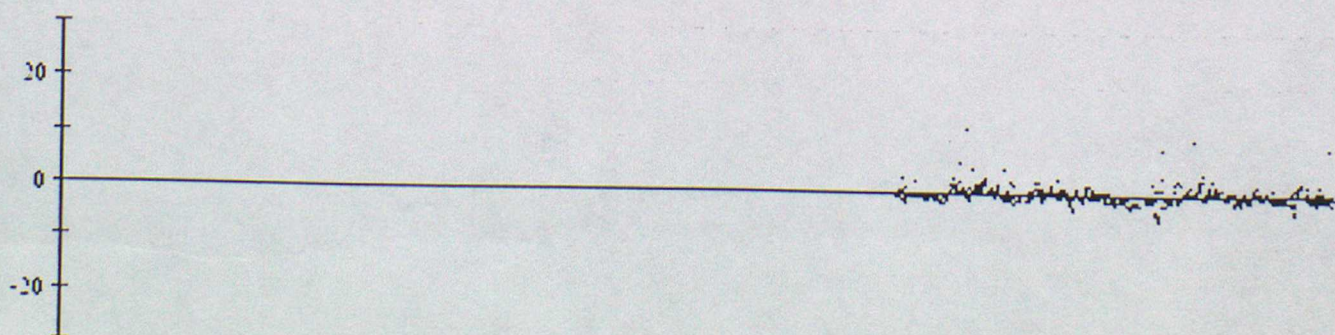
44546 Pressure



44548 Pressure

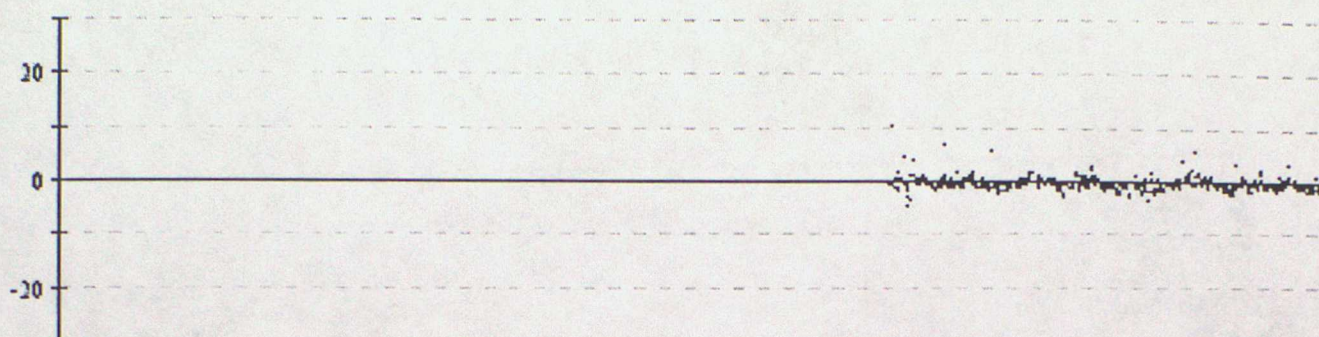


44549 Pressure

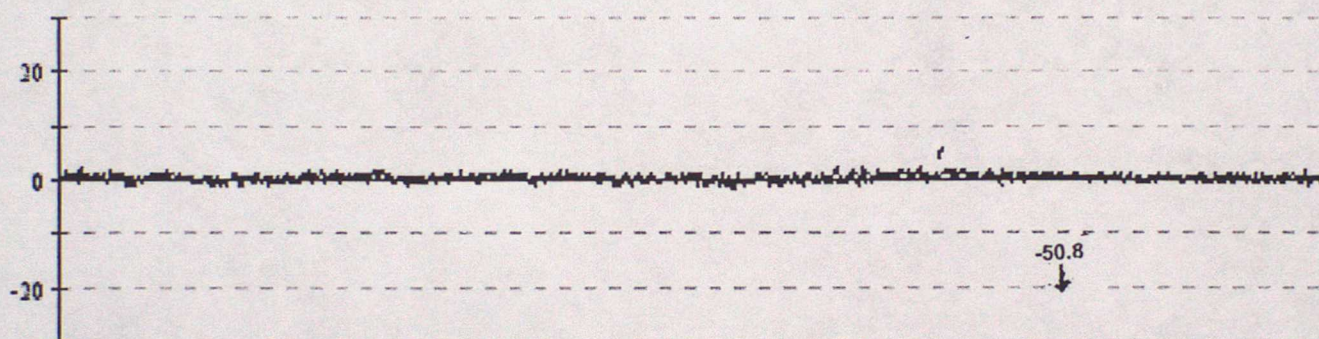


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

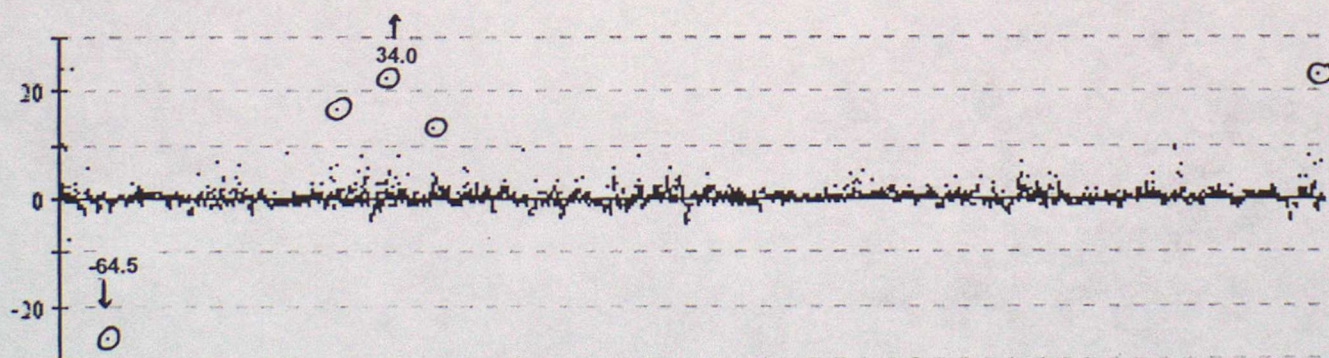
44550 Pressure



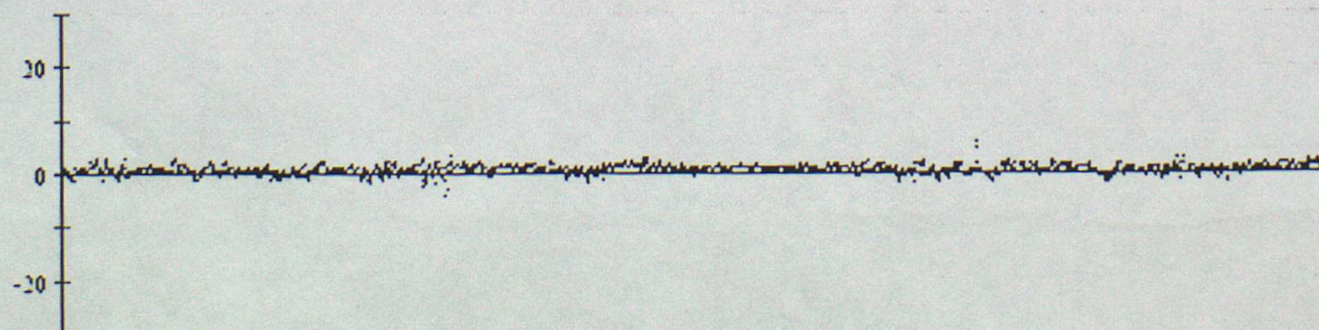
44608 Pressure



44610 Pressure

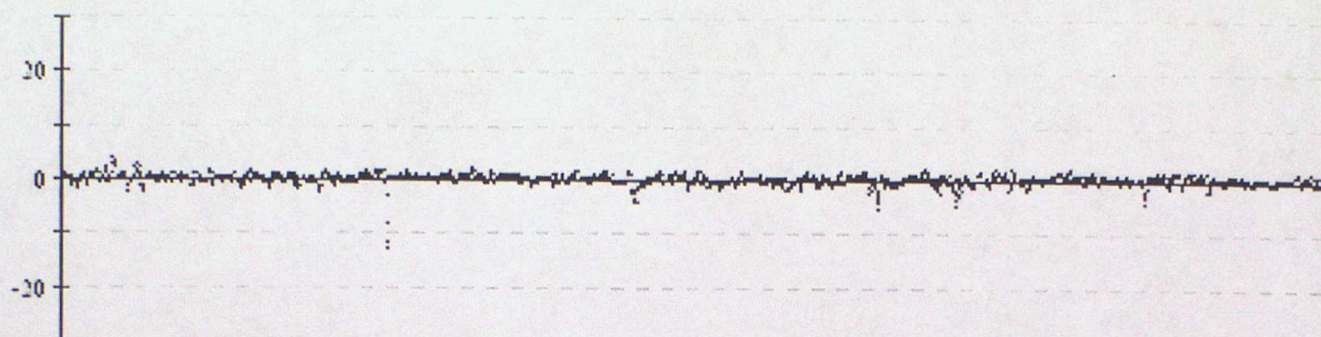


44611 Pressure

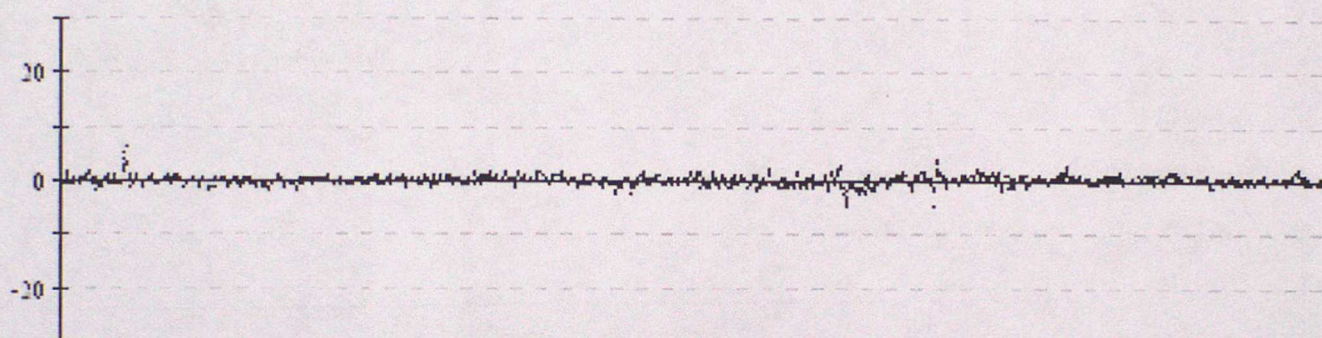


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

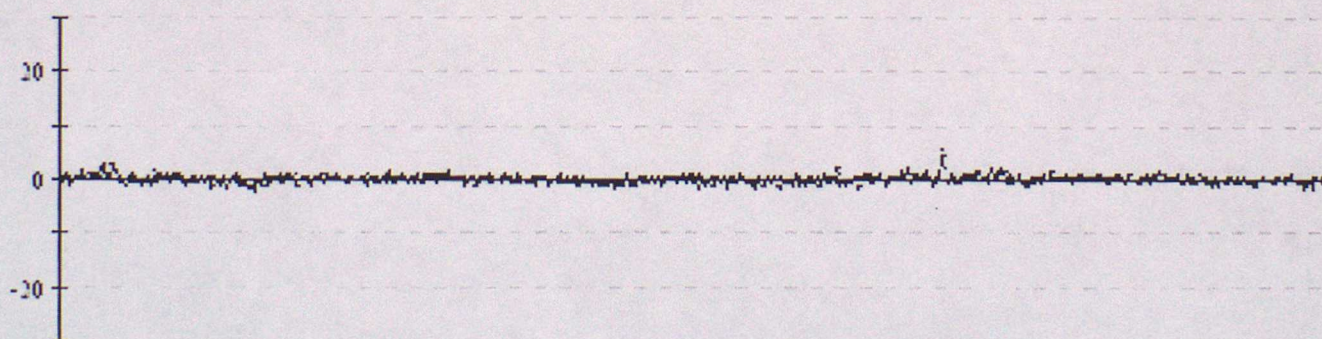
44612 Pressure



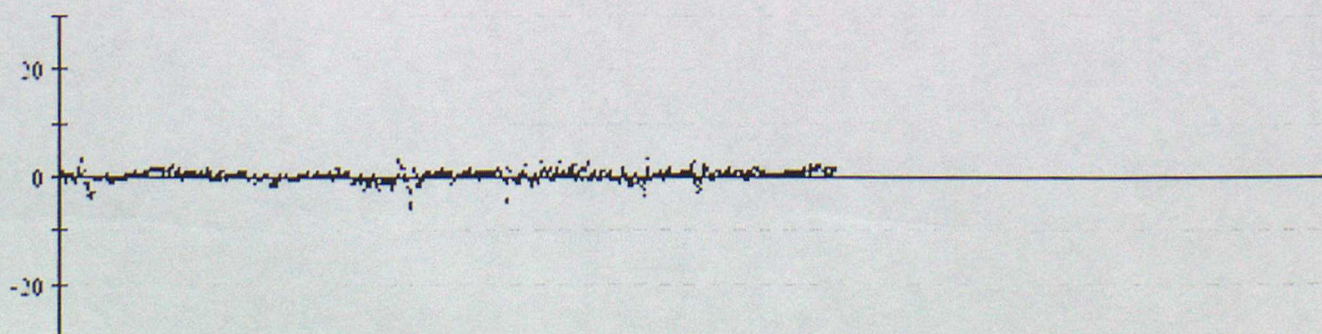
44613 Pressure



44620 Pressure

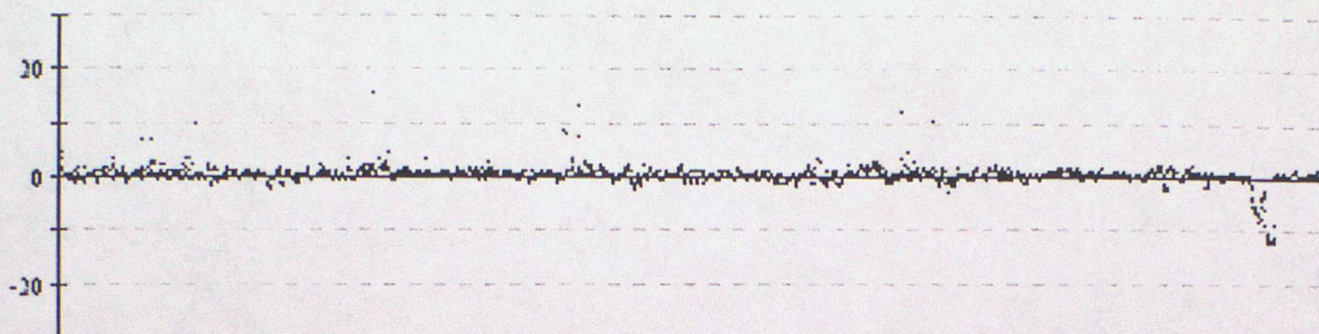


44622 Pressure

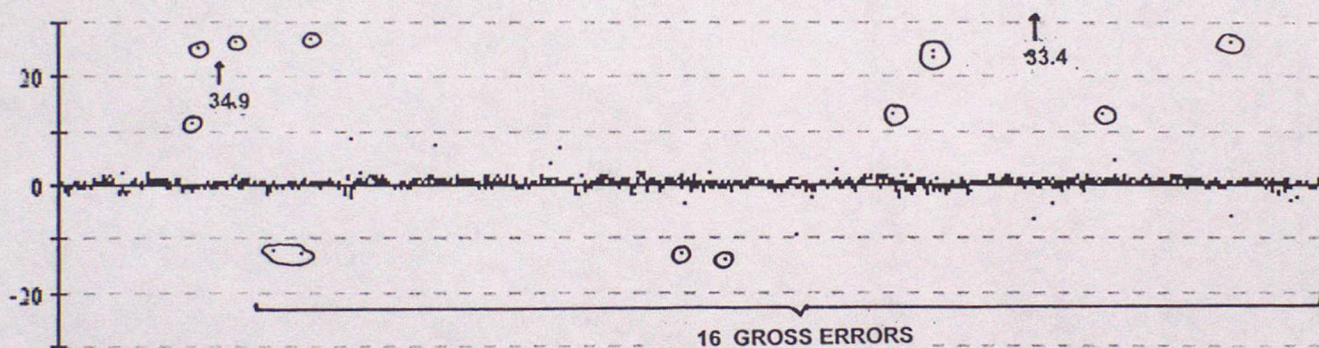


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

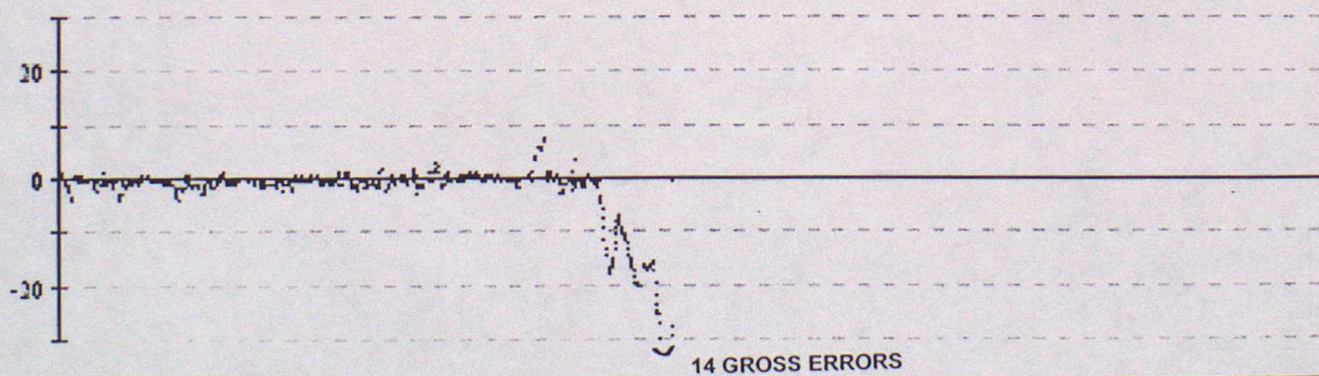
44623 Pressure



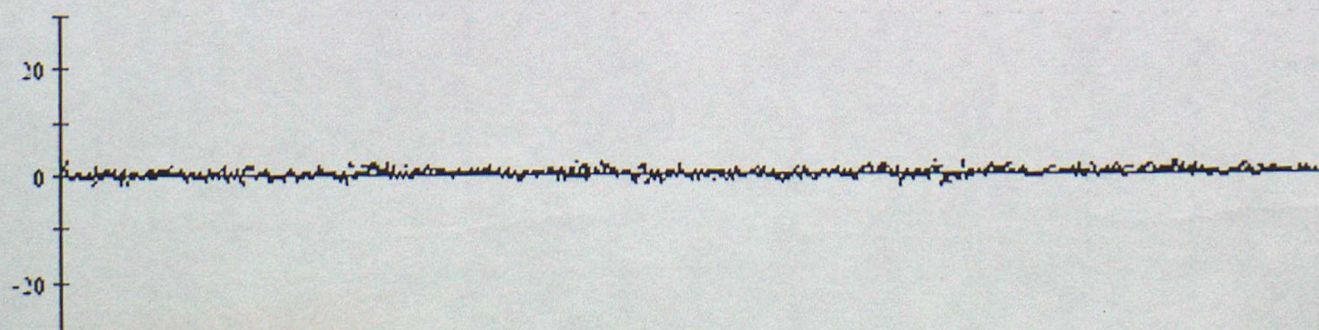
44628 Pressure



44723 Pressure

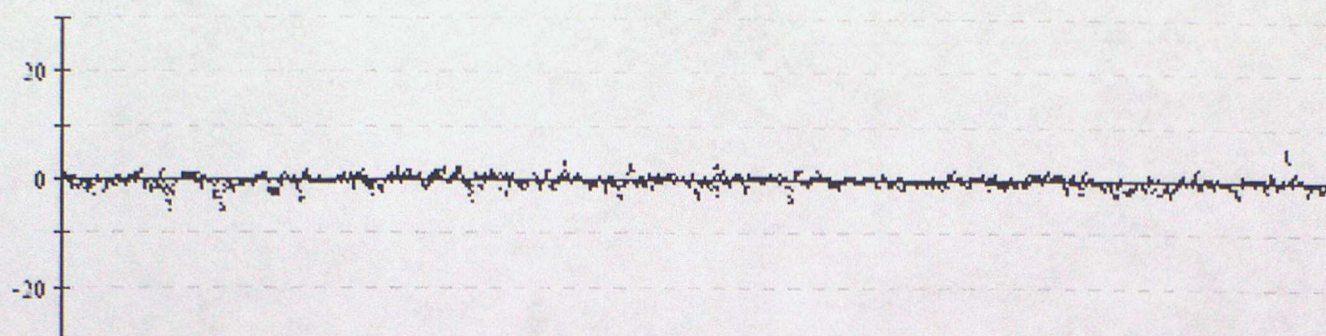


44724 Pressure

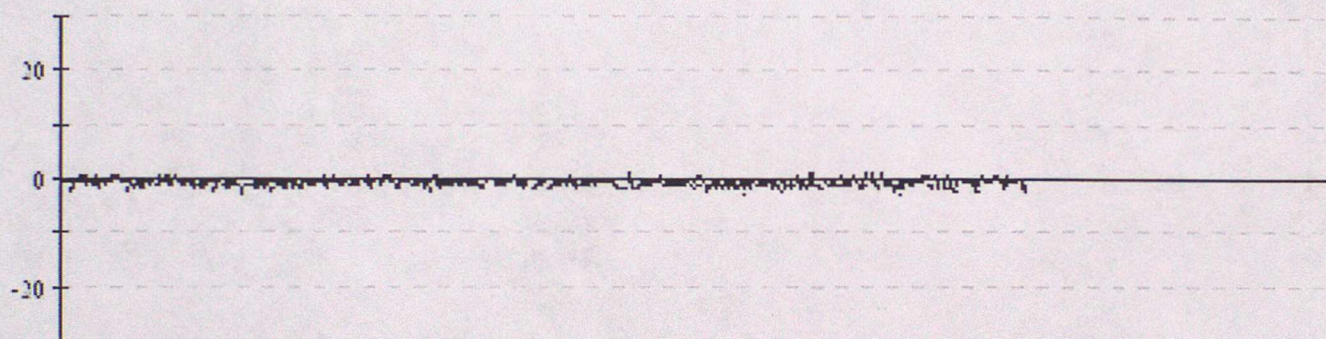


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

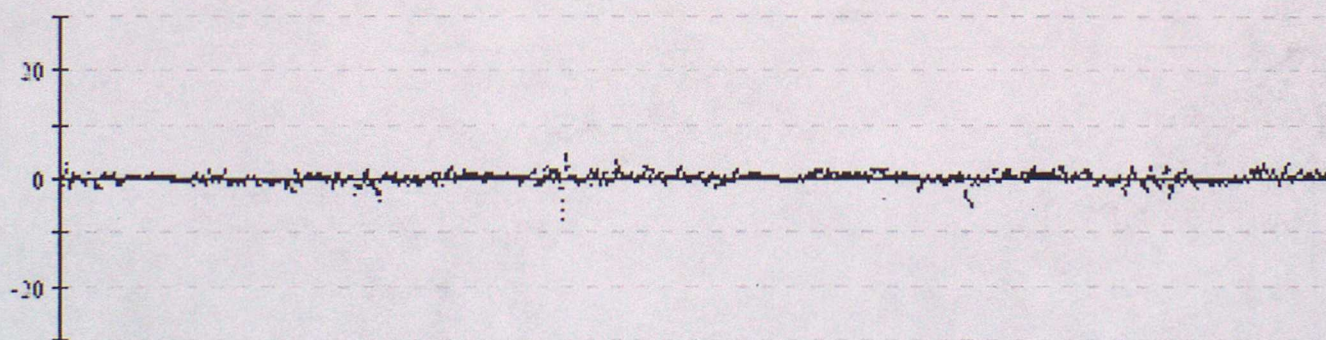
44725 Pressure



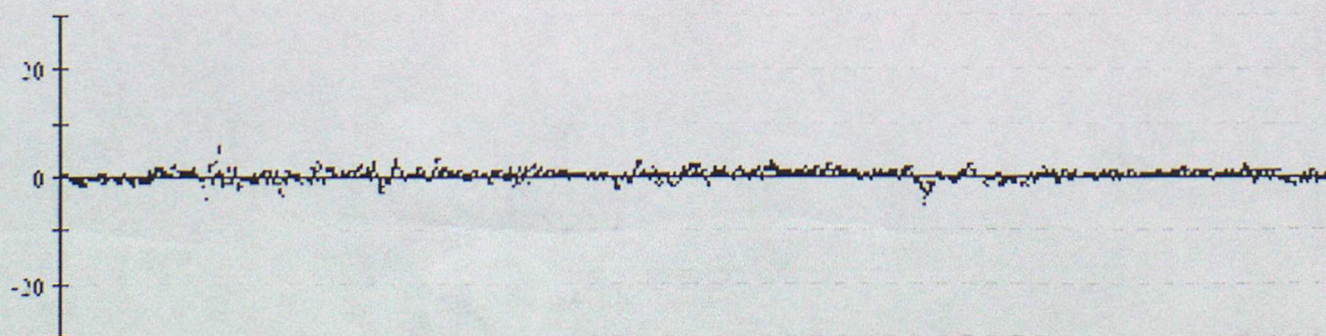
44727 Pressure



44729 Pressure

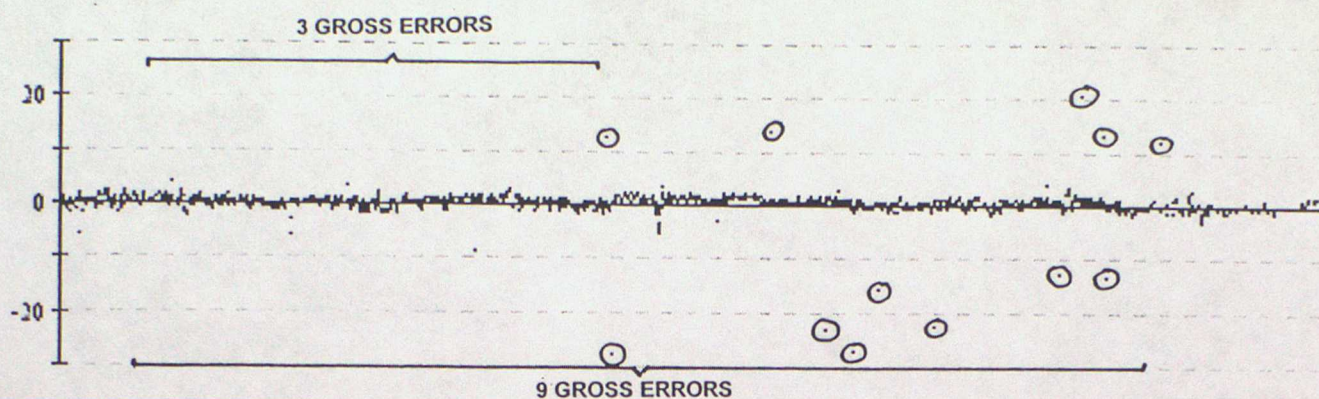


44741 Pressure

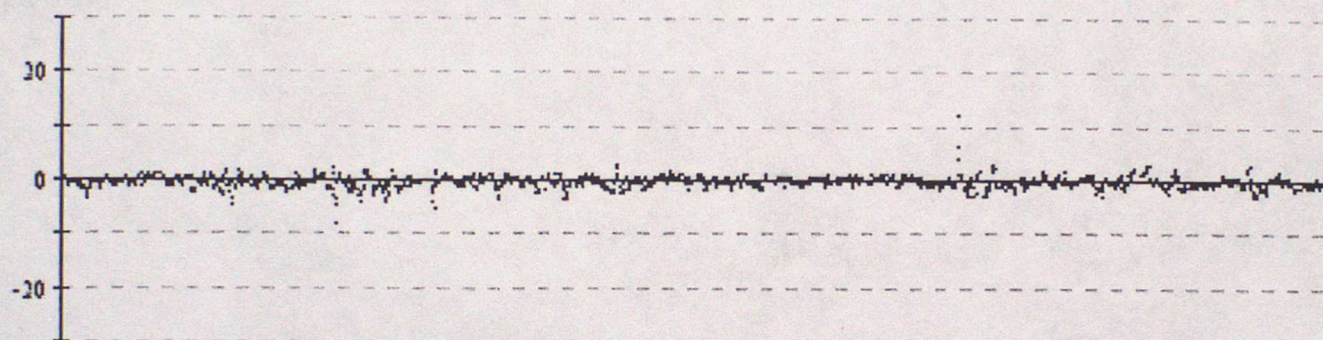


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

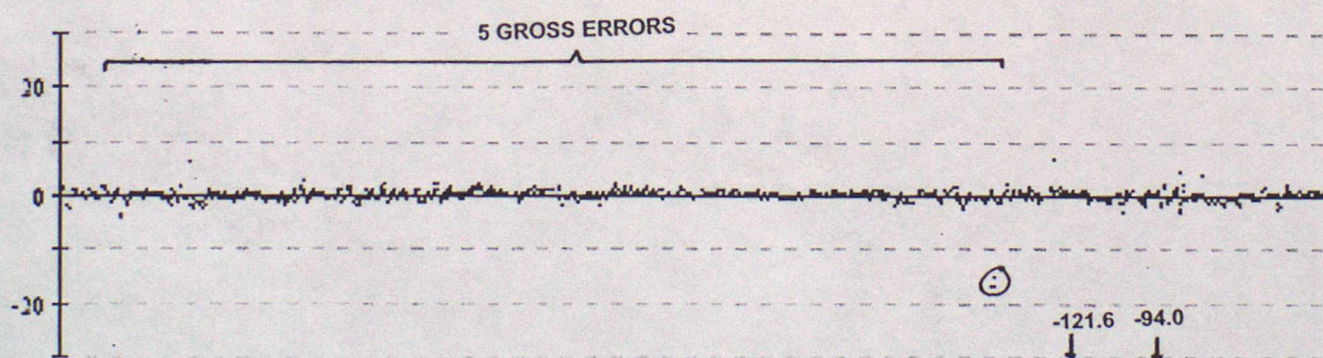
44743 Pressure



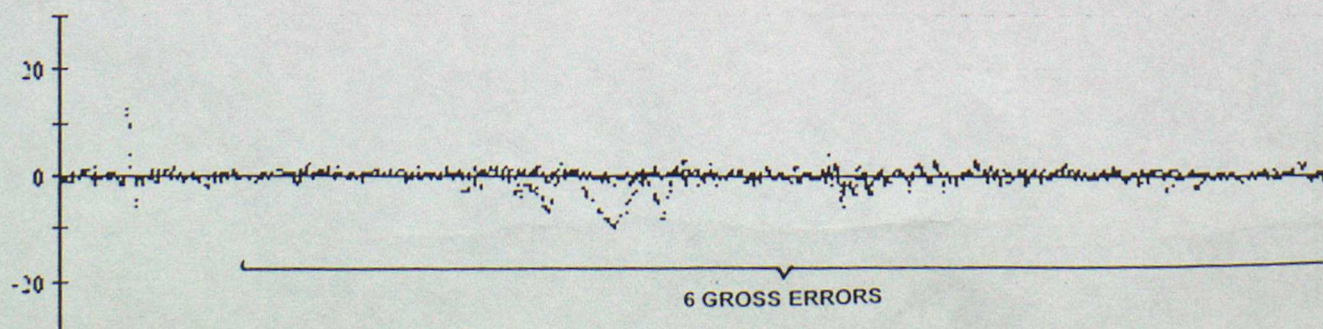
44761 Pressure



44762 Pressure

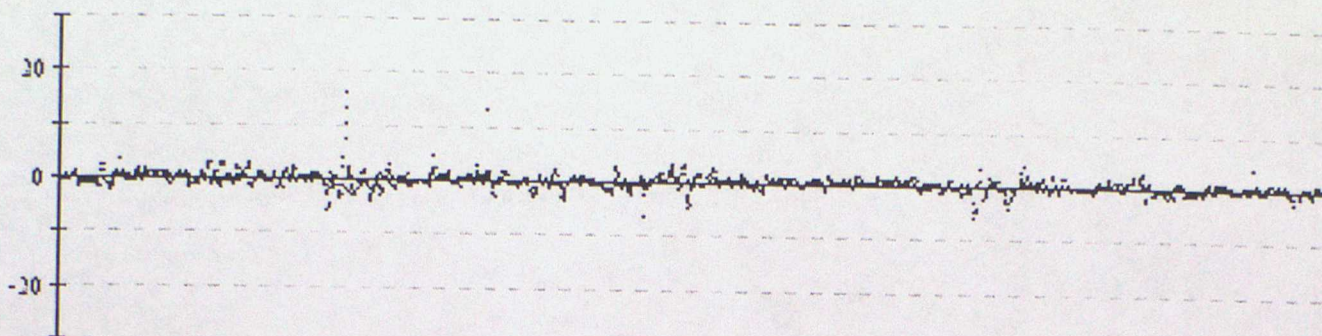


44765 Pressure

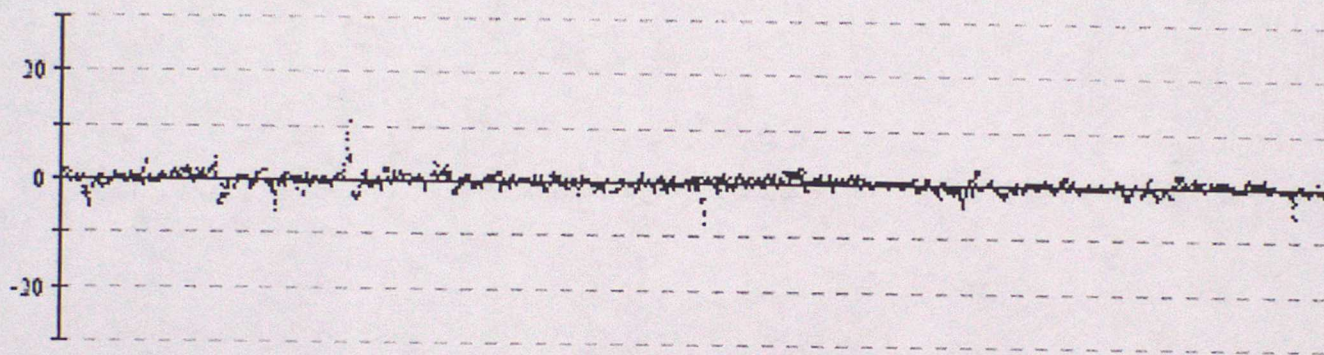


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

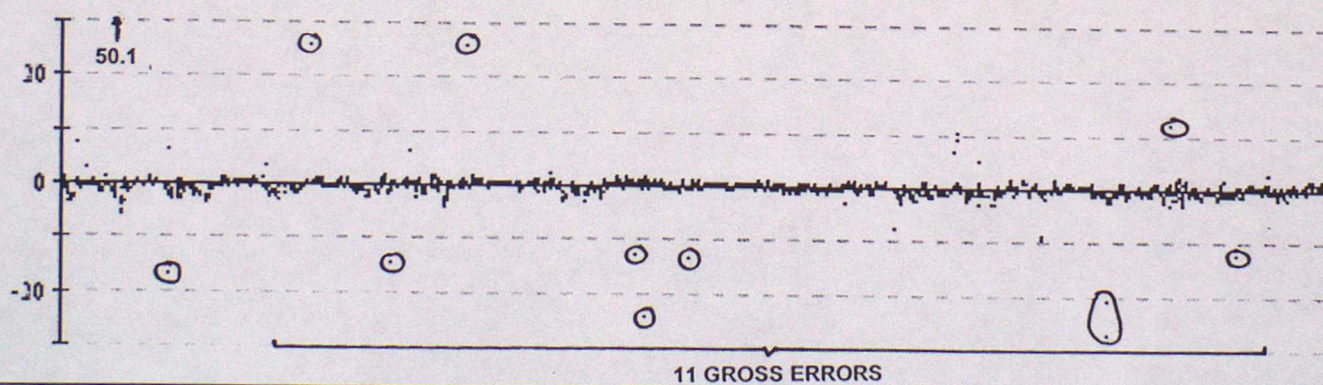
44770 Pressure



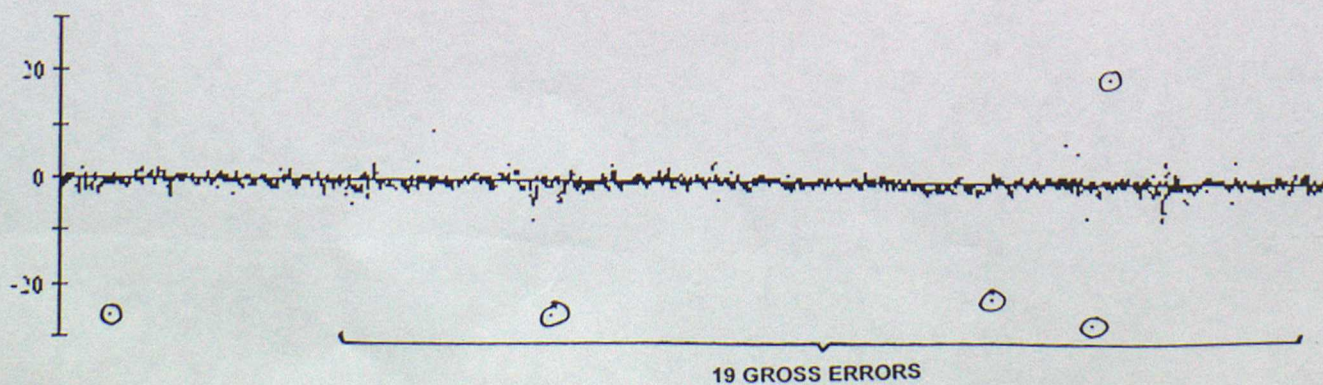
44771 Pressure



44772 Pressure

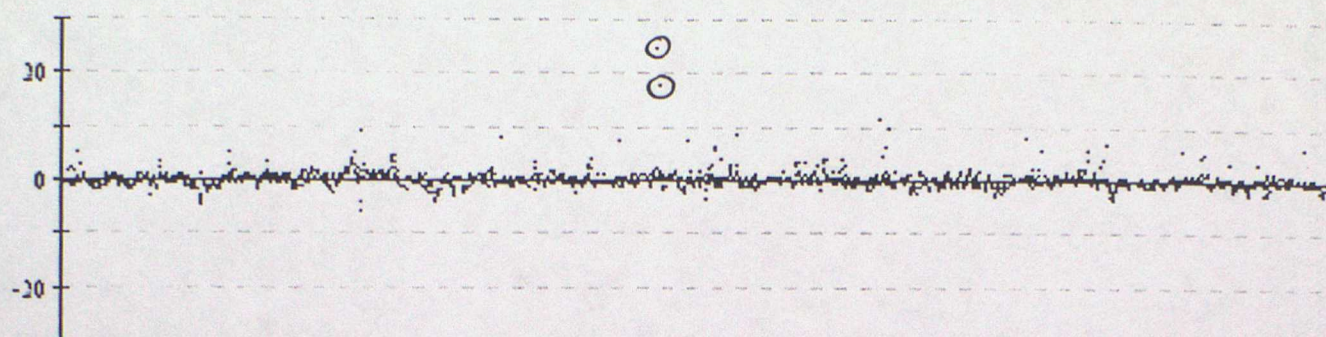


44774 Pressure

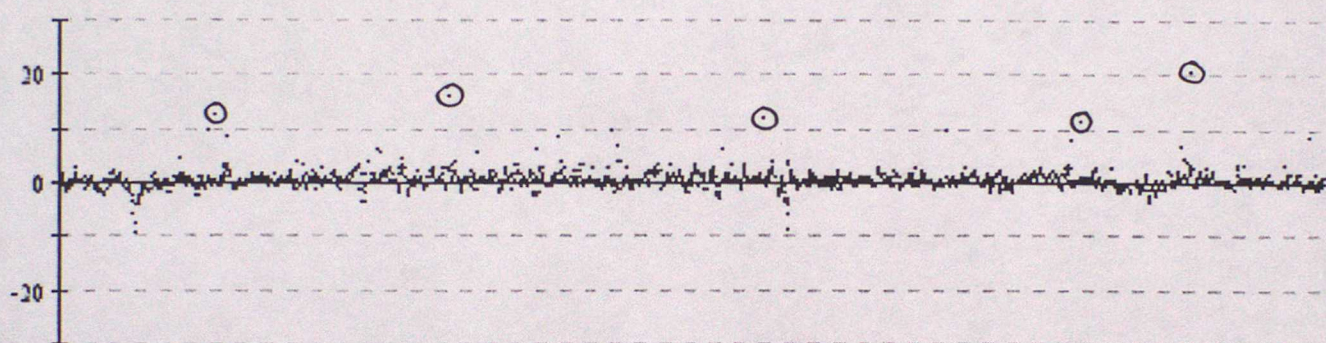


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

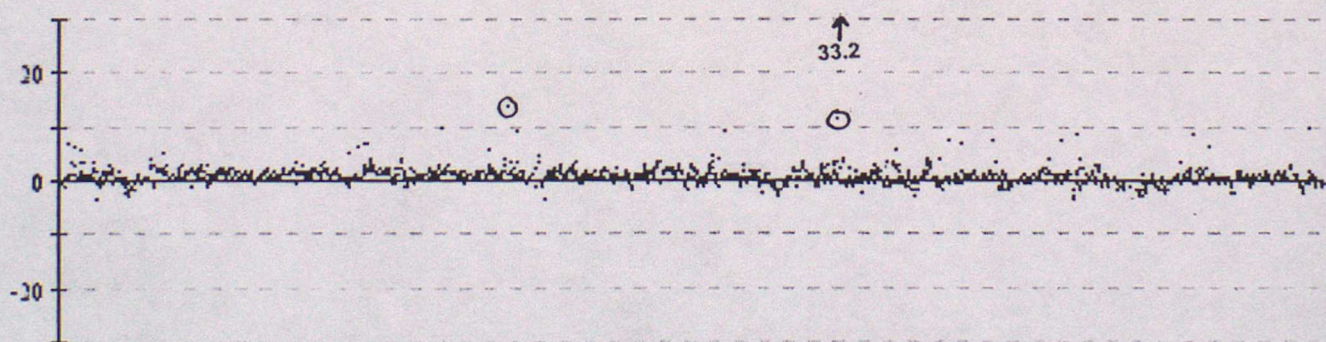
44775 Pressure



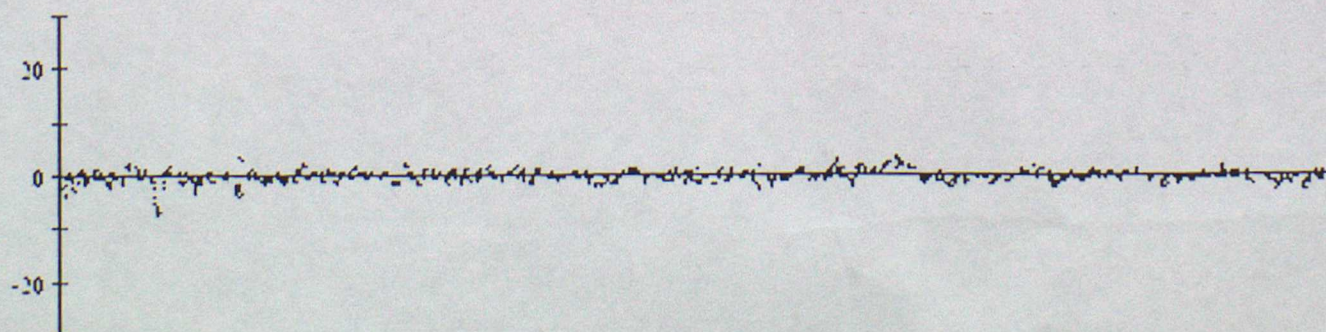
44776 Pressure



44778 Pressure

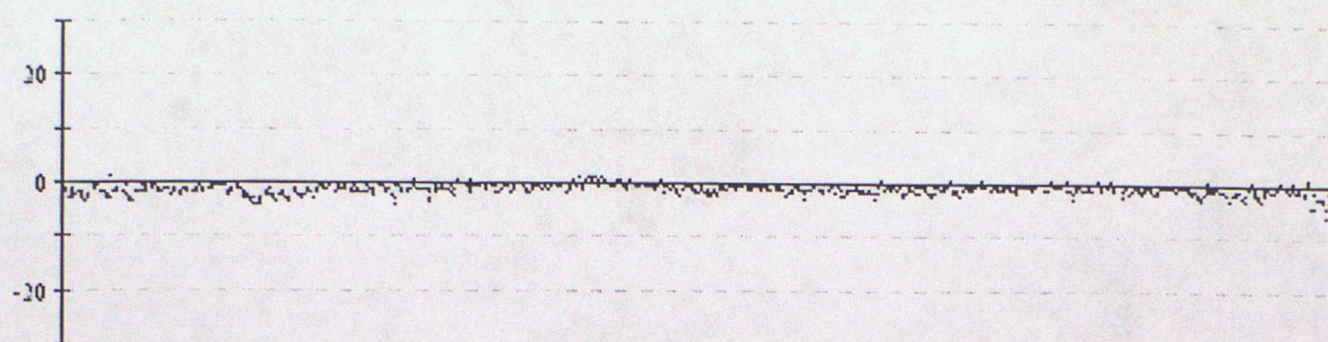


48581 Pressure

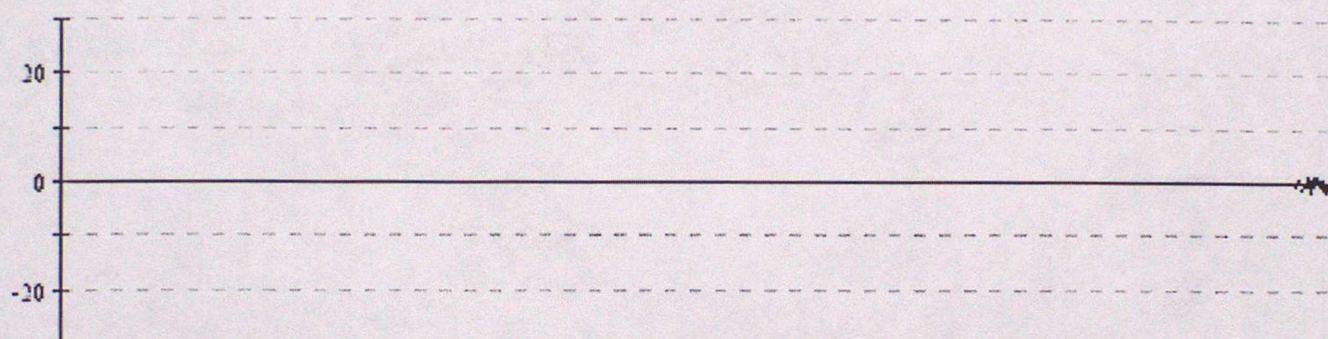


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

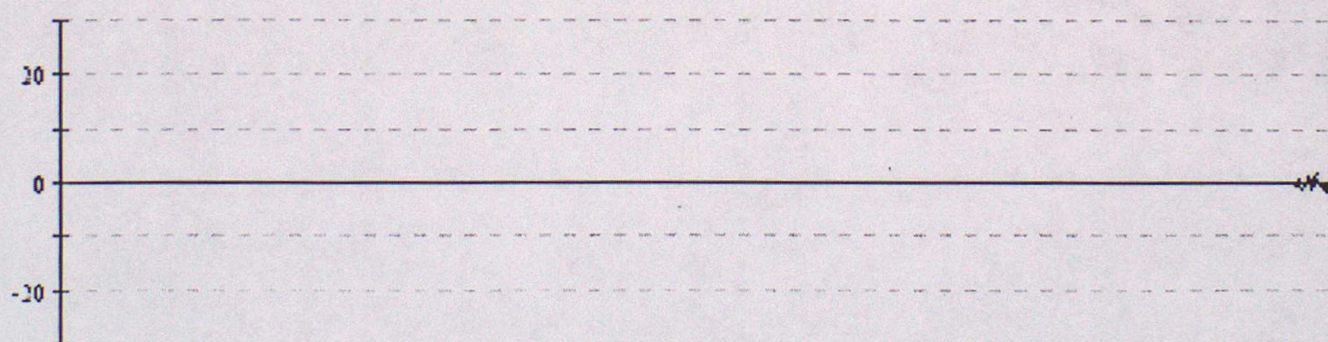
61522 Pressure



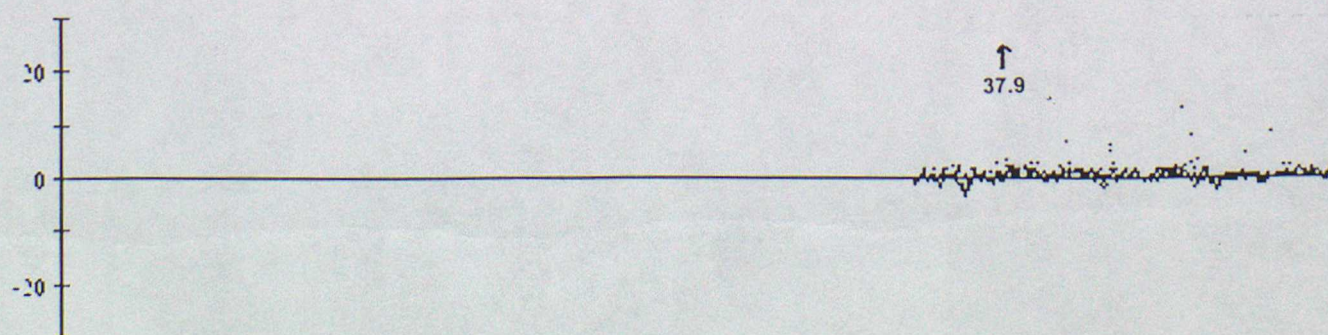
61538 Pressure



61539 Pressure

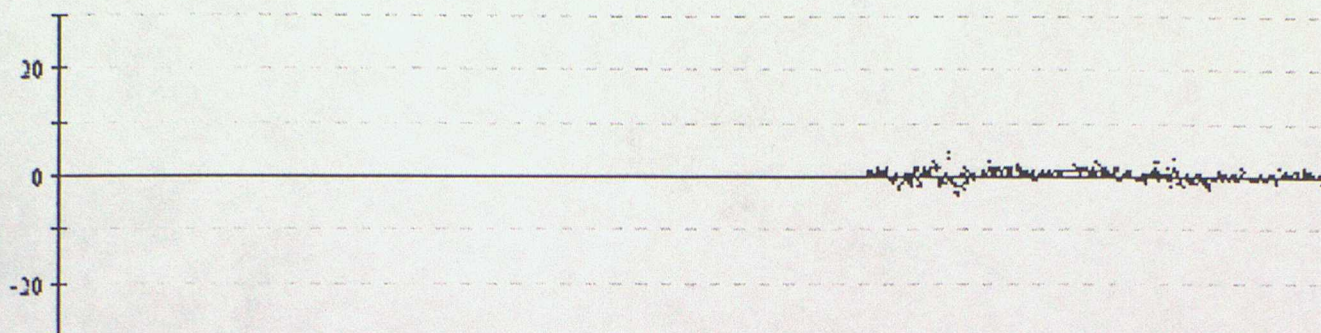


62501 Pressure

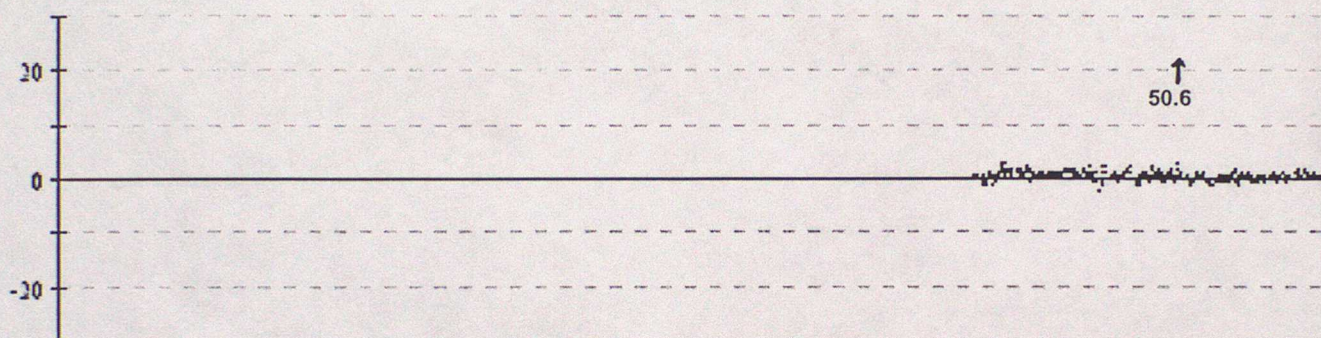


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

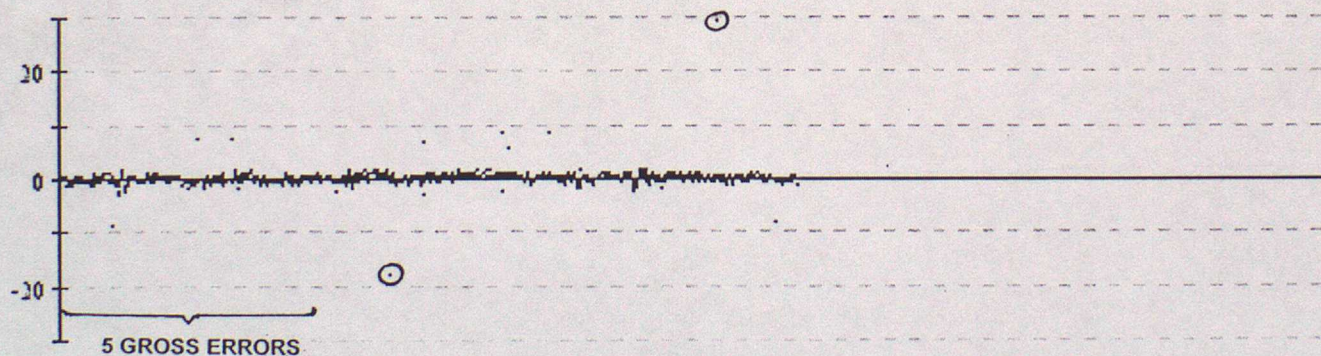
62504 Pressure



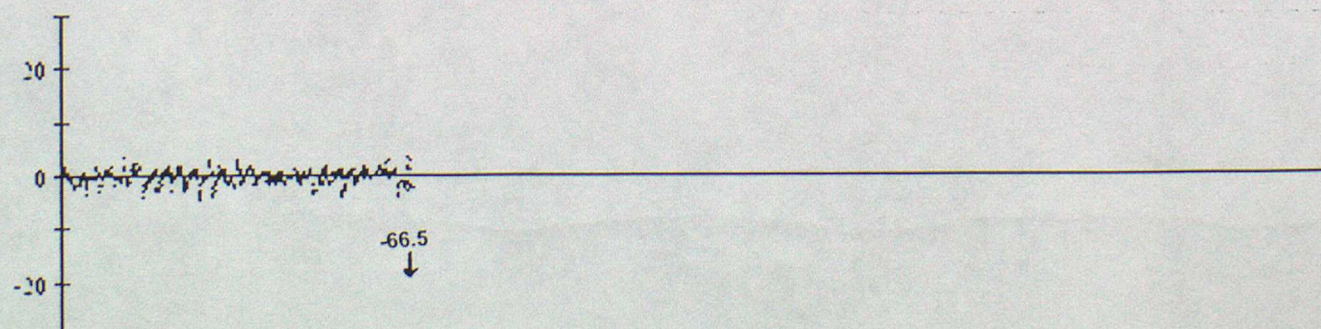
62505 Pressure



62507 Pressure

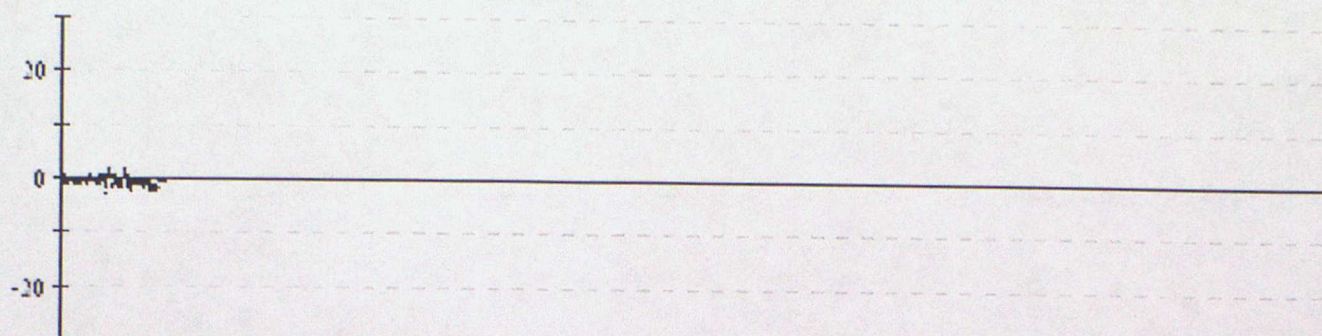


62508 Pressure

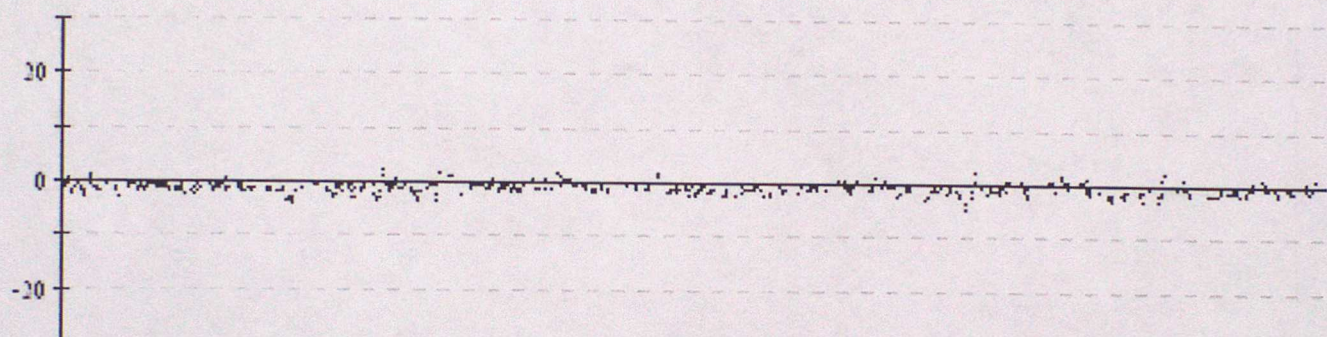


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

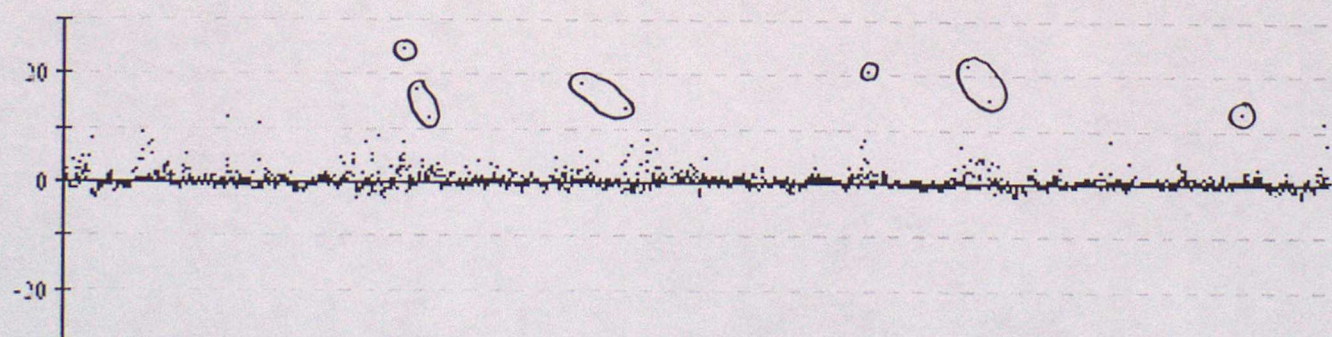
62509 Pressure



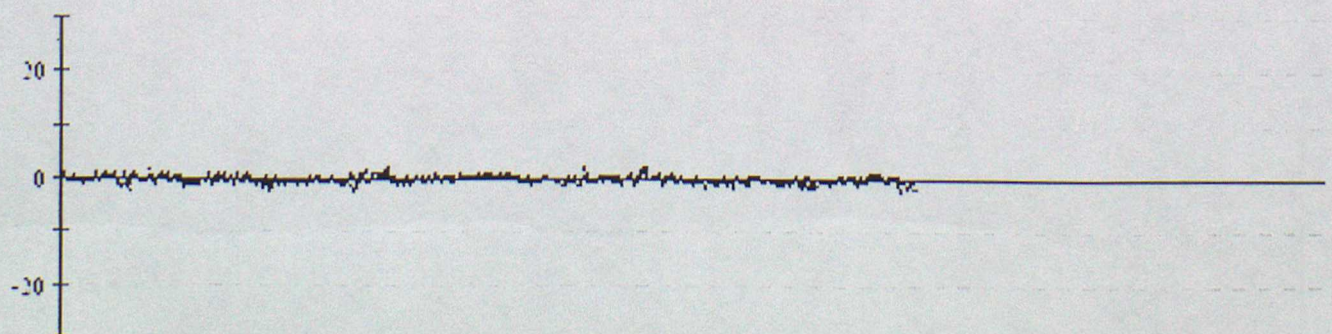
62513 Pressure



62514 Pressure

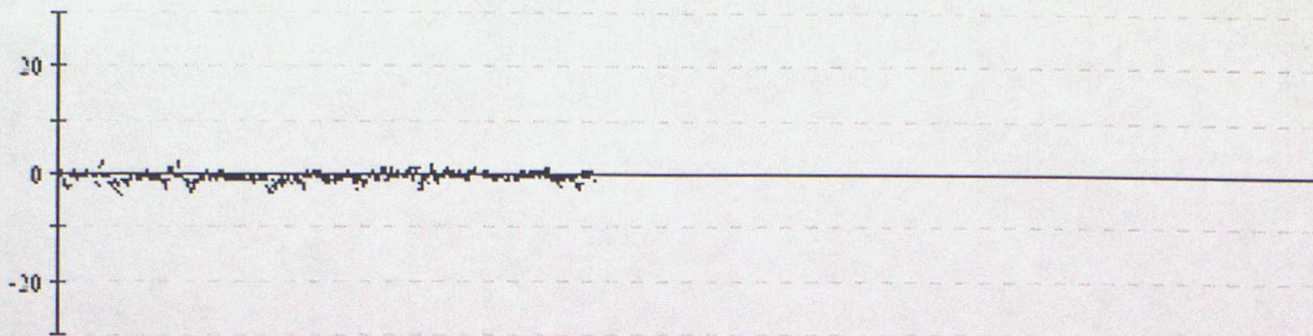


62517 Pressure

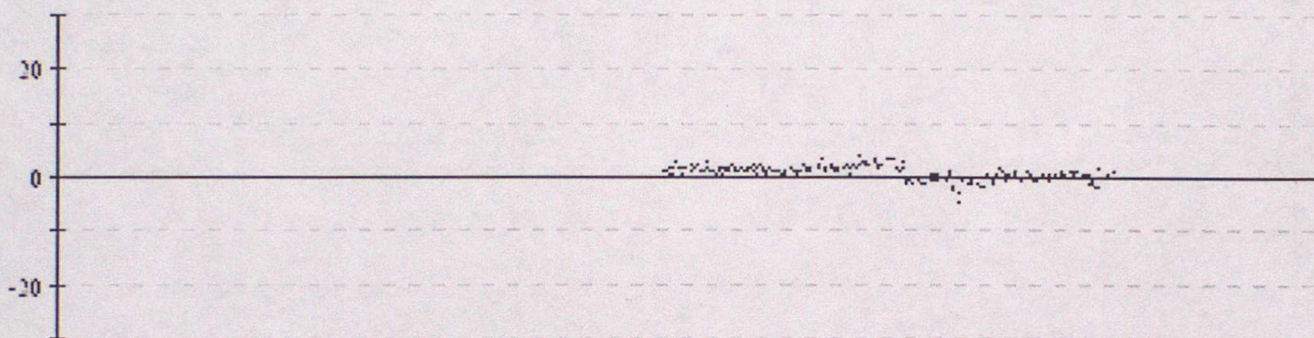


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

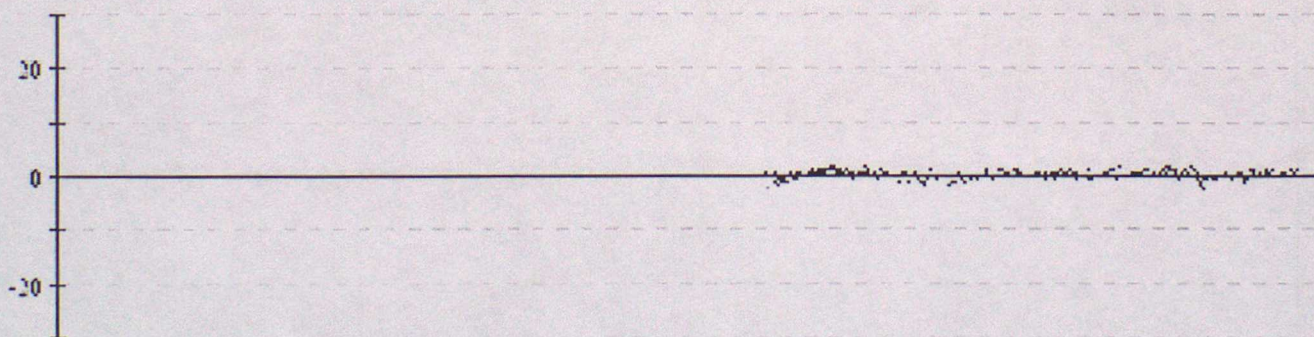
62519 Pressure



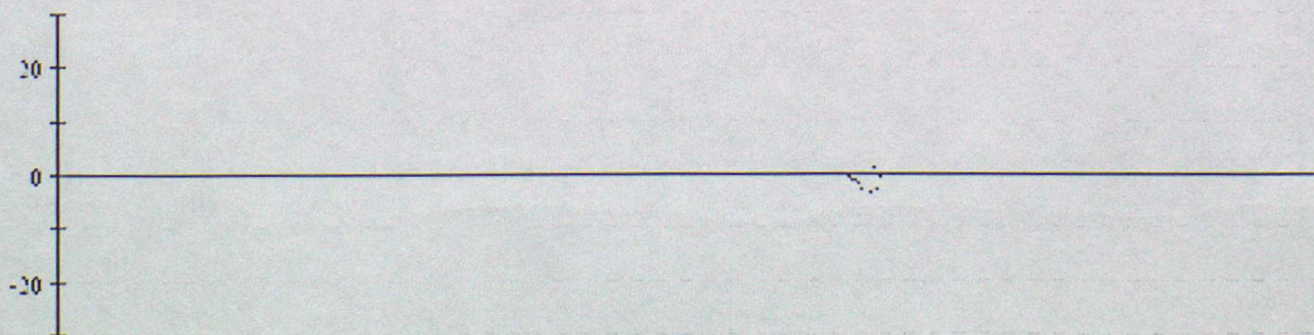
62551 Pressure



62564 Pressure

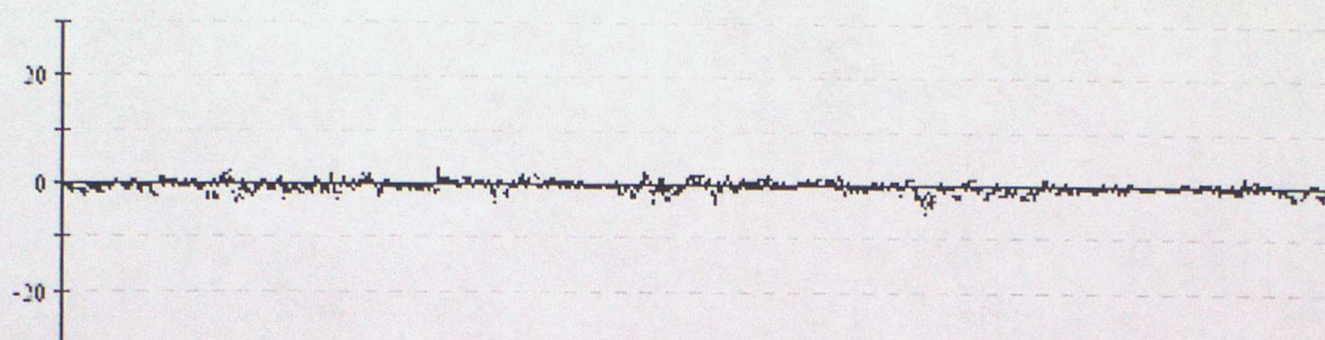


62585 Pressure

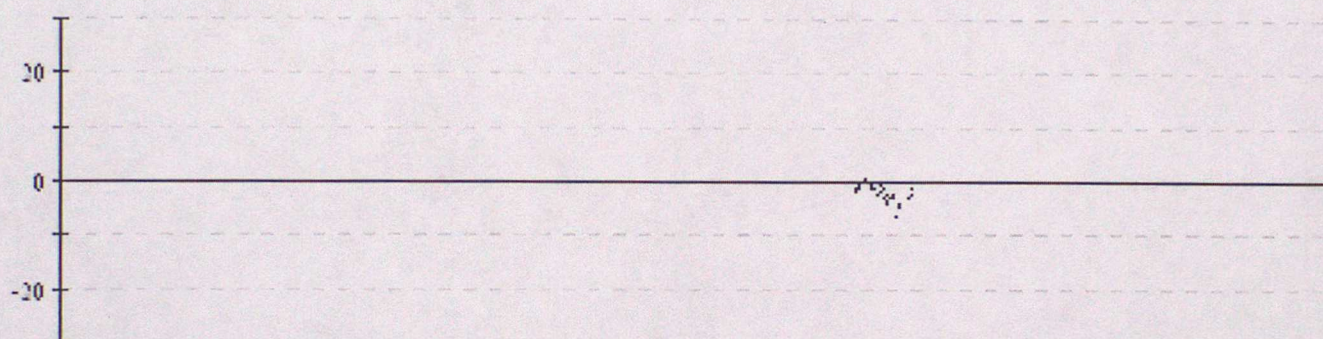


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

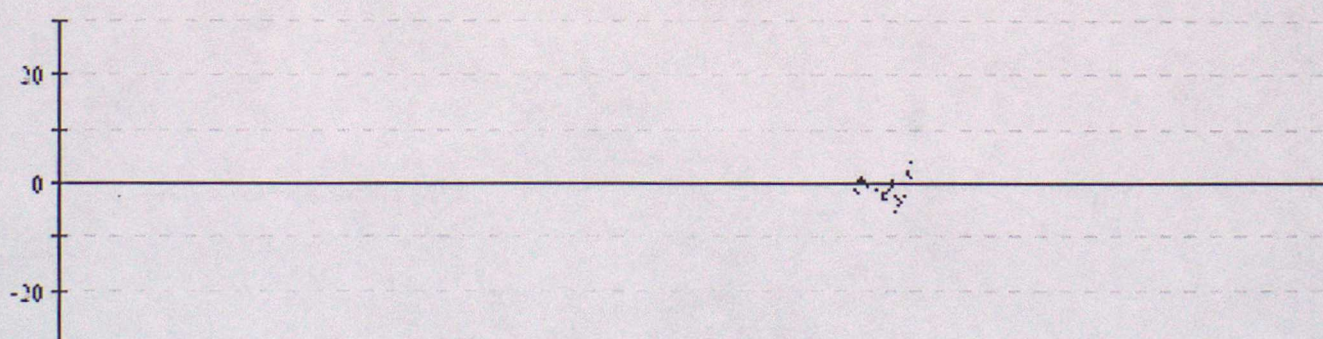
62596 Pressure



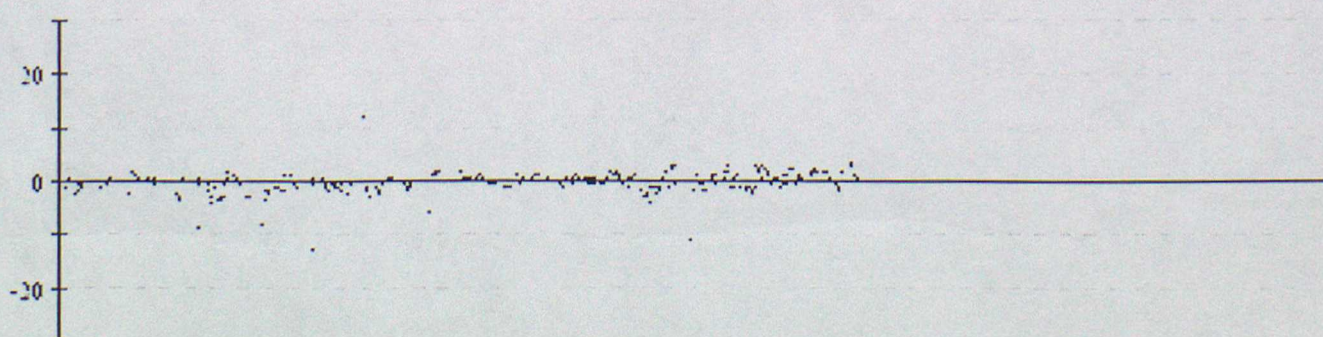
62783 Pressure



62784 Pressure

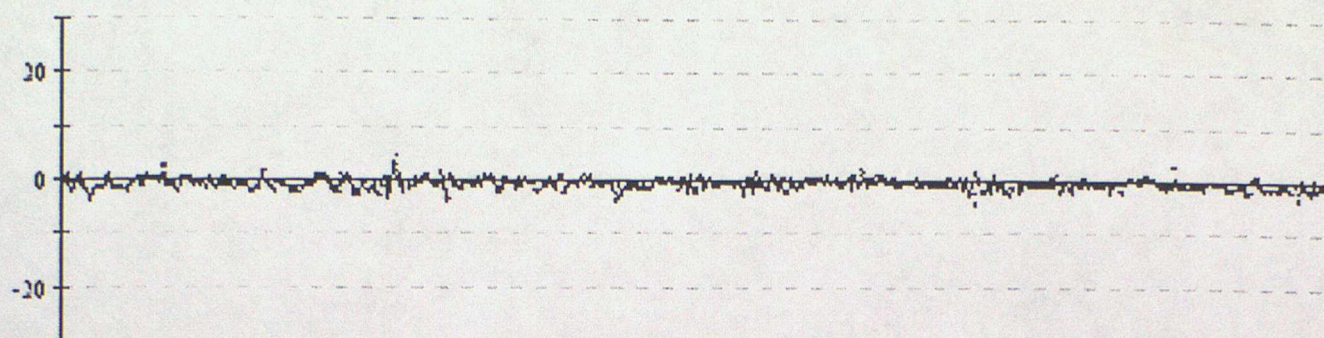


63662 Pressure

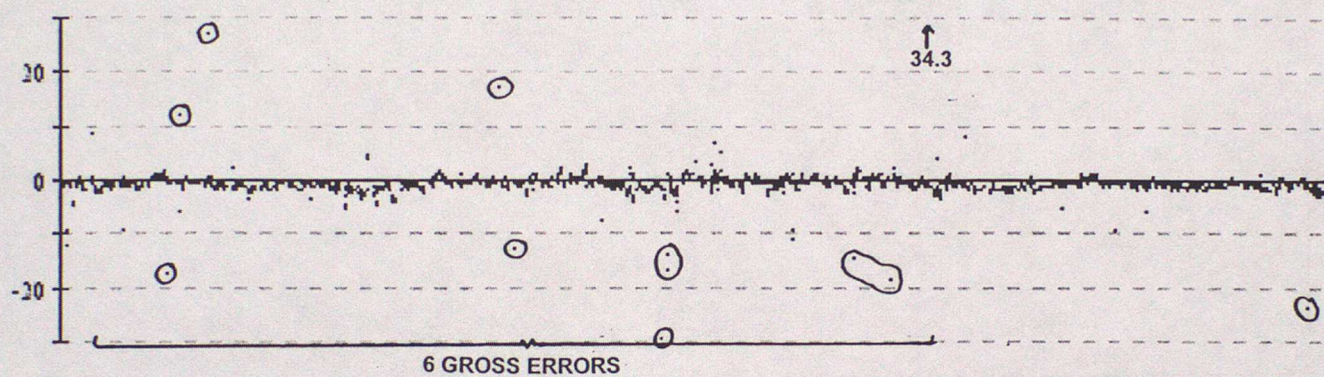


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

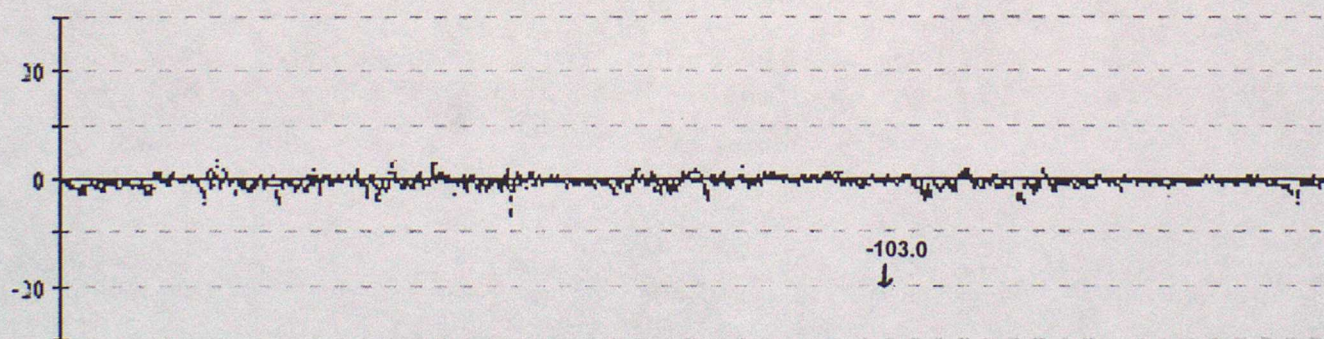
64517 Pressure



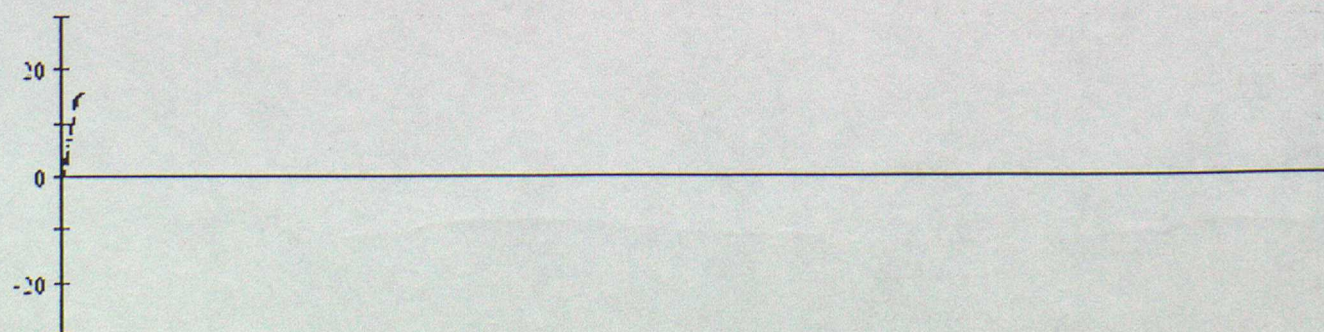
64548 Pressure



64698 Pressure

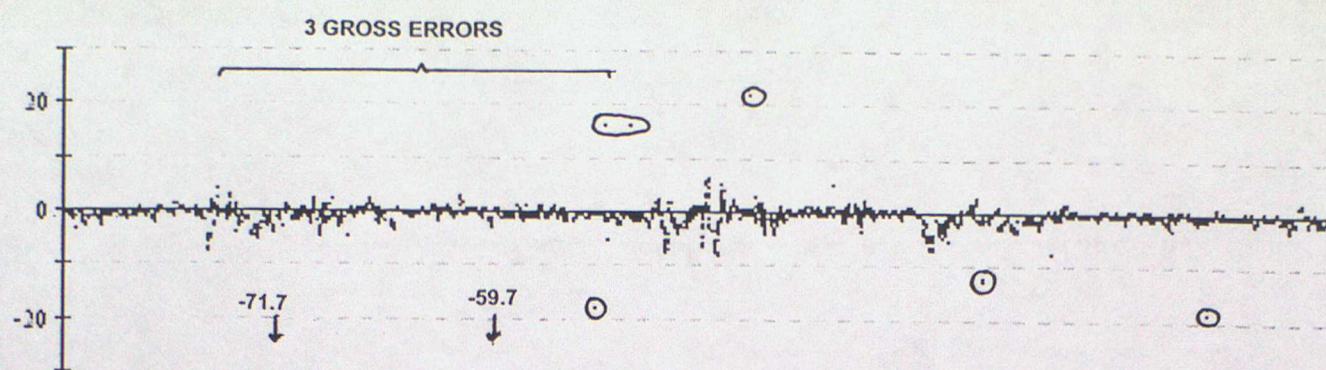


64699 Pressure

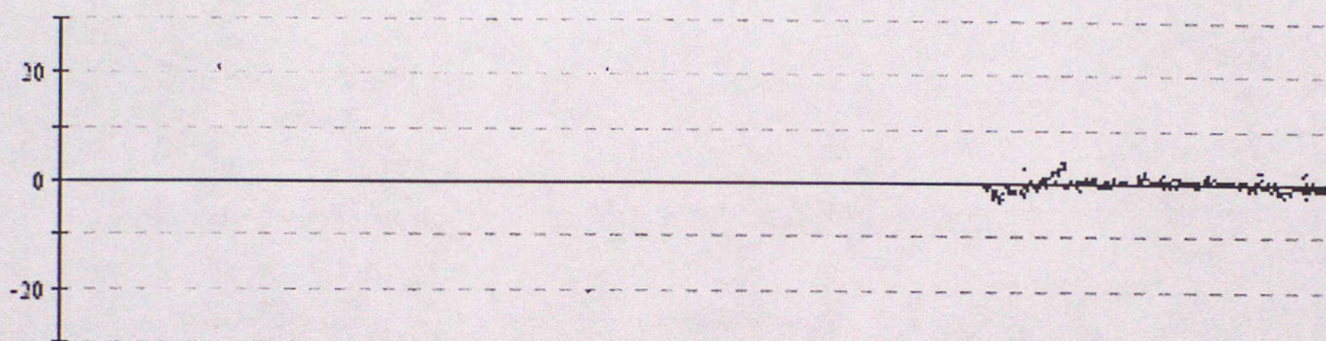


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

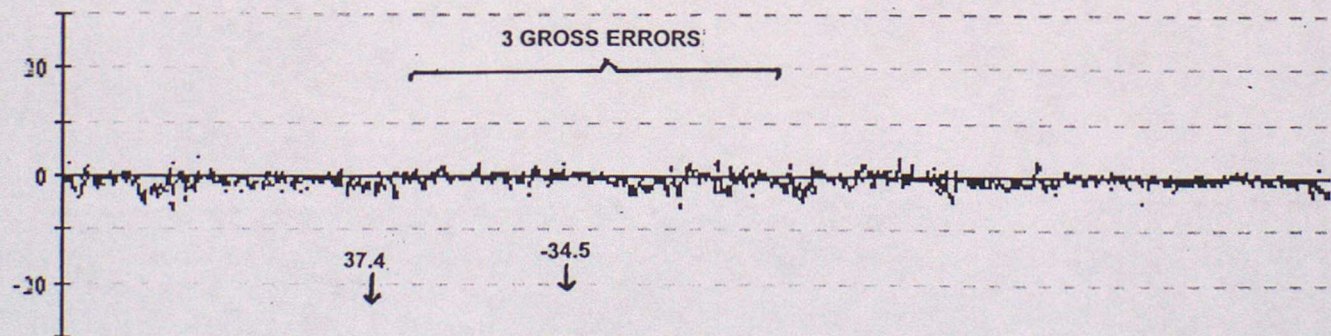
65593 Pressure



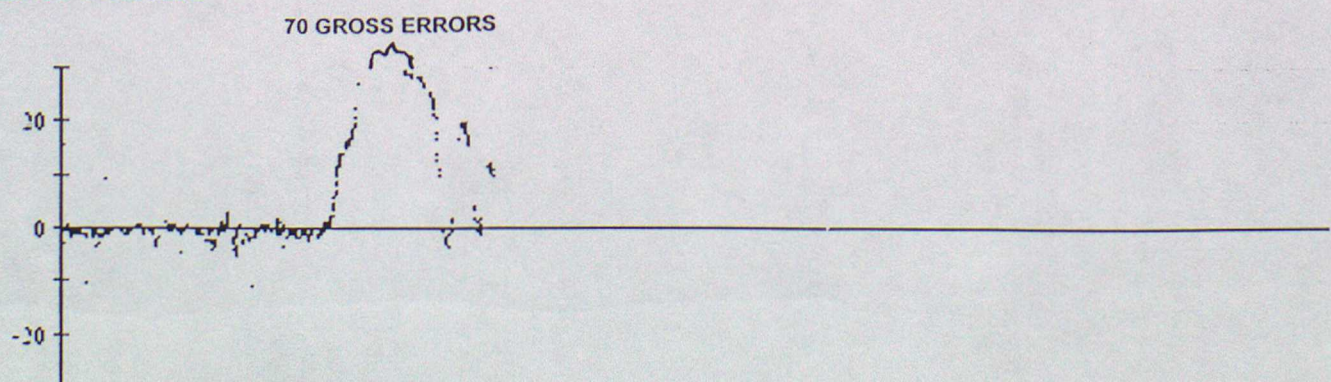
65595 Pressure



65600 Pressure

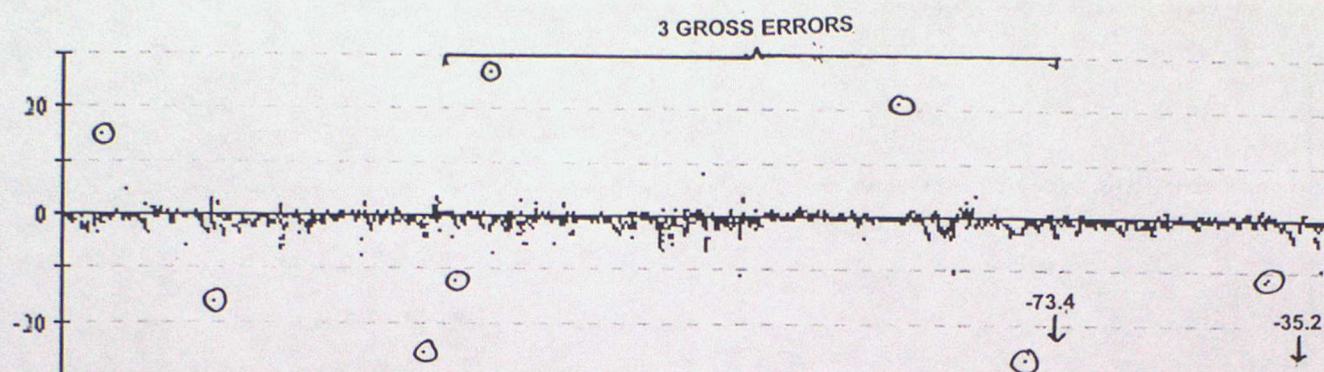


65601 Pressure

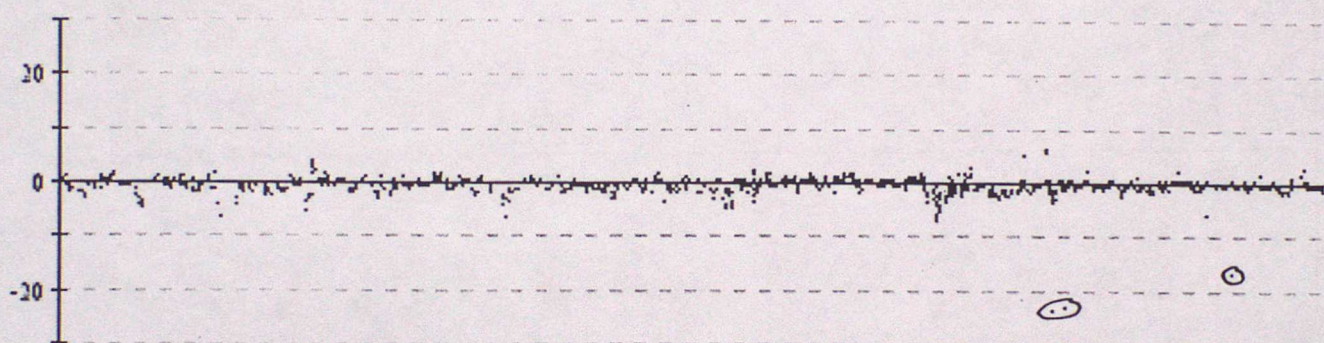


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

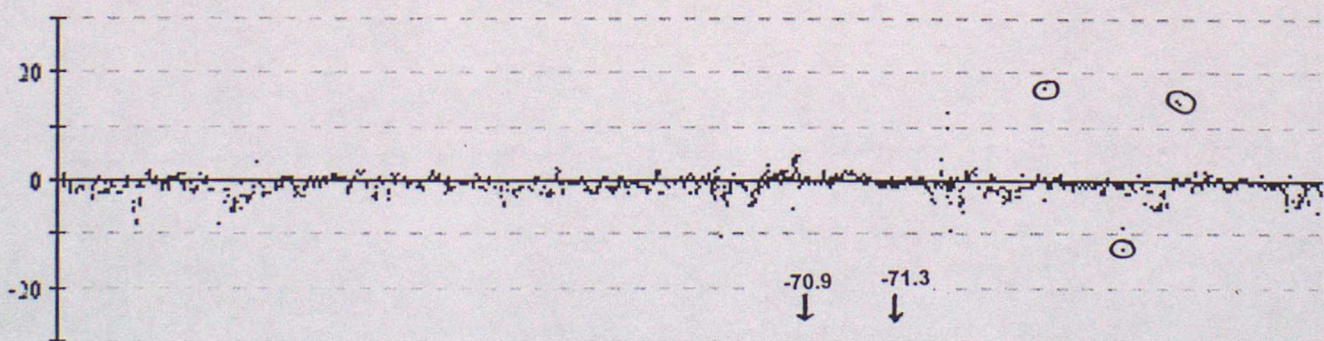
65602 Pressure



65662 Pressure



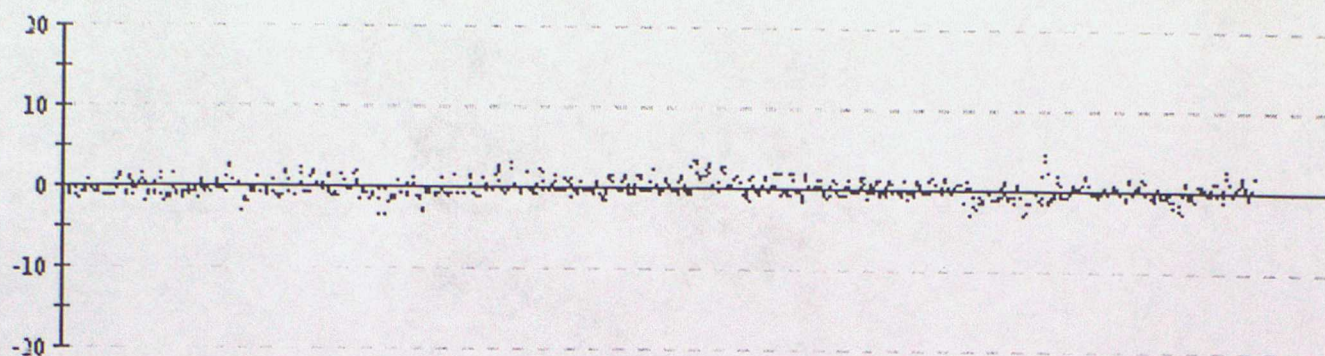
65663 Pressure



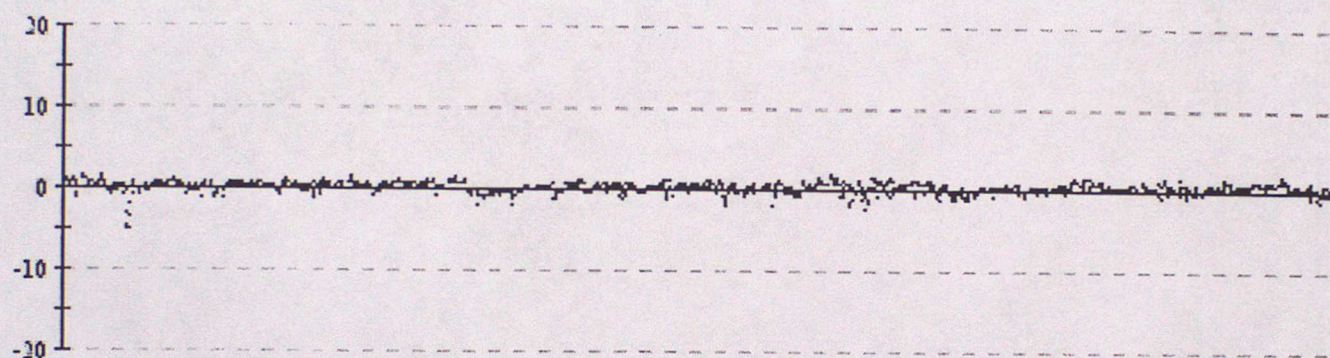
ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

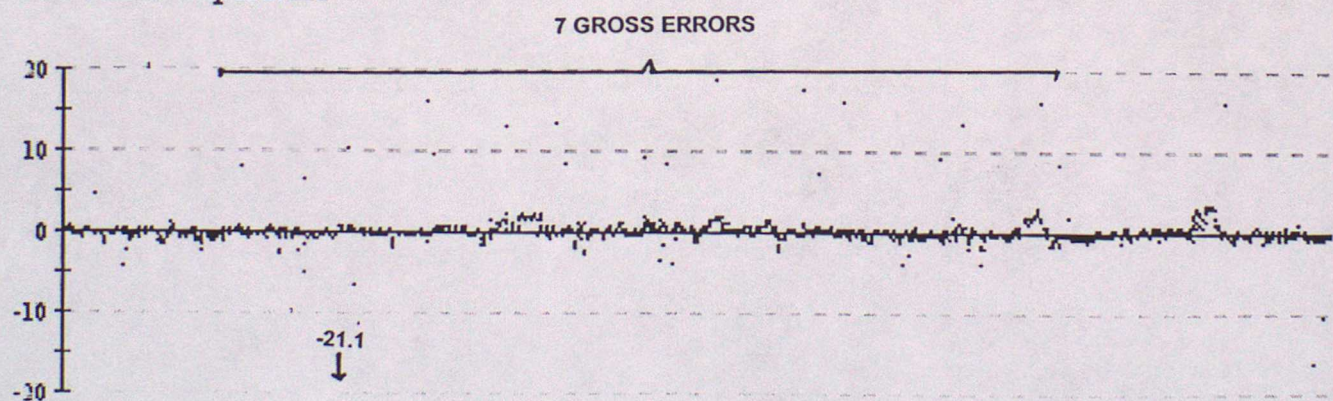
41521 Air Temperature



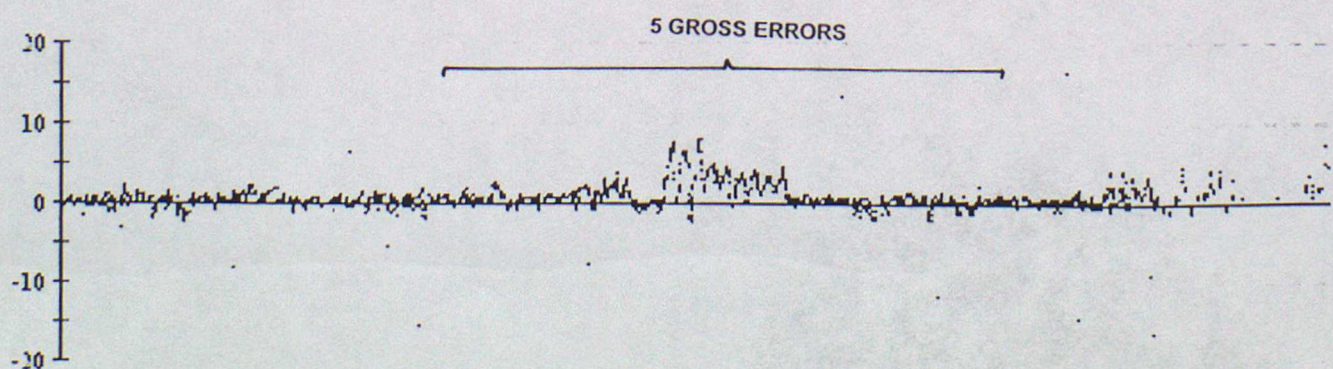
44613 Air Temperature



44628 Air Temperature

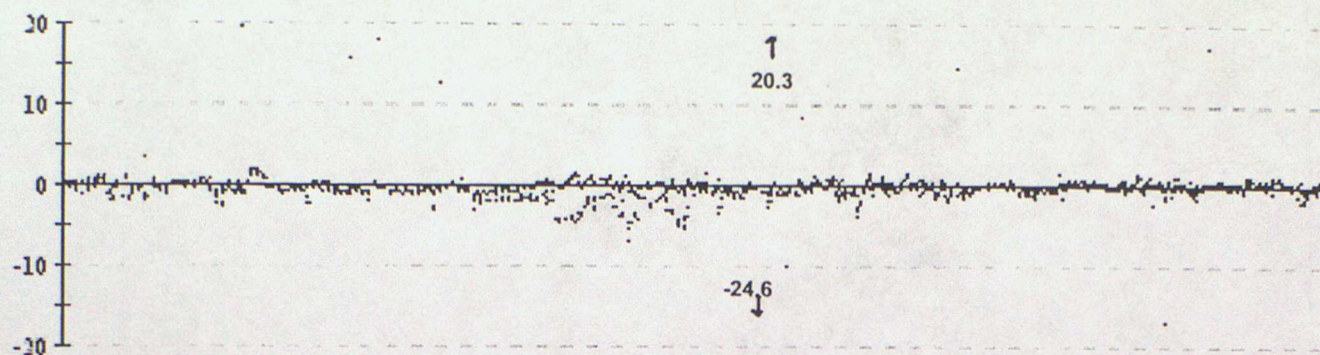


44743 Air Temperature

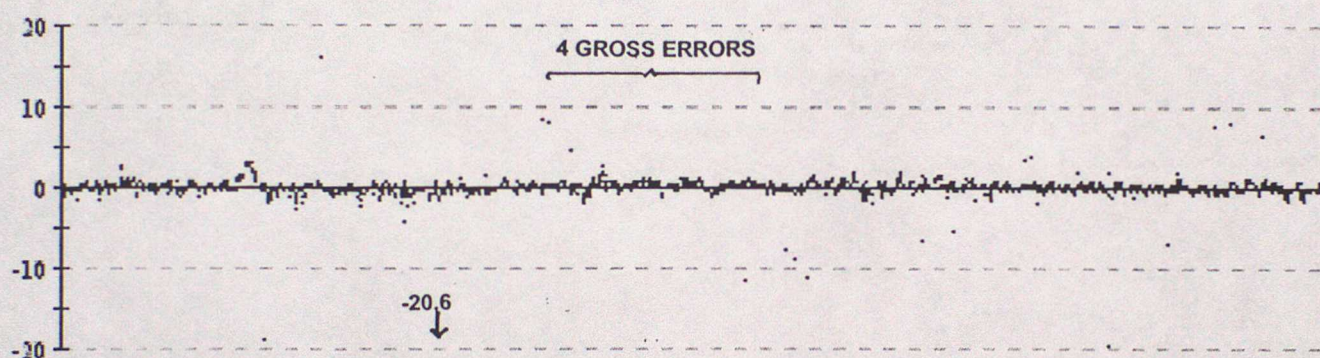


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

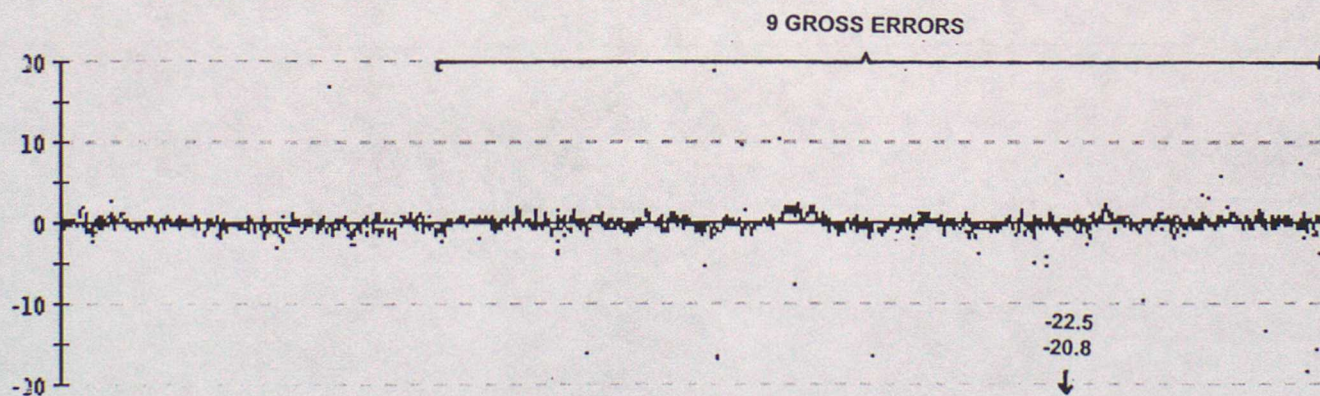
44765 Air Temperature



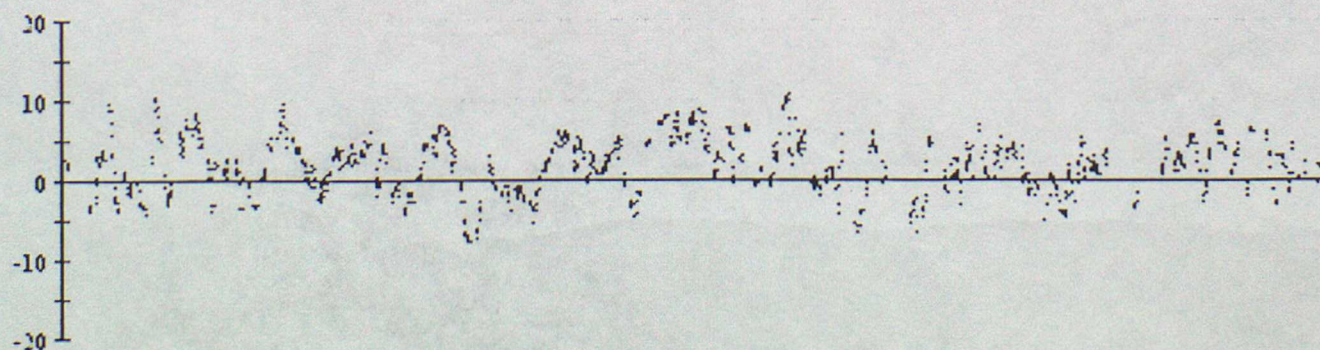
44772 Air Temperature



44774 Air Temperature

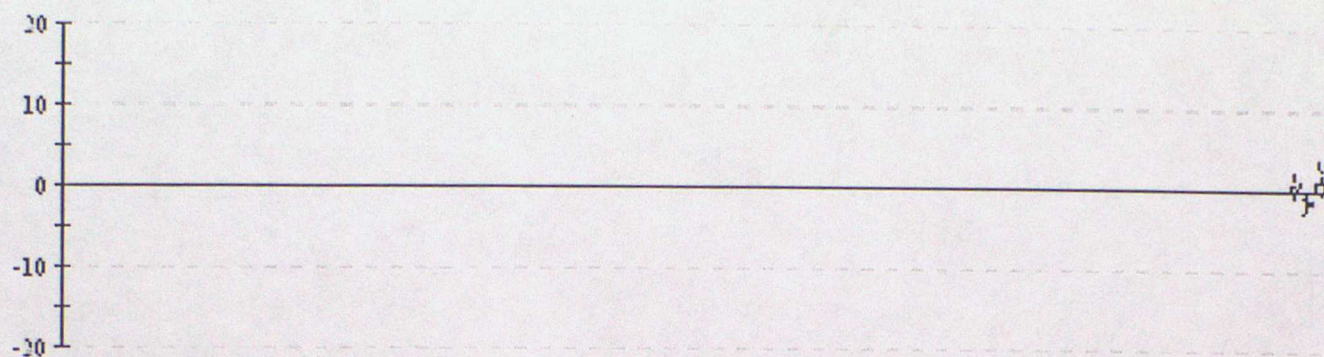


48581 Air Temperature

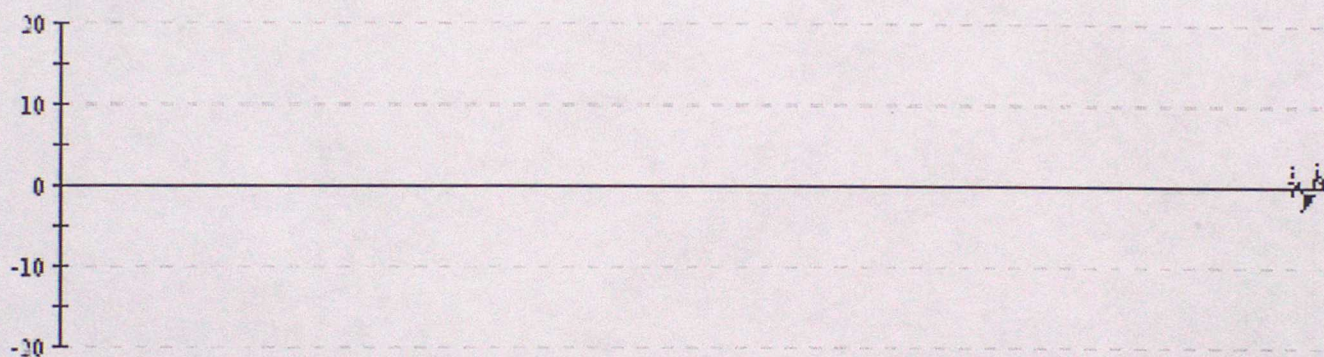


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

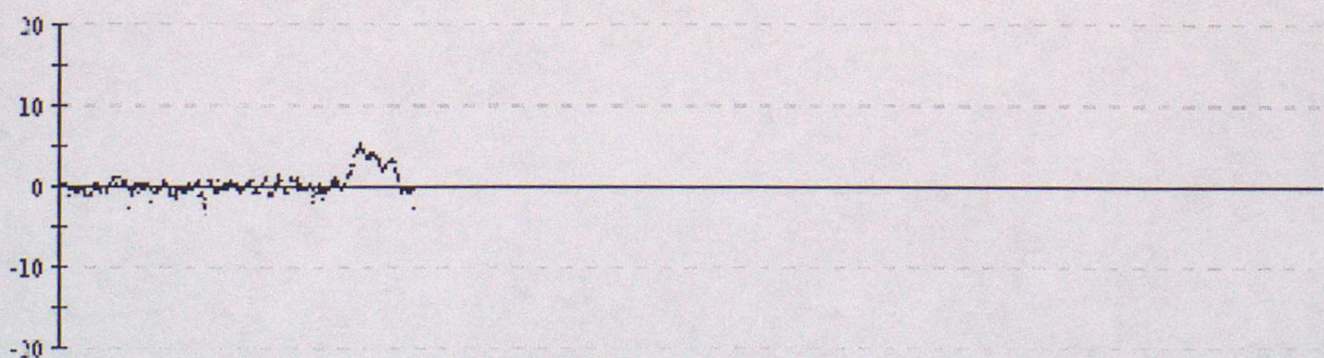
61538 Air Temperature



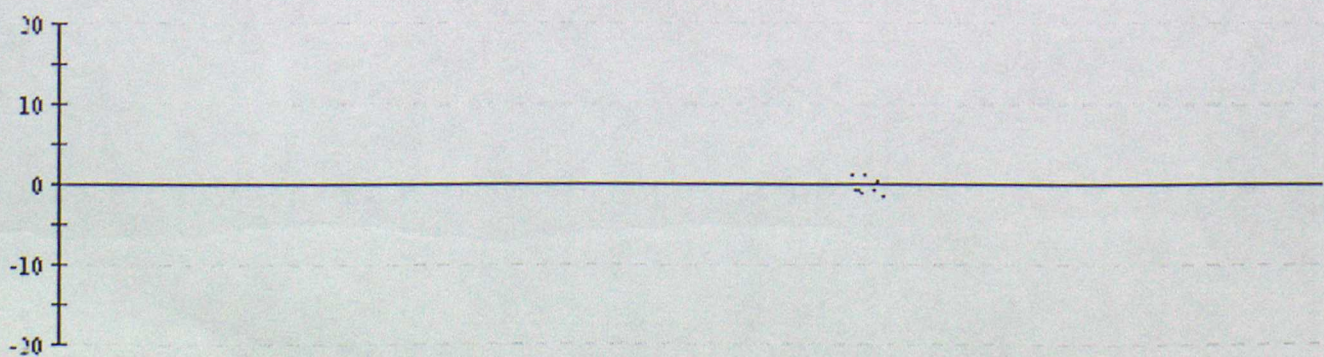
61539 Air Temperature



62508 Air Temperature

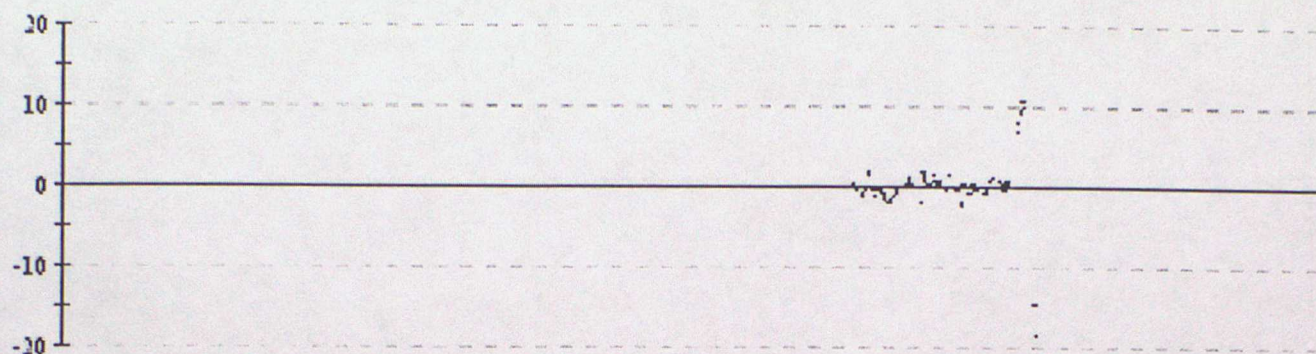


62585 Air Temperature

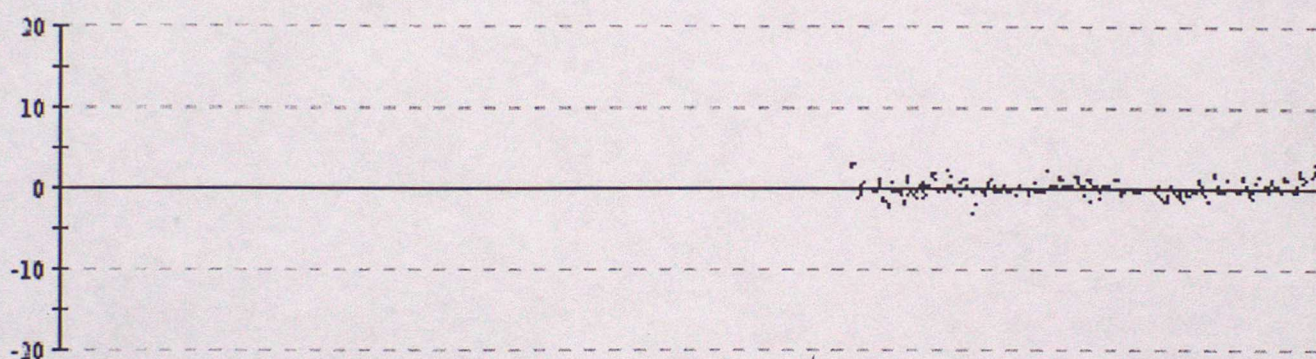


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

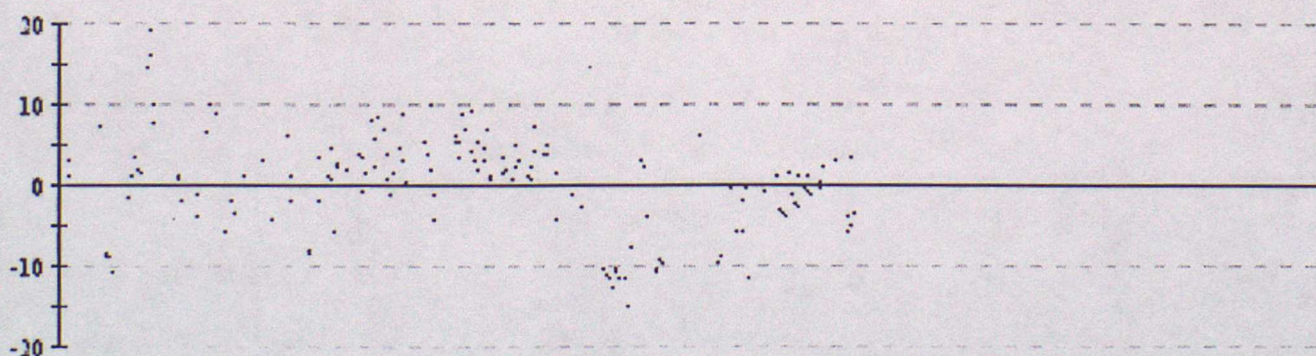
62783 Air Temperature



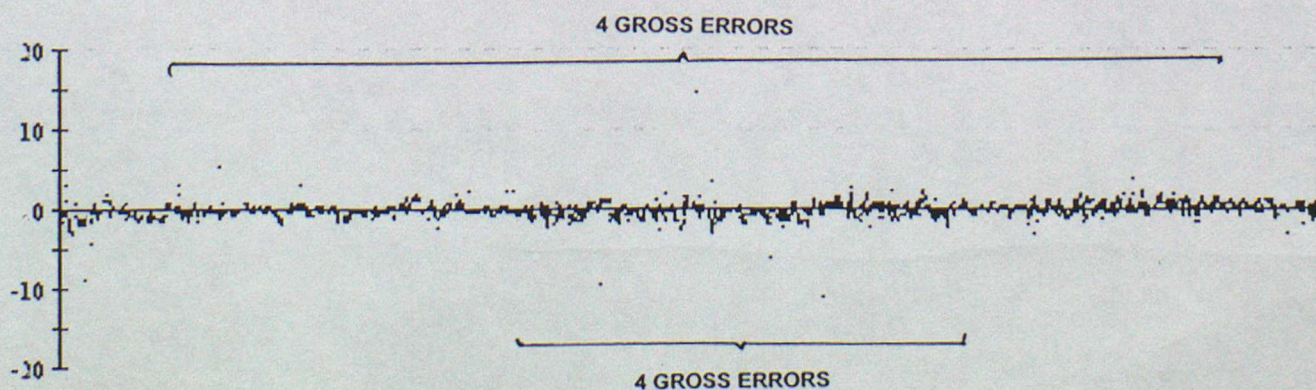
62784 Air Temperature



63662 Air Temperature

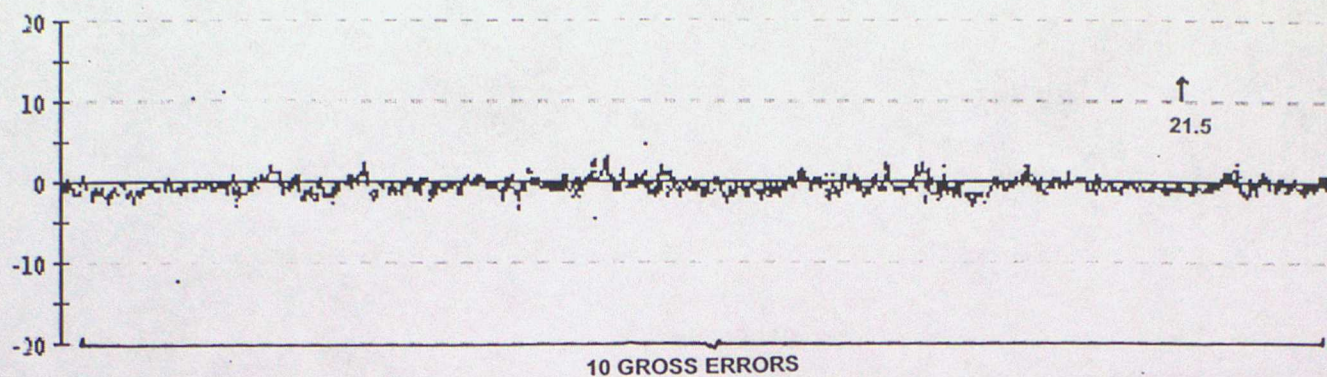


64548 Air Temperature

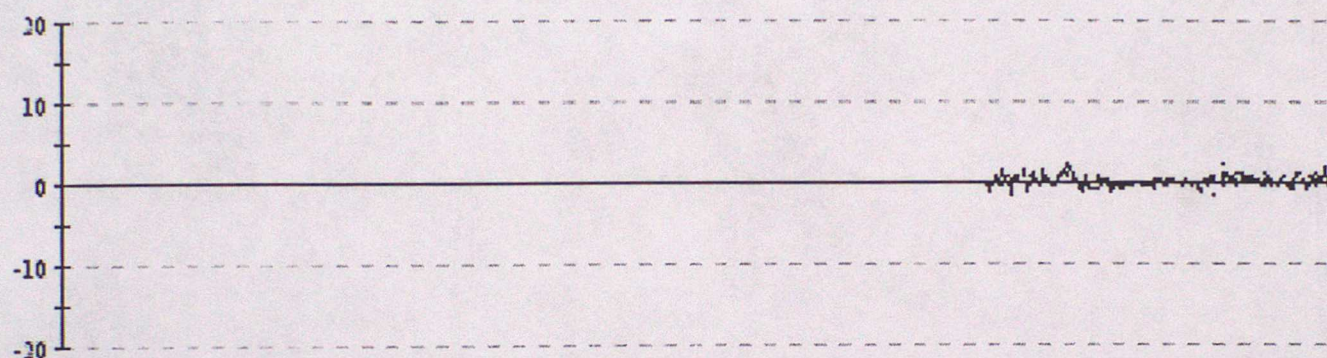


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

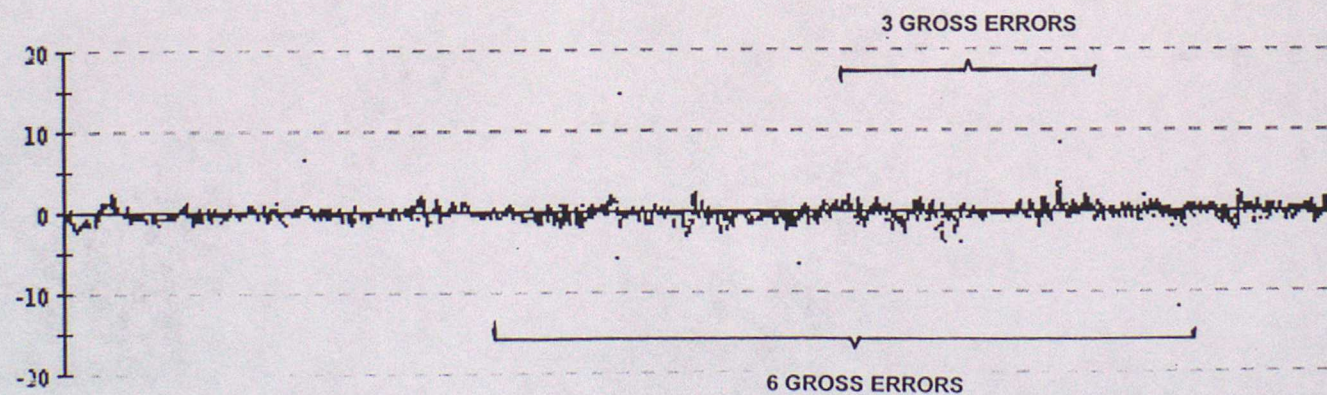
65593 Air Temperature



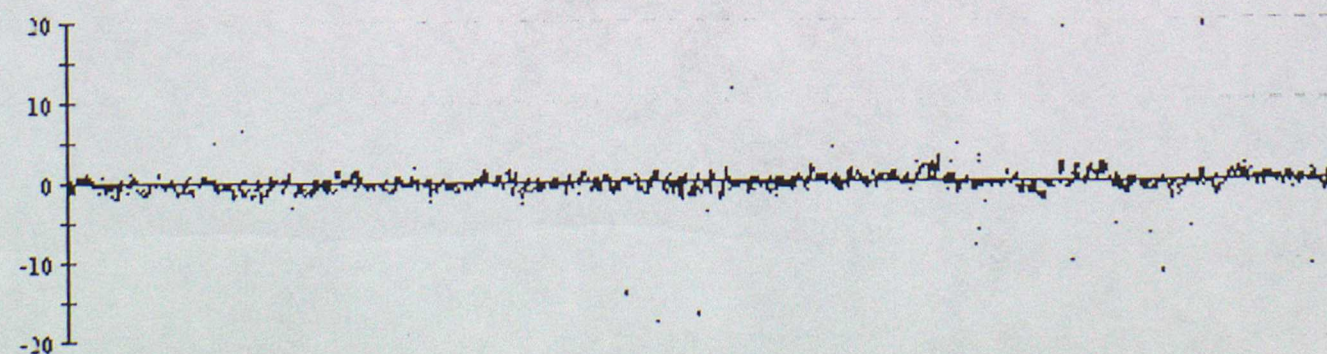
65595 Air Temperature



65600 Air Temperature

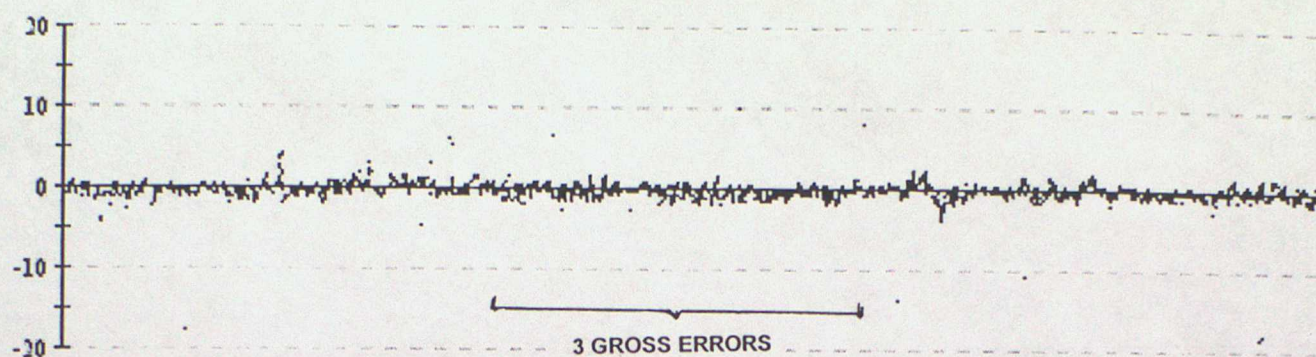


65601 Air Temperature

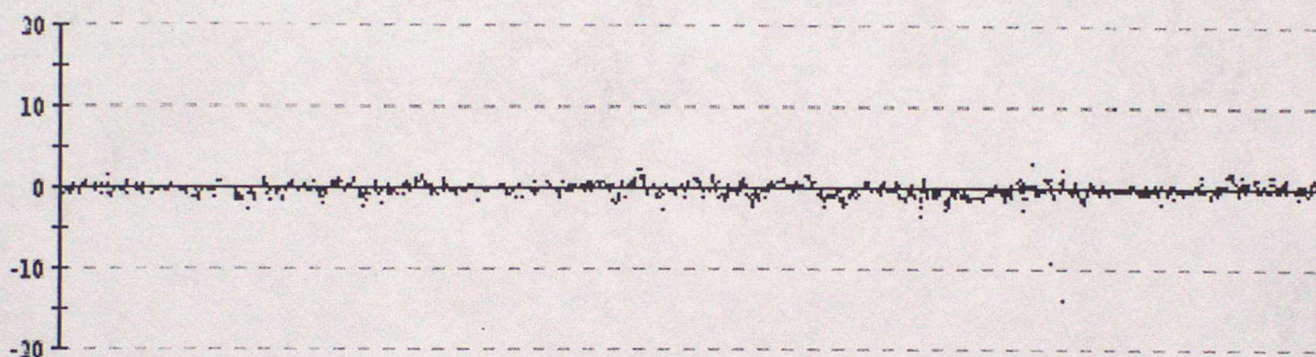


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

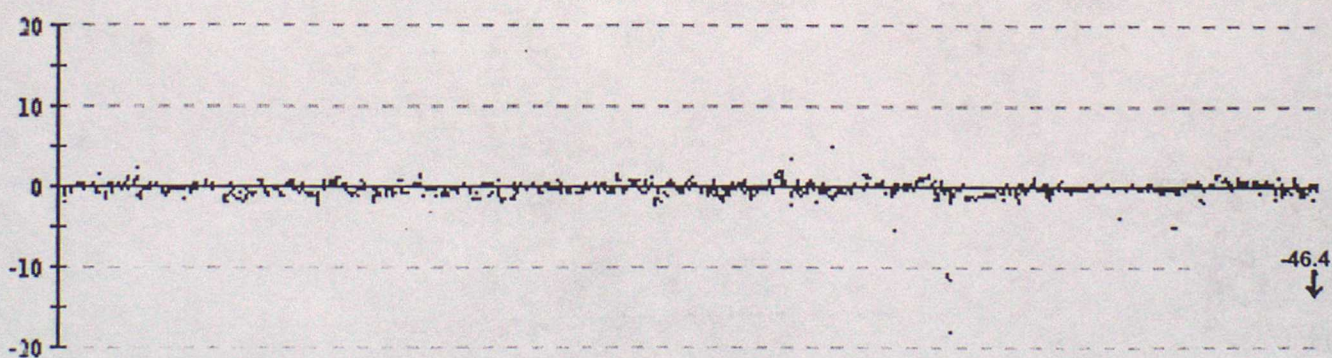
65602 Air Temperature



65662 Air Temperature



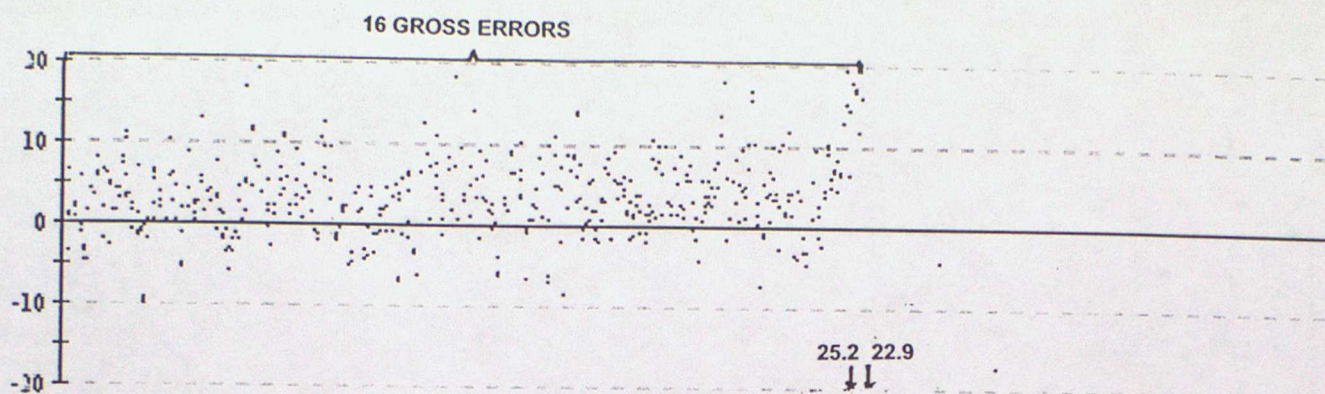
65663 Air Temperature



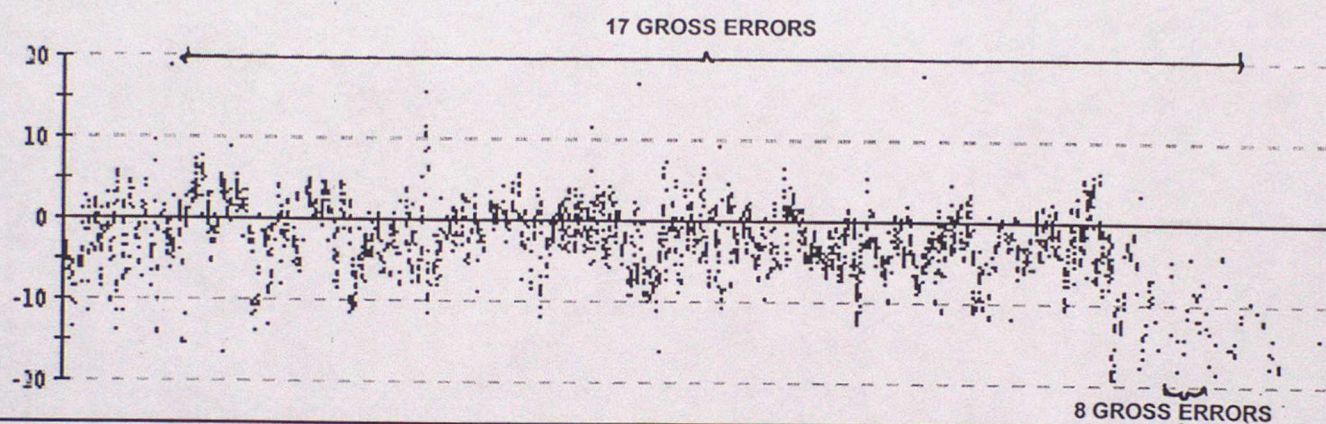
ANNEX D - TIME SERIES PLOTS OF WIND SPEED

Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

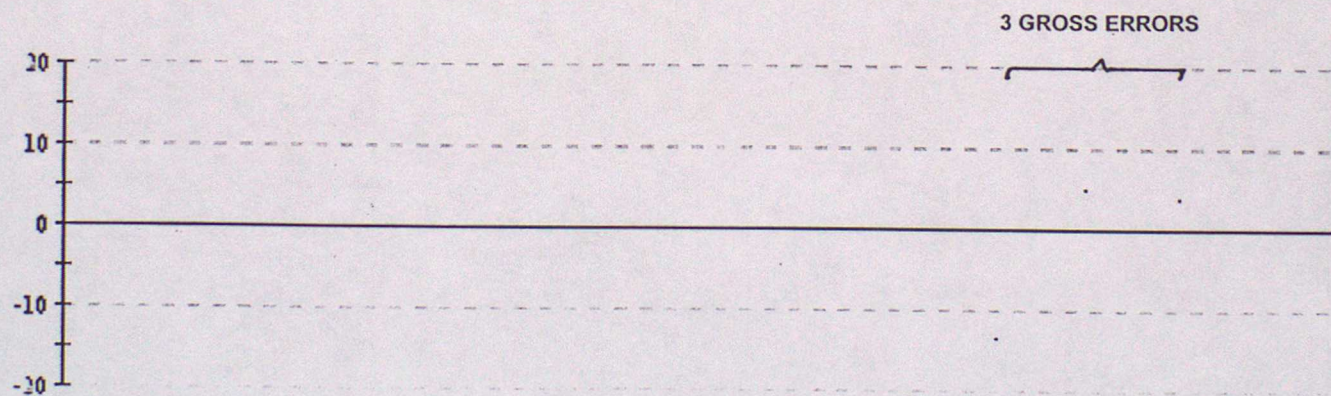
41523 Wind speed



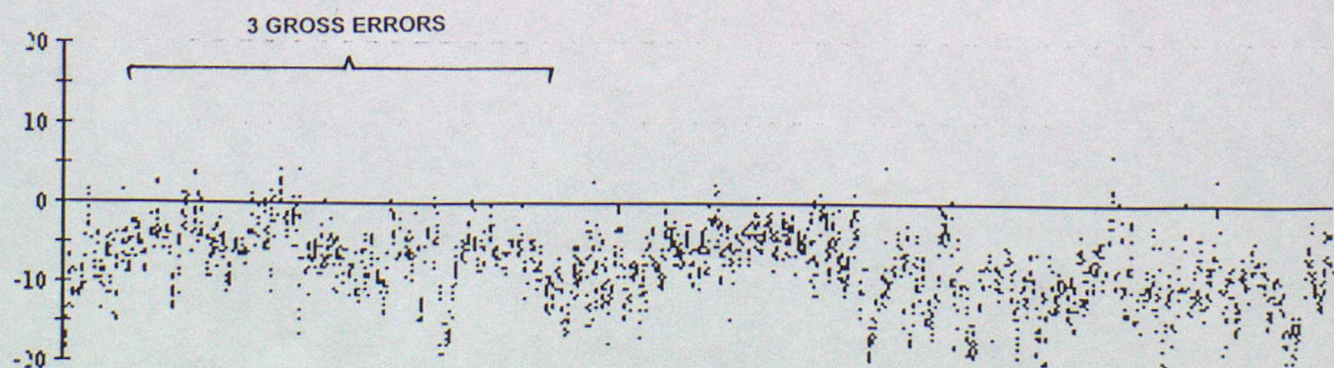
44743 Wind speed



44762 Wind speed

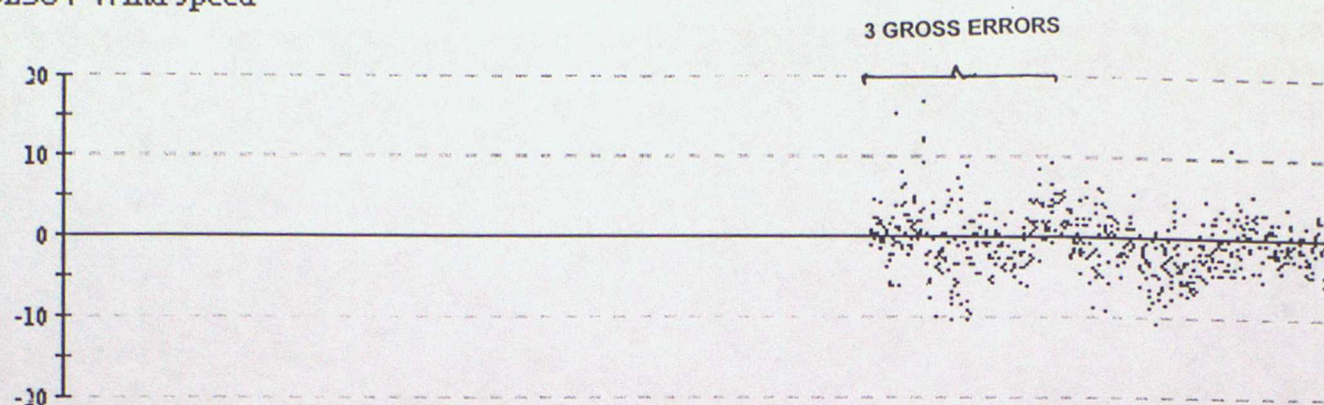


44772 Wind speed

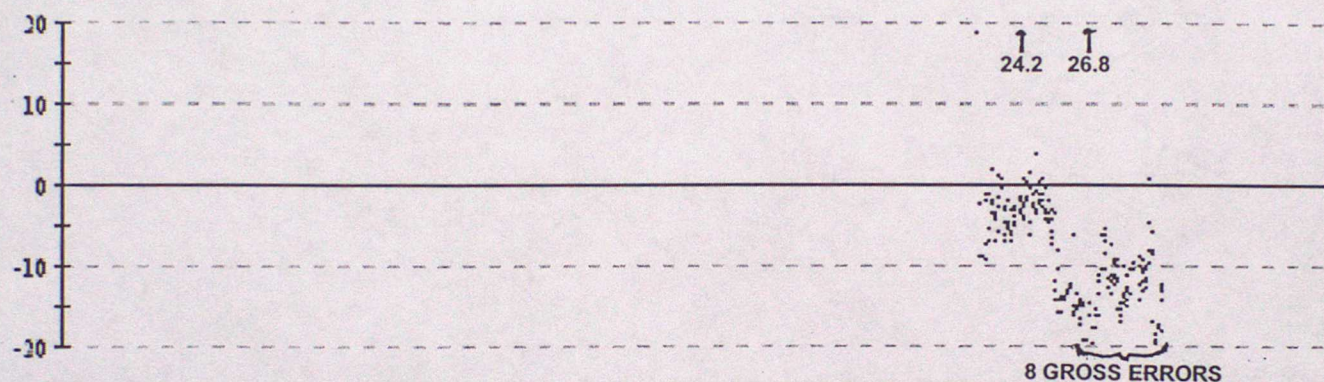


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

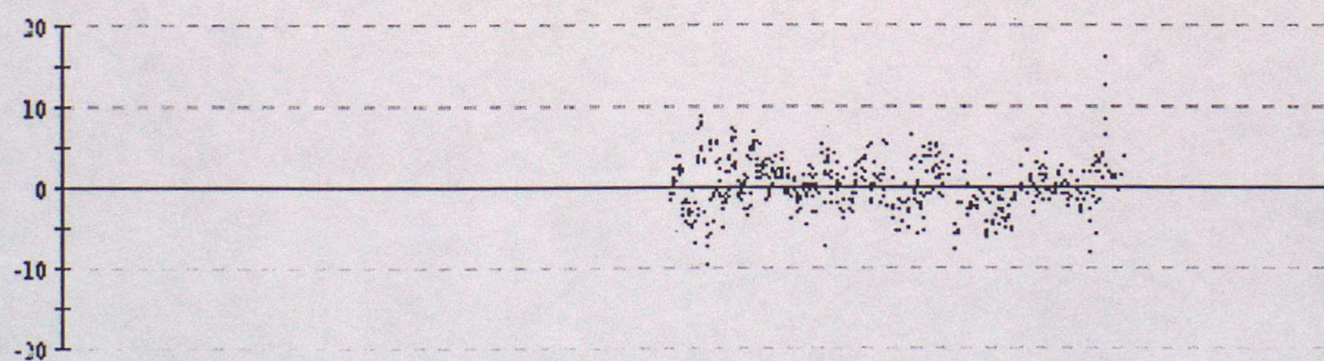
62504 Wind speed



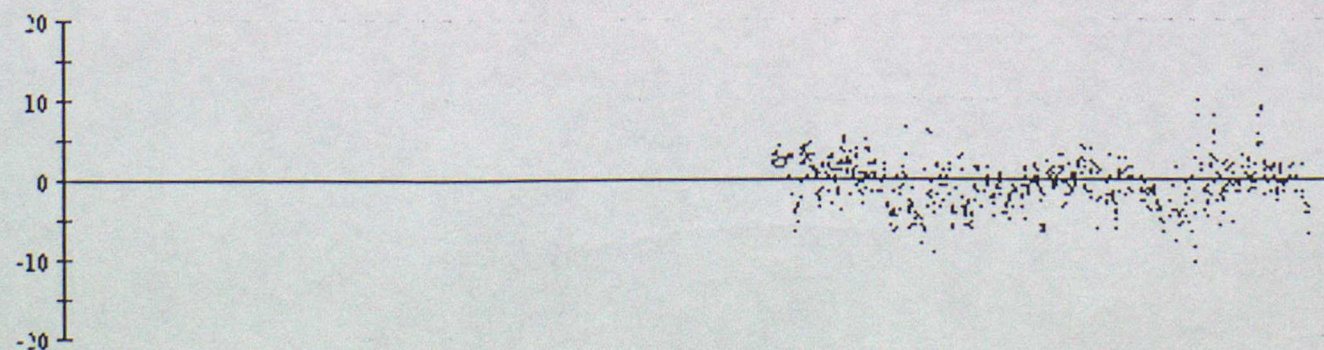
62505 Wind speed



62551 Wind speed



62564 Wind speed



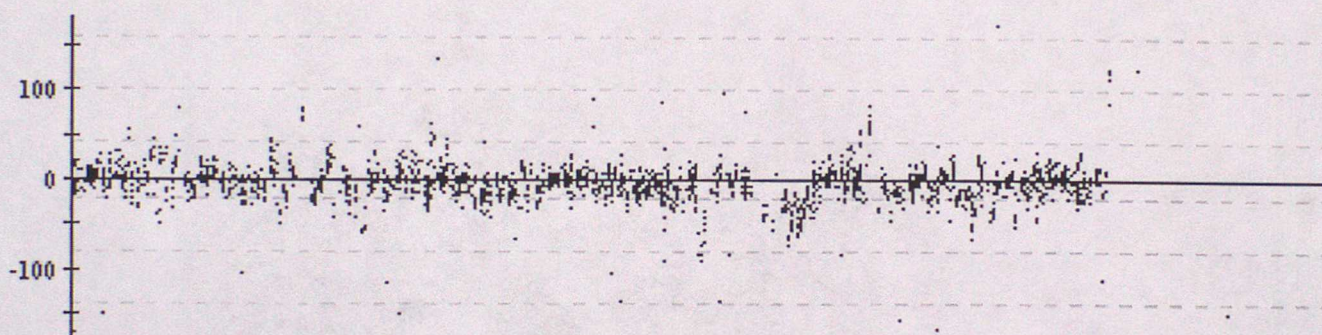
ANNEX E - TIME SERIES PLOTS OF WIND DIRECTION

Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

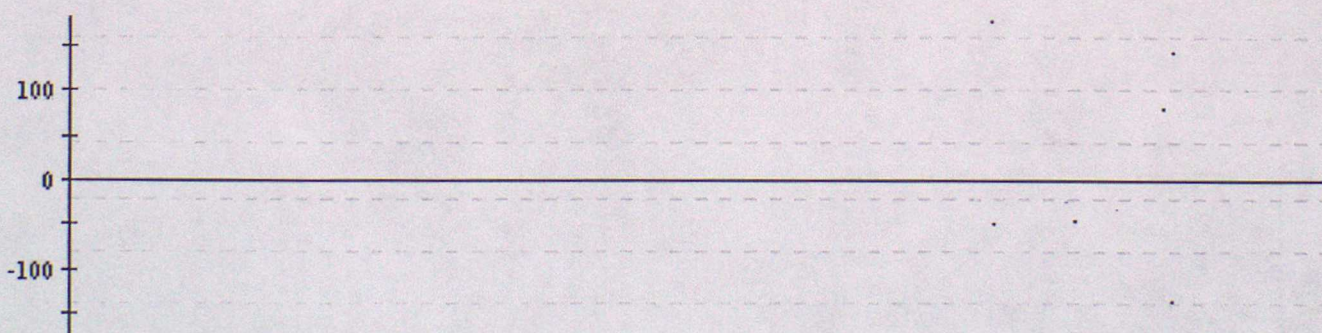
41523 Wind direction



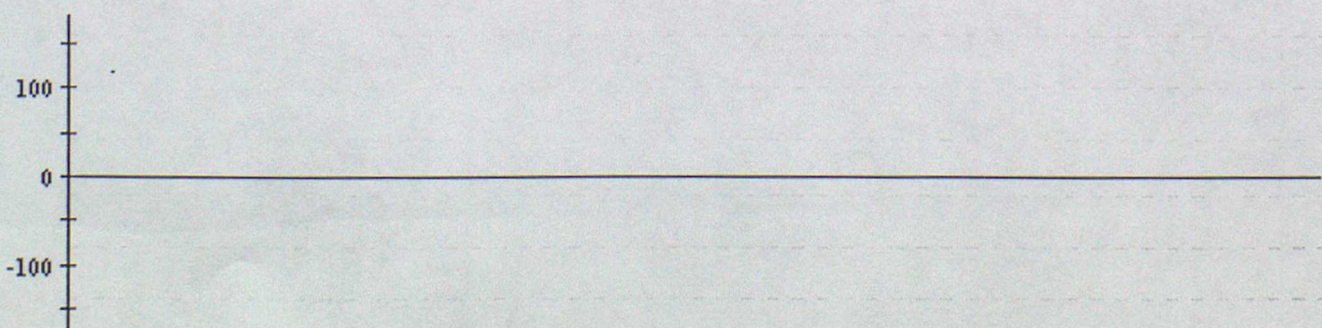
44743 Wind direction



44762 Wind direction

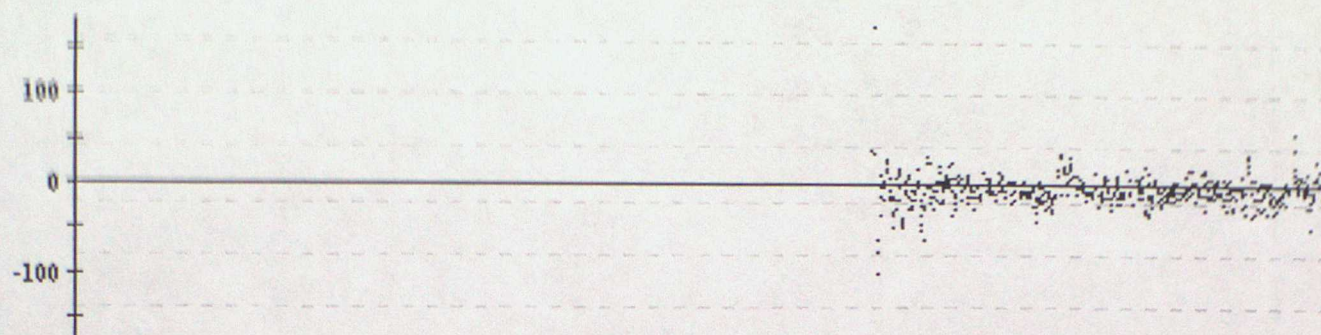


44772 Wind direction

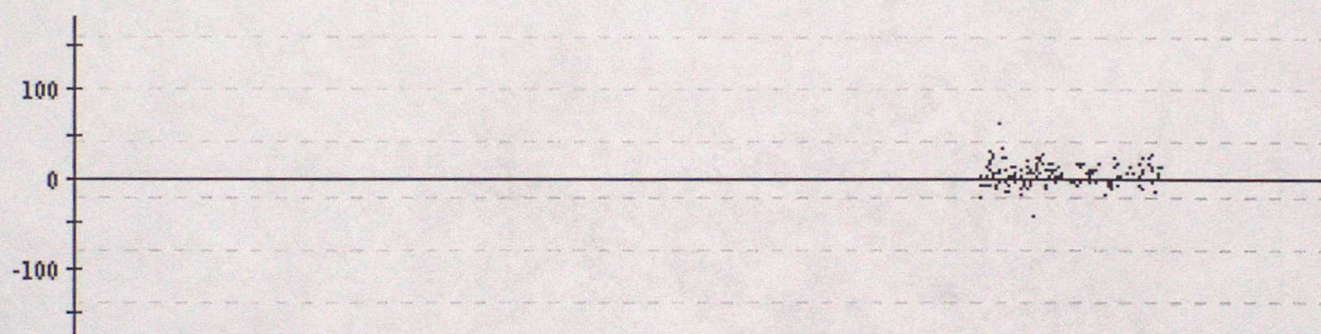


Data from 00z on 01/01/2001 to 23z on 31/03/2001 (OBS - Background field)

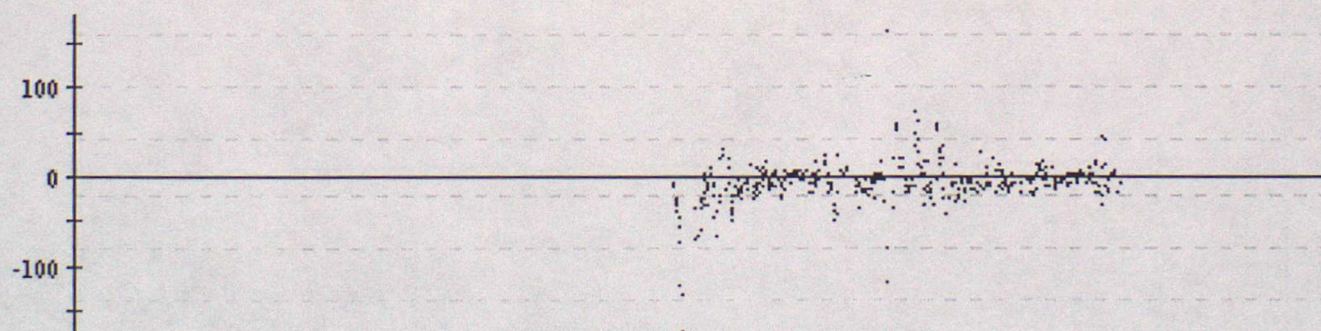
62504 Wind direction



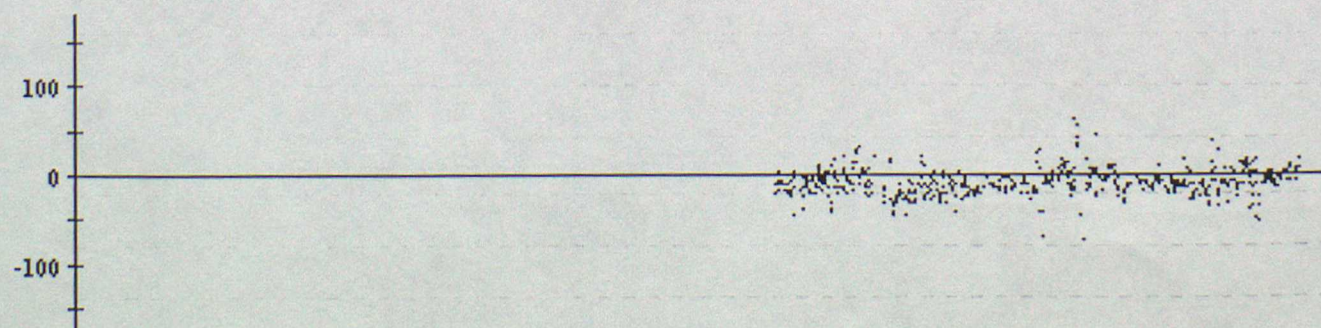
62505 Wind direction



62551 Wind direction



62564 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	
41505			*					*	01/01 - 31/03
41521			*		*			*	01/01 - 28/03
41523			*			*	*	*	01/01 - 31/03
41571			*					*	08/01 - 31/03
41644			*					*	01/01 - 31/03
44546	25374	UK	*	*				*	01/01 - 31/03
44548	27617	UK	*	*				*	01/01 - 31/03
44549	22648	UK	*	*				*	01/03 - 31/03
44550	23703	UK	*	*				*	01/03 - 31/03
44608	14540	F	*	*				*	01/01 - 31/03
44610	12734	F	*	*				*	01/01 - 31/03
44611	27616	UK	*	*				*	01/01 - 31/03
44612	27619	UK	*	*				*	01/01 - 31/03
44613	28467	UK	*	*	*				01/01 - 31/03
44620	27622	UK	*	*				*	01/01 - 31/03
44622	27623	UK	*	*				*	01/01 - 25/02
44623	27624	UK	*	*				*	01/01 - 31/03
44628	12287	UK	*	*	*			*	01/01 - 31/03
44723	16392	NL	*	*					01/01 - 13/02
44724	27922	UK	*	*				*	01/01 - 31/03
44725	27925	UK	*	*				*	01/01 - 31/03
44727	27925	UK	*	*					01/01 - 10/03
44729	25375	UK	*	*				*	01/01 - 31/03
44741	25373	UK	*	*				*	01/01 - 31/03
44743			*	*	*	*	*	*	01/01 - 31/03
44761	27615	UK	*	*				*	01/01 - 31/03
44762	19073	UK	*	*		*	*	*	01/01 - 31/03
44765	28466	UK	*	*	*				01/01 - 31/03
44770	21627	UK	*	*				*	01/01 - 31/03
44771	25377	UK	*	*				*	01/01 - 31/03
44772	12412	UK	*	*	*	*	*	*	01/01 - 31/03
44774	12286	UK	*	*	*			*	01/01 - 31/03
44775	25372	UK	*	*				*	01/01 - 31/03
44776	25371	UK	*	*				*	01/01 - 31/03
44778	25370	UK	*	*				*	01/01 - 31/03
48581			*	*	*				01/01 - 31/03

ANNEX F - CONT'd

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
61522			*					*	01/01 - 31/03
61538			*		*			*	28/03 - 31/03
61539			*		*			*	28/03 - 31/03
62501	7139	F	*	*				*	02/03 - 31/03
62504	17928	F	*	*		*	*	*	27/02 - 31/03
62505	17929	F	*	*		*	*	*	06/03 - 31/03
62507	10111	F	*	*				*	01/01 - 22/02
62508	5822	F	*	*	*			*	01/01 - 25/01
62509	14537	F	*	*				*	01/01 - 08/01
62513	12731	F	*					*	01/01 - 31/03
62514	7119	F	*	*				*	01/01 - 31/03
62517	18674	F	*	*				*	01/01 - 02/03
62519	18693	F	*	*				*	01/01 - 08/02
62551	15501	F	*			*	*	*	13/02 - 17/03
62564	15516	F	*			*	*	*	20/02 - 30/03
62585			*		*			*	25/02 - 01/03
62596	16391	NL	*	*				*	01/01 - 31/03
62783			*		*			*	25/02 - 31/03
62784			*		*			*	25/02 - 31/03
63662			*		*				01/01 - 26/02
64517	14178	F	*	*				*	01/01 - 31/03
64548	1153	IR	*	*	*			*	01/01 - 31/03
64698	29867	F	*	*				*	01/01 - 31/03
64699	29868	F	*	*				*	01/01 - 02/03
65593	4228	NL	*	*	*			*	01/01 - 31/03
65595	4229	NL	*	*	*			*	07/03 - 31/03
65600	3676	N	*	*	*			*	01/01 - 31/03
65601	3039	D	*	*	*			*	01/01 - 31/03
65602	6667	IR	*	*	*			*	01/01 - 31/03
65662	9307	D	*	*	*			*	01/01 - 31/03
65663	9308	D	*	*	*			*	01/01 - 31/03

