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**FORTY-NINETH QUARTERLY REPORT
ON DRIFTING BUOYS
IN THE NORTH ATLANTIC**

1st JANUARY 1999 – 31st MARCH 1999

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11th May 1999

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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 Bank (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

The location accuracy was good with 67 out of 71 of the buoys reporting having a '% of observations with acceptable positions' greater than 95% (compared to 64 out of 69 last quarter).

(b) Data timeliness

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

Timeliness	Last quarter.	This quarter
Very Good	50	49
Good	6	5
Satisfactory	3	3
Poor	1	10
Very poor	9	4
Total no. of buoys	69	71

(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	5	6	19	16
Good	15	4	8	7
Satisfactory	6	7	4	9
Poor	8	17	2	5
Very Poor	0	0	2	0

The total number of buoy days in the quarter was 4055 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 5259) and the number of 'buoy hours' with at least one observation was 63127 (compared with 79898 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 15.57 (last quarter the figure was 15.19).

3. SUMMARY OF PRESSURE PERFORMANCE

(a) Buoy deployments, etc.

North of 50deg N

There were 23 buoys reporting pressure at the beginning of the period. 25 buoys were operating at the end of the period. 14 buoys were deployed during the period (44607, 44610, 44616, 44624, 44728, 44766, 64516, 64517, 64518, 64519, 64520, 65593, 65594 and 65595). 12 buoys ceased reporting pressure (44601, 44602, 44726, 44772, 44774, 47556, 62674, 64520, 64528, 65562, 65571 and 65597).

South of 50deg N

There were 21 buoys reporting pressure at the beginning of the period. 30 buoys were reporting at the end of the period. 13 buoys were deployed during the period (44513, 44514, 44515, 44516, 44517, 44546, 44608, 44621, 44765, 61525, 61526, 61527 and 62575). 5 buoys ceased reporting (41597, 44604, 62511, and 62513. Also 62517, which stopped reporting pressure on 15/02/99 but continued to report other elements).

(e) 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 2.0 hPa and for buoys north of 50°N they should be below 3.0 hPa. The buoys whose revised RMS difference were found to lie outside these limits have had their performance described as 'suspect' and are included in the section below. Examination of the time-series plots (see Annex B) indicates the performance of these buoys:-

- 41598 - Pressure data from this buoy showed a larger than normal scatter (mainly during the first half of the period). The buoy also produced a large number of erroneous observations during the period.
- 44601 - This buoy reported a bias of +1.2 hPa from the beginning of the period until the end of its life (23/02/99). The buoy also produced a large number of erroneous observations during the period.
- 44604 - This buoy reported a bias of +1.7 hPa, and showed a larger than normal scatter, from the beginning of the period until the end of its life (13/02/99).

- 44772 - Pressure data showed a larger than normal scatter throughout January. Also data were erroneous at the beginning of the period and end of the buoy's reporting life (16/02/99).
- 62517 - This buoy reported a bias of +2.3 hPa from the beginning of the period until it ceased reporting pressure(mid February).
- 64528 - This buoy only reported pressure until 08/01/99, during which time all but one of the pressures reported were gross errors.
- 65562 - Pressure data from this buoy became erroneous before ceasing altogether on 21/01/99.
- 65571 - This buoy only reported pressure during early January. All pressure data were erroneous during this time.

Biases

Nine 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 also had their performance described as 'suspect'.

WMO No.	Buoy bias (hPa)	Period of reports
44513	-0.7	11/03 – 31/03
44514	-0.6	11/03 – 31/03
44516	-0.8	11/03 – 31/03
44517	-0.6	11/03 – 31/03
44602	0.8	01/01 – 07/01
44621	-0.7	11/03 – 31/03
44901	1.0	01/01 – 31/03
61527	-0.8	03/03 – 31/03
64529	-0.8	01/01 – 31/03

Summary of Pressure Performance

Pressure Summary	Last Quarter	This Quarter
Acceptable	36	54
Suspect - RMS	15	8
Suspect - Bias	18	9
Total no. of buoys	69	71

(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
41503	---	---	---	41504	0.71	1.13	810
41505	---	---	---	41521	0.52	1.15	826
41528	---	---	---	41597	---	---	---
41598	---	---	---	41599	---	---	---
41629	0.50	1.24	783	41637	---	---	---
44513	-0.46	1.19	211	44514	-0.05	1.59	223
44515	-0.24	0.90	212	44516	-0.75	2.19	216
44517	-0.03	1.10	214	44546	---	---	---
44601	---	---	---	44602	---	---	---
44604	---	---	---	44607	---	---	---
44608	---	---	---	44610	---	---	---
44613	0.67	2.40	3286	44616	0.23	0.80	2020
44621	0.39	1.00	235	44624	-0.13	0.82	1855
44726	---	---	---	44728	-0.10	1.60	209
44742	0.10	1.60	3349	44760	-1.12	4.41	2918
44762	---	---	---	44764	0.63	1.30	2816

WMO No.	Air Temperature			WMO No.	Air Temperature		
	Mean	St. Dev	No. of Obs		Mean	St. Dev	No. of Obs
44765	-0.41	1.11	167	44766	-0.17	0.70	261
44768	---	---	---	44772	---	---	---
44774	0.14	1.39	657	44778	7.87	2.22	86
44780	0.69	1.00	6226	44901	---	---	---
47556	---	---	---	61525	-0.15	1.20	248
61526	-0.38	1.26	238	61527	0.00	1.35	242
62511	---	---	---	62512	---	---	---
62513	---	---	---	62515	---	---	---
62517	-12.64	4.55	305	62519	---	---	---
62520	---	---	---	62554	---	---	---
62674	1.94	3.52	857	62675	-0.09	1.19	209
64516	---	---	---	64517	---	---	---
64518	---	---	---	64519	---	---	---
64520	---	---	---	64528	-65.42	6.12	114
64529	-0.51	1.34	3618	65562	2.41	4.37	276
65571	0.75	2.51	2725	65581	-0.33	0.88	1363
65591	-0.12	1.13	3546	65592	-0.19	1.57	3054
65593	-0.45	1.06	984	65594	-0.14	0.97	114
65595	-0.14	0.64	50	65597	-1.35	0.99	30
65599	16.62	2.58	59				

Summary

Buoys 44778 (+7.87), 62517 (-12.64), 62674 (+1.94) and 65597 (-1.35) all showed significant air temperature bias.

Data from buoys 44760 (-1.12) and 65562 (+2.41) became totally erratic at some point during their reporting lives.

All data from buoys 64528 (-65.42) and 65599 (16.62) were erroneous.

(5) Winds

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

WMO No.	Period	Wind Speed (kt)			Wind Direction (deg)		
		Mean	St. Dev.	No. of Obs	Mean	St. Dev.	No. of Obs
41504	01/01 31/03	-2.57	4.04	724	10.64	24.19	541
41521	01/01 31/03	-0.73	2.90	812	-13.66	18.86	750
41599	01/01 31/03	15.29	3.94	16	2.82	18.88	129
41629	01/01 31/03	-1.11	3.21	760	9.76	21.09	656
41637	01/01 31/03	0.65	3.29	545	-11.80	28.44	479
44601	01/01 23/02	-0.25	5.12	689	-23.45	47.74	687
44602	01/01 07/01	0.32	6.30	82	76.66	42.26	74
44607	19/01 31/03	2.77	4.85	960	4.12	31.28	941
44762	01/01 31/03	1.15	5.04	1183	-13.87	31.52	1152
62517	01/01 31/03	0.01	3.76	2013	-2.28	23.73	1838
65599	01/01 31/03	-1.60	5.86	3745	0.19	37.23	3374

All wind speed data from buoy 41599 (15.29) were erroneous.

Buoy 44601 (-23.45) showed a significant wind direction bias which improved during February.

Buoys 41504 (+10.64), 41521 (-13.66), 41637 (-11.80), 44602 (+76.66) and 44762 (-13.87) all showed significant wind direction biases throughout their reporting lives.

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	??	- unknown

2. Number of observations received is the number received at Bracknell in the Meteorological Data Bank (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).

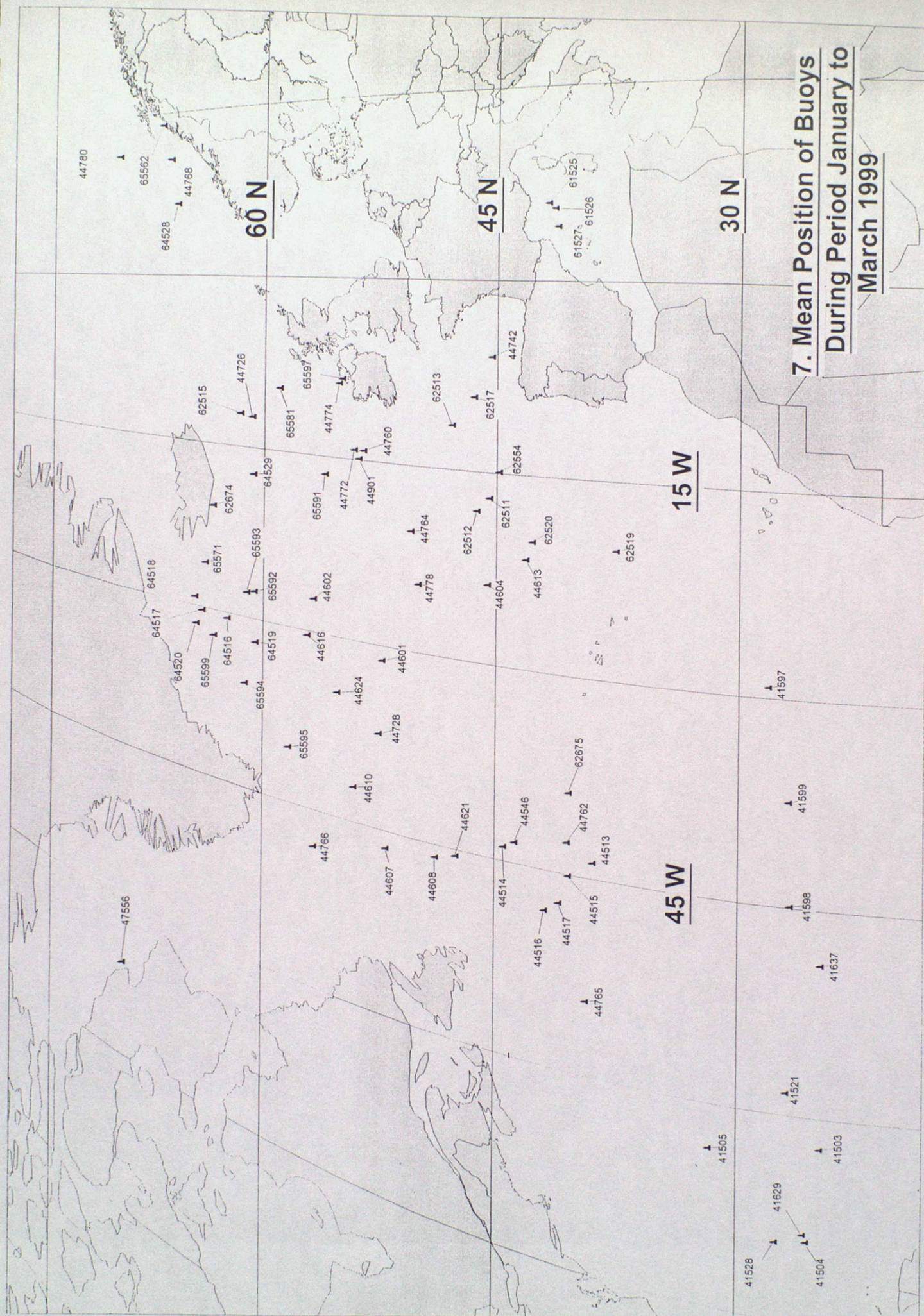
9. The performance categories are defined in the table below.

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



**7. Mean Position of Buoys
During Period January to
March 1999**

Annex A - TABLE OF STATISTICS

WMO No./Country	41503	41504	41505
Argos Id No.	??	??	??
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	24.9	25.7	31.7
Mean Longitude	-62.2	-69.0	-63.3
No. of Obs Received	780	847	889
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	98.1	97.5	99.2
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	97.4	0.0
Wind Speed/Dir	0.0/ 96.8	87.7/ 96.3	0.0/ 0.0
Sea-Surface Temp.	98.6	97.5	99.2
Median delay (min)	39	37	37
Number of days	90	90	90
Mean No. of obs/day	8.7	9.4	9.9
No. of Hours with obs	714	828	876
Mean no. of hours/day with obs	7.9	9.2	9.7
% of hour periods without an ob	66.8	61.6	59.4
Mean (Ob-Bg)	0.0	0.1	0.2
RMS (Ob-Bg) unflagged data	0.9	1.0	1.0
Mean (Ob-Bg)	0.0	0.1	0.2
RMS (Ob-Bg) all data	0.9	1.0	1.0
Revised RMS (Ob-Bg)	0.9	1.0	1.0
% of data flagged	1	2	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Poor	Poor	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	41521	41528	41597/F
Argos Id No.	??	??	6753
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 22/01
Mean Latitude	27.0	27.6	28.2
Mean Longitude	-58.4	-69.3	-29.2
No. of Obs Received	860	839	420
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	98.4	98.3	100.0
P. Tendency	0.0	0.0	11.7
Air Temperature	98.1	0.0	0.0
Wind Speed/Dir	97.0/ 98.1	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	98.6	99.0	100.0
Median delay (min)	37	37	63.5
Number of days	90	90	22
Mean No. of obs/day	9.6	9.3	19.1
No. of Hours with obs	849	828	295
Mean no. of hours/day with obs	9.4	9.2	13.4
% of hour periods without an ob	60.6	61.6	43.7
Mean (Ob-Bg)	0.1	0.2	-0.1
RMS (Ob-Bg) unflagged data	0.9	1.0	0.8
Mean (Ob-Bg)	0.1	0.2	-0.1
RMS (Ob-Bg) all data	0.9	1.1	0.8
Revised RMS (Ob-Bg)	0.9	1.0	0.8
% of data flagged	1	1	37
Operating at end of period	YES	YES	NO
Performance			
Availability	Poor	Poor	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	41598	41599	41629
Argos Id No.	??	??	??
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	26.8	26.9	25.9
Mean Longitude	-44.9	-37.4	-68.5
No. of Obs Received	3311	2384	832
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	96.8	92.7	96.0
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	0.0	96.3
Wind Speed/Dir	0.0/ 6.6	6.9/ 8.6	94.5/ 94.8
Sea-Surface Temp.	63.5	56.9	0.0
Median delay (min)	261	341	36
Number of days	90	90	90
Mean No. of obs/day	36.8	26.5	9.2
No. of Hours with obs	1659	1626	810
Mean no. of hours/day with obs	18.4	18.1	9.0
% of hour periods without an ob	23.2	24.7	62.5
Mean (Ob-Bg)	0.4	-0.2	0.1
RMS (Ob-Bg) unflagged data	1.1	0.9	1.0
Mean (Ob-Bg)	0.3	-0.7	0.1
RMS (Ob-Bg) all data	2.9	3.7	1.0
Revised RMS (Ob-Bg)	2.1	1.7	1.0
% of data flagged	50	33	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Good	Poor
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Poor	Very Poor	Very Good
Comments			

Annex A - cont'd

WMO No./Country	41637	44513	44514
Argos Id No.	??	??	??
Period Within Area	01/01 - 31/03	11/03 - 31/03	11/03 - 31/03
Mean Latitude	24.9	38.9	44.5
Mean Longitude	-48.9	-43.8	-43.9
No. of Obs Received	1363	244	244
% of obs with Acceptable Position	100.0	99.6	99.2
% of Present Pressure	93.0	91.4	95.9
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	90.2	95.9
Wind Speed/Dir	47.7/ 53.9	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	54.7	95.1	98.0
Median delay (min)	335	33.5	33
Number of days	90	21	21
Mean No. of obs/day	15.1	11.6	11.6
No. of Hours with obs	1095	217	222
Mean no. of hours/day with obs	12.2	10.3	10.6
% of hour periods without an ob	49.2	55.3	53.8
Mean (Ob-Bg)	0.5	-0.7	-0.6
RMS (Ob-Bg) unflagged data	1.1	1.1	1.2
Mean (Ob-Bg)	-0.1	-0.7	-0.6
RMS (Ob-Bg) all data	4.3	1.1	1.2
Revised RMS (Ob-Bg)	2.0	1.1	1.2
% of data flagged	25	4	8
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Poor	Poor
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Very Poor	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44515	44516	44517
Argos Id No.	??	??	??
Period Within Area	11/03 - 31/03	11/03 - 31/03	11/03 - 31/03
Mean Latitude	40.4	41.9	41.0
Mean Longitude	-45.1	-48.1	-47.3
No. of Obs Received	246	253	234
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	90.2	87.7	96.2
P. Tendency	0.0	0.0	0.0
Air Temperature	89.8	88.5	95.7
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	95.1	93.3	97.4
Median delay (min)	33	33.5	34
Number of days	21	21	21
Mean No. of obs/day	11.7	12.0	11.1
No. of Hours with obs	216	216	216
Mean no. of hours/day with obs	10.3	10.3	10.3
% of hour periods without an ob	55.6	55.6	55.6
Mean (Ob-Bg)	-0.2	-0.8	-0.6
RMS (Ob-Bg) unflagged data	0.9	1.3	1.1
Mean (Ob-Bg)	-0.1	-0.8	-0.6
RMS (Ob-Bg) all data	0.9	1.3	1.1
Revised RMS (Ob-Bg)	0.9	1.3	1.1
% of data flagged	8	9	4
Operating at end of period	YES	YES	YES
Performance Availability	Poor	Poor	Poor
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44546	44601/F	44602/F
Argos Id No.	??	5878	5883
Period Within Area	10/03 - 31/03	01/01 - 23/02	01/01 - 07/01
Mean Latitude	43.8	52.3	56.8
Mean Longitude	-43.4	-31.2	-27.2
No. of Obs Received	414	1405	182
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	97.8	97.5	97.3
P. Tendency	96.9	0.0	0.0
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	53.1/ 58.3	47.8/ 55.5
Sea-Surface Temp.	98.3	59.3	58.2
Median delay (min)	208	121	187
Number of days	22	54	7
Mean No. of obs/day	18.8	26.0	26.0
No. of Hours with obs	312	1121	141
Mean no. of hours/day with obs	14.2	20.8	20.1
% of hour periods without an ob	40.3	12.5	11.3
Mean (Ob-Bg)	0.3	1.2	0.8
RMS (Ob-Bg) unflagged data	1.2	2.3	2.2
Mean (Ob-Bg)	0.3	45.3	22.1
RMS (Ob-Bg) all data	1.4	137.2	98.0
Revised RMS (Ob-Bg)	1.3	3.2	2.3
% of data flagged	32	28	24
Operating at end of period	YES	NO	NO
Performance			
Availability	Acceptable	Good	Good
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Poor	Acceptable	Poor
Comments			

Annex A - cont'd

WMO No./Country	44604/F	44607/F	44608/F
Argos Id No.	6572	6216	14540
Period Within Area	01/01 - 13/02	19/01 - 31/03	20/01 - 31/03
Mean Latitude	45.6	52.0	48.8
Mean Longitude	-23.8	-46.4	-46.0
No. of Obs Received	734	1210	1726
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.6	94.3	98.4
P. Tendency	6.4	53.1	56.0
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	89.4/ 88.6	0.0/ 0.0
Sea-Surface Temp.	99.5	95.0	98.2
Median delay (min)	40	164	183
Number of days	44	72	71
Mean No. of obs/day	16.7	16.8	24.3
No. of Hours with obs	554	1176	1170
Mean no. of hours/day with obs	12.6	16.3	16.5
% of hour periods without an ob	46.6	31.5	30.9
Mean (Ob-Bg)	1.7	-0.2	-0.2
RMS (Ob-Bg) unflagged data	2.9	1.7	1.5
Mean (Ob-Bg)	1.9	-0.1	-0.2
RMS (Ob-Bg) all data	3.5	2.1	1.5
Revised RMS (Ob-Bg)	3.5	2.0	1.5
% of data flagged	40	3	38
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Acceptable	Poor
Comments			

Annex A - cont'd

WMO No./Country	44610/F	44613/UK	44616/UK
Argos Id No.	12734	28467	28468
Period Within Area	17/02 - 31/03	01/01 - 31/03	28/01 - 31/03
Mean Latitude	54.1	43.2	57.2
Mean Longitude	-42.1	-21.5	-30.4
No. of Obs Received	883	3540	2311
% of obs with Acceptable Position	100.0	97.2	99.8
% of Present Pressure	99.3	96.5	90.9
P. Tendency	93.7	92.3	85.0
Air Temperature	0.0	94.4	89.7
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	98.2	2.1	91.4
Median delay (min)	210	22	64
Number of days	43	90	63
Mean No. of obs/day	20.5	39.3	36.7
No. of Hours with obs	612	1597	1216
Mean no. of hours/day with obs	14.2	17.7	19.3
% of hour periods without an ob	40.2	25.9	19.3
Mean (Ob-Bg)	0.0	-0.1	0.0
RMS (Ob-Bg)	1.6	1.1	1.7
unflagged data			
Mean (Ob-Bg)	0.1	-0.9	0.0
RMS (Ob-Bg)	2.1	11.3	1.7
all data			
Revised RMS (Ob-Bg)	1.7	1.3	1.7
% of data flagged	36	64	55
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Poor	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44621/UK	44624/UK	44726/UK
Argos Id No.	12372	28470	12539
Period Within Area	11/03 - 31/03	01/02 - 31/03	01/01 - 02/03
Mean Latitude	47.5	55.2	60.9
Mean Longitude	-45.5	-34.6	-12.3
No. of Obs Received	281	2093	3332
% of obs with Acceptable Position	99.3	99.9	99.5
% of Present Pressure	89.3	93.2	97.3
P. Tendency	84.3	87.7	92.4
Air Temperature	88.6	91.1	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	91.5	92.7	97.4
Median delay (min)	21	63	21
Number of days	21	59	61
Mean No. of obs/day	13.4	35.5	54.6
No. of Hours with obs	242	1123	1225
Mean no. of hours/day with obs	11.5	19.0	20.1
% of hour periods without an ob	50.6	20.2	15.0
Mean (Ob-Bg)	-0.7	-0.2	0.3
RMS (Ob-Bg) unflagged data	1.5	1.6	1.9
Mean (Ob-Bg)	-0.7	-0.5	0.3
RMS (Ob-Bg) all data	1.5	5.4	5.1
Revised RMS (Ob-Bg)	1.5	1.6	2.0
% of data flagged	13	54	71
Operating at end of period	YES	YES	NO
Performance			
Availability	Poor	Very Good	Very Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44728	44742UK	44760/UK
Argos Id No.	??	28471	28469
Period Within Area	15/03 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	52.5	45.4	53.6
Mean Longitude	-37.2	-6.0	-14.2
No. of Obs Received	254	3649	3644
% of obs with Acceptable Position	99.6	93.0	98.5
% of Present Pressure	91.7	94.9	96.3
P. Tendency	89.4	88.9	91.4
Air Temperature	94.1	93.9	81.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	92.1	95.2	96.0
Median delay (min)	22	23	22
Number of days	17	90	90
Mean No. of obs/day	14.9	40.5	40.5
No. of Hours with obs	205	1604	1598
Mean no. of hours/day with obs	12.1	17.8	17.8
% of hour periods without an ob	47.8	25.5	25.8
Mean (Ob-Bg)	-0.4	-0.1	0.3
RMS (Ob-Bg)	1.5	1.2	1.6
unflagged data			
Mean (Ob-Bg)	-0.3	-0.5	0.1
RMS (Ob-Bg)	1.8	6.7	4.3
all data			
Revised RMS (Ob-Bg)	1.6	1.3	1.7
% of data flagged	18	64	65
Operating at end of period	YES	YES	YES
Performance			
Availability	Poor	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44762/UK	44764/UK	44765/UK
Argos Id No.	12594	28464	28466
Period Within Area	01/01 - 31/03	01/01 - 31/03	15/03 - 31/03
Mean Latitude	40.5	50.5	39.3
Mean Longitude	-42.6	-20.3	-54.3
No. of Obs Received	1512	3110	201
% of obs with Acceptable Position	99.7	100.0	99.0
% of Present Pressure	86.4	94.2	94.5
P. Tendency	81.5	88.7	90.5
Air Temperature	0.0	92.5	94.5
Wind Speed/Dir	84.1/ 83.1	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	50.9	94.2	95.0
Median delay (min)	49	33	23
Number of days	90	90	17
Mean No. of obs/day	16.8	34.6	11.8
No. of Hours with obs	1133	1542	185
Mean no. of hours/day with obs	12.6	17.1	10.9
% of hour periods without an ob	47.5	28.3	53.5
Mean (Ob-Bg)	0.4	-0.3	0.0
RMS (Ob-Bg) unflagged data	1.3	1.5	1.2
Mean (Ob-Bg)	0.2	-0.6	0.0
RMS (Ob-Bg) all data	3.8	5.8	1.2
Revised RMS (Ob-Bg)	1.4	2.3	1.2
% of data flagged	49	58	7
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44766/UK	44768/UK	44772/UK
Argos Id No.	28465	26746	12577
Period Within Area	15/03 - 31/03	01/01 - 31/03	01/01 - 16/02
Mean Latitude	56.7	66.6	54.2
Mean Longitude	-48.1	10.7	-14.2
No. of Obs Received	323	6243	2237
% of obs with Acceptable Position	98.8	99.4	99.1
% of Present Pressure	93.8	96.7	97.5
P. Tendency	86.4	92.9	92.9
Air Temperature	92.6	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	94.1	84.5	97.7
Median delay (min)	25	24	21
Number of days	17	90	47
Mean No. of obs/day	19.0	69.4	47.6
No. of Hours with obs	248	1955	912
Mean no. of hours/day with obs	14.6	21.7	19.4
% of hour periods without an ob	37.2	9.4	18.6
Mean (Ob-Bg)	-0.2	0.0	-0.1
RMS (Ob-Bg) unflagged data	1.4	1.4	2.0
Mean (Ob-Bg)	-0.5	-0.2	-1.1
RMS (Ob-Bg) all data	4.0	4.7	6.5
Revised RMS (Ob-Bg)	1.4	1.4	4.0
% of data flagged	32	74	70
Operating at end of period	YES	YES	NO
Performance			
Availability	Acceptable	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44774/UK	44778/UK	44780/UK
Argos Id No.	28472	28473	26742
Period Within Area	01/01 - 16/01	01/01 - 31/03	01/01 - 31/03
Mean Latitude	55.2	50.0	70.2
Mean Longitude	-8.8	-24.5	11.3
No. of Obs Received	698	4262	6900
% of obs with Acceptable Position	96.4	98.6	99.5
% of Present Pressure	96.4	96.9	95.6
P. Tendency	91.7	92.1	90.9
Air Temperature	97.0	2.0	94.8
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	98.0	96.6	95.9
Median delay (min)	21	22	26
Number of days	16	90	90
Mean No. of obs/day	43.6	47.4	76.7
No. of Hours with obs	291	1701	2016
Mean no. of hours/day with obs	18.2	18.9	22.4
% of hour periods without an ob	21.6	21.1	6.6
Mean (Ob-Bg)	-0.2	-0.4	0.0
RMS (Ob-Bg) unflagged data	2.1	1.5	1.3
Mean (Ob-Bg)	-0.3	-0.8	0.0
RMS (Ob-Bg) all data	3.5	6.4	3.4
Revised RMS (Ob-Bg)	2.4	1.4	1.3
% of data flagged	66	68	75
Operating at end of period	NO	YES	YES
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44901	47556	61525
Argos Id No.	??	??	??
Period Within Area	01/01 - 31/03	01/01 - 09/01	03/03 - 31/03
Mean Latitude	53.9	69.6	41.9
Mean Longitude	-14.9	-66.1	6.0
No. of Obs Received	883	113	309
% of obs with Acceptable Position	99.5	95.6	100.0
% of Present Pressure	74.2	100.0	95.1
P. Tendency	22.9	0.0	0.0
Air Temperature	0.0	0.0	95.1
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	70.6	0.0	96.8
Median delay (min)	76	11	28
Number of days	90	9	29
Mean No. of obs/day	9.8	12.6	10.7
No. of Hours with obs	722	99	296
Mean no. of hours/day with obs	8.0	11.0	10.2
% of hour periods without an ob	66.4	54.0	55.8
Mean (Ob-Bg)	1.0	0.2	-0.5
RMS (Ob-Bg) unflagged data	1.8	1.4	1.1
Mean (Ob-Bg)	1.1	0.1	-0.5
RMS (Ob-Bg) all data	2.2	1.3	1.1
Revised RMS (Ob-Bg)	2.1	1.3	1.1
% of data flagged	18	20	6
Operating at end of period	YES	NO	YES
Performance			
Availability	Poor	Poor	Poor
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	61526	61527	62511/F
Argos Id No.	??	??	12729
Period Within Area	03/03 - 31/03	03/03 - 31/03	01/01 - 04/03
Mean Latitude	41.5	41.3	45.5
Mean Longitude	5.6	4.2	-17.0
No. of Obs Received	304	294	2841
% of obs with Acceptable Position	100.0	100.0	99.0
% of Present			
Pressure	92.8	95.6	82.2
P. Tendency	0.0	0.0	0.0
Air Temperature	91.8	94.6	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	94.7	96.3	58.0
Median delay (min)	28	26	194.5
Number of days	29	29	63
Mean No. of obs/day	10.5	10.1	45.1
No. of Hours with obs	291	282	1250
Mean no. of hours/day with obs	10.0	9.7	19.8
% of hour periods without an ob	56.8	57.8	16.3
Mean (Ob-Bg)	0.1	-0.8	0.5
RMS (Ob-Bg) unflagged data	0.9	1.2	1.3
Mean (Ob-Bg)	0.1	-0.8	2.1
RMS (Ob-Bg) all data	0.9	1.2	27.6
Revised RMS (Ob-Bg)	0.9	1.2	1.5
% of data flagged	5	4	60
Operating at end of period	YES	YES	NO
Performance			
Availability	Poor	Poor	Very Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Very Good	Very Good	Poor
Comments			

Annex A - cont'd

WMO No./Country	62512/F	62513/F	62515/F
Argos Id No.	12730	12731	6569
Period Within Area	01/01 - 31/03	01/01 - 24/03	01/01 - 31/03
Mean Latitude	46.3	47.9	61.7
Mean Longitude	-18.1	-11.5	-12.1
No. of Obs Received	2211	2708	7262
% of obs with Acceptable Position	99.6	98.7	99.5
% of Present Pressure	85.3	81.1	92.6
P. Tendency	0.0	0.0	6.4
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.	44.1	58.3	82.3
Median delay (min)	451	165	26
Number of days	90	83	90
Mean No. of obs/day	24.6	32.6	80.7
No. of Hours with obs	1368	1136	1915
Mean no. of hours/day with obs	15.2	13.7	21.3
% of hour periods without an ob	36.5	42.7	11.3
Mean (Ob-Bg)	0.3	0.5	0.5
RMS (Ob-Bg) unflagged data	1.2	1.4	2.0
Mean (Ob-Bg)	0.3	2.5	0.9
RMS (Ob-Bg) all data	1.2	20.1	8.0
Revised RMS (Ob-Bg)	1.1	1.5	2.2
% of data flagged	32	61	79
Operating at end of period	YES	NO	YES
Performance			
Availability	Acceptable	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Poor	Acceptable	Very Good
Comments			

Annex A - cont'd

WMO No./Country	62517/F	62519/F	62520/F
Argos Id No.	5823	6570	14431
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	46.5	37.6	42.8
Mean Longitude	-9.2	-20.2	-20.1
No. of Obs Received	2835	3369	3112
% of obs with Acceptable Position	98.8	93.0	97.1
% of Present			
Pressure	14.0	92.2	95.1
P. Tendency	84.2	6.4	86.6
Air Temperature	11.4	0.0	0.0
Wind Speed/Dir	76.2/ 74.8	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	94.2	1.9	95.1
Median delay (min)	22	25	21
Number of days	90	90	90
Mean No. of obs/day	31.5	37.4	34.6
No. of Hours with obs	1595	1534	1571
Mean no. of hours/day with obs	17.7	17.0	17.5
% of hour periods without an ob	26.0	28.8	27.1
Mean (Ob-Bg)	2.3	0.1	-0.3
RMS (Ob-Bg) unflagged data	3.1	1.0	1.0
Mean (Ob-Bg)	2.2	-0.6	-0.3
RMS (Ob-Bg) all data	4.6	14.5	2.4
Revised RMS (Ob-Bg)	3.0	1.2	1.1
% of data flagged	89	66	58
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Very Good	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	62554/F	62674	62675
Argos Id No.	14430	??	??
Period Within Area	01/01 - 31/03	01/01 - 24/03	11/03 - 31/03
Mean Latitude	44.9	63.5	40.4
Mean Longitude	-14.9	-20.6	-38.8
No. of Obs Received	3203	926	247
% of obs with Acceptable Position	96.9	99.9	99.6
% of Present Pressure	94.3	98.5	90.7
P. Tendency	86.1	0.0	0.0
Air Temperature	0.0	98.2	89.5
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	94.6	0.0	95.1
Median delay (min)	21	77	33
Number of days	90	83	21
Mean No. of obs/day	35.6	11.2	11.8
No. of Hours with obs	1591	804	218
Mean no. of hours/day with obs	17.7	9.7	10.4
% of hour periods without an ob	26.2	59.3	55.1
Mean (Ob-Bg)	0.3	-0.3	-0.2
RMS (Ob-Bg) unflagged data	1.1	2.0	0.8
Mean (Ob-Bg)	0.2	-0.3	-0.2
RMS (Ob-Bg) all data	2.4	2.0	0.9
Revised RMS (Ob-Bg)	1.1	2.0	0.9
% of data flagged	59	18	4
Operating at end of period	YES	NO	YES
Performance			
Availability	Very Good	Poor	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	64516	64517/F	64518/F
Argos Id No.	??	14178	14180
Period Within Area	14/03 - 31/03	11/02 - 31/03	11/02 - 31/03
Mean Latitude	62.5	64.2	64.7
Mean Longitude	-30.5	-30.3	-29.2
No. of Obs Received	483	864	1671
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	98.6	97.7	98.5
P. Tendency	96.9	82.5	82.2
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.	98.1	95.5	96.5
Median delay (min)	222	231	235
Number of days	18	49	49
Mean No. of obs/day	26.8	17.6	34.1
No. of Hours with obs	304	645	932
Mean no. of hours/day with obs	16.9	13.2	19.0
% of hour periods without an ob	26.2	44.6	20.1
Mean (Ob-Bg)	-0.1	0.1	-0.4
RMS (Ob-Bg)	1.5	1.5	1.7
unflagged data			
Mean (Ob-Bg)	0.0	0.3	-0.4
RMS (Ob-Bg)	1.8	2.3	1.9
all data			
Revised RMS (Ob-Bg)	1.5	1.7	1.8
% of data flagged	41	32	47
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Acceptable	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Poor	Poor	Poor
Comments			

Annex A - cont'd

WMO No./Country	64519	64520/F	64528/NL
Argos Id No.	??	14198	4274
Period Within Area	15/03 - 31/03	11/02 - 29/03	01/01 - 08/01
Mean Latitude	60.6	64.6	66.1
Mean Longitude	-32.0	-31.6	6.6
No. of Obs Received	300	1639	300
% of obs with Acceptable Position	100.0	100.0	98.7
% of Present			
Pressure	98.0	98.5	39.0
P. Tendency	97.3	82.1	46.0
Air Temperature	0.0	0.0	39.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	97.0	97.3	38.0
Median delay (min)	218.5	234	22
Number of days	17	47	8
Mean No. of obs/day	17.6	34.9	37.5
No. of Hours with obs	222	877	144
Mean no. of hours/day with obs	13.1	18.7	18.0
% of hour periods without an ob	43.2	20.6	19.1
Mean (Ob-Bg)	0.1	-0.5	-0.5
RMS (Ob-Bg) unflagged data	1.9	1.8	1.8
Mean (Ob-Bg)	0.2	-0.4	-78.0
RMS (Ob-Bg) all data	2.3	2.5	78.6
Revised RMS (Ob-Bg)	2.3	1.9	78.6
% of data flagged	33	51	0
Operating at end of period	YES	NO	NO
Performance			
Availability	Acceptable	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Poor	Poor	Very Good
Comments			

Annex A - cont'd

WMO No./Country	64529/D	65562/N	65571/IR
Argos Id No.	6669	3675	4275
Period Within Area	01/01 - 31/03	01/01 - 21/01	01/01 - 04/03
Mean Latitude	60.8	67.2	64.0
Mean Longitude	-17.3	13.9	-25.9
No. of Obs Received	4260	326	3179
% of obs with Acceptable Position	97.7	99.7	99.2
% of Present Pressure	89.6	96.0	11.1
P. Tendency	52.5	67.2	62.1
Air Temperature	88.2	95.1	88.3
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	75.3	81.9	78.6
Median delay (min)	21	21	20
Number of days	90	21	63
Mean No. of obs/day	47.3	15.5	50.5
No. of Hours with obs	1702	184	1260
Mean no. of hours/day with obs	18.9	8.8	20.0
% of hour periods without an ob	21.1	62.2	15.9
Mean (Ob-Bg)	-0.8	-0.8	-1.8
RMS (Ob-Bg) unflagged data	2.2	2.0	3.2
Mean (Ob-Bg)	-0.7	-2.9	-6.4
RMS (Ob-Bg) all data	4.5	8.5	12.1
Revised RMS (Ob-Bg)	2.4	6.5	10.2
% of data flagged	70	67	81
Operating at end of period	YES	NO	NO
Performance			
Availability	Very Good	Acceptable	Very Good
Pressure Quality	Suspect	Suspect	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	65581/D	65591/UK	65592/D
Argos Id No.	2294	26748	4270
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	59.1	56.1	60.7
Mean Longitude	-9.6	-16.5	-27.6
No. of Obs Received	1948	3952	3538
% of obs with Acceptable Position	99.9	100.0	60.5
% of Present Pressure	76.8	94.8	90.8
P. Tendency	68.2	89.6	86.5
Air Temperature	75.3	92.5	89.6
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	55.9	1.1	65.1
Median delay (min)	49	37	26
Number of days	90	90	90
Mean No. of obs/day	21.6	43.9	39.3
No. of Hours with obs	1310	1689	1659
Mean no. of hours/day with obs	14.6	18.8	18.4
% of hour periods without an ob	39.2	21.5	23.1
Mean (Ob-Bg)	-0.3	-0.2	-0.3
RMS (Ob-Bg) unflagged data	1.7	1.7	2.1
Mean (Ob-Bg)	-0.2	-0.4	-0.5
RMS (Ob-Bg) all data	2.0	5.9	4.4
Revised RMS (Ob-Bg)	1.8	1.7	2.2
% of data flagged	40	64	60
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	65593/NL	65594	65595
Argos Id No.	4228	??	??
Period Within Area	05/02 - 31/03	26/03 - 31/03	28/03 - 31/03
Mean Latitude	61.2	61.3	58.4
Mean Longitude	-27.8	-35.8	-40.3
No. of Obs Received	1305	162	76
% of obs with Acceptable Position	93.0	98.8	97.4
% of Present			
Pressure	82.4	81.5	93.4
P. Tendency	71.7	78.4	92.1
Air Temperature	78.5	77.8	93.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	57.5	66.7	65.8
Median delay (min)	41	41.5	36
Number of days	55	6	4
Mean No. of obs/day	23.7	27.0	19.0
No. of Hours with obs	861	95	54
Mean no. of hours/day with obs	15.7	15.8	13.5
% of hour periods without an ob	34.3	29.1	41.3
Mean (Ob-Bg)	-0.3	-0.5	-0.2
RMS (Ob-Bg)	1.8	1.4	0.9
unflagged data			
Mean (Ob-Bg)	-0.3	-0.4	0.3
RMS (Ob-Bg)	2.5	1.2	3.6
all data			
Revised RMS (Ob-Bg)	2.1	1.2	0.9
% of data flagged	42	50	48
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

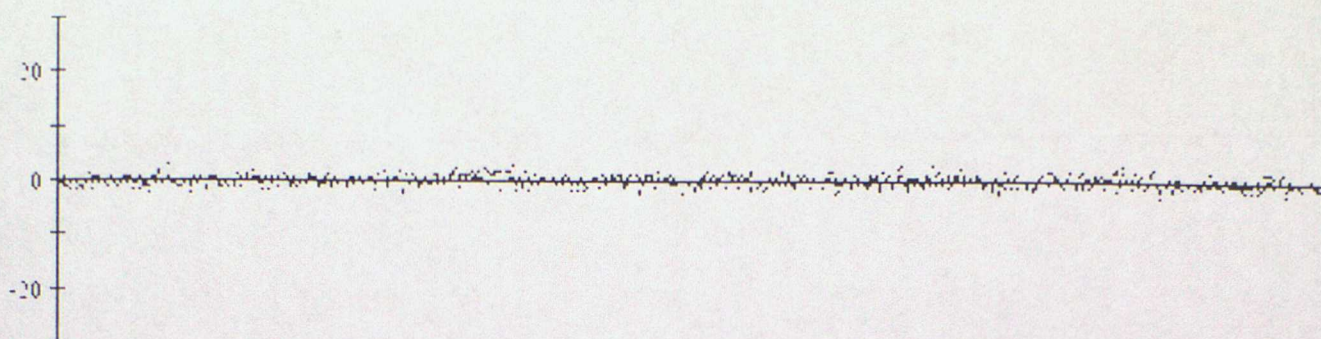
Annex A - cont'd

WMO No./Country	65597/NL	65599/UK
Argos Id No.	4273	28477
Period Within Area	01/01 - 04/01	01/01 - 31/03
Mean Latitude	55.0	63.4
Mean Longitude	-8.4	-32.3
No. of Obs Received	30	6392
% of obs with Acceptable Position	100.0	99.5
% of Present Pressure	100.0	94.9
P. Tendency	96.7	90.3
Air Temperature	100.0	2.1
Wind Speed/Dir	0.0/ 0.0	62.7/ 62.5
Sea-Surface Temp.	63.3	95.1
Median delay (min)	23	22
Number of days	4	90
Mean No. of obs/day	7.5	71.0
No. of Hours with obs	25	1946
Mean no. of hours/day with obs	6.3	21.6
% of hour periods without an ob	65.8	9.7
Mean (Ob-Bg)	-0.4	-0.1
RMS (Ob-Bg) unflagged data	1.9	1.7
Mean (Ob-Bg)	-0.4	-0.2
RMS (Ob-Bg) all data	1.8	5.6
Revised RMS (Ob-Bg)	1.8	1.7
% of data flagged	17	75
Operating at end of period	NO	YES
Performance		
Availability	Poor	Very Good
Pressure Quality	Acceptable	Acceptable
Timeliness	Very Good	Very Good
Comments		

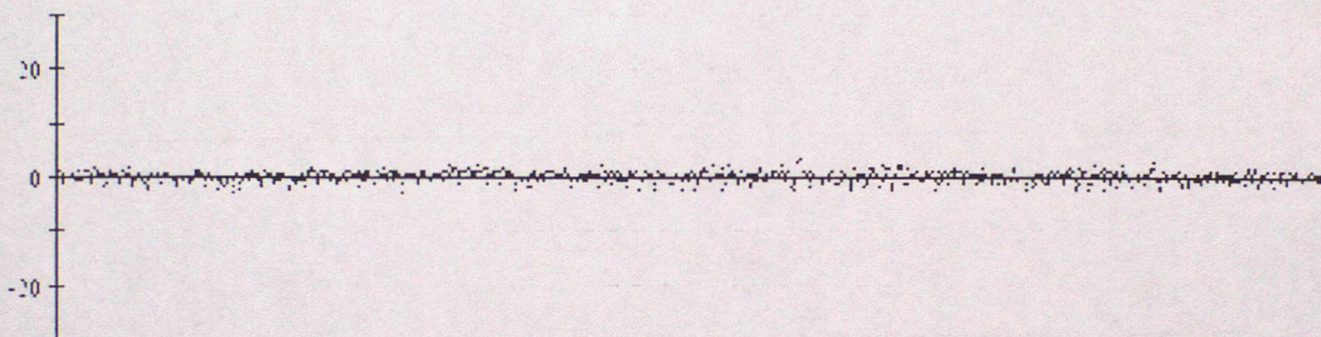
ANNEX B - TIME SERIES PLOTS OF PRESSURE

Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

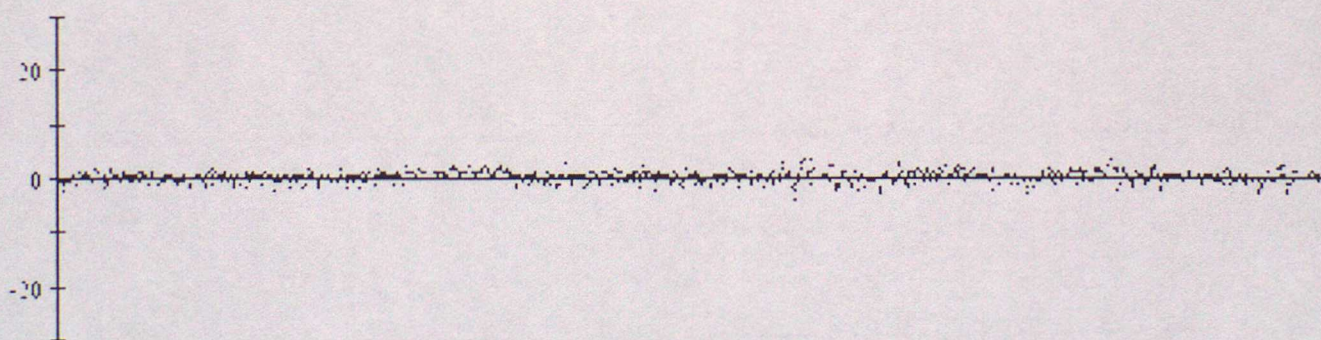
41503 Pressure



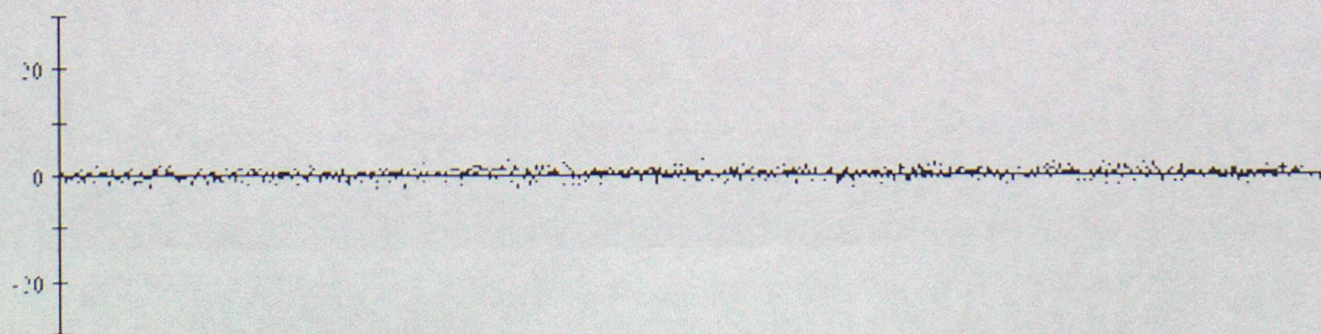
41504 Pressure



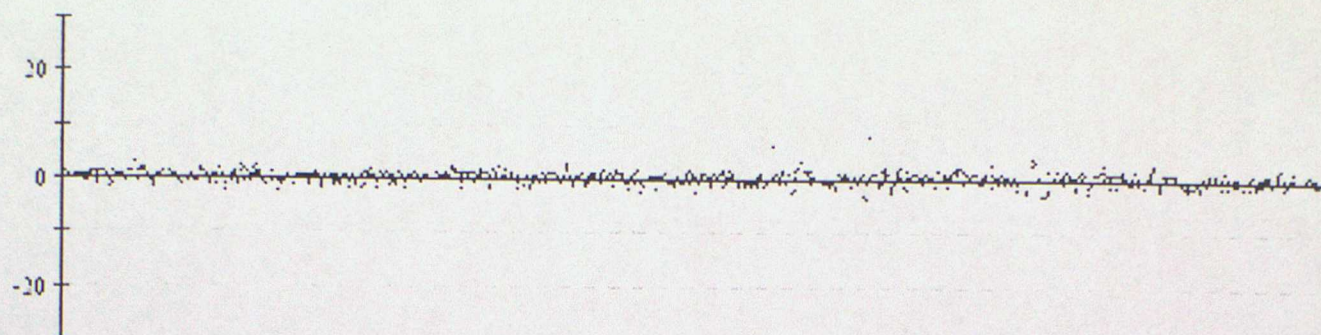
41505 Pressure



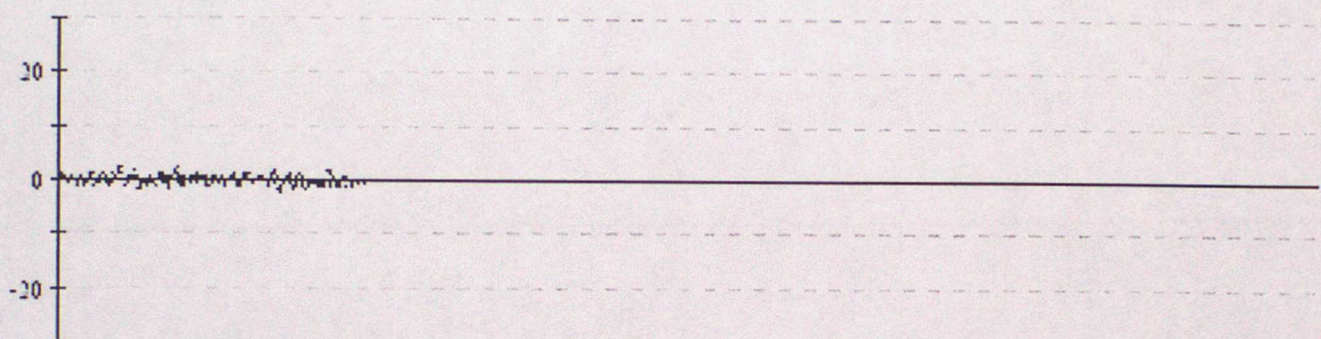
41521 Pressure



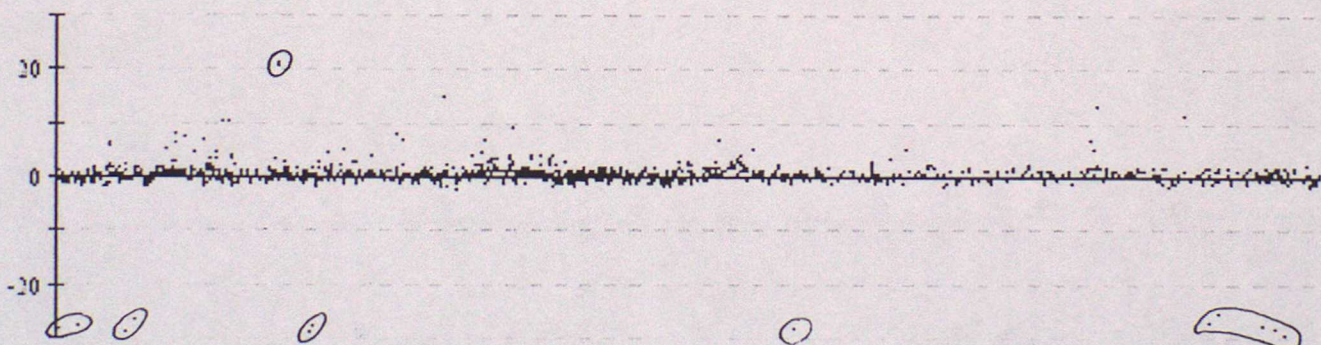
41528 Pressure



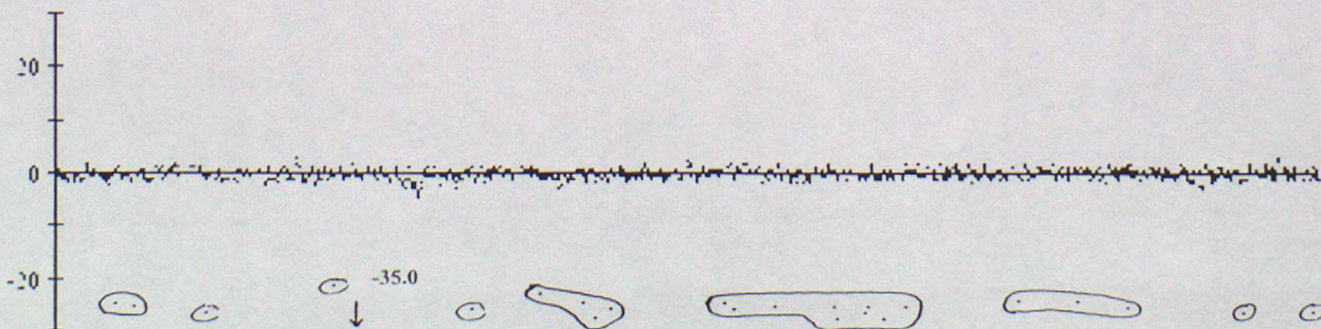
41597 Pressure



41598 Pressure

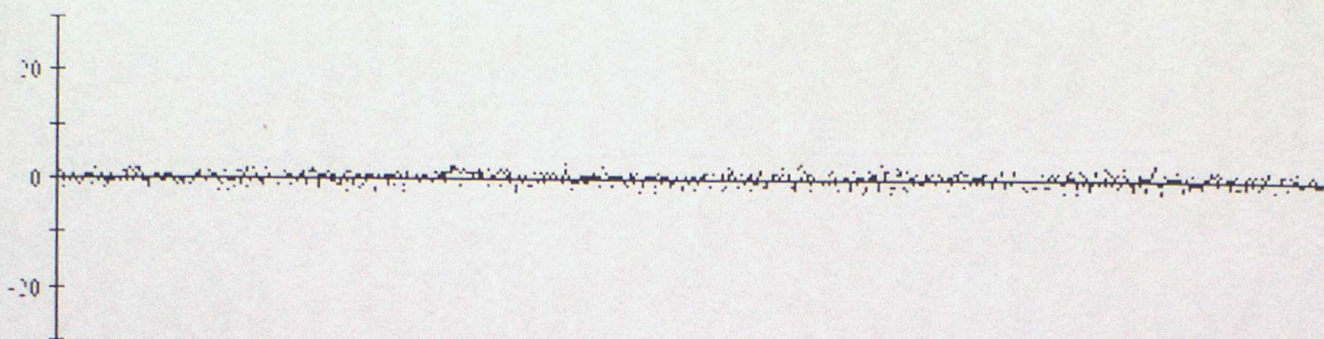


41599 Pressure

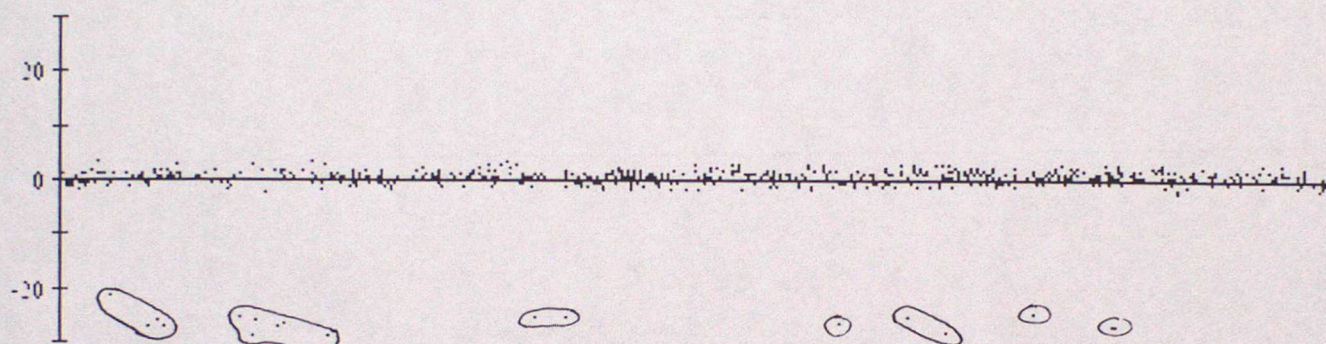


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

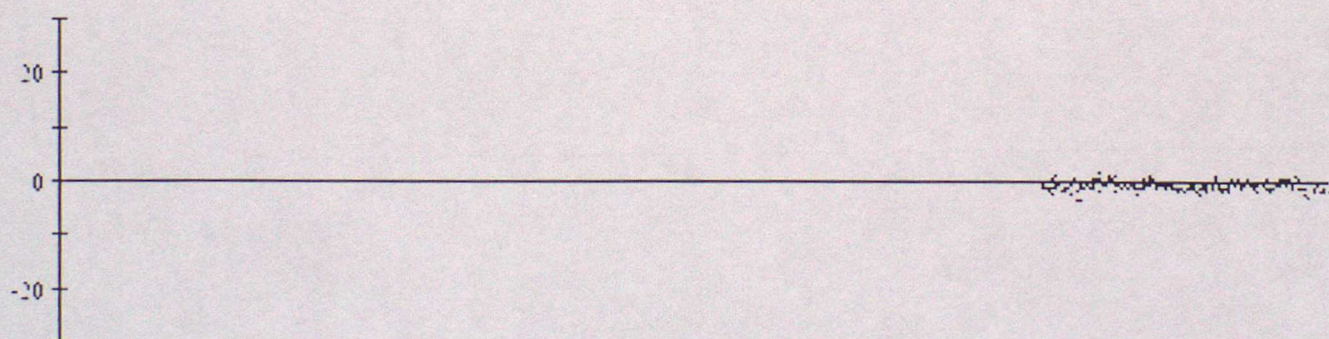
41629 Pressure



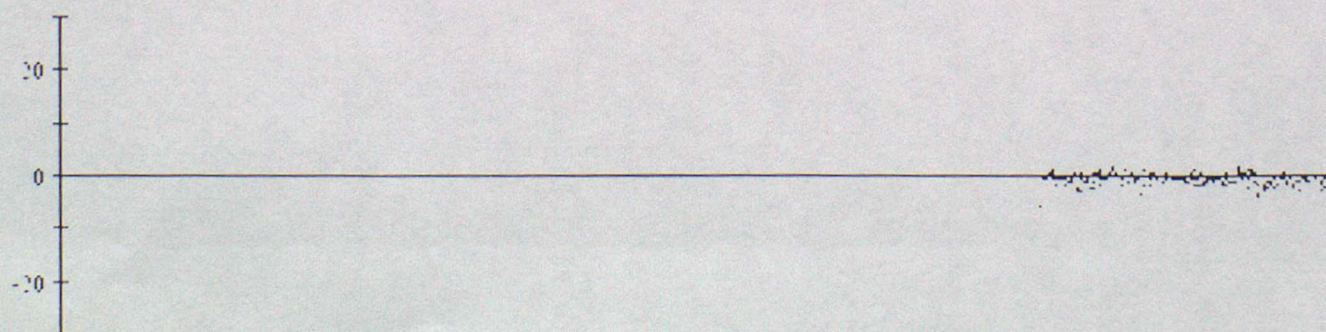
41637 Pressure



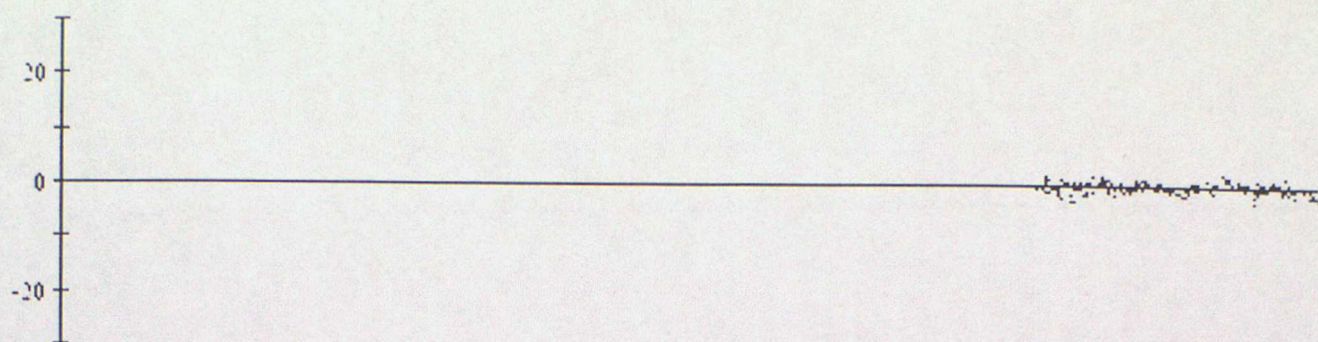
44513 Pressure



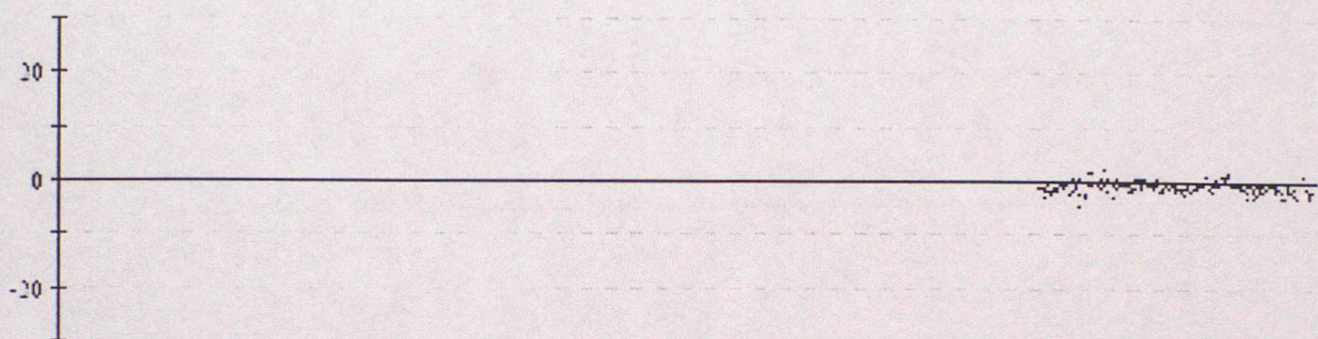
44514 Pressure



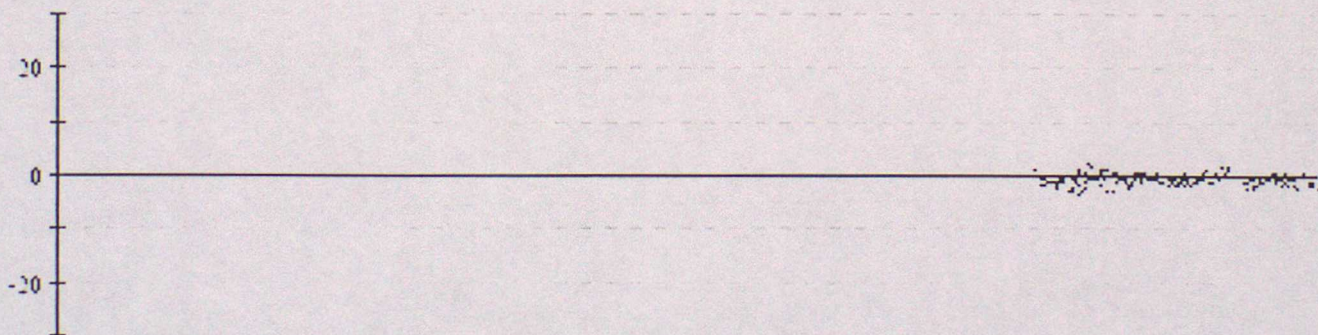
44515 Pressure



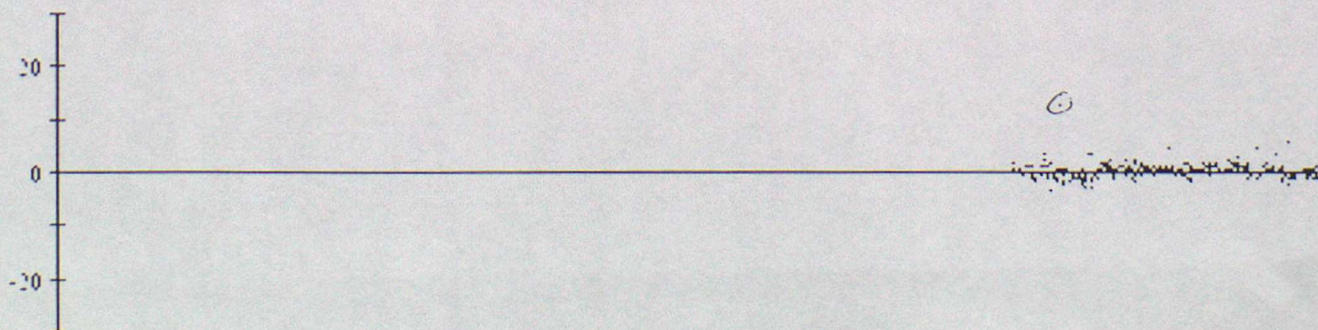
44516 Pressure



44517 Pressure

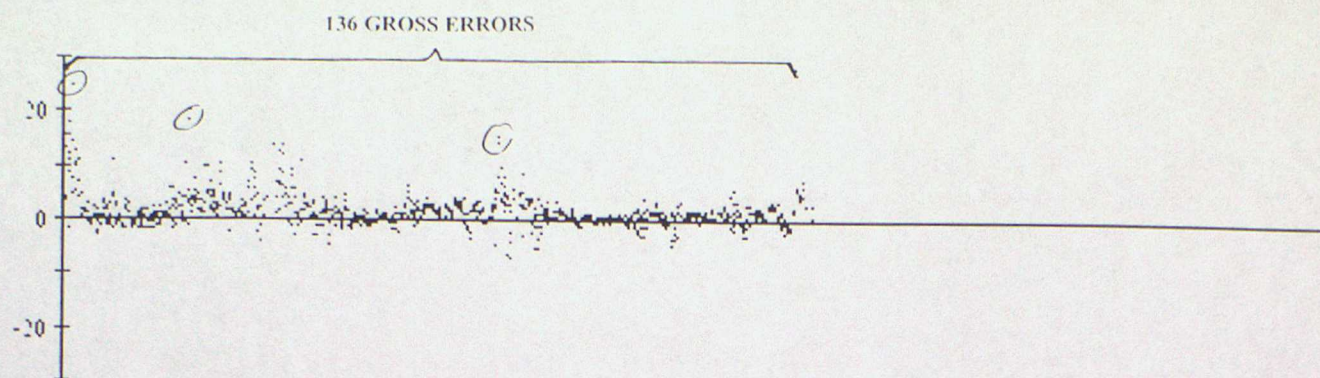


44546 Pressure

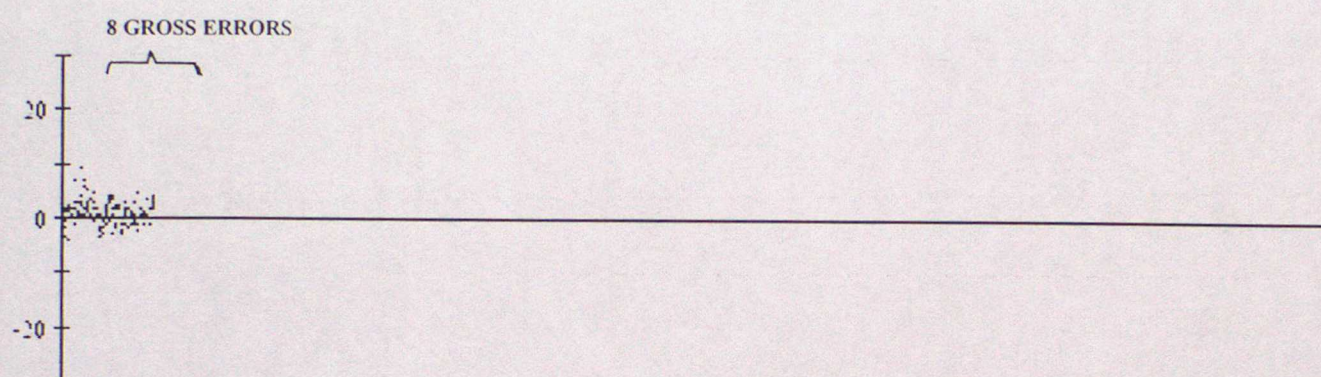


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

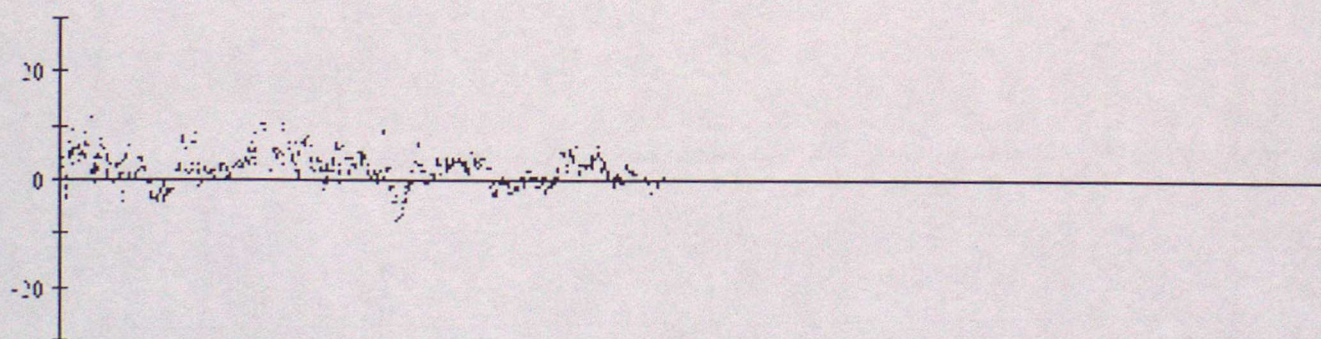
44601 Pressure



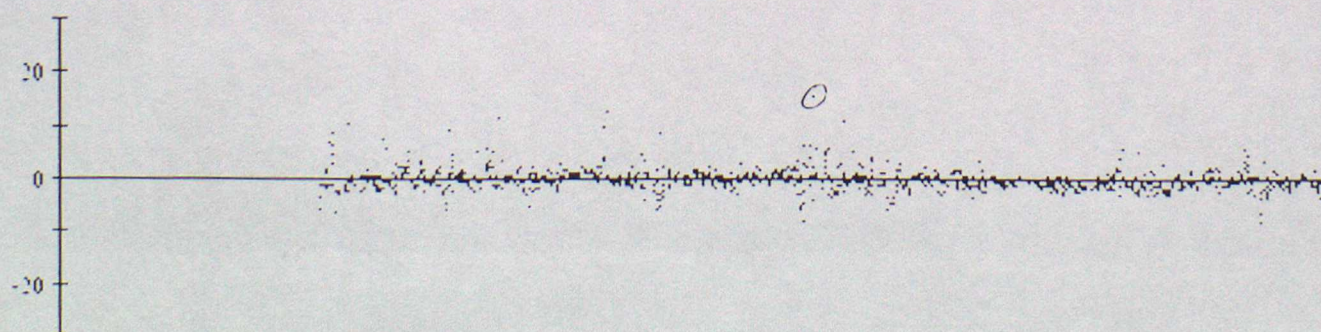
44602 Pressure



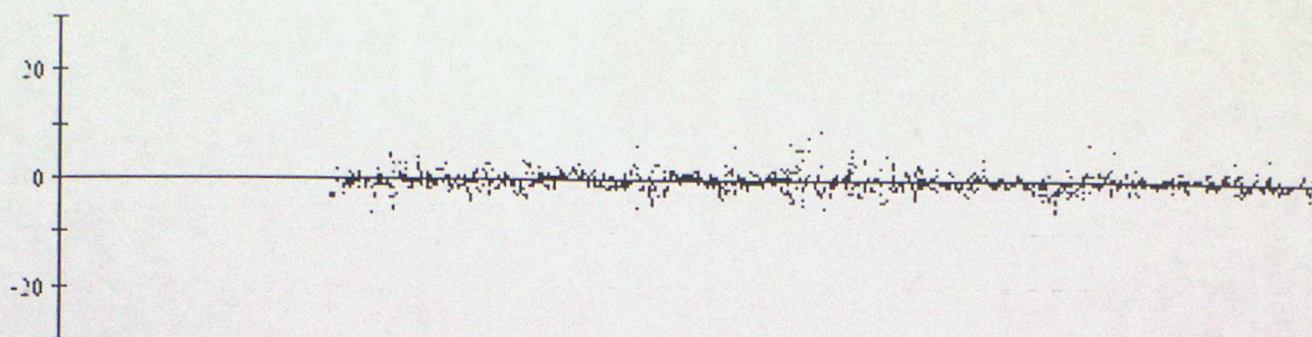
44604 Pressure



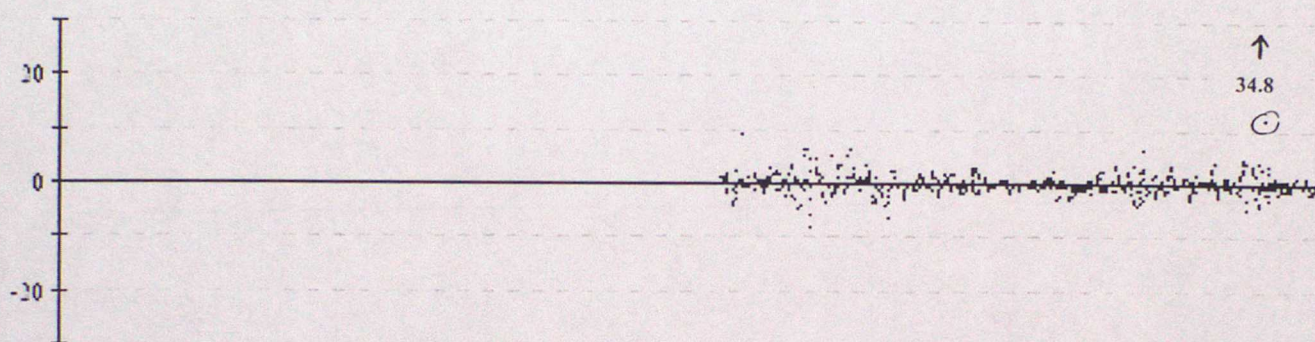
44607 Pressure



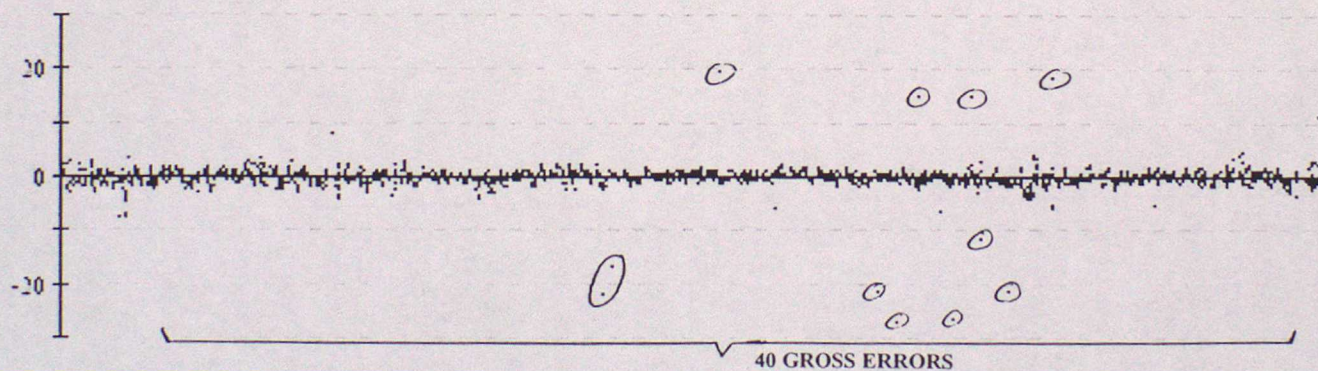
44608 Pressure



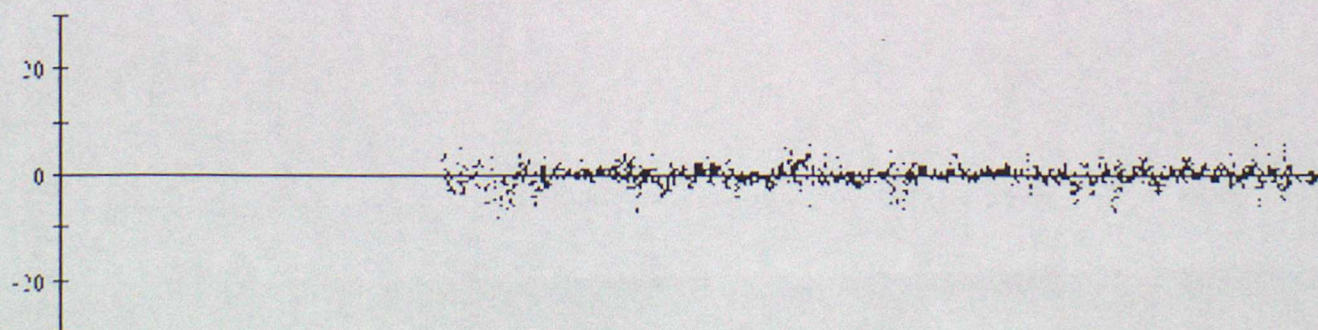
44610 Pressure



44613 Pressure

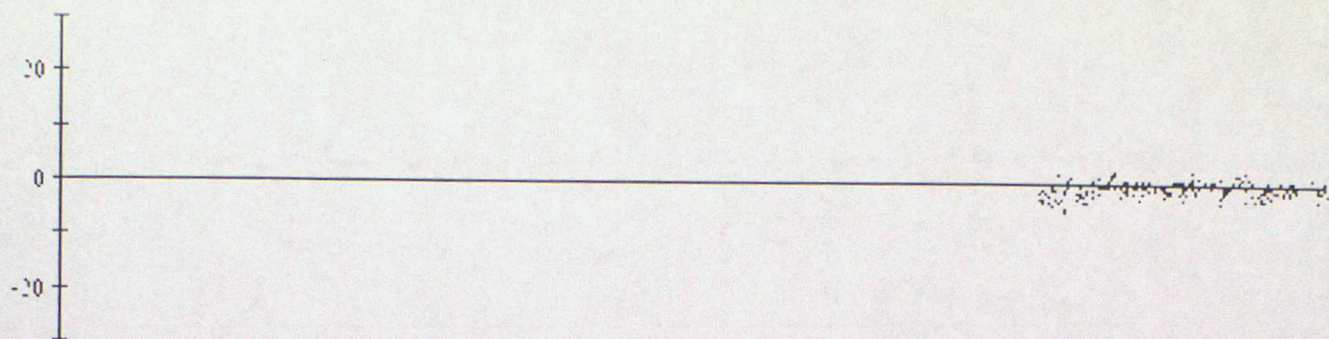


44616 Pressure

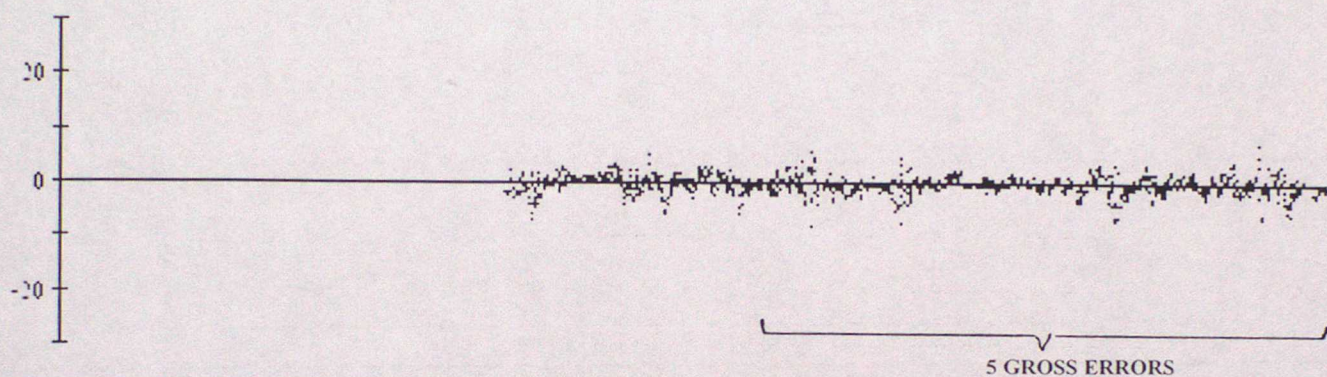


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

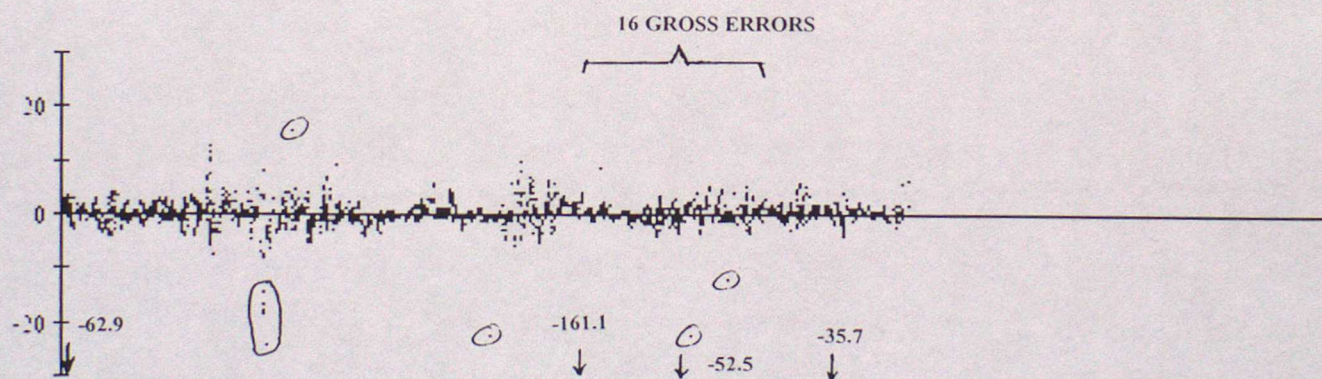
44621 Pressure



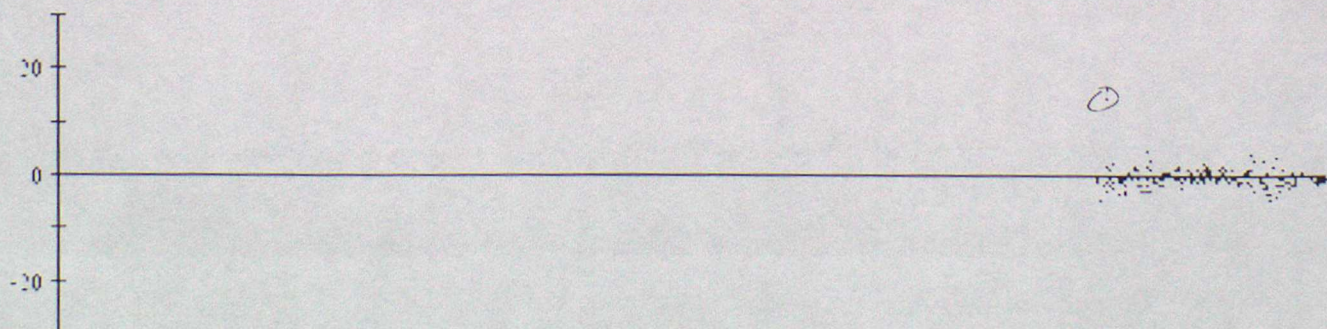
44624 Pressure



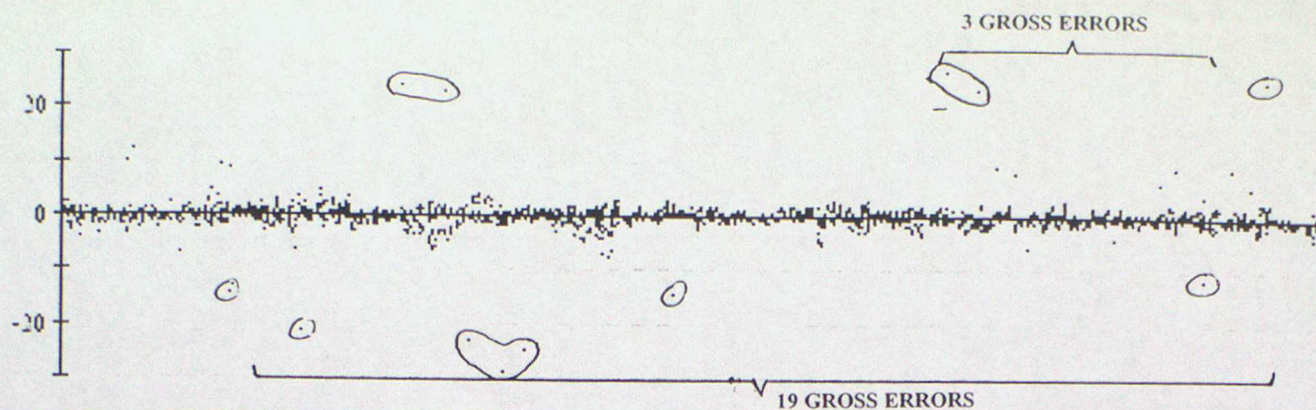
44726 Pressure



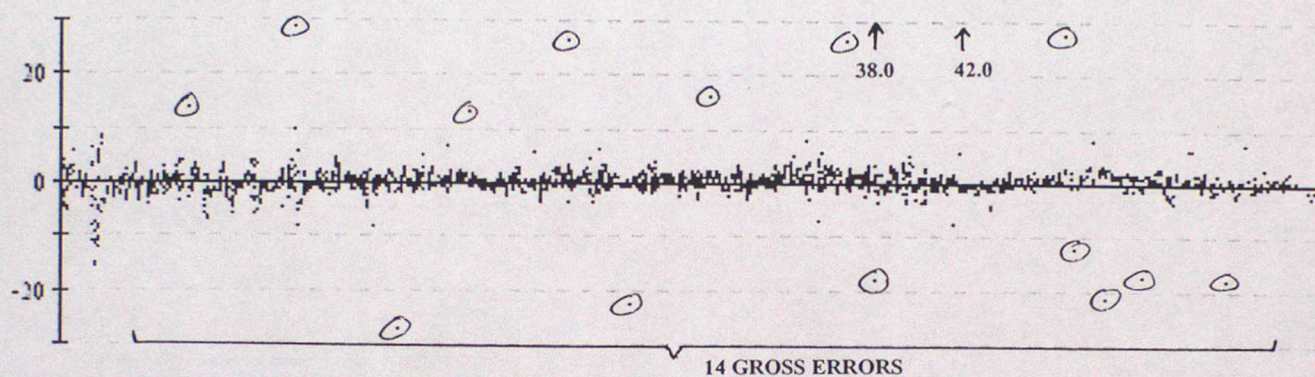
44728 Pressure



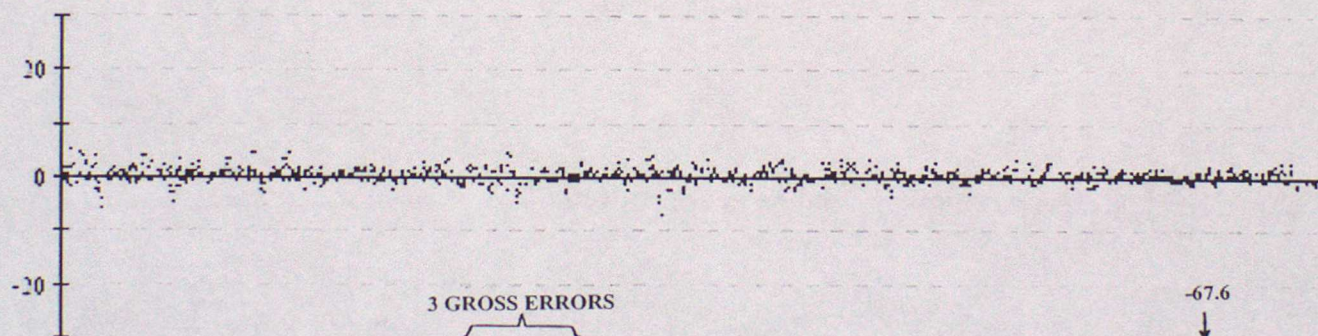
44742 Pressure



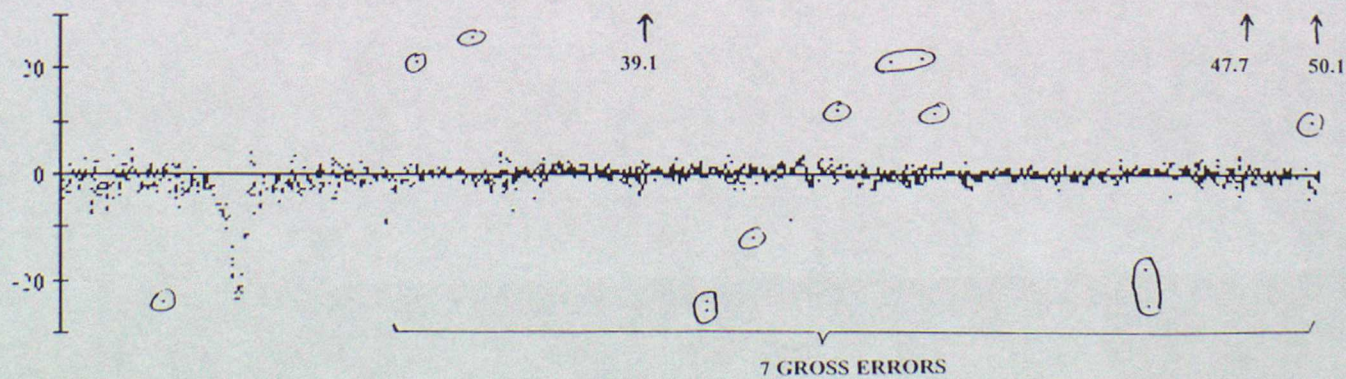
44760 Pressure



44762 Pressure

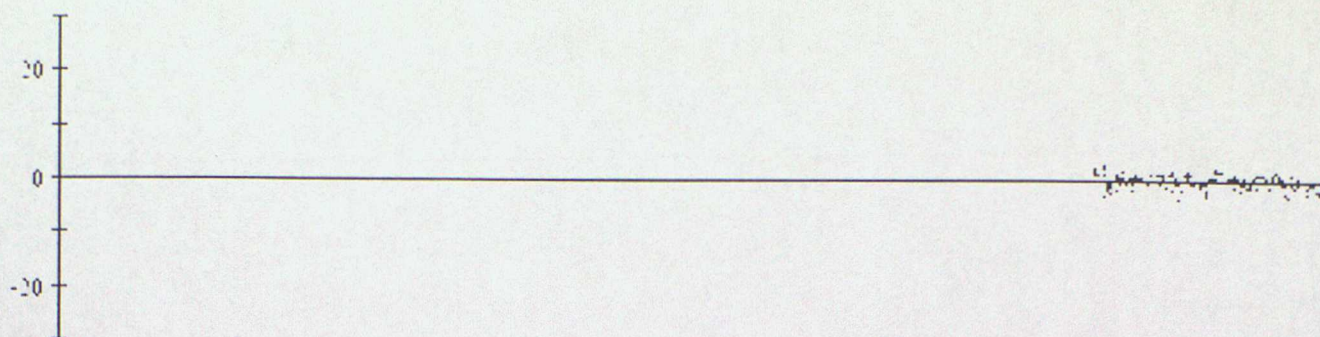


44764 Pressure

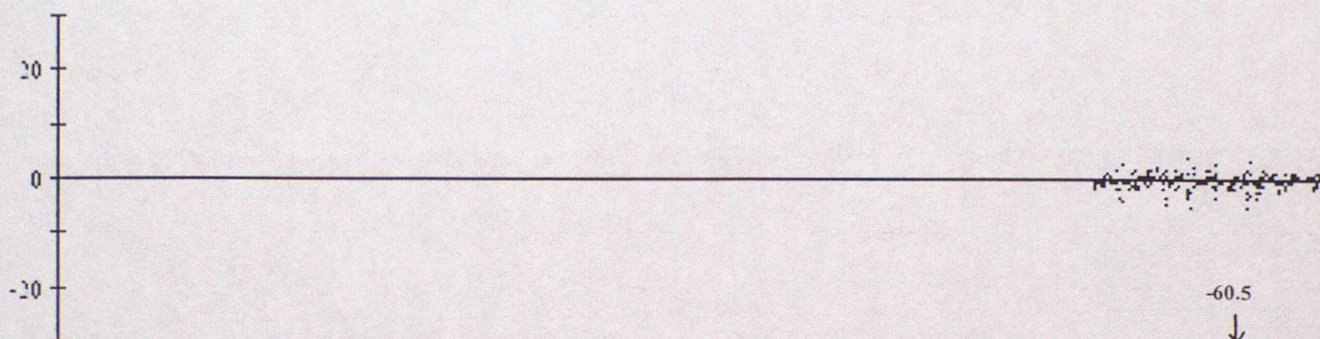


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

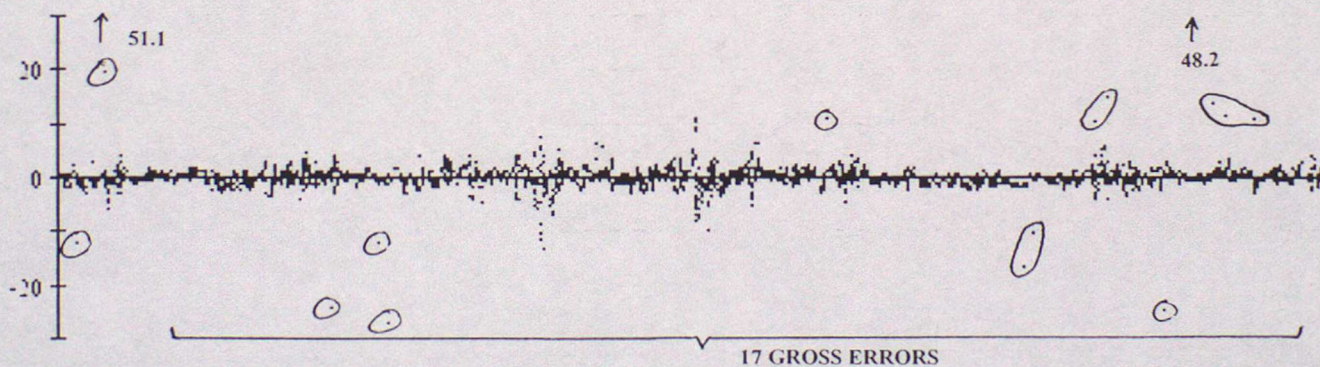
44765 Pressure



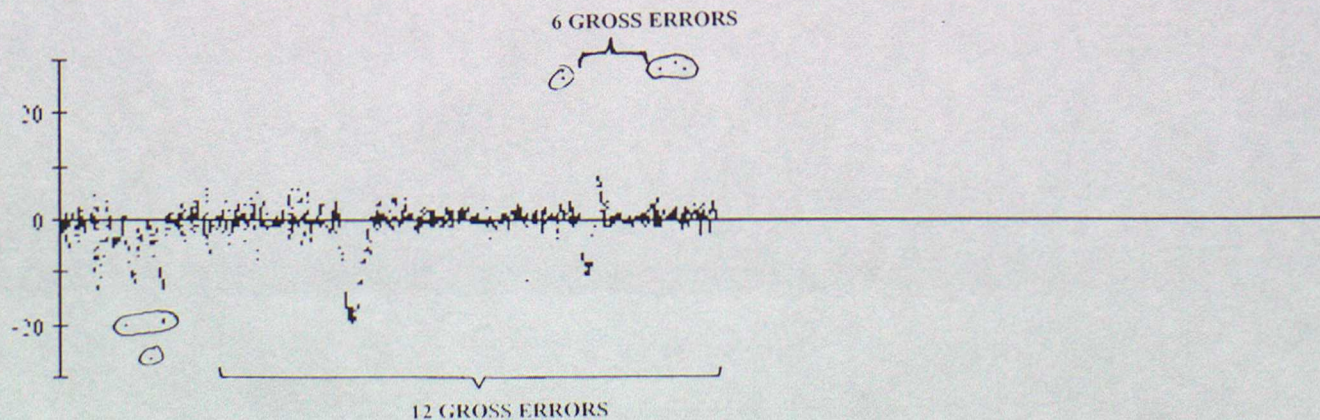
44766 Pressure



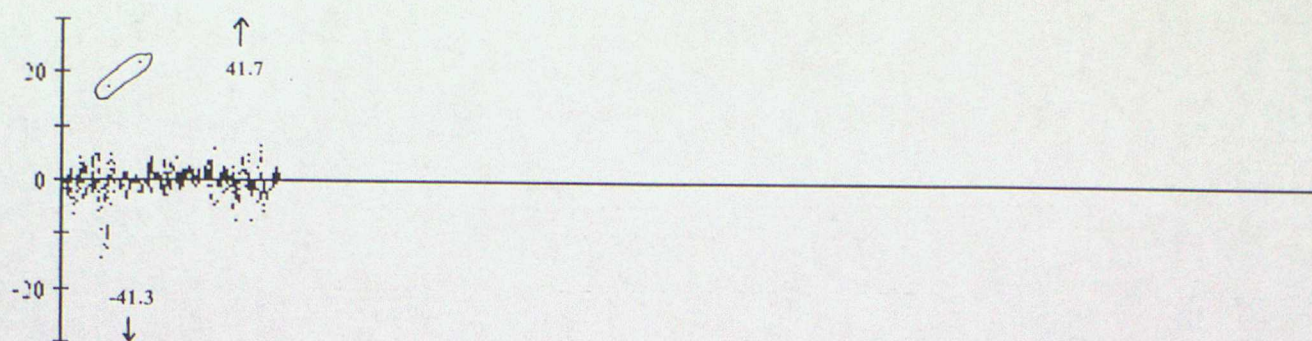
44768 Pressure



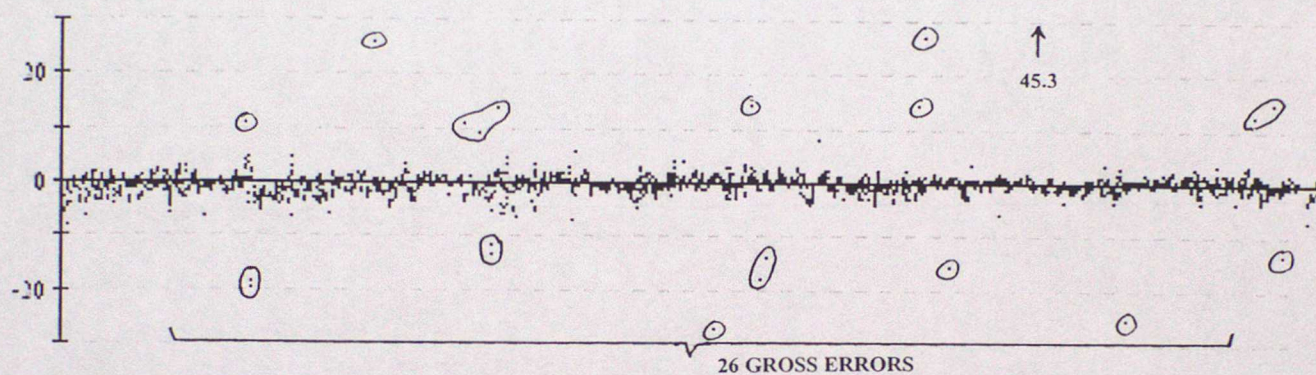
44772 Pressure



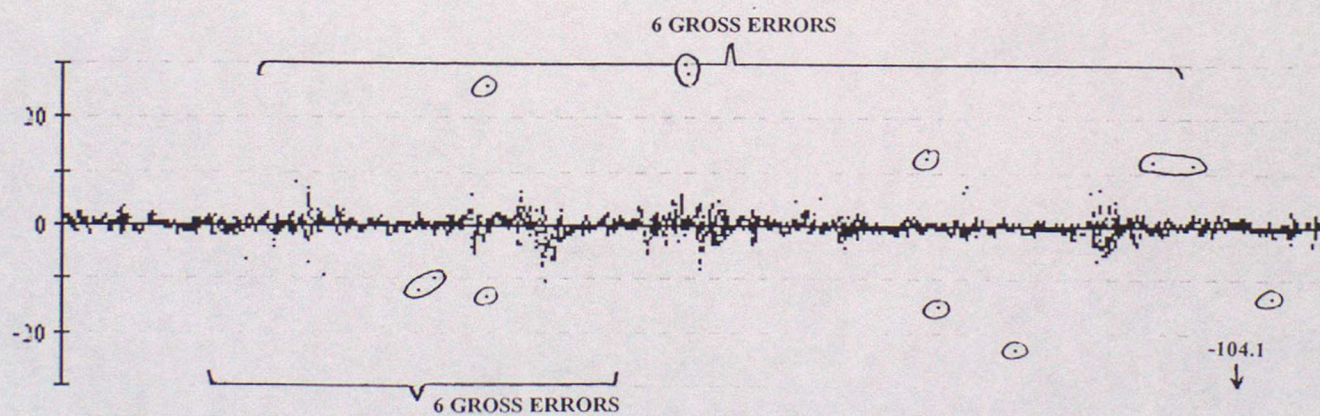
44774 Pressure



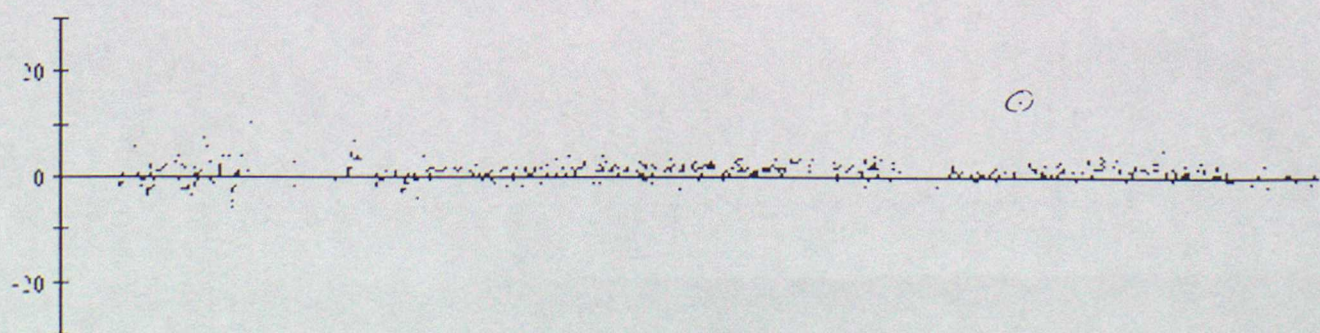
44778 Pressure



44780 Pressure

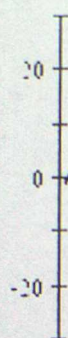


44901 Pressure

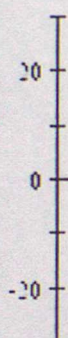


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

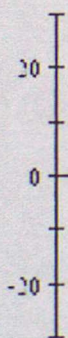
47556 Pressure



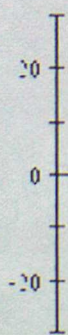
61525 Pressure



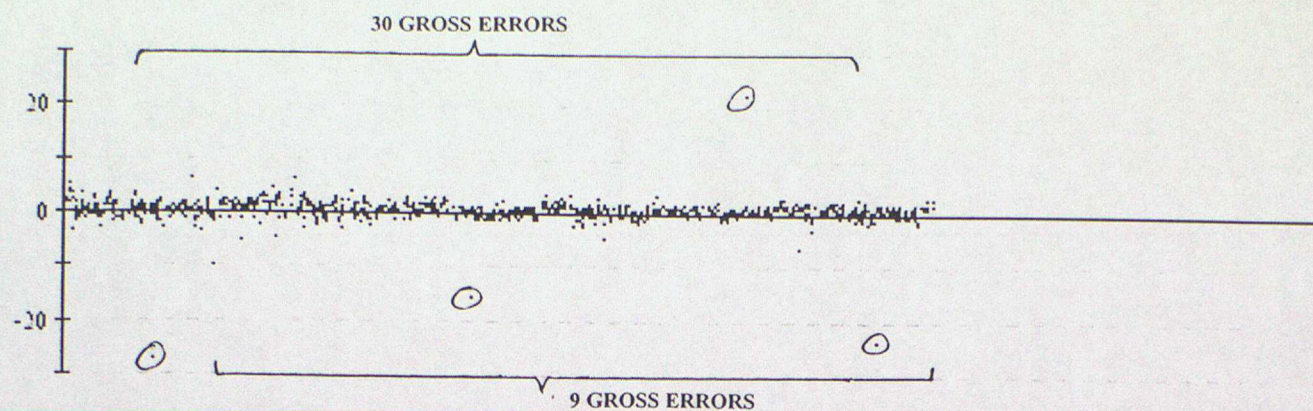
61526 Pressure



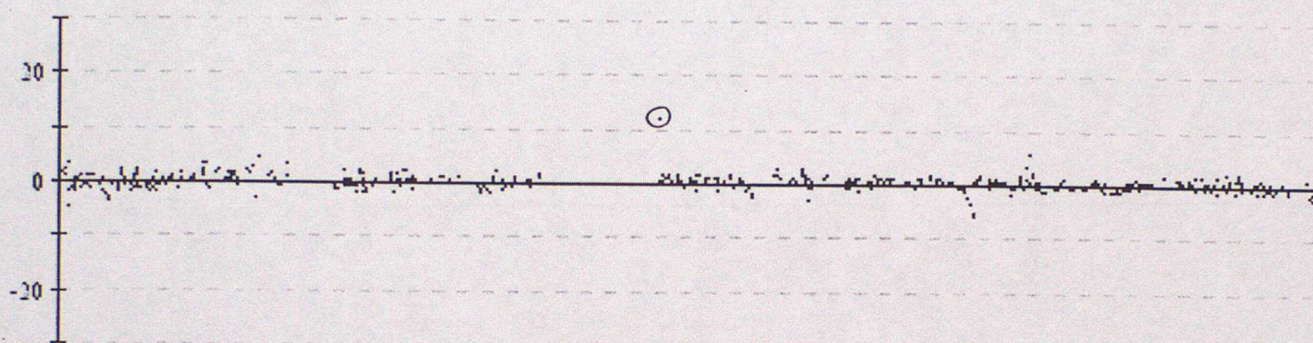
61527 Pressure



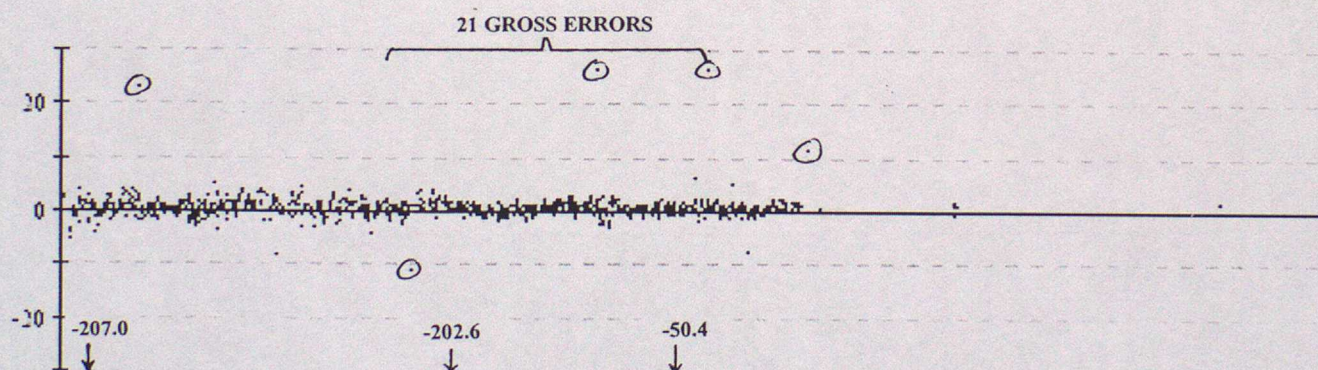
62511 Pressure



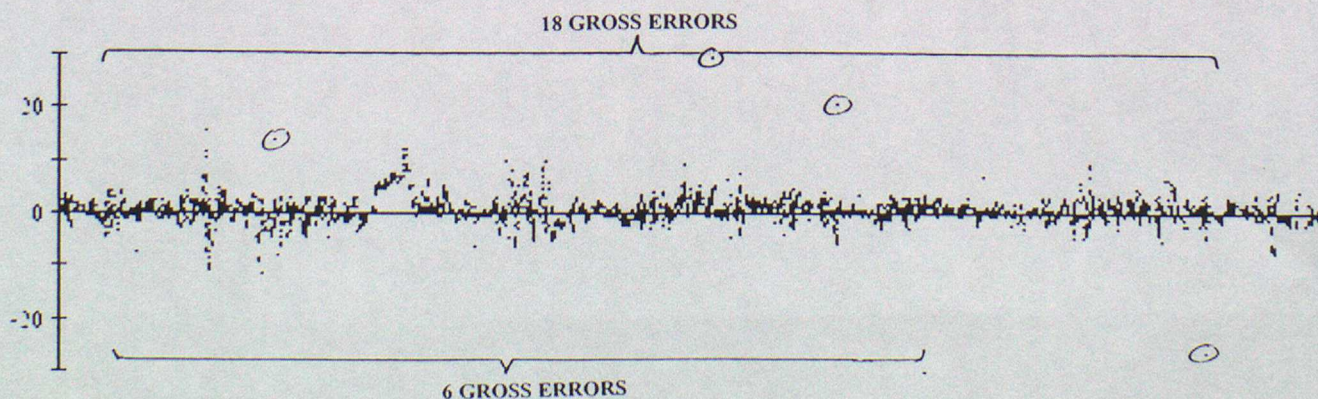
62512 Pressure



62513 Pressure

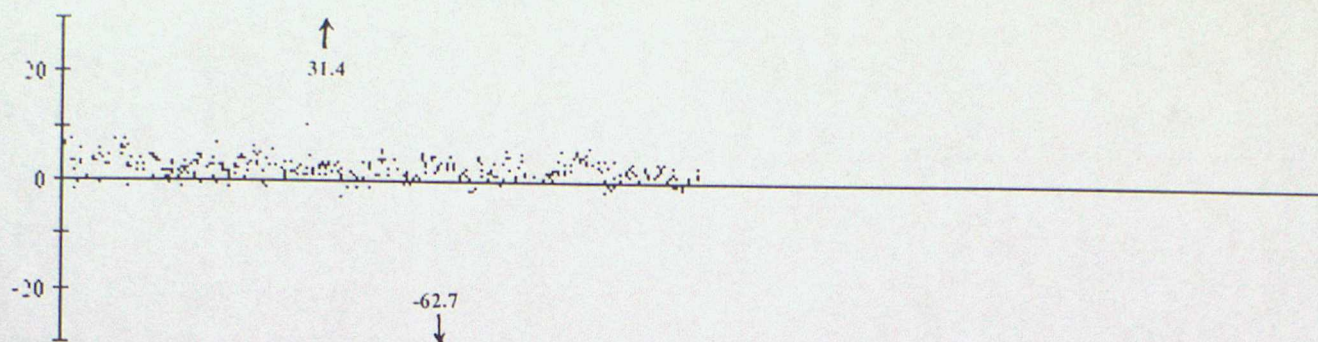


62515 Pressure

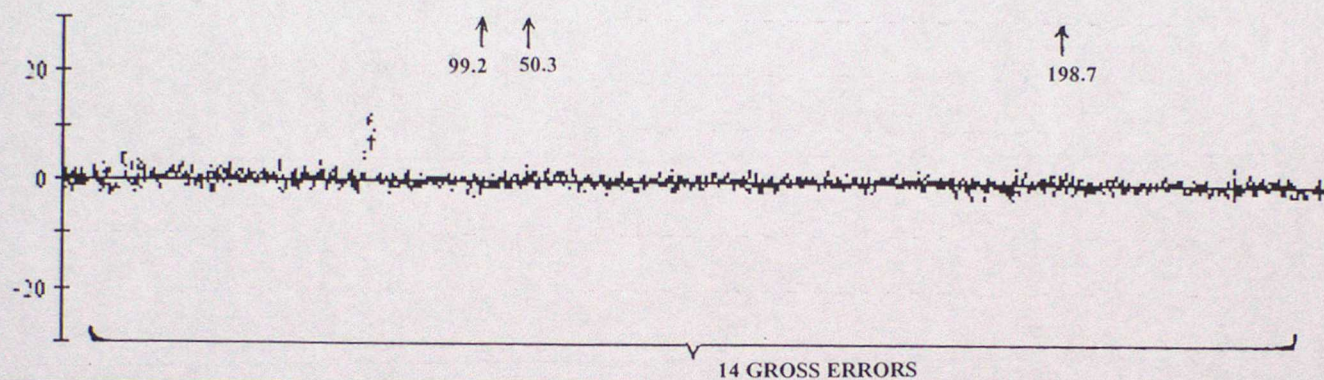


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

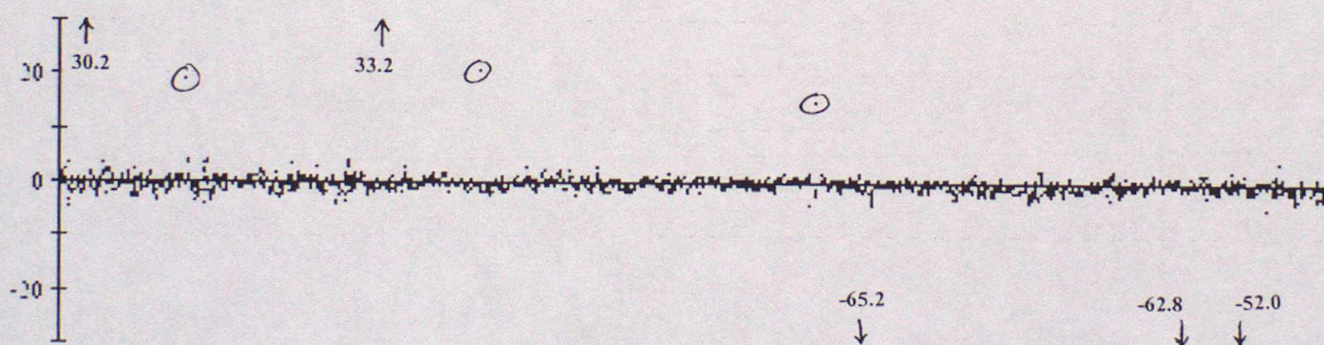
62517 Pressure



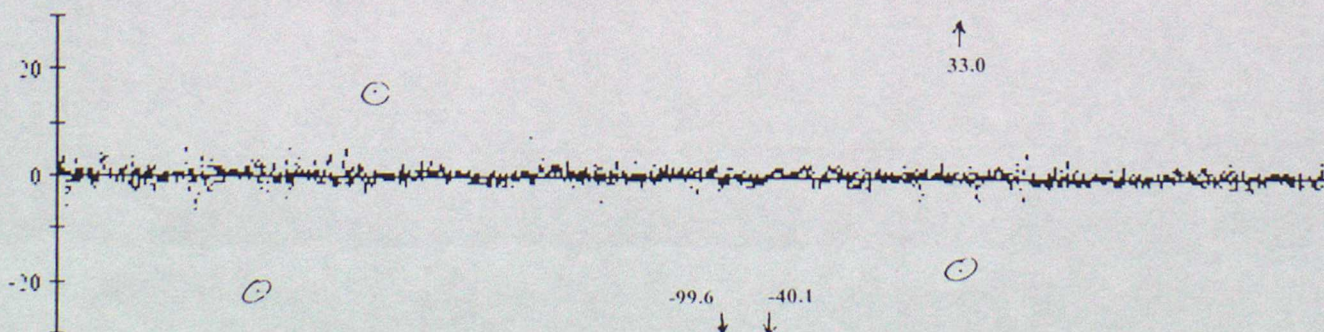
62519 Pressure



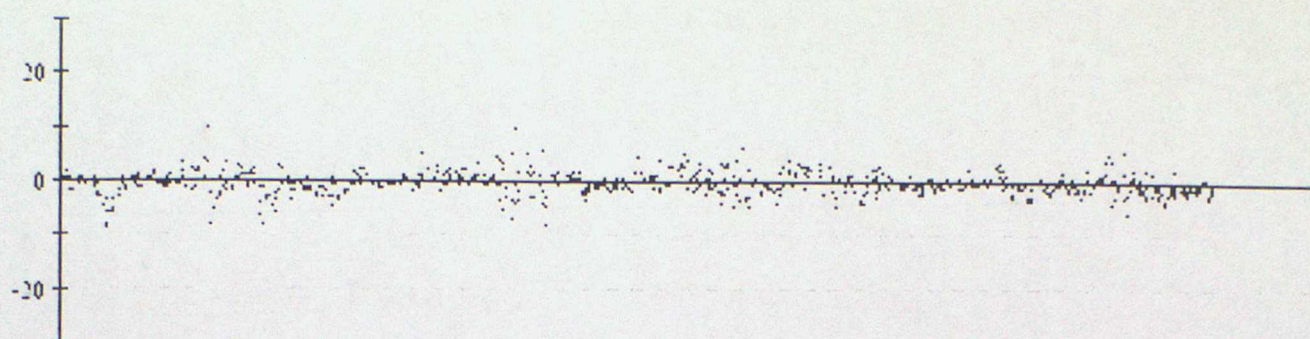
62520 Pressure



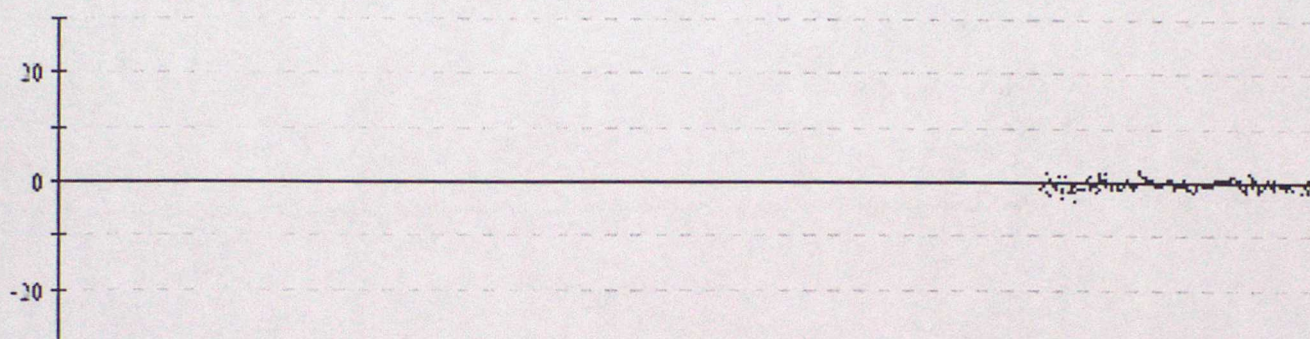
62554 Pressure



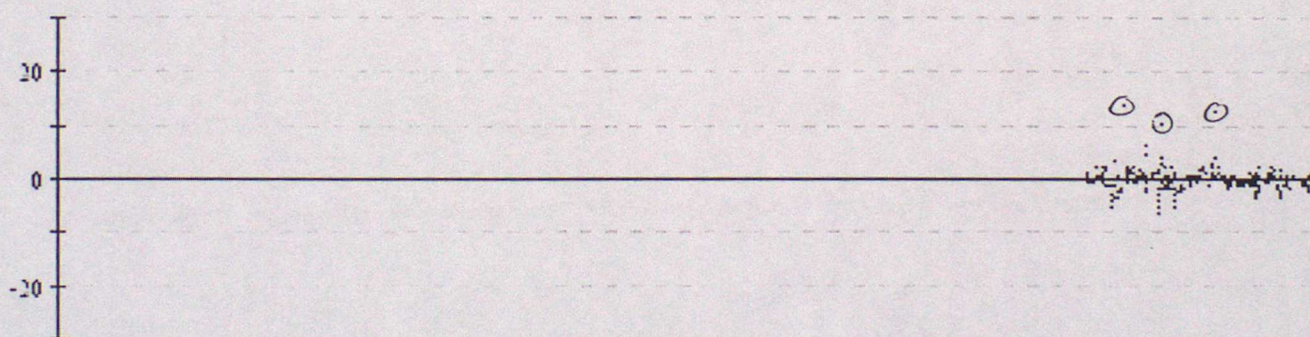
62674 Pressure



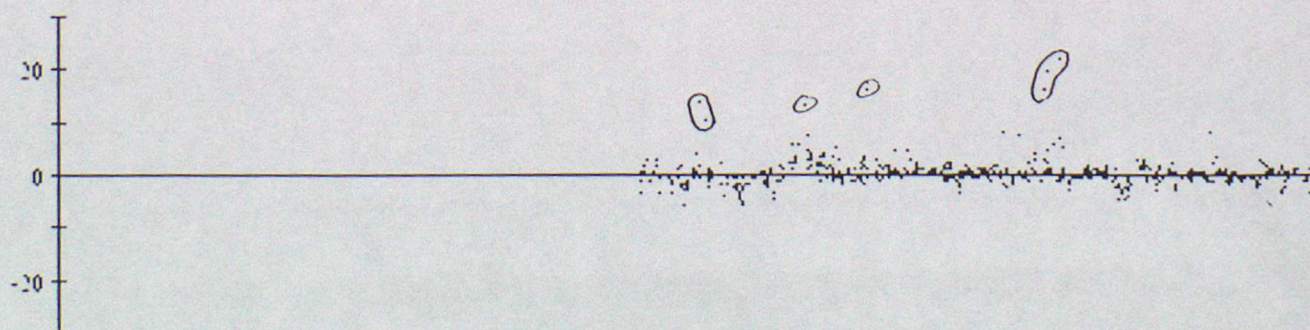
62675 Pressure



64516 Pressure

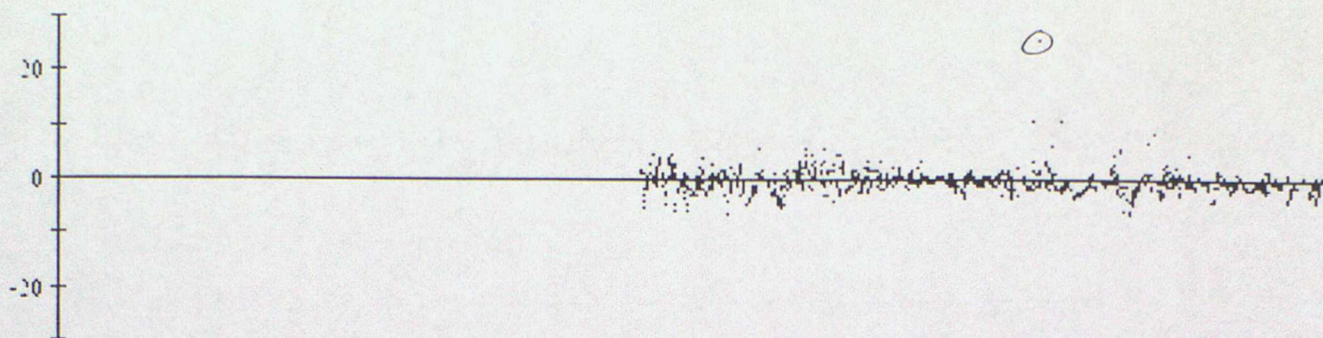


64517 Pressure

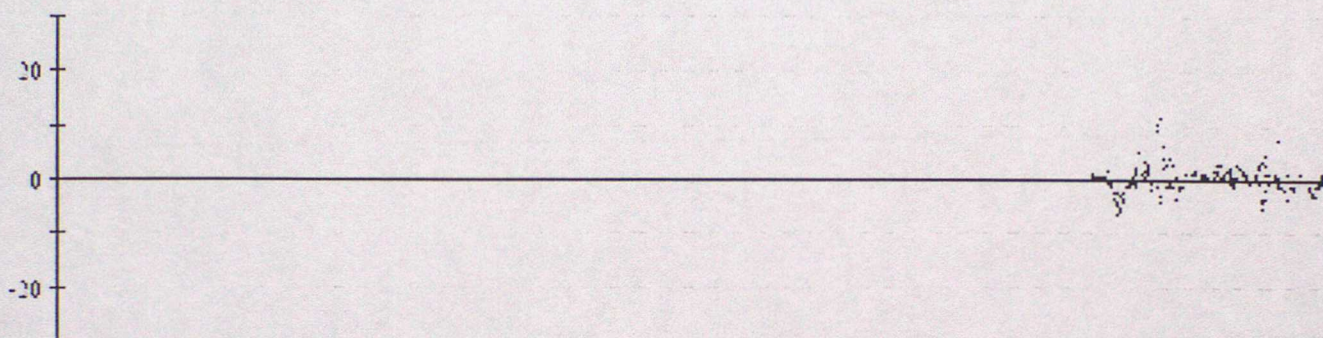


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

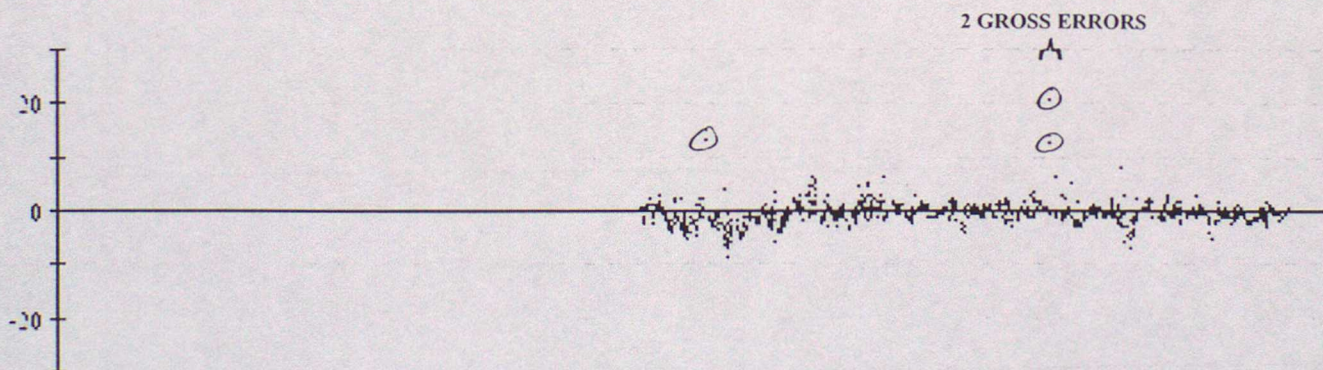
64518 Pressure



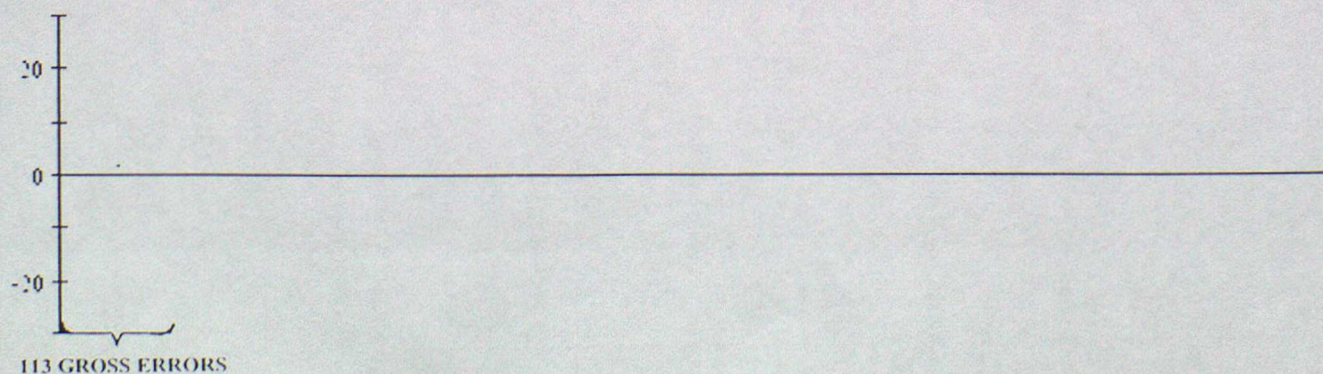
64519 Pressure



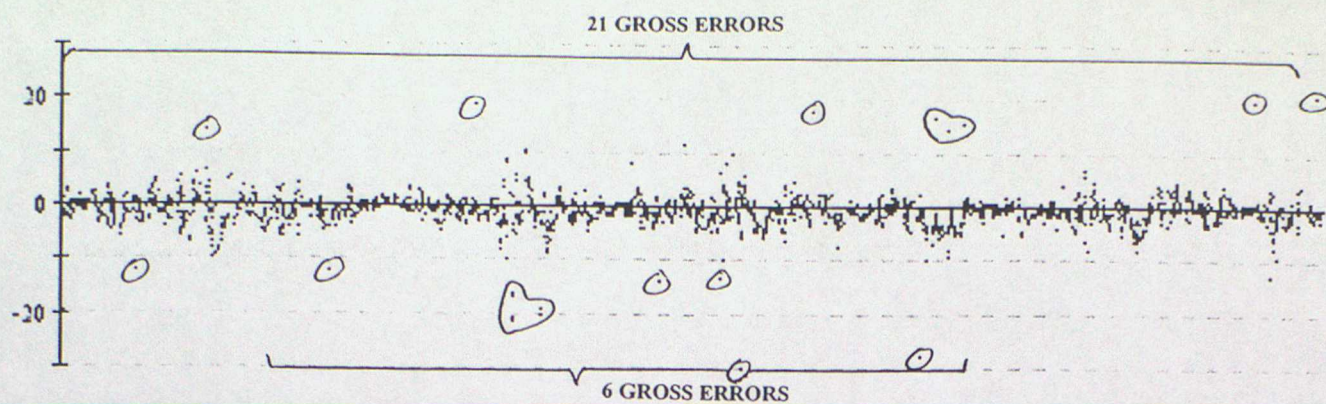
64520 Pressure



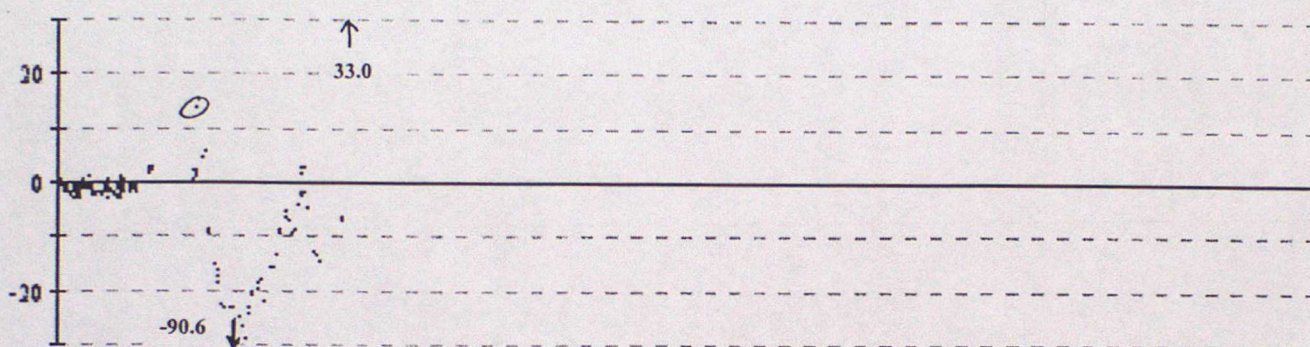
64528 Pressure



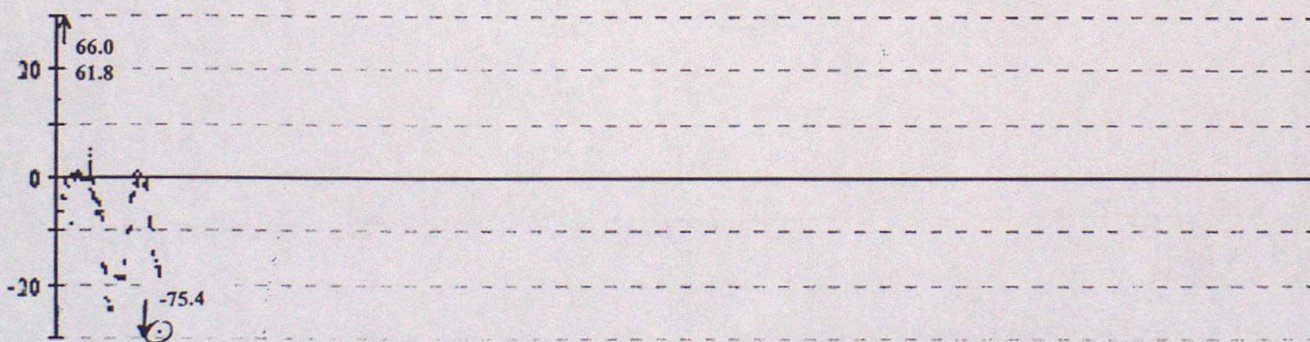
64529 Pressure



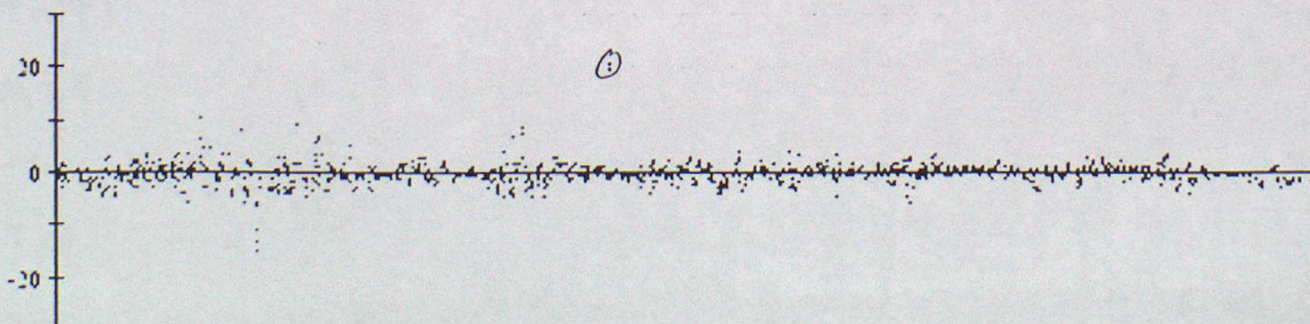
65562 Pressure



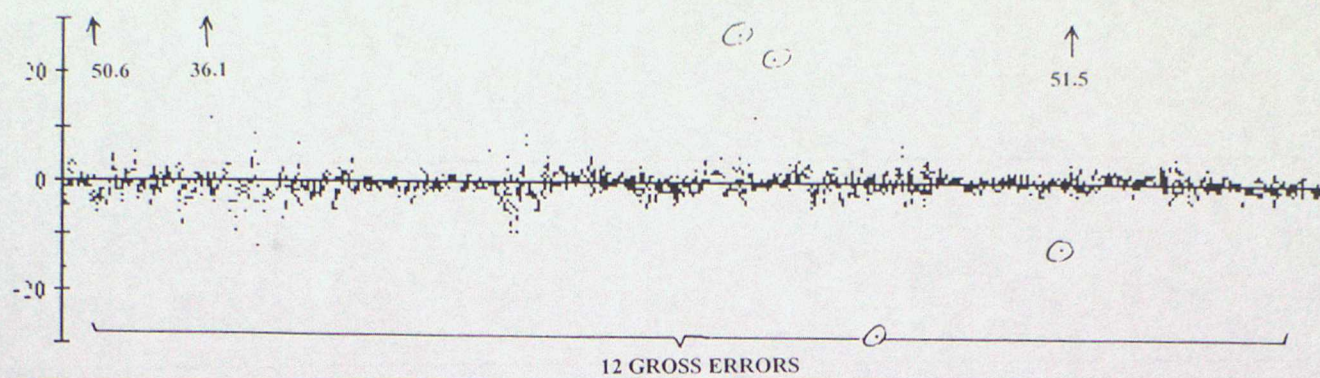
65571 Pressure



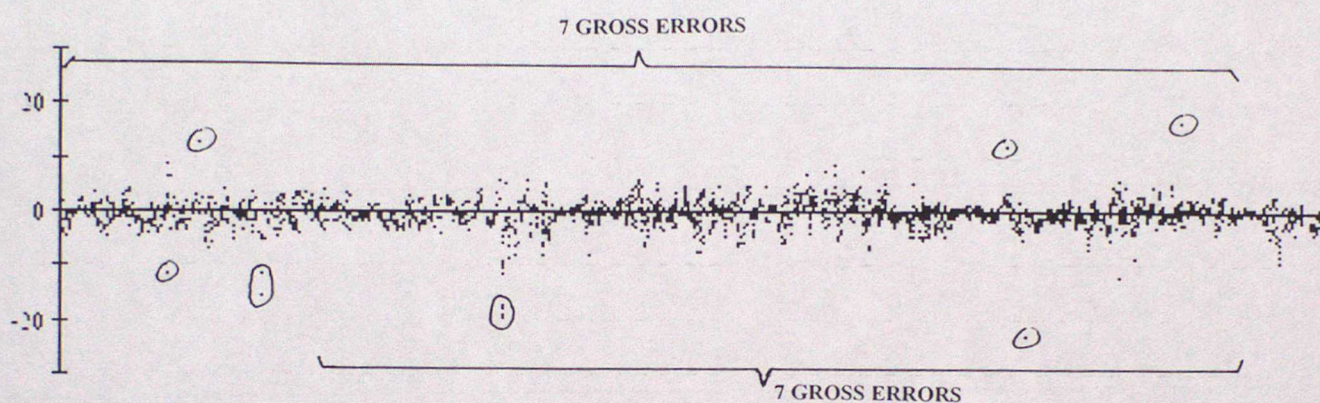
65581 Pressure



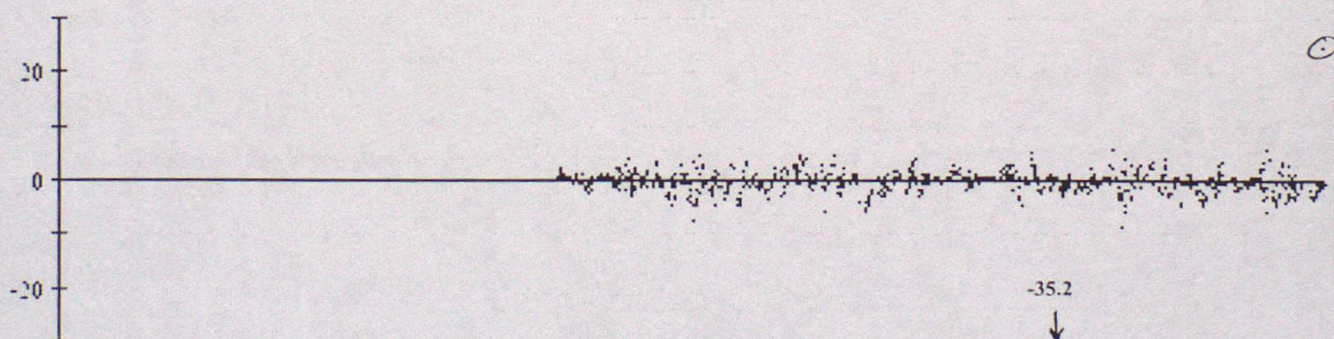
65591 Pressure



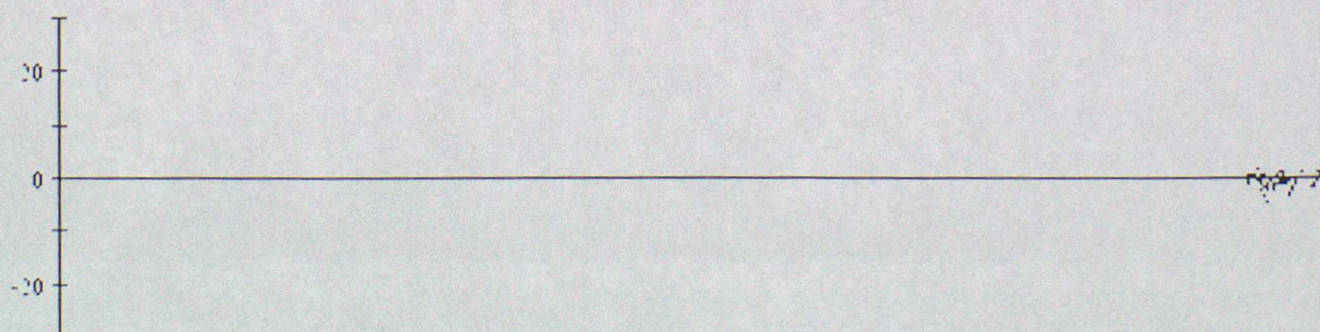
65592 Pressure



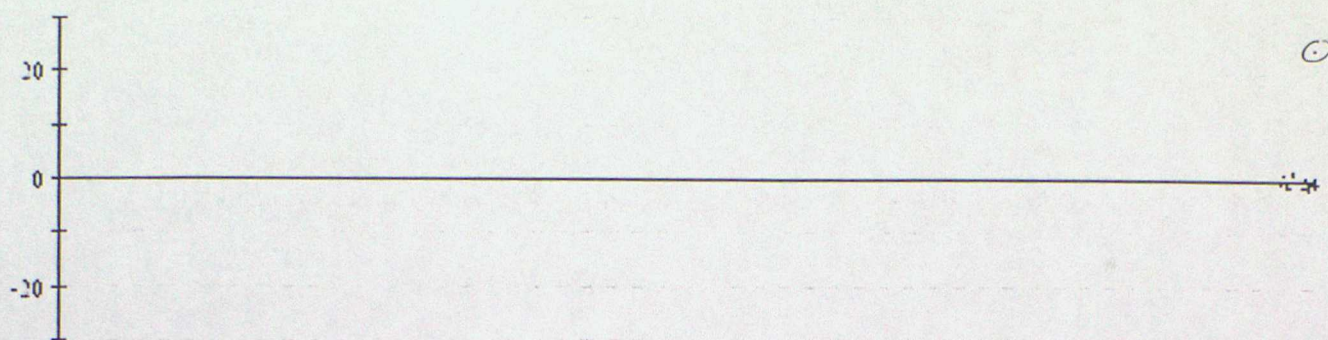
65593 Pressure



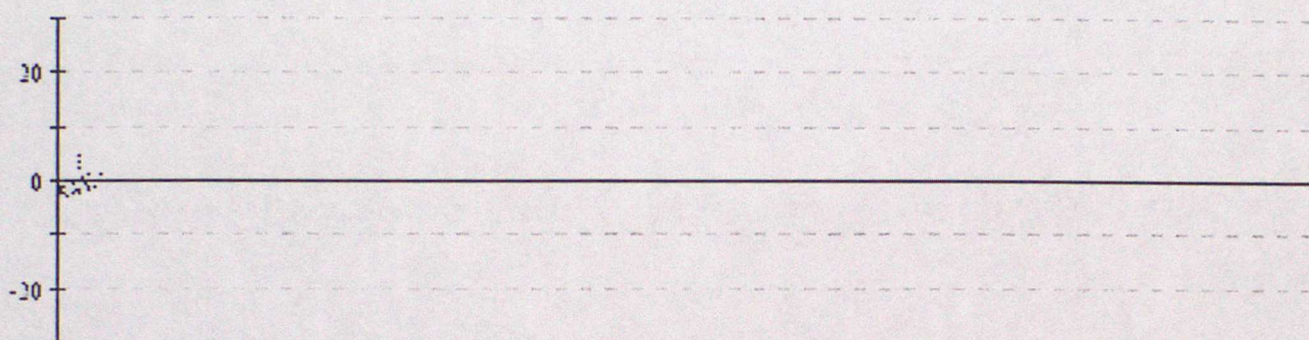
65594 Pressure



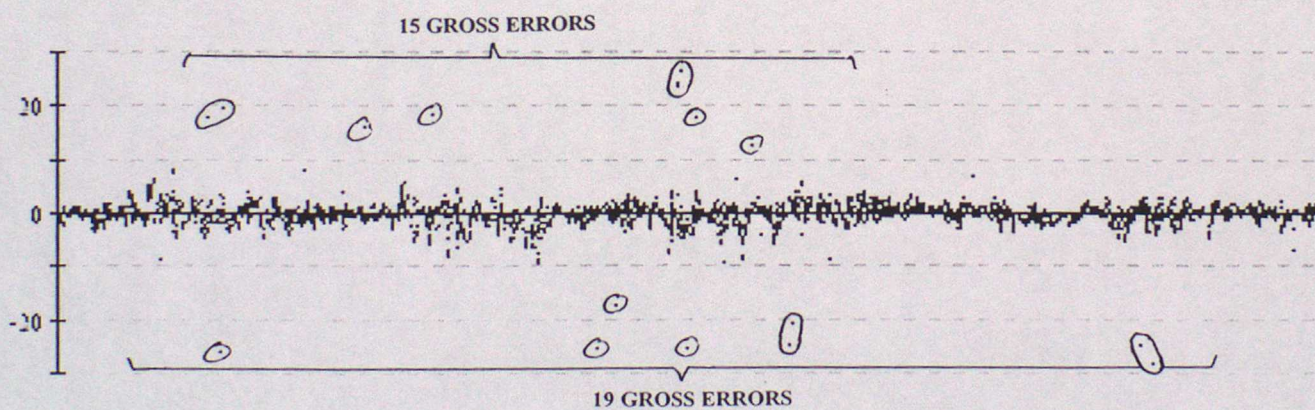
65595 Pressure



65597 Pressure



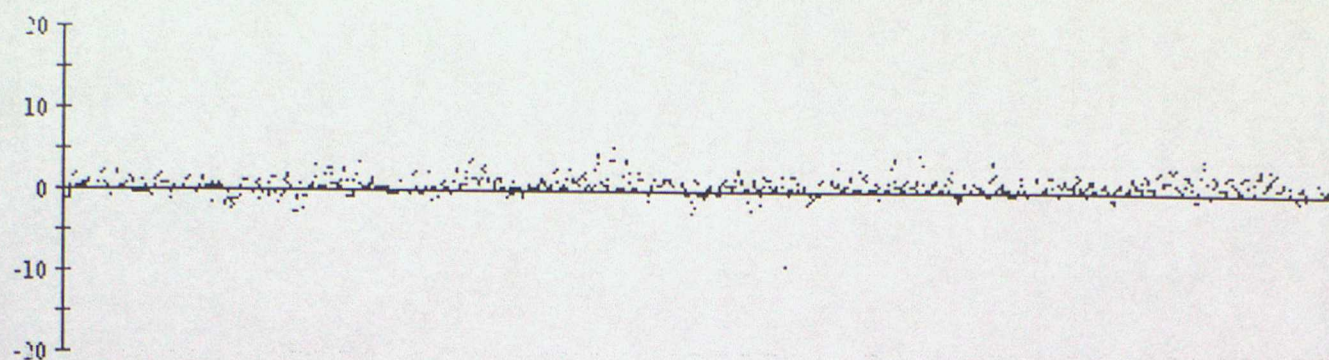
65599 Pressure



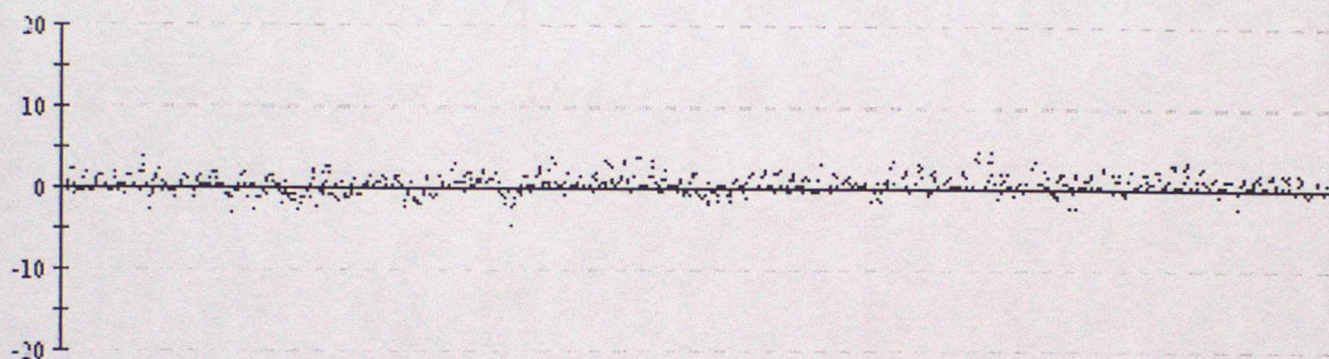
ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

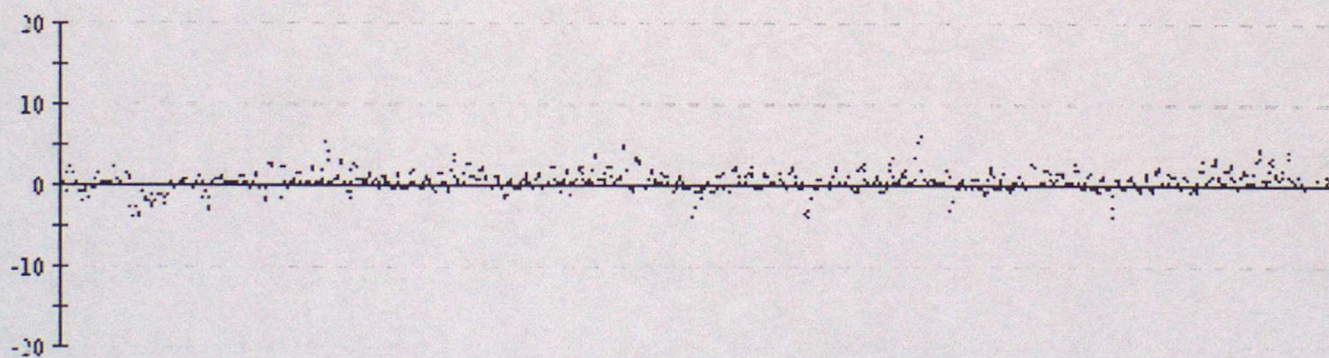
41504 Air Temperature



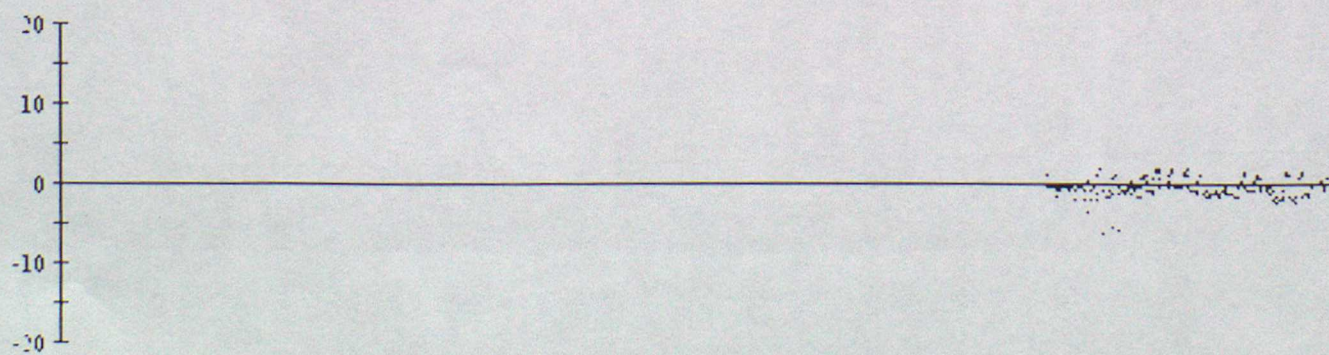
41521 Air Temperature



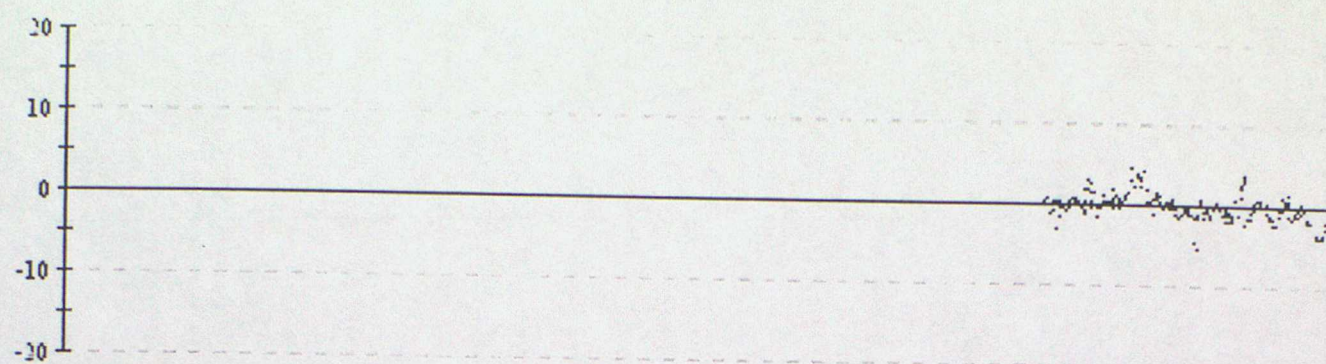
41629 Air Temperature



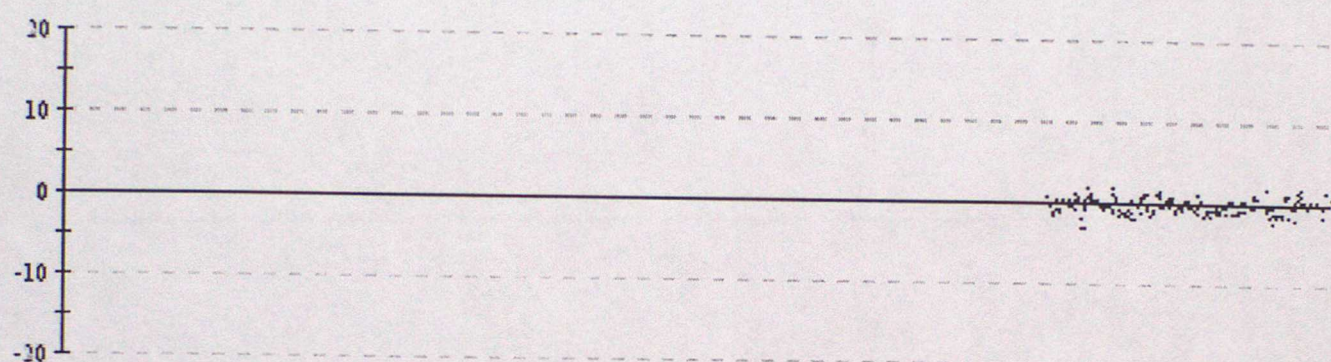
44513 Air Temperature



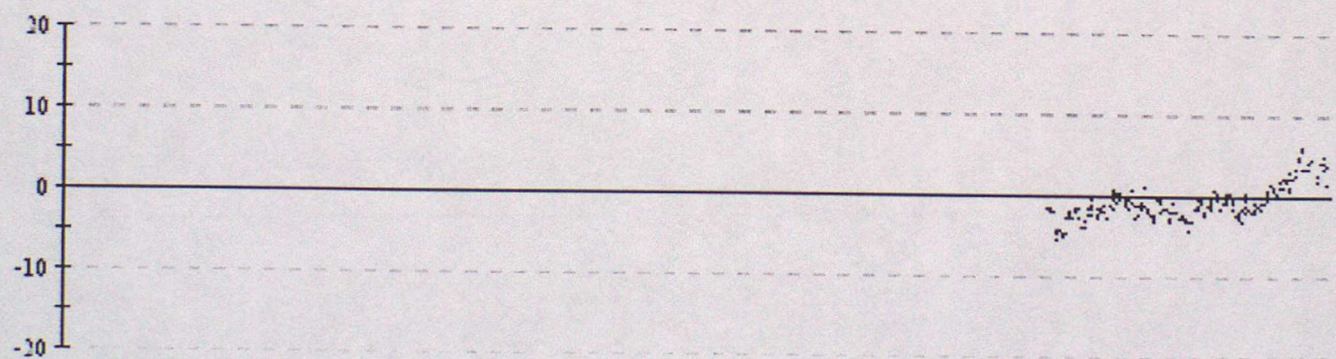
44514 Air Temperature



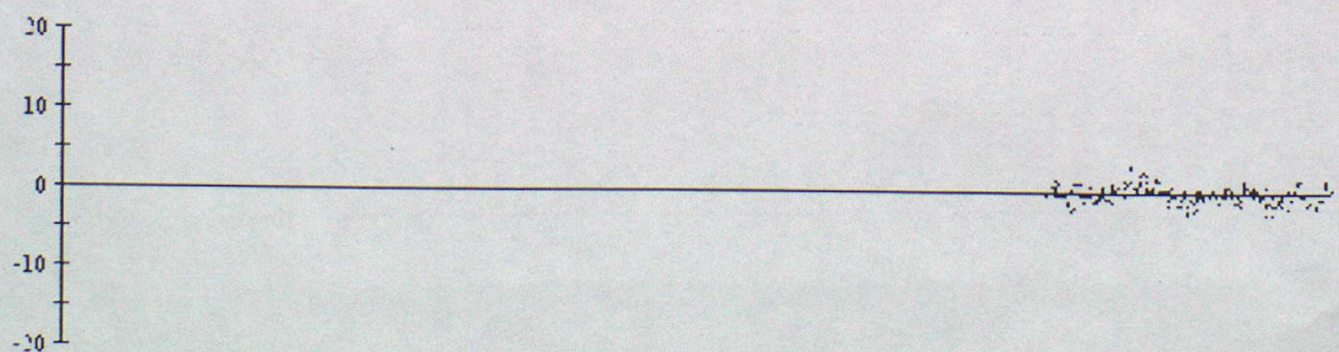
44515 Air Temperature



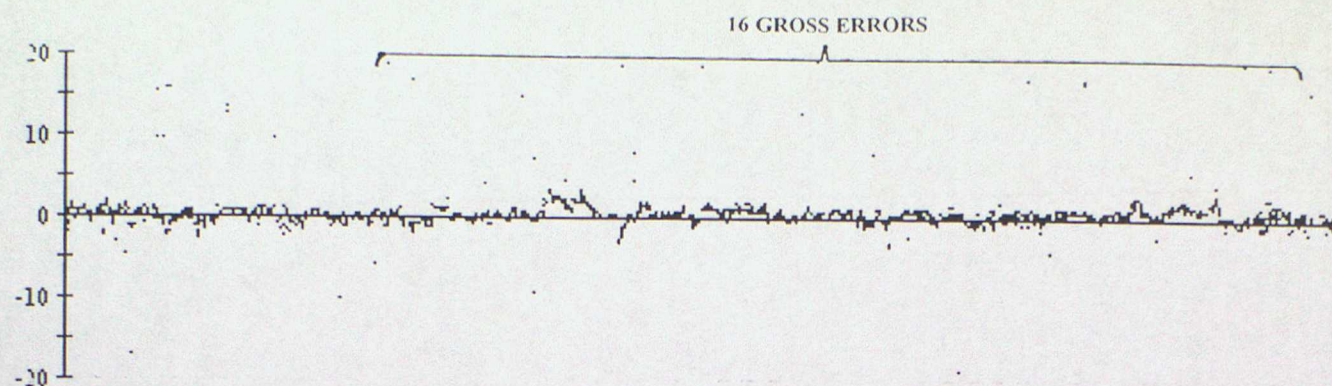
44516 Air Temperature



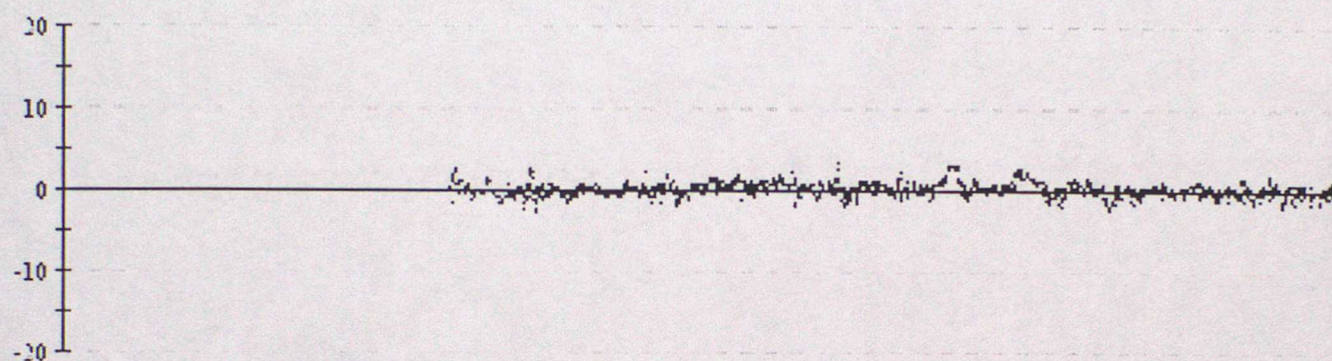
44517 Air Temperature



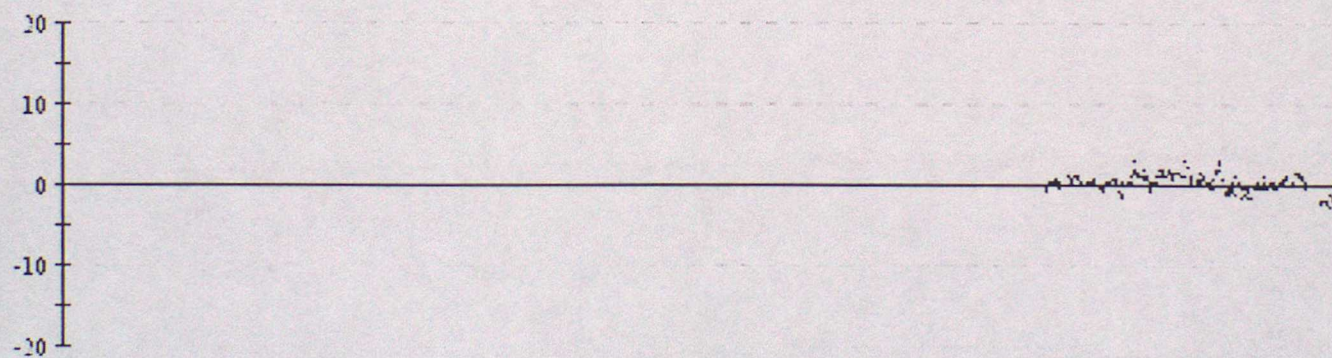
44613 Air Temperature



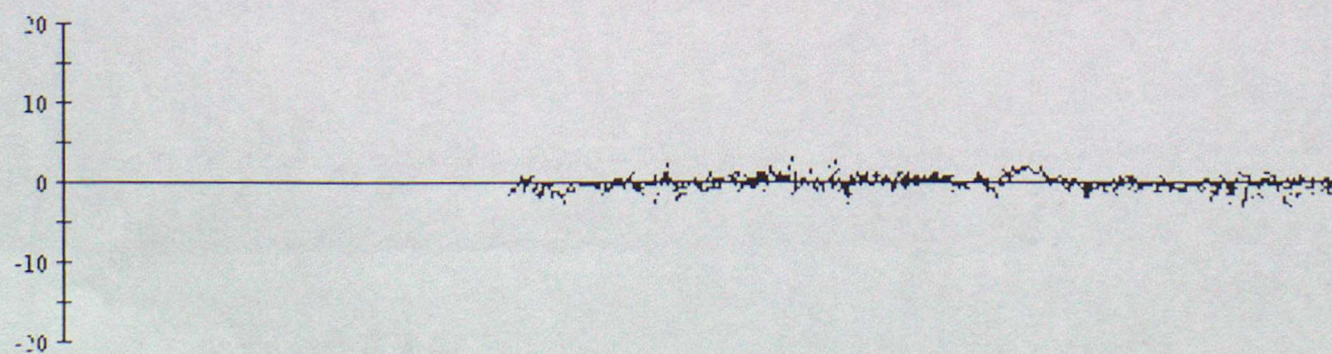
44616 Air Temperature



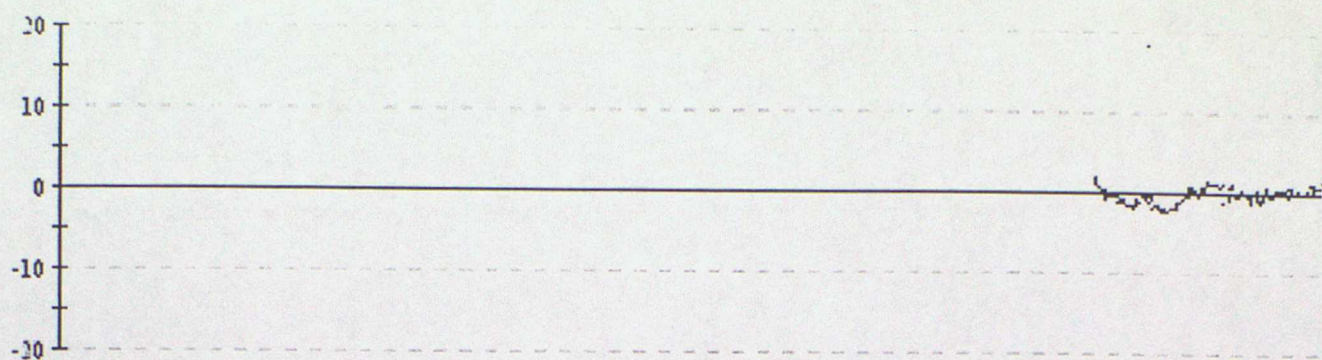
44621 Air Temperature



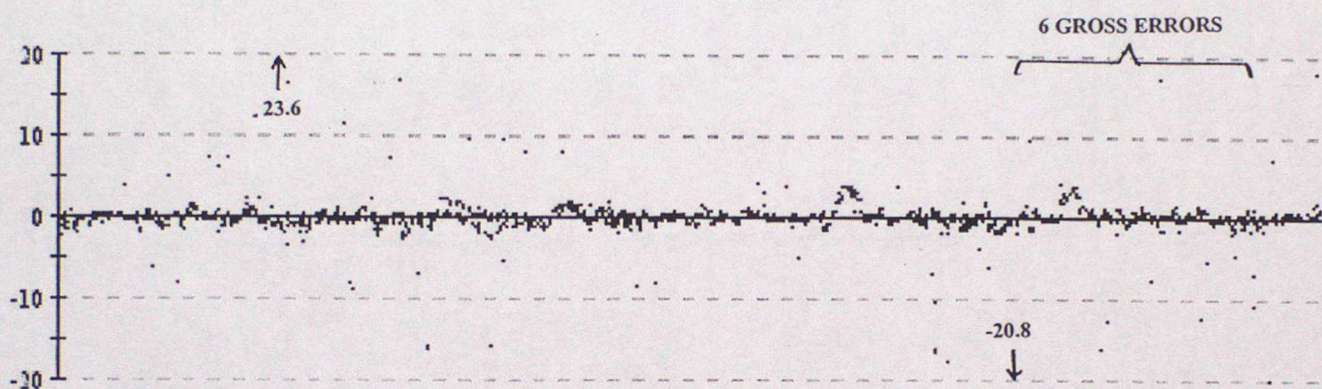
44624 Air Temperature



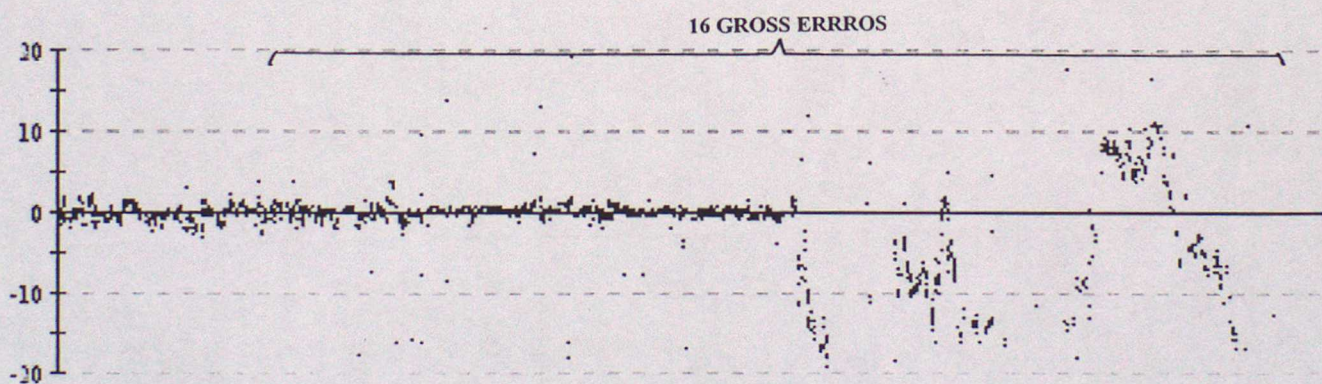
44728 Air Temperature



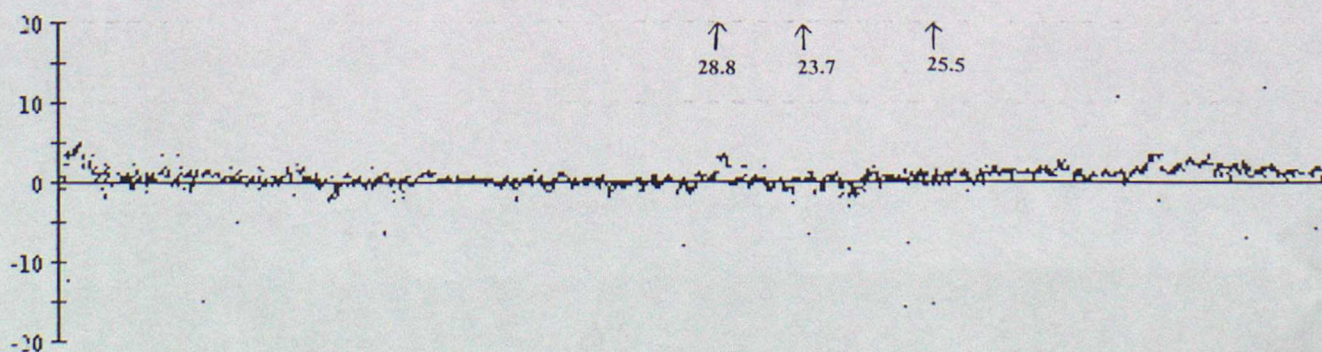
44742 Air Temperature



44760 Air Temperature

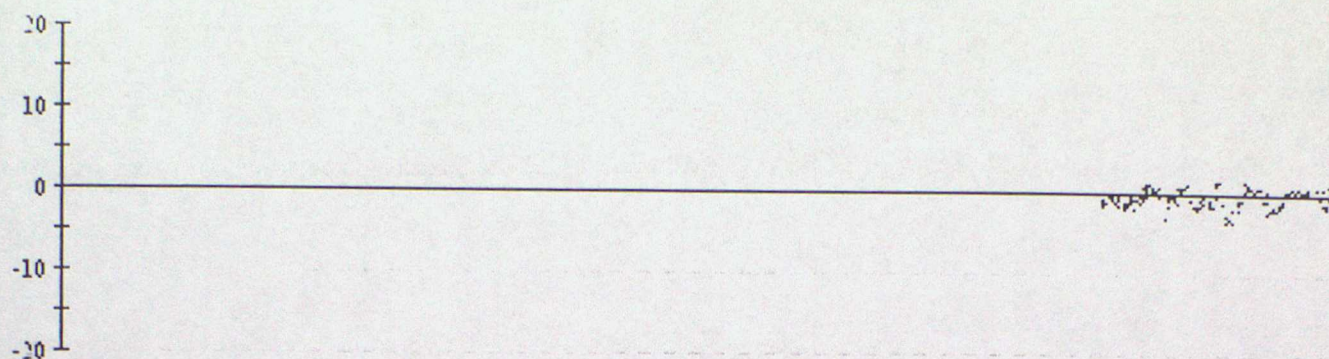


44764 Air Temperature

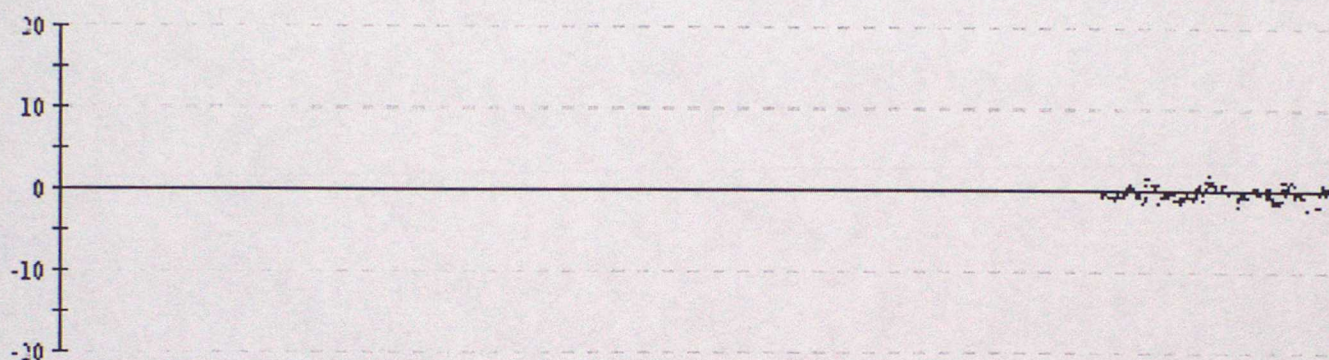


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

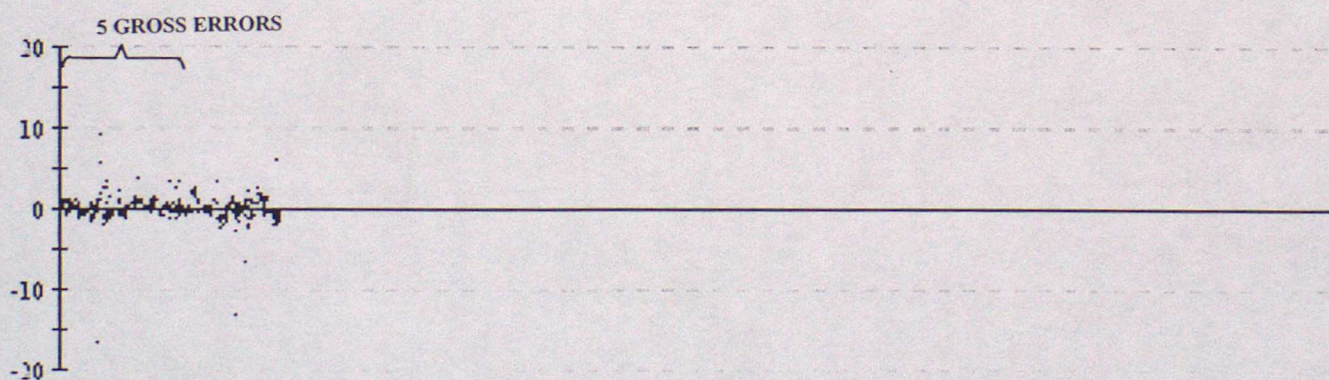
44765 Air Temperature



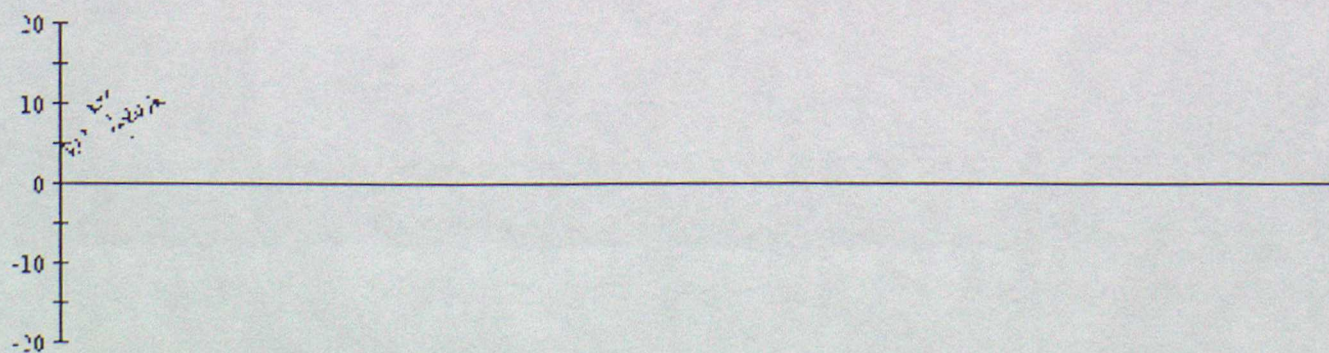
44766 Air Temperature



44774 Air Temperature

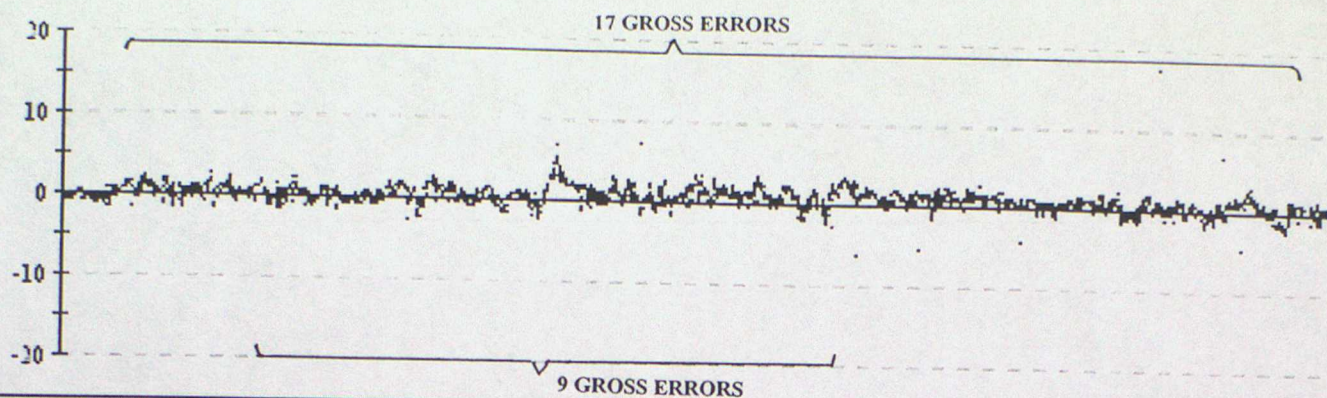


44778 Air Temperature

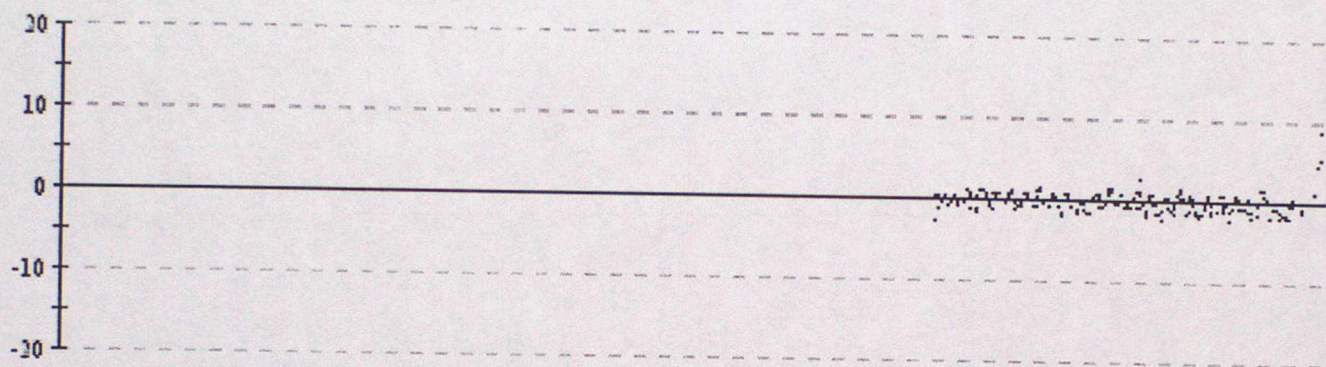


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

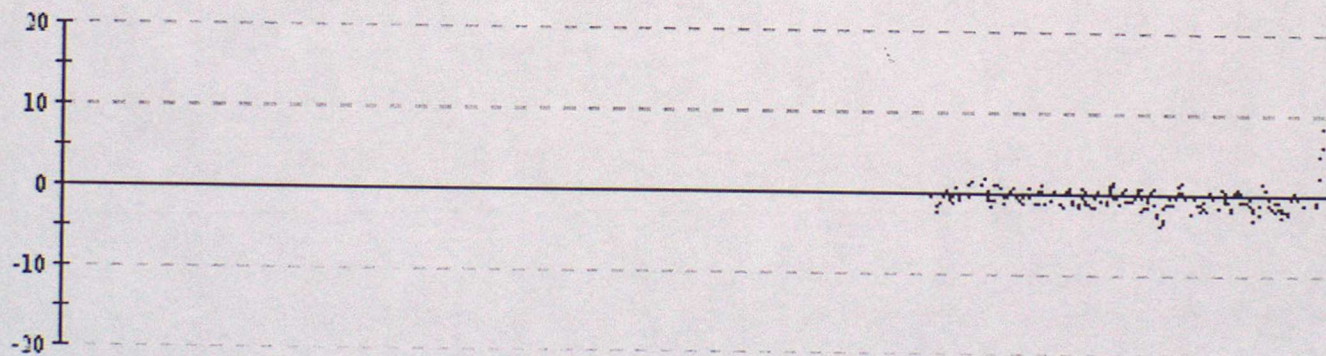
44780 Air Temperature



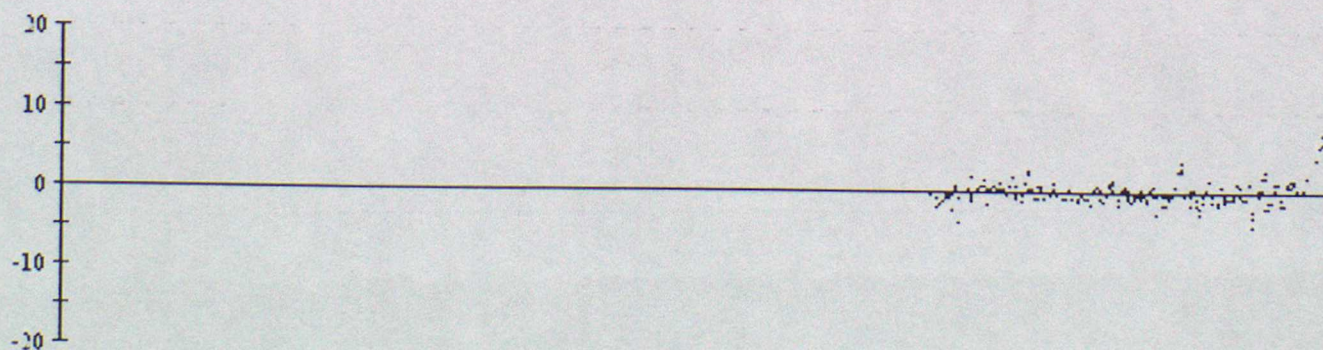
61525 Air Temperature



61526 Air Temperature

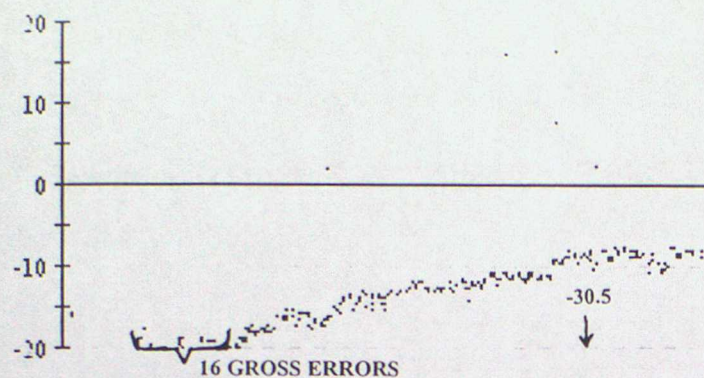


61527 Air Temperature

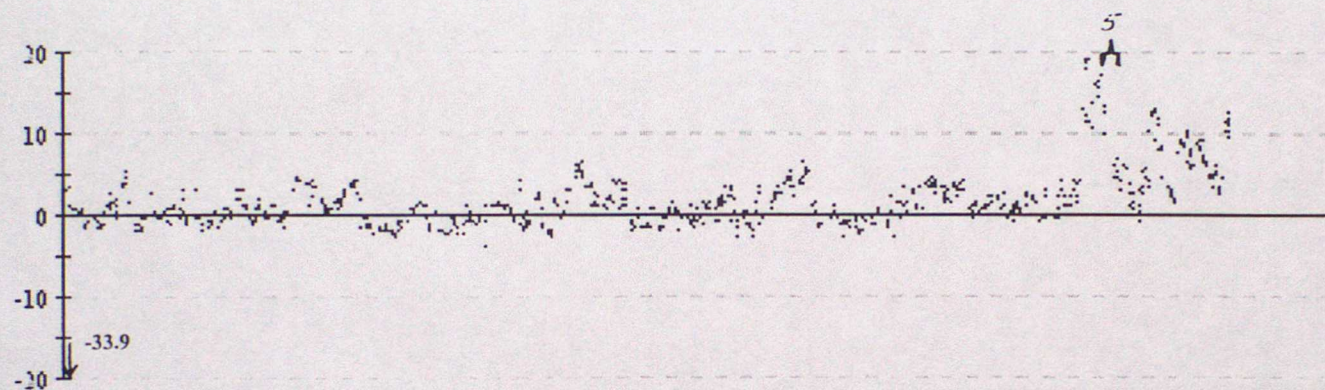


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

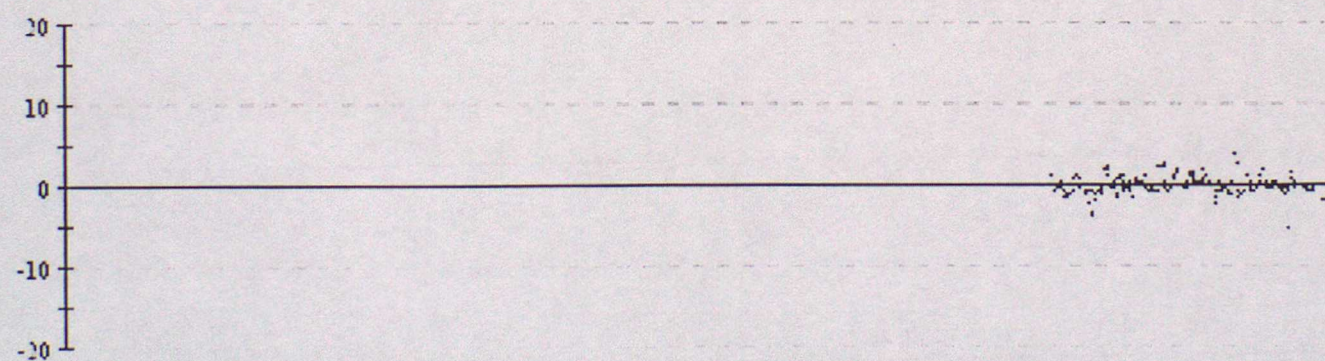
62517 Air Temperature



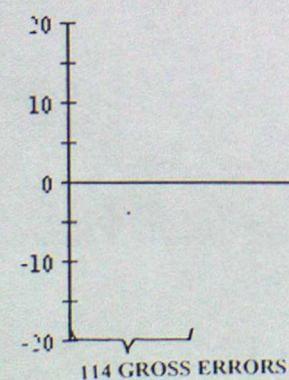
62674 Air Temperature



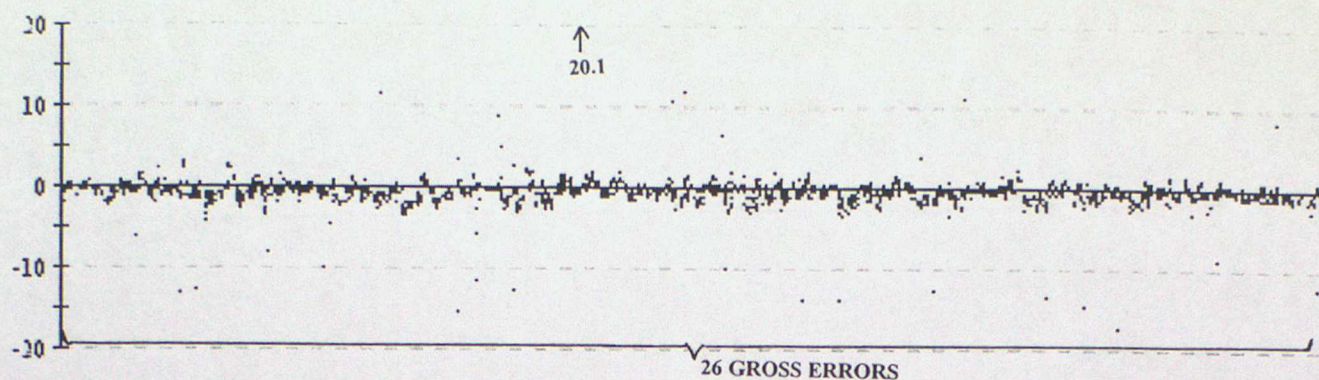
62675 Air Temperature



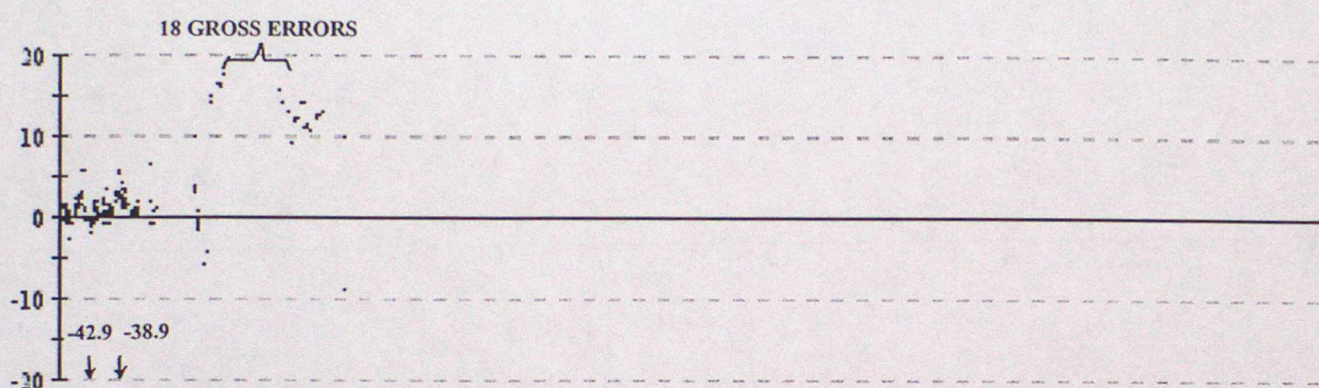
64528 Air Temperature



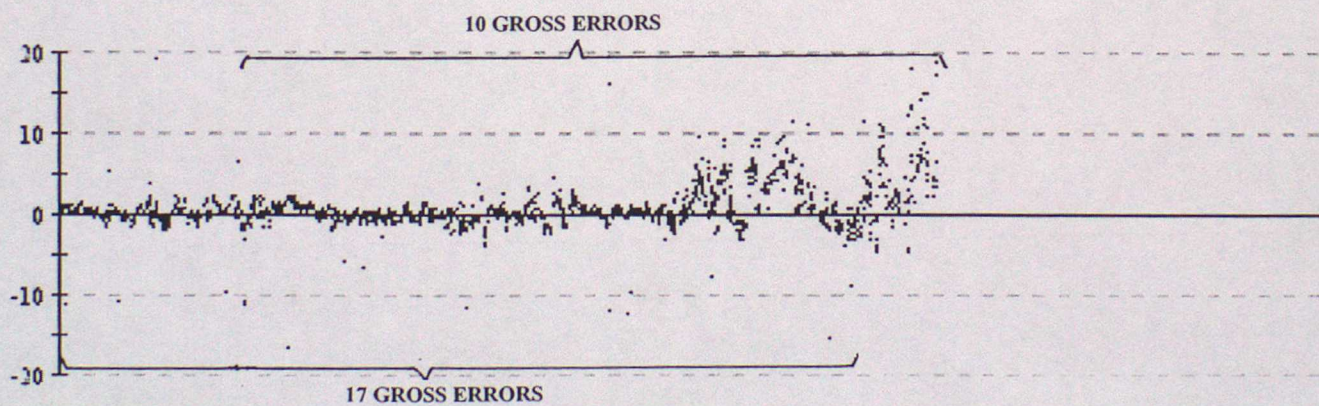
64529 Air Temperature



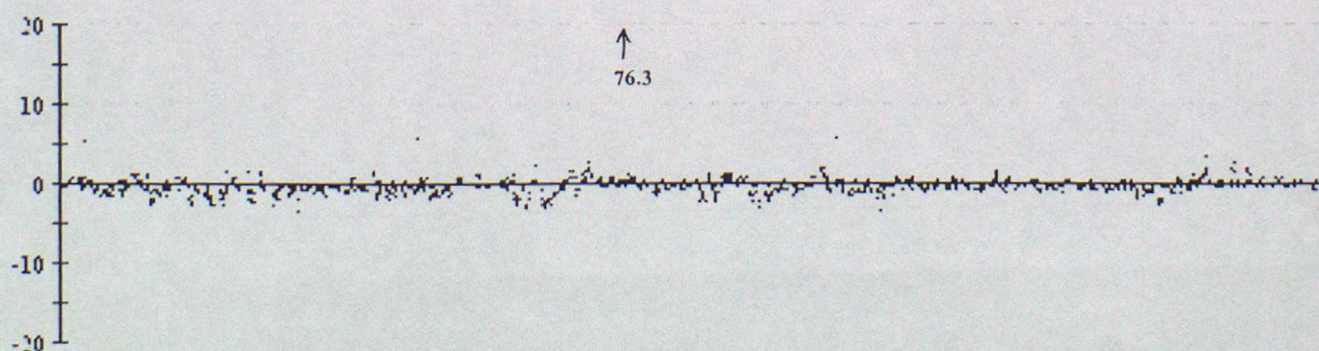
65562 Air Temperature



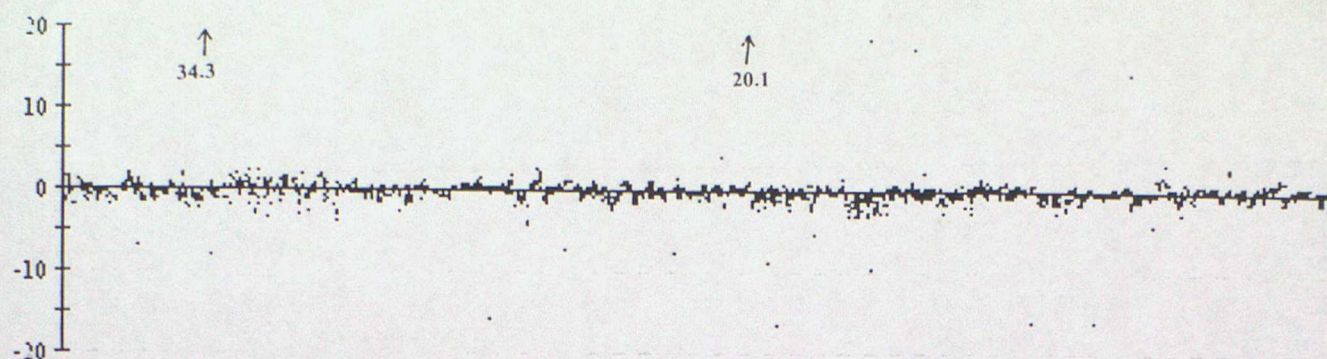
65571 Air Temperature



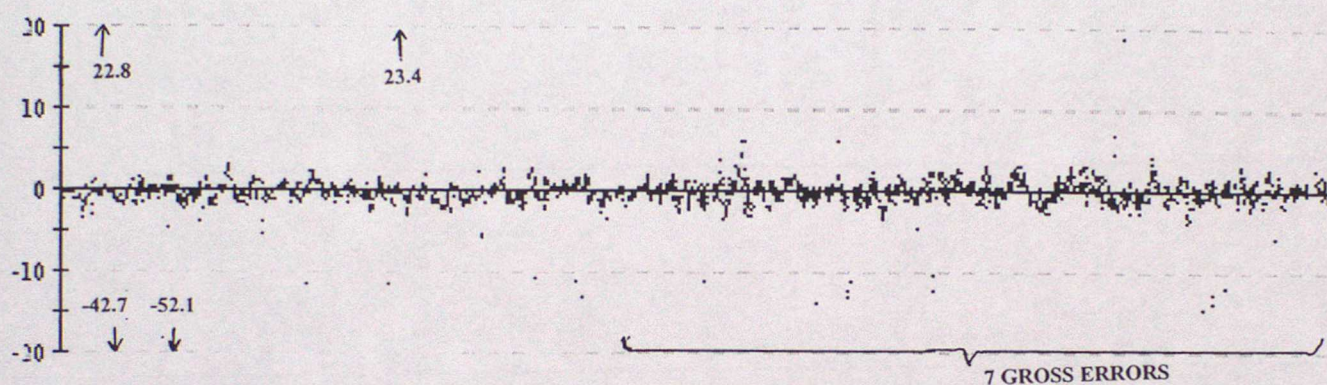
65581 Air Temperature



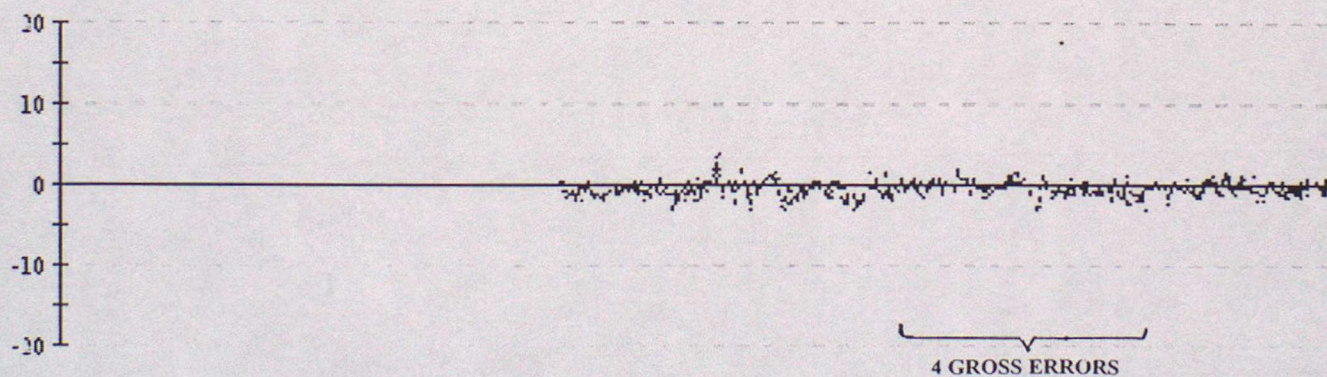
65591 Air Temperature



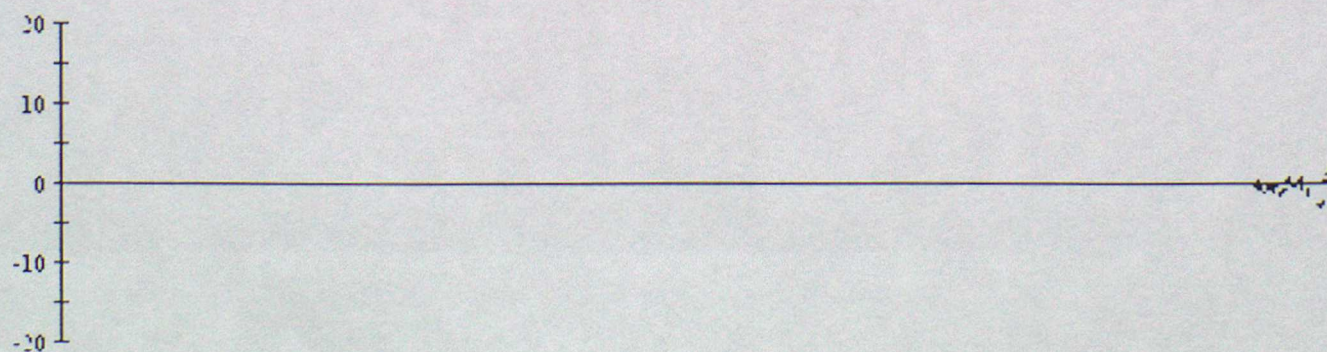
65592 Air Temperature



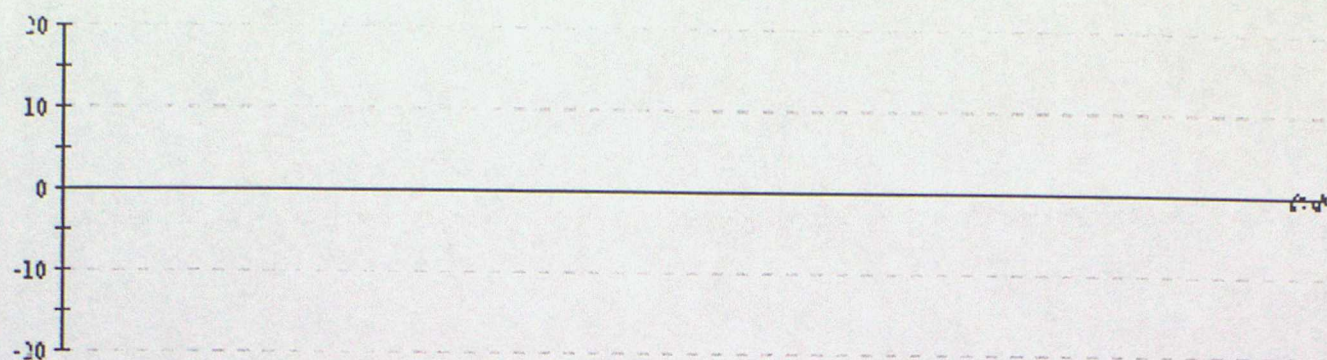
65593 Air Temperature



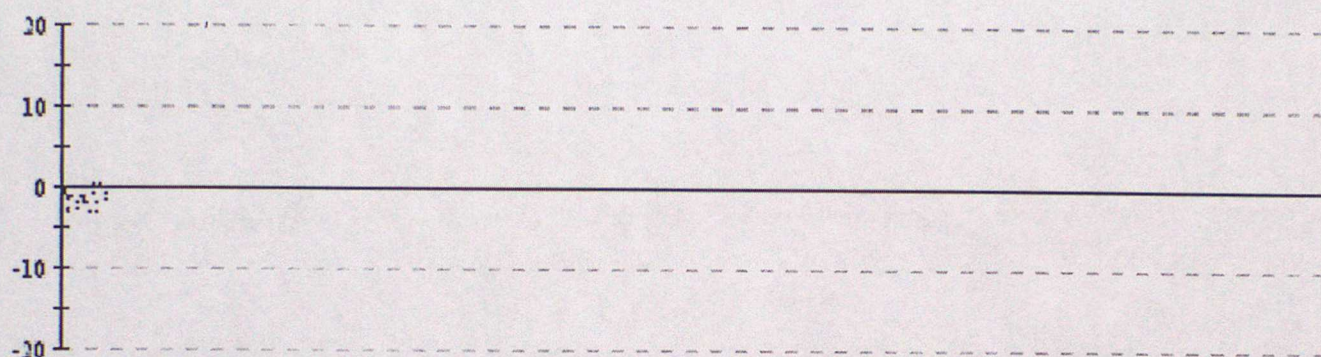
65594 Air Temperature



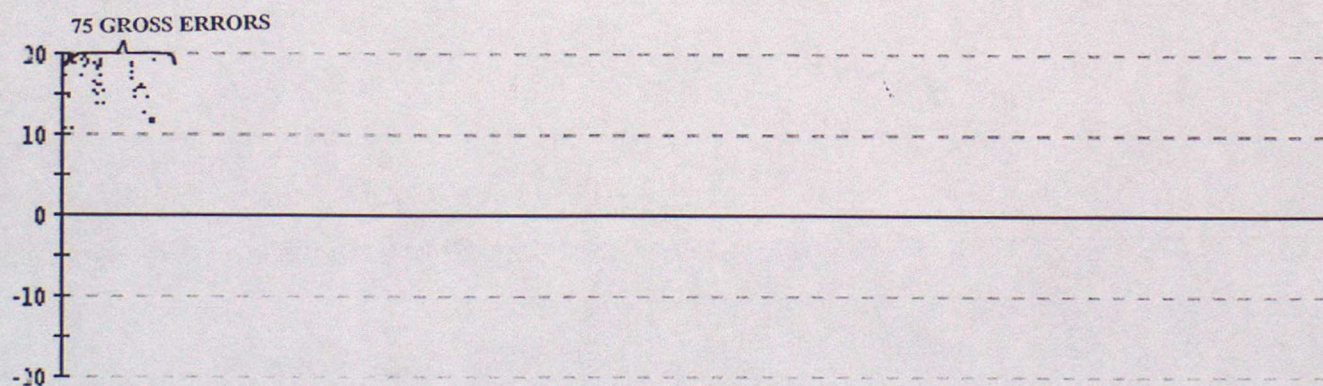
65595 Air Temperature



65597 Air Temperature



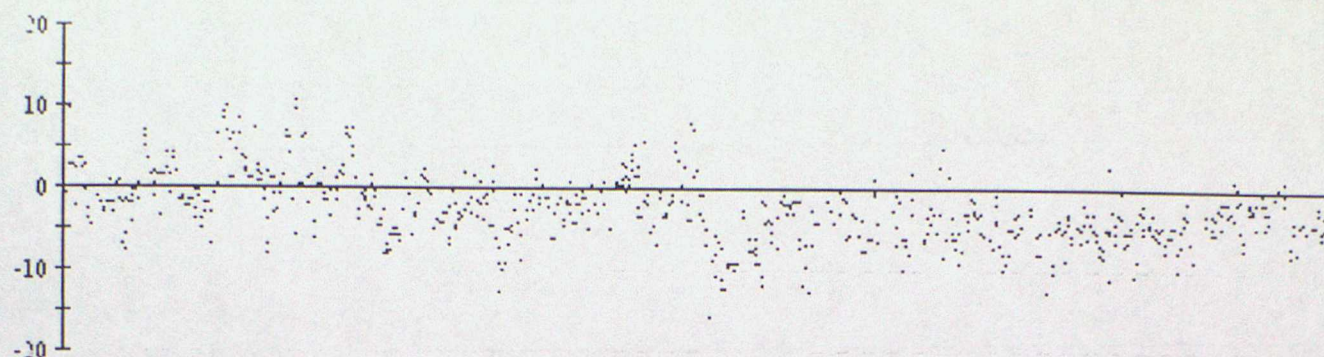
65599 Air Temperature



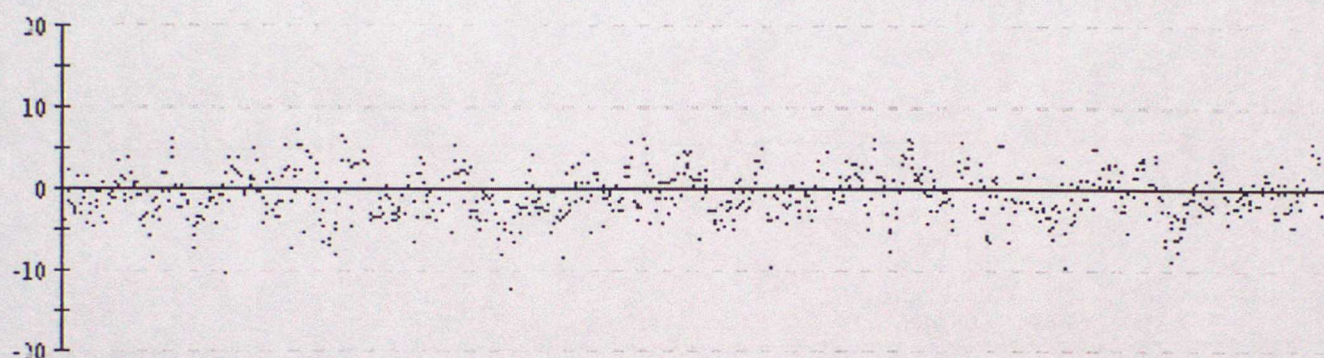
ANNEX D - TIME SERIES PLOTS OF WIND SPEED

Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

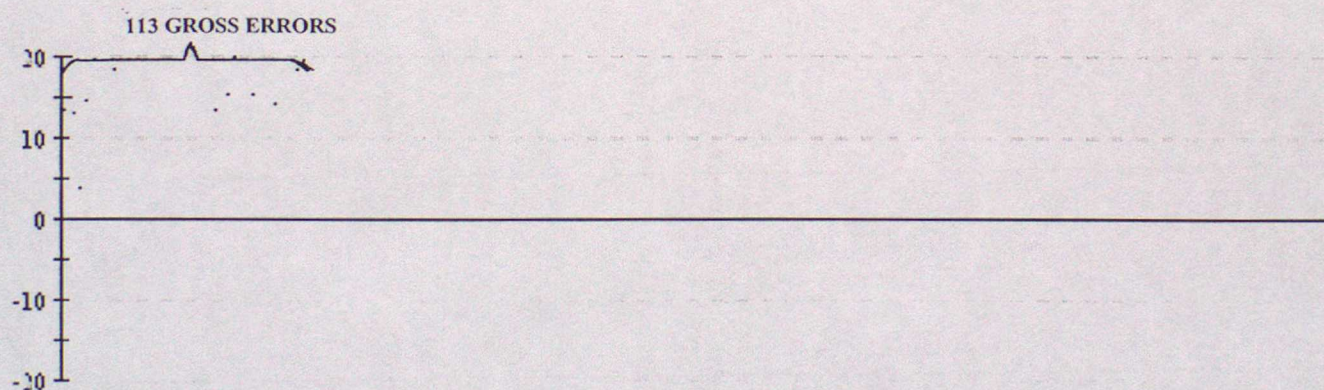
41504 Wind speed



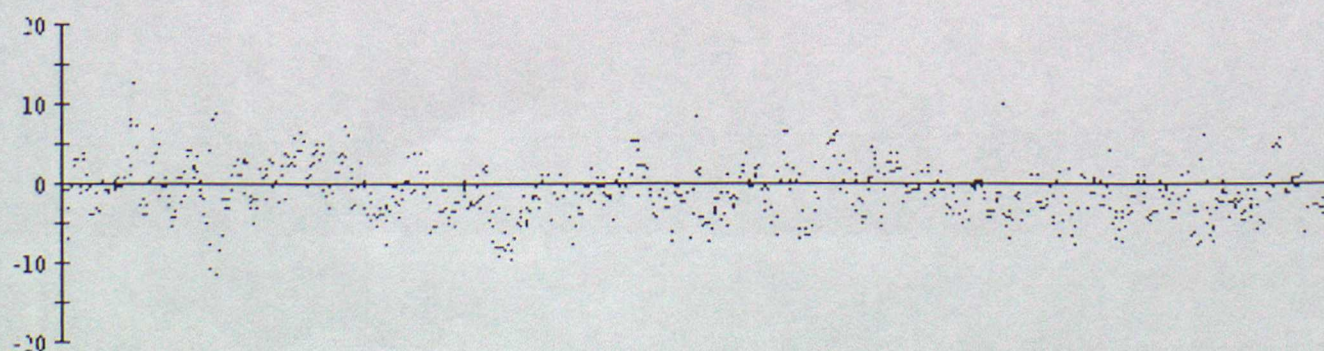
41521 Wind speed



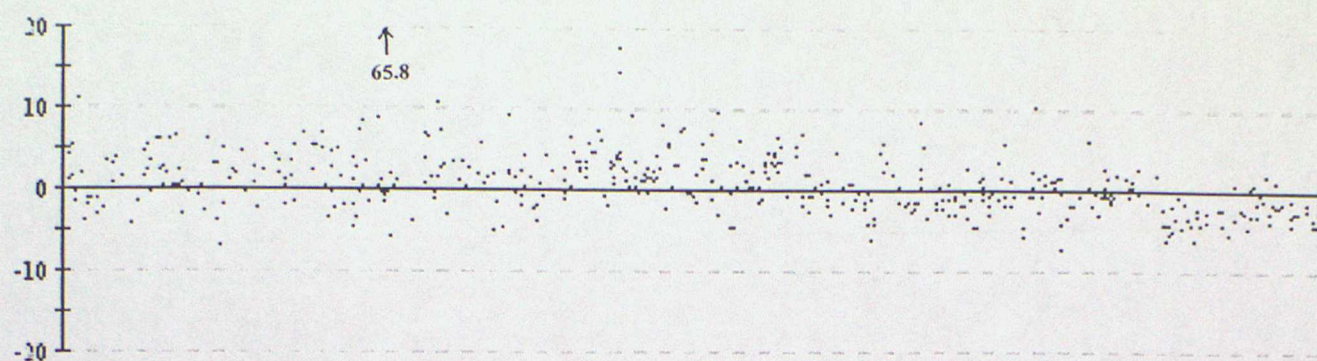
41599 Wind speed



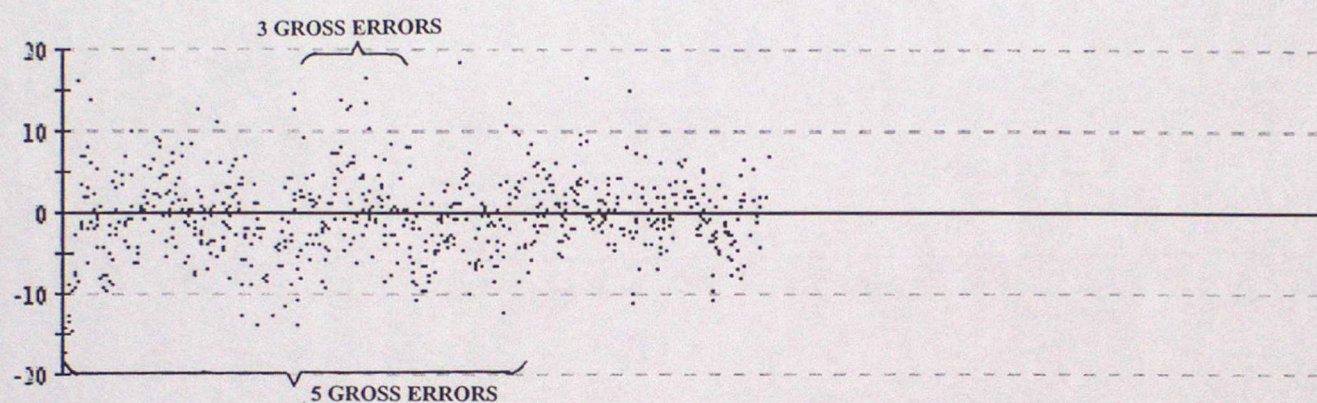
41629 Wind speed



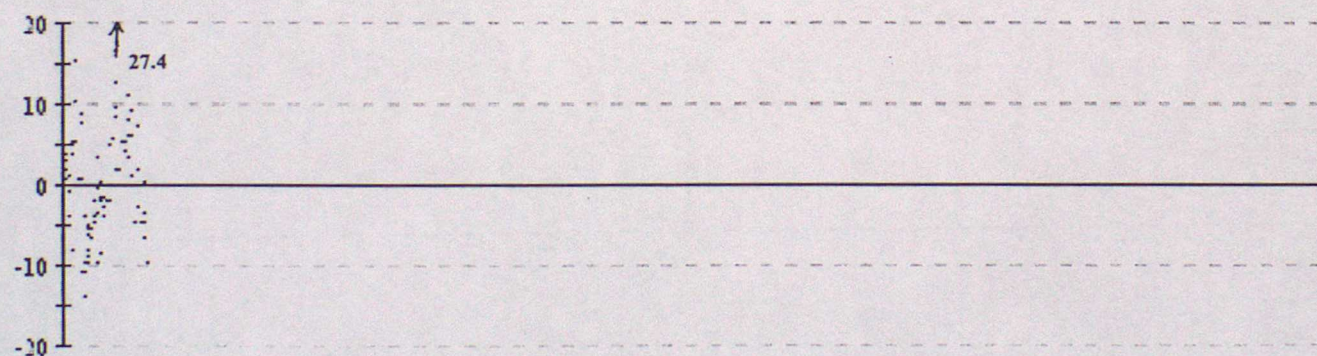
41637 Wind speed



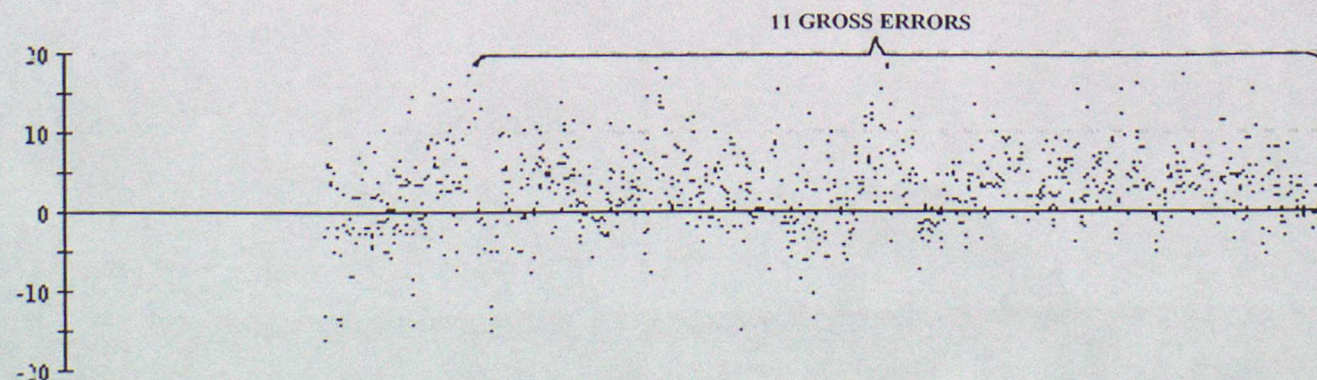
44601 Wind speed



44602 Wind speed

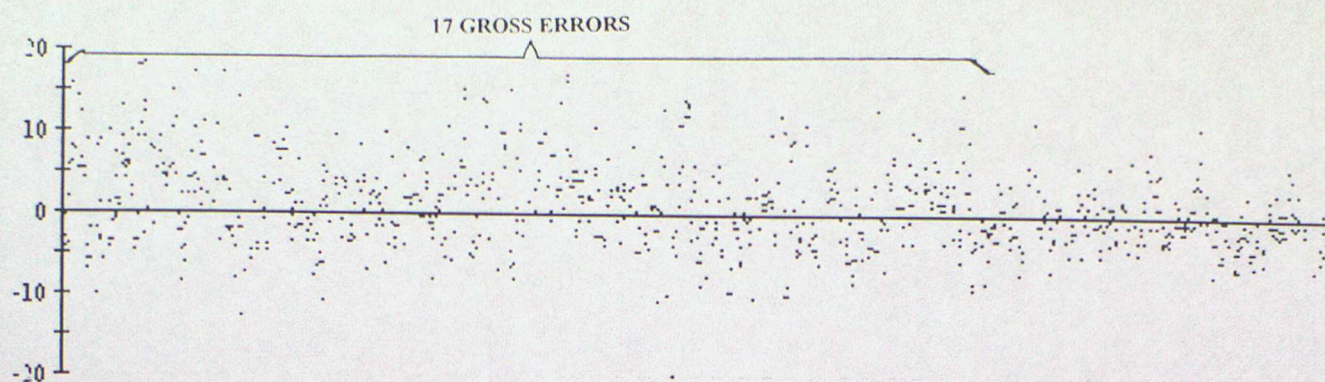


44607 Wind speed

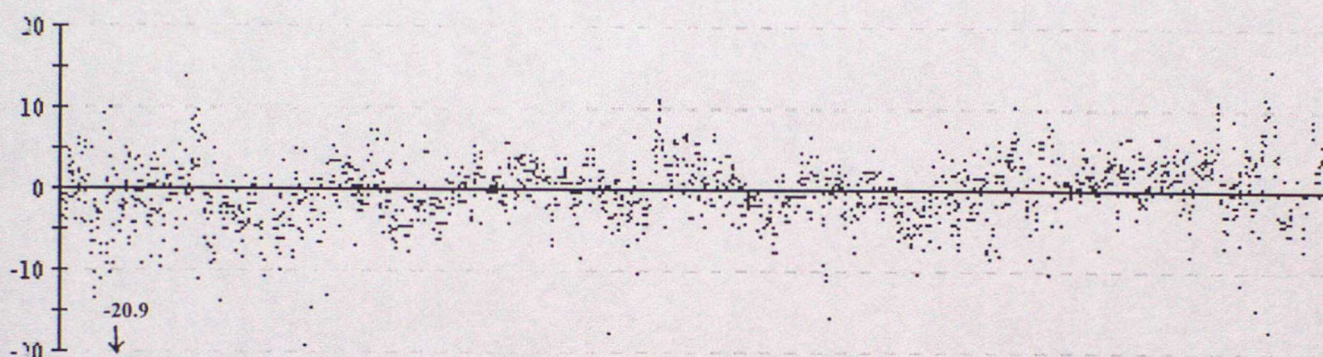


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

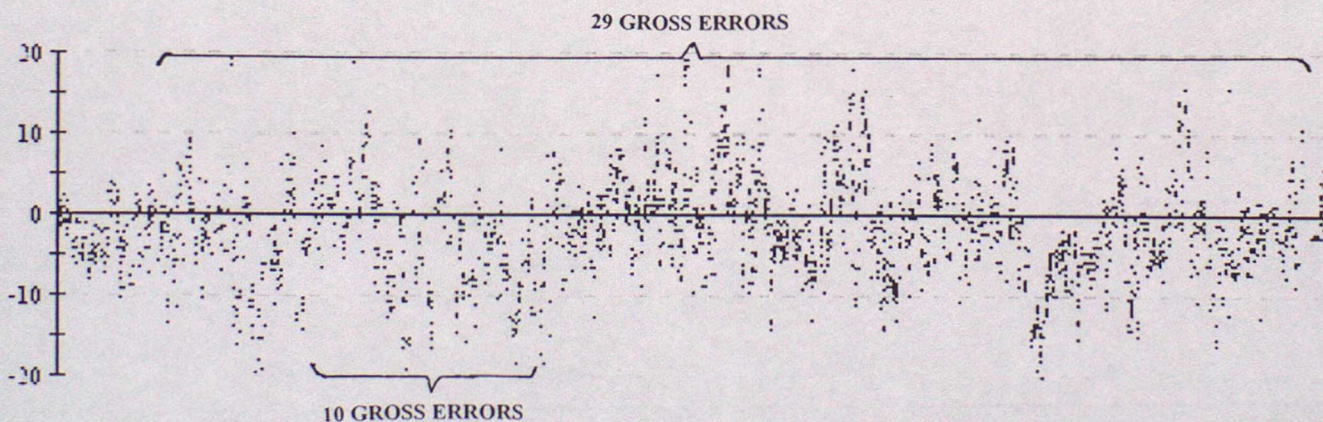
44762 Wind speed



62517 Wind speed



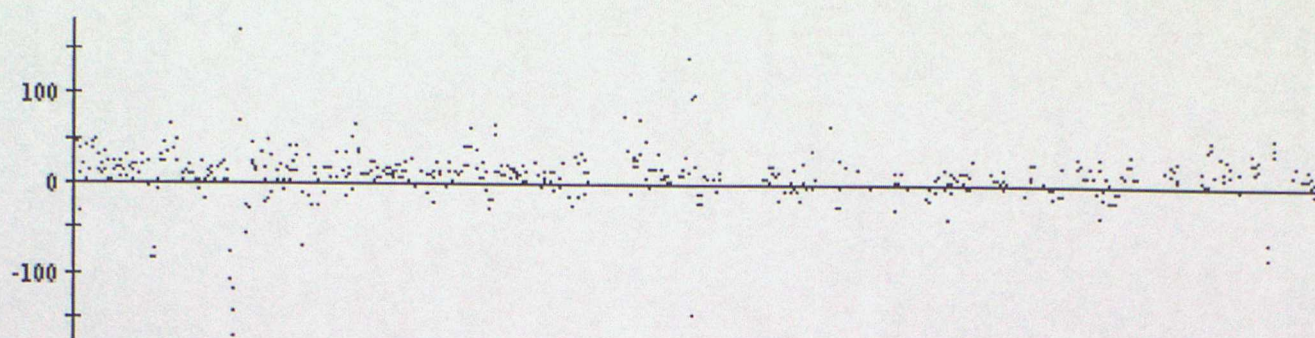
65599 Wind speed



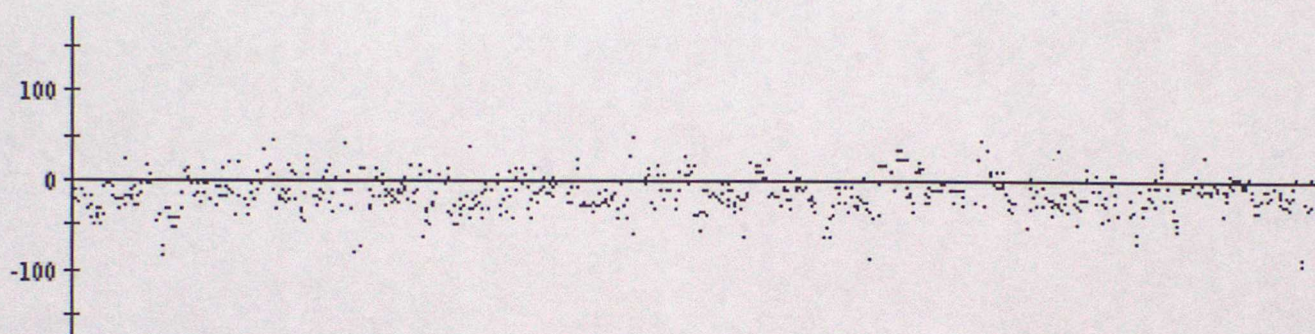
ANNEX E - TIME SERIES PLOTS OF WIND DIRECTION

Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

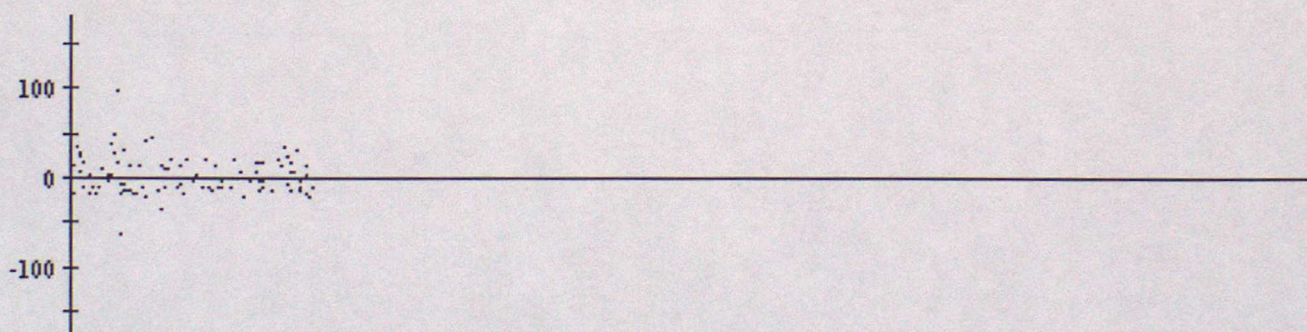
41504 Wind direction



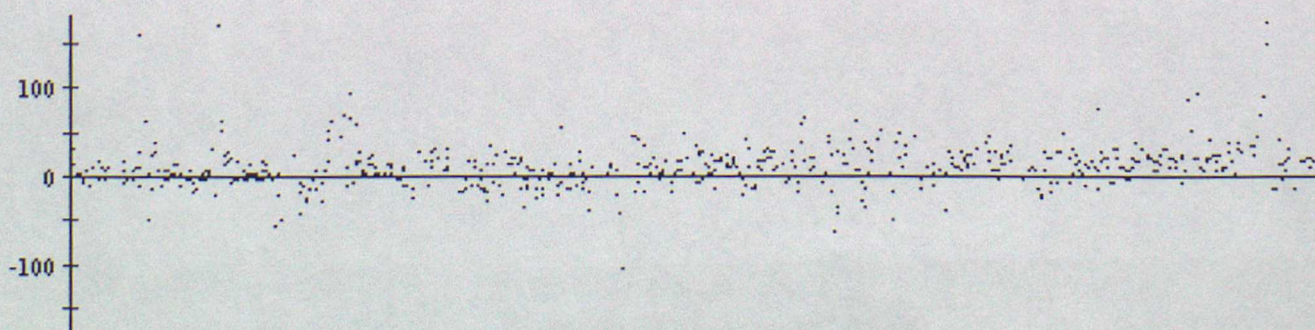
41521 Wind direction



41599 Wind direction



41629 Wind direction

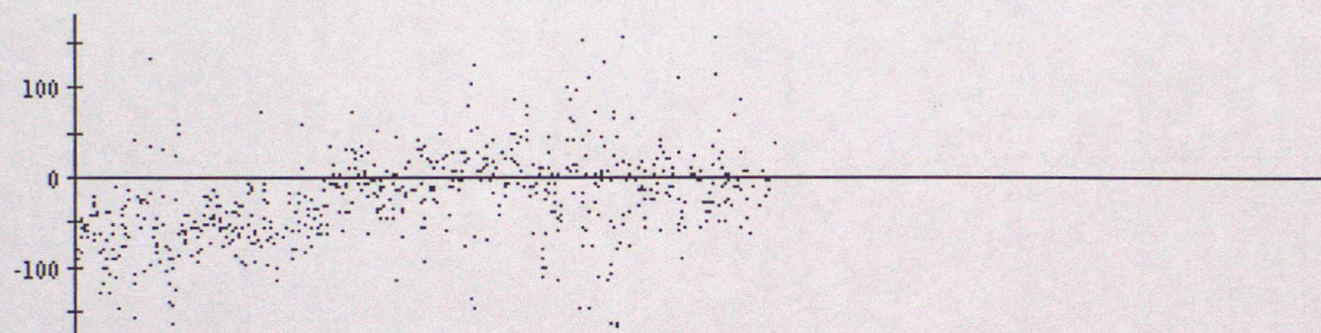


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

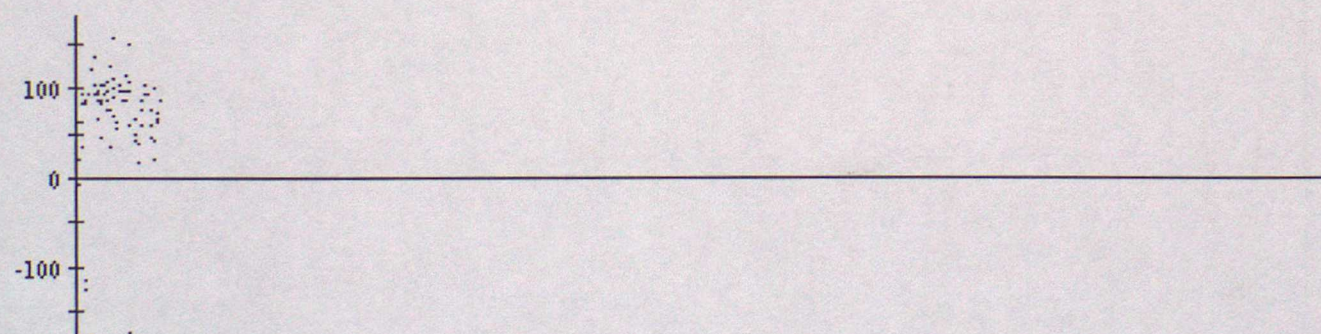
41637 Wind direction



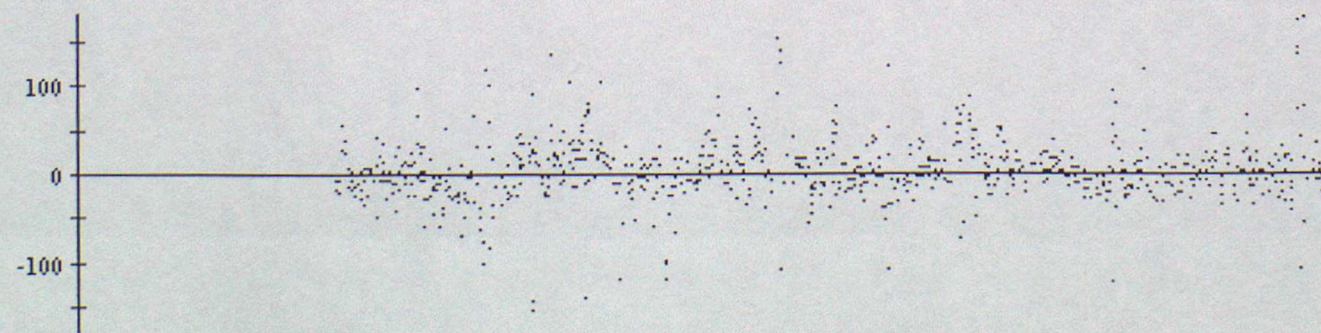
44601 Wind direction



44602 Wind direction

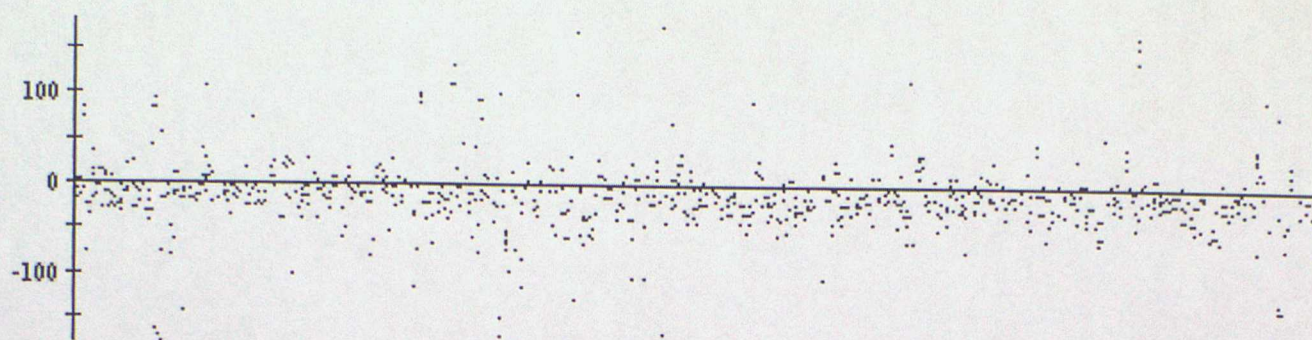


44607 Wind direction

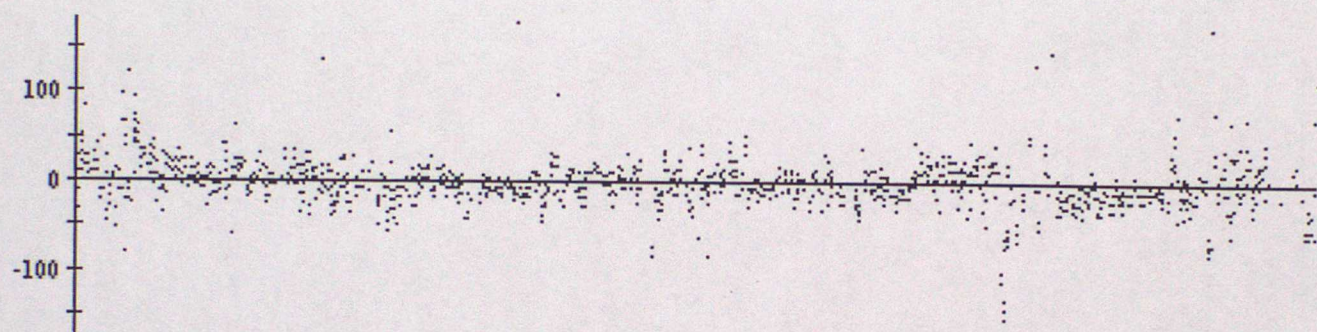


Data from 00z on 01/01/1999 to 23z on 31/03/1999 (OBS - Background field)

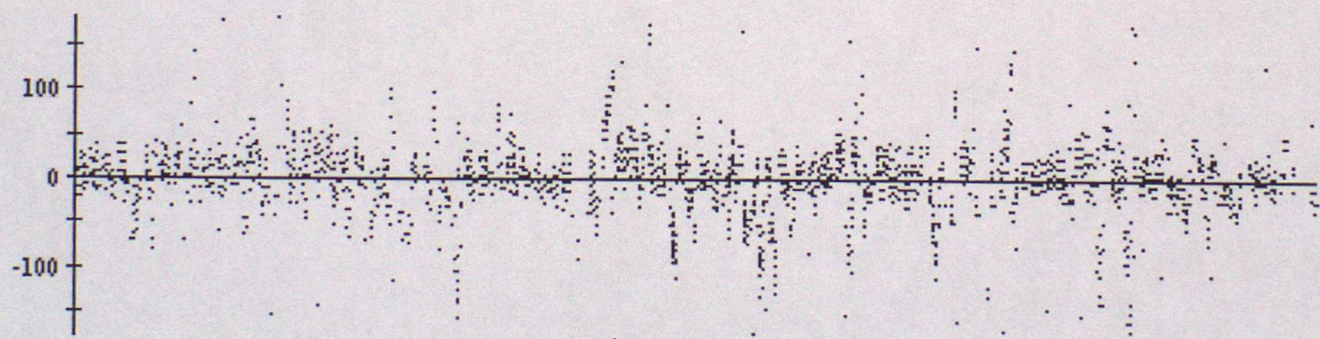
44762 Wind direction



62517 Wind direction



65599 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	
41503			*					*	01/01 - 31/03
41504			*		*	*	*	*	01/01 - 31/03
41505			*					*	01/01 - 31/03
41521			*		*	*	*	*	01/01 - 31/03
41528			*					*	01/01 - 31/03
41597	6753	F	*	*				*	01/01 - 22/01
41598			*					*	01/01 - 31/03
41599			*			*	*	*	01/01 - 31/03
41629			*		*	*	*		01/01 - 31/03
41637			*			*	*	*	01/01 - 31/03
44513			*		*			*	11/03 - 31/03
44514			*		*			*	11/03 - 31/03
44515			*		*			*	11/03 - 31/03
44516			*		*			*	11/03 - 31/03
44517			*		*			*	11/03 - 31/03
44546			*	*				*	10/03 - 31/03
44601	5878	F	*			*	*	*	01/01 - 23/02
44602	5883	F	*			*	*	*	01/01 - 07/01
44604	6572	F	*	*				*	01/01 - 13/02
44607	6216	F	*	*		*	*	*	19/01 - 31/03
44608	14540	F	*	*				*	20/01 - 31/03
44610	12734	F	*	*				*	17/02 - 31/03
44613	28467	UK	*	*	*			*	01/01 - 31/03
44616	28468	UK	*	*	*			*	28/01 - 31/03
44621	12372	UK	*	*	*			*	11/03 - 31/03
44624	28470	UK	*	*	*			*	01/02 - 31/03
44726	12539	UK	*	*				*	01/01 - 02/03
44728			*	*	*			*	15/03 - 31/03
44742	28471	UK	*	*	*			*	01/01 - 31/03
44760	28469	UK	*	*	*			*	01/01 - 31/03
44762	12594	UK	*	*		*	*	*	01/01 - 31/03
44764	28464	UK	*	*	*			*	01/01 - 31/03
44765	28466	UK	*	*	*			*	15/03 - 31/03
44766	28465	UK	*	*	*			*	15/03 - 31/03
44768	26746	UK	*	*				*	01/01 - 31/03
44772	12577	UK	*	*				*	01/01 - 16/02

ANNEX F - CONT'd

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
44774	28472	UK	*	*	*			*	01/01 - 16/01
44778	28473	UK	*	*	*			*	01/01 - 31/03
44780	26742	UK	*	*	*			*	01/01 - 31/03
44901			*	*				*	01/01 - 31/03
47556			*						01/01 - 09/01
61525			*		*			*	03/03 - 31/03
61526			*		*			*	03/03 - 31/03
61527			*		*			*	03/03 - 31/03
62511	12729	F	*					*	01/01 - 04/03
62512	12730	F	*					*	01/01 - 31/03
62513	12731	F	*					*	01/01 - 24/03
62515	6569	F	*	*				*	01/01 - 31/03
62517	5823	F	*	*	*	*	*	*	01/01 - 31/03
62519	6570	F	*	*				*	01/01 - 31/03
62520	14431	F	*	*				*	01/01 - 31/03
62554	14430	F	*	*				*	01/01 - 31/03
62674			*		*				01/01 - 24/03
62675			*		*			*	11/03 - 31/03
64516			*	*				*	14/03 - 31/03
64517	14178	F	*	*				*	11/02 - 31/03
64518	14180	F	*	*				*	11/02 - 31/03
64519			*	*				*	15/03 - 31/03
64520	14198	F	*	*				*	11/02 - 29/03
64528	4274	NL	*	*	*			*	01/01 - 08/01
64529	6669	D	*	*	*			*	01/01 - 31/03
65562	3675	N	*	*	*			*	01/01 - 21/01
65571	4275	IR	*	*	*			*	01/01 - 04/03
65581	2294	D	*	*	*			*	01/01 - 31/03
65591	26748	UK	*	*	*			*	01/01 - 31/03
65592	4270	D	*	*	*			*	01/01 - 31/03
65593	4228	NL	*	*	*			*	05/02 - 31/03
65594			*	*	*			*	26/03 - 31/03
65595			*	*	*			*	28/03 - 31/03
65597	4273	NL	*	*	*			*	01/01 - 04/01
65599	28477	UK	*	*	*	*	*	*	01/01 - 31/03

(62517 crossed up by previous)

