

DUPLICATE ALSO

OBSERVATIONS, PLANS AND REQUIREMENTS BRANCH

Quality Evaluation Section

FIFTY-FIRST QUARTERLY REPORT

ON DRIFTING BUOYS

IN THE NORTH ATLANTIC

1st JULY 1999 – 30th SEPTEMBER 1999

Produced By : S. J. Smith

Meteorological Office,
Met O (OPR),
Room 132,
London Road,
Bracknell,
Berkshire, RG12 2SZ,
United Kingdom

Tel : 01344 856815

e-mail : ssmith@meto.gov.uk

ORGS UKMO Q

National Meteorological Library

FitzRoy Road, Exeter, Devon. EX1 3PB



3 8078 0005 4601 2

DISTRIBUTION LIST

Met. Office

1. D(TS)
2. Hd (OPR)
3. Hd (OLA)
4. Mr.D.W.Jones
5. Dr J McArthur, (OLA) 4d
6. Miss M. J. Atkins, Hd (OV)
7. Mr G.Hutchinson, (OLA) 4d
8. Mr.B.Oatway, Operations Manager, NMC
9. Mr.C.A.Parrett (NWP)
10. Library (2)

International.

1. Mr.T.Kvinge, Norway
2. Mr.J.Keeley, Canada
3. Mr.E.Charpentier, France
4. Mr.P.Blouch, France
5. Mr.U.Gartner, Germany
6. Mr. Giratys, Switzerland
7. Mr.V.Wagner, Germany
8. Mr.W.C.M.van Dijk, The Netherlands
9. Mr.F.Sigurdsson, Iceland
10. Mr.K.Bjorheim, Norway
11. Mr.K.Hedeegaard, Denmark
12. Mr.P.O.Harsmar, Sweden
13. Mr.M.Lubben, Germany
14. Mr.B.Richter, Germany
15. Mr.L.Golmen, Norway
16. Mr.T.Lothe, Norway

CONTENTS

1. Introduction

Summary of :-

2. General Performance
3. Pressure Performance
4. Air temperatures
5. Winds
6. Explanatory Notes
7. Mean Positions of Buoys

- | | |
|---------|---|
| Annex A | - Table of Statistics |
| Annex B | - Time-series plots of pressure |
| Annex C | - Time-series plots of air temperature |
| Annex D | - Time-series plots of wind speed |
| Annex E | - Time-series plots of wind direction |
| Annex F | - Summary table of operational drifting buoys |

7th October 1999

This report has not been published.
Permission to quote from it should be obtained from the
Head of Observations, Plans and Requirements Branch.

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

69 out of 71 of the buoys reporting, gave a '% of observations with acceptable positions' greater than 95% (66 out of 73 last quarter).

(b) Data timeliness

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

Timeliness	Last quarter.	This quarter
Very Good	45	38
Good	14	17
Satisfactory	8	9
Poor	0	3
Very poor	6	4
Total no. of buoys	73	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	7	9	23	20
Good	5	12	6	9
Satisfactory	4	4	4	2
Poor	19	14	1	0
Very Poor	2	1	2	0

The total number of buoy days in the quarter was 5110 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 5025) and the number of 'buoy hours' with at least one observation was 88625 (compared with 76556 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 17.34 (last quarter the figure was 15.24).

3. SUMMARY OF PRESSURE PERFORMANCE

(a) Buoy deployments, etc.

North of 50deg N

There were 26 buoys reporting pressure at the beginning of the period. 28 buoys were operating at the end of the period. 5 buoys were deployed during the period (44614, 44625, 64530, 64546 and 65596). 3 buoys ceased reporting pressure (64692, 64696 and 64697).

South of 50deg N

There were 26 buoys reporting pressure at the beginning of the period. 28 buoys were reporting at the end of the period. 14 buoys were deployed during the period (13504, 41628, 41648, 41649, 41656, 41852, 44626, 44627, 44628, 44629, 44630, 61505, 61502 and 61504). 12 buoys ceased reporting pressure (41502, 41598, 41628, 41656, 44513, 44514, 44515, 44517, 44742, 44764, 62505 and 62901).

(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:-

- 41852 - Pressure data from this buoy became erratic from mid September onwards.
- 44629 - Pressure data from this buoy showed an increasing bias throughout August, until it ceased reporting pressure at the beginning of September.
- 44764 - Pressure data from this buoy showed a bias of approximately -9 hPa from the end of July until the end of its reporting life (03/09/99).
- 62506 - Pressure data from this buoy showed a bias of +1.9hPa throughout most of the period.

Biases

Twenty-one 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
41628	0.6	10/07 - 15/09
41656	0.9	03/08 - 05/09
44513	-0.7	01/07 - 11/07
44514	-1.6	01/07 - 03/07
44614	-0.8	08/07 - 30/09
44621	-0.7	01/07 - 30/09
44766	-0.6	01/07 - 30/09
44773	-0.6	01/07 - 30/09
61501	-0.7	10/09 - 30/09
61502	-0.8	10/09 - 30/09
64518	-0.8	01/07 - 30/09
64529	-0.6	01/07 - 30/09
64530	-0.7	08/07 - 30/09
64546	-0.7	08/09 - 30/09
64692	-0.7	01/07 - 04/08
64694	-1.0	01/07 - 30/09
64696	-0.8	01/07 - 13/07
64697	-0.7	01/07 - 16/07
65593	-0.6	01/07 - 30/09
65594	-0.6	01/07 - 30/09
65595	-0.8	01/07 - 30/09

Summary of Pressure Performance

Pressure Summary	Last Quarter	This Quarter
Acceptable	46	46
Suspect - RMS	5	4
Suspect - Bias	22	21
Total no. of buoys	73	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 $\pm 20^{\circ}\text{C}$ 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
13504	0.63	0.90	395	41521	1.14	1.48	831
41628	0.84	1.01	606	41656	1.35	1.14	725
44513	8.83	7.98	34	44514	-1.26	4.28	19
44515	0.24	2.71	45	44517	0.97	1.58	39
44613	0.71	1.32	2906	44614	0.17	1.18	1828
44616	0.63	1.56	4228	44621	-0.22	1.60	2484
44624	0.23	1.16	4964	44625	-0.06	1.05	3819
44626	-0.13	1.33	2648	44627	-6.97	5.53	9
44628	0.11	1.19	2272	44629	0.04	0.99	2088
44630	-0.44	1.41	2435	44728	0.12	1.25	2967
44742	1.64	2.14	2475	44764	1.21	2.31	1048
44765	0.50	1.92	1398	44766	-0.05	1.53	3441
44773	0.62	1.61	2099	44777	1.22	2.16	2167
44780	0.82	1.13	6385	62505	0.29	0.72	1032
64529	0.60	1.33	3243	64530	0.34	1.11	2399
64546	0.19	0.91	561	65593	0.30	1.23	2970
65594	0.59	1.45	3365	65595	0.32	1.21	4026
65596	2.85	0.88	537				

Summary

Buoys 41521(1.14), 41656(1.35), 44742(1.64), 44764(1.21), 44777(1.22) and 65596(2.85) all showed significant air temperature bias.

Although temperature data from buoys 44513(8.83) and 44514(-1.26) showed significant biases, it should be noted that only 34 and 19 reports, respectively, were received.

All temperature data from buoy 44627(-6.97) were erroneous, resulting in all but 9 reports being rejected.

(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
41521	-2.05	3.16	743	-8.52	18.38	665
41636	-3.94	2.85	725	-25.40	50.08	669
41637	-3.78	2.10	99	-78.75	50.86	95
41638	-1.76	3.17	825	48.17	35.64	823
41648	1.65	2.63	6	23.47	29.41	6
41649	1.39	5.08	477	8.14	27.19	388
44607	1.96	4.08	1865	8.03	27.91	1745
44773	-0.70	3.62	3492	-1.57	27.81	3244
44777	-1.03	3.87	3974	-0.47	24.93	3049
62505	0.58	2.83	1306	-15.56	21.62	1175
62506	0.65	3.34	1837	-2.65	26.88	1774
65599	0.21	3.88	4170	0.64	20.70	3440

Buoys 41636(-3.94) and 41637(-3.78) both showed a significant **wind speed** bias throughout their reporting lives.

Buoys 41637(-78.75) and 62505(-15.56) both showed significant **wind direction** biases throughout their reporting lives.

Buoys 41636(-25.40) and 41638(48.17) both developed significant **wind direction** biases during August.

Although buoy 41648 showed a significant **wind speed** bias(4.25), it should be noted that very few reports were received.

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 July to
September 1999

Annex A - TABLE OF STATISTICS

WMO No./Country	13504	41502	41505
Argos Id No.			
Period Within Area	10/08 - 30/09	01/07 - 03/08	01/07 - 30/09
Mean Latitude	25.9	24.8	34.0
Mean Longitude	-20.2	-47.1	-56.9
No. of Obs Received	469	231	915
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	96.4	98.3	99.8
P. Tendency	0.0	0.0	0.0
Air Temperature	96.6	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	96.8	72.7	99.7
Median delay (min)	136	138	39
Number of days	52	34	92
Mean No. of obs/day	9.0	6.8	9.9
No. of Hours with obs	423	229	892
Mean no. of hours/day with obs	8.1	6.7	9.7
% of hour periods without an ob	65.5	71.6	59.5
Mean (Ob-Bg)	-0.2	0.2	0.1
RMS (Ob-Bg) unflagged data	0.7	0.7	0.8
Mean (Ob-Bg)	-0.2	0.2	0.0
RMS (Ob-Bg) all data	0.7	0.7	1.7
Revised RMS (Ob-Bg)	0.7	0.7	1.0
% of data flagged	2	0	5
Operating at end of period	YES	NO	YES
Performance			
Availability	Poor	Poor	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Acceptable	Acceptable	Very Good
Comments			

Annex A - cont'd

WMO No./Country	41521	41528	41598
Argos Id No.			
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 31/08
Mean Latitude	26.4	30.7	24.7
Mean Longitude	-58.8	-75.0	-47.2
No. of Obs Received	887	882	278
% of obs with Acceptable Position	100.0	99.7	100.0
% of Present Pressure	98.3	99.0	98.9
P. Tendency	0.0	0.0	0.0
Air Temperature	98.2	0.0	0.0
Wind Speed/Dir	88.8/ 97.7	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	98.1	99.1	84.2
Median delay (min)	38	34	194
Number of days	92	92	62
Mean No. of obs/day	9.6	9.6	4.5
No. of Hours with obs	860	871	229
Mean no. of hours/day with obs	9.3	9.5	3.7
% of hour periods without an ob	60.9	60.5	84.3
Mean (Ob-Bg)	0.2	0.4	0.2
RMS (Ob-Bg) unflagged data	0.8	1.1	0.8
Mean (Ob-Bg)	0.0	0.3	0.2
RMS (Ob-Bg) all data	2.2	1.5	1.3
Revised RMS (Ob-Bg)	0.8	1.3	0.8
% of data flagged	4	4	22
Operating at end of period	YES	YES	NO
Performance Availability	Poor	Poor	Very Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Poor
Comments			

Annex A - cont'd

WMO No./Country	41599	41628	41636
Argos Id No.			
Period Within Area	01/07 - 30/09	10/07 - 15/09	01/07 - 30/09
Mean Latitude	28.7	24.2	26.5
Mean Longitude	-38.1	-55.9	-57.9
No. of Obs Received	2680	642	2398
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	97.5	98.9	95.9
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	98.6	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	39.5/ 40.7
Sea-Surface Temp.	56.6	98.8	54.5
Median delay (min)	328.5	39	299.5
Number of days	92	68	92
Mean No. of obs/day	29.1	9.4	26.1
No. of Hours with obs	1791	628	1622
Mean no. of hours/day with obs	19.5	9.2	17.6
% of hour periods without an ob	18.9	60.8	26.5
Mean (Ob-Bg)	-0.3	0.6	0.5
RMS (Ob-Bg) unflagged data	0.7	1.0	1.1
Mean (Ob-Bg)	-0.5	0.6	0.4
RMS (Ob-Bg) all data	2.5	1.0	3.4
Revised RMS (Ob-Bg)	0.7	1.0	1.2
% of data flagged	31	3	37
Operating at end of period	YES	NO	YES
Performance			
Availability	Good	Poor	Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Very Poor	Very Good	Very Poor
Comments			

Annex A - cont'd

WMO No./Country	41637	41638	41648
Argos Id No.			
Period Within Area	01/07 - 30/09	01/07 - 30/09	19/07 - 30/09
Mean Latitude	26.5	24.8	42.0
Mean Longitude	-47.1	-54.8	-47.9
No. of Obs Received	1393	2328	723
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	96.6	98.1	99.3
P. Tendency	0.0	0.0	0.0
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	8.5/ 9.6	49.9/ 43.4	97.9/ 1.1
Sea-Surface Temp.	53.5	53.6	98.6
Median delay (min)	335	314	85
Number of days	92	92	74
Mean No. of obs/day	15.1	25.3	9.8
No. of Hours with obs	1108	1639	719
Mean no. of hours/day with obs	12.0	17.8	9.7
% of hour periods without an ob	49.7	25.7	59.2
Mean (Ob-Bg)	0.4	0.3	0.0
RMS (Ob-Bg) unflagged data	0.9	1.2	1.0
Mean (Ob-Bg)	0.1	0.3	0.0
RMS (Ob-Bg) all data	2.9	1.6	1.1
Revised RMS (Ob-Bg)	0.9	1.2	1.1
% of data flagged	25	31	0
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Poor	Very Poor	Good
Comments			

Annex A - cont'd

WMO No./Country	41649	41656	41852
Argos Id No.			
Period Within Area	03/08 - 30/09	03/08 - 05/09	27/08 - 30/09
Mean Latitude	27.3	27.7	34.3
Mean Longitude	-70.8	-70.4	-72.5
No. of Obs Received	520	928	325
% of obs with Acceptable Position	100.0	100.0	68.0
% of Present Pressure	99.8	94.7	97.2
P. Tendency	0.0	0.0	34.5
Air Temperature	0.0	94.3	0.0
Wind Speed/Dir	97.7/ 97.3	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	98.8	96.7	96.6
Median delay (min)	75.5	180	74
Number of days	59	34	35
Mean No. of obs/day	8.8	27.3	9.3
No. of Hours with obs	519	738	288
Mean no. of hours/day with obs	8.8	21.7	8.2
% of hour periods without an ob	62.9	6.0	64.8
Mean (Ob-Bg)	0.4	0.9	0.7
RMS (Ob-Bg) unflagged data	0.8	1.2	2.5
Mean (Ob-Bg)	0.4	0.9	-5.8
RMS (Ob-Bg) all data	0.8	1.2	12.8
Revised RMS (Ob-Bg)	0.8	1.2	4.6
% of data flagged	0	17	40
Operating at end of period	YES	NO	YES
Performance			
Availability	Poor	Good	Poor
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Good	Poor	Good
Comments			

Annex A - cont'd

WMO No./Country	44513/US	44514/US	44515/US
Argos Id No.	26237	26235	26236
Period Within Area	01/07 - 11/07	01/07 - 03/07	01/07 - 05/07
Mean Latitude	35.8	47.0	39.1
Mean Longitude	-36.0	-24.0	-35.7
No. of Obs Received	110	24	52
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	91.7	96.2
P. Tendency	0.0	0.0	0.0
Air Temperature	34.5	87.5	90.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	96.4	91.7	96.2
Median delay (min)	135.5	166.5	134.5
Number of days	11	3	5
Mean No. of obs/day	10.0	8.0	10.4
No. of Hours with obs	108	21	49
Mean no. of hours/day with obs	9.8	7.0	9.8
% of hour periods without an ob	57.5	68.7	56.6
Mean (Ob-Bg)	-0.7	-1.6	0.0
RMS (Ob-Bg) unflagged data	0.9	2.0	0.6
Mean (Ob-Bg)	-0.7	-1.6	0.0
RMS (Ob-Bg) all data	0.9	2.0	0.6
Revised RMS (Ob-Bg)	0.9	2.0	0.6
% of data flagged	3	0	4
Operating at end of period	NO	NO	NO
Performance Availability	Poor	Poor	Poor
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Acceptable	Acceptable	Acceptable
Comments			

Annex A - cont'd

WMO No./Country	44517/US	44546/F	44607/F
Argos Id No.	26234	14538	6216
Period Within Area	01/07 - 05/07	01/07 - 30/09	01/07 - 30/09
Mean Latitude	40.6	43.6	53.2
Mean Longitude	-34.2	-35.0	-43.2
No. of Obs Received	41	5999	2016
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	100.0	99.8	99.4
P. Tendency	0.0	99.5	99.3
Air Temperature	100.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	99.0/ 98.4
Sea-Surface Temp.	97.6	99.7	99.4
Median delay (min)	138	146	78
Number of days	5	92	92
Mean No. of obs/day	8.2	65.2	21.9
No. of Hours with obs	41	2066	2014
Mean no. of hours/day with obs	8.2	22.5	21.9
% of hour periods without an ob	58.2	6.4	8.7
Mean (Ob-Bg)	-0.4	-0.1	-0.4
RMS (Ob-Bg) unflagged data	0.8	0.9	1.3
Mean (Ob-Bg)	-3.9	-0.1	-0.3
RMS (Ob-Bg) all data	22.4	1.1	1.7
Revised RMS (Ob-Bg)	0.8	1.0	1.5
% of data flagged	3	67	1
Operating at end of period	NO	YES	YES
Performance			
Availability	Poor	Very Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Acceptable	Acceptable	Good
Comments			

Annex A - cont'd

WMO No./Country	44608/F	44610/F	44613/UK
Argos Id No.	14540	12734	28467
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	45.6	55.2	34.2
Mean Longitude	-25.8	-36.7	-20.1
No. of Obs Received	5624	5851	3168
% of obs with Acceptable Position	100.0	100.0	96.4
% of Present Pressure	99.7	99.7	97.8
P. Tendency	99.6	99.4	93.8
Air Temperature	0.0	0.0	96.5
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.7	99.6	0.0
Median delay (min)	143	131	27
Number of days	92	92	92
Mean No. of obs/day	61.1	63.6	34.4
No. of Hours with obs	2059	2052	1561
Mean no. of hours/day with obs	22.4	22.3	17.0
% of hour periods without an ob	6.7	7.1	29.1
Mean (Ob-Bg)	-0.2	-0.2	-0.1
RMS (Ob-Bg) unflagged data	1.0	1.3	0.6
Mean (Ob-Bg)	-0.2	-0.1	-0.5
RMS (Ob-Bg) all data	1.1	1.5	6.1
Revised RMS (Ob-Bg)	1.0	1.4	0.6
% of data flagged	66	68	59
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Acceptable	Acceptable	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44614/UK	44616/UK	44621/UK
Argos Id No.	12375	38468	12372
Period Within Area	08/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	51.2	58.3	49.1
Mean Longitude	-44.3	-18.5	-30.1
No. of Obs Received	2143	5702	2702
% of obs with Acceptable Position	99.9	99.6	96.9
% of Present			
Pressure	89.6	96.3	96.6
P. Tendency	62.9	92.5	92.8
Air Temperature	89.2	78.4	96.7
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	67.5	64.6	97.5
Median delay (min)	21	23	20
Number of days	85	92	92
Mean No. of obs/day	25.2	62.0	29.4
No. of Hours with obs	1311	1886	1436
Mean no. of hours/day with obs	15.4	20.5	15.6
% of hour periods without an ob	35.4	14.6	34.8
Mean (Ob-Bg)	-0.8	-0.2	-0.7
RMS (Ob-Bg) unflagged data	1.5	1.1	1.4
Mean (Ob-Bg)	-0.8	-0.8	-1.1
RMS (Ob-Bg) all data	2.5	7.0	6.5
Revised RMS (Ob-Bg)	1.6	1.2	1.5
% of data flagged	49	73	56
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Very Good	Good
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44624/UK	44625/UK	44626/UK
Argos Id No.	28470	12283	12284
Period Within Area	01/07 - 30/09	16/07 - 30/09	16/07 - 30/09
Mean Latitude	57.2	51.3	47.5
Mean Longitude	-19.6	-31.8	-42.8
No. of Obs Received	5465	4238	2858
% of obs with Acceptable Position	99.3	99.5	99.1
% of Present Pressure	95.9	96.2	97.1
P. Tendency	91.8	92.1	94.1
Air Temperature	95.5	96.0	97.1
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	96.3	96.7	97.4
Median delay (min)	23	26	24
Number of days	92	77	77
Mean No. of obs/day	59.4	55.0	37.1
No. of Hours with obs	1862	1614	1419
Mean no. of hours/day with obs	20.2	21.0	18.4
% of hour periods without an ob	15.6	12.2	22.8
Mean (Ob-Bg)	-0.5	-0.3	-0.3
RMS (Ob-Bg) unflagged data	1.3	1.4	1.2
Mean (Ob-Bg)	-0.7	-0.6	-0.4
RMS (Ob-Bg) all data	5.3	4.8	4.2
Revised RMS (Ob-Bg)	1.3	1.4	1.2
% of data flagged	72	69	58
Operating at end of period	YES	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	44627/UK	44628/UK	44629/UK
Argos Id No.	12285	12287	12374
Period Within Area	19/07 - 30/09	19/07 - 30/09	19/07 - 30/09
Mean Latitude	42.9	40.2	41.9
Mean Longitude	-54.5	-45.0	-43.0
No. of Obs Received	2558	2444	2263
% of obs with Acceptable Position	99.1	98.2	98.8
% of Present Pressure	97.9	98.0	57.1
P. Tendency	95.5	95.2	89.7
Air Temperature	9.9	97.9	96.9
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	98.1	98.3	85.8
Median delay (min)	24	24	24
Number of days	74	74	74
Mean No. of obs/day	34.6	33.0	30.6
No. of Hours with obs	1354	1293	1217
Mean no. of hours/day with obs	18.3	17.5	16.4
% of hour periods without an ob	23.2	26.9	31.2
Mean (Ob-Bg)	-0.3	0.1	1.7
RMS (Ob-Bg) unflagged data	1.2	1.0	2.6
Mean (Ob-Bg)	-0.5	-0.1	2.7
RMS (Ob-Bg) all data	4.0	4.5	8.2
Revised RMS (Ob-Bg)	1.2	1.0	5.1
% of data flagged	56	56	64
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44630/UK	44728/UK	44742/UK
Argos Id No.	12376	12375	28471
Period Within Area	19/07 - 30/09	01/07 - 30/09	01/07 - 10/09
Mean Latitude	44.7	52.4	44.0
Mean Longitude	-45.1	-15.1	-5.0
No. of Obs Received	2629	3193	2726
% of obs with Acceptable Position	98.9	98.7	98.5
% of Present Pressure	97.4	97.0	96.7
P. Tendency	94.8	93.2	91.7
Air Temperature	97.6	97.4	96.2
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	38.2	97.3	96.8
Median delay (min)	24	20	23
Number of days	74	92	72
Mean No. of obs/day	35.5	34.7	37.9
No. of Hours with obs	1340	1538	1235
Mean no. of hours/day with obs	18.1	16.7	17.2
% of hour periods without an ob	24.3	30.2	27.7
Mean (Ob-Bg)	-0.3	-0.4	-0.1
RMS (Ob-Bg) unflagged data	1.1	1.2	0.9
Mean (Ob-Bg)	-0.4	-0.8	-0.3
RMS (Ob-Bg) all data	5.1	7.2	5.8
Revised RMS (Ob-Bg)	1.1	1.2	0.8
% of data flagged	58	61	62
Operating at end of period	YES	YES	NO
Performance			
Availability	Very Good	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44764/UK	44765/UK	44766/UK
Argos Id No.	28464	28466	28465
Period Within Area	01/07 - 03/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	49.3	31.3	55.3
Mean Longitude	-4.5	-49.4	-39.1
No. of Obs Received	1113	1496	3697
% of obs with Acceptable Position	97.8	85.3	99.2
% of Present Pressure	95.8	98.1	97.3
P. Tendency	90.6	95.4	93.7
Air Temperature	95.2	97.9	97.9
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	95.7	0.1	70.6
Median delay (min)	22	21	20
Number of days	65	92	92
Mean No. of obs/day	17.1	16.3	40.2
No. of Hours with obs	563	1087	1674
Mean no. of hours/day with obs	8.7	11.8	18.2
% of hour periods without an ob	63.4	50.6	24.0
Mean (Ob-Bg)	-0.2	0.0	-0.6
RMS (Ob-Bg) unflagged data	1.2	0.8	1.4
Mean (Ob-Bg)	-2.1	-0.5	-1.3
RMS (Ob-Bg) all data	6.4	6.2	8.5
Revised RMS (Ob-Bg)	4.1	0.9	1.6
% of data flagged	73	36	64
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Acceptable	Very Good
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44773/UK	44777/UK	44778/UK
Argos Id No.	12415	12377	28473
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	58.8	62.0	47.6
Mean Longitude	-32.7	-42.8	-7.4
No. of Obs Received	5608	5921	3502
% of obs with Acceptable Position	99.8	99.4	99.2
% of Present Pressure	95.4	95.9	96.8
P. Tendency	92.2	91.6	91.2
Air Temperature	39.0	38.1	0.0
Wind Speed/Dir	69.5/ 74.7	72.7/ 72.1	0.0/ 0.0
Sea-Surface Temp.	96.1	96.3	74.3
Median delay (min)	22	22	23
Number of days	92	92	92
Mean No. of obs/day	61.0	64.4	38.1
No. of Hours with obs	1883	1946	1637
Mean no. of hours/day with obs	20.5	21.2	17.8
% of hour periods without an ob	14.6	11.9	25.7
Mean (Ob-Bg)	-0.6	-0.4	-0.1
RMS (Ob-Bg) unflagged data	1.4	1.1	0.8
Mean (Ob-Bg)	-0.8	-0.8	-0.4
RMS (Ob-Bg) all data	4.6	6.5	6.4
Revised RMS (Ob-Bg)	1.5	1.2	0.8
% of data flagged	73	73	61
Operating at end of period	YES	YES	YES
Performance Availability	Very Good	Very Good	Very Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44780/UK	61501	61502
Argos Id No.	27642		
Period Within Area	01/07 - 30/09	10/09 - 30/09	10/09 - 30/09
Mean Latitude	72.2	42.5	42.5
Mean Longitude	13.6	4.4	4.6
No. of Obs Received	7005	981	952
% of obs with Acceptable Position	99.1	100.0	100.0
% of Present Pressure	96.5	73.4	77.1
P. Tendency	92.2	0.0	0.0
Air Temperature	96.1	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	96.6	74.9	77.8
Median delay (min)	26	19.5	20
Number of days	92	21	21
Mean No. of obs/day	76.1	46.7	45.3
No. of Hours with obs	2109	357	361
Mean no. of hours/day with obs	22.9	17.0	17.2
% of hour periods without an ob	4.5	27.9	27.2
Mean (Ob-Bg)	0.0	-0.7	-0.8
RMS (Ob-Bg) unflagged data	1.0	1.1	1.2
Mean (Ob-Bg)	-0.9	-0.7	-0.8
RMS (Ob-Bg) all data	10.2	1.1	1.2
Revised RMS (Ob-Bg)	1.0	1.1	1.2
% of data flagged	75	66	66
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	61504	62505/F	62506/F
Argos Id No.		5790	12733
Period Within Area	10/09 - 30/09	01/07 - 30/08	01/07 - 30/09
Mean Latitude	42.2	45.3	42.9
Mean Longitude	5.8	-14.5	-19.2
No. of Obs Received	961	1565	1987
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	74.3	92.5	99.4
P. Tendency	0.0	82.5	98.7
Air Temperature	0.0	69.8	0.0
Wind Speed/Dir	0.0/ 0.0	91.3/ 89.8	98.3/ 98.0
Sea-Surface Temp.	75.0	93.7	99.3
Median delay (min)	20	21	95
Number of days	21	61	92
Mean No. of obs/day	45.8	25.7	21.6
No. of Hours with obs	353	970	1986
Mean no. of hours/day with obs	16.8	15.9	21.6
% of hour periods without an ob	28.8	32.5	10.0
Mean (Ob-Bg)	-0.1	-0.3	0.3
RMS (Ob-Bg) unflagged data	0.9	1.0	1.9
Mean (Ob-Bg)	-0.1	-0.2	-0.2
RMS (Ob-Bg) all data	0.8	1.4	3.0
Revised RMS (Ob-Bg)	0.8	1.0	3.0
% of data flagged	67	48	6
Operating at end of period	YES	NO	YES
Performance			
Availability	Very Good	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Very Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62520/F	62554/F	62901
Argos Id No.	14431	14430	
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 25/09
Mean Latitude	34.5	35.7	49.5
Mean Longitude	-23.0	-14.4	-7.1
No. of Obs Received	2965	2904	835
% of obs with Acceptable Position	97.2	98.1	99.8
% of Present Pressure	96.9	97.0	96.2
P. Tendency	89.7	89.5	33.1
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	96.4	97.1	97.5
Median delay (min)	22	22	187
Number of days	92	92	87
Mean No. of obs/day	32.2	31.6	9.6
No. of Hours with obs	1536	1508	768
Mean no. of hours/day with obs	16.7	16.4	8.8
% of hour periods without an ob	30.3	31.6	62.8
Mean (Ob-Bg)	-0.4	0.2	0.3
RMS (Ob-Bg) unflagged data	0.8	0.6	0.8
Mean (Ob-Bg)	-0.5	0.0	0.3
RMS (Ob-Bg) all data	2.4	2.6	0.8
Revised RMS (Ob-Bg)	0.9	0.6	0.8
% of data flagged	57	56	8
Operating at end of period	YES	YES	NO
Performance Availability	Good	Good	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Poor
Comments			

Annex A - cont'd

WMO No./Country	64516/F	64517/F	64518/F
Argos Id No.	14176	14178	14180
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	63.9	61.6	58.0
Mean Longitude	-38.2	-55.8	-43.6
No. of Obs Received	7350	6158	5937
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.8	99.8	99.7
P. Tendency	99.7	99.5	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	99.8	99.6
Median delay (min)	100	103	110
Number of days	92	92	92
Mean No. of obs/day	79.9	66.9	64.5
No. of Hours with obs	2160	2116	2135
Mean no. of hours/day with obs	23.5	23.0	23.2
% of hour periods without an ob	2.2	4.2	3.3
Mean (Ob-Bg)	-0.5	-0.4	-0.8
RMS (Ob-Bg) unflagged data	1.2	1.3	1.4
Mean (Ob-Bg)	-0.5	-0.4	-0.8
RMS (Ob-Bg) all data	1.3	1.3	1.6
Revised RMS (Ob-Bg)	1.2	1.3	1.5
% of data flagged	72	68	66
Operating at end of period	YES	YES	YES
Performance Availability	Very Good	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	64529/D	64530/D	64546
Argos Id No.	6669	4272	
Period Within Area	01/07 - 30/09	08/07 - 30/09	08/09 - 30/09
Mean Latitude	62.9	61.2	61.5
Mean Longitude	-6.1	-34.7	-29.1
No. of Obs Received	3861	2873	629
% of obs with Acceptable Position	96.7	99.5	100.0
% of Present Pressure	90.2	88.6	93.3
P. Tendency	65.4	68.5	89.8
Air Temperature	89.3	87.7	92.5
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	71.8	72.4	68.7
Median delay (min)	22	23	18
Number of days	92	85	23
Mean No. of obs/day	42.0	33.8	27.3
No. of Hours with obs	1653	1508	399
Mean no. of hours/day with obs	18.0	17.7	17.3
% of hour periods without an ob	25.0	25.8	26.1
Mean (Ob-Bg)	-0.6	-0.7	-0.7
RMS (Ob-Bg) unflagged data	1.2	1.4	1.5
Mean (Ob-Bg)	-1.0	-0.7	-0.7
RMS (Ob-Bg) all data	6.4	2.8	1.4
Revised RMS (Ob-Bg)	1.3	1.4	1.4
% of data flagged	66	58	47
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Good	Good
Pressure Quality	Suspect	Suspect	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	64692/IC	64693/IC	64694/IC
Argos Id No.	15088	15100	15108
Period Within Area	01/07 - 04/08	01/07 - 30/09	01/07 - 30/09
Mean Latitude	65.3	66.5	66.4
Mean Longitude	-25.5	-21.5	-20.0
No. of Obs Received	1120	2912	2858
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.9	99.7	99.8
P. Tendency	99.6	99.5	99.6
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.6	99.8
Median delay (min)	94	90	89
Number of days	35	92	92
Mean No. of obs/day	32.0	31.7	31.1
No. of Hours with obs	661	1756	1704
Mean no. of hours/day with obs	18.9	19.1	18.5
% of hour periods without an ob	19.3	20.3	22.7
Mean (Ob-Bg)	-0.7	-0.4	-1.0
RMS (Ob-Bg) unflagged data	1.3	1.1	1.5
Mean (Ob-Bg)	-0.7	-0.4	-1.0
RMS (Ob-Bg) all data	1.3	1.1	1.5
Revised RMS (Ob-Bg)	1.3	1.1	1.5
% of data flagged	47	45	46
Operating at end of period	NO	YES	YES
Performance			
Availability	Good	Good	Good
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	64695/IC	64696/IC	64697/IC
Argos Id No.	15111	15124	15128
Period Within Area	01/07 - 30/09	01/07 - 13/07	01/07 - 16/07
Mean Latitude	66.6	66.0	65.5
Mean Longitude	-22.9	-23.7	-24.3
No. of Obs Received	3228	445	541
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	99.8	99.6	99.8
P. Tendency	99.8	98.9	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.3	99.8
Median delay (min)	90	89	98
Number of days	92	13	16
Mean No. of obs/day	35.1	34.2	33.8
No. of Hours with obs	1739	247	295
Mean no. of hours/day with obs	18.9	19.0	18.4
% of hour periods without an ob	20.7	15.4	22.0
Mean (Ob-Bg)	-0.1	-0.8	-0.7
RMS (Ob-Bg) unflagged data	1.1	1.3	1.2
Mean (Ob-Bg)	-0.1	-0.9	-0.6
RMS (Ob-Bg) all data	1.1	1.8	1.1
Revised RMS (Ob-Bg)	1.1	1.3	1.1
% of data flagged	50	51	53
Operating at end of period	YES	NO	NO
Performance			
Availability	Very Good	Good	Good
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	64698/IC	64699/IC	64700/IC
Argos Id No.	29867	29868	29870
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	66.5	65.7	65.1
Mean Longitude	-24.4	-32.7	-26.7
No. of Obs Received	4374	3962	3782
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present Pressure	99.6	99.6	99.9
P. Tendency	99.4	99.1	98.6
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.5	99.5	99.6
Median delay (min)	114	97	104
Number of days	92	92	92
Mean No. of obs/day	47.5	43.1	41.1
No. of Hours with obs	2057	2034	1970
Mean no. of hours/day with obs	22.4	22.1	21.4
% of hour periods without an ob	6.8	7.9	10.8
Mean (Ob-Bg)	-0.4	-0.4	0.0
RMS (Ob-Bg) unflagged data	1.2	1.5	1.6
Mean (Ob-Bg)	-0.4	-0.2	0.5
RMS (Ob-Bg) all data	1.6	2.3	3.8
Revised RMS (Ob-Bg)	1.4	1.9	2.2
% of data flagged	55	54	52
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	65593/NL	65594/D	65595/NL
Argos Id No.	4228	2295	4229
Period Within Area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Mean Latitude	61.1	62.7	58.5
Mean Longitude	-18.6	-30.7	-36.6
No. of Obs Received	3360	3952	4425
% of obs with Acceptable Position	99.2	97.1	99.1
% of Present Pressure	93.9	90.1	95.4
P. Tendency	89.8	84.9	92.5
Air Temperature	93.4	89.2	95.4
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	76.7	73.7	75.3
Median delay (min)	19	22	19
Number of days	92	92	92
Mean No. of obs/day	36.5	43.0	48.1
No. of Hours with obs	1639	1697	1731
Mean no. of hours/day with obs	17.8	18.4	18.8
% of hour periods without an ob	25.8	23.1	21.5
Mean (Ob-Bg)	-0.6	-0.6	-0.8
RMS (Ob-Bg) unflagged data	1.3	1.3	1.4
Mean (Ob-Bg)	-0.5	-0.6	0.0
RMS (Ob-Bg) all data	2.5	3.2	6.1
Revised RMS (Ob-Bg)	1.3	1.3	1.5
% of data flagged	60	66	69
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Suspect	Suspect	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

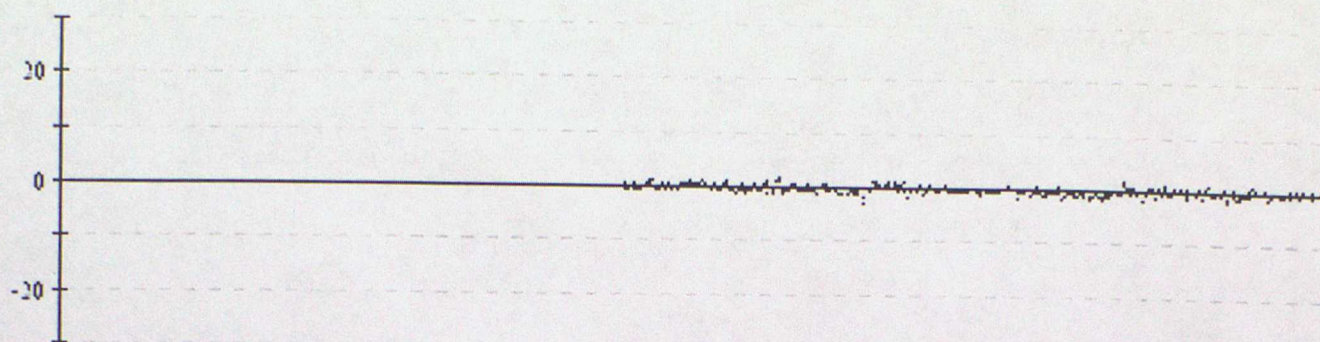
Annex A - cont'd

WMO No./Country	65596	65599/UK	
Argos Id No.		28477	
Period Within Area	06/09 - 30/09	01/07 - 30/09	
Mean Latitude	58.7	62.4	
Mean Longitude	-38.3	-34.7	
No. of Obs Received	610	6080	
% of obs with Acceptable Position	100.0	99.4	
% of Present			
Pressure	92.3	96.1	
P. Tendency	89.0	92.0	
Air Temperature	91.8	0.0	
Wind Speed/Dir	0.0/ 0.0	74.1/ 73.7	
Sea-Surface Temp.	67.0	96.4	
Median delay (min)	19	23	
Number of days	25	92	
Mean No. of obs/day	24.4	66.1	
No. of Hours with obs	400	1954	
Mean no. of hours/day with obs	16.0	21.2	
% of hour periods without an ob	31.3	11.5	
Mean (Ob-Bg)	-0.5	-0.2	
RMS (Ob-Bg) unflagged data	1.4	1.1	
Mean (Ob-Bg)	-0.5	-0.7	
RMS (Ob-Bg) all data	1.4	7.4	
Revised RMS (Ob-Bg)	1.4	1.1	
% of data flagged	43	73	
Operating at end of period	YES	YES	
Performance			
Availability	Acceptable	Very Good	
Pressure Quality	Acceptable	Acceptable	
Timeliness	Very Good	Very Good	
Comments			

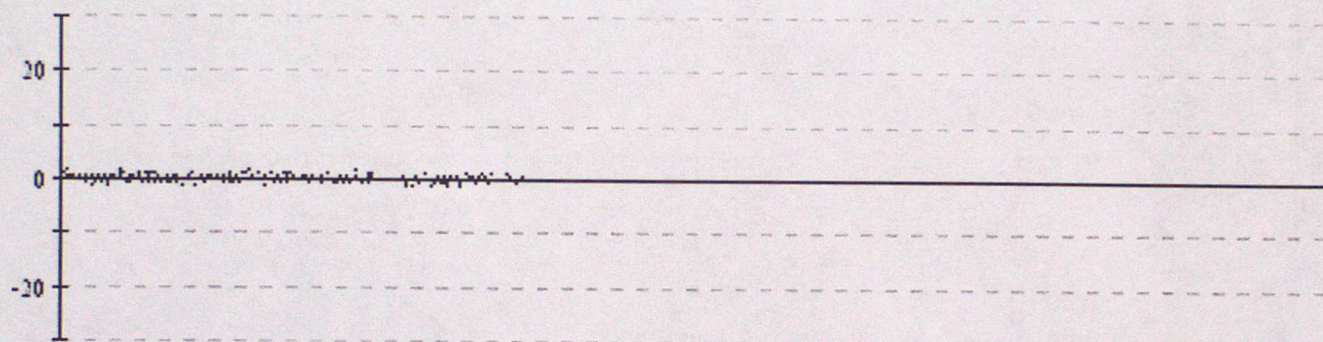
ANNEX B - TIME SERIES PLOTS OF PRESSURE

Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

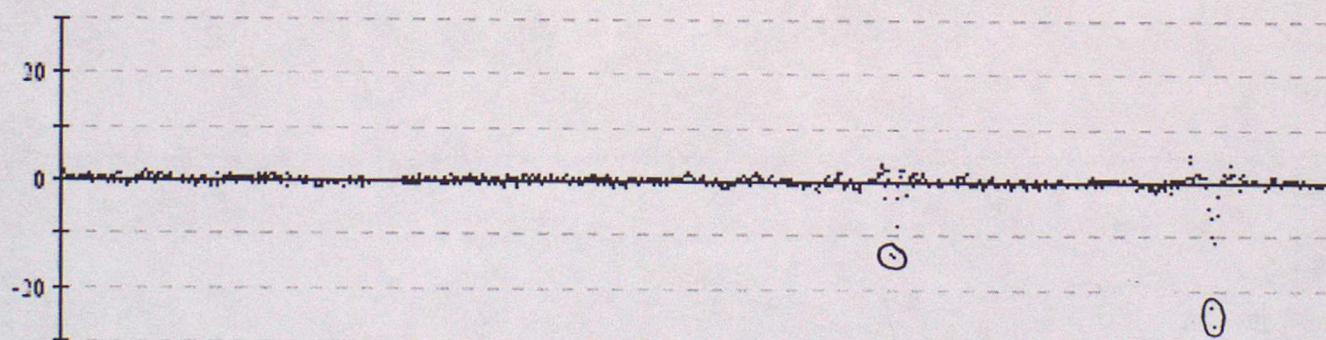
13504 Pressure



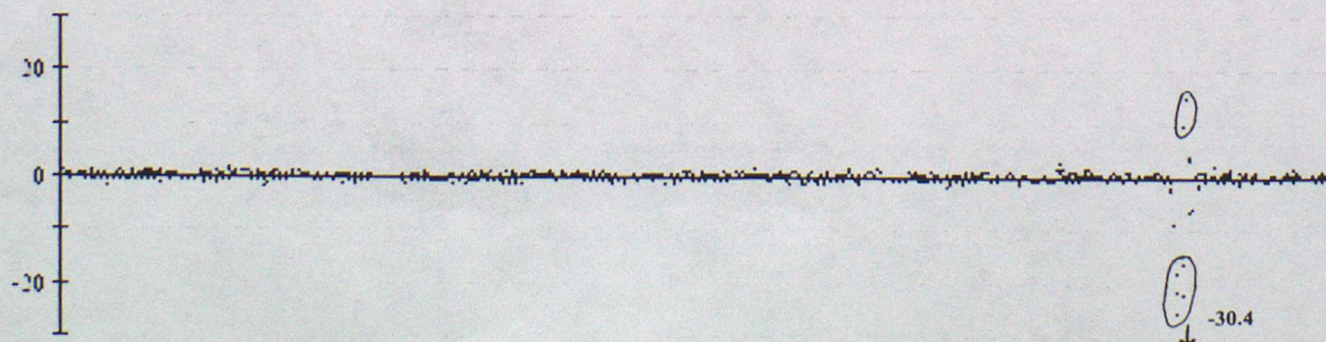
41502 Pressure



41505 Pressure

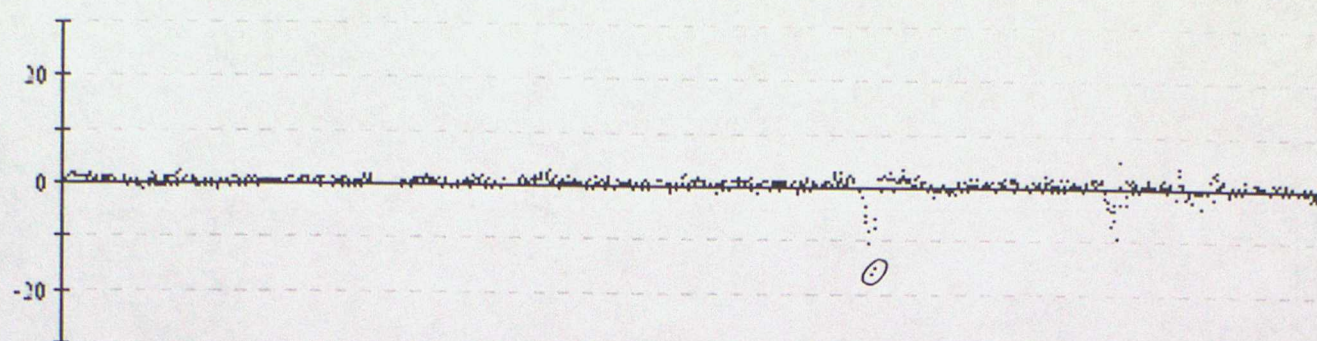


41521 Pressure

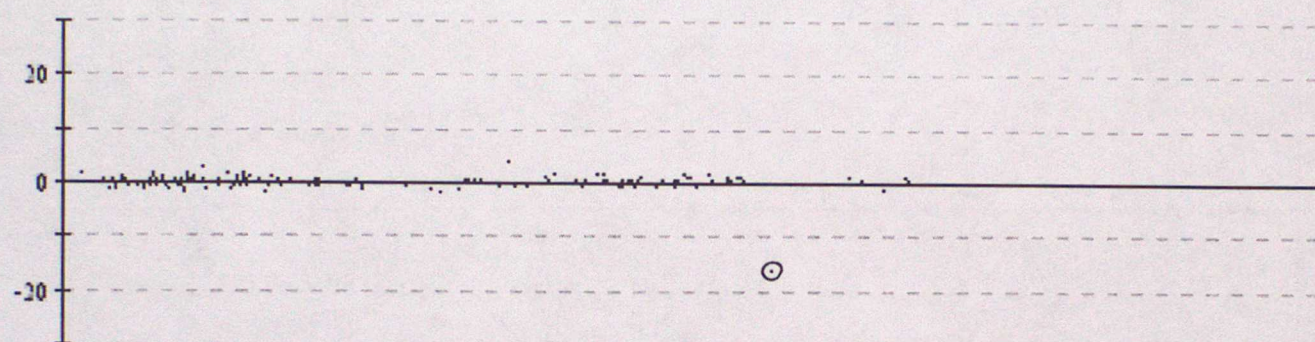


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

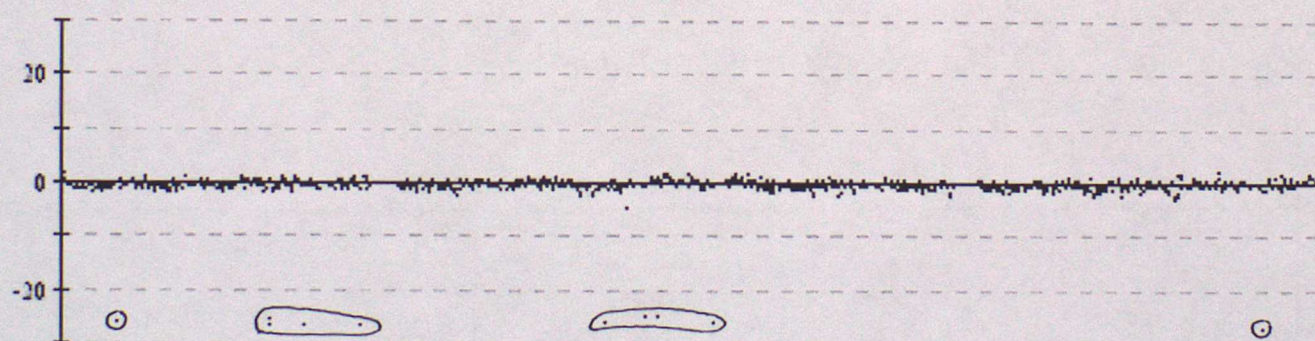
41528 Pressure



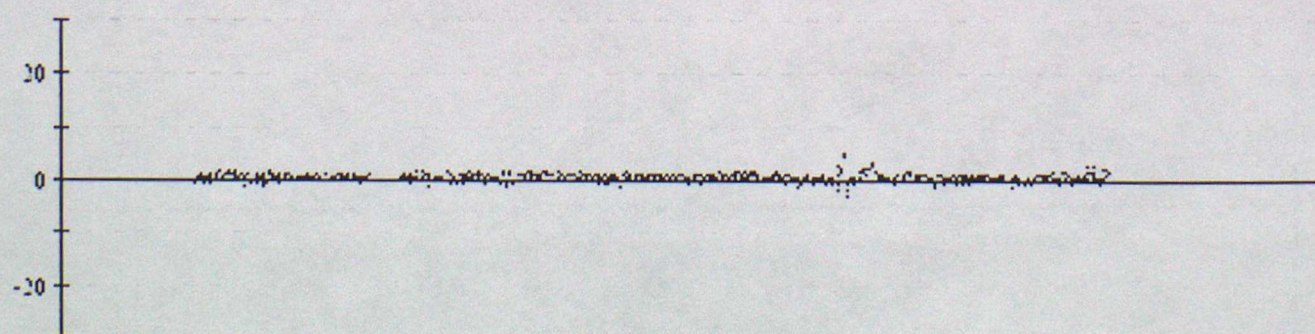
41598 Pressure



41599 Pressure

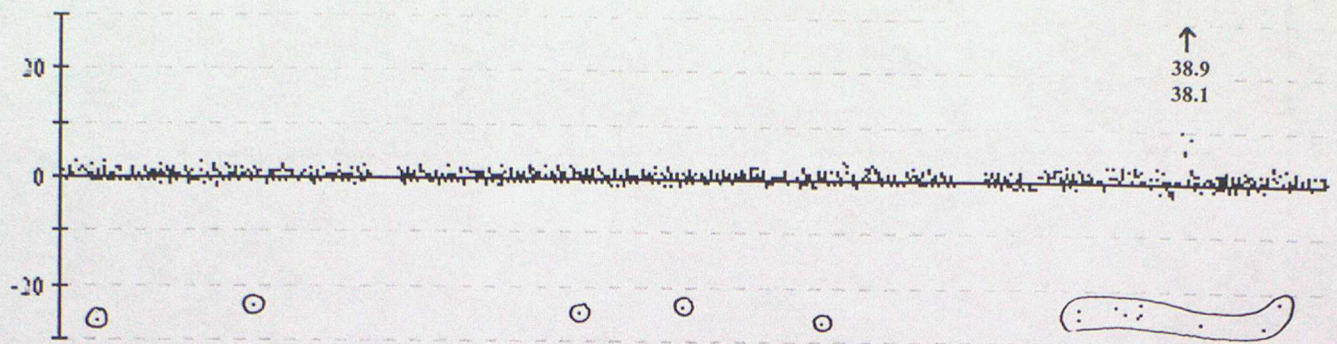


41628 Pressure

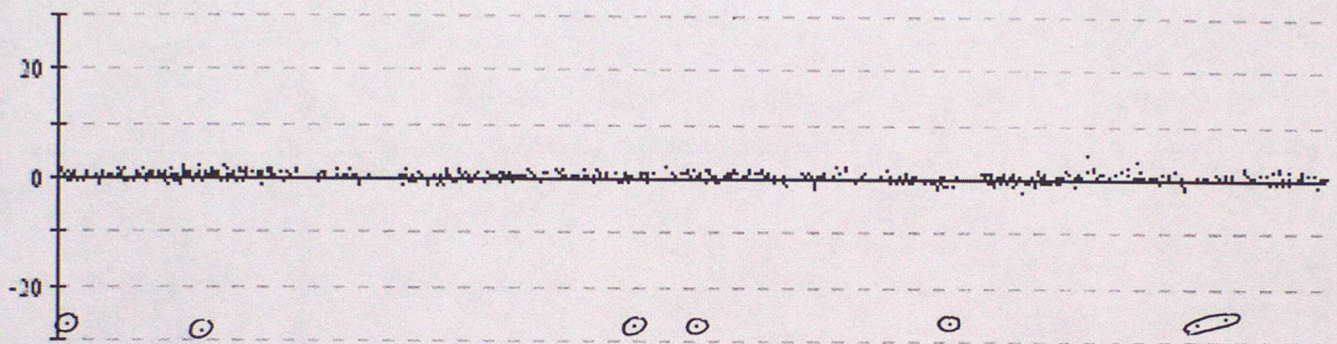


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

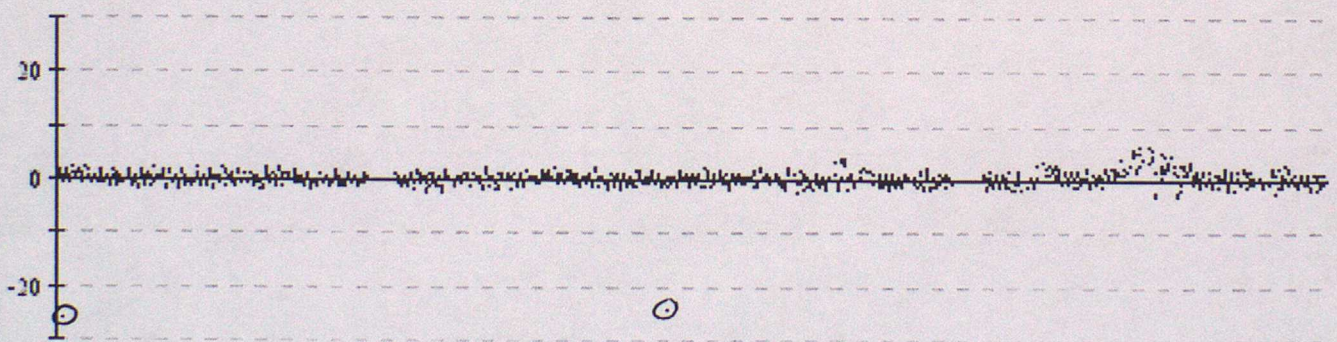
41636 Pressure



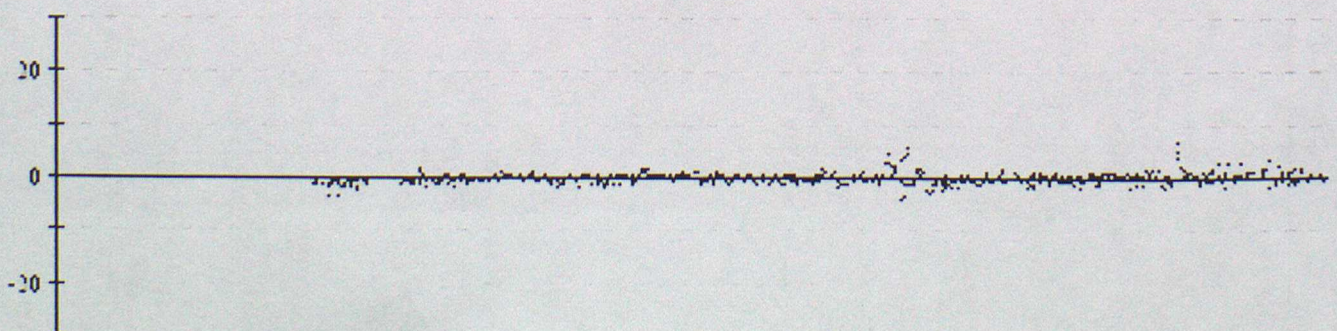
41637 Pressure



41638 Pressure

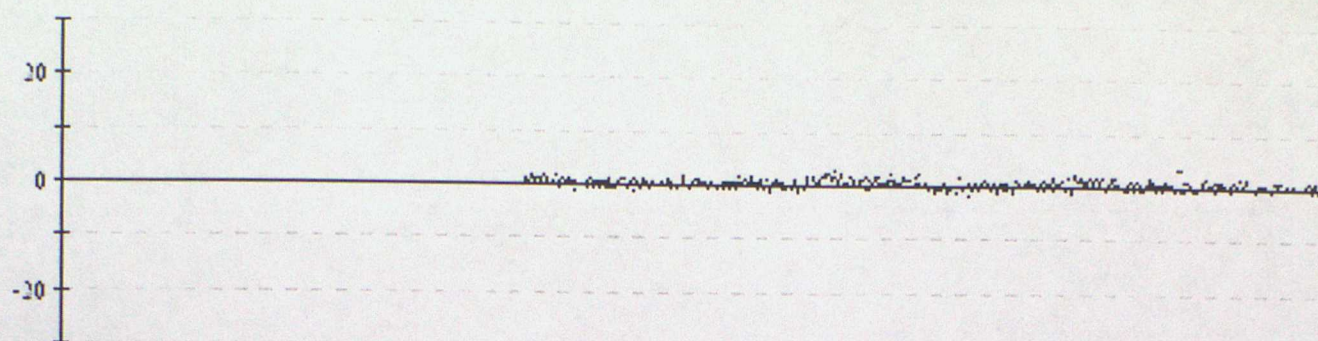


41648 Pressure

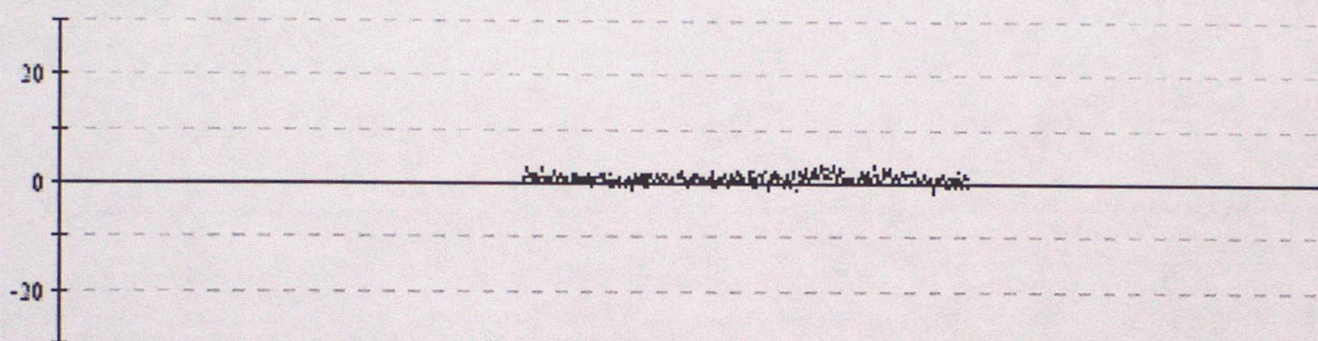


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

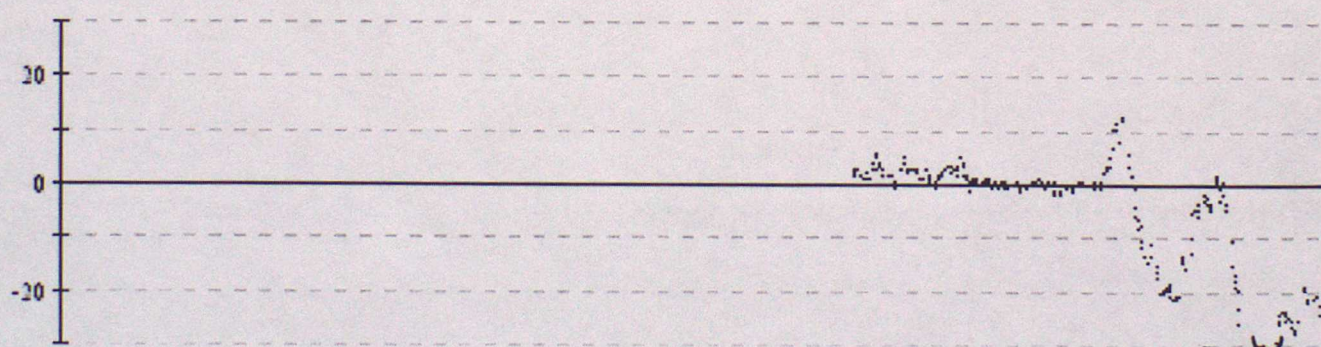
41649 Pressure



41656 Pressure

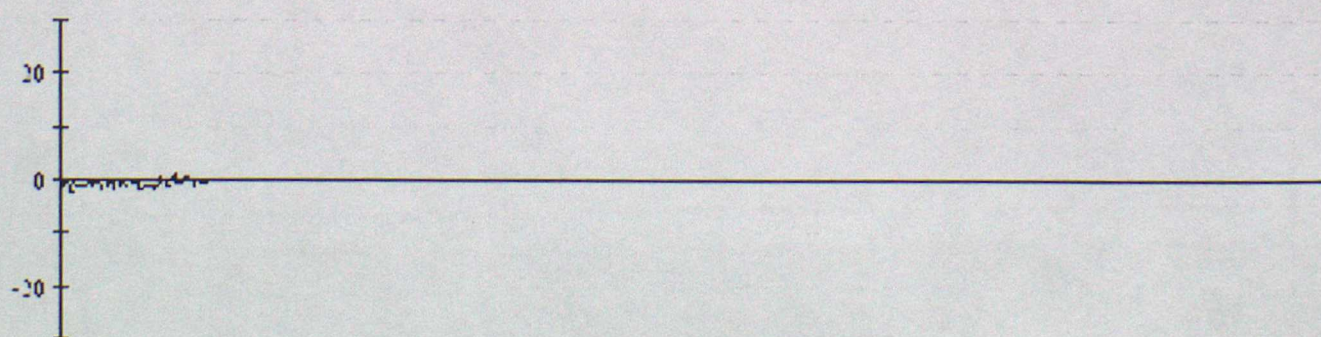


41852 Pressure



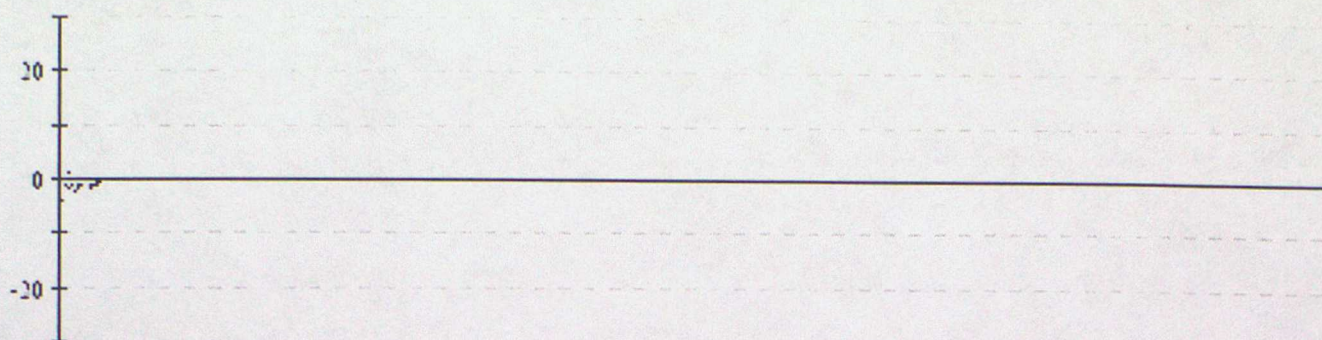
14 GROSS ERRORS

44513 Pressure

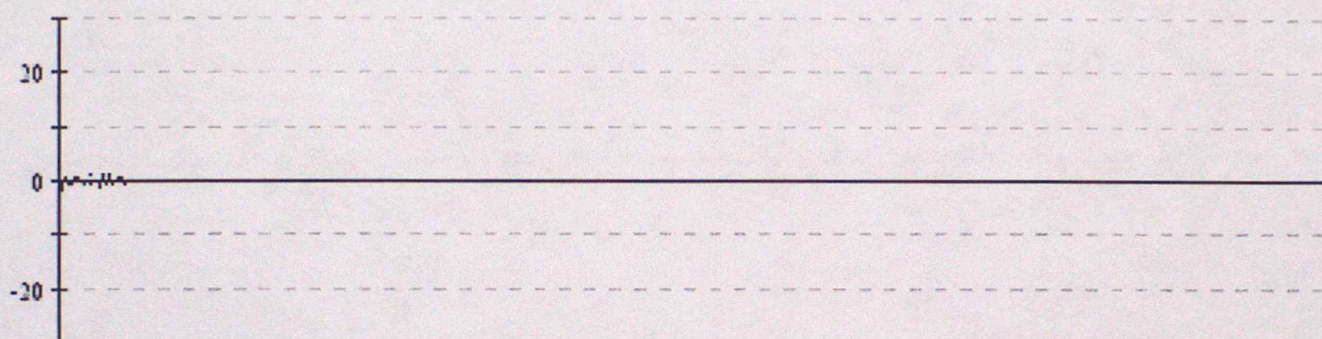


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

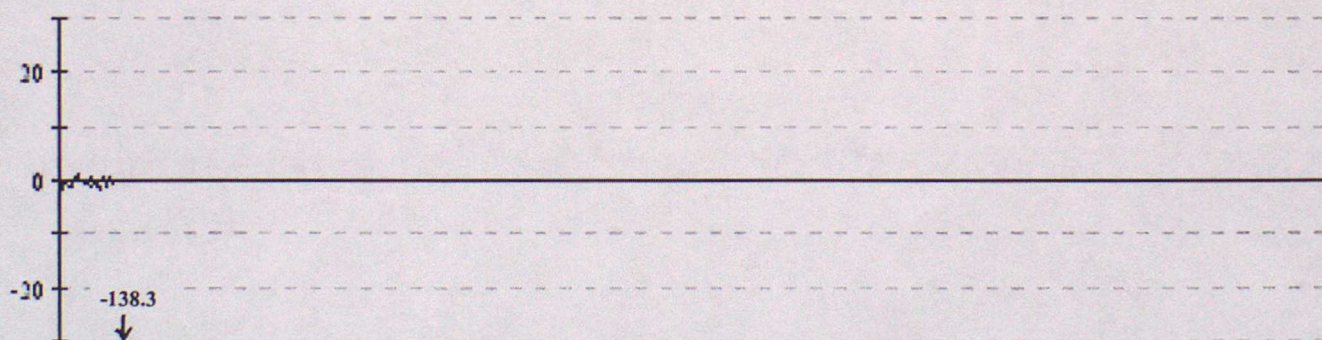
44514 Pressure



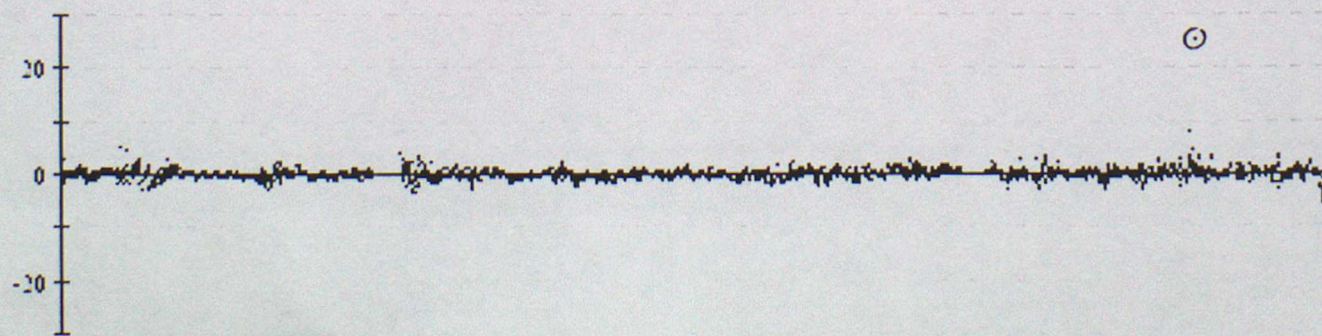
44515 Pressure



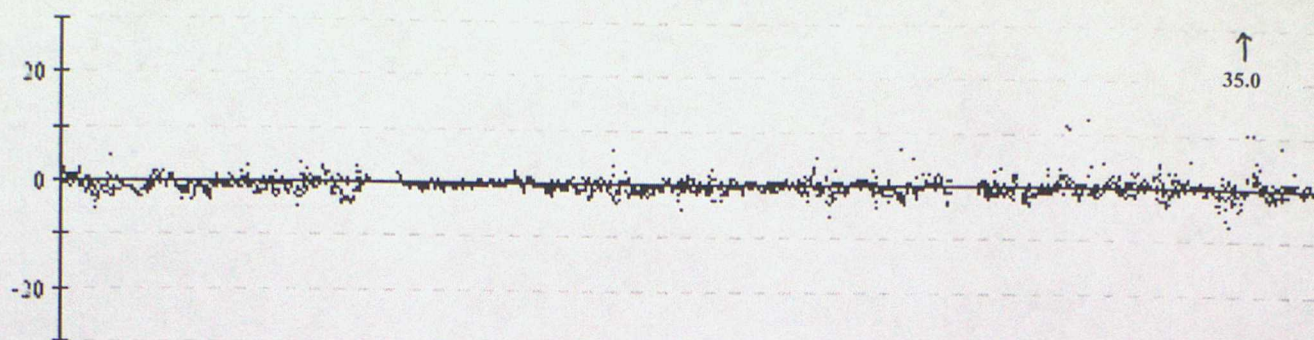
44517 Pressure



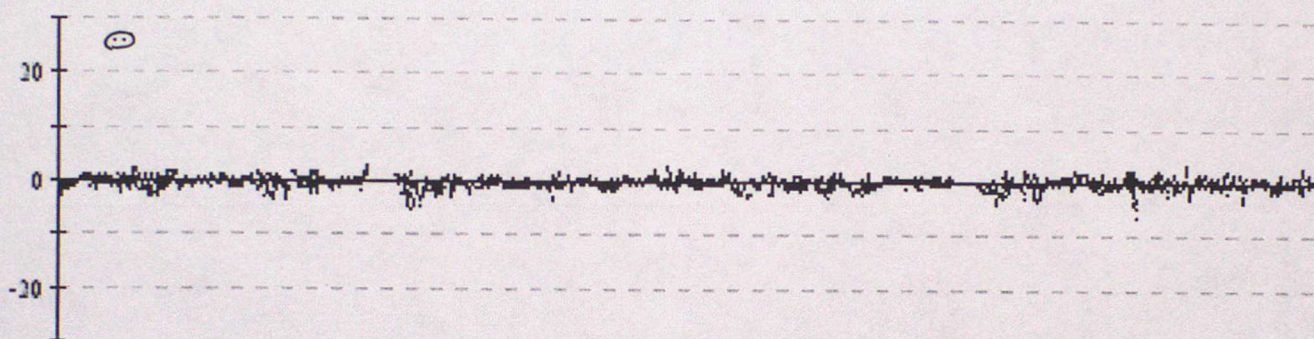
44546 Pressure



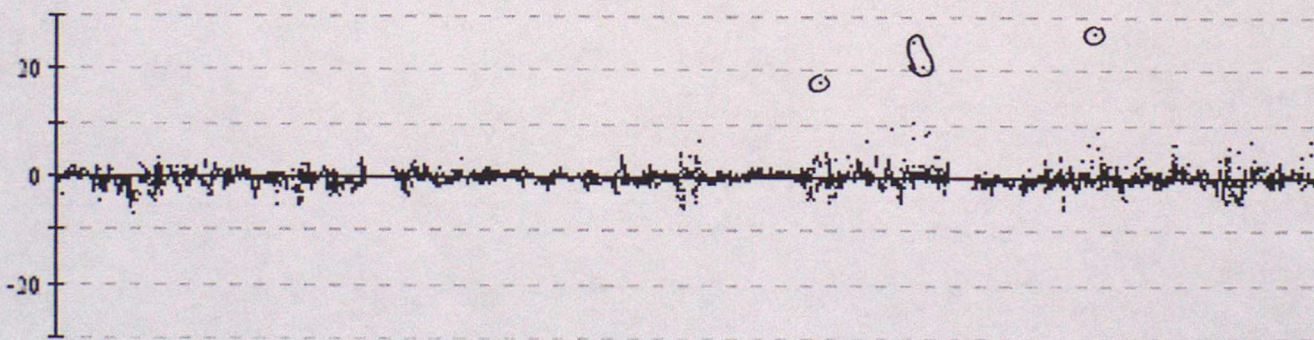
44607 Pressure



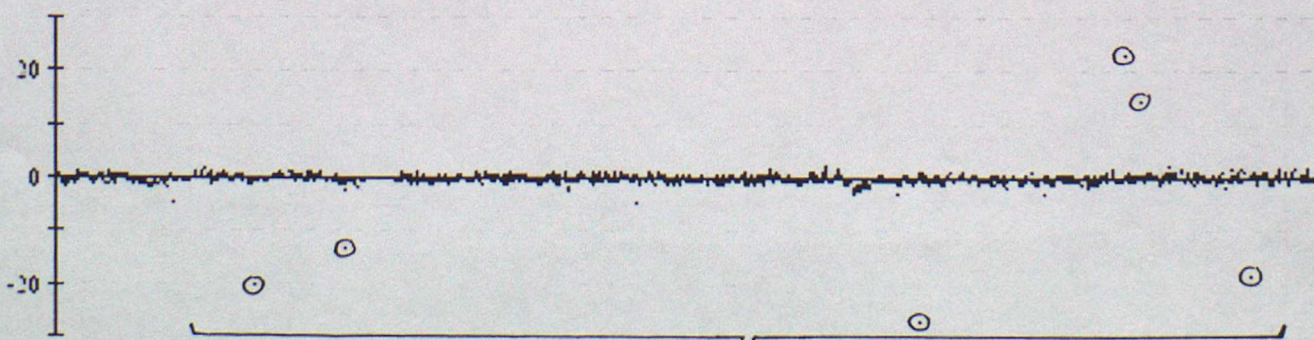
44608 Pressure



44610 Pressure



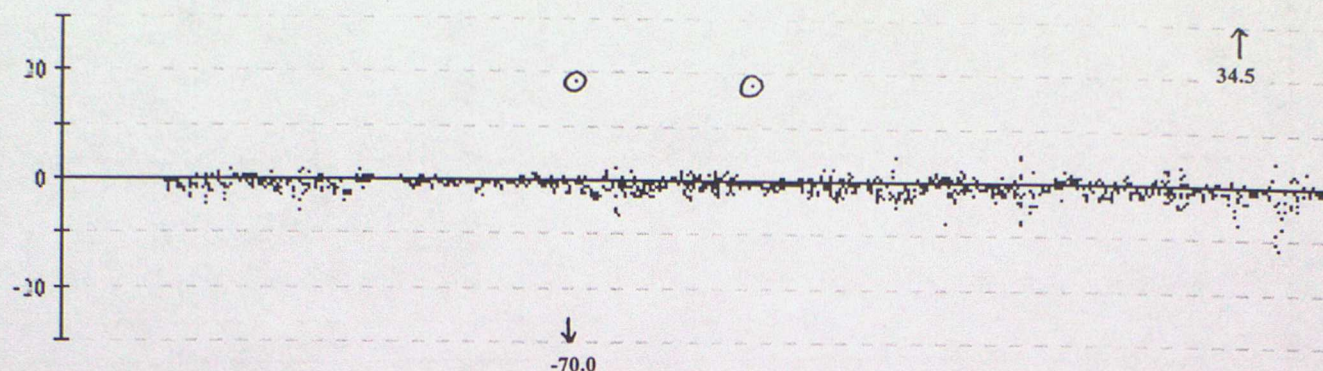
44613 Pressure



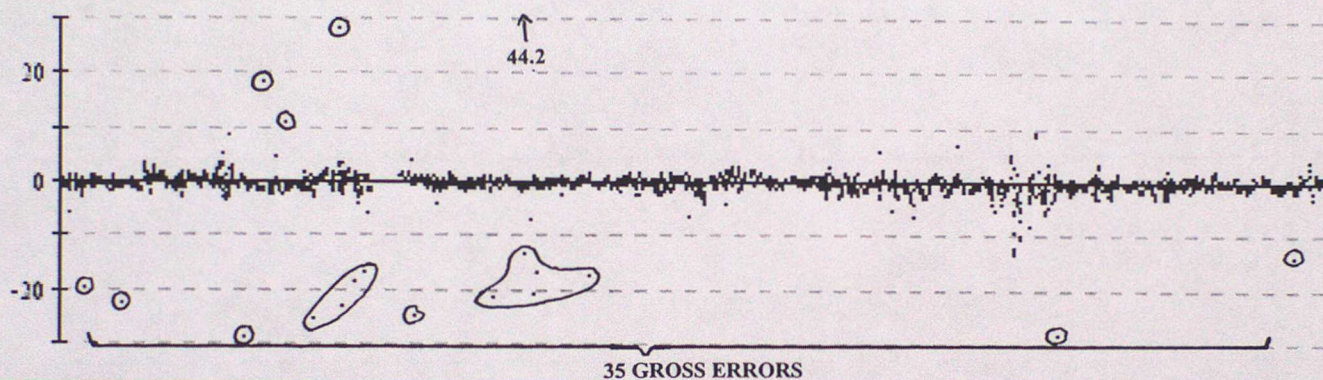
11 GROSS ERRORS

Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

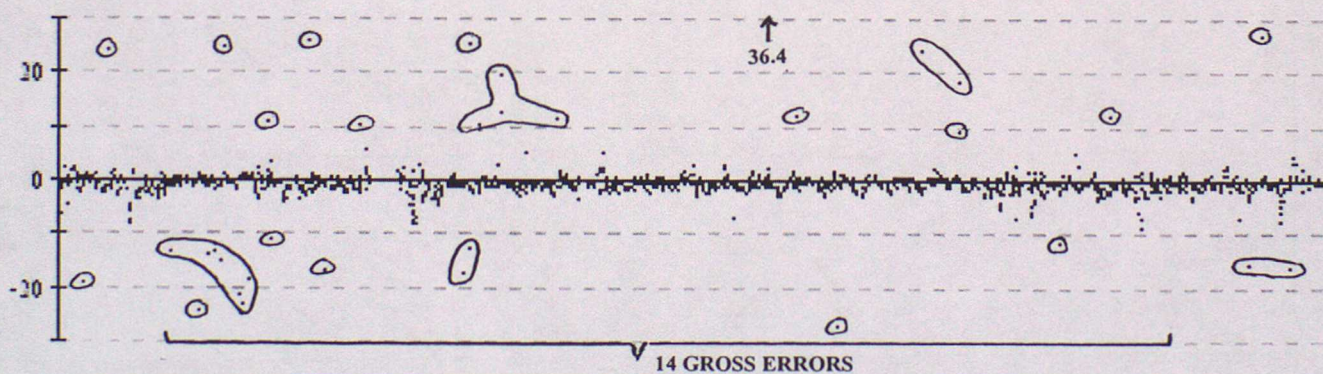
44614 Pressure



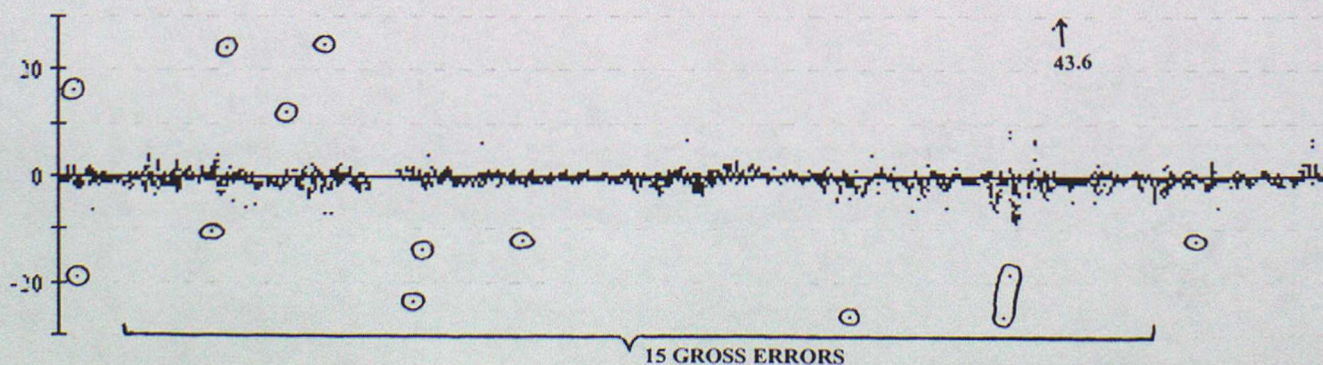
44616 Pressure



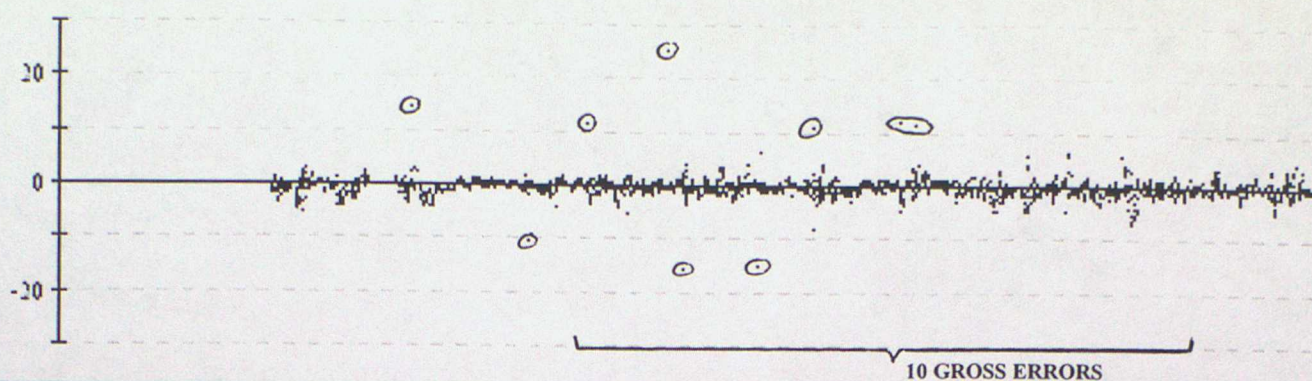
44621 Pressure



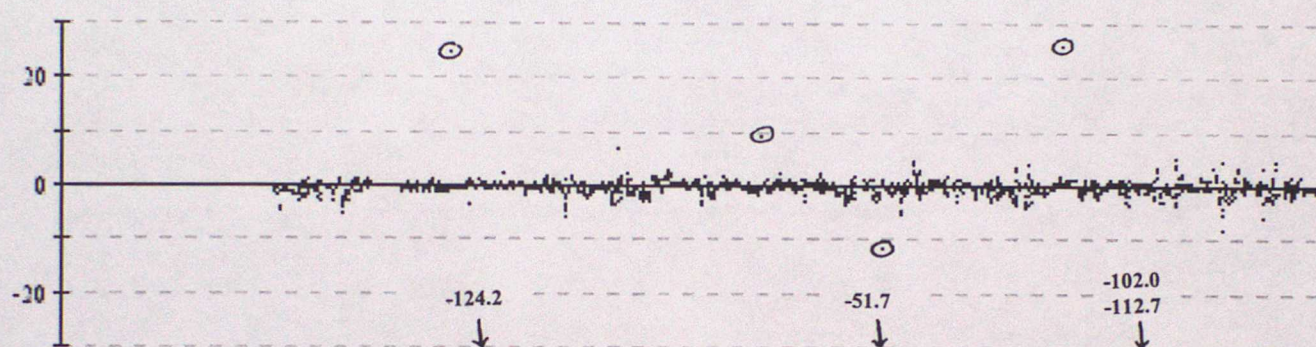
44624 Pressure



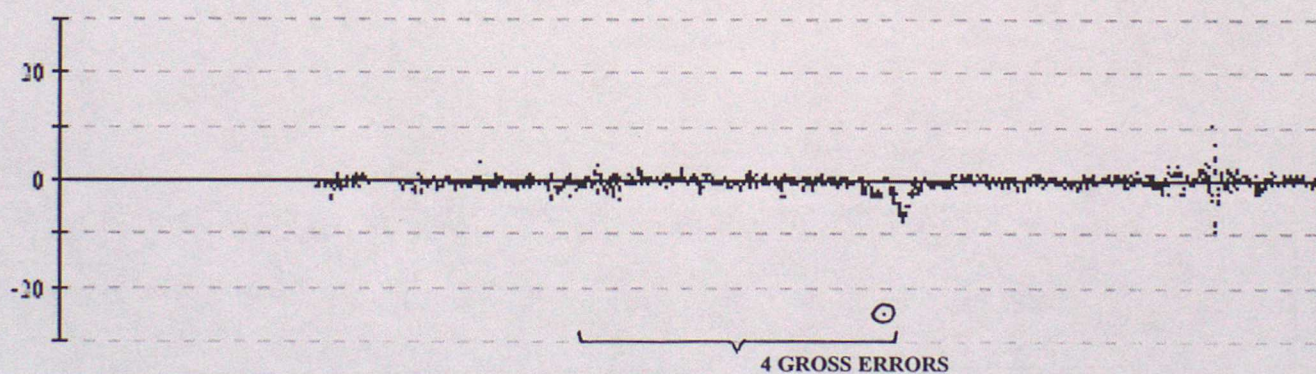
44625 Pressure



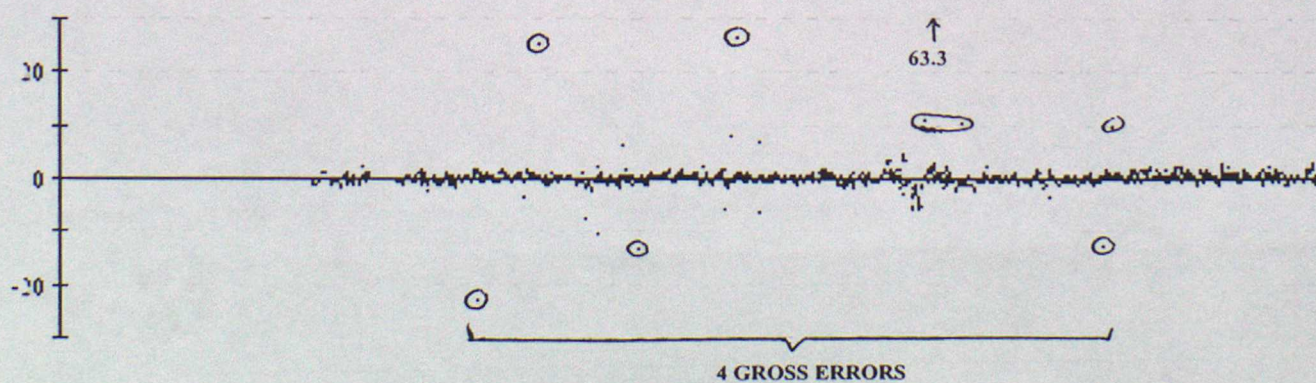
44626 Pressure



44627 Pressure

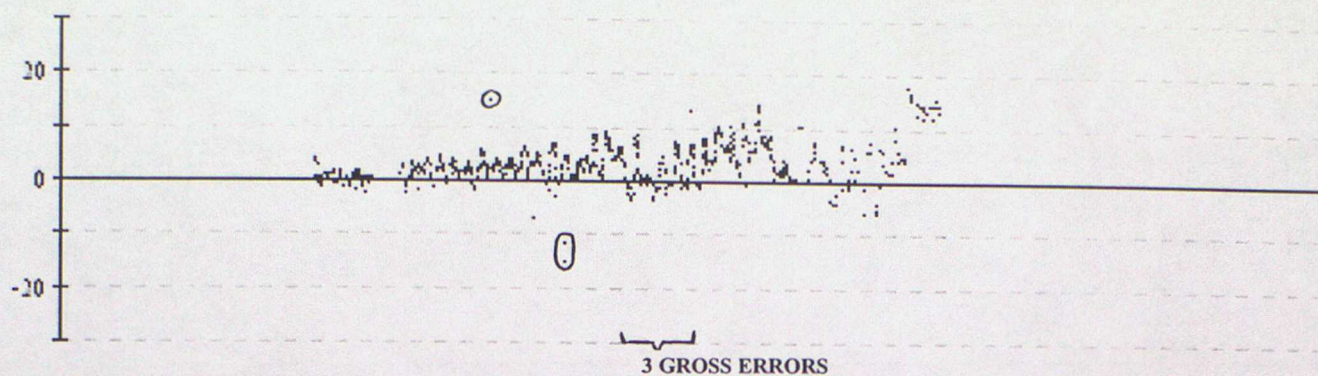


44628 Pressure

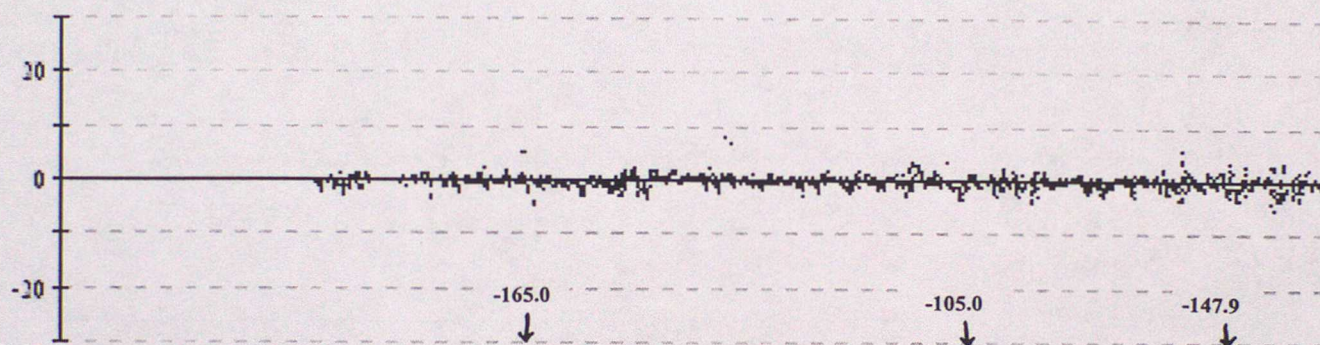


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

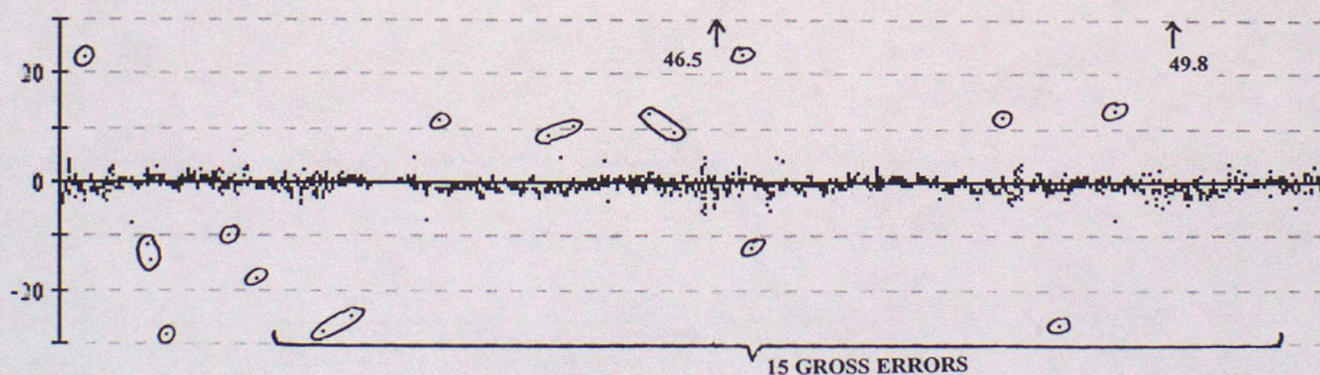
44629 Pressure



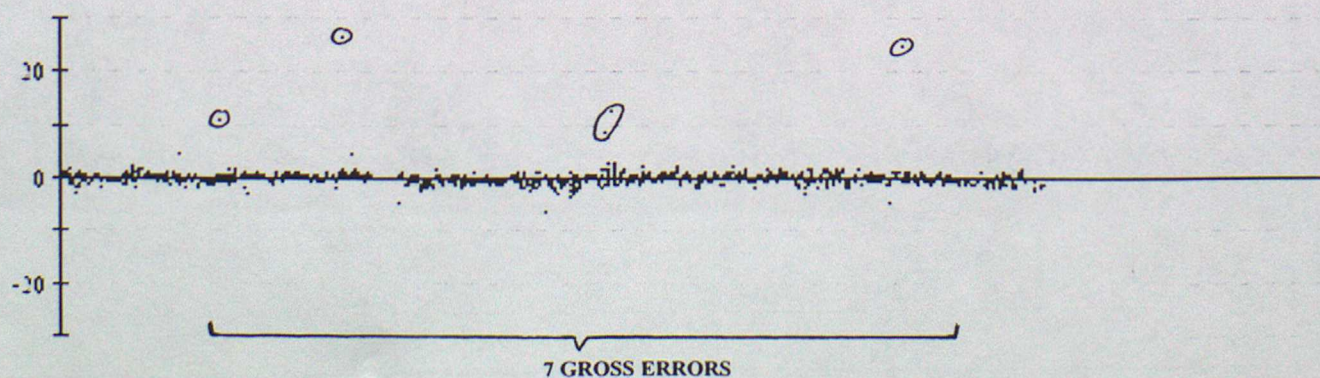
44630 Pressure



44728 Pressure

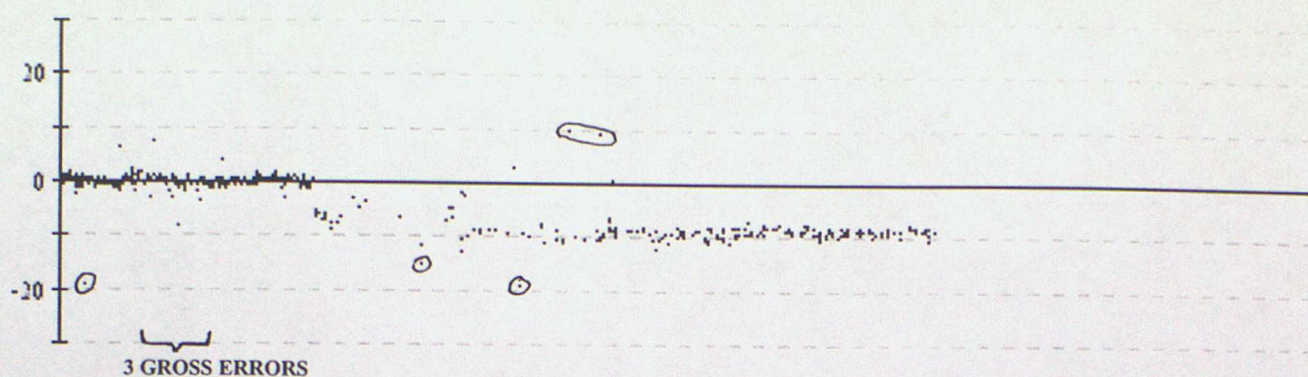


44742 Pressure

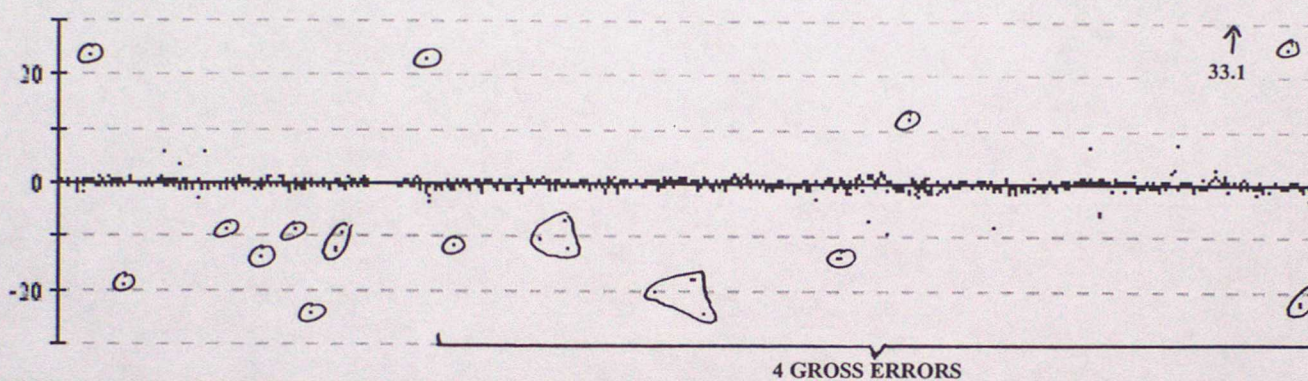


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

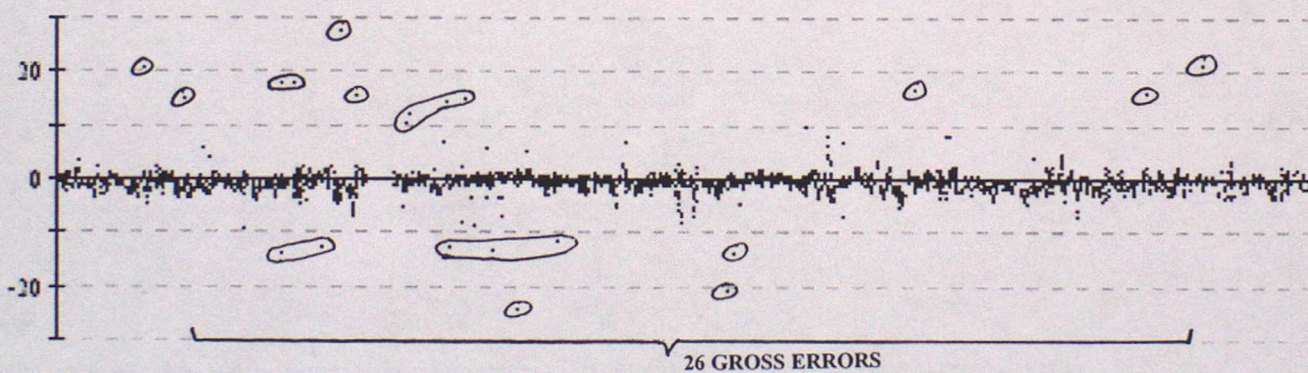
44764 Pressure



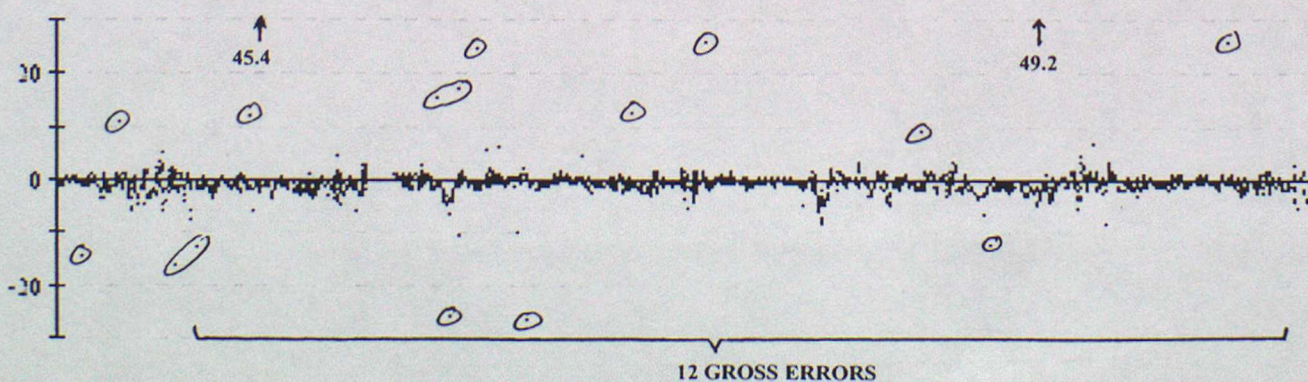
44765 Pressure



44766 Pressure

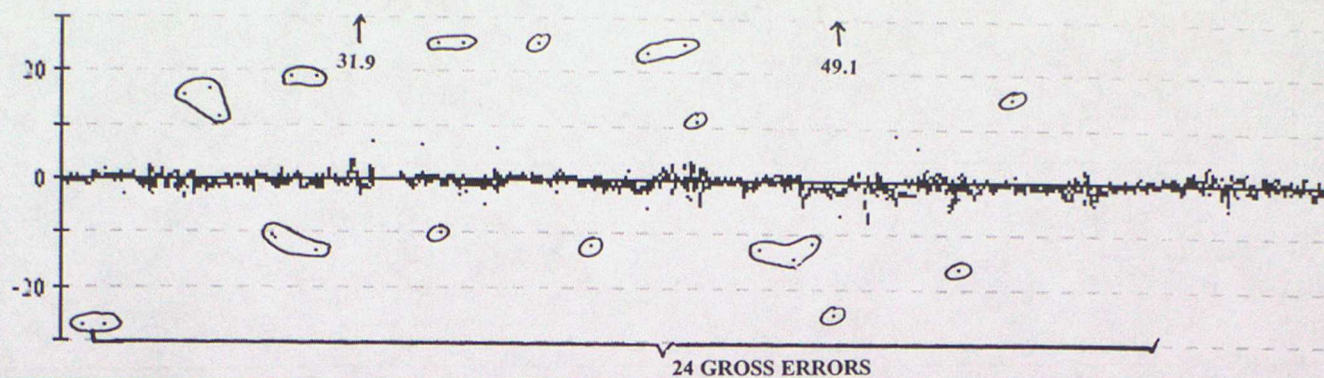


44773 Pressure

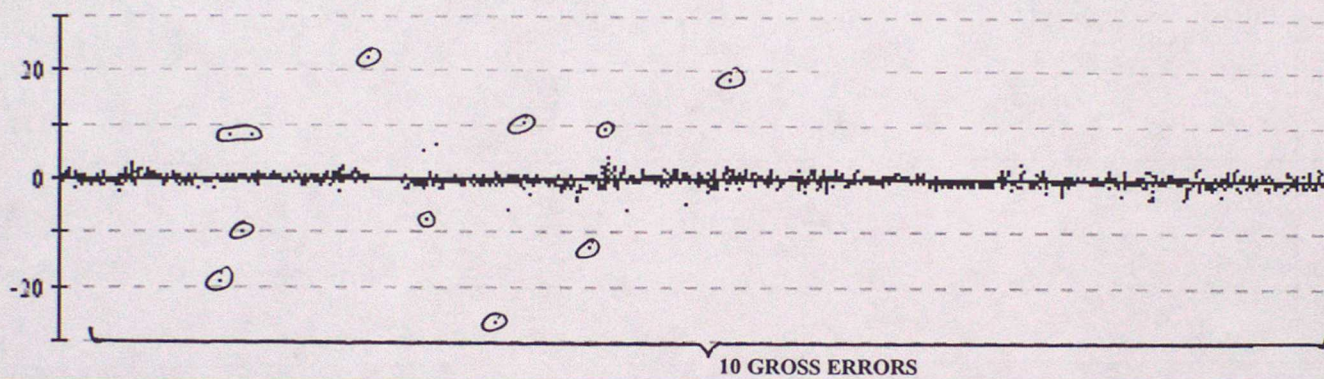


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

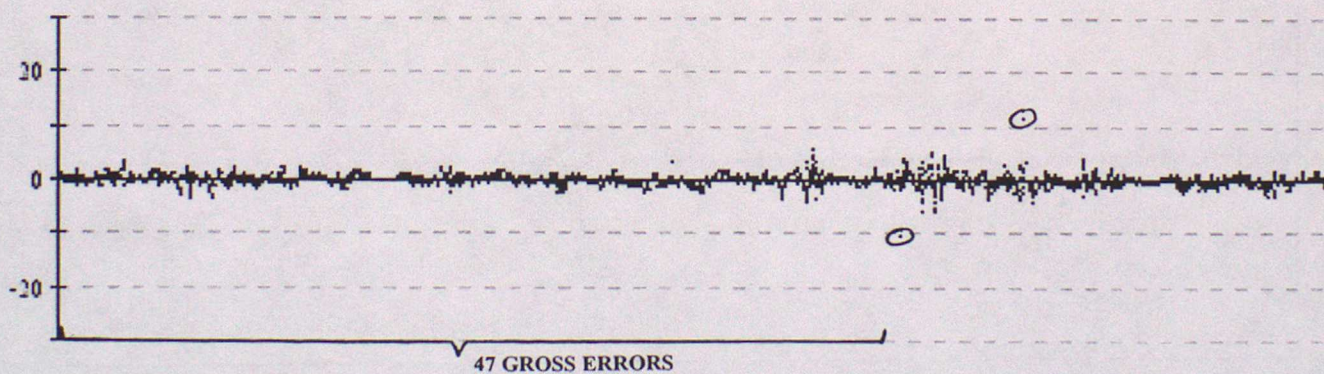
44777 Pressure



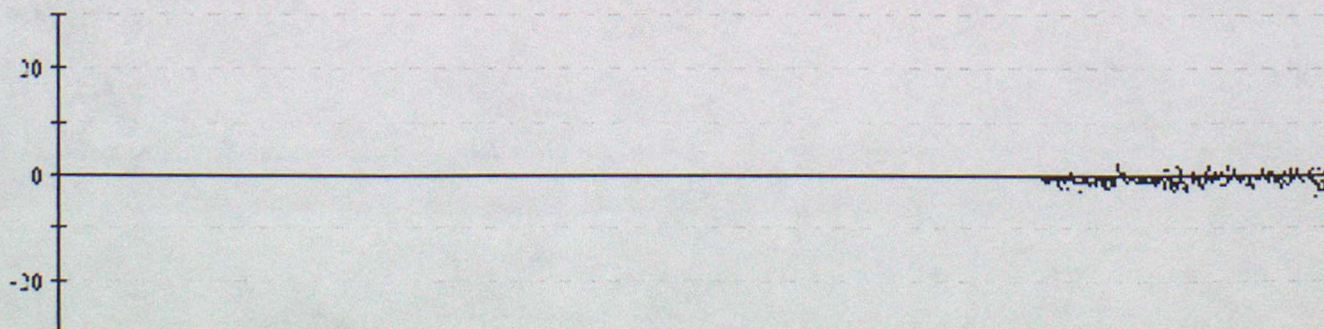
44778 Pressure



44780 Pressure

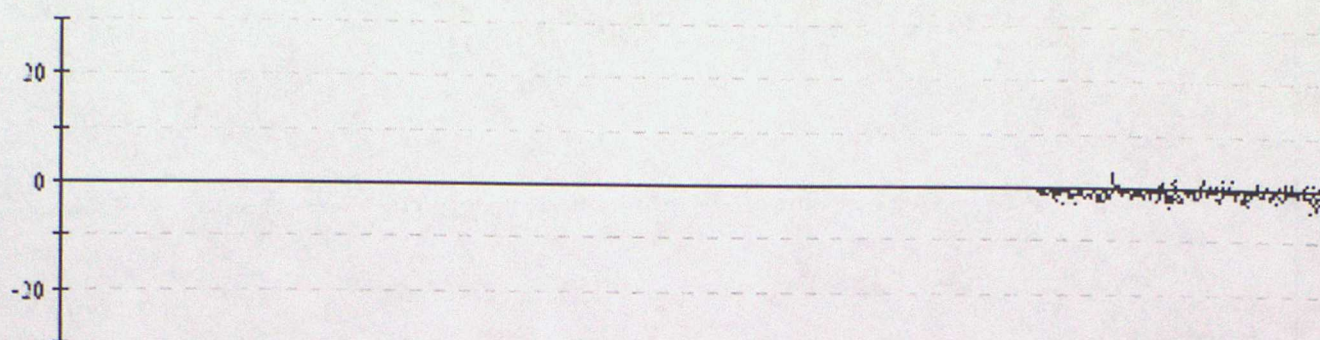


61501 Pressure

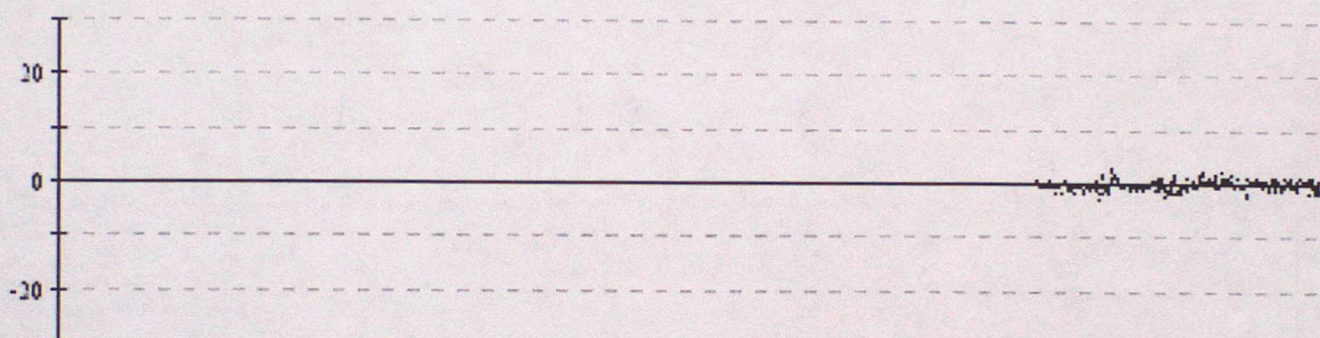


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

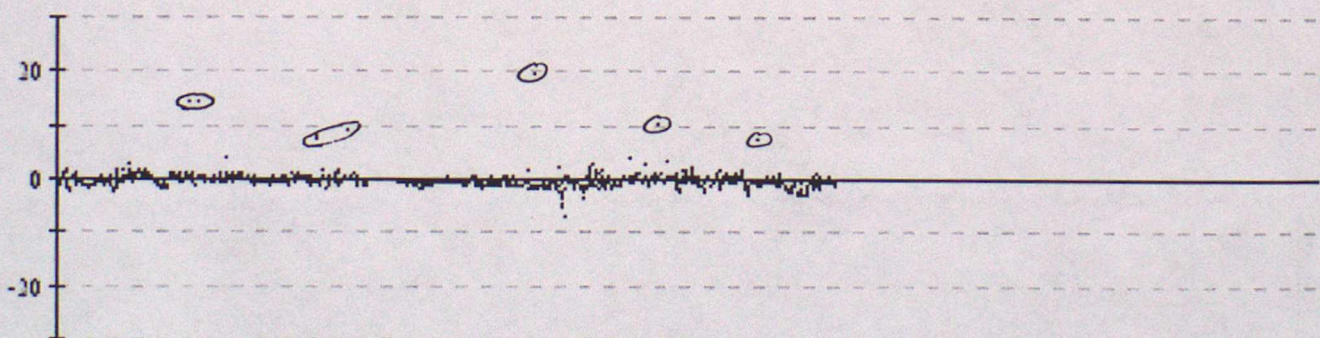
61502 Pressure



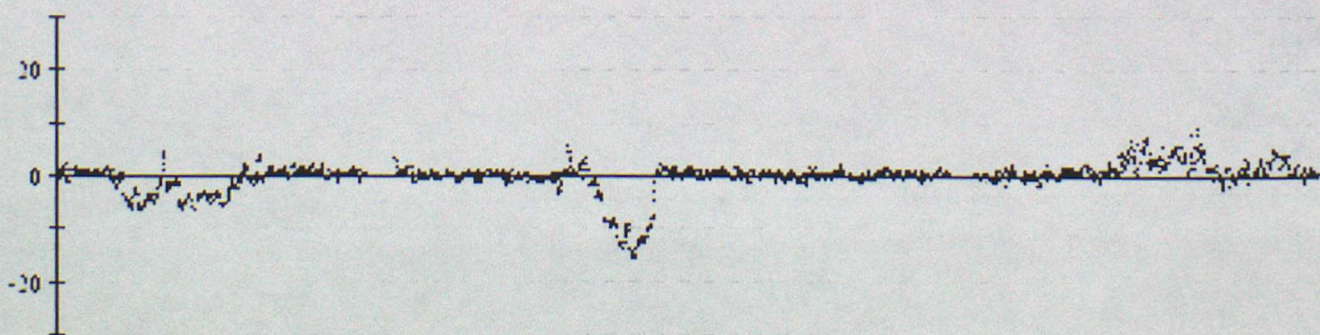
61504 Pressure



62505 Pressure

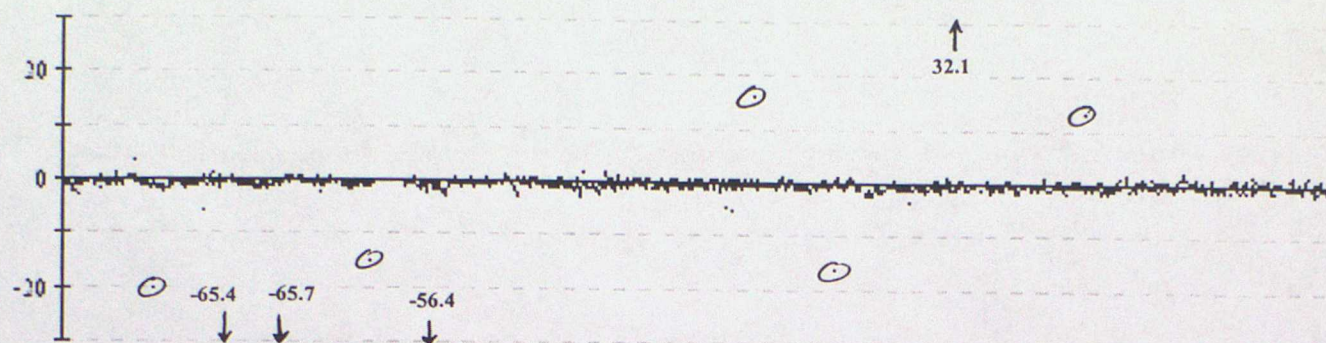


62506 Pressure

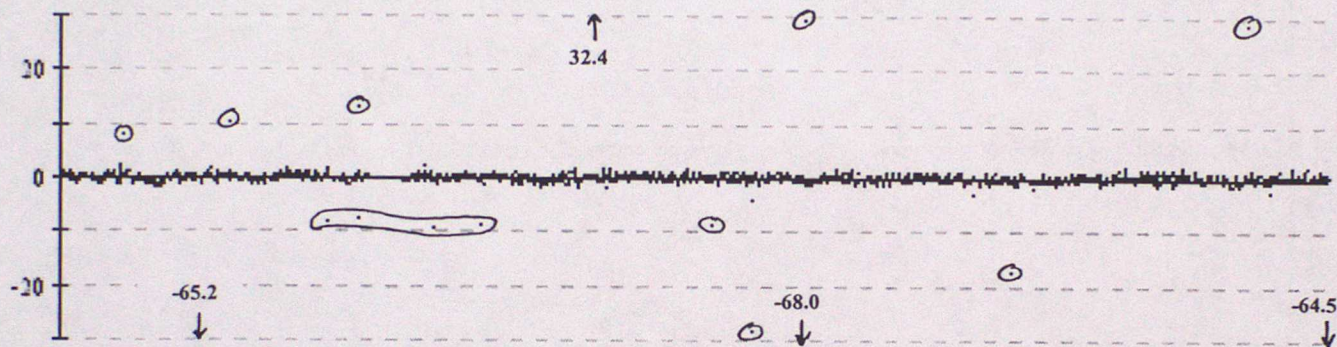


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

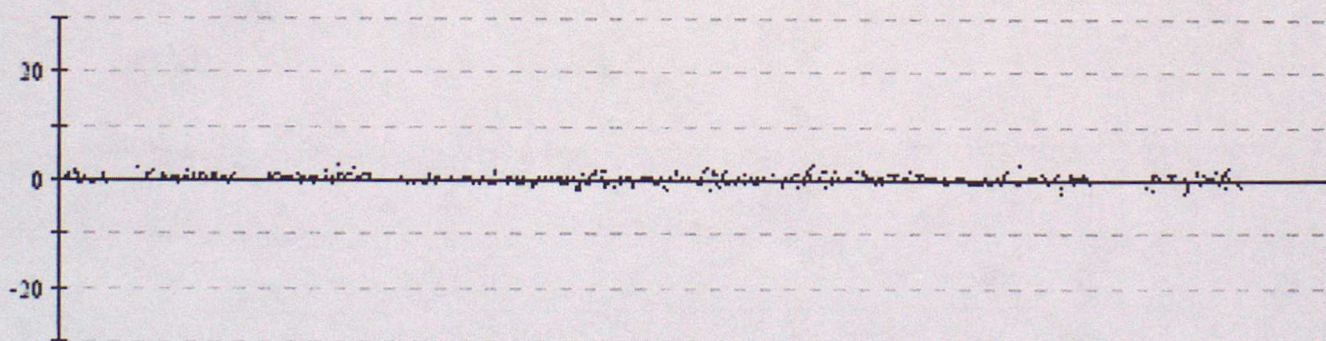
62520 Pressure



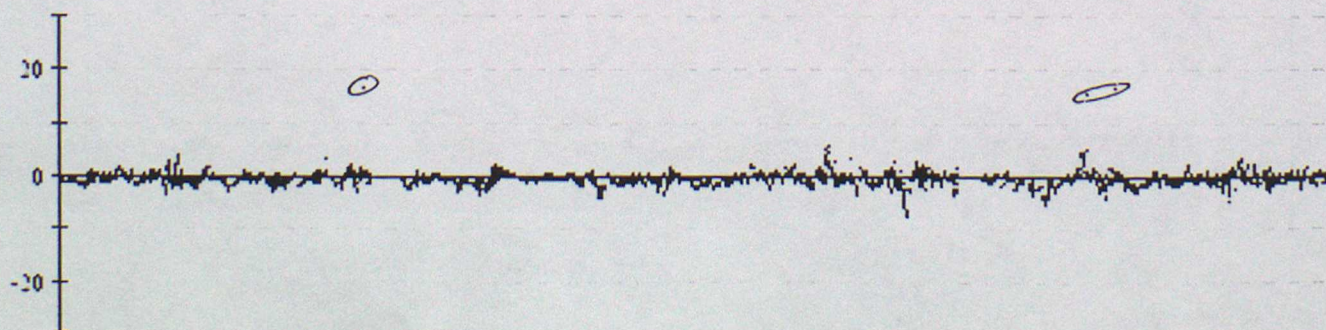
62554 Pressure



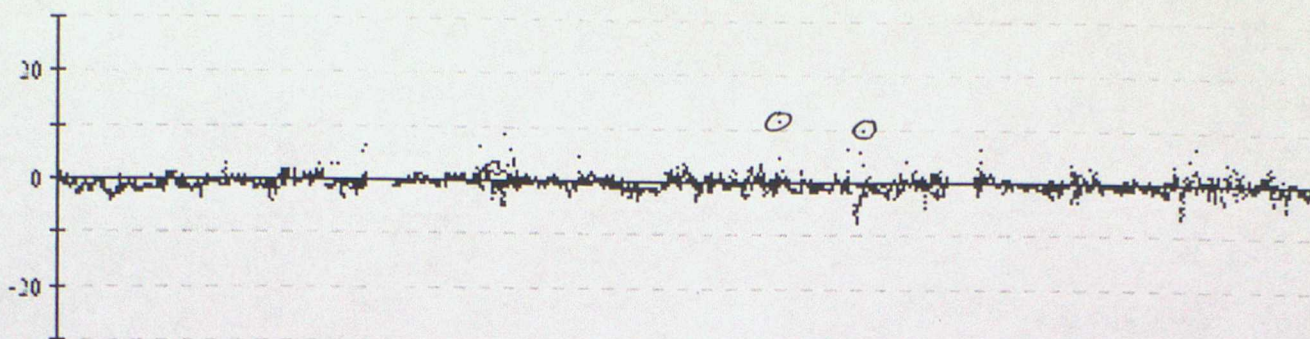
62901 Pressure



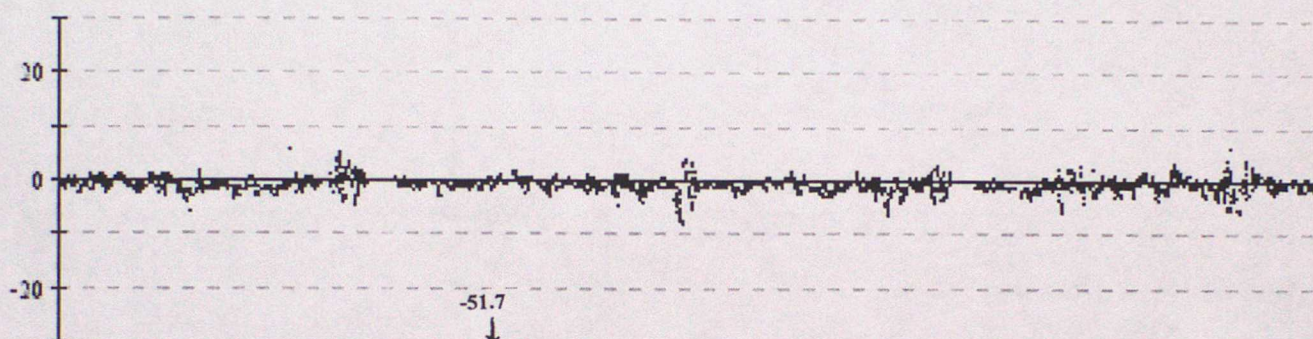
64516 Pressure



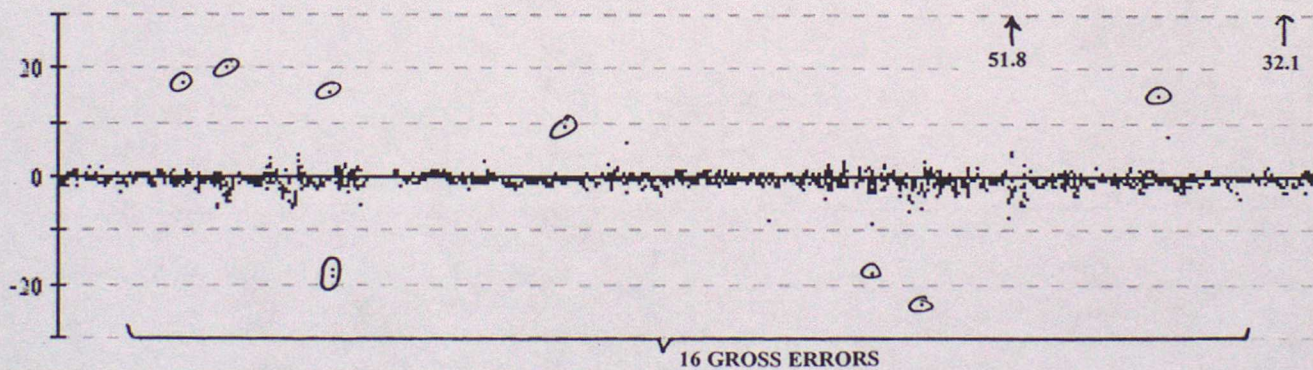
64517 Pressure



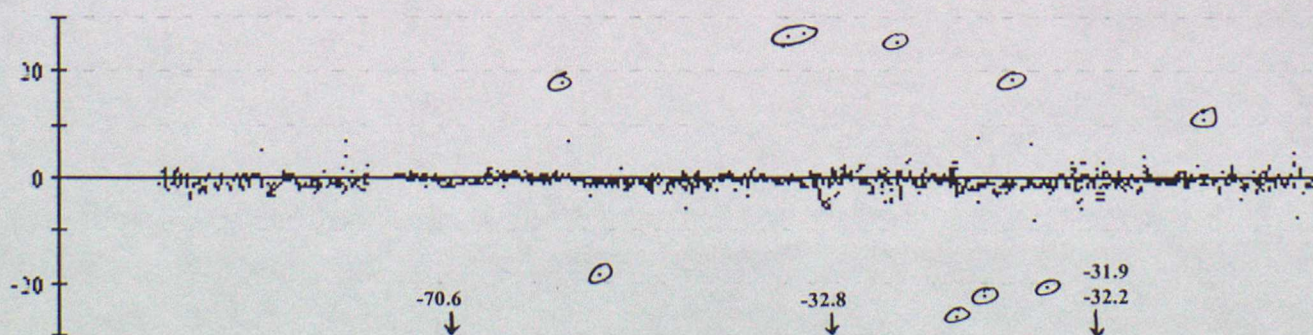
64518 Pressure



64529 Pressure

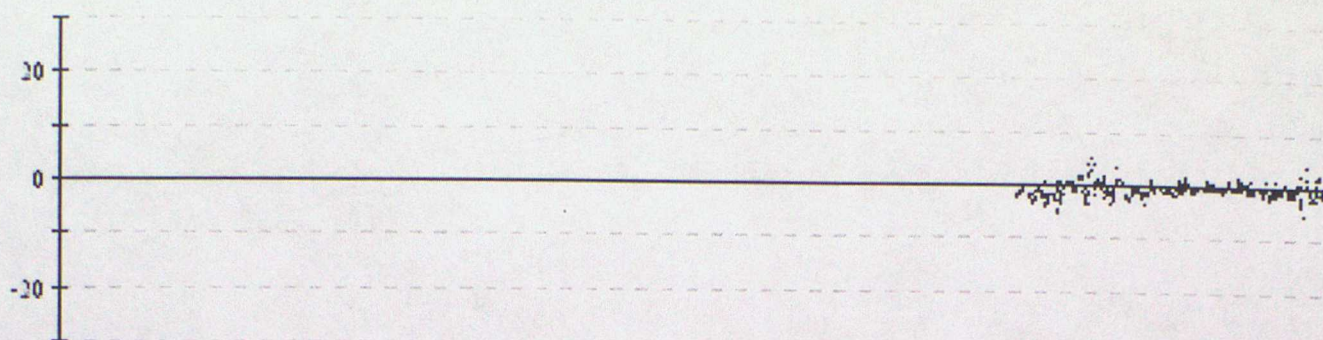


64530 Pressure

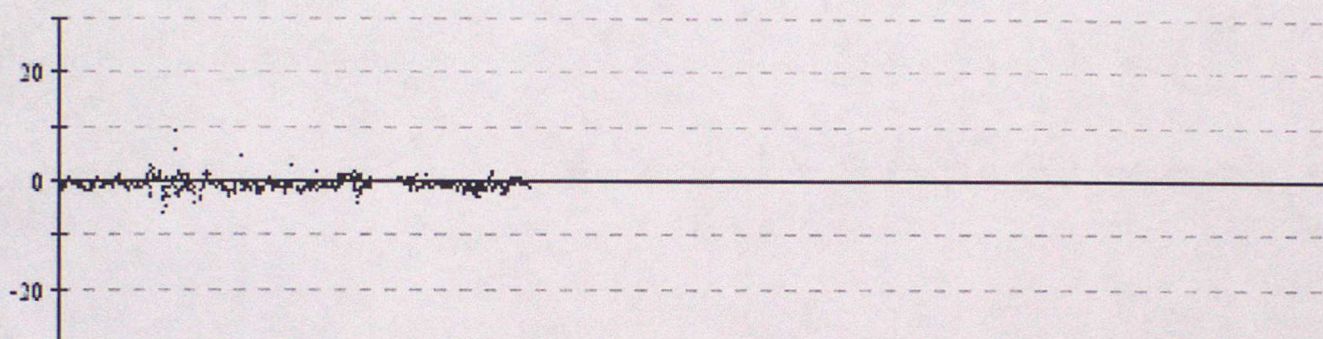


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

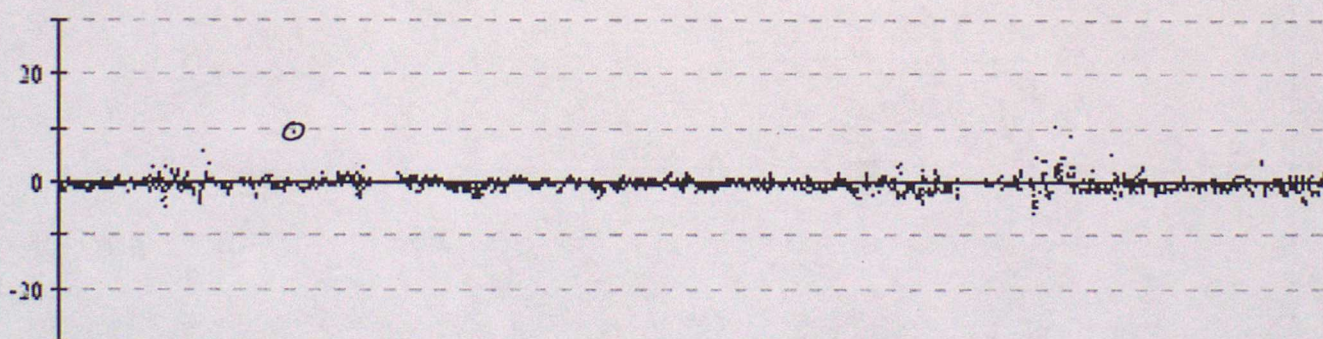
64546 Pressure



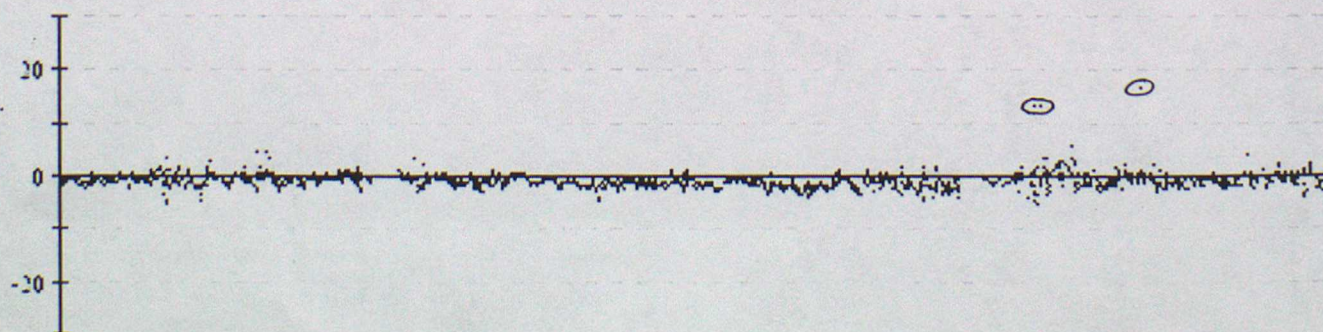
64692 Pressure



64693 Pressure

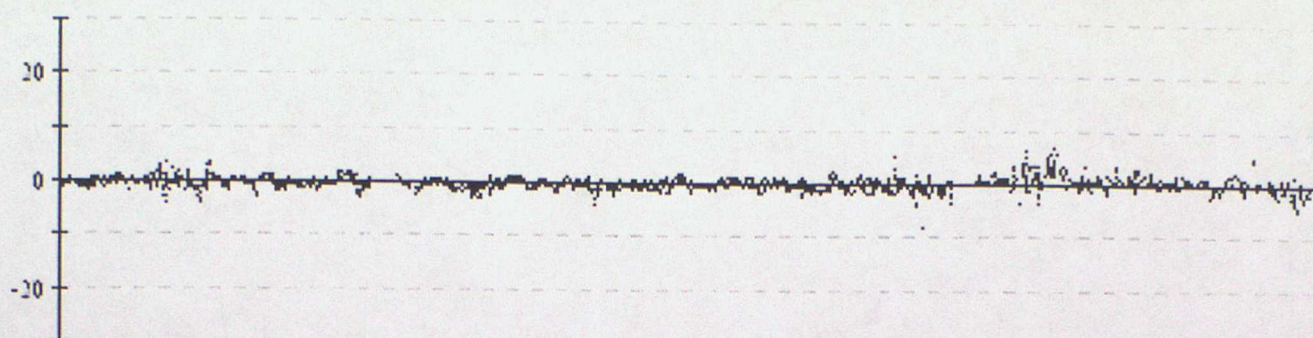


64694 Pressure

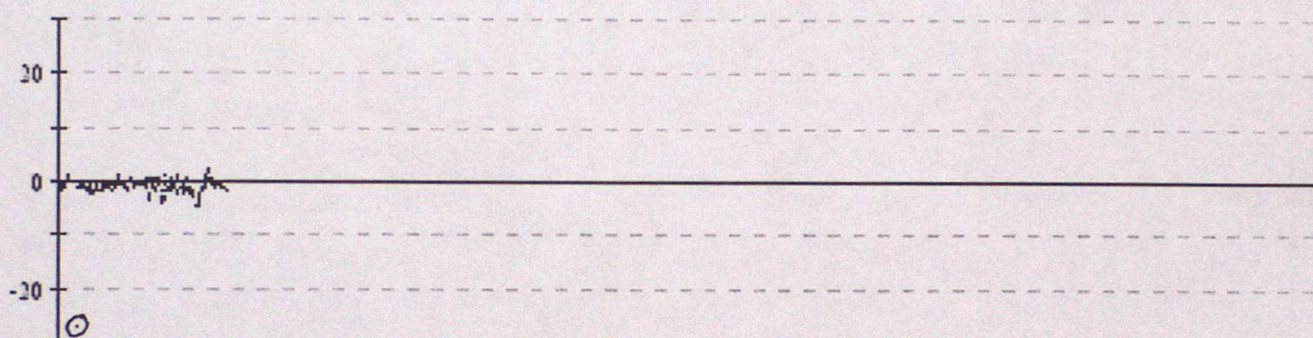


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

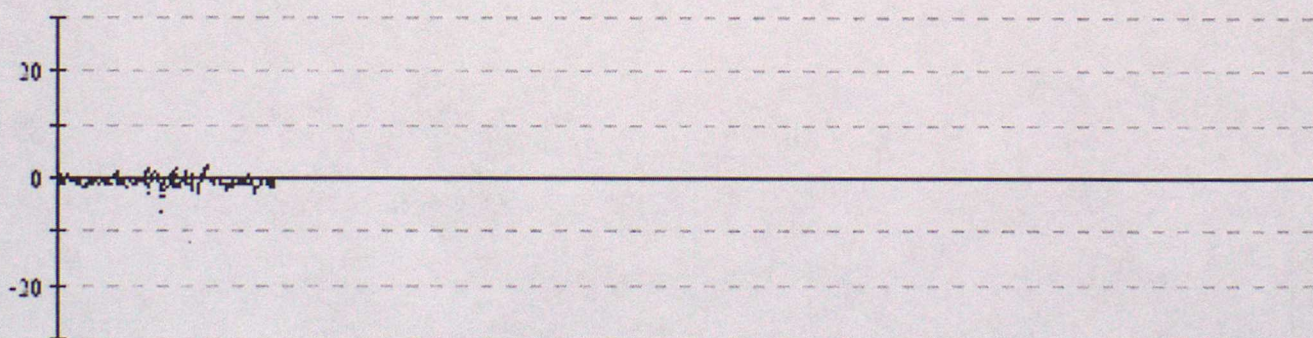
64695 Pressure



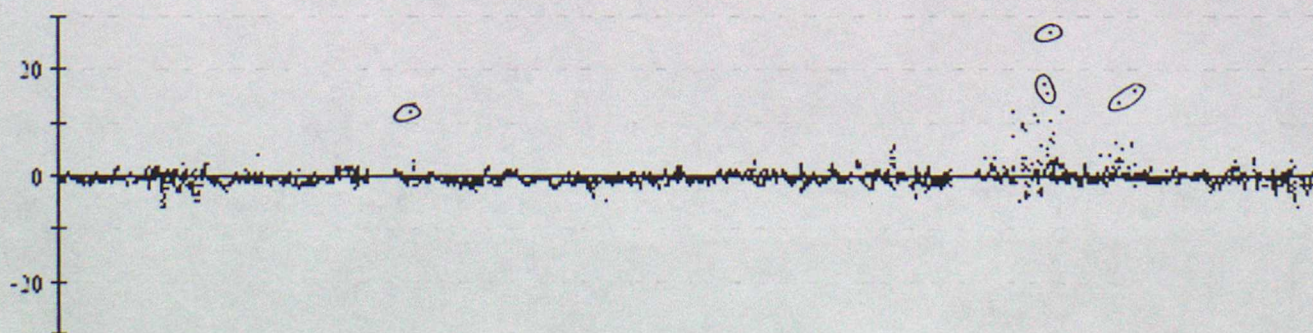
64696 Pressure



64697 Pressure

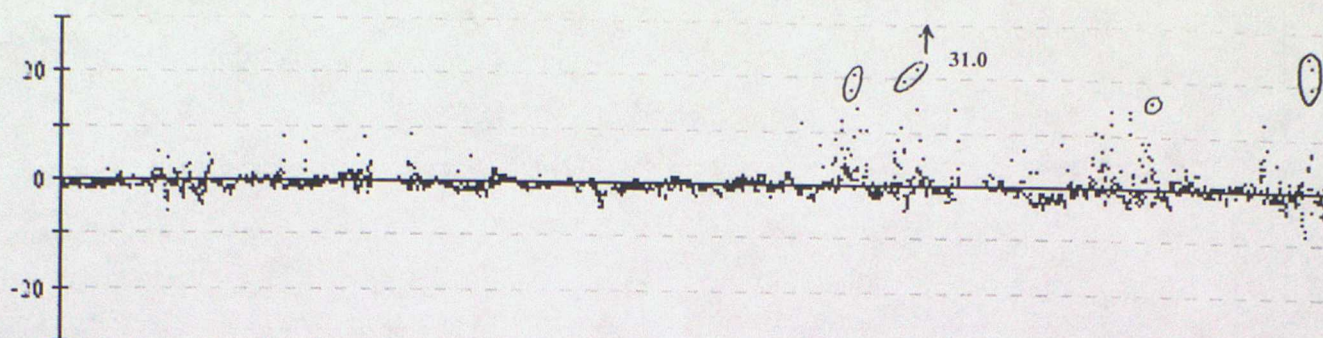


64698 Pressure

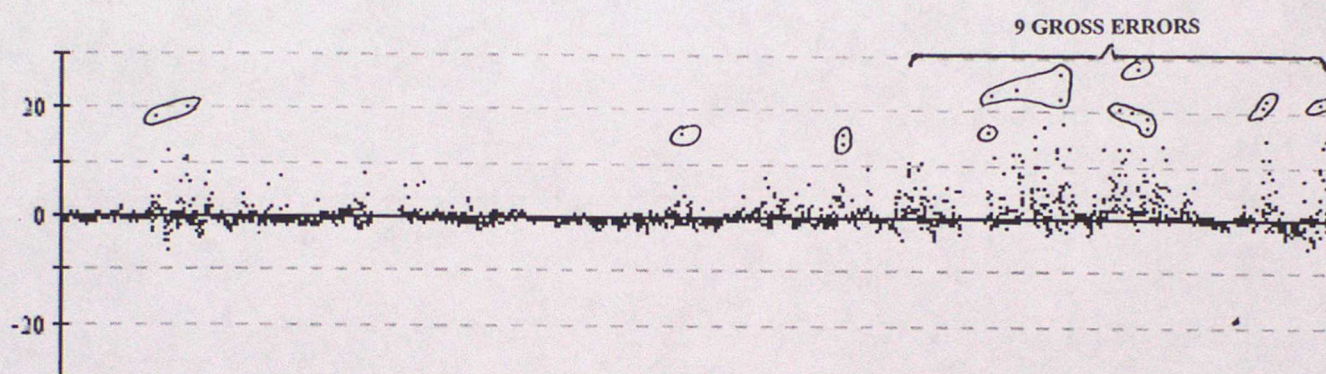


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

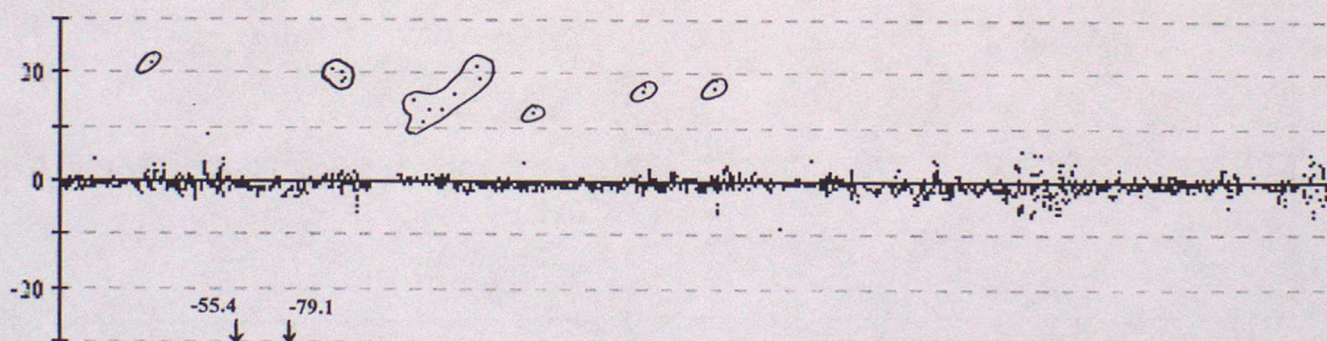
64699 Pressure



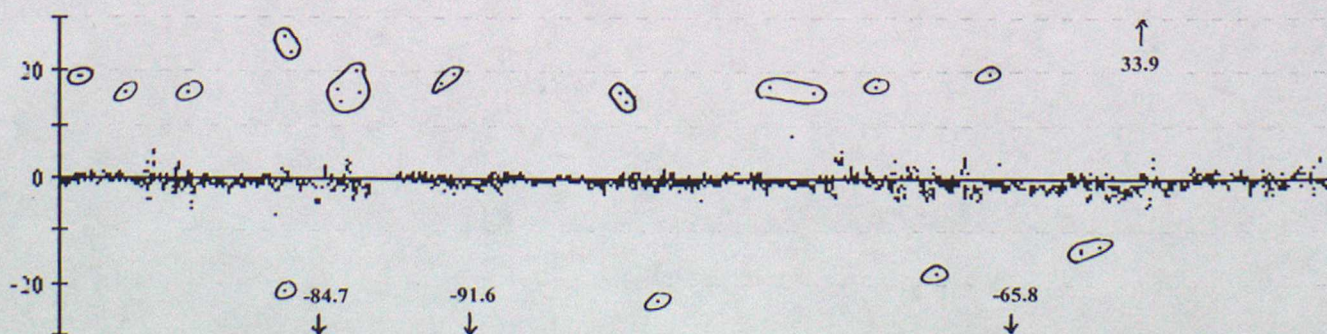
64700 Pressure



65593 Pressure

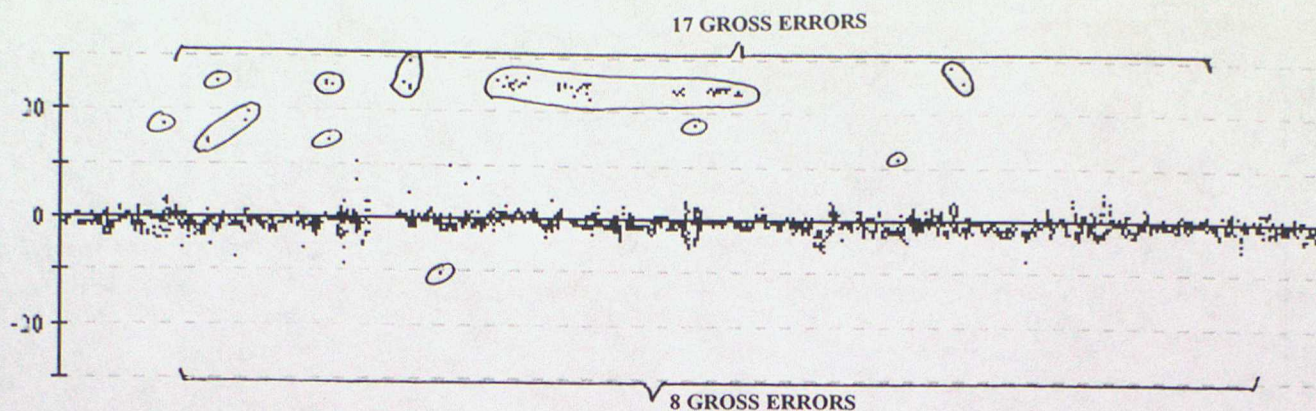


65594 Pressure

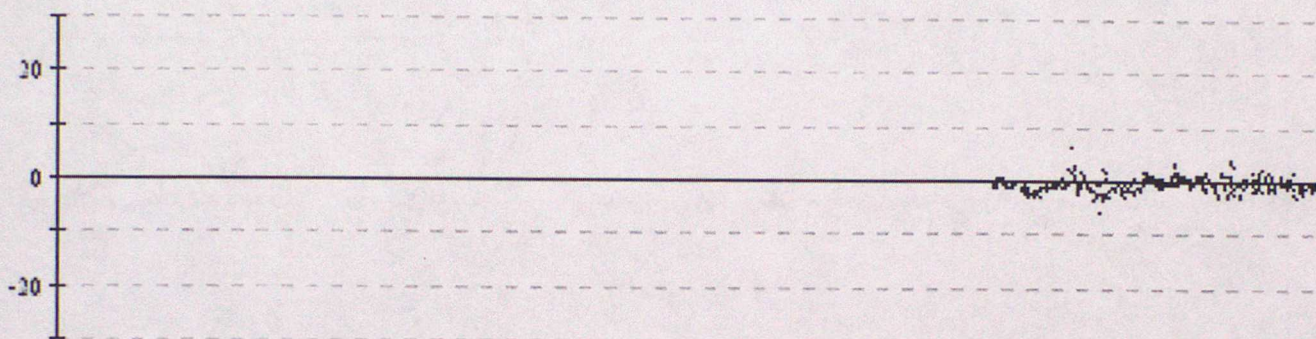


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

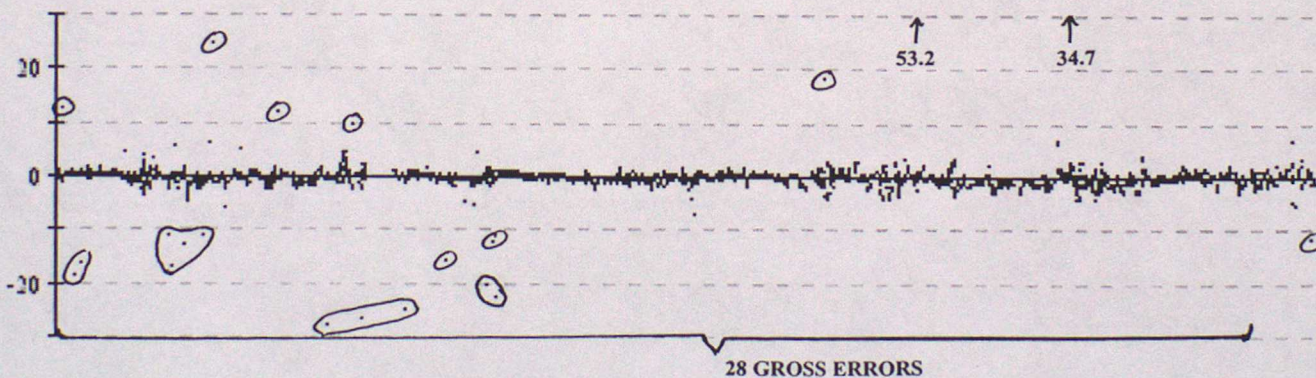
65595 Pressure



65596 Pressure



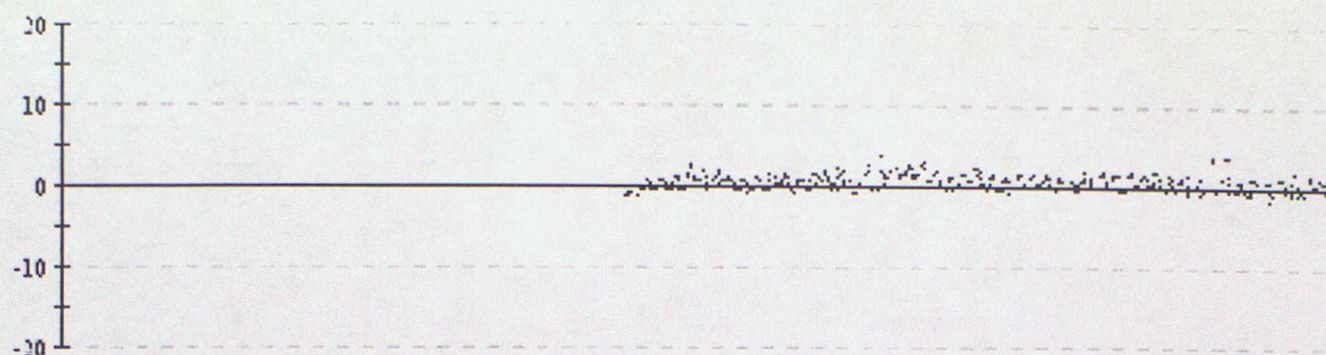
65599 Pressure



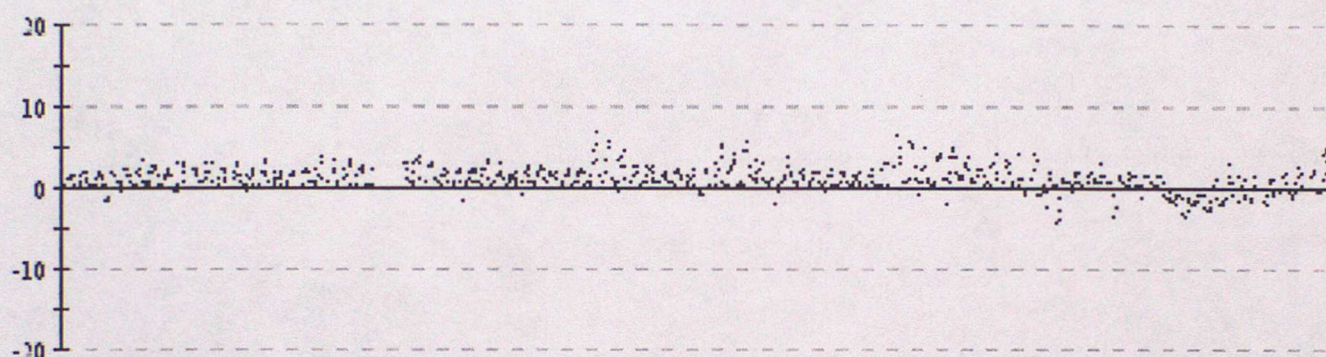
ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

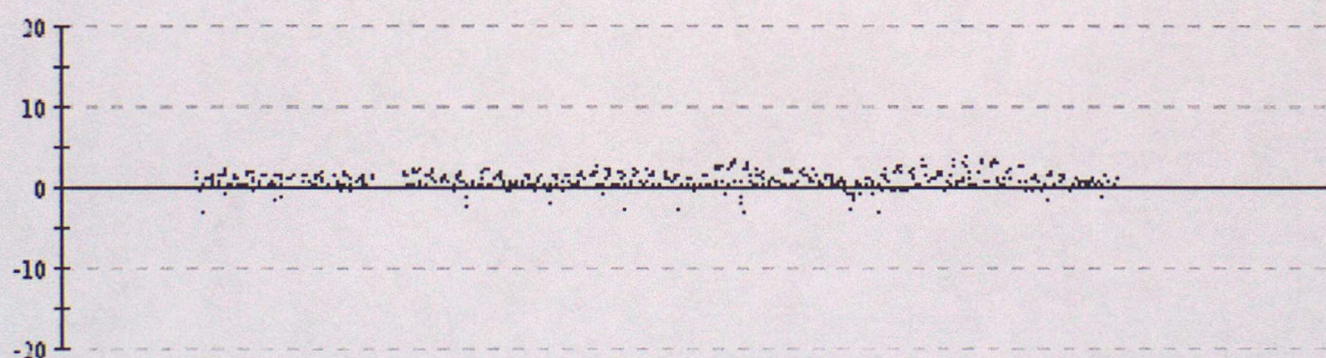
13504 Air Temperature



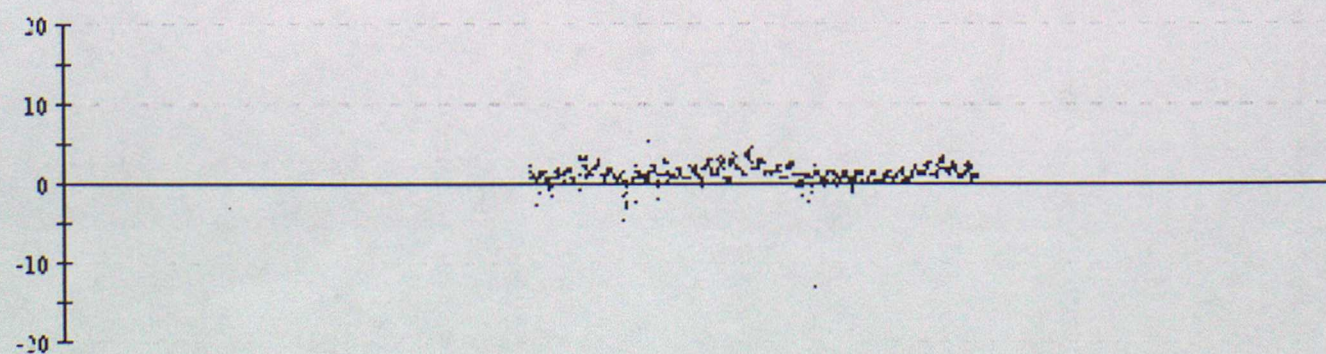
41521 Air Temperature



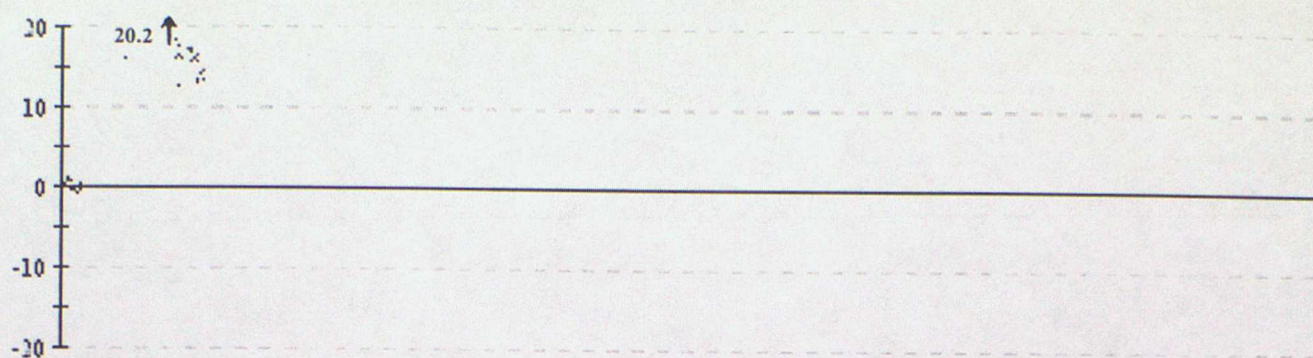
41628 Air Temperature



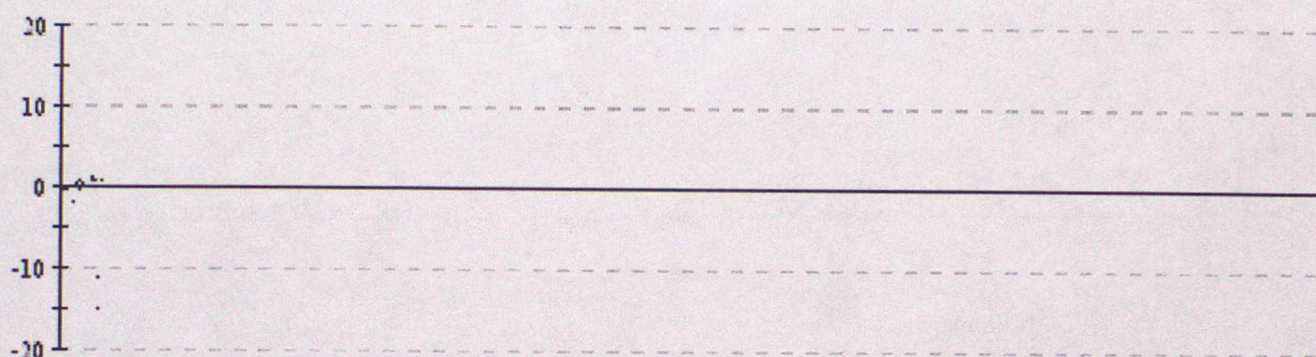
41656 Air Temperature



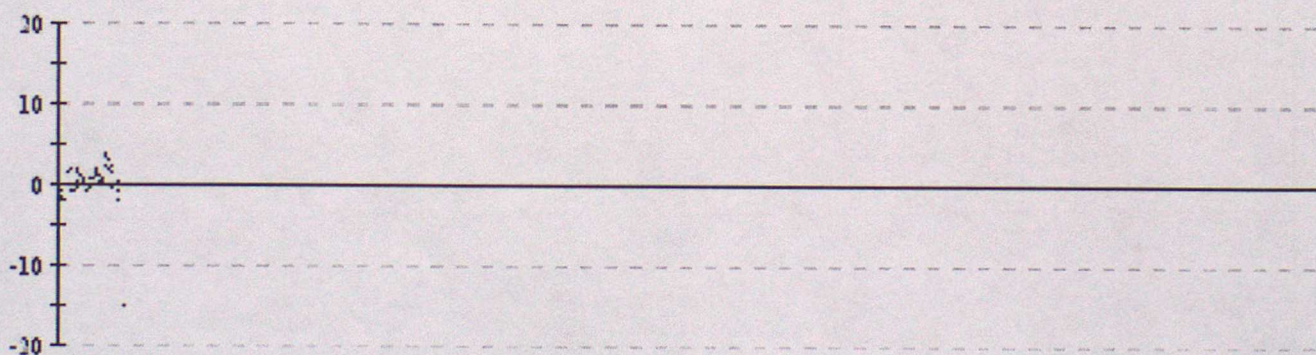
44513 Air Temperature



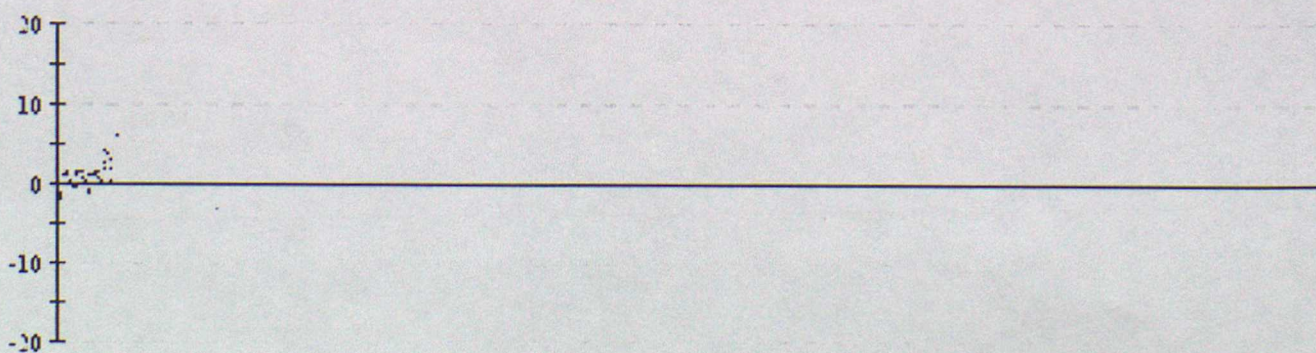
44514 Air Temperature



44515 Air Temperature

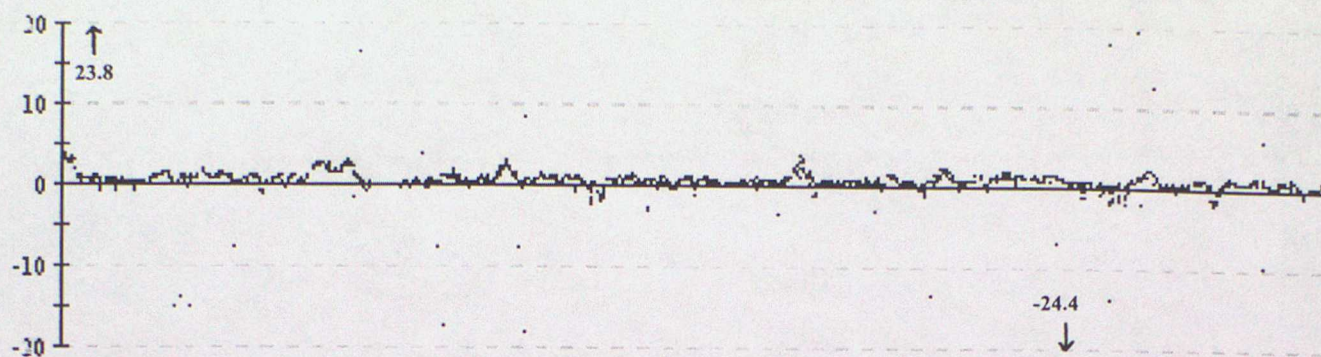


44517 Air Temperature

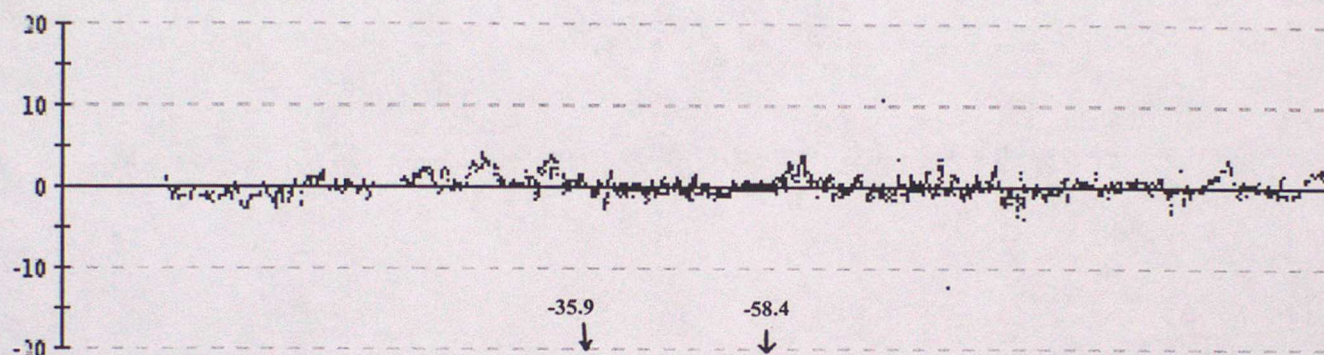


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

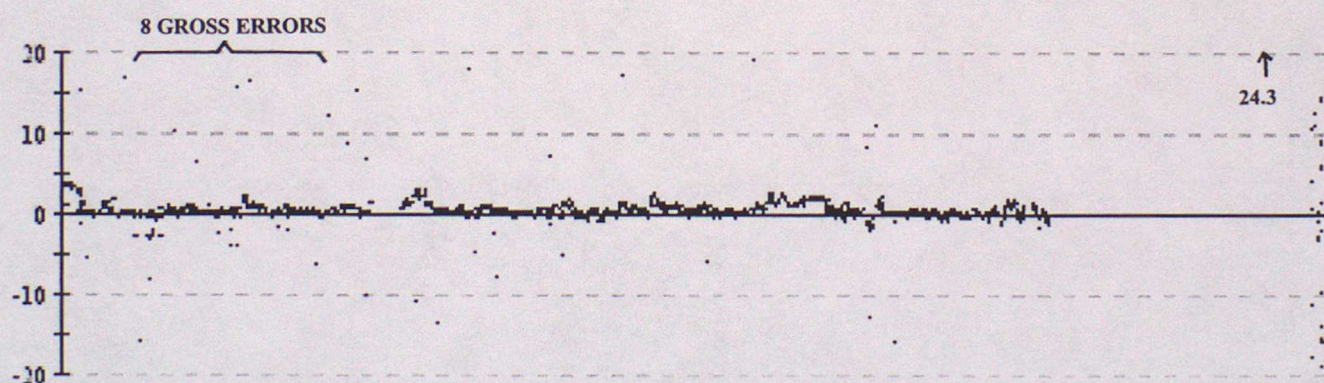
44613 Air Temperature



44614 Air Temperature



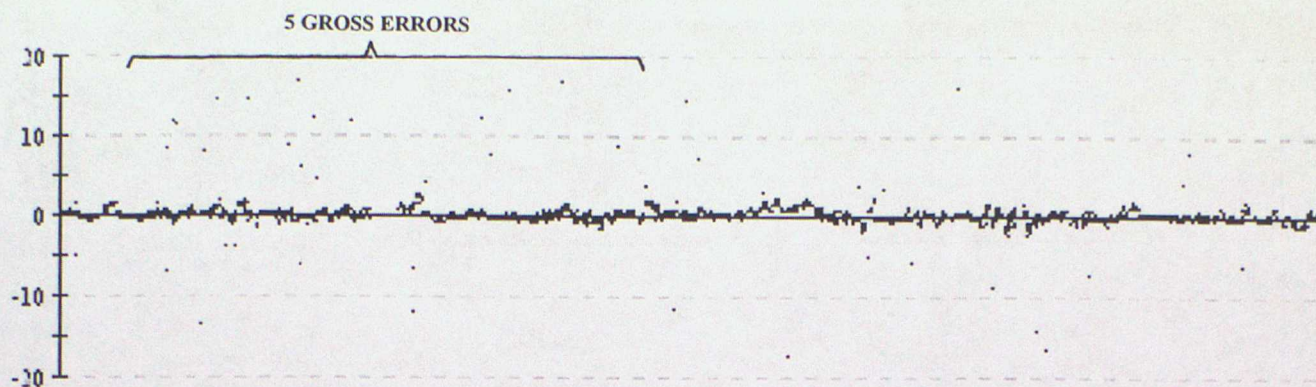
44616 Air Temperature



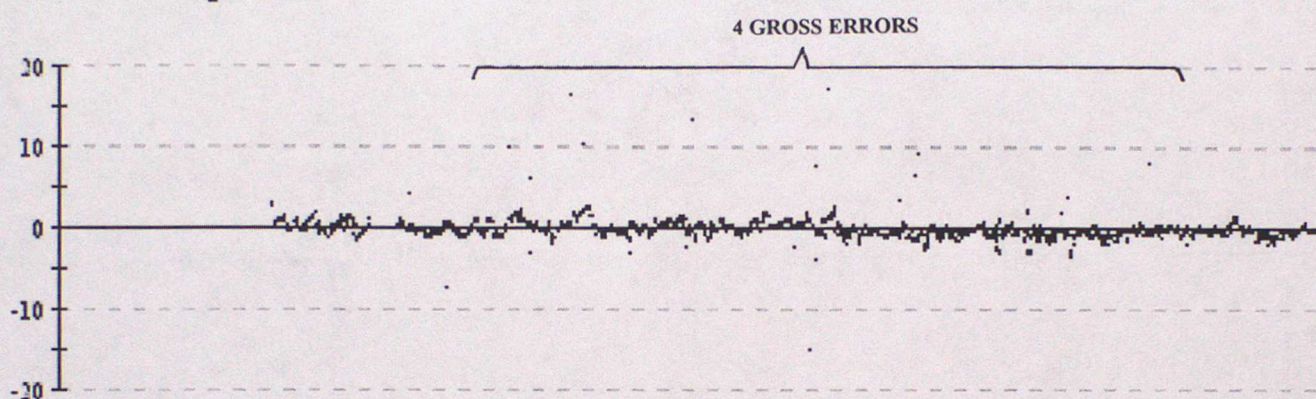
44621 Air Temperature



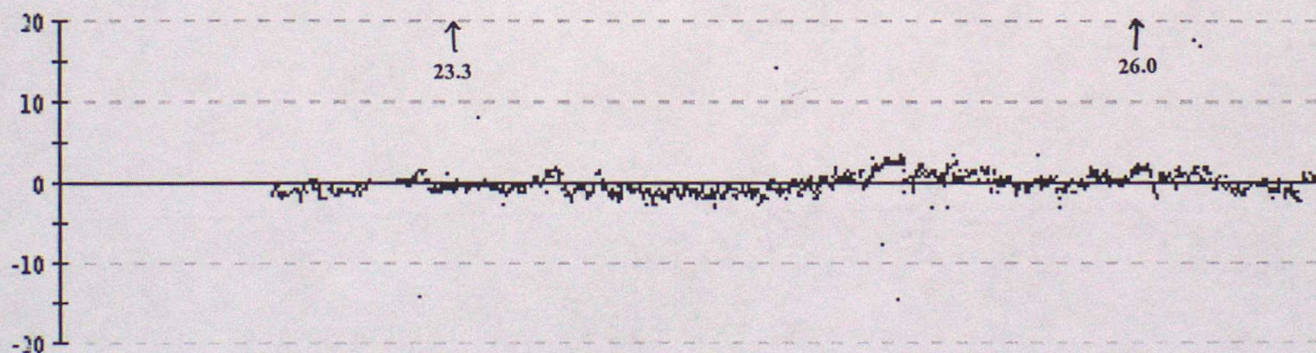
44624 Air Temperature



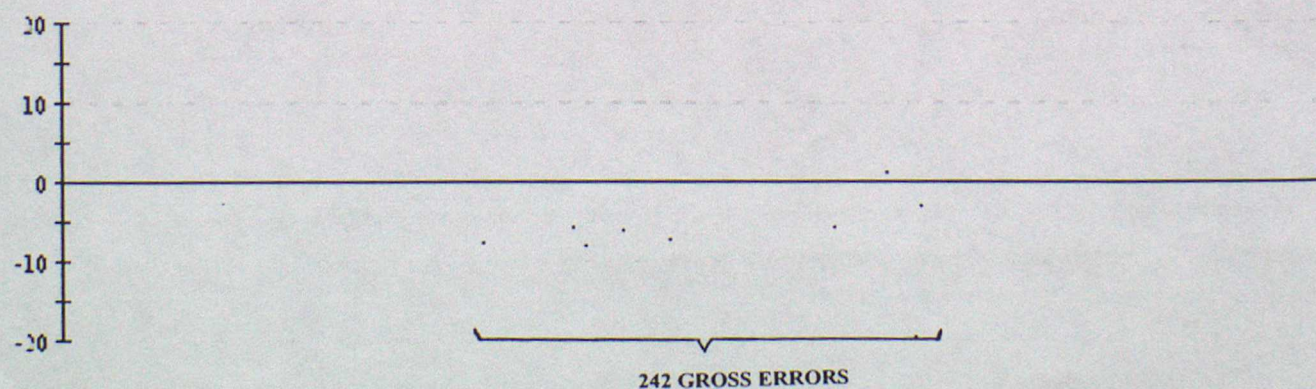
44625 Air Temperature



44626 Air Temperature

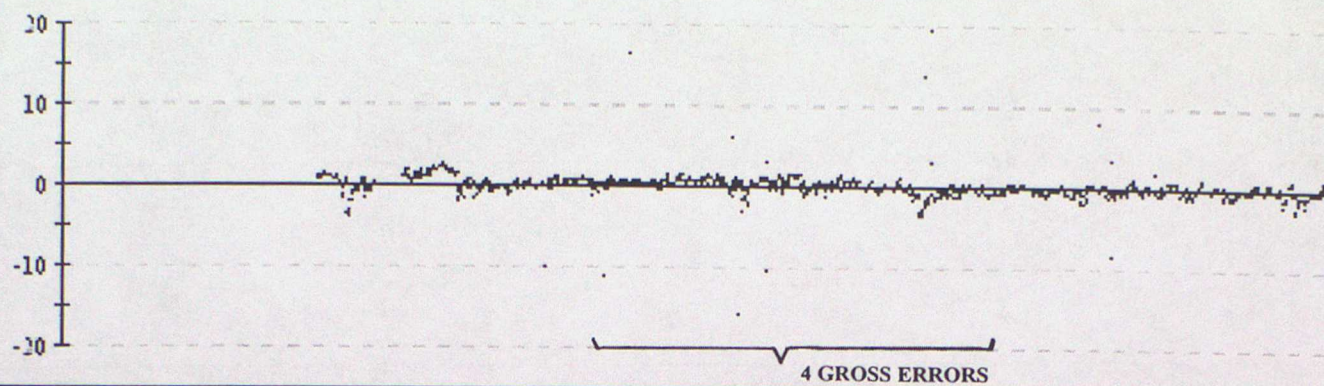


44627 Air Temperature

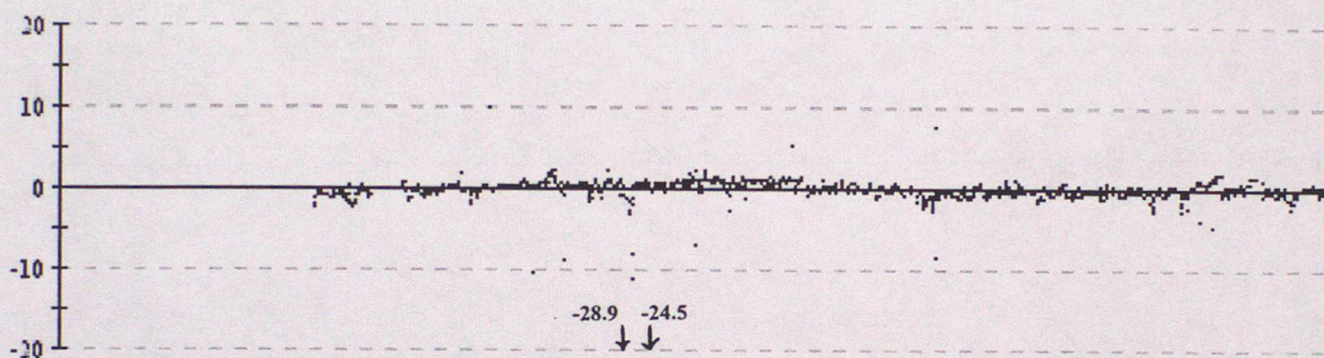


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

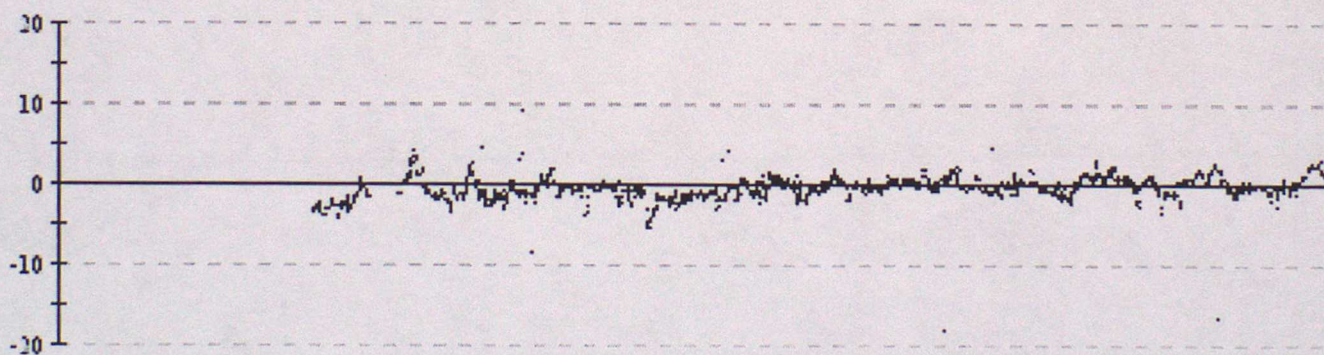
44628 Air Temperature



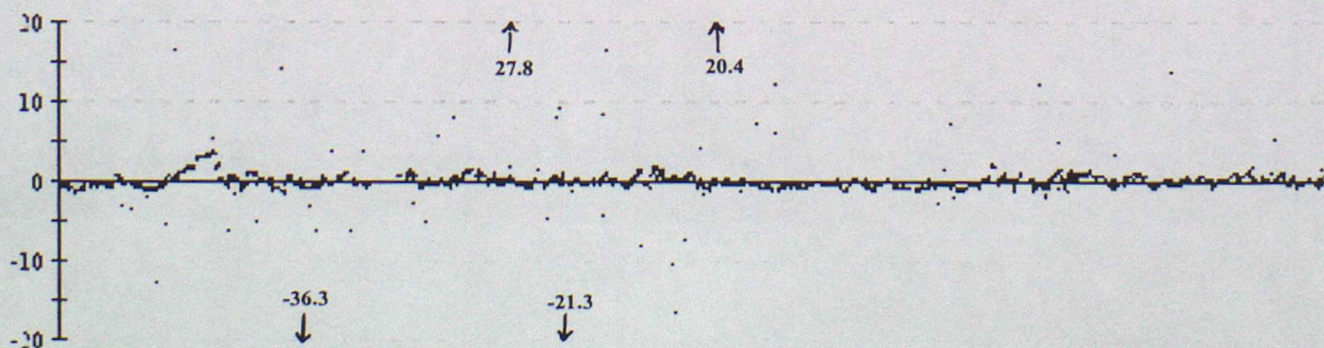
44629 Air Temperature



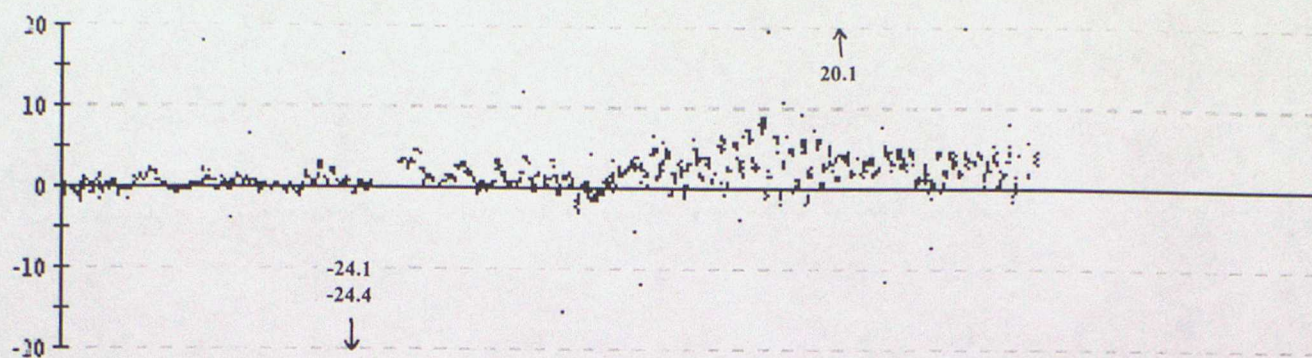
44630 Air Temperature



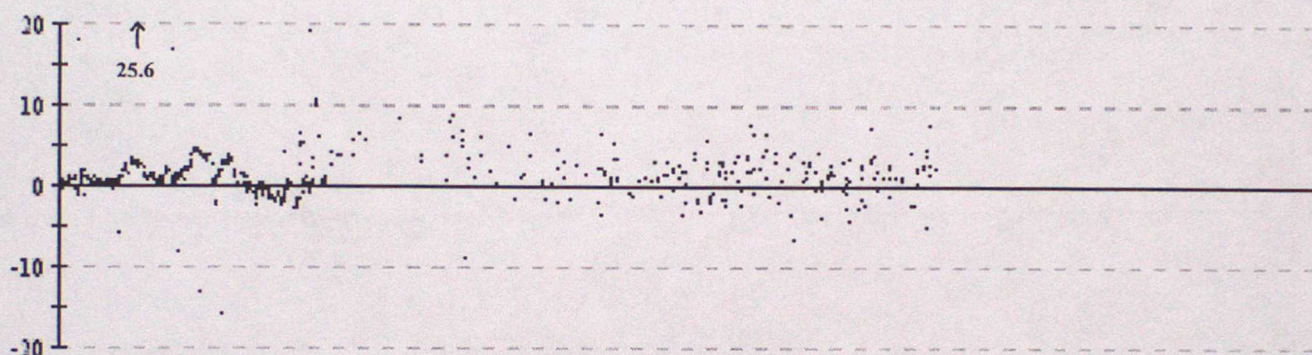
44728 Air Temperature



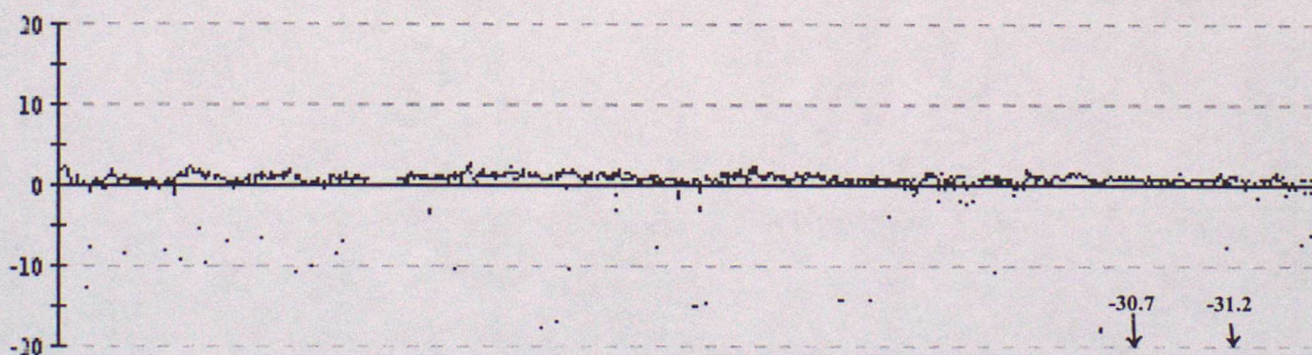
44742 Air Temperature



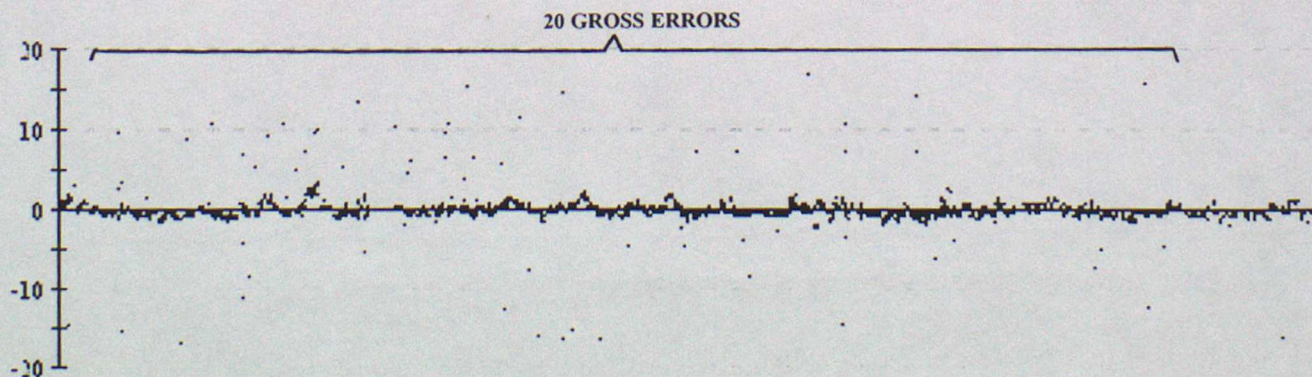
44764 Air Temperature



44765 Air Temperature

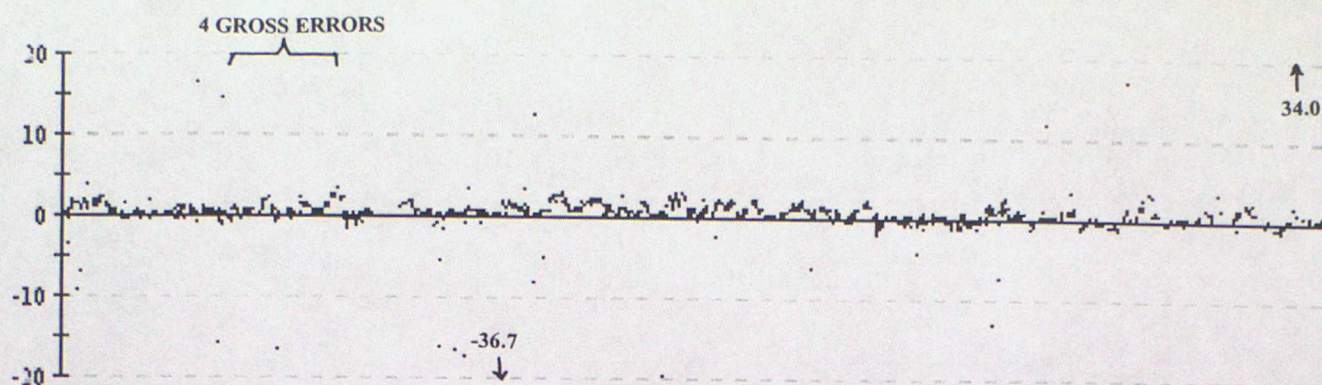


44766 Air Temperature

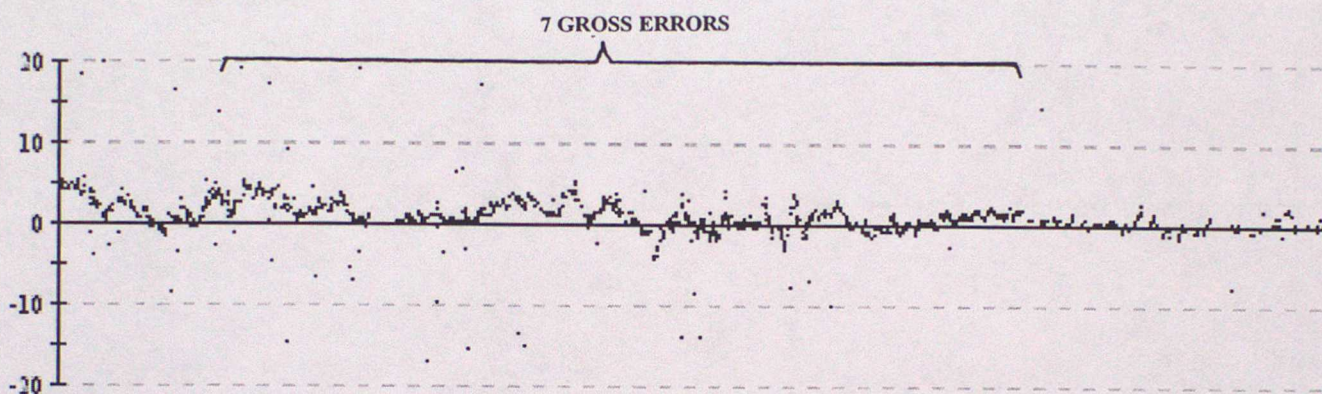


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

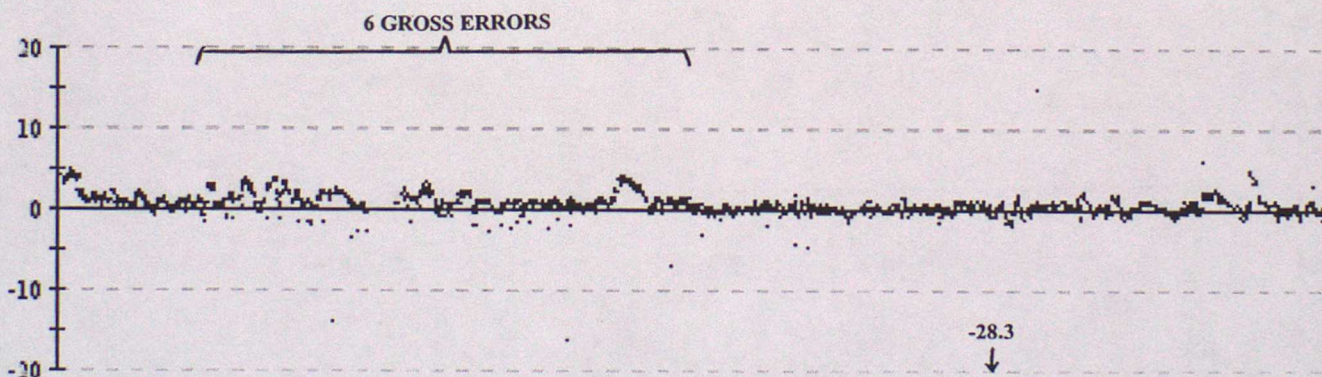
44773 Air Temperature



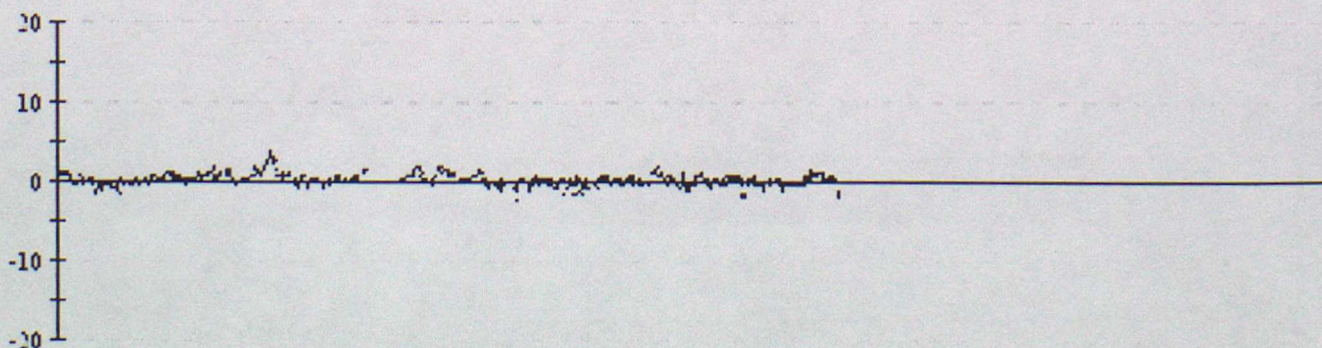
44777 Air Temperature



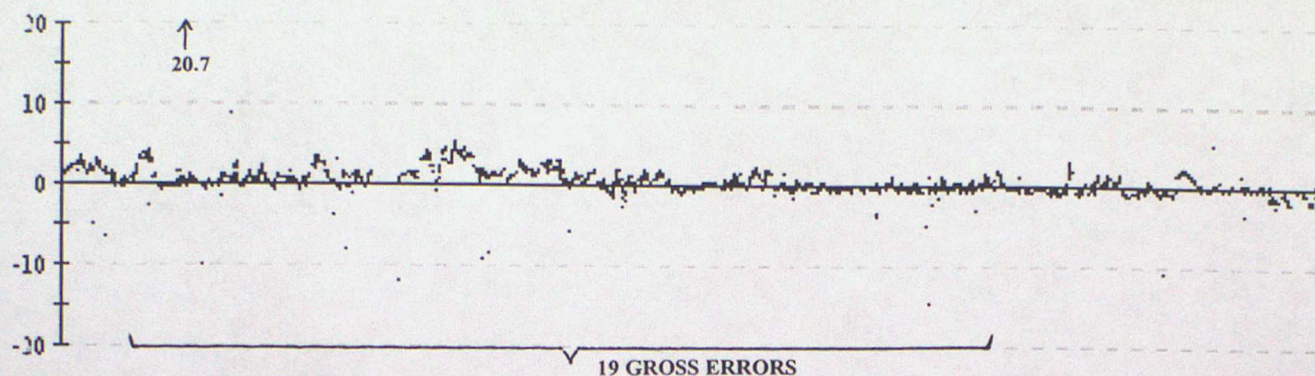
44780 Air Temperature



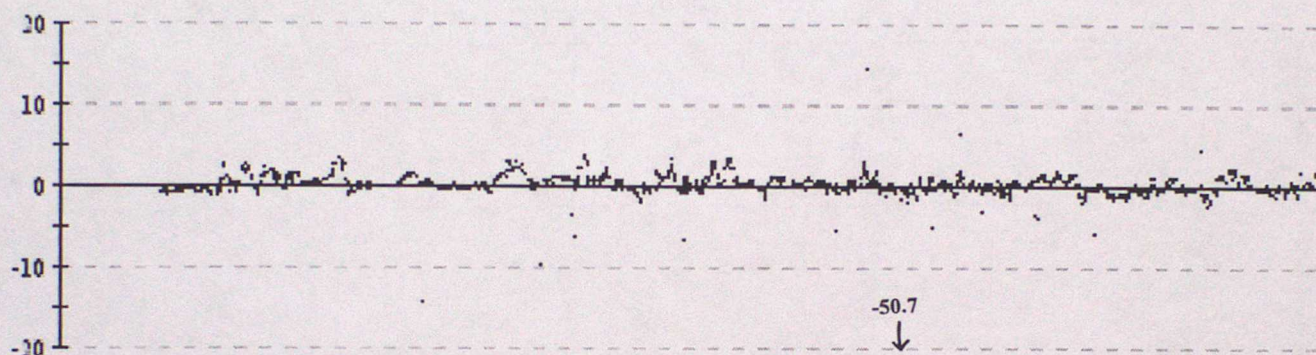
62505 Air Temperature



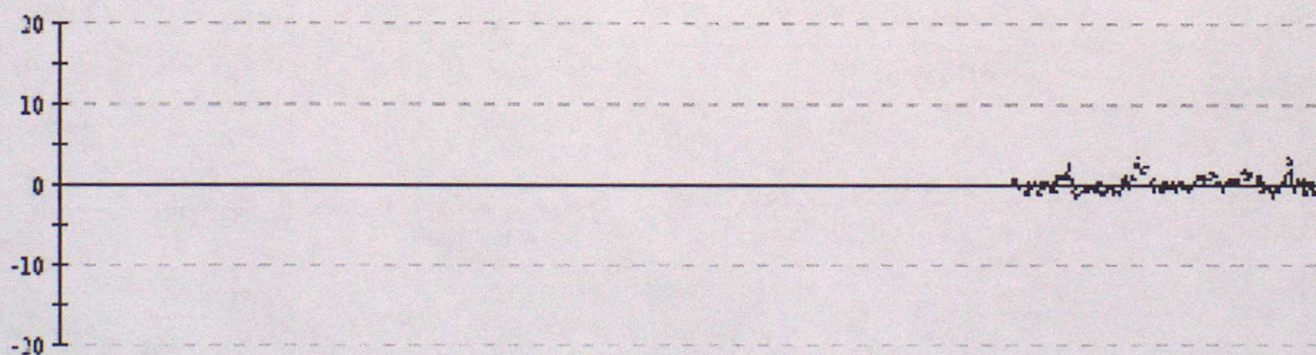
64529 Air Temperature



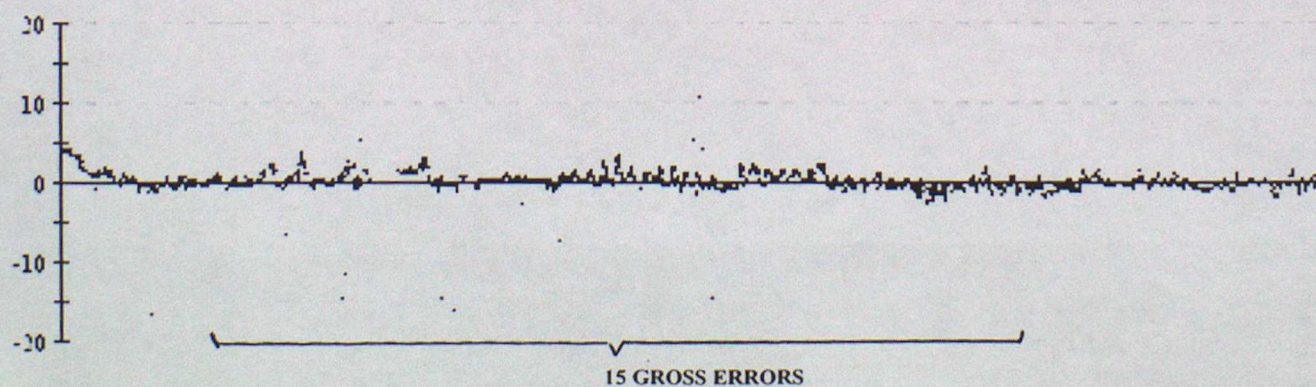
64530 Air Temperature



64546 Air Temperature

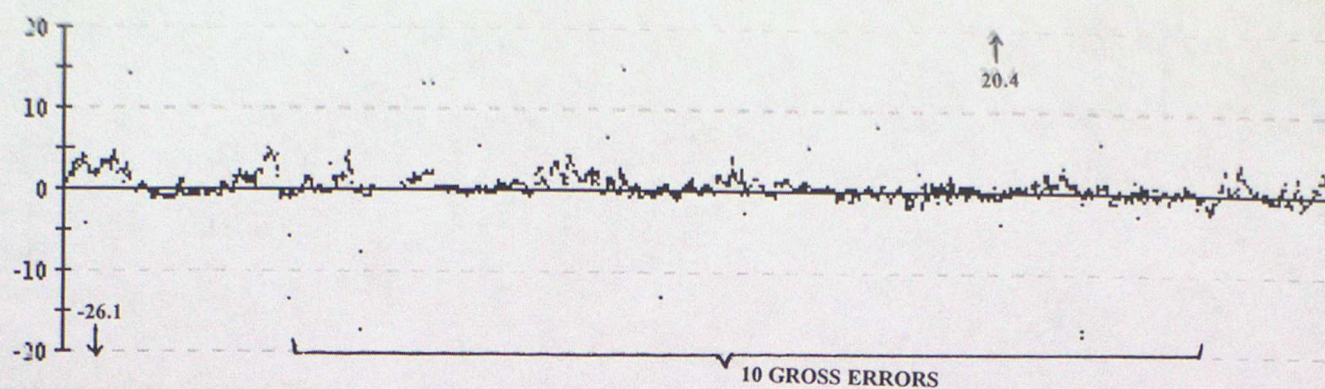


65593 Air Temperature

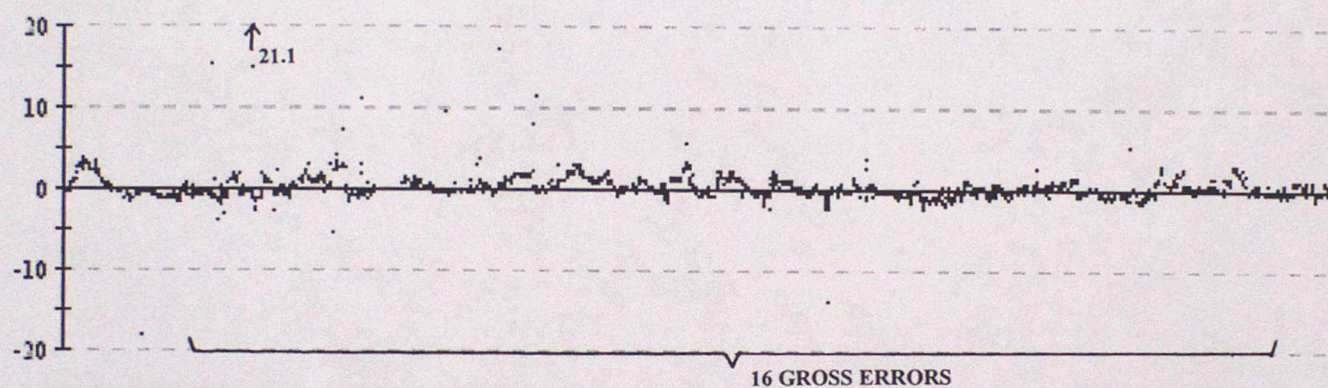


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

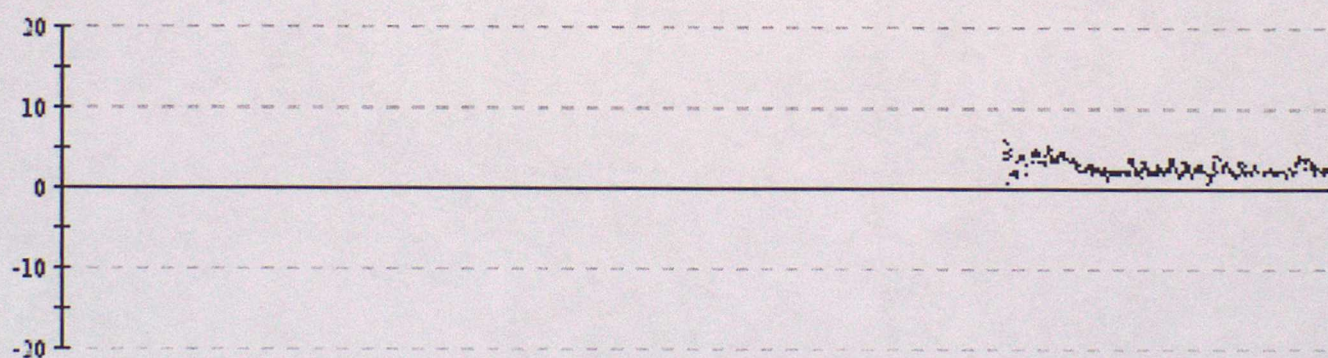
65594 Air Temperature



65595 Air Temperature



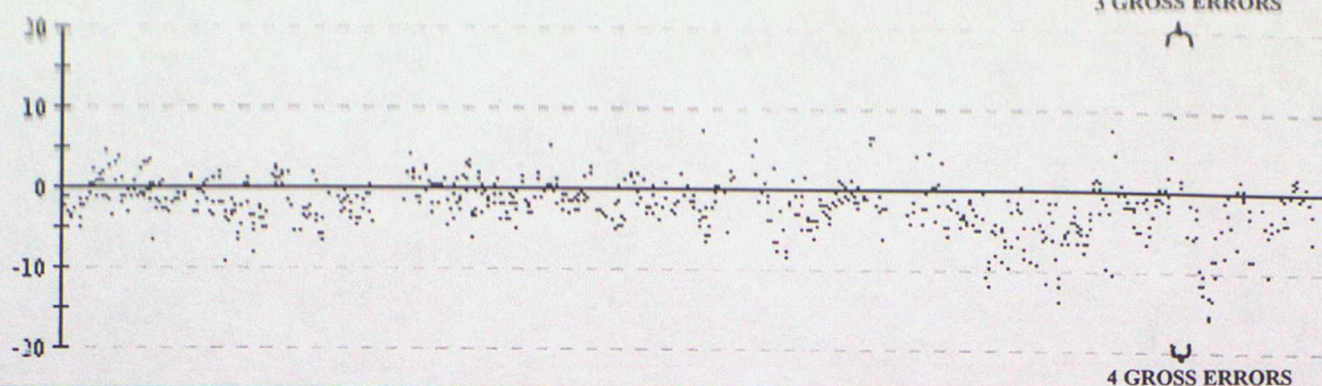
65596 Air Temperature



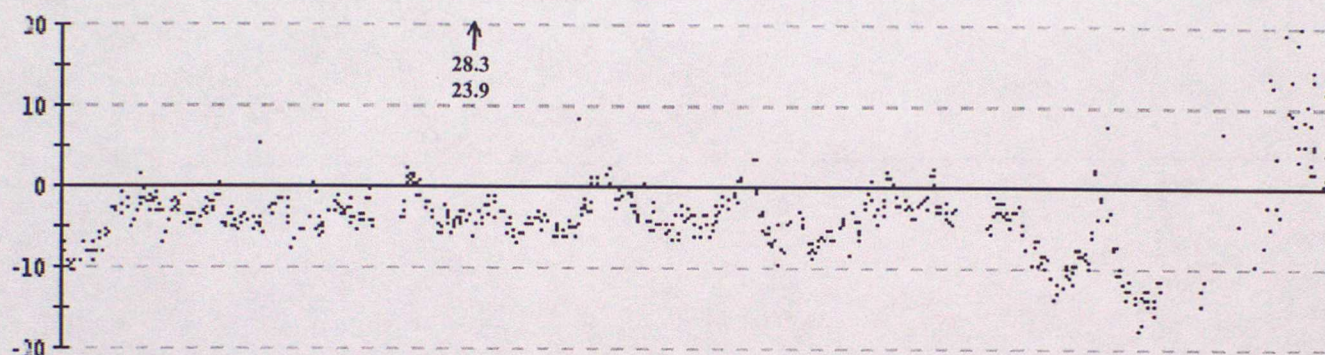
ANNEX D - TIME SERIES PLOTS OF WIND SPEED

Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

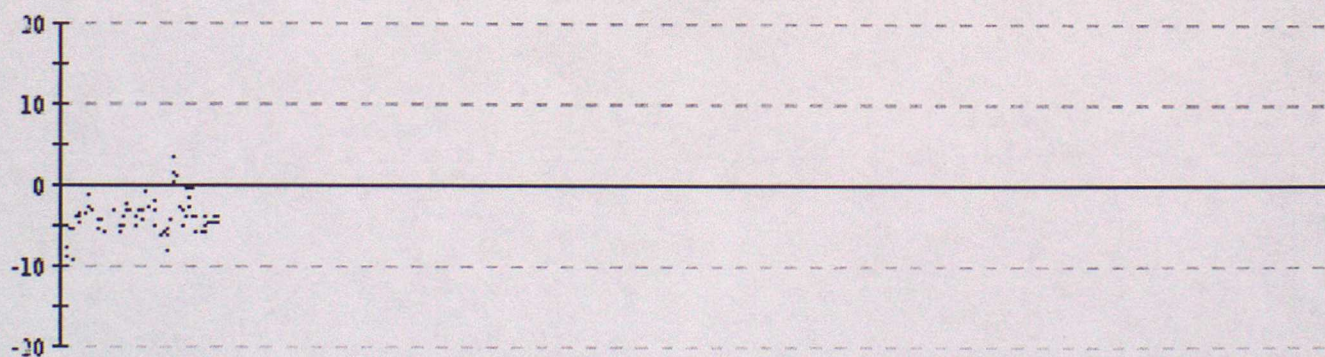
41521 Wind speed



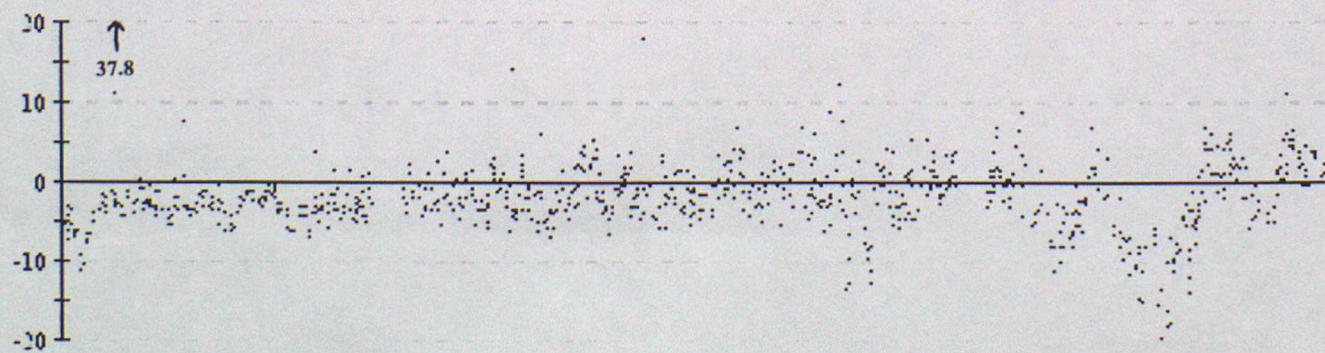
41636 Wind speed



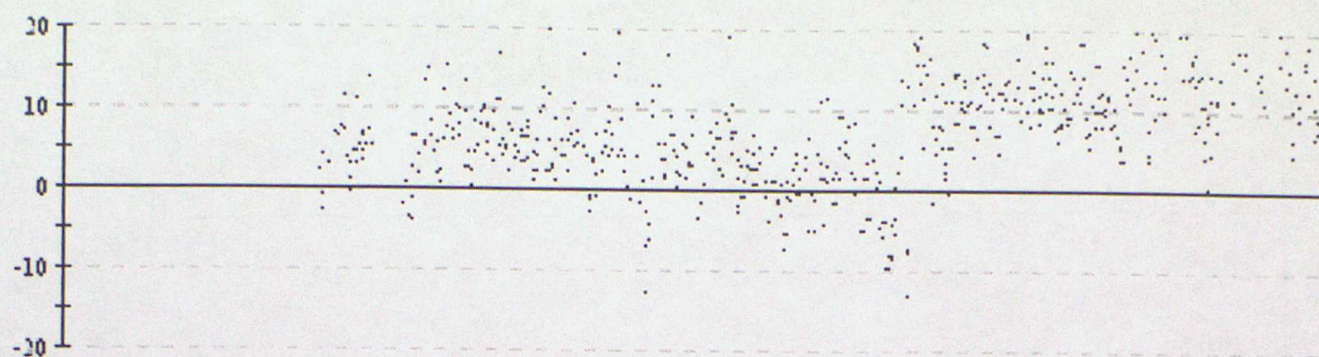
41637 Wind speed



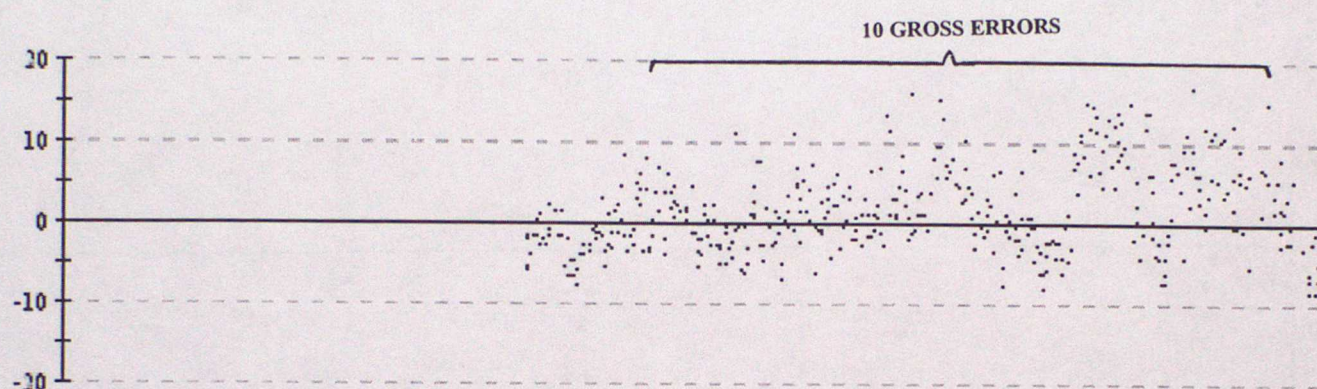
41638 Wind speed



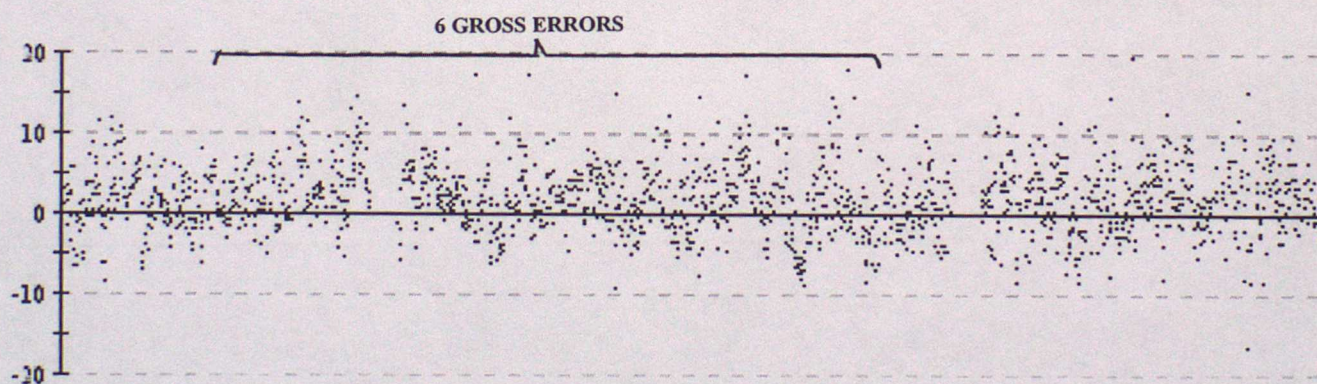
41648 Wind speed



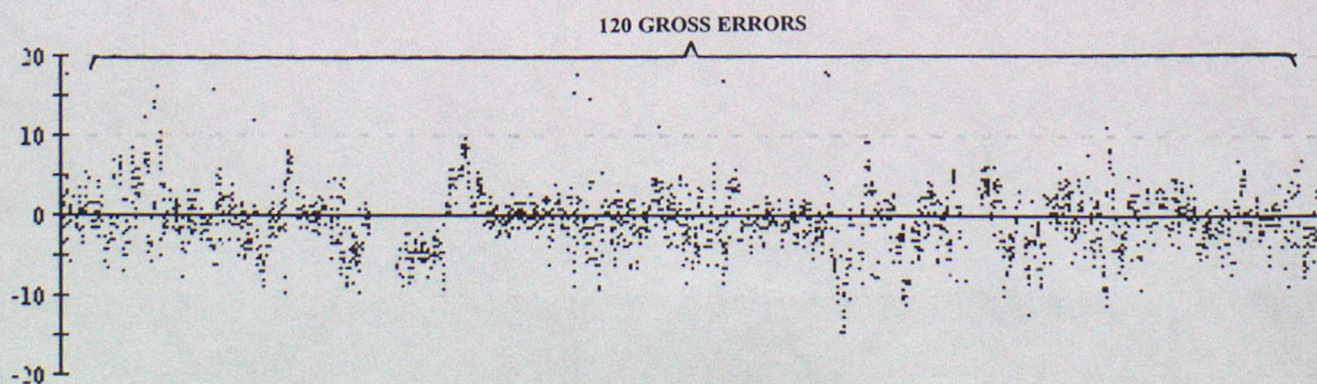
41649 Wind speed



44607 Wind speed

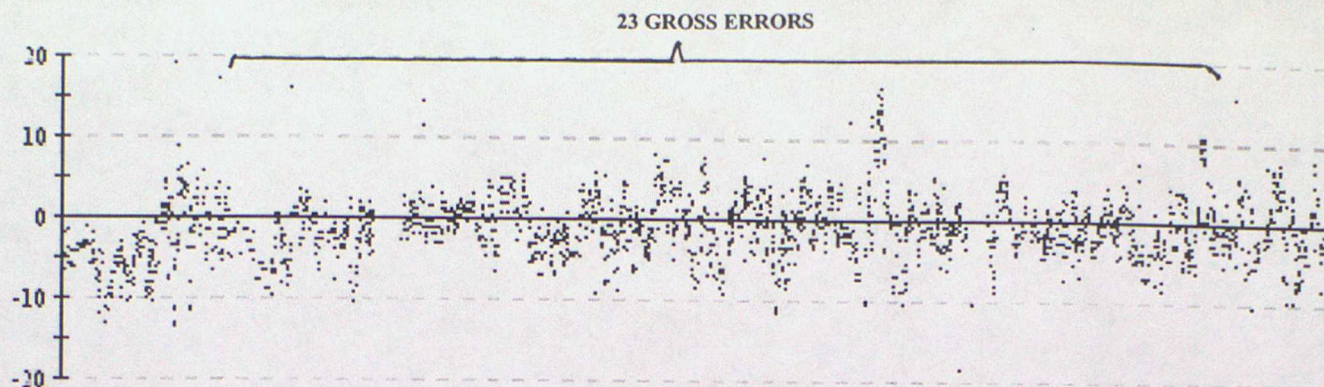


44773 Wind speed

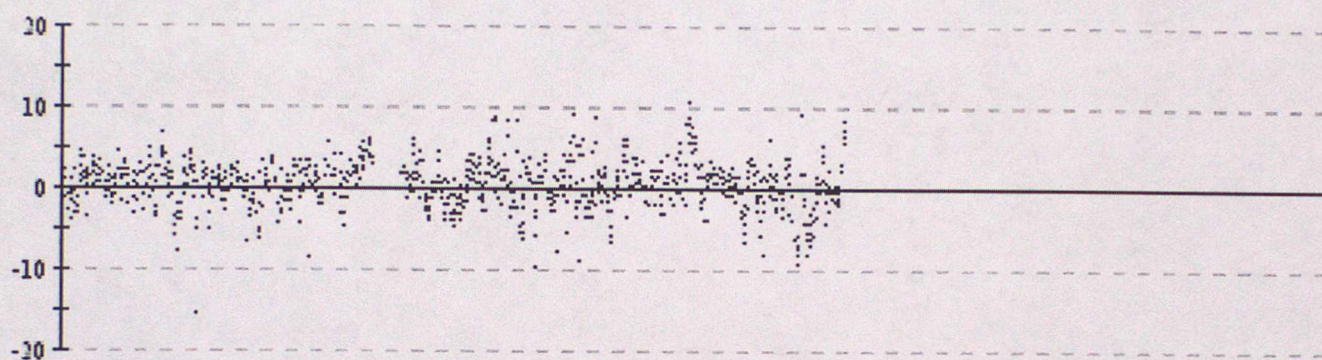


Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

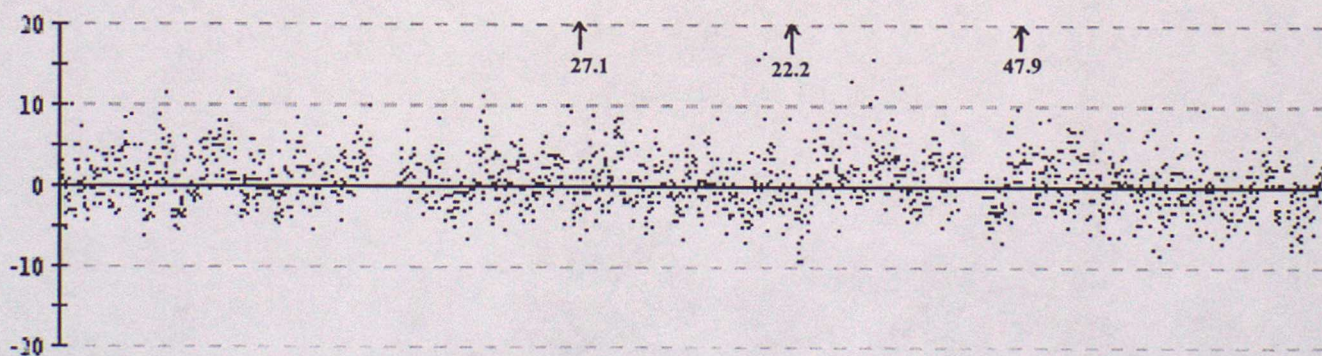
44777 Wind speed



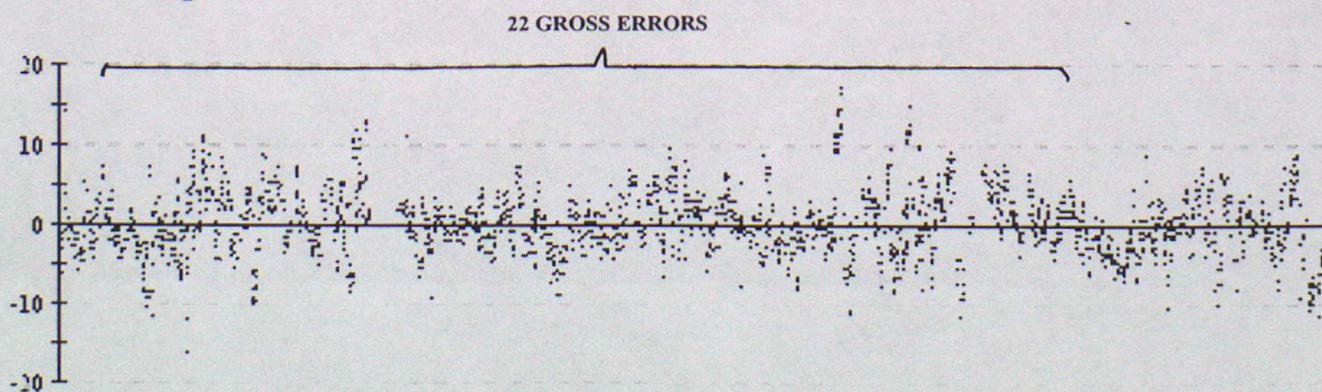
62505 Wind speed



62506 Wind speed



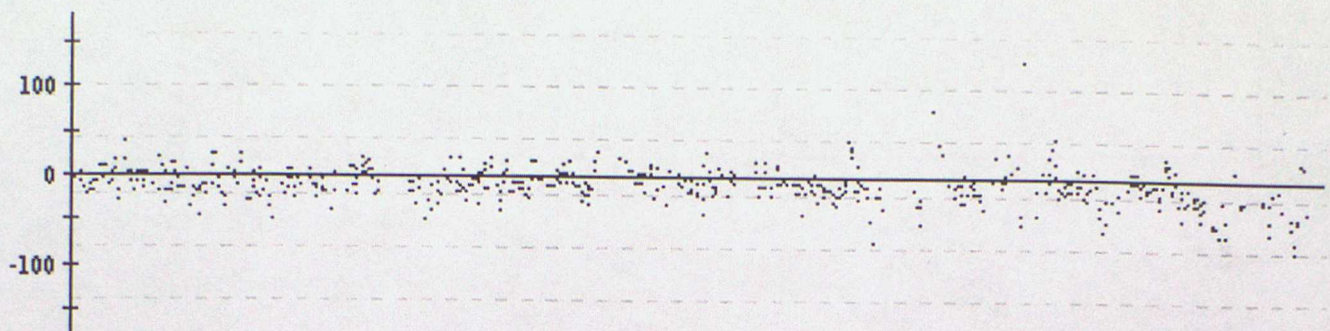
65599 Wind speed



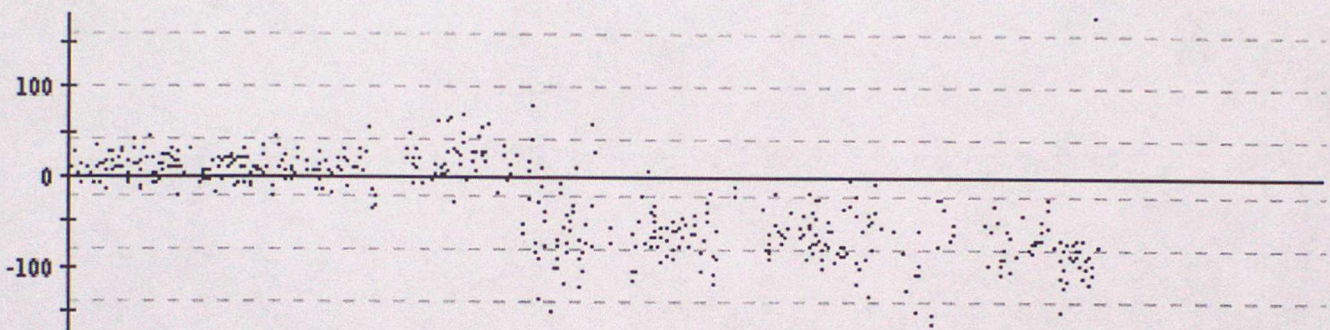
ANNEX E - TIME SERIES PLOTS OF WIND DIRECTION

Data from 00z on 01/07/1999 to 23z on 30/09/1999 (OBS - Background field)

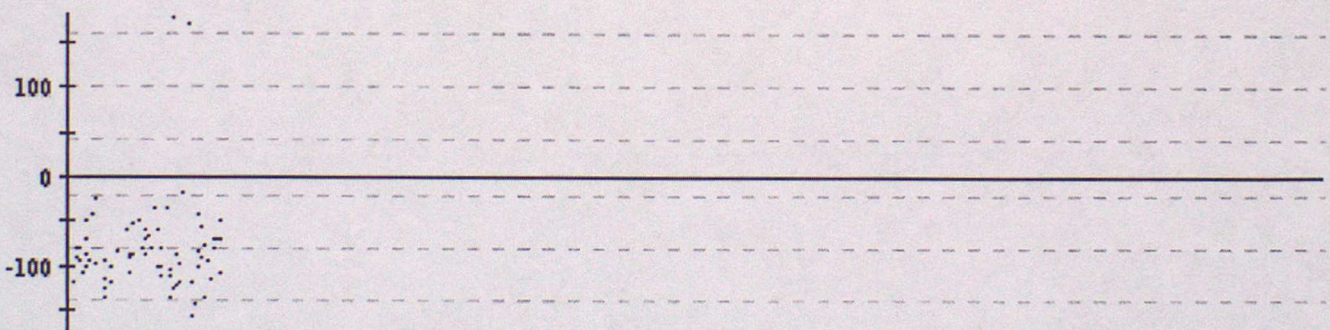
41521 Wind direction



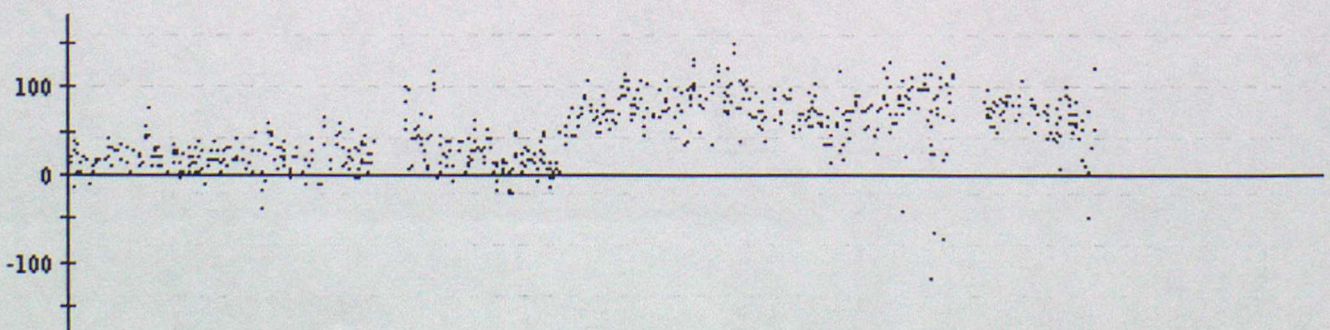
41636 Wind direction



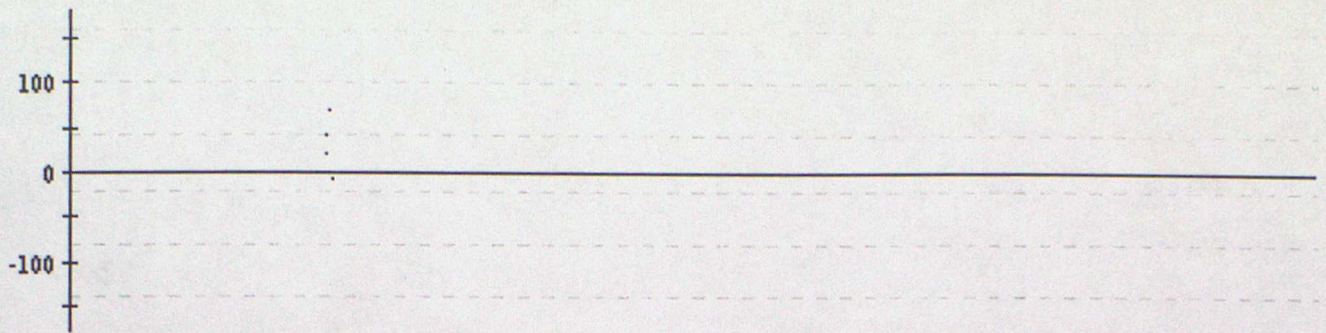
41637 Wind direction



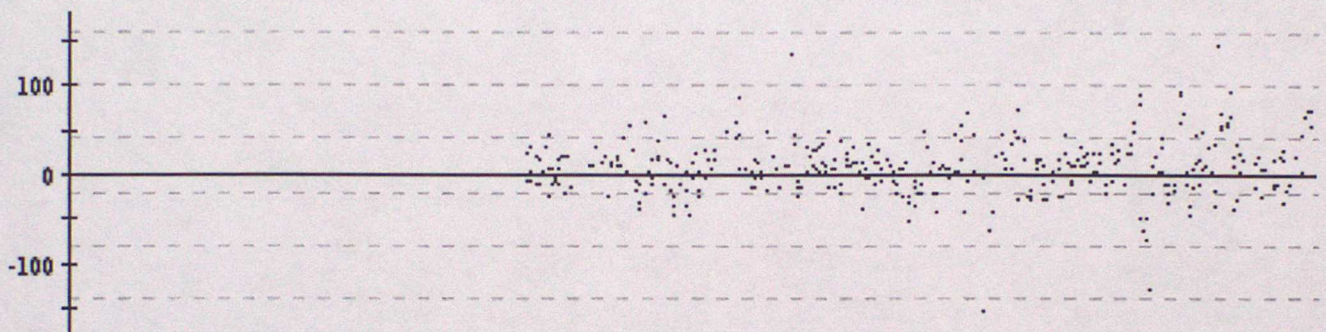
41638 Wind direction



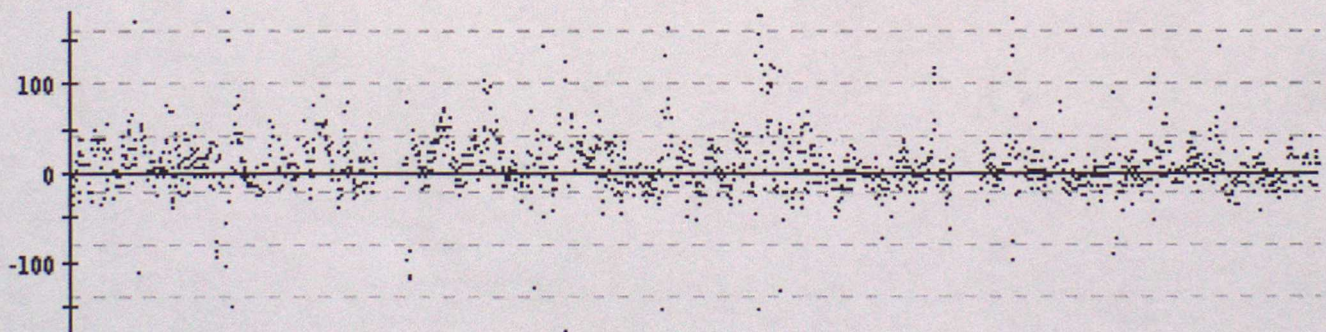
41648 Wind direction



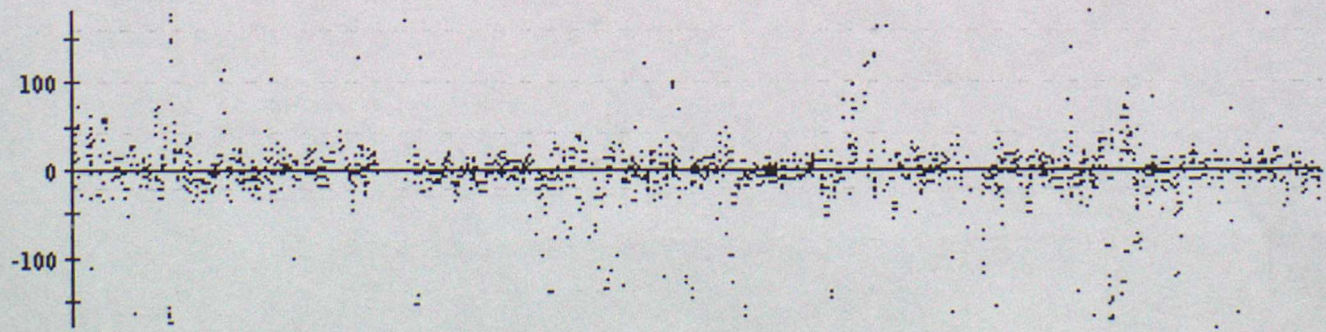
41649 Wind direction



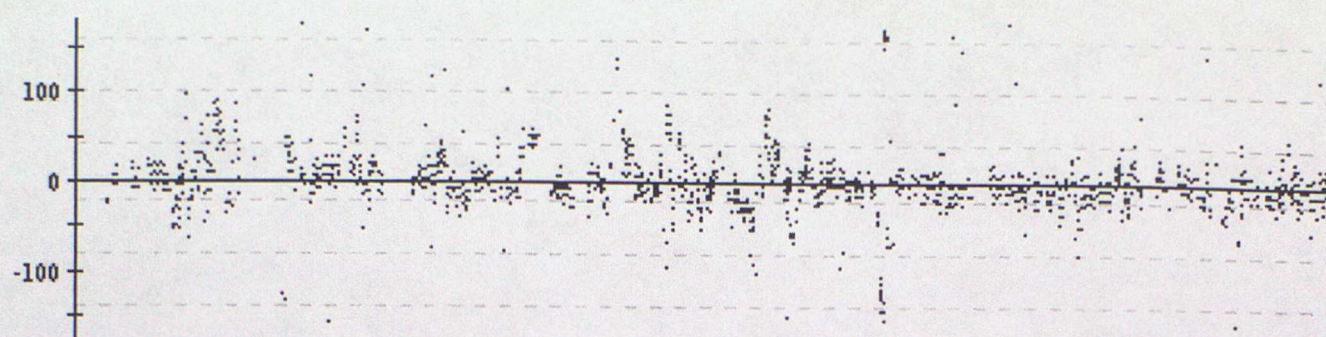
44607 Wind direction



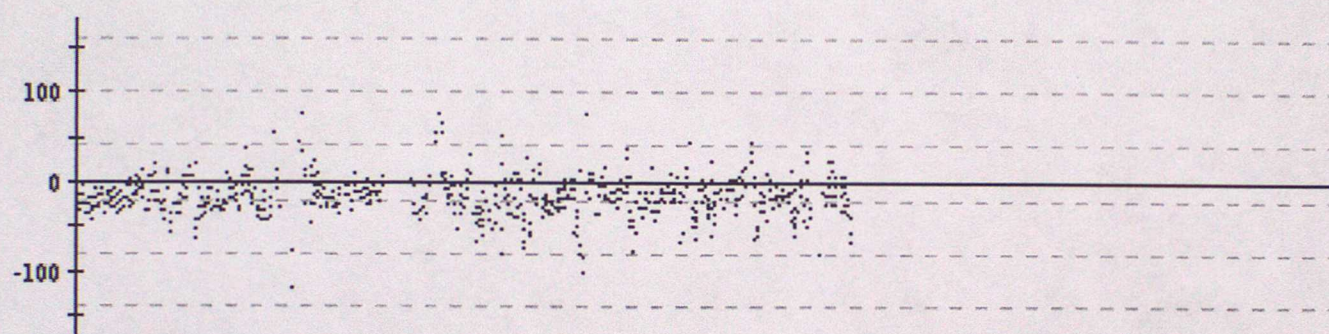
44773 Wind direction



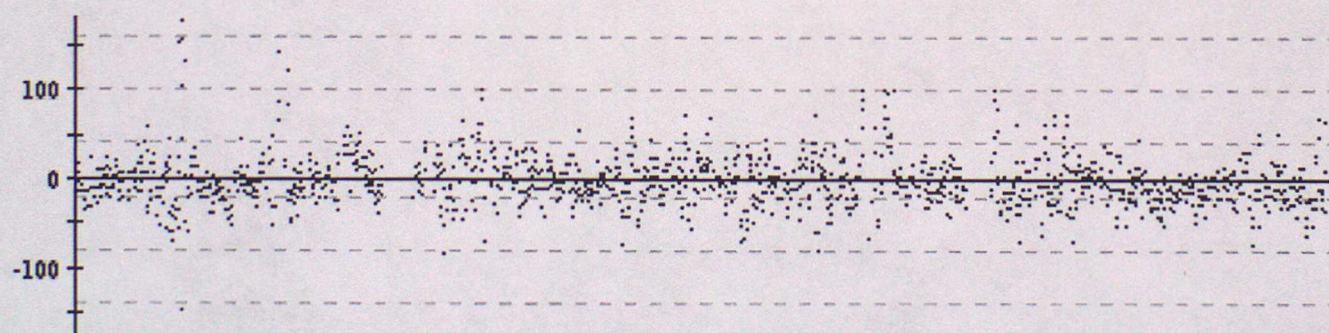
44777 Wind direction



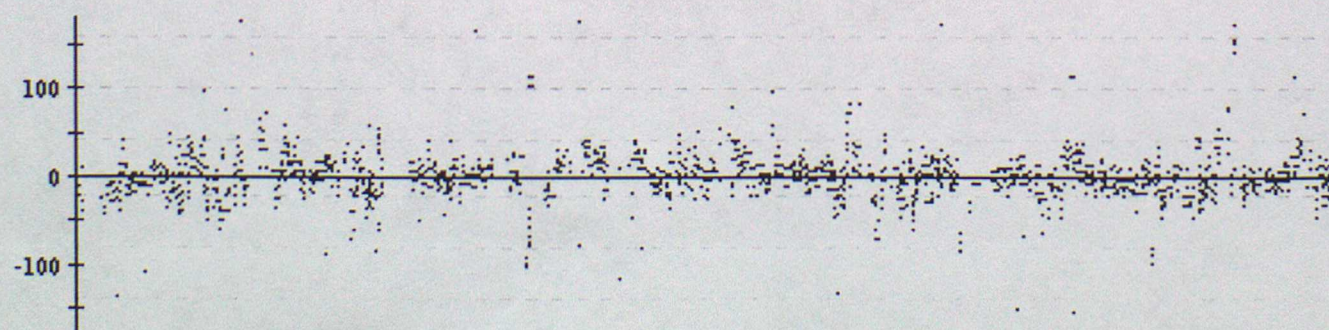
62505 Wind direction



62506 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	
13504			*		*			*	10/08 - 30/09
41502			*					*	01/07 - 03/08
41505			*					*	01/07 - 30/09
41521			*		*	*	*	*	01/07 - 30/09
41528			*					*	01/07 - 30/09
41598			*					*	01/07 - 31/08
41599			*					*	01/07 - 30/09
41628			*		*			*	10/07 - 15/09
41636			*			*	*	*	01/07 - 30/09
41637			*			*	*	*	01/07 - 30/09
41638			*			*	*	*	01/07 - 30/09
41648			*			*	*	*	19/07 - 30/09
41649			*			*	*	*	03/08 - 30/09
41656			*		*			*	03/08 - 05/09
41852			*	*				*	27/08 - 30/09
44513	26237	US	*		*			*	01/07 - 11/07
44514	26235	US	*		*			*	01/07 - 03/07
44515	26236	US	*		*			*	01/07 - 05/07
44517	26234	US	*		*			*	01/07 - 05/07
44546	14538	F	*	*				*	01/07 - 30/09
44607	6216	F	*	*		*	*	*	01/07 - 30/09
44608	14540	F	*	*				*	01/07 - 30/09
44610	12734	F	*	*				*	01/07 - 30/09
44613	28467	UK	*	*	*				01/07 - 30/09
44614	12375	UK	*	*	*			*	08/07 - 30/09
44616	38468	UK	*	*	*			*	01/07 - 30/09
44621	12372	UK	*	*	*			*	01/07 - 30/09
44624	28470	UK	*	*	*			*	01/07 - 30/09
44625	12283	UK	*	*	*			*	16/07 - 30/09
44626	12284	UK	*	*	*			*	16/07 - 30/09
44627	12285	UK	*	*	*			*	19/07 - 30/09
44628	12287	UK	*	*	*			*	19/07 - 30/09
44629	12374	UK	*	*	*			*	19/07 - 30/09
44630	12376	UK	*	*	*			*	19/07 - 30/09
44728	12375	UK	*	*	*			*	01/07 - 30/09
44742	28471	UK	*	*	*			*	01/07 - 10/09

ANNEX F - CONT'd

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
44764	28464	UK	*	*	*			*	01/07 - 03/09
44765	28466	UK	*	*	*			*	01/07 - 30/09
44766	28465	UK	*	*	*			*	01/07 - 30/09
44773	12415	UK	*	*	*	*	*	*	01/07 - 30/09
44777	12377	UK	*	*	*	*	*	*	01/07 - 30/09
44778	28473	UK	*	*				*	01/07 - 30/09
44780	27642	UK	*	*	*			*	01/07 - 30/09
61501			*					*	10/09 - 30/09
61502			*					*	10/09 - 30/09
61504			*					*	10/09 - 30/09
62505	5790	F	*	*	*	*	*	*	01/07 - 30/08
62506	12733	F	*	*		*	*	*	01/07 - 30/09
62520	14431	F	*	*				*	01/07 - 30/09
62554	14430	F	*	*				*	01/07 - 30/09
62901			*	*				*	01/07 - 25/09
64516	14176	F	*	*				*	01/07 - 30/09
64517	14178	F	*	*				*	01/07 - 30/09
64518	14180	F	*	*				*	01/07 - 30/09
64529	6669	D	*	*	*			*	01/07 - 30/09
64530	4272	D	*	*	*			*	08/07 - 30/09
64546			*	*	*			*	08/09 - 30/09
64692	15088	IC	*	*				*	01/07 - 04/08
64693	15100	IC	*	*				*	01/07 - 30/09
64694	15108	IC	*	*				*	01/07 - 30/09
64695	15111	IC	*	*				*	01/07 - 30/09
64696	15124	IC	*	*				*	01/07 - 13/07
64697	15128	IC	*	*				*	01/07 - 16/07
64698	29867	IC	*	*				*	01/07 - 30/09
64699	29868	IC	*	*				*	01/07 - 30/09
64700	29870	IC	*	*				*	01/07 - 30/09
65593	4228	NL	*	*	*			*	01/07 - 30/09
65594	2295	D	*	*	*			*	01/07 - 30/09
65595	4229	NL	*	*	*			*	01/07 - 30/09
65596			*	*	*			*	06/09 - 30/09
65599	28477	UK	*	*		*	*	*	01/07 - 30/09

