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Quality Evaluation Section

THIRTY NINTH QUARTERLY REPORT

ON DRIFTING BUOYS

IN THE NORTH ATLANTIC

JULY TO SEPTEMBER 1996

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4th December 1996

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

Drifting buoys operated by European countries, the United States, Canada and E.G.O.S. (European Group on Ocean Stations) provide valuable meteorological data in the North Atlantic Ocean. This report is a summary of the performance of these buoys giving information on the number of buoys operating, the accuracy of reported locations and data quality, timeliness and availability. It is compiled by looking at observations received in the Met. Office Meteorological Data 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 similar to last quarter with 52 out of 56 of the buoys reporting having a '% of observations with acceptable positions' greater than 95% (compared to 43 out of 46 last quarter). There were 0 gross errors in location during the quarter - the same as last quarter (see under Data Quality).

(b) Data timeliness

(see note 9 of section 5 for definition of terms.)

Timeliness	Last quarter.	This quarter
Very Good	20	19
Good	9	12
Satisfactory	5	14
Poor	4	1
Very poor	8	10
Total no. of buoys	46	56

(c) Data availability

(see note 9 of section 5 for definition of terms.)

Availability	South of 50 deg N		North of 50 deg N	
	Previous Quarter	Present Quarter	Previous Quarter	Present Quarter
Very Good	--	--	11	15
Good	2	3	5	3
Satisfactory	3	18	4	4
Poor	12	7	7	3
Very Poor	2	1	--	2

The total number of buoy days in the quarter was 3,851 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 3,391) and the number of 'buoy hours' with at least one observation was 60,052 (compared with 38,750 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 15.59 (last quarter the figure was 11.43).

3. SUMMARY OF PRESSURE PERFORMANCE

NOTE

Although buoys 44616, 44763, 44767, 44768, 44769, 44772, 65594 and 65598 were reporting at the beginning of the period, pressure data failed to reach the Observation Processing Databanks (OPD) until 6/7, 8/7, 4/7, 8/7, 8/7, 3/7, 7/7 and 4/7 respectively.

(a) Buoy deployments, etc.

North of 50deg N

There were 22 buoys reporting pressure at the beginning of the period. This figure includes buoys 71544 and 71545 which were not included in the last report. The figure also includes the buoys in the note above - all of which were north of 50 degN. 22 buoys were reporting at the end of the period. 5 new buoys were deployed during the period (44513, 44614, 44743, 44766 and 65599). 5 buoys ceased reporting (44728 (this buoy ceased reporting pressure on 28/7 but continued to report other elements), 44768, 44773, 71544 and 71545).

South of 50deg N

There were 18 buoys reporting pressure at the beginning of the period. This figure includes buoy 61522 which was reporting at the end of the last period but failed to report on the first couple of days of this period. This figure also includes buoys 71546 and 71557 which were not included in the last report. 15 buoys were reporting at the end of the period. 11 new buoys were deployed (44617, 61525, 61526, 61527, 61529, 61534, 62513, 62515, 62516, 62517 and 62518). 14 buoys ceased reporting (41526, 41585, 44613, 44727, 61522, 61525, 61529, 61534, 62501, 62505, 62506, 63661, 71546 and 71557).

(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 degN the Revised RMS differences should be less than 2.0 hPa and for buoys north of 50 degN 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:-

- 44769 - Data from this buoy were erroneous from the start of September until midway through the month, when the pressure improved to a more accurate level.
- 61522 - Pressure data showed a consistent bias of -5.0 hPa from the start of the period until the end of the buoy's life on 21/8.
- 61534 - Pressure data were erroneous for the first couple of days and last couple of days of this buoy's life.
- 62518 - This buoy showed a larger than normal scatter of data from the start of it's life on 9/9 until the end of the reporting period.
- 63661 - There were only a limited number of reports (12) from this buoy. However, all pressure data proved to be erroneous.
- 71546 - There were only a limited number of reports (13) from this buoy. However, all pressure data proved to be erroneous.
- 71557 - There were only a limited number of reports (12) from this buoy. However, all pressure data proved to be erroneous.

Biases

6 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.	Position	Buoy bias (hPa)	Ship bias (hPa)	Period of reports
44513	W of SOBA	-0.6	-0.4	31/08 - 30/09
44616	E of SOBA	+0.8	-0.6	01/07 - 30/09
61525	S of Spain	+1.3	-0.1	16/07 - 18/08
62516	N of SCOS	-0.8	-0.1	12/09 - 30/09
71544	N of SCOS	-1.6	-0.2	01/07 - 07/09
71545	N of SCOS	-3.3	-0.1	01/07 - 06/09

The ship bias represents the mean pressure biases reported from ships within a radius of 500 nautical miles of the mean position of each buoy.

Gross errors

The observations that appear to lie outside the expected distribution - the 'gross' errors (see Time-series graphs) - have been ringed. (The erroneous observations which occurred towards the end of the life of 44613 and 44728 have not been included in this section.) The observations have been individually examined to see whether the errors lie with the pressure, location or the background field. Out of 228 occasions the results are as follows -

ERROR	NUMBER LAST QUARTER	NUMBER THIS QUARTER	COLLECTING CENTRE
bg field	0	0	-----
location	0	0	Oslo
location	0	0	Sondre Stromfjord
location	0	0	Paris
location	0	0	US Air Force
pressure	98	107	Oslo
pressure	1	51	Sondre Stromfjord
pressure	74	70	Paris
pressure	1	0	US Air Force
Total no. of buoy hours	37,650	60,052	

During the quarter 228 gross pressure errors were transmitted as compared to 174 last quarter. There were no gross location errors from the Local User Terminals.

(4) Air Temperatures and Sea Surface Temperatures

The following table shows the mean and standard deviation of observation minus background differences for air temperatures and sea surface temperatures. Figures in brackets are for the observations from voluntary observing ships within a radius of about 500 nautical miles of the mean position of each buoy.

(Note : The calculations below include gross errors. Therefore, in some instances, the figures may be slightly misleading.)

(see tables on following pages)

WMO No.	Air Temperature			Sea Surface Temperature		
	Mean	St. Dev	No. of Obs	Mean	St. Dev.	No. of Obs
25565	1.0(-0.2)	1.3(2.7)	1563 (225)	---	---	---
41526	0.6(0.2)	0.9(4.3)	412 (267)	0.2(0.0)	0.5(3.0)	440 (207)
41585	0.5(0.5)	1.2(4.6)	191 (226)	0.3(0.2)	0.5(2.4)	207 (177)
44513	0.2(-0.4)	0.9(1.7)	566 (312)	0.2(0.0)	0.5(3.0)	575 (257)
44613	---	---	---	-0.1(0.2)	1.7(3.8)	2554 (832)
44614	0.3(0.4)	1.8(2.2)	4068 (73)	0.3(0.0)	1.0(1.0)	4118 (64)
44616	0.7(-0.6)	1.4(3.6)	4827 (237)	0.0(-0.4)	0.6(1.0)	5237 (224)
44617	1.6(-0.1)	5.3(1.8)	504 (199)	-1.2(-0.2)	1.1(3.9)	525 (184)
44727	0.3(0.3)	1.1(1.9)	2465 (704)	-0.2(0.1)	0.8(3.1)	2513 (577)
44728	0.1(0.3)	1.6(2.1)	2809 (95)	0.1(0.0)	0.7(1.4)	2952 (80)
44743	28.3(-0.5)	3.0(1.7)	81 (249)	-0.6(-0.2)	1.3(3.7)	488 (215)
44760	0.6(0.4)	0.6(5.9)	886 (134)	-0.5(0.2)	0.5(2.0)	1230 (99)
44763	0.6(0.3)	0.9(2.0)	4864 (88)	-0.2(0.1)	0.8(1.5)	5447 (79)
44765	0.4(0.4)	2.6(2.1)	4760 (85)	-0.1(0.0)	0.7(1.4)	3138 (75)
44766	0.5(0.0)	1.2(1.7)	696 (158)	0.2(-0.3)	0.9(4.2)	375 (143)
44767	0.3(-0.3)	1.0(4.7)	4855 (98)	0.5(0.1)	0.8(1.4)	5165 (92)
44768	0.2(0.1)	1.2(2.3)	4849 (55)	0.2(0.0)	0.9(1.6)	5475 (46)
44769	---	---	---	0.0(-0.3)	0.5(1.0)	5435 (254)
44770	0.4(0.8)	1.2(4.8)	1594 (230)	-0.4(0.2)	0.5(1.8)	1672 (193)

Statistics of (ob-bg) differences for buoys reporting this
quarter and all ships within 500 nautical miles

WMO No.	Air Temperature			Sea Surface Temperature		
	Mean	St. Dev	No. of Obs	Mean	St. Dev.	No. of Obs
44771	0.3(0.0)	1.3(4.2)	4675 (139)	-0.2(0.2)	0.7(1.5)	4710 (131)
44772	-0.1(-0.2)	1.4(4.5)	4787 (108)	0.0(0.1)	0.6(1.4)	3141 (106)
44773	1.8(-0.2)	6.6(6.0)	3140 (690)	-0.2(0.0)	0.9(3.4)	3299 (633)
44774	0.3(-0.1)	1.3(3.4)	4565 (269)	0.1(0.5)	0.7(4.0)	4587 (245)
44775	-0.2(-0.4)	2.4(1.9)	2029 (190)	0.7(-0.4)	1.2(4.0)	2063 (171)
44777	---	---	---	-0.4(-0.5)	1.3(2.2)	2673 (81)
44778	-0.1(0.2)	2.0(2.0)	2417 (82)	0.3(0.3)	1.0(1.7)	2475 (73)
44911	---	---	---	0.1(-0.2)	0.3(3.3)	8 (232)
61522	7.3(0.0)	7.3(5.2)	120 (427)	---	---	---
61525	-0.1(-0.3)	5.5(2.5)	532 (344)	0.7(-0.4)	1.1(2.3)	477 (229)
61526	1.6(-0.2)	2.1(5.5)	932 (398)	-0.1(-0.2)	1.2(3.2)	1389 (352)
61527	2.5(-0.4)	2.7(17.4)	1177 (304)	0.2(-0.4)	1.9(1.7)	1703 (292)
61529	1.6(-0.2)	2.2(11.4)	995 (365)	0.1(-0.3)	1.4(1.7)	1421 (347)
61534	2.4(-0.1)	1.8(5.2)	809 (425)	0.3(-0.1)	0.8(3.2)	1214 (392)
62501	---	---	---	-0.2(0.5)	0.3(4.8)	1528 (340)
62503	---	---	---	0.2(0.2)	0.4(3.7)	1698 (657)
62504	---	---	---	0.1(0.0)	0.4(4.2)	1712 (704)
62505	---	---	---	0.4(0.3)	0.5(4.4)	1549 (433)
62506	0.9(-0.1)	0.9(2.9)	1017 (447)	0.3(0.4)	0.5(4.4)	1102 (416)

Statistics of (ob-bg) differences for buoys reporting this
quarter and all ships within 500 nautical miles

WMO No.	Air Temperature			Sea Surface Temperature		
	Mean	St. Dev	No. of Obs	Mean	St. Dev.	No. of Obs
62507	---	---	---	-0.2(0.4)	0.5(2.9)	1081 (512)
62508	---	---	---	---	---	---
62510	---	---	---	0.1(0.2)	0.4(4.0)	1066 (567)
62513	---	---	---	-5.6(0.4)	7.1(3.5)	225 (337)
62515	---	---	---	0.1(0.4)	0.1(4.9)	165 (353)
62516	-1.2(-0.1)	2.6(3.0)	180 (465)	-0.8(0.3)	0.2(4.5)	351 (417)
62517	-1.5(-0.2)	3.0(3.1)	190 (366)	-0.3(0.5)	0.1(4.8)	360 (340)
62518	---	---	---	0.2(0.5)	0.3(3.8)	353 (290)
62910	---	---	---	0.5(0.0)	1.2(1.5)	8 (50)
63661	13.2(-0.2)	1.3(2.0)	7 (518)	---	---	---
65594	0.3(-0.1)	1.6(1.9)	4891 (51)	0.1(0.2)	1.1(1.9)	5354 (43)
65595	-1.6(0.1)	2.6(2.0)	4516 (72)	-0.2(0.1)	0.9(1.6)	2936 (60)
65598	0.1(0.1)	2.6(2.2)	4725 (61)	0.0(0.0)	0.7(1.6)	3223 (50)
65599	-0.3(-0.4)	1.1(1.7)	1620 (308)	-0.4(-0.1)	0.9(1.9)	995 (256)
71544	-42.1 (-0.2)	25.1(3.1)	28 (330)	---	---	---
71545	---	---	---	---	---	---
71546	-17.8 (-0.1)	27.9(1.9)	13 (330)	---	---	---
71557	---	---	---	---	---	---

Statistics of (ob-bg) differences for buoys reporting this
quarter and all ships within 500 nautical miles

Buoys 25565(1.0), 61522(7.3), 61526(1.6) (however, data from this buoy improved during September), 61527(2.5), 61529(1.6), 61534(2.4), 62516(-1.2), 62517(-1.5), 63661(13.2) (only 7 reports were received from this buoy) and 65595 (-1.6) all showed significant air temperature biases.

Buoy 44617 (1.6) produced erroneous air temperature data during the last few days of the period. Data from buoy 44743 was erroneous from the date of its deployment on 21/8 until it was removed from the GTS on 3/9. A large number of erroneous temperature observations were reported by 44773, particularly towards the end of the buoy's life (28/9). Buoys 71544(-42.1) and 71546(-17.8) produced only a limited number of reports, the majority of which were erroneous.

Buoy 44617(-1.2) showed a significant sea surface temperature bias.

Data from buoys 61527, 61529 and 61534 became erratic from 3/9 until the end of the reporting period in the case of 61527, and until 12/9 for buoys 61529 and 61534 (the day they ceased reporting). Buoy 62513 showed a bias of approximately -15°C from 18/9 until 25/9.

(5) Winds

The following table shows the mean and standard deviation of observation minus background differences for wind speed and direction. Figures in brackets are for the observations from voluntary observing ships within a radius of about 500 nautical miles of the mean position of each buoy (Note - it is not known what proportion of the ships' winds were measured rather than estimated visually using the Beaufort Scale). The statistics for this report can be compared with those for ships and the relative quality of the wind data from each buoy can be assessed.

(Note : Annex A quotes buoy 44617 as having 2.8% of wind speeds present and buoy 44771 as having 81.5% of wind speeds present. However, in both cases no analysis was carried out on the data because the speed reports were not accompanied by wind directions. The limited number of speed observations from 44617 also appeared to be consistently reporting as 40 knots.)

WMO No.	Period	Wind Speed (kn)		Wind Direction (deg)		No. of Obs
		Mean	St. Dev.	Mean	St. Dev.	
41526	01/07-01/09	-3.2(0.2)	2.8(4.3)	6.1(2.3)	17.6(43.1)	323 (267)
44513	31/08-30/09	-9.9(-0.4)	5.1(1.7)	31.8(-4.1)	17.6(17.2)	395 (312)
44613	01/07-22/09	-3.5(0.0)	3.3(4.6)	-4.1(-0.3)	23.8(25.5)	1956 (981)
62516	12/09-30/09	0.2(-0.1)	3.6(3.0)	-14.7(-1.2)	17.4(3.0)	337 (465)
62517	13/09-30/09	-1.7(-0.2)	4.0(3.1)	-3.9(-1.9)	33.9(30.6)	275 (366)
62518	09/09-30/09	1.2(-0.1)	4.6(3.3)	3.4(-0.9)	26.5(32.6)	297 (313)
65598	01/07-30/09	85.0(0.1)	60.4(2.2)	-51.0(1.4)	97.5(22.3)	25 (61)

Statistics of (ob-bg) differences for buoys reporting this quarter and all ships within 500 nautical miles

Buoys 41526, 44513 and 44613 showed a significant negative wind speed bias. Wind speed data from buoy 65598 was erroneous throughout the period, although only a limited number of reports were produced.

Buoys 44513 and 62516 showed a significant wind direction bias. Wind direction data from buoy 65598 was reported as 0 for the limited number of wind direction reports 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

ANNEX A - TABLE OF STATISTICS

Wmo No./Country	25565/UK	41526/US	41585/US
Argos Id No.	1639	5575	23640
Period within area	01/07 - 30/09	01/07 - 01/09	01/07 - 21/07
Area	E of SOBA	W of SCOS	W of SCOS
Mean Latitude	58.8	35.5	35.3
Mean Longitude	-16.4	-56.3	-43.5
No. of obs received	1798	464	212
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	99.1	100.0
% of Present			
Pressure	90.6	89.7	91.5
P. Tendency	84.9	0.0	0.0
Air Temperature	88.8	90.1	92.0
Wind Speed/Dir.	0.0/0.0	86.4/86.4	0.0/0.0
Sea-surface Temp.	0.0	90.1	91.5
Median delay(min)	104.0	160.0	76.0
Number of days	92.0	63.0	21.0
Mean no. of obs/day	19.5	7.4	10.1
No. of hours with obs	1267.0	461.0	206.0
Mean no. of hours/day with obs	13.8	7.3	9.8
% of hour periods without an ob	42.5	69.6	59.2
Mean (Ob-Bg)	0.0	-0.2	-0.2
RMS (Ob-Bg)	1.3	0.8	0.8
unflagged data			
Mean (Ob-Bg)	0.0	-0.2	-0.2
RMS (Ob-Bg)	1.3	0.8	0.8
all data			
Revised RMS (Ob-Bg)	1.3	0.8	1.8
% of data flagged	37.0	0.0	3.0
Operating at end of period	YES	NO	NO
Performance			
Availability	Satisfactory	Poor	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Satisfactory	Good
Comments			

ANNEX A - Cont.

Wmo No./Country	44513/??	44613/UK	44614/UK
Argos Id.No.	????	3324	1256
Period within area	31/08 - 30/09	01/07 - 22/09	02/07 - 30/09
Area	W of SOBA	SCOS	SOBA
Mean Latitude	56.4	40.4	59.9
Mean Longitude	-54.3	-13.3	-26.3
No. of obs received	614	2600	4301
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable positions	99.7	94.2	99.7
% of Present			
Pressure	95.4	53.9	97.6
P. Tendency	0.0	64.3	73.2
Air Temperature	95.6	0.0	95.5
Wind Speed /Dir.	83.6/90.9	93.7/92.6	0.0/0.0
Sea-surface Temp.	95.1	96.8	96.0
Median delay(Min)	13.0	33.0	23.0
Number of days	31.0	84.0	91.0
Mean no. of obs/day	19.8	30.1	47.3
No. of hours with obs	512.0	1295.0	1742.0
Mean no. of hours/day with obs	16.5	15.4	20.2
% of hour periods without an ob	31.3	35.8	15.8
Mean (Ob-Bg)	-0.6	-0.1	0.1
RMS (Ob-Bg)	1.3	0.8	1.1
unflagged data			
Mean (Ob-bg)	-0.6	2.9	-0.2
RMS (Ob-Bg)	1.8	11.7	4.6
all data			
Revised RMS (Ob-Bg)	1.3	1.1	1.3
% of data flagged	21.0	64.0	66.0
Operating at end of period	YES	NO	YES
Performance			
Availability	Satisfactory	Good	Very Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

ANNEX A - Cont.

Wmo No./Country	44616/UK	44617/UK	44727/UK
Argos Id. No.	3318	1255	2974
Period within area	01/07 - 30/09	22/08 - 30/09	01/07 - 26/09
Area	E of SOBA	NW of SCOS	SCOS
Mean Latitude	61.1	48.5	36.8
Mean Longitude	-14.4	-41.9	-16.7
No. of obs received	5435	542	2580
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	99.8	99.6	99.8
% of Present			
Pressure	99.0	95.9	99.3
P. Tendency	93.3	88.6	95.3
Air Temperature	96.6	95.8	96.4
Wind Speed/Dir.	0.0/0.0	2.8/0.0	0.0/0.0
Sea-surface Temp.	96.7	95.9	96.4
Median delay(min)	137.0	14.0	25.0
Number of days	92.0	40.0	88.0
Mean no. of obs/day	59.1	13.6	29.3
No. of hours with obs	1948.0	470.0	1424.0
Mean no. of hours/day with obs	21.2	11.8	16.2
% of hour periods without an ob	11.7	50.8	32.5
Mean (Ob-Bg)	0.8	-0.2	-0.1
RMS (Ob-Bg)	1.4	1.3	0.8
unflagged data			
Mean (Ob-bg)	0.7	-0.5	-0.4
RMS (Ob-Bg)	2.6	5.1	4.4
all data			
Revised RMS (Ob-Bg)	1.5	1.3	1.1
% of data flagged	71.0	18.0	51.0
Operating at end of period	YES	YES	NO
Performance			
Availability	Very Good	Poor	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Satisfactory	Very Good	Very Good
Comments			

ANNEX A - Cont.

Wmo No./Country	44728/UK	44743/UK	44760/UK
Argos Id.No.	3024	1248	2947
Period within area	01/07 - 30/09	21/08 - 30/09	01/07 - 30/09
Area	E of SOBA	SW of SOBA	SW of SCOS
Mean Latitude	59.1	52.4	22.8
Mean Longitude	-20.8	-49.8	-51.0
No. of obs received	2948	508	1209
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable positions	100.0	99.2	98.1
% of Present			
Pressure	37.5	96.1	99.2
P. Tendency	92.1	89.6	98.8
Air Temperature	97.7	16.5	98.9
Wind Speed /Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	98.1	96.9	99.3
Median delay(Min)	132.0	76.0	134.0
Number of days	92.0	41.0	92.0
Mean no. of obs/day	32.0	12.4	13.1
No. of hours with obs	1555.0	432.0	1053.0
Mean no. of hours/day with obs	16.9	10.5	11.4
% of hour periods without an ob	29.6	56.3	52.5
Mean (Ob-Bg)	0.4	-0.3	0.0
RMS (Ob-Bg)	1.1	1.4	0.9
unflagged data			
Mean (Ob-bg)	4.4	-0.3	0.0
RMS (Ob-Bg)	13.7	2.5	0.9
all data			
Revised RMS (Ob-Bg)	1.7	1.9	0.9
% of data flagged	69.0	21.0	11
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Poor	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Satisfactory	Good	Satisfactory
Comments	Pressure data ceased reporting on 28/7		

ANNEX A - Cont.

Wmo No./Country	44763/UK	44765/NL	44766/D
Argos Id.No.	3098	4178	1298
Period within area	01/07 - 30/09	01/07 - 30/09	21/08 - 30/09
Area	SOBA	E of SOBA	N of SCOS
Mean Latitude	58.2	59.2	50.3
Mean Longitude	-27.8	-23.2	-39.5
No. of obs received	5631	5076	689
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	99.6	64.5	98.0
% of Present			
Pressure	99.2	96.9	99.0
P. Tendency	93.8	91.3	92.2
Air Temperature	97.3	95.2	99.0
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	97.4	62.5	55.9
Median delay(min)	254.0	114.0	73.0
Number of days	92.0	92.0	41.0
Mean no. of obs/day	61.2	55.2	16.8
No. of hours with obs	1954.0	1838.0	496.0
Mean no. of hours/day with obs	21.2	20.0	12.1
% of hour periods without an ob	11.7	16.7	49.6
Mean (Ob-Bg)	0.2	-0.1	-0.5
RMS (Ob-Bg)	1.0	1.1	1.5
unflagged data			
Mean (Ob-bg)	0.1	-0.2	-0.5
RMS (Ob-Bg)	3.7	2.6	1.5
all data			
Revised RMS (Ob-Bg)	1.1	1.2	1.5
% of data flagged	71.0	70.0	36.0
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Satisfactory
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Poor	Good	Good
Comments			

ANNEX A - Cont.

Wmo No./Country	44767/UK	44768/UK	44769/UK
Argos Id.No.	3013	1251	1253
Period within area	01/07 - 30/09	01/07 - 27/09	01/07 - 30/09
Area	SOBA	SOBA	E of SOBA
Mean Latitude	57.3	62.7	59.1
Mean Longitude	-27.4	-32.7	-15.2
No. of obs received	5330	5701	5588
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable positions	99.4	99.4	99.8
% of Present			
Pressure	99.0	99.0	92.7
P. Tendency	93.7	93.3	90.9
Air Temperature	97.3	97.1	0.0
Wind Speed /Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	97.3	97.0	97.2
Median delay(Min)	49.0	61.0	163.0
Number of days	92.0	89.0	92.0
Mean no. of obs/day	57.9	64.1	60.7
No. of hours with obs	1902.0	1965.0	1952.0
Mean no. of hours/day with obs	20.7	22.1	21.2
% of hour periods without an ob	13.8	7.9	11.7
Mean (Ob-Bg)	0.2	0.1	0.3
RMS (Ob-Bg)	1.1	1.1	1.3
unflagged data			
Mean (Ob-bg)	0.1	0.0	1.3
RMS (Ob-Bg)	2.7	3.5	6.3
all data			
Revised RMS (Ob-Bg)	1.2	1.3	4.9
% of data flagged	70.0	73.0	74.0
Operating at end of period	YES	NO	YES
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Good	Satisfactory
Comments			

ANNEX A - Cont.

Wmo No./Country	44770/UK	44771/UK	44772/D
Argos Id.No.	3035	2954	6667
Period within area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Area	W of SCOS	SE of SOBA	SOBA
Mean Latitude	26.6	53.5	56.1
Mean Longitude	-56.9	-24.2	-26.3
No. of obs received	1667	4844	5183
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	99.4	97.4
% of Present			
Pressure	99.6	99.3	97.1
P. Tendency	98.7	94.7	92.5
Air Temperature	99.4	97.3	95.7
Wind Speed/Dir.	0.0/0.0	81.9/0.0	0.0/0.0
Sea-surface Temp.	99.6	97.3	61.5
Median delay(min)	514.0	46.0	111.0
Number of days	92.0	92.0	92.0
Mean no. of obs/day	18.1	52.7	56.3
No. of hours with obs	1216.0	1821.0	1808.0
Mean no. of hours/day with obs	13.2	19.8	19.7
% of hour periods without an ob	45.0	17.5	17.9
Mean (Ob-Bg)	0.3	0.1	-0.1
RMS (Ob-Bg)	0.9	1.2	1.2
unflagged data			
Mean (Ob-bg)	0.1	-0.1	-0.1
RMS (Ob-Bg)	4.7	3.8	1.7
all data			
Revised RMS (Ob-Bg)	1.0	1.4	1.2
% of data flagged	38.0	69.0	71.0
Operating at end of period	YES	YES	YES
Performance			
Availability	Satisfactory	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Poor	Very Good	Good
Comments			

ANNEX A - Cont.

Wmo No./Country	44773/UK	44774/UK	44775/UK
Argos Id. No.	3132	3162	1260
Period within area	01/07 - 28/09	01/07 - 30/09	01/07 - 30/09
Area	W of Ireland	N of SCOS	S of SOBA
Mean Latitude	53.1	50.8	52.9
Mean Longitude	-12.7	-19.8	-44.0
No. of obs received	3409	4729	2139
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable positions	99.4	99.4	100.0
% of Present			
Pressure	98.8	99.6	97.2
P. Tendency	91.6	93.7	79.9
Air Temperature	92.7	97.1	95.7
Wind Speed /Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	96.2	97.0	96.3
Median delay(Min)	23.0	84.0	19.0
Number of days	90.0	92.0	92.0
Mean no. of obs/day	37.9	51.4	23.3
No. of hours with obs	1547.0	1836.0	1356.0
Mean no. of hours/day with obs	17.2	20.0	14.7
% of hour periods without an ob	28.3	16.7	38.8
Mean (Ob-Bg)	0.3	0.1	-0.4
RMS (Ob-Bg)	1.1	1.1	1.4
unflagged data			
Mean (Ob-bg)	0.1	-0.2	-0.5
RMS (Ob-Bg)	4.7	4.1	4.6
all data			
Revised RMS (Ob-Bg)	1.4	1.2	2.1
% of data flagged	61.0	67.0	45.0
Operating at end of period	NO	YES	YES
Performance			
Availability	Very Good	Very Good	Satisfactory
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Very Good
Comments			

ANNEX A - Cont.

Wmo No./Country	44777/UK	44778/UK	44911/US
Argos Id.No.	14733	1258	466
Period within area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Area	SOBA	S of SOBA	SW of SOBA
Mean Latitude	56.7	55.0	55.0
Mean Longitude	-38.8	-36.0	-48.8
No. of obs received	2787	2584	951
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	100.0	100.0
% of Present			
Pressure	97.5	96.7	86.2
P. Tendency	78.5	76.5	0.0
Air Temperature	0.0	94.7	0.0
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	95.8	95.4	0.8
Median delay(min)	16.0	22.0	610.0
Number of days	92.0	92.0	92.0
Mean no. of obs/day	30.3	28.1	10.3
No. of hours with obs	1540.0	1470.0	826.0
Mean no. of hours/day with obs	16.7	16.0	9.0
% of hour periods without an ob	30.4	33.3	62.5
Mean (Ob-Bg)	0.1	-0.1	0.2
RMS (Ob-Bg)	1.4	1.4	1.1
unflagged data			
Mean (Ob-bg)	0.1	-0.2	0.3
RMS (Ob-Bg)	3.3	4.5	1.1
all data			
Revised RMS (Ob-Bg)	1.7	1.7	1.1
% of data flagged	57.0	51.0	11.0
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Poor
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Poor
Comments			

ANNEX A - Cont.

Wmo No./Country	61522/US	61525/US	61526/US
Argos Id.No.	7207	????	????
Period within area	04/07 - 21/08	16/07 - 18/08	16/07 - 30/09
Area	E of Spain	S of Spain	E of Spain
Mean Latitude	38.7	35.6	39.2
Mean Longitude	1.3	-4.3	3.4
No. of obs received	178	796	1418
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable positions	100.0	99.9	100.0
% of Present			
Pressure	96.6	98.7	97.7
P. Tendency	0.0	0.0	0.0
Air Temperature	93.3	98.7	97.3
Wind Speed /Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	0.0	99.2	98.6
Median delay(Min)	469.0	560.0	495.0
Number of days	49.0	34.0	77.0
Mean no. of obs/day	3.6	23.4	18.4
No. of hours with obs	166.0	634.0	1156.0
Mean no. of hours/day with obs	3.4	18.6	15.0
% of hour periods without an ob	85.8	22.5	37.5
Mean (Ob-Bg)	-5.2	1.3	-0.2
RMS (Ob-Bg)	5.3	1.6	0.9
unflagged data			
Mean (Ob-bg)	-5.0	1.3	-0.3
RMS (Ob-Bg)	5.3	1.6	1.3
all data			
Revised RMS (Ob-Bg)	5.1	1.6	1.3
% of data flagged	90.0	21.0	19.0
Operating at end of period	NO	NO	YES
Performance			
Availability	Very Poor	Satisfactory	Satisfactory
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Very Poor	Very Poor	Very Poor
Comments			

ANNEX A - Cont.

Wmo No./Country	61527/US	61529/US	61534/US
Argos Id. No.	????	????	????
Period within area	16/07 - 30/09	16/07 - 12/09	18/07 - 12/09
Area	W of Italy	E of Spain	E of Spain
Mean Latitude	38.9	40.8	38.5
Mean Longitude	13.2	5.6	0.9
No. of obs received	1771	1472	1238
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	99.9	99.5
% of Present			
Pressure	98.2	98.9	98.9
P. Tendency	0.0	0.0	0.0
Air Temperature	99.1	99.1	98.6
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	98.7	98.9	99.3
Median delay(min)	347.0	623.0	647.0
Number of days	77.0	59.0	57.0
Mean no. of obs/day	23.0	24.9	21.7
No. of hours with obs	1378.0	1112.0	959.0
Mean no. of hours/day with obs	17.9	18.8	16.8
% of hour periods without an ob	25.4	21.7	30.0
Mean (Ob-Bg)	0.1	-0.5	0.0
RMS (Ob-Bg)	0.9	0.9	0.9
unflagged data			
Mean (Ob-bg)	0.1	-0.6	0.6
RMS (Ob-Bg)	0.9	2.0	2.6
all data			
Revised RMS (Ob-Bg)	1.0	1.0	2.5
% of data flagged	24.0	24.0	29.0
Operating at end of period	YES	NO	NO
Performance			
Availability	Satisfactory	Good	Satisfactory
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Poor	Very Poor	Very Poor
Comments			

ANNEX A - Cont.

Wmo No./Country	62501/F	62503/F	62504/F
Argos Id.No.	10116	14427	14428
Period within area	01/07 - 18/09	01/07 - 30/09	01/07 - 30/09
Area	N of SCOS	SCOS	E of SCOS
Mean Latitude	49.4	42.0	42.7
Mean Longitude	-19.4	-15.3	-10.7
No. of obs received	1534	1679	1705
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	99.9	99.9
% of Present			
Pressure	96.7	96.4	95.7
P. Tendency	88.1	89.9	88.3
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	96.1	97.1	96.9
Median delay(min)	10.0	8.0	172.0
Number of days	80.0	92.0	92.0
Mean no. of obs/day	19.2	18.3	18.5
No. of hours with obs	1118.0	1264.0	1286.0
Mean no. of hours/day with obs	14.0	13.7	14.0
% of hour periods without an ob	41.7	42.9	41.7
Mean (Ob-Bg)	-0.2	0.0	0.0
RMS (Ob-Bg)	1.2	0.8	0.9
unflagged data			
Mean (Ob-bg)	-0.2	0.0	0.0
RMS (Ob-Bg)	1.2	0.8	0.9
all data			
Revised RMS (Ob-Bg)	1.2	0.8	0.9
% of data flagged	35.0	33.0	33.0
Operating at end of period	NO	YES	YES
Performance			
Availability	Satisfactory	Satisfactory	Satisfactory
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Satisfactory
Comments			

ANNEX A - Cont.

Wmo No./Country	62505/F	62506/F	62507/F
Argos Id.No.	10117	????	????
Period within area	01/07 - 19/09	01/07 - 09/09	01/07 - 30/09
Area	N of SCOS	N of SCOS	SCOS
Mean Latitude	48.7	49.6	40.8
Mean Longitude	-18.3	-18.3	-21.6
No. of obs received	1537	1070	1749
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	99.7	100.0	100.0
% of Present			
Pressure	96.9	97.1	37.3
P. Tendency	89.7	93.2	62.7
Air Temperature	0.0	97.2	0.0
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	97.2	97.9	62.7
Median delay(min)	18.0	21.0	134.0
Number of days	81.0	71.0	92.0
Mean no. of obs/day	19.0	15.1	19.0
No. of hours with obs	1142.0	893.0	1405.0
Mean no. of hours/day with obs	14.1	12.6	15.3
% of hour periods without an ob	41.3	47.5	36.3
Mean (Ob-Bg)	0.1	0.4	0.4
RMS (Ob-Bg)	1.1	1.2	1.0
unflagged data			
Mean (Ob-bg)	0.2	0.5	0.4
RMS (Ob-Bg)	1.5	1.2	1.1
all data			
Revised RMS (Ob-Bg)	1.1	1.2	1.2
% of data flagged	35.0	28.0	71.0
Operating at end of period	NO	NO	YES
Performance			
Availability	Satisfactory	Satisfactory	Satisfactory
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Satisfactory
Comments			

ANNEX A - Cont.

Wmo No./Country	62508/F	62510/F	62513/F
Argos Id.No.	????	14417	????
Period within area	01/07 - 30/09	01/07 - 30/09	09/09 - 30/09
Area	N of SCOS	SCOS	N of SCOS
Mean Latitude	48.8	42.4	45.0
Mean Longitude	-24.8	-16.4	-20.0
No. of obs received	1886	1733	374
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	100.0	99.2
% of Present			
Pressure	100.0	100.0	100.0
P. Tendency	65.4	62.2	61.2
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.	0.0	62.2	61.2
Median delay(min)	125.0	95.0	106.0
Number of days	92.0	92.0	22.0
Mean no. of obs/day	20.5	18.8	17.0
No. of hours with obs	1477.0	1340.0	290.0
Mean no. of hours/day with obs	16.1	14.6	13.2
% of hour periods without an ob	32.9	39.2	45.0
Mean (Ob-Bg)	0.4	0.3	0.4
RMS (Ob-Bg)	1.2	0.9	1.1
unflagged data			
Mean (Ob-bg)	0.4	0.3	0.4
RMS (Ob-Bg)	1.2	0.9	1.1
all data			
Revised RMS (Ob-Bg)	1.1	0.9	1.0
% of data flagged	28.0	34.0	28.0
Operating at end of period	YES	YES	YES
Performance			
Availability	Satisfactory	Satisfactory	Satisfactory
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Satisfactory	Good	Good
Comments			

ANNEX A - Cont.

Wmo No./Country	62515/F	62516/F	62517/F
Argos Id.No.	14422	10107	10120
Period within area	09/09 - 30/09	12/09 - 30/09	13/09 - 30/09
Area	N of SCOS	N of SCOS	N of SCOS
Mean Latitude	47.6	45.1	49.4
Mean Longitude	-19.3	-18.2	-19.4
No. of obs received	431	345	359
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	99.7	100.0
% of Present			
Pressure	100.0	97.1	96.7
P. Tendency	63.3	93.3	91.4
Air Temperature	0.0	53.6	54.3
Wind Speed/Dir.	0.0/0.0	97.4/96.8	79.7/88.3
Sea-surface Temp.	38.1	98.0	96.7
Median delay(min)	125.0	50.0	23.0
Number of days	22.0	19.0	18.0
Mean no. of obs/day	19.6	18.2	19.9
No. of hours with obs	327.0	324.0	266.0
Mean no. of hours/day with obs	14.9	17.1	14.8
% of hour periods without an ob	37.9	28.8	38.3
Mean (Ob-Bg)	0.0	-0.8	-0.2
RMS (Ob-Bg)	1.3	1.4	1.5
unflagged data			
Mean (Ob-bg)	-0.1	-0.6	-0.3
RMS (Ob-Bg)	1.4	1.8	1.5
all data			
Revised RMS (Ob-Bg)	1.4	1.8	1.4
% of data flagged	31.0	37.0	37.0
Operating at end of period	YES	YES	YES
Performance			
Availability	Satisfactory	Satisfactory	Satisfactory
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Satisfactory	Very Good	Very Good
Comments			

ANNEX A - Cont.

Wmo No./Country	62518/F	62910/??	63661/D
Argos Id.No.	14419	????	8068
Period within area	09/09 - 30/09	01/07 - 30/09	01/07 - 02/07
Area	N of SCOS	SOBA	W of SCOS
Mean Latitude	47.1	62.3	44.7
Mean Longitude	-20.0	-32.1	-63.5
No. of obs received	452	1145	12
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	100.0	100.0	100.0
% of Present			
Pressure	30.5	86.6	91.7
P. Tendency	0.0	0.0	16.7
Air Temperature	0.0	0.0	75.0
Wind Speed/Dir.	92.9/93.4	0.0/0.0	0.0/0.0
Sea-surface Temp.	90.5	0.7	0.0
Median delay(min)	200.0	470.0	118.0
Number of days	22.0	92.0	2.0
Mean no. of obs/day	20.5	12.4	6.0
No. of hours with obs	376.0	920.0	12.0
Mean no. of hours/day with obs	17.1	10.0	6.0
% of hour periods without an ob	28.8	58.3	75.0
Mean (Ob-Bg)	-0.4	0.4	-
RMS (Ob-Bg)	2.3	1.1	-
unflagged data			
Mean (Ob-bg)	-0.3	0.4	-7.7
RMS (Ob-Bg)	2.4	1.1	32.5
all data			
Revised RMS (Ob-Bg)	2.4	1.0	6.9
% of data flagged	4.0	18.0	100.0
Operating at end of period	YES	YES	NO
Performance			
Availability	Satisfactory	Poor	Poor
Pressure Quality	Suspect	Acceptable	Suspect
Timeliness	Poor	Very Poor	Good
Comments			

ANNEX A - Cont.

Wmo No./Country	65594/UK	65595/IR	65598/N
Argos Id.No.	1252	3038	3678
Period within area	01/07 - 30/09	01/07 - 30/09	01/07 - 30/09
Area	SOBA	SOBA	SOBA
Mean Latitude	58.9	58.4	61.0
Mean Longitude	-39.4	-35.1	-34.6
No. of obs received	5507	4760	5308
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	99.1	99.4	57.5
% of Present			
Pressure	99.0	97.4	96.2
P. Tendency	94.4	91.3	89.7
Air Temperature	97.8	95.6	94.4
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.7/0.6
Sea-surface Temp.	97.8	62.6	61.8
Median delay(min)	33.0	160.0	71.0
Number of days	92.0	92.0	92.0
Mean no. of obs/day	59.9	51.7	57.7
No. of hours with obs	1876.0	1752.0	1866.0
Mean no. of hours/day with obs	20.4	19.0	20.3
% of hour periods without an ob	15.0	20.8	15.4
Mean (Ob-Bg)	-0.2	-0.3	-0.3
RMS (Ob-Bg)	1.5	1.3	1.2
unflagged data			
Mean (Ob-bg)	-0.3	-0.3	-0.4
RMS (Ob-Bg)	3.3	1.9	1.4
all data			
Revised RMS (Ob-Bg)	1.8	1.5	1.3
% of data flagged	72.0	69.0	72.0
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Satisfactory	Good
Comments			

ANNEX A - Cont.

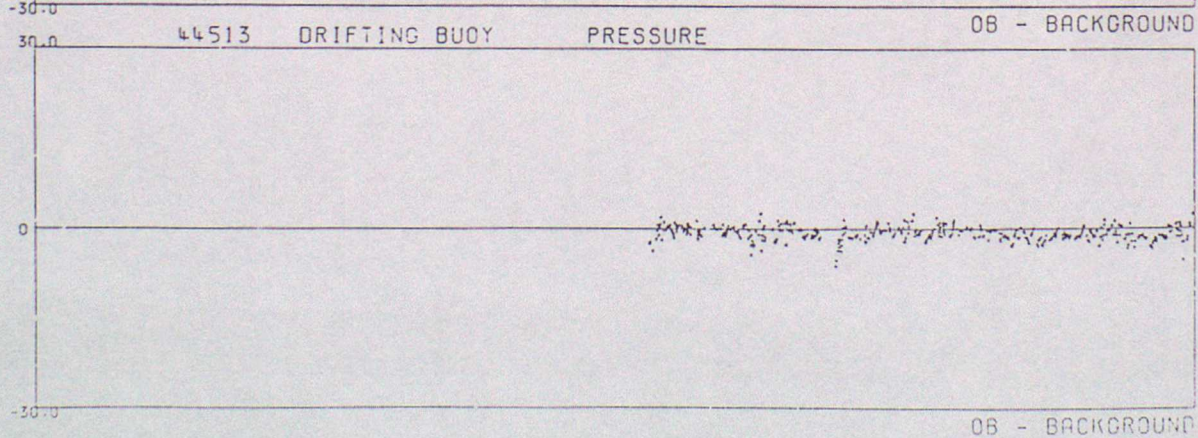
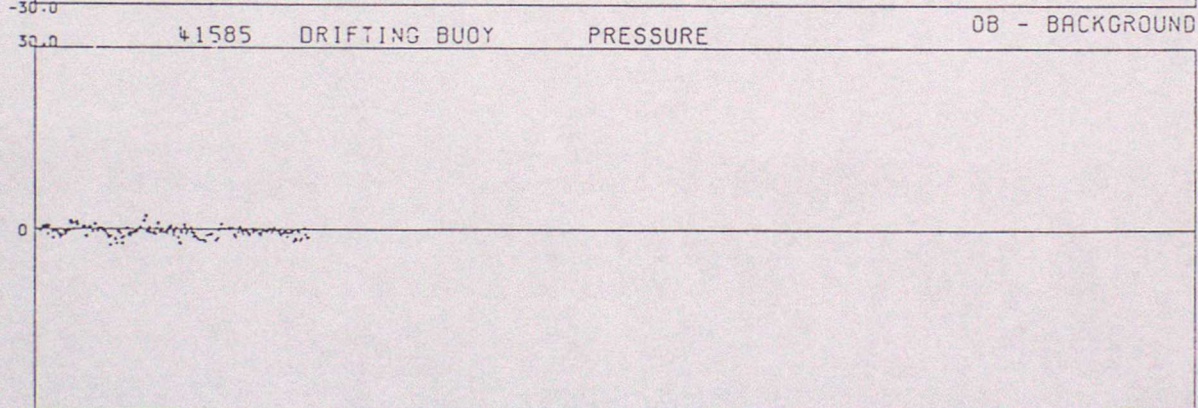
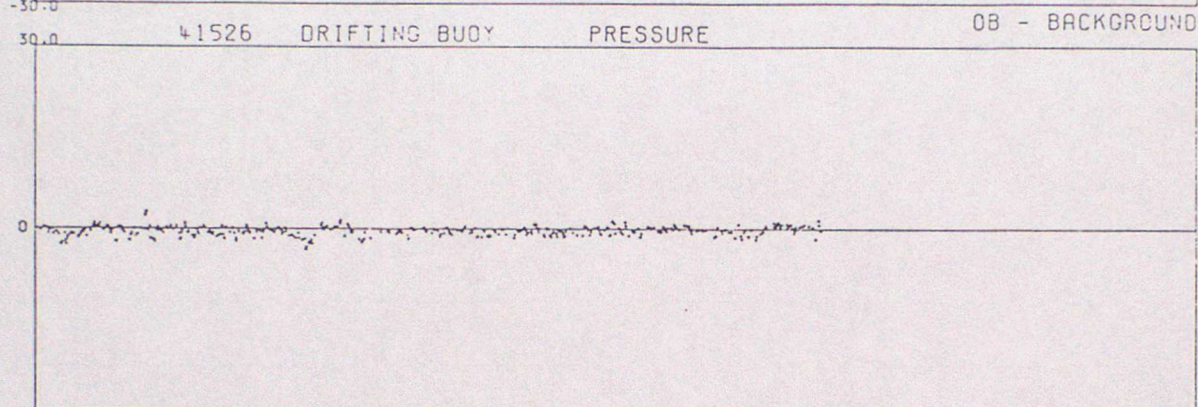
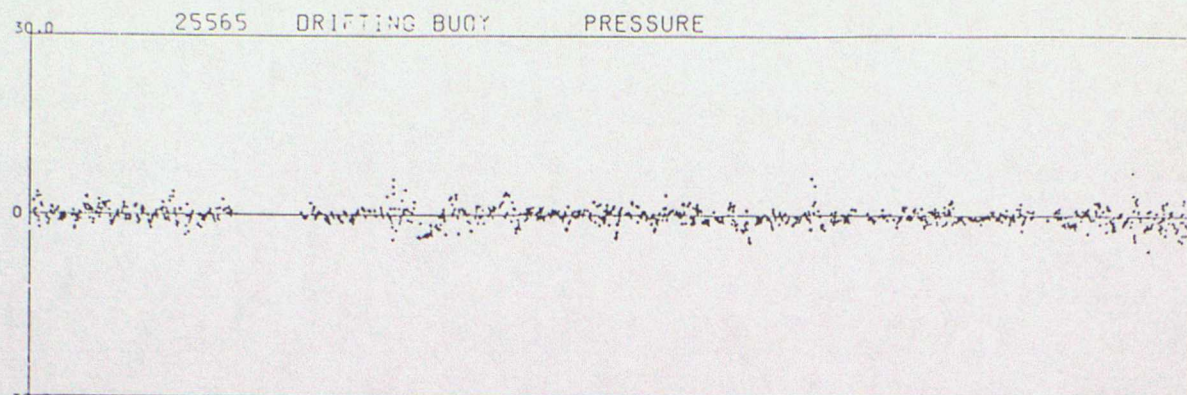
Wmo No./Country	65599/D	71544/D	71545/D
Argos Id No.	9308	8059	8060
Period within area	21/08 - 30/09	01/07 - 07/09	01/07 - 06/09
Area	W of SOBA	N of SCOS	N of SCOS
Mean Latitude	56.5	50.1	50.0
Mean Longitude	-54.1	-19.5	-19.8
No. of obs received	1669	36	28
% of obs with valid Time and Date	100.0	100.0	100.0
% of obs with acceptable position	83.3	100.0	100.0
% of Present			
Pressure	97.2	100.0	100.0
P. Tendency	91.7	0.0	0.0
Air Temperature	96.5	94.4	0.0
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface Temp.	63.2	0.0	0.0
Median delay(min)	145.0	132.0	153.0
Number of days	41.0	69.0	68.0
Mean no. of obs/day	40.7	0.5	0.4
No. of hours with obs	733.0	35.0	28.0
Mean no. of hours/day with obs	17.9	0.5	0.4
% of hour periods without an ob	25.4	97.9	98.3
Mean (Ob-Bg)	-0.5	-1.6	-3.3
RMS (Ob-Bg)	1.4	2.3	3.5
unflagged data			
Mean (Ob-bg)	-1.0	-1.9	-3.3
RMS (Ob-Bg)	2.7	2.5	3.5
all data			
Revised RMS (Ob-Bg)	2.7	2.6	2.3
% of data flagged	66.0	9.0	67.0
Operating at end of period	YES	NO	NO
Performance			
Availability	Very Good	Very Poor	Very Poor
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Satisfactory	Satisfactory	Satisfactory
Comments			

ANNEX A - Cont.

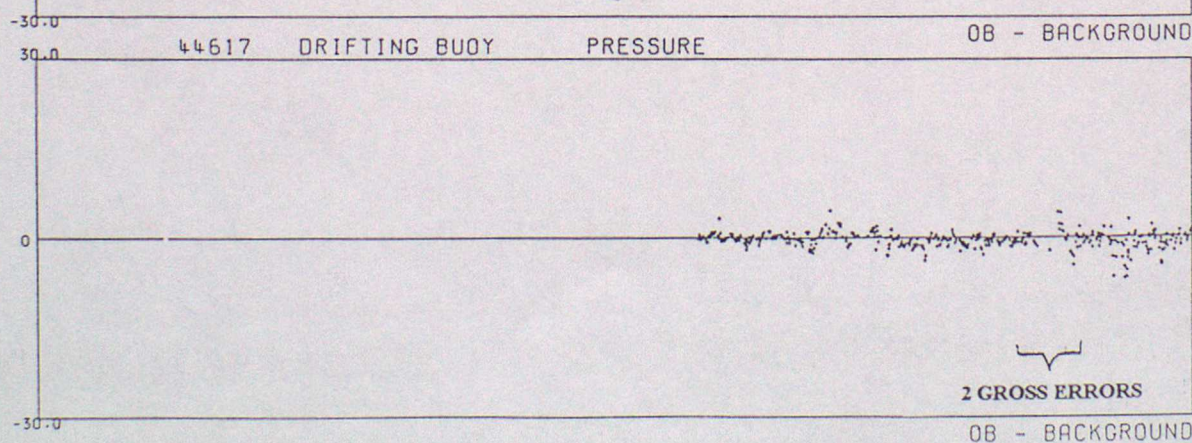
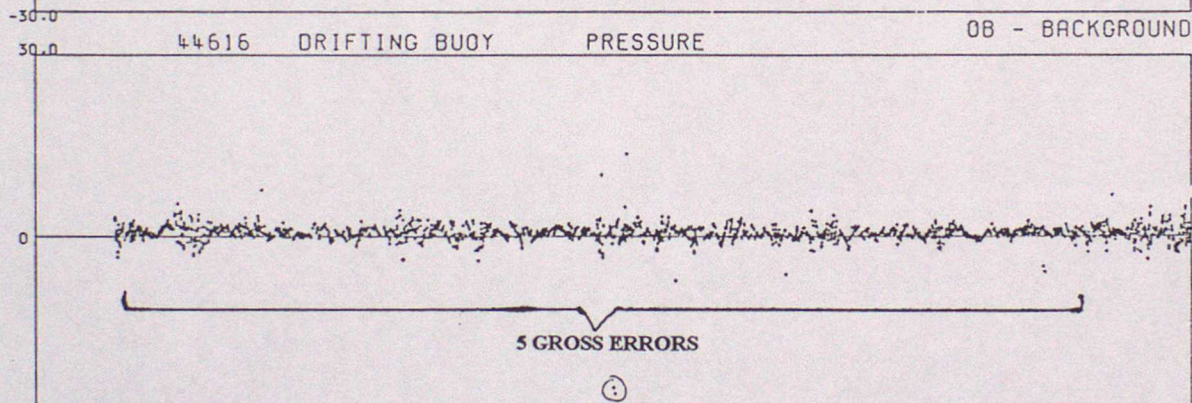
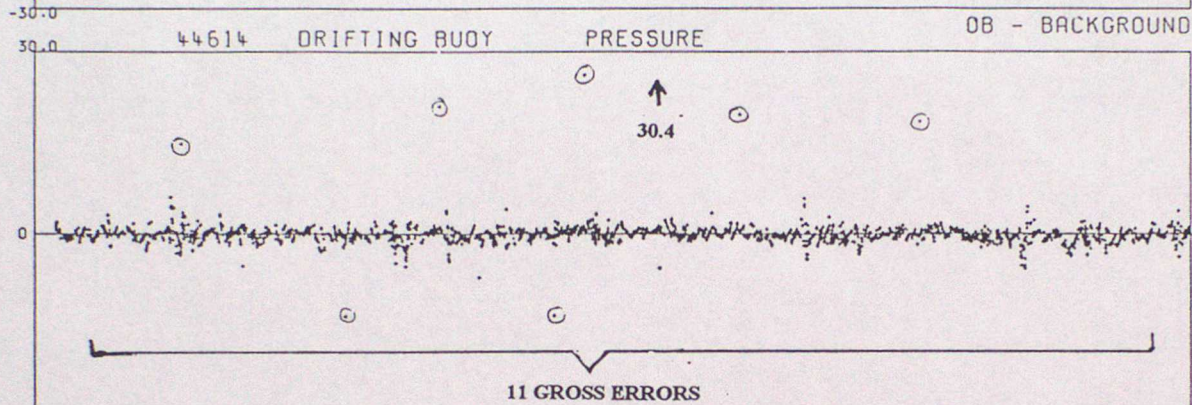
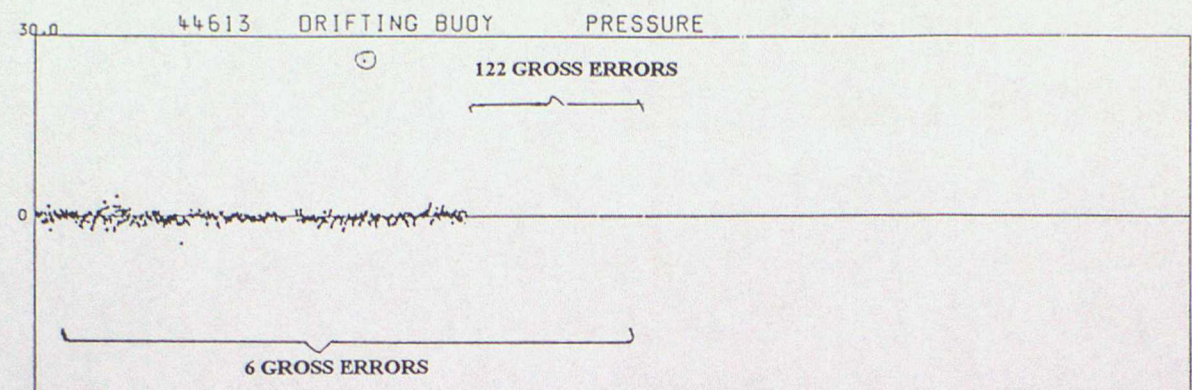
Wmo No./Country	71546/D	71557/D	
Argos Id. No.	8061	8064	
Period within area	01/07 - 02/07	01/07 - 02/07	
Area	W of SCOS	W of SCOS	
Mean Latitude	44.7	44.7	
Mean Longitude	-63.5	-63.5	
No. of obs received	13	12	
% of obs with valid Time and Date	100.0	100.0	
% of obs with acceptable position	100.0	100.0	
% of Present			
Pressure	100.0	91.7	
P. Tendency	0.0	0.0	
Air Temperature	100.0	0.0	
Wind Speed/Dir.	0.0/0.0	0.0/0.0	
Sea-surface Temp.	0.0	0.0	
Median delay(min)	135.0	12.0	
Number of days	2.0	2.0	
Mean no. of obs/day	6.5	6.0	
No. of hours with obs	13.0	12.0	
Mean no. of hours/day with obs	6.5	6.0	
% of hour periods without an ob	72.9	75.0	
Mean (Ob-Bg)	-3.2	-	
RMS (Ob-Bg)	3.4	-	
unflagged data			
Mean (Ob-bg)	-3.2	-19.4	
RMS (Ob-Bg)	3.4	19.5	
all data			
Revised RMS (Ob-Bg)	3.7	18.7	
% of data flagged	0.0	100.0	
Operating at end of period	NO	NO	
Performance			
Availability	Poor	Poor	
Pressure Quality	Suspect	Suspect	
Timeliness	Satisfactory	Very Good	
Comments			

ANNEX B - TIME SERIES PLOTS OF PRESSURE

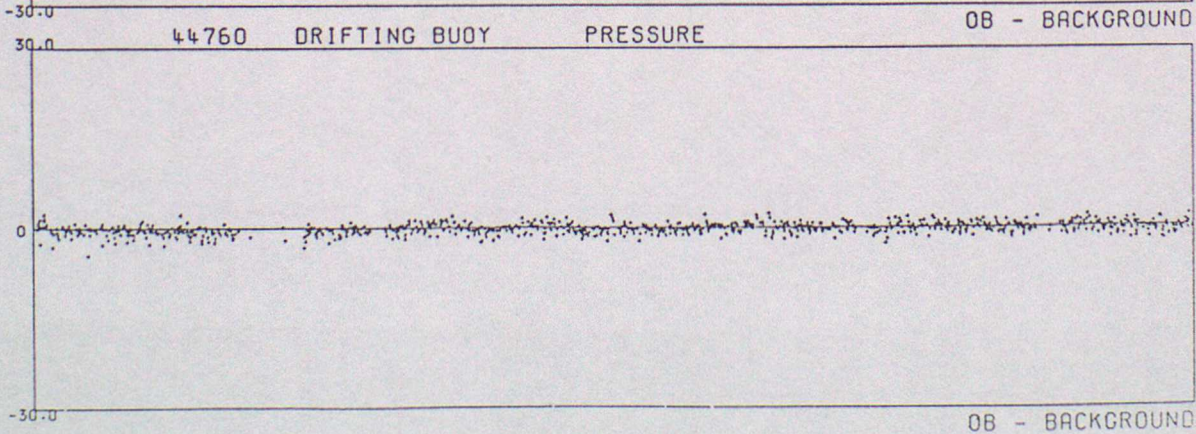
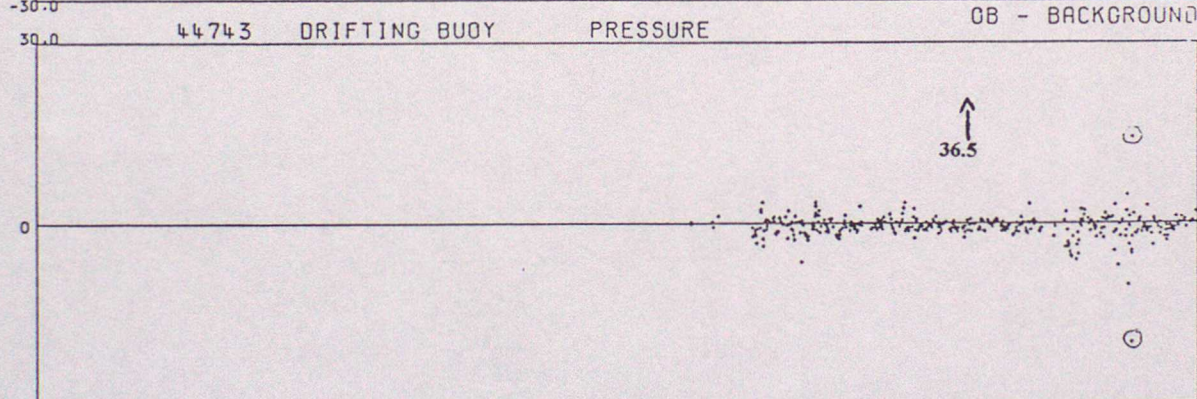
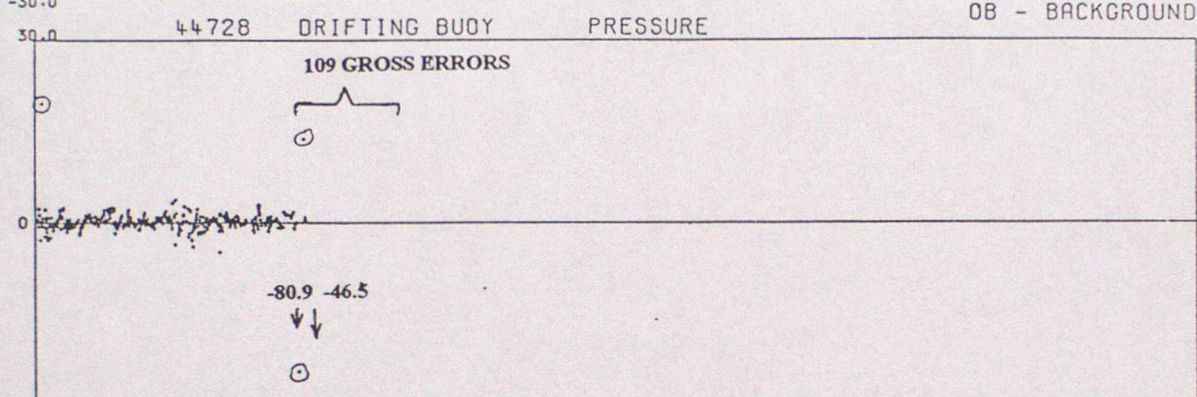
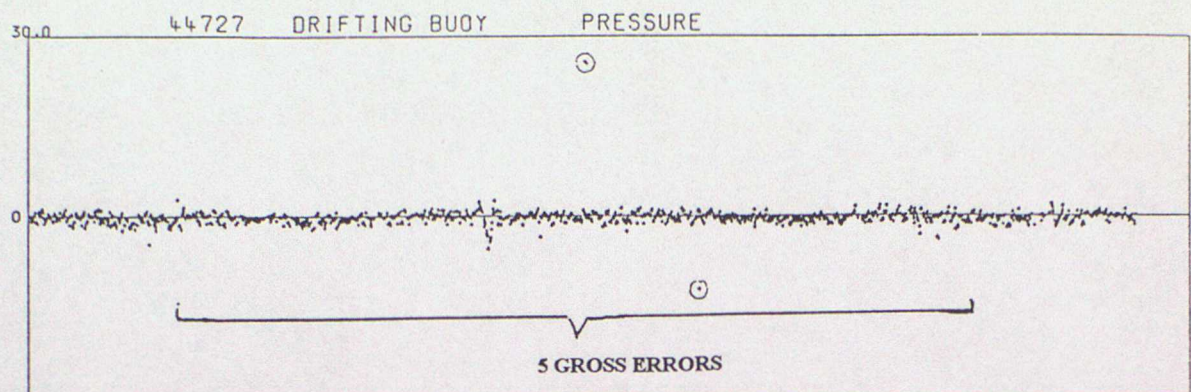
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (025 - BACKGROUND FIELD)



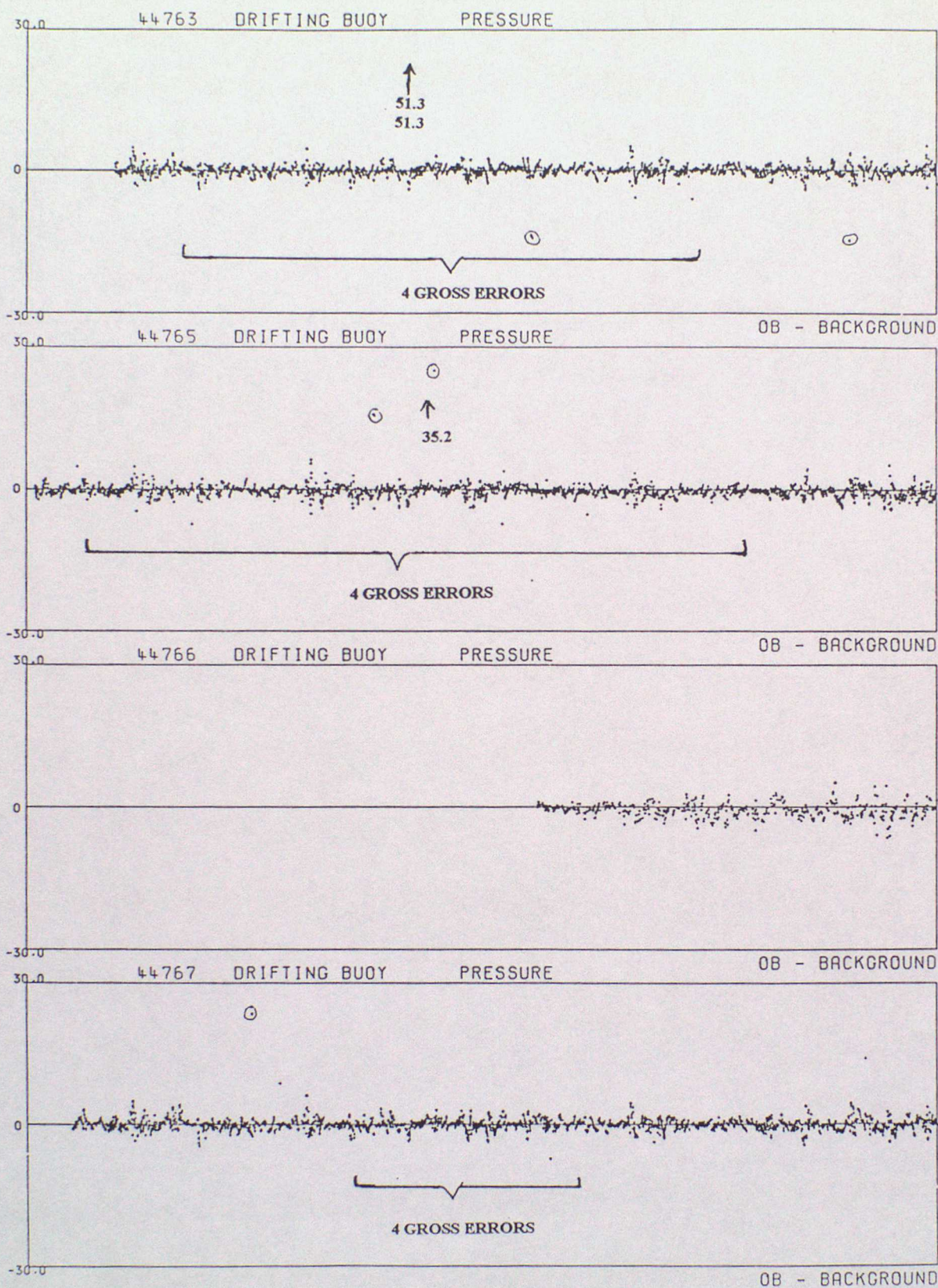
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



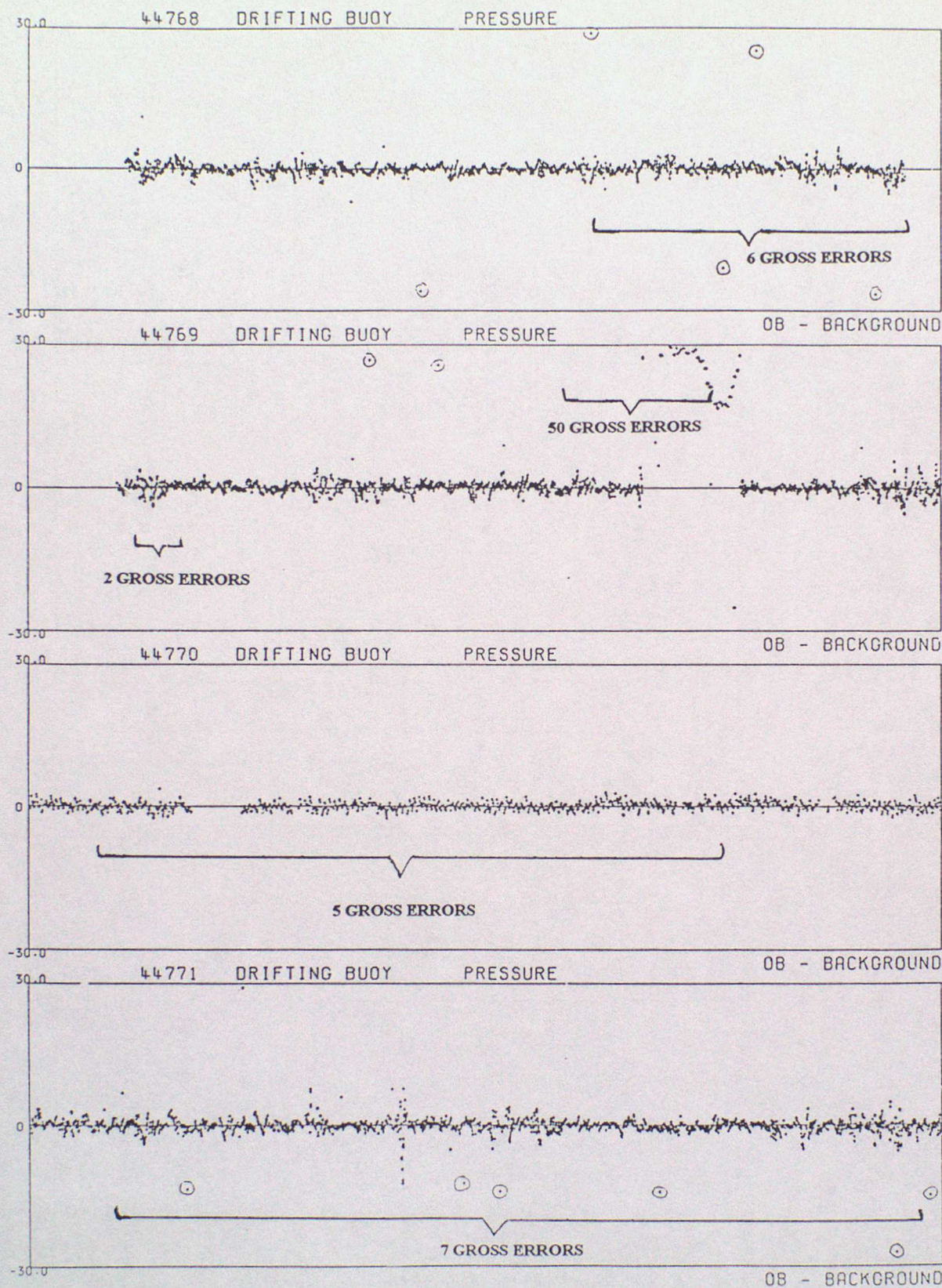
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



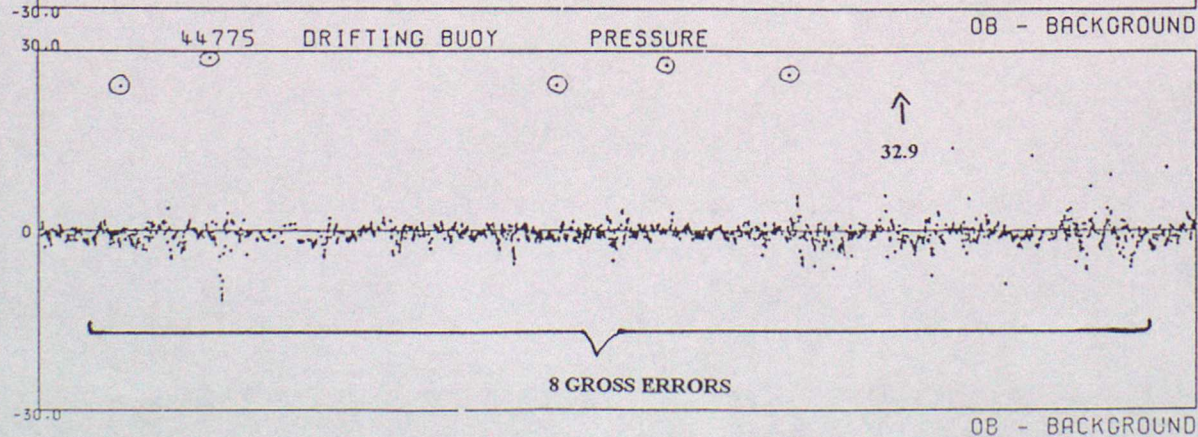
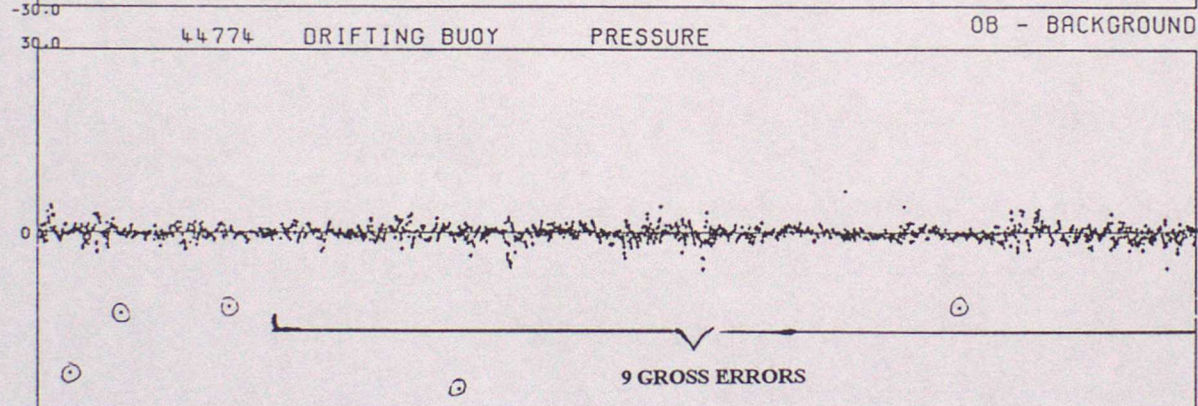
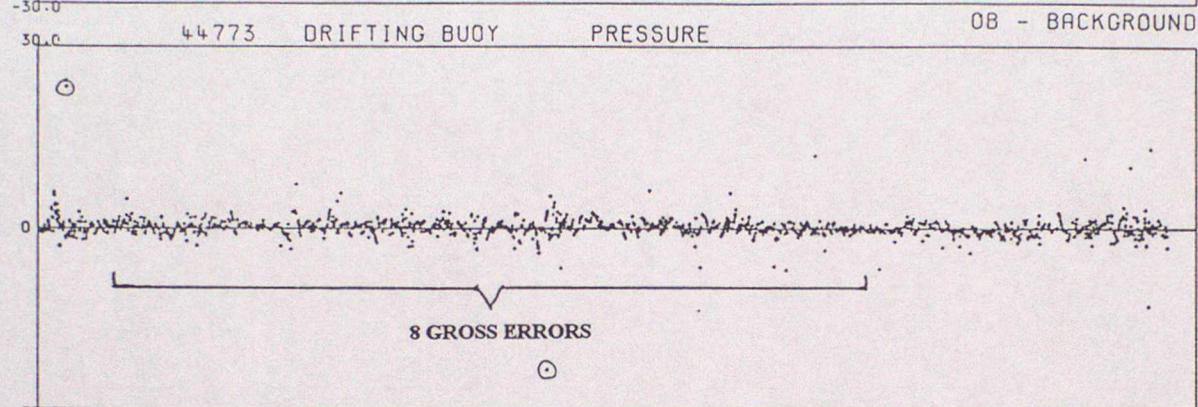
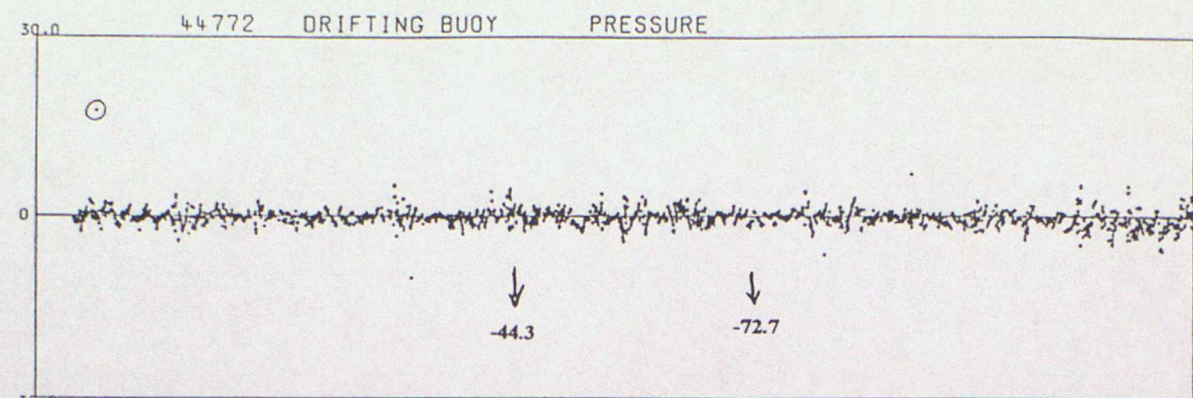
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



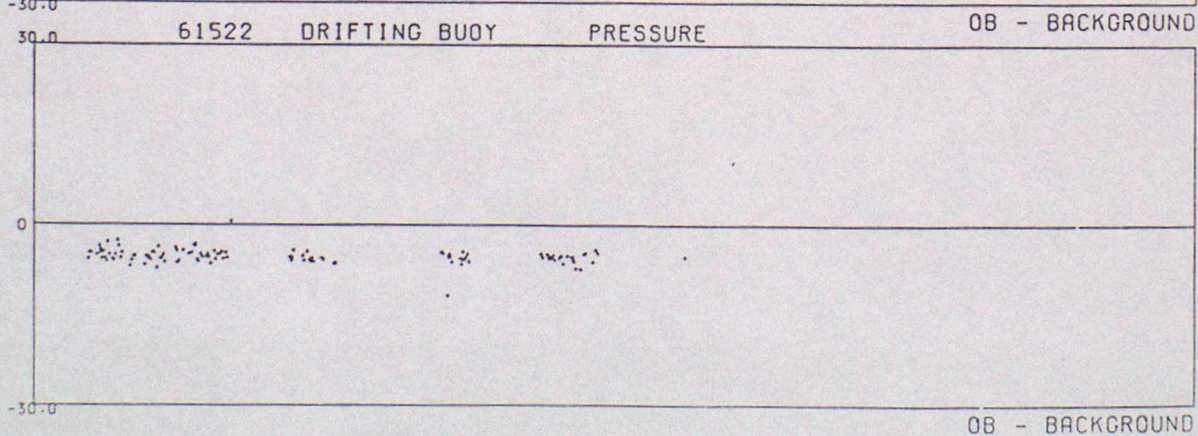
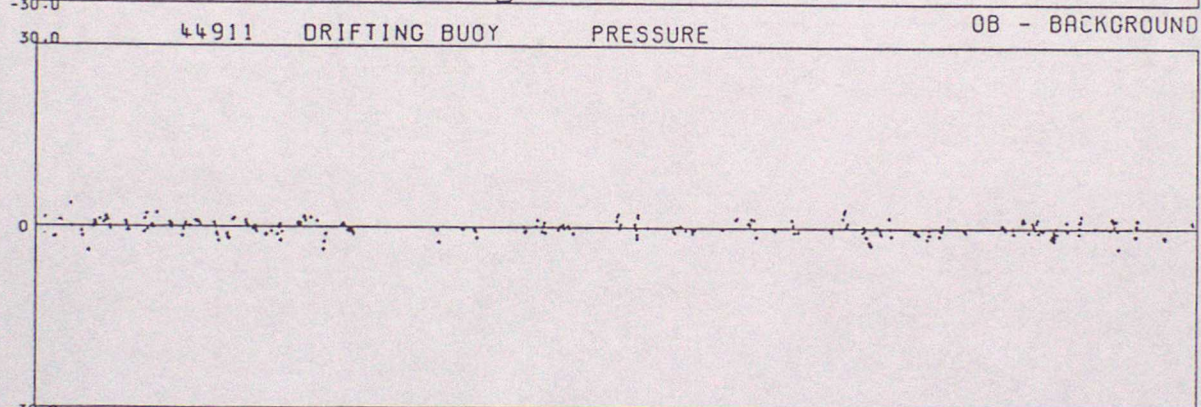
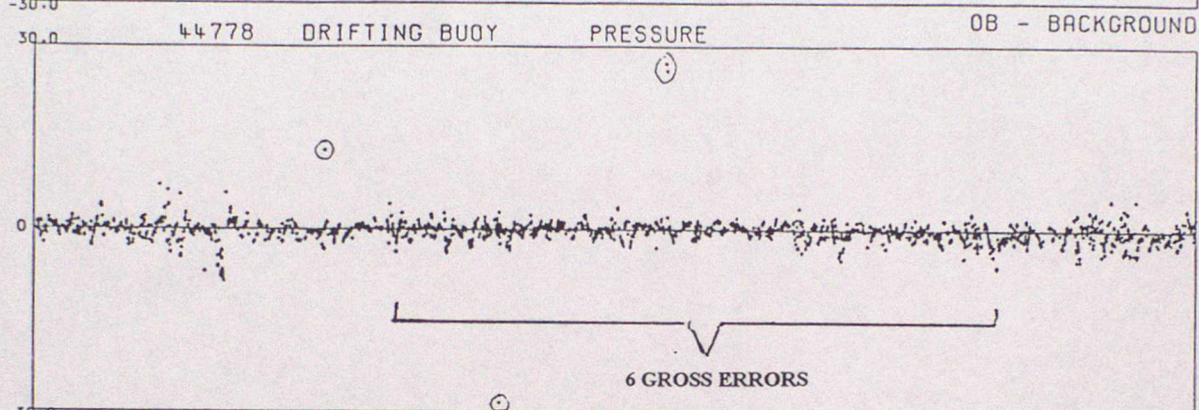
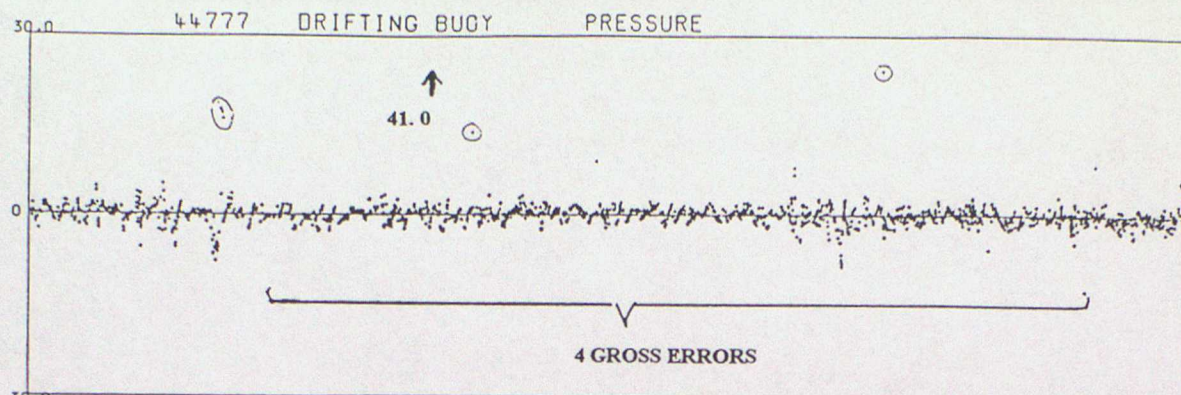
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



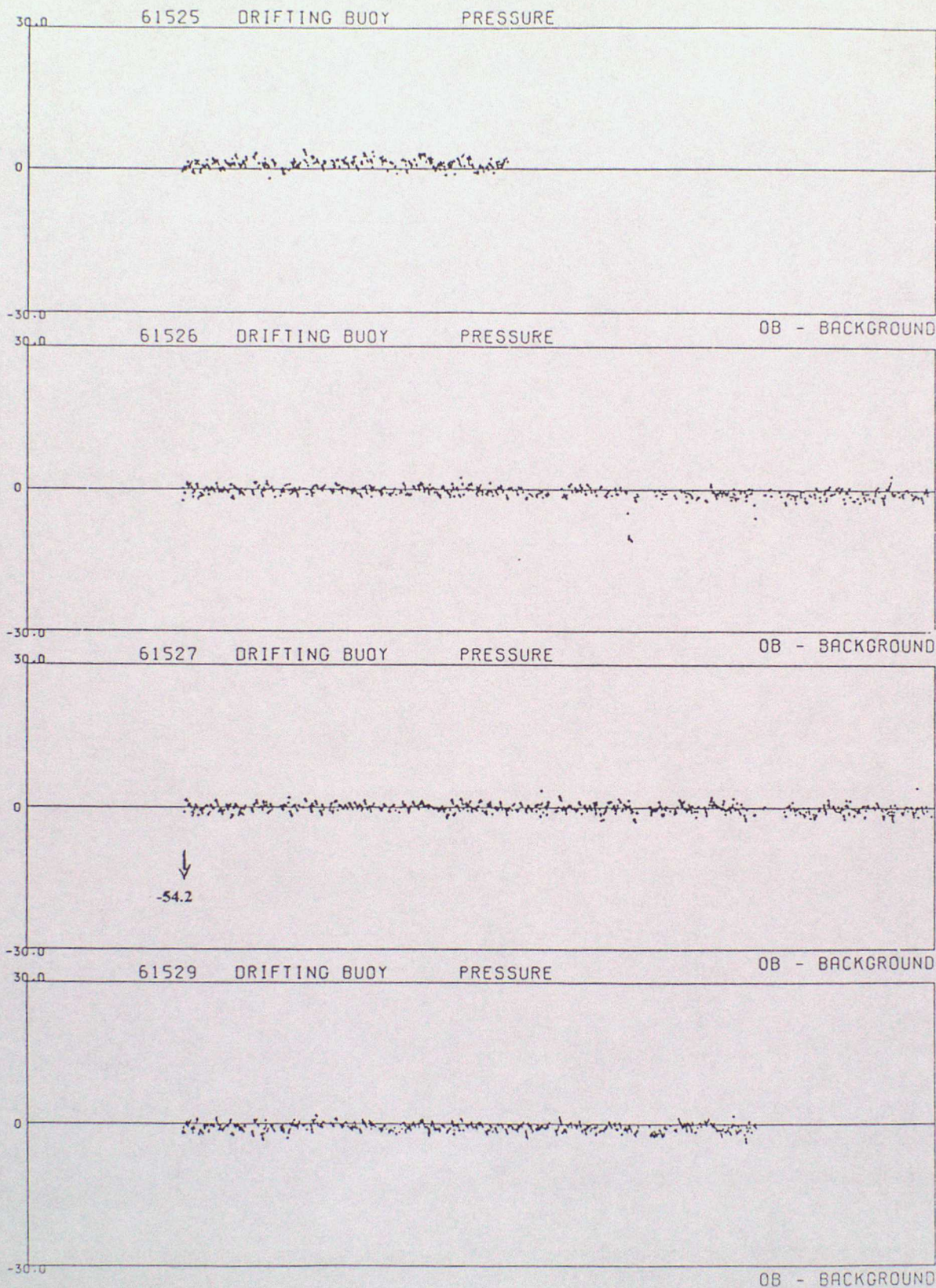
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



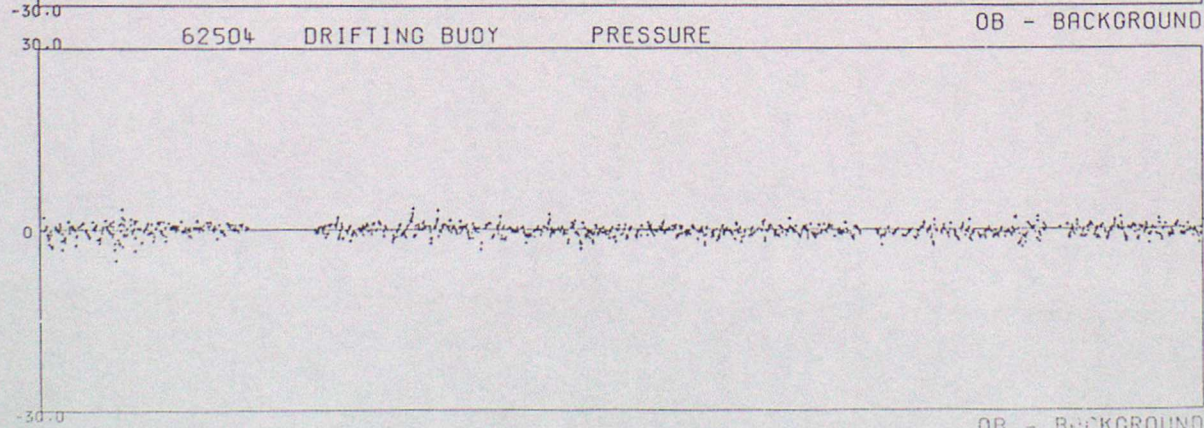
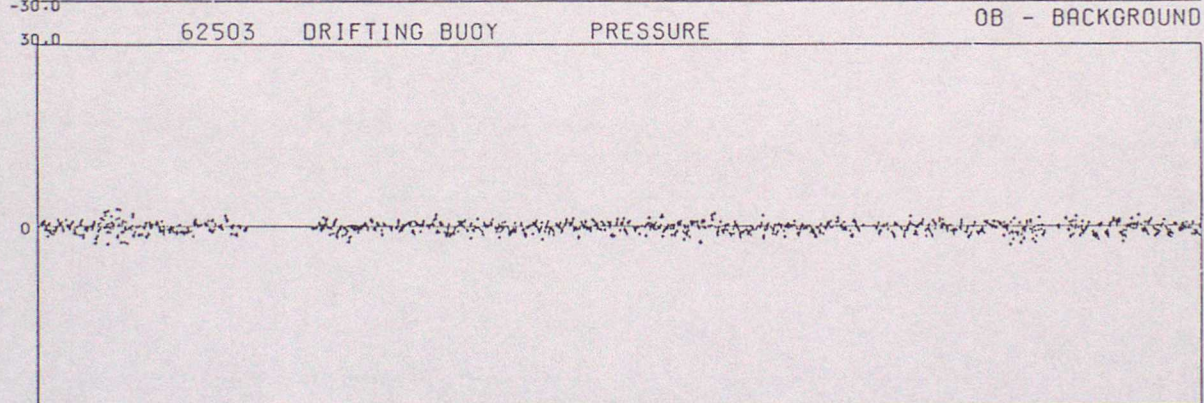
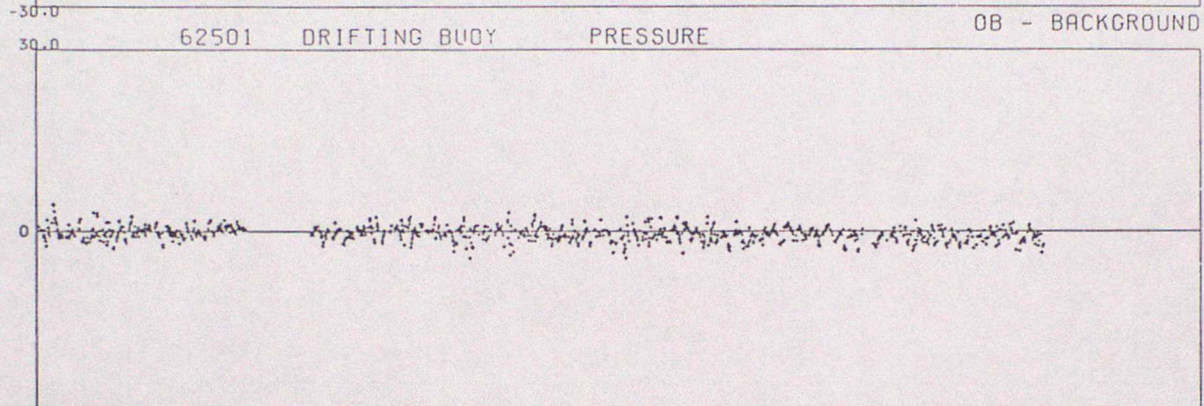
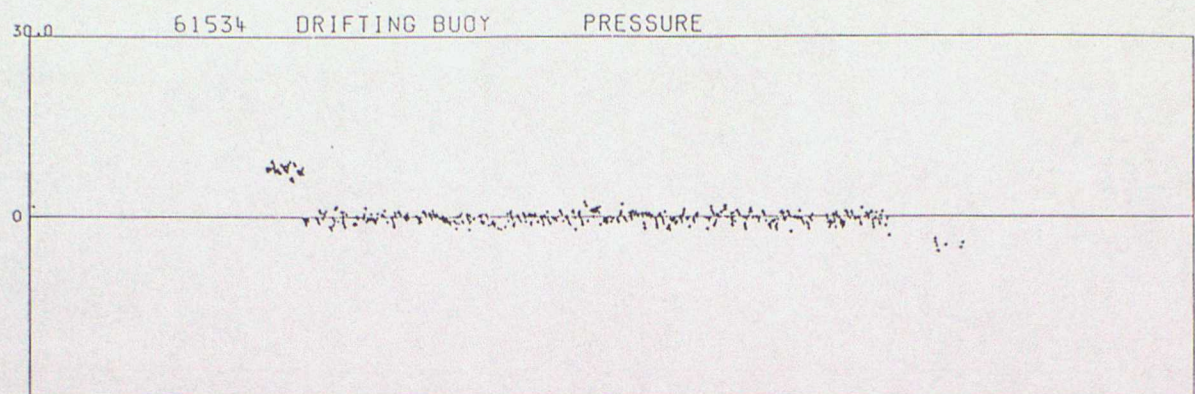
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

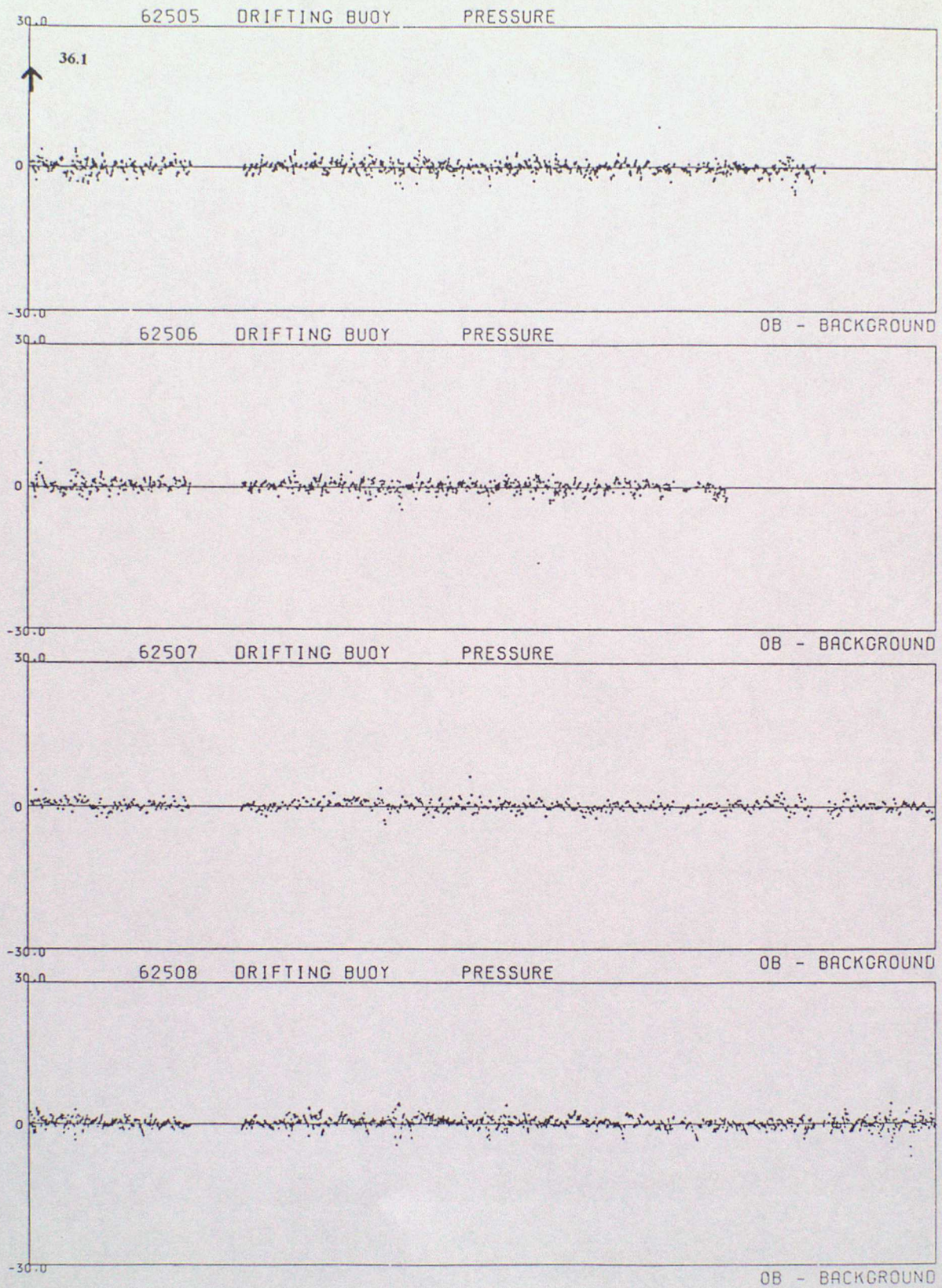


DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

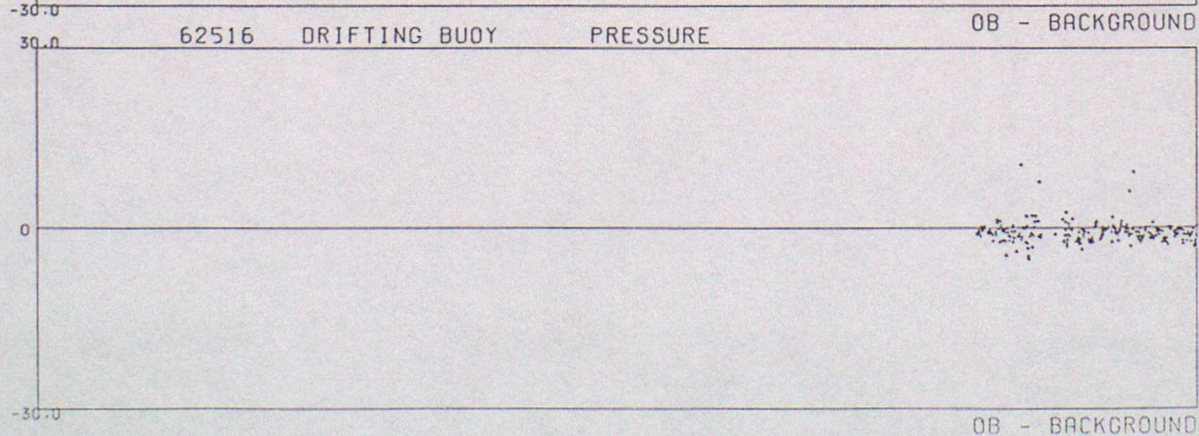
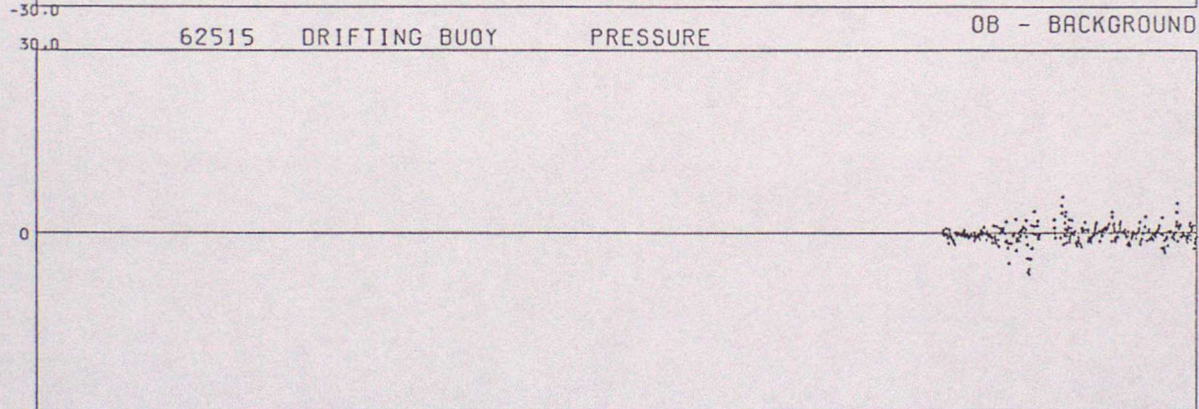
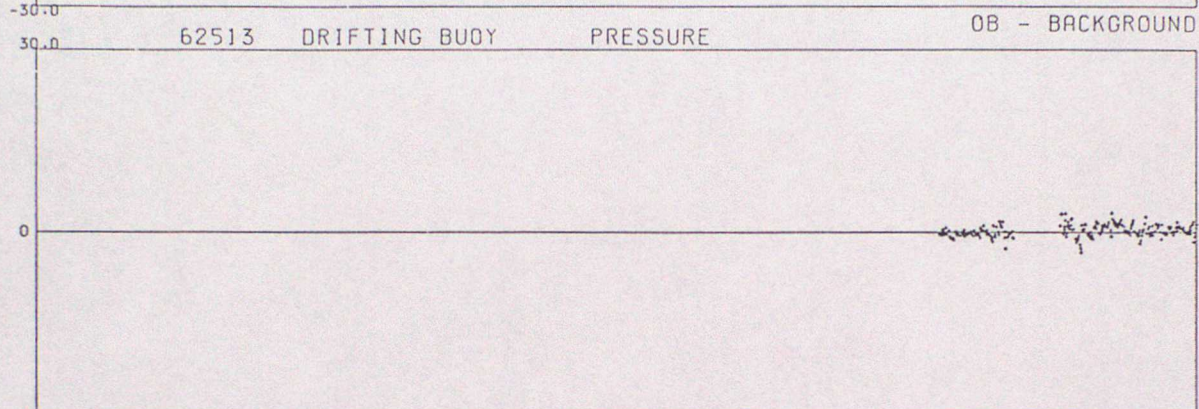
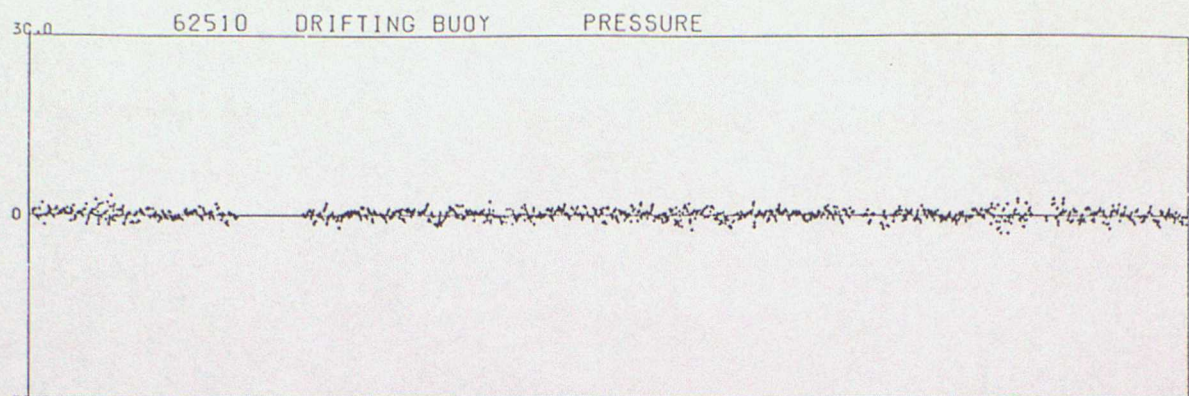


OB - BACKGROUND

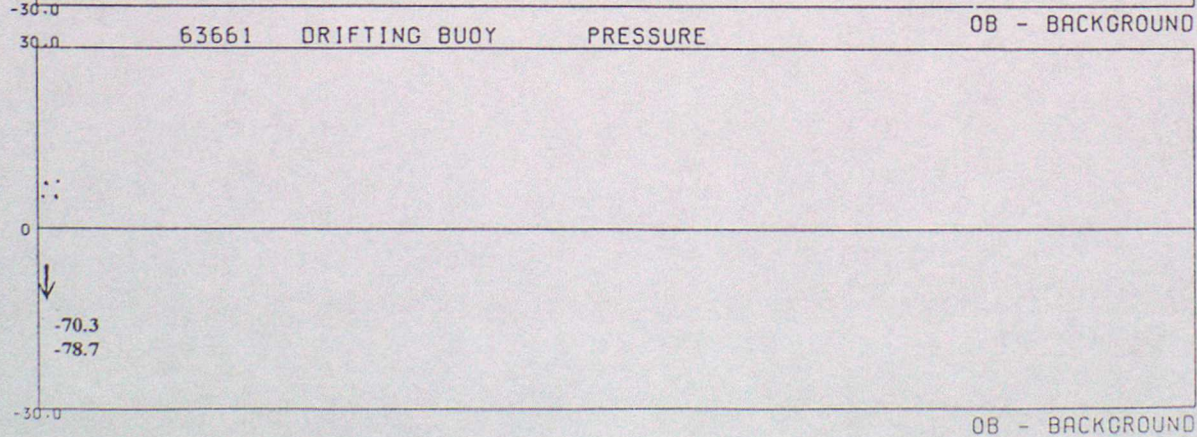
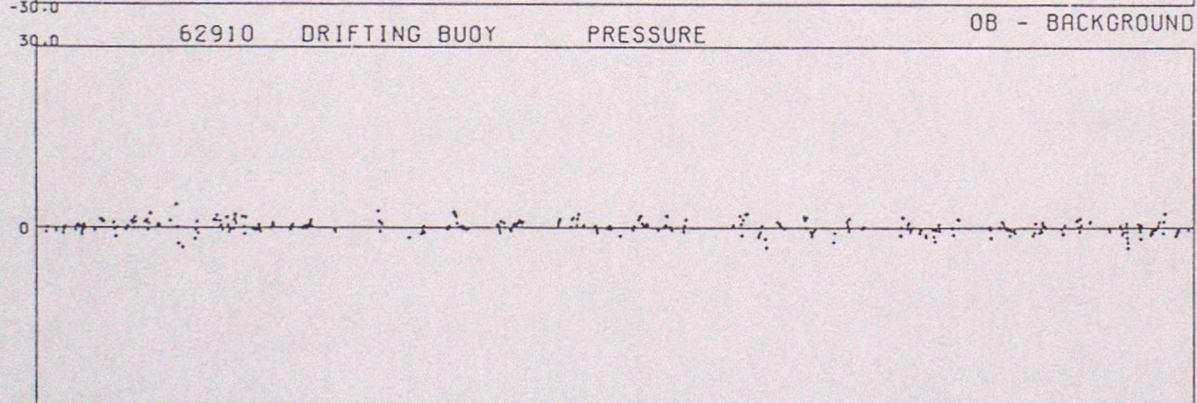
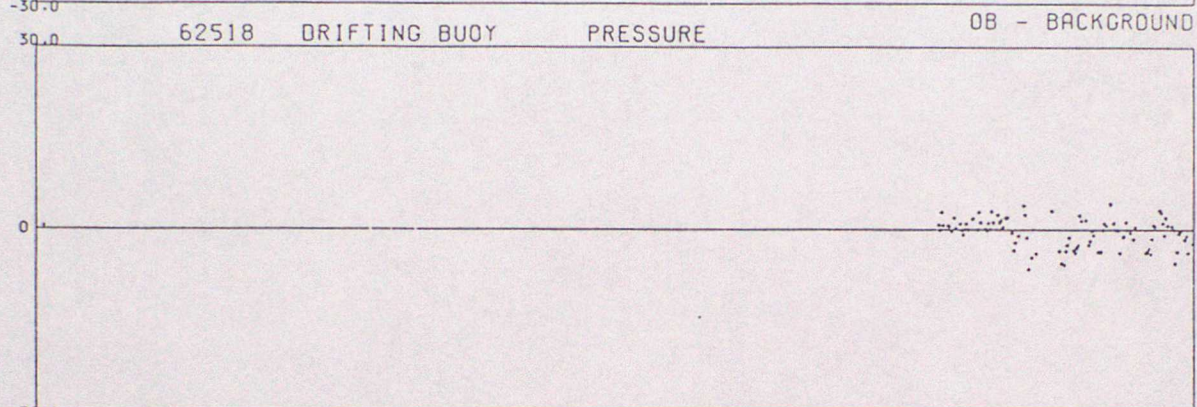
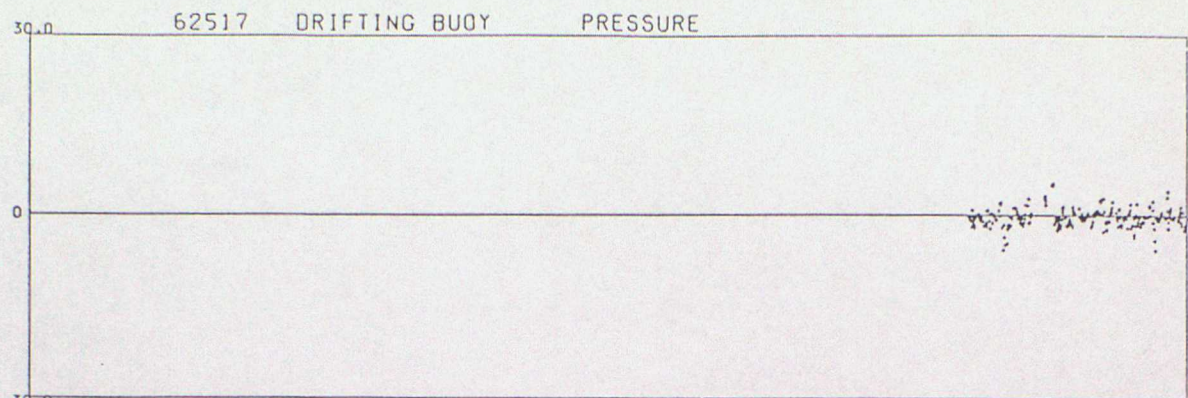
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



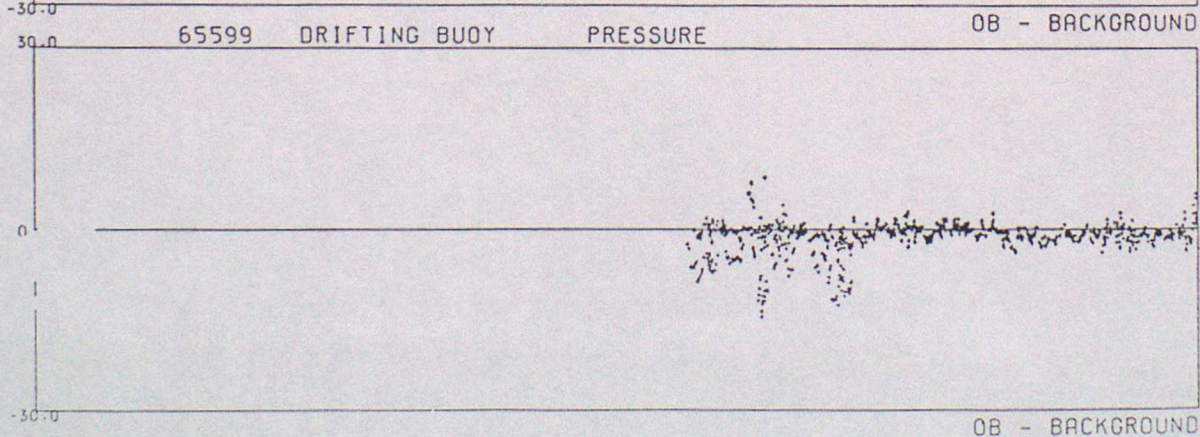
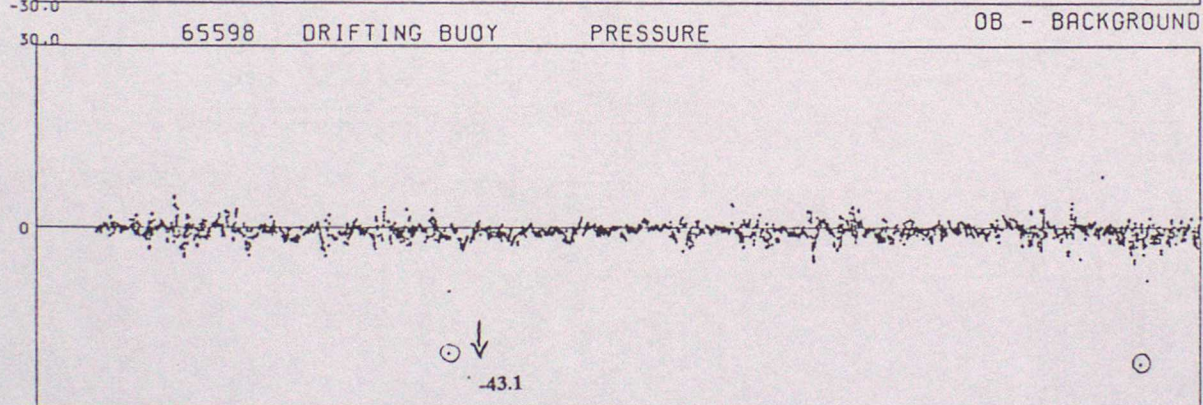
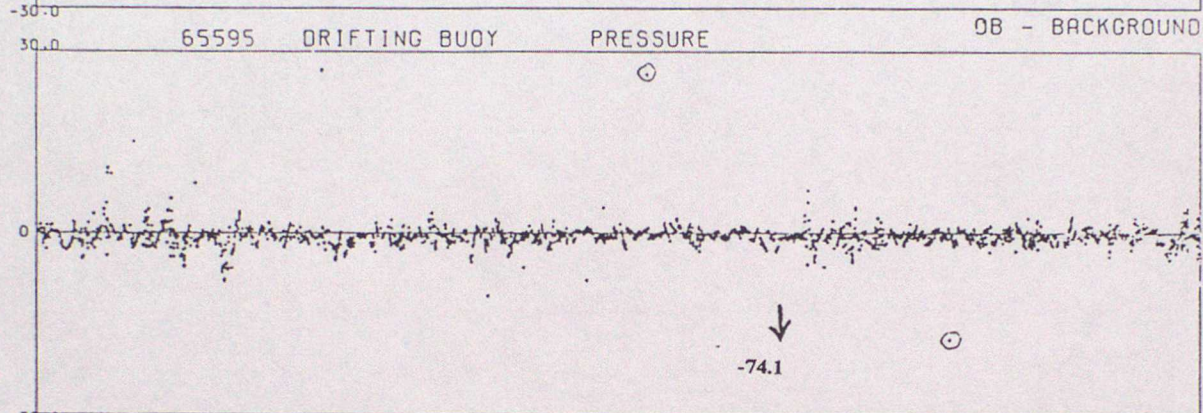
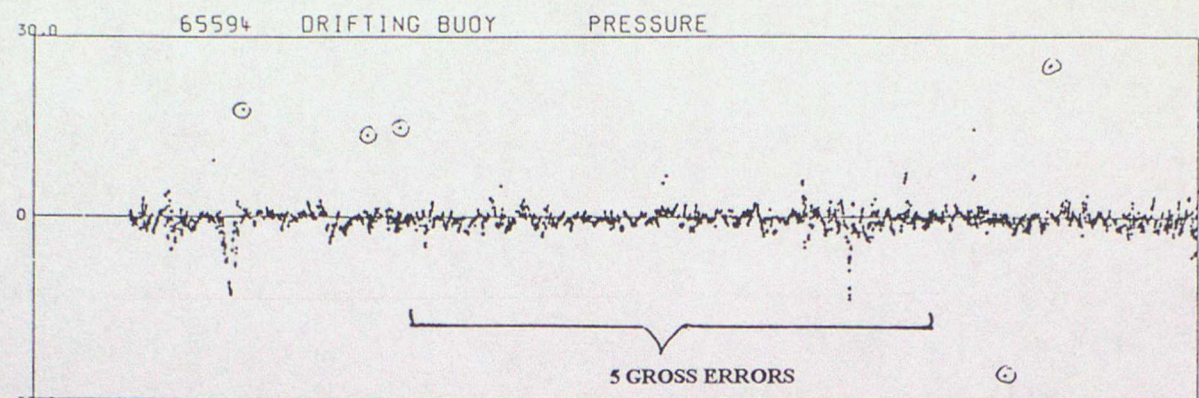
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



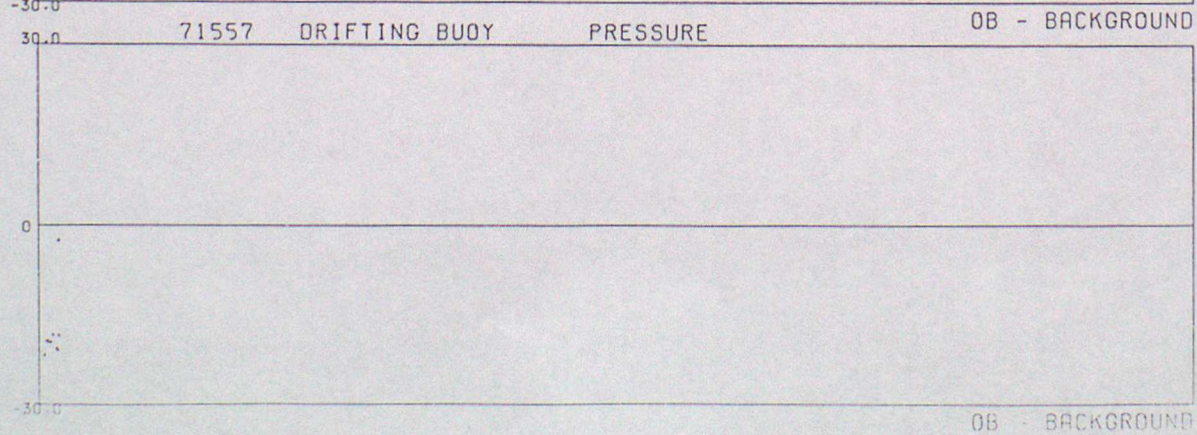
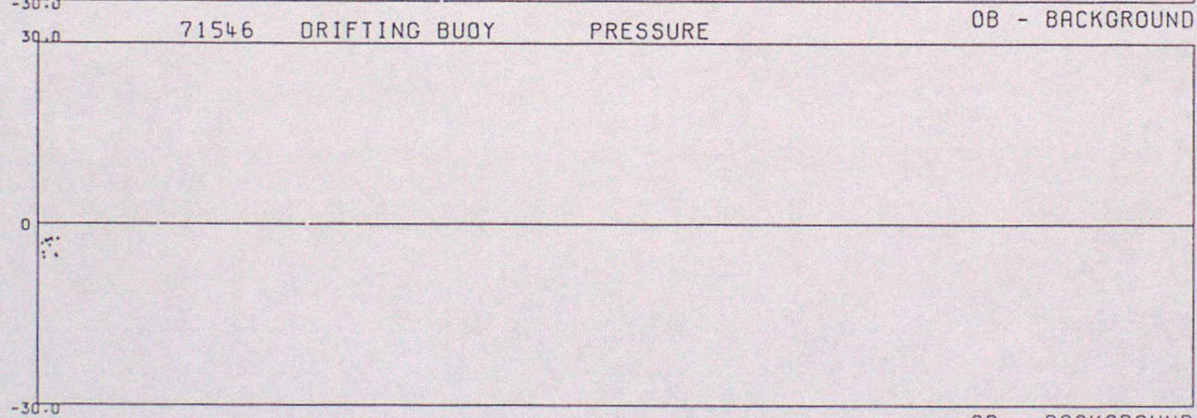
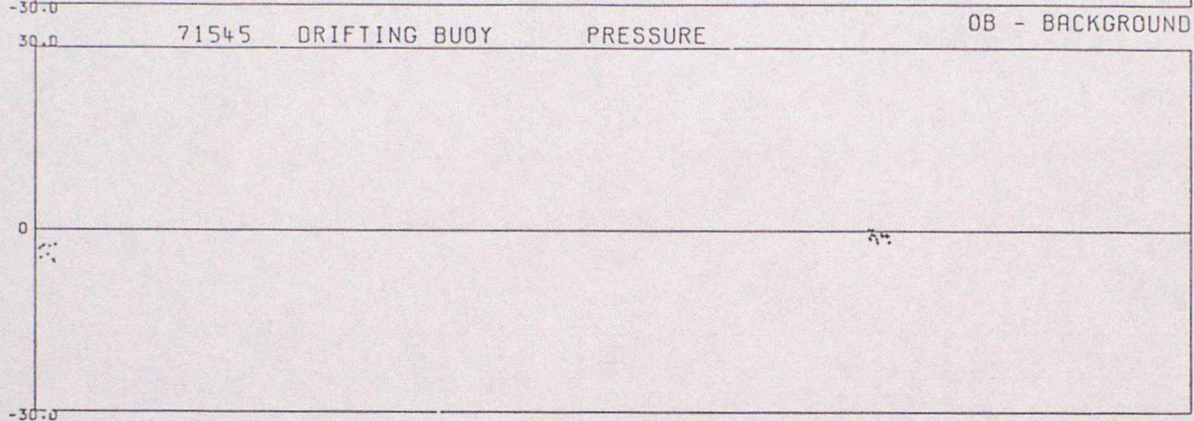
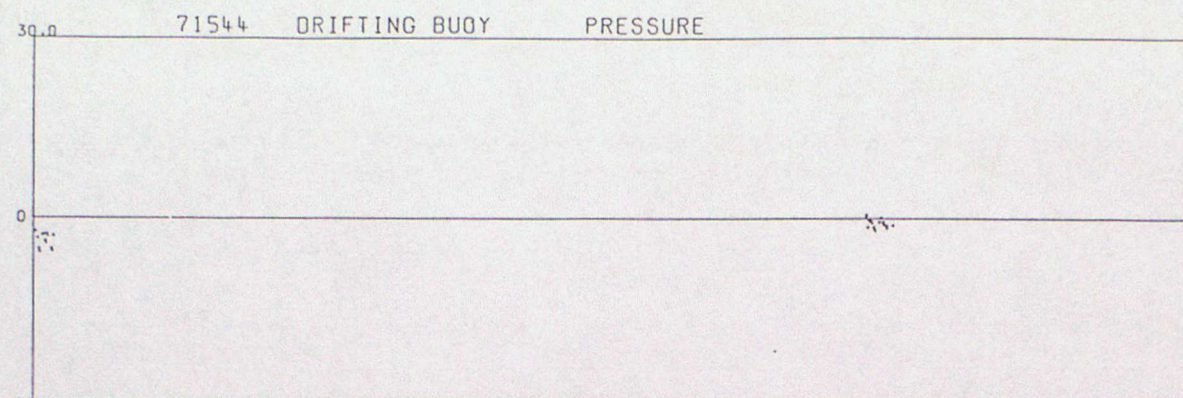
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

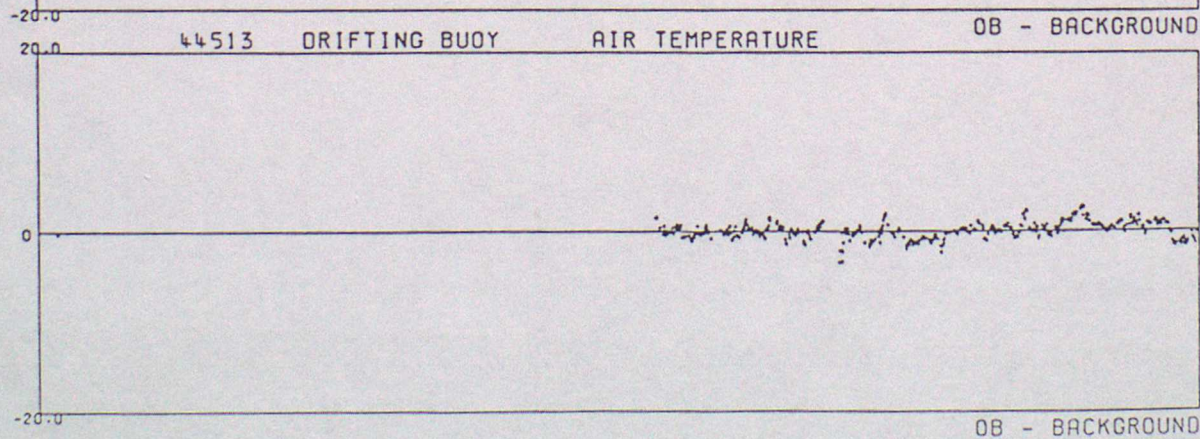
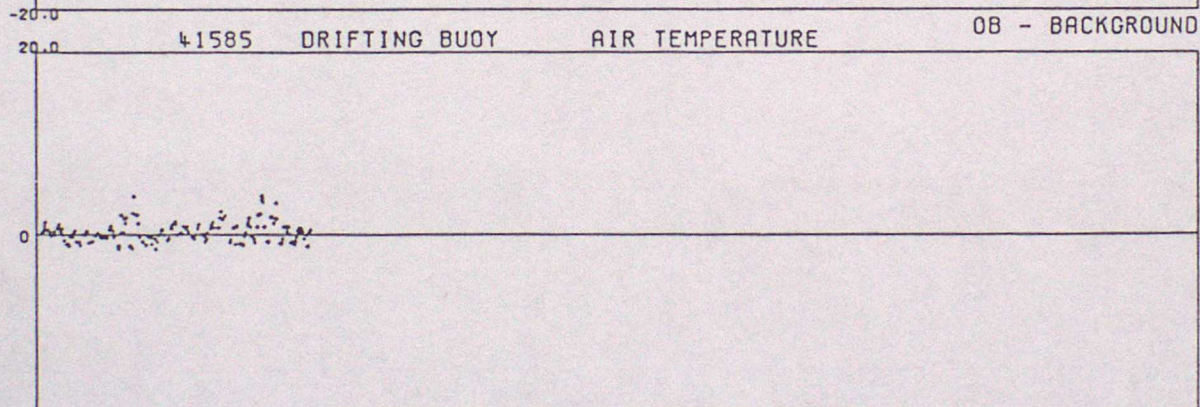
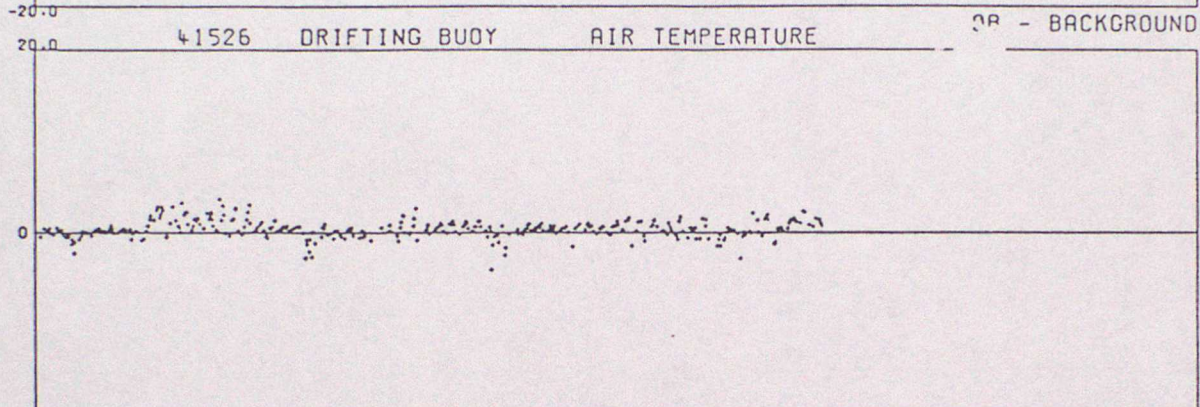
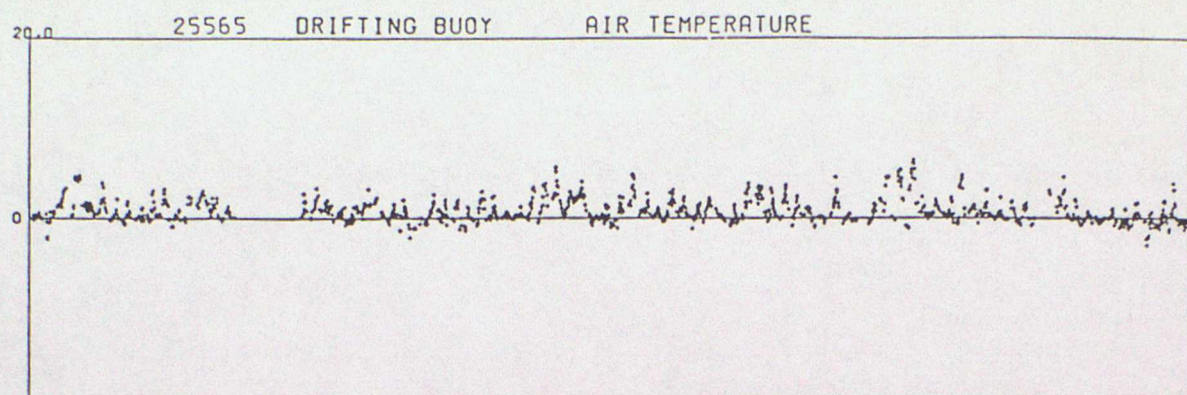


DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

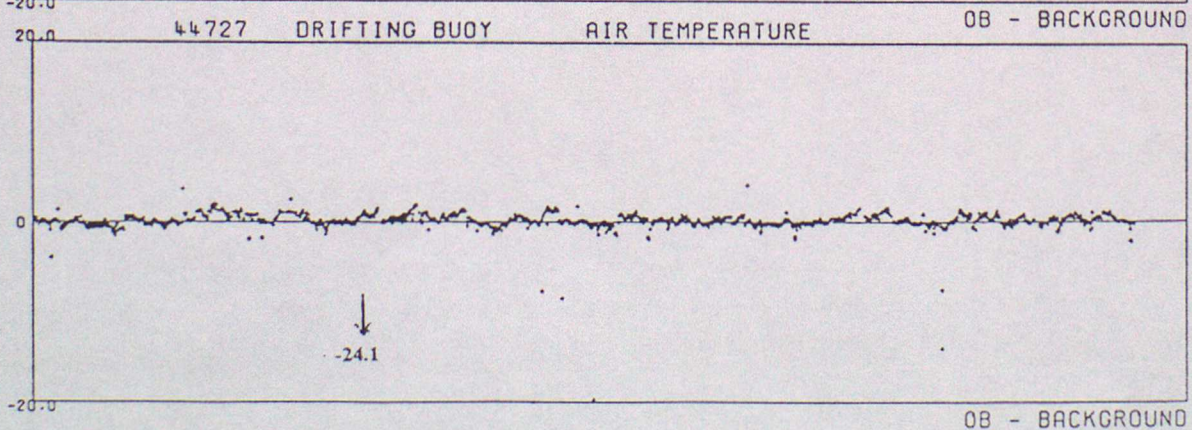
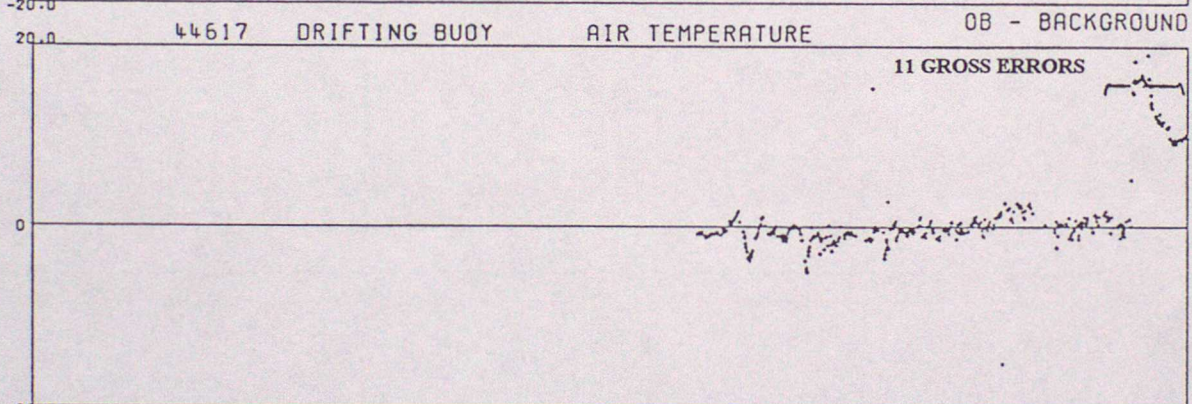
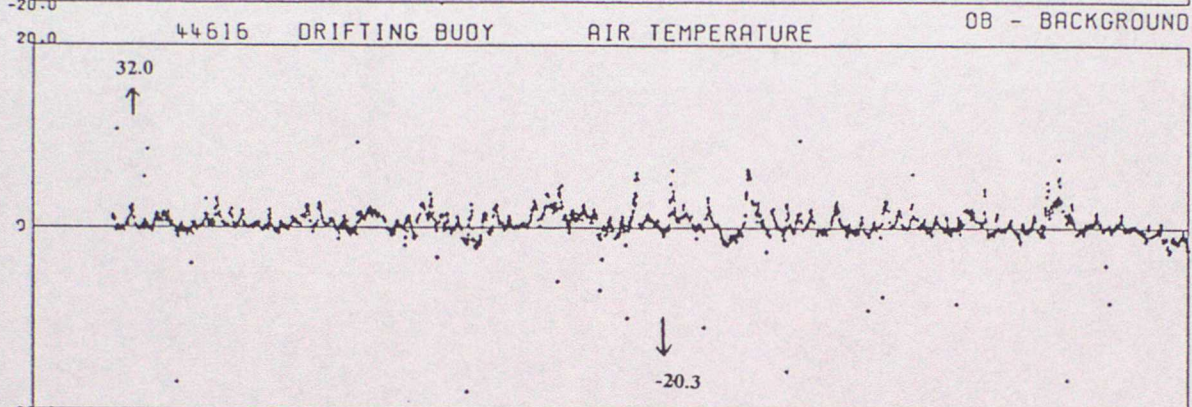
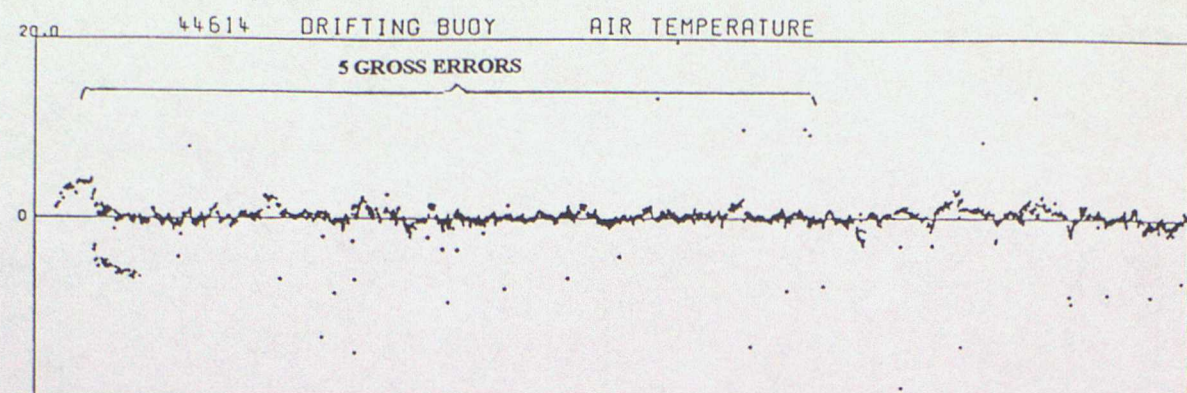


ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

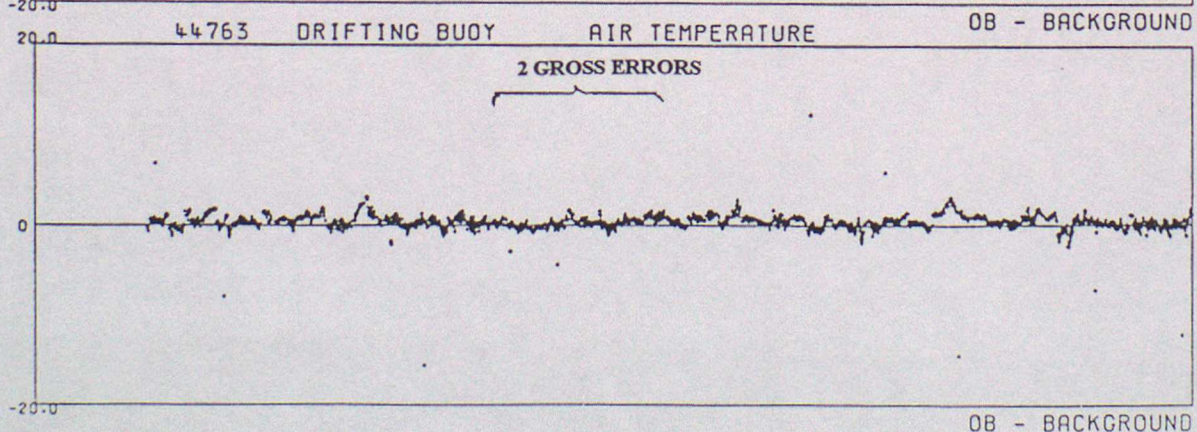
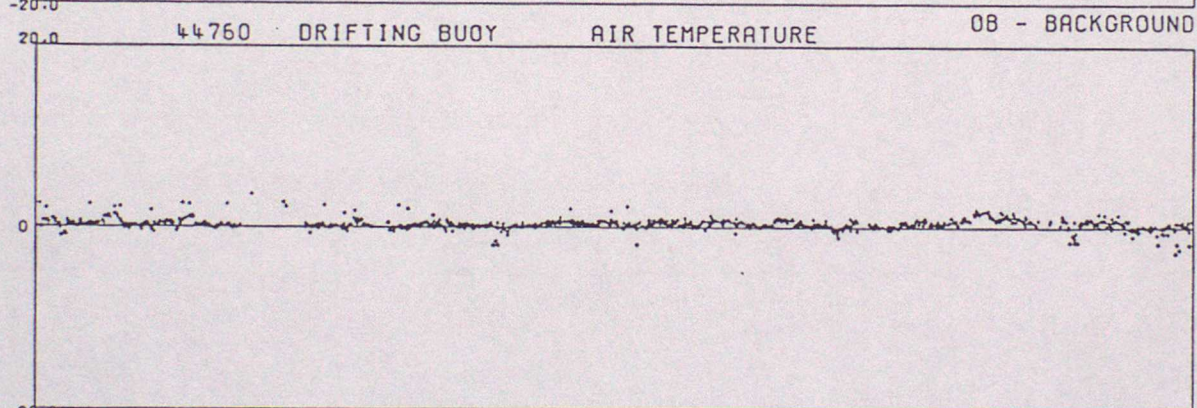
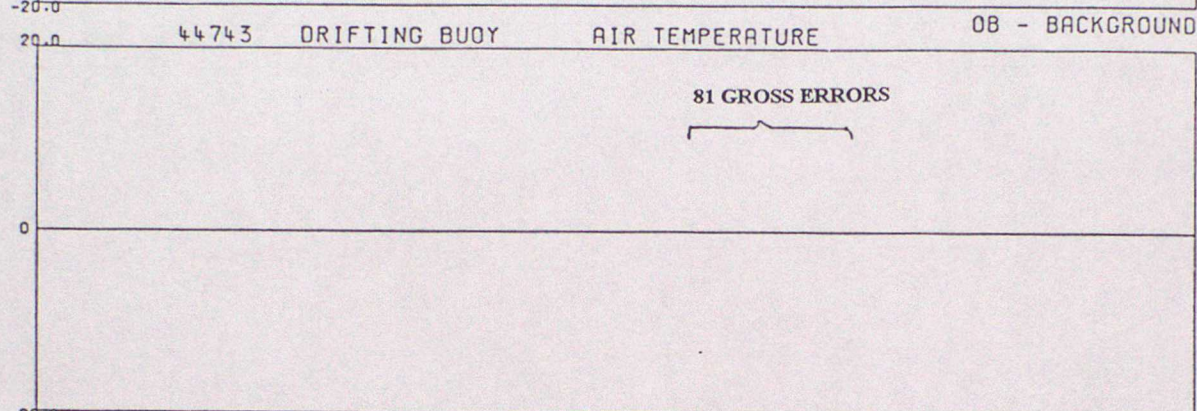
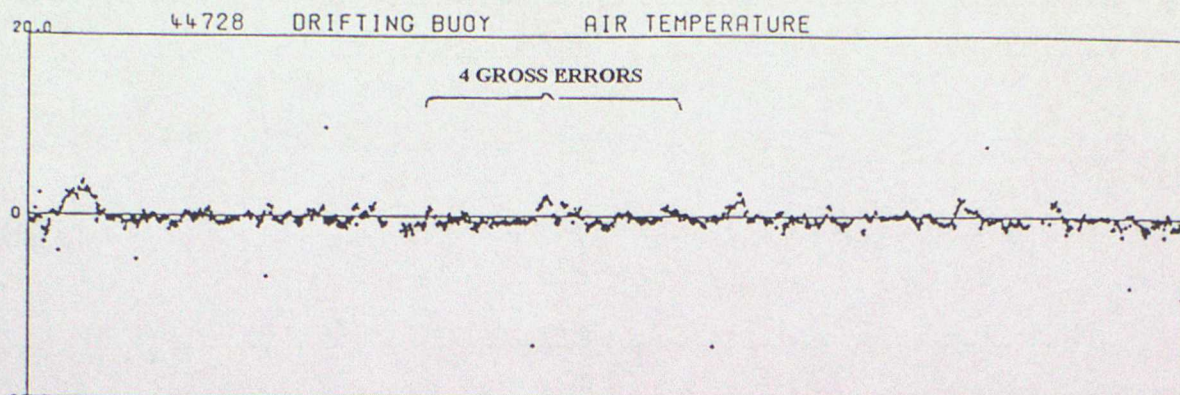
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



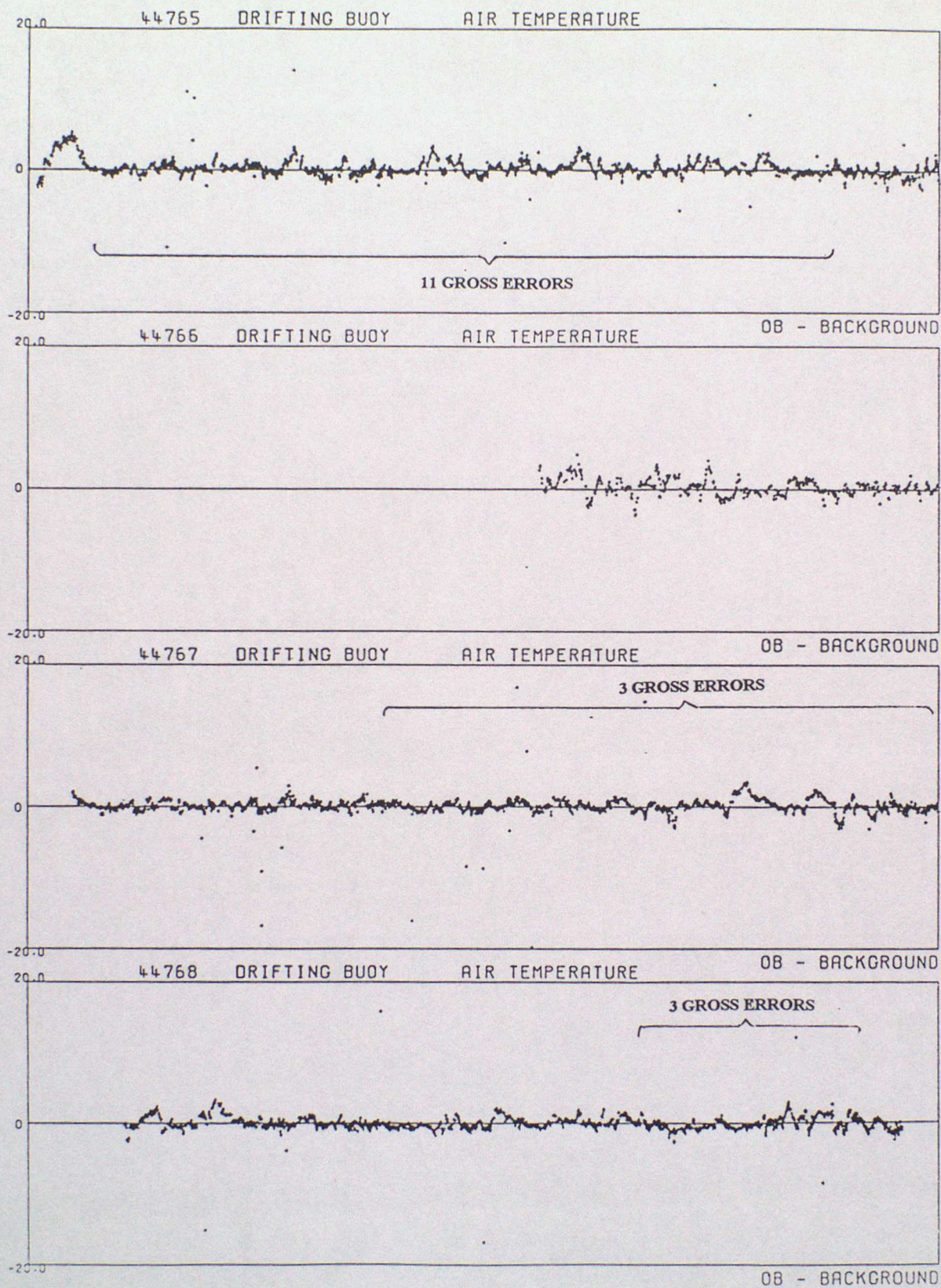
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



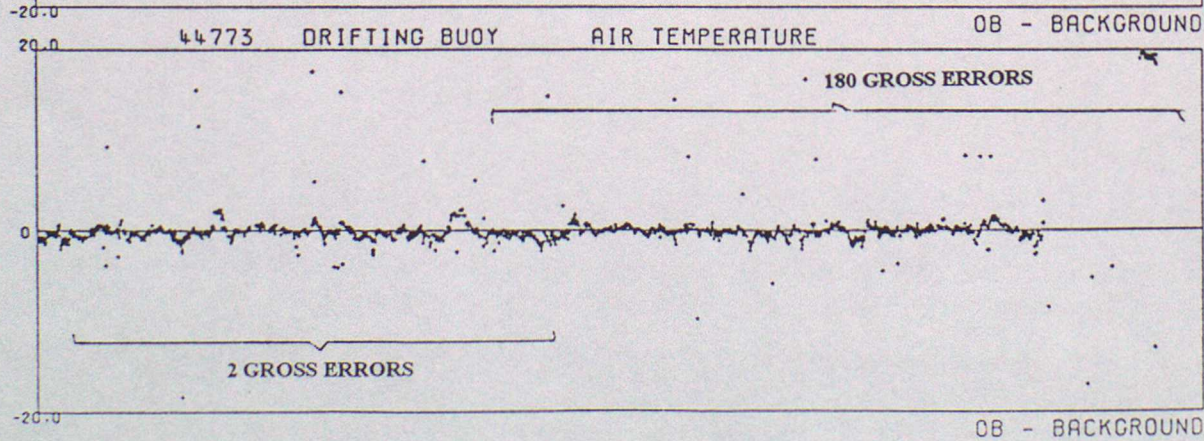
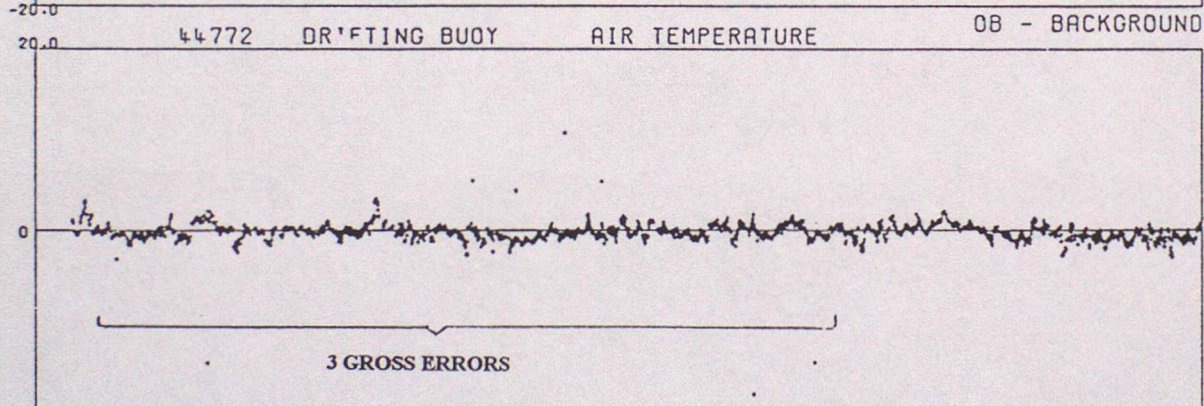
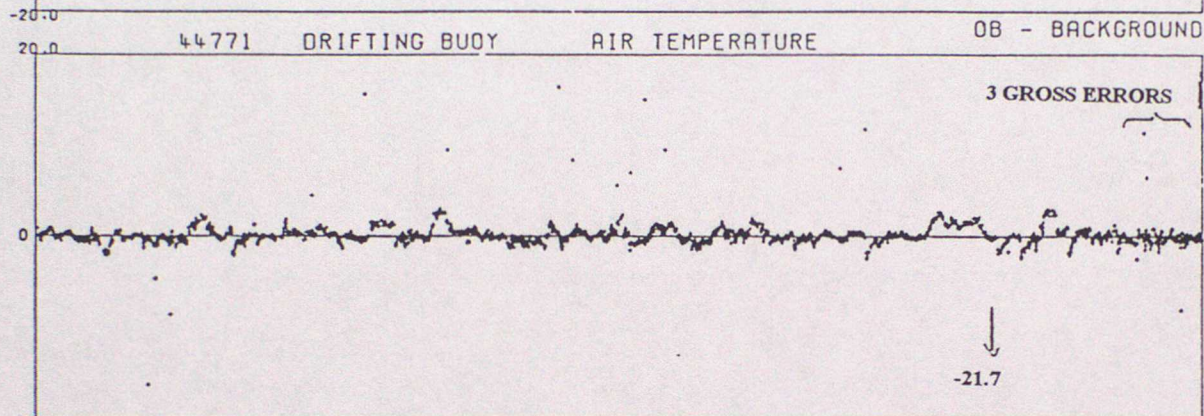
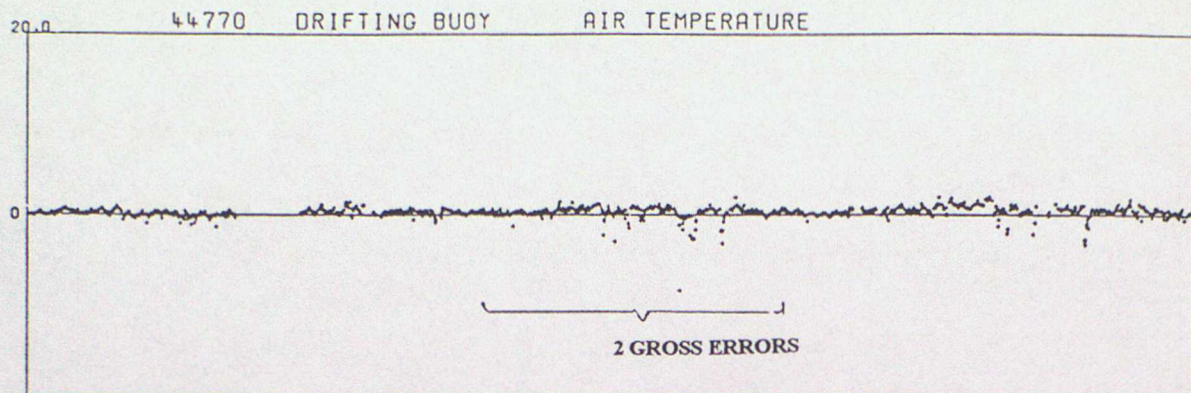
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



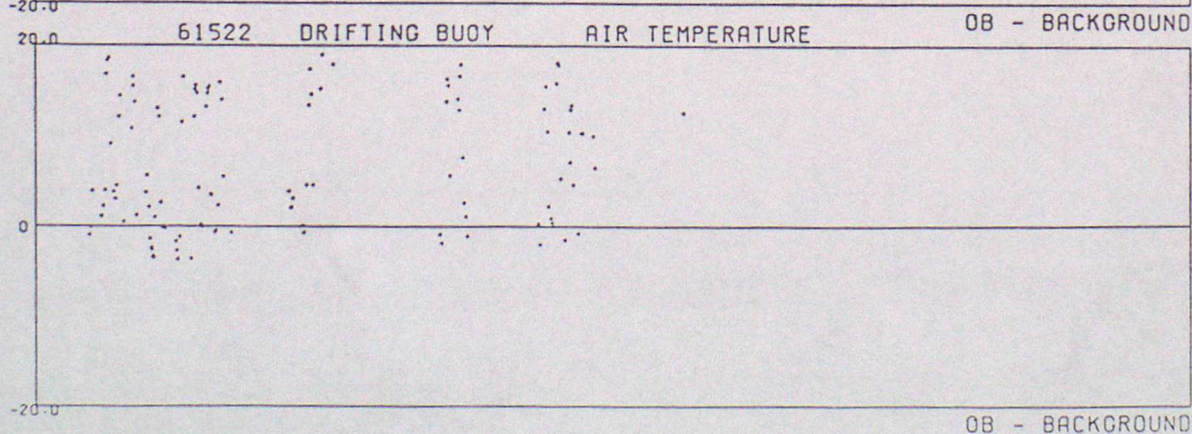
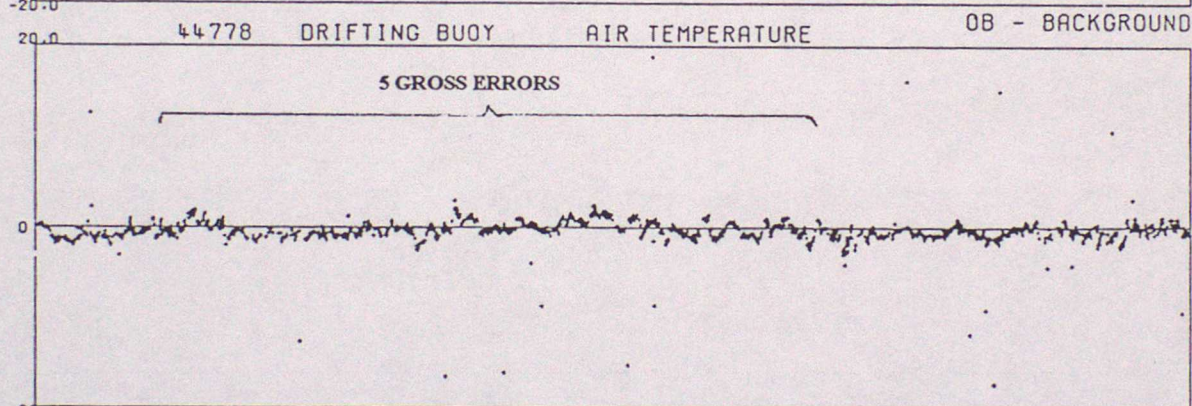
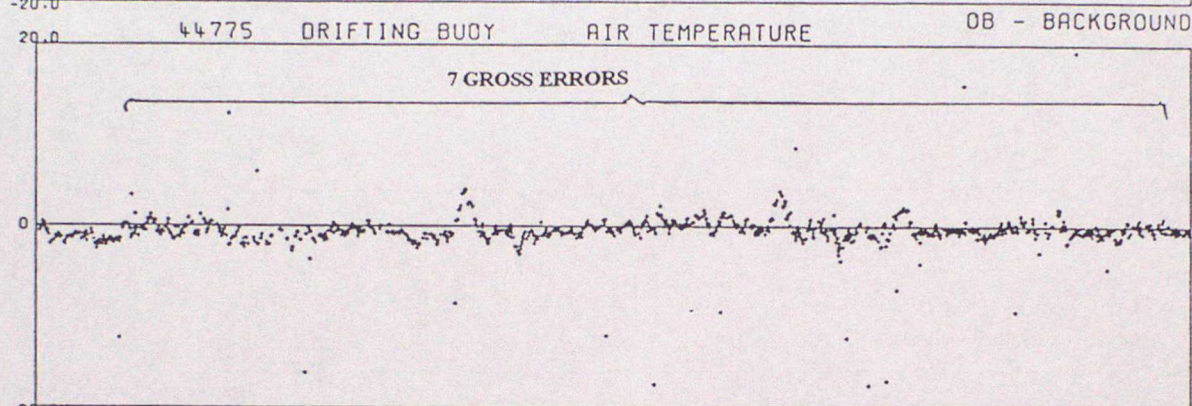
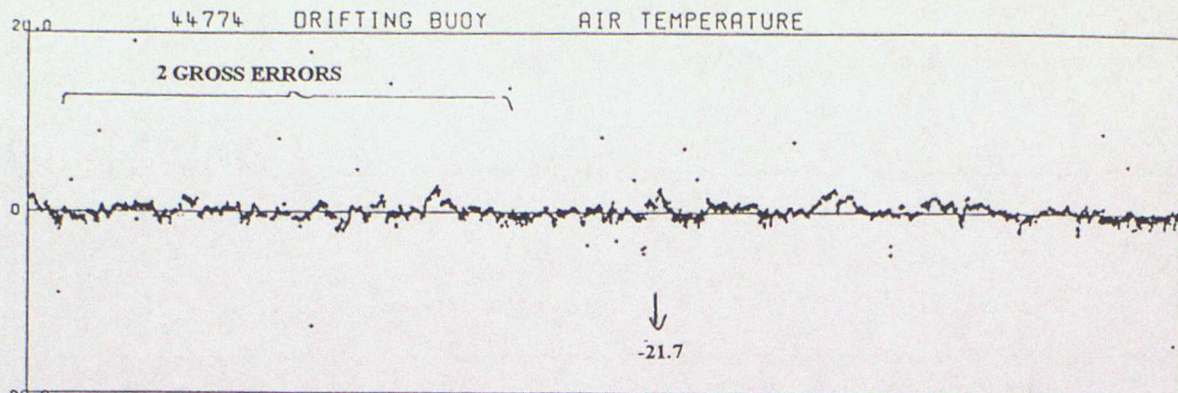
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



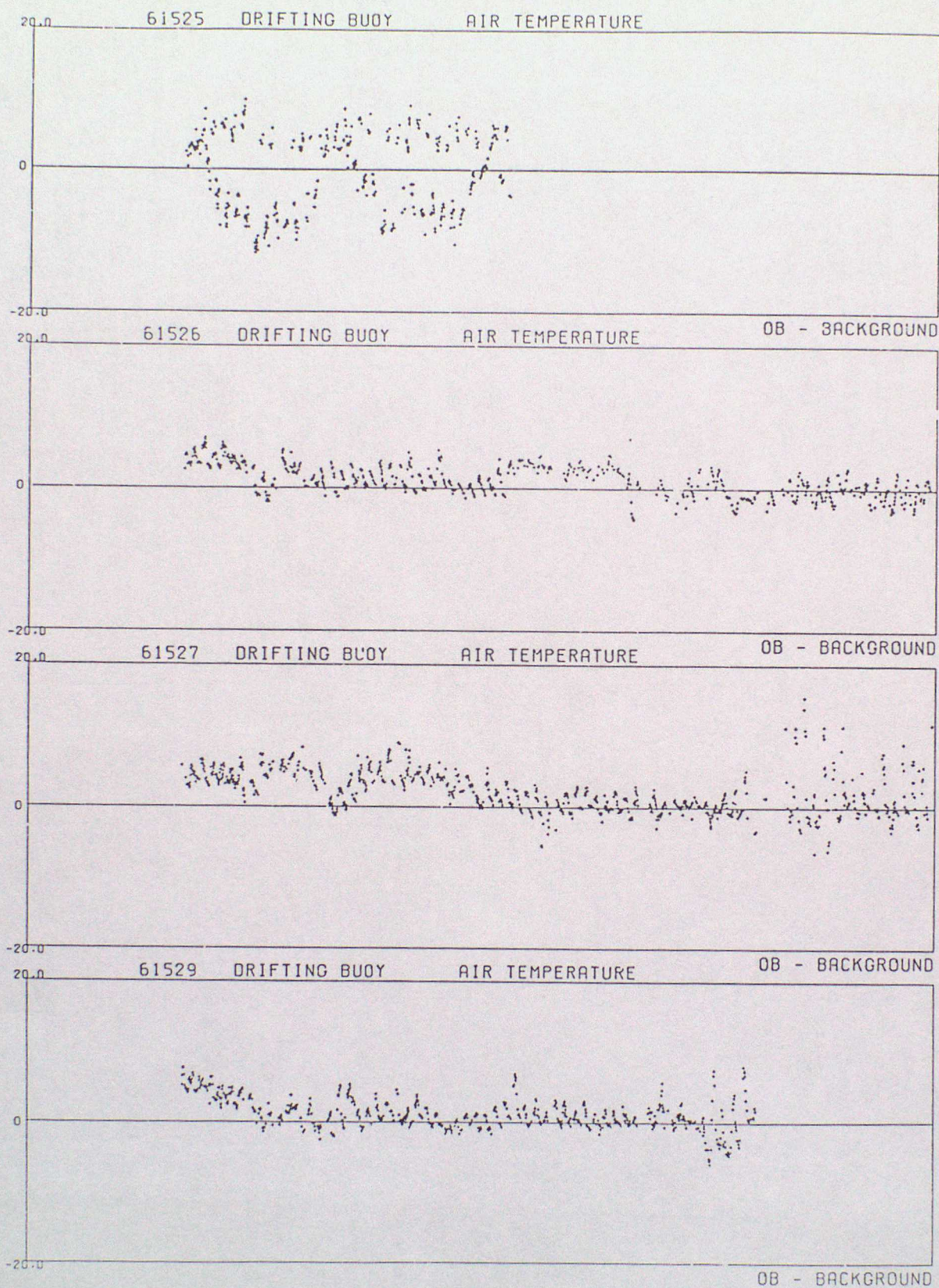
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



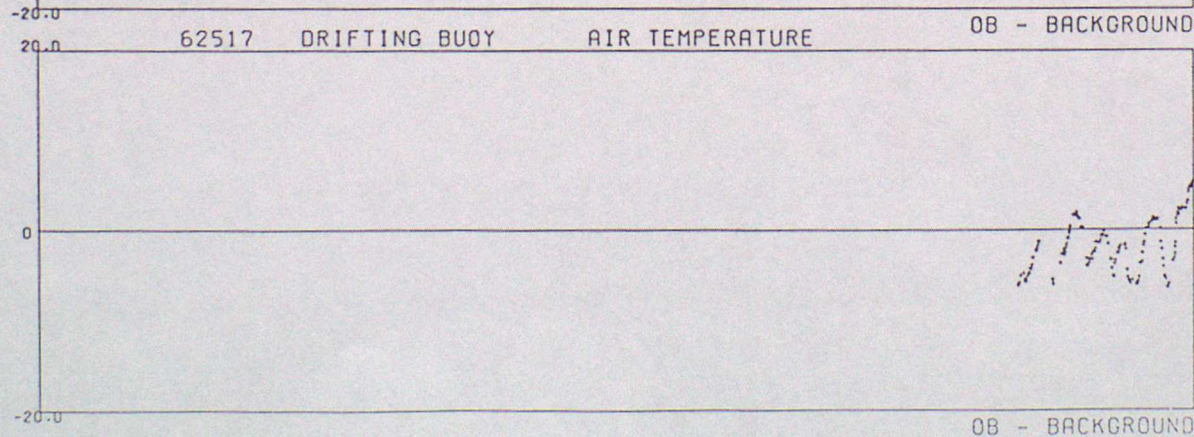
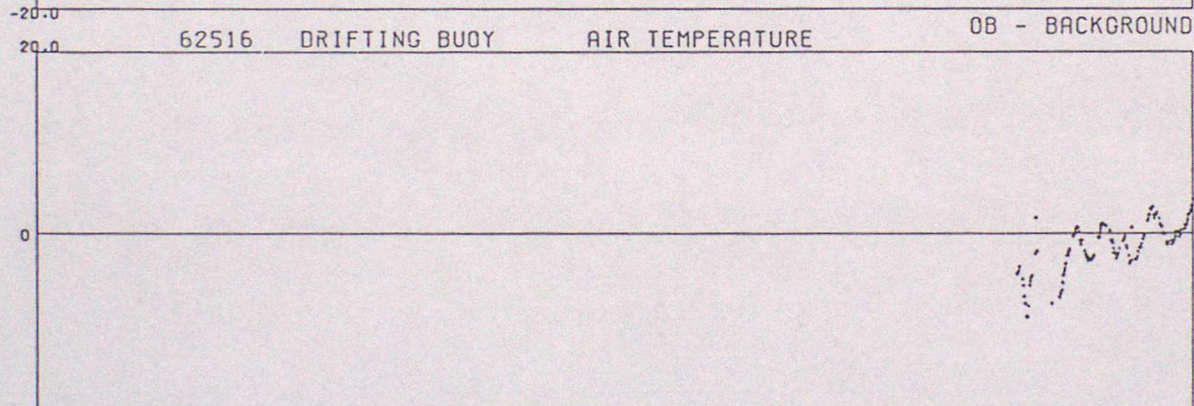
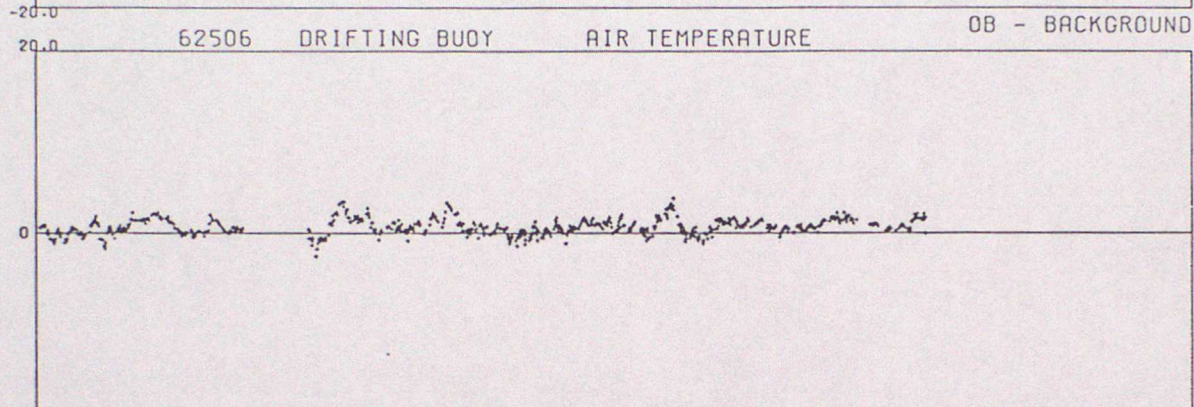
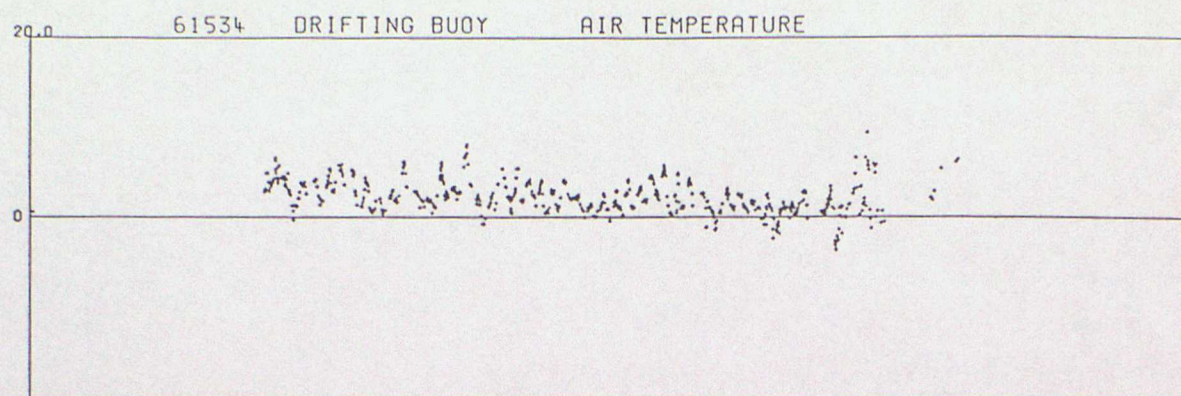
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



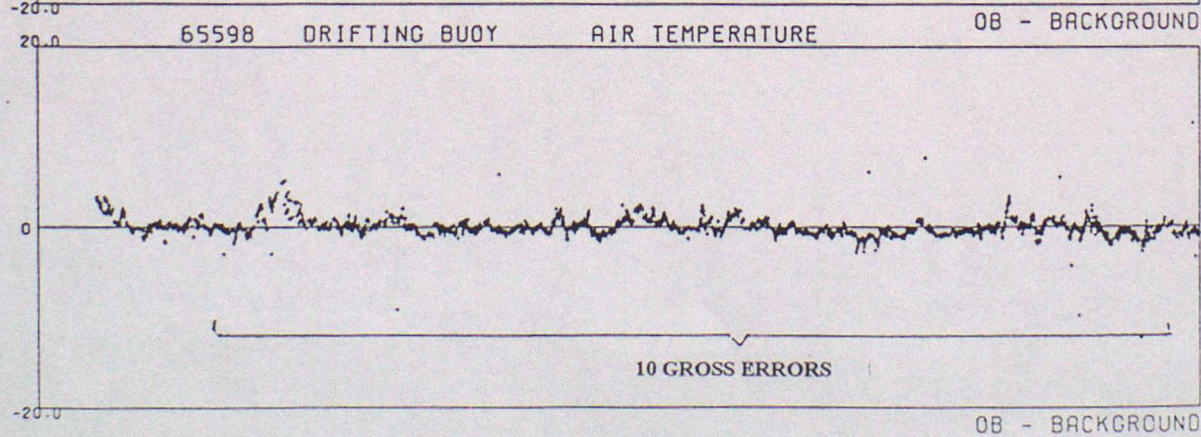
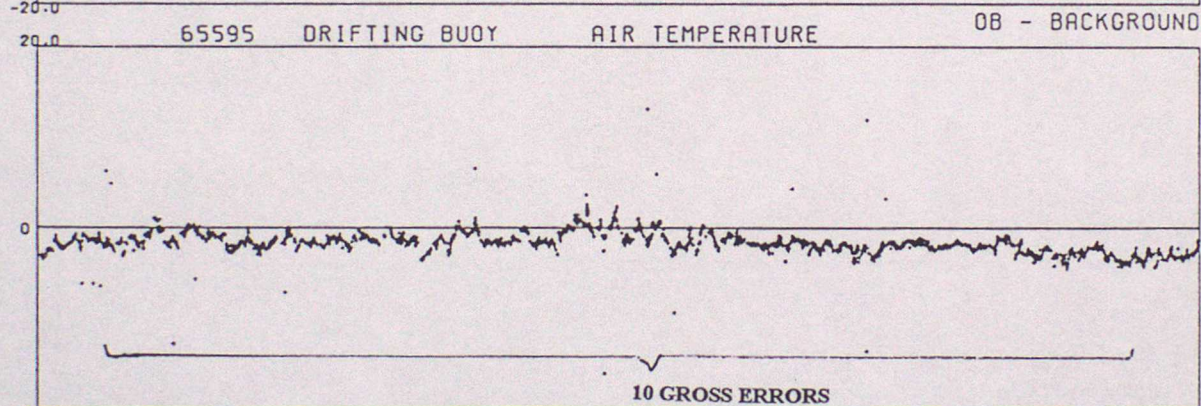
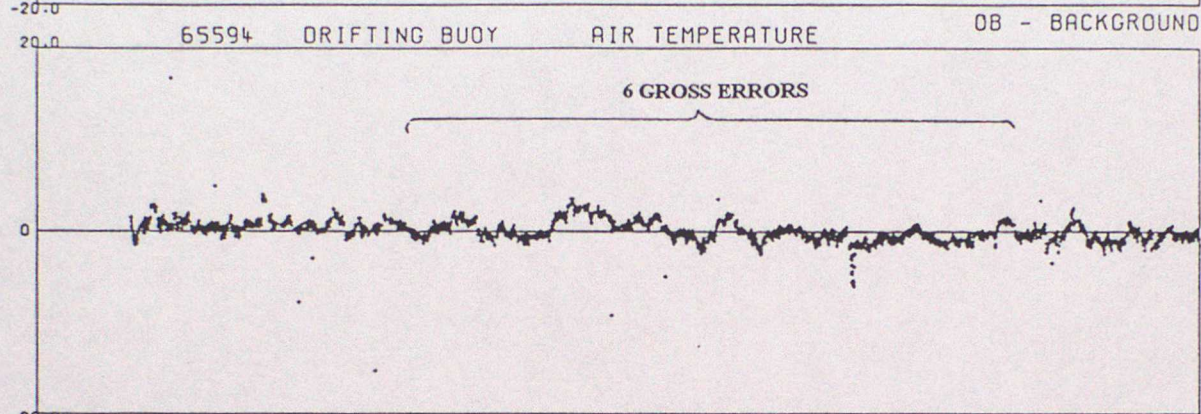
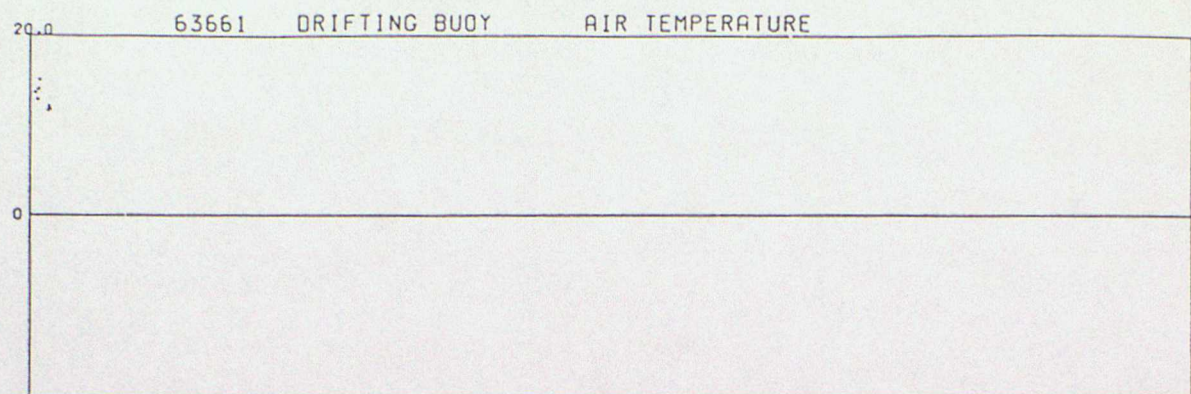
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



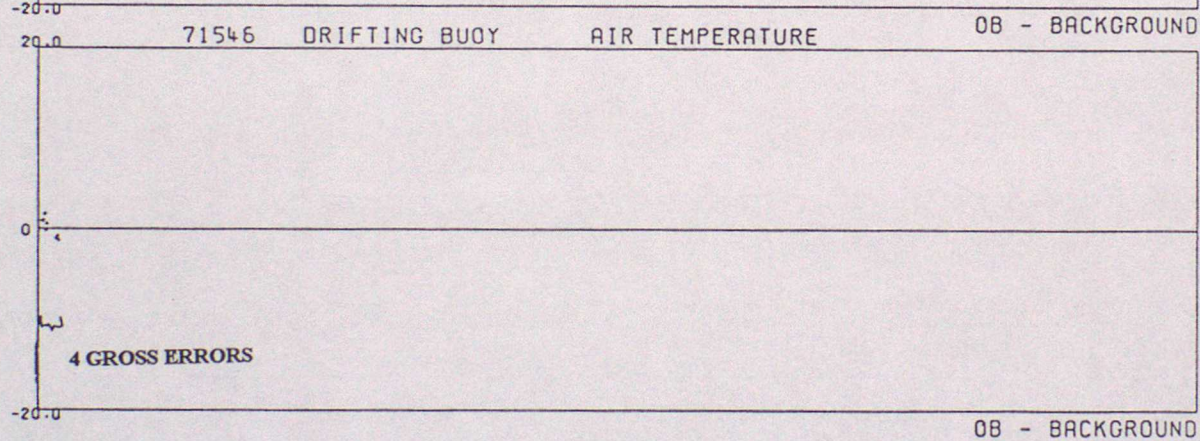
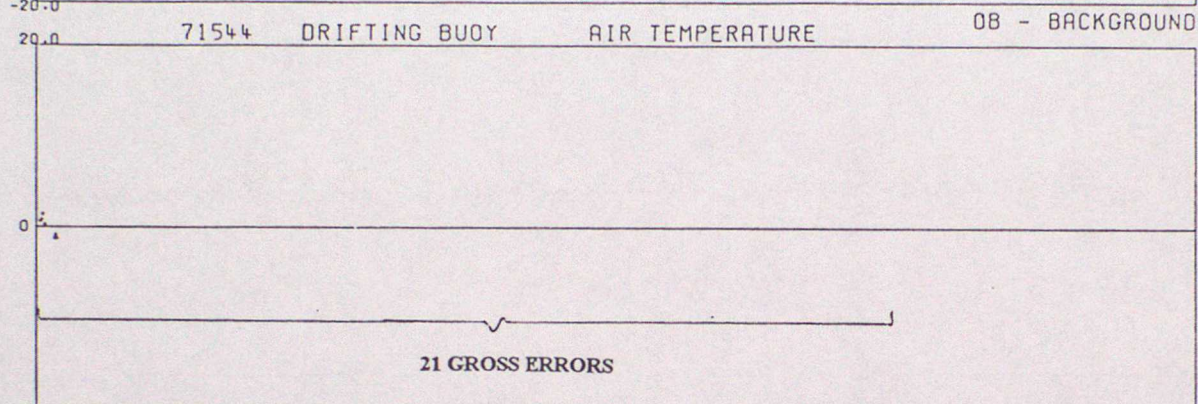
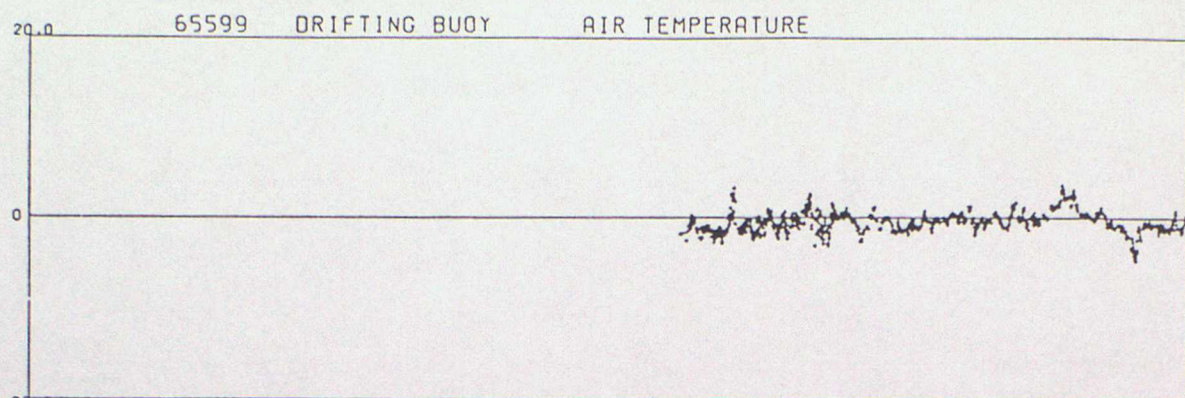
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

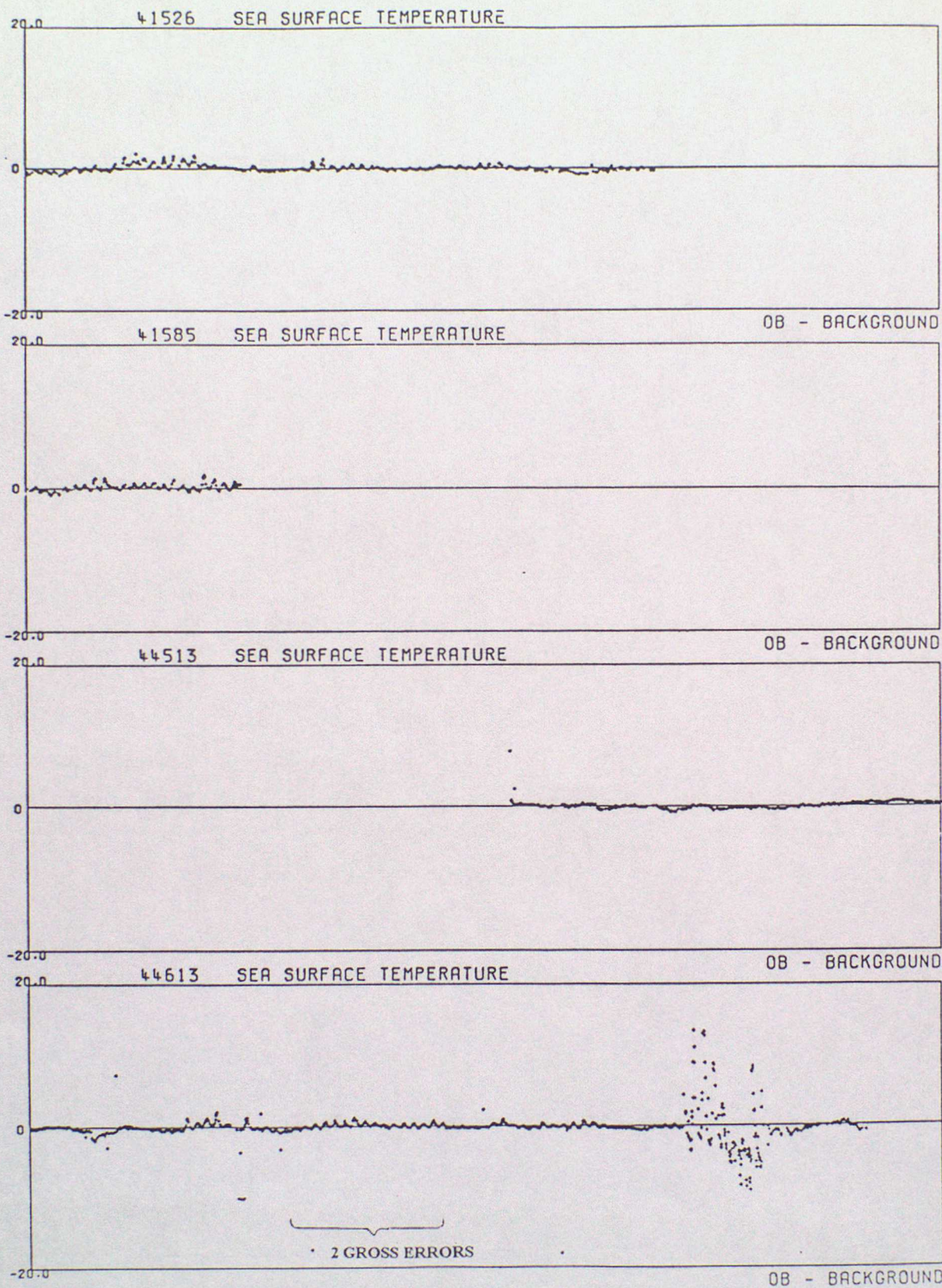


DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

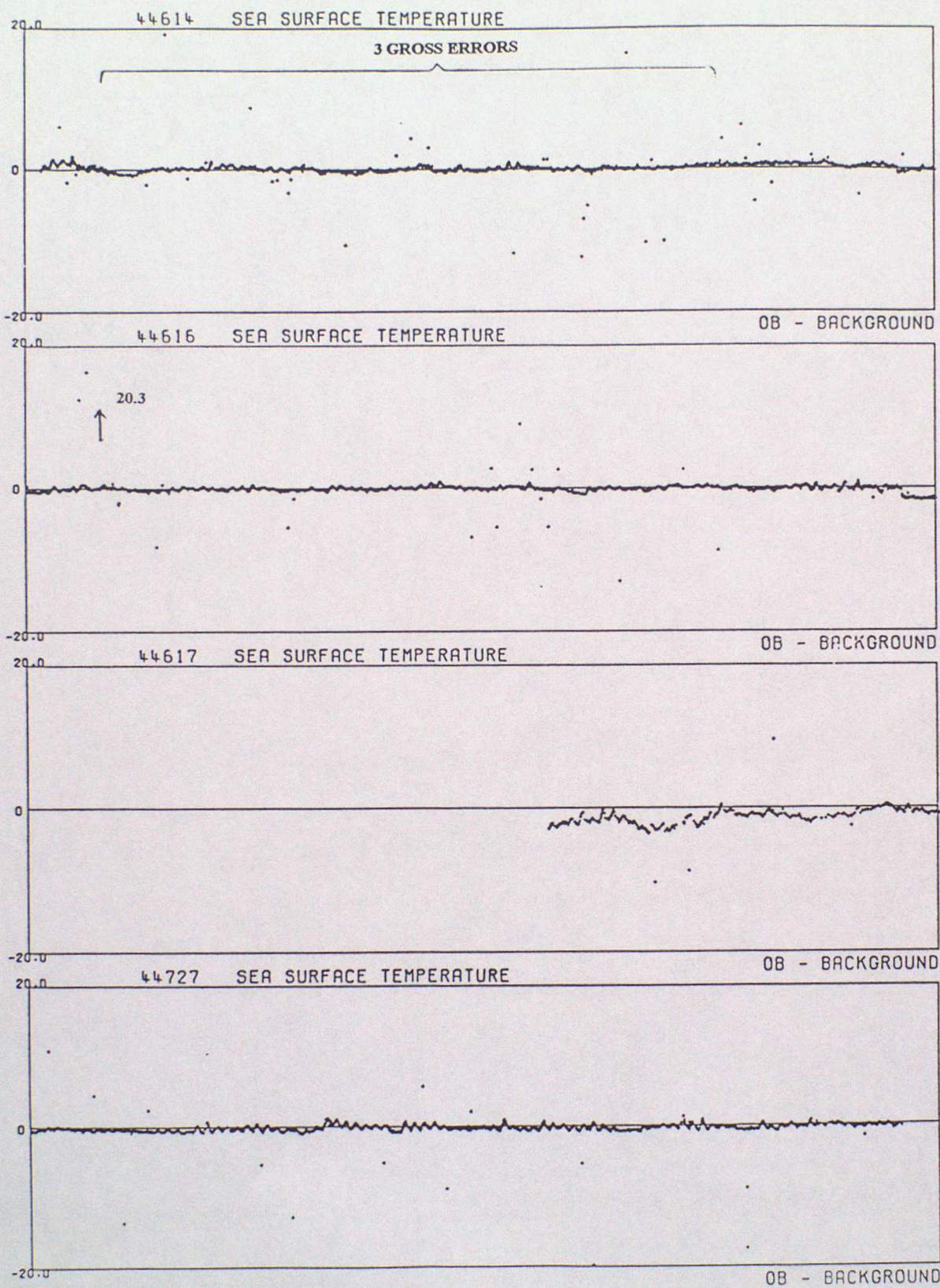


ANNEX D - TIME SERIES PLOTS OF SEA SURFACE TEMPERATURE

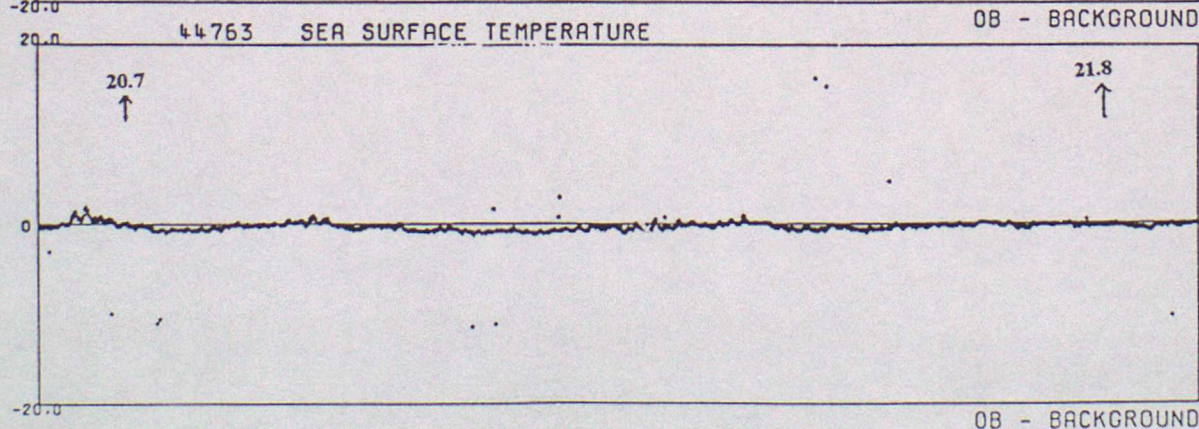
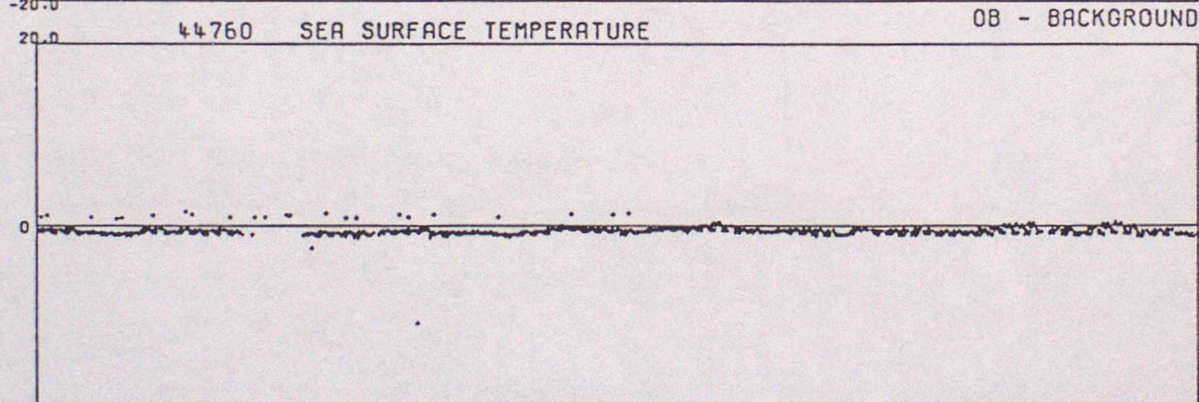
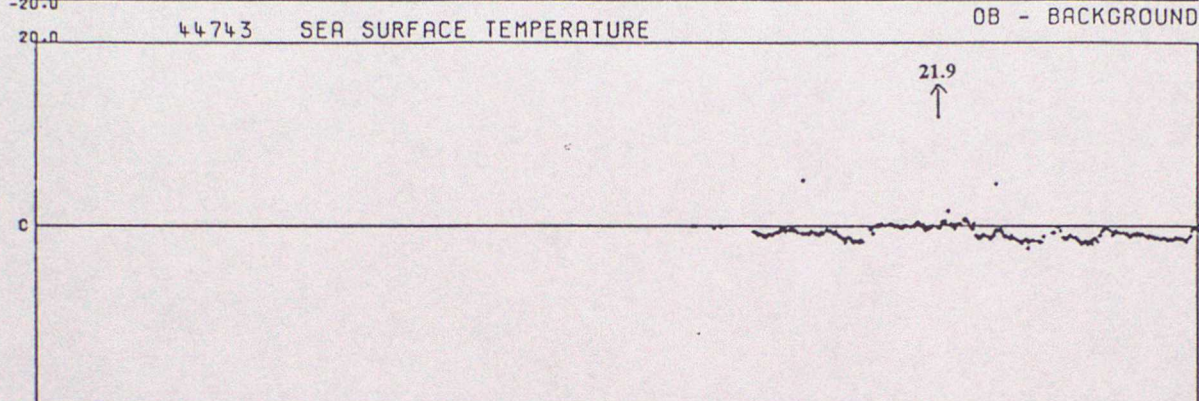
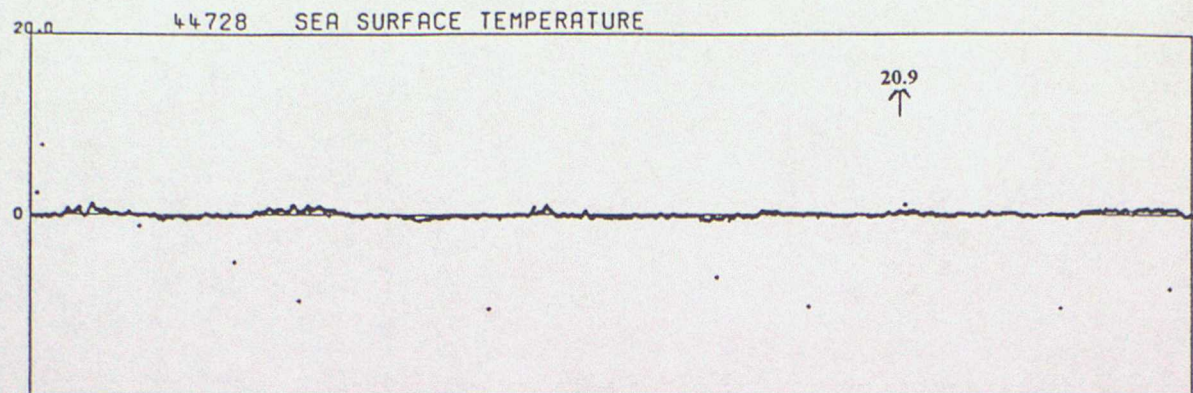
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



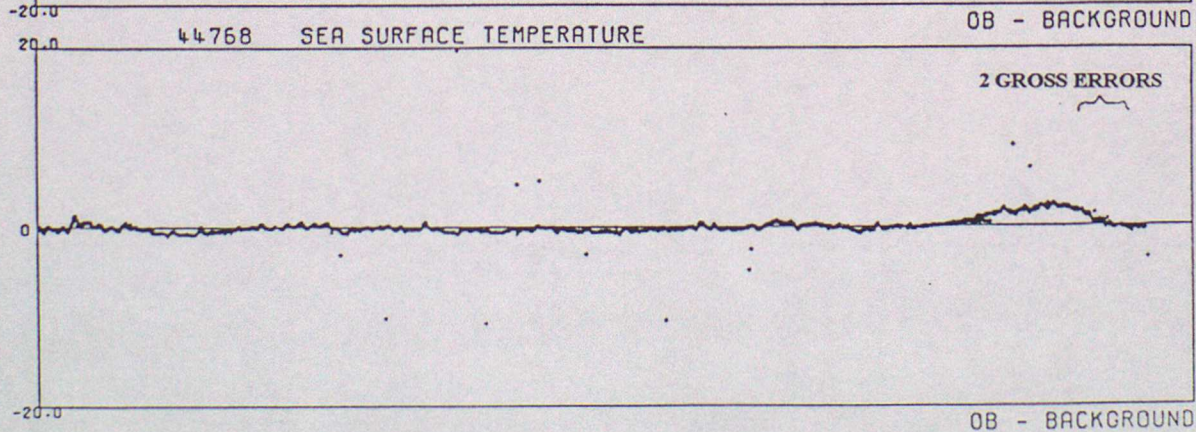
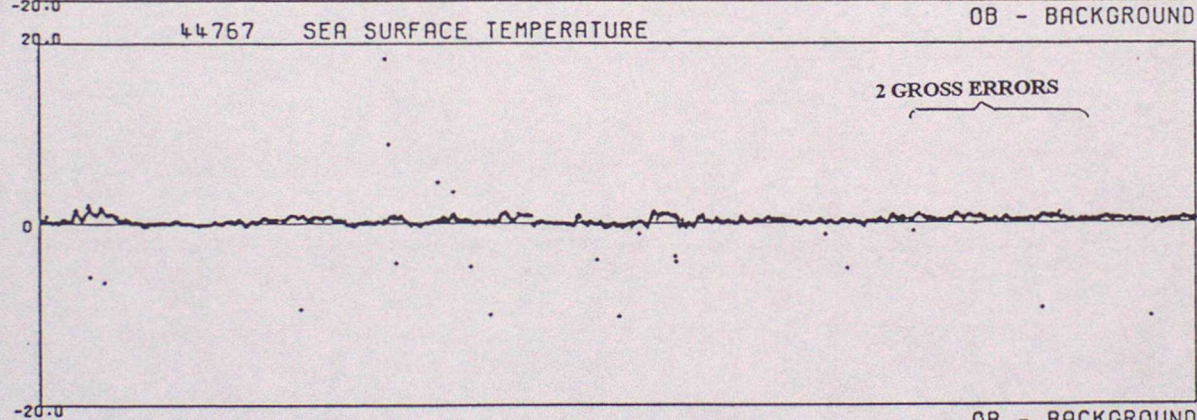
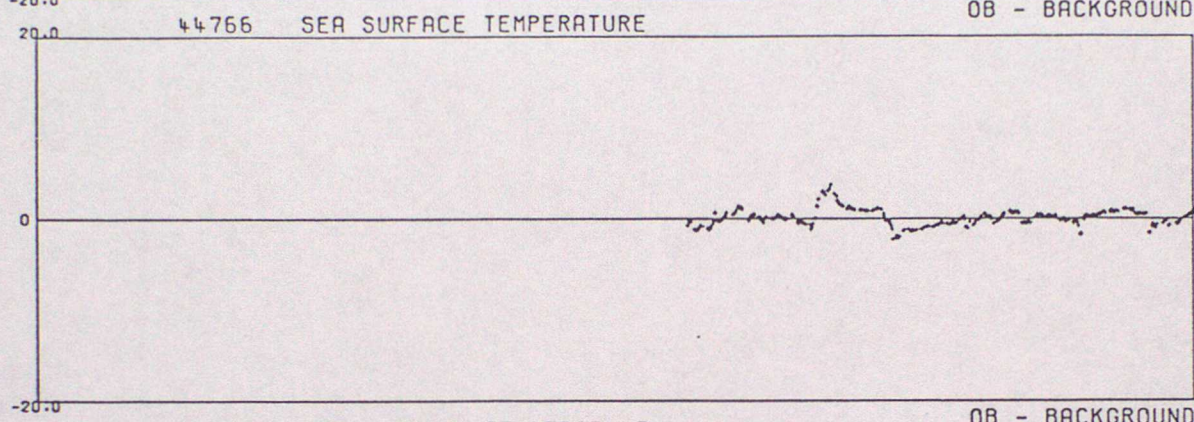
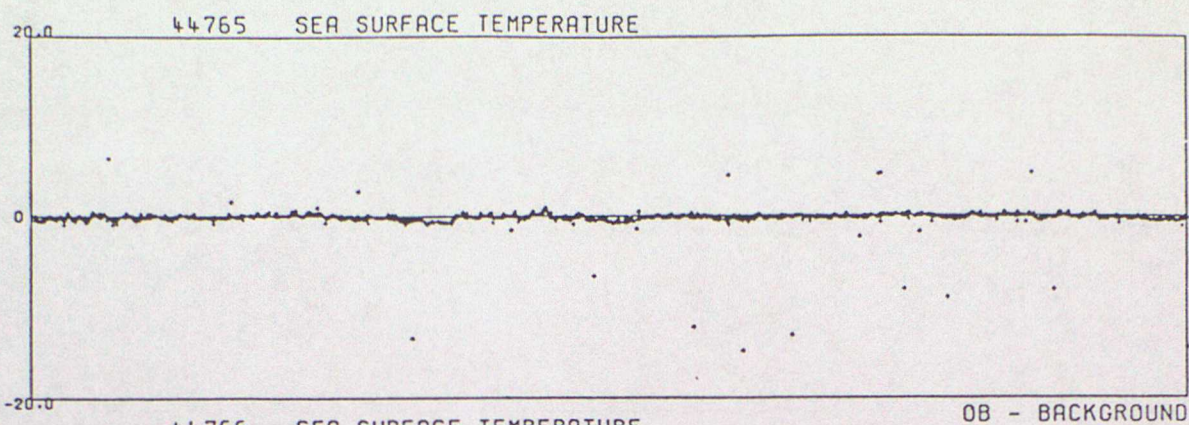
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



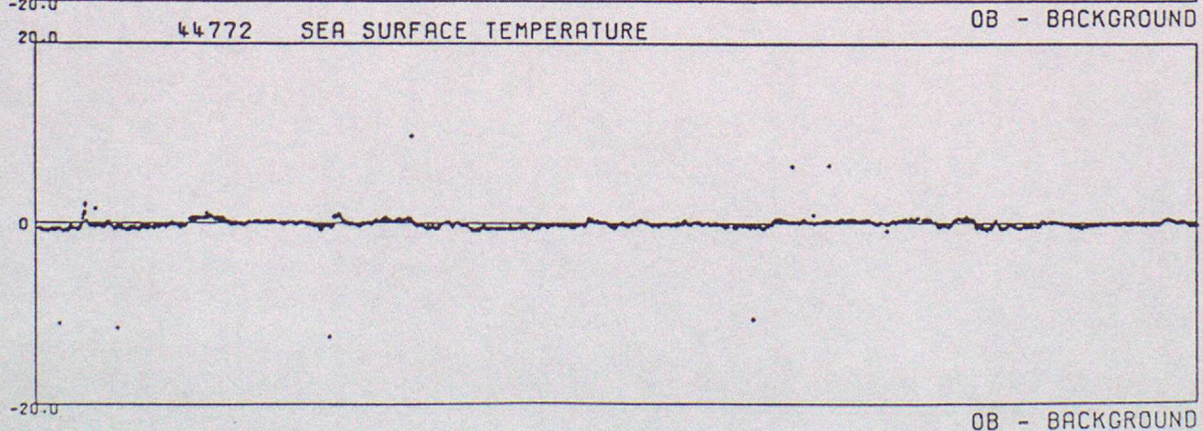
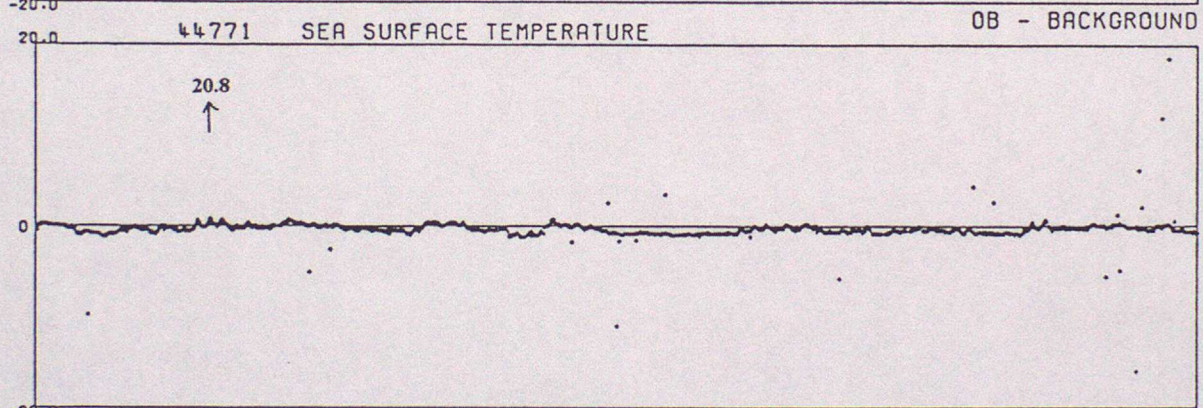
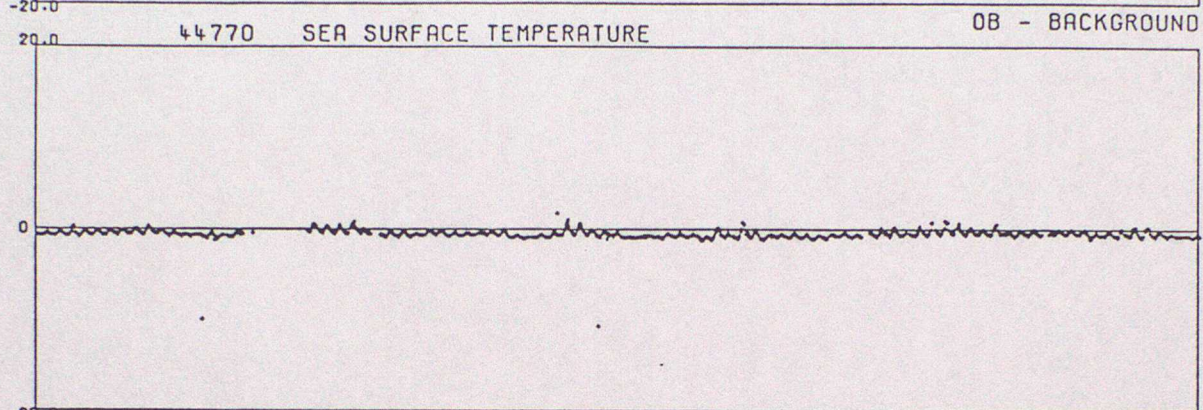
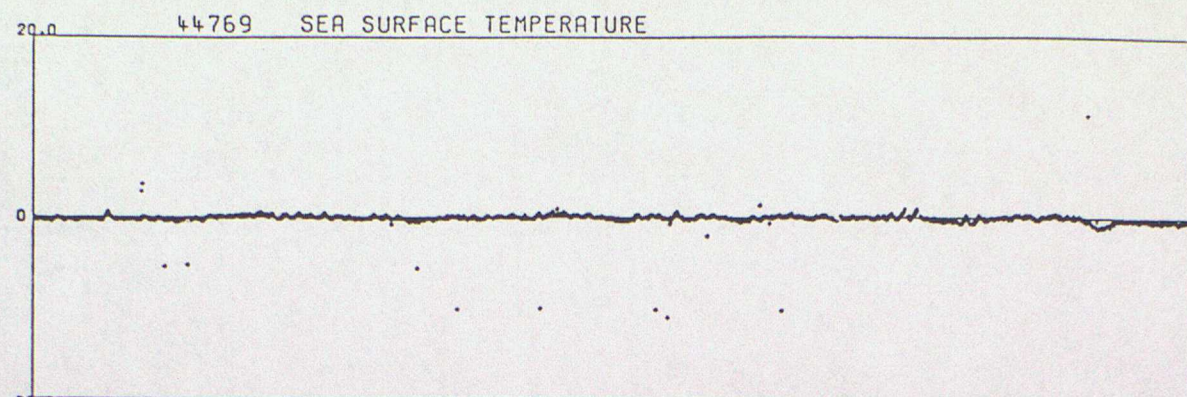
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



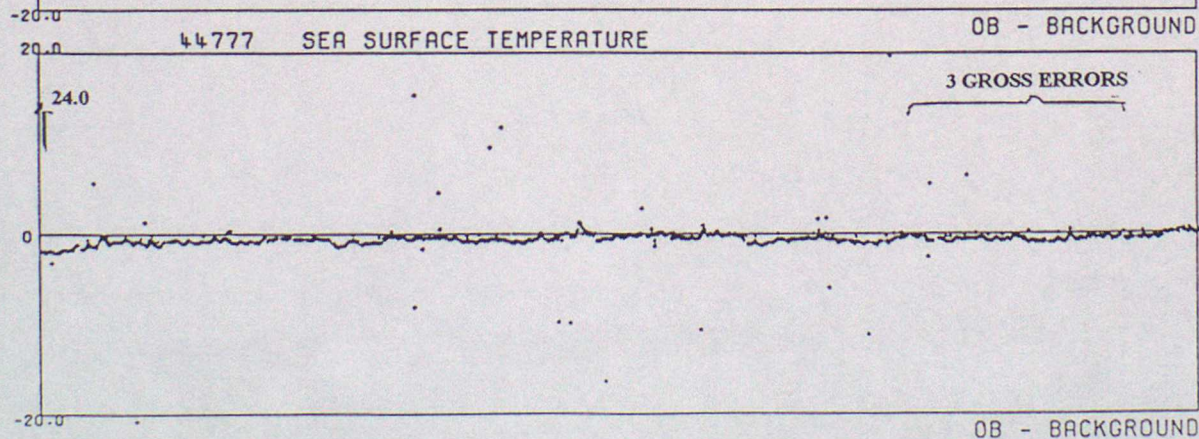
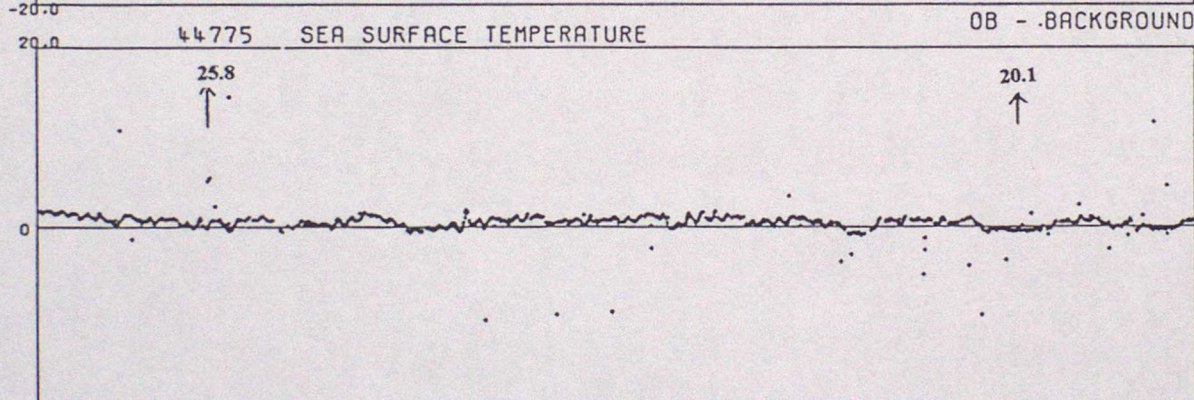
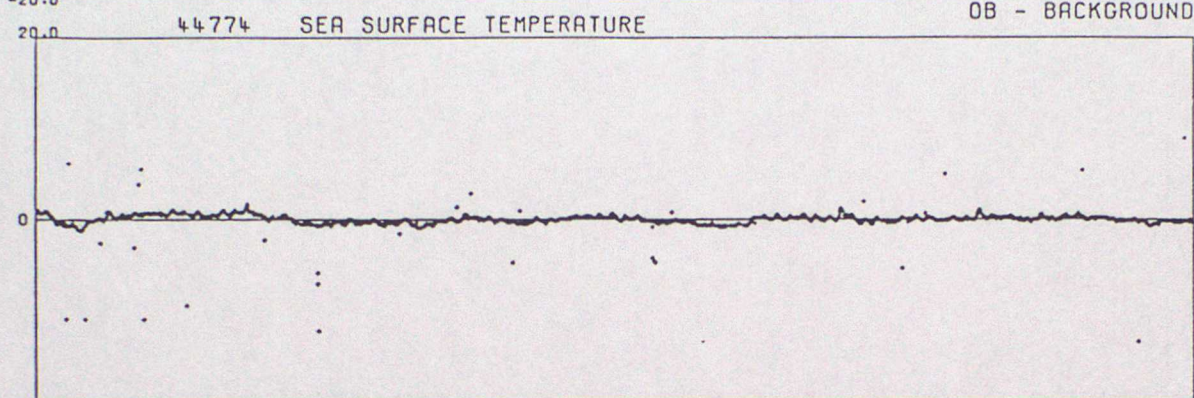
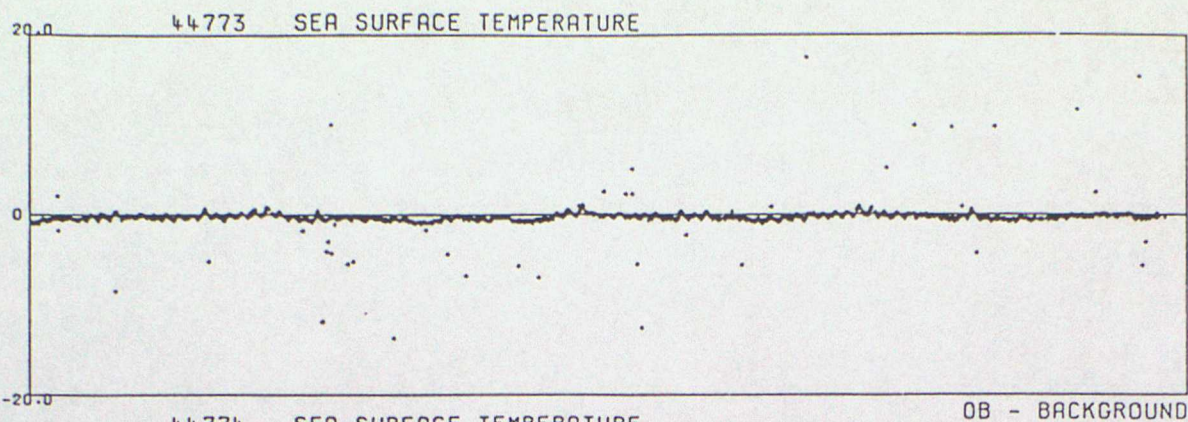
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



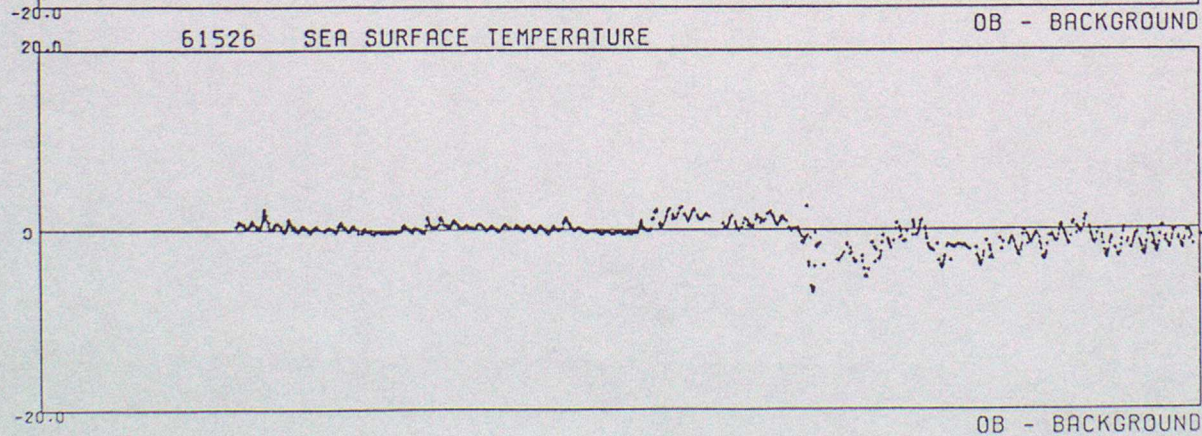
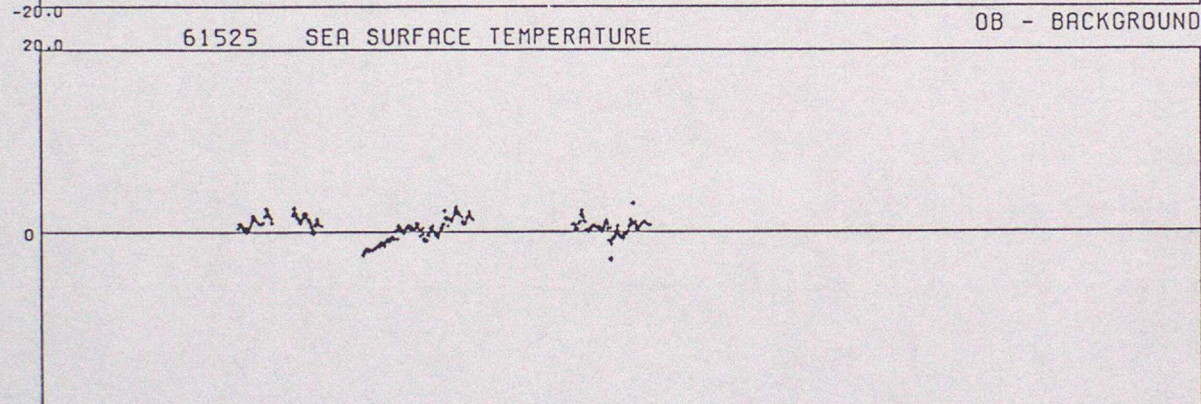
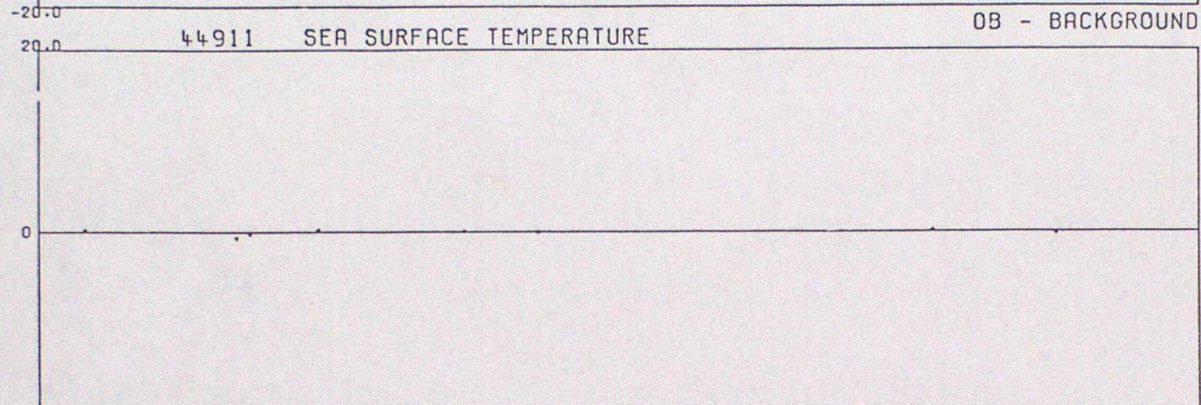
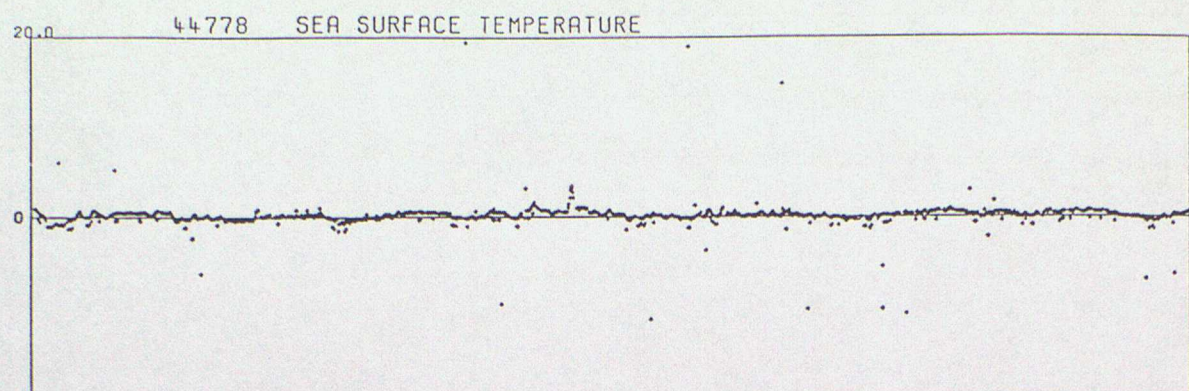
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



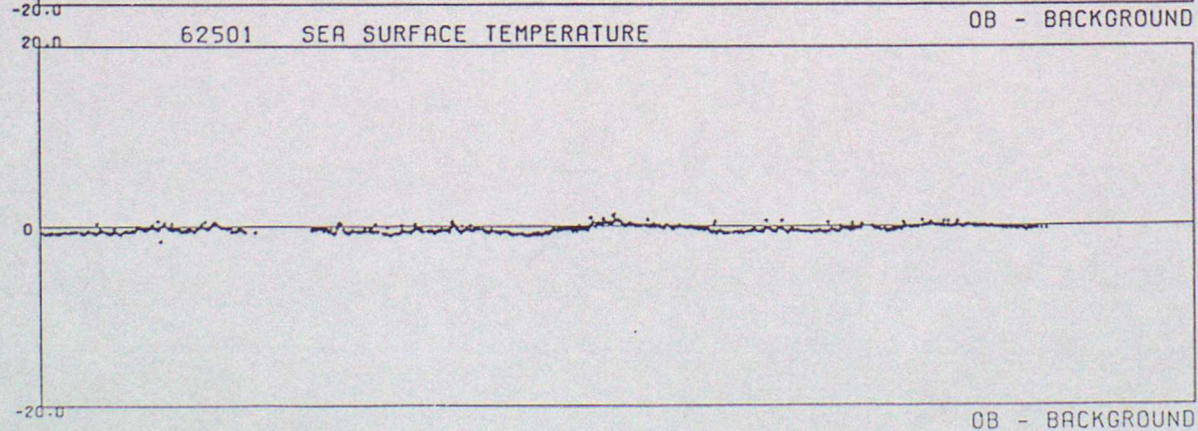
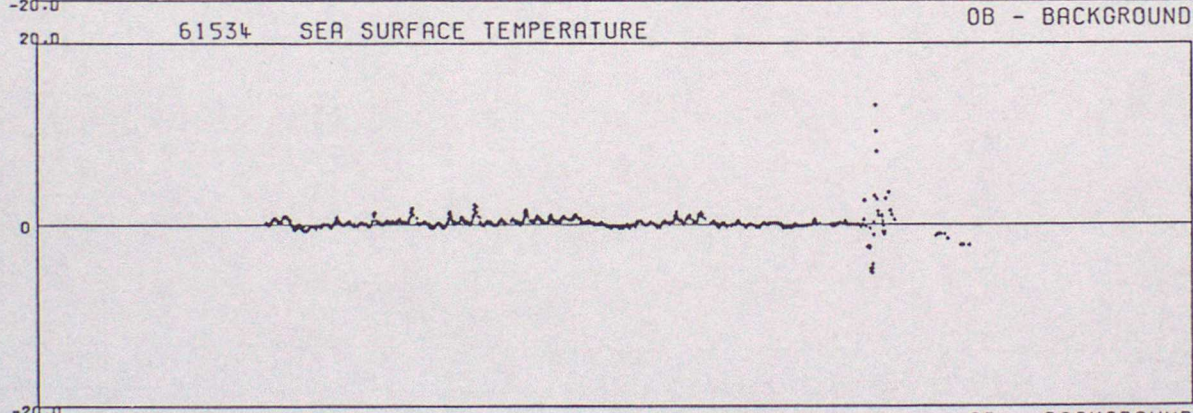
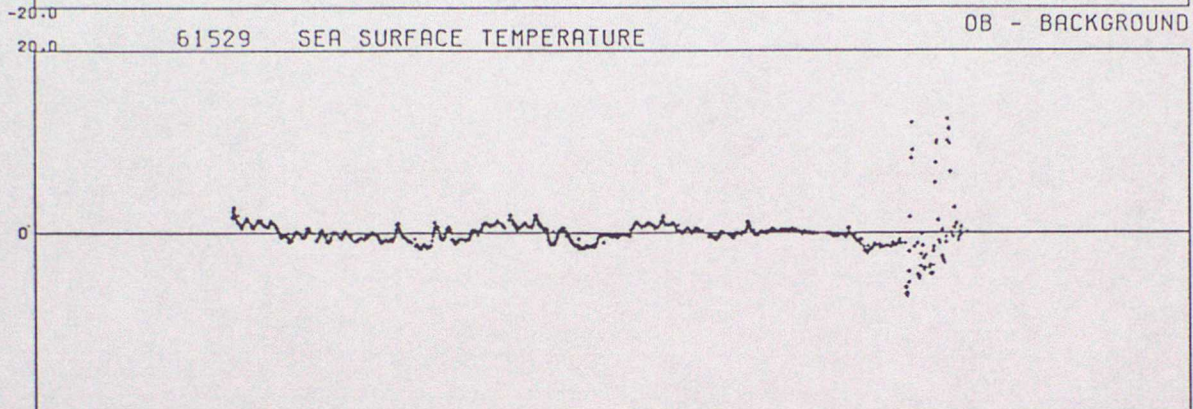
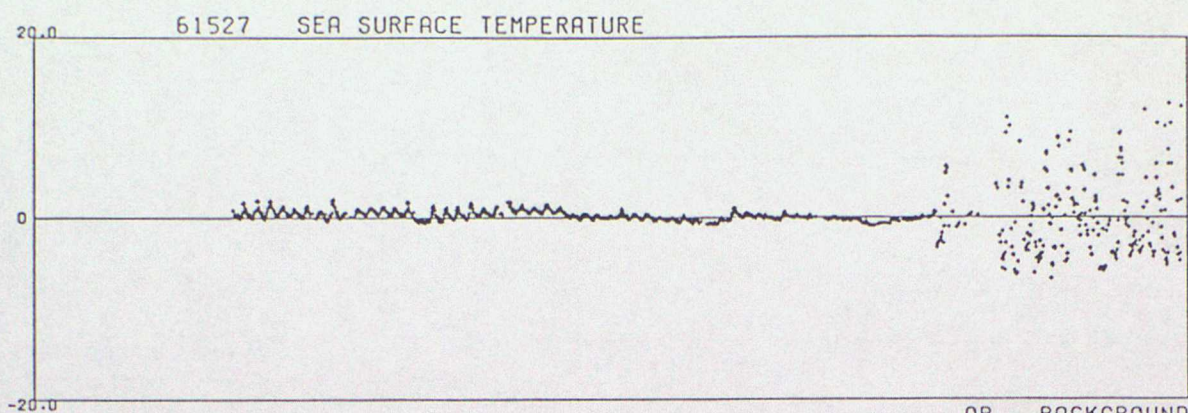
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



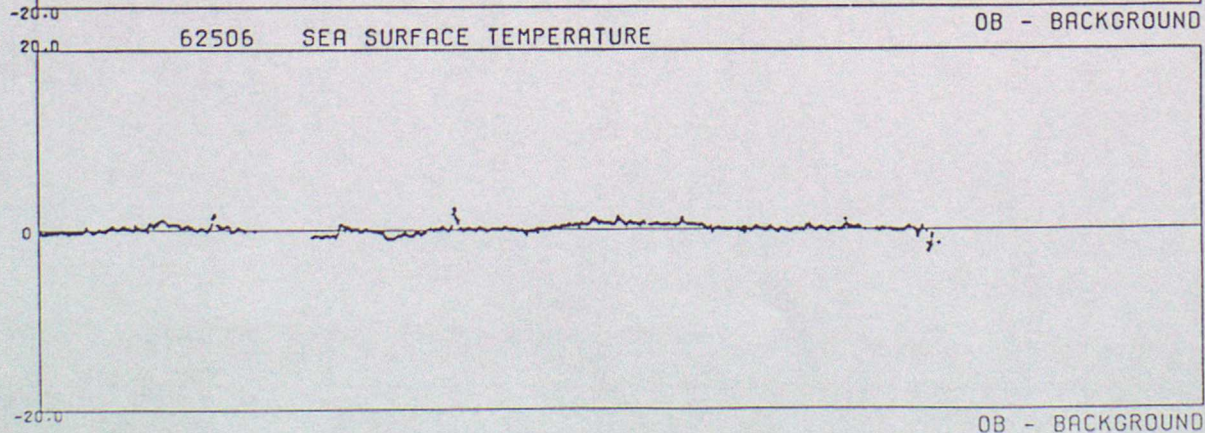
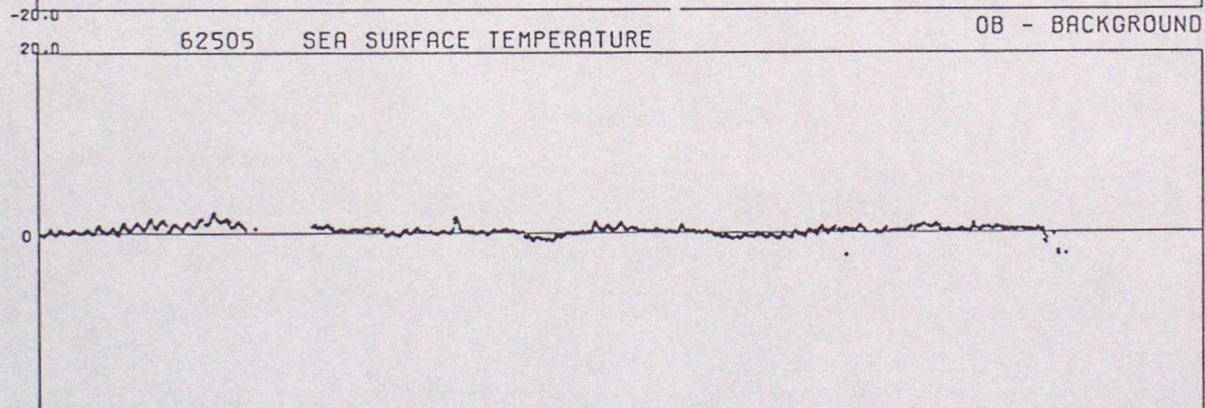
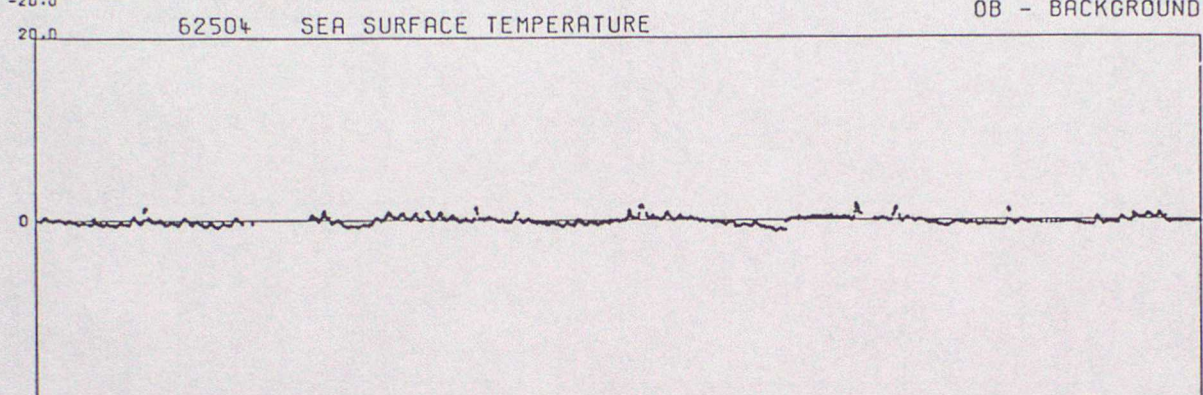
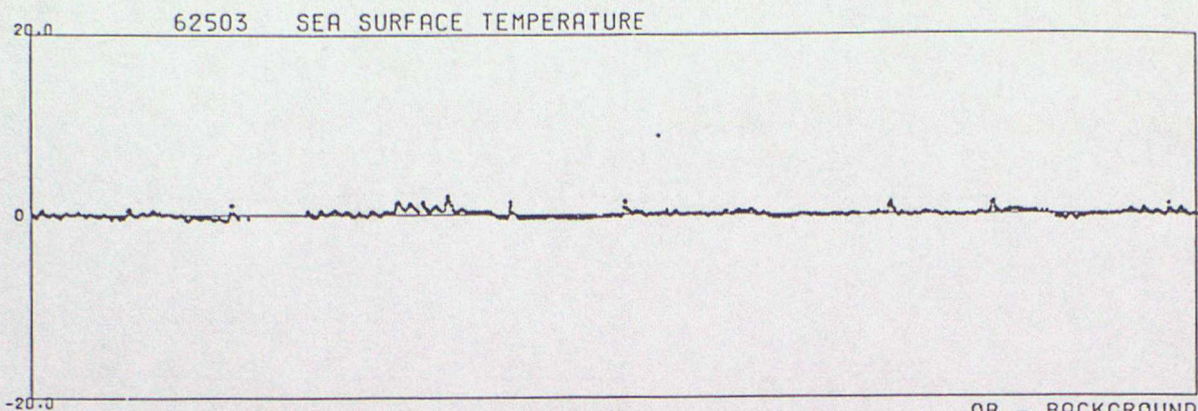
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



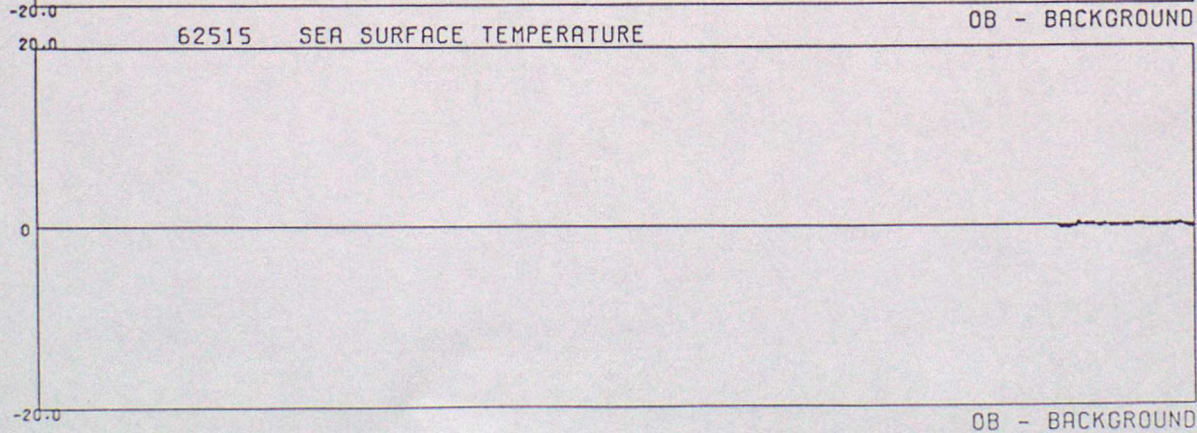
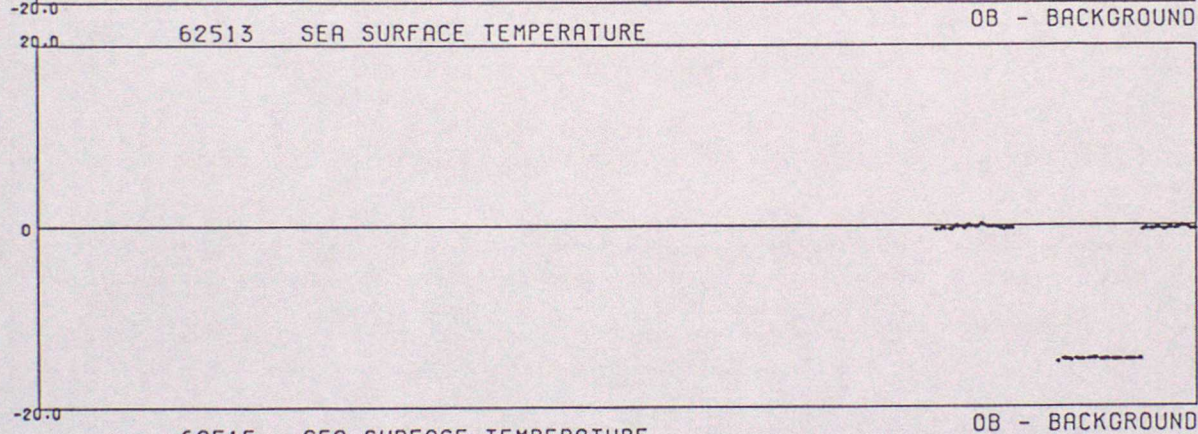
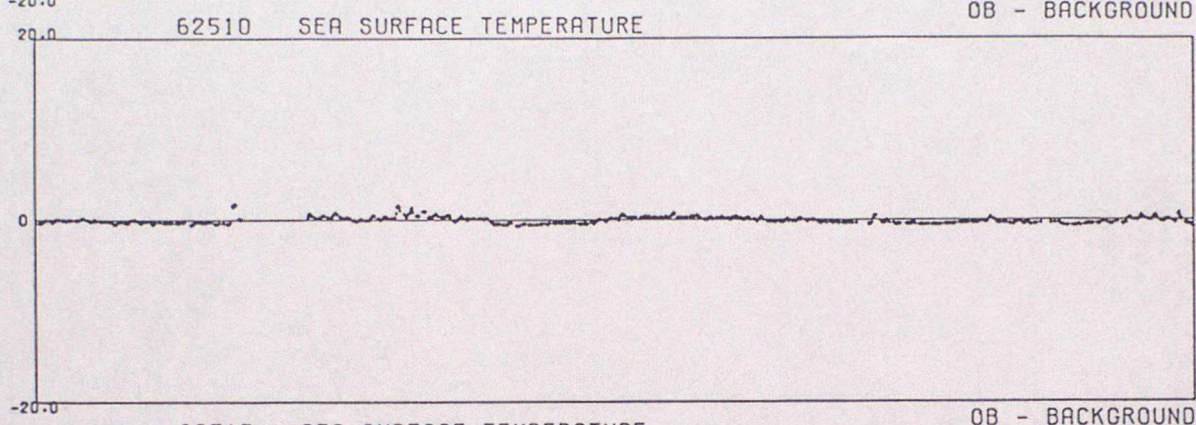
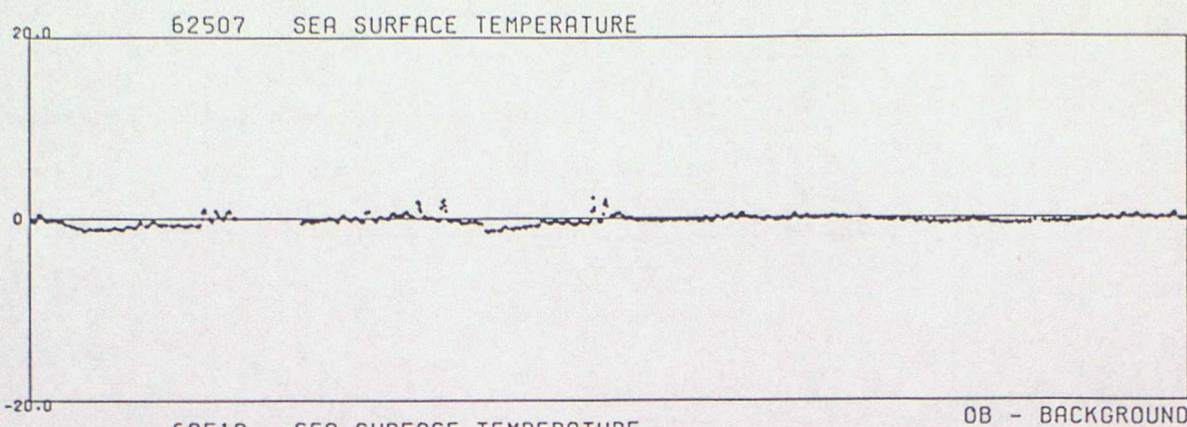
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

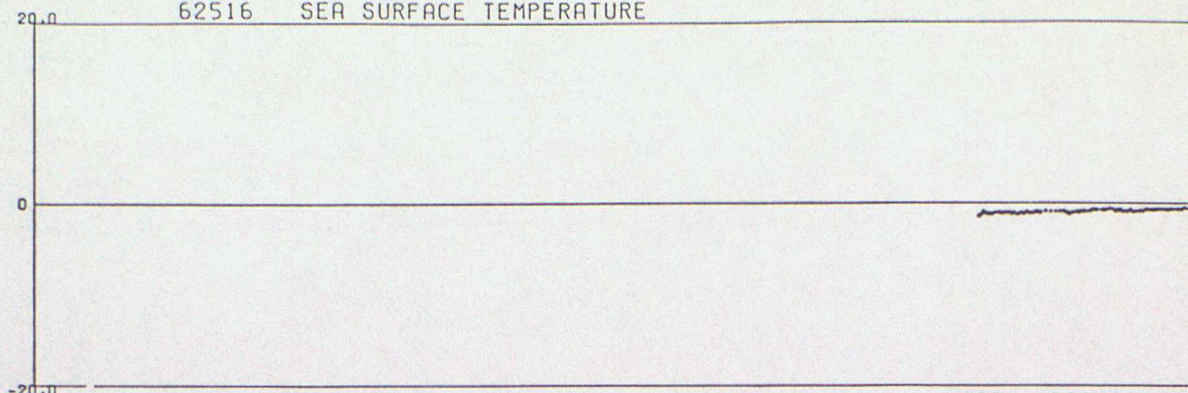


DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



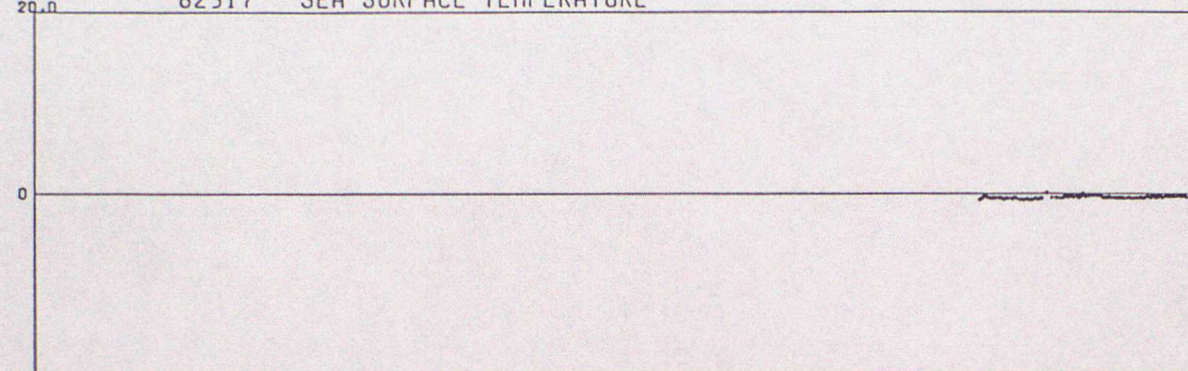
DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

62516 SEA SURFACE TEMPERATURE



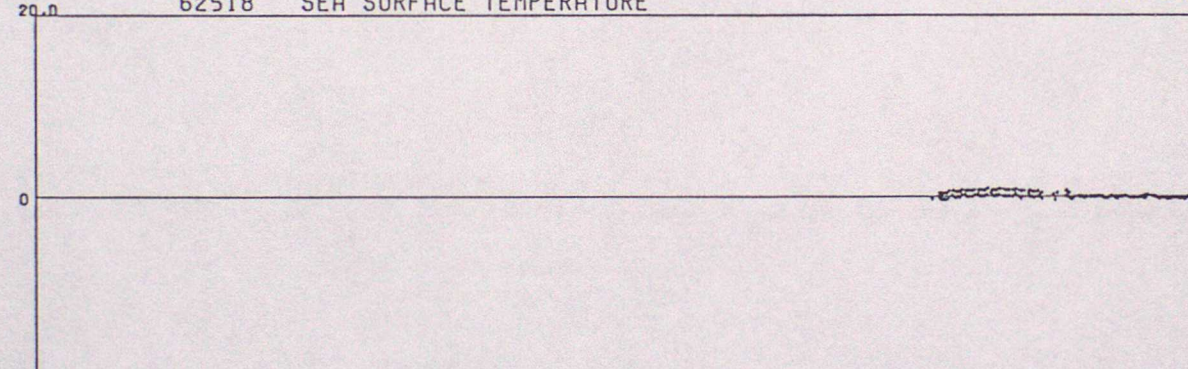
62517 SEA SURFACE TEMPERATURE

OB - BACKGROUND



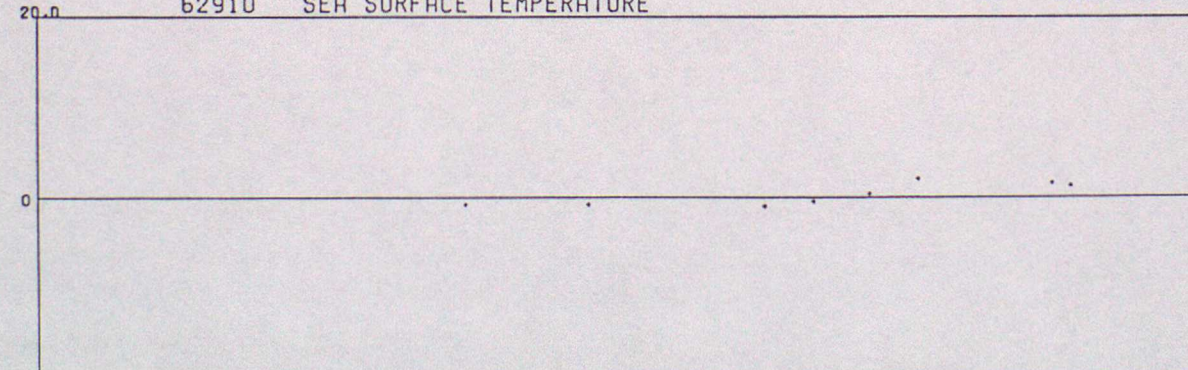
62518 SEA SURFACE TEMPERATURE

OB - BACKGROUND



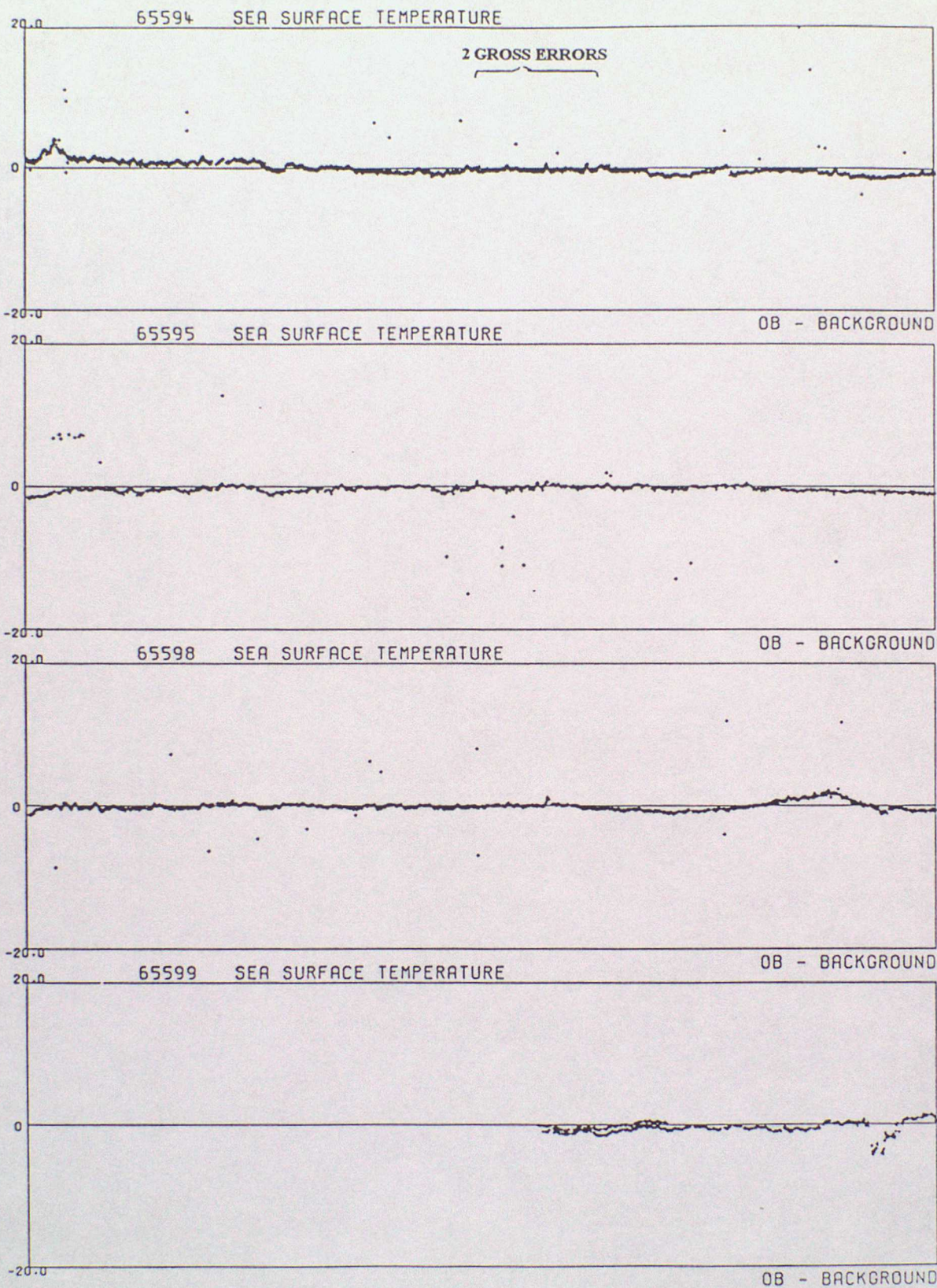
62910 SEA SURFACE TEMPERATURE

OB - BACKGROUND



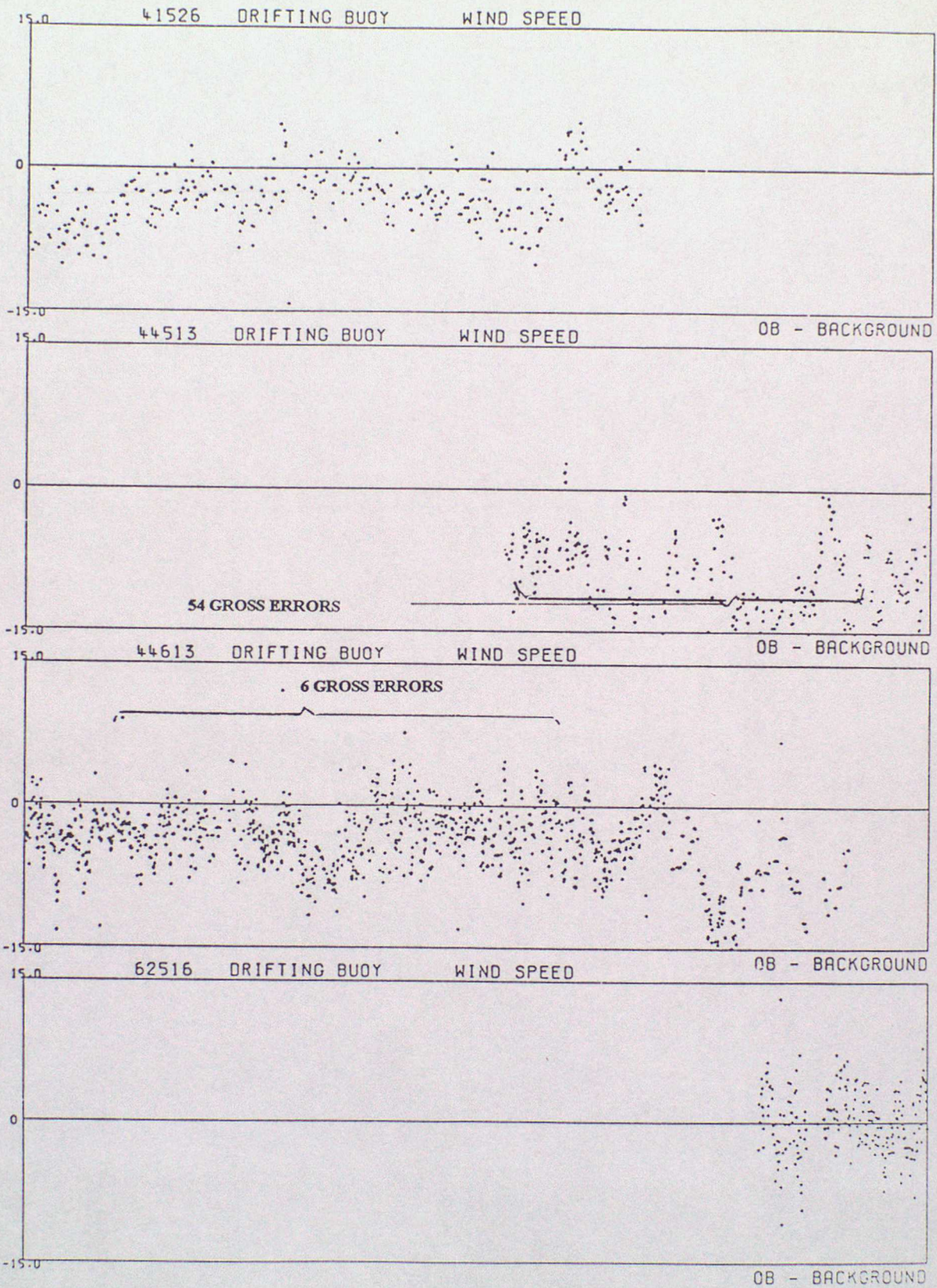
OB - BACKGROUND

DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

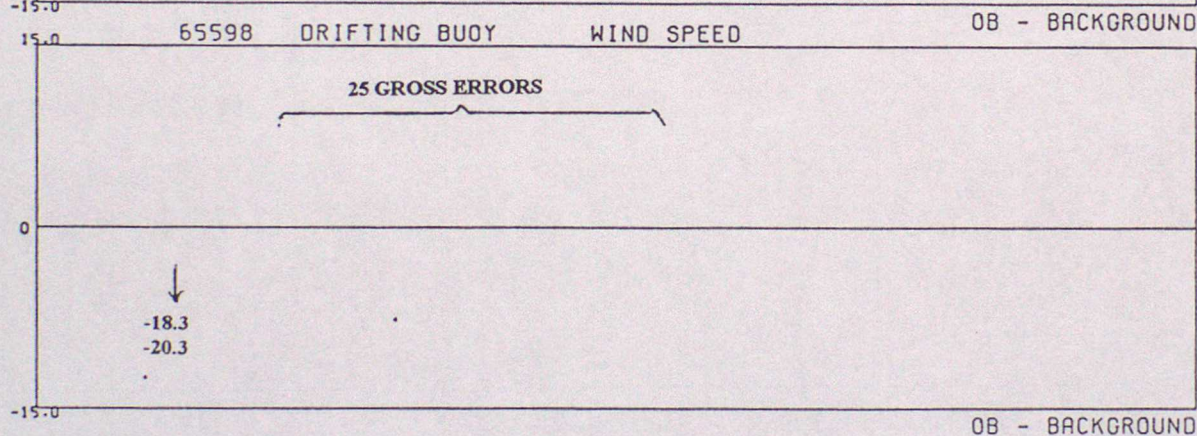
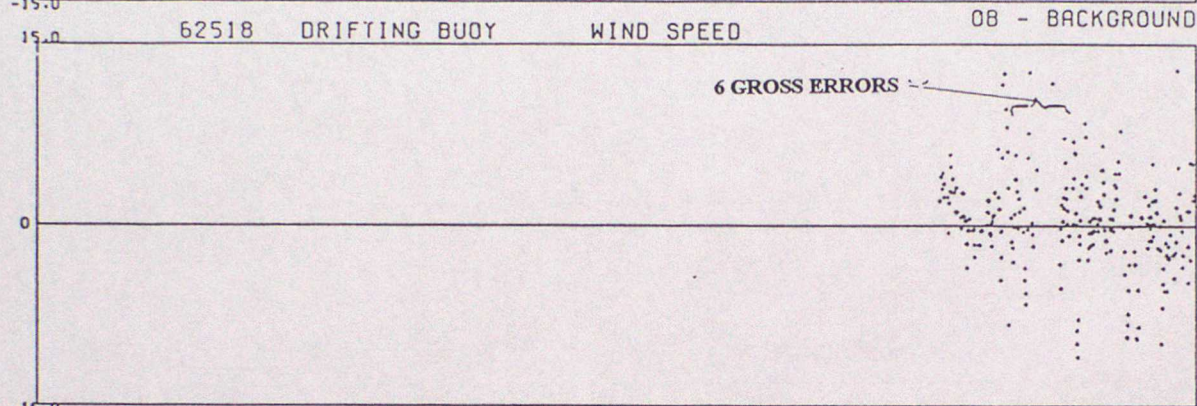
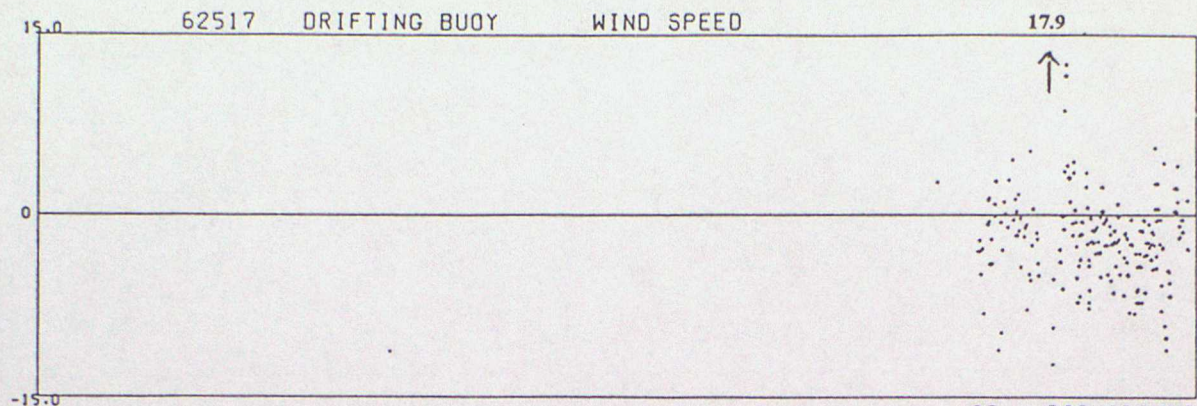


ANNEX E - TIME SERIES PLOTS OF WIND SPEED

DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

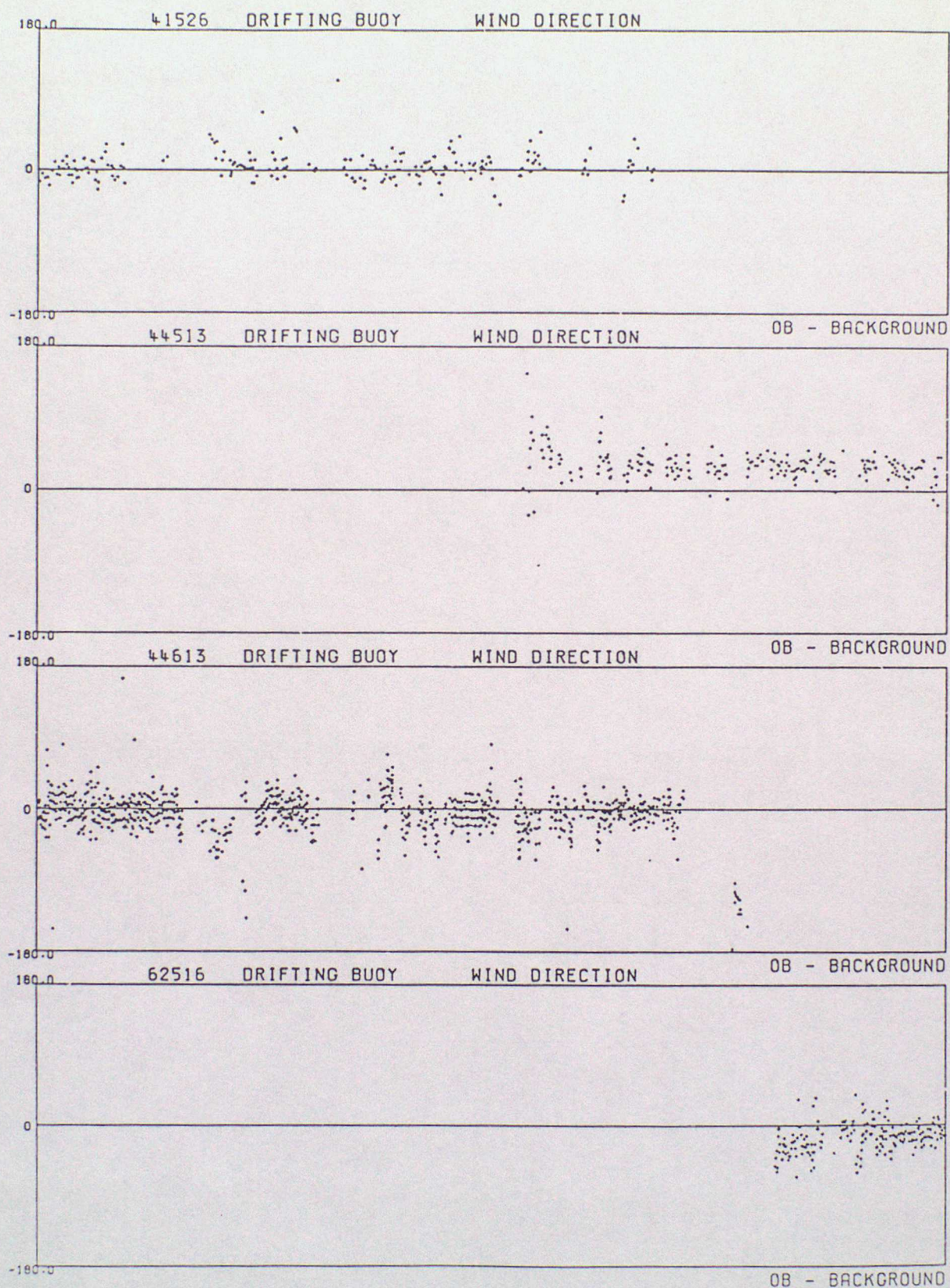


DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)

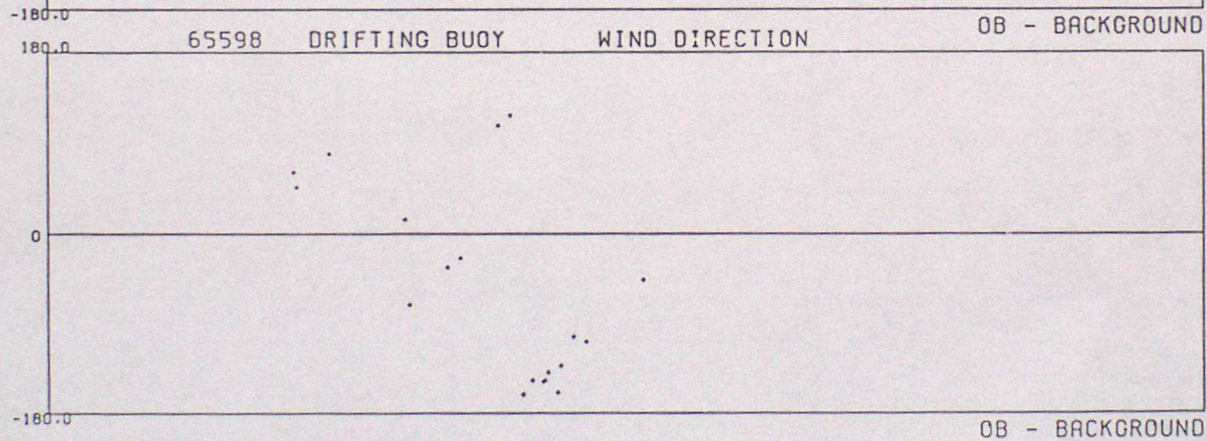
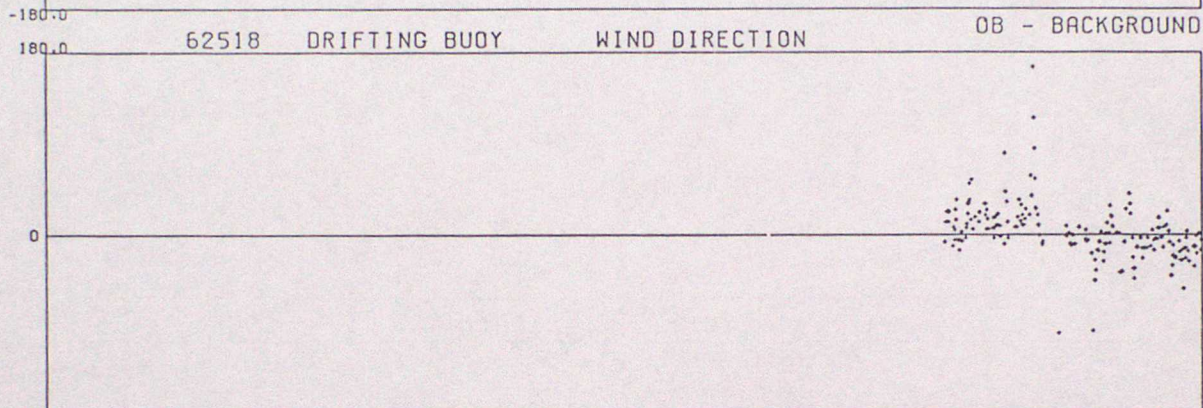
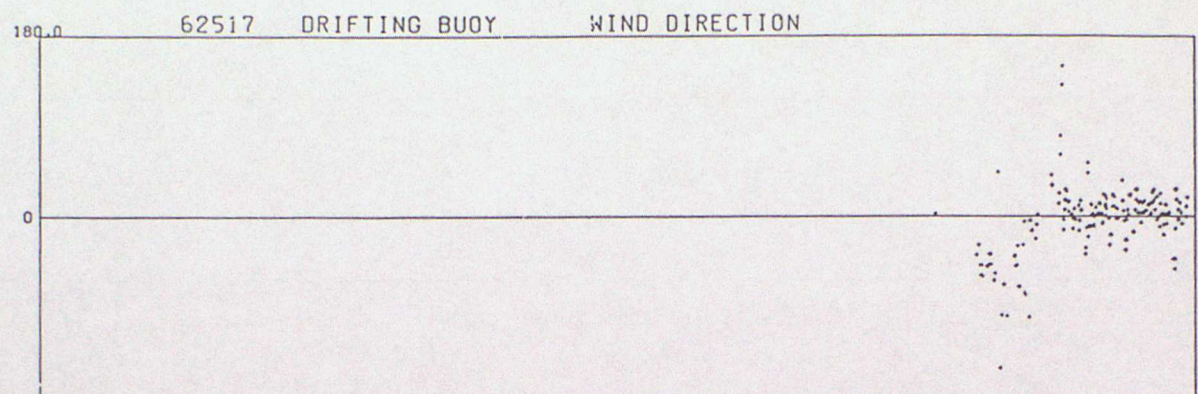


ANNEX F - TIME SERIES PLOTS OF WIND DIRECTION

DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/07/1996 TO 23Z ON 30/09/1996 (OBS - BACKGROUND FIELD)



ANNEX G - SUMMARY TABLE OF OPERATIONAL DRIFTING BUOYS

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
25565	1639	UK.	*	*	*				01/07-30/09
41526	5575	US.	*		*	*	*	*	01/07-01/09
41585	23640	US.	*		*			*	01/07-21/07
44513	????	??	*		*	*	*	*	31/08-30/09
44613	3324	UK.	*	*		*	*	*	01/07-22/09
44614	1256	UK.	*	*	*			*	02/07-30/09
44616	3318	UK.	*	*	*			*	01/07-30/09
44617	1255	UK.	*		*	*		*	22/08-30/09
44727	2974	UK.	*	*	*			*	01/07-26/09
44728	3024	UK.	*	*	*			*	01/07-30/09 +
44743	1248	UK.	*	*	*			*	21/08-30/09
44760	2947	UK.	*	*	*			*	01/07-30/09
44763	3098	UK.	*	*	*			*	01/07-30/09
44765	4178	NL.	*	*	*			*	01/07-30/09
44766	1298	D.	*	*	*			*	21/08-30/09
44767	3013	UK.	*	*	*			*	01/07-30/09
44768	1251	UK.	*	*	*			*	01/07-27/09
44769	1253	UK.	*	*				*	01/07-30/09
44770	3035	UK.	*	*	*			*	01/07-30/09
44771	2954	UK.	*	*	*	*		*	01/07-30/09
44772	6667	D.	*	*	*			*	01/07-30/09
44773	3132	UK.	*	*	*			*	01/07-28/09
44774	3162	UK.	*	*	*			*	01/07-30/09
44775	1260	UK.	*	*	*			*	01/07-30/09
44777	14733	UK.	*	*				*	01/07-30/09
44778	1258	UK.	*	*	*			*	01/07-30/09
44911	466	US.	*					*	01/07-30/09
61522	7207	US.	*		*				04/07-21/08
61525	????	US.	*		*			*	16/07-18/08
61526	????	US.	*		*			*	16/07-30/09

KEY

- PP - Pressure Pt - Pressure tendency TT - Air temperature
 FF - Wind speed DD - Wind direction SST - Sea surface temperature
 + - Pressure ceased reporting before the end of the period but other elements continued to be reported.

			Elements Reported						Reporting Period
WMO No.	Argos No.	Owner	PP	Pt	TT	FF	DD	SST	
61527	????	US.	*		*			*	16/07-30/09
61529	????	US.	*		*			*	16/07-12/09
61534	????	US.	*		*			*	18/07-12/09
62501	10116	F.	*	*				*	01/07-18/09
62503	14427	F.	*	*				*	01/07-30/09
62504	14428	F.	*	*				*	01/07-30/09
62505	10117	F.	*	*				*	01/07-19/09
62506	????	F.	*	*	*			*	01/07-09/09
62507	????	F.	*	*				*	01/07-30/09
62508	????	F.	*	*					01/07-30/09
62510	14417	F.	*	*				*	01/07-30/09
62513	????	F.	*	*				*	09/09-30/09
62515	14422	F.	*	*				*	09/09-30/09
62516	10107	F.	*	*	*	*	*	*	12/09-30/09
62517	10120	F.	*	*	*	*	*	*	13/09-30/09
62518	14419	F.	*			*	*	*	09/09-30/09
62910	????	??	*					*	01/07-30/09
63661	8068	D.	*	*	*				01/07-02/07
65594	1252	UK.	*	*	*			*	01/07-30/09
65595	3038	IR.	*	*	*			*	01/07-30/09
65598	3678	N.	*	*	*	*	*	*	01/07-30/09
65599	9308	D.	*	*	*			*	21/08-30/09
71544	8059	D.	*		*				01/07-07/09
71545	8060	D.	*						01/07-06/09
71546	8061	D.	*		*				01/07-02/07
71557	8064	D.	*						01/07-02/07

KEY

PP - Pressure Pt - Pressure tendency
FF - Wind speed DD - Wind direction

TT - Air temperature
SST - Sea surface temperature

