

DUPLICATE ALSO



THIRTY SECOND QUARTERLY REPORT
ON DRIFTING BUOYS
IN THE NORTH ATLANTIC
25-60 deg N, 60 deg W to 10 deg E

OCTOBER TO DECEMBER 1994

Headquarters, Bracknell

ORGS UKMO Q

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CONTENTS

1. Introduction

Summary of :-

2. Pressure Performance
3. Air temperatures and sea surface temperatures
4. Winds
5. Explanatory Notes
6. 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 sea surface temperature |
| Annex E | - Time-series plots of wind speed |
| Annex F | - Time-series plots of wind direction |
| Annex G | - Summary table of operational drifting buoys |

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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.

SPECIAL NOTE :

A number of problems were experienced during the quarter with the storage of drifting buoy data within the Met. Office's databanks. These problems affected all elements included in this report and all the buoys. The problems are summarised below :-

- 1) Corruption of the Observation Processing Databank (OPD) meant the loss of pressure data, air temperatures, wind speeds and directions between the 3rd October and 11th October from the graphs in the Annexes. (NB. The Table of Statistics in Annex A collates data from a different source and thus the statistics include data for the missing week).
- 2) The Sea Surface Temperature OPD suffered a problem from 27th November to 3rd December resulting in a similar problem to that stated above.
- 3) A problem with the Met. D. B. has resulted in some Collecting Centre information being unavailable. This is currently being investigated.

2. SUMMARY OF PRESSURE PERFORMANCE

(a) Buoy deployments, etc.

North of 50deg N

There were 22 buoys reporting pressure at the beginning of the period (Buoy 62507 which had a mean position south of 50 degN last quarter has drifted north this quarter and is included in the figure above) and 21 at the end. 6 new buoys were deployed during the period (44624, 44762, 44780, 64529, 64546 and 64560). 7 buoys ceased reporting (44727, 44761, 44770, 44774, 62675, 62721 and 64043).

South of 50deg N

There were 12 buoys reporting pressure at the beginning of the period and 7 at the end (Buoy 62508 ceased reporting pressure on 16/11 but continued to report other elements throughout the period). Only 1 new buoy was deployed (44614). 5 buoys ceased reporting (13556, 13561, 44743, 62501 and 62514).

(b) Location Accuracy

The location accuracy was poor over the quarter with 18 out of 41 of the buoys reporting having a '% of observations with acceptable positions' greater than 95% (compared to 40 out of 43 last quarter). There were 51 gross errors in location during the quarter, compared with 4 last quarter (see under Data Quality).

(c) Data timeliness

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

Timeliness	Last quarter.	This quarter
Very Good	17	12
Good	4	8
Satisfactory	5	5
Poor	5	7
Very poor	12	9
Total no. of buoys	43	41

(d) 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	--	--	14	14
Good	1	1	3	7
Satisfactory	8	8	7	2
Poor	10	3	--	4
Very Poor	--	1	--	1

The total number of buoy days in the quarter was 3,016 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 2,613) and the number of 'buoy hours' with at least one observation was 41,544 (compared with 39,518 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 13.77 (last quarter the figure was 15.12).

(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:-

- 44727 - Pressure data became erroneous from around 5/11 until the end of the buoy's life on 20/11.
- 44769 - Pressure data showed a significant number (135) of gross errors from 3/12 until the end of the quarter.
- 62508 - Pressure data showed a bias of -1.3 hPa and a larger than normal scatter from the start of the period until it stopped reporting pressure on 16/11.
- 62513 - This buoy showed a bias of +0.8 hPa throughout the period, and towards the end of the quarter showed a slightly larger than normal scatter.
- 62675 - Pressure data showed a bias of -1.6 hPa and then became erroneous from around 20/11 until the end of the buoy's life on 25/11.

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
62501	NE of SCOS	-0.8	+0.1	01/10 - 08/12
62507	NE of SCOS	+0.7	+0.1	01/10 - 31/12
62511	SCOS	+0.8	-0.1	01/10 - 31/12
62512	SCOS	+0.8	+0.1	01/10 - 31/12
62514	SCOS	-1.0	-0.2	01/10 - 01/11
64546	SOBA	+1.5	-1.6	05/12 - 31/12

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 which appear to lie outside the expected distribution - the 'gross' errors (see Time-series graphs) - have been ringed. (The erroneous observations which occurred at the end of the life of buoys 44727, 44769 and 62675 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 257 occasions the results are as follows -

ERROR	NUMBER LAST QUARTER	NUMBER THIS QUARTER	COLLECTING CENTRE
bg field	0	1	-----
location	4	48	Oslo
location	0	3	Sondre Stromfjord
location	0	0	Paris
location	0	0	Unknown
pressure	105	92	Oslo
pressure	52	67	Sondre Stromfjord
pressure	6	0	Paris
pressure	2	0	US Air Force
pressure	1	46	Unknown
Total no. of buoy hours	39,518	41,544	

During the quarter 205 gross pressure errors were transmitted as compared to 166 (with another 686 being reported by buoy 44766) last quarter. The number of gross location errors from the Local User Terminals showed an increase (51 compared to 4 last quarter).

(3) 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.)

WMO No.	Air Temperature			Sea Surface Temperature		
	Mean	St. Dev	No. of Obs	Mean	St. Dev.	No. of Obs
13556	---	---	---	---	---	---
13561	---	---	---	---	---	---
44614	0.6(0.0)	2.5(1.6)	944 (277)	1.4(-0.4)	1.7(1.9)	225 (177)
44617	-0.5(0.0)	1.4(1.6)	2375 (205)	-0.6(-0.4)	2.4(1.9)	1481 (179)
44624	0.4(0.1)	1.6(1.8)	287 (200)	-0.6(-0.4)	0.5(2.1)	98 (176)
44727	-0.2(0.0)	0.9(1.8)	783 (112)	6.0(-0.7)	6.0(1.9)	793 (105)
44743	---	---	---	---	---	---
44761	2.7(0.1)	2.3(1.5)	434 (23)	---	---	---
44762	-0.2(0.3)	1.6(2.1)	2285 (126)	-0.4(-0.4)	2.0(1.9)	1378 (121)
44764	-0.3(0.2)	1.7(1.9)	2973 (81)	-0.8(-0.8)	1.8(1.8)	1633 (77)
44766	-0.1(4.1)	3.8(4.0)	1768 (11)	-0.3(-0.7)	0.9(0.4)	614 (9)
44767	0.9(0.5)	1.8(1.2)	3581 (13)	-1.0(-0.3)	1.6(0.9)	1924 (12)
44768	-2.4(1.0)	7.3(2.3)	5 (402)	0.1(0.0)	3.2(1.6)	1499 (276)
44769	2.6(-0.1)	4.1(1.1)	2590 (103)	-0.5(-0.5)	2.2(1.5)	1740 (98)
44770	-0.1(0.2)	4.8(1.1)	914 (24)	-0.4(-0.6)	1.3(1.4)	644 (24)
44771	---	---	---	-0.8(0.1)	2.1(1.3)	1422 (251)
44774	0.2(0.6)	1.6(1.7)	1726 (762)	-0.7(0.1)	2.9(1.3)	1099 (582)
44775	4.6(0.0)	2.2(1.6)	2469 (202)	-0.8(-0.4)	2.6(2.0)	1473 (177)
44776	-0.1(0.2)	2.4(2.1)	2969 (73)	-0.4(-0.7)	1.9(1.7)	1606 (67)

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
44780	15.3(0.1)	14.7(1.8)	1517 (110)	-0.5(-0.7)	0.4(1.8)	400 (107)
62501	---	---	---	-0.2(0.0)	0.2(1.6)	597 (842)
62507	---	---	---	0.4(0.1)	0.4(1.5)	687 (765)
62508	---	---	---	-0.1(0.0)	0.3(1.5)	231 (941)
62509	1.0(0.7)	1.9(1.7)	380 (1023)	-0.3(0.1)	0.2(1.5)	270 (776)
62510	---	---	---	-0.1(0.0)	0.2(1.7)	627 (565)
62511	---	---	---	-0.5(0.0)	0.2(1.6)	710 (757)
62512	---	---	---	-0.3(0.0)	0.3(1.6)	734 (849)
62513	---	---	---	-0.1(0.0)	0.3(1.8)	729 (440)
62514	---	---	---	---	---	---
62524	5.3(0.1)	5.1(1.4)	1176 (286)	-0.2(-0.3)	3.2(1.2)	993 (198)
62675	1.0(0.3)	2.6(1.7)	346 (150)	-0.3(-0.2)	0.2(1.6)	336 (140)
62696	12.1(0.8)	0.9(2.3)	67 (81)	-0.5(0.4)	1.7(2.1)	1361 (64)
62721	-0.9(0.6)	0.7(2.1)	372 (234)	-0.2(0.0)	0.3(1.4)	445 (197)
64043	0.7(-0.1)	2.9(1.4)	200 (99)	-0.1(-0.2)	1.0(1.7)	160 (102)
64528	0.2(0.3)	2.9(1.1)	2169 (15)	0.4(-0.2)	2.1(1.4)	790 (15)
64529	0.1(0.5)	1.3(1.1)	1463 (14)	0.2(-0.2)	0.4(0.9)	38 (13)
64544	0.3(0.3)	1.3(1.3)	693 (23)	0.1(-0.6)	0.5(1.7)	940 (24)
64546	0.1(0.5)	2.2(1.0)	325 (14)	-0.8(-0.2)	0.3(1.4)	12 (14)

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
64560	-1.1(0.7)	5.5(1.1)	941 (19)	0.1(-0.3)	0.1(1.0)	8 (18)
65571	-0.3(0.2)	3.1(1.1)	2186 (23)	-1.3(-0.5)	1.3(1.3)	702 (23)
65592	-0.4(0.3)	2.7(1.2)	1877 (39)	-0.9(-0.8)	1.6(1.8)	570 (73)

Buoys 44761 (+2.7), 44768 (-2.4), 44769 (+2.6), 44775 (+4.6), 44780 (+15.3), 62524 (+5.3), 62696 (+12.0) and 64560 (-1.1) all showed significant air temperature biases. However, it should be noted that only 5 reports were received from buoy 44768. Buoys 44769, 44780 and 62524 produced good data for much of the period and only became erratic towards the end of the quarter.

Buoys 44614 (+1.4), 44727 (+6.0) and 65571 (-1.3) showed significant sea surface temperature (SST) biases.

Between 2nd November and 10th November a number of corrupt observations got onto the SST Databases (as can be seen in the graphs in Annex D) and are represented by a string of observations with a negative bias, which show a large displacement from the normal observations.

(4) 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. Buoy 13561 produced wind speed data but not wind direction data. This has resulted in the data not being stored in the Office's Observation Processing Databank and thus it is not available for analysis.)

WMO No.	Period	Wind Speed (kn)		Wind Direction (deg)		No. of Obs
		Mean	St. Dev	Mean	St. Dev.	
13556	01/10-28/11	-3.1(2.0)	3.1(6.2)	-3.3(-0.5)	27.6(30.0)	442(536)
44617	01/10-31/12	-2.2(3.4)	4.9(12.8)	-6.2(-3.8)	28.3(31.2)	2038(194)
44727	01/10-20/11	-1.3(3.7)	4.3(8.6)	-3.3(-2.6)	28.4(35.4)	498(108)
44762	03/10-31/12	-1.2(3.8)	5.2(8.8)	10.6(-4.9)	29.5(33.7)	1985(116)
44764	01/10-31/12	0.0(5.8)	5.7(7.3)	0.3(-4.5)	24.7(26.2)	2601(81)
44776	01/10-31/12	-1.7(5.3)	4.8(7.2)	3.4(-3.2)	55.1(25.9)	2599(71)
62508	01/10-31/12	1.0(1.9)	5.7(6.2)	-9.2(-1.7)	22.8(26.4)	576(1148)
62509	01/10-31/12	11.5(1.8)	9.7(6.3)	13.7(-2.8)	18.7(26.0)	72(941)
64043	01/10-29/12	-2.1(1.9)	4.9(5.3)	8.3(-4.8)	47.7(35.9)	146(94)
64544	01/10-31/12	-11.0(3.1)	7.8(13.7)	0.0(2.6)	65.3(48.7)	461(24)

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

Buoys 13556 (-3.1), 62509 (11.5) and 64544 (-11.0) all showed significant wind speed biases.

Buoys 44776, 64043 and 64544 all showed a larger than normal standard deviation of wind direction of 55.1, 47.7 and 65.3 degrees respectively.

5 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, ie 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 (ie. 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).

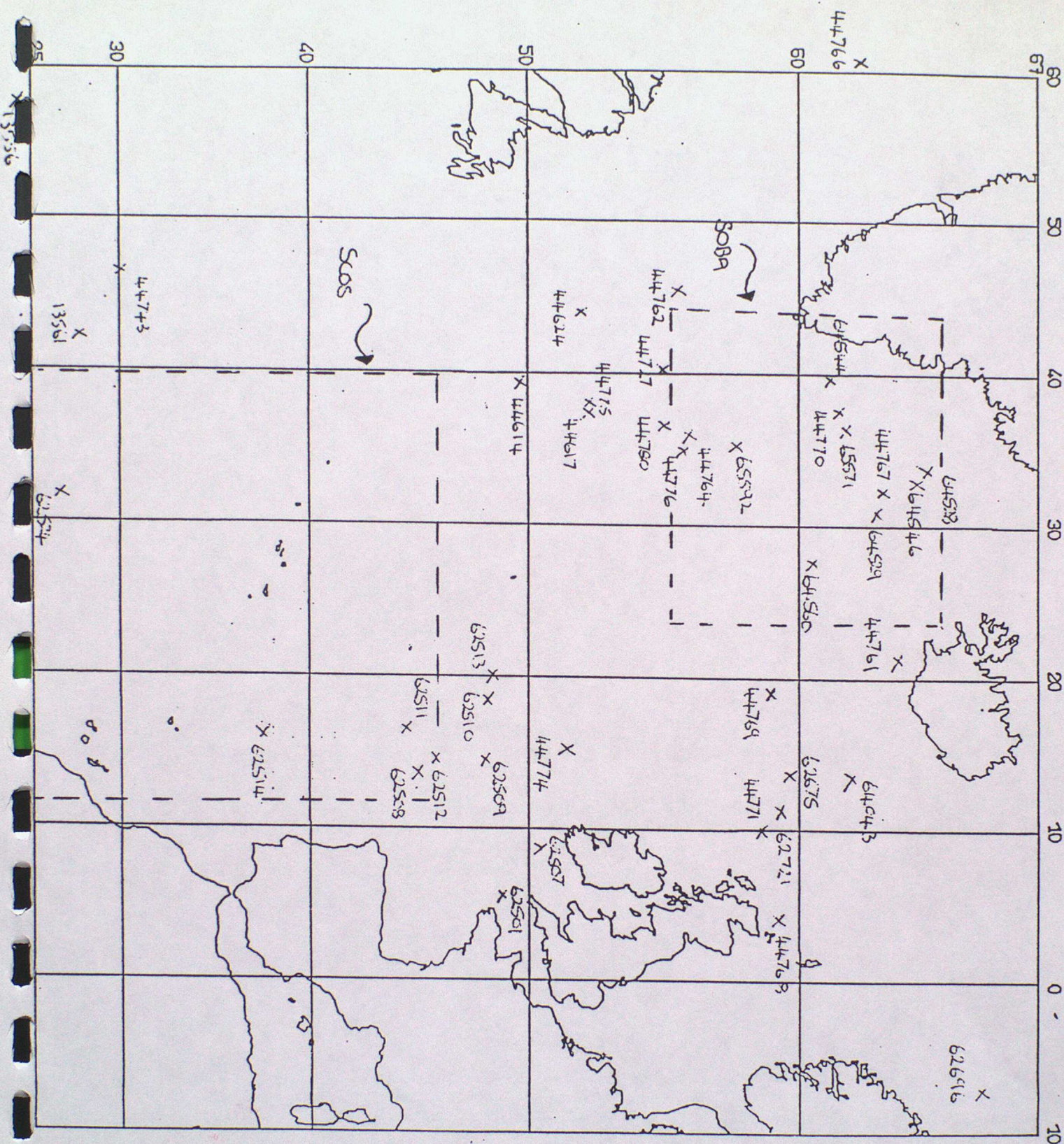
9. The performance categories are defined in the table below.

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 ¹	13556/F	13561/F	44614/UK
Argos Id No.	15526	15531	6294
Period within area	01/10-28/11	01/10-26/11	01/12-31/12
Area	SW of SCOS	W of SCOS	N of SCOS
Mean Latitude	24.6	27.9	49.8
Mean Longitude	-57.9	-42.2	-39.3
No. of obs received ²	961	958	992
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	56.8	100.0	93.2
% of Presents			
Pressure	35.2	33.1	99.6
P. Tendency	0.0	0.0	98.9
Air Temperature	0.0	0.0	99.5
Wind Speed/Dir.	94.9/95.3	95.9/0.0	0.0/0.0
Sea-surface temp.	0.0	0.0	27.7
Median delay (min) ⁶	320.0	436.0	105.0
Number of days	59.0	57.0	31.0
Mean no. of obs/day	16.3	16.8	32.0
No. of hours with obs	960.0	958.0	456.0
Mean no. of hours/day with obs	16.3	16.8	14.7
% of hour periods without an ob ⁷	32.1	30.0	38.8
Mean (Ob-Bg)	0.5	0.5	-0.5
RMS (Ob-Bg)	1.4	1.1	1.8
unflagged data			
Mean (Ob-Bg)	0.5	0.5	-0.9
RMS (Ob-Bg)	1.4	1.1	5.9
all data			
Revised RMS (Ob-Bg) ⁸	1.4	1.1	2.0
% of data flagged ⁸	0.0	0.0	63.0
Operating at end of period	NO	NO	YES
Performance ⁹			
Availability	Satisfactory	Satisfactory	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Poor	Very Poor	Good
Comments			

Wmo No./ Country ¹	44617/UK	44624/UK	44727/UK
Argos Id No.	6299	6292	6298
Period within area	01/10-31/12	22/12-31/12	01/10-20/11
Area	S of SOBA	S of SOBA	S of SOBA
Mean Latitude	52.1	52.0	55.0
Mean Longitude	-37.4	-44.0	-40.3
No. of obs received ²	3186	306	1695
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	93.0	74.5	96.2
% of Presents			
Pressure	97.0	99.3	77.2
P. Tendency	95.0	97.1	75.4
Air Temperature	97.2	97.7	77.2
Wind Speed/Dir.	83.4/83.4	0.0/0.0	51.3/51.3
Sea-surface temp.	47.7	32.0	47.5
Median delay (min) ⁶	81.0	317.0	268.0
Number of days	92.0	10.0	51.0
Mean no. of obs/day	34.6	30.6	33.2
No. of hours with obs	1395.0	147.0	777.0
Mean no. of hours/day with obs	15.2	14.7	15.2
% of hour periods without an ob ⁷	36.7	38.8	36.7
Mean (Ob-Bg)	0.1	-0.2	0.1
RMS (Ob-Bg) unflagged datas	2.0	1.6	1.9
Mean (Ob-bg)	-0.2	-0.1	-1.5
RMS (Ob-Bg) all datas	4.4	3.4	6.5
Revised RMS (Ob-Bg) ⁸	2.0	2.1	6.5
% of data flagged ⁸	65.0	65.0	66.0
Operating at end of period	YES	YES	NO
Performances ⁹			
Availability	Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Very Poor	Very Poor
Comments			Pressure data erratic at end of buoy's life.

Wmo No./ Country ¹	44743/UK	44761/N	44762/UK
Argos Id.No.	1370	9308	6307
Period within area	01/10-07/10	01/10-29/11	03/10-31/12
Area	W of SCOS	E of SOBA	W of SOBA
Mean Latitude	30.1	62.9	55.5
Mean Longitude	-46.7	-21.2	-45.8
No. of obs received ²	41	2667	3096
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	87.8	91.8	38.7
% of Presents			
Pressure	100.0	61.3	97.8
P. Tendency	0.0	59.6	95.6
Air Temperature	0.0	25.6	97.8
Wind Speed/Dir.	0.0/0.0	0.0/0.0	83.8/83.8
Sea-surface temp.	0.0	0.0	46.1
Median delay (min) ⁶	23.0	188.0	133.0
Number of days	7.0	60.0	90.0
Mean no. of obs/day	5.9	44.5	34.4
No. of hours with obs	33.0	1096.0	1390.0
Mean no. of hours/day with obs	4.7	18.3	15.4
% of hour periods without an ob ⁷	80.4	23.8	35.8
Mean (Ob-Bg)	0.2	0.1	-0.2
RMS (Ob-Bg)	0.9	1.3	2.0
unflagged datas			
Mean (Ob-bg)	0.1	0.1	-0.5
RMS (Ob-Bg)	0.9	2.7	4.6
all datas			
Revised RMS (Ob-Bg) ⁸	0.9	1.3	2.1
% of data flagged ⁸	22.0	70.0	66.0
Operating at end of period	NO	NO	YES
Performance ⁹			
Availability	Poor	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Poor	Satisfactory
Comments			

Wmo No./ Country ¹	44764/UK	44766/UK	44767/UK
Argos Id.No.	6306	4274	6297
Period within area	01/10-31/12	01/10-31/12	01/10-31/12
Area	SOBA	W of SOBA	SOBA
Mean Latitude	56.0	61.8	62.4
Mean Longitude	-35.9	-60.9	-32.1
No. of obs received ²	3947	2963	4737
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	38.4	44.0	95.5
% of Presents			
Pressure	97.4	79.8	97.6
P. Tendency	94.8	76.6	96.3
Air Temperature	97.6	79.5	97.7
Wind Speed/Dir.	85.5/85.5	0.0/0.0	0.0/0.0
Sea-surface temp.	42.4	21.0	42.1
Median delay (min) ⁶	164.0	24.0	207.0
Number of days	92.0	92.0	92.0
Mean no. of obs/day	42.9	32.2	51.5
No. of hours with obs	1632.0	1408.0	1817.0
Mean no. of hours/day with obs	17.7	15.3	19.8
% of hour periods without an ob ⁷	26.3	36.3	17.5
Mean (Ob-Bg)	0.3	-0.1	0.2
RMS (Ob-Bg)	1.9	7.1	1.7
unflagged datas			
Mean (Ob-bg)	0.3	3.2	0.1
RMS (Ob-Bg)	2.4	21.9	2.6
all datas			
Revised RMS (Ob-Bg) ⁸	1.9	2.0	1.6
% of data flagged ⁸	68.0	80.0	70.0
Operating at end of period	YES	YES	YES
Performance ⁹			
Availability	Very Good	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Satisfactory	Very Good	Poor
Comments			

Wmo No. / Country ¹	44768/UK	44769/UK	44770/N
Argos Id.No.	6295	6291	3039
Period within area	01/10-31/12	01/10-31/12	01/10-22/12
Area	E of SOBA	E of SOBA	SOBA
Mean Latitude	59.4	59.0	61.1
Mean Longitude	-3.8	-19.1	-37.9
No. of obs received ²	4025	4535	1653
% of obs with valid Time and Dates	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	91.0	37.3	87.5
% of Presents			
Pressure	97.5	69.1	91.2
P. Tendency	96.1	92.1	89.2
Air Temperature	0.1	73.1	91.3
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface temp.	37.8	38.8	39.4
Median delay (min) ⁶	41.0	103.0	182.0
Number of days	92.0	92.0	83.0
Mean no. of obs/day	45.8	49.3	19.9
No. of hours with obs	1529.0	1662.0	753.0
Mean no. of hours/day with obs	16.6	18.1	9.1
% of hour periods without an ob ⁷	30.8	24.6	62.1
Mean (Ob-Bg)	0.3	0.2	-0.1
RMS (Ob-Bg)	1.5	1.8	1.5
unflagged datas			
Mean (Ob-bg)	0.3	-8.2	-0.3
RMS (Ob-Bg)	2.7	35.1	3.0
all datas			
Revised RMS (Ob-Bg) ⁸	1.5	34.5	1.8
% of data flagged ⁸	70.0	72.0	67.0
Operating at end of period	YES	YES	NO
Performance ⁹			
Availability	Very Good	Very Good	Satisfactory
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Very Good	Good	Poor
Comments			

Wmo No./ Country ¹	44771/UK	44774/UK	44775/UK
Argos Id.No.	6290	6289	6293
Period within area	01/10-31/12	01/10-25/12	01/10-31/12
Area	E of SOBA	SE of SOBA	S of SOBA
Mean Latitude	58.8	51.6	52.1
Mean Longitude	-10.0	-15.3	-37.6
No. of obs received ²	3803	2487	3301
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	35.7	94.3	97.5
% of Presents			
Pressure	98.5	96.7	97.1
P. Tendency	96.7	94.2	95.6
Air Temperature	0.0	97.3	97.3
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface temp.	38.1	44.7	45.8
Median delay (min) ⁶	290.0	32.0	21.0
Number of days	92.0	86.0	92.0
Mean no. of obs/day	41.3	28.9	35.9
No. of hours with obs	1597.0	1056.0	1442.0
Mean no. of hours/day with obs	17.4	12.3	15.7
% of hour periods without an ob ⁷	27.5	48.8	34.6
Mean (Ob-Bg)	0.5	0.2	0.1
RMS (Ob-Bg)	1.6	1.5	1.9
unflagged datas			
Mean (Ob-bg)	0.4	0.1	-0.1
RMS (Ob-Bg)	2.0	2.6	3.8
all datas			
Revised RMS (Ob-Bg) ⁸	1.8	1.7	2.0
% of data flagged ⁸	67.0	63.0	67.0
Operating at end of period	YES	NO	YES
Performances ⁹			
Availability	Very Good	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Poor	Very Good	Very Good
Comments			

Wmo No./ Country ¹	44776/UK	44780/UK	62501/F
Argos Id.No.	6305	1250	10116
Period within area	01/10-31/12	15/11-31/12	01/10-08/12
Area	SOBA	S of SOBA	NE of SCOS
Mean Latitude	55.8	54.9	48.7
Mean Longitude	-34.9	-36.9	-5.5
No. of obs received ²	3890	1858	1091
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	38.2	98.2	100.0
% of Presents			
Pressure	97.2	99.6	99.5
P. Tendency	95.6	98.6	94.3
Air Temperature	97.4	92.3	0.0
Wind Speed/Dir.	85.5/85.5	0.0/0.0	0.0/0.0
Sea-surface temp.	42.1	24.1	53.2
Median delay (min) ⁶	102.0	173.0	74.0
Number of days	92.0	47.0	69.0
Mean no. of obs/day	42.3	39.5	15.8
No. of hours with obs	1598.0	753.0	787.0
Mean no. of hours/day with obs	17.4	16.0	11.4
% of hour periods without an ob ⁷	27.5	33.3	52.5
Mean (Ob-Bg)	0.3	-0.1	-0.8
RMS (Ob-Bg)	1.9	2.0	1.4
unflagged datas			
Mean (Ob-bg)	0.2	-0.3	-0.8
RMS (Ob-Bg)	3.0	3.7	1.5
all datas			
Revised RMS (Ob-Bg) ⁸	1.9	2.0	1.5
% of data flagged ⁸	69.0	68.0	38.0
Operating at end of period	YES	YES	NO
Performance ⁹			
Availability	Very Good	Very Good	Satisfactory
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Satisfactory	Good
Comments			

Wmo No./ Country ¹	62507/F	62508/F	62509/F
Argos Id No.	14420	5826	10106
Period within area	01/10-31/12	01/10-31/12	01/10-31/12
Area	NE of SCOS	SCOS	N of SCOS
Mean Latitude	50.7	45.0	48.2
Mean Longitude	-8.7	-13.7	-14.4
No. of obs received ²	1575	776	960
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	100.0	100.0	100.0
% of Presents			
Pressure	99.2	37.6	98.7
P. Tendency	96.3	93.9	93.3
Air Temperature	0.0	0.0	56.5
Wind Speed/Dir.	0.0/0.0	98.8/98.2	15.0/15.2
Sea-surface temp.	42.4	25.6	24.8
Median delay (min) ⁶	106.0	208.0	11.0
Number of days	92.0	92.0	92.0
Mean no. of obs/day	17.1	8.4	10.4
No. of hours with obs	1108.0	642.0	777.0
Mean no. of hours/day with obs	12.0	7.0	8.4
% of hour periods without an ob ⁷	50.0	70.8	65.0
Mean (Ob-Bg)	0.7	-1.3	0.5
RMS (Ob-Bg) unflagged datas	1.5	2.6	1.4
Mean (Ob-bg)	0.7	-5.8	0.5
RMS (Ob-Bg) all datas	1.6	8.3	1.5
Revised RMS (Ob-Bg) ⁸	1.6	8.3	1.5
% of data flagged ⁸	40.0	53.0	27.0
Operating at end of period	YES	YES	YES
Performance ⁹			
Availability	Satisfactory	Poor	Poor
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Good	Poor	Very Good
Comments			

Wmo No. / Country ¹	62510/F	62511/F	62512/F
Argos Id No.	14417	14423	14424
Period within area	01/10-31/12	01/10-31/12	01/10-31/12
Area	N of SCOS	SCOS	SCOS
Mean Latitude	48.3	44.6	45.8
Mean Longitude	-18.6	-16.8	-14.7
No. of obs received ²	1406	1438	1464
% of obs with valid Time and Dates	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	100.0	99.2	98.6
% of Presents			
Pressure	99.0	99.9	99.5
P. Tendency	94.7	54.9	55.3
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.	43.8	54.9	55.9
Median delay (min) ⁶	40.0	243.0	263.0
Number of days	92.0	92.0	92.0
Mean no. of obs/day	15.3	15.6	15.9
No. of hours with obs	1018.0	1216.0	1216.0
Mean no. of hours/day with obs	11.1	13.2	13.2
% of hour periods without an ob ⁷	53.8	45.0	45.0
Mean (Ob-Bg)	0.4	0.8	0.8
RMS (Ob-Bg)	1.6	1.5	1.5
unflagged data⁸			
Mean (Ob-bg)	0.5	0.8	0.8
RMS (Ob-Bg)	1.5	1.5	1.4
all data⁸			
Revised RMS (Ob-Bg) ⁸	1.5	1.5	1.4
% of data flagged ⁸	37.0	29.0	28.0
Operating at end of period	YES	YES	YES
Performances			
Availability	Satisfactory	Satisfactory	Satisfactory
Pressure Quality	Acceptable	Suspect	Suspect
Timeliness	Very Good	Very Poor	Very Poor
Comments			

Wmo No./ Country ¹	62513/F	62514/F	62524/UK
Argos Id.No.	9435	1356	4625
Period within area	01/10-31/12	01/10-01/11	01/10-31/12
Area	N of SCOS	SCOS	SCOS
Mean Latitude	48.4	37.7	26.7
Mean Longitude	-20.2	-16.2	-31.9
No. of obs received ²	1453	128	1724
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	99.9	85.9	88.1
% of Presents			
Pressure	99.8	99.2	93.8
P. Tendency	54.9	0.0	65.0
Air Temperature	0.0	0.0	93.3
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface temp.	54.9	0.0	58.4
Median delay (min) ⁶	309.0	97.0	25.0
Number of days	92.0	32.0	92.0
Mean no. of obs/day	15.8	4.0	18.7
No. of hours with obs	1259.0	121.0	1046.0
Mean no. of hours/day with obs	13.7	3.8	11.4
% of hour periods without an ob ⁷	43.0	84.2	52.5
Mean (Ob-Bg)	0.8	-1.0	0.1
RMS (Ob-Bg)	1.9	1.5	0.9
unflagged datas			
Mean (Ob-bg)	1.1	-0.9	0.0
RMS (Ob-Bg)	2.7	1.5	1.2
all datas			
Revised RMS (Ob-Bg) ⁸	2.7	1.5	1.2
% of data flagged ⁸	27.0	5.0	43.0
Operating at end of period	YES	NO	YES
Performances ⁹			
Availability	Satisfactory	Very Poor	Satisfactory
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Very Poor	Good	Very Good
Comments			

Wmo No./ Country ¹	62675/US	62696/UK	62721/US
Argos Id.No.	11221	6288	12698
Period within area	01/10-25/11	01/10-31/12	01/10-23/11
Area	E of SOBA	E of SOBA	E of SOBA
Mean Latitude	59.7	65.3	59.2
Mean Longitude	-13.3	7.3	-11.2
No. of obs received ²	513	3867	597
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	100.0	85.3	100.0
% of Presents			
Pressure	98.6	98.8	99.3
P. Tendency	0.0	96.9	0.0
Air Temperature	98.6	7.2	99.0
Wind Speed/Dir.	0.0/0.0	0.0/0.0	0.0/0.0
Sea-surface temp.	59.1	35.9	68.2
Median delay (min) ⁶	31.0	475.0	158.0
Number of days	56.0	92.0	54.0
Mean no. of obs/day	9.2	42.0	11.1
No. of hours with obs	435.0	1551.0	485.0
Mean no. of hours/day with obs	7.8	16.9	9.0
% of hour periods without an ob ⁷	67.5	29.6	62.5
Mean (Ob-Bg) RMS (Ob-Bg)	-1.6 2.2	0.3 1.5	0.4 1.4
unflagged datas			
Mean (Ob-bg) RMS (Ob-Bg)	-2.7 6.0	0.3 1.7	0.5 1.3
all datas			
Revised RMS (Ob-Bg)s	6.0	1.6	1.3
% of data flagged ⁸	32.0	67.0	30.0
Operating at end of period	NO	YES	NO
Performance ⁹			
Availability	Poor	Very Good	Poor
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Poor	Satisfactory
Comments	Pressure data erratic at end of buoy's life.		

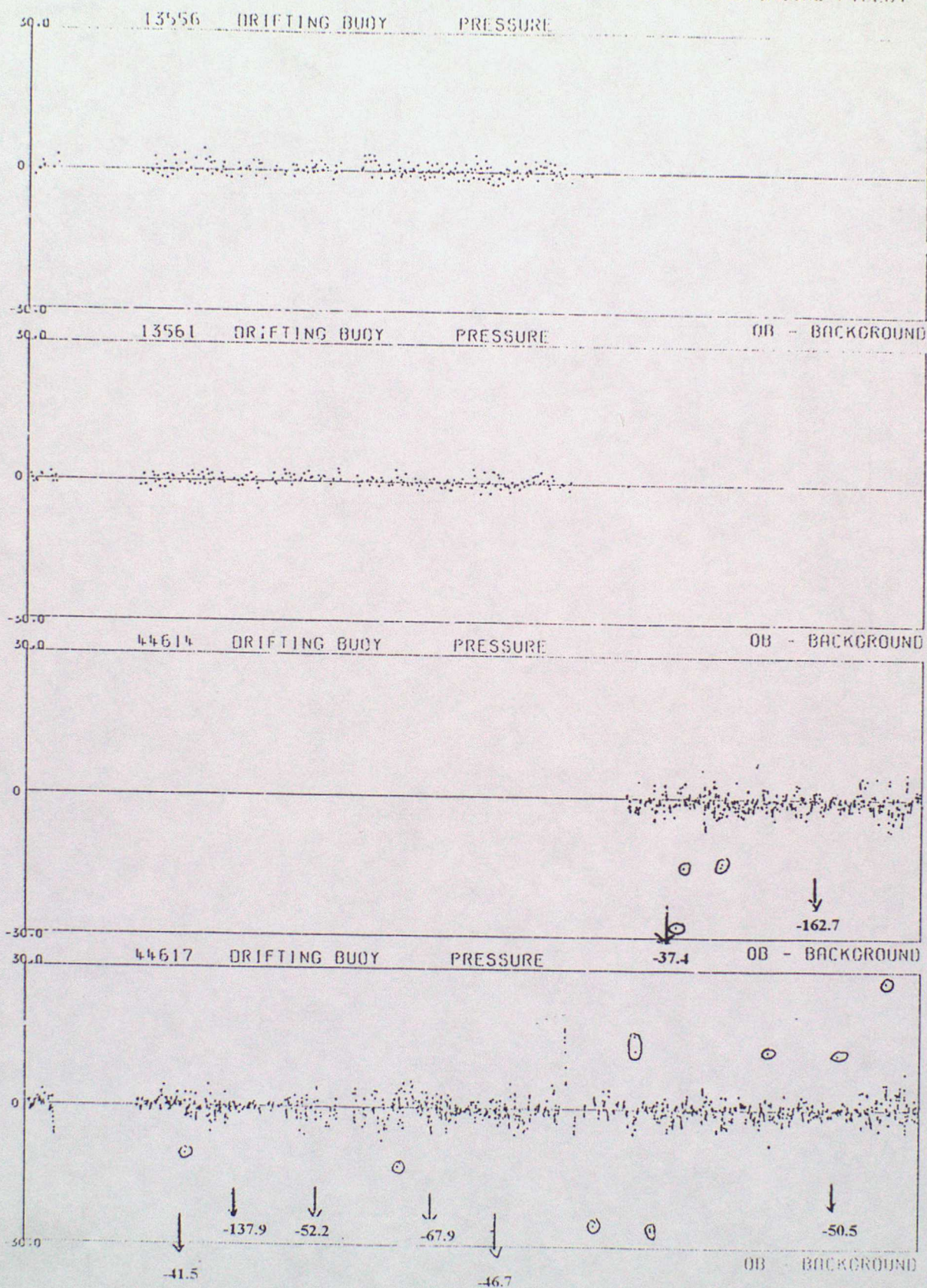
Wmo No./ Country ¹	64043/UK	64528/NL	64529/N
Argos Id No.	6271	9306	3037
Period within area	01/10-29/12	01/10-31/12	10/11-31/12
Area	E of SOBA	SOBA	SOBA
Mean Latitude	61.5	63.8	62.0
Mean Longitude	-13.3	-33.2	-31.0
No. of obs received ²	400	3429	2320
% of obs with valid Time and Dates ³	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	100.0	43.0	93.7
% of Presents			
Pressure	96.0	83.9	69.4
P. Tendency	88.5	82.0	68.4
Air Temperature	94.2	83.9	69.4
Wind Speed/Dir.	73.5/72.2	0.0/0.0	0.0/0.0
Sea-surface temp.	39.5	23.3	1.8
Median delay (min) ⁶	22.0	13.0	148.0
Number of days	90.0	92.0	52.0
Mean no. of obs/day	4.4	37.3	44.6
No. of hours with obs	281.0	1627.0	889.0
Mean no. of hours/day with obs	3.1	17.7	17.1
% of hour periods without an ob ⁷	87.1	26.3	28.8
Mean (Ob-Bg) RMS (Ob-Bg)	-0.4 1.3	-0.4 1.8	-0.1 1.9
unflagged datas			
Mean (Ob-bg) RMS (Ob-Bg)	-1.8 10.9	-0.6 3.0	-0.1 1.9
all datas			
Revised RMS (Ob-Bg) ⁸	1.2	1.9	1.9
% of data flagged ⁸	5.0	66.0	63.0
Operating at end of period	NO	YES	YES
Performance ⁹			
Availability	Very Poor	Very Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Satisfactory
Comments			

Wmo No./ Country ¹	64544/US	64546/US	64560/NL
Argos Id.No.	14631	11227	3036
Period within area	01/10-31/12	05/12-31/12	01/12-31/12
Area	SOBA	SOBA	SOBA
Mean Latitude	60.8	63.5	60.4
Mean Longitude	-39.8	-32.7	-27.6
No. of obs received ²	981	360	1398
% of obs with valid Time and Dates	100.0	100.0	100.0
% of obs with acceptable Positions ⁴	99.9	100.0	94.2
% of Presents			
Pressure	99.5	98.6	68.8
P. Tendency	0.0	0.0	68.6
Air Temperature	99.3	98.3	68.8
Wind Speed/Dir.	99.3/84.1	0.0/0.0	0.0/0.0
Sea-surface temp.	99.4	3.9	1.7
Median delay (min) ⁶	187.0	214.0	187.0
Number of days	92.0	27.0	31.0
Mean no. of obs/day	10.7	13.3	45.1
No. of hours with obs	840.0	304.0	520.0
Mean no. of hours/day with obs	9.1	11.3	16.8
% of hour periods without an ob ⁷	62.1	52.9	30.0
Mean (Ob-Bg) RMS (Ob-Bg)	-0.1 1.4	-1.5 2.2	-0.1 2.0
unflagged datas			
Mean (Ob-bg) RMS (Ob-Bg)	0.0 1.4	-1.5 2.2	-0.5 2.6
all datas			
Revised RMS (Ob-Bg) ⁸	1.4	2.2	2.7
% of data flagged ⁸	26.0	32.0	65.0
Operating at end of period	YES	YES	YES
Performances ⁹			
Availability	Poor	Poor	Very Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Poor	Poor	Poor
Comments			

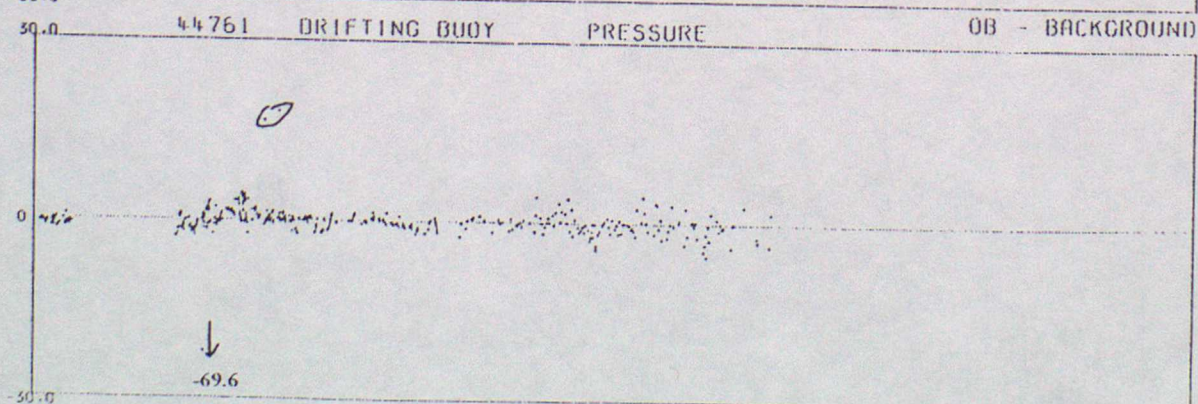
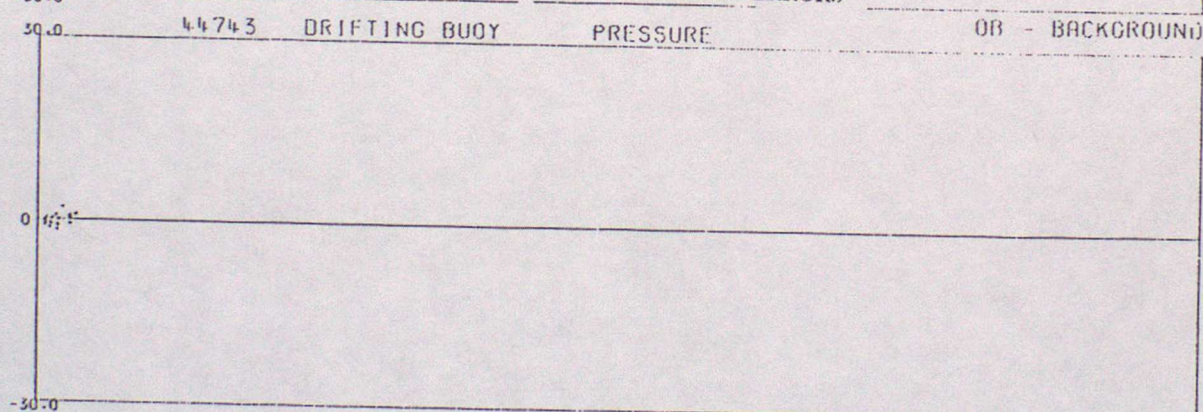
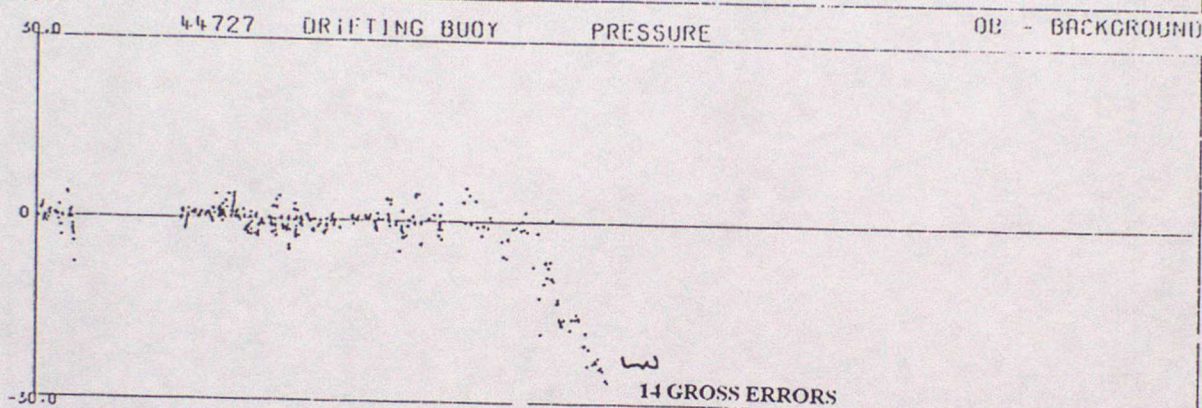
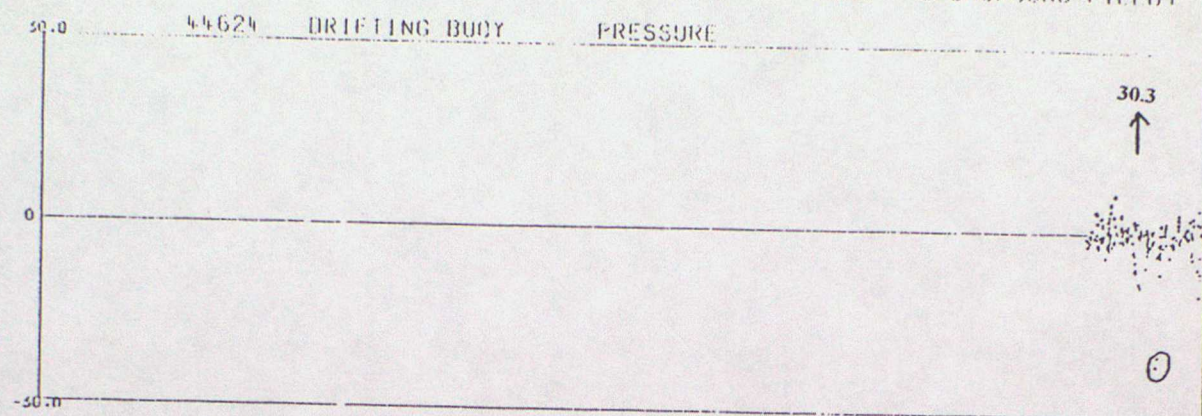
Wmo No./ Country ¹	65571/N	65592/NL	
Argos Id.No.	3676	9309	
Period within area	01/10-31/12	01/10-31/12	
Area	SOBA	SOBA	
Mean Latitude	61.1	57.8	
Mean Longitude	-36.6	-35.2	
No. of obs received ²	3678	3116	
% of obs with valid Time and Dates	100.0	100.0	
% of obs with acceptable Positions ⁴	41.1	91.4	
% of Presents			
Pressure	79.2	79.4	
P. Tendency	77.5	77.8	
Air Temperature	79.4	79.4	
Wind Speed/Dir.	0.0/0.0	0.0/0.0	
Sea-surface temp.	19.3	18.5	
Median delay (min) ⁶	39.0	112.0	
Number of days	92.0	92.0	
Mean no. of obs/day	40.0	33.9	
No. of hours with obs	1556.0	1407.0	
Mean no. of hours/day with obs	16.9	15.3	
% of hour periods without an ob ⁷	29.6	36.3	
Mean (Ob-Bg) RMS (Ob-Bg)	-0.4 1.9	0.2 2.1	
unflagged datas			
Mean (Ob-bg) RMS (Ob-Bg)	-0.5 2.4	0.2 6.5	
all datas			
Revised RMS (Ob-Bg) ⁸	2.0	2.4	
% of data flagged ⁸	64.0	64.0	
Operating at end of period	YES	YES	
Performance ⁹			
Availability	Very Good	Good	
Pressure Quality	Acceptable	Acceptable	
Timeliness	Very Good	Good	
Comments			

ANNEX B - TIME SERIES PLOTS OF PRESSURE

DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

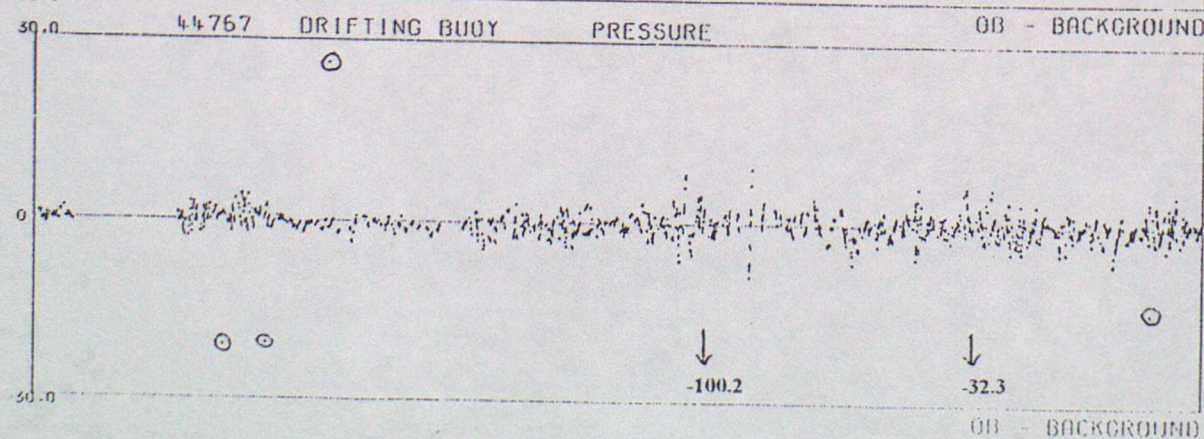
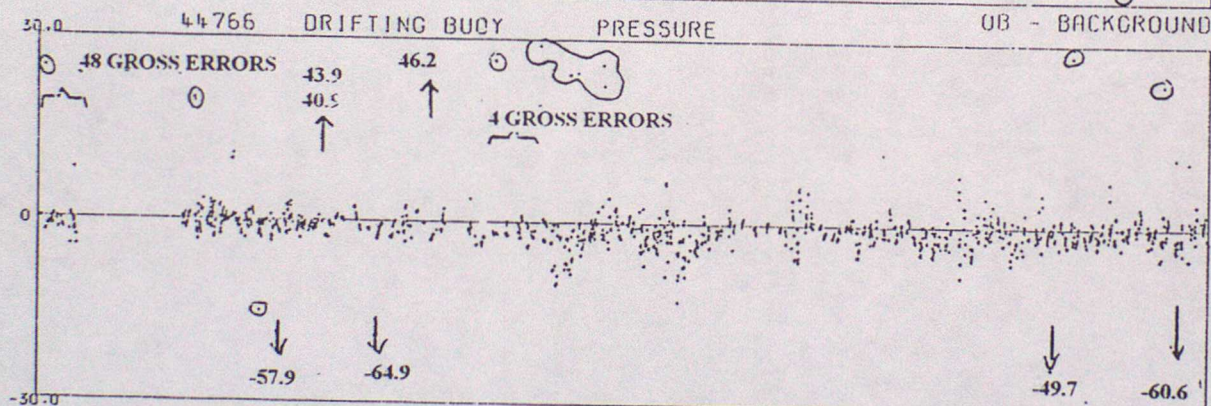
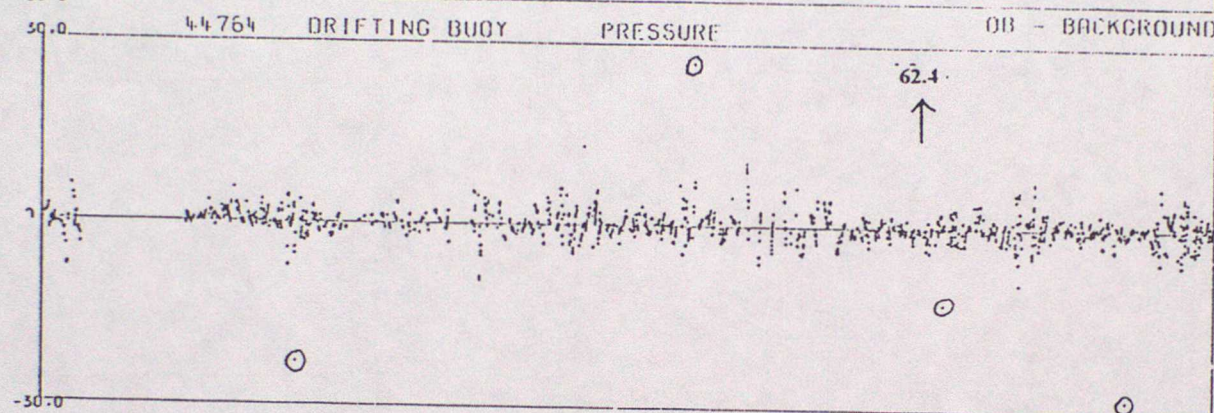
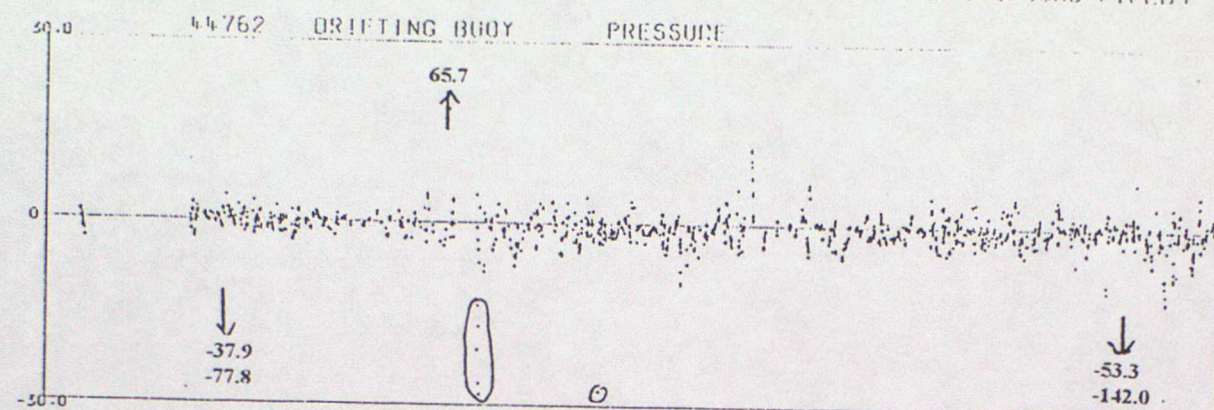


DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



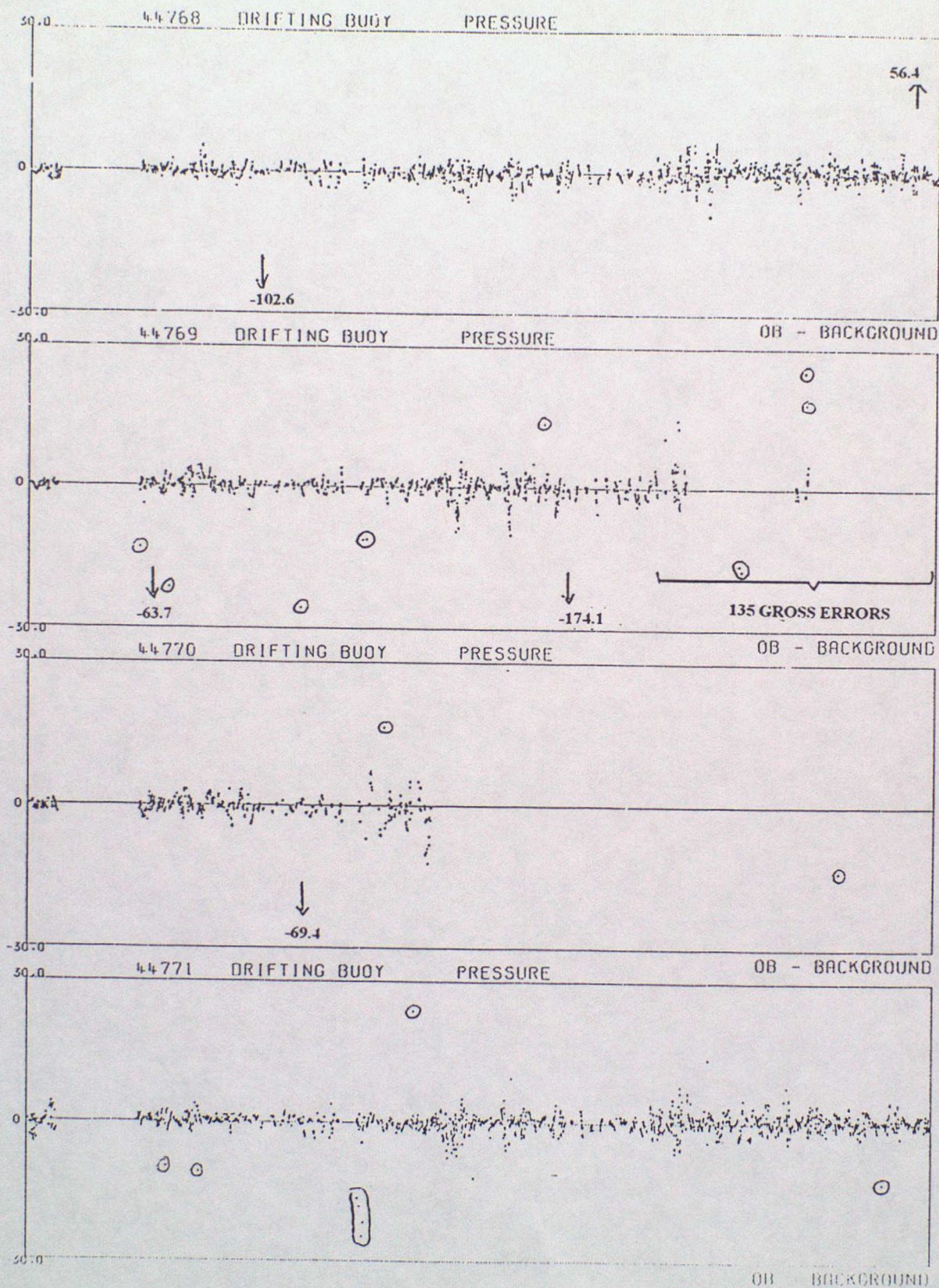
OB - BACKGROUND

DATA FROM 00Z ON 01/10/1994 TO 24Z ON 01/12/1994 (OBS - BACKGROUND FIELD)

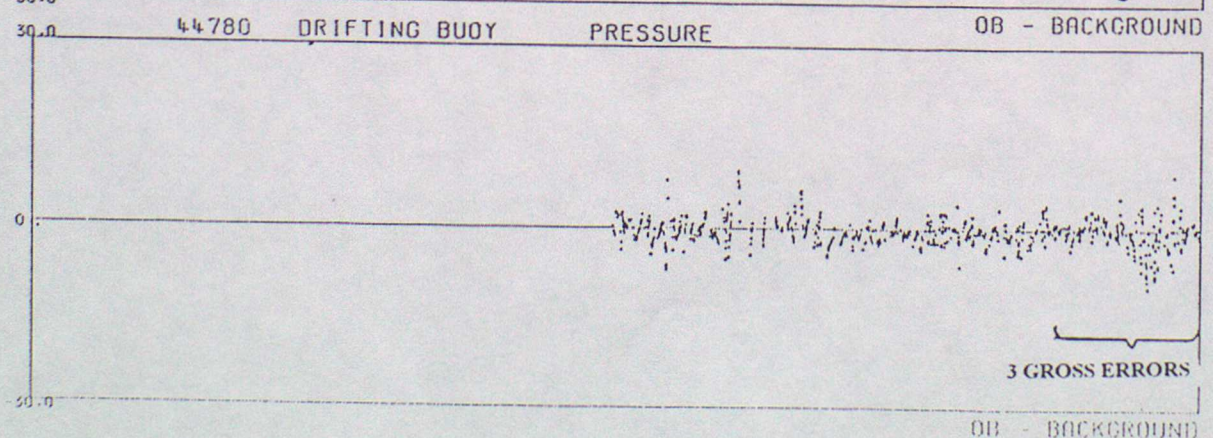
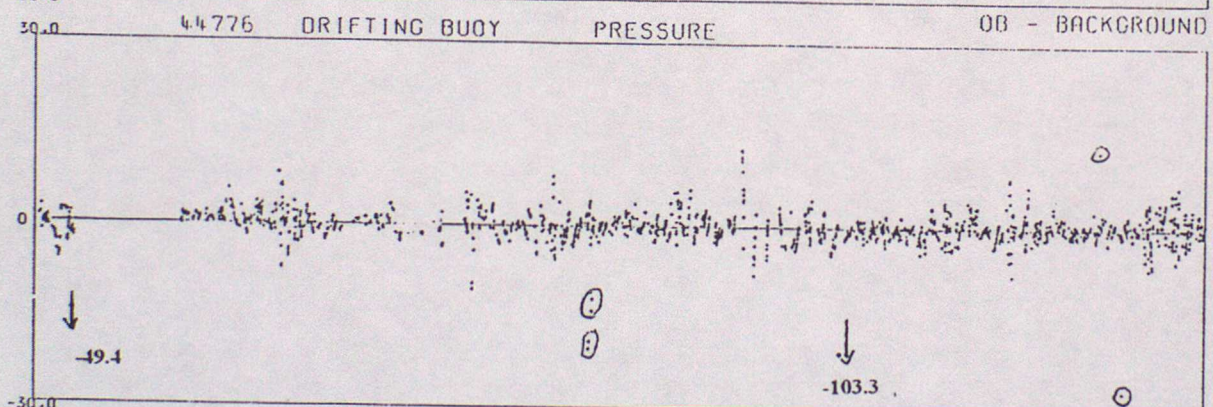
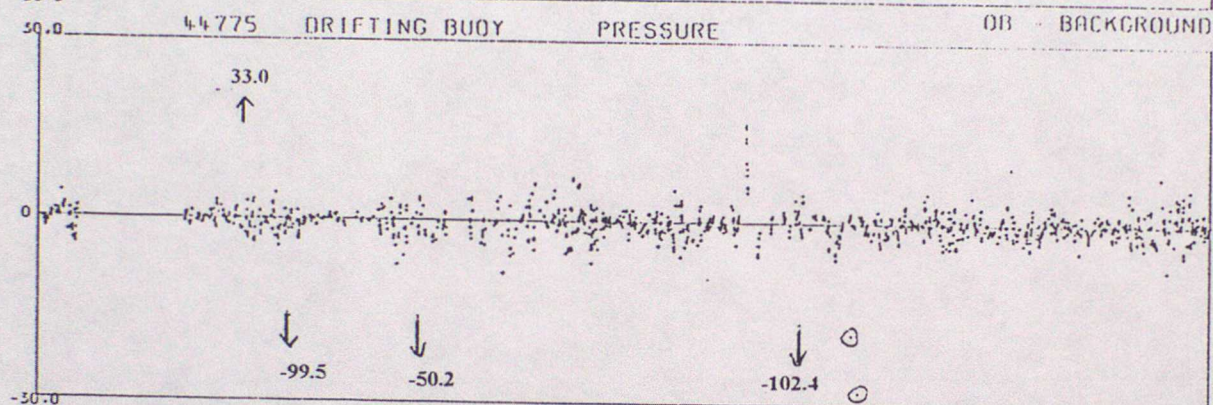
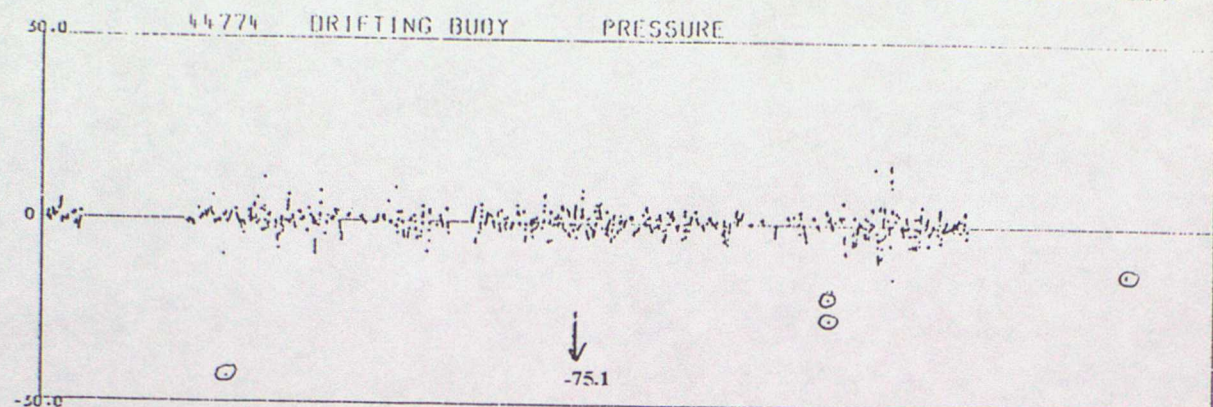


OB - BACKGROUND

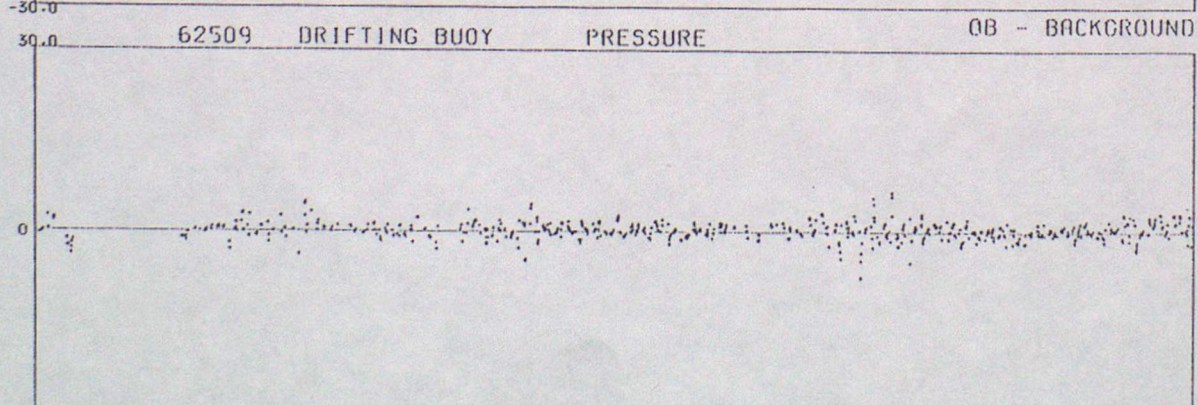
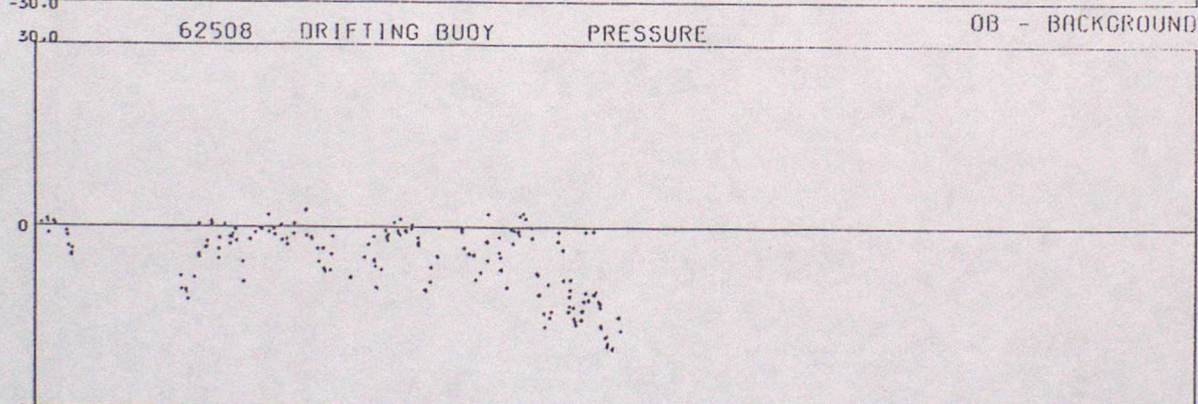
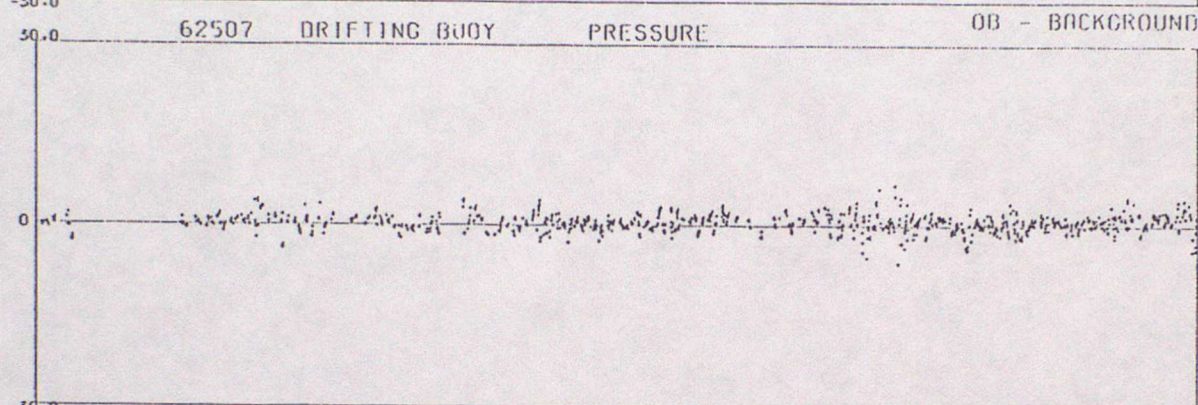
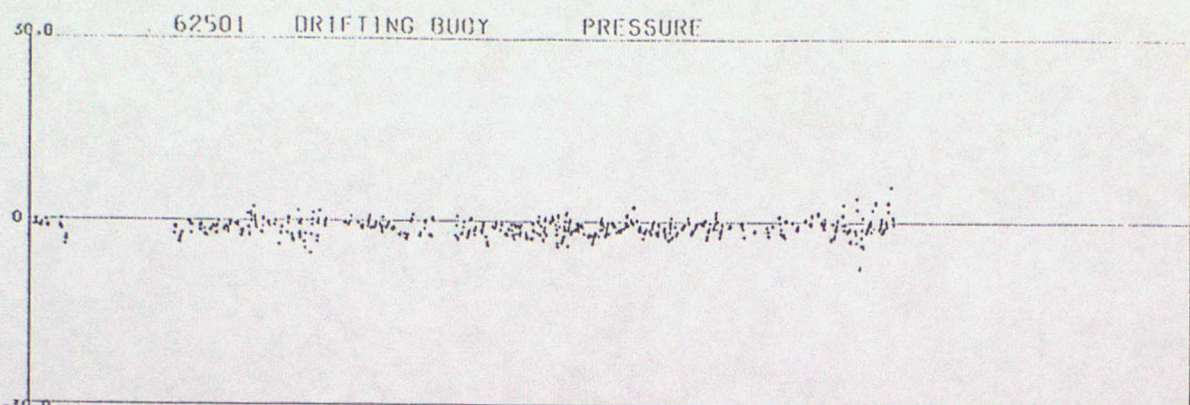
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

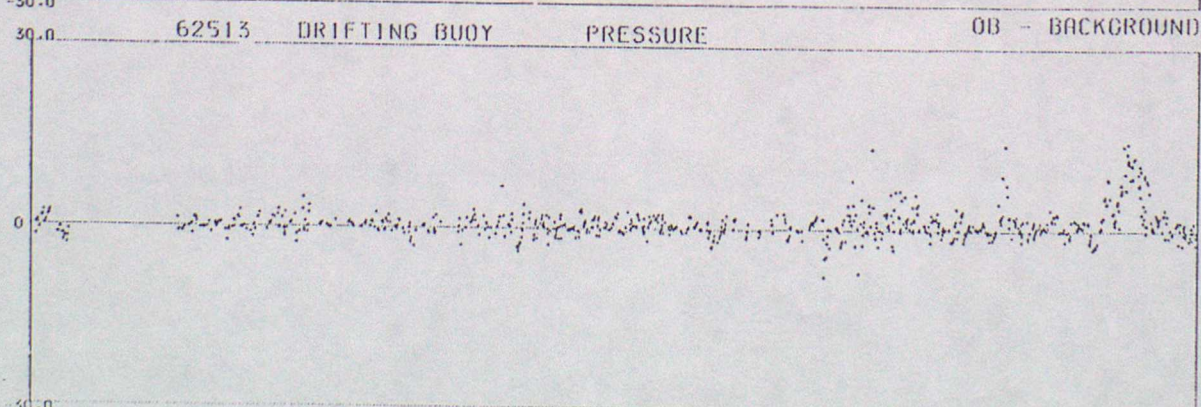
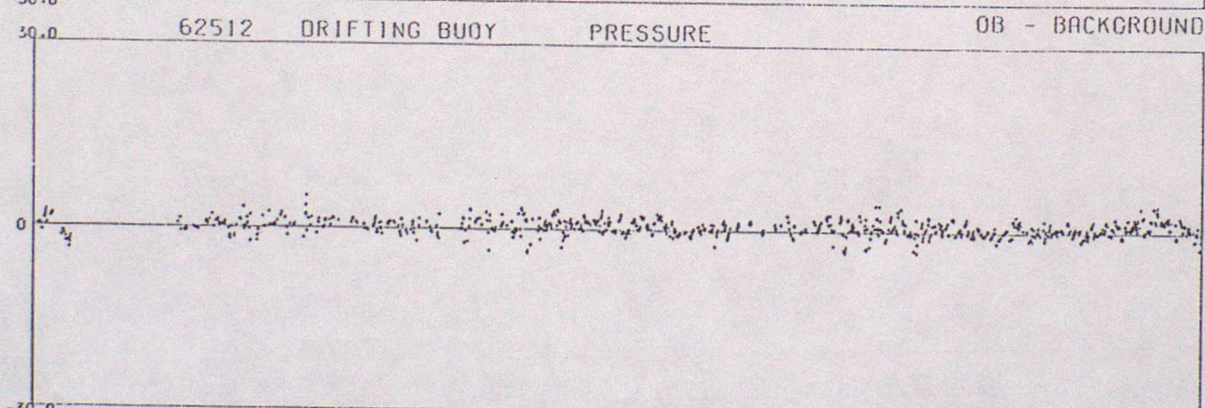
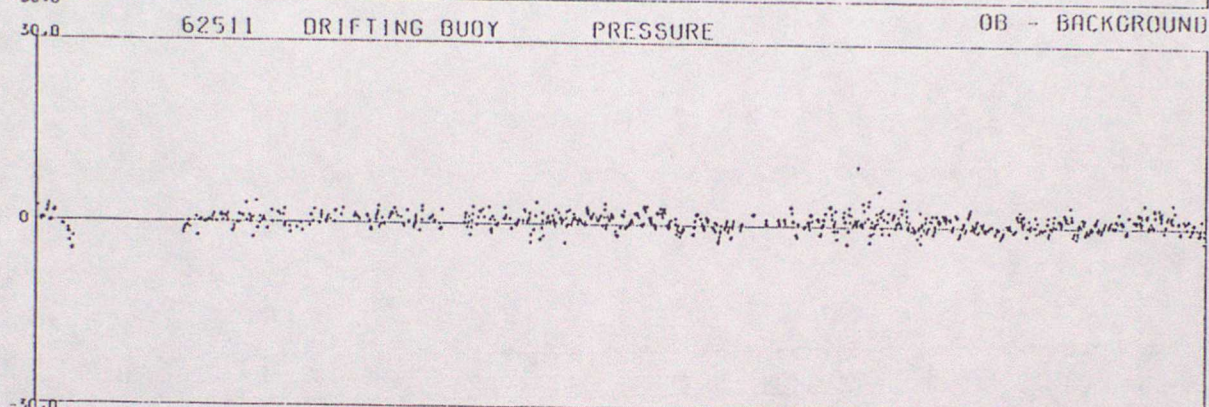
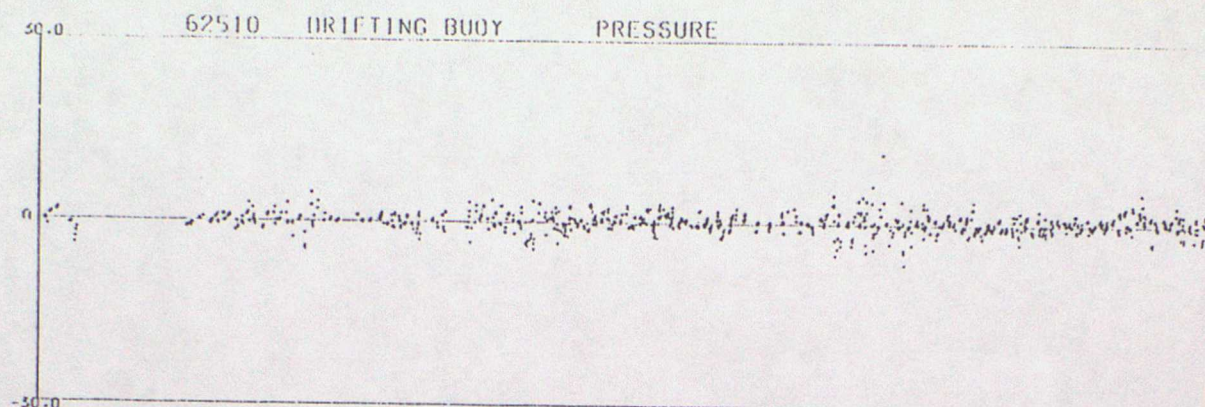


DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FILLID)



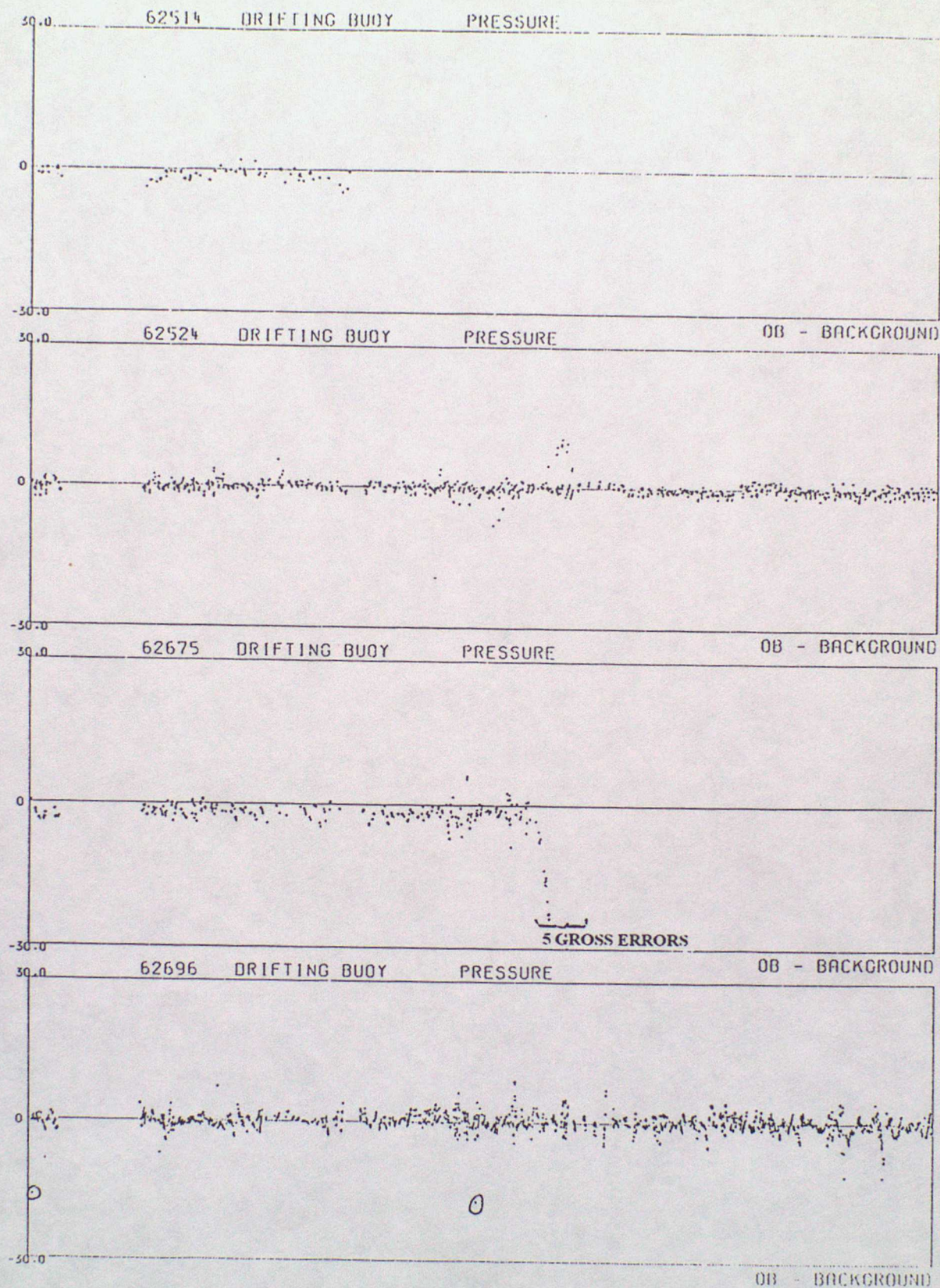
OB - BACKGROUND

DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

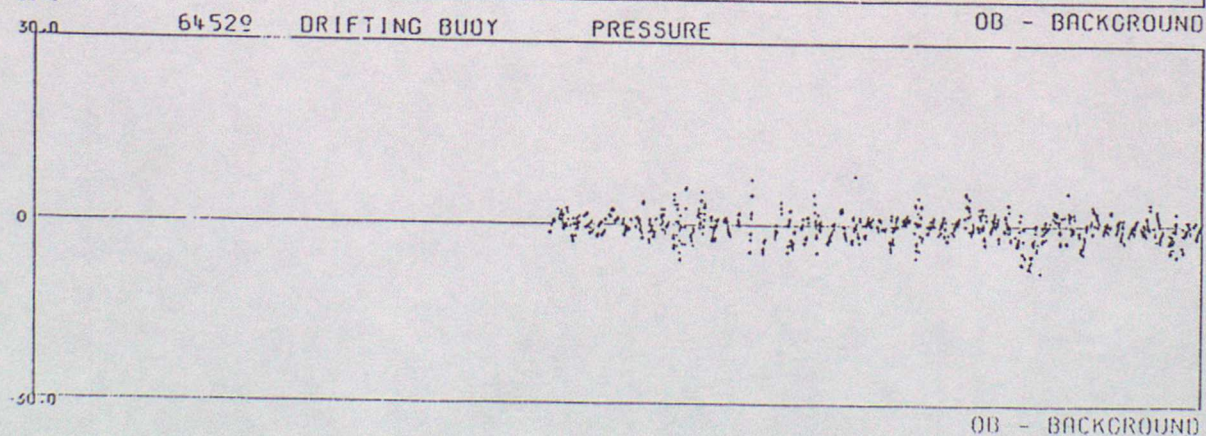
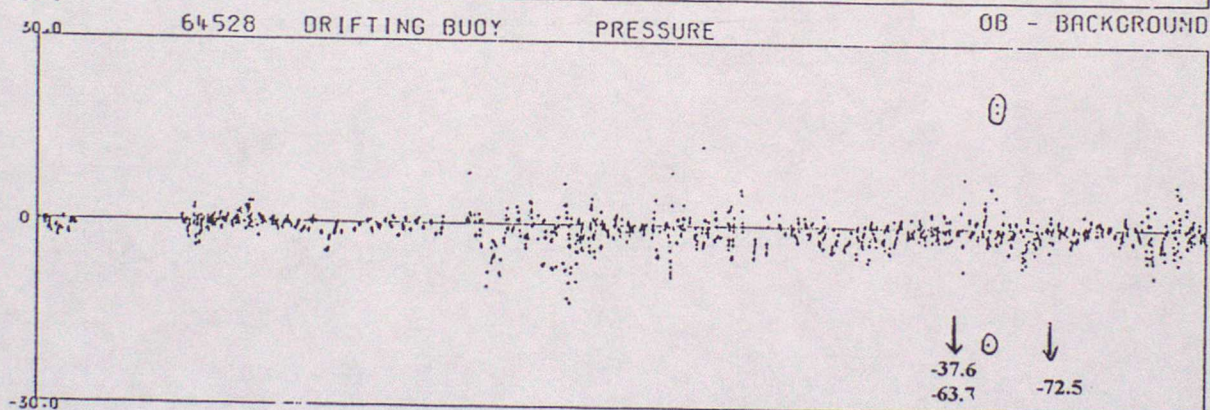
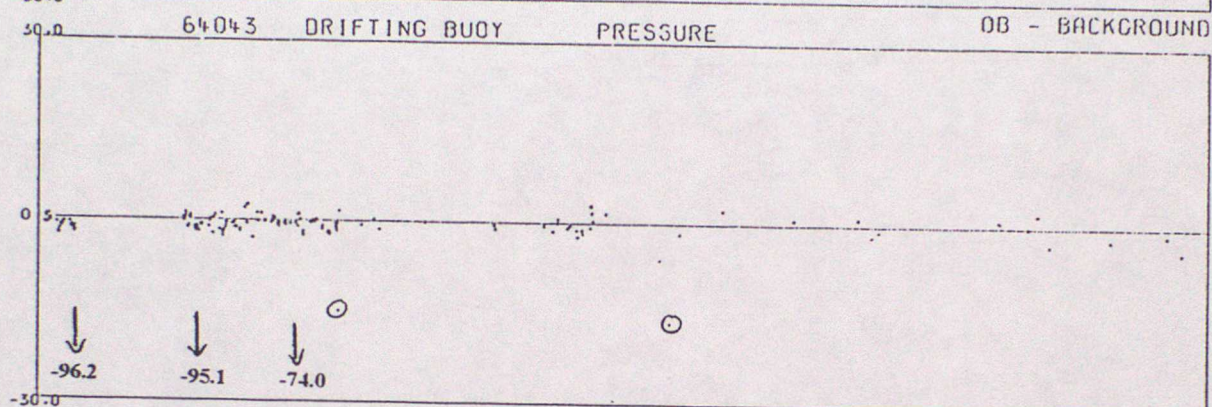
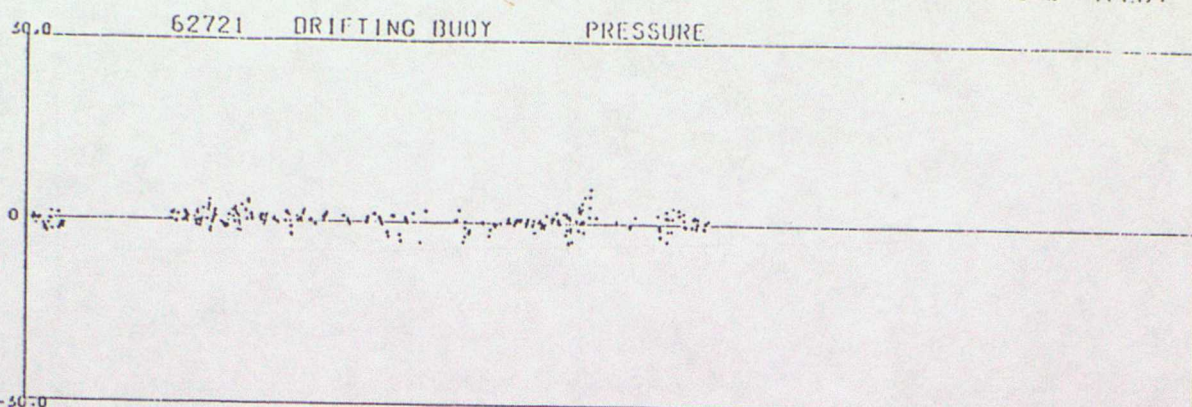


OB - BACKGROUND

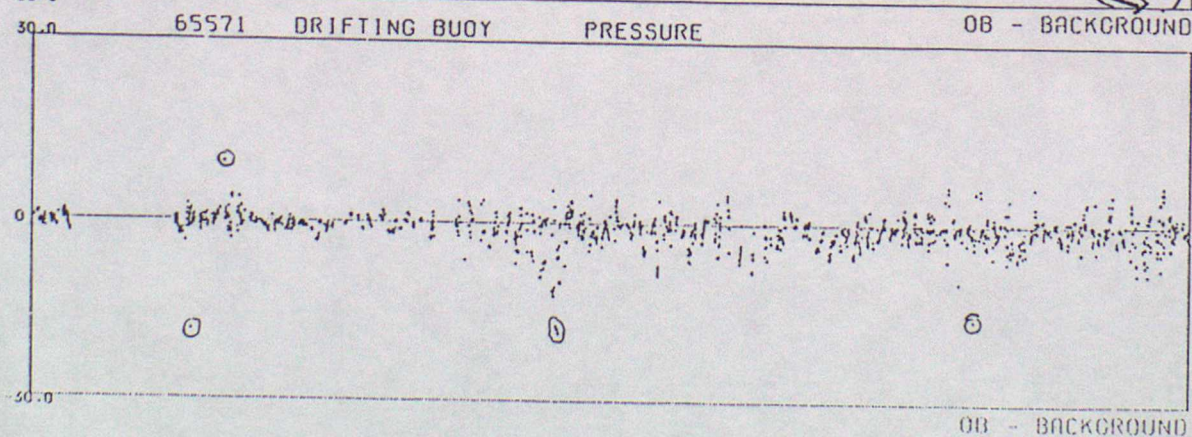
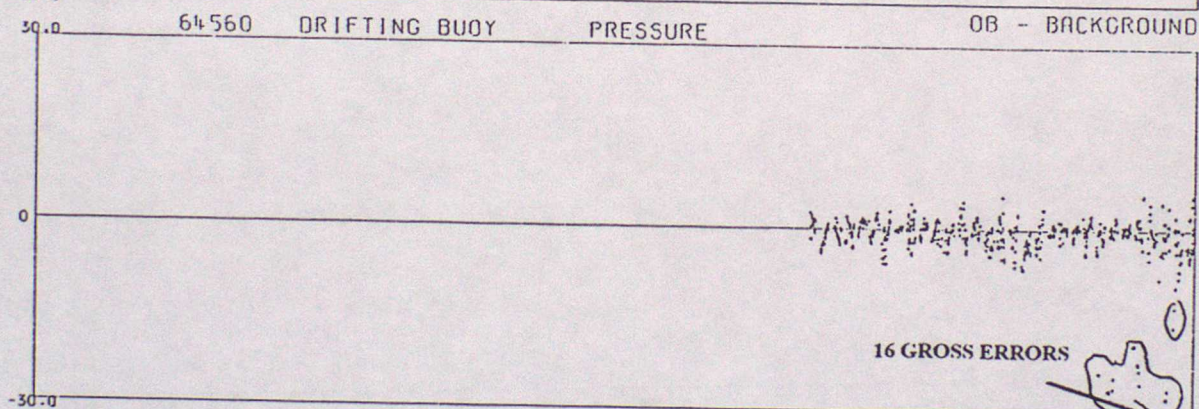
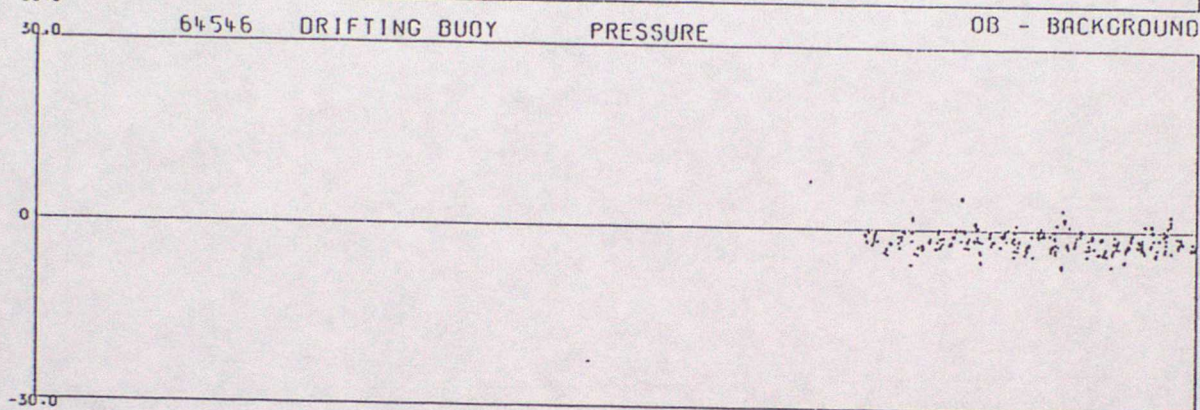
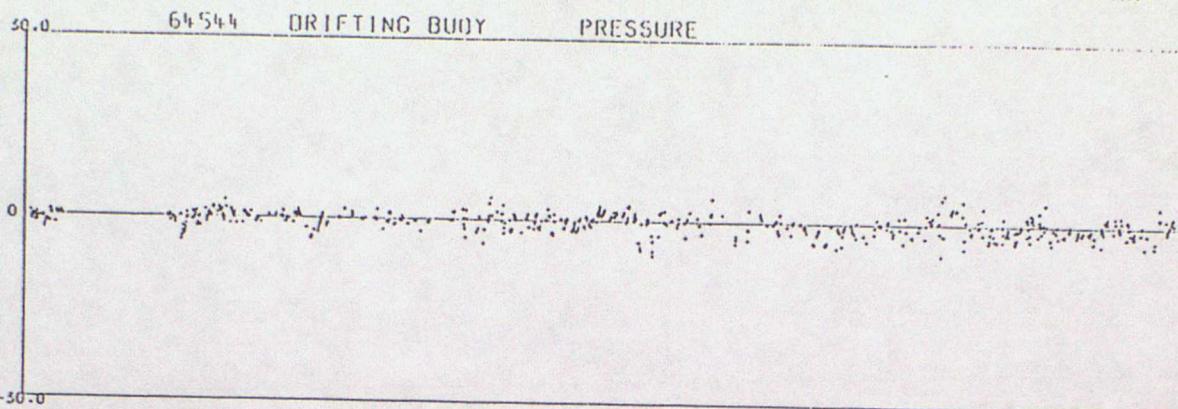
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

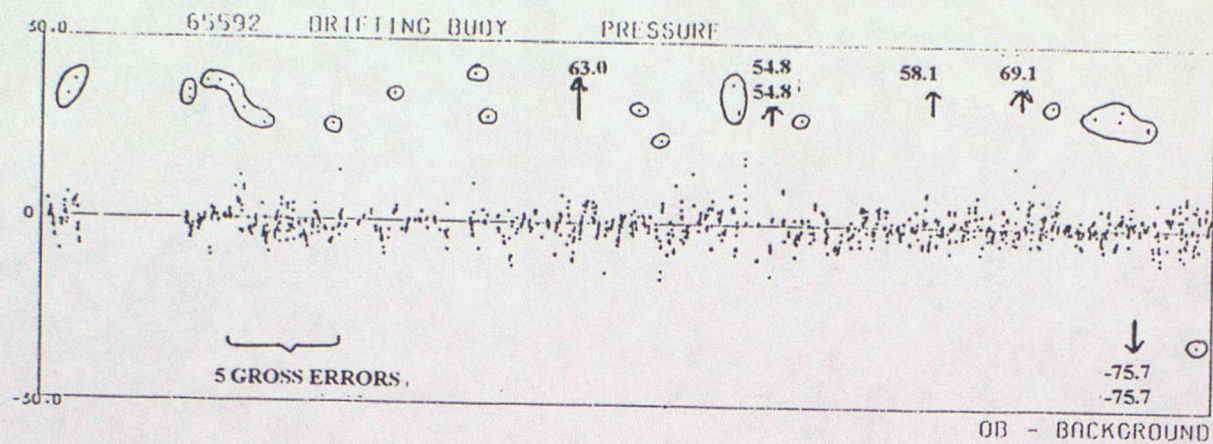


DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



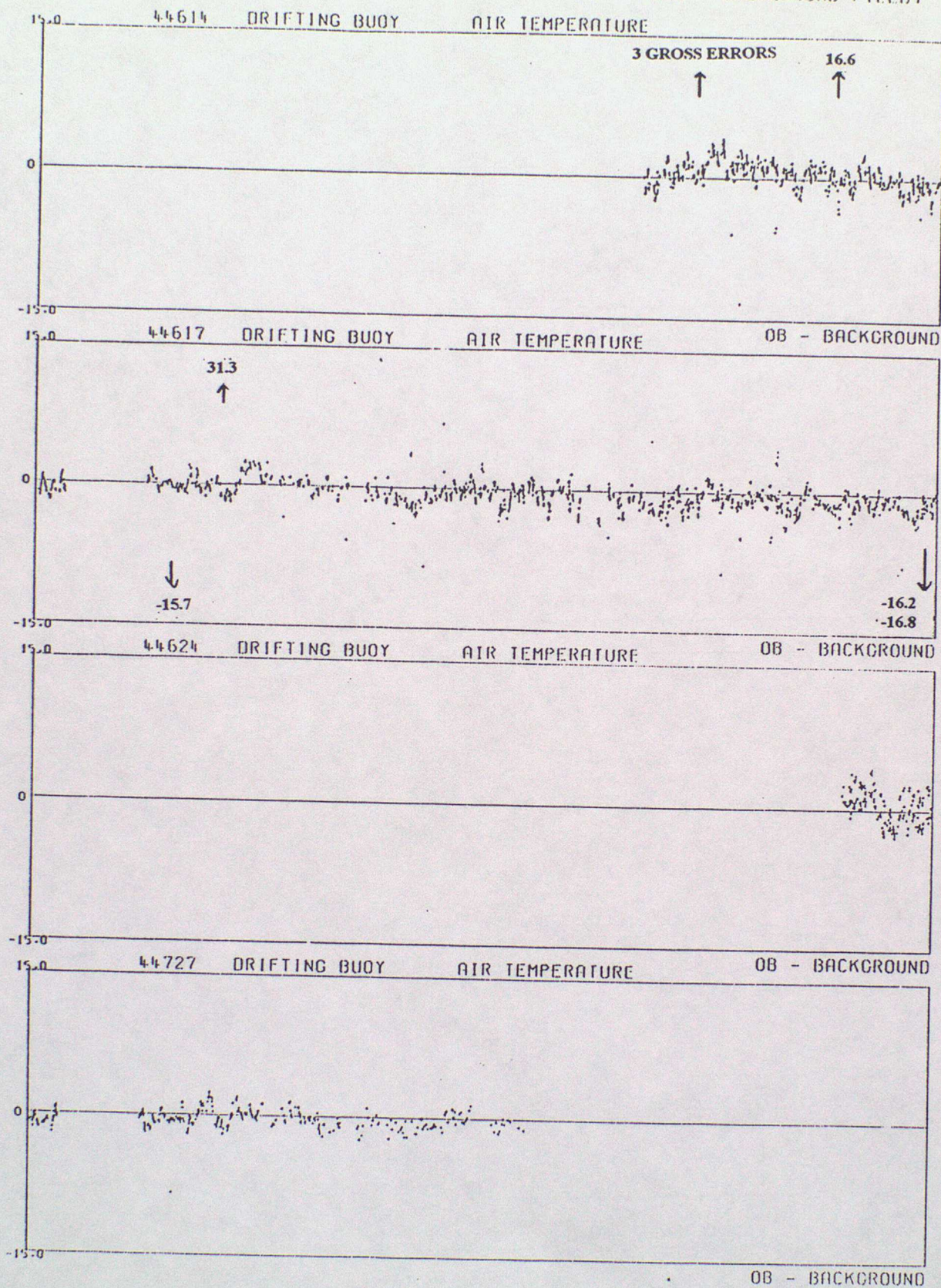
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



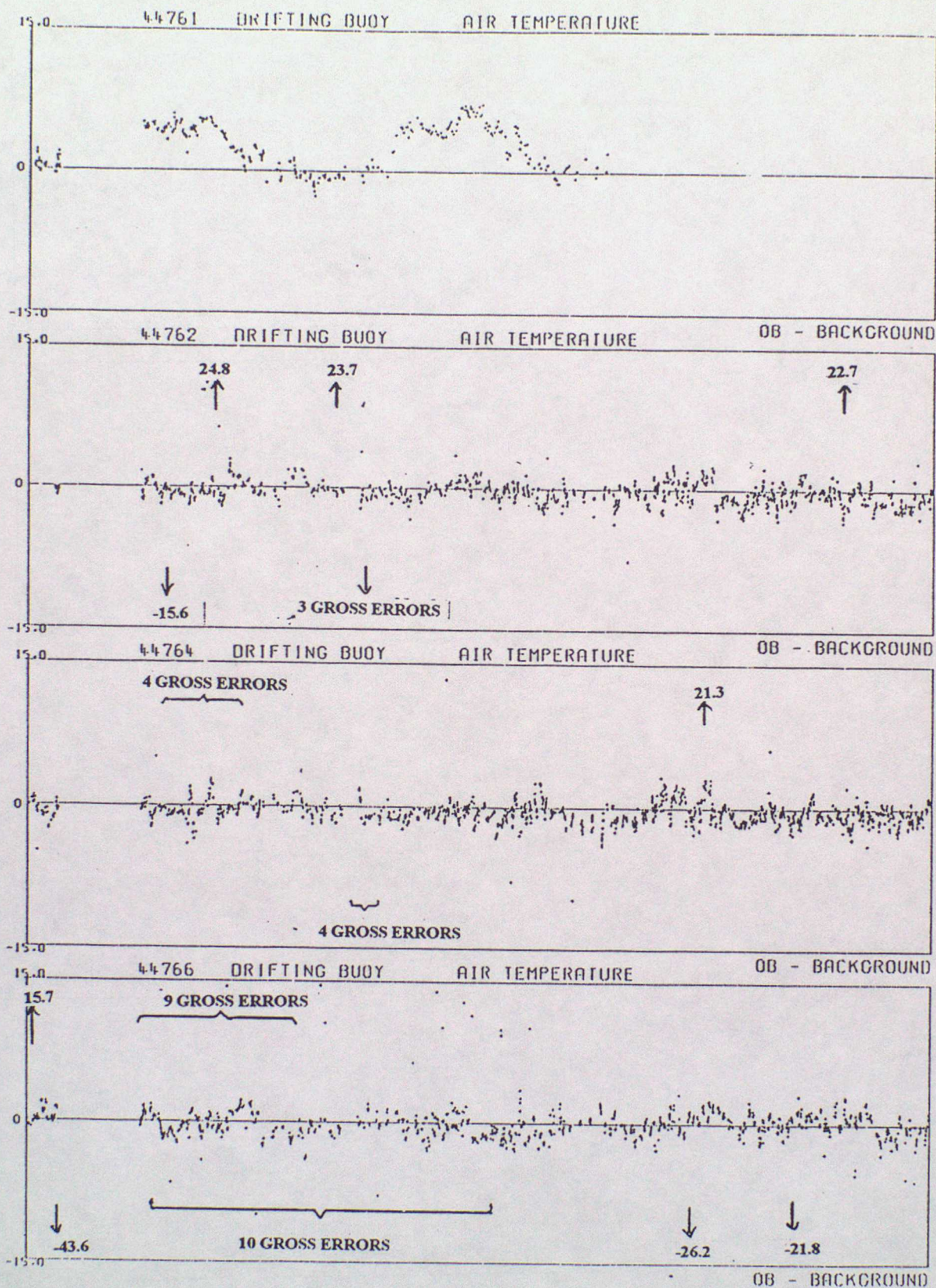


ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

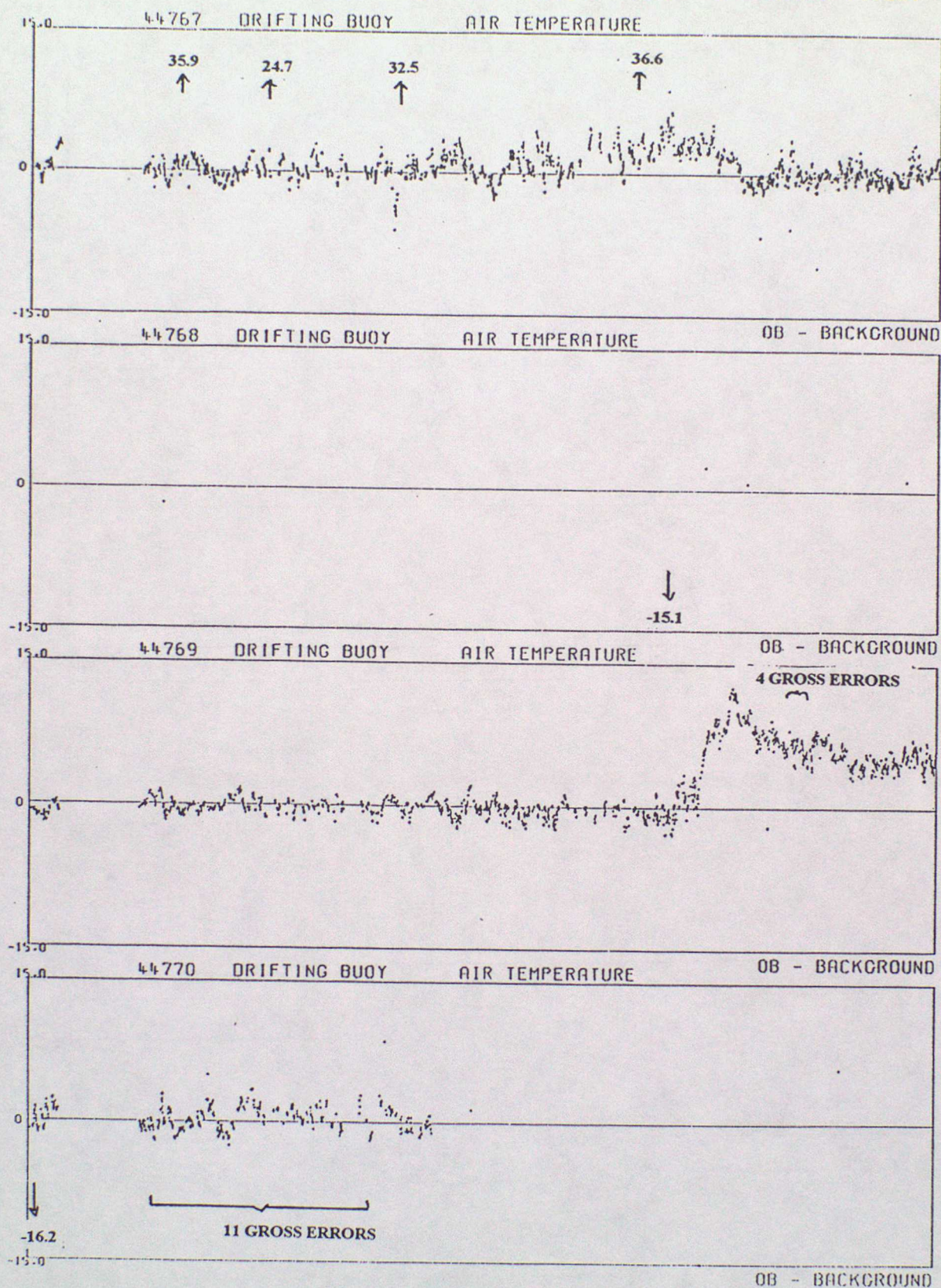
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



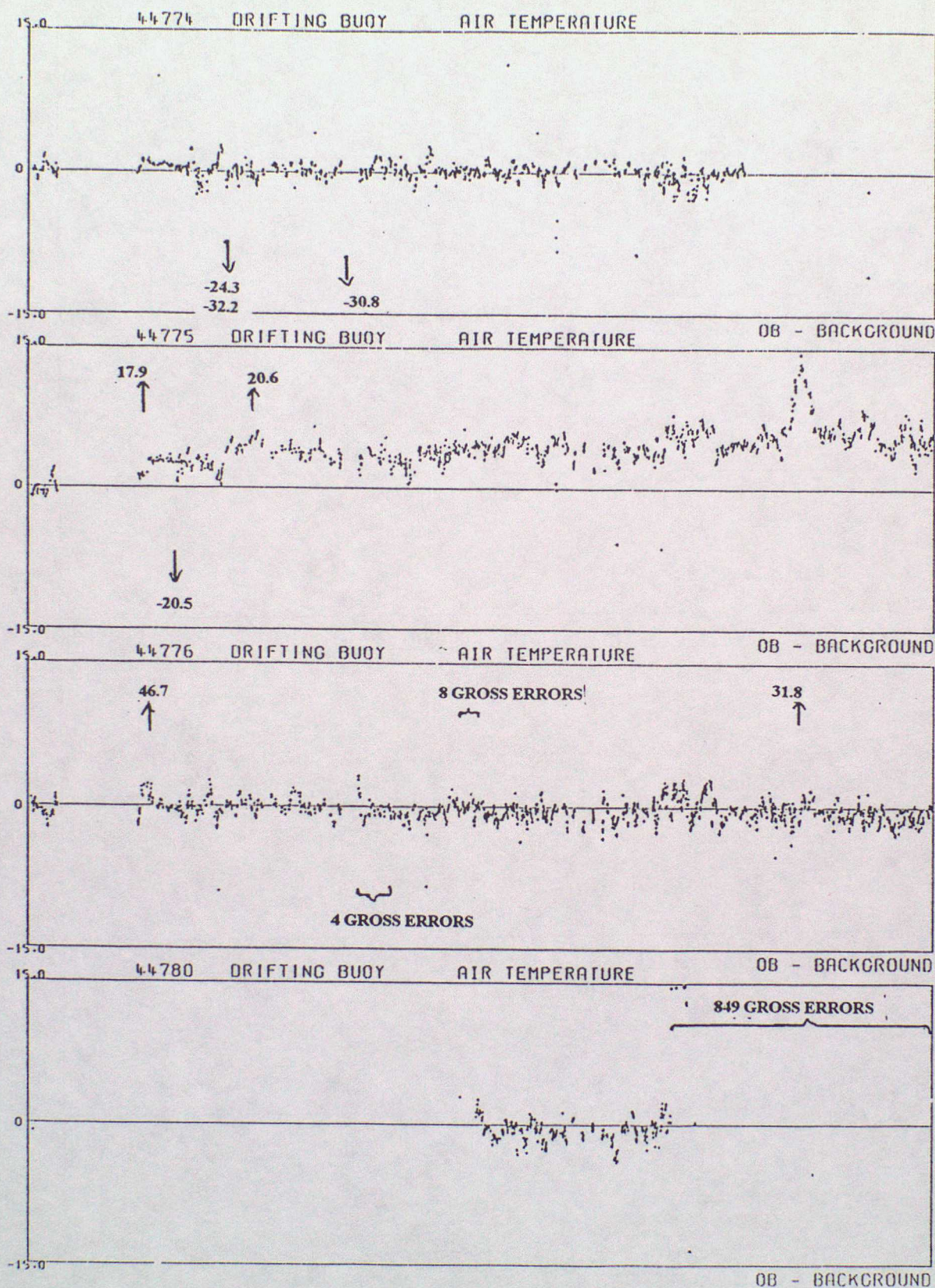
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



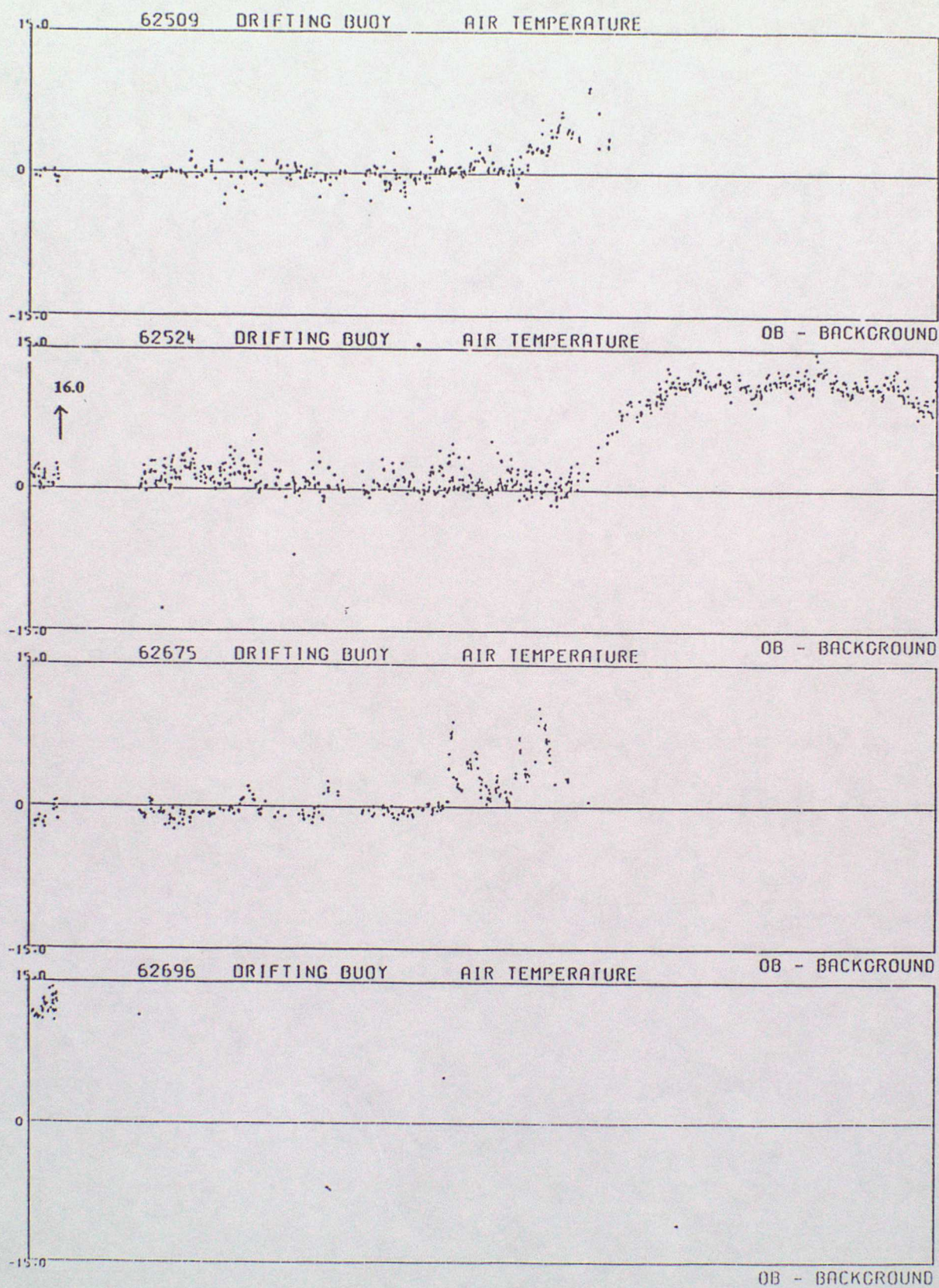
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



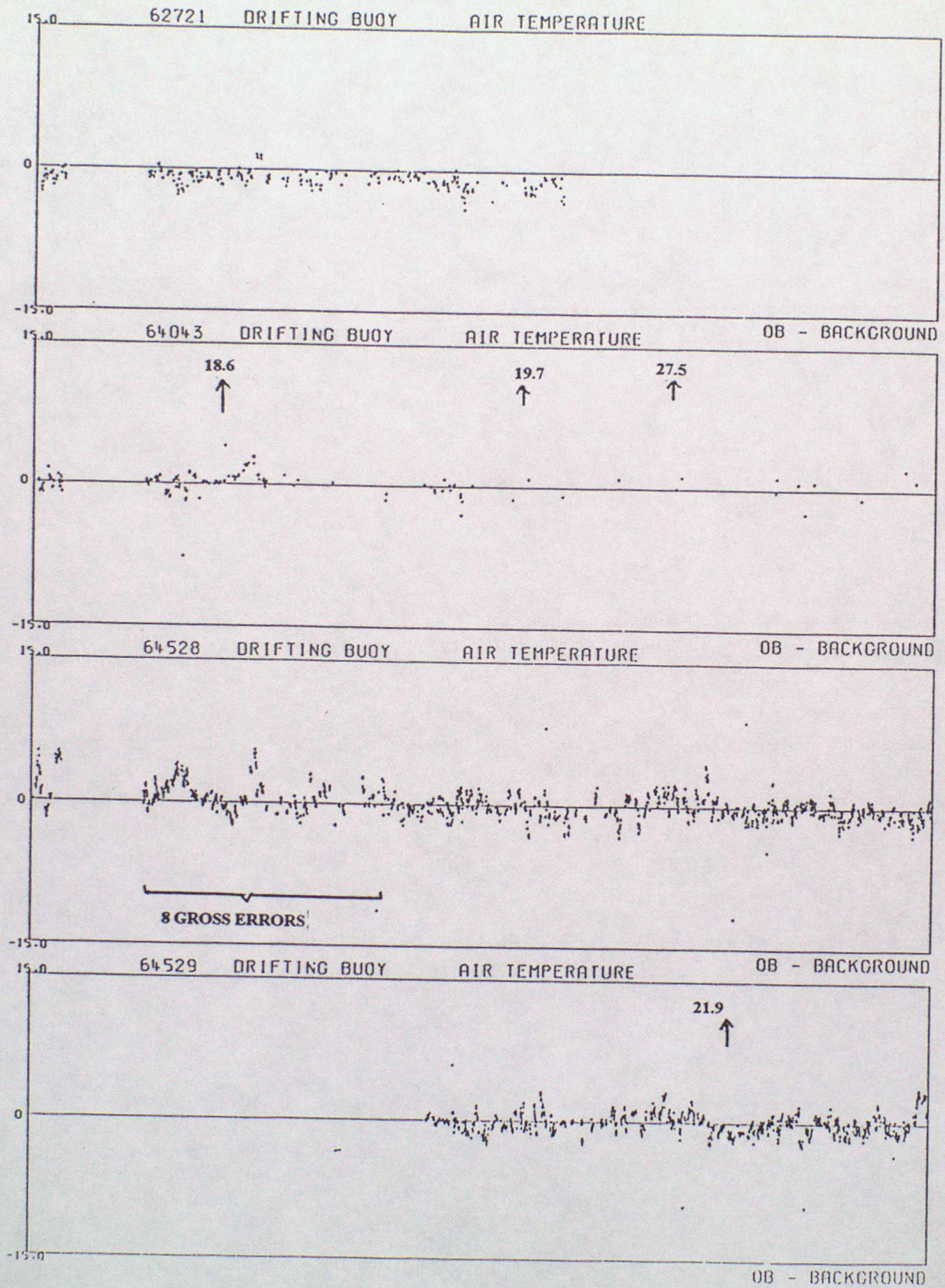
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



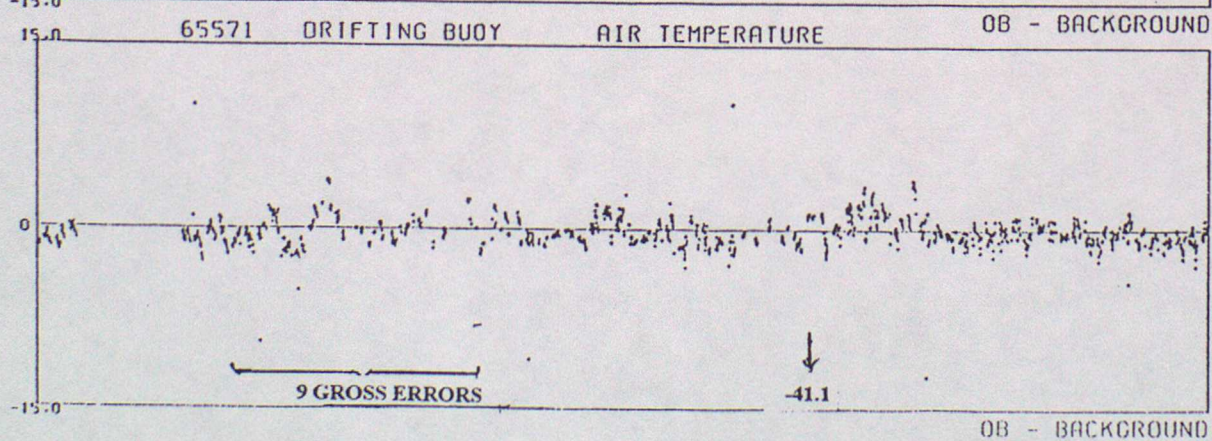
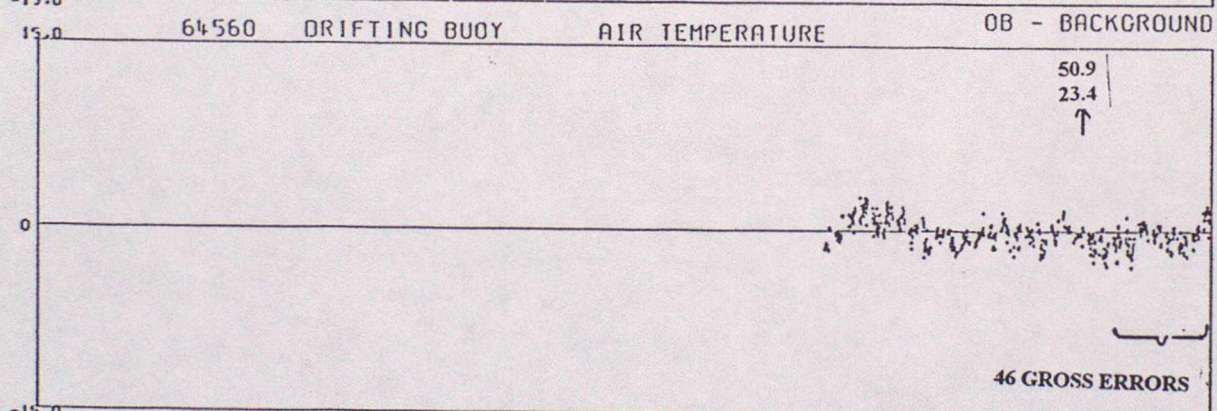
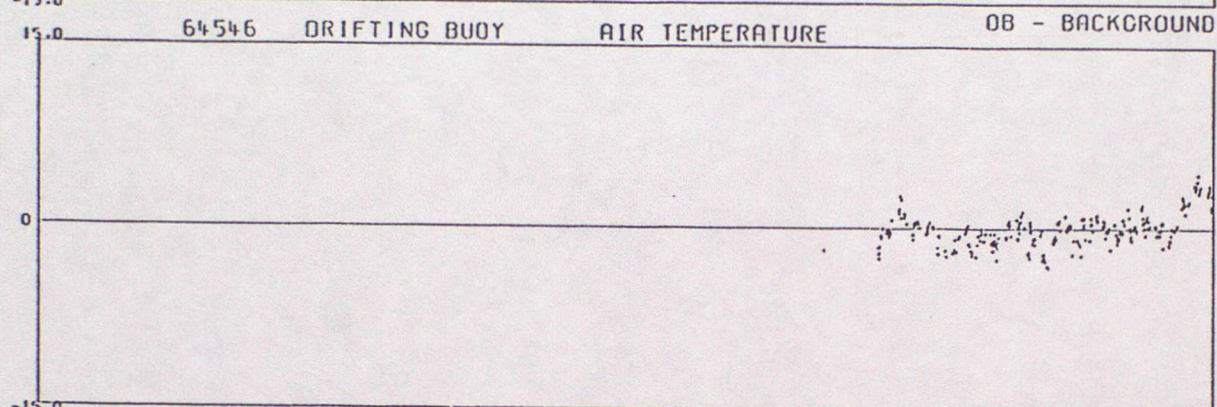
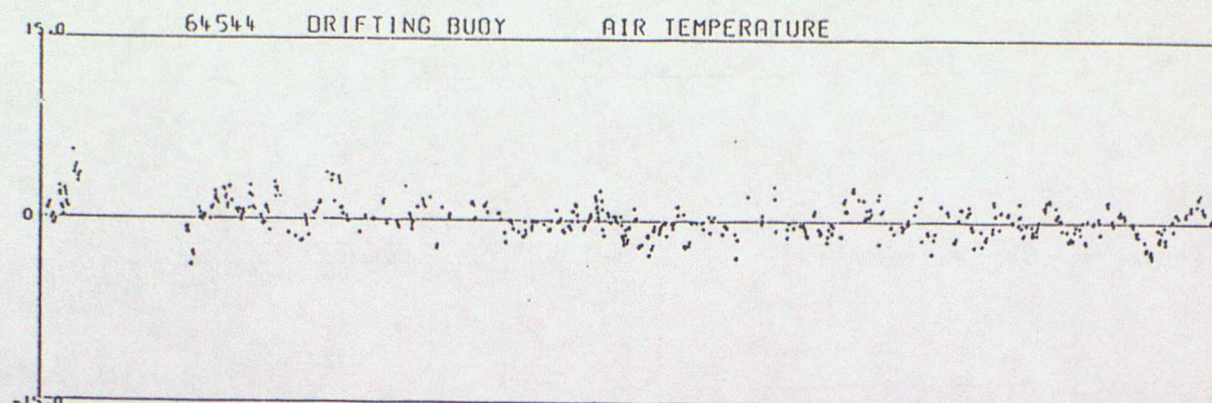
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

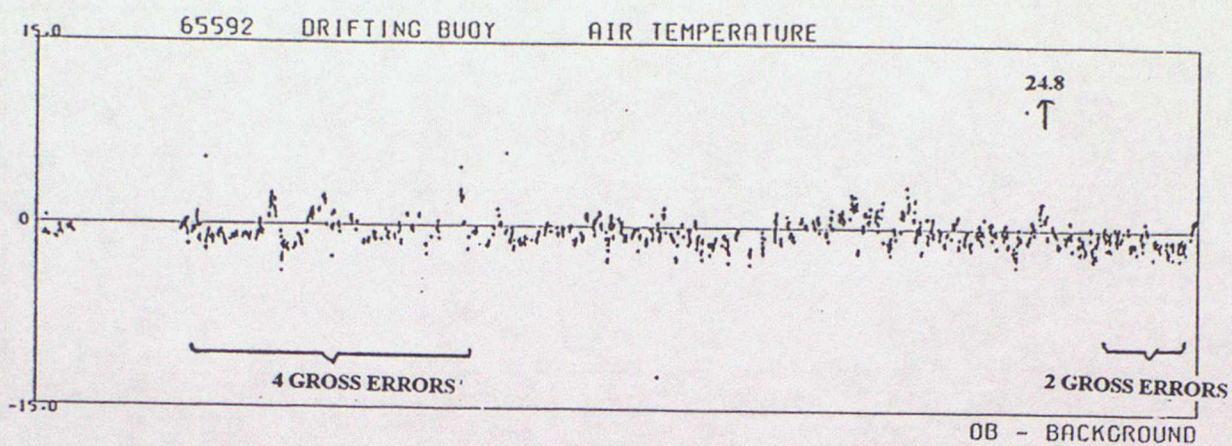


DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



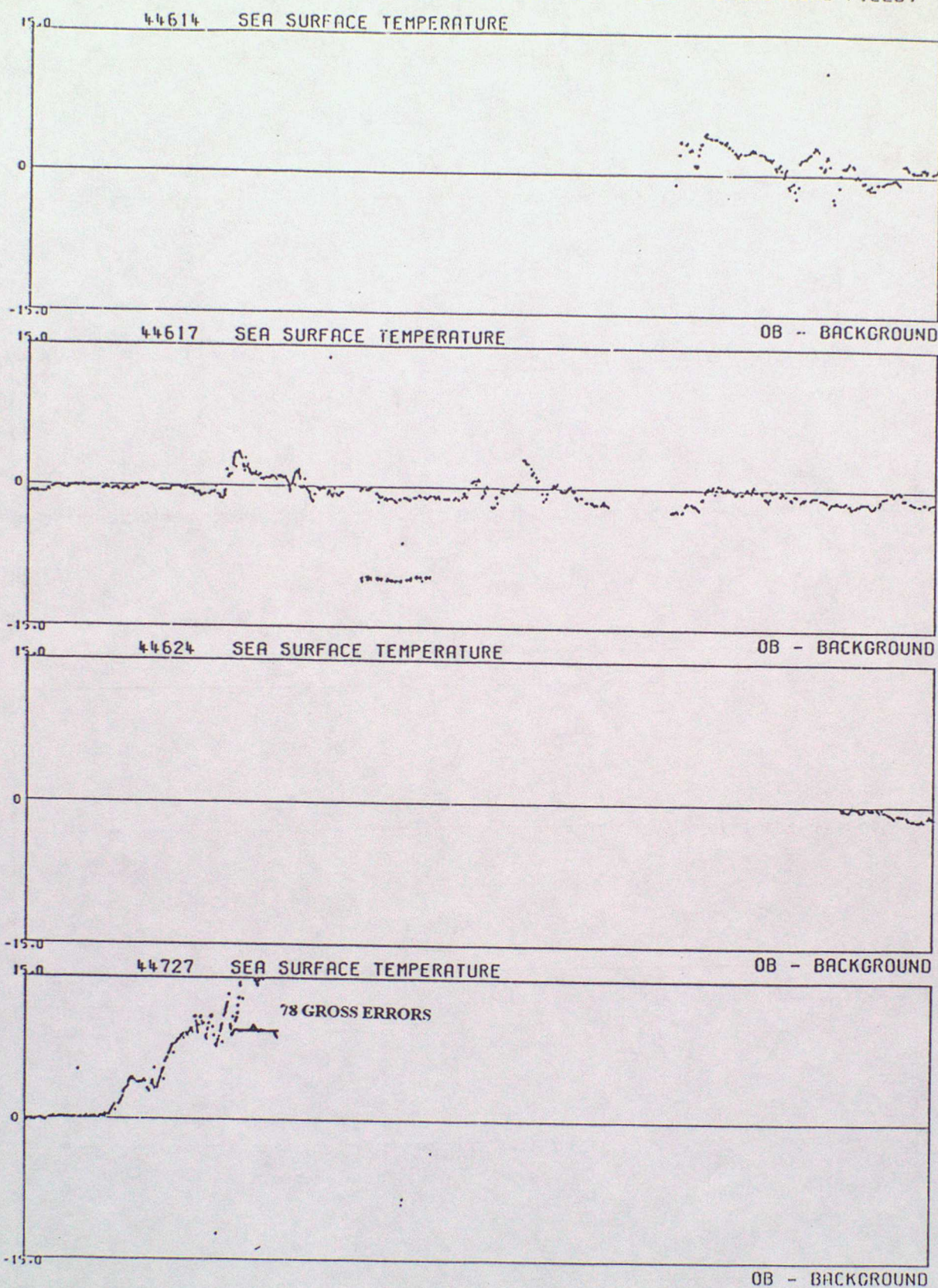
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



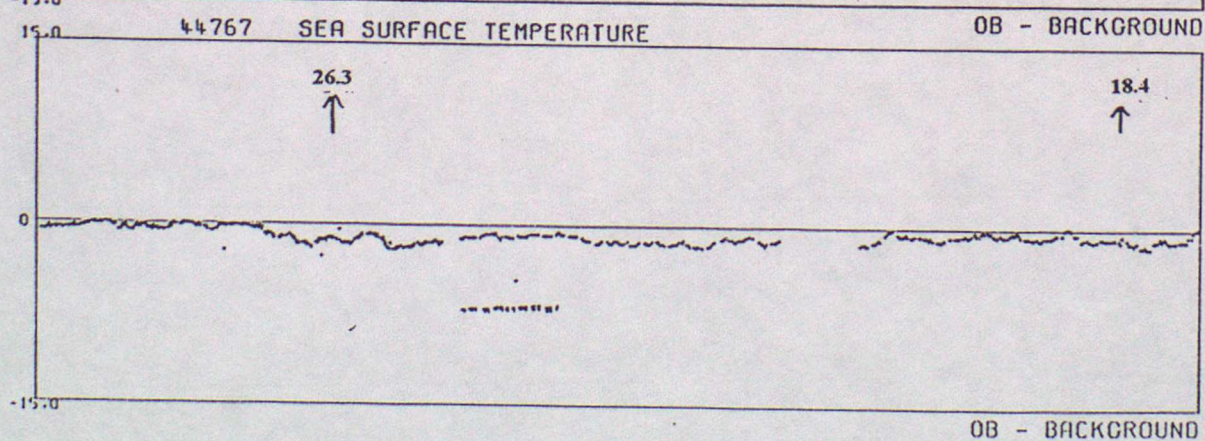
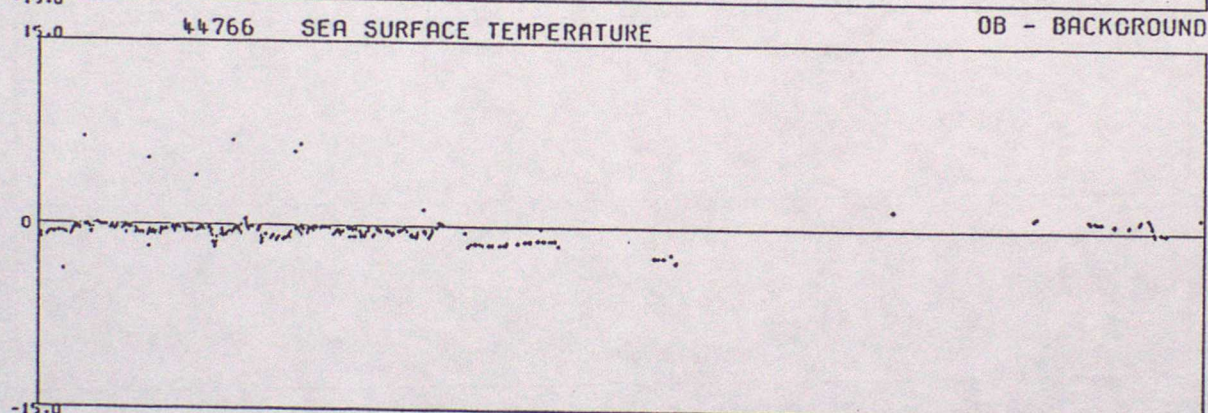
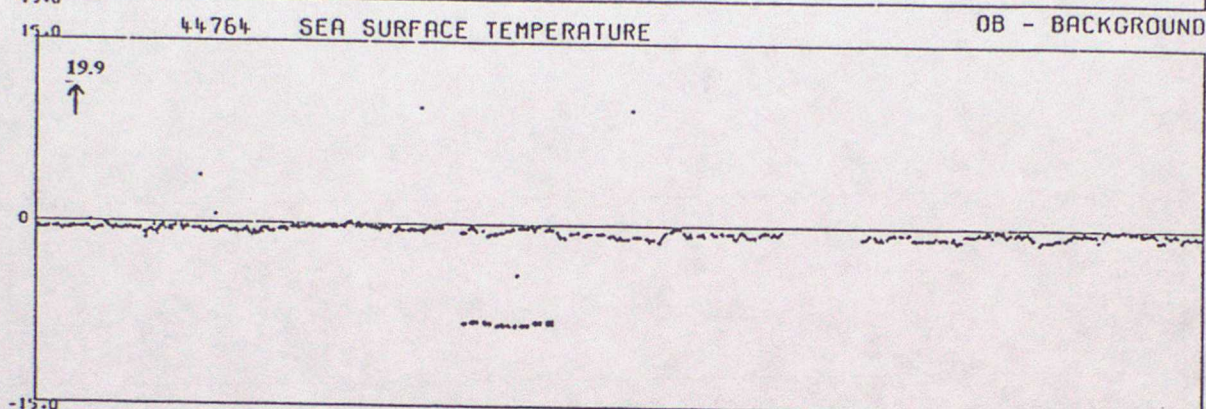
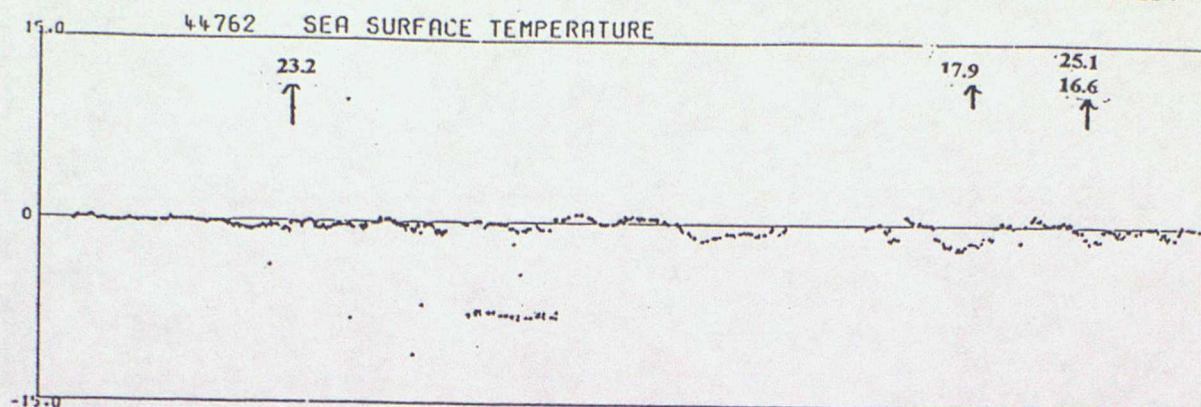


ANNEX D - TIME SERIES PLOTS OF SEA SURFACE TEMPERATURE

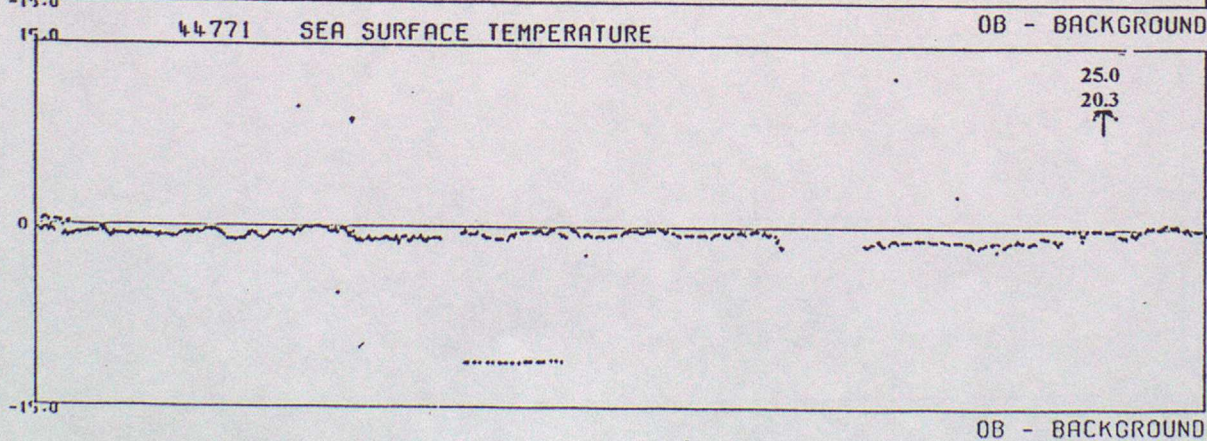
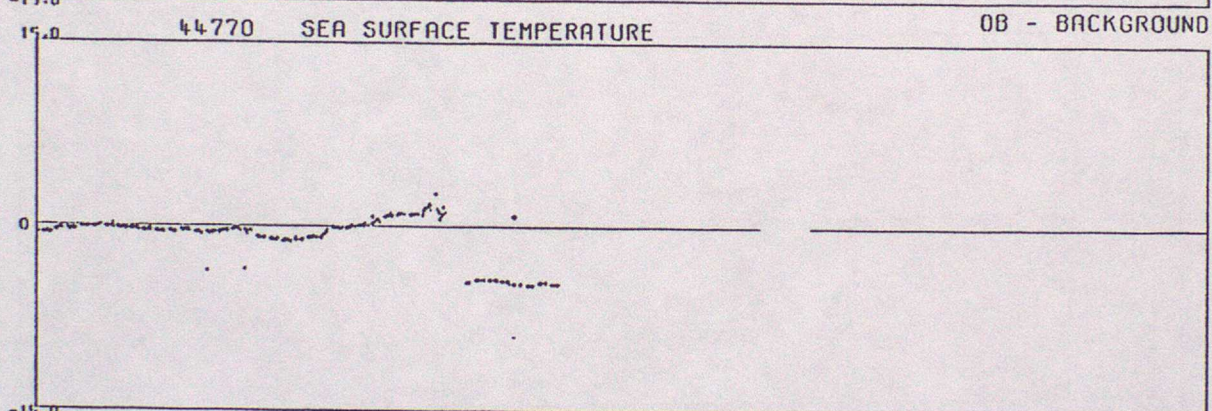
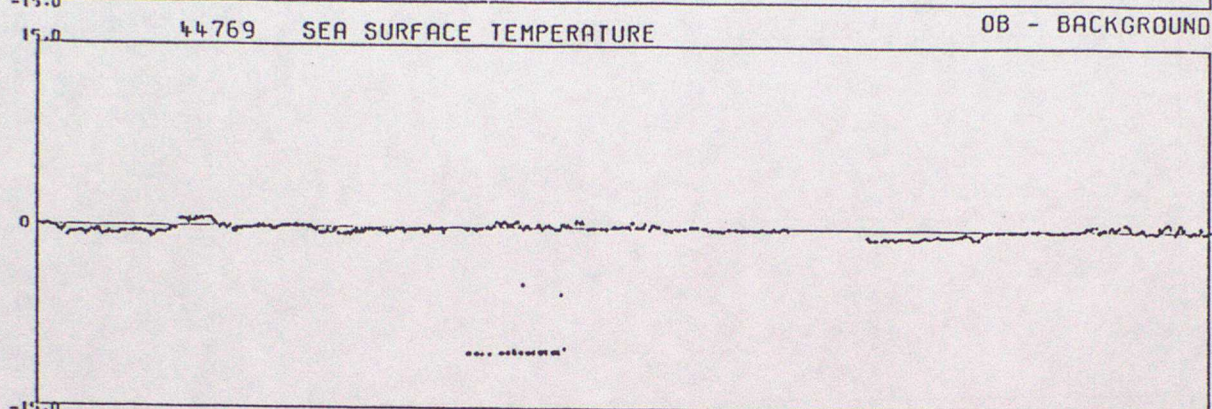
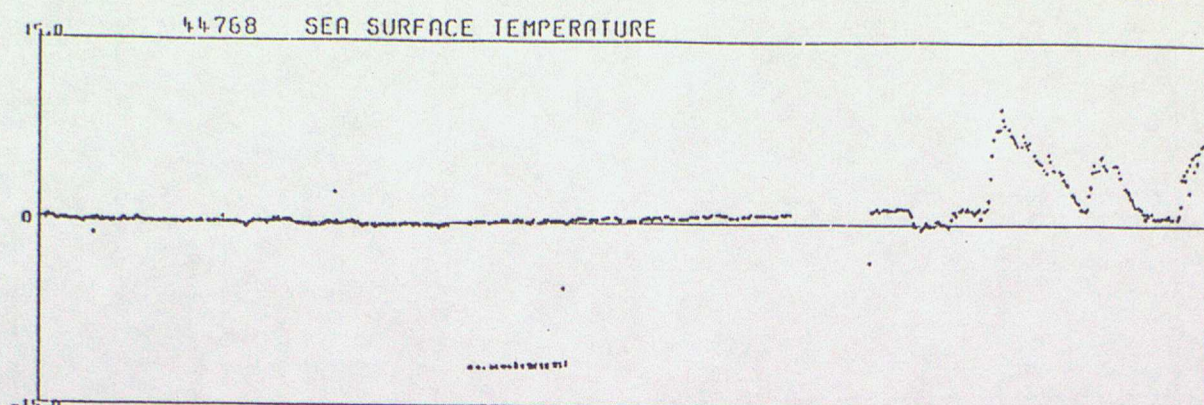
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



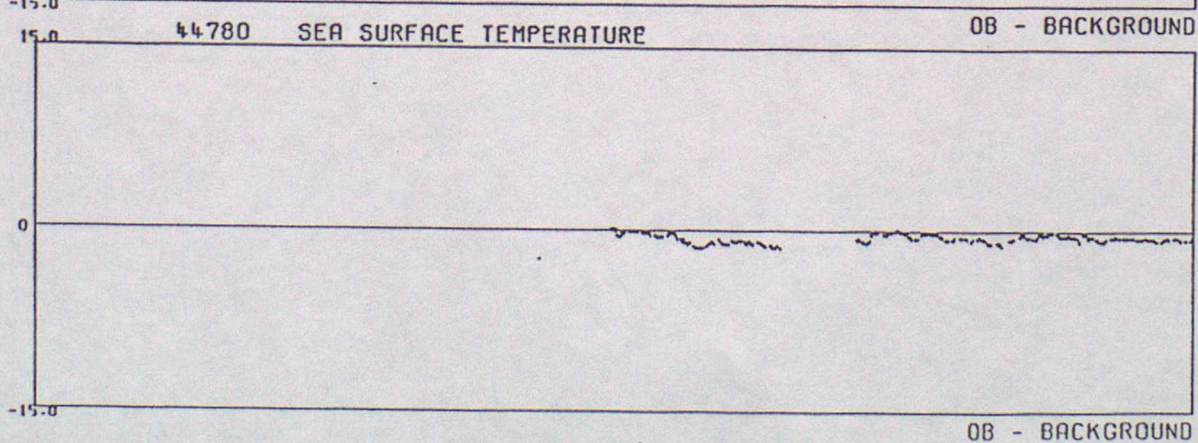
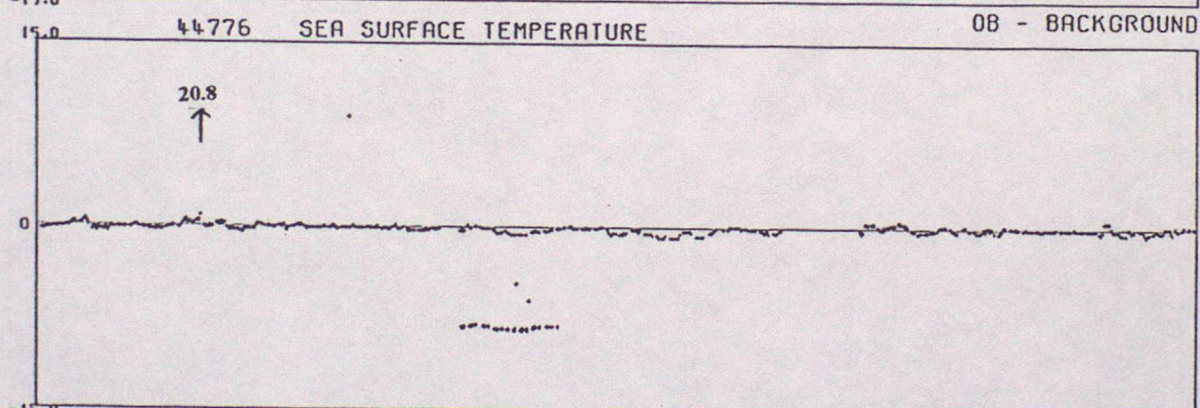
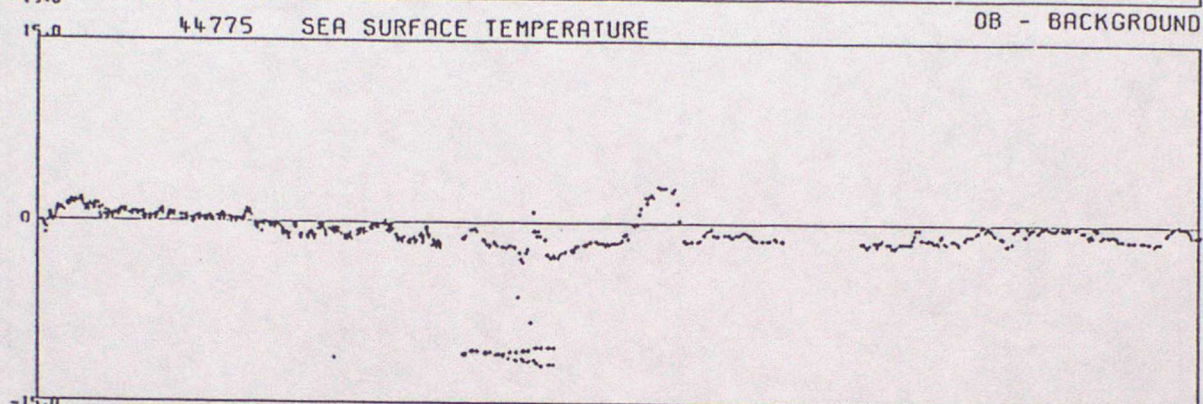
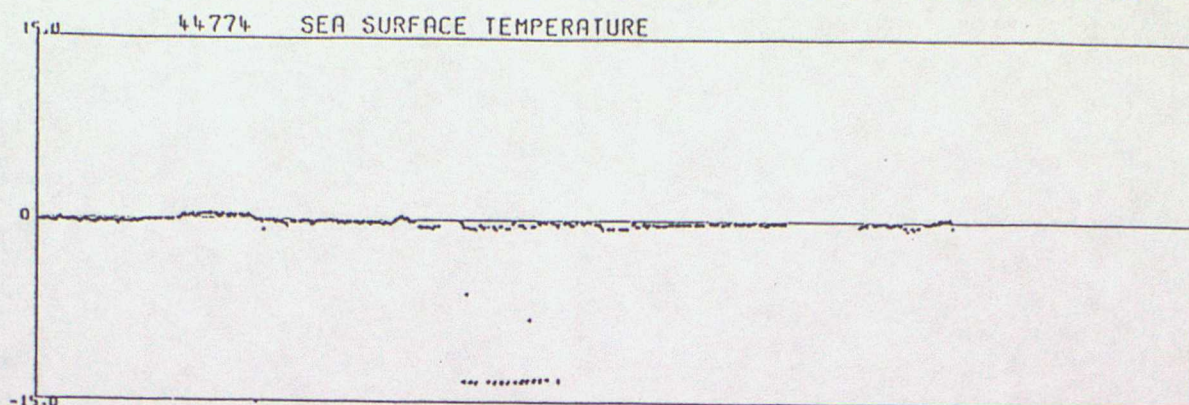
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



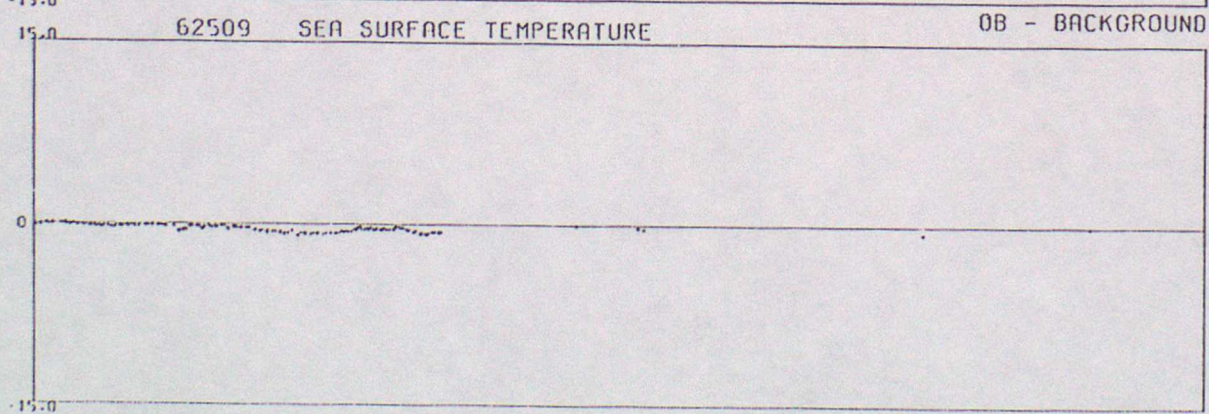
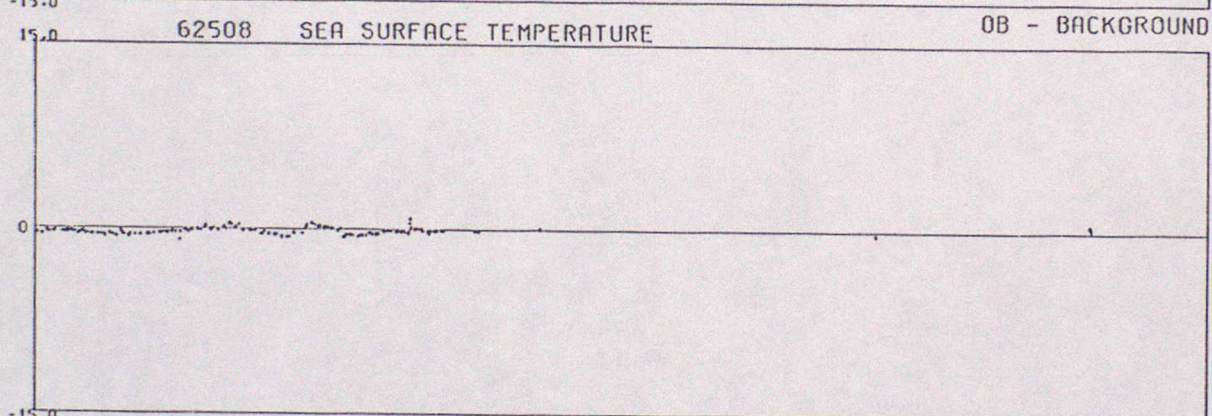
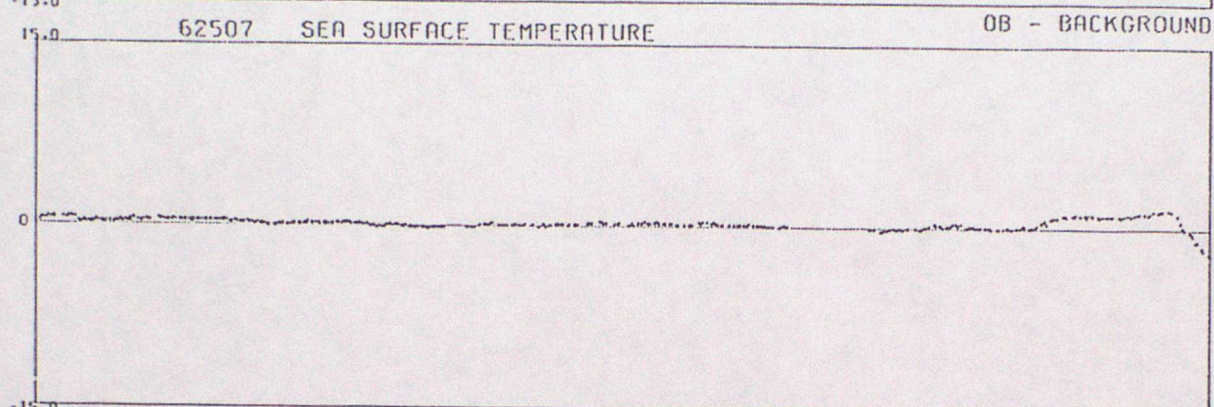
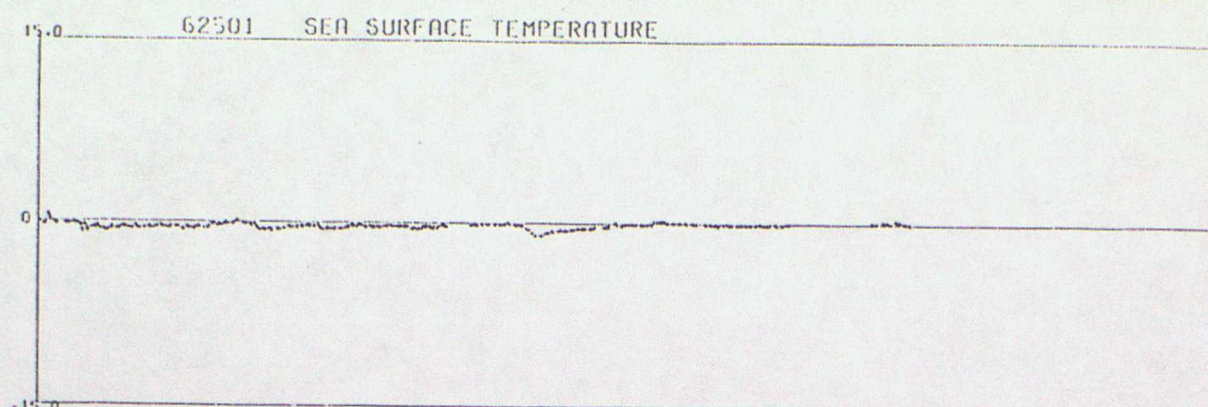
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

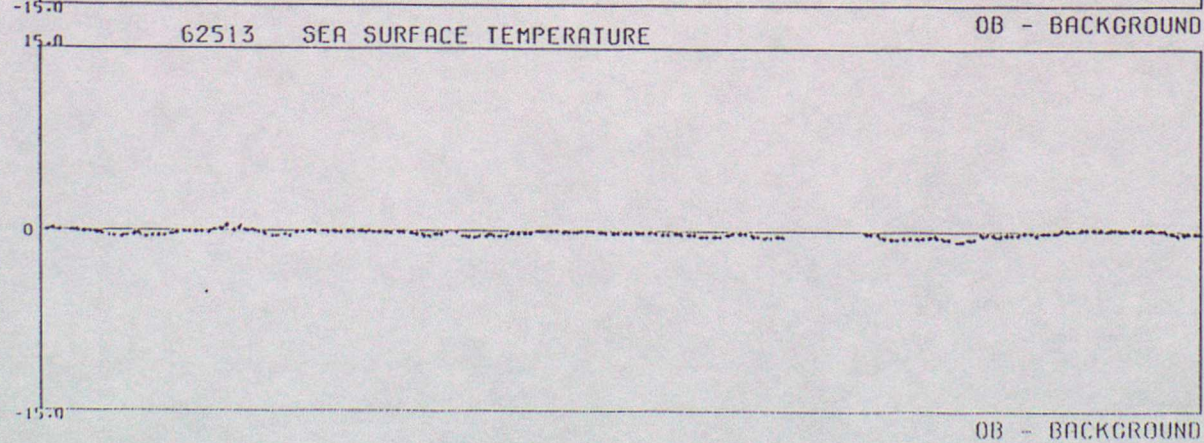
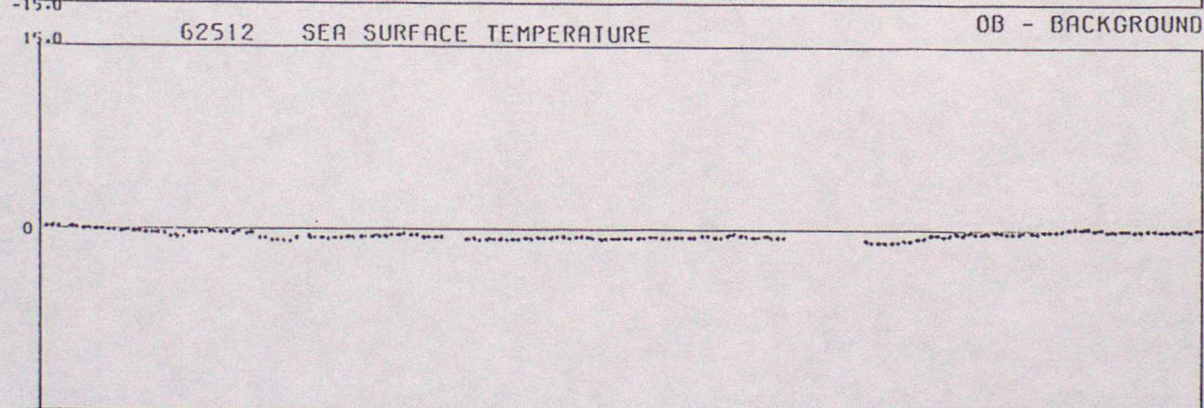
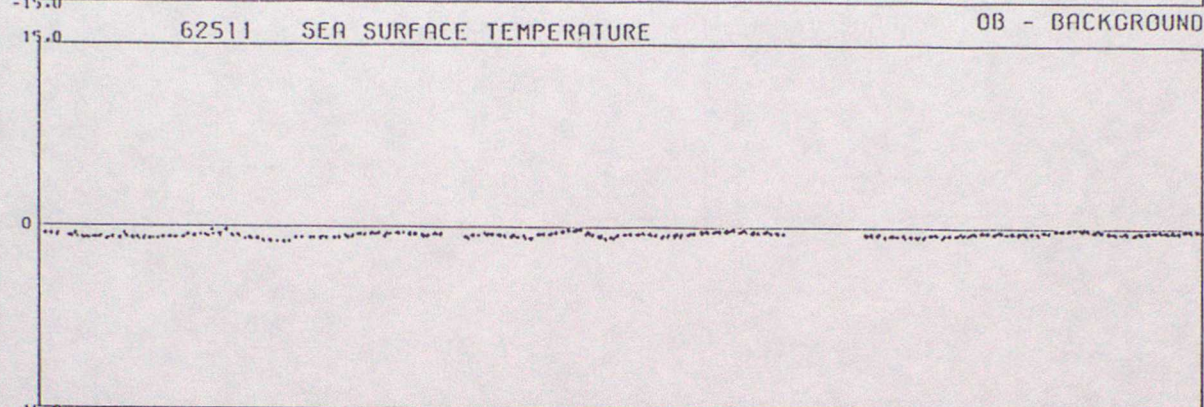
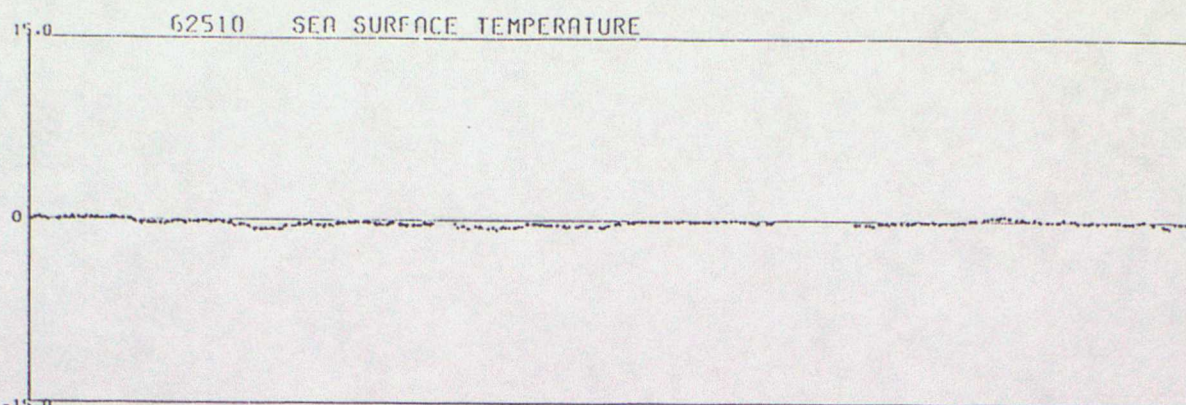


DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)

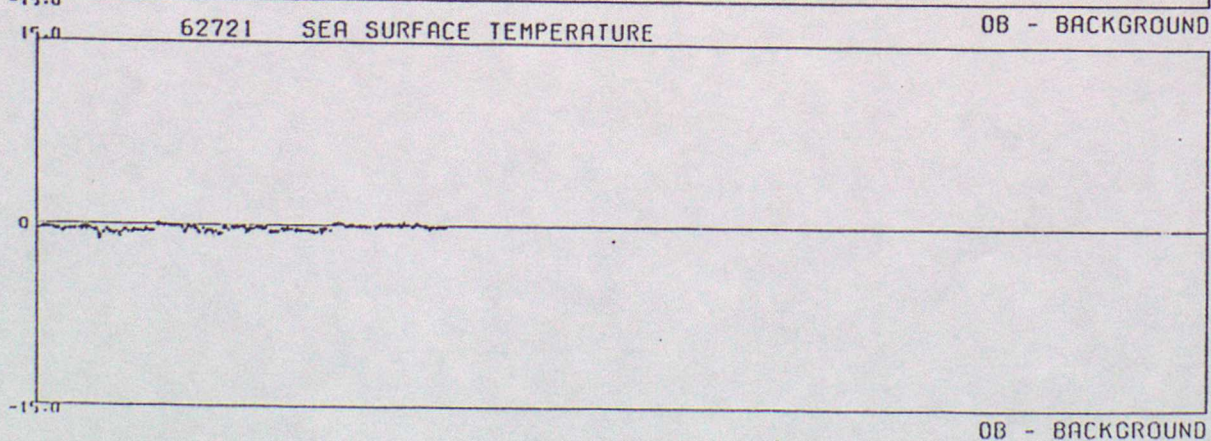
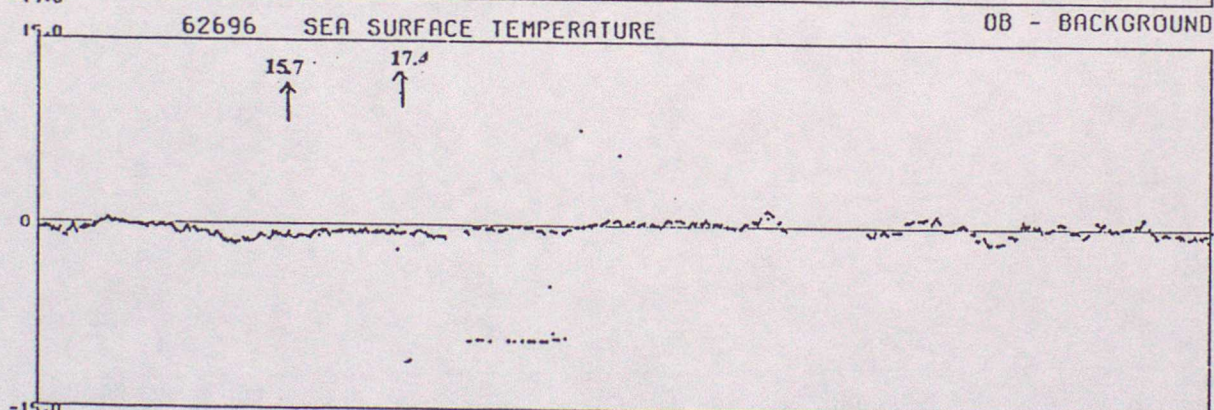
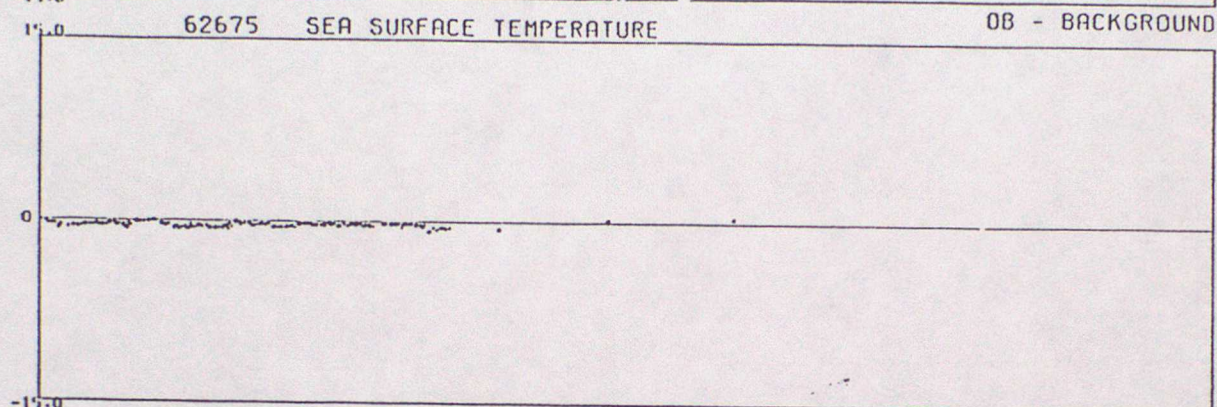
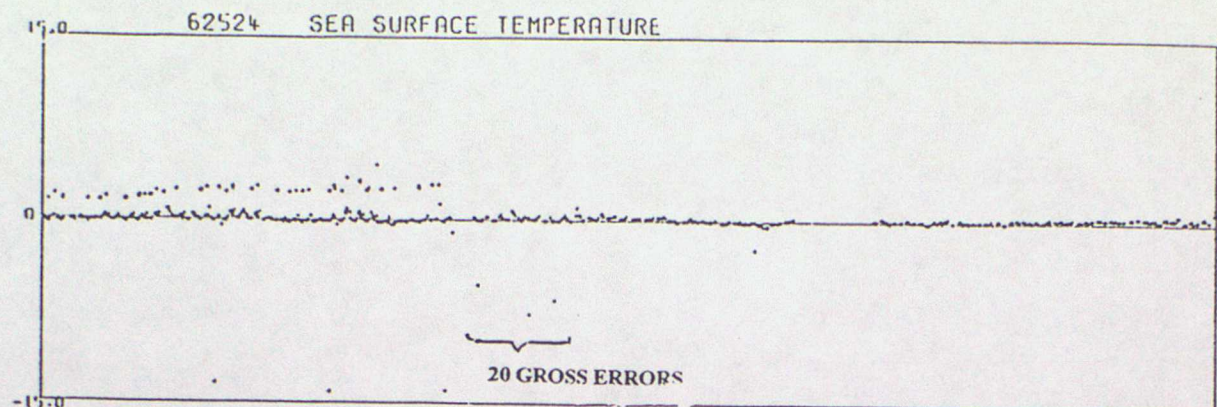


OB - BACKGROUND

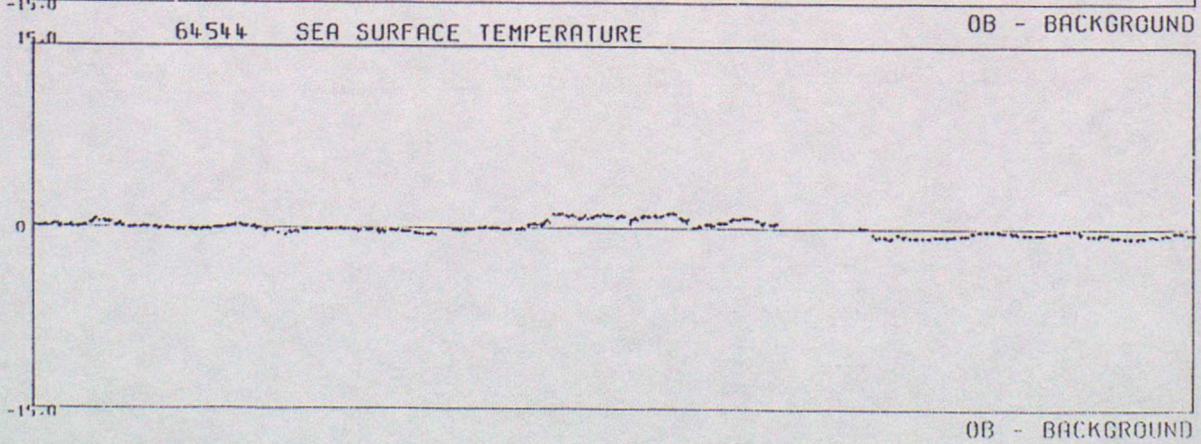
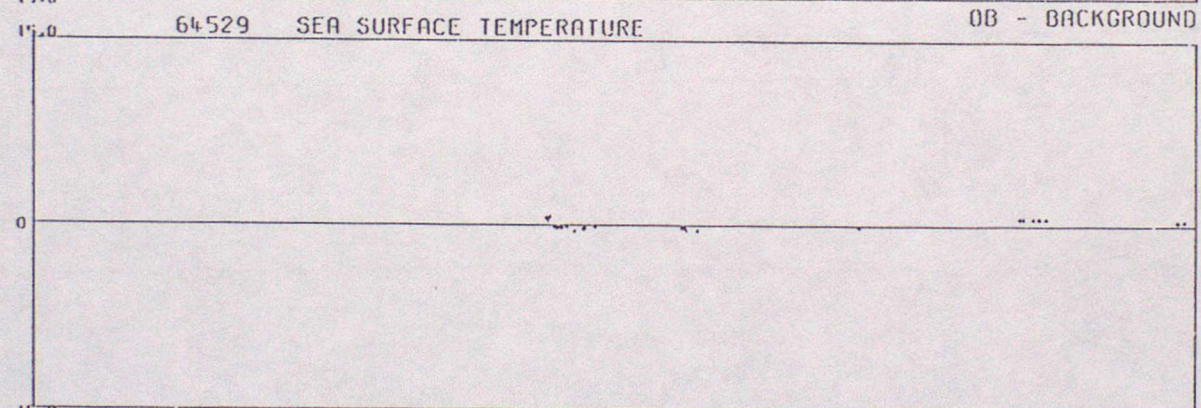
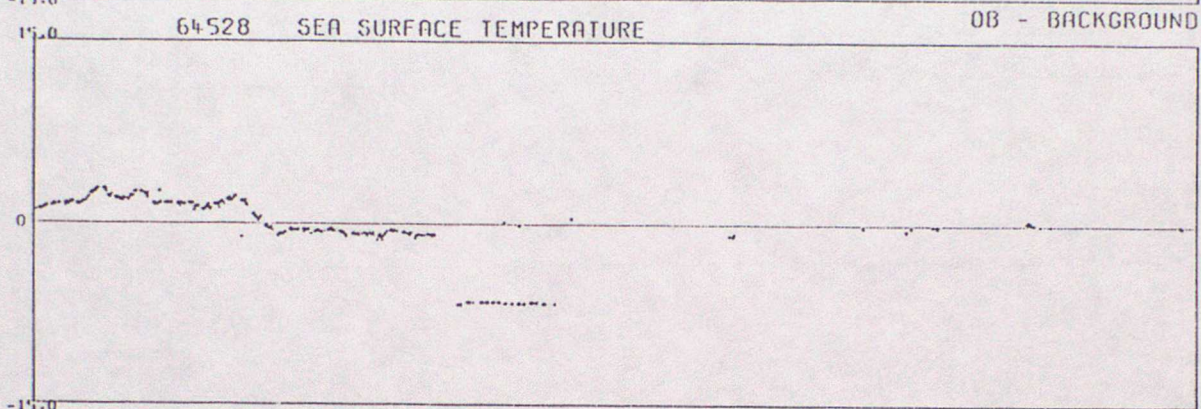
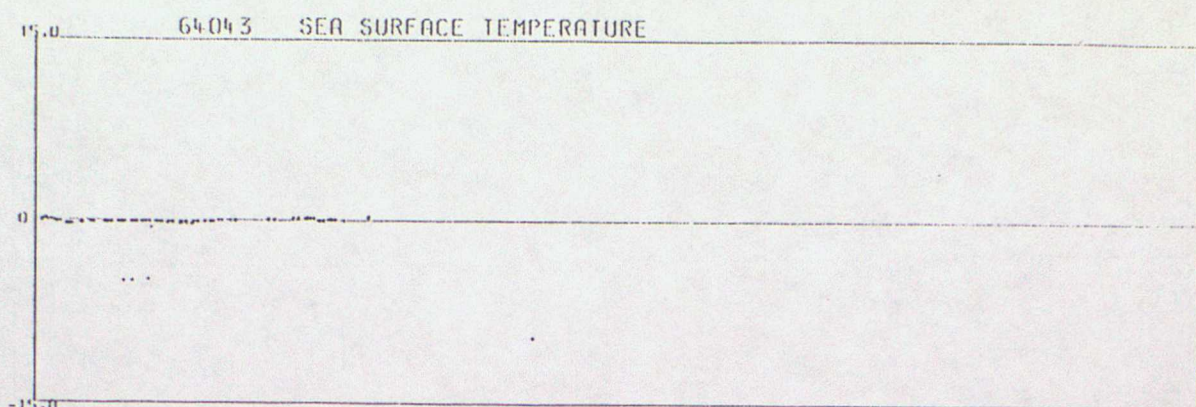
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



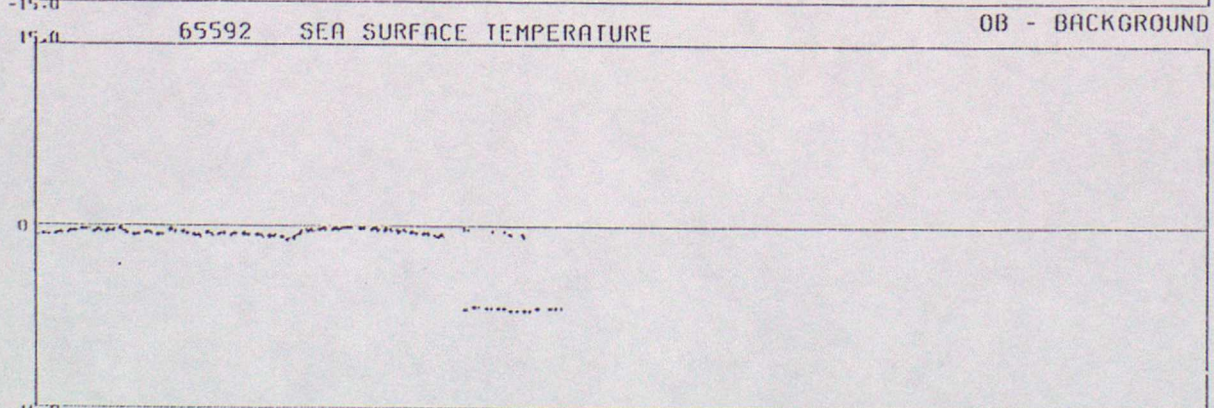
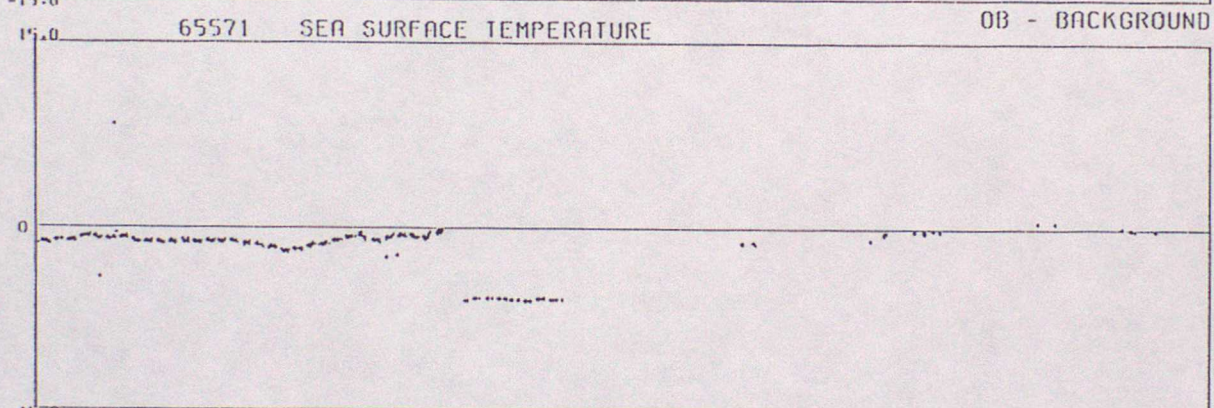
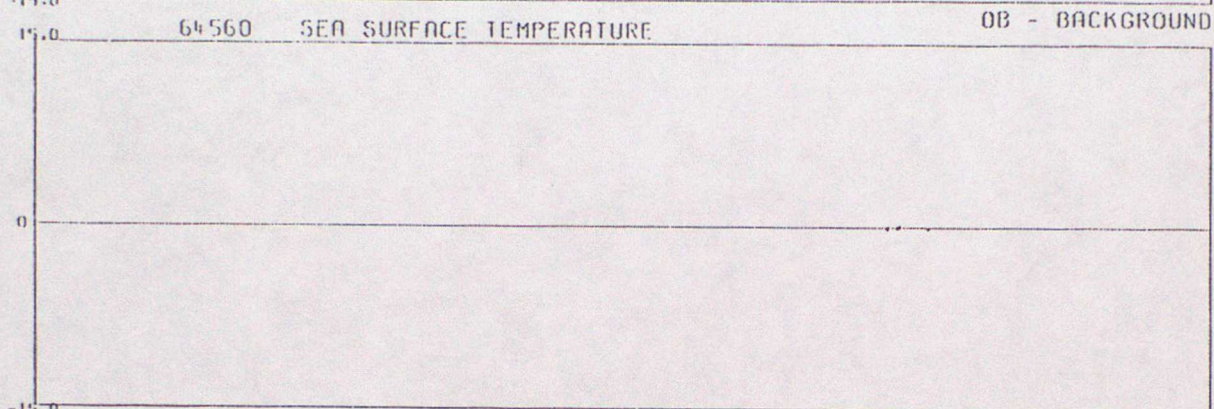
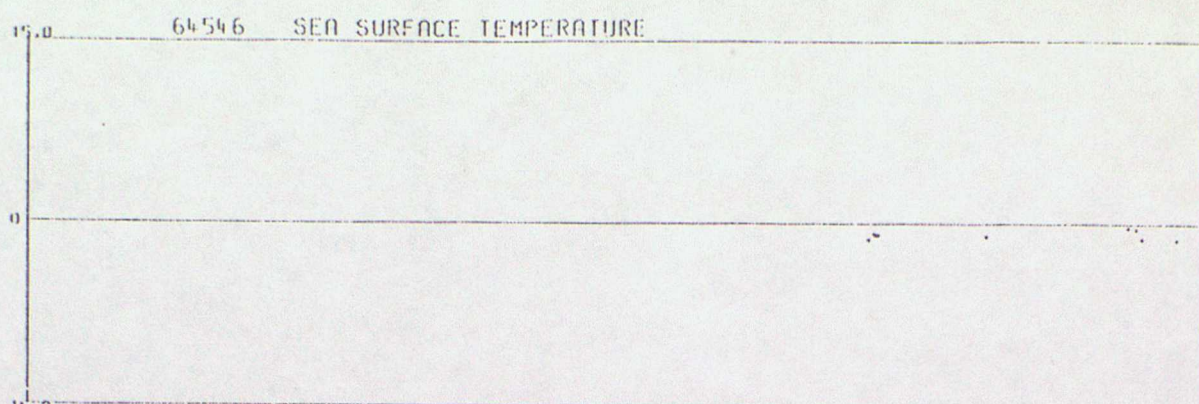
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



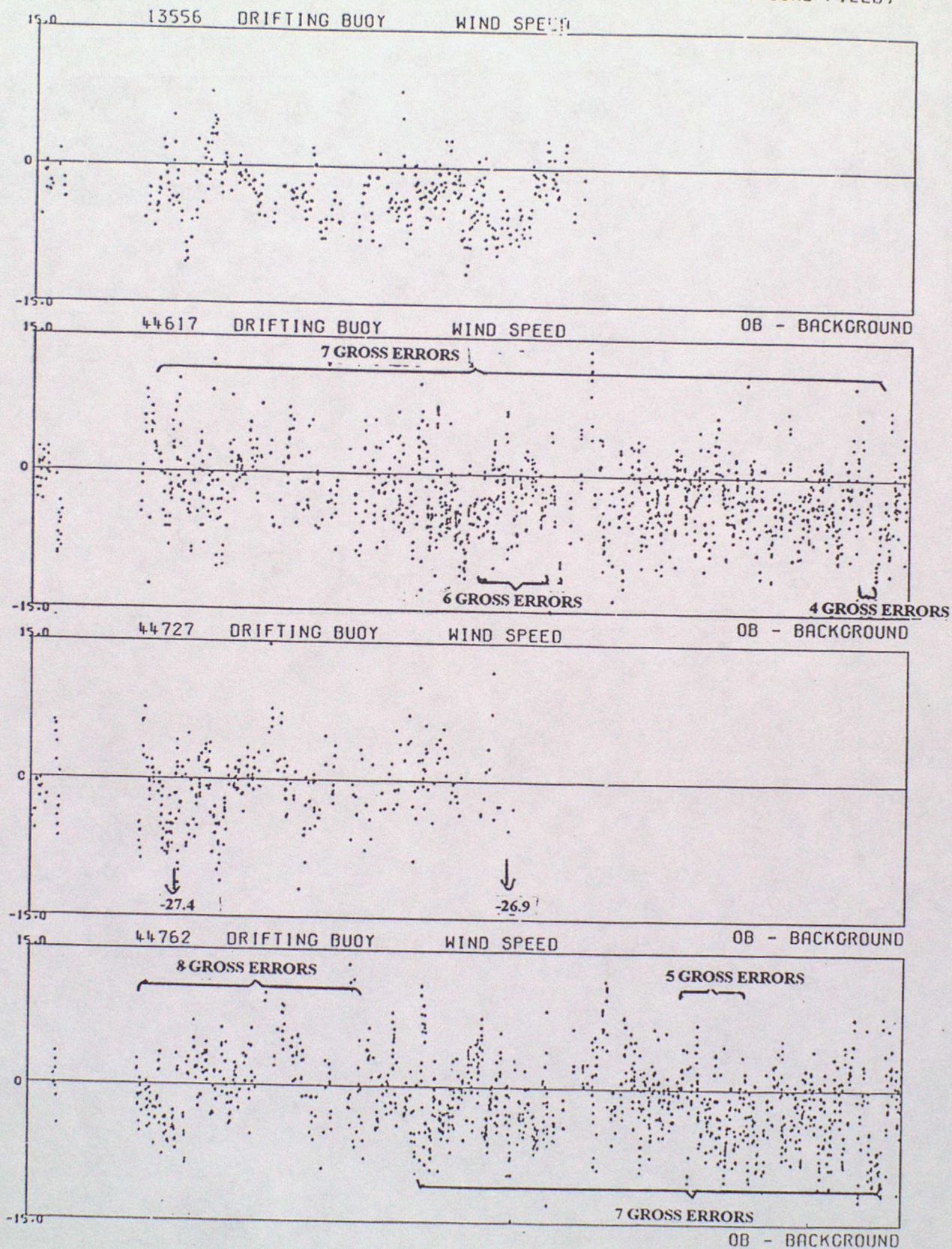
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



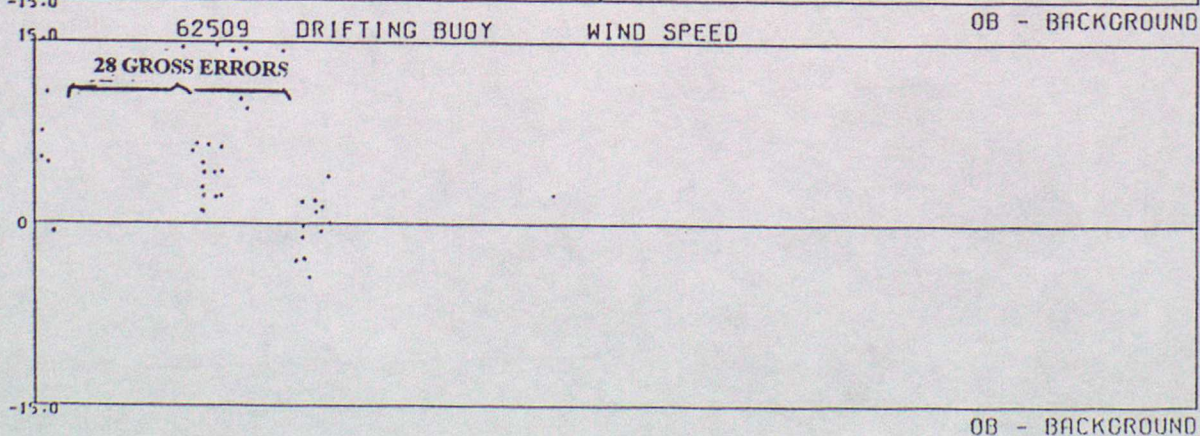
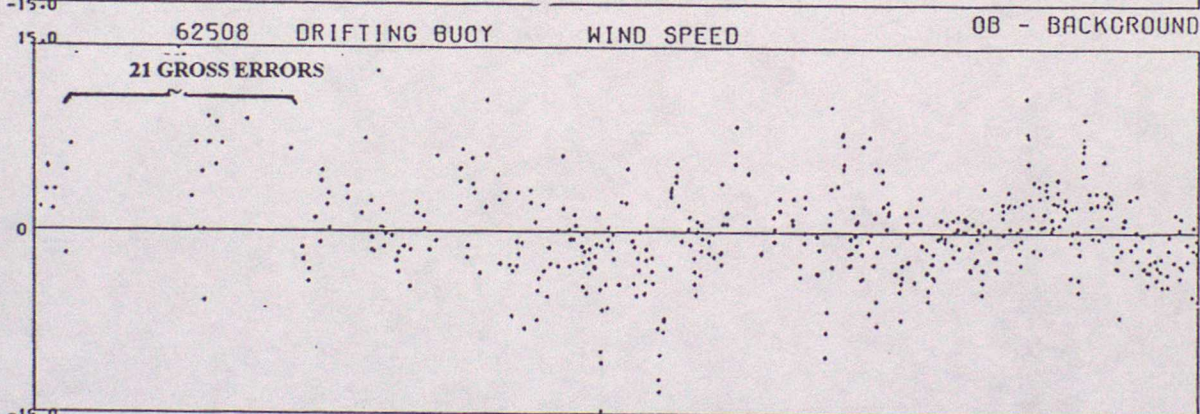
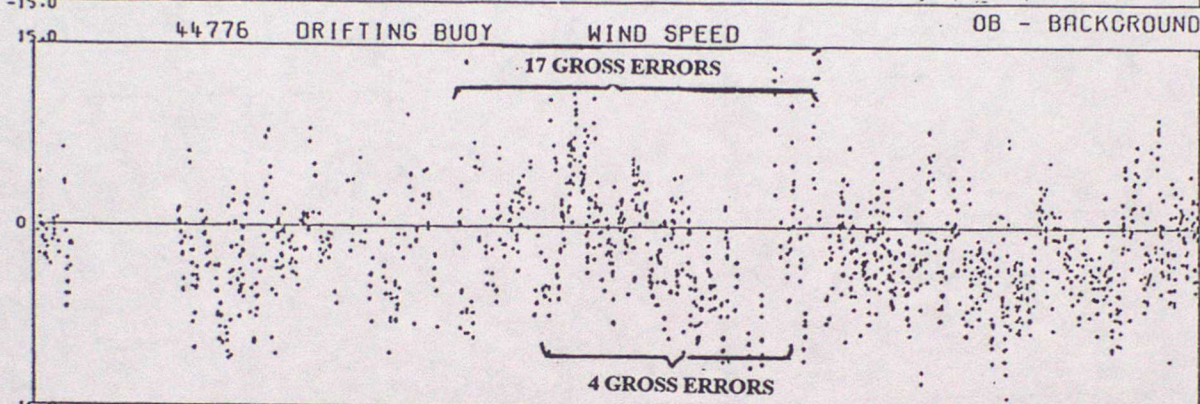
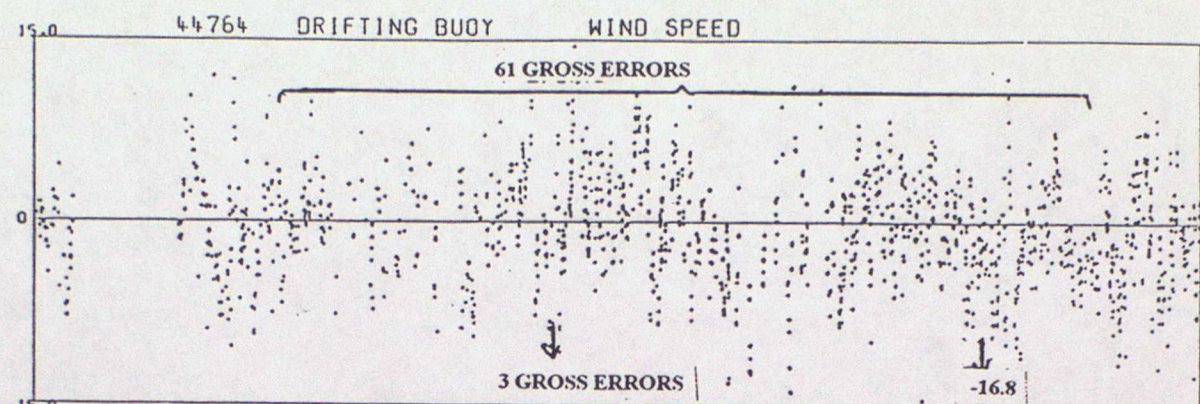
OB - BACKGROUND

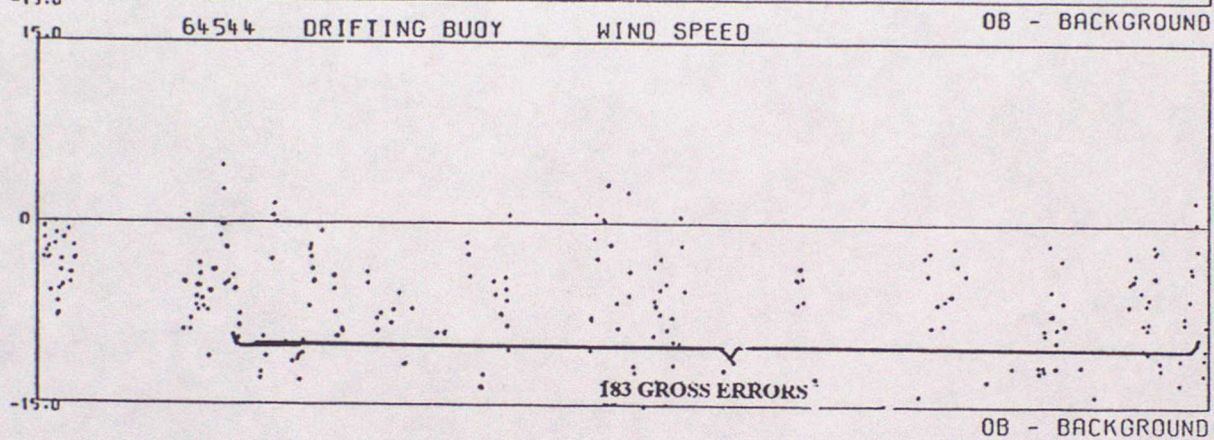
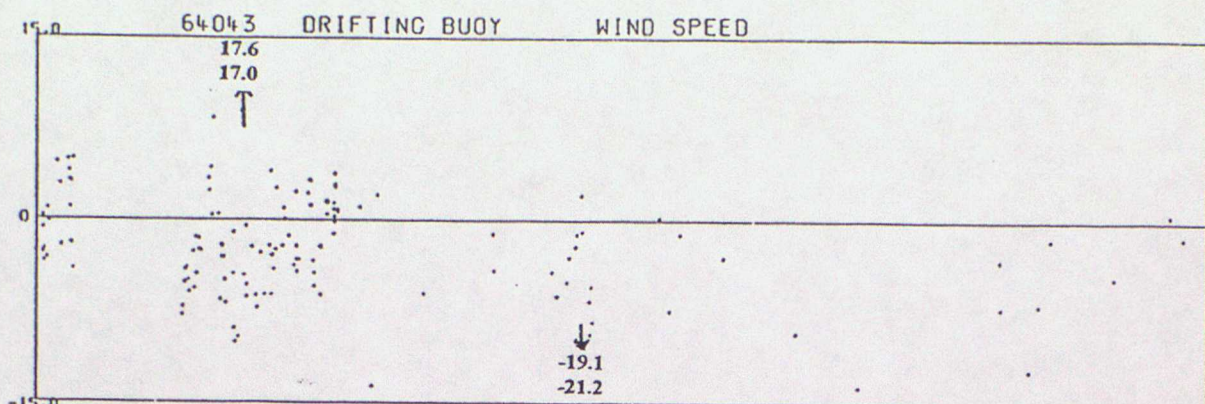
ANNEX E - TIME SERIES PLOTS OF WIND SPEED

DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



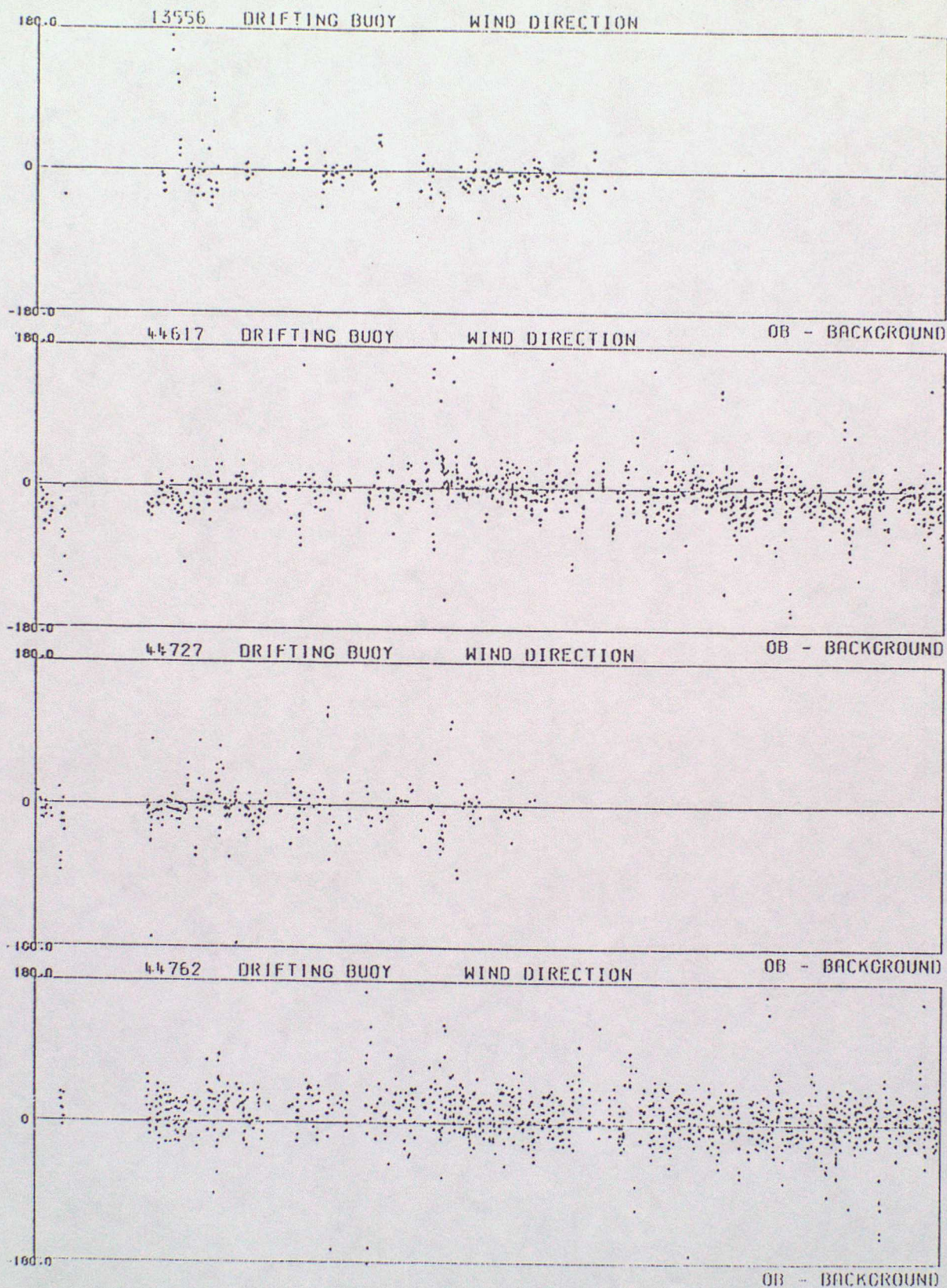
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



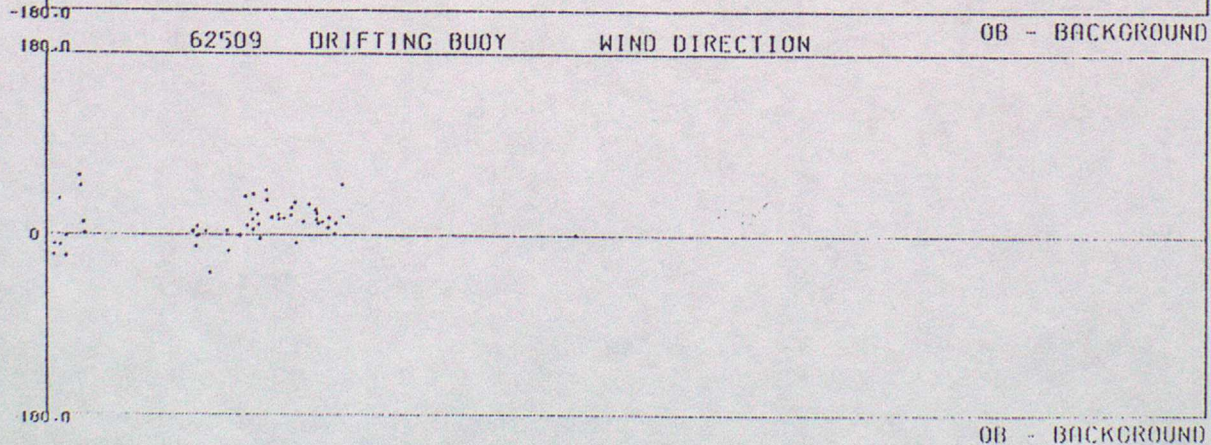
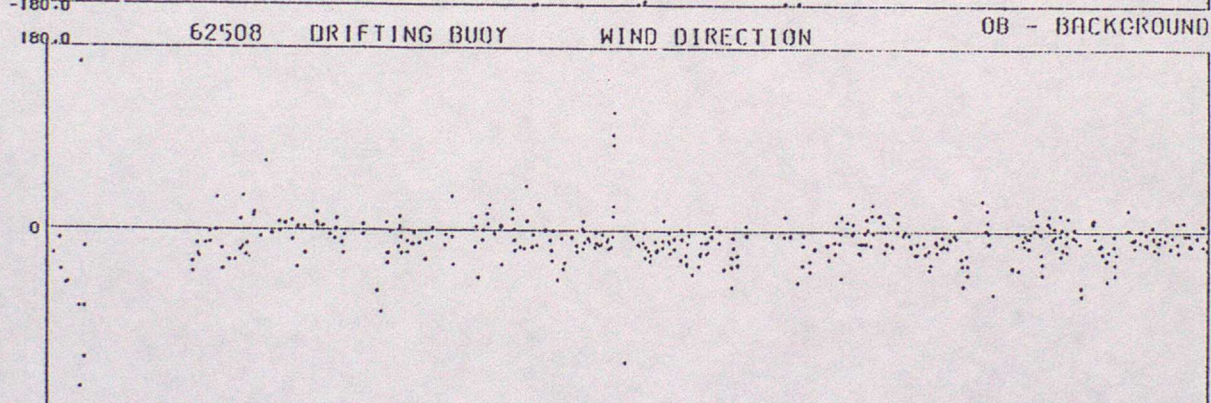
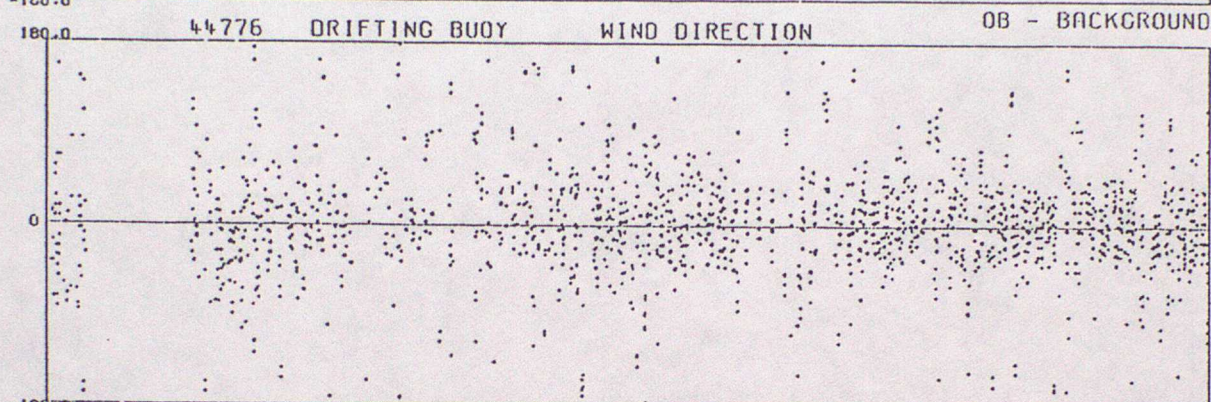
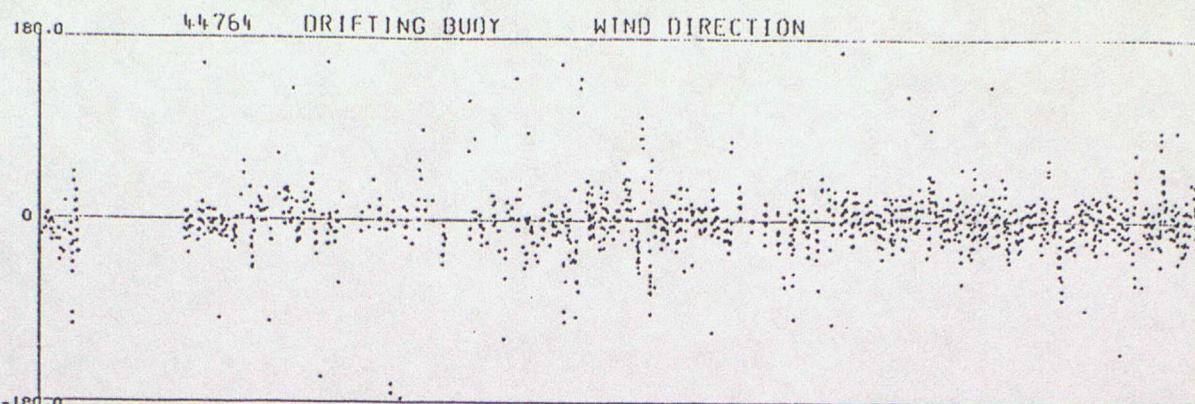


ANNEX F - TIME SERIES PLOTS OF WIND DIRECTION

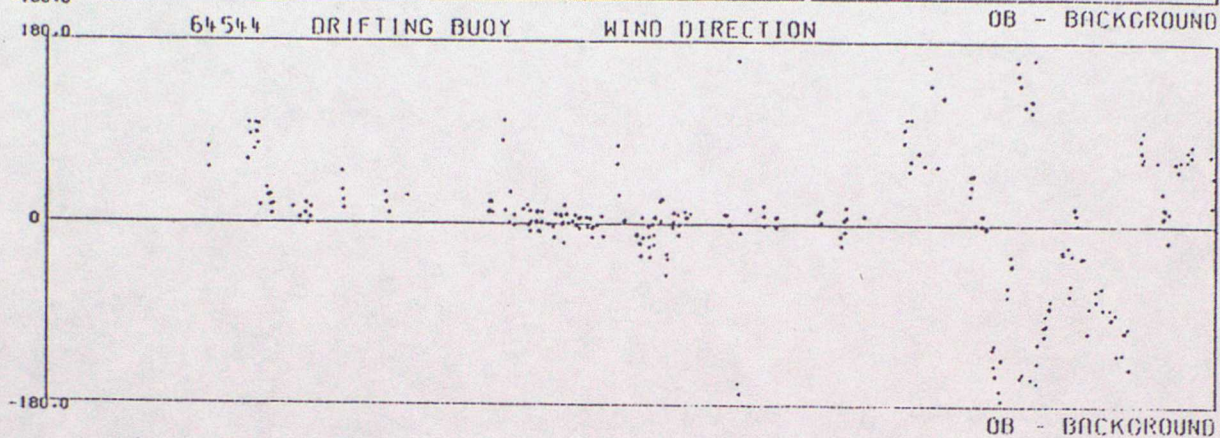
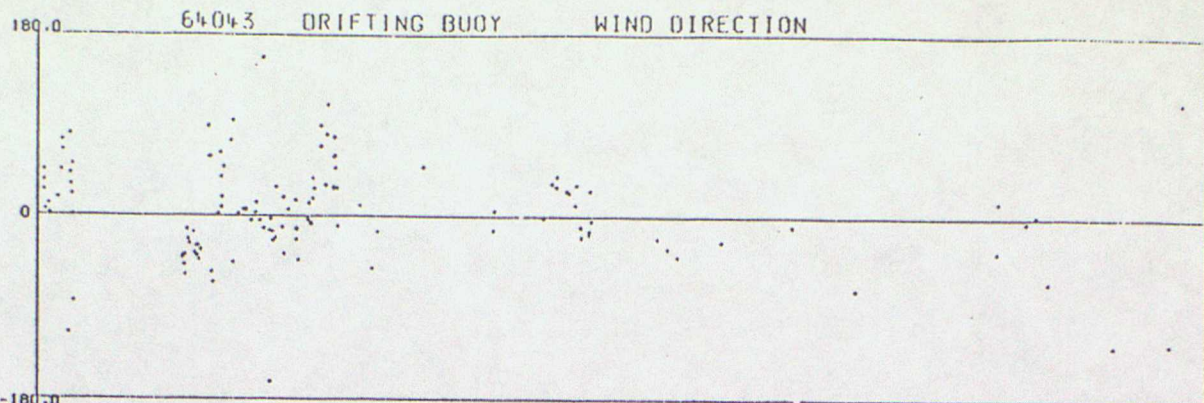
DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



DATA FROM 00Z ON 01/10/1994 TO 23Z ON 31/12/1994 (OBS - BACKGROUND FIELD)



OB - BACKGROUND



ANNEX G - SUMMARY TABLE OF OPERATIONAL DRIFTING BUOYS

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
13556	15526	F	*			*	*		01/10 - 28/11
13561	15531	F	*			*			01/10 - 26/11
44614	6294	UK	*	*	*			*	01/12 - 31/12
44617	6299	UK	*	*	*	*	*	*	01/10 - 31/12
44624	6292	UK	*	*	*			*	22/12 - 31/12
44727	6298	UK	*	*	*	*	*	*	01/10 - 20/11
44743	1370	UK	*						01/10 - 07/10
44761	9308	N	*	*	*				01/10 - 29/11
44762	6307	UK	*	*	*	*	*	*	03/10 - 31/12
44764	6306	UK	*	*	*	*	*	*	01/10 - 31/12
44766	4274	UK	*	*	*			*	01/10 - 31/12
44767	6297	UK	*	*	*			*	01/10 - 31/12
44768	6295	UK	*	*	*			*	01/10 - 31/12
44769	6291	UK	*	*	*			*	01/10 - 31/12
44770	3039	N	*	*	*			*	01/10 - 22/12
44771	6290	UK	*	*				*	01/10 - 31/12
44774	6289	UK	*	*	*			*	01/10 - 25/12
44775	6293	UK	*	*	*			*	01/10 - 31/12
44776	6305	UK	*	*	*	*	*	*	01/10 - 31/12
44780	1250	UK	*	*	*			*	15/11 - 31/12
62501	10116	F	*	*				*	01/10 - 08/12
62507	14420	F	*	*				*	01/10 - 31/12
62508	5826	F	*	*		*	*	*	01/10 - 31/12 +
62509	10106	F	*	*	*	*	*	*	01/10 - 31/12
62510	14417	F	*	*				*	01/10 - 31/12
62511	14423	F	*	*				*	01/10 - 31/12
62512	14424	F	*	*				*	01/10 - 31/12
62513	9435	F	*	*				*	01/10 - 31/12
62514	1356	F	*						01/10 - 01/11
62524	4625	UK	*	*	*			*	01/10 - 31/12

KEY

PP - Pressure Pt - Pressure tendency TT - Air temperature
 FF - Wind speed DD - Wind direction SST - Sea surface temperature

+ - This buoy stopped reporting pressure before the end of the quarter but continued to report other elements

			Elements Reported						
WMO No.	Argos No.	Owner	PP	Pt	TT	FF	DD	SST	Reporting Period
62675	11221	US	*		*			*	01/10 - 25/11
62696	6288	UK	*	*	*			*	01/10 - 31/12
62721	12698	US	*		*			*	01/10 - 23/11
64043	6271	UK	*	*	*	*	*	*	01/10 - 29/12
64528	9306	NL	*	*	*			*	01/10 - 31/12
64529	3037	N	*	*	*			*	10/11 - 31/12
64544	14631	US	*		*	*	*	*	01/10 - 31/12
64546	11227	US	*		*			*	05/12 - 31/12
64560	3036	NL	*	*	*			*	01/12 - 31/12
65571	3676	N	*	*	*			*	01/10 - 31/12
65592	9309	NL	*	*	*			*	01/10 - 31/12

KEY

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

TT - Air temperature
SST - Sea surface temperature

