

# ENVISAT - AATSR

## CYCLIC REPORT #96

	START	END
DATE	27TH OCTOBER 2010	26TH NOVEMBER 2010
TIME	21:57:36	21:58:25
ORBIT #	45274	45705



This subset from a Level 1 product acquired on 9 November 2010 shows the Great Lakes region of North America. This RGB image is composed of the 1.6, 0.87 and 0.55 micron channels for the nadir view.

---

prepared by/*préparé par* AATSR IDEAS and QWG team  
reference/*référence*  
issue/*édition* 1  
revision/*révision* 0

date of issue/*date d'édition* 10th December 2010  
status/*état*

Document type/*type de document* Technical Note  
Distribution/*distribution*

## A P P R O V A L

Title <i>titre</i>	AATSR Cyclic Report – Cycle 96	issue 1 <i>issue</i>	revision 0 <i>revision</i>
-----------------------	--------------------------------	-------------------------	-------------------------------

author <i>auteur</i>	Pauline Cocevar	date <i>date</i>	10th December 2010
-------------------------	-----------------	---------------------	-----------------------

approved by <i>approuvé par</i>	date <i>date</i>
------------------------------------	---------------------

## C H A N G E L O G

reason for change /raison du changement	issue/issue	revision/revision	date/date
		0	

## C H A N G E R E C O R D

ISSUE: 1 REVISION: 0

reason for change/raison du changement	page(s)/page(s)	paragraph(s)/ paragraph(s)

**T A B L E O F C O N T E N T S**

<b>AATSR CYCLIC REPORT # 96</b> .....	<b>1</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
1.1 Acronyms and Abbreviations .....	1
<b>2 SUMMARY</b> .....	<b>2</b>
<b>3 SOFTWARE &amp; AUX FILE VERSION CONFIGURATION</b> .....	<b>5</b>
3.1 Software Version.....	5
3.2 Auxiliary Files.....	5
3.2.1 Status of Daily Visible Calibration Files .....	6
3.2.1.1 VC1 File Availability.....	6
3.2.2 Status of other Auxiliary Files.....	6
<b>4 PDS STATUS</b> .....	<b>7</b>
4.1 Instrument Unavailability .....	7
4.2 L0 Data Acquisition and L1b Processing Status.....	7
4.2.1 Orbits Affected by Poor Data Quality .....	9
4.3 L0 and L1b Backlog Processing Status .....	9
<b>5 DATA QUALITY CONTROL</b> .....	<b>10</b>
5.1 Monitoring of Instrument Parameters .....	10
5.1.1 Jitter .....	10
5.1.2 Sensor Temperature .....	10
5.1.3 Viscal .....	10
5.1.4 NEAT .....	10
5.2 User Rejections .....	11
5.3 Software Problem Reporting.....	11
5.3.1 Existing SPRs that are still open .....	11
5.3.2 New SPRs since the last cyclic report .....	12
5.3.3 Closed SPRs .....	12
5.4 Monthly Level 3 Product.....	13
<b>6 CALIBRATION/VALIDATION ACTIVITIES &amp; RESULTS</b> .....	<b>14</b>
6.1 Calibration .....	14
6.2 Validation.....	14
<b>7 DISCLAIMERS</b> .....	<b>16</b>

## AATSR CYCLIC REPORT # 96

### 1 INTRODUCTION

The AATSR Cyclic Report is distributed by the AATSR IDEAS team to keep the AATSR community informed of any modification regarding instrument performances, the data production chain and the results of calibration and validation campaigns at the end of each Envisat 2010+ cycle, which consists of 341 complete orbits over the course of 30 days.

This document is available online at: <http://earth.esa.int/pcs/envisat/aatsr/reports/cyclic/>

#### 1.1 *Acronyms and Abbreviations*

AATSR	Advanced Along Track Scanning Radiometer
APC	Antenna Pointing Controller
CR	Cyclic Report
DDS	Data Dissemination System
DMOP	Detailed Mission Operation Plan
DMS	Data Management System
EN-UNA-YYYY/#	Envisat Unavailability (plus year and number)
ESOC	European Space Operation Centre
HSM	High Speed Multiplexer
IDEAS	Instrument Data quality Evaluation and Analysis Service
IECF	Instrument Engineering and Calibration Facilities
IPF	Instrument Processing Facilities
LUT	Look Up Table
MPS	Mission Planning Schedule
NRT	Near Real Time
OCM	Orbit Control Manoeuvre
OBDH	On-board Data Handling
PDS	Payload Data Segment
PMC	Payload Management Computer
RAL	Rutherford Appleton Laboratory
SPR	Software Problem Reporting
SSR	Solid State Recorder
SW	Software
VISCAL	Visible Calibration

The AATSR list of acronyms and abbreviations is available at the following site:

<http://envisat.esa.int/dataproducts/aatsr/CNTR5.htm#eph.aatsr.glossary>

## 2 SUMMARY

Since the previous cyclic report (for cycle 93) the ENVISAT satellite was placed in a new orbit, as part of the plans for the Envisat 2010+ mission extension. During the transition from one orbit configuration to the other, there were two cycles of shorter than usual length, cycles 94 and 95, and the first complete cycle under the new configuration was cycle 96, which started on the 27<sup>th</sup> October. This report focuses on the main cycle, while including some information on the transition cycles.

### 2.1 Transition cycles

- **Envisat lowered into its new orbit**

From 22<sup>nd</sup> to 29<sup>th</sup> October 2010, the ENVISAT satellite was placed in a new orbit, 17.4km lower than the original one. The new orbit is characterised by a different repeat cycle, going from 35 days/501 orbits to 30 days/431 orbits.

- **Non-operational data period**

Although data were acquired after 22<sup>nd</sup> October 2010, they were intended for internal assessment purposes only; users are requested to discard such data as the quality is not guaranteed. Nominal data distribution was resumed on 2<sup>nd</sup> November 2010

- **AATSR outgassing**

A scheduled AATSR outgassing was initiated on 20<sup>th</sup> October at 16:12, and was completed on 27<sup>th</sup> October 2010 18:55. For this period (orbits 45170 to 45272), no Infra Red data are available. During outgassing, the products only contain the reflectance channels (1600nm, 860nm, 670nm and 560nm) and are affected by poor calibration.

- **Transition cycles**

Cycles 94 and 95 were two short cycles to cover the orbit transition period:

	Start date	Stop date	Orbit start	Orbit stop
Cycle 94	18-Oct-2010 21:59:29	24-Oct-2010 07:05:25	45145	45222
Cycle 95	24-Oct-2010 07:05:25	27-Oct-2010 21:57:36	45222	45274

- **Mini-commissioning**

Following the orbit manoeuvres, a mini-commissioning is ongoing to ensure the quality of the AATSR data in the new orbit configuration. This includes the routine quality control activities, as well as some more in depth checks of selected data products. Particular emphasis will be placed on assessing the geolocation performance of AATSR data. The Cal/Val and ESL teams are also conducting specific investigations, all of which will contribute to a final report on the mini-commissioning phase.

A summary of the data quality in the new configuration is given as follows:

### **Level 1 Products**

Monitoring of the Level 1B products reveals no major problems with the data, and no quality anomalies have been detected. Previously reported increased margins to the edges of the swath have been attributed to an increase in the number of absent pixels resulting from the reduced instrument swath (as a result of the orbit lowering) combined with the fixed product swath of 512km. Initial assessment of the geolocation shows performance remains comparable to before the orbit lowering; work is ongoing to verify this assessment. No change has been identified in the collocation of the views. Preliminary results of the instrument calibration monitoring show no cause for concern - this will be verified as longer time-series of data becomes available.

### **Level 2 Products**

Monitoring of the Level 2 products (including the L2P product) show no major issues, and no quality anomalies have been found in the data. Preliminary validation of the SSTs to *in situ* data show no major problems; again, this will be verified as a longer time-series of data becomes available for analysis.

## **2.2 Main cycle report**

Cycle 96 is the first full cycle within the new ENVISAT orbit configuration:

<b>Cyclic Report:</b>	96	
<b>Cycle Start:</b>	27th October 2010, 21:57:36	Orbit #: 45274
<b>Cycle End:</b>	26th November 2010, 21:58:25	Orbit #: 45705

The main activities during the cycle have been as follows:

- **ESRIN downtimes and delays**

There was a planned network downtime of about six hours on 9 November due to required maintenance.

There were delays in the Envisat NRT production and distribution to users on 22 and 24-25 November.

The EOLI web services were unavailable for a few hours on 25, 26 October and 16 November due to server maintenance.

EOHelp service was unavailable on 18 November for three hours due to network maintenance.

- **Kiruna downtimes and delays**

There was a planned network downtime of about six hours on 17 November between 10:00 and 18:00 due to network migration.

Due to required interventions at the PDHS-K facilities, there was an interruption to the Envisat Near Real Time (NRT) production / dissemination services on 18<sup>th</sup> November.

- **Delayed availability of Envisat catalogue data**

The availability of Envisat catalogue data for products acquired after 2<sup>nd</sup> November 2010 is delayed due to an anomaly found in validating the catalogue configuration files compatible with the new Envisat orbit. On 3<sup>rd</sup> December the problem was identified and fixed, with catalogue data expected on EOLI-SA within the week.

- **Disruption to Visible Calibration (VC1) auxiliary files**

RAL was unable to come back operational after server downtime. No daily VC1 files were delivered from 13 to 18 November, and an extended range (19-day) VC1 file was used for NRT and consolidated data within that time. Partial operations were resumed on 19 November, with weekly VC1 files being issued every 3-4 days.

### 3 SOFTWARE & AUX FILE VERSION CONFIGURATION

#### 3.1 Software Version

AATSR IPF for Level 1 and Level 2: Version 6.03

AATSR L2P Processor: Version 1.5.

#### 3.2 Auxiliary Files

AATSR processing uses the following auxiliary files:

- Browse Product Lookup Data (ATS\_BRW\_AX)
- L1b Characterisation Data (ATS\_CH1\_AX)
- Cloud Lookup Table Data (ATS\_CL1\_AX)
- General Calibration Data (ATS\_GC1\_AX)
- AATSR Instrument Data (ATS\_INS\_AX)
- Visible Calibration Coefficients Data (ATS\_VC1\_AX)
- L1b Processing Configuration Data (ATS\_PC1\_AX)
- L2 Processing Configuration Data (ATS\_PC2\_AX)
- SST Retrieval Coefficients Data (ATS\_SST\_AX)
- LST Land Surface Temperature Coefficients Data (ATS\_LST\_AX)

Because the PC1 file contains the orbit period, an update was needed for the new scenario (see Section 3.2.2) and two versions need to be maintained.

The latest filename for each auxiliary file in use in the PDS is as follows:

Product name
ATS_BRW_AXVIEC20020123_072338_20020101_000000_20200101_000000
ATS_CH1_AXVIEC20070720_093530_20020301_000000_20200101_000000
ATS_CL1_AXVIEC20101015_104659_20020301_000000_20200101_000000
ATS_GC1_AXVIEC20070720_093834_20020301_000000_20200101_000000
ATS_INS_AXVIEC20070720_094014_20020301_000000_20200101_000000
See below for VC1 files
ATS_LST_AXVIEC20101018_094830_20020301_000001_20200101_000000
ATS_PC1_AXVIEC20101015_101827_20020301_000000_20101021_235959
ATS_PC1_AXVIEC20101015_100604_20101022_000000_20200101_000000
ATS_PC2_AXVIEC20020123_074151_20020101_000000_20200101_000000
ATS_SST_AXVIEC20051205_102103_20020101_000000_20200101_000000

Table 3-1 Latest auxiliary files currently in use by the PDS



### 3.2.1 STATUS OF DAILY VISIBLE CALIBRATION FILES

#### 3.2.1.1 VCI File Availability

The following daily reflectance channel calibration files were not available during this cycle:

Date	Validity range		Comments
	From	To	
12/11/2010	11/11/2010	18/11/2010	An extended validity file (11/11-30/11) was provided to cover for EDS server problems, which continued throughout the cycle
13/11/2010	12/11/2010	19/11/2010	
14/11/2010	13/11/2010	20/11/2010	
15/11/2010	14/11/2010	21/11/2010	
16/11/2010	15/11/2010	22/11/2010	
18/11/2010	17/11/2010	23/11/2010	
20/11/2010	19/11/2010	25/11/2010	
21/11/2010	20/11/2010	27/11/2010	
22/11/2010	21/11/2010	28/11/2010	
25/11/2010	24/11/2010	1/12/2010	
26/11/2010	25/11/2010	2/12/2010	

**Table 3-2 Unavailable VCI files**

### 3.2.2 STATUS OF OTHER AUXILIARY FILES

An update of auxiliary files was required for the new phase:

- LST file to set Phase parameter to X in the MPH (as used for other ADFs)
- CL1 file needed extended validity range to cover whole mission:
  - Previous version ended 20120801\_235959, now extended to match other files, so ends on 20200101\_000000
- PC1 file contains the orbit period, so needed to update for new scenario and maintain 2 versions:
  - Existing file modified to be valid up to 20101021\_235959
  - New file valid from 20101022\_000000 to 20200101\_000000

## 4 PDS STATUS

### 4.1 Instrument Unavailability

There was no period of AATSR data unavailability recorded due to instrument unavailability for Cycles 94 and 95. For cycle 96, the instrument was declared as unavailable until the time for nominal start of operations on 2<sup>nd</sup> November 2010.

UTC Start	UTC Stop	Reason	Reference	Planned
27-Oct-2010 21:57:36	02-Nov-2010 21:37:43	Orbit change		Yes

Table 4-1 Instrument unavailability for cycle 96

### 4.2 L0 Data Acquisition and L1b Processing Status

#### 4.2.1 CYCLE 94

#	Week	Orbit		Availability (s)			Availability (%)		
	Dates	Start	Stop	Inst Unav	L0 gaps	L1 gaps	Instrument	L0	L1
1	18-Oct-2010	45145	45222	0	32699	36556	100.00%	92.96%	85.10%

Table 4-2 Instrument and data unavailability weekly summary for cycle 94

The instrument was available for 100.00% of the time during the cycle.  
 The L0 data were available for 92.96% of the time during the cycle.  
 The L1b data were available for 85.10% of the time during the cycle.

The following L0 data were missing from cycle 94:

UTC Start	UTC Stop	Duration (s)	Orbit Start	Orbit End
21/10/2010 00:06	21/10/2010 06:20	22411	45173	45177
21/10/2010 20:39	21/10/2010 23:30	10288	45187	45187

Table 4-3 L0 missing data during cycle 94

The following L1b data were also missing from cycle 94:

UTC Start	UTC Stop	Duration (s)	Orbit Start	Orbit End
21/10/2010 23:56	22/10/2010 10:05	36556	45189	45195

Table 4-4 ATS\_TOA\_1P missing data during cycle 94

## 4.2.2 CYCLE 95

#	Week	Orbit		Availability (s)			Availability (%)		
	Dates	Start	Stop	Inst Unav	L0 gaps	L1 gaps	Instrument	L0	L1
1	24-Oct-2010	45222	45274	0	68760	0	100.00%	78.01%	78.01%

**Table 4-5 Instrument and data unavailability weekly summary for cycle 95**

The instrument was available for 100.00% of the time during the cycle.  
 The L0 data were available for 78.01% of the time during the cycle.  
 The L1b data were available for 78.01% of the time during the cycle.

The following L0 data were missing from cycle 95:

UTC Start	UTC Stop	Duration (s)	Orbit Start	Orbit End
24/10/2010 10:18	24/10/2010 10:22	226	45223	45223
26/10/2010 19:59	26/10/2010 21:09	4166	45258	45258
26/10/2010 21:01	26/10/2010 22:07	3983	45259	45259
26/10/2010 22:15	26/10/2010 23:43	5311	45259	45259
26/10/2010 23:58	27/10/2010 01:18	4804	45259	45260
27/10/2010 01:36	27/10/2010 02:32	3338	45260	45261
27/10/2010 03:04	27/10/2010 04:00	3375	45262	45262
27/10/2010 04:32	27/10/2010 05:39	4058	45262	45263
27/10/2010 06:14	27/10/2010 07:19	3898	45264	45264
27/10/2010 07:57	27/10/2010 09:08	4249	45265	45266
27/10/2010 09:28	27/10/2010 10:37	4148	45266	45266
27/10/2010 11:17	27/10/2010 18:50	27204	45267	45271

**Table 4-6 L0 data missing from cycle 95**

Other than those associated with the missing L0 data, there were no additional missing L1b data from cycle 95.

## 4.2.3 CYCLE 96

#	Week	Orbit		Availability (s)			Availability (%)		
	Dates	Start	Stop	Inst Unav	L0 gaps	L1 gaps	Instrument	L0	L1
1	27-Oct-2010	45274	45360	518400	0	0	0.00%	0.00%	0.00%
2	02-Nov-2010	45360	45446	0	0	309	100.00%	100.00%	100.00%
3	08-Nov-2010	45446	45533	0	0	0	100.00%	100.00%	100.00%
4	14-Nov-2010	45533	45619	0	8091	6293	100.00%	98.44%	97.23%
5	20-Nov-2010	45619	45705	0	11362	5817	100.00%	97.81%	96.69%

**Table 4-7 Instrument and data unavailability weekly summary for cycle 96**

The instrument was available for 83.33% of the time during the cycle.  
 The L0 data were available for 82.71% of the time during the cycle.  
 The L1b data were available for 82.32% of the time during the cycle.

The following L0 data were missing from this cycle:

UTC Start	UTC Stop	Duration (s)	Orbit Start	Orbit End
29/10/2010 12:50	29/10/2010 13:52	3688	45296	45297
02/11/2010 15:19	02/11/2010 16:58	5959	45355	45356
16/11/2010 04:33	16/11/2010 05:43	4191	45550	45550
20/11/2010 06:37	20/11/2010 07:42	3900	45609	45609
21/11/2010 12:08	21/11/2010 13:44	5797	45626	45627
25/11/2010 05:27	25/11/2010 06:53	5177	45680	45680
26/11/2010 20:35	26/11/2010 20:37	128	45703	45703
26/11/2010 21:40	26/11/2010 21:44	260	45704	45704

**Table 4-8 L0 data missing during cycle 96**

The following L1b data were also missing from this cycle:

UTC Start	UTC Stop	Duration (s)	Orbit Start	Orbit End
19/11/2010 02:04	19/11/2010 03:49	6293	45591	45592
21/11/2010 21:32	21/11/2010 23:09	5817	45631	45632

**Table 4-9 ATS\_TOA\_1P missing data during cycle 96**

#### 4.2.4 ORBITS AFFECTED BY POOR DATA QUALITY

During this cycle, no orbits contained frames suffering from bad/missing telemetry.

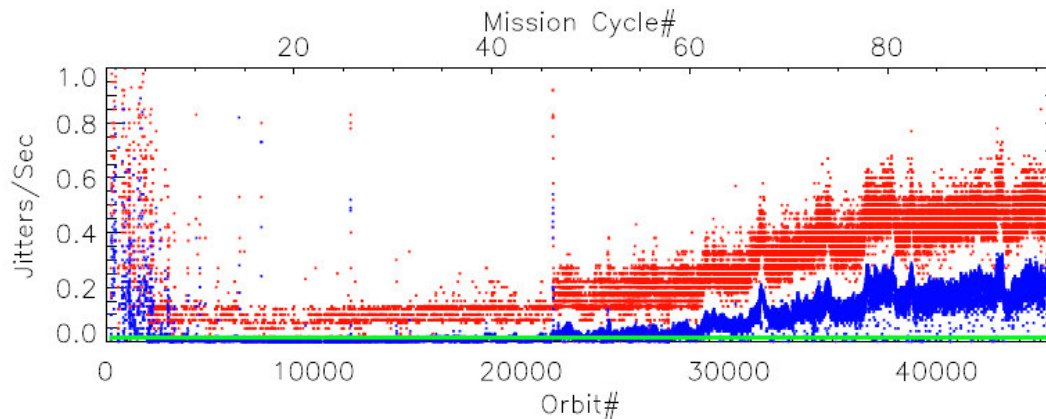
### 4.3 L0 and L1b Backlog Processing Status

There is no update available on the status of backlog processing.

## 5 DATA QUALITY CONTROL

### 5.1 *Monitoring of Instrument Parameters*

#### 5.1.1 JITTER



**Figure 5-1 Jitter trend from mission start**

The plot shows the jitter-trend since the start of the mission, against both orbit-number and cycle-number. The mean jitter-rate (per-orbit) is shown in blue and the maximum rate per orbit in red. The green horizontal line shows the nominal mean jitter-level achieved for much of the mission.

The Jitter plot shows an improving mean jitter-rate during this cycle.

#### 5.1.2 SENSOR TEMPERATURE

The detector temperature plots for Cycle 96 can be found at:  
<http://www.aatsrops.rl.ac.uk/EDSX/CyclePlots/DetTemps96.pdf>

The detector temperatures have remained nominal during routine operations.

#### 5.1.3 VISCAL

NRT calibration quality for the AATSR reflectance channels has been maintained throughout the cycle. In addition, the following set of “orbital” VC1 files for this cycle was delivered:

<http://www.aatsrops.rl.ac.uk/EDSX/CyclePlots/VC1-96.txt>

#### 5.1.4 NE $\Delta$ T

Information on the NE $\Delta$ T for Cycle 96 was not available at the time of publishing; the information will be included, when available, in the following Cyclic Report.

## 5.2 User Rejections

There were no user rejections during this cycle.

## 5.3 Software Problem Reporting

This section describes the new and open SPRs, their potential impact on the data quality, and any SPRs that have been closed.

### 5.3.1 EXISTING SPRS THAT ARE STILL OPEN

The following SPRs are still open:

#### **Wrong REF\_DOC in MPH of AATSR products**

NA-PR-10-05334

As a result of the AMALFI-2 pilot project, it has been discovered that the REF\_DOC field in the MPH of AATSR products is different from the product specification name.

- 1) The REF\_DOC should follow "AA-BB-CCC-DD-EEEE\_V/I", 23 characters where AA-BB-CCC-DD-EEEE is the ESA standard document number and V/I is the volume/issue.
- 2) The referenced product spec is still 3/K. whilst the one applicable, and also referenced in the SRN of 6.03 is 4/A.

#### **AATSR Child Products contain insufficient number of ADS records**

NA-PR-08-03912

The number of ADS records present in AATSR child products is insufficient for processing of the entire product. Users are currently advised to order products of at least 1 granule longer to obtain all required ADS records. Excluding the SQADS and the scan pixel x and y ADS, the DPM requires that for AATSR full resolution products, the number of records in the ADS shall be one greater than the number of MDS granules in the product. Child products are currently produced with a number of ADS records equal to the number of MDS granules in the product. In the case of the SQADS, this is sampled only every 512 rows, rather than every 32, so in order to provide coverage for every granule in a child product, the number of SQADS records strictly required depends on the length of the child product and where the child product starts in relation to the 512 record boundaries. Parent products by definition start on a 512 record boundary, but child products need not. If we define a product segment of 512 consecutive rows (=16 granules) as a frame, then the number of SQADS records required in the child product is equal to the number of frames overlapped by the child product. For the case of the Scan Pixel x and y ADS, the records represent instrument scans, not image rows. There is no simple algorithm to define the number of records from the parent product that should be included in the child product.

### **AATSR Consolidated Products**

NA-PR-08-03952

The AATSR Flight Operations and Data Plan (FODP), PO-PL-ESA-AT-0152, Issue 2 Revision 5 dated 22 November 2001 defines the meaning of “consolidated” in Appendix B.1 as follows: “... time-ordered, no overlap nor data gap except when the instrument is not operated ...”, and for Level 0 there should be sufficient overlap only so that the higher level products can be chopped “... ANX to ANX ...”. The FODP is part of the high level agreement between ESA and Defra and so can be taken as the definitive requirement for AATSR products.

### **Update to AATSR Child product generation requirements**

NA-PR-08-04015

The 'Child Product Generation Requirements' on pages 520-521 of the document 'PDS Technical Specification for Maintenance and Evolution' (PO-RF-CSF-GS-20437) currently reads:

"For time extraction, for each data set in the parent product, the time stamp of the DSRs shall be compared to that of the requested start time ( $t_0$ ) segment. The first DSR extracted from each data set to form the new child data set is the one with a time stamp immediately preceding or equal to  $t_0$ . The last DSR extracted from each DS is the one immediately preceding  $t_1$ ."

To ensure that a sufficient number of Auxiliary Data Set Records are present in AATSR child products, the requirement should be changed to read as follows:

"For time extraction, for each data set in the parent product, the time stamp of the DSRs shall be compared to that of the requested start time ( $t_0$ ) segment. The first DSR extracted from each data set to form the new child data set is the one with a time stamp immediately preceding or equal to  $t_0$ . The last DSR extracted from each DS is the one immediately preceding  $t_1$ .

For AATSR data, the last ADS DSR extracted from each DS is the one whose time label is equal to or greater than  $t_1$  provided such a DSR exists, otherwise the last ADS DSR in the product."

## **5.3.2 NEW SPRS SINCE THE LAST CYCLIC REPORT**

No new SPRs have been opened since the last Cyclic Report.

## **5.3.3 CLOSED SPRS**

No SPRs have been closed since the last Cyclic Report.

## **5.4 Monthly Level 3 Product**

The monthly plots were unable to be generated this cycle.



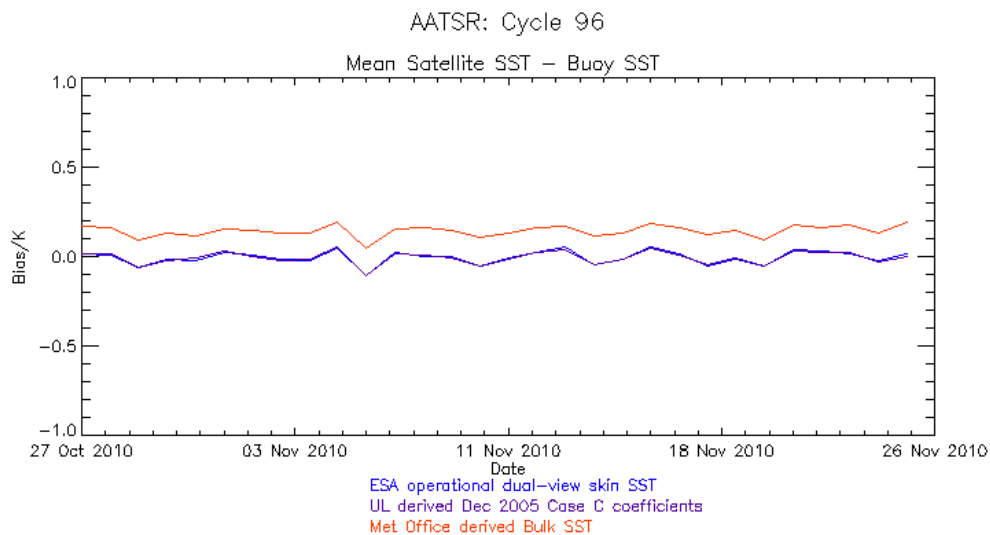
## 6 CALIBRATION/VALIDATION ACTIVITIES & RESULTS

### 6.1 Calibration

No calibration results were reported during this cycle.

### 6.2 Validation

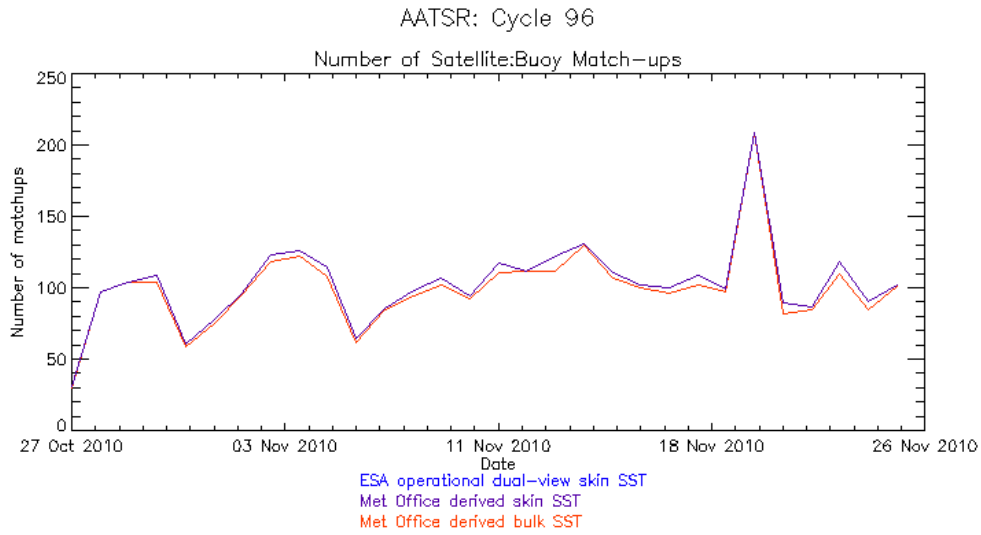
The Met Office has validated the AATSR dual-view SST data using the global network of *in situ* drifting buoy SST data, the results for Cycle 96 being shown in Figure 6-1. The updated SST coefficients released in December 2005 were used in the AATSR SST retrievals.



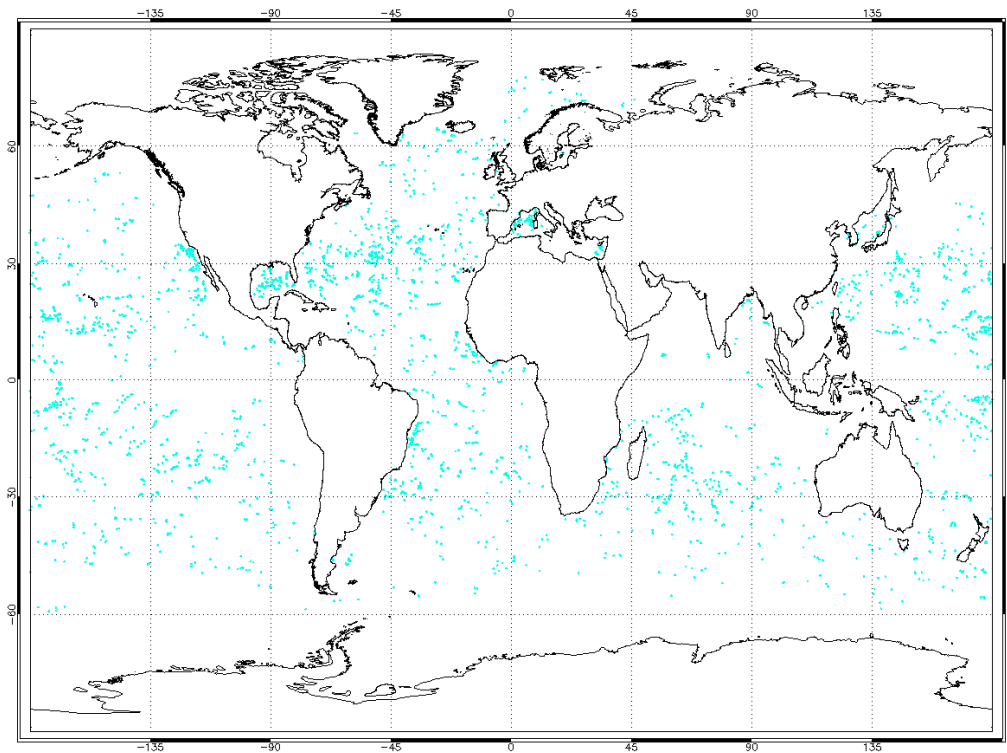
**Figure 6-1 Comparison of daily mean difference between 10' AATSR SST values and in situ drifting buoy SST for Cycle 96. Data provided by the Met Office.**

During cycle 96, there were 1593 night time match-ups, with a mean (UL derived dual-view skin SST minus buoy SST) of -0.037 K, standard deviation 0.26 K, and a mean (dual-view depth SST minus buoy SST) of +0.107 K, standard deviation 0.24 K. A total of 1447 daytime match-ups were found, with a mean (UL derived dual-view skin SST minus buoy SST) of +0.027 K, standard deviation 0.31 K, and a mean (dual-view depth SST minus buoy SST) of +0.181 K, standard deviation 0.30 K. As these data are comparisons of a single point buoy measurement against a much larger spatially averaged value they are not a true indicator of AATSR's accuracy and are used to show consistency of data quality between cycles.

These results represent the first set of analysis of data for the new Envisat cycle length following the lowering of the orbit height.



**Figure 6-2** Plot of daily number of match-ups between 10' AATSR SST values and in situ buoy SST for Cycle 96. Data provided by the Met Office.



**Figure 6-3** Map showing global distribution of match-ups between 10' AATSR SST values and in situ buoy SST for Cycle 96. The cyan dots indicate a match-up to a drifting buoy. Data provided by the Met Office.

## **7      DISCLAIMERS**

No new disclaimers have been issued during this cycle.