

AATSR Cycle Report
Cycle # 40

15 August 2005, 21:59:29 orbit 18091
19 September 2005, 21:59:29 orbit 18591

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1 THE CYCLIC REPORT #40

1.1 *Acronyms and abbreviations*

| | |
|---------------|---|
| AATSR | Advanced Along Track Scanning Radiometer |
| CR | Cyclic Report |
| DMOP | Detailed Mission Operation Plan |
| DMS | Data Management System |
| EN-UNA-YYYY/# | Envisat Unavailability (plus year and number) |
| ESOC | European Space Operation Center |
| HSM | High Speed Multiplexer |
| IECF | Instrument Engineering and Calibration Facilities |
| IPF | Instrument Processing Facilities |
| MPS | Mission Planning Schedule |
| NRT | Near Real Time |
| OCM | Orbit Control Manoeuvre |
| PDS | Payload Data Segment |
| PMC | Payload Management Computer |
| SPR | Software Problem Reporting |
| SW | Software |
| VISCAL | Visible Calibration |

The AATSR list of acronyms and abbreviation is in the following site:

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

1.2 Summary

Cyclic number: 40

Cycle Start Time: 15-AUGUST-2005, 21:59:29 orbit stop: 18091

Cycle Stop Time: 19-SEPTEMBER-2005, 21:59:29 orbit stop: 18591

The main activities during the cycle have been the following:

- **Processor L0 and IPF Version:** No change in the version of AATSR processor for Level0 (5.22). No change in the IPF version for Level1 and Level2 (5.59).
- **Visible calibration data:** The visible calibration coefficients data (ATS_VC1_AX) are changed regularly during the cycle. These VC1 files are being used within the time criteria set for NRT processing. Off-line data processing is expected to take place within 2 weeks of acquisition. When this is the case the VC1 file used should be +/- 1 day from the date of acquisition (i.e. within specification). If off-line data are generated before 2 weeks from acquisition, this may not be achieved.

1.3 Software version and Auxiliary files version

1.3.1 Software version

AATSR IPF for Level1 and Level2; version: AATSR/05.59

1.3.1.1 Auxiliary file version

This list defines the AATSR auxiliary files:

- **Browse Product Look-up Data (ATS_BRW_AX)**
- **L1b Characterization Data (ATS_CH1_AX)**
- **Cloud Look-up Table Data (ATS_CL1_AX)**
- **General Calibration Data (ATS_GC1_AX)**
- **AATSR Instrument Data (ATS_INS_AX)**
- **Visible Calibration Coefficients Data (ATS_VC1_AX)**
- **Level1B Processing Configuration Data (ATS_PC1_AX)**
- **Level2 Processing Configuration Data (ATS_PC2_AX)**
- **SST Retrieval Coefficients Data (ATS_SST_AX)**
- **LST Land Surface Temperature Coefficients Data (ATS_LST_AX)**

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

| Product name |
|---|
| ATS_BRW_AXVIEC20020123_072338_20020101_000000_20200101_000000 |
| ATS_CH1_AXVIEC20021114_113144_20020301_000000_20070801_235959 |
| ATS_CL1_AXVIEC20020123_073044_20020101_000000_20200101_000000 |
| ATS_GC1_AXVIEC20020123_073430_20020101_000000_20200101_000000 |
| ATS_INS_AXVIEC20030731_092706_20020301_000000_20070801_235959 |
| See below for VC1 files |
| ATS_LST_AXVIEC20040311_095537_20020301_000001_20070801_235959 |
| ATS_PC1_AXVIEC20040812_063722_20020301_000000_20070801_235959 |
| ATS_PC2_AXVIEC20020123_074151_20020101_000000_20200101_000000 |
| ATS_SST_AXVIEC20020123_074408_20020101_000000_20200101_000000 |

Tab 1.3.1.1: Latest auxiliary files currently in use by the PDS

1.3.1.1.1 Daily Visible Calibration (VC1) files

Reflectance channel calibration files were available for all dates, except:

21 August 2005 (No L0 on DDS)

Due to problems with VC1 file dissemination, non-nominal VC1 files were used for the following dates during NRT production:

27 August 2005 – 31 August 2005
 07 September 2005 – 09 September 2005

09 September 2005 00:00 – 09 September 2005 14:30
09 September 2005 – 13 September 2005

1.3.1.1.2 Other auxiliary files

This section will report the list of other auxiliary files changed in the cycle, and for each file, the date and the reason for the change will be specified.

| Product name | Start validity | Reason of changing |
|------------------------------|-----------------------|---------------------------|
| No changes during this cycle | | |

Tab 1.3.1.2: Auxiliary files list changed during the period

1.4 PDS status

1.4.1 Instrument Unavailability

| Start | Stop | Reason | Reference | Planned |
|-------------------|-------------------|-------------|------------------|---------|
| 22 Aug 2005 08:46 | 25 Aug 2005 15:25 | Out-gassing | EN-UNA-2005/0330 | YES |
| 07 Sep 2005 04:20 | 07 Sep 2005 13:40 | OCM | EN-UNA-2005/0355 | YES |

Tab 1.4.1.1: Instrument unavailability information

The NRT products during an outgassing contain only 0.86, 0.67 and 0.56um channel data and even these data will be [relatively] poorly calibrated. NRT L1B and Browse products immediately after an outgassing may be poorly calibrated as a post-outgassing ATS_VC1_AX file may not have been incorporated into the NRT processing.

1.4.2 Level0 data acquisition and Level1b processing status

This chapter will report on missing Level0 data and unplanned data unavailability during the period.

Level 1b data will only be reported if the start time does not coincide with the start time of unavailable Level0 data.

UTC Start: start time of the missing acquisition.

UTC Stop: stop time of the missing acquisition.

Duration: duration of the missing acquisition.

Orbit Start: absolute orbit start of the missing acquisition.

Orbit Stop: absolute orbit stop of the missing acquisition.

| UTC Start | UTC Stop | Duration (sec) | Orbit Start | Orbit Stop |
|---------------------|---------------------|----------------|-------------|------------|
| 16/08/2005 21:14:49 | 16/08/2005 21:53:50 | 2341 | 18104 | 18105 |
| 18/08/2005 09:09:51 | 18/08/2005 10:49:16 | 5965 | 18126 | 18127 |
| 23/08/2005 19:42:27 | 23/08/2005 19:46:29 | 242 | 18204 | 18204 |
| 23/08/2005 22:37:26 | 23/08/2005 22:40:20 | 174 | 18205 | 18205 |
| 29/08/2005 05:35:16 | 29/08/2005 07:15:12 | 5996 | 18281 | 18282 |
| 31/08/2005 21:42:29 | 31/08/2005 21:42:49 | 20 | 18319 | 18319 |
| 03/09/2005 23:31:31 | 04/09/2005 01:09:14 | 5863 | 18363 | 18364 |
| 07/09/2005 21:24:55 | 07/09/2005 21:33:19 | 504 | 18419 | 18419 |
| 08/09/2005 19:38:12 | 08/09/2005 19:47:04 | 532 | 18433 | 18433 |
| 09/09/2005 20:49:47 | 09/09/2005 21:59:47 | 4200 | 18448 | 18448 |
| 10/09/2005 10:25:52 | 10/09/2005 12:05:46 | 5994 | 18456 | 18457 |
| 10/09/2005 20:15:47 | 10/09/2005 20:23:30 | 463 | 18462 | 18462 |
| 12/09/2005 03:12:24 | 12/09/2005 04:53:54 | 6090 | 18480 | 18481 |

Tab 1.4.2.1: ATS_NL__OP missing data during cycle 40

| UTC Start | UTC Stop | Duration (sec) | Orbit Start | Orbit Stop |
|---------------------|---------------------|---------------------------|------------------------|-----------------------|
| 18/08/2005 09:14:57 | 18/08/2005 10:42:28 | 5251 | 18126 | 18127 |
| 29/08/2005 05:40:22 | 29/08/2005 07:09:14 | 5332 | 18281 | 18282 |
| 03/09/2005 23:36:37 | 04/09/2005 01:05:00 | 5303 | 18363 | 18364 |
| 09/09/2005 20:56:09 | 09/09/2005 21:54:58 | 3529 | 18448 | 18448 |
| 10/09/2005 10:32:14 | 10/09/2005 11:59:05 | 5211 | 18456 | 18457 |
| 12/09/2005 03:17:30 | 12/09/2005 04:47:09 | 5379 | 18480 | 18481 |

Tab 1.4.2.2: ATS_TOA_1P missing data during cycle 40

1.4.2.1 Compromised orbits owing major bad data quality

The information reported in the tables 1.4.2.1 and 1.4.2.2 does not consider the quality of the data, only whether or not it is available.

List of orbits with bad data quality: *Not available for this report*

1.4.3 Level0 and Level1b backlog processing status

In this chapter a check with respect to the previous cycle is done to verify if the status of the missing data has changed after backlog processing.

The list of data missing during the previous cycle has not changed.

1.5 Quality Control

1.5.1 Monitoring of parameters

JITTER: *Not available for this report.*

SENSOR TEMPERATURE: *Not available for this report.*

VISCAL: *Not available for this report.*

TOTAL NOISE: *Not available for this report.*

NEAT: *Not available for this report.*

1.5.2 Users Rejection

Not available for this report.

1.5.3 Software Problem Reporting. Potential impact

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

1.5.3.1 SPR open

This section lists the open SPRs.

1.5.3.1.1 Existing SPRS that are still open

Unphysical sea surface temperature values in Level 2 AATSR products from PDHS-E at intervals of 480 rows: Open – The investigation shows that the problem does not happen using the IPF 5.59 with respect to the IPF 5.52 on which the problem was detected. Further information on the changes introduced in V5.59 has been requested.

50 / 17 km Cell Size Anomaly in AST product: Open – The reason for this effect is understood, but it is proposed that the cell size should stay as-is until further consultation with AATSR users has taken place.

Inconsistent values in AST confidence word, 17 km cell: Investigation completed - to be corrected with a patch at the next appropriate opportunity.

1.5.3.1.2 New SPRs since the last Cyclic Report

There are no new SPRs since last Cyclic Report.

1.5.3.2 SPR closed

No SPRs have been closed since the last Cyclic Report.

1.6 Instrument Performance

Nominal

1.7 Calibration/Validation activities and results

1.7.1 Calibration

Not available for this report.

1.7.2 Validation

Not available for this report.

1.8 Disclaimers

No new disclaimers have been issued during this cycle.