

# ENVISAT ASAR MONTHLY REPORT

NOVEMBER 2008



## PUBLIC SUMMARY

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## **1 EXECUTIVE SUMMARY**

This document summarizes the instrument and product quality status as derived from data acquired during November 2008. No major anomalies have been reported during this period.

The list of unavailability periods is provided in Chapter 2 together with details of any data disclaimers issued during the reporting period. Chapter 3 provides information on the background regional mission (BRM) planning. Details on the Doppler Centroid evolution are provided in chapter 4. Radiometric stability is measured by means of ASAR transponders. Detailed results are provided in chapter 5. An updated list of auxiliary data files is provided in chapters 6 and 7.

## 2 INSTRUMENT STATUS

**No major anomalies were experienced during the reporting period.**

The following Antenna Transmit/Receive Modules (TRMs) have failed since launch:

- TRM-01 to 04 in tile C1: H & V polarisation transmit failed since May 2002
- TRM-01 to 04 in tile D2: H & V polarisation transmit and receive failed since 18th February 2003
- TRM-14 in tile B2: H polarisation transmit failed since 12th April 2004
- TRM-15 in tile A1: failed to transmit in V polarisation since 17th May 2004
- TRM-06 in tile A1: failed to transmit in V polarisation since 17th November 2004
- TRM-12 in tile C4: failed to transmit in H polarisation since 16th January 2005
- TRM-02 in tile D3: failed to transmit in V polarisation since 20th November 2005
- TRM-03 in tile A3: failed to transmit in H polarisation since 28th January 2007
- TRM-01-02-03-04 in tile B3: failed to transmit in H & V polarization since 2nd February 2007
- TRM-02 in tile B1: failed to transmit in H polarisation since 6th May 2007.
- TRM-08 in tile E4: failed to transmit in H polarisation since 20th July 2008
- TRM-05 in tile E4: failed to transmit in V polarisation since 22nd October 2008.

Please note that single TRM transmit failures have a minimal impact on the instrument performance and on the antenna pattern shape. The impact of multiple TRM failures is mitigated by the generation of new antenna patterns.

### 2.1 *Instrument Unavailability*

The new events with respect to the previous report are given in the table below. Please note that the full unavailability list is available in Appendix A. The following instrument unavailability has been occurred during the reporting period.

| Unavailability report reference | Start                                     | Stop                                      |
|---------------------------------|---|---|
| EN-UNA-2008/0177                | 1 Nov 2008 20:16:08.000<br>Orbit = 34894  | 1 Nov 2008 22:31:40.000<br>Orbit = 34896  |
| EN-UNA-2008/0183                | 9 Nov 2008 00:57:00.000<br>Orbit = 34997  | 9 Nov 2008 00:58:00.000<br>Orbit = 34997  |
| EN-UNA-2008/0185                | 11 Nov 2008 01:41:48.000<br>Orbit = 35027 | 11 Nov 2008 03:58:47.000<br>Orbit = 35028 |
| EN-UNA-2008/0186                | 17 Nov 2008 21:59:55.000<br>Orbit = 35125 | 18 Nov 2008 07:08:39.000<br>Orbit = 35130 |
| EN-UNA-2008/0190                | 15 Nov 2008 02:51:23.000<br>Orbit = 35084 | 15 Nov 2008 07:10:44.000<br>Orbit = 35087 |

## 2.2 *Data Disclaimer*

A data quality disclaimer is issued each time that ASAR data of degraded quality is acquired between specific time intervals. Details on the available disclaimers are provided online at <http://earth.esa.int/pcs/envisat/asar/disclaimer>. Please note that the full disclaimer list is also available in Appendix B.

No new disclaimer was issued during the reporting period.

### 3 LOW RATE BACKGROUND REGIONAL MISSION

The current Low Rate BRM definition is provided below:

| Mode | Where  | Swath | Polarisation |
|------|--|-------|--------------|
| Wave | Over the sea (~15 sec from the coast line), including the Mediterranean Sea. | IS2   | VV           |

| Mode              | Where           | Polarization   |
|-------------------|-----------------|--|
| Global Monitoring | Everywhere else | <b>HH:</b> over land, ice and sea-ice including the following areas:<br>- Europe<br>- Antarctica extended<br>- Arctic<br>- Greenland and Greenland Sea<br>- Labrador Sea and North of Canada<br>- Kara Sea<br>- Baffin Bay<br>- Golf of Mexico & Caribbean Sea<br><b>VV:</b> None. All GM acquisitions in HH |

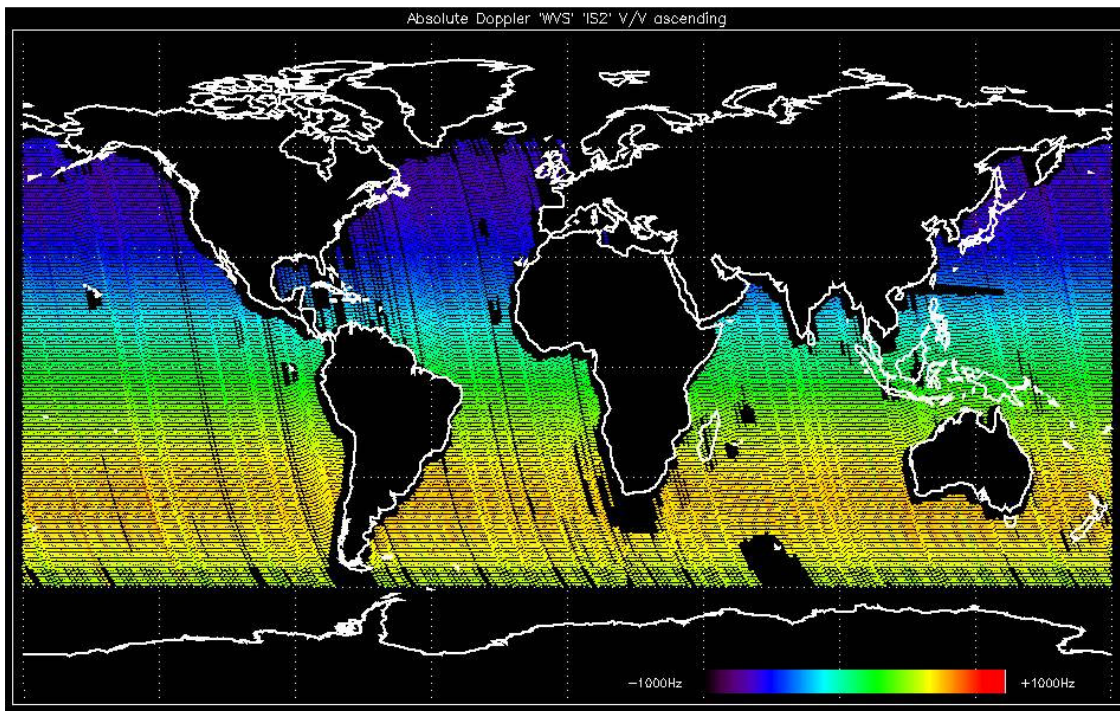
Further details of the background mission can be found in reference 'ASAR Low Bit Rate Background Mission Planning Strategy', ESA, ENVI-CLVL-EOPG-TN-06-0008, Issue 1, May 2006 and from the ASAR Background Region Mission web site at <http://earth.esa.int/object/index.cfm?fobjectid=4045>.

## 4 DOPPLER MONITORING

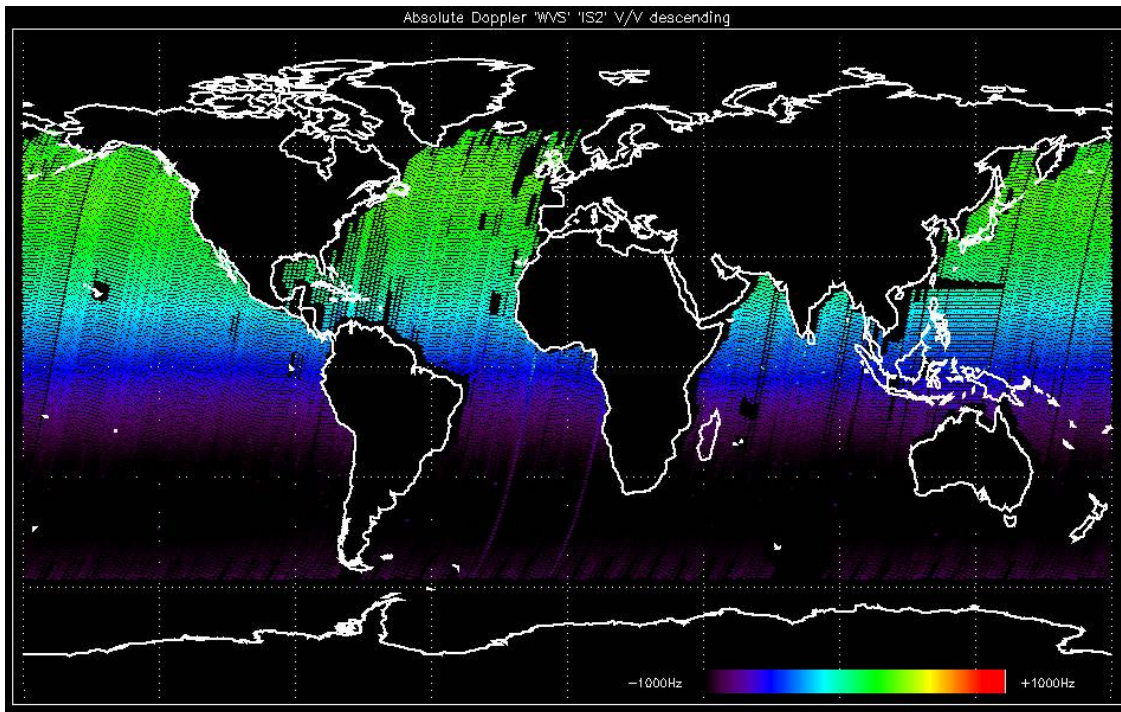
The Envisat Orbit Control Manoeuvres (OCM) can affect the platform attitude stability even hours after the burst with a direct impact on the Doppler centroid frequency evolution. An updated list of the OCM can be found at <http://nng.esoc.esa.de/envisat/ENVmano.html>.

The plots of the Figure 4.1 and Figure 4.2 show the evolution of the Doppler centroid over the world for the 35 days prior to the end of the reporting period. No anomaly on the Doppler centroid distribution is noticed.

### 4.1 *Absolute WV-IS2 Doppler Centroid Evolution*



(a) absolute Doppler in ascending passes

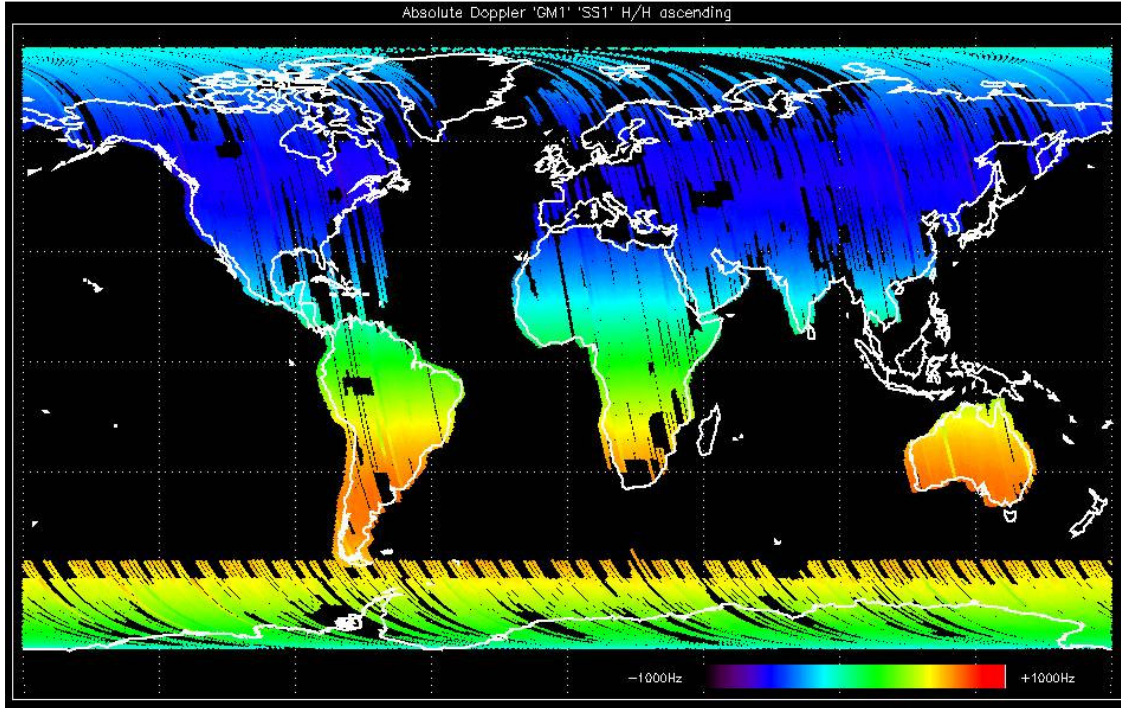


(b) absolute Doppler in descending passes

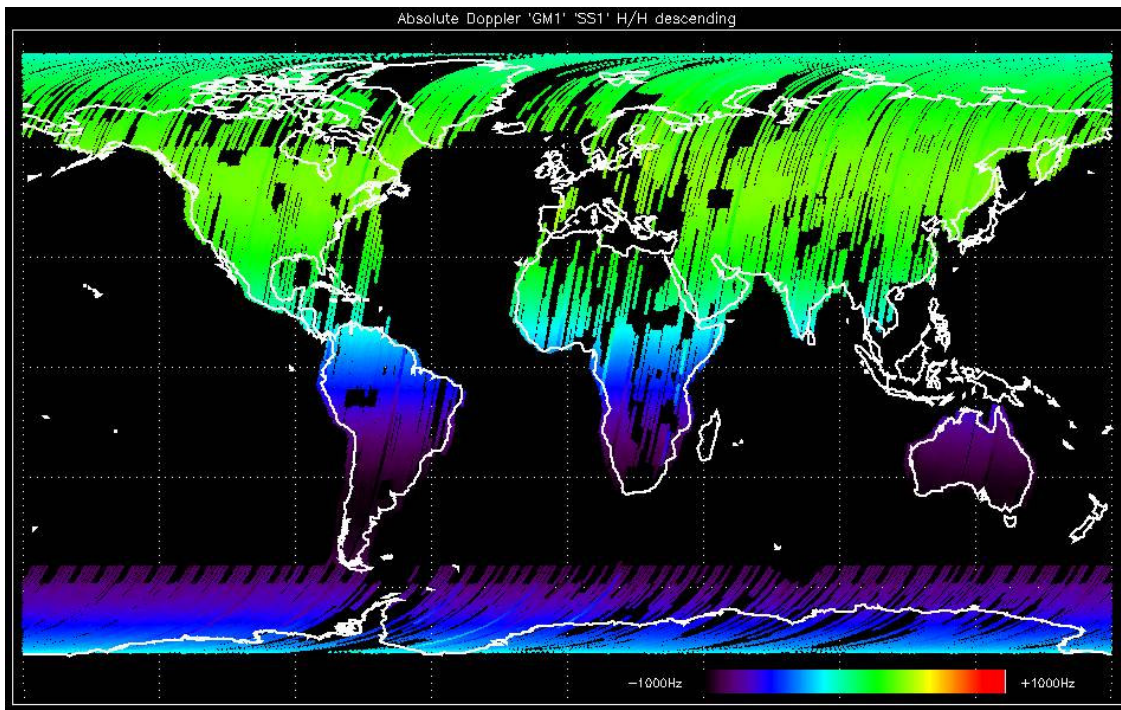
Figure 4.1: Absolute Wave mode Doppler evolution over the world



## 4.2 Absolute GM SS1 Doppler Centroid Evolution



(a) absolute Doppler in ascending passes

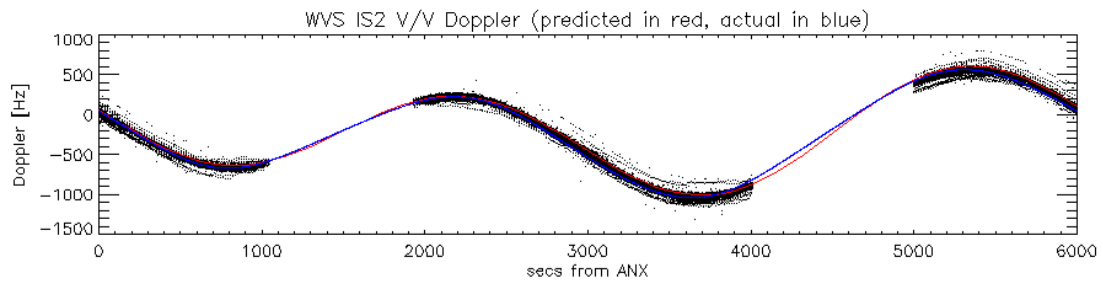


(b) absolute Doppler in descending passes

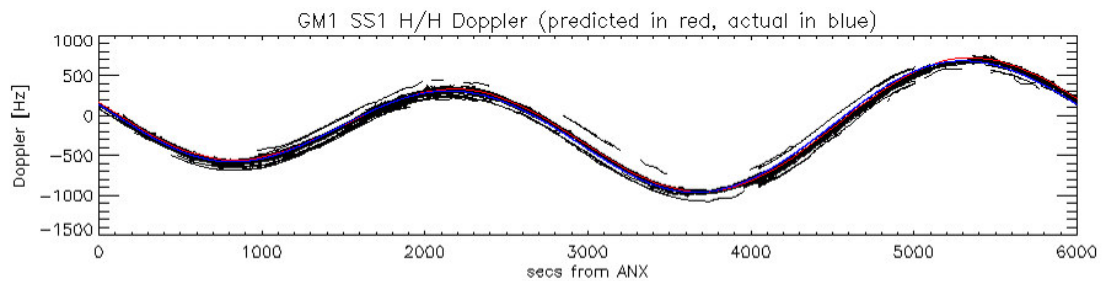
Figure 4.2: Absolute GM mode Doppler evolution over the world

### 4.3 Absolute Doppler Centroid Evolution vs ANX

Figure 4.3(a) shows the wave mode Doppler evolution (IS2, VV) against the elapsed seconds from the ascending node (ANX) for data acquired during the current month. Theoretical Doppler is in red while the blue curve stands for Doppler evolution model obtained by Fourier series decomposition. Figure 4.3(b) shows a similar plot derived from global monitoring data.



(a) Wave mode Doppler

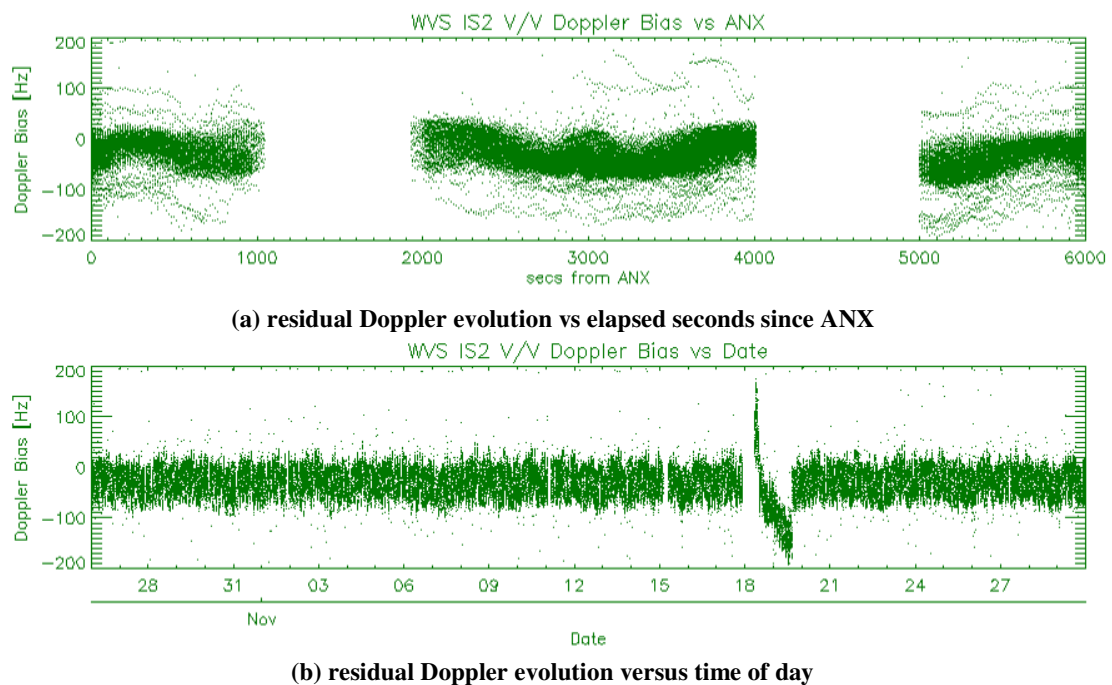


(b) GM1 Doppler

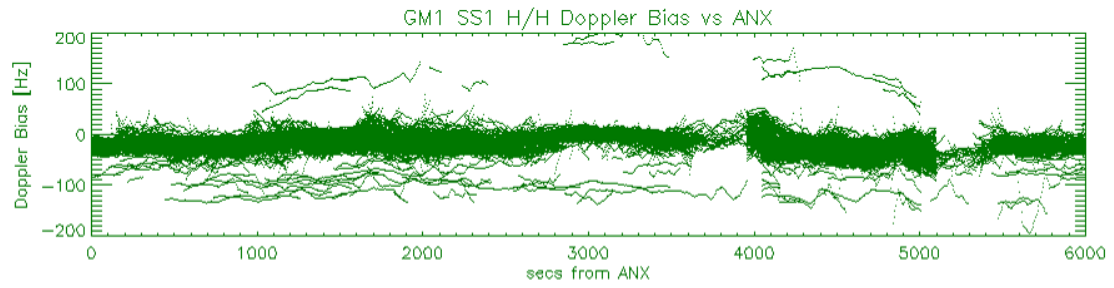
Figure 4.3: Absolute Doppler Centroid evolution wrt elapsed seconds since ANX

## 4.4 Residual Doppler Centroid Evolution vs. ANX and Time of Day

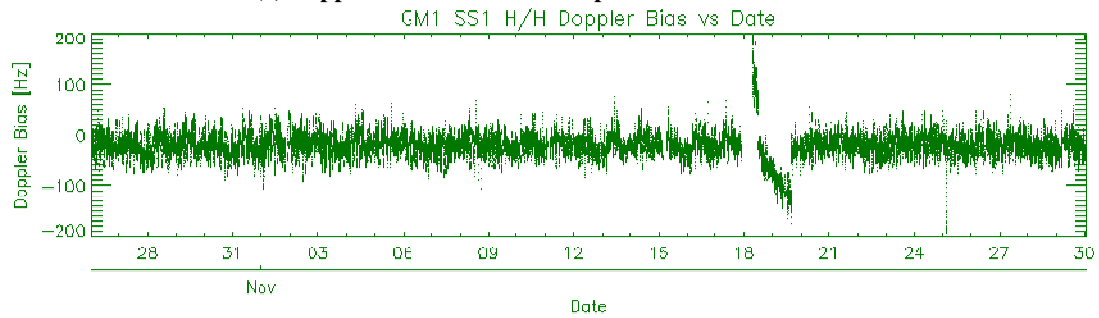
Figure 4.4 shows the wave mode residual Doppler evolution (IS2, VV) against the elapsed seconds from the ascending node (ANX) (a) and versus the time of the day (UTC time) (b) for data acquired during the current month. Figure 4.5 shows the same information but for data acquired in GM1 mode.



**Figure 4.4: Residual Doppler centroid evolution for WVS data**



(a) Doppler evolution versus elapsed seconds since ANX



(b) residual Doppler evolution versus time of day

Figure 4.5: Residual Doppler centroid evolution for GM1 data

## 5 IMAGE QUALITY AND RADIOMETRIC ANALYSIS

The analysis of the ASAR transponders is used to characterise ASAR products in term of:

- ✓ spatial resolution,
- ✓ Impulse Response Function (IRF) parameters (ISLR, PSLR, SSLR) and
- ✓ Absolute calibration factor.

The analysis is performed for all the modes, beams and polarisations.

Table 6.1 shows the relative Radar Cross Section (RCS)<sup>1</sup> per mode, beam and set of transponders. The values provided per sub-swath correspond to the mean absolute calibration error. Values provided per all swaths correspond to the mean error value and the corresponding standard deviation. All values are in dB.

| Product type | Relative RCS [dB] |       |       |       |       |       |       |       |
|--------------|-------------------|-------|-------|-------|-------|-------|-------|-------|
|              | All Swaths        | IS1   | IS2   | IS3   | IS4   | IS5   | IS6   | IS7   |
| <b>IMP</b>   | -0.23±0.60        | -0.16 | -0.18 | -0.57 | -0.40 | -0.06 | -0.05 | -0.28 |
| <b>IMG</b>   | -0.18±0.63        | -0.32 | -0.20 | -0.47 | -0.40 | 0.17  | 0.08  | -0.11 |
| <b>IMS</b>   | -0.18±0.60        | -0.30 | -0.05 | -0.58 | -0.36 | -0.03 | 0.05  | -0.15 |
| <b>IMM</b>   | -0.25±0.98        |       |       |       |       |       |       |       |
| <b>APP</b>   | -0.09±0.41        | -0.37 | -0.22 | -0.07 | -0.02 | -0.03 | 0.07  | -0.07 |
| <b>APG</b>   | -0.08±0.50        | -0.33 | -0.21 | 0.00  | -0.12 | -0.14 | 0.20  | -0.09 |
| <b>APS</b>   | -0.10±0.52        | -0.21 | -0.26 | 0.02  | -0.31 | -0.15 | 0.10  | 0.06  |
| <b>APM</b>   | 0.02±1.29         |       |       |       |       |       |       |       |
| <b>WSM</b>   | 0.12±0.79         |       |       |       |       |       |       |       |

**Table 6.1: ASAR Image Relative Radar Cross-Sections per mode and beam.**

Table 6.2 gives the relative RCS for the full resolutions products as a function of the polarization. All values are in dB.

<sup>1</sup>The relative RCS is defined as the difference between the nominal RCS and the measured RCS.

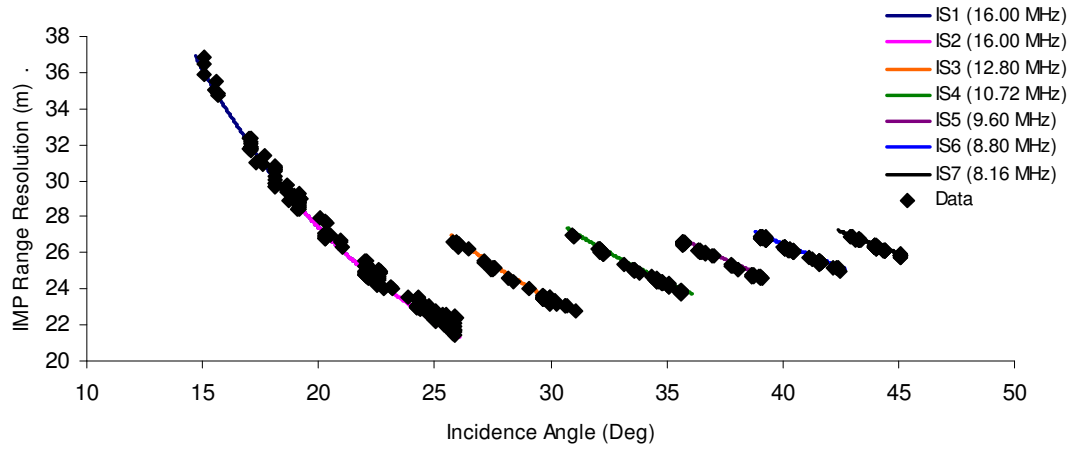
| Product type | Relative RCS [dB] |       |       |       |
|--------------|-------------------|-------|-------|-------|
|              | VV                | HH    | VH    | HV    |
| IMP          | -0.13             | -0.38 |       |       |
| APP          | 0.00              | -0.08 | -0.10 | -0.07 |

**Table 6.2: ASAR Image Relative Radar Cross-Sections per mode and polarisation**

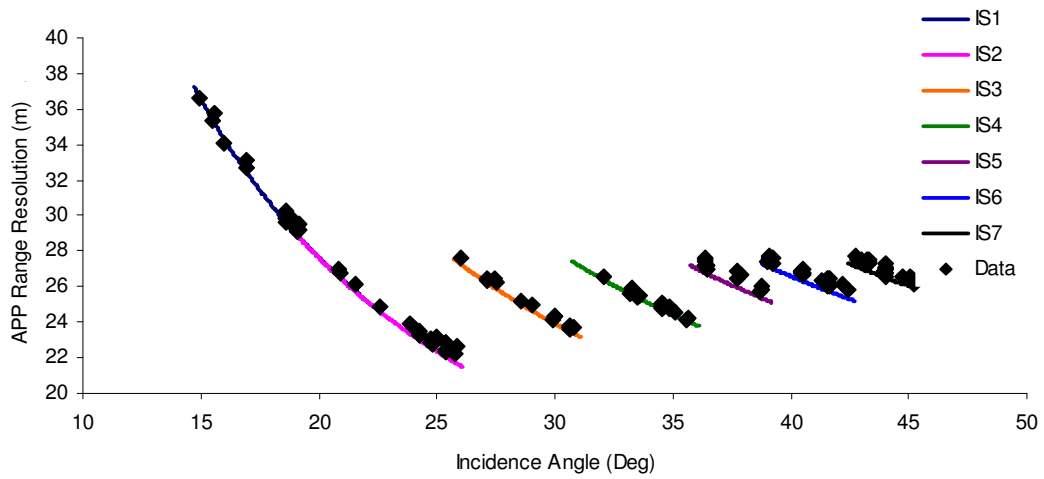
The Table 6.3 shows the IRF parameters measured per different product types. Please note that the performance for WSM products are given only for transponders reprocessed with 40m pixel spacing.

| Product Type | Azimuth Res (m)        | Range Res (m) | ISLR (dB)   | PSLR (dB)   | SSLR (dB)   | No of Results |
|--------------|------------------------|---------------|-------------|-------------|-------------|---------------|
| IMP          | 22.14±0.50             | (figure 5.1a) | -13.48±0.55 | -16.71±0.99 | -22.75±1.76 | 464           |
| IMG          | 22.39±0.48             | 21.6 – 35.8   | -13.54±0.53 | -16.90±1.01 | -23.50±1.70 | 463           |
| IMS          | 4.77±0.04<br>5.56±0.07 | 9.43±0.05     | -14.45±0.29 | -19.06±0.46 | -28.38±0.63 | 456           |
| IMM          | 146.65±3.84            | 133.25±6.47   | -8.32±3.95  | -16.16±2.39 | -17.57±4.35 | 330           |
| APP          | 27.61±0.79             | (figure 5.1b) | -12.87±0.47 | -19.13±0.99 | -27.04±1.61 | 133           |
| APG          | 27.70±0.76             | 22.6 – 36.4   | -12.94±0.49 | -19.23±0.97 | -27.70±1.30 | 132           |
| APS          | 4.42±1.83              | 8.40±0.07     | 3.95±2.49   | -1.98±1.38  | -16.90±4.33 | 131           |
| APM          | 145.57±4.51            | 132.90±6.89   | -7.82±6.83  | -15.07±4.31 | -15.89±7.92 | 49            |
| WSM          | 112.17±6.144           | 123.60±10.58  | -9.83±4.31  | -15.19±3.58 | -16.72±4.44 | 119           |

**Table 6.3: ASAR IRF parameters per product type**

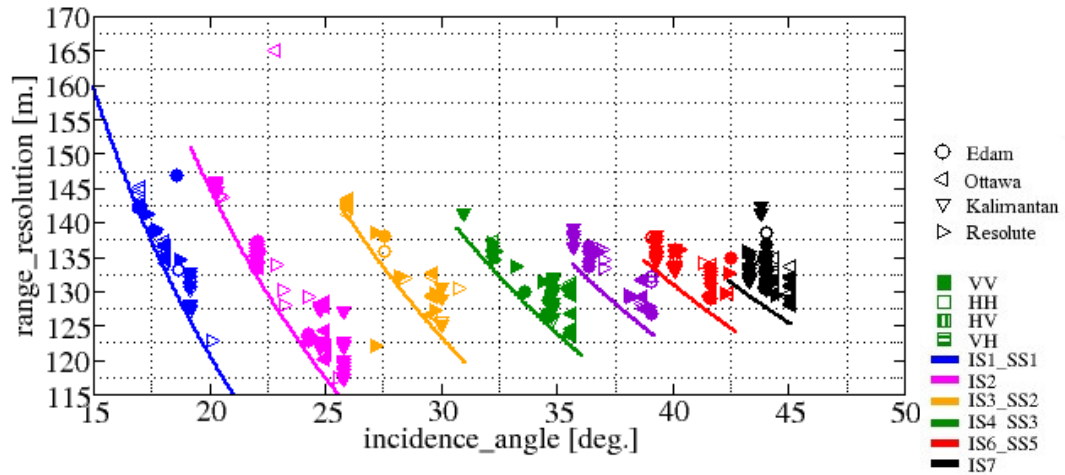


(a) IMP products

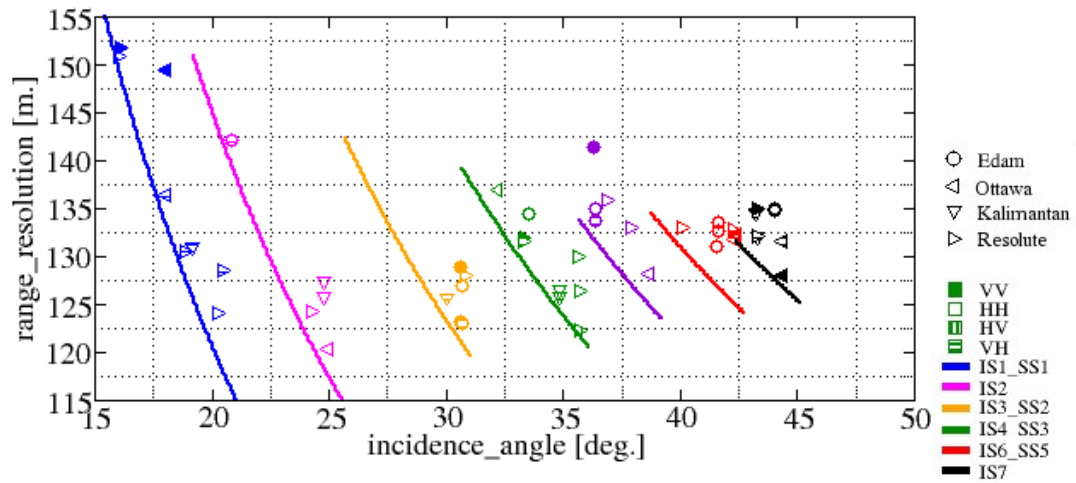


(b) APP products

**Figure 6.1: Range resolution as a function of the incidence angle for the IMP and APP products**

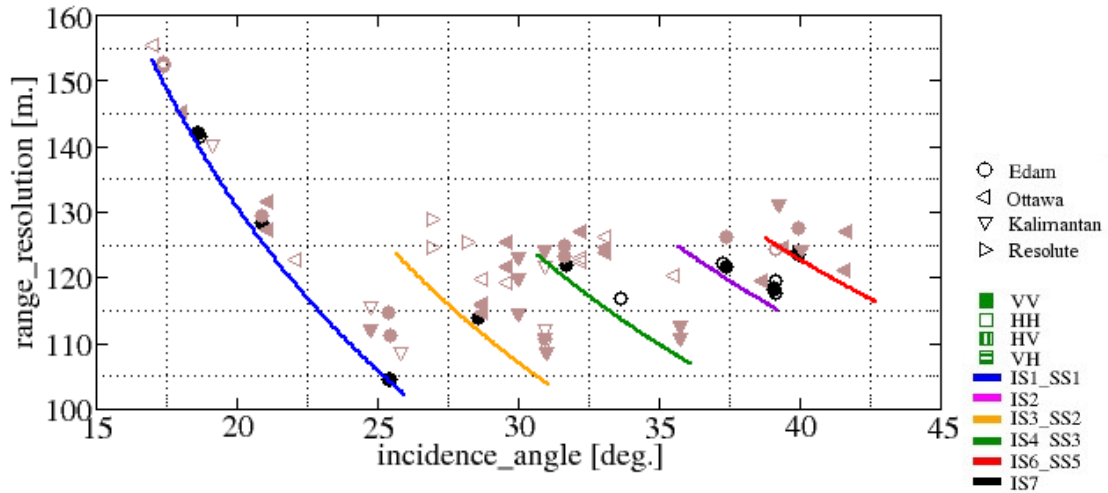


(a) IMM products



(b) APM products





(c) WSM products. Black symbols stand for the 40m pixel spacing data while brown are for 75m pixel spacing

Figure 6.2: Range resolution as a function of the incidence angle for the medium resolution products.

Table 6.4 gives measured equivalent number of looks and radiometric resolutions for IMP/IMG, IMS, APP/APG, APS and WSM products.

| Product Type | Equ. Num Looks | Rad Res (dB) |
|--------------|----------------|--------------|
| IMP/IMG      | 3.95           | 1.77         |
| IMS          | 0.96           | 3.05         |
| APS          | 0.93           | 3.09         |

Table 6.4(a): ASAR measured equivalent number of looks and radiometric resolution

| APP/APG        | IS1  | IS2  | IS3  | IS4  | IS5  | IS6  | IS7  |
|----------------|------|------|------|------|------|------|------|
| Equ. Num Looks | 1.76 | 1.73 | 2.25 | 2.66 | 3.30 | 3.78 | 3.73 |
| Rad Res (dB)   | 2.44 | 2.45 | 2.22 | 2.08 | 1.91 | 1.80 | 1.81 |

Table 6.4(b): ASAR measured equivalent number of looks and radiometric resolution

| WSM            | SS1   | SS2   | SS3   | SS4   | SS5   |
|----------------|-------|-------|-------|-------|-------|
| Equ. Num Looks | 13.19 | 13.21 | 13.84 | 13.77 | 13.38 |
| Rad Res (dB)   | 1.05  | 1.05  | 1.03  | 1.03  | 1.04  |

Table 6.4(c): ASAR measured equivalent number of looks and radiometric resolution

| APM                   | IS1   | IS2   | IS3   | IS4   | IS5   | IS6   | IS7   |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| <b>Equ. Num Looks</b> | 43.99 | 52.46 | 65.68 | 75.66 | 83.21 | 90.16 | 95.93 |
| <b>Rad Res (dB)</b>   | 0.60  | 0.56  | 0.50  | 0.47  | 0.45  | 0.43  | 0.42  |

Table 6.4(d): ASAR measured equivalent number of looks and radiometric resolution

| IMM                   | IS1   | IS2   | IS3   | IS4   | IS5   | IS6   | IS7   |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| <b>Equ. Num Looks</b> | 35.68 | 42.20 | 52.56 | 60.78 | 65.76 | 72.67 | 75.77 |
| <b>Rad Res (dB)</b>   | 0.67  | 0.62  | 0.56  | 0.52  | 0.50  | 0.48  | 0.47  |

Table 6.4(e): ASAR measured equivalent number of looks and radiometric resolution

The noise equivalent radar cross-section (NESigma0) has been estimated using AP and IM products of low radar cross-section ocean region, as shown in Figure 6.3. All measurements are at or lower than predicted NESigma0 values.

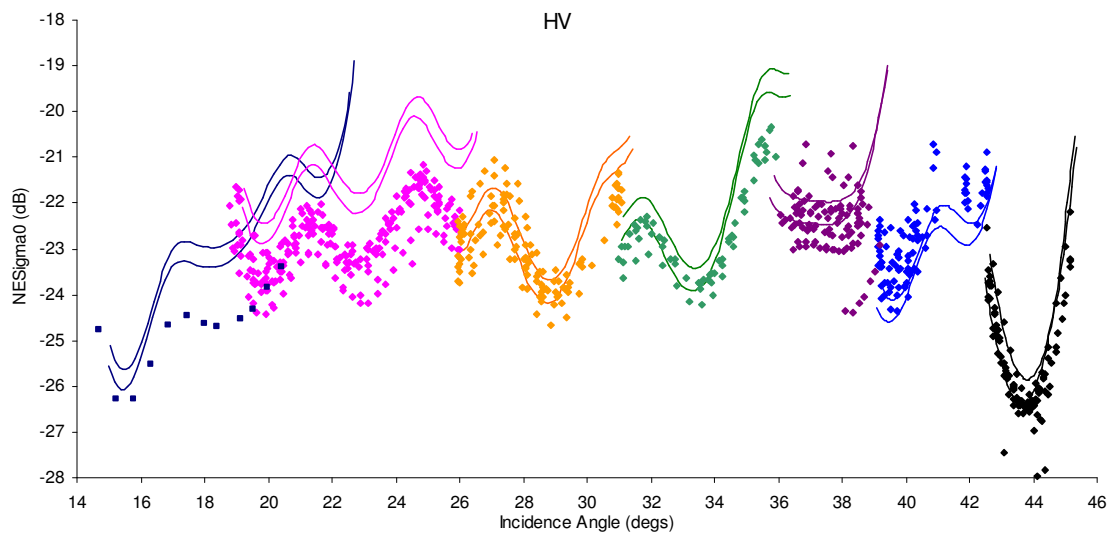


Figure 6.3(a). NESigma0 measurements for IM/AP HV polarisation.

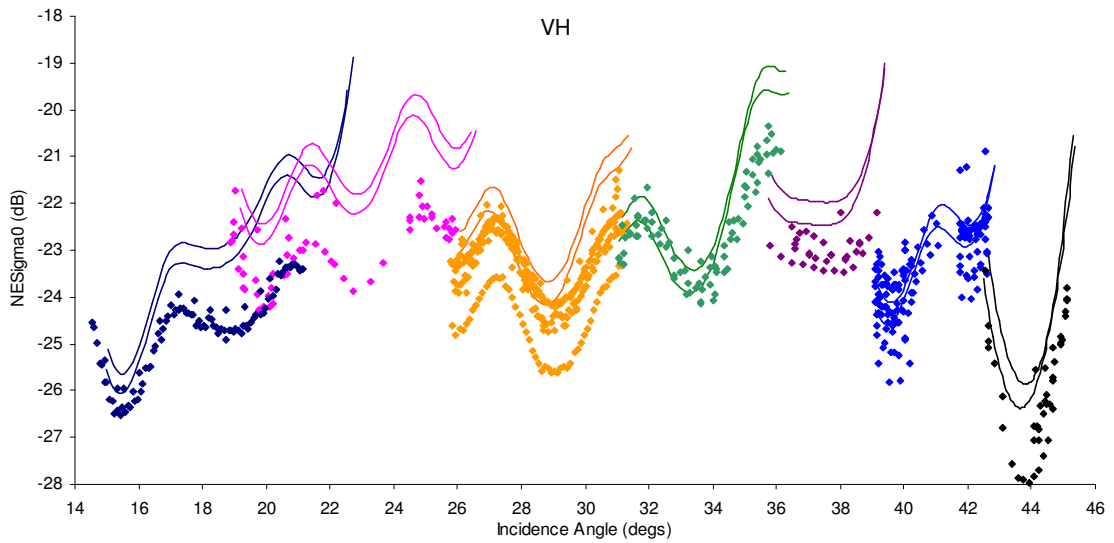


Figure 6.3(b). NESigma0 measurements for IM/AP VH polarisation.

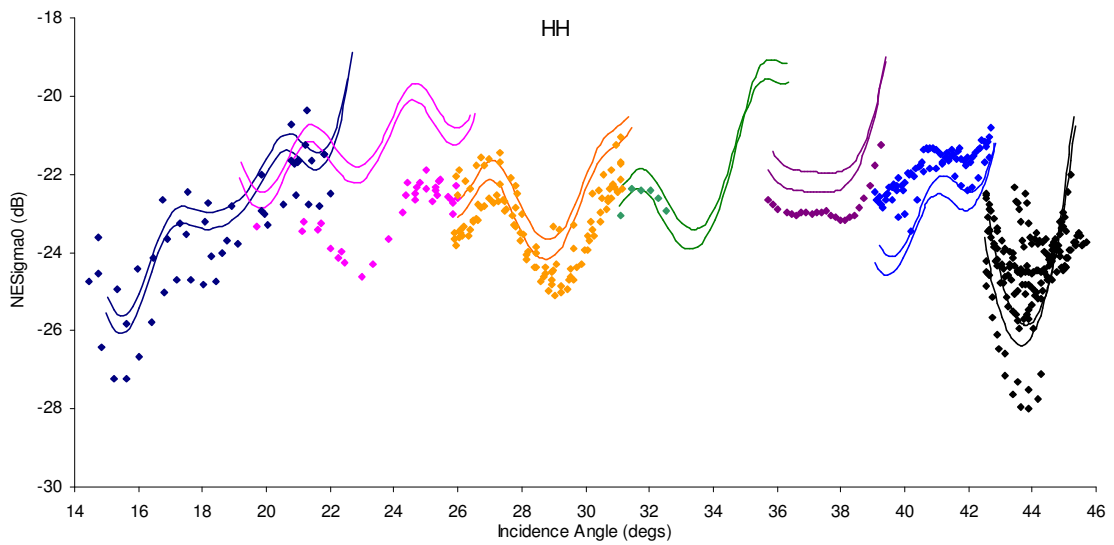
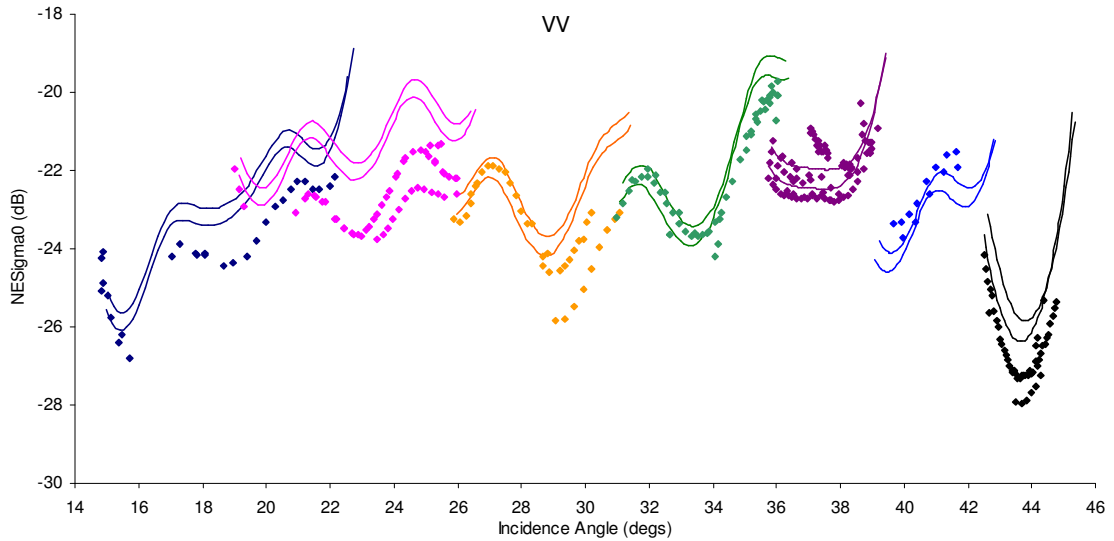
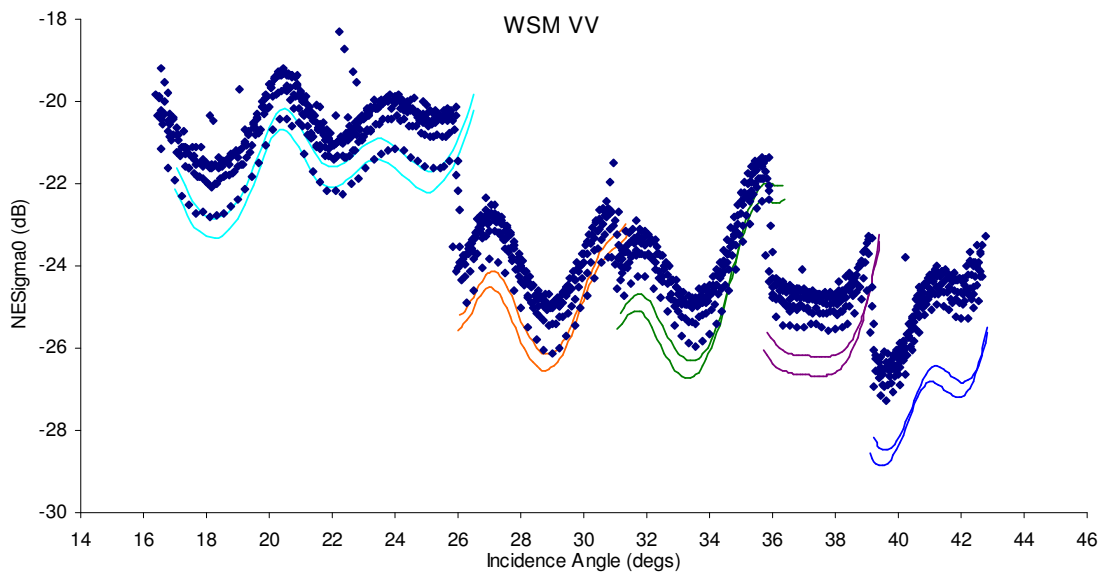


Figure 6.3(c). NESigma0 measurements for IM/AP HH polarisation.



**Figure 6.3(d). NESigma0 measurements for IM/AP VV polarisation.**

The WSM noise equivalent radar cross-section (NESigma0) has also been estimated using low radar cross-section ocean regions, as shown in Figure 6.4.



**Figure 6.4(a). NESigma0 measurements for WSM VV polarisation.**

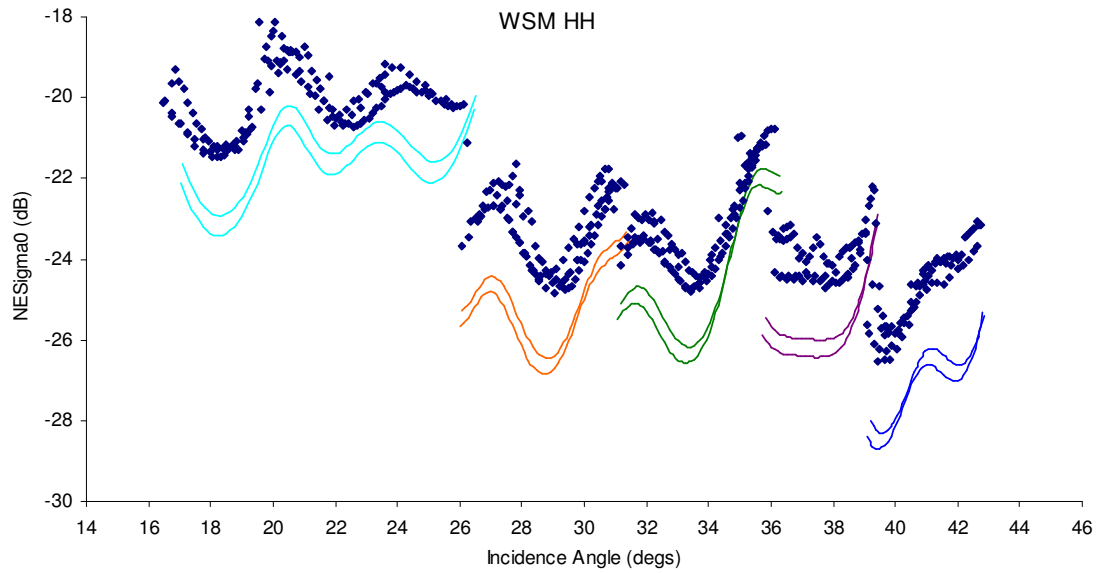


Figure 6.4(b). NESigma0 measurements for WSM HH polarisation.

## 6 ELEVATION ANTENNA PATTERN MONITORING

### 6.1 Recent Elevation Antenna Pattern Updates

During the reporting period there were no updates to the ASAR elevation antenna patterns. The table below show the most recent updates (since August 2003) for each beam and polarisation.

| BEAM    | POL | RECENT ELEVATION ANTENNA PATTERN UPDATES |            |            |            |            |            |            |            |            |            |
|---------|-----|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| SS1     | HH  | 27/08/2003                               |            | 06/04/2004 | 12/08/2004 |            | 13/10/2005 | 19/12/2005 | 15/02/2007 |            | 07/10/2008 |
| SS1     | VV  | 27/08/2003                               |            | 06/04/2004 |            |            | 13/10/2005 | 19/12/2005 | 22/02/2007 |            |            |
| IS1     | HH  |  | 09/12/2003 |            |            |            |            |            |            |            | 18/12/2007 |
| IS1     | VV  |  | 09/12/2003 | 06/04/2004 |            |            |            |            |            |            | 17/05/2007 |
| IS1     | HV  |  |            |            |            |            |            | 23/02/2006 | 17/07/2006 |            |            |
| IS1     | VH  |  | 09/12/2003 | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS2     | HH  |  |            | 06/04/2004 |            |            | 03/11/2005 |            |            | 17/05/2007 |            |
| IS2     | VV  |  | 09/12/2003 | 06/04/2004 |            |            | 03/11/2005 |            |            | 17/05/2007 |            |
| IS2     | HV  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS2     | VH  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS3_SS2 | HH  | 27/08/2003                               | 09/12/2003 |            | 12/08/2004 | 27/10/2004 | 13/10/2005 |            | 15/02/2007 | 17/05/2007 | 07/10/2008 |
| IS3_SS2 | VV  | 27/08/2003                               |            |            | 12/08/2004 |            | 13/10/2005 |            | 22/02/2007 | 17/05/2007 | 07/10/2008 |
| IS3_SS2 | HV  |  |            |            |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS3_SS2 | VH  |  |            |            |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS4_SS3 | HH  |  |            |            | 12/08/2004 |            | 13/10/2005 |            | 15/02/2007 | 17/05/2007 | 07/10/2008 |
| IS4_SS3 | VV  |  |            |            |            | 27/10/2004 | 13/10/2005 |            | 22/02/2007 | 17/05/2007 |            |
| IS4_SS3 | HV  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS4_SS3 | VH  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS5_SS4 | HH  | 27/08/2003                               |            | 06/04/2004 |            | 27/10/2004 | 13/10/2005 |            | 15/02/2007 | 18/12/2007 | 07/10/2008 |
| IS5_SS4 | VV  | 27/08/2003                               |            |            |            |            | 13/10/2005 |            | 22/02/2007 | 17/05/2007 | 07/10/2008 |
| IS5_SS4 | HV  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 |            |            |
| IS5_SS4 | VH  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 |            |            |
| IS6_SS5 | HH  |  |            |            |            | 27/10/2004 | 13/10/2005 |            | 15/02/2007 | 17/05/2007 | 07/10/2008 |
| IS6_SS5 | VV  |  |            |            |            |            | 13/10/2005 |            | 22/02/2007 | 17/05/2007 | 07/10/2008 |
| IS6_SS5 | HV  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS6_SS5 | VH  |  |            | 06/04/2004 |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS7     | HH  |  |            |            |            |            |            |            |            | 17/05/2007 |            |
| IS7     | VV  |  |            |            |            |            |            |            |            | 17/05/2007 |            |
| IS7     | HV  |  |            |            |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |
| IS7     | VH  |  |            |            |            |            |            | 23/02/2006 | 17/07/2006 | 17/05/2007 |            |

### 6.2 History of Elevation Antenna Pattern Updates

The table below summarizes the evolution of the elevation antenna pattern used for processing since August 2002. The files are available on line at [http://earth.esa.int/services/auxiliary\\_data/asar/](http://earth.esa.int/services/auxiliary_data/asar/).

The source information indicates whether the pattern has been derived from data acquired over the Rain Forest (“RF”) or whether it has been derived from antenna synthesis using results from Module Stepping acquisitions (“SYN”).

Please note that pre-launch antenna pattern where used before the first ASA\_XCA\_AX update.

Please note that the table indicates for each beam, in which file the update took place. Any file created after this date will include that update unless a new file is specified for the beam.

For instance, the pattern for IS3\_SS2 VV was updated on 27 August 2003. The file created on 9 December 2003 (when the IS1 VV pattern was updated) will include the same pattern for IS3\_SS2 VV as in the file of 27 August 2003, since the table does not indicate any further update for the IS3\_SS2 VV pattern.

| ASAR ELEVATION ANTENNA PATTERNS UPDATES IN THE ASAR EXTERNAL CALIBRATION FILE |                 |  |   |                                      |          |
|---|-----------------|--|---|--------------------------------------|----------|
| Swath & polarization  | Source          | Update time<br>(file used in operations since 1 day after this date) | File Name   | Applicable to data acquired between: |          |
|   |                 |  |   | Start                                | Stop     |
| IS1 VV  | RF              | 20020813   | ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000             | 20020413                             | 20021231 |
|   | NA <sup>1</sup> | 20021107   | ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000             | 20020413                             | 20021231 |
|   | RF              | 20021122   | ASA_XCA_AXVIEC20021122_130838_20020413_000000_20021231_00000 <sup>2</sup> | 20020413                             | 20021231 |
|   | RF              | 20031209   | ASA_XCA_AXVIEC20031209_113559_20030211_000000_20041231_000000             | 20030211                             | 20041231 |
|   | RF              | 20040406   | ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000             | 20030211                             | 20041231 |
|   | RF              | 20070517   | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000             | 20070204                             | 20071231 |
|   | RF              | 20080710   | ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000             | 20070204                             | 20081231 |
| IS1 HH  | RF              | 20021107   | ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000             | 20020413                             | 20021231 |

<sup>1</sup> A corrupted IS1 VV pattern was included into the ASA\_XCA\_IP file updated of 11 Nov. 2002

<sup>2</sup> The corrupted IS1 VV pattern in the operational ASA\_XCA\_IP file was corrected on 22 Nov. 2002. Please note that the IS1 VV pattern in ASA\_XCA\_AXVIEC20021122\_130838\_20020413\_000000\_20021231\_00000 is the same as in ASA\_XCA\_AXVIEC20020813\_080042\_20020413\_000000\_20021231\_000000



|        |    |          |   |          |          |
|--------|----|----------|---|----------|----------|
|        | RF | 20031209 | <a href="#">ASA_XCA_AXVIEC20031209_113559_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF | 20071218 | <a href="#">ASA_XCA_AXVIEC20071218_082742_20070204_165113_20081231_000000</a> | 20070204 | 20081231 |
|        | RF | 20080710 | <a href="#">ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000</a> | 20070204 | 20081231 |
| IS1 HV | RF | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|        | RF | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|        | RF | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
| IS1 VH | RF | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|        | RF | 20031209 | <a href="#">ASA_XCA_AXVIEC20031209_113559_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|        | RF | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|        | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS2 VV | RF | 20020813 | <a href="#">ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|        | RF | 20031209 | <a href="#">ASA_XCA_AXVIEC20031209_113559_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF | 20051103 | <a href="#">ASA_XCA_AXVIEC20051103_160021_20050101_000000_20050914_080040</a> | 20050101 | 20050914 |
|        | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |

|            |    |          |   |          |          |
|------------|----|----------|---|----------|----------|
| IS2 HH     | RF | 20021107 | <a href="#">ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|            | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|            | RF | 20051103 | <a href="#">ASA_XCA_AXVIEC20051103_160021_20050101_000000_20050914_080040</a> | 20050101 | 20050914 |
|            | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS2 HV     | RF | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|            | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|            | RF | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|            | RF | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS2 VH     | RF | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|            | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|            | RF | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|            | RF | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS3_SS2 VV | RF | 20020813 | <a href="#">ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|            | RF | 20021018 | <a href="#">ASA_XCA_AXVIEC20021018_121708_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|            | RF | 20030801 | <a href="#">ASA_XCA_AXVIEC20030801_133024_20030428_000000_20031231_000000</a> | 20030428 | 20031231 |

|            |    |          |   |          |          |
|------------|----|----------|---|----------|----------|
|            | RF | 20030801 | ASA_XCA_AXVIEC20030801_134802_20020413_000000_20030211_000000 | 20020413 | 20030211 |
|            | RF | 20030827 | ASA_XCA_AXVIEC20030827_140210_20030211_000000_20031231_000000 | 20030211 | 20031231 |
|            | RF | 20040812 | ASA_XCA_AXVIEC20040812_170224_20040412_000000_20041231_000000 | 20040412 | 20041231 |
|            | RF | 20051013 | ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040 | 20050101 | 20050914 |
|            | RF | 20051013 | ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|            | RF | 20070222 | ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000 | 20070204 | 20071231 |
|            | RF | 20070517 | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000 | 20070204 | 20071231 |
|            | RF | 20080710 | ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000 | 20070204 | 20081231 |
| IS3_SS2 HH | RF | 20021107 | ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000 | 20020413 | 20021231 |
|            | RF | 20030801 | ASA_XCA_AXVIEC20030801_133024_20030428_000000_20031231_000000 | 20030428 | 20031231 |
|            | RF | 20030801 | ASA_XCA_AXVIEC20030801_134802_20020413_000000_20030211_000000 | 20020413 | 20030211 |
|            | RF | 20030827 | ASA_XCA_AXVIEC20030827_140210_20030211_000000_20031231_000000 | 20030211 | 20031231 |
|            | RF | 20031209 | ASA_XCA_AXVIEC20031209_113559_20030211_000000_20041231_000000 | 20030211 | 20041231 |
|            | RF | 20040812 | ASA_XCA_AXVIEC20040812_170224_20040412_000000_20041231_000000 | 20040412 | 20041231 |
|            | RF | 20041027 | ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000 | 20040412 | 20051231 |
|            | RF | 20051013 | ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|            | RF | 20070215 | ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000 | 20070204 | 20071231 |

|            |      |          |   |          |          |
|------------|------|----------|---|----------|----------|
|            | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
|            | RF   | 20080710 | <a href="#">ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000</a> | 20070204 | 20081231 |
| IS3 HV     | SYN. | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|            | RF   | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|            | RF   | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS3 VH     | RF   | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|            | RF   | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|            | RF   | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS4_SS3 VV | RF   | 20020813 | <a href="#">ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|            | RF   | 20021018 | <a href="#">ASA_XCA_AXVIEC20021018_121708_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|            | RF   | 20041027 | <a href="#">ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000</a> | 20040412 | 20051231 |
|            | RF   | 20051013 | <a href="#">ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040</a> | 20050101 | 20050914 |
|            | RF   | 20051013 | <a href="#">ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF   | 20070222 | <a href="#">ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
|            | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |

|            |    |          |   |          |          |
|------------|----|----------|---|----------|----------|
| IS4_SS3 HH | RF | 20021107 | <a href="#">ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|            | RF | 20040812 | <a href="#">ASA_XCA_AXVIEC20040812_170224_20040412_000000_20041231_000000</a> | 20040412 | 20041231 |
|            | RF | 20051013 | <a href="#">ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040</a> | 20050101 | 20050914 |
|            | RF | 20051013 | <a href="#">ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF | 20070215 | <a href="#">ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
|            | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS4 HV     | RF | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|            | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|            | RF | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|            | RF | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS4 VH     | RF | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|            | RF | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|            | RF | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|            | RF | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|            | RF | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS5_SS4 VV | RF | 20020813 | <a href="#">ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |

|            |    |          |   |          |          |
|------------|----|----------|---|----------|----------|
|            | RF | 20021018 | ASA_XCA_AXVIEC20021018_121708_20020413_000000_20021231_000000 | 20020413 | 20021231 |
|            | RF | 20051013 | ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040 | 20050101 | 20050914 |
|            | RF | 20070222 | ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000 | 20070204 | 20071231 |
|            | RF | 20070517 | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000 | 20070204 | 20071231 |
|            | RF | 20080710 | ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000 | 20070204 | 20081231 |
| IS5_SS4 HH | RF | 20021107 | ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000 | 20020413 | 20021231 |
|            | RF | 20040406 | ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000 | 20030211 | 20041231 |
|            | RF | 20041027 | ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000 | 20040412 | 20051231 |
|            | RF | 20051013 | ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|            | RF | 20070215 | ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000 | 20070204 | 20071231 |
|            | RF | 20071218 | ASA_XCA_AXVIEC20071218_082742_20070204_165113_20081231_000000 | 20070204 | 20081231 |
|            | RF | 20080710 | ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000 | 20070204 | 20081231 |
| IS5 HV     | RF | 20021217 | ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000 | 20020413 | 20031231 |
|            | RF | 20040406 | ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000 | 20030211 | 20041231 |
|            | RF | 20060223 | ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000 | 20050101 | 20050914 |
|            | RF | 20060717 | ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000 | 20050916 | 20061231 |
| IS5 VH     | RF | 20021217 | ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000 | 20020413 | 20031231 |

|            |            |          |   |   |          |
|------------|------------|----------|---|---|----------|
|            | RF         | 20040406 | ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000 | 20030211  | 20041231 |
|            | RF         | 20060223 | ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000 | 20050101  | 20050914 |
| IS6_SS5 VV | RF         | 20020813 | ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000 | 20020413  | 20021231 |
|            | RF         | 20021018 | ASA_XCA_AXVIEC20021018_121708_20020413_000000_20021231_000000 | 20020413  | 20021231 |
|            | RF         | 20030801 | ASA_XCA_AXVIEC20030801_133024_20030428_000000_20031231_000000 | 20030428  | 20031231 |
|            | RF         | 20030801 | ASA_XCA_AXVIEC20030801_134802_20020413_000000_20030211_000000 | 20020413  | 20030211 |
|            | RF         | 20030827 | ASA_XCA_AXVIEC20030827_140210_20030211_000000_20031231_000000 | 20030211  | 20031231 |
|            | RF         | 20051013 | ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040 | 20050101  | 20050914 |
|            | RF         | 20070222 | ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000 | 20070204  | 20071231 |
|            | RF         | 20070517 | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000 | 20070204  | 20071231 |
|            | RF         | 20080710 | ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000 | 20070204  | 20081231 |
|            | IS6_SS5 HH | RF       | 20021107  | ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000 | 20020413 |
| RF         |            | 20030801 | ASA_XCA_AXVIEC20030801_133024_20030428_000000_20031231_000000 | 20030428  | 20031231 |
| RF         |            | 20030801 | ASA_XCA_AXVIEC20030801_134802_20020413_000000_20030211_000000 | 20020413  | 20030211 |
| RF         |            | 20030827 | ASA_XCA_AXVIEC20030827_140210_20030211_000000_20031231_000000 | 20030211  | 20031231 |
| RF         |            | 20041027 | ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000 | 20040412  | 20051231 |
| RF         |            | 20051013 | ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040 | 20050101  | 20050914 |

|        |      |          |   |          |          |
|--------|------|----------|---|----------|----------|
|        | RF   | 20051013 | <a href="#">ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|        | RF   | 20070215 | <a href="#">ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
|        | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
|        | RF   | 20080710 | <a href="#">ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000</a> | 20070204 | 20081231 |
| IS6 HV | SYN. | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|        | RF   | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF   | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|        | RF   | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|        | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS6 VH | RF   | 20021217 | <a href="#">ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000</a> | 20020413 | 20031231 |
|        | RF   | 20040406 | <a href="#">ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000</a> | 20030211 | 20041231 |
|        | RF   | 20060223 | <a href="#">ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000</a> | 20050101 | 20050914 |
|        | RF   | 20060717 | <a href="#">ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000</a> | 20050916 | 20061231 |
|        | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS7 VV | RF   | 20020813 | <a href="#">ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |
|        | RF   | 20070517 | <a href="#">ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000</a> | 20070204 | 20071231 |
| IS7 HH | RF   | 20021107 | <a href="#">ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000</a> | 20020413 | 20021231 |



|        |    |          |   |          |          |
|--------|----|----------|---|----------|----------|
|        | RF | 20070517 | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000 | 20070204 | 20071231 |
| IS7 HV | RF | 20021217 | ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000 | 20020413 | 20031231 |
|        | RF | 20060223 | ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000 | 20050101 | 20050914 |
|        | RF | 20060717 | ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|        | RF | 20070517 | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000 | 20070204 | 20071231 |
| IS7 VH | RF | 20021217 | ASA_XCA_AXVIEC20021217_150852_20020413_000000_20031231_000000 | 20020413 | 20031231 |
|        | RF | 20060223 | ASA_XCA_AXVIEC20060223_133247_20050101_000000_20050914_000000 | 20050101 | 20050914 |
|        | RF | 20060717 | ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|        | RF | 20070517 | ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000 | 20070204 | 20071231 |
| SS1 VV | RF | 20020813 | ASA_XCA_AXVIEC20020813_080042_20020413_000000_20021231_000000 | 20020413 | 20021231 |
|        | RF | 20021018 | ASA_XCA_AXVIEC20021018_121708_20020413_000000_20021231_000000 | 20020413 | 20021231 |
|        | RF | 20030801 | ASA_XCA_AXVIEC20030801_133024_20030428_000000_20031231_000000 | 20030428 | 20031231 |
|        | RF | 20030801 | ASA_XCA_AXVIEC20030801_134802_20020413_000000_20030211_000000 | 20020413 | 20030211 |
|        | RF | 20030827 | ASA_XCA_AXVIEC20030827_140210_20030211_000000_20031231_000000 | 20030211 | 20031231 |
|        | RF | 20040406 | ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000 | 20030211 | 20041231 |
|        | RF | 20051013 | ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040 | 20050101 | 20050914 |
|        | RF | 20051013 | ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000 | 20050916 | 20061231 |

|        |    |          |   |          |          |
|--------|----|----------|---|----------|----------|
|        | RF | 20051219 | ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|        | RF | 20070222 | ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000 | 20070204 | 20071231 |
| SS1 HH | RF | 20021107 | ASA_XCA_AXVIEC20021107_144746_20020413_000000_20021231_000000 | 20020413 | 20021231 |
|        | RF | 20030801 | ASA_XCA_AXVIEC20030801_133024_20030428_000000_20031231_000000 | 20030428 | 20031231 |
|        | RF | 20030801 | ASA_XCA_AXVIEC20030801_134802_20020413_000000_20030211_000000 | 20020413 | 20030211 |
|        | RF | 20030827 | ASA_XCA_AXVIEC20030827_140210_20030211_000000_20031231_000000 | 20030211 | 20031231 |
|        | RF | 20040406 | ASA_XCA_AXVIEC20040406_160451_20030211_000000_20041231_000000 | 20030211 | 20041231 |
|        | RF | 20040812 | ASA_XCA_AXVIEC20040812_170224_20040412_000000_20041231_000000 | 20040412 | 20041231 |
|        | RF | 20051013 | ASA_XCA_AXVIEC20051013_152245_20050101_000000_20050914_080040 | 20050101 | 20050914 |
|        | RF | 20051013 | ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|        | RF | 20051219 | ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000 | 20050916 | 20061231 |
|        | RF | 20070215 | ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000 | 20070204 | 20071231 |
|        | RF | 20080710 | ASA_XCA_AXVIEC20080710_133546_20070204_165113_20081231_000000 | 20070204 | 20081231 |

## 7 AUXILIARY FILES UPDATE

### 7.1 *Operational Auxiliary Data Files*

The ASAR auxiliary data files contain information on calibration and instrument parameters. The auxiliary files used at the end of the reporting period for the operational processing of ASAR data in the ENVISAT Ground Segment, are listed below. The three dates in the auxiliary file name are the creation date, start acquisition date and end acquisition date respectively. During the reported period no new auxiliary files have been disseminated.

#### **Processor configuration file (CON)**

##### **Current versions**

[ASA\\_CON\\_AXVIEC20080604\\_143203\\_20050916\\_195733\\_20070204\\_165113](#)  
[ASA\\_CON\\_AXVIEC20080604\\_143539\\_20021017\\_130000\\_20030601\\_000000](#)  
[ASA\\_CON\\_AXVIEC20080610\\_122458\\_20030601\\_000000\\_20050916\\_195733](#)  
[ASA\\_CON\\_AXVIEC20080710\\_132557\\_20070204\\_165113\\_20081231\\_000000](#)

##### **Previous versions**

[ASA\\_CON\\_AXVIEC20071218\\_084201\\_20070204\\_165113\\_20081231\\_000000](#)  
[ASA\\_CON\\_AXVIEC20080610\\_122458\\_20030601\\_000000\\_20050916\\_195733](#)  
[ASA\\_CON\\_AXVIEC20070215\\_183645\\_20050916\\_195733\\_20070204\\_165113](#)  
[ASA\\_CON\\_AXVIEC20070202\\_163902\\_20030601\\_000000\\_20050916\\_195733](#)  
[ASA\\_CON\\_AXVIEC20060614\\_160050\\_20021017\\_130000\\_20030601\\_000000](#)  
[ASA\\_CON\\_AXVIEC20070410\\_140202\\_20070204\\_165113\\_20071231\\_000000](#)  
[ASA\\_CON\\_AXVIEC20070313\\_165336\\_20070314\\_043800\\_20070314\\_045200](#)  
[ASA\\_CON\\_AXVIEC20070320\\_170948\\_20070321\\_003000\\_20070321\\_050000](#)  
[ASA\\_CON\\_AXVIEC20070326\\_152930\\_20070327\\_000000\\_20070328\\_000000](#)  
[ASA\\_CON\\_AXVIEC20070328\\_163753\\_20070329\\_000000\\_20070330\\_120000](#)  
[ASA\\_CON\\_AXVIEC20070212\\_170541\\_20070213\\_214400\\_20070213\\_214900](#)  
[ASA\\_CON\\_AXVIEC20070215\\_184018\\_20070204\\_165113\\_20071231\\_000000](#)  
[ASA\\_CON\\_AXVIEC20070222\\_190441\\_20070204\\_165113\\_20071231\\_000000](#)  
[ASA\\_CON\\_AXVIEC20061107\\_090002\\_20050916\\_195733\\_20071231\\_000000](#)  
[ASA\\_CON\\_AXVIEC20051013\\_151540\\_20050916\\_195733\\_20061231\\_000000](#)  
[ASA\\_CON\\_AXVIEC20050324\\_172815\\_20030601\\_000000\\_20051231\\_000000](#)

#### **External calibration file (XCA)**

##### **Current versions**

[ASA\\_XCA\\_AXVIEC20080710\\_133546\\_20070204\\_165113\\_20081231\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070215\\_184408\\_20050916\\_195733\\_20070204\\_165113](#)  
[ASA\\_XCA\\_AXVIEC20070130\\_111710\\_20050101\\_000000\\_20050914\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070130\\_111449\\_20040412\\_000000\\_20050101\\_000000](#)

[ASA\\_XCA\\_AXVIEC20070130\\_111245\\_20030804\\_000000\\_20040412\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070130\\_111029\\_20030601\\_000000\\_20030804\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070130\\_110635\\_20030211\\_000000\\_20030601\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070130\\_105508\\_20020413\\_000000\\_20030211\\_000000](#)

#### Previous versions

[ASA\\_XCA\\_AXVIEC20071218\\_082742\\_20070204\\_165113\\_20081231\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070517\\_153558\\_20070204\\_165113\\_20071231\\_000000](#)  
[ASA\\_XCA\\_XXXIEC20070222\\_185842\\_20070204\\_165113\\_20071231\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20070215\\_184408\\_20050916\\_195733\\_20070204\\_165113](#)  
[ASA\\_XCA\\_AXVIEC20070215\\_184638\\_20070204\\_165113\\_20071231\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20061221\\_143253\\_20050916\\_195733\\_20071231\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20060717\\_154125\\_20050916\\_195733\\_20061231\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20060620\\_132802\\_20030211\\_000000\\_20030601\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20060620\\_133409\\_20030601\\_000000\\_20030804\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20060620\\_133829\\_20030804\\_000000\\_20040412\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20060620\\_145317\\_20020413\\_000000\\_20030211\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20060223\\_133247\\_20050101\\_000000\\_20050914\\_000000](#)  
[ASA\\_XCA\\_AXVIEC20051013\\_151933\\_20040412\\_000000\\_20050101\\_000000](#)

#### Instrument auxiliary file (INS)

##### Current versions

[ASA\\_INS\\_AXVIEC20071218\\_083603\\_20070307\\_060000\\_20081231\\_000000](#)  
[ASA\\_INS\\_AXVIEC20070227\\_105626\\_20070228\\_060000\\_20071231\\_000000](#)  
[ASA\\_INS\\_AXVIEC20070306\\_164819\\_20070307\\_060000\\_20071231\\_000000](#)  
[ASA\\_INS\\_AXVIEC20061220\\_105425\\_20030211\\_000000\\_20071231\\_000000](#)  
[ASA\\_INS\\_AXVIEC20031209\\_113259\\_20021030\\_110000\\_20030211\\_000000](#)

##### Previous versions

[ASA\\_INS\\_XXXIEC20070223\\_140724\\_20070226\\_000000\\_20071231\\_000000](#)  
[ASA\\_INS\\_AXVIEC20051219\\_161945\\_20030211\\_000000\\_20061231\\_000000](#)  
[ASA\\_INS\\_AXVIEC20031209\\_113259\\_20021030\\_110000\\_20030211\\_000000](#)  
[ASA\\_INS\\_AXVIEC20031212\\_105841\\_20021017\\_162400\\_20021030\\_110000](#)  
[ASA\\_INS\\_AXVIEC20031212\\_122530\\_20020815\\_131000\\_20021017\\_162400](#)

#### External characterization file (XCH)

##### Current version

[ASA\\_XCH\\_AXVIEC20051219\\_162547\\_20020301\\_000000\\_20081231\\_000000](#)

##### Previous versions

[ASA\\_XCH\\_AXVIEC20020308\\_113032\\_20020301\\_000000\\_20021231\\_000000](#)  
[ASA\\_XCH\\_AXVIEC20021018\\_121101\\_20020301\\_000000\\_20021231\\_000000](#)

ASA\_XCH\_AXVIEC20021030\_125700\_20020301\_000000\_20021231\_000000  
ASA\_XCH\_AXVIEC20021217\_151302\_20020301\_000000\_20031231\_000000  
ASA\_XCH\_AXVIEC20031209\_112947\_20020301\_000000\_20041231\_000000  
ASA\_XCH\_AXVIEC20041215\_180350\_20020301\_000000\_20051231\_000000  
ASA\_XCH\_AXVIEC20051219\_162547\_20020301\_000000\_20081231\_000000

These files as well as the previous versions of them can be downloaded from:  
[http://earth.esa.int/services/auxiliary\\_data/asar/](http://earth.esa.int/services/auxiliary_data/asar/).

## 7.2 *Recent Auxiliary File Updates and Description of Changes*

Details of auxiliary file updates are listed below (most recent changes at the end) and those from the current period are boxed:

### **ASA\_XCA\_AXVIEC20041129\_173057\_20020413\_000000\_20030211\_000000**

- ✓ Absolute calibration constant values updated for data acquired during this period. Major changes affect AP IS5 and IS7 products.
- ✓ Other parameters are the same as previous XCA file covering this time period (file created on 20030801).

### **ASA\_XCA\_AXVIEC20041028\_154000\_20030804\_000000\_20040412\_000000**

- ✓ The SS2-VV elevation antenna pattern used for data acquired after 12 April 2004 is also applied now to data acquired after 4 August 2004.
- ✓ New calibration constant (K) for WV IS2 VV after the DSS change in May 2003. Due to the drift observed in the WV K after May2003, the new value is valid since 1 June 2003 till 12 April 2004. The K value for WV IS2 VV for this period is 51571.6
- ✓ Updated elevation antenna pattern for SS3 VV. Valid since 4 Aug 2003.

### **ASA\_CON\_AXVIEC20041027\_165251\_20021017\_130000\_20051231\_000000**

- ✓ File consistent with updated format in PF-ASAR v4.0 (additional parameters in spare fields included and parameters for the new WSS product included).
- ✓ Normalization for WSM products changed to Reference Energy.
- ✓ Updated reference energy values for WSM products (values in dB):
- ✓ HH (from SS1 to SS5): 1.08, 6.96, 7.5, 7.95, 9.13
- ✓ VV (from SS1 to SS5): 1.11, 6.9, 7.5, 7.95, 9.1

### **ASA\_XCA\_AXVIEC20041027\_164238\_20040412\_000000\_20051231\_000000**

- ✓ Updated calibration constant (K) for WV IS2 VV to follow an observed drift. The new K is valid since 12 April 2004 with a value of 50222.9
- ✓ Updated elevation antenna patterns for: SS2 HH, SS4 HH, SS5 HH. They are valid since 12 April 2004.
- ✓ Updated elevation antenna pattern for SS3 VV. Valid since 4 Aug 2003 (this is the same pattern as in file valid from 4-Aug-04 to 12-Apr-04).

**ASA\_XCA\_AXVIEC20041027\_163611\_20030601\_000000\_20030804\_000000**

✓ New calibration constant (K) for WV IS2 after the DSS change in May 2003. Due to the drift observed in the WV K after May2003. The new K is valid since 1 June 2003 till 12 April 2004 with a value of 51571.6

**ASA\_XCA\_AXVIEC20041027\_162907\_20030211\_000000\_20030601\_000000**

✓ Created to use a different K for WV (IS2 VV) before and after May 2003.  
✓ No changes with respect to the previous XCA file covering this time period.

**ASA\_XCA\_AXVIEC20040812\_170224\_20040412\_000000\_20041231\_000000**

✓ Update of elevation antenna pattern for: SS1\_HH, SS2\_IS3\_HH, SS3\_IS4\_HH and SS2\_IS3\_VV.

**ASA\_INS\_AXVIEC20040521\_160843\_20030211\_000000\_20041231\_000000**

✓ GM ISG increased by 1 for all sub-swaths

**ASA\_CON\_AXVIEC20040407\_173947\_20021017\_130000\_20041231\_000000**

✓ Increased GM SS3 HH gain (by decreasing 0.5 dB the Eq. Energy for GM SS3 HH)

**ASA\_XCA\_AXVIEC20040406\_160451\_20030211\_000000\_20041231\_000000**

✓ Updated elevation patterns for: SS1 HH-VV, IS1 VV-VH, IS2 HH-VV-HV-VH, IS4 HV-VH, IS5 HH-HV-VH, IS6 HV-VH

**ASA\_XCA\_AXVIEC20040326\_190217\_20030211\_000000\_20041231\_000000**

✓ Inserted calibration constant for GMM products: 73.4 dB for HH and 74.0 dB for VV.

**ASA\_CON\_AXVIEC20040322\_164757\_20021017\_130000\_20041231\_000000**

✓ Same as last update (20040308): Updated AP Eq. Energy values (different per each polarization).  
✓ Changed AP normalization method from reference energy to equivalent energy.  
✓ Enable DAR for GM.

**ASA\_CON\_AXVIEC20040308\_103426\_20021017\_130000\_20041231\_000000**

✓ Updated AP Eq. Energy values (different per each polarization).  
✓ Changed AP normalization method from reference energy to equivalent energy.  
✓ Enable DAR for GM.

**ASA\_INS\_AXVIEC20031212\_122530\_20020815\_131000\_20021017\_162400**

✓ SWST bias updated.

**ASA\_CON\_AXVIEC20031212\_122409\_20021017\_130000\_20041231\_000000**

✓ End validity date extended till 31-12-2004

**ASA\_INS\_AXVIEC20031212\_105841\_20021017\_162400\_20021030\_110000**

- ✓ SWST bias updated

**ASA\_CON\_AXVIEC20031212\_105603\_20021017\_130000\_20031231\_000000**

- ✓ Dates adjusted to previous ASA\_CON\_AX version from 09-09-03.

**ASA\_XCA\_AXVIEC20031209\_113559\_20030211\_000000\_20041231\_000000**

- ✓ End validity time extended until 31 December 2004.
- ✓ Elevation antenna patterns updated for: IS1 VV, IS1 HH, IS1 VH, IS2 VV and SS2\_IS3 HH.

**ASA\_INS\_AXVIEC20031209\_113421\_20030211\_000000\_20041231\_000000**

- ✓ SWST Bias updated.
- ✓ End validity time extended until 31 December 2004.

**ASA\_INS\_AXVIEC20031209\_113259\_20021030\_110000\_20030211\_000000**

- ✓ SWST Bias updated

**ASA\_XCH\_AXVIEC20031209\_112947\_20020301\_000000\_20041231\_000000**

- ✓ End validity time extended until 31 December 2004

**ASA\_CON\_AXVIEC20031209\_112721\_20020301\_000000\_20041231\_000000**

- ✓ End validity time extended until 12 December 2004

**ASA\_CON\_AXVIEC20041215\_175442\_20030601\_000000\_20051231\_000000**

- ✓ Image mode (IM) Reference Energy updated for data acquired after the DSS redundancy change in May 2003. IM Reference Energy before the DSS redundancy change can be found in the ASA\_CON\_AXVIEC20041215\_180008\_20021017\_130000\_20030601\_000000 file. End validity time extended to 31-DEC-2005.

**ASA\_CON\_AXVIEC20041215\_180008\_20021017\_130000\_20030601\_000000**

- ✓ File created to have different reference energy values before/after the DSS change after May 2003.

**ASA\_XCH\_AXVIEC20041215\_180350\_20020301\_000000\_20051231\_000000**

- ✓ End validity time extended to 31-DEC-2005.

**ASA\_INS\_AXVIEC20041215\_180208\_20030211\_000000\_20051231\_000000**

- ✓ End validity time extended to 31-DEC-2005.

**ASA\_CON\_AXVIEC20050324\_172815\_20030601\_000000\_20051231\_000000**

- ✓ WSS processing gain values set.

**ASA\_XCA\_AXXIEC20050803\_151858\_20020413\_000000\_20030211\_000000**

- ✓ Inserted calibration constant values for ASA\_WSS\_1P product HH & VV (=80.28 dB)

**ASA\_XCA\_AXXIEC20050803\_150715\_20030211\_000000\_20030601\_000000**

✓ Inserted calibration constant values for ASA\_WSS\_1P product HH & VV (=80.28 dB)

**ASA\_XCA\_AXXIEC20050803\_151318\_20030601\_000000\_20030804\_000000**

✓ Inserted calibration constant values for ASA\_WSS\_1P product HH & VV (=80.28 dB)

**ASA\_XCA\_AXXIEC20050803\_151945\_20030804\_000000\_20040412\_000000**

✓ Inserted calibration constant values for ASA\_WSS\_1P product HH & VV (=80.28 dB)

**ASA\_XCA\_AXXIEC20050803\_152145\_20040412\_000000\_20051231\_000000**

✓ Inserted calibration constant values for ASA\_WSS\_1P product HH & VV (=80.28 dB)

**ASA\_CON\_AXVIEC20051013\_151540\_20050916\_195733\_20061231\_000000**

✓ Update after the antenna maintenance, refinement operation performed on 16 Sep.2005. Eq.Energy updated for WS HH SS1,SS5 and GM HH SS1 Change in Eq. Energy for: WS HH SS1: from 1.08 dB to 1.15 dB, WS HH SS3: from 9.13 dB to 9.20 dB, GM HH SS1: from 16.43 dB to 16.73 dB

**ASA\_XCA\_AXVIEC20051013\_151933\_20040412\_000000\_20050101\_000000**

✓ Same content as:ASA\_XCA\_AXVIEC20050803\_152145\_20040412\_000000\_20051231\_000000 but split due to changes in the antenna patterns from Jan05

**ASA\_XCA\_AXVIEC20051013\_152245\_20050101\_000000\_20050914\_080040**

✓ Changes in the ScanSAR elevation antenna patterns. New patterns valid from Jan 2005 till 14 Sep.2005. Updated elevation patters: IS3\_SS2 VV, IS4\_SS3 HH & VV, IS5\_SS4 VV, IS6\_SS5 HH & VV, SS1 HH & VV

**ASA\_XCA\_AXVIEC20051013\_152531\_20050916\_195733\_20061231\_000000**

✓ Updated ScanSAR elevation antenna patterns since antenna maintenance refinement on 16 Sep.05. K for WS HH & VV updated as well. Updated elevation patters: IS3\_SS2 HH & VV, IS4\_SS3 HH & VV, IS5\_SS4 HH, IS6\_SS5 HH, SS1 HH & VV. Updated K: WSM HH K: 6309573.44, WSM VV K: 7413102.41

**ASA\_XCA\_AXVIEC20051103\_160021\_20050101\_000000\_20050914\_080040**

✓ Updated of elevation antenna patterns for: IS2 HH and IS2 VV before the antenna maintenance. New patterns valid from Jan 2005 till 14 Sep.2005. Updated elevation patters: IS2 HH & VV

**ASA\_XCA\_AXVIEC20051219\_162245\_20050916\_195733\_20061231\_000000**

✓ User description: Elevation antenna patterns for SS1 HH & VV updated

**ASA\_INS\_AXVIEC20051219\_161945\_20030211\_000000\_20061231\_000000**

✓ User description: End validity date extended till December 2006



**[ASA\\_XCH\\_AXVIEC20051219\\_162547\\_20020301\\_000000\\_20081231\\_000000](#)**

✓ User description: End validity date extended till December 2008

**[ASA\\_XCA\\_AXVIEC20060223\\_133247\\_20050101\\_000000\\_20050914\\_000000](#)**

✓ User description: elevation antenna pattern update for beams IS1 to IS7 and polarisation HV and VH

**[ASA\\_CON\\_AXVIEC20060614\\_160050\\_20021017\\_130000\\_20030601\\_000000](#)**

✓ User description: Processing gain for WSS products updated. Set to same value as for products acquired after 2003-06-01.

**[ASA\\_XCA\\_AXVIEC20060620\\_132802\\_20030211\\_000000\\_20030601\\_000000](#)**

✓ User description: Update of the reference document in the MPH

**[ASA\\_XCA\\_AXVIEC20060620\\_133409\\_20030601\\_000000\\_20030804\\_000000](#)**

✓ User description: Update of the reference document in the MPH

**[ASA\\_XCA\\_AXVIEC20060620\\_133829\\_20030804\\_000000\\_20040412\\_000000](#)**

✓ User description: Update of the reference document in the MPH

**[ASA\\_XCA\\_AXVIEC20060620\\_145317\\_20020413\\_000000\\_20030211\\_000000](#)**

✓ User description: Update of the reference document in the MPH

**[ASA\\_XCA\\_AXVIEC20060717\\_154125\\_20050916\\_195733\\_20061231\\_000000](#)**

✓ User description: The following ASAR antenna patterns have been updated: IS1 HV & VH, IS2 HV & VH, IS3 HV & VH, IS4 HV & VH, IS5 HV, IS6 HV & VH, IS7 HV & VH

**[ASA\\_CON\\_AXVIEC20061107\\_090002\\_20050916\\_195733\\_20071231\\_000000](#)**

✓ User description: Update of the reference chirp energy value for Image Mode, beam IS2, polarisation VV

**[ASA\\_XCA\\_AXVIEC20061221\\_143253\\_20050916\\_195733\\_20071231\\_000000](#)**

✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**[ASA\\_INS\\_AXVIEC20061220\\_105425\\_20030211\\_000000\\_20071231\\_000000](#)**

✓ User description: End validity date extended to 31 December 2007

**[ASA\\_XCA\\_AXVIEC20070130\\_105508\\_20020413\\_000000\\_20030211\\_000000](#)**

✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**[ASA\\_XCA\\_AXVIEC20070130\\_110635\\_20030211\\_000000\\_20030601\\_000000](#)**

- ✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**ASA\_XCA\_AXVIEC20070130\_111245\_20030804\_000000\_20040412\_000000**

- ✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**ASA\_XCA\_AXVIEC20070130\_111029\_20030601\_000000\_20030804\_000000**

- ✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**ASA\_XCA\_AXVIEC20070130\_111449\_20040412\_000000\_20050101\_000000**

- ✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**ASA\_XCA\_AXVIEC20070130\_111710\_20050101\_000000\_20050914\_000000**

- ✓ User description: Update of the calibration constant for the following ASAR products: IMM, APM, APP, APS, APG, IMP, IMG, IMS

**ASA\_CON\_AXVIEC20070202\_163902\_20030601\_000000\_20050916\_195733**

- ✓ User description: Update of the end validity date

**ASA\_CON\_AXVIEC20070212\_170541\_20070213\_214400\_20070213\_214900**

- ✓ User description: Update of the end validity date. User description: Enable Doppler Grid ADS creation for ASA\_WSM\_1P products(Validity covers a single segment over Antarctica)

**ASA\_CON\_AXVIEC20070215\_183645\_20050916\_195733\_20070204\_165113**

- ✓ User description: Update of the end validity date

**ASA\_CON\_AXVIEC20070215\_184018\_20070204\_165113\_20071231\_000000**

- ✓ User description: Update of the reference chirp energy values for IM and WSM products

**ASA\_XCA\_AXVIEC20070215\_184408\_20050916\_195733\_20070204\_165113**

- ✓ User description: Update of the end validity date

**ASA\_XCA\_AXVIEC20070215\_184638\_20070204\_165113\_20071231\_000000**

- ✓ User description: Update of the Antenna elevation pattern gain for HH polarisation for the swaths SS1, IS3/SS2, IS4/SS3, IS5/SS4, IS6/SS5

**ASA\_XCA\_AXVIEC20070222\_185842\_20070204\_165113\_20071231\_000000**

- ✓ User description: For VV polarisation the following antenna elevation pattern have been updated: SS1,IS3\_SS2,IS4\_SS3,IS5\_SS4,IS6\_SS5

**ASA\_CON\_AXVIEC20070222\_190441\_20070204\_165113\_20071231\_000000**

- ✓ User description: Update of the reference chirp energy values for WS products, polarisation VV, swaths SS4,SS5

**ASA\_INS\_AXVIEC20070223\_140724\_20070226\_000000\_20071231\_000000**

- ✓ User description: Update of the M value from 277 to 194 for AP mode, swath IS5 for the AP IS5 test over critical ANX range, planned from 26th Feb 2007 to 17th Mar 2007

**ASA\_INS\_AXVIEC20070227\_105626\_20070228\_060000\_20071231\_000000**

- ✓ User description: Number of pulses per burst for all AP swaths (but IS1) reduced to 194 (same as IS1). Expected to solve/improve the on-board anomalies related to AP usage. CTI-s (CTI\_AIx) will be updated from same start validity date

**ASA\_INS\_AXVIEC20070306\_164819\_20070307\_060000\_20071231\_000000**

- ✓ User description: Update of the number of pulses per burst for all AP swaths IS1=194, IS2=196, IS3=257, IS4=218, IS5=194, IS6=238, IS7=297.

**ASA\_CON\_AXVIEC20070313\_165336\_20070314\_043800\_20070314\_045200**

- ✓ User description: Enable Doppler Grid ADS creation for ASA\_WSM\_1P products (validity covers 2 segments over Antarctica).

**ASA\_CON\_AXVIEC20070320\_170948\_20070321\_003000\_20070321\_050000**

- ✓ User description: Enable WSM Doppler grid for few orbits at PDHS-E.

**ASA\_CON\_AXVIEC20070326\_152930\_20070327\_000000\_20070328\_000000**

- ✓ User description: WSM Doppler grid enabled both at PDHS-K and PDHS-E on 27 march 2007 (24 hours in total).

**ASA\_CON\_AXVIEC20070328\_163753\_20070329\_000000\_20070330\_120000**

- ✓ User description: WSM Doppler grid added at PDHS-E and PDHS-K for 1.5 days.

**ASA\_CON\_AXVIEC20070410\_140202\_20070204\_165113\_20071231\_000000**

- ✓ User description: WSM Doppler grid enabled for the period covered by the latest operational CON file (Feb07-Dec07). Equivalent Energy values updated for IM and WS.

**ASA\_XCA\_AXVIEC20070517\_153558\_20070204\_165113\_20071231\_000000**

- ✓ User description: The following antenna elevation patterns have been updated using data acquired over Amazon RF: IS1[VV, VH], IS2[HH, VV, HV, VH], IS3[HH, VV, HV, VH], IS4[HH, VV, HV, VH], IS5[VV], IS6[HH, VV, HV, VH], IS7[HH, VV, HV, VH].

**ASA\_CON\_AXVIEC20071218\_084201\_20070204\_165113\_20081231\_000000**

- ✓ User description: Extension of the end validity date to 31 December 2008. Update of the reference document to PO-RS-MDA-GS-2009\_08\_4B

**ASA\_INS\_AXVIEC20071218\_083603\_20070307\_060000\_20081231\_000000**

- ✓ User description: Extension of the end validity date to 31 December 2008. Update of the reference document to PO-RS-MDA-GS-2009\_08\_4B.

**ASA\_XCA\_AXVIEC20071218\_082742\_20070204\_165113\_20081231\_000000**

- ✓ User description: The following antenna elevation patterns have been updated using data acquired over Amazon RF: IS1 [HH], IS5 [HH]. Extension of the end validity date to 31 December 2008. Update of the reference document to PO-RS-MDA-GS-2009\_08\_4B.

**ASA\_CON\_AXVIEC20080604\_143203\_20050916\_195733\_20070204\_165113**

- ✓ User description: Enabled “Doppler Centroid Grid ADS” for ASAR WSM products.

**ASA\_CON\_AXVIEC20080604\_143539\_20021017\_130000\_20030601\_000000**

- ✓ User description: Enabled “Doppler Centroid Grid ADS” for ASAR WSM products.

**ASA\_CON\_AXVIEC20080610\_122458\_20030601\_000000\_20050916\_195733**

- ✓ User description: Enabled “Doppler Centroid Grid ADS” for ASAR WSM products.

**ASA\_XCA\_AXVIEC20080710\_133546\_20070204\_165113\_20081231\_000000**

- ✓ User description: The following elevation antenna patterns have been updated: SS1[HH], IS1[HH], IS1[VV], IS3\_SS2[HH], IS3\_SS2[VV], IS4\_SS3[HH], IS5\_SS4[HH], IS5\_SS4[VV], IS6\_SS5[HH], IS6\_SS5[VV].

**ASA\_CON\_AXVIEC20080710\_132557\_20070204\_165113\_20081231\_000000**

- ✓ User description: Updated reference chirp energy values for WSM products, HH and VV polarisations.

## APPENDIX A : INSTRUMENT UNAVAILABILITIES LIST

| Unavailability report reference | Start                                | Stop                                 |
|---------------------------------|--------------------------------------|--------------------------------------|
| EN-UNA-2004/0111                | 14/04/2004 02:45:00                  | 14/04/2004 13:40:00                  |
| EN-UNA-2004/0114                | 20/04/2004 08:15:46                  | 20/04/2004 08:23:31                  |
| EN-UNA-2004/0118                | 20/04/2004 10:00:54                  | 20/04/2004 11:56:40                  |
| EN-UNA-2004/0124                | 26/04/2004 21:32:03                  | 27/04/2004 09:41:43                  |
| EN-UNA-2004/0125                | 29/04/2004 08:32:08                  | 29/04/2004 10:18:18                  |
| EN-UNA-2004/0129                | 02/05/2004 21:32:47                  | 03/05/2004 09:41:44                  |
| EN-UNA-2004/0176                | 12/07/2004 11:21:46                  | 12/07/2004 18:01:40                  |
| EN-UNA-2004/0191                | 04/08/2004 09:19:00                  | 04/08/2004 09:26:00                  |
| EN-UNA-2004/0193                | 05/08/2004 23:07:33                  | 05/08/2004 23:43:27                  |
| EN-UNA-2004/0229                | 12/09/2004 10:54:47                  | 12/09/2004 11:12:40                  |
| EN-UNA-2004/0246                | 23/09/2004 06:13:17                  | 23/09/2004 09:55:38                  |
| EN-UNA-2004/0252                | 26/09/2004 21:24:58                  | 27/09/2004 11:02:04                  |
| EN-UNA-2004/0261                | 17/10/2004 02:28:31                  | 17/10/2004 07:45:11                  |
| EN-UNA-2004/0265                | 01/11/2004 05:00:40                  | 01/11/2004 05:01:40                  |
| EN-UNA-2004/0268                | 03/11/2004 09:59:30<br>Orbit = 14004 | 03/11/2004 10:04:58<br>Orbit = 14004 |
| EN-UNA-2004/0270                | 07/11/2004 03:41:28<br>Orbit=14054   | 07/11/2004 08:00:03<br>Orbit=14060   |
| EN-UNA-2004/0276                | 12/11/2004 21:46:59<br>Orbit = 14140 | 12/11/2004 23:43:46<br>Orbit = 14141 |
| EN-UNA-2004/0281                | 16/11/2004 02:34:15<br>Orbit = 14185 | 16/11/2004 03:16:49<br>Orbit = 14186 |
| EN-UNA-2004/0290                | 21/11/2004 19:36:58<br>Orbit = 14267 | 21/11/2004 22:19:32<br>Orbit = 14269 |
| EN-UNA-2004/0299                | 29/11/2004 00:42:03<br>Orbit = 14370 | 29/11/2004 03:09:35<br>Orbit = 14372 |
| EN-UNA-2004/0307                | 05/12/2004 15:06:14<br>Orbit = 14465 | 05/12/2004 15:35:42<br>Orbit = 14465 |
| EN-UNA-2004/0309                | 09/12/2004 00:32:56<br>Orbit=14513   | 09/12/2004 00:56:03<br>Orbit=14514   |
| EN-UNA-2004/0314                | 27/12/2004 01:50:26<br>Orbit=14772   | 27/12/2004 07:10:58<br>Orbit=14775   |

|                  |  |  |
|------------------|--|--|
| EN-UNA-2005/0002 | 01/01/2005 20:17:59<br>Orbit=14854     | 01/01/2005 22:37:38<br>Orbit=14856     |
| EN-UNA-2005/0005 | 07/01/2005 03:00:00<br>Orbit=14936     | 07/01/2005 13:00:00<br>Orbit=14936     |
| EN-UNA-2005/0010 | 07/01/2005 13:00:00<br>Orbit=14936     | 07/01/2005 18:20:00<br>Orbit=14939     |
| EN-UNA-2005/0011 | 09/01/2005 06:39:29<br>Orbit=14961     | 09/01/2005 06:45:03<br>Orbit=14961     |
| EN-UNA-2005/0020 | 20/01/2005 16:49:16<br>Orbit = 15124   | 20/01/2005 17:05:23<br>Orbit = 15125   |
| EN-UNA-2005/0032 | 27/01/2005 19:59:57<br>Orbit = 15226   | 27/01/2005 22:52:29<br>Orbit = 15228   |
| EN-UNA-2005/0039 | 05/02/2005 06:12:44<br>Orbit = 15347   | 05/02/2005 09:46:32<br>Orbit = 15349   |
| EN-UNA-2005/0009 | 09/02/2005 08:38:15<br>Orbit = 15406   | 10/02/2005 00:17:26<br>Orbit = 15415   |
| EN-UNA-2005/0054 | 21/02/2005 14:07:52<br>Orbit=15581     | 21/02/2005 15:53:57<br>Orbit=15582     |
| EN-UNA-2005/0071 | 10/03/2005 10:38:15<br>Orbit = 15822   | 10/03/2005 10:49:45<br>Orbit = 15822   |
| EN-UNA-2005/0072 | 10/03/2005 20:02:46<br>Orbit = 15828   | 10/03/2005 22:00:18<br>Orbit = 15829   |
| EN-UNA-2005/0073 | 12/03/2005 15:51:15<br>Orbit = 15854   | 12/03/2005 15:56:28<br>Orbit = 15854   |
| EN-UNA-2005/0078 | 17 Mar 2005 01:00:00<br>Orbit = 15917  | 17 Mar 2005 13:00:00<br>Orbit = 15924  |
| EN-UNA-2005/0093 | 22/03/2005 09:03:10<br>Orbit = 15993   | 22/03/2005 09:09:10<br>Orbit = 15993   |
| EN-UNA-2005/0103 | 02/04/2005 02:48:28<br>Orbit = 16147   | 02/04/2005 06:35:25<br>Orbit = 16149   |
| EN-UNA-2005/0109 | 06/04/2005 02:53:21<br>Orbit = 16204   | 06/04/2005 06:10:08<br>Orbit = 16206   |
| EN-UNA-2005/0113 | 13 /04/ 2005 20:21:40<br>Orbit = 16315 | 13 /04/ 2005 20:21:40<br>Orbit = 16315 |
| EN-UNA-2005/0125 | 21/04/2005 04:17:47<br>Orbit = 16419   | 21/04/2005 04:17:47<br>Orbit = 16419   |
| EN-UNA-2005/0149 | 12 /05/ 2005 10:50:00<br>Orbit = 16724 | 12 /05/ 2005 10:50:00<br>Orbit = 16724 |

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|------------------|--|--|
| EN-UNA-2005/0159 | 18/05/2005 01:49:01<br>Orbit = 16804   | 18/05/2005 01:49:01<br>Orbit = 16804   |
| EN-UNA-2005/0161 | 18 /05/ 2005 13:57:30<br>Orbit = 16812 | 18 /05/ 2005 13:57:30<br>Orbit = 16812 |
| EN-UNA-2005/0164 | 20/05/2005 12:09:50<br>Orbit = 16839   | 20/05 2005 12:09:50<br>Orbit = 16839   |
| EN-UNA-2005/0182 | 01/06/2005 16:44:17 Orbit<br>= 17014   | 01/06/2005 16:51:19<br>Orbit = 17014   |
| EN-UNA-2005/0188 | 06/06/2005 08:11:25 Orbit<br>= 17080   | 06/06/2005 09:42:14<br>Orbit = 17081   |
| EN-UNA-2005/0190 | 11/06/2005 03:19:14<br>Orbit = 17149   | 11/06/2005 06:35:30<br>Orbit = 17151   |
| EN-UNA-2005/0212 | 01/07/2005 13:54:40<br>Orbit = 17442   | 01/07/2005 16:14:21<br>Orbit = 17443   |
| EN-UNA-2005/0216 | 04/07/2005 02:55:43<br>Orbit = 17478   | 04/07/2005 06:13:02<br>Orbit = 17480   |
| EN-UNA-2005/0223 | 5/07/2005 17:16:39<br>Orbit = 17501    | 5/07/2005 17:27:11<br>Orbit = 17501    |
| EN-UNA-2005/0231 | 10/07/2005 11:15:25<br>Orbit = 17569   | 10/07/2005 11:22:12<br>Orbit = 17569   |
| EN-UNA-2005/0239 | 16/07/2005 21:03:12<br>Orbit = 17661   | 16/07/2005 21:09:19<br>Orbit = 17661   |
| EN-UNA-2005/0258 | 24/07/2005 07:22:41<br>Orbit = 17767   | 24/07/2005 07:31:40<br>Orbit = 17767   |
| EN-UNA-2005/0269 | 03/08/2005 22:01:30<br>Orbit = 17919   | 03/10/2005 22:08:56<br>Orbit = 17919   |
| EN-UNA-2005/0285 | 15/08/2005 03:41:02<br>Orbit = 18080   | 15/08/2005 07:33:52<br>Orbit = 18082   |
| EN-UNA-2005/0305 | 22/08/2005 01:25:33 Orbit<br>= 18178   | 22/08/2005 08:50:14<br>Orbit = 18183   |
| EN-UNA-2005/0325 | 24/08/2005 07:50:16 Orbit<br>= 18211   | 24/08/2005 07:55:55<br>Orbit = 18211   |
| EN-UNA-2005/0350 | 31/08/2005 04:11:27 Orbit<br>= 18309   | 31/08/2005 07:37:21<br>Orbit = 18309   |
| EN-UNA-2005/0357 | 06/09/2005 21:02:54 Orbit<br>= 18405   | 06/09/2005 21:33:29<br>Orbit = 18405   |
| EN-UNA-2005/0355 | 07/09/2005 04:20:00 Orbit<br>= 18409   | 07/09/2005 13:40:00<br>Orbit = 18415   |
| EN-UNA-2005/0365 | 14/09/2005 07:51:31 Orbit<br>= 18511   | 14/09/2005 12:53:26<br>Orbit = 18514   |
| EN-UNA-2005/0440 | 21/10/2005 09:22:00 Orbit<br>= 19042   | 21/10/2005 09:34.58<br>Orbit = 19042   |

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|------------------|---|--|
| EN-UNA-2005/0441 | 23/10/2005 14:46:45 Orbit<br>= 19074      | 23/10/2005 14:46:55<br>Orbit = 19074     |
| EN-UNA-2005/0465 | 20/11/2005 23:20:25 Orbit<br>= 19480      | 20/11/2005 23:28:50<br>Orbit = 19480     |
| EN-UNA-2005/0473 | 11/12/2005 14:04:37.000<br>Orbit = 19775  | 11/12/2005 14:14:52.000<br>Orbit = 19775 |
| EN-UNA-2005/0477 | 18/12/2005 03:45:26.000<br>Orbit = 19869  | 18/12/2005 07:11:19.000<br>Orbit = 19871 |
| EN-UNA-2006/0009 | 9 Jan 2006 07:22:23.000<br>Orbit = 20186  | 9 Jan 2006 09:05:12.000<br>Orbit = 20187 |
| EN-UNA-2006/0022 | 25 Jan 2006 20:24:55.000<br>Orbit = 20423 | 25 Jan 2006 20:31:34.000<br>Orbit 20423  |
| EN-UNA-2006/0038 | 07/02/2006 01:34:22.000<br>Orbit = 20598  | 07/02/2006 05:19:30.000<br>Orbit = 20600 |
| EN-UNA-2006/0052 | 17/02/2006 02:45:18.000<br>Orbit = 20741  | 17/02/2006 06:41:47.000<br>Orbit = 20744 |
| EN-UNA-2006/0060 | 19/02/2006 15:08:07.273<br>Orbit = 20777  | 19/02/2006 15:10:44.706<br>Orbit = 20778 |
| EN-UNA-2006/0069 | 22/02/2006 11:00:16.000<br>Orbit = 20818  | 22/02/2006 11:21:32.000<br>Orbit = 20818 |
| EN-UNA-2006/0073 | 24/02/2006 02:19:08.441<br>Orbit = 20841  | 24/02/2006 02:23:14.554<br>Orbit = 20841 |
| EN-UNA-2006/0084 | 28/02/2006 07:39:56.000<br>Orbit = 20902  | 28/02/2006 07:49:38.000<br>Orbit = 20902 |
| EN-UNA-2006/0102 | 20/03/2006 07:03:30.000<br>Orbit = 21188  | 20/03/2006 07:20:49.559<br>Orbit = 21188 |
| EN-UNA-2006/0108 | 28/03/2006 00:39:22.000<br>Orbit = 21298  | 28/03/2006 13:13:20.000<br>Orbit = 21306 |
| EN-UNA-2006/0120 | 06/04/2006 02:09:26.446<br>Orbit = 21428  | 10/04/2006 17:23:03.000<br>Orbit = 21495 |
| EN-UNA-2006/0122 | 12/04/2006 20:14:00.000<br>Orbit = 21525  | 12/04/2006 20:19:54.776<br>Orbit = 21525 |
| EN-UNA-2006/0130 | 19/04/2006 08:18:12.000<br>Orbit = 21618  | 19/04/2006 12:00:36.000<br>Orbit = 21620 |
| EN-UNA-2006/0136 | 24/04/2006 07:09:20.000<br>Orbit = 21525  | 24/04/2006 07:16:59.000<br>Orbit = 21689 |
| EN-UNA-2006/0140 | 25/04/2006 14:55:00.000<br>Orbit = 21708  | 25/04/2006 15:02:48.000<br>Orbit = 21708 |
| EN-UNA-2006/0143 | 30/04/2006 13:55:00.000<br>Orbit = 21779  | 30/04/2006 14:04:03.000<br>Orbit = 21779 |
| EN-UNA-2006/0151 | 10/05/2006 19:59:10.000<br>Orbit = 21926  | 10/05/2006 20:01:38.000<br>Orbit = 21926 |



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|------------------|--|--|
| EN-UNA-2006/0155 | 11/05/2006 06:33:32.000<br>Orbit = 21932 | 11/05/2006 06:41:29.000<br>Orbit = 21932 |
| EN-UNA-2006/0167 | 22/05/2006 11:04:00.000<br>Orbit = 22092 | 22/05/2006 11:23:16.000<br>Orbit = 22092 |
| EN-UNA-2006/0171 | 25/05/2006 07:39:00.000<br>Orbit = 22133 | 25/05/2006 07:45:47.000<br>Orbit = 22133 |
| EN-UNA-2006/0185 | 03/06/2006 22:31:12.000<br>Orbit = 22271 | 04/06/2006 00:37:03.000<br>Orbit = 22272 |
| EN-UNA-2006/0186 | 04/06/2006 20:07:16.000<br>Orbit = 22283 | 04/06/2006 22:58:54.000<br>Orbit = 22285 |
| EN-UNA-2006/0188 | 10/06/2006 20:17:47.000<br>Orbit = 22369 | 10/06/2006 22:35:24.000<br>Orbit = 22371 |
| EN-UNA-2006/0190 | 13/06/2006 07:14:05.000<br>Orbit = 22405 | 13/06/2006 07:18:46.000<br>Orbit = 22405 |
| EN-UNA-2006/0200 | 22/06/2006 17:42:40.000<br>Orbit = 22540 | 22/06/2006 17:49:40.000<br>Orbit = 22540 |
| EN-UNA-2006/0204 | 24/06/2006 07:17:00.000<br>Orbit = 22562 | 24/06/2006 07:23:52.000<br>Orbit = 22562 |
| EN-UNA-2006/0212 | 01/07/2006 08:09:30.000<br>Orbit = 22663 | 01/07/2006 08:16:10.000<br>Orbit = 22663 |
| EN-UNA-2006/0230 | 26/07/2006 13:28:00.000<br>Orbit = 23024 | 26/07/2006 13:41:43.000<br>Orbit = 23024 |
| EN-UNA-2006/0235 | 2/8/2006 13:30:01.335<br>Orbit = 23124   | 2/08/2006 13:33:09.238<br>Orbit = 23124  |
| EN-UNA-2006/0237 | 4/8/2006 10:21:22.000<br>Orbit = 23151   | 4/8/2006 10:30:10.000<br>Orbit = 23151   |
| EN-UNA-2006/0240 | 8/8/2006 08:19:23.000<br>Orbit = 23207   | 8/8/2006 08:28:56.000<br>Orbit = 23207   |
| EN-UNA-2006/0248 | 14/8/2006 15:20:59.000<br>Orbit = 23297  | 14/8/2006 15:24:38.000<br>Orbit = 23297  |
| EN-UNA-2006/0254 | 21/8/2006 14:47:52.107<br>Orbit = 23397  | 21/8/2006 14:55:47.108<br>Orbit = 23397  |
| EN-UNA-2006/0257 | 24/8/2006 16:40:50.000<br>Orbit = 23441  | 24/8/2006 16:47:19.000<br>Orbit = 23441  |
| EN-UNA-2006/0261 | 29/8/2006 09:12:28.052<br>Orbit = 23508  | 29/8/2006 12:35:07.052<br>Orbit = 23508  |
| EN-UNA-2006/0263 | 03/09/2006 06:20:00.000<br>Orbit = 23578 | 03/09/2006 06:28:16.000<br>Orbit = 23578 |
| EN-UNA-2006/0266 | 03/09/2006 17:59:17.000<br>Orbit = 23585 | 03/09/2006 18:07:40.000<br>Orbit = 23585 |
| EN-UNA-2006/0280 | 16/09/2006 14:12:15.000<br>Orbit = 23769 | 16/09/2006 16:21:03.000<br>Orbit = 23770 |
| EN-UNA-2006/0290 | 23/09/2006 13:53:10.877                  | 23/09/2006 16:00:55.216                  |

|                  |  |  |
|------------------|--|--|
|                  | Orbit = 23869                            | Orbit = 23870                            |
| EN-UNA-2006/0298 | 1/10/2006 14:43:21.000<br>Orbit = 23984  | 1/10/2006 16:41:12.000<br>Orbit = 23985  |
| EN-UNA-2006/0299 | 2/10/2006 14:10:16.000<br>Orbit = 23998  | 2/10/2006 14:33:51.000<br>Orbit = 23998  |
| EN-UNA-2006/0300 | 3/10/2006 13:38:04.000<br>Orbit = 24012  | 3/10/2006 13:57:04.000<br>Orbit = 24012  |
| EN-UNA-2006/0303 | 6/10/2006 10:57:34.000<br>Orbit = 24053  | 6/10/2006 11:15:30.000<br>Orbit = 24053  |
| EN-UNA-2006/0307 | 14/10/2006 13:38:33.000<br>Orbit = 24169 | 14/10/2006 13:38:52.000<br>Orbit = 24169 |
| EN-UNA-2006/0314 | 17/10/2006 19:53:41.000<br>Orbit = 24216 | 17/10/2006 20:00:54.000<br>Orbit = 24216 |
| EN-UNA-2006/0316 | 18/10/2006 14:07:37.000<br>Orbit = 24227 | 18/10/2006 16:15:23.000<br>Orbit = 24228 |
| EN-UNA-2006/0322 | 24/10/2006 09:35:01.000<br>Orbit = 24310 | 24/10/2006 09:42:25.000<br>Orbit = 24310 |
| EN-UNA-2006/0333 | 02/11/2006 14:30:52.000<br>Orbit = 24442 | 02/11/2006 16:48:39.000<br>Orbit = 24443 |
| EN-UNA-2006/0338 | 08/11/2006 14:50:09.000<br>Orbit = 24528 | 08/11/2006 16:51:03.000<br>Orbit = 24529 |
| EN-UNA-2006/0342 | 15/11/2006 16:10:05.724<br>Orbit = 24629 | 15/11/2006 18:05:13.248<br>Orbit = 24630 |
| EN-UNA-2006/0343 | 20/11/2006 13:30:36.000<br>Orbit = 24699 | 20/11/2006 14:04:27.000<br>Orbit = 24699 |
| EN-UNA-2006/0345 | 22/11/2006 06:56:58.000<br>Orbit = 24723 | 22/11/2006 07:27:33.000<br>Orbit = 24724 |
| EN-UNA-2006/0350 | 24/11/2006 14:49:34.000<br>Orbit = 24757 | 24/11/2006 15:09:01.000<br>Orbit = 24757 |
| EN-UNA-2006/0357 | 28/11/2006 07:58:29.000<br>Orbit = 24810 | 30/11/2006 13:29:00.000<br>Orbit = 24842 |
| EN-UNA-2006/0360 | 01/12/2006 12:44:47.000<br>Orbit = 24856 | 01/12/2006 13:16:28.000<br>Orbit = 24856 |
| EN-UNA-2006/0362 | 02/12/2006 01:46:48.000<br>Orbit = 24863 | 02/12/2006 07:38:30.000<br>Orbit = 24867 |
| EN-UNA-2006/0364 | 04/12/2006 12:50:04.000<br>Orbit = 24899 | 04/12/2006 13:24:50.000<br>Orbit = 24899 |
| EN-UNA-2006/0369 | 12/12/2006 14:24:33.000<br>Orbit = 25014 | 12/12/2006 14:32:26.000<br>Orbit = 25014 |
| EN-UNA-2006/0372 | 12/12/2006 18:02:17.000<br>Orbit = 25016 | 16/12/2006 02:58:44.000<br>Orbit = 25065 |
| EN-UNA-2006/0378 | 24/12/2006 11:07:30.000<br>Orbit = 25184 | 24/12/2006 11:14:05.000<br>Orbit = 25184 |

|                  |  |  |
|------------------|--|--|
| EN-UNA-2006/0383 | 27/12/2006 14:15:30.000<br>Orbit = 25229 | 27/12/2006 17:39:31.000<br>Orbit = 25231 |
| EN-UNA-2007/0003 | 03/01/2007 09:08:30.000<br>Orbit = 25326 | 03/01/2007 09:14:26.000<br>Orbit = 25326 |
| EN-UNA-2007/0007 | 06/01/2007 02:40:22.000<br>Orbit = 25365 | 06/01/2007 04:15:17.000<br>Orbit = 25366 |
| EN-UNA-2007/0015 | 22/01/2007 23:29:00.000<br>Orbit = 25606 | 23/01/2007 12:14:00.000<br>Orbit = 25614 |
| EN-UNA-2007/0029 | 02/02/2007 03:29:56.000<br>Orbit = 25752 | 02/02/2007 20:06:32.000<br>Orbit = 25762 |
| EN-UNA-2007/0029 | 02/02/2007 20:41:46.000<br>Orbit = 25762 | 04/02/2007 16:51:13.000<br>Orbit = 25789 |
| EN-UNA-2007/0038 | 09/02/2007 16:07:58.000<br>Orbit = 25860 | 09/02/2007 16:36:05.000<br>Orbit = 25860 |
| EN-UNA-2007/0039 | 10/02/2007 20:17:43.000<br>Orbit = 25876 | 10/02/2007 21:31:10.000<br>Orbit = 25877 |
| EN-UNA-2007/0041 | 12/02/2007 00:47:33.000<br>Orbit = 25893 | 12/02/2007 04:52:37.000<br>Orbit = 25896 |
| EN-UNA-2007/0053 | 03/03/2007 11:31:22.000<br>Orbit = 26172 | 03/03/2007 12:05:49.000<br>Orbit = 26172 |
| EN-UNA-2007/0054 | 03/03/2007 14:28:29.000<br>Orbit = 26174 | 03/03/2007 14:59:00.000<br>Orbit = 26174 |
| EN-UNA-2007/0055 | 04/03/2007 13:07:07.000<br>Orbit = 26187 | 04/03/2007 14:25:55.000<br>Orbit = 26188 |
| EN-UNA-2007/0059 | 05/03/2007 16:51:22.000<br>Orbit = 26204 | 05/03/2007 17:16:25.000<br>Orbit = 26204 |
| EN-UNA-2007/0064 | 15/03/2007 06:58:21.000<br>Orbit = 26341 | 15/03/2007 07:05:53.000<br>Orbit = 26341 |
| EN-UNA-2007/0070 | 17/03/2007 10:51:59.000<br>Orbit = 26372 | 17/03/2007 11:00:38.000<br>Orbit = 26372 |
| EN-UNA-2007/0078 | 23/03/2007 02:48:45.000<br>Orbit = 26453 | 23/03/2007 07:43:17.000<br>Orbit = 26456 |
| EN-UNA-2007/0090 | 31/03/2007 21:39:01.000<br>Orbit = 26579 | 01/04/2007 01:39:09.000<br>Orbit = 26581 |
| EN-UNA-2007/0088 | 02/04/2007 23:50:12.000<br>Orbit = 26609 | 03/04/2007 07:08:35.000<br>Orbit = 26613 |
| EN-UNA-2007/0102 | 15/04/2007 09:16:02.000<br>Orbit = 26786 | 15/04/2007 09:33:26.000<br>Orbit = 26786 |
| EN-UNA-2007/0112 | 23/04/2007 01:05:10.000<br>Orbit = 26896 | 23/04/2007 04:54:28.000<br>Orbit = 26898 |
| EN-UNA-2007/0122 | 11/05/2007 06:19:33.000<br>Orbit = 27156 | 11/05/2007 06:41:03.000<br>Orbit = 27157 |
| EN-UNA-2007/0127 | 21/05/2007 02:06:58.000                  | 21/05/2007 04:48:56.000                  |

|                  |   |   |
|------------------|---|---|
|                  | Orbit = 27297                             | Orbit = 27299                             |
| EN-UNA-2007/0134 | 27/05/2007 00:57:47.000<br>Orbit = 27382  | 27/05/2007 01:01:20.000<br>Orbit = 27382  |
| EN-UNA-2007/0136 | 27/05/2007 07:13:18.000<br>Orbit = 27386  | 27/05/2007 13:55:30.000<br>Orbit = 27390  |
| EN-UNA-2007/0165 | 27 Jun 2007 12:30:00.000<br>Orbit = 27833 | 27 Jun 2007 12:43:09.000<br>Orbit = 27833 |
| EN-UNA-2007/0176 | 10 Jul 2007 16:55:13.000<br>Orbit = 28022 | 10 Jul 2007 17:29:05.000<br>Orbit = 28022 |
| EN-UNA-2007/0178 | 16 Jul 2007 22:04:59.000<br>Orbit = 28111 | 17 Jul 2007 07:10:43.000<br>Orbit = 28116 |
| EN-UNA-2007/0187 | 22 Jul 2007 21:05:00.000<br>Orbit = 28196 | 22 Jul 2007 21:36:04.000<br>Orbit = 28196 |
| EN-UNA-2007/0219 | 24 Sep 2007 21:44:16.000<br>Orbit = 29112 | 25 Sep 2007 18:23:08.000<br>Orbit = 29125 |
| EN-UNA-2007/0223 | 24 Sep 2007 12:27:00.000<br>Orbit = 29107 | 27 Sep 2007 18:43:58.000<br>Orbit = 29153 |
| EN-UNA-2007/0225 | 29 Sep 2007 13:30:25.000<br>Orbit = 29179 | 29 Sep 2007 16:45:43.000<br>Orbit = 29181 |
| EN-UNA-2007/0243 | 31 Oct 2007 05:47:44.000<br>Orbit = 29632 | 31 Oct 2007 06:00:00.000<br>Orbit = 29633 |
| EN-UNA-2007/0254 | 30 Nov 2007 5:13:30.890<br>Orbit = 30068  | 30 Nov 2007 17:32:51.718<br>Orbit = 30069 |
| EN-UNA-2007/0257 | 1 Dec 2007 19:08:03.275<br>Orbit = 30084  | 1 Dec 2007 22:20:26.017<br>Orbit = 30086  |
| EN-UNA-2007/0261 | 3 Dec 2007 21:42:20.000<br>Orbit = 30114  | 4 Dec 2007 18:12:14.000<br>Orbit = 30127  |
| EN-UNA-2007/0270 | 9 Dec 2007 07:52:41.000<br>Orbit = 30192  | 9 Dec 2007 11:32:07.149<br>Orbit = 30194  |
| EN-UNA-2007/0266 | 11 Dec 2007 8:06:00.000<br>Orbit = 30221  | 11 Dec 2007 11:36:13.000<br>Orbit = 30223 |
| EN-UNA-2007/0278 | 13 Dec 2007 6:22:00.000<br>Orbit = 30248  | 13 Dec 2007 15:04:39.000<br>Orbit = 30254 |
| EN-UNA-2008/0010 | 16 Jan 2008 16:11:00.000<br>Orbit = 30741 | 17 Jan 2008 10:35:21.000<br>Orbit = 30752 |
| EN-UNA-2008/0011 | 17 Jan 2008 09:42:13.000<br>Orbit = 30751 | 17 Jan 2008 13:03:25.000<br>Orbit = 30753 |
| EN-UNA-2008/0017 | 22 Jan 2008 14:11:03.000<br>Orbit = 30826 | 22 Jan 2008 14:41:07.000<br>Orbit = 30826 |
| EN-UNA-2008/0023 | 28 Jan 2008 16:11:51.540<br>Orbit = 30913 | 28 Jan 2008 18:04:35.000<br>Orbit = 30914 |
| EN-UNA-2008/0024 | 31 Jan 2008 00:54:40.528<br>Orbit = 30946 | 31 Jan 2008 00:55:17.000<br>Orbit = 30946 |

|                  |   |   |
|------------------|---|---|
| EN-UNA-2008/0027 | 5 Feb 2008 17:00:26.000<br>Orbit = 31028  | 5 Feb 2008 19:00:13.000<br>Orbit = 31029  |
| EN-UNA-2008/0033 | 11 Feb 2008 23:45:12.000<br>Orbit = 31118 | 12 Feb 2008 09:10:21.000<br>Orbit = 31123 |
| EN-UNA-2008/0045 | 1 Mar 2008 05:23:34.000<br>Orbit = 31379  | 1 Mar 2008 07:33:46.000<br>Orbit = 31380  |
| EN-UNA-2008/0054 | 13 Mar 2008 9:33:46.000<br>Orbit = 31553  | 13 Mar 2008 19:28:40.000<br>Orbit = 31559 |
| EN-UNA-2008/0063 | 15 Apr 2008 01:32:02.556<br>Orbit = 32020 | 15 Apr 2008 01:33:36.325<br>Orbit = 32020 |
| EN-UNA-2008/0070 | 21 Apr 2008 21:59:00.000<br>Orbit = 32118 | 22 Apr 2008 07:22:00.000<br>Orbit = 32124 |
| EN-UNA-2008/0082 | 6 May 2008 08:09:32.000<br>Orbit = 32325  | 6 May 2008 08:18:11.000<br>Orbit = 32325  |
| EN-UNA-2008/0090 | 1 Jun 2008 00:34:17.000<br>Orbit = 32693  | 1 Jun 2008 00:39:03.000<br>Orbit = 32693  |
| EN-UNA-2008/0097 | 18 Jun 2008 18:26:01.000<br>Orbit = 32947 | 18 Jun 2008 18:27:31.000<br>Orbit = 32947 |
| EN-UNA-2008/0100 | 23 Jun 2008 08:02:19.000<br>Orbit = 33012 | 23 Jun 2008 11:08:49.000<br>Orbit = 33014 |
| EN-UNA-2008/0104 | 30 Jun 2008 22:04:59.000<br>Orbit = 33121 | 1 Jul 2008 12:03:18.000<br>Orbit = 33129  |
| EN-UNA-2008/0104 | 30 Jun 2008 22:04:59.000<br>Orbit = 33121 | 1 Jul 2008 12:03:18.000<br>Orbit = 33129  |
| EN-UNA-2008/0121 | 19 Jul 2008 18:34:43.214<br>Orbit = 33390 | 19 Jul 2008 18:45:48.214<br>Orbit = 33391 |
| EN-UNA-2008/0124 | 25 Jul 2008 11:08:00.000<br>Orbit = 33472 | 25 Jul 2008 11:35:31.000<br>Orbit = 33472 |
| EN-UNA-2008/0140 | 25 Aug 2008 9:31:12.000<br>Orbit = 33921  | 25 Aug 2008 19:52:15.000<br>Orbit = 33921 |
| EN-UNA-2008/0144 | 8 Sep 2008 21:59:58.000<br>Orbit = 34123  | 9 Sep 2008 07:59:53.000                   |
| EN-UNA-2008/0153 | 23 Sep 2008 23:00:25.000<br>Orbit = 34338 | 24 Sep 2008 00:53:13.000<br>Orbit = 34339 |
| EN-UNA-2008/0165 | 13 Oct 2008 06:11:51.000<br>Orbit = 34614 | 13 Oct 2008 09:23:21.000<br>Orbit = 34616 |
| EN-UNA-2008/0169 | 18 Oct 2008 15:00:32.000<br>Orbit = 34691 | 18 Oct 2008 15:07:53.000                  |
| EN-UNA-2008/0177 | 1 Nov 2008 20:16:08.000<br>Orbit = 34894  | 1 Nov 2008 22:31:40.000<br>Orbit = 34896  |
| EN-UNA-2008/0183 | 9 Nov 2008 00:57:00.000<br>Orbit = 34997  | 9 Nov 2008 00:58:00.000<br>Orbit = 34997  |
| EN-UNA-2008/0185 | 11 Nov 2008 01:41:48.000                  | 11 Nov 2008 03:58:47.000                  |

|                  | Orbit = 35027                             | Orbit = 35028                             |
|------------------|---|---|
| EN-UNA-2008/0186 | 17 Nov 2008 21:59:55.000<br>Orbit = 35125 | 18 Nov 2008 07:08:39.000<br>Orbit = 35130 |
| EN-UNA-2008/0190 | 15 Nov 200 02:51:23.000<br>Orbit = 35084  | 15 Nov 2008 07:10:44.000<br>Orbit = 35087 |

## APPENDIX B : DATA DISCLAIMER LIST

Below are given, in date order, ASAR data disclaimer details. Disclaimers from the current reporting period are boxed. The disclaimer list is also available at <http://earth.esa.int/pcs/envisat/asar/disclaimer/>.

- From 10-Jul-2003 20:20 UTC to 11-Jul-2003 16:57 UTC.

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 03-Aug-2003 21:15 UTC to 04-Aug-2003 12:43 UTC.

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 19-Oct-2003 12:50:59 UTC to 20-Oct-2003 15:37:47.000 UTC

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 28-Oct-2003 06:26:28 UTC to 28-Oct-2003 13:10:01 UTC

Problem description:

Data not acquired in Yaw Steering Mode but in Fine Pointing Mode (FPM). Large Doppler frequency values are expected.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 4-Dec-2003 21:5:23 UTC to 4-Dec-2003 22:03:31 UTC

Problem description:

Data not acquired in Yaw Steering Mode but in Fine Pointing Mode (FPM). Large Doppler frequency values are expected.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 11-Dec-2003 01:45:00 UTC to 11-Dec-2003 15:11:15 UTC

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 04-Jan-2004 09:15:00 UTC to 05-Jan-2003 15:25:20 UTC.

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products

All ASAR products, including level 0 products, acquired during this period.

- From 13-Feb-2004 13:38 UTC to 14-Feb-2004 11:06:01 UTC.

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 20-Feb-2004 18:00 UTC to 23-Feb-2004 13:08 UTC.

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 18-Nov-2003 until 22-May-2004 00:00:00 UTC

Problem description:

Degraded ASAR GM products location accuracy.

Affected products:

All ASAR GM level 1 products (ASA\_GM1\_1P), acquired during this period.

Correction:

The location error in ASA\_GM1\_1P products acquired before 22<sup>nd</sup> of May 2004 can be corrected by the user multiplying the line numbers in the Geolocation Grid ADS by 0.97169.

- From 21-Jun-2004 07:56:33 UTC to 22-Jun-2004 11:50:18 UTC

Problem description:

Degraded Attitude Stability. Instrument operating in Yaw Steering Mode (YSM) rather than in Stellar YSM. A positive Doppler bias of about 300 Hz is observed on data acquired during this period.

Affected products:

All ASAR products, including level 0 products, acquired during this period.

- From 04-Aug-2004 02:00 UTC to 04-Aug-2004 09:26:00 UTC.

Problem description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products, acquired during this period.



- From 16-Sep-2004 03:36:39UTC to 16-Sep-2004 08:53:15 UTC

Problem Description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products

- From 12-Sep-2004 03:46:00 UTC to 12-Sep-2004 12:40:00 UTC

Problem Description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products

- From 12-Aug-2004 13:53:54 UTC to 12-Aug-2004 19:09:50 UTC

Problem Description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products

- From 14-AUG-2004 07:36:00 UTC to 17-AUG-2004 10:57:45 UTC

Problem Description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products

- From 02-NOV-2004 14:17:25 UTC to 03-NOV-2004 10:04:58 UTC

Problem Description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products

- From 05-DEC-2004 10:03:48 UTC to 05-DEC-2004 15:35:45 UTC

Problem Description:

Degraded radiometric quality due to an instrument anomaly.

Affected products:

All ASAR products, including level 0 products

- From 13-APR-2002 to 11-FEB-2003

Problem Description:

The absolute calibration factor annotated in all ASAR level 1 products acquired between 13-APR-2002 and 11-FEB-2003 and processed between 01-AUG-2003 and 29-NOV-2004 is not correct. These products with incorrect calibration factor annotated in the Main Processing Parameters ADS can be identified by checking the auxiliary files used for processing. The name of the auxiliary files used in the processing is provided in the product SPH (use “view as HTML” in EnviView to

visualise them). Products with incorrect calibration factor have been processed with the following external calibration auxiliary file:

ASA\_XCA\_AXVIEC20030801\_134802\_20020413\_000000\_20030211\_000000

The correct calibration factors for these products are provided in the following auxiliary file:

ASA\_XCA\_AXVIEC20041129\_173057\_20020413\_000000\_20030211\_000000

available on line at: [http://earth.esa.int/services/auxiliary\\_data/asar/](http://earth.esa.int/services/auxiliary_data/asar/)

Affected products:

All ASAR level1 products.

- From 09-JAN-2005 03:13:21 to 09-JAN-2005 06:45:03 UTC

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 25-JAN-2005 to 02-FEB-2005

Problem Description:

Due to a problem on the ESRIN Low Bit Rate acquisition chain, the ASAR Wave and GM data could be of bad quality.

Affected products:

All ASAR Low bit rate products (Wave and GM), including level 0 products acquired at PDHS-E (ESRIN)

- From 22-MAR-2005 00:54:10 to 22-MAR-2005 00:54:10

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 12-MAY-2005 07:26:02 to 12-MAY-2005 10:50:00

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 18-MAY-2005 10:58:16 to 18-MAY-2005 13:58:00

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 01-JUN-2005 13:29:28 to 01-JUN-2005 16:45:00

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 05-JUL-2005 14:16:58 to 05-JUL-2005 17:27:11

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 24-JUL-2005 02:22:42 to 24-JUL-2005 07:31:40

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 03-AUG-2005 17:09:54 to 03-AUG-2005 22:08:56

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 24-AUG-2005 01:09:08 to 03-AUG-2005 07:55:55

Problem Description:

Due to an on-board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 product is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 14-SEP-2005 08:00:40 to 16-SEP-2005 19:57:33

Problem Description:

Quality of ASAR Level-1 and Level-2 products is slightly degraded due to a temporal modification of the antenna radiation patterns. Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products are clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

From 16-SEP-2005 19:57:33 to 14-OCT-2005 00:00:00

Problem Description:

Quality of ASAR Level-1 and Level-2 products acquired between 16-09-2005 19:57:33 UTC and 14-10-2005 00:00:00 is slightly degraded for NRT products while it is nominal products generated on-request after 14-10-2005 00:00:00. Quality of products acquired after 14-10-2005 00:00:00 is nominal.

Affected products:

All ASAR level 1 and level 2 products

- From 21-OCT-2005 07:34:39 to 21-OCT-2005 09:34:58

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 01-MAR-2002 00:00:00 to 10-FEB-2006 00:00:00

Warning: Degraded geolocation accuracy

Problem Description:

There is a shift in the zero-Doppler azimuth times annotated in the AP Level-1 products (this applies to the product zero-Doppler times and does not apply to other external times, such as the state vectors azimuth times). Full details on the impact on the product geolocation accuracy and the strategy for correcting products 'a-posteriori' can be found on [http://envisat.esa.int/dataproducts/availability/disclaimers/PQD\\_0082ASA\\_all.pdf](http://envisat.esa.int/dataproducts/availability/disclaimers/PQD_0082ASA_all.pdf).

Affected products:

All ASAR Alternating Polarisation (AP) Level-1 products processed with PF-ASAR version lower than 4.02. The PF-ASAR 4.02 is available at the following centres for which the installation date is reported: PDHSK (02-02-2006), PDHSE (02-02-2006), I-PAC (02-02-2006), LRAC (02-02-2006), UK-PAC (07-02-2006), D-PAC (09-02-2006).

- From 20-NOV-2005 20:15:13 to 20-NOV-2005 23:28:50

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 11-DEC-2005 10:53:54 to 11-DEC-2005 14:14:52

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 25-JAN-2006 17:10:27 to 25-JAN-2006 20:31:34

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 22-FEB-2006 00:43:46 to 22-FEB-2006 11:21:32

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 22-FEB-2006 10:12:25 to 22-FEB-2006 15:14:13

Warning: Degraded ASAR Global Monitoring Mode radiometric quality

Problem Description:

Radiometric quality of ASAR Global Monitoring Mode (GMM) data acquired on 22 February from 10:12:25 UTC until 15:14:13 UTC, corresponding to orbits 20818, 20819 and 20820 may be degraded since a test with the ASAR instrument will be performed during this time. Data acquired during this time interval in modes other than GMM is NOT affected. GMM data acquired immediately before and after this period is NOT affected.

Affected products:

ASAR Global Monitoring Mode (GMM) products

- From 28-FEB-2006 02:37:34 to 28-FEB-2006 07:49:38

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 20-MAR-2006 02:12:44 to 20-MAR-2006 07:20:50

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 12-APR-2006 19:53:48 to 12-APR-2006 20:19:55

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 24-APR-2006 03:47:51 to 24-APR-2006 07:17:00

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 25-APR-2006 13:22:31 to 25-APR-2006 15:02:48

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 30-APR-2006 10:53:00 to 30-APR-2006 14:04:03

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 11-MAY-2006 03:13:20 to 11-MAY-2006 06:41:30

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 22-MAY-2006 07:32:43 to 22-MAY-2006 11:23:16

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 25-MAY-2006 02:33:46 to 25-MAY-2006 7:45:47

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 22-JUN-2006 16:00:00 to 22-JUN-2006 17:49:40

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 01-JULY-2006 03:00:00 to 01-JULY-2006 08:16:10

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation



of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 26-JULY-2006 13:15:00 to 01-JULY-2006 13:41:43

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 04-AUG-2006 07:15:00 to 04-AUG-2006 10:30:10

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 08-AUG-2006 01:38:00 to 08-AUG-2006 08:28:56

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 17-AUG-2006 03:26:46 to 21-AUG-2006 14:56:00

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 24-AUG-2006 12:56:47 to 24-AUG-2006 16:47:19

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 03-SEP-2006 01:19:40 to 03-SEP-2006 06:28:16

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 03-SEP-2006 16:05:12 to 03-SEP-2006 18:07:40

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 06-OCT-2006 07:35:40 to 06-OCT-2006 11:15:30

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 17-OCT-2006 16:23:20 to 17-OCT-2006 20:00:54

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 24-OCT-2006 04:43:30 to 24-OCT-2006 09:42:25

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 24-DEC-2006 07:51:56 to 24-DEC-2006 11:14:05

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 03-JAN-2007 07:37:20 to 03-JAN-2006 09:14:26

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 04-FEB-2007 16:51:13 to 23-FEB-2007 00:00:00

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. NRT products processed by the following auxiliary data: ASA\_XCA\_AXXIEC20061221\_143253\_20050916\_195733\_20071231\_000000, ASA\_CON\_AXXIEC20061107\_090002\_20050916\_195733\_20071231\_000000, ASA\_CON\_AXVIEC20070215\_184018\_20070204\_165113\_20071231\_000000 has significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM). The products are being reprocessed.

Affected products:

All ASAR products, including level 0 products

From 03-MAR-2007 08:23:44 to 03-MAR-2007 12:05:49

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

From 15-MAR-2007 02:09:10 to 15-MAR-2007 07:05:53

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

From 17-MAR-2007 07:43:40 to 17-MAR-2007 11:00:38

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

From 15-APR-2007 07:32:22 to 15-APR-2007 09:33:26

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

During June 2007 one new disclaimer was issued:

- From 27-JUN-2007 10:58:54 to 27-JUN-2007 12:43:10

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 22-JUL-2007 20:41:47 to 22-JUL-2007 21:36:04

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products

- From 04-DEC-2007 18:06:43 to 06-DEC-2007 00:17:30

Warning: Degraded geolocation accuracy

Problem Description:

ASAR data acquired between orbits 30127 and 30145 show a variable location error in azimuth, ranging up to 12 km. The problem is fully corrected for ASAR data acquired since orbit 30146.

Affected products:

All ASAR products, including level 0 products

- From 01-NOV-2007 00:00:00 to 28-FEB-2007 00:00:00

Warning: Degraded ASAR GM product quality

Problem Description:

Due to archiving problem, the overall quality of ASAR GM products acquired between November 2006 and February 2007, covering the South America and Indonesia areas might be degraded. Processing artifacts as azimuth stripe and subswaths discontinuity are visible. A reprocessing

activity is currently on-going. ASAR GM users are invited to check the available quick-looks by Eoli before ordering the products.

Affected products:

All ASAR products, including level 0 products

- From 25-JUL-2008 07:00:00 18:06:43 to 25-JUL-2008 11:40:00

Warning: ASAR antenna gain problem

Problem Description:

Due to an on board anomaly, data acquired during this period is affected by a change of the antenna radiation pattern. The overall quality of these data is degraded. Radiometric normalisation of level 1 products is clearly corrupted, with significant residual antenna pattern modulation and differences from sub-swath to sub-swath in the ScanSAR cases (WS and GM).

Affected products:

All ASAR products, including level 0 products