

Tables of Data Versions  
of  
EUMETSAT's GOME-2 L1b  
and  
KNMI's Level-2  
Vertical Ozone Profile  
and  
Absorbing Aerosol Index product  
produced in the context  
of the O3MSAF

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2015-02-18

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# Chapter 1

## Introduction

### 1.1 General

In this document we list the versions of the various GOME-2 data sets that KNMI has received. These can be Level-1b, either in NRT or as reprocessed datasets, or data sets that were produced and disseminated in the context of the EUMETSAT O3MSAF project.

Given in the tables are (where applicable):

| Name          | Description   |
|---------------|---|
| PPF           | Identifies the Level-1b version   |
| Algorithm     | Identifies the algorithm version. Is updated every time the methodology changes.                  |
| PGE           | Identifies the software version. Is updated for bug fixes and other code changes.                 |
| Configuration | Identifies the version of the set of configuration files. Changes when parameter settings change. |
| OPF           | Output Product Format version, refers to the Product User Manual describing the output.           |

Table 1.1: Description of the parameters given in the tables..

# Chapter 2

## Version Tables Ozone Products

### 2.1 Level 1b

#### 2.1.1 Metop-A GOME-2 Level 1b

| Time Period                        | PPF | Processing Type |
|------------------------------------|-----|-----------------|
| 20070302081156Z — 20070403110558Z  | 3.2 | NRT             |
| 20070403110858Z — 20070903113858Z  | 3.3 | NRT             |
| 200709031114158Z — 20071004105655Z | 3.4 | NRT             |
| 20071004105955Z — 20071114114756Z  | 3.5 | NRT             |
| 20071114115056Z — 20080131123559Z  | 3.7 | NRT             |
| 20080131123859Z — 20080310112659Z  | 3.8 | NRT             |
| 20080310112959Z — 20080626105359Z  | 3.9 | NRT             |
| 20070104151144Z — 20090107134155Z  | 4.0 | R1 + NRT        |
| 20090107134755Z — 20090407073554Z  | 4.1 | NRT             |
| 20090407073854Z — 20090818114455Z  | 4.2 | NRT             |
| 20090818114755Z — 20100121125958Z  | 4.3 | NRT             |
| 20100121130258Z — 20100909113554Z  | 4.4 | NRT             |
| 20100909113854Z — 20110105124156Z  | 4.5 | NRT             |
| 20110105125056Z — 20110302113558Z  | 5.0 | NRT             |
| 20110302113858Z — 20110906114759Z  | 5.1 | NRT             |
| 20110906115059Z — 20120124101156Z  | 5.2 | NRT             |
| 20070123100858Z — 20140617115054Z  | 5.3 | R2 + NRT        |
| 20140617115654Z —                  | 6.0 | NRT             |

Table 2.1: Version numbers of the Metop-A GOME-2 level-1b data in the KNMI archive given by Product Processor Facility (PPF) by date. The last column states whether the data was reprocessed or part of the normal forward processing (NRT).

### 2.1.2 Metop-B GOME-2 Level 1b

| Time Period                       | PPF | Processing Type |
|-----------------------------------|-----|-----------------|
| 20121212082659Z — 20140617124157Z | 5.3 | NRT             |
| 20140617124457Z —                 | 6.0 | NRT             |

Table 2.2: Version numbers of the Metop-B GOME-2 level-1b data in the KNMI archive given by Product Processor Facility (PPF) by date. The last column states whether the data was reprocessed or part of the normal forward processing (NRT).

## 2.2 NRT Vertical Ozone Profile (NOP)

### 2.2.1 Metop-A GOME-2 NRT Vertical Ozone Profile (NOP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20070914130859Z — 20071004100855Z | 3.4 | 0.98      |      |        | NRT             |
| 20071004105955Z — 20071114110556Z | 3.5 | 0.98      |      |        | NRT             |
| 20071114115656Z — 20080129113254Z | 3.7 | 0.98      |      |        | NRT             |
| 20080129122054Z — 20080131123259Z | 3.7 | 0.98      | 1.13 |        | NRT             |
| 20080131145959Z — 20080310103859Z | 3.8 | 0.98      | 1.13 |        | NRT             |
| 20080310112959Z — 20080530072357Z | 3.9 | 0.98      | 1.13 |        | NRT             |
| 20080530072657Z — 20080626105359Z | 3.9 | 0.99      | 1.14 |        | NRT             |
| 20080626105659Z — 20080711094459Z | 4.0 | 0.99      | 1.14 |        | NRT             |
| 20080711103559Z — 20081209125655Z | 4.0 | 0.99      | 1.15 |        | NRT             |
| 20081209125955Z — 20090107130255Z | 4.0 | 1.00      | 1.16 |        | NRT             |
| 20090107134755Z — 20090407073554Z | 4.1 | 1.00      | 1.16 |        | NRT             |
| 20090407073854Z — 20090818114455Z | 4.2 | 1.00      | 1.16 |        | NRT             |
| 20090818114755Z — 20091109080554Z | 4.3 | 1.00      | 1.16 |        | NRT             |
| 20091109080854Z — 20100121125958Z | 4.3 | 1.01      | 1.20 |        | NRT             |
| 20100121130258Z — 20100128080856Z | 4.4 | 1.01      | 1.20 |        | NRT             |
| 20100128085056Z — 20100302074154Z | 4.4 | 1.01      | 1.21 |        | NRT             |
| 20100302074454Z — 20100429063257Z | 4.4 | 1.01      | 1.22 |        | NRT             |
| 20100429071457Z — 20100909113554Z | 4.4 | 1.10      | 1.23 |        | NRT             |
| 20100909113854Z — 20110105124156Z | 4.5 | 1.10      | 1.23 |        | NRT             |
| 20110105125056Z — 20110302105058Z | 5.0 | 1.10      | 1.24 |        | NRT             |
| 20110302114158Z — 20110906114759Z | 5.1 | 1.10      | 1.24 |        | NRT             |
| 20110906115059Z — 20120124101156Z | 5.2 | 1.10      | 1.24 |        | NRT             |
| 20120124101456Z — 20120130071154Z | 5.3 | 1.10      | 1.24 |        | NRT             |
| 20120130071154Z — 20120807062059Z | 5.3 | 1.10      | 1.25 |        | NRT             |
| 20120807062059Z — 20130513042956Z | 5.3 | 1.10      | 1.26 | 1.0    | NRT             |
| 20130513043256Z — 20140617114754Z | 5.3 | 1.11      | 1.28 |        | NRT             |
| 20140617115654Z —                 | 6.0 | 1.11      | 1.28 |        | NRT             |

Table 2.3: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.2.2 Metop-B GOME-2 NRT Vertical Ozone Profile (NOP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130221123856Z — 20140617124157Z | 5.3 | 1.11      | 1.28 | 1.0    | NRT             |
| 20140617124457Z —                 | 6.0 | 1.11      | 1.28 |        | NRT             |

Table 2.4: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.3 Offline Vertical Ozone Profile (OOP)

### 2.3.1 Metop-A GOME-2 Offline Vertical Ozone Profile (OOP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| — 20071004093557Z                 | 3.4 | 0.98      |      |        | Offline         |
| 20071004111157Z — 20071114101156Z | 3.5 | 0.98      |      |        | Offline         |
| 20071114115656Z — 20080127061755Z | 3.7 | 0.98      |      |        | Offline         |
| 20080127075955Z — 20080129104154Z | 3.7 | 0.98      | 1.12 |        | Offline         |
| 20080129122054Z — 20080131114159Z | 3.7 | 0.98      | 1.13 |        | Offline         |
| 20080131145959Z — 20080310094459Z | 3.8 | 0.98      | 1.13 |        | Offline         |
| 20080310112959Z — 20080530063857Z | 3.9 | 0.98      | 1.13 |        | Offline         |
| 20080530082057Z — 20080610060859Z | 3.9 | 0.99      | 1.14 |        | Offline         |
| 20080610075059Z — 20080626104759Z | 3.9 | 0.99      | 1.15 |        | Offline         |
| 20080626122359Z — 20081207060256Z | 4.0 | 0.99      | 1.15 |        | Offline         |
| 20081207074456Z — 20081209120855Z | 4.0 | 0.99      | 1.16 |        | Offline         |
| 20081209134455Z — 20090107120855Z | 4.0 | 1.00      | 1.16 |        | Offline         |
| 20090107134755Z — 20090407072654Z | 4.1 | 1.00      | 1.16 |        | Offline         |
| 20090407090854Z — 20090818114155Z | 4.2 | 1.00      | 1.16 |        | Offline         |
| 20090818131755Z — 20091107052355Z | 4.3 | 1.00      | 1.16 |        | Offline         |
| 20091107070555Z — 20091109062354Z | 4.3 | 1.00      | 1.20 |        | Offline         |
| 20091109094754Z — 20100121125958Z | 4.3 | 1.01      | 1.20 |        | Offline         |
| 20100121144158Z — 20100126061157Z | 4.4 | 1.01      | 1.20 |        | Offline         |
| 20100126075356Z — 20100228062355Z | 4.4 | 1.01      | 1.21 |        | Offline         |
| 20100228080555Z — 20100427043557Z | 4.4 | 1.01      | 1.22 |        | Offline         |
| 20100221153858Z — 20100429053557Z | 4.4 | 1.01      | 1.23 |        | Offline         |
| 20100429071457Z — 20100909113554Z | 4.4 | 1.10      | 1.23 |        | Offline         |
| 20100909130854Z — 20110105123856Z | 4.5 | 1.10      | 1.23 |        | Offline         |
| 20110105142056Z — 20110302095358Z | 5.0 | 1.10      | 1.23 |        | Offline         |
| 20110302114158Z — 20110906114459Z | 5.1 | 1.10      | 1.23 |        | Offline         |
| 20110906132059Z — 20120124101156Z | 5.2 | 1.10      | 1.23 |        | Offline         |
| 20120124115956Z — 20120128034454Z | 5.3 | 1.10      | 1.23 |        | Offline         |
| 20120128052354Z — 20120807072359Z | 5.3 | 1.10      | 1.25 |        | Offline         |
| 20120807072359Z — 20130513042656Z | 5.3 | 1.10      | 1.26 | 1.0    | Offline         |
| 20130513052356Z — 20140617114154Z | 5.3 | 1.11      | 1.28 |        | Offline         |
| 20140617131454Z —                 | 6.0 | 1.11      | 1.28 |        | Offline         |

Table 2.5: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

### 2.3.2 Metop-B GOME-2 Offline Vertical Ozone Profile (OOP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130328231154Z — 20140617123557Z | 5.3 | 1.11      | 1.28 |        | Offline         |
| 20140617141157Z —                 | 6.0 | 1.11      | 1.28 |        | Offline         |

Table 2.6: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.4 NRT HR Vertical Ozone Profile (NHP)

### 2.4.1 Metop-A GOME-2 NRT HR Vertical Ozone Profile (NHP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20091126054155Z — 20100121125958Z | 4.3 | 1.01      | 1.20 |        | 3/24            |
| 20100121130258Z — 20100128080856Z | 4.4 | 1.01      | 1.20 |        | 3/24            |
| 20100128085056Z — 20100302072654Z | 4.4 | 1.01      | 1.21 |        | 3/24            |
| 20100302072954Z — 20100429063257Z | 4.4 | 1.01      | 1.22 |        | 3/24            |
| 20100429071457Z — 20100909113554Z | 4.4 | 1.10      | 1.23 |        | 3/24            |
| 20100909113854Z — 20110105124156Z | 4.5 | 1.10      | 1.23 |        | 3/24            |
| 20110105125056Z — 20110207125355Z | 5.0 | 1.10      | 1.24 |        | 3/24            |
| 20110207125355Z — 20110302114158Z | 5.0 | 1.10      | 1.24 |        | NRT             |
| 20110302114158Z — 20110906114759Z | 5.1 | 1.10      | 1.24 |        | NRT             |
| 20110906115059Z — 20120124101156Z | 5.2 | 1.10      | 1.24 |        | NRT             |
| 20120124101456Z — 20120130062654Z | 5.3 | 1.10      | 1.24 |        | NRT             |
| 20120130062954Z — 20120807054459Z | 5.3 | 1.10      | 1.25 |        | NRT             |
| 20120807054459Z — 20130513042956Z | 5.3 | 1.10      | 1.26 | 1.0    | NRT             |
| 20130513043256Z — 20140617114754Z | 5.3 | 1.11      | 1.28 |        | NRT             |
| 20140617115654Z —                 | 6.0 | 1.11      | 1.28 |        | NRT             |

Table 2.7: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.4.2 Metop-B GOME-2 NRT HR Vertical Ozone Profile (NHP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130221124156Z — 20140617124157Z | 5.3 | 1.11      | 1.28 | 1.0    | NRT             |
| 20140617124457Z —                 | 6.0 | 1.11      | 1.28 |        | NRT             |

Table 2.8: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.5 Offline HR Vertical Ozone Profile (OHP)

### 2.5.1 Metop-A GOME-2 Offline HR Vertical Ozone Profile (OHP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20100214212655Z — 20100302003854Z | 4.4 | 1.01      | 1.21 |        | Offline         |
| 20100302022054Z — 20100428224757Z | 4.4 | 1.01      | 1.22 |        | Offline         |
| 20100221153858Z — 20100429053557Z | 4.4 | 1.01      | 1.23 |        | Offline         |
| 20100429071457Z — 20100909113554Z | 4.4 | 1.10      | 1.23 |        | Offline         |
| 20100909130854Z — 20110105123856Z | 4.5 | 1.10      | 1.23 |        | Offline         |
| 20110105142056Z — 20110302095358Z | 5.0 | 1.10      | 1.23 |        | Offline         |
| 20110302114158Z — 20110906114459Z | 5.1 | 1.10      | 1.23 |        | Offline         |
| 20110906132059Z — 20120124101156Z | 5.2 | 1.10      | 1.23 |        | Offline         |
| 20120124115956Z — 20120129233854Z | 5.3 | 1.10      | 1.23 |        | Offline         |
| 20120130012054Z — 20120807072359Z | 5.3 | 1.10      | 1.25 |        | Offline         |
| 20120807072359Z — 20130513042656Z | 5.3 | 1.10      | 1.26 | 1.0    | Offline         |
| 20130513052356Z — 20140617114154Z | 5.3 | 1.11      | 1.28 |        | Offline         |
| 20140617131454Z —                 | 6.0 | 1.11      | 1.28 |        | Offline         |

Table 2.9: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.5.2 Metop-B GOME-2 Offline HR Vertical Ozone Profile (OHP)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130328231154Z — 20140617123557Z | 5.3 | 1.11      | 1.28 |        | Offline         |
| 20140617141157Z — 20150218042357Z | 6.0 | 1.11      | 1.28 |        | Offline         |

Table 2.10: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 2.11 for the detailed modification description.

## 2.6 Description of Modifications of the Ozone Profile Algorithm

The following table describes per version all changes that affect the vertical ozone profile.

| Algorithm | PGE  | Config | OPF  | Description   |
|-----------|------|--------|------|---|
| 0.98      | 1.13 |        |      |   |
| 0.99      | 1.14 |        |      |   |
| 0.99      | 1.15 |        |      |   |
| 1.00      | 1.16 |        |      |   |
| 1.01      | 1.20 |        |      |   |
| 1.01      | 1.21 |        |      |   |
| 1.01      | 1.22 |        |      |   |
| 1.10      | 1.23 |        |      |   |
| 1.10      | 1.24 |        |      |   |
| 1.10      | 1.25 |        |      | Addition of Tropospheric and Stratospheric ozone columns with errors. Temperature profiles from ECMWF via pygrib. gsl-1.15: forced protection against extrapolation of temperature to TOA and BOA. HDF4 phase out. OPF v3.9   |
| 1.10      | 1.26 | 1.0    |      | Noise floor increased to 0.02.<br>Increase of significant digits in BUFR product  |
| 1.11      | 1.28 | 1.12   |      | General: Spectral spike filtering change. Use of RAL response function values for the slit function, noise floor to 1%. Metop-A/B: FRESCO lookup tables instrument specific, slit function instrument specific, spectral bands instrument specific. Use of 137 temperature layers from ECMWF.   |
| 1.12      | 1.32 | 1.20   | 3.20 | Maintenance and cleanup of code base. Use of temperature and potential vorticity as an indicator for the tropopause. Lower limit of valid temperature range from 150K down to 100K. Cloud Fraction max to 1.06 due to regular FRESCO overshoots in L1b. Internal naming of spectral windows Band->COADDED in case of (averaging to) B1a footprint. Fixed an array inversion in temperature field. Including tropospheric integrated vertical profile, from surface up to tropopause and from surface up to 500hPa in the ozone profile product. |

Table 2.11: Description of the changes made for several versions of the Algorithm, the Product Generation Element (Software), the Configuration version and the Output Product Version (OPF).

# **Chapter 3**

## **Version Tables Aerosol Products**

### **3.1 NRT Absorbing Aerosol Index (NAR/ARS)**

#### **3.1.1 Metop-A GOME-2 NRT Absorbing Aerosol Index (NAR/ARS)**

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20071025134758Z — 20071114110556Z | 3.5 | 0.03      |      |        | NRT             |
| 20071114115656Z — 20080129113254Z | 3.7 | 0.03      |      |        | NRT             |
| 20080129122054Z — 20080131123259Z | 3.7 | 0.03      | 1.13 |        | NRT             |
| 20080131145959Z — 20080310103859Z | 3.8 | 0.03      | 1.13 |        | NRT             |
| 20080310112959Z — 20080530072357Z | 3.9 | 0.03      | 1.13 |        | NRT             |
| 20080530072657Z — 20080626105359Z | 3.9 | 0.04      | 1.14 |        | NRT             |
| 20080626105659Z — 20081209125655Z | 4.0 | 0.04      | 1.14 |        | NRT             |
| 20081209125955Z — 20090107130255Z | 4.0 | 0.05      | 1.16 |        | NRT             |
| 20090107134755Z — 20090407073554Z | 4.1 | 0.05      | 1.16 |        | NRT             |
| 20090407073854Z — 20090818114455Z | 4.2 | 0.05      | 1.16 |        | NRT             |
| 20090818114755Z — 20091109080554Z | 4.3 | 0.05      | 1.16 |        | NRT             |
| 20091109080854Z — 20100121125958Z | 4.3 | 0.06      | 1.20 |        | NRT             |
| 20100121130258Z — 20100128080856Z | 4.4 | 0.06      | 1.20 |        | NRT             |
| 20100128085056Z — 20100302074154Z | 4.4 | 0.06      | 1.21 |        | NRT             |
| 20100302074454Z — 20100429063257Z | 4.4 | 0.06      | 1.22 |        | NRT             |
| 20100429071457Z — 20100909113554Z | 4.4 | 0.06      | 1.23 |        | NRT             |
| 20100909113854Z — 20110105124156Z | 4.5 | 0.06      | 1.23 |        | NRT             |
| 20110105125056Z — 20110302105058Z | 5.0 | 0.06      | 1.24 |        | NRT             |
| 20110302114158Z — 20110906114759Z | 5.1 | 0.06      | 1.24 |        | NRT             |
| 20110906115059Z — 20120124101156Z | 5.2 | 0.06      | 1.24 |        | NRT             |
| 20120124101456Z — 20120130070854Z | 5.3 | 0.06      | 1.24 |        | NRT             |
| 20120130071154Z — 20120807062059Z | 5.3 | 0.06      | 1.25 |        | NRT             |
| 20120807062059Z — 20130513042956Z | 5.3 | 0.06      | 1.26 | 1.0    | NRT             |
| 20130513043256Z — 20140617114754Z | 5.3 | 0.06      | 1.28 |        | NRT             |
| 20140617115654Z —                 | 6.0 | 0.06      | 1.28 |        | NRT             |

Table 3.1: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

### 3.1.2 Metop-B GOME-2 NRT Absorbing Aerosol Index (NAR/ARS)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20121213112058Z — 20130513043858Z | 5.3 | 0.06      | 1.26 |        | NRT             |
| 20130513052058Z — 20140617124157Z | 5.3 | 0.06      | 1.28 |        | NRT             |
| 20140617124457Z —                 | 6.0 | 0.06      | 1.28 |        | NRT             |

Table 3.2: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

## 3.2 Offline Absorbing Aerosol Index (ARS)

### 3.2.1 Metop-A GOME-2 Offline Absorbing Aerosol Index (ARS)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20071025084358Z — 20071114101156Z | 3.5 | 0.03      |      |        | Offline         |
| 20071114115656Z — 20080127043555Z | 3.7 | 0.03      |      |        | Offline         |
| 20080101065654Z — 20080129104154Z | 3.7 | 0.03      | 1.12 |        | Offline         |
| 20080129122054Z — 20080131114159Z | 3.7 | 0.03      | 1.13 |        | Offline         |
| 20080131145959Z — 20080310094459Z | 3.8 | 0.03      | 1.13 |        | Offline         |
| 20080310112959Z — 20080530063857Z | 3.9 | 0.03      | 1.13 |        | Offline         |
| 20080530082057Z — 20080624011454Z | 3.9 | 0.04      | 1.14 |        | Offline         |
| 20080610060859Z — 20080626104759Z | 3.9 | 0.04      | 1.15 |        | Offline         |
| 20080627102059Z — 20080707151755Z | 4.0 | 0.04      | 1.14 |        | Offline         |
| 20080626122359Z — 20081207042056Z | 4.0 | 0.04      | 1.15 |        | Offline         |
| 20081207060256Z — 20081209120855Z | 4.0 | 0.04      | 1.16 |        | Offline         |
| 20081209134455Z — 20090107120855Z | 4.0 | 0.05      | 1.16 |        | Offline         |
| 20090107134755Z — 20090407072654Z | 4.1 | 0.05      | 1.16 |        | Offline         |
| 20090407090854Z — 20090818114155Z | 4.2 | 0.05      | 1.16 |        | Offline         |
| 20090818131755Z — 20091107052355Z | 4.3 | 0.05      | 1.16 |        | Offline         |
| 20091107070555Z — 20091109080554Z | 4.3 | 0.05      | 1.20 |        | Offline         |
| 20091109094754Z — 20100121125958Z | 4.3 | 0.06      | 1.20 |        | Offline         |
| 20091118082057Z — 20091118233257Z | 4.3 | 0.06      | 1.23 |        | Offline         |
| 20100121144158Z — 20100126061157Z | 4.4 | 0.06      | 1.20 |        | Offline         |
| 20100126075356Z — 20100228062355Z | 4.4 | 0.06      | 1.21 |        | Offline         |
| 20100228080555Z — 20100427043557Z | 4.4 | 0.06      | 1.22 |        | Offline         |
| 20100221153858Z — 20100909113554Z | 4.4 | 0.06      | 1.23 |        | Offline         |
| 20100909130854Z — 20110105123856Z | 4.5 | 0.06      | 1.23 |        | Offline         |
| 20110105142056Z — 20110302095358Z | 5.0 | 0.06      | 1.23 |        | Offline         |
| 20110302114158Z — 20110906114459Z | 5.1 | 0.06      | 1.23 |        | Offline         |
| 20110906132059Z — 20120124101156Z | 5.2 | 0.06      | 1.23 |        | Offline         |
| 20120124115956Z — 20120128034454Z | 5.3 | 0.06      | 1.23 |        | Offline         |
| 20120128052354Z — 20120807072359Z | 5.3 | 0.06      | 1.25 |        | Offline         |
| 20120807072359Z — 20130513042956Z | 5.3 | 0.06      | 1.26 | 1.0    | Offline         |
| 20130513052356Z — 20140617114154Z | 5.3 | 0.06      | 1.28 |        | Offline         |
| 20140617131454Z —                 | 6.0 | 0.06      | 1.28 |        | Offline         |

Table 3.3: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

### 3.2.2 Metop-B GOME-2 Offline Absorbing Aerosol Index (ARS)

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130328231154Z — 20130513033858Z | 5.3 | 0.06      | 1.26 |        | Offline         |
| 20130513052058Z — 20140617123557Z | 5.3 | 0.06      | 1.28 |        | Offline         |
| 20140617141157Z —                 | 6.0 | 0.06      | 1.28 |        | Offline         |

Table 3.4: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

### 3.3 NRT Absorbing Aerosol Index from PMDs

#### 3.3.1 Metop-A GOME-2 NRT Absorbing Aerosol Index from PMDs

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20100101000254Z — 20100121125958Z | 4.3 | 0.06      | 1.25 |        | NRT             |
| 20100906124755Z — 20100909113554Z | 4.4 | 0.06      | 1.23 |        | NRT             |
| 20100121130258Z — 20100630234155Z | 4.4 | 0.06      | 1.25 |        | NRT             |
| 20100909113854Z — 20110105124156Z | 4.5 | 0.06      | 1.23 |        | NRT             |
| 20110105125056Z — 20110302105058Z | 5.0 | 0.06      | 1.24 |        | NRT             |
| 20110302114158Z — 20110906114759Z | 5.1 | 0.06      | 1.24 |        | NRT             |
| 20110906115059Z — 20120124101156Z | 5.2 | 0.06      | 1.24 |        | NRT             |
| 20120124101456Z — 20120130070854Z | 5.3 | 0.06      | 1.24 |        | NRT             |
| 20120128094754Z — 20120807054459Z | 5.3 | 0.06      | 1.25 |        | NRT             |
| 20120807054459Z — 20130513042956Z | 5.3 | 0.06      | 1.26 | 1.0    | NRT             |
| 20130513043256Z — 20140617114754Z | 5.3 | 0.06      | 1.28 |        | NRT             |
| 20140617115654Z —                 | 6.0 | 0.06      | 1.28 |        | NRT             |

Table 3.5: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

#### 3.3.2 Metop-B GOME-2 NRT Absorbing Aerosol Index from PMDs

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130204062354Z — 20130513043858Z | 5.3 | 0.06      | 1.26 |        | NRT             |
| 20130513052058Z — 20140617124157Z | 5.3 | 0.06      | 1.28 |        | NRT             |
| 20140617124457Z —                 | 6.0 | 0.06      | 1.28 |        | NRT             |

Table 3.6: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

## 3.4 Offline Absorbing Aerosol Index from PMDs

### 3.4.1 Metop-A GOME-2 Offline Absorbing Aerosol Index from PMDs

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20130930231155Z — 20140617114154Z | 5.3 | 0.06      | 1.28 |        | Offline         |
| 20140617131454Z —                 | 6.0 | 0.06      | 1.28 |        | Offline         |

Table 3.7: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

### 3.4.2 Metop-B GOME-2 Offline Absorbing Aerosol Index from PMDs

| Time Period                       | PPF | Algorithm | PGE  | Config | Processing Type |
|-----------------------------------|-----|-----------|------|--------|-----------------|
| 20131001000556Z — 20140617123557Z | 5.3 | 0.06      | 1.28 |        | Offline         |
| 20140617141157Z —                 | 6.0 | 0.06      | 1.28 |        | Offline         |

Table 3.8: Version numbers of the Product Processor Facility (PPF), the Algorithm Version, the Product Generation Element (Software Version), the Configuration Version and the Processing Type by date. Refer to Table 3.9 for the detailed modification description.

### **3.5 Description of Modifications of the Absorbing Aerosol Index Algorithm**

The following table describes per version all changes that affect the Absorbing Aerosol Index.

| Algorithm | PGE  | Config | OPF  | Description  |
|-----------|------|--------|------|--|
| 0.03      | 1.13 |        |      |  |
| 0.04      | 1.14 |        |      |  |
| 0.05      | 1.16 |        |      |  |
| 0.06      | 1.20 |        |      |  |
| 0.06      | 1.21 |        |      |  |
| 0.06      | 1.22 |        |      |  |
| 0.06      | 1.23 |        |      |  |
| 0.06      | 1.24 |        |      |  |
| 0.06      | 1.25 |        | 3.9  | OPF v3.9   |
| 0.06      | 1.26 | 1.0    |      | None   |
| 0.06      | 1.28 | 1.12   |      | None   |
| 0.07      | 1.32 | 1.10   | 4.01 | Inclusion of cloud parameters from the L1b product (from AVHRR) in the AAI output product. |

Table 3.9: Description of the changes made for several versions of the Algorithm, the Product Generation Element (Software) and the Configuration.