EUMETSAT

GOME-2 _ Metop-C instrument, PPF and auxiliary-data change history

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1 INTRODUCTION

1.1 Purpose and Scope

The document details all changes applied to the Metop-C GOME-2 level 0 to 1b data processor (PPF) with a potential impact on data quality, especially with respect to the quality of derived level 2 data. In addition to processor changes any substantial instrument or Metop-C satellite platform anomalies or events are listed here which have interrupted data-dissemination or may have affected level 1b and 2 data quality.

1.1.1 Document Structure

Section 2 provides a brief introduction on the provided tables and listings. Section 3 lists all events for instrument and PPF starting November 2018. Section 4 provides a detailed list with relevant changes applied to the PPF.

Note, that all times given in the document are UTC if not stated otherwise.

1.2 Documents

Routine monitoring results and additional documentation of Metop-C / GOME-2 processing is available at:

www.eumetsat.int > Service Status > Product Quality Monitoring > GOME-2 Instrument (http://oiswww.eumetsat.org/epsreports/html/index.php?instrument=GOME).

The GOME-2 instrument, processing and products newsletter is available under:

www.eumetsat.int > Service Status > Product Quality Monitoring > GOME-2 Newsletter (http://www.eumetsat.int/Home/Main/Satellites/Metop/Instruments/sp_2011011017745548)

The GOME-2 Product Users Guide is available online under:

http://oiswww.eumetsat.int/WEBOPS/eps-pg/GOME-2/GOME2-PG-index.htm .

EPS technical documentation including the documents listed in 1.2.1 can be found under:

www.eumetsat.int >Data & Products > Resources
(http://www.eumetsat.int/Home/Main/DataProducts/Resources/index.htm?l=en).

1.2.1 Applicable Documents

AD1	GOME-2 Products Guide	EUM/OPS-EPS/MAN/07/0445	Issue: v2C
AD2	GOME-2 L1 Product Generation	EPS.SYS.SPE.990011	Version: 7

	Specification		
AD3	GOME-2 L1 Product Format Specification	EPS.MIS.SPE.97232	Version: 9
AD4	Metop-C / GOME-2 PMD band definitions and PMD calibration	TBW	Version 1A
AD5	Generic Product Format Specification	EPS.GGS.SPE.96167	Version 7D
AD6	GIOV TLMs Plan as run	EUM/OPS-EPS/DOC/18/986579	Version 1

1.3 Abbreviations and Acronyms

CGS x	Core Ground Segment Number x
GOME	Global Ozone Monitoring Experiment
PDU	Product Dissemination Unit
GPFS	Generic Product Format Specification
PFS	Product Format Specification
PPF	Product Processing Facility
PGS	Product Generation Specification
PMD	Polarisation measurement devices
FPA	Focal Plane Assembly (Main instrument channels)
BU	Binary units

Auxiliary data tagging:

[Auxiliary data type]_[instrument model]_[version number]

STA:
GOME-2 Static auxiliary file, holding elevation model as well as Fresco transmission, reflectance and surface albedo database.

INS:
Initialisation file, holding GOME-2 level0 to 1b processor settings.

COR:
Correction file, holding GOME-2 instrument degradation correction parameters

CAL:
Calibration file, holding GOME-2 instrument keydata.

2 INTRODUCTION

Metop-C / GOME-2 level 1B data is disseminated since xxx of February xxx via EUMETCast. Level 1A and 1B reconstructed full orbit data is also available from UMARF starting xxxx. Since xxxx the data is labelled "operational". The following PPF change history applies to all changes introduced as of xxxx to processor and auxiliary data affecting the data content and/or quality of level 1A and 1B (more changes might have been applied to the processor, which however did not affect the science data). **Note that level 1 processor changes usually apply to Metop-A/B and C processing change whereas auxiliary file changes may apply to only one chain.** The data is disseminated from our Core Ground Segment number 1 (CGS1) and tagged with O at the end of the file name. Note that all data tagged with C or T stems either from CGS2 or CGS3 and might therefore be of different quality than listed here! *Note also that changes to the processor applied during the Metop-B Satellite In-orbit Verification phase (SIOV) are not listed here!* **Data prior to the xxxx has therefore to be treated with special caution!** In doubt, please contact EUMETSAT GOME CalVal staff for details or help (ops@eumetsat.int).

Events affecting the instrument, like satellite-platform or instrument anomaly switch-off phases, as well as non-nominal instrument operations are listed in a separate table. Updates to the product format are detailed in a table along with the version of applicable documents, products and processors.

3 EVENT HISTORY

3.1 Tabular PPF change history

Table of Metop-B / GOME-2 Processor and Auxiliary data version update for CGS1/EUMETCast/UMARF. Changes are indicated in blue.

Date	Processor Version	AUX data version	PFS version	PGS version
07/11/2018 Launch	620	STA_FM3_100 INS_FM3_100 COR_FM3_100 CAL_FM3_100	9	7

3.2 Tabular instrument event history

Table of Metop-C / GOME-2 FM3 instrument events and operations. Note that the events start/stop times do not necessarily coincide with NRT data dissemination start/stop times!

Start date	End date	Start orbit	End orbit	Instrument event/operation	Type
07/11/2018		0		Launch	Nominal

3.3 Moon intrusion (solar eclipse) event history

Table of moon intrusion events which significantly reduce signal levels for the Metop-C / GOME-2 FM3 instrument.

Start	End / Duration (s)

3.4 Tabular level 1 product format change history

Table of product format and product generation specification change history including the product format version number, and as indicated in the products Main Product Header Record (MPHR). The MPHR record per orbit file is also displayed in the detailed orbit monitoring listing on gome.eumetsat.int under "Details".

Start date	Start orbit	PFS version	GPFS version	Product format version[1]	Changes with respect to previous verison	Applicable PPF versions
26/09/2012	122	7D	6.5	12.0	Initial version for FM2 Metop-B (similar version for Metop-A FM3 PPF 5.0 and later versions)	PPF 5.3 to ...

[1] **as indicated in the MPHR of the product**

4 DETAILED PPF EVOLUTION HISTORY

CalVal - 28th of November 2012 12:00 UTC

- Update of instrument key-data to adjust overlap-region and to account for the on-ground to in orbit change in Etalon.

CalVal - 17th of December 2012 12:00 UTC

- Update of instrument key-data to fix an issue with the irr-radiometric absolute calibration for PMD-S.
- Update of instrument key-data to provide ne look-up-tables and instrument specific parameters for the FRESCO+ cloud properties parameters provided in the product.

Pre-OPS: 13th of February 2013

- Start of pre-operational dissemination of level 1 data with processor version 5.3.0 via EUMETCast.

Pre-OPS: 18th of February 2013

- Reconstructed orbits of pre-operational level 1 data available in the archive (EO-portal).

7th May 2013, 10:00 UTC

Start of operational GOME-2 / Metop-C level 1 dissemination with processor version 6.2.0.

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