

EUMETSAT AGENCY REPORT

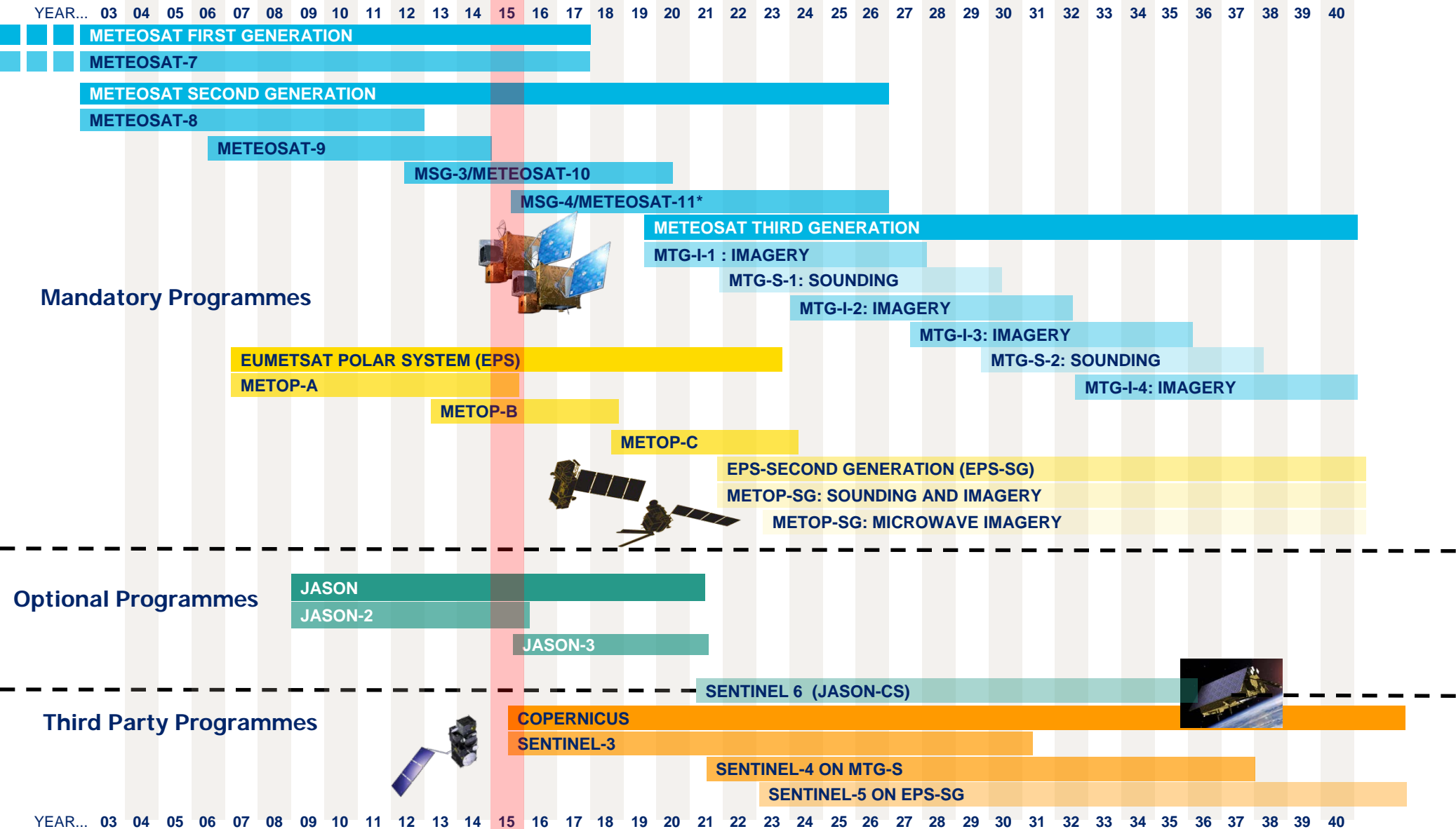
2014/15 GSICS ACTIVITIES



**J. Ackermann, S. Elliott, T. Hewison, K. Holmlund,
V. John, R. Munro, P. Miu, A. O'Carroll,
R. Roebeling, H. Rothfuss, B. Viticchiè, S. Wagner**



EUMETSAT Programme Planning



Executive Panel

- Ken Holmlund EUMETSAT representative



Data Working Group

- Peter Miu Co-chair + Data management expert
- Simon Elliott Formats Expert



Research Working Group

- Tim Hewison Chair + Infra-Red (sub-group chair)
- Sébastien Wagner VIS/NIR + Lunar calibration
- Rob Roebeling Archive re-calibration
- Rosemary Munro Chair UV sub-group
- Joerg Ackermann Microwave



Supported by

- Bartolomeo Viticchiè VIS/NIR + Lunar calibration
- Viju John Infra-red (Meteosat - HIRS)
- Anne O' Carroll Infra-red (AVHRR - IASI)



Point of Contact for Operational Matters

- Harald Rothfuss



Actions on EUMETSAT Closed 2014/15



Action Ref	Description	Assigned to	Due Date	State
GRWG_14.5	S. Wagner to share strawman netCDF file for DCC products for review at web meeting.	S. Wagner	1 May 2015	Closed web meeting
GRWG_14.6	EUMETSAT and JMA to prepare a list of requirements to participate in a lunar calibration workshop, applying a common version of the ROLO model and report on timing and feasibility of hosting such an event in time for workshop at a web meeting in May/June 2014.	T. Hewison, M. Takahashi	1 May 2015	Closed web meeting .
GRWG_14.11	Tim Hewison to send CNES example GSICS Corrections with embedded delta corrections for further analysis.	T. Hewison	1 May 2015	Closed by email
GRWG_14.12	EUMETSAT to implement the delta corrections in GSICS products using MetOp-B/IASI.	EUMETSAT	1 May 2015	Closed web meeting
GRWG_14.34	EUMETSAT to provide feedback at web meeting on how to handle DCC seasonality by Oct 2014.	EUMETSAT	1 May 2015	Closed web meeting
GRWG_14.37	Lunar calibration workshop organizers to provide one page summary on how the diffusion of lunar calibration expertise is intended to be done (as an example for best practise). To be also published in the GSICS Quarterly.	S. Wagner	1 May 2015	Closed

Actions on EUMETSAT Status/Open



Action Ref	Description	Assigned to	Due Date	State
GRWG05_08	Investigate the possibility to supply GEO data over desert sites to the SADE database	EUMETSAT	01 Mar 2011	Open
Several	Actions related to Instrument Events Logs will be reported by Rob			
GWG_13.14	EUMETSAT to propose solution based on modification of plotting tool and server structure and content to allow daily results to be displayed by 1 Sept 2013.	T. Hewison	01 Sep 2013	Late
GWG_13.37	EUMETSAT (lead) + GDWG members to work with EUMETSAT to use their bias plotting tool for GPRC product monitoring plots.	T. Hewison	01 Mar 2014	Late
GWG_13.25	Each GPRC provides angular data available in the May web meeting and present the result to decide ADM model in another web meeting in summer; July-Nov for threshold sensitivity analysis.	GPRC	1 May 2014	Close?
GWG_13.30	All GPRCs to provide GCC with links to the official SRFs for all instruments for which GSICS Products are being developed for publication on GCC website. - Links to SRFs from NASA/NOAA/EUMETSAT/CMA/JMA are now available on the GCC website [TimHewison, 2015-01-23]	GPRC	1 Jul 2014	Close?

Actions on EUMETSAT Status/Open



Action Ref	Description	Assigned to	Due Date	State
GRWG_14.13	CNES and EUMETSAT to investigate differences in their IASI-A, -B and CrIS? comparison methods and results, and report these by the next annual GRWG meeting.	CNES + EUMETSAT	1 May 2015	ongoing analysis, to be included in new "Traceability Statement".
GRWG_14.17	EUMETSAT to report the AVHRR-IASI inter-calibration work in next meeting.	EUMETSAT	1 May 2015	Not on!?
GWG_13.12	NOAA & EUMETSAT to analyse GEO-GEO difference after applying the GEO-LEO correction to quantify the diurnal calibration uncertainty before promotion to Operational status.	EUMETSAT	01 Sep 2014	See Thurs am 5l
GWG_13.16	Tim Hewison to draft example of netCDF file incorporating the delta correction to convert from MetopB/IASI to MetopA/IASI and distribute to GRWG+GDWG.	T. Hewison	01 Mar 2014	Done See Thurs am 5h

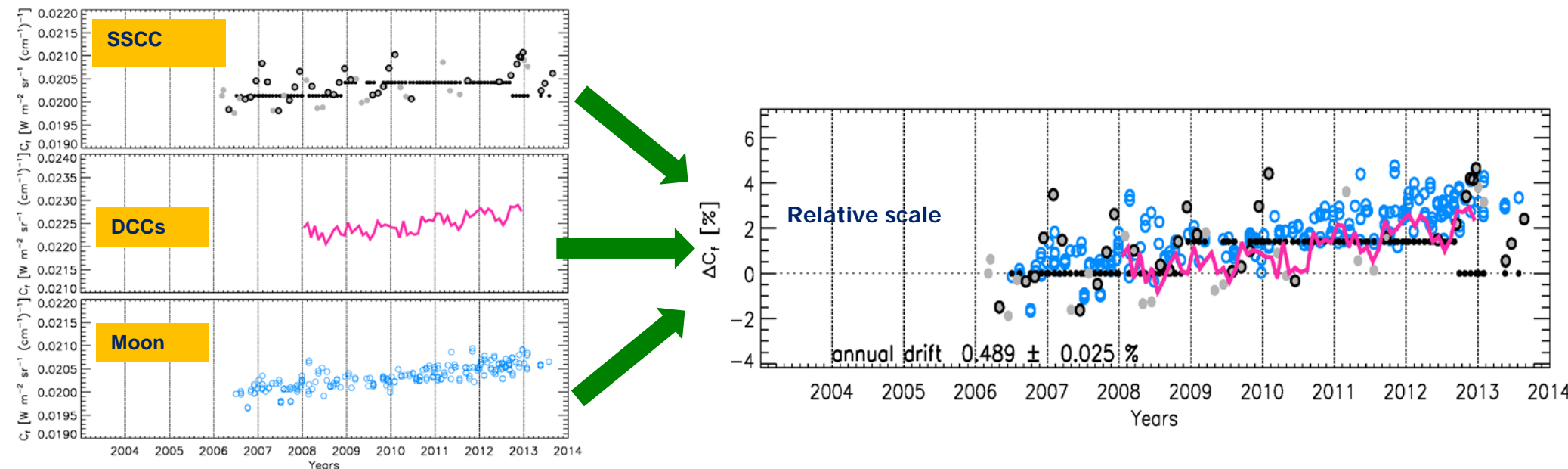
Actions on EUMETSAT Status/Open



Action Ref	Description	Assigned to	Due Date	State
GRWG_14.27	All GPRCs to review their GSICS websites to take into account of the new developments in GSICS as these websites will be reviewed in the next joint meeting.	All GPRCs	1 May 2015	On GDWG agenda
GRWG_14.30	EUMETSAT to support the creation of a GitHub? account for uploading the GSICS related codes for collaboration development.	All GPRCs	1 May 2015	On GDWG agenda
GRWG_14.31	EUMETSAT to prepare a proposal for automating the GPPA and demonstrate this in a Webex meeting.	EUMETSAT	1 May 2015	Pete's ppt
GRWG_14.21	EUMETSAT shall provide a method to formalise this (GPPA) process in an automated way (if possible).	EUMETSAT	1 May 2015	Pete's ppt
GRWG_14.33	EUMETSAT to share with IMD plans for reprocessing of the archive data (re-calibration)	EUMETSAT	1 May 2015	Rob to follow-up
GRWG_14.35	EUMETSAT/NOAA/NASA/JMA to perform analysis to evaluate the optimal temporal resolution for a DCC product. GPRCs are invited to report at the next web-meeting on the DCC method.	EUMETSAT, NOAA, NASA, JMA	1 May 2015	Wed session
GRWG_14.38	Tim Hewison to provide a one-page summary GEO/LEO IR products for QA4EO best practices showcase.	TimHewison	1 May 2015	Open
GRWG_14.40	Rob Roebeling and Dave Doelling to communicate on possibility of collaborations on inter-calibration / re-calibration in support to SCOPE-CM activities and report.	Rob Roebeling Dave Doelling	1 May 2015	Rob to follow-up here

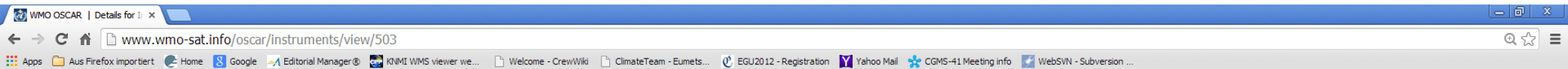

Achievements – GRWG Highlights

- Progress on methodologies
 - E.g. DCC, Lunar/GIRO
- Support to visiting scientists from JMA (1 year) and CMA (4 months) with MTSAT2, Himawari-8/AHI & FY2E
- Development of Multi-Mission Integrated Calibration Monitoring System 2016-



- Improvement of the GSICS plotting tool performances.
- Support to NOAA to ensure compatibility of their pre-operational GSICS RAC products with the GSICS plotting tool.
- CMA technical expert hosted for 3 months at EUMETSAT HQ. Main activities:
 - Configuration of CMA GSICS collaboration server
 - Support to the validation of a GSICS product development framework developed by EUMETSAT
 - Familiarisation with on-going GSICS tasks
 - Event logging
 - Product notification and distribution
 - Data product contents wrt guidelines + conventions + standards
 - Familiarisation with Data Centre operational environment + archiving of data

- **Collection of the landing pages from the GRPCs started and is ongoing**
- **WMO OSCAR is being modified to host our landing pages**
- **A calibration events Task Team with members from the GRPCs has been established.**
- **Discussions on mandatory information at the landing pages to be started**
- **Discussion on using common nomenclature for calibration events and monitoring to be started**

OSCAR

Observing Systems Capability Analysis and Review Tool

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Instrument: SEVIRI

Instrument details

Acronym	SEVIRI		
Full name	Spinning Enhanced Visible Infra-Red Imager		
Type of Instrument	01. Moderate-resolution optical imager		
Purpose	Multi-purpose imagery and wind derivation by tracking clouds and water vapour features		
Short description	12 channels (11 narrow-bandwidth, 1 high-resolution broad-bandwidth VIS) [see detailed characteristics below]		
Background	New development		
Scanning Technique	Mechanical, spinning satellite, E-W continuous, S-N stepping		
Resolution	4.8 km IFOV, 3 km sampling for narrow channels; 1.6 km IFOV, 1 km sampling for broad VIS channel		
Coverage / Cycle	Full disk every 15 min. Limited areas in correspondingly shorter time intervals		
Mass	260 kg	Power	150 W
		Data Rate	3.26 Mbps

Providing Agency	EUMETSAT
Instrument Maturity	Flown on operational programme
Utilization Period:	2002-08-28 to ≥2022
Last update:	2012-09-13

Detailed characteristics

Satellites this instrument is flying on

Note: a red tag indicates satellites no longer operational, a green tag indicates operational satellites, a blue tag indicates future satellites

- Meteosat Second Generation (MSG)** (EUMETSAT)
 -  [Meteosat-8](#) (2002 - 2016)
 -  [Meteosat-9](#) (2005 - 2019)
 -  [Meteosat-10](#) (2012 - 2019)
 -  [Meteosat-11](#) (2015 - 2022)

Contribution to Space Capabilities

The instrument contributes to the following Capabilities, as identified in the "Vision for the GOS in 2025" and the Implementation Plan for the Evolution of Global Observing Systems:

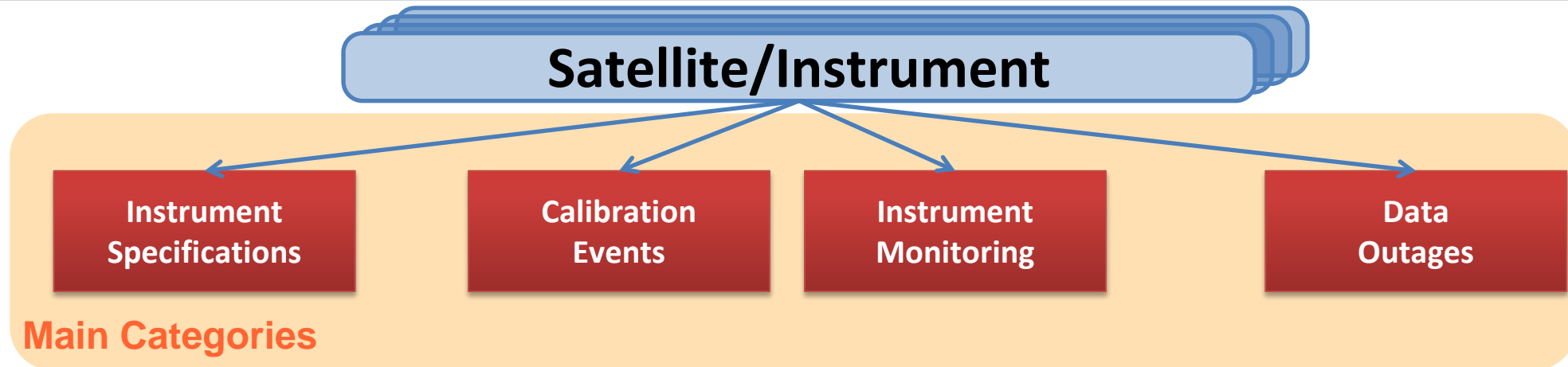
- [Multi-purpose VIS/IR imagery from GEO](#)

Tentative Evaluation of Measurements

The following list indicates which measurements can **typically** be retrieved from this category of instrument. To see a full Gap Analysis by Variable, click on the respective variable.

Note: table can be sorted by clicking on the column headers.

Variable	Relevance for measuring this Variable	Operational Limitations	Processing maturity
Cloud top height	2-High	No specific	Consolidated methodology



Instrument Specifications

General information on the platform, instruments, and sensors operated in the mission that is relevant to all users of the satellite data (see OSCAR website).

Calibration Events

Database (and graphical interface) of events at satellite and processing level that are not occurring systematically and that impact the radiometric or geometric quality of the observations due to instruments calibrations, manoeuvres or miscellaneous.

Data Outages

Events that triggered the temporary or definitive end of the data collection.

Instrument Monitoring

Database (and graphical interface) of quasi continuous information on the present state of the instruments and sensors operated on the platform;

MSG CALIBRATION (NEW)

DATA

DATA DELIVERY

PRODUCTS

LEVEL 1 DATA

ATMOSPHERE

OCEAN

LAND

CLIMATE

FORMATS

CALIBRATION

MFG CALIBRATION

MSG CALIBRATION

INTER-CALIBRATION

MSG CALIBRATION (NEW)

SOFTWARE PRODUCTS

REGIONAL DATA SERVICE / EARS

GLOBAL DATA SERVICE

CLIMATE SERVICE

METEOSAT DATA COLLECTION SERVICES

THIRD PARTY

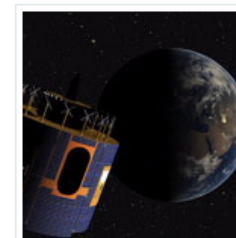
TRAINING

SERVICE STATUS

TECHNICAL DOCUMENTS

MSG Calibration landing page

▶ [Meteosat-8](#), ▶ [Meteosat-9](#), ▶ [Meteosat-10](#)



METEOSAT-8

INSTRUMENT SPECIFICATIONS

- ▶ [WMO OSCAR \(Satellite Instrument Specifications\)](#)
- Spectral Response Function
 - Spectral responses are derived for all 12 channels of the SEVIRI instrument.
 - ▶ [Spectral responses for Meteosat Second Generation \(MSG\) \(ZIP, 226 KB\)](#). *Note: SEVIRI PFM is onboard Meteosat-8.*

CALIBRATION EVENTS

- ▶ [Meteosat-8 SEVIRI \(User Notification Service\)](#)
- ▶ [Meteosat-8 GERB \(User Notification Service\)](#)
- [Monthly Operations Report](#)

DATA OUTAGES

- Described in the [Monthly Operations Report](#)

INSTRUMENT MONITORING

- [Navigation Monitoring](#)
- [GSICS Calibration Monitoring](#)

RELEVANT DOCUMENTS

- [▶ MSG Ground Segment LRIT/HRIT Mission Specific Implementation](#)
- [▶ CGMS LRIT/HRIT Global Specification](#)
- [▶ MSG Level 1.5 Image Data Format Description](#)
- [▶ MSG Level 1.5 Image Product - Quality Indicators](#)

- **Calibration is key to ensuring EUMETSAT achieves its objectives:**
 1. To establish, maintain and exploit European systems of operational meteorological satellites
 2. To contribute to the operational monitoring of the climate & the detection of global climatic changes
 3. Furthermore, other environment monitoring issues are considered when interactions with the atmosphere or the ocean are involved

- **EUMETSAT continues to develop new calibration capabilities**
 1. For real-time operations
 2. Support of climate reanalysis
 3. Support to future programs (MTG + EPS/SG) + third party programs (S3)
 4. In international cooperation, including:
 - Global Space-based Inter-Calibration System
 - CEOS WGCV

Thank you

Backup slides