

Operational Direct Broadcast Systems Status Report & Status of Implementation of **Best Practices**

Presented to CGMS-51 WG-I, Agenda Item 5.3 Monday 24 April 2023 antoine.jeanjean@eumetsat.int

Coordination Group for Meteorological Satellites





Slide: 1

Operational Direct Broadcast Systems

The Status of Operational Direct Broadcast Systems at EUMETSAT is summarised in the Table below:

Instruments	МЕТОР-В	METOP-C	
AMSU-A	Operational	Operational	
ASCAT	Operational	Operational	
AVHRR	Operational	Operational	
GOME	Operational	Operational	
GRAS	Operational	Operational	
HIRS	Degraded since 17/03/2023	N/A	
IASI	Operational	Operational	
MHS	Operational	Operational	



List of Best Practices

This presentation describes the implementation status at EUMETSAT for the CGMS Agency Best Practices in support to Local and Regional Processing of LEO DB data (latest version endorsed by CGMS-48, August 2020).

(*) EPS-Sterna subject to approval of the programme targeted in mid-2025.						
Direct Broadcast Best Practices		МЕТОР	EPS-SG	EPS- Sterna *		
01	Global Specification for Direct Broadcast	Compliant	Compliant	Compliant		
02	Timely Provision of Space-to-Ground Interface Control Documents	Compliant	Compliant	Will be C.		
03	Provision of Current Orbit Information	Compliant	Will be C.	Will be C.		
04	Provision and Maintenance of Product Processing Packages	Compliant	Will be C.	In preparation		
05	Provision of Auxiliary Data for Instrument Product Processing	Compliant	Will be C.	In preparation		
06	Recommendations of Hyperspectral Channel Selection	Compliant	Will be C.	N/A		
07	Spacecraft and Instrument Operational Status	Compliant	Will be C.	Will be C.		
08	Operational Announcements	Compliant	Will be C.	Will be C.		
09	Satellite Direct Broadcast and Reception Station Performance	Compliant	Compliant	N/A		
10	Monitoring of the Direct Broadcast Downlink	Partially C.	Will be C.	Under		

assessment

BP.01 Global Specification for Direct Broadcast

BP.01 version endorsed by the CGMS-44 plenary

METOP

Compliant.

Details available in: METOP Space-to-Ground Interface Control Document

EPS-SG

Compliant.

Details available in: EPS-SG Space-to-Ground Interface Control Document

EPS-Sterna

Compliant.

EPS-Sterna Space to Ground ICD to be provided.





BP.02 Timely Provision of Space-to-Ground ICDs

BP.02 endorsed by the CGMS-44 plenary

METOP

Compliant.

Details available in: METOP Space-to-Ground Interface Control Document; TD 18 METOP Direct Readout AHRPT Technical Description.

EPS-SG

Compliant.

Details available in: <u>EPS-SG Space-to-Ground Interface Control Document</u>.

EPS-Sterna

Will be compliant.

EPS-Sterna Space to Ground ICD to be provided.





BP.03 Provision of Current Orbit Information

BP.03 endorsed by the CGMS-45 plenary

METOP

Compliant.

See METOP TLE webpage.

EPS-SG

Will be compliant. to be established prior to launch of the first EPS-SG.

EPS-Sterna

Will be compliant. to be established prior to launch of the first EPS-Sterna.





BP.04 Provision and Maintenance of Product Processing Software Packages

BP.04 endorsed by the CGMS-45 plenary

METOP

Compliant.

Software available in: http://nwp-saf.eumetsat.int for AAPP & OPS-LRS (HIRS, AVHRR, AMSU, MHS and IASI)

http://osi-saf.eumetsat.int for ASCAT

http://nwc-saf.eumetsat.int for PPS (NWC)

EPS-SG

Will be compliant.

EPS-SG software packages will be made available in a similar way to the METOP software packages.

EPS-Sterna

In preparation.

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Slide: 7

BP.05 Provision of Auxiliary Data for Instrument Product Processing

BP.05 endorsed by the CGMS-44 plenary

METOP

Compliant.

Data is provided by the EUMETSAT SAFs, see previous BP.04.

EPS-SG

Will be compliant.

Scope and provision of auxiliary data for instrument product processing under consideration.

EPS-Sterna

In preparation.

Scope and provision of auxiliary data for instrument product processing under consideration.





BP.06 Recommendations of Channel Selection for **Hyperspectral Instruments**

BP.06 endorsed by the CGMS-44 plenary

METOP

Compliant.

The channel selection for the IASI hyperspectral sounder is provided in the EUMETSAT Product Navigator under IASI reduced products

EPS-SG

Will be compliant.

To be provided starting from the launch of the first EPS-SG.

EPS-Sterna

N/A.





BP.07 Spacecraft and Instrument Operational Status

BP.07 endorsed by the CGMS-45 plenary

METOP

Compliant.

See EUMETSAT User Notification Service (UNS) service status and tool.

EPS-SG

Will be compliant.

To be provided starting from the launch of the first EPS-SG.

EPS-Sterna

Will be compliant.

To be provided starting from the deployment of the EPS-Sterna constellation.





BP.08 Operational Announcements

BP.08 endorsed by the CGMS-45 plenary

METOP

Compliant.

See EUMETSAT User Notification Service (UNS) service status and tool.

EPS-SG

Will be compliant.

To be provided starting from the launch of the first EPS-SG.

EPS-Sterna

Will be compliant.

to be provided starting from the deployment of the EPS-Sterna constellation.







BP.09 Satellite Direct Broadcast and Reception Station Performance Requirements

BP.09 endorsed by the CGMS-45 plenary

METOP

N/A as METOP Direct Broadcast is in L-Band.

EPS-SG

Compliant.

See link budget analysis in "Implementation of CGMS Best Practices for LEO Direct Broadcast Data at EUMETSAT.docx" [CGMS-50-EUMETSAT-WP-06].

EPS-Sterna

N/A as EPS-Sterna Direct Broadcast is in L-Band.





BP.10 Monitoring of the Direct Broadcast Downlink

BP.10 endorsed by the CGMS-48 plenary

METOP

- Partially compliant.
- N/A.
- Partially compliant. Monitoring is performed manually in case of anomalies.
- Compliant.

EPS-SG

Will be compliant.

To be provided starting from the launch of the first EPS-SG.

EPS-Sterna

Under assessment.





Summary

WG-I members are invited to take note and comment on the status of operational direct broadcast systems and implementation of the CGMS Best Practices at EUMETSAT in support to local and regional processing of LEO direct broadcast data.





Slide: 14