Status of the Direct Broadcast Network (DBNet) for global real-time acquisition, processing, and delivery of satellite direct readout data, coordinated by WMO

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CIMSS/SSEC/UW-Madison

CGMS 54 WGI
13 April 2026

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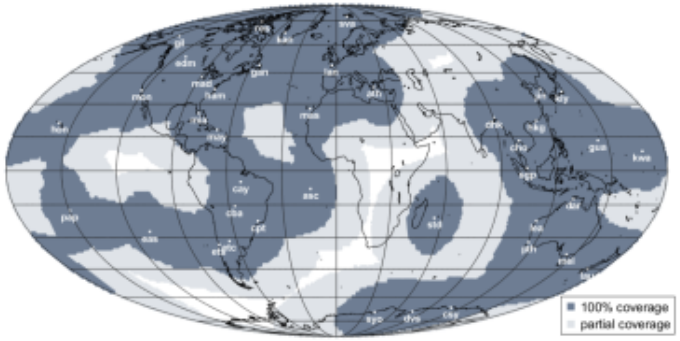
DBNet concept and objectives

Global availability of near real-time LEO data received by a collection of Direct Broadcast stations distributed around the world

Global consistency ensured by common software (i.e. AAPP, CSPP, FY3PP) consistent with global processors, standardized coding and file naming, and quality monitoring

Dissemination by the WMO Information System (primarily GTS/WIS 2.0)

Coordinated by WMO Space Programme; supported by CGMS



DBNet-ATOVS coverage in December 2025

- Initial goal established in 2004: NOAA and Metop ATOVS (L1B) from 90% of the globe available on the GTS in 30 minutes
- Latency goal revised to 20 minutes in 2015 to reflect evolving NWP needs
- 20-minute goal achieved for ATOVS in 2017

ATOVS= HIRS, AMSU-A, AMSU-B, MHS

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DBNet components

- DBNet is composed of networks coordinated by regional and the DBNet Coordination Group (https://community.wmo.int/direct-broadcast-network-dbnet)
- Global monitoring of product consistency is performed by EUMETSAT NWP-SAF (http://nwpsaf.eu/site/monitoring/dbnet/)
- Last DBNet-CG virtual meeting in Dec 2025 (https://wmo.int/events/8th-dbnet-coordination-group-meeting-dbnet-cg-8)

Regional Network	Regional or Sub-regional Node
DBNet - EUMETSAT (EARS)	EUMETSAT
DBNet - Asia-Pacific	JMA
	BoM
DBNet - South America	INPE
	SMN Argentina / CONAE

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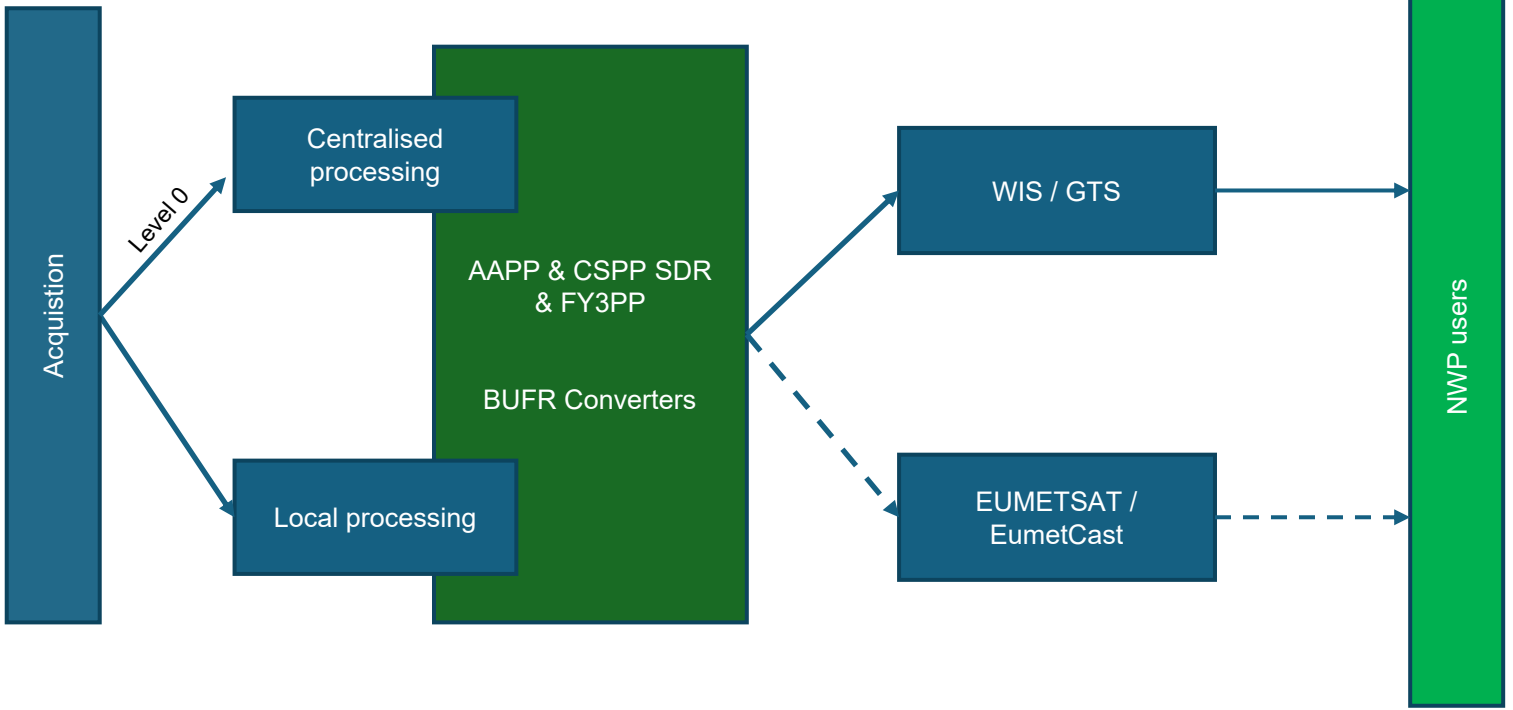
DBNet processing scheme



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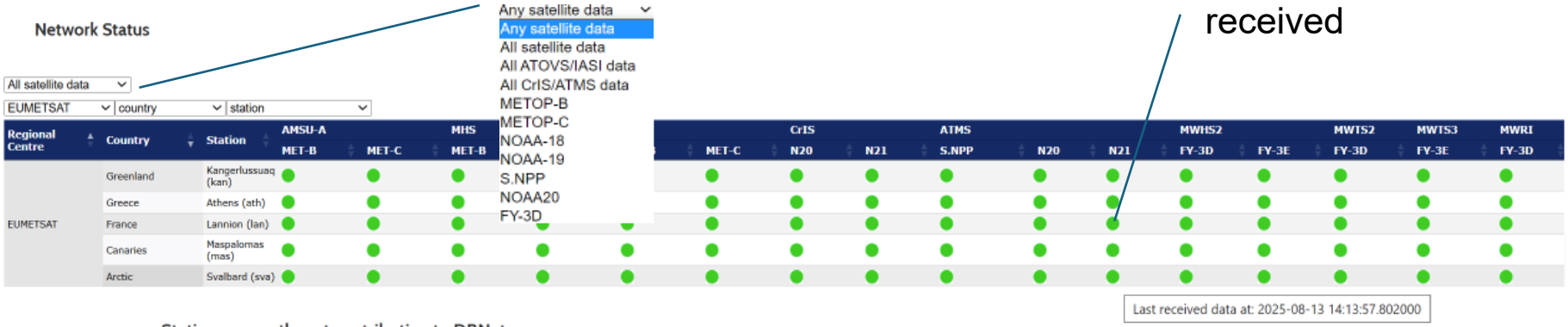
DBNet Station data reception and consistency status

Can select a specific satellite

Can show last pass received



Stations currently not contributing to DBNet

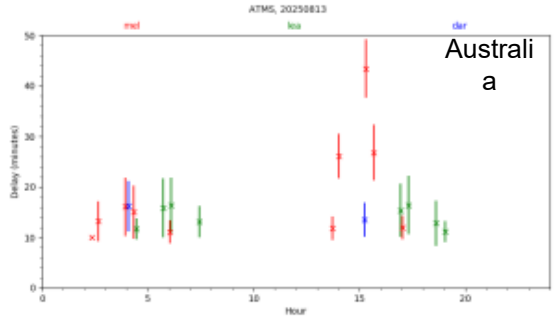
Regional Centre	Country	Station
BOM	Australia	Perth
BOM	New Zealand	Lauder
BOM	New Zealand	Maupuia
EUMETSAT	Russia	Novosibirsk
EUMETSAT	Russia	Moscow
EUMETSAT	Russia	Khabarovsk
INPE	Brazil	Belém
SAWS	Niger	Niamey
SSEC/CIMSS	S Africa	Pretoria

Key for table icons:	
🔴	No data received over past week
🟡	No data received over past three days
🟢	Data received during past three days
☐	Data failing consistency comparison with global feed

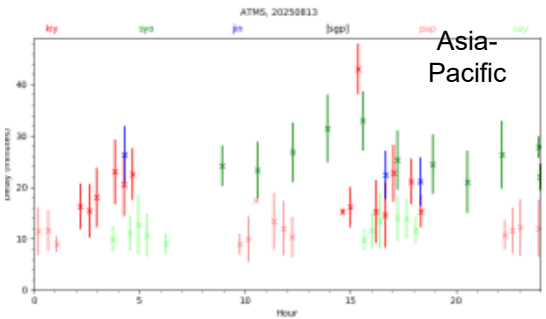
https://nwp-saf.eumetsat.int/monitoring/ears_mon/DBNet_station_status.html

DBNet Station Timeliness monitoring

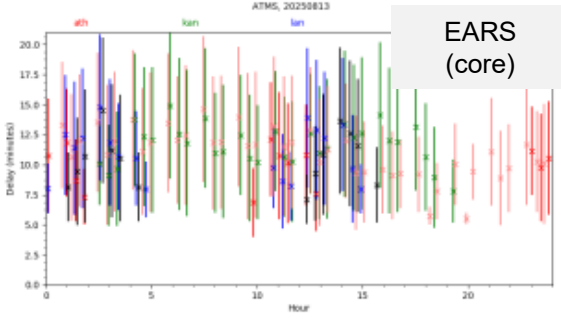
ATMS: 13 August 2025



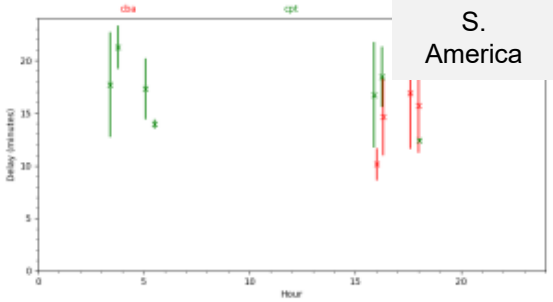
Australia



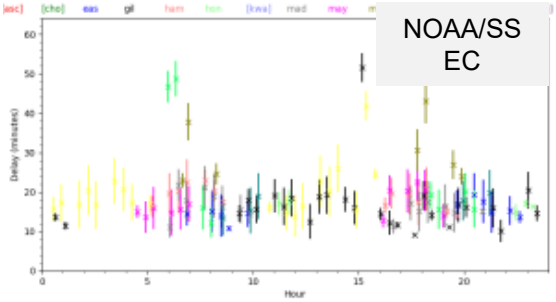
Asia-Pacific



EARS (core)



S. America



NOAA/SSEC

atms 20250813 EARS (core)					
station	passes	0%	50%	90%	100%
ath	13	4	10	**14**	17
kan	31	5	12	**17**	21
lan	18	5	11	**17**	21
mas	14	5	11	**16**	21
sva	42	5	11	**16**	21

overall latency from 14 to 17 min (for 90% of data)

https://nwp-saf.eumetsat.int/downloads/dbnet/timeliness/

Current DBNet services

EUMETSAT: Metop-B, Metop-C (Metop-SGA1 and AWS by end of 2026)

NOAA: SNPP, NOAA-20, NOAA-21

CMA: FY-3D, FY-3E

Categories of services	Services (instruments)
	Current services
IR/MW sounding	AMSU-A, MHS, ATMS, MWTS, MWHS
VIS/IR imaging (incl. L2)	VIIRS, AVHRR, MERSI
HSIR sounding	CrIS, IASI, AIRS
Scatterometry	ASCAT
MW imagery	MWRI

Services in red – implemented by EUMETSAT-EARS

Services in rose – implemented by NOAA-DBRTN

All other services – implemented globally

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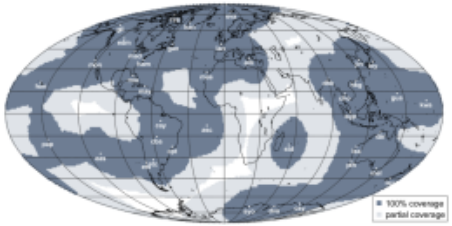
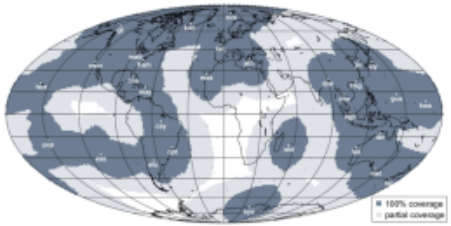
DBNet Coverage – Dec 2025

The main areas of concern in terms of coverage:

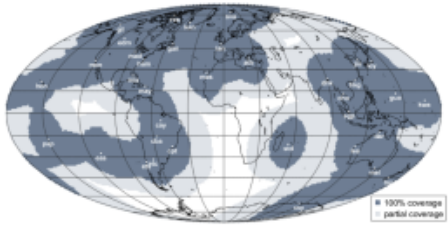
- Central Asia
- Southern Pacific
- Central and Southern Africa



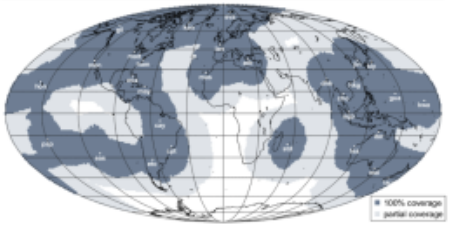
DBNet-ATOVS coverage in December 2025



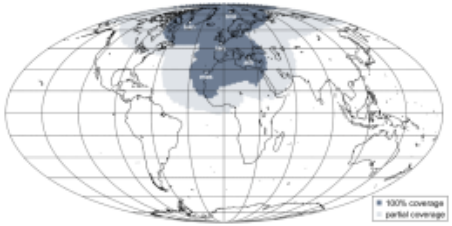
DBNet-ATMS coverage in December 2025



DBNet-IASI coverage in December 2025



DBNet-CrIS coverage in December 2025



DBNet-VASS coverage in December 2025

plots by Antoine Jeanjean, EUMETSAT

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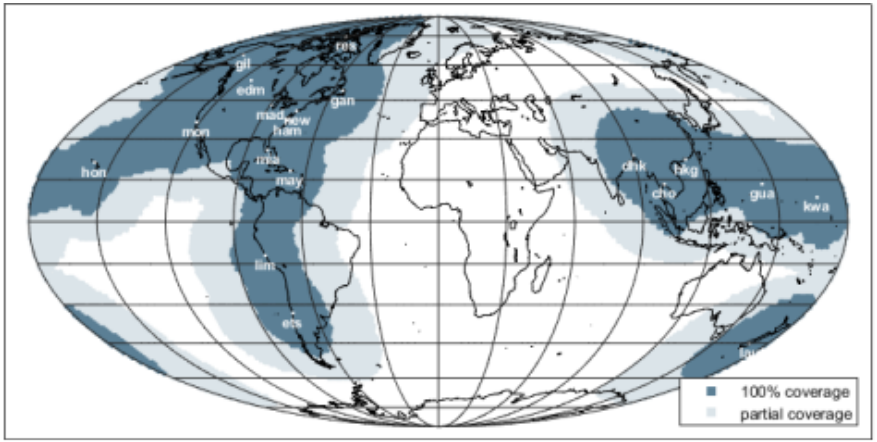
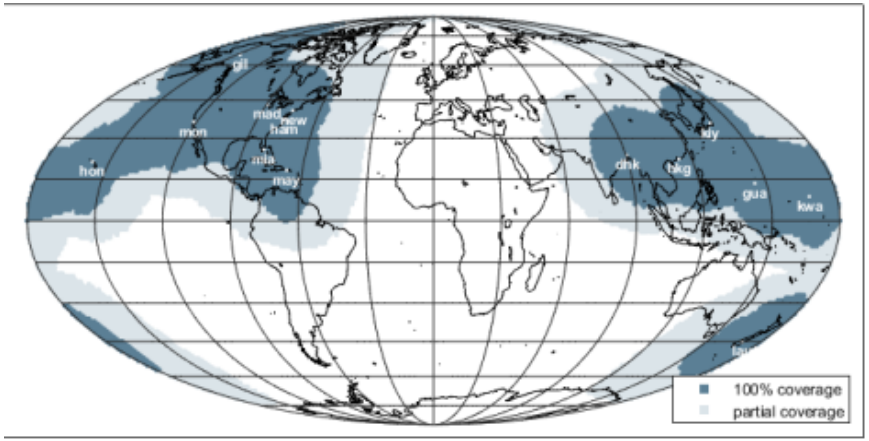
Transition from GTS to WIS 2.0

Full channel sets of IASI and CrIS data from NOAA-20, NOAA-21, Metop-B, and Metop-C, disseminated by NOAA DBRTN, are already **available today via WIS 2.0**.

IASI-NOAA DBRTN



CrIS-NOAA DBRTN



Status as of October 2024

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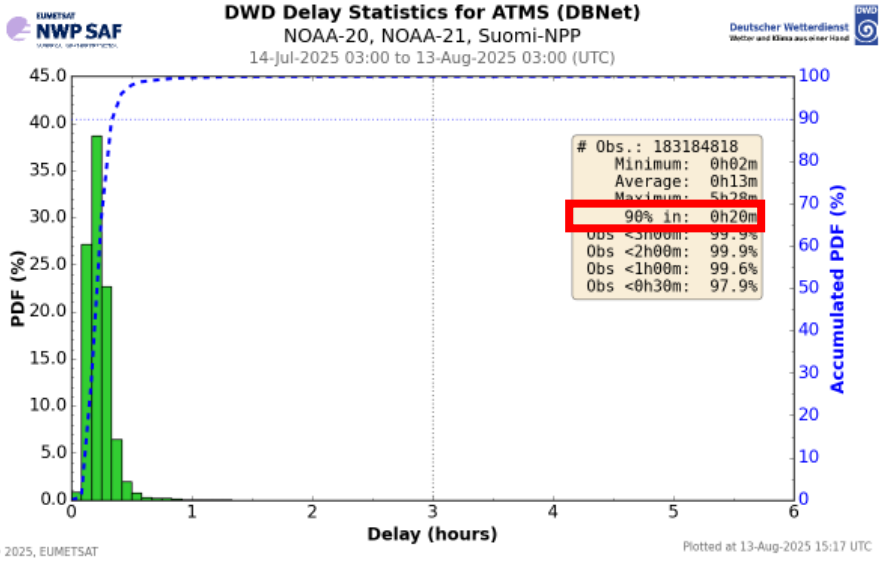
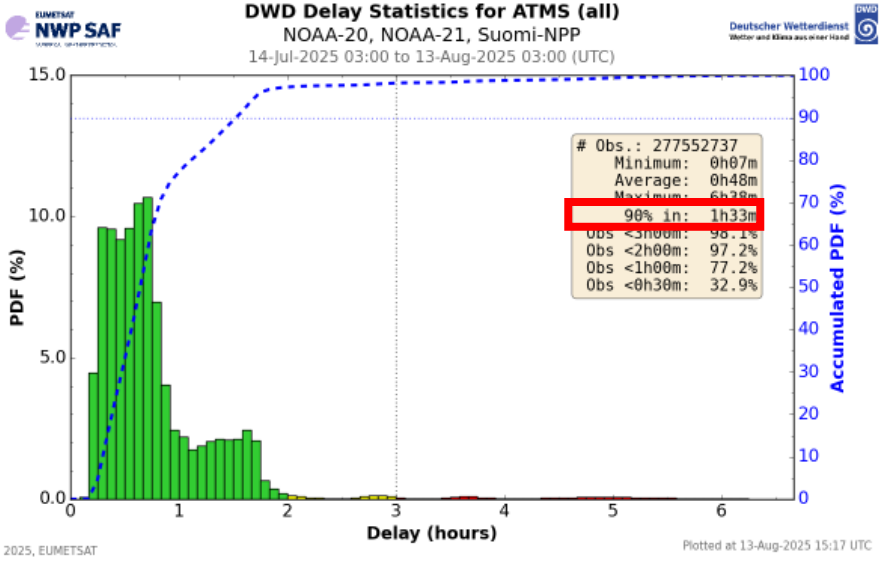
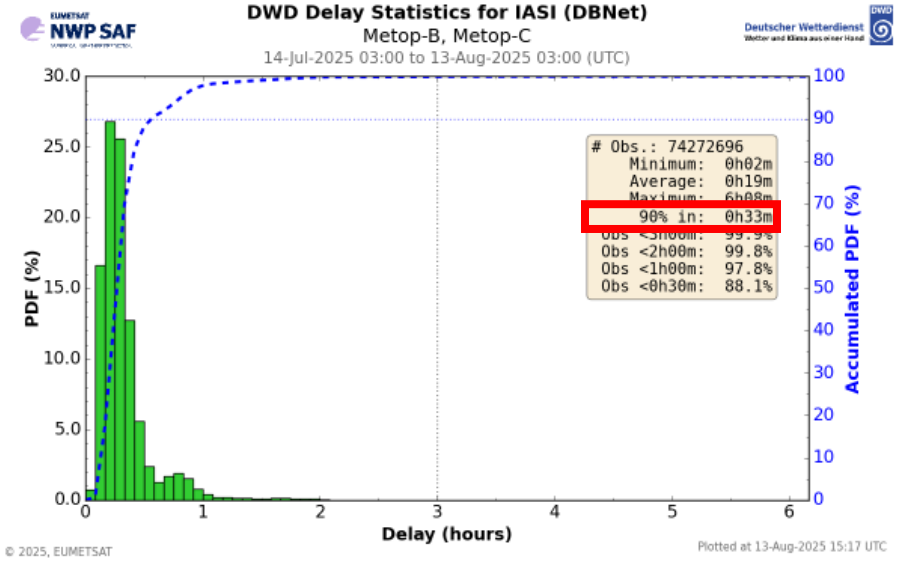
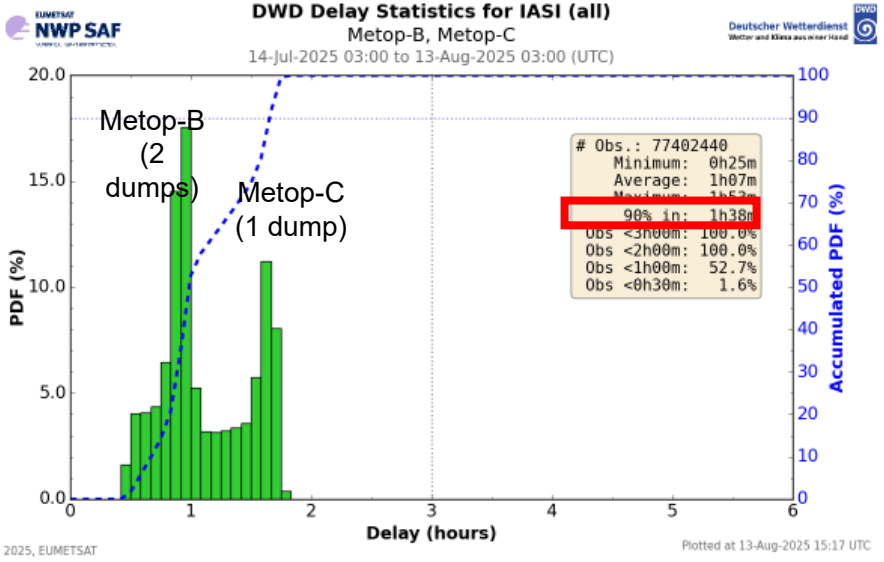
DBNet Station data latency (ATMS)





DBNet Station data latency (IASI)





High priority DBNet activities in the coming years (1/2)

1. Continue and expand the deployment of Metop-SGA1 data services;
2. Foster transition of DBNet data from GTS to WIS 2.0;
3. Expand the geographic coverage of DBNet;
   a) reintegration of CMA stations in the DBNet project (Urumqi),
   b) addition of the SMN/CONAE high latitude station (Tierra del Fuego),
   c) reintegration of four stations from the SAWIDRA/SEWA project (Libreville, Nairobi, Niamey, and Pretoria),
   d) addition of Env. Canada stations in the Northern part of Canada (Inuvik and Iqaluit),
   e) reintegration of IMD stations in the DBNet project (Delhi, Chennai),
   f) integration of FMI Sodankylä station as an EUMETSAT pilot station of opportunity,
   g) reintegration of ROSHYDROMET stations in the DBNet project (Moscow, Novosibirsk, Khabarovsk)
4. Advance the implementation of FY-3 data services;

High priority DBNet activities in the coming years (2/2)

5. Further develop the ground station receiving infrastructure to be compliant with JPSS-2/3/4, Metop-SG, FY-3E/F/H (due to new downlink characteristics, hardware and/or software upgrades will be required);
6. Expand the implementation of HSIR sounder services (from IASI and CrIS) by providing full channel sets via DBNet via WIS 2.0;
7. Enhance the monitoring of the DBNet product tools developed by NWP SAF, including timeliness monitoring capabilities;
8. Analyse benefits and feasibility of reducing DBNet product latency.

Thank you

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