Status of EUMETSAT scatterometer missions

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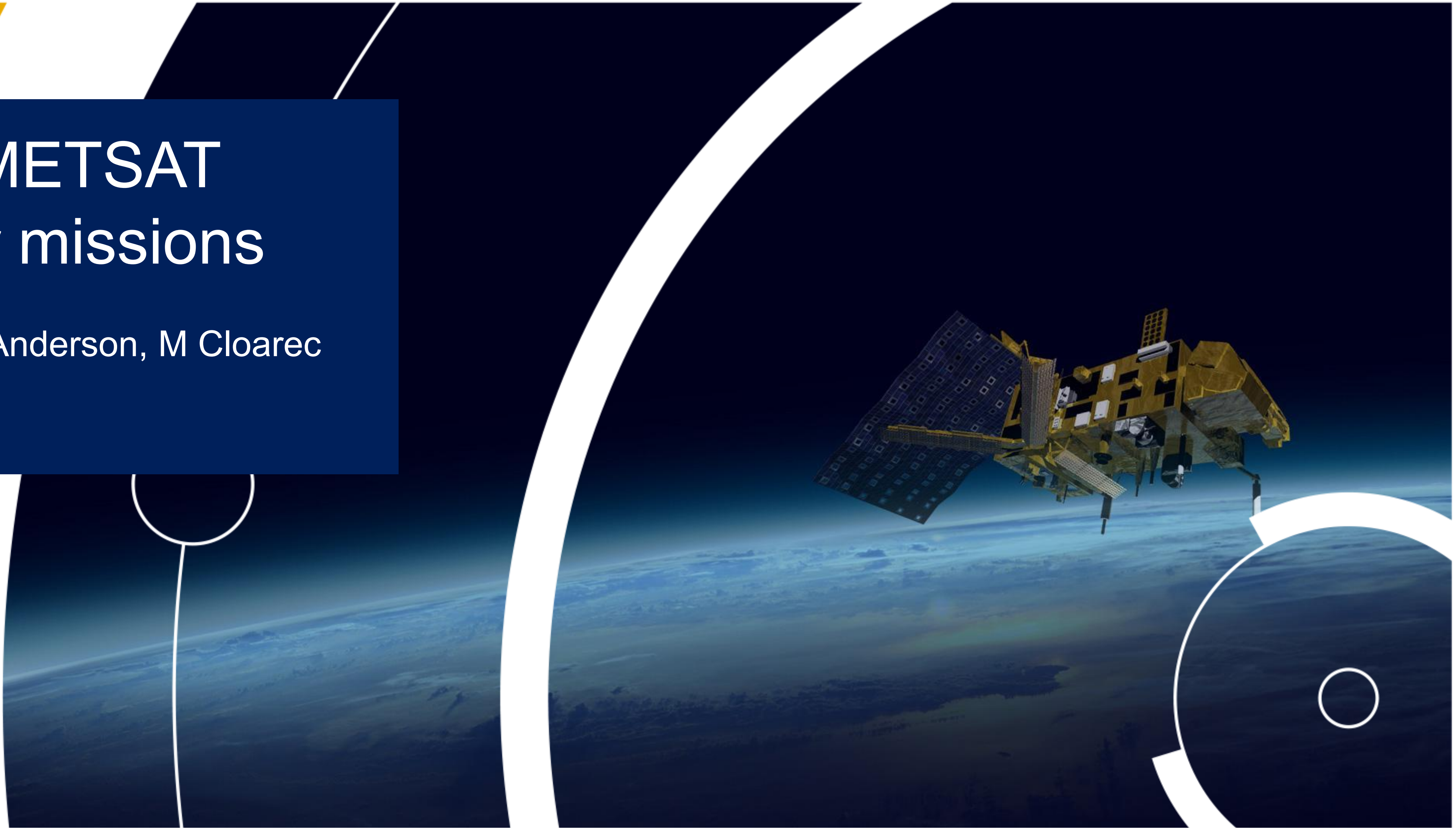
IOVWST – 19 April 2022



Agenda

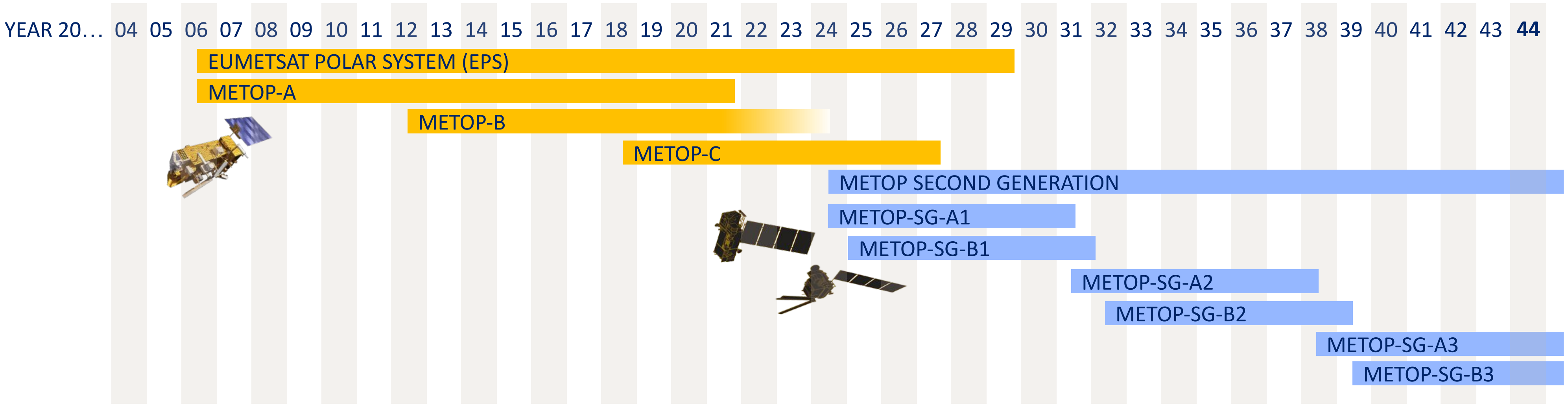
EPS / ASCAT

Instrument status · ASCAT noise evolution

EPS-SG / SCA

Status and recent updates

Current and future European operational scatterometer missions



Metop

- ASCAT-B (launched 17 September 2012)
- ASCAT-C (launched 07 November 2018)

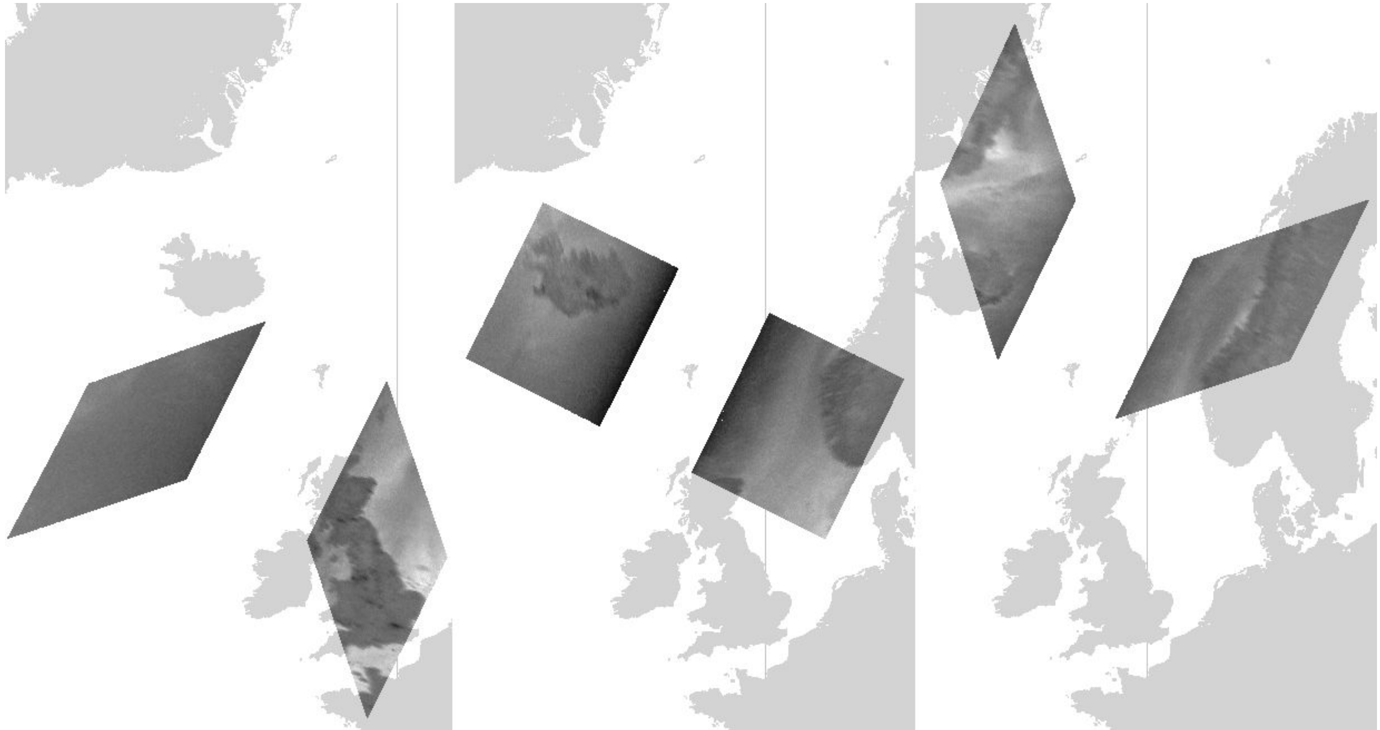
Metop-SG

- Scatterometer instruments (SCA) are on the SAT-B series
- SG-A1 launch planned for 2024
- SG-B1 launch planned for 2025

EPS / ASCAT - Instruments

- ASCAT-A mission ended on 15 Nov 2021
- ASCAT-B and -C are fully operational

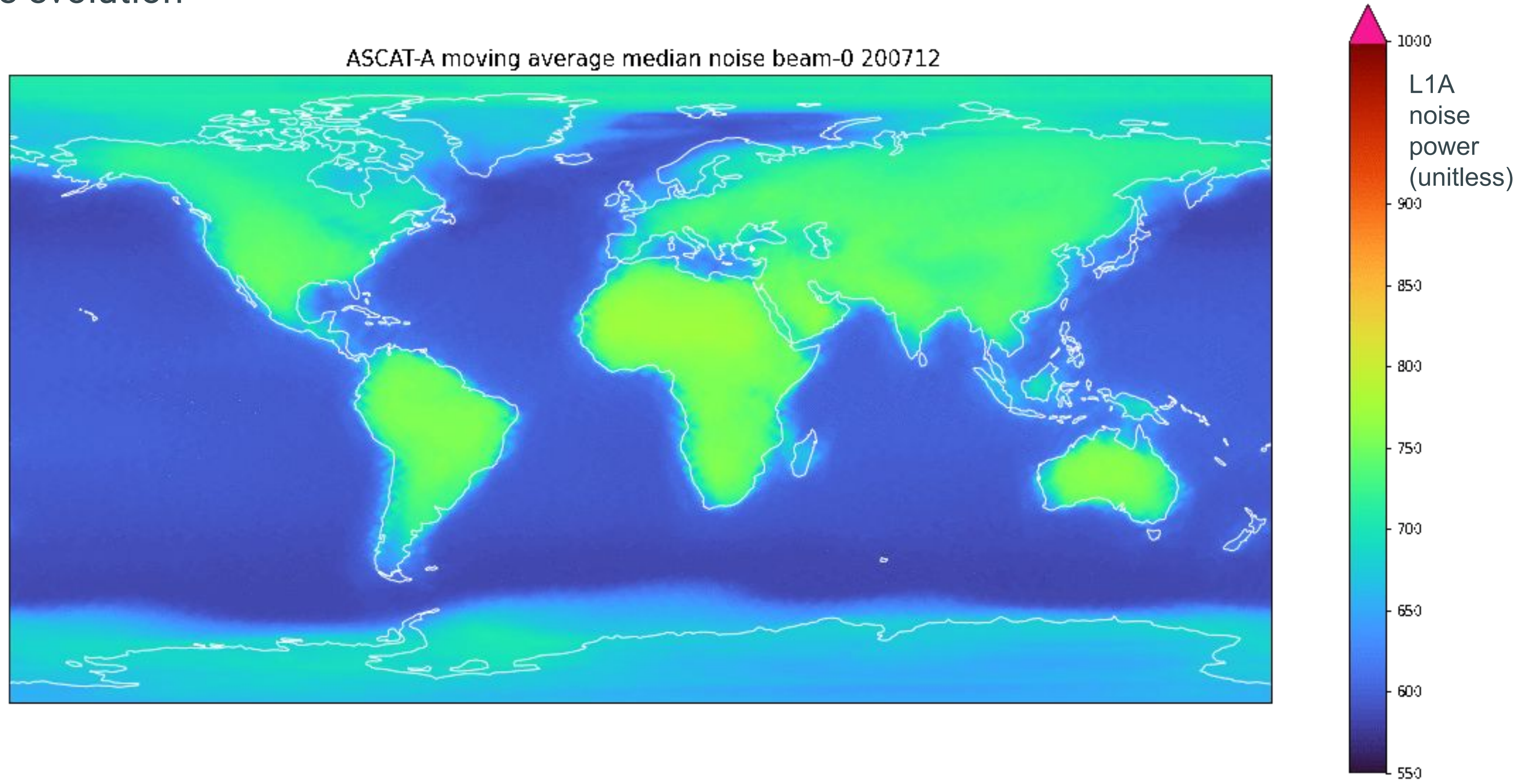
- Starting initial preparatory work for the reprocessing of the ASCAT-A mission
- Calibration campaign for ASCAT-C in preparation
- ASCAT PPF update expected Q2/2022



Last ASCAT-A PDU seen by the EUM Ground Segment, 15 Nov 2021 09:24 – 09:27

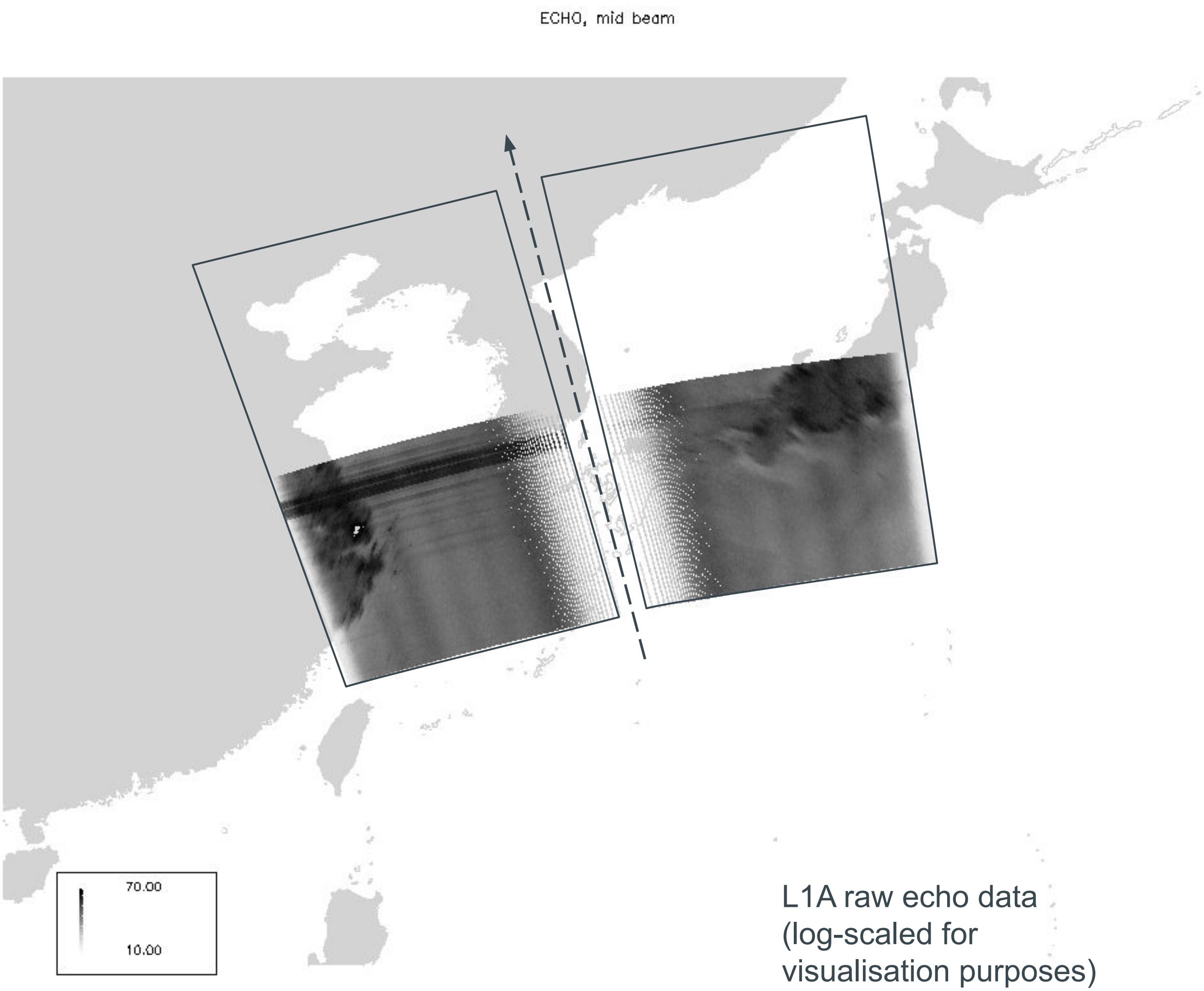
EPS / ASCAT – Noise evolution

Global noise evolution
(seasonality removed)



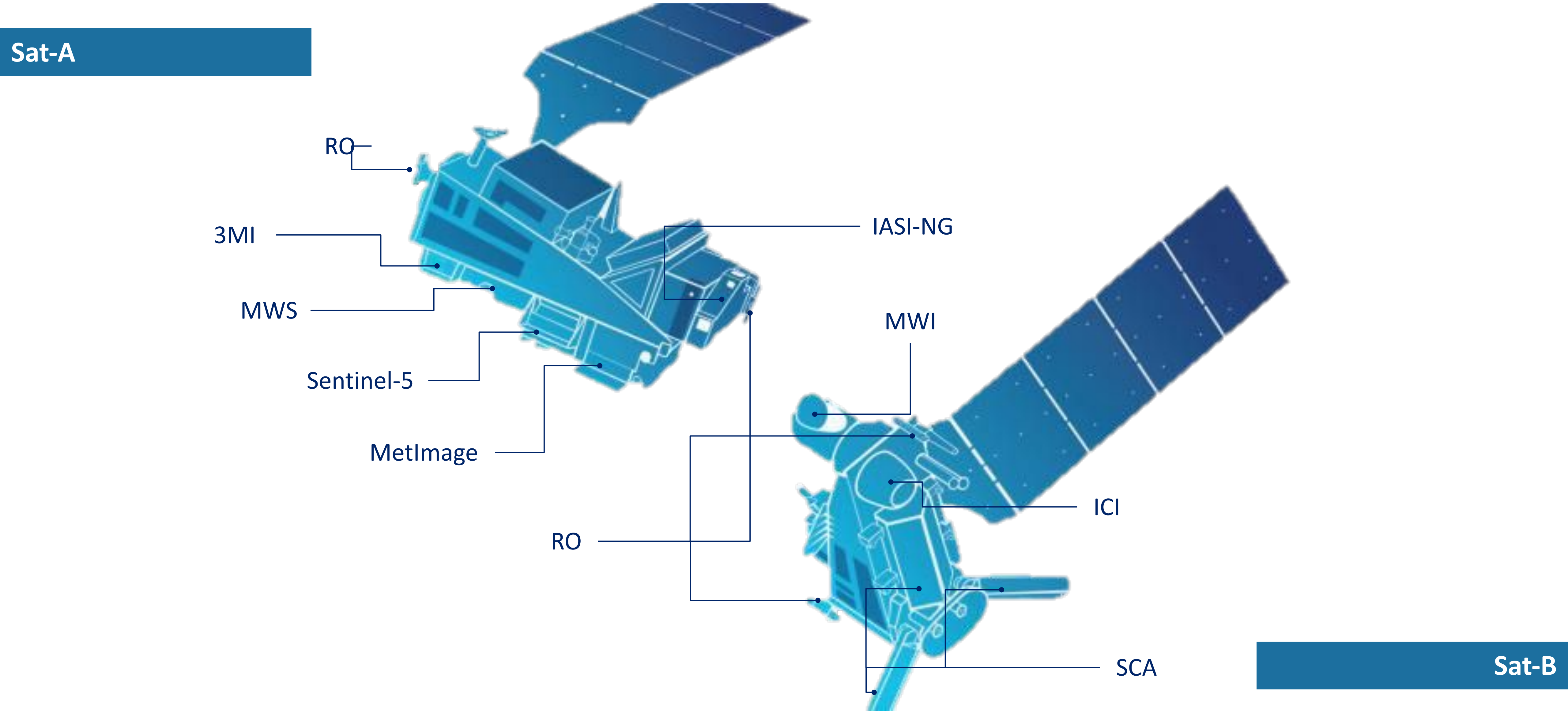
Noise impact

- Corrected in the L1 processing (noise subtraction), products are flagged
- On very rare occasions, extreme events can corrupt the measurements
- How much data is lost (flagged) due to RFI: under investigation



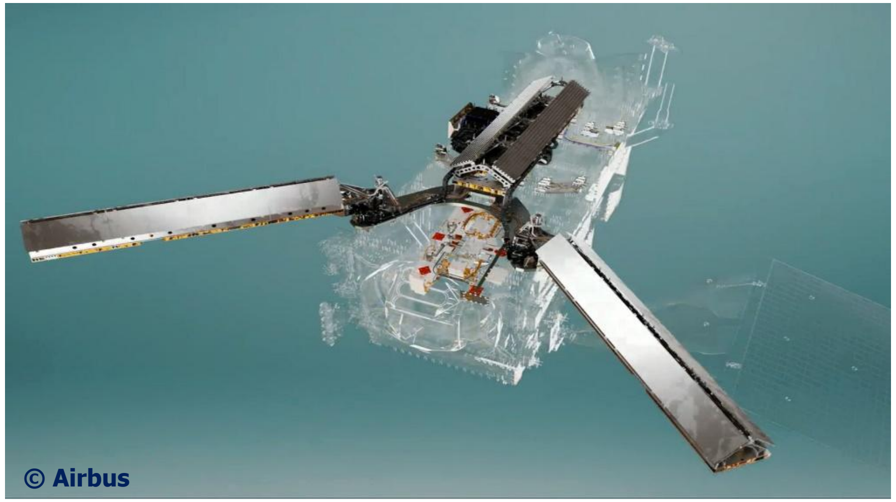
RFI in Level-1A from ASCAT-B, 2021-12-03 12:27:00

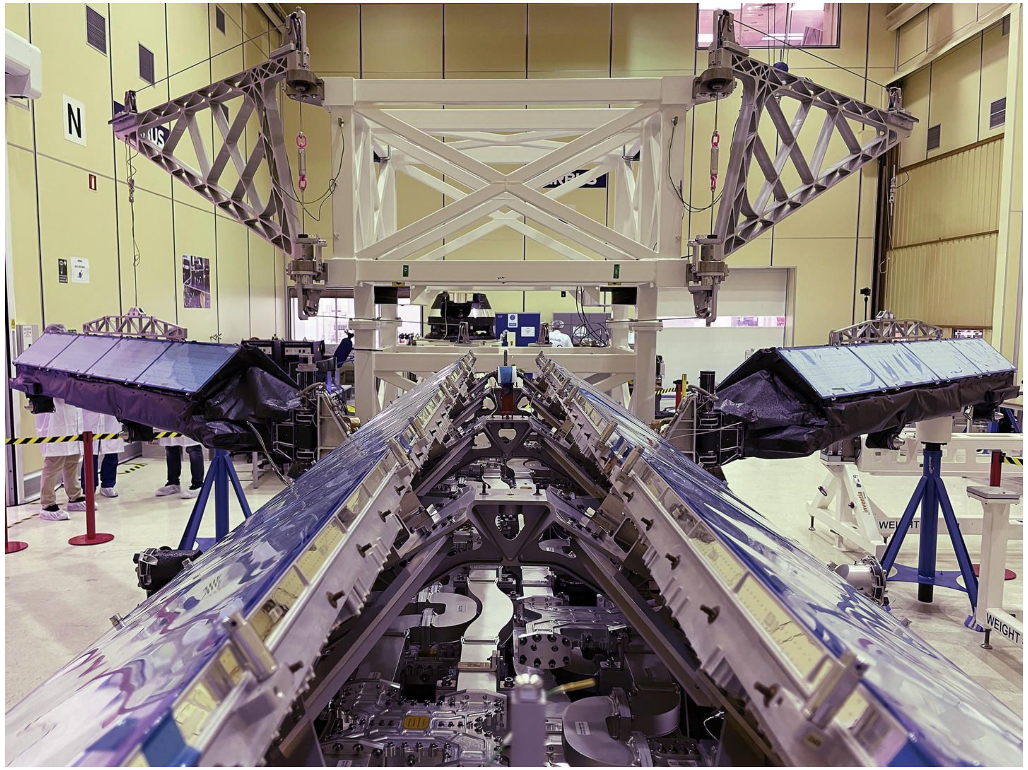
EPS-SG: Metop-SG satellites and instruments



EPS-SG SCA

- SCA instrument flight model has passed tests and will be integrated into the satellite along with the other instruments.
- SG-B1 Launch scheduled for Q1/2025
- We are currently preparing pre-launch versions of:
  - processing specifications,
  - test data, processor prototype





Scatterometer Antenna Subsystem in deployed configuration – Copyright Airbus-2021 (https://www.airbus.com/en/newsroom/press-releases/2022-04-metop-sg-b-weather-satellite-scatterometer-flies-through-tests)

Data products

	SCA SZR	ASCAT SZO	ASCAT SZR	SCA SZF	ASCAT SZF
Grid configuration	Swath based grid, colocated σ^0 measurements			Individual σ^0 measurements	
Spacing	12.5 km	25 km	12.5 km	Range 3 km Azimuth 1.5 km	
Resolution	25 km	50 km	25-30 km	Range 5 km Azimuth 25 km	Range 10 km Azimuth 25 km
Kp	3%	2-3%	4-5%	–	–
Calibration accuracy	0.1 dB	0.1 dB	0.1 dB	0.1 dB	0.1 dB
File formats	NetCDF, BUFR	NetCDF, BUFR, native	NetCDF, BUFR, native	NetCDF, BUFR	NetCDF, native

Data dissemination

Product ID	Global / Regional	EUMETCAST	Others	Destination (Others)	**Archive**
SCA-1B-SZF	G		NetCDF-4	KNMI	BUFR NetCDF-4
SCA-1B-SZR	G	BUFR NetCDF-4			BUFR NetCDF-4
SCA-1B-SZF	R		NetCDF-4	KNMI	BUFR NetCDF-4
SCA-1B-SZR	R	BUFR NetCDF-4			BUFR NetCDF-4

Some updates expected.

No dissemination via GTS is currently planned for SCA L1B data.

Timeliness / NRT data

ASCAT

- ASCAT-A 2 hours 15 mins
- ASCAT-B: 90 min
- EARS (regional): 15-30 min

SCA

- Global data: target 70 min
- Regional data: target 30 min

Thank you!

Questions are welcome.