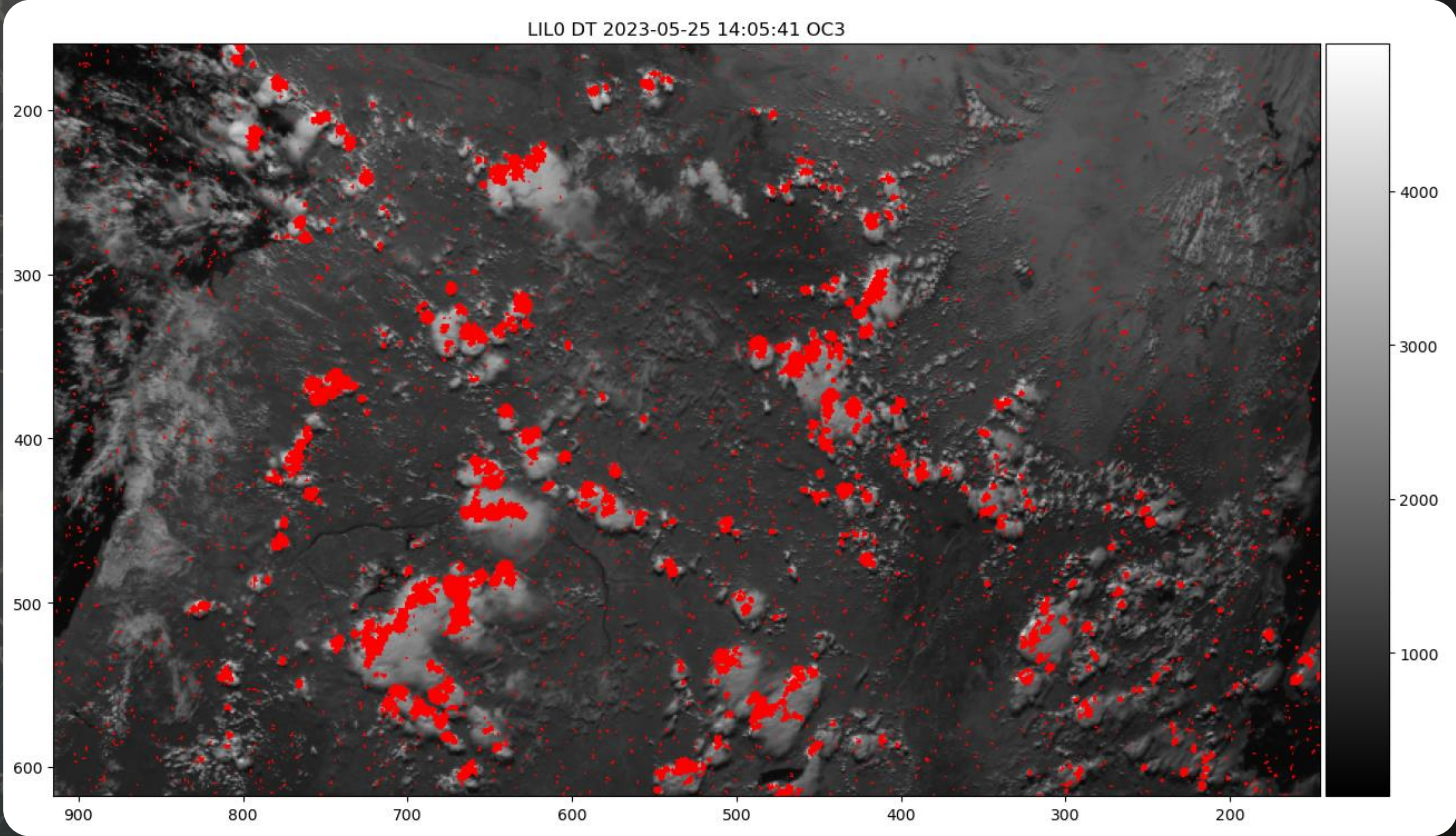
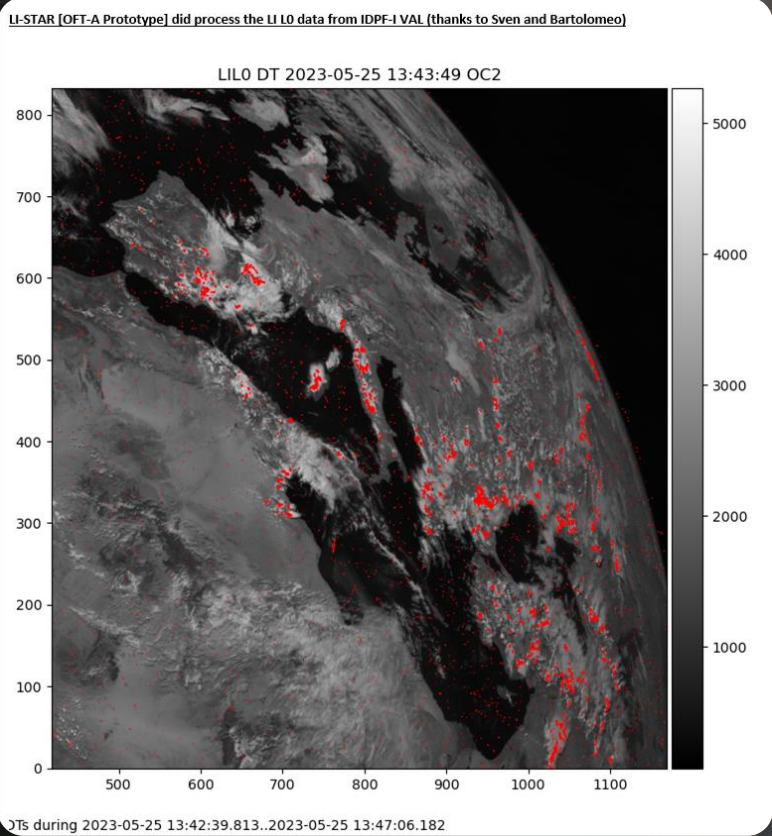


ESA Report on Current & Future ESA EO Missions and Programmes

Coordination Group for Meteorological Satellites
CGMS – 51 – Plenary Session

26/06/2023

MTG-I1's Lightning Imager is confirmed to be operating as planned, providing autonomous lightning detection. Initial result correlate extremely well with ground radar



MTG-I1 will become fully operational by the end of 2023

EO TOTAL: 2.7B€ on 3.03B€

Close to 90% of proposed envelope

Guaranteeing continuity of current activities and programmes and allowing start of new projects

ESA MS Demonstrating

- **Strong support** to climate and environmental actions
- **Strategic relevance of EO** sector for climate and environment
- **Climate as top concern** for European Citizens (Harris survey)

FutureEO

Undersubscribed, but highest contribution ever on yearly basis, **400 M€/year**

Copernicus

Oversubscription shows continued support by MS

Customised EO

Climate Space (Oversubscribed)

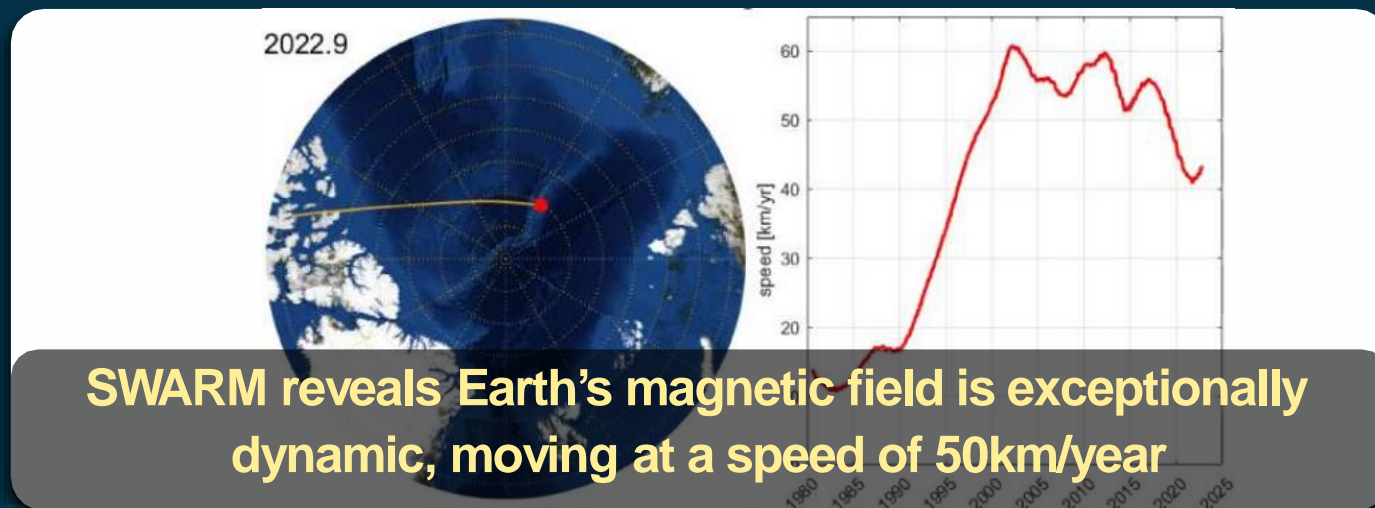
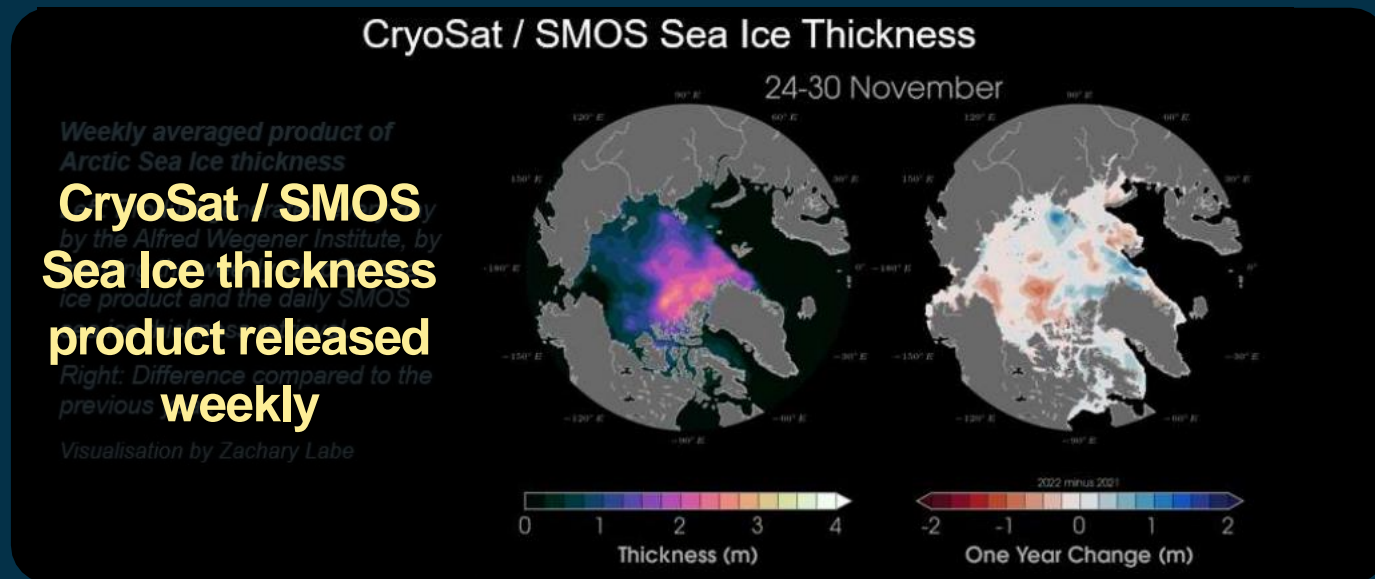
Digital Twin Earth (Near full subscription)

TRUTHS (Activities continue to CM25)

InCubed-2 (Scaled to subscription)

Aeolus-2: Oversubscribed

- SMOS, CryoSat and SWARM have provided outstanding results of interest to the meteorological and climate research communities at large.
- The overall performance of the missions remains excellent.
- Both ESA DOSTAG and PB-EO have endorsed the extension of the three missions until the end of 2025.



Aeolus Re-Entry

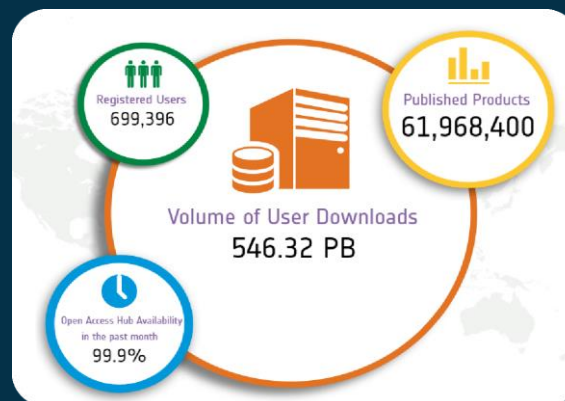
- Aeolus performed well beyond its nominal lifetime and is now being prepared for re-entry.
- Innovative re-entry strategy, Decay+, reduces casualty risk by factor of 42, ensuring compliance with current space safety regulations.
- Re-entry planned over Atlantic ocean 19 July – 12 August 2023.

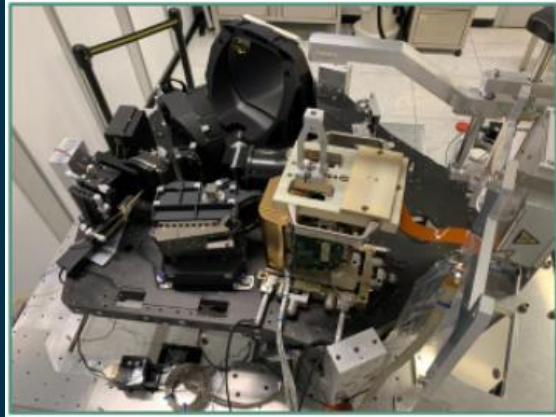
AEOLUS-2

- Instrument Consolidation Study Preliminary Concept Review successfully closed.

Sentinel missions are operated in full operations capacity

- **Sentinel-1A** → **nominal operations**
- **Sentinel-2A and Sentinel-2B** → **nominal operations**
- **Sentinel-3A and Sentinel-3B** → **nominal operations**
- **Sentinel-5P** → **nominal operations**





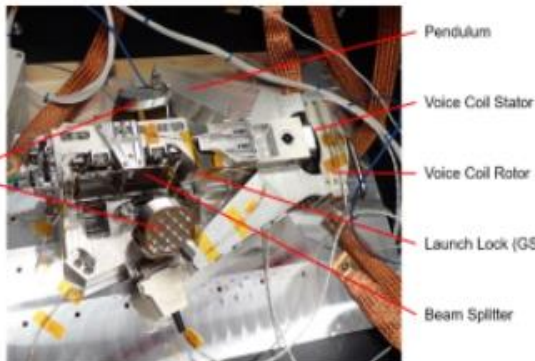
Floris FM integration / alignment

FLEX

- Platform AIT will start in September at TAS-UK facilities in Belfast.
- Instrument FM AIT progressing well.
- Launch date targeted for December 2025.

FORUM

- System PDR preparation is progressing according to plans.
- Instrument PDR Collocation has been completed.
- Launch targeted for Q3 2027.



FORUM Interferometer, OHB

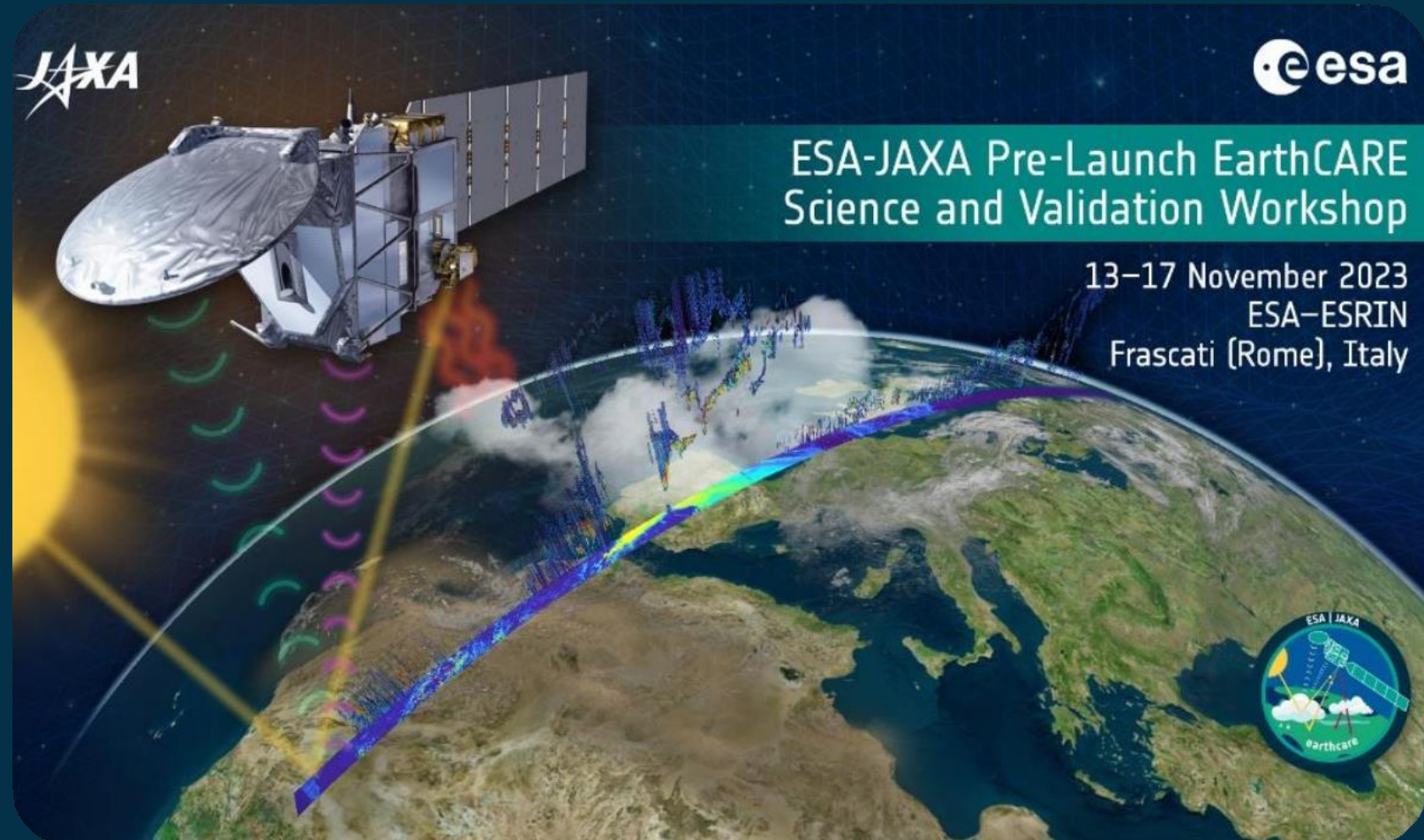


Biomass

- Good progress is being made on the satellite in the test facilities in Toulouse.
- Launch readiness targeted for ~ 24/25

EarthCARE:

- EarthCARE Overall Ground Segment Verification phase on schedule, with 2 major test runs out of 4 planned successfully performed.
- Satellite test campaign progressing according to plan at ESA-ESTEC.
- Launcher baseline Vega-C with backup Falcon-9 compatibility study negotiated and starting.



Upcoming ESA-JAXA Pre-Launch EarthCARE Science & Validation Workshop 13-17 November 2023 at ESRIN

EE12: Call for mission ideas received 18 Letters of Intent

- Letter of intent workshop held on 10 May 2023.
- April 2024, Selection of candidate missions to enter phase 0.

EE11: MTR's for all 4 missions have been completed.



TRUTHS:

- Phase B1 Extension study has been closed out and the end-to-end simulator delivered to ESA in support of science activities.
- Technology pre-developments supported by funding of the Phase A/B1 and B1-bridging are on-going.

NGGM: NASA sent success criteria for decision to embark European tech demo on Mass Change.

"In-line"

"Bender"

HARMONY:

- All six Phase B1 studies have been started.
- Two parallel System Phase B1 studies addressing the System and satellites aspects were initiated in February 2023.

ALTIUS:

- System performance : Level 2 mission performances under assessment with the E2E Simulator showing promising results for ozone and aerosol products.
- Platform CDR started.
- Ground segment elements are progressing nominally.

Completion of PDRs for ALL Copernicus Expansion Missions



CHIME

- Contract Rider for PFM and FM2 Phase C/D signed in November 2022.
- Project is in Phase C/D since 1st December 2022.
- System and Instrument PDRs are closed.

CIMR

- Project is in phase C since December 2022. Rider 1 has been signed among TAS-I and main subcontractors (HPS/LSS and OHB); propagation to lower levels subcos still on-going, expected to be completed by summer.
- Large Deployable Reflector for Earth observation that serves as Engineering Model for the CIMR reflector has completed all the hardware testing.

CO2M

- CO2M Payload CDR KO planned end September 2023, and Satellite CDR KO forecasted end November 2023.
- Launcher CO2M specific Contract KO held on 17th February 2023. Formal announcement of new Launch Slot proposal by Arianespace is now expected in July 2023.

ROSE-L

- Project in phase C since December 2022. SAR instrument PDR successfully completed in 21st March 2023.
- All critical technologies have achieved TRL-6 with the exception of the TRM modules for which some testing are pending.

LSTM

- Phase CD/D1 part 1 activities released for Prime, instrument Prime and all in November 2022 followed by the Kick-off of the remaining platform equipment.
- Finalization of the MTF for the TIR planned in Q2 2023.

CRISTAL

- Preparation of System CDR scheduled in Q2 2024.
- For IRIS Instrument: all lower level PDR's completed.
- Implementing Arrangement in preparation for a collaboration with EUMETSAT and a collaboration with NASA.