



Working Group III Report

Presented to CGMS-51 Plenary
agenda item 3

Presented by: Irene Parker, Co-Chair, WG III

Agenda

- Report of WGIII Meeting (CGMS-51-WGIII-WP01)
 - Includes CGMS Contingency Plan Revision
- CGMS Baseline
- 5th CGMS Risk Assessment (2023)

Report of the WGIII Meeting (1 of 2)

➤ Update from WMO on Unified Data Policy and Establishing Core Satellite Data

WMO presented their activities in the intersessional period, which were bilateral in nature. Working Group III Members welcomed the addition of a planned workshop to bring together space agencies and users representing WMO application areas with an aim to provide the proposed updates to the WIGOS Manual for core and recommend satellite data for approval of INFCOM-3 (April 2024), Executive Council and the WMO Congress.

➤ Status of operational and research missions

- EUMETSAT reported MTG-I1 commissioning is underway with the first image to be released on 4 May 2023, EPS-Aeolus is now in Phase B, and EPS-Sterna is in Phase A. EUMETSAT also noted they are investing in AI/ML to support future missions.
- JMA reported Himawari-9 became the operational mission in December 2022 and Himawari-8 will remain as back-up. JMA noted they contracted manufacturing of Himawari-10, which will carry a visible/infrared imager, and infrared sounder and a space environment instrument suite.
- NASA reported the Tropospheric Emissions: Monitoring of Pollution (TEMPO) mission will get powered-on in May 2023 with first light scheduled for mid-July 2023 and a public release of standard products in October 2023, and although the Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats (TROPICS) mission lost two CubeSats in a launch attempt in 2022, NASA's new launch scheduled for 30 April 2023 is expected to allow the constellation to be ready for the 2023 Atlantic Hurricane Season, with data latency under two hours.

➤ WMO OSCAR/Space Status

WMO presented the status of OSCAR/Space noting they addition of a milestone to develop frequency reporting to support the CGMS WGI Space Frequency Coordination Group, and to add data latency records to support the WMO gap analysis. Further, WMO noted major milestones for 2023 include adding the WIGOS station identifiers for satellites and Common Code Tables C-5/8.

Report of the WGIII Meeting (2 of 2)

➤ WMO Gap Analysis

WMO presented their analysis of the gap between the space-based Earth and Space Weather observation capabilities recorded in OSCAR/Space and the WMO Vision for WIGOS 2040. The Gap Analysis identified 18 gaps for Earth observations (MW SST/LST, cloud radar, doppler wind lidar, altimeter lidar, wide swath radar altimeter, IR/MW limb sounder and high-temporal MW sounder) and nine (9) gaps for space weather observations (solar radio waves at L1 in the latter part of the decade).

➤ CGMS Contingency Plan ([CGMS-51-WGIII-WP-06](#))

WG-III reviewed the proposed changes to the CGMS Contingency Plan, codifying existing practices consistent with the direction approved by CGMS-50 Plenary: the WMO Gap Analysis is provided annually (section 4.1), updated text regarding the help-your-neighbour process (section 5.1), added use of commercially-sourced data for risk mitigation (section 5), and added text for operators to consider (without obligation) operations of satellites beyond design life if possible (section 5.1), and added text describing the CGMS Risk Assessment process (Annex).

➤ Socioeconomic Benefit Studies

- CMA presented its outlook for the Fengyun (FY) programme and its preliminary assessment of socioeconomic benefits, which indicated the economic benefit of the FY programme in 2019 was 31.343 RMB with a 1:30 input-output ratio.
- NOAA presented two studies: GeoXO Benefit Analysis and Economic Benefit Analysis of NOAA's Space Weather Products and Services to the Electric Power Industry. The GeoXO Benefit Analysis

➤ CGMS Future Direction Project 2022+

Following a presentation on the work of the CGMS Futures 2022+ Task Team, WGIII agreed future execution of the Relationship with the Private Sector and Socio-Economic Benefits were well placed in WGIII.

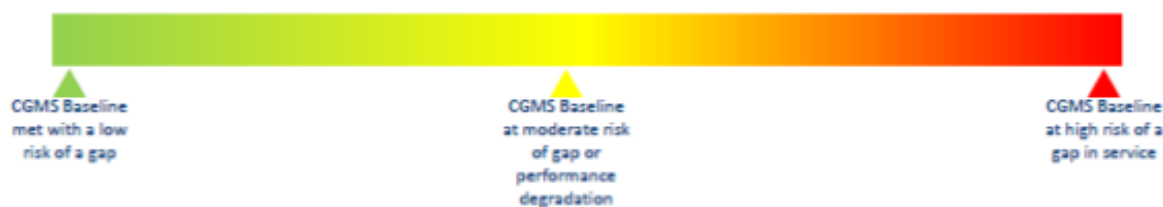
CGMS Baseline

- There were no substantial updates to the CGMS Baseline in 2023; only minor editorial changes to update the reference list and the GEO slots for space weather observations.
- The CGMS Baseline is provided as [CGMS-51-WGIII-WP-07](#) for Plenary endorsement.

CGMS Risk Assessment Key

CGMS Risk Assessment uses **Green**, **Yellow**, and **Red** to graphically represent the overall status of that sensor/observation. The criteria for each colour is as follows:

- **Green**: CGMS Baseline met with a low risk of a gap.
- **Yellow**: The CGMS Baseline is at moderate risk of not being fully met. Some mitigation by CGMS Members may be required.
- **Red**: There is a high risk of not meeting the CGMS Baseline without CGMS Member action
- **No Colour**: Observation is not planned to be available until a later date



Top-Level Risk Assessment (2022)

No plans for low-inclination
RO observations after
COSMIC-2



Observations at L1 at risk in the near-term until SWFO-L1 is launched

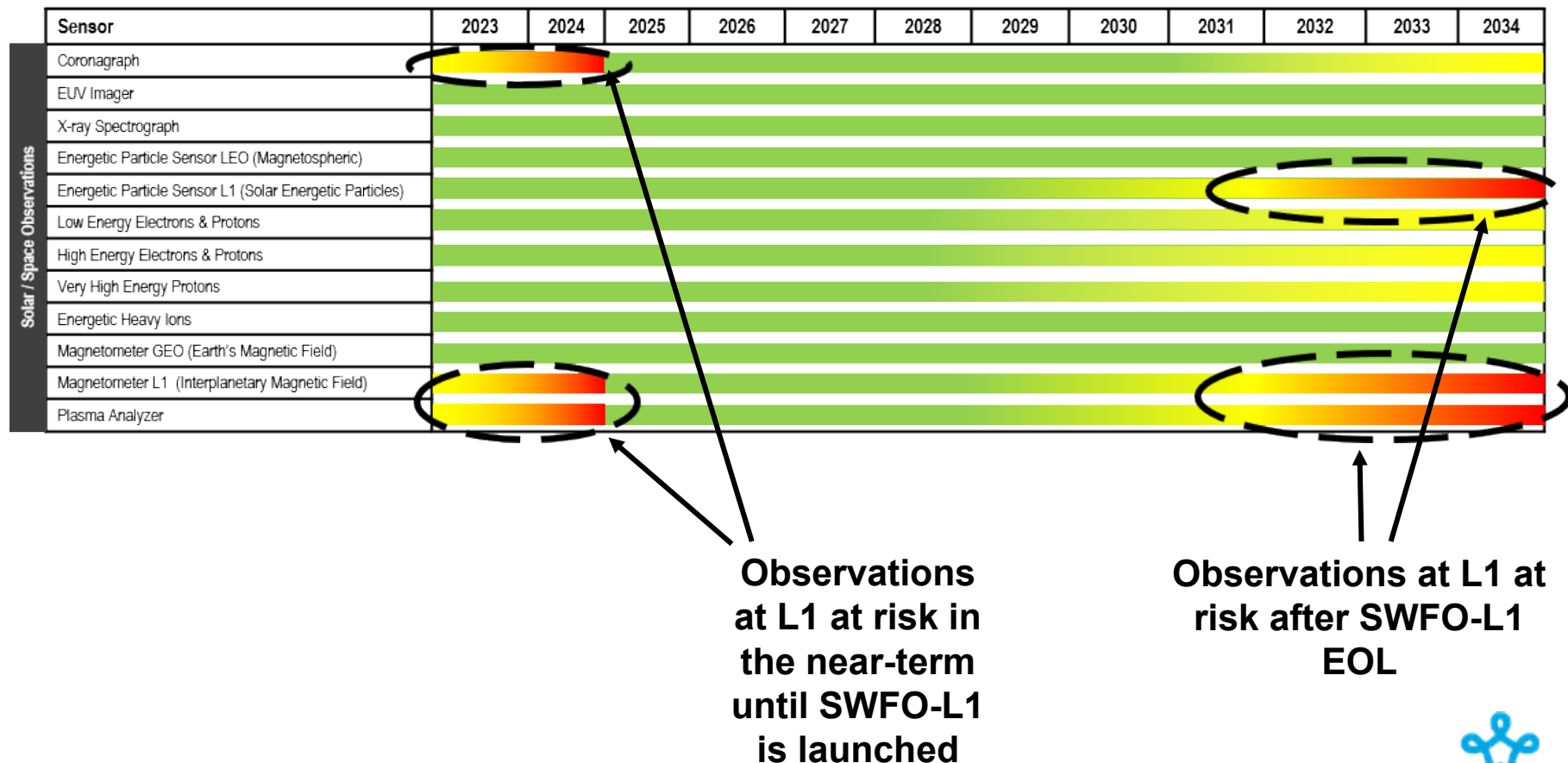
Top-Level Risk Assessment - Earth Observations (2023)

No plans for low-inclination RO observations after COSMIC-2



Coordination Group for Meteorological Satellites - CGMS

Top-Level Risk Assessment - Solar/Space Observations (2023)



Top-Level Risk Assessment (2023) – Recommended & Existing Actions

Recommended Actions

- CMA to look into potential for operational use of Chinese commercial RO data

Existing Actions

- ISRO to confirm plans beyond OceanSat-3
- ISRO to provide update on plans for a geostationary hyperspectral infrared sounder
- NASA and JAXA to confirm plans to fly a precipitation radar beyond GPM Core
- KMA to confirm plans beyond GK-2B for the Visible / UV Spectrometer and Narrow Band Visible Imager
- WGIII to consider adding observations from geostationary orbit to the CGMS baseline requirements for broadband short/long wave radiometer
- NOAA should review additional ground resources needed to track STEREO-A and PUNCH to provide additional coverage in the near-term.

To Be Considered by CGMS-52:

CGMS Contingency Plan ([CGMS-51-WGIII-WP-06](#))

CGMS Baseline update ([CGMS-51-WGIII-WP-07](#))

5th CGMS Risk Assessment (CGMS-51-WGIII-WP-05)



Thank You.

WG-III Co-Chairs:
ZHANG Peng, CMA
Irene PARKER, NOAA

Rapporteur:
Heikki Pohjola, WMO