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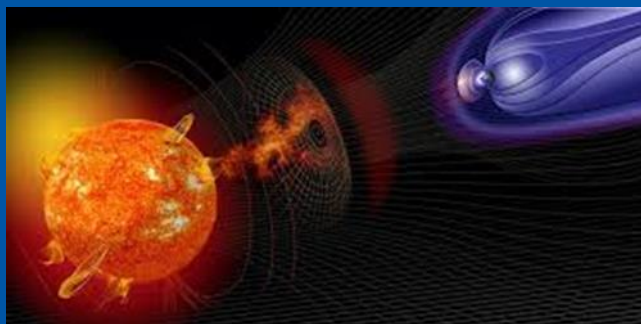
*ASECNA Seminar on the Implementation of
requirements for the provision of Space
Weather Information to Aviation: From
Awareness to Operational Readiness*

Dakar, 8-12 December 2025, Dakar, Senegal



Session 3

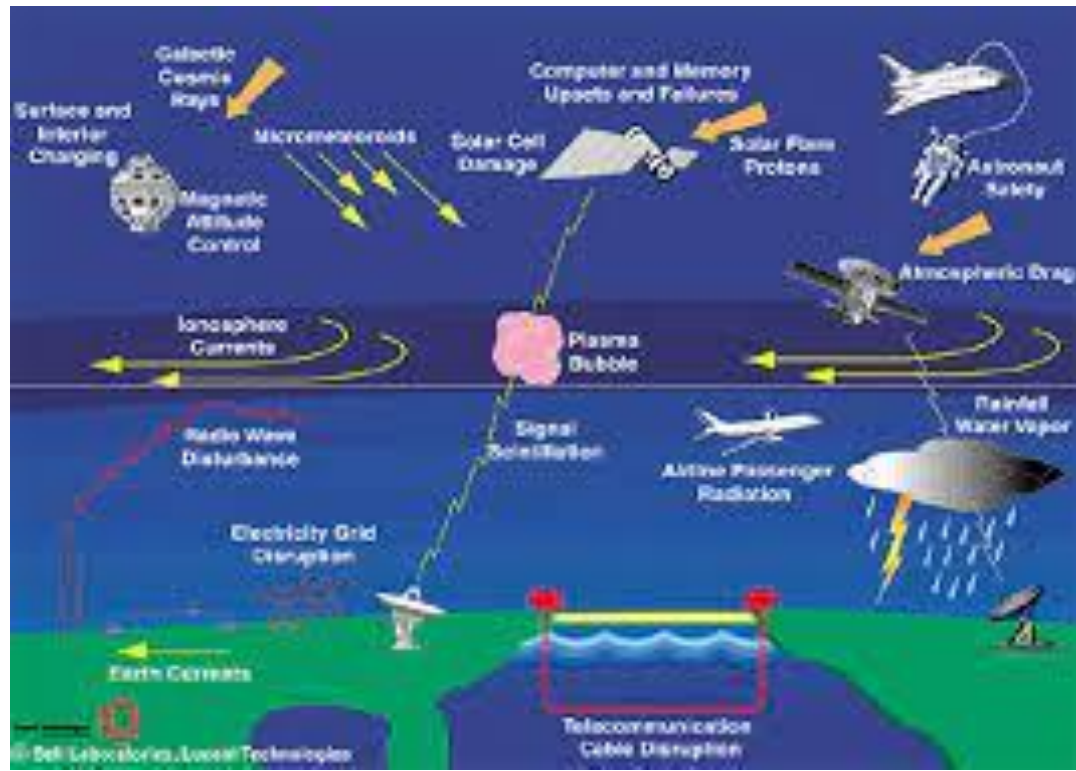
Space Weather Reporting and Communication



3.3 Dissemination of SWXAs and role of MET units

Outlines

- 01** Overview of SARPs on the Issuance and Provision of SWXA Information
- 02** Dissemination of SWXA Information
- 03** Roles of MET Offices



Overview of SARPs on the Issuance and Provision of SWXA Information

A3 STD 3.7.1 A Contracting State, having accepted the responsibility for providing a space weather centre (SWXC) within the framework of the space weather information service, shall arrange for that centre to:

- a) ...
- b) issue advisory information regarding the extent, severity and duration of the space weather phenomena that have an impact in the areas of **high frequency (HF) radio communications, Communications via satellite, GNSS-based navigation and surveillance; and Radiation exposure at flight levels.**
- c) **supply the advisory information** referred to in b) to:
 - 1) Area Control Centres, Flight Information Centres And Aerodrome Meteorological Offices;
 - 2) other SWXCs; and
 - 3) International OPMET Databanks and Aeronautical Fixed Service Internet-based Services.
- d) issue updated advisory information on space weather phenomena, as necessary, **but at least every six hours until such time** as the space weather phenomena are no longer detected and/or are no longer expected to have an impact.

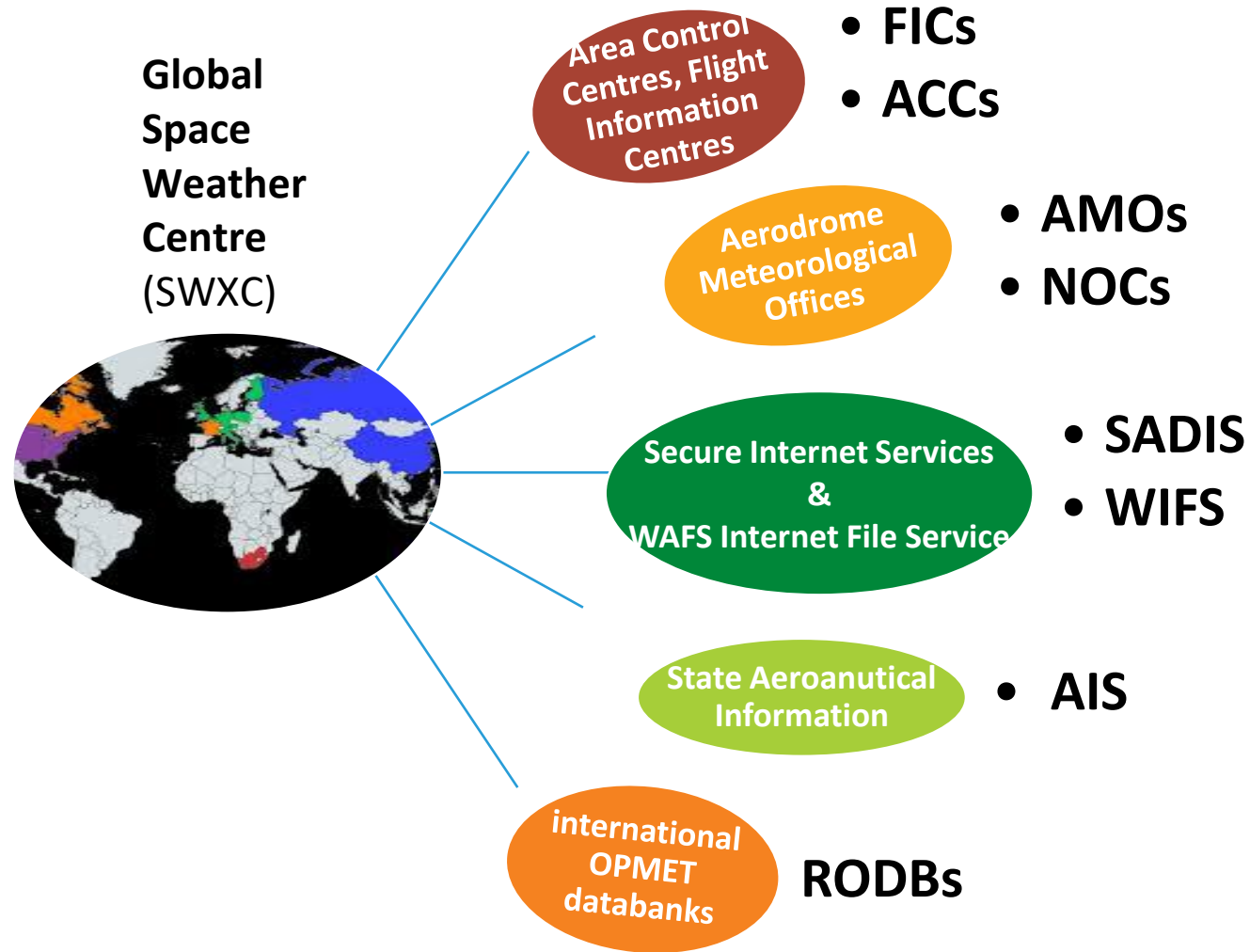
A3 STD 3.7.2 SWXC shall maintain a **24-hour watch.**

A3 STD 7.3. The advisory information on space weather shall be issued **by a Global Space Weather Centre (SWXC).**

PANS-MET STD 6.3.2 Space weather advisory information shall be disseminated in IWXXM form, in addition to the dissemination of this advisory information in abbreviated plain language in accordance with 6.3.1.

Dissemination of SWXA Information

- **A3 STD 7.3.** The advisory information on space weather shall be issued by a **Global Space Weather Centre (SWXC)**.
- User's can obtain the Space Weather Advisory (SWXA) through :



- MET Offices (Meteorological Watch Offices, Aerodrome Meteorological Offices, Regional MET Centres, etc.) are responsible for ensuring that pilots, air traffic services, and flight operations **receive timely and reliable information on space weather phenomena that may affect aviation safety**. (See PANS-MET, Chap. 8)
- The roles of the MET Offices can be grouped into five major functions as detailed in the following Slides.

0. Implementation of Dissemination/Reception Systems

MET Units should ensure availability of appropriate dissemination systems, such as:

- AMHS,
- SADIS or WIFS,
- Local aeronautical briefing systems,
- National aviation portals;
- Etc.

Roles of MET Offices

1. Reception and Monitoring of SWXA Information

- MET Units to ensure continuous and reliable receipt of:
 - SWXA messages **issued by Global SWX Centres (SWXC)**, Updates and cancellations;
 - They should **monitor 24/7** for any changes that influence aviation operations in their area of responsibility.

Roles of MET Offices

2. Interpretation and Assessment

Once SWXA messages are received, MET Units should:

- **Interpret the advisory content** (phenomena, intensity, expected impacts),
- **Evaluate its significance** for local/regional aviation operations,
- **Determine implications** for:
 - Communications (HF),
 - Navigation (GNSS), Surveillance,
 - Radiation exposure,
 - Airspace management.
- This step is critical because SWXA information is global;
- MET Units to translate it into actionable local/regional relevance.

Roles of MET Offices

3. Dissemination to ATS, Airlines, and Other Aviation Stakeholders ^{1/2}

MET Units may ensure **timely dissemination** of SWXA information to the users who need it:

To ATS Units (ACC, APP, TWR)

- To support decision-making in route planning, altitude allocation, and flow management.
- To allow ATS to include SWX in NOTAM, ATIS updates, or operational briefings when required.

To Flight Operations (AOC, dispatchers)

- For flight planning decisions (routes, altitudes, alternates).
- For risk assessment and crew briefing.

Roles of MET Offices

3. Dissemination to ATS, Airlines, and Other Aviation Stakeholders ^{1/2}

To Pilots

- Through pre-flight briefings,
- During flight via ATS when significant changes occur.

To AIS/AIM Units

- For inclusion in briefing packages or aeronautical information products.

Roles of MET Offices

4. Integration Into Briefings and Operational Products

MET Units should incorporate SWXA information into:

- Pre-flight briefing packages,
- Flight folders,
- GNSS/Radio communication advisories,
- Operational meteorological consultations.

This ensures that SWX becomes part of routine operational decision-making.



Thank You!