



# Overarching Goal: Strengthen Resilience Through Improved Services

Four elements needed to improve space weather capabilities:

1. User Needs: Understand the risks and the actions that need to be taken
2. Targeted Services: Develop useable capabilities from basic science knowledge
3. Observing Infrastructure: Shared approach for long-term continuity
4. Global Coordination: Consistent, accurate message



# Imperatives for International Action

- Space weather is growing in importance around the globe
- Space weather services lag far behind what is needed to ensure the resiliency of our economic and security infrastructure
- Basic and applied research – both are required to improve our capabilities. Space weather is more than space science.
- Coordinated approach is required to maintain continuous, real-time ground-based and space-based observing assets
- Regional and global consistency of information is necessary



# International Organizations Involved in Space Weather Services



International Space Environment Service – Global network of space weather service providers since 1962



World Meteorological Organization – Global observing and service infrastructure – combining meteorology and space weather



Coordination Group for Meteorological Satellites – Satellite observations and anomaly reporting – drafting Terms of Reference



International Civil Aviation Organization – Defining civil aviation needs and information flow



UN Committee on Peaceful Uses of Outer Space – New space weather agenda item – Research, observations, applications



# International Efforts Involved in Space Weather Research

International Space Weather Initiative

Varsiti SCOSTEP

International Living With a Star

COSPAR Panel on Space Weather/Roadmap



# Discussion

## Who Contributes Today?

- **User Needs:** ISES, WMO, ICAO, CGMS
  - **Targeted Services:** ISES, WMO, COPUOS, ISWI, Varsiti, ILWS, COSPAR
  - **Observing Infrastructure:** ISES, WMO, COPUOS, CGMS, ISWI, ILWS
  - **Consistent Message:** ISES, WMO
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- What do we want to accomplish through international cooperation?
  - Can our goals be achieved with the existing organizations/relationships, or is a new approach needed?