



Meeting the Nation's Evolving Needs for Space Weather Services

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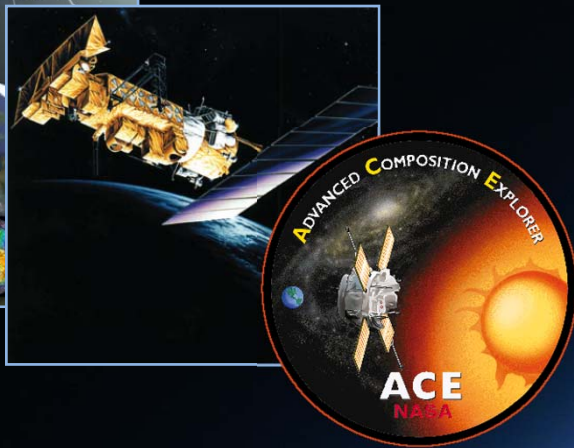
June 5, 2012

A Weather-Ready Nation:

Society is prepared for and responds to space weather-related events



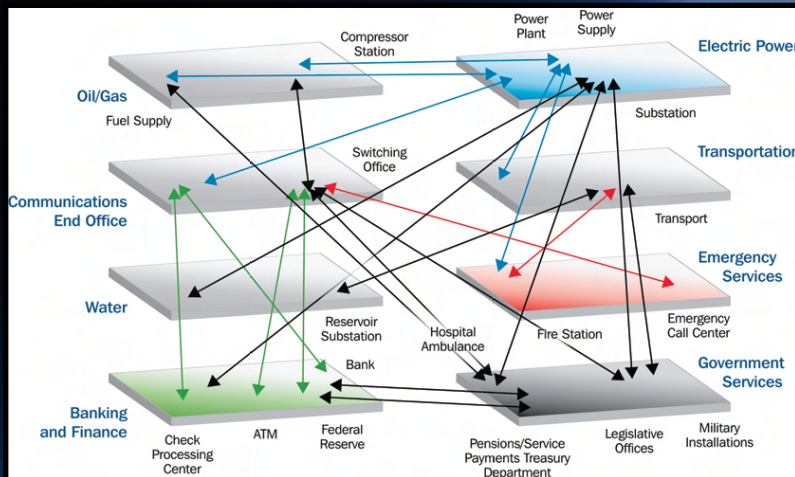
Critical Observations



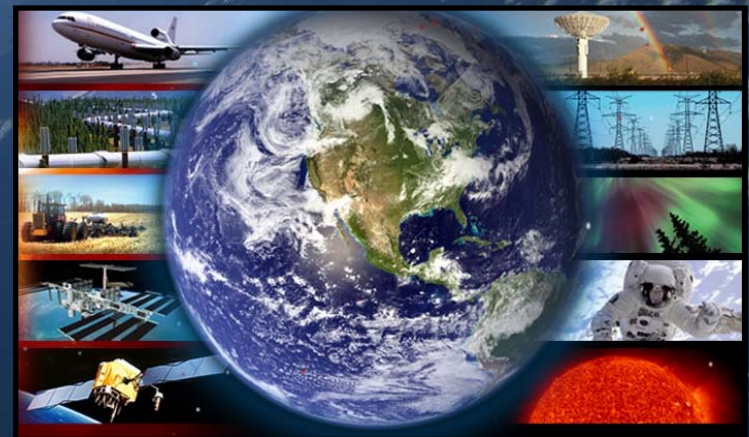
Partnerships



Connections and Interdependencies

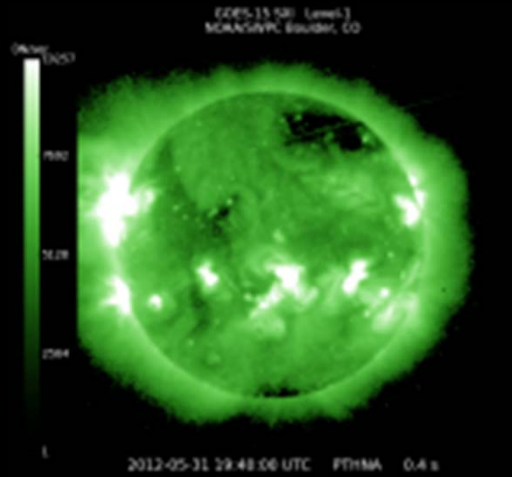


Customer Growth

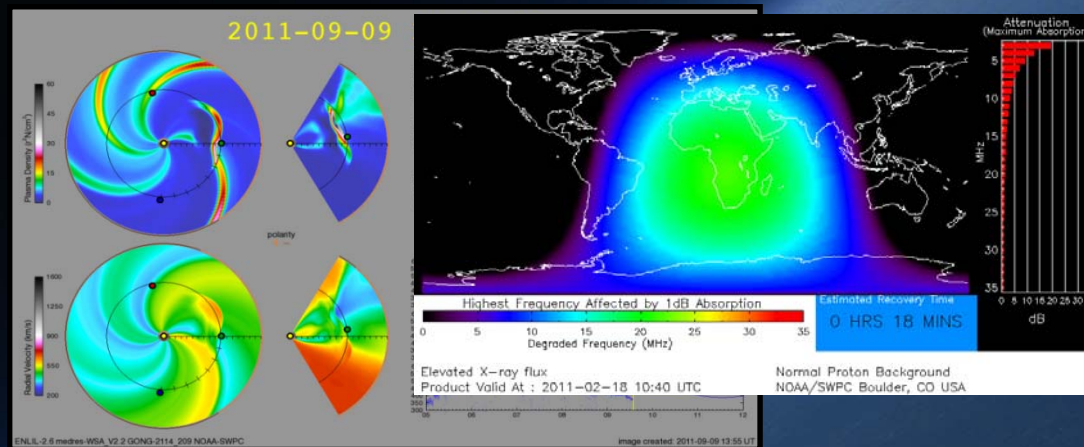


NOAA's Contribution to the Unified National Space Weather Capability

Observations



Operational Models



Forecasts & Warnings

Space Weather Summary March 12 th , 2012	Past 48 Hours	Current
Solar Flare Radio Blackouts (R Scale)	R2	None
Solar Radiation Storms (S Scale)	S2	S1
Geomagnetic Storms (G Scale)	None	G1

Education & Outreach

International



NOAA's Commitment to Improve Operations

Continue and Expand Coverage of Critical Observations

GOES R

- EXIS – X-ray sensor, expanded dynamic range and flare location
- SEISS – energetic particle detectors
- SUVI – solar imager
- Launch ~2015



DSCOVR

- Will provide critical warnings at L1
- Collaborating with NASA and DOD for summer 2014 launch

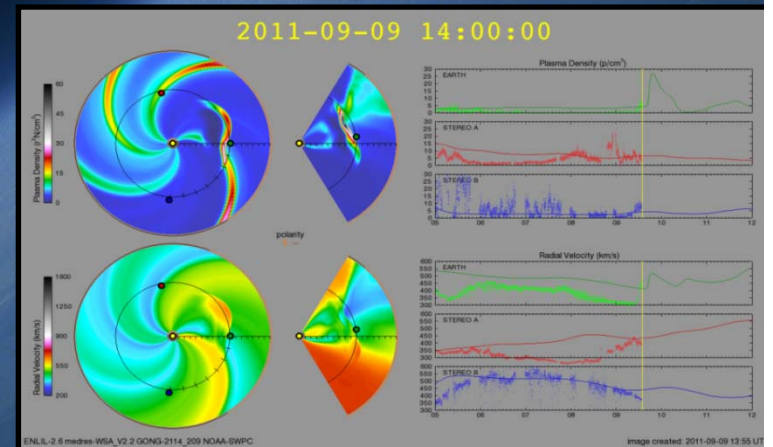


NOAA's Commitment to Improve Operations

New Models and Products

- Model Transition
 - WSA-ENLIL model transitioned into operations
- Space Weather Prediction Testbed
 - Geospace Model
 - Ovation - Auroral Forecast Model
- Upgrade operational product suite – critical new data sets
 - Geomagnetic storm products
 - USGS and INTERMAGNET data

WSA_ENLIL Model



NOAA's Connection to UNSWC Partners

- **National Science Foundation** – basic research and modeling advances
- **NASA** – research satellite observations, modeling and real-time model assessments through Community Coordinated Modeling Center
- **U.S. Geological Survey** – Magnetometer data
- **Air Force Weather Agency** – Solar Electro Optical Network (SEON), SWPC backup

NOAA's Contribution to International Space Weather

Global Threat – Global Response



Space Weather at the United Nations

- World Meteorological Organization
- International Civil Aviation Organization
- UN Committee on the Peaceful Uses of Outer Space



International Space Weather Operations

- UK Met Office
 - *Partnering on model development, forecaster training, and collaborative operational concepts*
- Korean Radio Research Agency
 - *Providing key real-time data from ACE*
- European Space Agency
 - *Plans to build upon respective capabilities*



Visions of the Future...

Evolving Customer Base



NEXTGEN



Commercial Space



Climate Change – Arctic interests



GPS Applications

Visions of the Future...

Sailing on sunlight!



Sunjammer Solar Sail Technology Demonstration Mission (TDM)

- NASA mission to prove the viability and value of the solar sail technology (*launch ~2015*)
- NOAA working with NASA and other partners exploring options for solar wind measurements
- **Potential game-changer!!** Add hours to warning lead time of geomagnetic storms!

Partnerships: A Critical Element for Meeting National and Global Needs



Other Partners

