

NOAA Space Weather Prediction Center

Planned Improvements in Support of the Nation's Growing Need for Space Weather Services

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Space Weather Enterprise Forum

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Safeguarding Our Nation's Advanced Technologies

Serving the Nation

Creating a Sustainable Space Weather Program

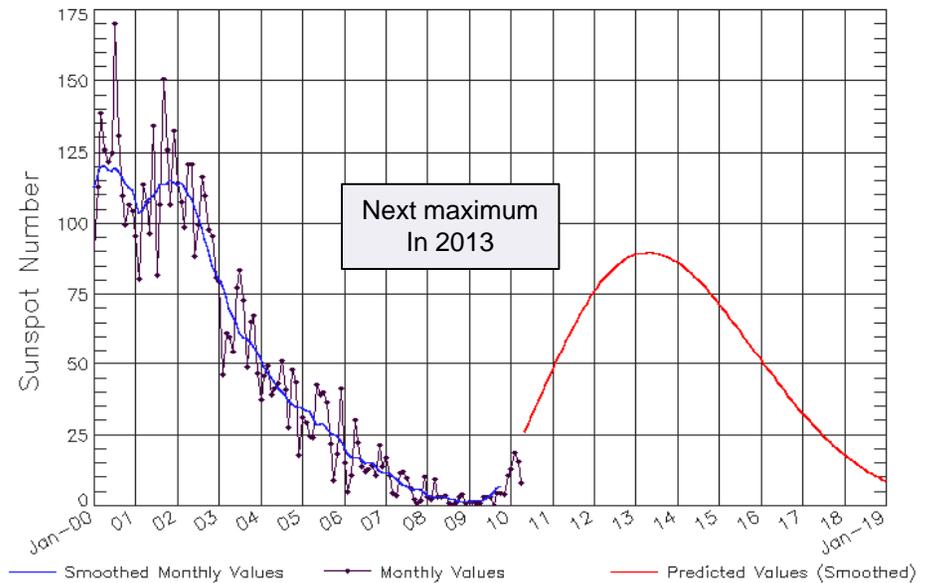
NWS Priorities:

- **Understand space weather service needs of a rapidly expanding customer base**
- **Provide timely, accurate and actionable space weather products to empower citizens to make informed choices**
- **Educate user community on NWS space weather services to help reduce vulnerability of interdependent national critical infrastructure**
- **Continue interagency and inter-sector collaboration and partnerships**

Solar Activity Increasing

- Prolonged solar minimum is over
- Several active regions observed since Dec 2009
- Numerous C-class flares and coronal mass ejections observed
- First significant geomagnetic storm in April 2010

ISES Solar Cycle Sunspot Number Progression
Observed data through Apr 2010



Updated 2010 May 4

NOAA/SWPC Boulder, CO USA

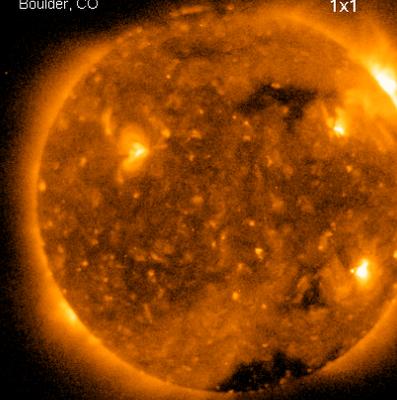
Dec 2009



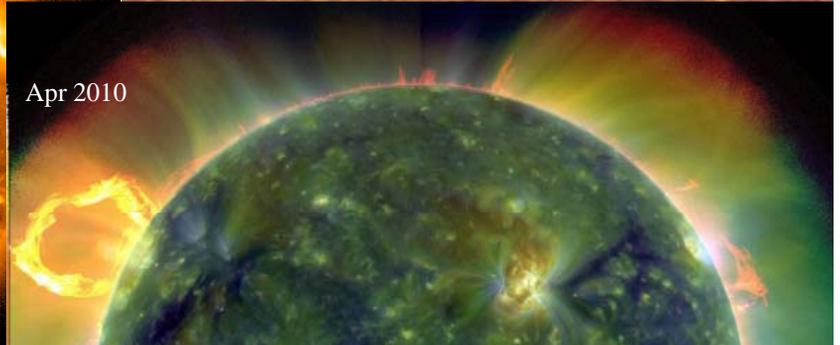
Scale (DN)

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GOES-14 SXI CS Raw 0x1c120200
NOAA/SWPC 12BIT
Boulder, CO 1x1



Apr 2010



2009/12/22 00:11:15 UTC TM 0.500 s

Meeting Our Nation's Needs

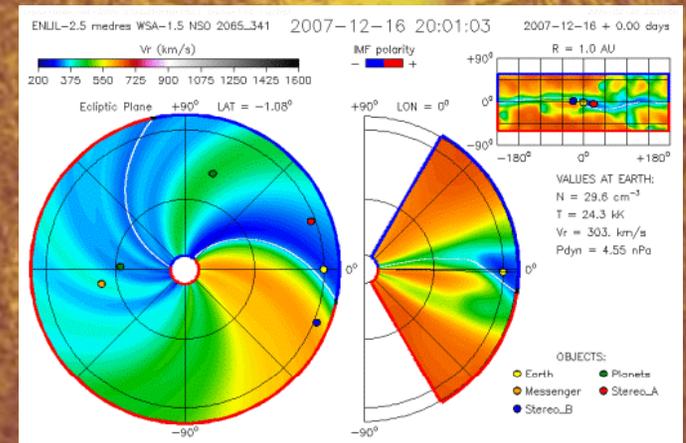
NOAA is transitioning the first physics-based space weather model - WSA-Enlil

- Will model the propagation of CMEs from the Sun to Earth and Mars and offers the promise of actionable, accurate 1-4 day advance prediction for (geo)magnetic storms (current capability - 20-50 mins based on ACE)

- **WSA-Enlil in Production Mode at NCEP**

- Enlil is a great example of interagency collaboration to meet a clearly defined operational need

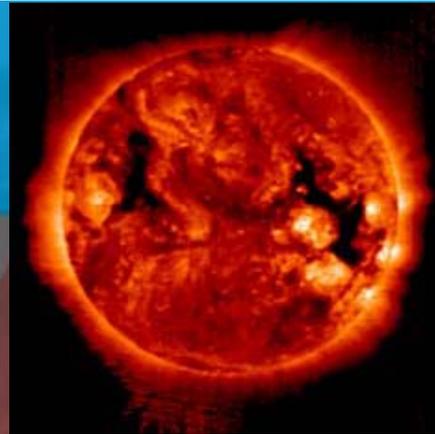
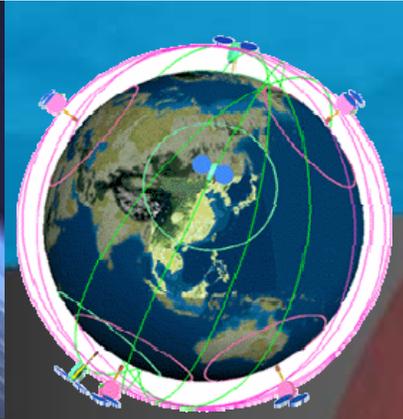
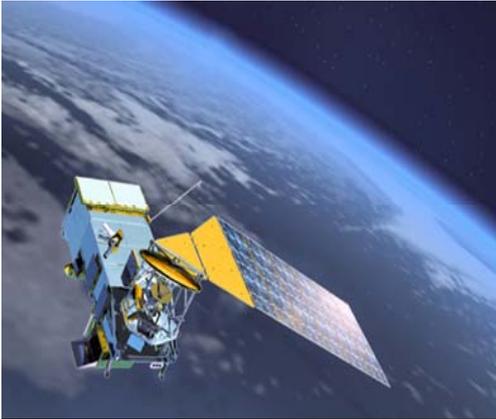
New Space Weather Prediction Test bed will enable effective and efficient transition of research models and data streams into operational products and services



Building a Resilient Society

NOAA working to improve Nation's capability to plan for, protect against, and respond to space weather hazards

- **Educating emergency responders on space weather**
- **Coordinating alert products to FEMA Operations Center**
- **Working with OSTP, OMB, DHS, DOE, and others in the Geomagnetic Induced Current (GIC) Interagency Working Group (IWG) to address options for mitigation and consequence management of severe space weather**
- **Revised alerting procedures for North American Electric Reliability Corp**
- **Participated in the DOE and NERC High-Impact, Low-Frequency (HILF) Event Risk effort.**



SWPC's Goal:
Provide the *right* information... in the *right* format...
at the *right* time... to the *right* people...
to make the *right* decisions

