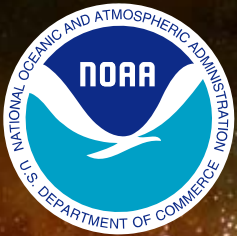


NOAA Space Weather Prediction Center

A New Focus on Products and Services



Vickie Nadolski

*NOAA Deputy Assistant Administrator for Weather Services, and
National Weather Service Deputy Director*



Fifth Symposium on Space Weather

88th AMS Annual Meeting

New Orleans, Louisiana

January 21, 2008

Serving the Nation

Creating a Sustainable Space Weather Program

- **Building hazard-resilient communities is a high-level, NOAA-wide priority**
- **The concept of a hazard-resilient community can be extended to include the high-tech community**
- **Understanding space weather service needs of a rapidly expanding customer base**
- **Continuing interagency and Inter-sector collaboration and Partnerships**



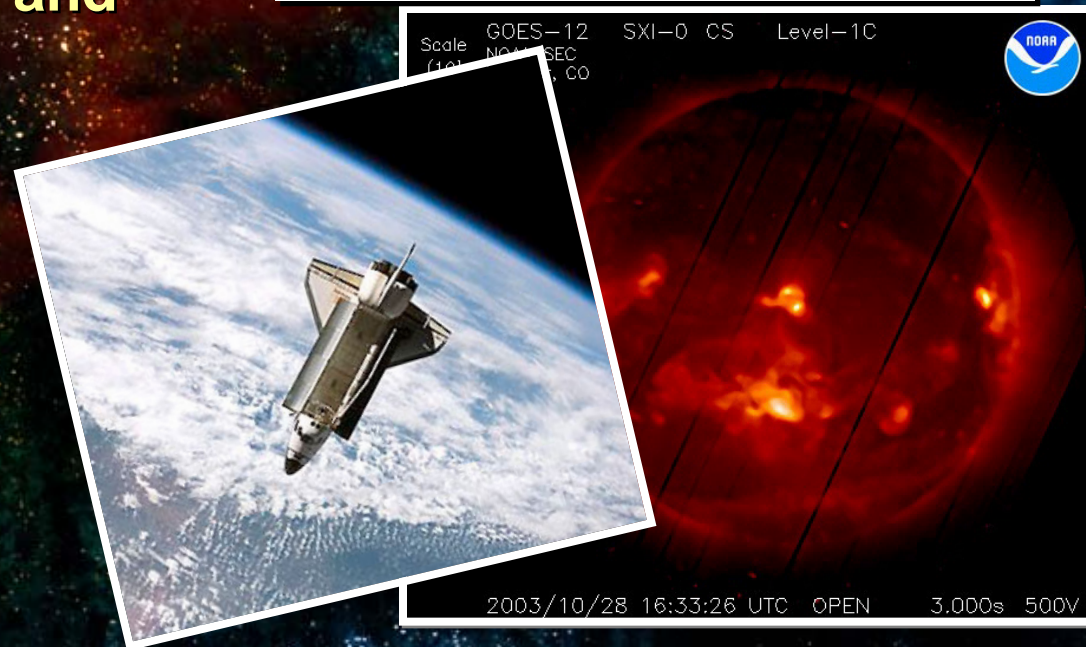
NWS Mission & Space Weather

- Provide climate, water, weather forecasts and warnings to protect life and property and enhance the Nation's economy
- Provide real-time monitoring and forecasting of solar and geophysical events
- Issue space weather alerts, watches, and warnings
- Conduct research in solar-terrestrial physics

Usage of Space Weather Data:

- ▬ 400,000 unique customers
- ▬ Four million solar wind file transfers per month
- ▬ Ten million GOES file transfers
- ▬ Seven million POES file transfers per month

All of the above in just one month!



Space Weather Prediction Center

● New name

- *Reflects organizational structure with emphasis on operations*

● New structure

- *Efficient and timely transition of numerical models to operations*
- *Addresses the rapidly evolving needs and requirements of a global high-tech economy*



Growing Space Weather Needs

GPS Users

- **GPS users represent the fastest growing customer base for SWPC**
- **Space weather is the largest error source for GPS**
 - *Solar radio bursts and ionosphere impacts can adversely affect GPS-enabled systems, industries, and the people using them*
- **The global precision agricultural market is \$6 - \$10 billion**

(GPS World, Jul 2007)



Growing Space Weather Needs

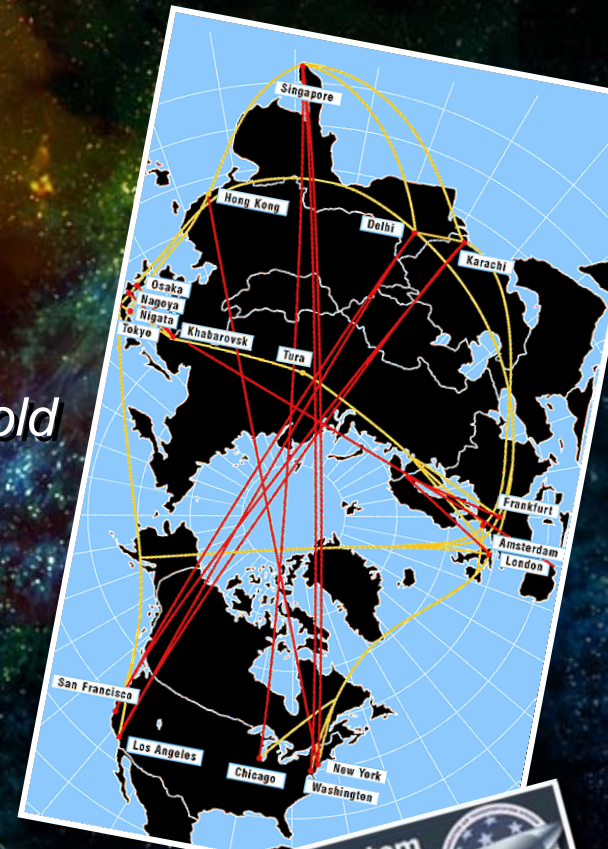
Aviation

- **Near-Term: Motivated by the growing popularity of polar routes**

- 13 airlines will fly 8,000 polar routes in 2008
- Passenger traffic projected to increase eight-fold by 2019 (Transport Canada Assumptions Report 2005-2019)

- **Long-Term: Next Generation Air Transportation System (NextGen)**

- Wide-ranging transformation of the entire national air transportation system
- Relies on new and more dynamic satellite-based technology
- Uses GPS satellite signals for air traffic control



Growing Space Weather Needs

Commercial Human Space Flight

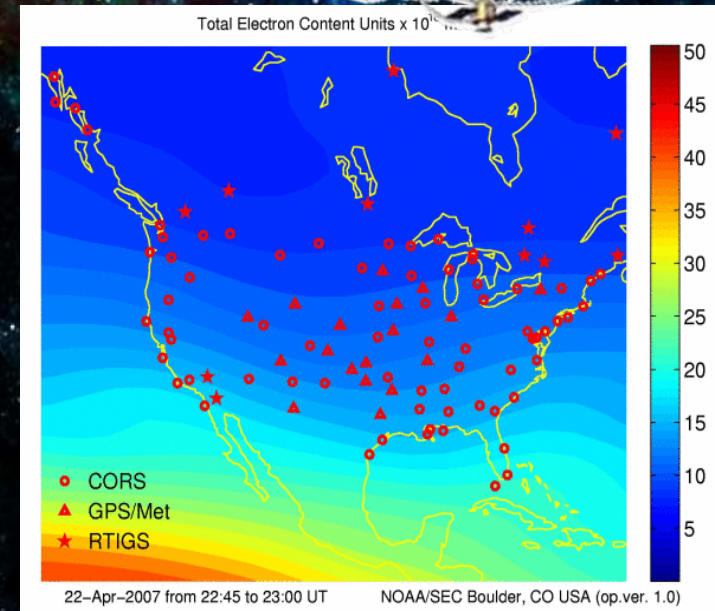
- Suborbital space tourism
- Point-to-point commercial space flight services (orbital)
- Commercial spaceports, and space hotels
- NASA crew and cargo services to the ISS
- Commercial lunar flyby



New Services for Fast-Growing GPS Customer Base

● **SWPC will provide ionospheric correctors for dual-frequency GPS receivers beginning FY08**

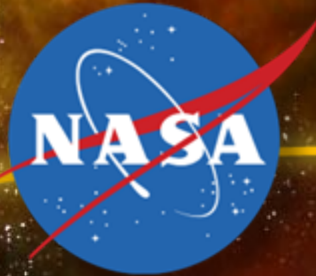
- *Will be used by NOAA's National Geodetic Survey to improve GPS positioning service*
- *Also will be used by other positioning service providers, including real-time kinematic positioning*



US-TEC

The Future of Space Weather

Interagency Collaboration

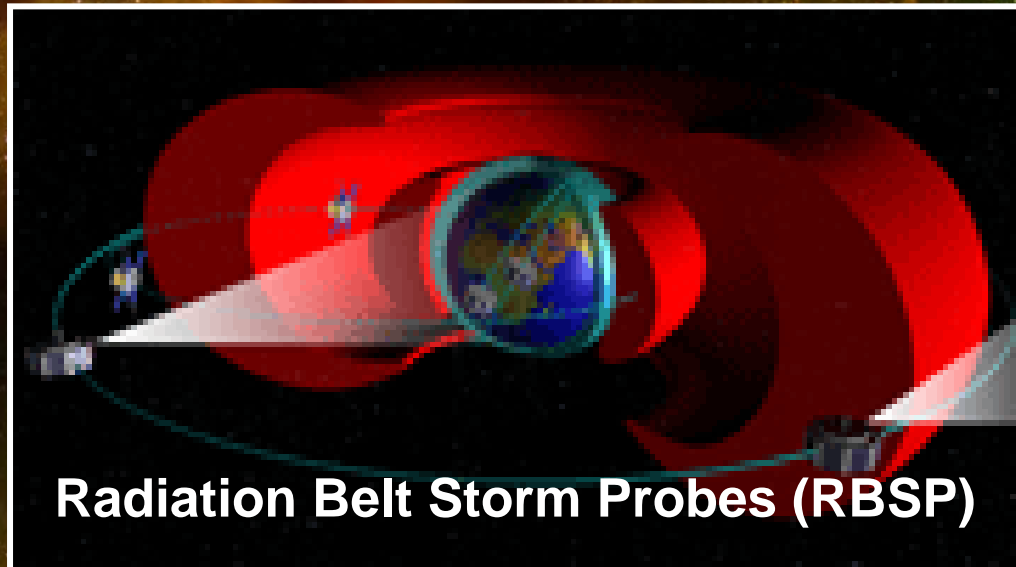


"A US multi-agency partnership to enable, support, and perform the research and development for next generation space science and space weather models"



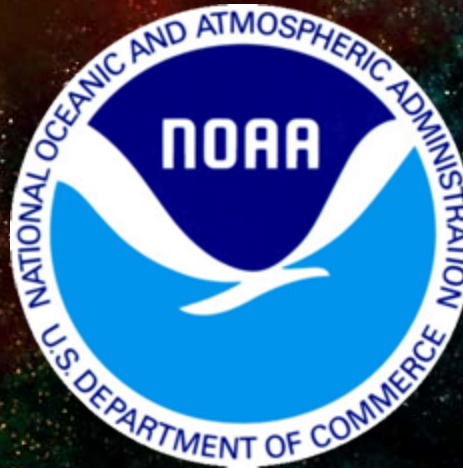
The Future of Space Weather

Interagency Collaboration



The Future of Space Weather

Other Partnerships

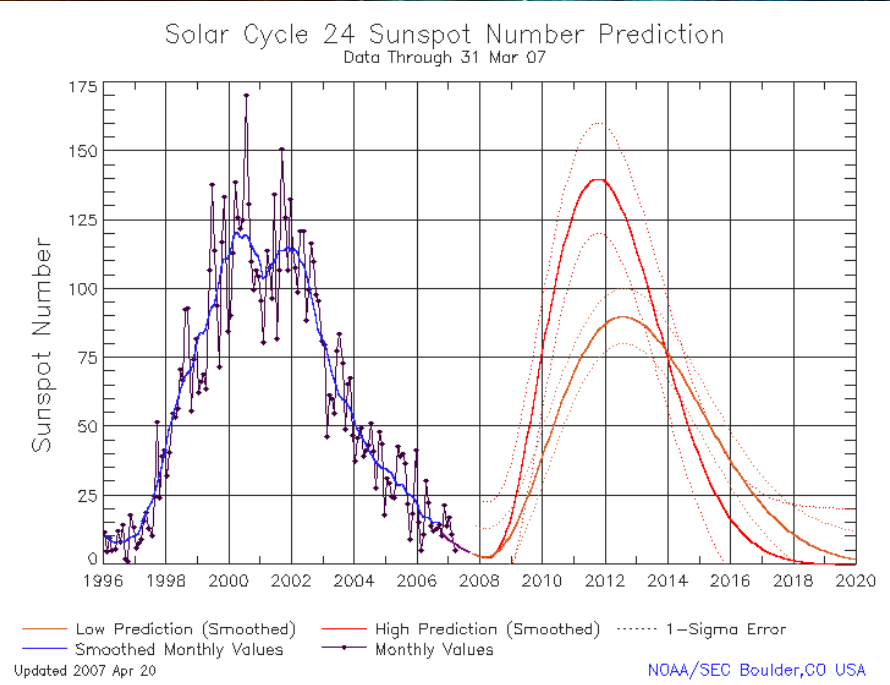
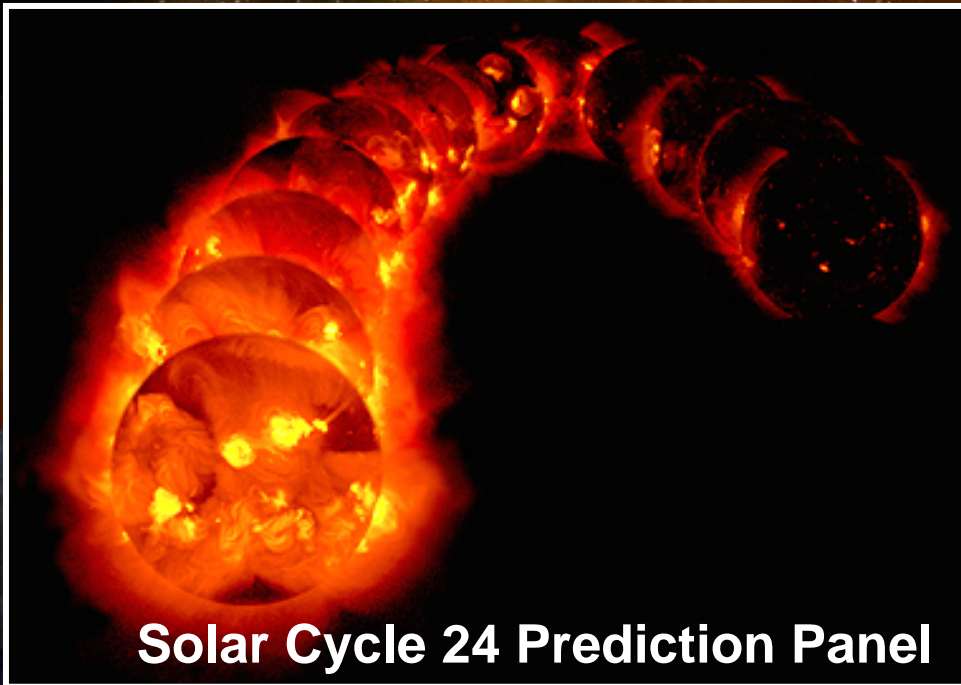


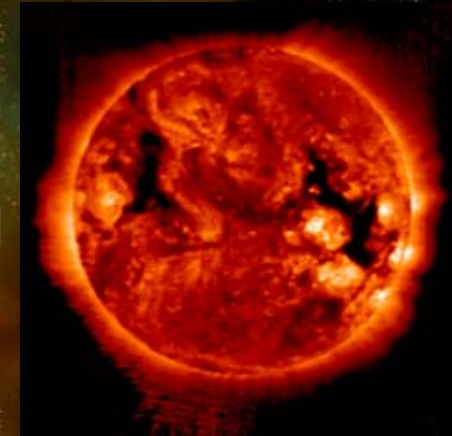
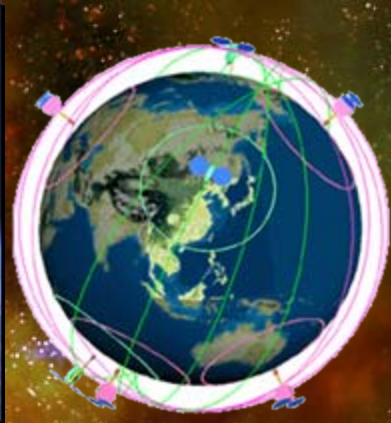
Academia

**Commercial
Space Weather
Providers**

The Future of Space Weather

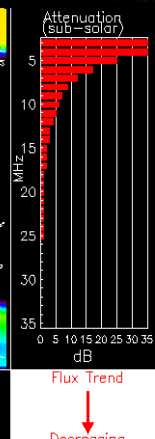
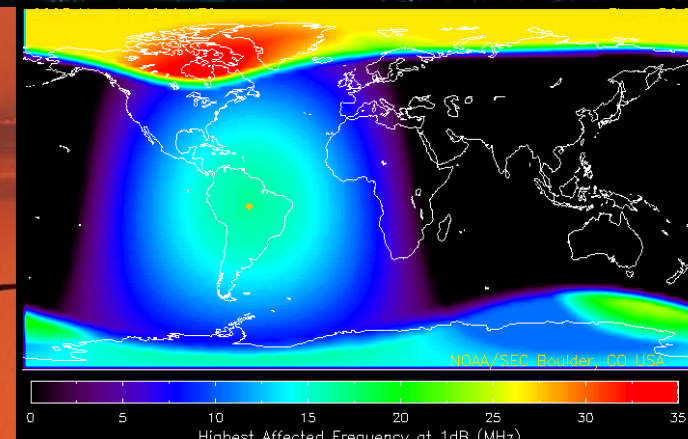
Other Partnerships





SWPC's Goal:

Provide the *right* information... in the *right* format...
at the *right* time... to the *right* people...
to make the *right* decisions



Upcoming Events

Creating a Sustainable Space Weather Program

Space Weather Workshop
Boulder, CO (29 Apr – 2 May 2008)



Space Weather Enterprise Forum
National Press Club, Washington D.C. (21 May 2008)

More Information

www.swpc.noaa.gov