



Space Weather - Key Element for Space Domain Awareness

15 Apr 15

**Maj Gen Steve Denker
HQ AFSPC/A2/3/6**

This briefing is for information only. No US Government commitment to sell, loan, lease, co-develop or co-produce defense articles or provide defense services is implied or intended.



Space Weather Criticality

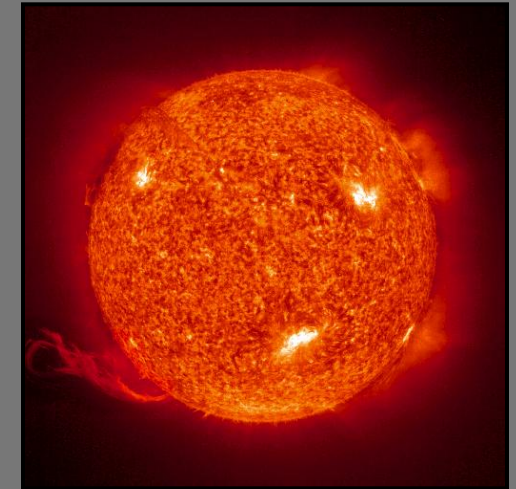
Human Caused Hazards:

- Jamming
- DE Attack
- Kinetic Attack
- Operator Error
- Unintentional Interference



System/Service Problems

- Radar/GPS Interference
- Payload Anomaly
- Satellite Attitude Failure
- System Anomaly
- SATCOM Link Problems



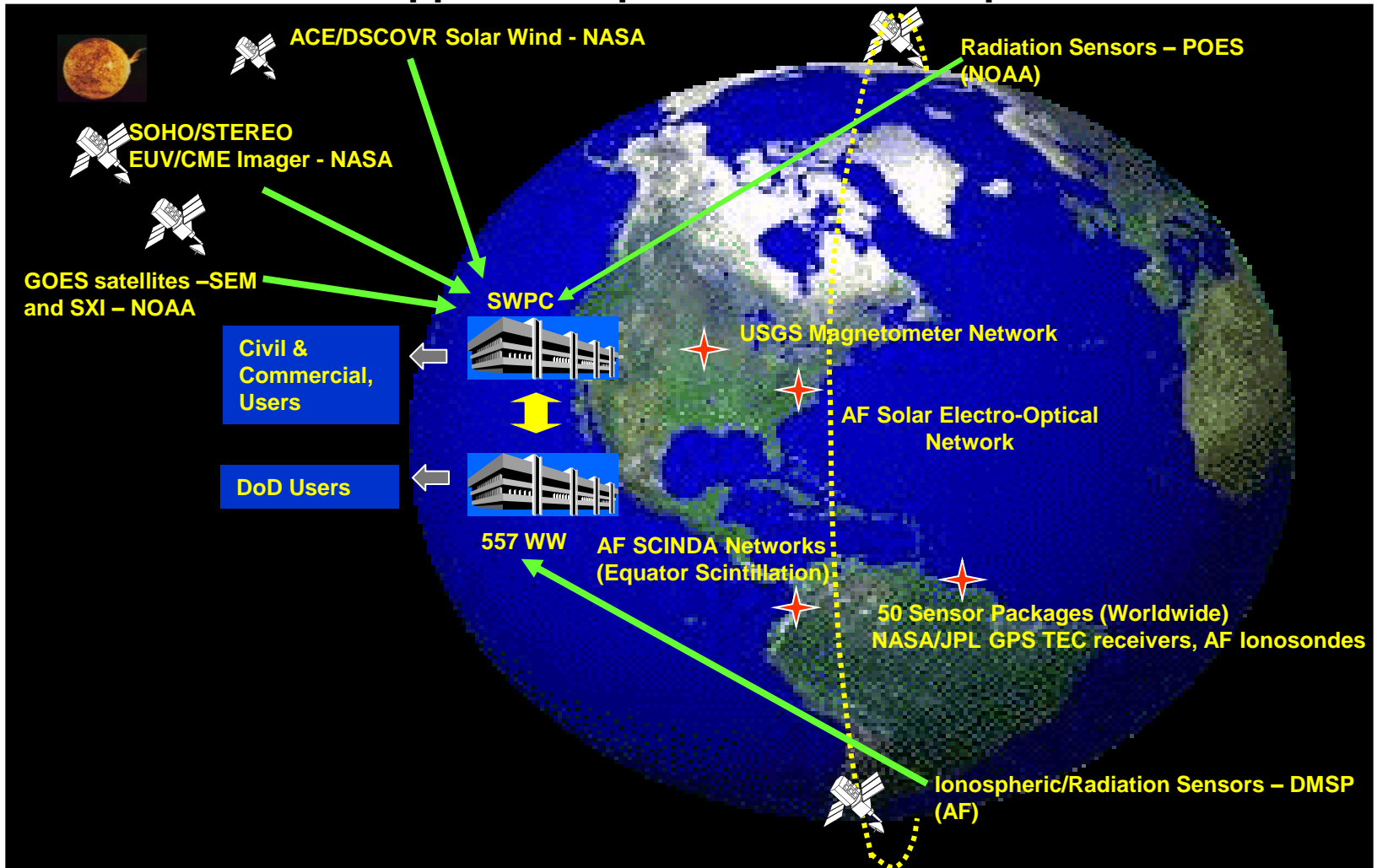
Environmental Hazards

- Solar Radio Noise
- Surface/Internal Charge/Discharge
- Single Event Effects
- Event Total Dose
- Ionospheric Scintillation



Sensing Partnerships

Department of Defense, Department of Commerce, and NASA
all support the space weather enterprise





Govt-Govt Partnering



DSCOVR Launch – 11 Feb 15

- NASA/NOAA/AF: DSCOVR
- NOAA/Taiwan: COSMIC-2
- AF/NOAA/NASA Data Sharing

**Cooperation and Collaboration is Essential to Future
Space Weather Enterprise Growth**



Govt-Industry Partnering



Launch



Space Weather



**Disaggregation:
Smaller Systems**



**Satellite Command
and Control**

**Government-Industry Partnerships Leverage Technologies,
Increase Production and Provide Resilient Architectures**





Production Partnerships

Warfighters

557th Weather Wing – space weather analysis/prediction products and services to the warfighter!

Space Wx Inputs (DoD, Civil, Intl Data Sources)



Key Partnership



2nd Weather Squadron
Space Weather Flight

