Understanding and managing risks and impacts associated with space weather – National Weather Service perspective

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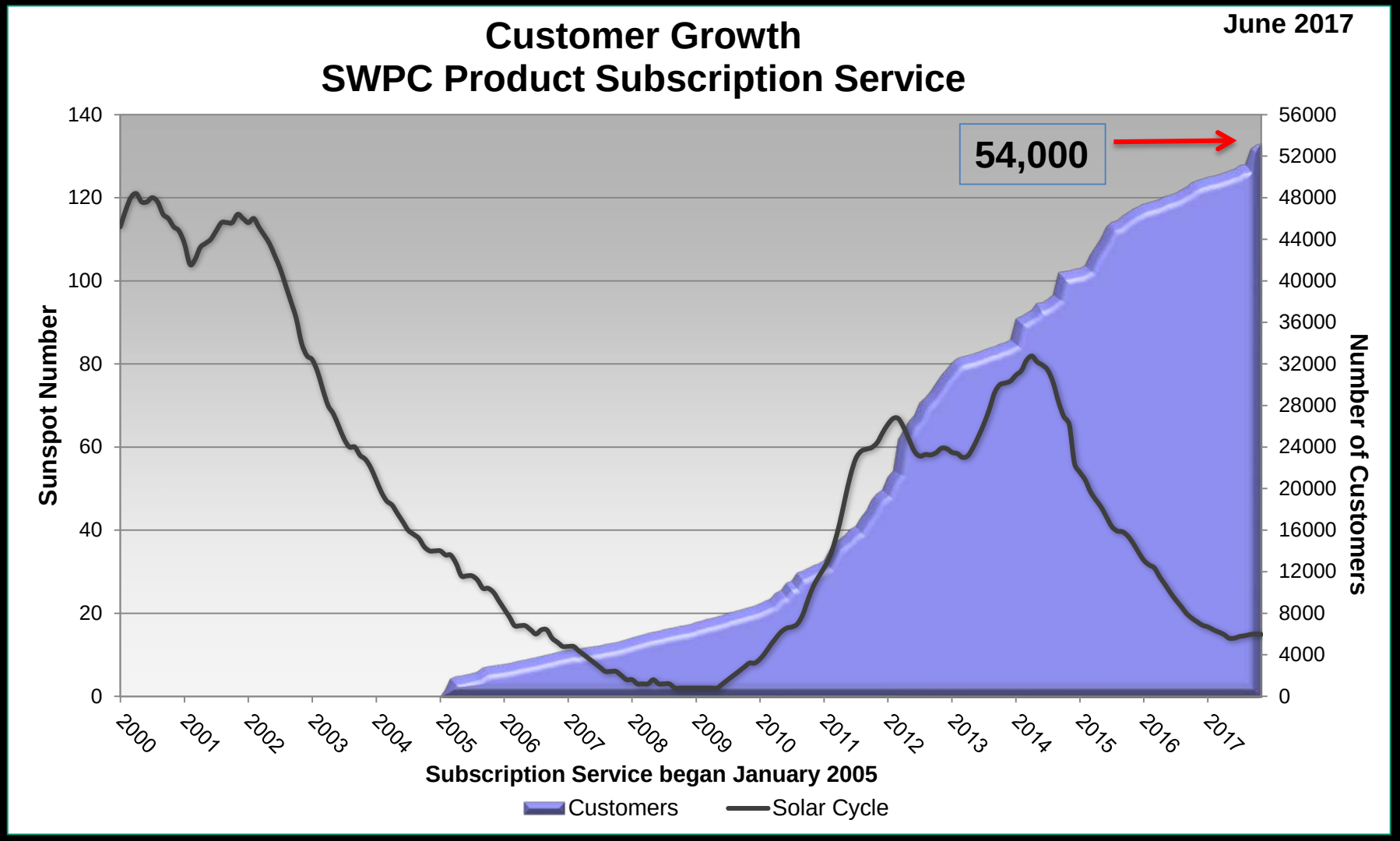
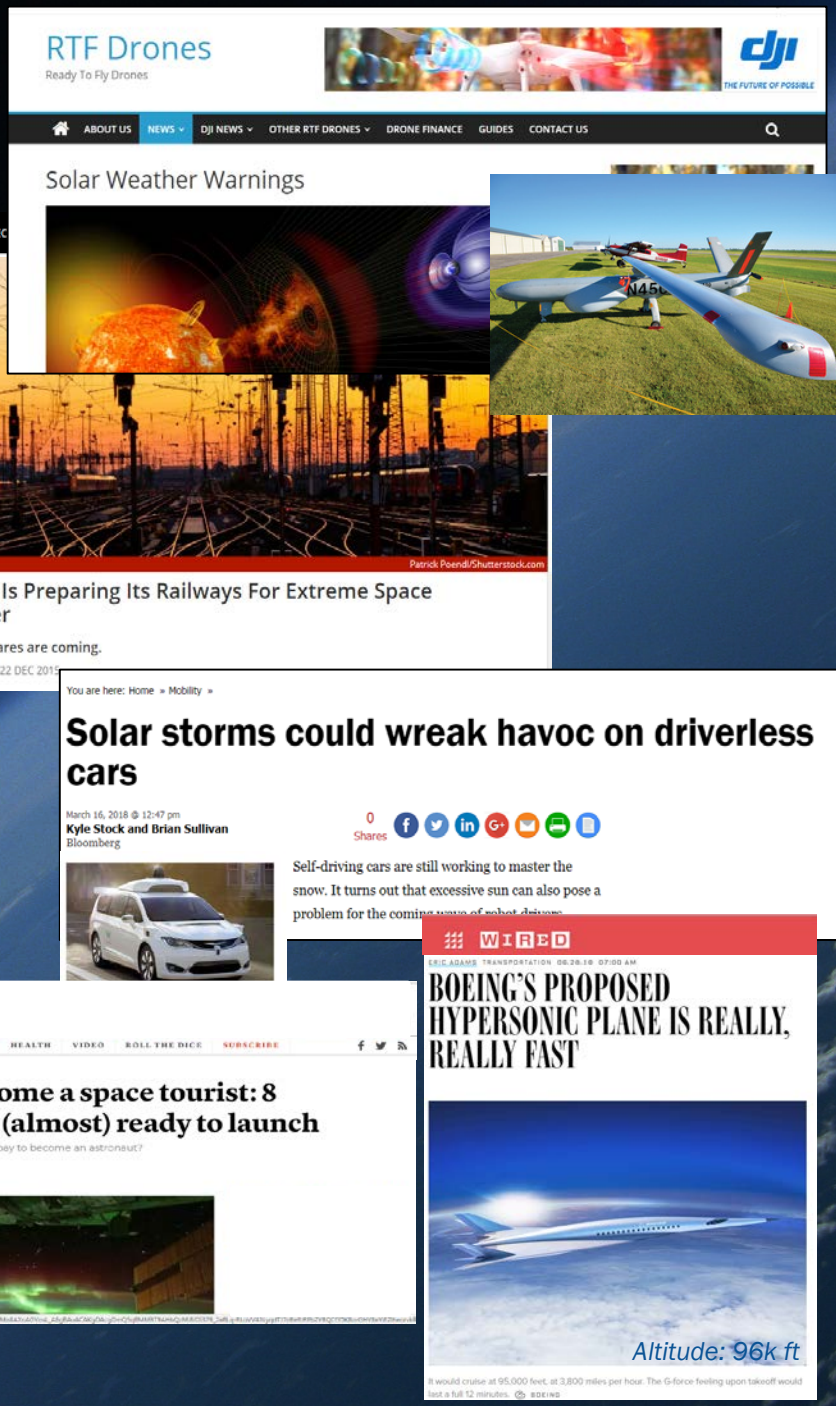


- **Averaging 200 new subscribers monthly…even through solar minimum**
  - **Increased awareness across all sectors**
  - **Hundreds of Federal, State, and local emergency responders**

Adapting To Consumers Evolving Needs

Community must anticipate and manage the needs of a rapidly evolving technological society

- **Autonomous vehicles**
- **Advanced Rail Technologies - Positive Train Control (GPS-based safety system)**
- **Supersonic and Hypersonic transport**
- **Space Tourism**
- **Drone technology**
- **Deep space exploration**



NOAA Response – Meeting commitments to improve space weather services through critical observations

NSWS - Establish and sustain a baseline observational capability

- **GONG** – NOAA now supporting the Operations and Maintenance of the Observatories
  - SWPC working with NSF/NSO and NOAA/IDP program to operationalize the processing of the GONG data
- **GOES –** Currently Operational with GOES 14&15
  - GOES-16 operational FY19/Q2
  - GOES-17 operational ~FY20

- **DSCOVR** – Supporting SWPC operations and models since 2016

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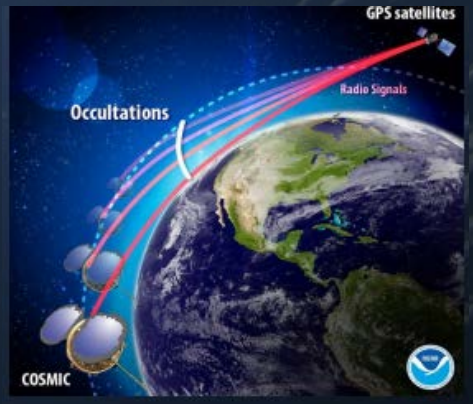
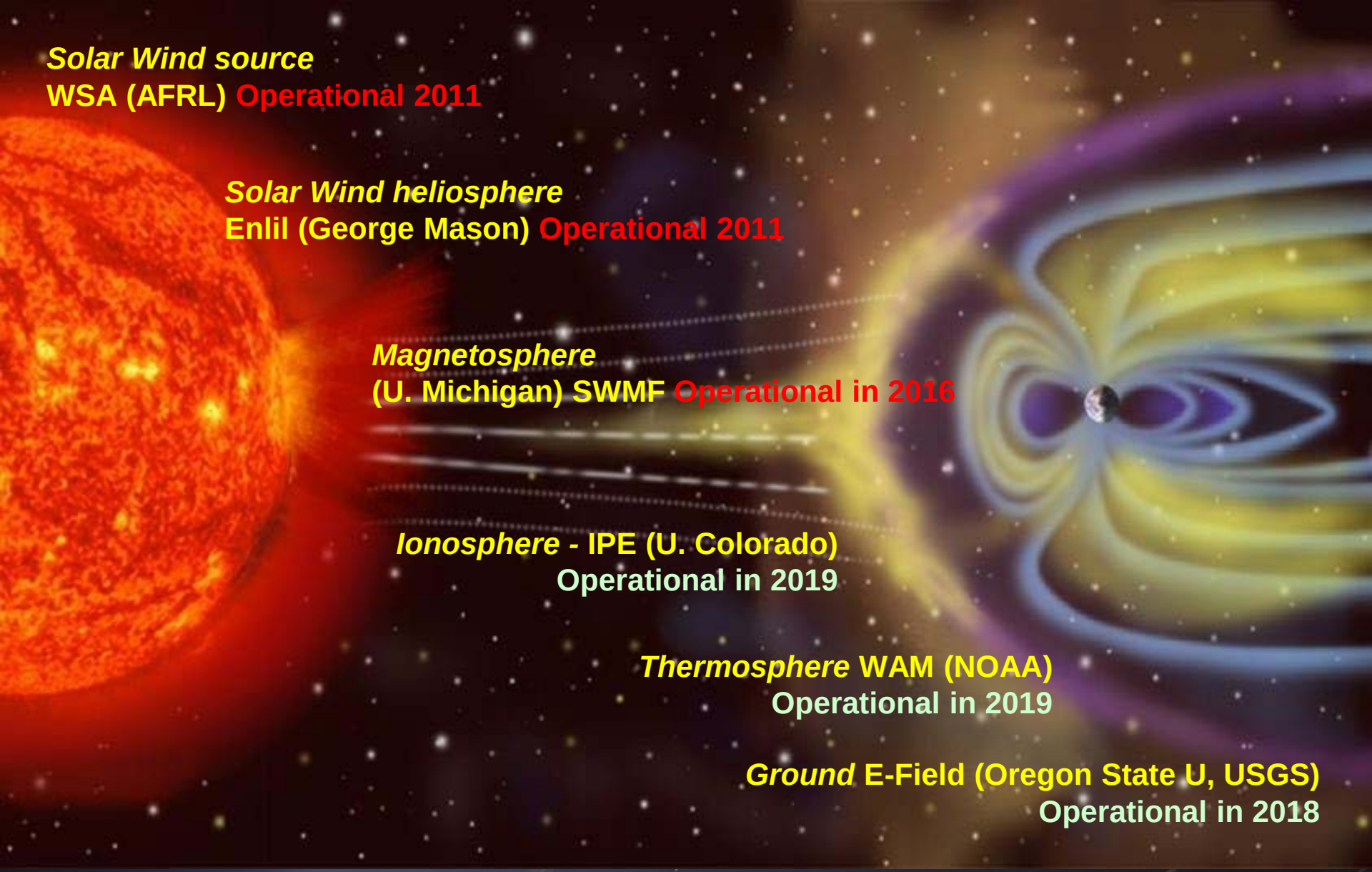
- **Space Weather Follow On + Operational Coronagraph**
  - Host coronagraph on GOES-U, launch in 2024
  - Rideshare to L1 with NASA's Interstellar Mapping and Acceleration Probe (IMAP) late 2024 to include solar wind instruments and coronagraph
- **NOAA Commercial Weather Data Buy Program (radio occultation data for operational use)**
  - Showing promise as replacement to the now canceled COSMIC-2B program





Building a Sun-to-Earth modeling capability

Partnerships & Building Relationships "Can't Do It Alone"

Achieving our goals will require the Federal Government to work across agencies and to develop enhanced and innovative partnerships with State, tribal, and local governments; academia; non-profits; the private sector; and international partners. These efforts will enhance national preparedness and speed the creation of a space-weather-ready Nation