SWPC – CCMC Collaborations

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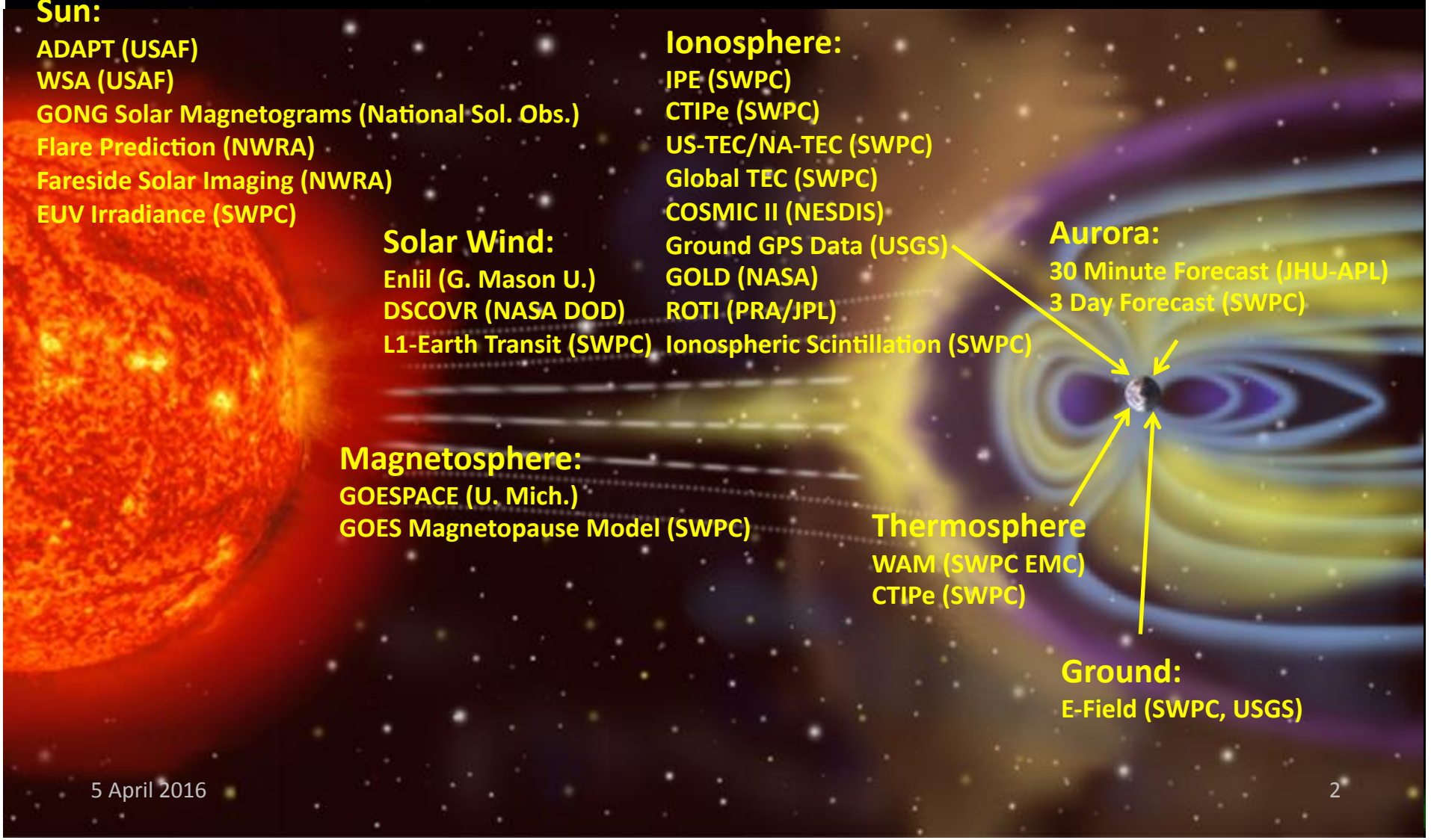
Outline:

SWPC Needs and Requests from CCMC and the Research Community

R20 and O2R

SWPC Activities: Modeling and Data for Space Weather Forecasting

(Partnering with the World)



R2O: Possibilities for Near-term CCMC-SWPC Collaboration

- Model Evaluation and Validation
  - Aviation Radiation Model
    - Model assessment and selection
  - ADAPT-WSA-Enlil
    - Evaluation of updated versions
  - Geospace Model Evaluation
    - Beyond the current operational model
  - Electric Field Model
- Developing new capabilities
  - Data assimilation
  - Ensemble modeling

O2R: Providing the Research Community with High Priority Goals for Space Weather Research

- Forecast Bz within a CME when it arrives at Earth
- Forecast solar flares (timing and magnitude)
- Forecast Solar Energetic Proton events
- Specify and forecast the radiation levels at LEO and aircraft altitudes
- Forecast ionospheric TEC gradients and scintillation
- Data assimilation
- Ensemble modeling

SORM and SWAP
Improving R2O and O2R

5.6 Improve the effectiveness and timeliness of the process that transitions research to operations

5.6.1 Establish and R2O Center: NASA and NSF with participation from NOAA and DOD.

- Assess and select new data and models for transition to operations
- Compare new models and capabilities with current operational models

5.6.2 Establish an O2R capability: DOC and DOD with participation from NASA and DOD.

- Improve and upgrade existing operational models

Summary

- R2O: SWPC and CCMC Collaborate in the testing , assessment, validation, and selection of models for transition
- O2R: CCMC is part of the conduit from operations to research, translating the operational needs for new research.
- SWAP: SWPC and CCMC (NOAA and NASA) will work together to define the future of R20 and O2R