The WSA Dashboard: Current and Future Capabilities

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Overview

The Wang-Sheeley-Arge (WSA) model is a combined empirical and physics-based model of the corona and solar wind. It has been operational at the U.S. National Weather Service (NWS) since 2011 and is now routinely used to help make forecasts worldwide. Recently, the model's real-time predictions have been made publicly available via an online tool called the WSA Dashboard with a focus on forecaster needs.

Future Outlook for WSA and Dashboard

In addition to its usefulness for space weather forecasting, WSA is widely used for basic research purposes. The WSA team is now working to build an online archive of current and past predictions designed to support the basic and applied research needs of the scientific community such as Space Weather related science.

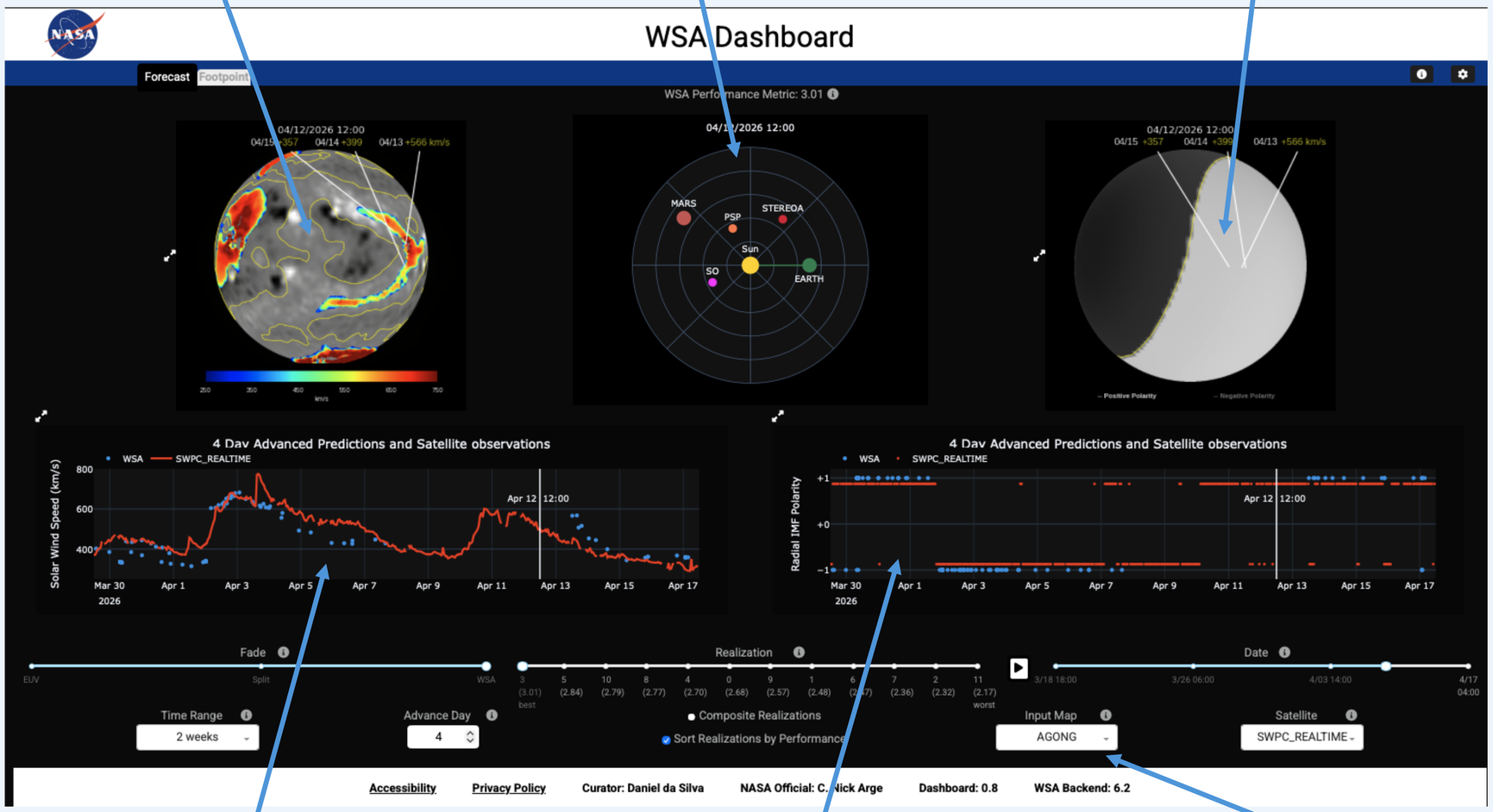
Possible future data products:

- **False white-light images**
- **Coronal density data cubes**
- **B-field data cubes**
- **Coronal field line tracings**
- **Harmonic coefficients (e.g., global dipole and quadrupole components)**
- **Open flux and/or global open and closed fractional areas.**
- **Suggestions!?**

Sources of solar wind, WSA coronal hole solutions, and photospheric map

Choice of in situ satellite/planet for comparison to solar wind data

Predicted magnetic connectivity relative to heliospheric current sheet at 5Rs



WSA-predicted solar wind speed compared to spacecraft data

WSA-predicted solar wind interplanetary magnetic field (IMF) polarity compared to spacecraft data

Choice of input map data source

Feedback from the Space Weather Workshop community is *highly encouraged*!

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CCMC Version
ccmc.gsfc.nasa.gov/wsa-dashboard/

Development beta version
wsa-dashboard.helioanalytics.io

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Community Coordinated Modeling Center