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The launch of the National Aeronautics and Space Administration (NASA) Solar Terrestrial Relations Observatory (STEREO) in 2006 demonstrated the utility of off Sun-Earth line observations to improve space weather forecasting. The National Oceanic and Atmospheric Administration (NOAA) Space Weather Prediction Center (SWPC) uses STEREO data in real-time to model coronal mass ejections (CMEs) for improved Wang-Sheeley-Arge (WSA)-Enlil predictions of CME arrival at Earth. STEREO in-situ solar wind, interplanetary magnetic field, and energetic particle data are used to monitor the evolution of co-rotating structures with lead times of days before any potential impact on Earth. As a result, the NOAA National Environmental Satellite, Data, and Information Service (NESDIS) will be supplying the Naval Research Laboratory (NRL) Compact Coronagraph 3 (CCOR-3) to the European Space Agency’s (ESA) Vigil mission to the Lagrange 5 (L5) point mission. Additionally, research has shown pathways to using particle data and heliospheric imaging data to further improve forecasting of space weather. NOAA is also interested in the planned Vigil magnetograph for improved solar wind modeling and for the longer lead time solar flare predictions it will enable. We will present the NOAA current uses of STEREO data and plans for future observations and space weather product improvements.

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