The CCOR Series of Compact Coronagraphs for Space Weather Forecasts
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The Office of Projects Planning and Analysis (OPPA) at the National Oceanic and Atmospheric Administration (NOAA), funded the U.S. Naval Research Laboratory to develop, build and test the CCOR series of operational solar coronagraphs. CCOR stands for Compact Coronagraph, a series of white light solar coronagraphs that are dedicated to space weather forecasts. Its purpose is to detect halo Coronal Mass Ejections, determine their trajectory, mass, and speed, in the goal of predicting any geo-effective impact at Earth.

CCOR-1 is onboard the Geostationary Operational Environmental Satellite series, GOES-U, to be launched in the late April 2024. CCOR-2 is on the SWFO-L1 spacecraft, scheduled for launch in 2025. Finally, a CCOR-3 is planned to be on board the European Space Agency Vigil spacecraft that will orbit around the L5 Lagrange point, scheduled for launch in 2028.

In this presentation, we give an overview of the instrument capabilities and current status. We also put an emphasis on the importance of continuous operation of white-light solar coronagraphs as one of the main instrument currently in use, Large Angle and Spectrometric Coronagraph (LASCO) onboard Solar and Heliospheric Observatory (SOHO), nears the end of its mission lifetime.
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