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Poster
PUNCH is a coronagraphic and heliospheric imaging NASA Small Explorer comprising of four spacecraft: three Wide Field Imagers (WFI) and one Near Field Imager (NFI), which generates polarization-resolved observations of the corona and heliosphere between 6–180 solar radii. In addition to its science mission, PUNCH makes low-latency observations of the corona and heliosphere that can support space weather forecasting operations: the QuickPUNCH project, whose initial goal is to develop and demonstrate the required data products, pipeline, and low-latency capabilities.

We describe the space weather applications for QuickPUNCH observations, including tracking coronal mass ejections (CMEs) and solar wind outflow. We discuss the specific low-latency QuickPUNCH data products for space weather, PUNCH's more general science products, and end-user data access. We provide an overview of research-to-operations opportunities provided by these data, including the uses of polarized coronal measurements for space weather, tracing of CMEs in 3D, and the use of PUNCH data as a constraint for numerical forecasting models. We conclude with a look at recent PUNCH science data and their potential to revolutionize forecasting by tracking CMEs in 3-D as they traverse the inner solar system.
Poster session day
Thursday, April 30, 2026
Poster location
32
Meeting homepage
2026 Space Weather Workshop
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