Shaheda Begum
Shaik
George Mason University/ US Naval Research Laboratory
Mark Linton, Naval Research Laboratory, Washington, DC, USA
Sarah Gibson, National Center for Atmospheric Research, Boulder, CO, USA
Phillip Hess, Naval Research Laboratory, Washington, DC, USA
Robin Colaninno, Naval Research Laboratory, Washington, DC, USA
Erika Palmerio, Predictive Science Inc., San Diego, CA, USA
Oral
We present a CME and the interior structure of its cavity imaged by the Wide-field Imager for Solar Probe (WISPR) heliospheric imager on board the Parker Solar Probe (PSP) during its seventh encounter. We observe a complex structure of the three-part CME with a cavity consisting of non-concentric nested rings, lacking a clear front and bright core, which probably encompasses the helical magnetic flux rope (MFR) of the CME. As this CME is originated on the far side of the Sun from Earth, the presence of the associated pre-eruptive prominence-cavity system is not clearly known. This eruption is concurrent with a magnetic field reconfiguration at the eastern solar limb as observed by STEREO-A in extreme ultra-violet imagery and possibly related activity at the western limb, indicating a global-scale eruption. We examine the morphology of these nested density structures which can be interpreted as the magnetic field geometry and the three-dimensional projection of the flux rope seen through the ideal viewing angles of the observing instrument.
YouTube link
View Video
Meeting homepage
PUNCH 4 Science Meeting
Download to PDF