Phillip
Hess
Naval Research Laboratory
Paulett Liewer, JPL
Guillermo Stenborg, APL
Robin Colaninno, NRL
Mark Linton, NRL
Angelos Vourlidas, APL
Russell Howard, APL
Oral
(Invited Talk)
Imaging data from new instruments, including PSP/WISPR and SO/SoloHI, have allowed for observational coverage with unprecedented resolution in the region within .25 AU of the Sun. This improved observational capability has allowed for imaging of outflows of a variety of spatial scales and speeds. WISPR in particular has made frequent observations of outflows coming from the cusp of helmet streamers and propagating through the heliospheric current sheet (HCS). The largest of these are commonly considered to be coronal mass ejections (CMEs), but the similarity in observable features in the spectrum of these outflows raises the possibility that common physical processes operating on different scales cause outflows with a wide range of energetics and sizes. While the CMEs are frequently studied and understood to be a disruption within the solar wind, the frequency with which these smaller eruptions occur and the lack of evidence that they exist at 1 AU as unique, coherent structures, mean such outflows must regularly occur, evolve and possibly merge to comprise a significant portion of the steady solar wind. We present observational examples combining a variety of instruments to highlight the full process of these eruptions and structural analysis of outflows of different sizes with supporting observations from throughout the heliosphere.
Presentation file
11_p_hess.pdf
YouTube link
View Video
Meeting homepage
PUNCH 4 Science Meeting
Download to PDF