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Poster
Solar wind is a complex network of distinct magnetic flux tubes, each contained and separated by a current sheet. In this study, more than 50,000 current sheets in the solar wind are identified and characterized, for the first time, using multi-point Cluster observations during solar minimum and maximum intervals. Flux tubes at Earth are found to have an average diameter of 2.5 Earth radii, nearly 30 times smaller than previously reported. Furthermore, six years of NASA's ACE solar wind observations at Sun-Earth Lagrange point L1 is used to show that only 30% of the observed flux tubes would directly impact the Earth's magnetosphere. It is shown that flying closer to the Sun-Earth line could help to improve the prediction accuracy of ACE-like space weather monitors by 2.5 times.
Poster session day
Thursday, April 30, 2026
Poster location
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Meeting homepage
2026 Space Weather Workshop
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