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#### Oral

Following the study of previous deep solar minimum 23/24 in Jian et al. (2011), we choose a one-year interval at each solar minimum from the beginning of the acquisition of solar wind measurements in the ecliptic plane and at 1 AU, to compare the solar and solar wind parameters at the most recent solar minimum 24/25 with previous solar minima. In addition, combining the continuous solar wind measurements near 1 AU from Wind/ACE and STEREO A/B missions, we inspect and characterize the large-scale solar wind structures during 1995-2020, including interplanetary coronal mass ejections (ICMEs), slow-to-fast stream interaction regions (SIRs), and interplanetary shocks. We study their solar cycle variations comprehensively, focusing on the comparison of solar cycles 23 and 24, as well as the comparison of three recent solar minima 22/23, 23/24, and 24/25. Through this study, we describe the long-term variations of solar wind environment for other WHPI investigations.

Presentation file

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