



Structures and Fluctuations of Solar Wind

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Message from the Guest Editors

Multi-scale structures and fluctuations have been measured in solar wind. The scales range from days to electron gyro periods. The origin and evolution of these structures and fluctuations are key questions of heliophysics. As one type of day-scale structure, the Interplanetary Coronal Mass Ejection (ICME) is the largest eruption in the solar system, which is the main driver of geoeffectiveness. However, the components, evolution and propagation of ICMEs are still unclear due to their strong variability. On the other hand, waves under the ion-gyro-scale are important for energy transmission and dissipation. To reveal the mechanisms of generation and the evolution of these multi-scale structures and fluctuations in solar corona or in interplanetary space, both simulations and observations focus on the heating and accelerating processes and interplanetary magnetic field variation. This Special Issue aims to collect recent important work on the origin and evolution of the multi-scale structures and fluctuation of solar wind from different aspects. It may help us to understand one structure or fluctuation deeper in an interactive view.





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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

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