

JUNXIANG HU

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Postdoctoral Research Assistant at CSPAR (Center for Space Plasma and Aeronomic Research)

EDUCATION

Ph.D. in Space Science | The University of Alabama in Huntsville, U.S.

09/2011-11/2017

Advisor: Gang Li

Dissertation: *Modeling Particle Acceleration and Transport for Gradual SEP Events from 2D CME-Driven Shocks*

Bachelor in Space Physics | Peking University, China

09/2007- 07/2011

Advisor: Chuanyi Tu, Jiansen He

Thesis: *Analysis of Quiet Sun Outflows on Plume-like Structures Based on the Observations with SDO*

RESEARCH INTERESTS

- **Solar Energetic Particles (SEP) events with multi-satellites observation.** CME and shock analysis with satellites such as SDO, HINODE and STEREO.
- **Simulation on particle acceleration and transport.** Developed the improved Particle Acceleration and Transport in Heliosphere (iPATH) code. The iPATH model is used to study the longitudinal and radial extent of gradual SEP events from CME-driven shocks.
- **Solar wind MHD turbulence.** Studied the current sheet's effect on turbulence in different types of solar wind, and effect of radial evolution of turbulence on diffusion coefficients in inner heliosphere.

CONFERENCE EXPERIENCE

- **AGU fall meeting | 2012 - 2019**
- **SHINE meeting | 2014 - 2018**
- **Space Weather Workshop | 2015, 2016**
- **ACE science team meeting | 2017**
- **COSPAR | 2018, ISWAT | 2020**
- **AIAC | 2018, 2019**
- **ISSI Team Meeting | 2019**

PUBLICATIONS

Ding, Z., Li, G., **Hu, J.**, Fu, S. (2020). *Modeling the 10 September 2017 solar energetic particle event using the iPATH model.* Research in Astronomy and Astrophysics.

Fu, S., Jiang, Y., Airapatian, V., **Hu, J.**, Li, G., Zank, G. P. (2019). *Effect of Star Rotation Rates on the Characteristics of Energetic Particle Events.* The Astrophysical Journal Letters. Volume 878, Issue 2

Hu, J., Li, G., Fu, S., Zank, G. P., Ao, X. (2018). *Modeling a Single SEP Event from Multiple Vantage Points Using the iPATH Model.* The Astrophysical Journal Letters, Volume 854, Issue 2, article id. L19, 5 pp.

Hu, J., Li, G., Ao, X., Zank, G. P., & Verkhoglyadova, O. (2017). *Modeling Particle Acceleration and Transport at a 2-D CME-driven Shock.* Journal of Geophysical Research: Space Physics, 122.

Mewaldt, R. A., Li, G., **Hu, J.**, & Cohen, C. M. S. (2017). *What is Causing the Deficit of High-Energy Solar Particles in Solar Cycle 24?* Proceedings of Science. Volume 301, ICRC2017.

Shen, C.; Li, G.; Kong, X.; **Hu, J.**; Sun, X. D.; Ding, L.; Chen, Y.; Wang, Yuming; Xia, L. (2013). *Compound Twin Coronal Mass Ejections in the 2012 May 17 GLE Event,* The Astrophysical Journal, Volume 763, Issue 2, article id. 114, 8 pp.