

Tong Shi

Research

- Data driven simulation with SWMF/AWSoM using vector magnetogram
- Spectroscopic synthesis and diagnostics
- Solar coronal mass ejections observation and modeling

Employment

- 2024 – Research Scientist, SETI Institute
Sun-as-a-star studies and Stellar atmospheric simulation
- 2023 – 2024 Research Assistant, University of Michigan
Solar atmospheric simulation and comparison to observation

Education

- 2016 – 2023 Climate and Space Sciences and Engineering, University of Michigan
PhD in Climate and Space Sciences and Engineering and Scientific Computing
- 2011 – 2015 Kuang Yaming Honors School, Nanjing University
BS in Astronomy

Publications

- **Shi, T.**, Manchester, W., Landi, E., et al. (2024) AWSoM Magnetohydrodynamic Simulation of a Solar Active Region. II. Statistical Analysis of Alfvén Wave Dissipation and Reflection, Scaling Laws, and Energy Budget on Coronal Loops. *Astrophys. J.* 961, 60. doi:[10.3847/1538-4357/ad0df2](https://doi.org/10.3847/1538-4357/ad0df2)
- **Shi, T.**, Manchester, W., Landi, E., et al. (2022) AWSoM MHD Simulation of a Solar Active Region with Realistic Spectral Synthesis. *Astrophys. J.* 928, 34. doi:[10.3847/1538-4357/ac52ab](https://doi.org/10.3847/1538-4357/ac52ab)
- **Shi, T.**, Landi, E., Manchester, W. (2019) Nonequilibrium Ionization Effects on Coronal Plasma Diagnostics and Elemental Abundance Measurements. *Astrophys. J.* 882, 154. doi:[10.3847/1538-4357/ab384d](https://doi.org/10.3847/1538-4357/ab384d)
- **Shi, T.**, Wang, Y. K., Wan, L., et al. (2015) Predicting the Arrival Time of Coronal Mass Ejections with the Graduated Cylindrical Shell and Drag Force Model. *Astrophys. J.* 806, 271. doi:[10.1088/0004-637X/806/2/271](https://doi.org/10.1088/0004-637X/806/2/271)
- Su, W., Wang, Y.; Zhou, C., et al. (2021) *Astrophys. J.* 914, 139. doi:[10.3847/1538-4357/abfc49](https://doi.org/10.3847/1538-4357/abfc49)
- Su, W., Wang, Y.; Zhou, Z.-B., et al. (2020) *Class. Quantum Grav.* 37 185017. doi:[10.1088/1361-6382/aba181](https://doi.org/10.1088/1361-6382/aba181)
- Wan, L., Cheng, X., **Shi, T.**, et al. (2016) *Astrophys. J.* 826, 174. doi:[10.3847/0004-637X/826/2/174](https://doi.org/10.3847/0004-637X/826/2/174)

Awards

- 06/2017 NASA Earth and Space Science Fellowship, Heliophysics
- 07/2015 Outstanding Award, undergraduate thesis