

Xiaohang Chen

Postdoctoral Research Fellow
State Key Laboratory of Lunar and Planetary Sciences
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EDUCATION

University of Arizona

Ph.D. in Planetary Science
Advisor: Joe Giacalone

Tucson, AZ, US

08/2018 – 12/2023

Beihang University

B.S. in Astronautics
Advisor: Huishan Fu

Beijing, China

08/2014 – 05/2018

RESEARCH EXPERIENCE

Macau University of Science and Technology

Postdoctoral Research Fellow
Advisor: Gang Li

Macau, China

05/2025 – present

University of Michigan

Postdoctoral Research Fellow
Advisor: Lulu Zhao

Ann Arbor, MI, US

01/2024 – 12/2024

University of Arizona

Graduate Research Assistant
Advisor: Joe Giacalone

Tucson, AZ, US

08/2018 – 12/2023

Los Alamos National Laboratory

Research Intern
Advisor: Fan Guo

Los Alamos, NM, US

05/2022 – 08/2022

Harvard–Smithsonian Center for Astrophysics

Research Intern
Advisor: Federico Fraschetti

Cambridge, MA, US

05/2022

Beihang University

Undergraduate Research Assistant
Advisor: Huishan Fu

Beijing, China

08/2016-05/2018

TEACHING EXPERIENCE

University of Arizona

Graduate Teaching Assistant
Course: The Universe and Humanity: Origin and Destiny (PTYS/ASTR 170B2)
Lecturer: Tommi Koskinen

Tucson, AZ, US

Fall 2019

PUBLICATIONS

Chen, X., L. Zhao, J. Giacalone, et al., Evidence of Time-Dependent Diffusive Shock Acceleration in the September 5, 2022 Solar Energetic Particle Event. (Submitted to ApJ)

Zhang, J., J. Giacalone, **X. Chen**, L. K Jian, and K. G. Klein (2025), Parker Solar Probe Observations of Turbulence and Waves Between a Current Sheet and an ICME-driven Shock. ApJ (In press)

Liu, W., I. Sokolov , L. Zhao , T. Gombosi , **X. Chen**, et al. (2025), Physics-based Simulation of the 2013 April 11 Solar Energetic Particle Event. *ApJ*, 985, 82.

DOI:[10.3847/1538-4357/adc4e3](https://doi.org/10.3847/1538-4357/adc4e3).

Kouloumvakos, A., N. Wijsen, A. Afanasiev, et al. (2025), Shock and SEP Modeling Study for the 5 September 2022 SEP Event. *ApJ*, 979, 100. DOI:[10.3847/1538-4357/ada0be](https://doi.org/10.3847/1538-4357/ada0be).

Chen, X., J. Giacalone, F. Guo and K. G. Klein (2024), Parallel Diffusion Coefficient of Energetic Charged Particles in the Inner Heliosphere from the Turbulent Magnetic Field Measured by Parker Solar Probe. *ApJ*, 965, 61. DOI:[10.3847/1538-4357/ad33c3](https://doi.org/10.3847/1538-4357/ad33c3).

Giacalone, J., C. M. S. Cohen, D. J. McComas , **X. Chen**, et al. (2023), Analyses of \sim 0.05-2 MeV ions associated with the 2022 February 16 ESP Event Observed by Parker Solar Probe. *ApJ*, 958, 144. DOI:[10.3847/1538-4357/acfb86](https://doi.org/10.3847/1538-4357/acfb86).

Chen, X., J. Giacalone, and F. Guo (2022), Solar Energetic Particle Acceleration at a Spherical Shock with the Shock Normal Angle θ_{Bn} Evolving in Space and Time. *ApJ*, 941(1), 23. DOI:[10.3847/1538-4357/ac9f43](https://doi.org/10.3847/1538-4357/ac9f43).

Wang, Z., H. Fu, **X. Chen**, J. Cao, Y. Liu, Y. Yu, R. He, and Z. Guo (2022), The Effect of Current on Magnetic Null Topology during Turbulent Reconnection. *ApJ*, 927(1), 119. DOI:[10.3847/1538-4357/ac4eed](https://doi.org/10.3847/1538-4357/ac4eed).

Giacalone, J., Mitchell, D. G., Allen, R. C., Hill, M. E., McNutt, R. L., Szalay, J. R., Desai, M. I., Rouillard, A. P., Kouloumvakos, A., McComas, D. J., Christian, E. R., Schwadron, N. A., Wiedenbeck, M. E., Bale, S., Brown, L. E., Case, A., **Chen, X.**, et al. (2020), Solar Energetic Particles Produced by a Slow Coronal Mass Ejection at \sim 0.25 au. *ApJS*, 246(2), 29. DOI:[10.3847/1538-4365/ab5221](https://doi.org/10.3847/1538-4365/ab5221).

Fu, H., Z. Wang, Q. Zong, **X. Chen**, J. He, A. Vaivads, and V. Olshevsky (2020), Methods for Finding Magnetic Nulls and Reconstructing Field Topology: A Review. In *Dayside Magnetosphere Interactions* (eds Q. Zong, P. Escoubet, D. Sibeck, G. Le and H. Zhang). DOI:[10.1002/9781119509592.ch9](https://doi.org/10.1002/9781119509592.ch9).

Chen, X., H. Fu, C. Liu, D. Cao, Z. Wang, M. Dunlop, Z. Chen, and F. Peng (2017), Magnetic nulls in the reconnection driven by turbulence. *ApJ*, 852(1), 17. DOI:[10.3847/1538-4357/aa9991](https://doi.org/10.3847/1538-4357/aa9991).

AWARDS & HONORS

Group Achievement Award - Parker Solar Probe Team <i>National Aeronautics and Space Administration (NASA)</i>	2023
Galileo Circle Scholarship <i>University of Arizona</i>	2023
Curson Travel Award <i>Lunar and Planetary Laboratory, University of Arizona</i>	2022
Galileo Circle Scholarship <i>University of Arizona</i>	2020