Xinmin Li

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RESEARCH INTEREST

Turbulent magnetic reconnection, turbulent plasma, particle acceleration

EDUCATION

University of Science and Technology of China, Hefei, China
Ph. D., space physics, Sep. 2019 to May 2024 (expected)
Dissertation: electron acceleration and energy conversion during turbulent magnetic reconnection
Supervisor: Prof. Rongsheng Wang

University of Science and Technology of China, Hefei, China
B.S., Geophysics, Sep. 2015 to Jun. 2019

PUBLICATIONS

[1] **X. M. Li**, R. S. Wang, Q. M. Lu, Y. O. O. Hwang, Q. G. Zong, C. T. Russell, and S. Wang (2019), Observation of Nongyrotropic Electron Distribution Across the Electron Diffusion Region in the Magnetotail Reconnection, *Geophys Res Lett*, 46(24), 14263-14273, doi:10.1029/2019gl085014. (Hight Light)

[2] **X. M. Li**, R. S. Wang, Q. M. Lu, C. T. Russell, S. Lu, I. J. Cohen, R. E. Ergun, and S. Wang (2022), Three-dimensional network of filamentary currents and super-thermal electrons during magnetotail magnetic reconnection, *Nat Commun*, 13(1), doi:10.1038/s41467-022-31025-9.

[3] **X. M. Li**, R. S. Wang, C. Huang, Q. M. Lu, S. Lu, J. L. Burch, and S. Wang (2022), Energy Conversion and Partition in Plasma Turbulence Driven by Magnetotail Reconnection, *Astrophys J*, 936(1), doi: 10.3847/1538-4357/ac84d7.

[4] **X. M. Li**, R. S. Wang, and Q. M. Lu (2022), Division of Magnetic Flux Rope via Magnetic Reconnection Observed in the Magnetotail , *Geophys Res Lett*(2023): e2022GL101084. doi: 10.1029/2022GL101084.

[5] **X. M. Li**, R. S. Wang, X. L. Gao, Q. M. Lu, H. Y. Chen, & J. Q. Ma. (2023). Observation of non-resonance interactions between cold protons and EMIC waves of different polarizations in the inner magnetosphere. *Geophys Res Lett*, 50, e2023GL104431. doi: 10.1029/2023GL10443.

[6] Wang, R. S., S. M. Wang, Q. M. Lu, **X. M. Li**, S. Lu, and W. Gonzalez (2022), Direct observation of turbulent magnetic reconnection in the solar wind, *Nat Astron*, doi:10.1038/s41550-022-01818-5.

[7] Lu, S., Q. M. Lu,Wang, R. S., **X. M. Li**, Gao, X. L., Huang, K., ... & Jia, Y. (2023), Kinetic Scale Magnetic Reconnection with a Turbulent Forcing: Particle-in-cell Simulations, *The Astrophysical Journal* 943(2), 100., doi: 10.3847/1538-4357/acaf7a.

[8] Lu, S., Q. M. Lu, R. S. Wang, P. L. Pritchett, M. Hubbert, Y. Qi, K. Huang,**X. M. Li**, and C. T. Russell (2022), Electron-Only Reconnection as a Transition From Quiet Current Sheet to Standard Reconnection in Earth's Magnetotail: Particle-In-Cell Simulation and Application to MMS Data, *Geophys Res Lett*, 49(11), doi: 10.1029/2022GL098547.

[9] Xie, Y., Wang, R., Wang, S., **Li, X.**, Gao, X., & Lu, S. (2023). Suprathermal ions observed inside a Magnetic Flux Rope in the Earth's Magnetotail. *Journal of Geophysical Research: Space Physics*, doi:10.1029/2023JA031737.

[10] Wang, R., Lu, S., Wang, S., **Li, X.**, & Lu, Q. (2023). Recent progress on magnetic reconnection by in situ measurements. *Reviews of Modern Plasma Physics*, 7(1), 27. doi:10.1007/s41614-023-00129-0.

SELECTED PRESENTATIONS

[1] Apr. 23-28, 2023 EGU Oral talk

[2] Oct. 09-14, 2022 AAPPS Oral talk

[3] Dec. 13-17, 2021 AGU Poster

[4] Oct. 26-31, 2020 AAPPS Oral talk

[5] Oct. 17-21, 2020 CGU Oral talk

AWARDS

National Scholarship for Ph. D. student
University of Science and Technology of China, 2022

Dean Scholarship for Ph.D. graduate
School of Earth and Space Sciences, University of Science and Technology of China, 2024

SELF EVALUATION

I am a self-motivated, organized researcher with five years of experience in analyzing in-suit spacecraft observation data about space plasma. And I have strong knowledge of plasma physics and coding skill with IDL.