Zihan Wang

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EDUCATION

09/2012-07/2016:	School of Earth and Space Sciences, Peking University B.S. in Space Science and Technology with Honors
09/2016-Present	Department of Climate and Space Sciences and Engineering, University of Michigan, Ann Arbor PhD student in Space Science

Research Experience

Aug 2016-Present @Department of Climate and Space Sciences and Engineering, University of Michigan, Ann Arbor
Advisor: Prof. Shasha Zou

1. **The formation and evolution of Sub-Auroral Polarization Streams.**
2. **A new formation mechanism of polar cap patch using Space Weather Modeling Framework (SWMF).**
3. **The relation between Field-Aligned Currents and conductance in the aurora oval: SWARM and PFISR observations.**
4. **Asymmetry of the ionosphere during geomagnetic storms.**
5. **Equatorial plasma bubble formation.**
6. **Prediction of the Total Electron Contents (TEC) using deep learning method.**

Apr 2014-Aug 2016 @Institute of Space Physics and Applied Technology, Peking University, Beijing, China
Advisor: Prof. Xuzhi Zhou
Topic: The formation and observation of ULF wave-particle interactions within the Earth's magnetosphere

Honors/Scholarships

Future Investigators in NASA Earth and Space Science and Technology	06/2019
CEDAR Student Poster Prize Winners	06/2019
Tang Lixin scholarship	10/2015
National Scholarship	09/2015
Hui-Chun Chin and Tsung-Dao Lee Chinese Undergraduate Research Endowment	05/2014
Founder Scholarship	09/2013

Publications

Wang, Z., Zou, S., Coppeans, T., Ren, J., Ridley, A., & Gombosi, T. (2019). Segmentation of SED by boundary flows associated with westward drifting partial ring current. Geophysical Research Letters, 46.

Wang, Z., Zou, S., Shepherd, S. G., Liang, J., Gjerloev, J. W., Ruohoniemi, J. M., et al (2019). Multi‐instrument observations of Meso-Scale enhancement of Sub-Auroral Polarization Stream associated with an injection. Journal of Geophysical Research: Space Physics, 124(3), pp.1770-1784

Li, L., Zhou, X.Z., Omura, Y., Wang, Z.H., Zong, Q.G., Liu, Y., Hao, Y.X., Fu, S.Y., Kivelson, M.G., Rankin, R. and Claudepierre, S.G., (2018). Nonlinear Drift Resonance Between Charged Particles and Ultralow Frequency Waves: Theory and Observations. Geophysical Research Letters, 45(17), pp.8773-8782.

Zhou, X.Z., Wang, Z.H., Zong, Q.G., Rankin, R., Kivelson, M.G., Chen, X.R., Blake, J.B., Wygant, J.R. and Kletzing, C.A., (2016). Charged particle behavior in the growth and damping stages of ultralow frequency waves: Theory and Van Allen Probes observations. Journal of Geophysical Research: Space Physics, 121(4), pp.3254-3263.

Zhou, X.Z., Wang, Z.H., Zong, Q.G., Claudepierre, S.G., Mann, I.R., Kivelson, M.G., Angelopoulos, V., Hao, Y.X., Wang, Y.F. and Pu, Z.Y., (2015). Imprints of impulse‐excited hydromagnetic waves on electrons in the Van Allen radiation belts. Geophysical Research Letters, 42(15), pp.6199-6204.

Conference Presentations

Segmentation of Storm Enhanced Density (SED) by Boundary Flows Associated with Westward Drifting Partial Ring current. *2019 CEDAR workshop. Santa Fe, NM. (Oral)*

Segmentation of Storm Enhanced Density (SED) by Boundary Flows Associated with Westward Drifting Partial Ring current. *2019 GEM workshop. Santa Fe, NM. (Oral)*

Multi-instrument Observations of Meso-Scale Sub-Auroral Polarization Stream (MS-SAPS). *2018 AGU Fall Meeting. DC. (Poster)*

Relation between FAC and conductance: PFISR and SWARM observations. *2018 GEM workshop. Santa Fe, NM. (Poster)*

Relation between FAC and conductance: PFISR and SWARM observations. *2018 CEDAR workshop. Santa Fe, NM. (Poster)*

Relation between the Sub-Auroral Polarization Stream and Energetic Particle Injection during Substorms. *2017 AGU Fall Meeting. New Orleans, LA. (Oral)*

Relation between Sub-Auroral Polarization Stream and substorm injection. *13th International Conference on Substorms, Portsmouth, NH. (Poster)*

Sub-Auroral Polarization Stream during a geomagnetic storm and its relation with energetic particle injection and dipolarization. *2017 Geospace Environment Modeling (GEM) Summer Workshop, Portsmouth, VA. (Poster)*

Teaching Experiences

Guest instructor of SPACE 370 (Solar Terrestrial Relations). Fall 2019.