

Jinbei Huang

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EDUCATION

West Virginia University, Morgantown, WV

Doctor of Philosophy in Physics Candidate

GPA: 3.5/4.0

Expected: August 2023

Huazhong University of Science and Technology, Wuhan, China

Bachelor of Science in Physics

GPA: 3.7/4.0

June 2015

RESEARCH EXPERIENCE

Graduate Research Assistant

May 2019-Present

Department of Physics and Astronomy, West Virginia University, *Morgantown, WV*

Advisor: Weichao Tu

- Conducted research on the Drift Orbit Bifurcation (DOB) effects on Van Allen Radiation Belts electrons dropout using the guiding center test particle code
- Developed the code for Last Closed Drift Shell calculation by combining the LanlGeoMag library with the guiding center test particle code
- Utilized the calculated Last Closed Drift Shell to investigate the DOB effects on radiation belt electron dropout in a geomagnetic storm event study
- The study of DOB effects suggests that it plays a significant role in the radiation belts electrons dropout, which will be overestimated without it

PRESENTATIONS

Oral Presentations

- **Huang, J.**, Tu, W., & Eshetu, W. W. “Modeling the Effects of Drift Orbit Bifurcation on Radiation Belt Electrons” *AGU Fall Meeting 2021*
- **Huang, J.**, Tu, W., & Eshetu, W. W. “Modeling the Effects of Drift Orbit Bifurcation on Radiation Belt Electrons” *Magnetosphere Online Seminar Series – Virtual Meeting 2022*
- **Huang, J.** “Tutorial Talk – Inner Magnetosphere” *NSF-GEM Summer Workshop 2022*
- **Huang, J.**, Tu, W., & Eshetu, W. W. “Modeling the Effects of Drift Orbit Bifurcation on Radiation Belt Electrons/ Jinbei Huang” *NSF-GEM Summer Workshop 2022*
- **Huang, J.**, Tu, W., & Eshetu, W. W. “Test Particle Simulations of Energetic Particle Dynamics in Earth’s Magnetosphere” *WVU Center for KINETIC Plasma Physics Science Workshop 2022*
- **Huang, J.**, Tu, W., Lyu, X., Albert, J. M., & Lee, S.-Y. “Understanding the Role of Drift Orbit Bifurcation in Rapid Dropouts of Van Allen Radiation Belt Electrons” *AGU Fall Meeting 2022*

Poster Presentations

- **Huang, J.**, Tu, W., & Eshetu, W. W. “Quantifying the Transport of Radiation Belt Electrons due to Drift Orbit Bifurcation” *NSF-GEM Summer Workshop – Virtual Meeting 2020*
- **Huang, J.**, Tu, W., & Eshetu, W. W. “Quantifying the Transport of Radiation Belt Electrons due to Drift Orbit Bifurcation” *AGU Fall Meeting 2020*
- **Huang, J.**, Tu, W., & Eshetu, W. W. “Modeling the Effects of Drift Orbit Bifurcation on Radiation Belt Electrons” *NSF-GEM Summer Workshop – Virtual Meeting 2021*
- **Huang, J.**, Tu, W., & Eshetu, W. W. “Modeling the Effects of Drift Orbit Bifurcation on Radiation Belt Electrons” *NSF-GEM Summer Workshop 2022*

PUBLICATIONS

- **Huang, J.**, Tu, W., & Eshetu, W. W. (2022). Modeling the effects of drift orbit bifurcation on radiation belt electrons. *Journal of Geophysical Research: Space Physics*, 127, e2022JA030827. <https://doi.org/10.1029/2022JA030827>

CODING SKILLS

- C, C++, MATLAB
- LanlGeoMag Library, Guiding Center Test Particle Code

RELEVANT COURSEWORK

Principles of Plasma Physics, Space Physics, Kinetic Theory of Plasmas, Magnetohydrodynamics

PROFESSIONAL ASSOCIATIONS

Member, American Geophysical Union December 2020-Present

TEACHING EXPERIENCE

Teaching Assistant August 2016-May 2019

West Virginia University, *Morgantown, WV*

- Developed high-quality experiment illustrations, assessments, and outcomes for lab courses
- Engaged, challenged, and encouraged 60 students per semester, while tracking their learning progress
- Timely completion of final grades and evaluations, while also responding to student inquiries with mutual respect and understanding

COMMUNITY INVOLVEMENT

President, WVU Chinese Students & Scholars Association, *Morgantown, WV* January 2017-January 2018

- Successfully organized and managed a variety of events, including orientation programs, International Street Festival, Mid-Autumn Festival, and Spring Festival
- Regularly met with members to provide students in Morgantown with assistance related to various living, studying, and working problems

President, WVU International Student Soccer Club, *Morgantown, WV* May 2018-Present

- Organized weekly soccer practice sessions every Saturday
- Managed and allocated funds for practice costs to ensure smooth

Volunteer, Space Day, *Morgantown, WV* Mar 2022

- Educated children on the Earth's magnetosphere and how it protects us from solar activity