

YUANZHENG WEN

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EDUCATION

University of Iowa Department of Physics and Astronomy	Aug 2023-present Ph.D. Student in Physics
Chengdu University of Technology Department of Geophysics and Space Sciences	Sep 2018 - Jun 2022 B.S. in Space Sciences and Technology

PUBLICATION (CITATION: 19 H-INDEX:2)

1. Ionospheric TEC and plasma anomalies possibly associated with the 14 July 2019 Mw 7.2 Indonesia Laiwui earthquake, from analysis of GPS and CSES data

YZ Wen, D Tao, GX Wang et al.

Earth and Planetary Physics, doi: <http://doi.org/10.26464/epp2022028>

2. Statistical investigations of the flow-aligned component of IMF impact on the current sheet structure in the Martian magnetotail: MAVEN observations

YZ Wen, ZJ Rong, H Nilsson et al.

To be submitted to *Journal of Geophysical Research: Space Physics*

3. Multi-Point Observations of the Magnetic Reconnection in the Martian Magnetotail Triggered by an Interplanetary Magnetic Field Rotation

YZ Wen, JS Halekas, HW Shen et al.

The Astrophysical Journal Letters, doi: [10.3847/2041-8213/adbf10](https://doi.org/10.3847/2041-8213/adbf10)

4. Are the Significant Ionospheric Anomalies Associated with the 2007 Great Deep-Focus Undersea Jakarta-Java Earthquake?

D Tao, GX Wang, JY Zong, YZ Wen, et al.

Remote Sensing, doi: <https://doi.org/10.3390/rs14092211>

RESEARCH EXPERIENCE

University of Iowa <i>Graduate Research Assistant</i>	Jan 2024 - present Supervisor: Prof. Jasper Halekas
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• **Project: Exploring the Rapid Response of the Martian Magnetosphere to the Dynamic Solar Wind**

LASP-University of Colorado, Boulder <i>Undergraduate Researcher</i>	May 2022 - Aug 2023 Supervisor: Prof. David Brain & Prof. Hans Nilsson
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• **Project: Joint Observations of Mars' Tail Ion Escape Evolution from MAVEN and MEX**

• Analyzed synchronized MAVEN STATIC and Mars Express ASPERA-3 plasma observation to study ion escape evolution in Mars' magnetotail

• **Presentation at ASEPRA Team Meeting by IRF**

Institute of Geology and Geophysics, Chinese Academy of Sciences <i>Undergraduate Researcher</i>	Jul 2021 - Oct 2021 Supervisor: Prof. Zhaojin Rong
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• **Project: Statistical Investigations of the Flow-Aligned Component of IMF Impact on Magnetic Field Structure in Martian Magnetotail: MAVEN Observations**

- Analysis of magnetic field and plasma data from MAVEN to study IMF influences on Mars' magnetotail structure
- **Oral Presentation at 2022 AOGS Meeting in Singapore.**
- **First-author paper is in preparation.**

Swedish Institute of Space Physics (IRF), Kiruna Apr 2021 - Present
Undergraduate Researcher **Supervisor: Prof. Hans Nilsson & Prof. Mats Holmstrom**

- **Project: Solar Wind and Planetary Ions Mixing Investigations in the Vicinity of Martian Tail Region with MEX and MAVEN**
- Search and analysis of physical characters of ion mixing region near the Mars' tail boundary based on Mars Express and MAVEN observations

National Space Science Center, Chinese Academy of Sciences Jul 2020 - Sep 2020
Undergraduate Researcher **Supervisor: Dr. Yiteng Zhang**

- **Project: MHD Simulation of Mars Space Environment**
- Modeling the plasma environment of Mars and studied crustal magnetic fields influence on space environment
- **Supported by Chinese Academy of Sciences Research Fellowship.**

Chengdu University of Technology Sep 2019 - Dec 2020
Undergraduate Research Assistant **Supervisor: Prof. Dan Tao**

- **Project: Investigations of Seismic Ionospheric Disturbances with GPS and CSES**
- Analysis of global and local ionospheric anomalies before strong earthquakes based on satellite observations
- **First-author paper at *Earth and Planetary Physics***

SELECTED HONORS AND AWARDS

AGU 2024 Outstanding Student Presentation Award (top 2%-5% of student presenters)	2025
Pfeiffer and Maltby Scholarship, University of Iowa	2025
Undergraduate Research Fellowship, Chinese Academy of Sciences	Sep 2020/2021
Honorary Student of CAS-USTC International Summer School in Planetary Sciences	Aug 2020/2021
Honorary Student of Space Physics Summer School, ISPAT, Peking University	Jul 2021
National Scholarship, Ministry of Education of China	Sep 2020

TEACHING EXPERIENCE

Teaching Assistant of PHYS 3811: Electricity and Magnetism	Aug 2023-Dec 2023
Teaching Assistant of Mathematical Methods for Physics	Mar 2020-Jun 2020
Teaching Assistant of College Physics	Sep 2020-Jan 2021
Private Tutoring in Math, Physics and MATLAB Programming	

COMPUTER SKILLS

Programming	MATLAB, CERN ROOT, IDL (SPEDAS), Python (irfpy)
Operation System	Windows, Linux (Ubuntu)
Space Mission Instruments	MAVEN (STATIC, SWIA, MAG), Mars Express (ASPERA-3 IMA) CSES (LAP, PAP)

REFERENCES

Prof. Jasper Halekas

Ph.D. Advisor

Professor, University of Iowa

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Prof. David Brain

Collaborator

Professor, University of Colorado, Boulder

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Dr. Han-Wen Shen

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Postdoc Scholar, University of Iowa

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Dr. Yaxue Dong

Collaborator

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Prof. Hans Nilsson

Undergraduate Research Advisor

Senior Scientist, Swedish Institute of Space Physics, Kiruna

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Prof. Dan Tao

Undergraduate Research Advisor

Associate Professor, Chengdu University of Technology

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Prof. Zhaojin Rong

Undergraduate Research Advisor

Professor, Institute of Geology and Geophysics, CAS

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