

## Brief Curriculum Vitae of Dr. Zhonghua YAO

(1) **Date of Birth:** July-16-1986

**Nationality:** China

(2) **Position:** Research Professor at Institute of Geology and Geophysics, Chinese Academy of Sciences (since 2019); Honorary Professor at University College London (since 2022)

(3) **Address and e-mail:** No. 19, Beitucheng Western Road, Chaoyang District, 100029, Beijing, P.R.China; email: z.yao@ucl.ac.uk

### (4) **Employment History:**

2016 – 2019: Independent Researcher at University of Liège, Marie-Curie COFUND fellowship

2014 – 2016: Research Associate at Mullard Space Science Laboratory, University College London

### (5) **Education Degrees:**

Ph.D. in Geophysics, Peking University, Beijing, China, January 2014

*Thesis Title: "The current system associated with the interaction between near-Earth fast flows and the ambient plasmas". Advised by Prof. Zuyin Pu*

B.Sc. in Physics, Capital Normal University, Beijing, China, July 2008

### (6) **Research Experience:**

Strong experiences in both terrestrial and giant planetary space sciences, especially on the comparative investigations between the two communities. My research topics include magnetic reconnection, magnetospheric current systems, planetary aurorae, Io plasma torus etc., and I have strong expertise on planning and analysing joint datasets from different communities, such as the combination of in situ observations from spacecraft and telescopes.

### **Planetary Explorations using Ground and Space Telescopes**

- 1) Principal Investigator, 1.8m telescope in Lenghu for observing Jovian system
- 2) Co-Investigator, Chandra Obs., Chandra EUV Capabilities: A New View of Jupiter
- 3) Co-Investigator, XMM-Newton Obs., Juno and XMM-Newton's final search for drivers of Jupiter's X-ray aurorae
- 4) Co-Investigator, XMM-Newton Obs., Are Jupiter's Pulses Signatures of Global or Local Wave-Particle Interactions?
- 5) Co-Investigator, XMM-Newton Obs., Joining Juno in Exploring Jupiter's Aurora
- 6) Co-Investigator, Hubble Space Telescope Obs., Auroral and magnetospheric context for Juno in situ instruments during Cycle 26
- 7) Co-Investigator, Hubble Space Telescope Obs., Building connections: Juno and STIS contemporaneous observations of Jupiter's magnetosphere and auroras

### (7) **Major Awards and Honors:**

Kamide Lecture Award, AOGS	2021
Cassini Group Achievement Award, NASA	2018
Arne Richter Award, European Geosciences Union	2018
Winton Capital Award, Royal Astronomical Society	2017

Marie-Curie COFUND fellowship, European Union	2016
Robert Boyd Award by University College London	2015

### **Invited presentations at international conferences**

Jupiter's auroras: lessons from the comparisons with other planets, [Tutorial Talk at the Magnetospheres of Outer Planets Meetings](#), 2021

Auroral Morphologies and Their Magnetospheric Drivers: from Earth to Giant Planets, [Kamide Lecture of Asia Oceania Geosciences Society](#), 2021

Understand Planetary Spaces Remotely: The Stunning Auroral Displays, Space [Science Bazaar by International Space Science Institute – Beijing](#), 2021

Magnetospheric Drivers of Auroral Variations at Jupiter, [American Geophysical Union Fall Meeting](#), 2020

On the relation between Jovian aurorae and the loading/unloading of the magnetic flux: simultaneous measurements from Juno, HST and Hisaki, [Magnetospheres of the Outer Planets meeting](#), 2019

Aurora morphologies and their magnetospheric counterparts, [European Geosciences Union General Assembly](#), 2018

A direct examination of the dynamics of dipolarization fronts using MMS. [European Space Agency Cluster Workshop](#), 2017

Substructures within a Dipolarization Front Revealed by High-temporal Resolution Cluster Observations. [Asia Oceania Geosciences Society annual meeting](#), 2016

The current system associated with dipolarization front observed with CLUSTER and THEMIS. [European Geosciences Union General Assembly](#), 2014

Current system associated with the interaction between BBF and the near-Earth plasma. the third [International Conference on Storms, Substorms, and Space Weather \(ICSSSW\)](#), 2013

### **(8) Membership and Service to Scientific Community**

**Member** of American Geophysical Union, European Geosciences Union, Asia Oceania Geosciences Society, Chinese Geophysical Society

**Vice Director** of Planetary Physics Committee, Chinese Geophysical Society

**Team Leader** of an international team in International Space Science Institute (Beijing)

**Award Committee** of Asia Oceania Geosciences Society

**Associate Editor** of Frontiers in Astronomy and Space Sciences - Planetary Science

**Lead Guest Editor**

“Coupling of the magnetosphere-ionosphere system” in Geoscience Letters (2016/2017)

**Panelist** for the NASA Programs, 2017, 2018

**Regular Peer Review** for international journals (e.g., Nature Astronomy, APJL, JGR, GRL, ANGIO, ASR et al.)