



# Research Field: Planetary dust and radiation environment

## Focused Field: Lunar & cometary dust, space radiation

### SHORT BIO

I finished my B.Sc. and PhD degree in Physics in 2004 and 2010 at Nanjing University, China. In 2008-2010, I spent my last two years of PhD study as a student assistant in Nuclear Science Division, Lawrence Berkeley National Laboratory, USA.

In 2010-2012, I worked as a post-doc in Department of Engineering Physics, Tsinghua University. During 2011.1-2011.6, I visited Department of Physics & Astronomy, UCLA, as a research scholar.

In 2012, I was offered a position as an assistant professor in Space Science Institute, Macau University of Science and Technology. In 2017, I became an associate professor in the same institute. In 2018, this institute was upgraded as the State Key Laboratory of Lunar and Planetary Sciences.

Now I have been leading the planetary surface environment & small bodies group in the lab. My personal research focuses on the dust and radiation environment of the Moon, comets and Mars. I teach the "University Physics" course for undergraduate students.

Associate Prof.

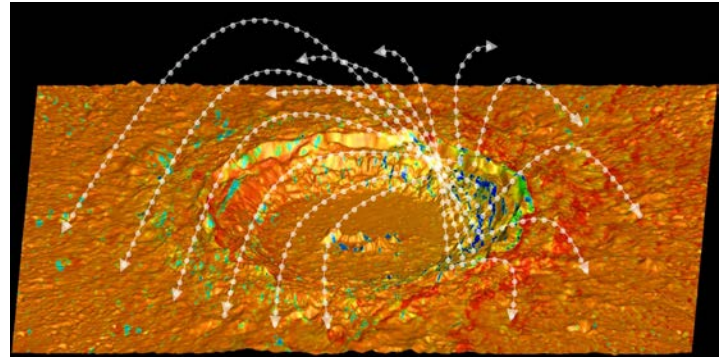
XIAOPING ZHANG

张小平



PhD (2010): Physics (Nuclear Physics) – Nanjing University

Bachelor (2004): Physics (Microelectronics) – Nanjing University



L. Xie, X. Zhang\* et al. Lunar dust fountain observed near twilight craters, *Geophysical Research Letters* (2020)

### RECENT PUBLICATIONS (250+ papers, 8000+ citations, <https://scholar.must.edu.mo/scholar/100153>)

S. Fu<sup>Δ</sup>, L. Zhao\*, **X. Zhang<sup>Δ</sup>** et al., *ApJL* 920, L12 (2021) (<sup>Δ</sup> equal contribution)  
*Comparison of Anomalous and Galactic Cosmic-Ray Oxygen at 1 au during 1997–2020*

S. Fu, **X. Zhang\***, L. Zhao\*, Y. Li, *ApJS* 254, 37 (2021).  
*Variations of the Galactic Cosmic Rays in the Recent Solar Cycles*

J. You, **X. Zhang\***, H. Zhang et al., *Acta Astronautica* 185, 337 (2021).  
*Analysis of plume–lunar surface interaction and soil erosion during the Chang’E-4 landing process*



### PROFESSIONAL EXPERIENCE

**2017 – Now** – Macau University of Science and Technology, Macau, China – Associate Prof.

**2012 – 2017** – Macau University of Science and Technology, Macau, China – Assistant Prof.

**2010 – 2012** – Department of Engineering Physics, Tsinghua University, China – Post Doctoral

**2008 – 2010** – Nuclear Science Division, Lawrence Berkeley National Laboratory, USA – Student Assistant

### PROJECTS & AWARDS (Selected)

PI of two scientific payloads: Dust Analyzer for Chinese asteroid mission (2021-2025) & Solar X-ray Detector for “Aoke-1” Satellite (2020-2022)

Macau Natural Science Award 2016 (First Prize)

**FDCT – 2019-2022** – PI – Scientific Analysis of Chang’E-4 Lunar Exploration Data

**NSFC-FDCT – 2017-2020** – PI – Theoretic study on some key nuclear reactions and its applications in the research of Mars radiation environment

**FDCT – 2014-2017** – PI – Research on the scientific and engineering questions about lunar dust

**NSFC – 2011-2014** – PI – Probing QCD phase diagram with  $\phi$  meson production in STAR BES program

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