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# 国台学术报告 NAOC COLLOQUIUM

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**Time: Wednesday 2:30 PM, Nov. 11    Location: A601 NAOC**

## The Physics and Roles of Black Holes and Cosmic Rays in Cosmic Structure Evolution

**Prof. Fulai Guo**

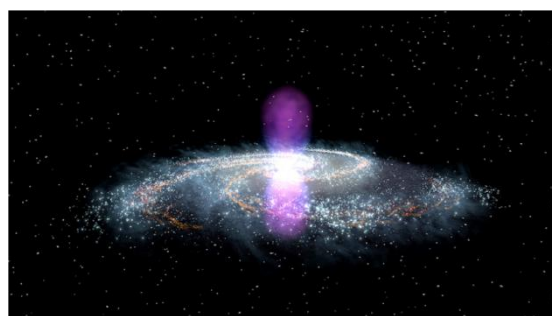
**Shanghai Astronomical Observatory**



Prof. Fulai Guo is a new faculty member in the astrophysics division of Shanghai Astronomical Observatory, currently setting up the Black Hole Feedback and Cosmic Ray Astrophysics research group. He received his B.S. degree in astrophysics from University of Science and Technology of China, and a PhD in Physics from University of California, Santa Barbara. He was then a postdoctoral scholar at University of California, Santa Barbara, and at University of California, Santa Cruz, and more recently a Zwicky prize fellow at Swiss Federal Institute of Technology Zurich, before joining SHAO. His research interests include AGN feedback, the Fermi bubbles, cosmic ray astrophysics, numerical simulations, galaxy quenching, dark matter signatures, etc.

### **Abstract**

Cosmology, galaxy formation, and high energy astrophysics are three central areas in contemporary astronomy. In this talk, I will bridge these three areas by discussing the potential roles of supermassive black holes and cosmic rays in cosmic structure evolution, with a focus on some of my works in the past several years. In particular, I will talk about radio-mode AGN feedback in galaxy clusters and the Fermi bubbles in the Milky Way, two observationally-different (but analogous) events both likely related to AGN jets, and potentially producing different effects in two very different environments.



*All are welcome! Tea, coffee, biscuits will be served at 2:15 PM.*