

国台学术报告 NAOC COLLOQUIUM

2012 年 第 14 次 / Number 14, 2012

TIME: Wednesday, 3:00 PM, Apr. 11, 2012 **LOCATION: A601 NAOC**

The Frequency and Demographics of Supermassive Black Hole Pairs and Binaries: from Tens-of-kpc to Sub-pc Scales



Dr. Xin Liu

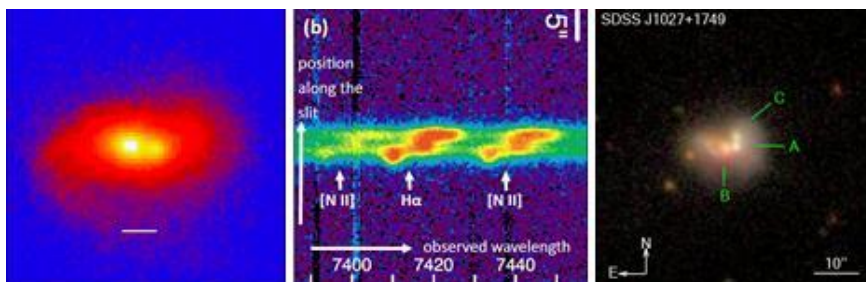
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Dr. Xin Liu is an Einstein postdoctoral fellow at Harvard-Smithsonian Center for Astrophysics.

She is working on the systematic identification and characterization of hierarchical mergers of massive black holes and the quantification of star formation and gaseous outflows in the host galaxies of luminous obscured quasars. Dr. Liu received her BS in physics from Tsinghua University, Beijing. She received a PhD in Astrophysics from Princeton University in 2010, before starting her fellowship at Harvard.

Abstract

Supermassive black hole pairs and binaries in galaxy mergers may hold important clues to our understanding of both fundamental physics and key aspects of galaxy formation.



Despite decades of searching, and strong reasons to believe that they exist, unambiguously confirmed SMBH pairs/binaries remain surprisingly scarce. Over the past few years, systematic searches, and in particular those using large optical spectroscopic surveys, together with dedicated follow-up observations have started to enable statistically robust investigation of the frequency and demographics of active SMBH pairs down to separations of a few hundred pc. I will review the new results from our systematic searches, and will highlight ongoing programs to explore SMBH pairs/binaries at a more advanced merger stage - a largely uncharted regime - towards building a complete picture of the accretion and evolution of SMBHs in mergers.

All are welcome! Tea, coffee, biscuits will be served at 2:45 P.M.

You are welcome to nominate speakers to Shude Mao (shude.mao@gmail.com), Licai Deng (licai@bao.ac.cn), Xuelei Chen (xuelei@cosmology.bao.ac.cn).