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国台学术报告 NAOC COLLOQUIUM

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TIME: Wednesday, 3:00 PM, Dec. 21, 2011 LOCATION: A601 NAOC

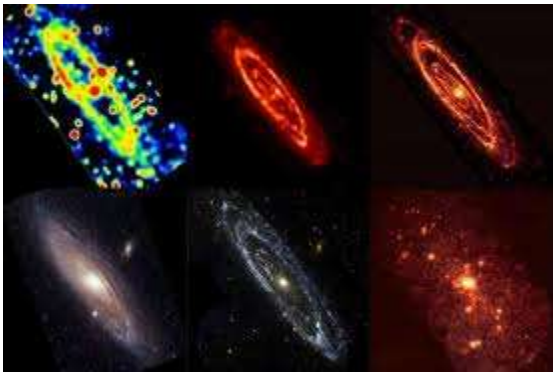
Downtown Andromeda: A Multiwavelength Study of the Nearest LINER

Dr. Zhiyuan Li

Harvard-Smithsonian Center for Astrophysics

I obtained my Balchelor and Master degrees, majoring in Astronomy, at Nanjing University. I obtained my PhD degree in Astronomy at the University of Massachusetts in early 2009. I've been a post-doctoral research fellow at the Smithsonian Astrophysical Observatory since 2009. My reserach focuses on high energy phenomena in nearby galaxies, which includes observational studies of the interstellar medium, X-ray binaries and low-luminosity super-massive black holes. I'm particularly interested in the astrophysics of the circumnuclear region in M31, which will be the topic of my talk.

Abstract



The so-called nuclear spiral in the Andromeda galaxy (M31), consisting of ionized and neutral dusty gas clouds of typically sub-parsec sizes, shows optical emission lines characteristic of LINERs. Yet the lack of UV radiation from either an active nucleus or massive young stars makes the ionizing source of this nearest LINER a longstanding puzzle. I will give an observational overview of the circumnuclear region of M31, and present preliminary results of an on-going multiwavelength study, based on new and archival HST, Spitzer and Chandra observations. I will discuss the relative importance of various ionization/excitation mechanisms, in particular heating by energetic particles that are plausibly supplied by the dormant super-massive black hole. This study will advance our understanding of the physical regulation of galactic circumnuclear environments.

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).