You are welcome to nominate speakers to colloquium@nao.cas.cn. The video and slide of previous colloquia and more information can be found at http://colloquium.bao.ac.cn/.

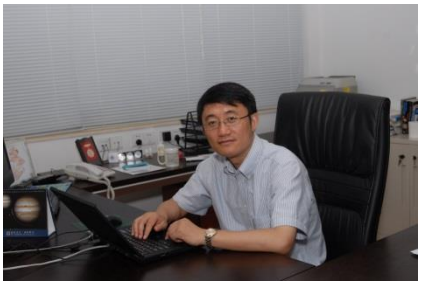
国台学术报告 NAOC COLLOQUIUM

2014 年 第 36 次 / Number36 2014

Time: Wednesday 2:30PM, Sep. 10 Location: A601 NAOC

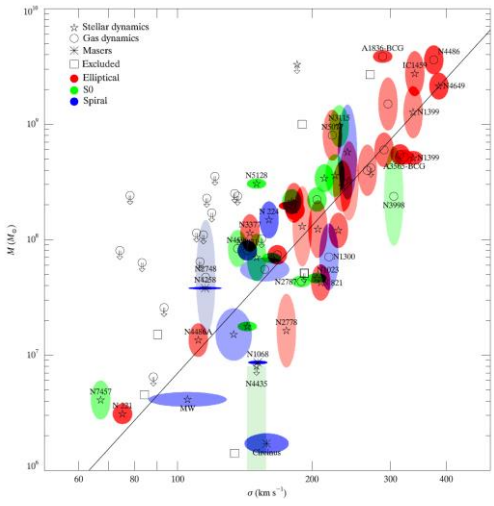
AGN feedback in an isolated elliptical galaxy

Feng Yuan (Shanghai Astronomical Observatory, CAS)



Prof. Feng Yuan obtained his PHD in Astrophysics from USTC in 1997, he then worked as a postdoc in Nanjing University, Max-Planck Institute for Radio Astronomy, Harvard-Simithsonian Center for Astrophysics, and Purdue University. He was recruited as "Bairen Jihua" in 2005 by Shanghai Astronomical Observatory. Now he is the director of Astrophysics division of SHAO. His main research interests include black hole accretion, AGN, Black hole X-ray binary, and AGN feedback. He has a number of highly cited papers and just published one review article in ARA&A on black hole accretion.

Abstract



AGN feedback is believed to play a crucial role in galaxy formation and evolution. In this talk, I will introduce our recent work on AGN feedback in an isolated elliptical galaxy. This work is based on 2D HD numerical simulation, the mechanical and radiative feedback effects from the AGN are considered. The inner boundary of the simulation domain is carefully chosen so that the Bondi radius is resolved and the accretion rate of the black hole is determined self-consistently. It is well known that when the accretion rates are high and low, the central AGNs will be in cold and hot accretion modes, which correspond to the radiative and kinetic feedback modes, respectively. We find that since the emitted spectrum from the hot accretion flows is harder than that from the cold accretion flows, the radiative heating is much more important that previously thought. The implications of this effect are discussed.

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