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**TIME: Wednesday 3:00 PM , Sept. 14, 2011**

**LOCATION: A601 NAOC**

## AGNs feedback at the parsec scale

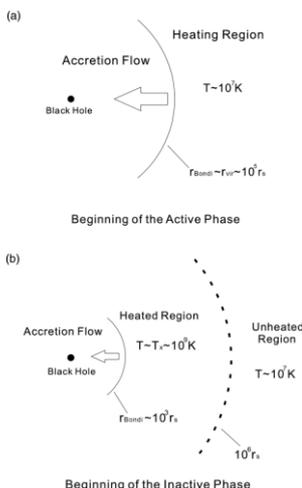
**Prof. Feng Yuan / 袁峰**

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Prof. Feng Yuan is the Dean of Research Center for Galaxy and Cosmology, SHAO and the Professor of CAS “100 Talent Program” since 2005. He is a 1991 graduate of the University of Shandong, and received a Ph.D. in astronomy at the University of Science and Technology of China in 1997. His research interests include accretion disks, formation of episodic jets, AGN, Black hole X-ray binaries and Planet formation.



### Abstract



Many compact young radio sources have been observed. Population studies have shown that their activity must be intermittent, with active and inactive timescales being roughly  $10^4$  and  $10^5$  years respectively. In this talk, I will describe an AGN feedback mechanism occurring at parsec scale to explain such an intermittency. The accretion mode in these sources is hot accretion such as ADAFs. In a hot accretion flow, the radiation from the innermost region of the flow propagates outward and heats the electrons at large radii via Compton scattering. If the radiation is strong enough,  $L > 2\% L_{\text{Edd}}$ , the electrons at the Bondi radius will be heated to be above the virial temperature thus the accretion will be stopped. The accretion will recover after the gas cools down. This results in the oscillation of the black hole activity. The calculated durations of active and inactive phases are consistent with those required to explain these compact radio sources. Some background knowledge will be presented at the beginning of the talk.

*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](mailto:shude.mao@gmail.com)), Licai Deng ([licai@bao.ac.cn](mailto:licai@bao.ac.cn)), Xuelei Chen ([xuelei@cosmology.bao.ac.cn](mailto:xuelei@cosmology.bao.ac.cn)).