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TIME: Tuesday, 2:30 PM, August 27, 2013 **LOCATION: A135 NAOC**

Optical spectroscopy for X-ray galaxy clusters: redshifts, dynamical masses and X-ray luminosity vs dynamical mass relation



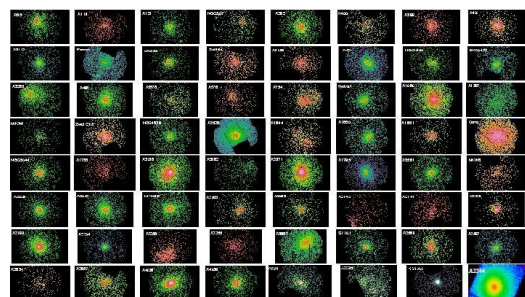
Dr. Yu-Ying Zhang 张宇颖 (University of Bonn)

Dr. Yu-Ying Zhang is a research scientist of Argelander-Institut fuer Astronomie (AIfA), University of Bonn since 2009. She obtained her M.Sc. in Astronomy from National Astronomical Observatories of China (NAOC) in 2002, and Ph.D. in Astronomy from Ludwig-Maximilians-Universitaet Muenchen (LMU) in 2005. Afterwards, she joined Max-Planck-Institut fuer extraterrestrische Physik (MPE)

as a research fellow, and went on to become a Research scientist at AIfA. Her main research interests are in the field of cosmology, in particular the study of the nature and distribution of matter in galaxy clusters, the determination of the cosmological parameters, and the formation of galaxies and galaxy clusters. She makes intensive use of interplay between observations, modeling, and theory, in which she worked on data from hard X-rays to the radio, but mostly in the X-ray and optical.

Abstract

We present the X-ray luminosity versus dynamical mass relation for a flux-limited sample of more than 60 nearby clusters of galaxies, the HIFLUGCS. Our analysis is based on 1.3Msec clean XMM-Newton X-ray data and optical spectroscopic redshifts of 13647 cluster member galaxies. For optimal use of optical spectroscopic surveys for high-redshift galaxy clusters and groups observed in upcoming X-ray surveys, we carried out Monte-Carlo re-sampling of the galaxy member redshifts for the redshift and dynamical mass calibration. We predict the redshifts, velocity dispersion and dynamical mass estimates assuming the eBOSS and 4MOST optical spectroscopic survey setups, respectively, with a 0.0-, 0.2-, 0.4-, 0.6-, and 0.8-shifts of the cluster redshifts. Aiming for high-z cluster/group systems, we also predict the bias of the redshift and mass estimates based on a small number of redshifts per cluster.



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

You are welcome to nominate speakers to Weimin Yuan (wmy@nao.cas.cn), Mei Zhang (zhangmei@bao.ac.cn), Licai Deng (licai@bao.ac.cn), Xuelei Chen (xuelei@cosmology.bao.ac.cn), Shude Mao (smao@nao.cas.cn)