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TIME: Wednesday 3:00 PM, Nov. 07, 2012 **LOCATION: A601 NAOC**

Close Major-Merger Pairs Since $z=1$: Evolution of Merger Rate & sSFR Enhancement

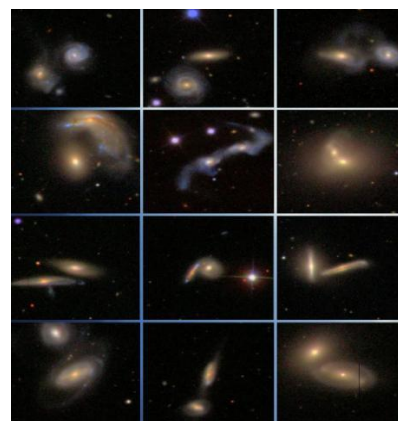


Dr. Kevin C. Xu (IPAC, Caltech)

Dr. Kevin C. Xu is a staff scientist at Infrared Processing and Analysis Center (IPAC), on the campus of the California Institute of Technology. He got the Ph.D. of astrophysics from International School for Advanced Studies in 1988. His main research interests are in the fields of galaxy evolution, interacting galaxies, starburst galaxies, infrared emission of normal galaxies. He's now working for two projects: GALEX and SWIRE. The Galaxy Evolution Explorer (GALEX) is a satellite which has been surveying the sky in the ultraviolet since its launch on April 28th, 2003. The Spitzer Wide-area InfraRed Extragalactic Survey (SWIRE) is a Spitzer legacy project. In both teams, his duty is to develop models that can predict major observational properties of sources to be detected in these missions.

Abstract

I will present results for a large sample of mass selected major-merger pairs with $\text{photo-}z < 1$, selected in the COSMOS field. We found a moderately strong cosmic evolution for the pair fraction, with the evolution index of 2.2 ± 0.2 . The pair fraction and the evolution show no significant dependence on the stellar mass of the mergers. Our quantitative estimates indicate that major mergers have significant impact on the stellar mass assembly of the most massive galaxies. Comparison with the mass dependent (U)LIRG rates suggests that the frequency of major-merger events is comparable to or higher than that of (U)LIRGs. Results from a new IR study, using data taken from Herschel and Spitzer surveys, showed a strong trend for the enhancement of the specific star formation rate (sSFR) in these pairs to decrease with increasing redshift, probably due to higher gas fractions in higher redshift galaxy disks which in turn may weaken the tidal effects in triggering starbursts.



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).