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国台学术报告 NAOC COLLOQUIUM

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Time: Tuesday 2:30PM, Dec. 23 Location: A601 NAOC

Star Formation and Stellar Populations of Ultra-Luminous Infrared Galaxies at High Redshifts

Dr. Haojing Yan (University of Missouri)

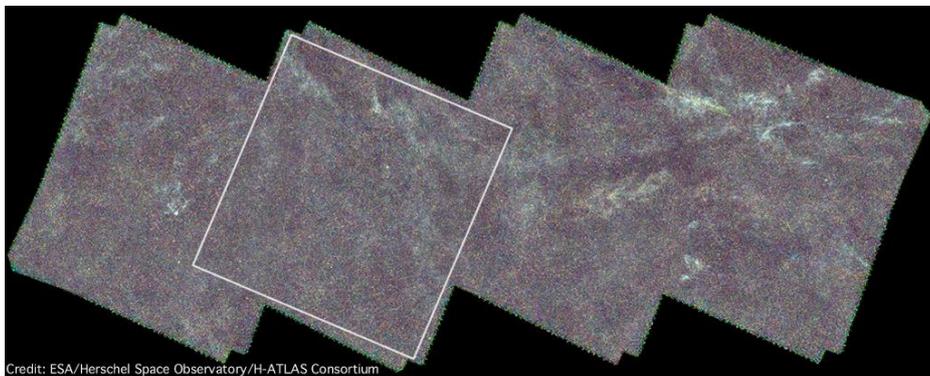


Assistant Professor Haojing Yan, an observational astronomer, has been working at the University of Missouri-Columbia since September 2011. His interest in the stars and galaxies motivated him to earn a bachelor's degree in astronomy from Nangjing University in China; he received his doctorate from Arizona State University in 2003. Before he came to MU, he did his post-doctoral work at the NASA Jet Propulsion Laboratory, the Carnegie Observatories, and The Ohio State University. His research interests fall in the broad category of galaxy formation and evolution, in particular galaxies

in the early universe and the mass assembly history of galaxies through cosmic time. Being an observer, he uses both ground- and space-based facilities for these studies.

Abstract

The Herschel space mission has generated, for the first time, a rich data set that allow us to explore the far-IR (FIR) universe at $z > 1$ on a large scale that is comparable to those in



optical/near-IR. As the mission is now over, these are the best – and all – that we can have before the next generation FIR facilities arrive. We are undertaking a program to study the extreme, dust-enshrouded star formation in galaxies at $z > 1$, targeting the Ultra-Luminous InfraRed Galaxies (ULIRGs) revealed by the Herschel very wide-field surveys. The most serious challenge is the persisting problem of poor angular resolution in FIR/sub-mm that the Herschel still suffered. We are developing a method to extract the major component(s) of Herschel sources using optical data directly as the position priors, which is appropriate to the study of ULIRGs. We will construct the largest, well-defined sample of high- z ULIRG, whose total IR luminosity are directly measured based on multiple FIR bands, and to enable a slew of follow-up studies. Some preliminary results will be presented here.

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