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国台学术报告 NAOC COLLOQUIUM

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Time: **Wednesday 2:30 PM, Oct.28th** Location: **A601, NAOC**

A comprehensive survey of dense gas structures and star formation in Cygnus-X

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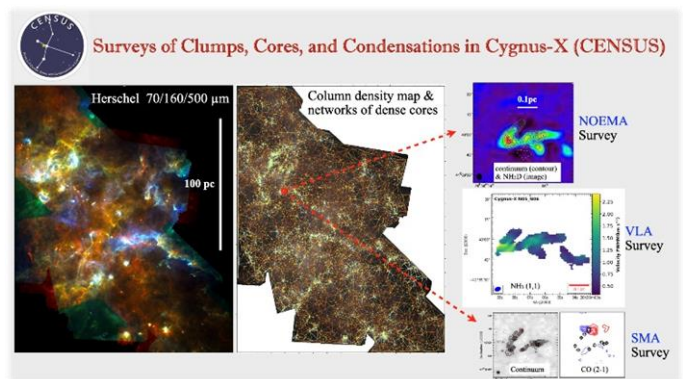


Prof. Keping Qiu did his PhD thesis research as a pre-doctorial fellow at the Harvard-Smithsonian Center for Astrophysics from 2006 to 2009, and then worked in Max-Planck Institute for Radioastronomy as a postdoc fellow from 2010 to 2012. Prof. Qiu joined the School of Astronomy and Space Science, Nanjing University in late 2012. His research interests include star formation, molecular spectroscopy, dust polarization, HI survey of our Galaxy, and submm to radio interferometry.

Abstract

Our understanding about how stars, in particular massive star, form in molecular clouds is still limited. We are performing a comprehensive survey of Cygnus-X, which is the most massive and active giant molecular cloud complex within 3 kpc from the Sun. Based on observations with the SMA, Jansky VLA, JCMT, IRAM-30m, Herschel, Spitzer, and

Shanghai Tianma radio telescope, we carry out a systemic study of the hierarchy of molecular cloud structures and star formation activities within the complex, aimed at constraining initial conditions of (massive) star formation and probing detailed mass assembly processes which lead to the birth of star clusters. I will introduce the progress of the project, including a complete survey of dense gas structures over $\sim 30 \text{ deg}^2$ sky coverage and their mass function, fragmentation, and dynamical properties. I may also talk about our ALMA and NOEMA observations of the selected targets from the survey.



All are welcome / Tea, coffee will be served at 2:15 PM.