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# 国台学术报告 NAOC COLLOQUIUM

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**Time: Wednesday 2:30 PM, Jul. 1st Location: A601 NAOC**

## Millimeter and Radio Studies of Quasars And Their Host Galaxies in the Most Distant Universe

**Dr. Ran Wang**

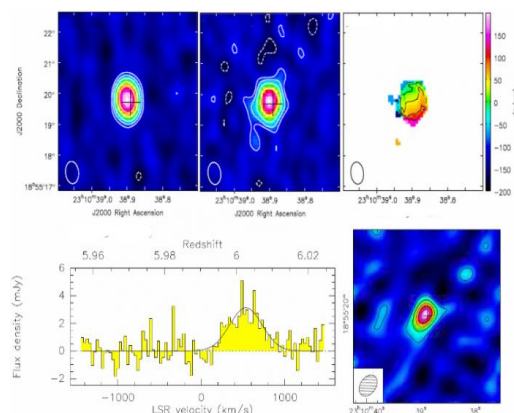
**Kavli Institute for Astronomy and Astrophysics (KIAA)**



Dr. Ran Wang received her PhD in astrophysics from Peking University in 2009. After that she got the NRAO Jansky fellow postdoctoral position, hosted at University of Arizona in 2010. She is currently a Youth Qianren Research Professor at Kavli Institute for Astronomy and Astrophysics (KIAA) at Peking University. Dr Wang is working millimeter and radio observations of the dust and gas components from high redshift quasar host galaxies. Her research interests include star formation and co-evolution of the supermassive black holes and their host galaxies in the early universe.

### Abstract

The large millimeter and radio telescopes, such as ALMA and the JVLA, provide us the best opportunity to study the formation of the first supermassive black holes (SMBHs) and galaxies at the earliest epoch. In particular, huge amount of dust and molecular gas were detected in about 30% of the luminous quasars at  $z\sim 6$ , which suggests an early phase of SMBH-galaxy evolution with massive star formation. The star formation rates estimated with the FIR dust continuum emission are about a few hundred to a thousand  $M_{\text{sun}}/\text{yr}$ . In this talk, I will present our recent millimeter and radio observations of the quasar samples at  $z\sim 6$  and discuss how the results constrain the quasar-galaxy coevolution in the early universe.



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