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CSO SPECIAL SCIENCE SEMINAR

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TIME: 11:00 AM, Monday 1st December 2008

PLACE: CSO Conference Room

**TITLE: ZEUS on the CSO: Probing the Gas in Active Regions
in ULIRGs and High-Redshift Galaxies**

SPEAKER: Dr. Thomas Nikola
Cornell University

ABSTRACT:

The star formation rate per unit volume shows strong evolution over the history of the Universe. This suggests a change of the gas properties in star formation regions or a variation of their size or both. We have built a grating spectrometer, ZEUS, for the submillimeter wavelength regime to investigate the physical properties of the gas in regions of enhanced star formation in ULIRGs and distant galaxies. With our instrument, we observe redshifted far-infrared fine structure lines, especially the 158 micron [CII] line, mid-J CO lines, and the [CI] 371 micron fine structure line to trace the gas properties in the star forming regions. In this presentation I will introduce our grating spectrometer, ZEUS, and give an overview of the results that we have obtained using our instrument on the CSO.

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Caltech Submillimeter Observatory (CSO) Hilo office is located in the University Park,
at the corner of Komohana – Nowelo Street.

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