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国台学术报告 NAOC COLLOQUIUM

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Time: **Wednesday 2:30 PM, Oct. 17th** Location: **A601, NAOC**

Suppression of star formation in transitioning galaxies in Compact Groups

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Dr. Ute Lisenfeld received her PhD at the Max-Planck-Institut for Nuclearphysics and Cosmophysics in Heidelberg in 1993, with a work about the FIR-radio correlation. She did a postdoc in Cambridge (UK), Florence (Italy) and at the Insitute for RadioMstronomy in the Millimeter (IRAM) in Granada and spent a sabatical year at IPAC in Pasadena (USA). Since 2008 she is working as a Profesor at the University of Granada in Spain. Her research interest is the relation between the interstellar medium (mainly molecular gas and dust) and star formation in

galaxies in different environments. She has been working mainly on interaction galaxies, starburst galaxies and dwarf galaxies.

Abstract

Galaxies in compact groups live in an environment where galaxy interactions play an important role. Mid-infrared colours from the Spitzer and WISE satallites are able to classify galaxies into actively star-forming and quiescent objects. Galaxies with intermediate infrared colours, populating the so-called "canyon" or "infrared transition



zone" are rare and are believed to be in a transitioning phase between active and quiescent. I will present an analysis of the molecular gas and star formation of a sample of 172 galaxies in compact groups with CO data. We find that the star formation efficiency and the molecular-to-stellar mass are significantly lower in canyon galaxies compared to active galaxies, indicating that the transition from active to quiescent is driven both by a loss of molecular gas and the fact that the remaining gas has lost its capacity to form stars efficiently. Recent, high-resolution map with the Plateau de Bure Interferometer confirm the perturbed nature of the molecular gas.

All are welcome ! Tea and coffee will be served at 2:15 PM.