

Colloquium

SFB 956

Conditions and Impact of Star Formation

02.12.2013

Monday 4:00 pm

Physikalische Institute Köln

Lecture Hall III

Zülpicher Straße 77 | 50937 Köln

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The ALMA View of One of the Nearest Starburst Galaxies

In the context of galaxy evolution, it is particularly interesting to understand better the mechanisms that regulate starburst activity in galaxies. In this talk I will present an analysis of the molecular ISM properties in the prototypical circumnuclear starburst galaxy, NGC 253, derived from ALMA observations. I will discuss the evidence for a molecular superwind, our measurements of the mass loss rate, and the possible gas entraining mechanisms. I will show our measurement of the properties of giant molecular clouds in the starburst, in an effort to better understand the conditions in this region. Finally, I will present and discuss some of the chemical complexity we see in the data. The extremely rich spectroscopy, a common feature in many ALMA datasets, opens new windows for the study of physical conditions in extragalactic systems.