Colloquium

SFB 956

Conditions and Impact of Star Formation

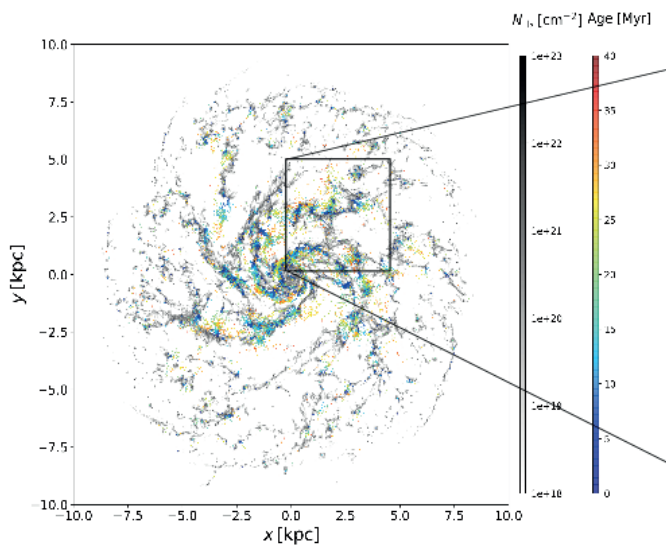
8 October 2018

Monday 3:00 pm

Physikalische Institute Köln

Lecture Hall III

Zülpicher Straße 77 | 50937 Köln



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ISM Dynamics and Star Formation

Stars and star clusters form by gravitational collapse in regions of high density in the multi-phase interstellar medium. The process of stellar birth is controlled by the complex interplay between the self-gravity of the star-forming gas and various opposing agents, such as supersonic turbulence, magnetic fields, cosmic ray and gas pressure, or stellar feedback in form of radiation, winds, and supernovae. Turbulence plays a dual role. On global scales it provides support, while at the same time it can promote local collapse. This process is modified by the thermodynamic response of the gas, which is determined by the balance between various heating and cooling processes, which in turn depend on the chemical composition of the material. I will review the current status of the field and discuss a few examples of recent progress.