Colloquium

SFB 956

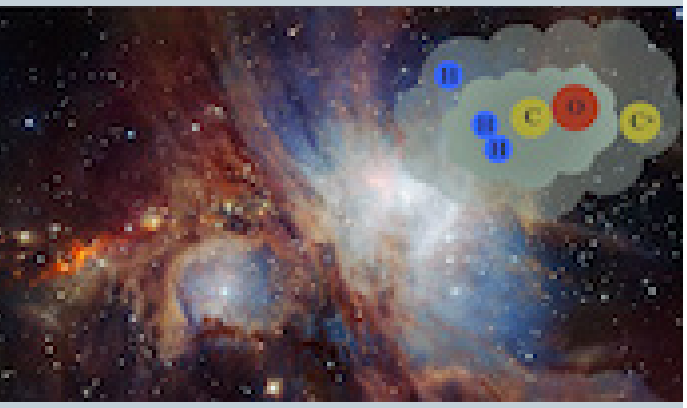
Conditions and Impact of Star Formation

15 November 2021

Monday 3:30 p.m.

Physikalische Institute Köln

Hybrid



Munan Gong

MPI for extraterrestrial physics, Garching, Germany

Simulating Chemistry in Star Forming Environments

Chemistry determines many important aspects of the interstellar medium (ISM): for example, the abundance of observable species, heating and cooling of the gas, and the ionization fraction. Understanding chemistry is important for both understanding the physical processes that control star formation, and interpreting observations of molecular clouds in the local universe and beyond. In this talk, I will summarise our efforts in adding chemistry to numerical simulations of the ISM. I will give examples of applying chemistry in different contexts: the environmental dependence of the X_{CO} conversion factor, self-consistent chemistry and thermodynamics, formation of molecules in HI clouds, and more.