



PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik der Goethe-Universität Frankfurt

Mittwoch, den 14.06.2023, 16 Uhr c.t.

Großer Hörsaal, Raum _0.111, Max-von-Laue-Str. 1

Antrittsvorlesung

Priv. Doz. Dr. Markus Röllig

Physikalischer Verein – Gesellschaft für
Bildung und Wissenschaft

Johann Wolfgang Goethe-Universität Frankfurt



"Disentangling star formation conditions in the era of JWST"

The evolution of galaxies is driven by massive stars due to their enormous energy output during their short lifetime. Massive stars provide stellar feedback in the form of (ionising) radiation, the associated radiation pressure on dust and gas, stellar winds, and type II supernova (SN) explosions. To resolve the local impact and leakage of these feedback processes out to the galactic-scale environment, the study of local templates at high spectral and spatial resolution is required. Commonly, the regions where the radiative feedback from a massive star most strongly interacts with the surrounding gas are called photodissociation regions or photon-dominated regions (PDRs), which mark the interstellar medium (ISM) phase transition between the ionised and neutral or molecular ambient medium. Modern instruments allow a detailed study of this interface region. In combination with complex numerical models of PDRs we can disentangle the interplay between UV radiative transfer, astrochemistry and local micro-physics in the ISM.

Die Dozentinnen und Dozenten der Physik

local host: Prof. Dr. Roger Erb, roger.erb@physik.uni-frankfurt.de