

The Galactic Environment and its Connection to the ISM

Rowan SMITH

(University of Manchester, UK)

Thursday, July 27, 2023, 14:15-16:15

In this lecture we will consider the variety of environments within our galaxy and how they facilitate the creation of star-forming gas. Environments to consider include; the galactic centre, bar, arm, inter-arm and outer galaxy. In all these regimes the turbulence, metallicity, interstellar radiation field, magnetic field, and mean gas density differ, which will affect the formation both of molecular cloud and stars within them. In addition, factors such as galactic shear, differential rotation, and expanding super-bubbles will place additional limits on the evolution and lifetimes of star forming clouds. All these factors mean that star formation in the ISM is intrinsically connected to the galactic environment in which it is embedded.