

Jeudi 22 novembre 2018 à 11h30 (IAS, bâtiment 121, salle 4-5)

Astrochemistry in star forming regions : new modeling approaches

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Star-forming regions present rich infrared and millimeter spectra emitted by the gas exposed to the feedback of young stars. This emission is increasingly used to study the star formation cycle in other galaxies, but results from a complex interplay of physical and chemical processes : chemistry in the gas and on grain surfaces, (de)excitation processes of the atoms and molecules, heating and cooling balance,... Its understanding thus requires detailed astrochemical models that include the couplings between these processes. In this talk, I will present several examples where new modeling approaches of specific processes and their couplings proved crucial to solve persistent observational riddles : from the driving role of UV irradiation in the dynamics of photodissociation regions (PDR) to the efficient reformation of molecular hydrogen in these regions.