

Physics and chemistry of the interstellar medium

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In this course I will illustrate the main chemical and physical processes occurring in the interstellar medium (ISM) of galaxies. In particular, I will explain the main mechanisms of molecule formation in space (e.g. gas phase, grain surface) in different environments, as well as the most relevant physical processes to model the ISM (e.g. heating and cooling, interstellar radiation field, dust effect), and to interpret different observations. At this regard, I will discuss different diagnostics to investigate the physical and chemical properties of the ISM.

Form:

The course will be composed by 30 hours of lectures plus 30 hours of exercises (2+2 hours per week). The exam will be considered successful after an oral examination and by completing at least 60% of the exercises.