TSI SPECIAL SEMINAR

INTEGRAL FIELD SPECTROSCOPY IN GALAXIES

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Projected in the sky, galaxies are spatially resolved objects. Despite this fact, large photometric and/or spectroscopic surveys were designed to only estimate their integrated physical properties. This has been drastically changed with the advent of the observational technique known as Integral Field Spectroscopy (IFS), where spectral information can be acquired at different portions (of the order of kpc in size) of a given galaxy simultaneously. In this talk, I will present an overview of the advantages of the IFS technique as well as the main large optical IFS surveys (e.g., CALIFA, SDSS-IV MaNGA) and their most significant contributions to the field of extragalactic astrophysics (e.g., scaling relations derived with observables at kpc scales in large samples of galaxies). I will also present a brief overview of the current status of IFS instrumentation both in ground and space facilities (e.g., SDSS-V LVM and JWST).

21-SEP-2023 3:30 PM ET TSI CONFERENCE