Contribution ID: **125** Type: **Stelle, popolazioni stellari e mezzo interstellare**

Revealing the Milky Way's Hidden Satellites with the current and ongoing facilities

Wednesday 5 June 2024 11:30 (20 minutes)

In the past two decades, the exploration of Milky Way (MW) satellites has intensified due to the availability of wide-field deep panchromatic photometric surveys carried out with the new generation of telescopes. The application of high-performance overdensity detection techniques on extensive datasets has significantly increased our knowledge of stellar systems residing in the MW halo. These surveys have unlocked the exploration of the low-luminosity faint end of the galaxy luminosity function, which was previously inaccessible, encompassing dwarf galaxies and ultra-faint dwarf (UFD) galaxies. UFDs are not only renowned as the most dark-matter-dominated objects in the Universe but also as the oldest and least chemically evolved galaxies, making them invaluable probes for unraveling the MW's mass assembly history. Anticipating the impact of the forthcoming Vera C. Rubin Observatory on the census of UFD galaxies in the Local Group, we exploited the untapped potential of the Kilo-Degree Survey (KiDS), which has not yet been utilized in the quest for low-surface brightness satellites of the MW. This endeavor culminated in the discovery of a novel member within the MW satellite family.

sessioni congresso

Stelle, popolazioni stellari e mezzo interstellare

Primary author: GATTO, Massimiliano (Istituto Nazionale di Astrofisica (INAF))

Presenter: GATTO, Massimiliano (Istituto Nazionale di Astrofisica (INAF))

Session Classification: Stelle, Popolazioni Stellari e Mezzo Interstellare