

Jeudi 30 mai 2024 à 11h (IAS, bâtiment 121, salle 1-2-3)

Gaia: a pinch of satellite, a teaspoon of catalogue and a cup of Milky-Way

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The Gaia satellite is in operation since 2014. It performs a full sky multi-epoch astrometric, spectro-photometric and spectroscopic survey down to magnitude $G \sim 21$ ($G \sim 17$ in spectroscopy). The data are processed on-ground and the results are published every 2 to 3 years in the form of incremental data releases. The most recent one, the Gaia Data Release 3 (GDR3), was published mid 2022. It contains many new products, such as: the radial velocities of 34 million stars and the atmospheric parameters for almost half a billion, the classification and characterisation of numerous binary and variable stars, the morphological parameters and the redshifts of several million galaxies and quasars. In this presentation, I will briefly recall the main characteristics of the mission, present the novelties of the third data release and discuss some of the recent scientific results which have changed our vision of the Milky Way, from the structure and kinematics of the disc to the eventful history of the formation of the halo.