

Jeudi 7 novembre 2024 à 11h (IAS, bâtiment 121, salle 1-2-3)

Charting new frontiers with the SKA: The transformative outlook for 1.4 GHz spectral line research

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With images produced by the SKA, astronomers will be on the verge of driving a generational breakthrough by mapping the circulation of diffuse neutral hydrogen (HI) gas in resolved galaxies from the nearby Universe. The Australian Square Kilometre Array Pathfinder (ASKAP), paving the way for the SKA, is now starting its full survey operations. In this talk, I will present the GASKAP-HI pilot survey, targeting the Magellanic system. I will present results on the multiphase content of the Magellanic Clouds and its link to star formation, offering a glimpse into the transformative potential of future SKA observations. I will also explore how the SKA will significantly enhance the resolution of foreground maps used for cosmological applications, e.g., mapping the cosmic web in the Xray band.