

## Winter Meeting 2025



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# The Milky Way as a case study for Galactic Dynamics

*Monday 3 February 2025 14:55 (25 minutes)*

The Milky Way is a dynamic system, exhibiting a wealth of complex processes revealed through the unprecedented precision of ESA's Gaia mission. Gaia's stellar data provide a detailed window into the ongoing dynamical evolution of our Galaxy. For instance, the Galactic bar appears to be slowing down in its angular rotation, while the outer disc shows perturbations likely caused by the passage of the Sagittarius dwarf galaxy. These observational findings drive theoretical studies aimed at uncovering the underlying physics and improving our understanding of the Milky Way's structure and evolution. In this talk, I will present recent results from computer simulations of disc galaxies within a cosmological context, demonstrating how these tools help us interpret the intricate dynamics shaping our Galaxy.

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