

Jeudi 19 décembre 2024 à 11h (IAS, bâtiment 121, salle 1-2-3)

Giant planets and their evolving obliquities

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The orbits of Solar System planets -- which are approximately circular and coplanar -- are well known signatures of the processes at work during the early stages of the Solar System history. Other key signatures are the inclinations of the planets' spin axes, or "obliquities". In this talk, I will review the evolution mechanisms of planetary obliquities. I will show how recent discoveries about Saturn's moons modify our understanding of the history of giant planets. The coupled evolution of moons and planetary spin axes may generically lead to high-obliquity planets surrounded by a ring -- a configuration that has been proposed to explain the unusual properties of several exoplanets.