

Gravitational Geometry and Dynamics Group Seminar

Wed., May. 22nd, 2024, at 11h00.

Room: Sala Sousa Pinto and Zoom ID: 989 6252 0928

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at: gravitation.web.ua.pt



Beyond the Concordance Model with galaxy cluster mass profiles

Galaxy clusters are excellent natural laboratories to study the nature of gravity and test possible alternatives to the Concordance Model, at the edge between cosmology and astrophysics. I present recent results obtained on the mass profile of clusters, using the updated version of MG-MAMPOSSt, a code that reconstructs the mass distribution of clusters with kinematics and lensing analyses in modified gravity/Dark Energy frameworks. I will show the constraints obtained on the inner slope of dark matter profile using high quality imaging and spectroscopic data for the galaxy cluster MACSJ1206, down to the core. I will discuss alternatives to Λ CDM scenario and possible bounds in the parameter space that can be derived using a combination of kinematics and lensing analyses.