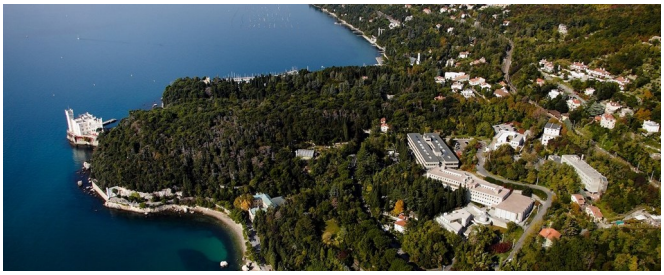

Contribution ID: **80** Type: **not specified**

Covariant formulation of MOND from hyperconical metrics and observational constraints

Friday 1 September 2023 21:45 (5 minutes)

Modified Newtonian Dynamics (MOND) can partially explain the excess of rotation of galaxies, or the equivalent mass discrepancy-acceleration, without the requirement of dark matter halos. This work proposes a modification of GR based on the distorted stereographic projection of hyperconical universes, which leads to MOND effects at galactic scales. To describe the mass discrepancy-acceleration relation, a hypothesis on the centrifugal acceleration was assumed, which would show a small time-like contribution at large-scale dynamics due to the metric used. As a limit case, a covariant formulation compatible with MOND is obtained, and mass discrepancy-acceleration is satisfactorily modelled for a reference set of 61 galaxies collected from the SPARC dataset

Presenter: MONJO, Robert

Session Classification: Posters of friday (ignore time)