
Observational signatures of hot-spots orbiting Gravastars

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Abstract

The first images of the central objects of the galaxies M87 and Milky Way, by the Event Horizon Telescope (EHT), propelled the study of observational signatures of various compact objects. These discoveries together with the GRAVITY and LIGO/VIRGO collaboration, brought more attention to black hole mimickers, horizonless compact objects that represent a possible alternative to black holes, like boson stars, fluid spheres or gravastars. This discussion will be focused on gravastars, namely, on the specific observed imprints left when these are orbited by a spherical luminous spot and if these can be considered adequate candidates who inhabit galactic centers. A brief introduction about gravastars will be given, followed by an analysis about the impact of compacticity, mass distribution and orbital radius in the observational properties of a gravastar. Finally, the plausibility of specific gravastar configurations as candidates for black hole mimickers will be discussed.

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