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Black hole mimickers in light of the recently observed shadows of Sagittarius A* and M87*

The recent observations of the shadows and images of the supermassive compact objects Sgr A*and M87* at the hearts of Our Galaxy and the nearby galaxy M87, respectively, by The Event Horizon Telescope (EHT) collaboration have opened up a new window in observational astronomy to probe and test gravity and fundamental physics in the strong-field regime. It is commonly believed that the gravitational field around astrophysical compact objects is described by the Kerr black hole geometry. The EHT data, therefore, can be used to test this hypothesis and put constraints on spacetime geometries which deviates from the Kerr. In this talk, I will talk about shadows cast by some Kerr black hole mimickers and discuss whether and to what extent these mimickers can be constrained using the EHT results.

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