

Constraints on black hole charges in M87* and Sgr A* with the EHT observations

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Three years ago the Event Horizon Telescope collaboration presented the first image reconstruction around the shadow for the supermassive black hole in M87. *It gives an opportunity to evaluate the shadow size. Recently, the Event Horizon Telescope collaboration constrained parameters (“charges”) of spherical symmetrical metrics of black holes from an estimated allowed interval for shadow radius from observations of M87.* If we assume that a Reissner–Nordström black hole with a (tidal) charge exists in M87, *therefore, based on results of the shadow size evaluation for M87* done by the Event Horizon Telescope collaboration we constrain a (tidal) charge. Similarly, we evaluate a (tidal) charge from shadow size estimates for Sgr A*.

Reference

A.F. Zakharov, Universe 8, 141 (2022).

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Session Classification: Connection with Prof. Ruffini for greetings