NEB-19 Recent Developments in Gravity (Online)



Contribution ID: 96

Type: Oral presentation

Tests of General Relativity with Black Hole Shadows

The imaging of black-hole shadows with the Event Horizon Telescope has opened a new window into the strong-field spacetimes of these extreme astrophysical objects. I will first discuss the technological and theoretical advances that led to the first image of the black hole in the M87 galaxy. I will describe how this observation allows us to perform new tests of General Relativity. I will explore the connection of the new results to tests of gravity with other astrophysical and cosmological probes. I will conclude with a prognosis on what ground-based observations of shadows can tell us about black-hole metrics and the underlying theory of gravity.

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