Contribution ID: **20**   Type: **Long talk (20 mins)**

Regge pole description of scattering by dirty black holes

Thursday, 15 December 2022 17:50 (30 minutes)

We study the problem of plane monochromatic scalar waves impinging upon a Schwarzschild dirty black hole and show that dirty black hole spacetimes may exhibit various critical effects for geometrical optics. We provide the complex angular momentum representation of the differential scattering cross section and examine the role of the different Regge pole branches. The role of the critical effects, i.e., orbiting, glory, grazing and rainbow scattering, and their impact on the differential scattering cross-section is introduced.

Type of presentation

20 minute talk

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Black holes

Primary author: HU, Shiqian (King's College London)

Presenter: HU, Shiqian (King's College London)

Session Classification: Full Length Talks