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Shadow of black holes with a plasma environment in 4D Einstein-Gauss-Bonnet gravity

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We study the shadow cast by rotating black holes surrounded by plasma in the context of the novel 4D Einstein-Gauss-Bonnet theory of gravity. The metric for these black holes results from applying the Newman-Janis algorithm to a spherically symmetric solution. We obtain the contour of the shadow for a plasma frequency model that allows a separable Hamilton-Jacobi equation. We introduce three observables in order to characterize the position, size, and shape of the shadow.

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