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Looking at Black Holes Mathematically JAMES GRABER, LC - I

will briefly discuss a mathematically exact relationship between the impact parameter at infinity and the photon orbit in the equatorial plane of the Kerr metric., originally derived by Bardeen in the early 1970s. Next I will present a mathematical generalization of this formula, and apply it to slightly perturbed Kerr metrics. If time permits I will compare the computed results with recent observations of Sgr A* performed by Doeleman *et al.*

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