

Abstract Submitted
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Growth rate for blackhole instabilities KARTIK PRABHU, ROBERT WALD, The University of Chicago — Hollands and Wald showed that dynamic stability of stationary axisymmetric black holes is equivalent to positivity of canonical energy on a space of linearised axisymmetric perturbations satisfying certain boundary and gauge conditions. Using a reflection isometry of the background, we split the energy into kinetic and potential parts. We show that the kinetic energy is positive. In the case that potential energy is negative, we show existence of exponentially growing perturbations and further obtain a variational formula for the growth rate.

Kartik Prabhu
The University of Chicago

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