



# IV Amazonian Workshop on Black Holes and Analogue Models of Gravity

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## Absorption of a scalar field by a charged black hole

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We compute the absorption cross section of a massive scalar field by a Reissner-Nordström black hole. We find the low-frequency limit of the absorption, which can be seen as a generalization of the massless case. For the high-frequency limit we use geodesics and the Sinc approximation to find analytical results. Finally, we compare the results obtained numerically with the analytical ones, showing a selection of results.