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## **SMALL SCHWARZSCHILD–ANTI–DE SITTER BLACK HOLES AND RESONANT BEHAVIOR ON THE POWER EMITTED BY A ROTATING SOURCE**

**João P. B. Brito<sup>1</sup>, Rafael P. Bernar<sup>2</sup>, and Luís C. B. Crispino<sup>3</sup>**

1,2,3Programa de Pós-Graduação em Física, Universidade Federal do Pará, 66075-110, Belém, Pará, Brasil. email1: joao.brito@icen.ufpa.br, email2: rbernar@ufpa.br, email3: crispino@ufpa.br.

3Departamento de Matemática da Universidade de Aveiro and Centre for Research and Development in Mathematics and Applications (CIDMA), Campus de Santiago, 3810-183 Aveiro, Portugal.

### **Resumo**

Using quantum field theory in curved spacetimes at tree level, we calculate the power emitted by a source moving along circular geodesics around Schwarzschild-anti-de Sitter black holes. For large black holes, the scalar power exhibits an enhancement in the contribution of higher multipoles as compared to the Schwarzschild case. For small black holes, the effective potential for the scalar field presents a local minimum, giving rise to long-lived modes. These modes are almost trapped inside the potential well and produce spikes on the total power emitted by the source. We also compare these results with the corresponding ones in the Schwarzschild-de Sitter spacetime.

**Palavras chave:** : Schwarzschild-anti-de Sitter, emitted power, resonant frequencies.