Greybody factors for string-corrected black holes

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Abstract

We compute analytically greybody factors for asymptotically flat spherically symmetric black holes with stringy higher derivative corrections in d dimensions. This calculation includes both the eikonal limit - where the real part of the frequency of the scattered wave is much larger than the imaginary part - and the highly damped case - where the imaginary part of the frequency is much larger than the real part -, addressing gravitational perturbations and test scalar fields, and yielding full transmission and reflection scattering coefficients.

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