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The effect of resummation in AdS black holes.

Friday 20 December 2024 17:00 (15 minutes)

The study of linear scalar perturbations in AdS_5 black holes typically reduces to the analysis of ODEs of the Heun-type. Recently, the connection coefficients of the Heun equation have been computed in terms of the Nekrasov-Shatashvili (NS) free energy of an $SU(2)$ supersymmetric gauge theory with four fundamental hypermultiplets. Using the exact form of these connection coefficients and summing over the instanton contributions of the NS function, we present asymptotic expansions in the small horizon limit for the retarded Green's function and the greybody factor in asymptotically AdS black holes. This talk is based on joint work with Shankhadeep Chakrabortty and Arpit Maurya.

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