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Asymptotic quasinormal modes of Gauss-Bonnet d-dimensional black holes

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Abstract: We compute the quasinormal frequencies of d-dimensional large spherically symmetric black holes with Gauss-Bonnet corrections in the highly damped regime. We solve perturbatively the master differential equation and we compute the monodromies of the master perturbation variable (analytically continued to the complex plane) in different contours, in order to obtain the quasinormal mode spectra. We consider tensorial, vectorial and scalar gravitational perturbations, obtaining the same frequencies for the three cases like in Einstein gravity. We also separately perform the same calculation for test scalar fields.