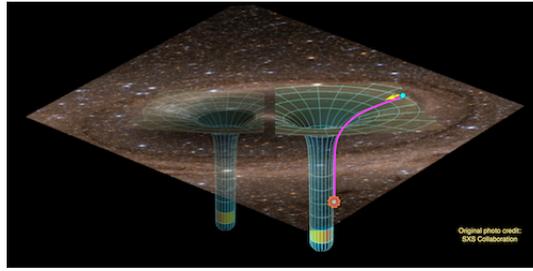


BLACK-HOLE MICROSTRUCTURE



ID de Contribution: 6

Type: Non spécifié

The Great Escape: Tunneling out of Microstate Geometries

mardi 9 juin 2020 14:30 (1 heure)

We discuss the quasi-normal modes in asymptotically-flat microstate geometries that have the same charge as a D1-D5-P black hole, but whose long BTZ-like throat ends in a smooth cap. In general the wave equation is not separable, but we find a class of geometries in which the non-separable term is negligible and we can compute the quasi-normal frequencies using WKB methods. The long throats of these capped geometries generate large redshifts, which lead to exceptionally-low-energy states with extremely long decay times, set by the central charge of the dual CFT to the power of twice the dimension of the operator dual to the mode. While these decay times are extremely long, we also argue that the energy decay is bounded, at large t , by $\log(t)^{-2}$ and is comparable with the behavior of ultracompact stars, as one should expect for microstate geometries.

Recorded Version: <https://www.youtube.com/watch?v=MI5-c5-HLC0>

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