Black holes beyond astrophysics

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Abstract

Aside from being fascinating (and in many ways extreme) objects in astrophysics, black holes have played an increasingly prominent role in theoretical physics: they underlie "holographic dualities" (originally formulated within the framework of string theory), through which they can be related to more mundane non-gravitational systems. Rather tantalizingly, they also hint at profound connections to quantum information theoretic constructs, in particular entanglement. In this overview-style talk I will try to give a broad-brush picture of the multifaceted nature of black holes.

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