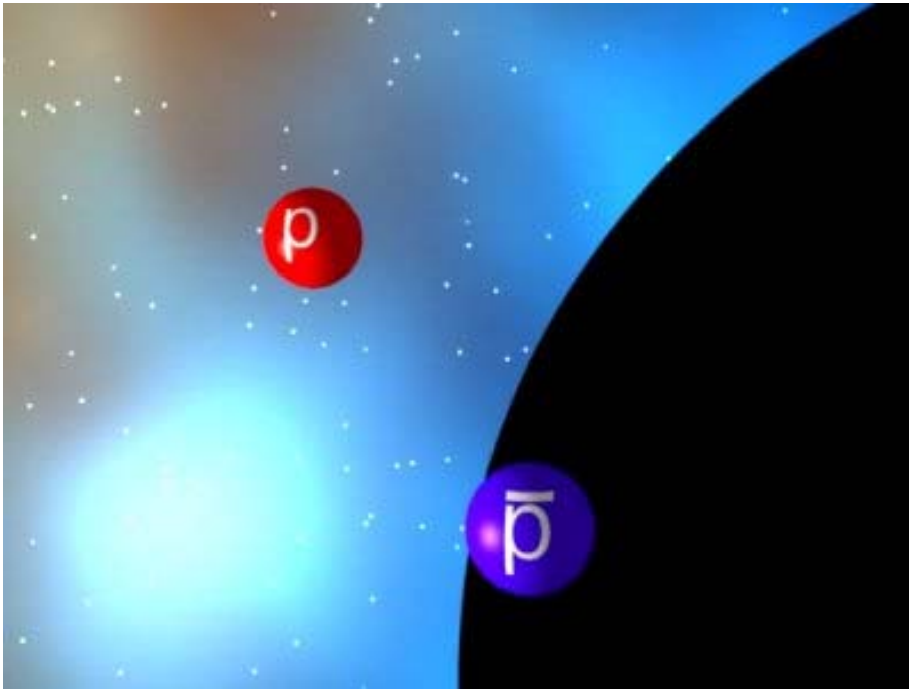




COLLOQUIUM



Dr. Douglas Singleton
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Hawking Radiation 101

Abstract

Despite their name, black holes are not black when one considers quantum mechanics. Viewing the event horizon as a barrier, particles can tunnel out from behind the horizon even if they are classically forbidden to do so. These tunneling particles appear as thermal radiation to an outside observer. It is possible to flesh out this physical picture with mathematical details and arrive at a simpler, more general derivation of Hawking radiation and the closely related Unruh radiation.

3-4 p.m., Friday, February 29th
McLane Hall 162