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## Testing Bell's inequality for Black holes

A remote observer in black hole spacetime sees the creation of a pair of particles. Now, one can use Bell's operator to test whether the two spacelike-separated particles (one outside the horizon and one inside the horizon) are quantum mechanically entangled or not. Also, we describe a prescription to check entanglement of particles created outside the horizon and inside the horizon using non-vacuum states such as excited states and coherent states.

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