General Relativity and Quantum Cosmology

On Particle Collisions in the Gravitational Field of Black Hole

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Elastic and inelastic scattering of particles in the gravitational field of static and rotating black holes is considered. Extraction of energy after the collision is evaluated. This energy is limited for the static black hole and can be unlimited for the rotating black hole. The role of the Penrose process is shown to be important for getting particles with large energies at the infinity from the rotating black hole.

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