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Title: Nonextremal black hole as particle accelerator

Abstract: We consider particle collisions in the background of a nonextremal black hole. Two particles fall from infinity, particle 1 is fine-tuned (critical), collision occurs in its turning point. If the energy at infinity E_1 is big enough, the turning point is close to the horizon. Then, significant growth of the energy in the center of mass frame $E_{c.m.}$ is possible if (i) particle 1 is ultrarelativistic, (ii) a black hole is near-extremal. We also examine the possibility of unbounded energies E at infinity (super-Penrose process) and show that this is possible for static charged black holes in contrast to the case of rotating neutral ones.