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## Simulations of coherent electron cooling with varied beam parameters

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Coherent electron cooling (CeC) is a novel technique for rapidly cooling high-energy, high-intensity hadron beam. Plasma cascade amplifier (PCA) has been proposed for the CeC experiment in the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory (BNL). Cooling performance of PCA based CeC has been predicted in 3D start-to-end CeC simulations using code SPACE. The dependence of the cooling rate on the electron beam parameters has been explored in the simulation studies.

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