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Non-thermal radiation from interaction of compact objects with a jet in Cen A

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The central engines in active galaxies are immersed in huge central stellar clusters and also surrounded by spherical halos with radii of a few tens of kpc containing from a few hundred up to several tausend globular clusters. We investigate the acceleration of particles on the shocks formed in collisions of different compact objects at the kpc distances with jet plasma. We show that electrons can be accelerated on the shocks up to energies of the order of hundreds TeV. They emit synchrotron radiation up to the X-ray energies and also inverse Compton up-scatter background radiation to GeV-TeV energies. We calculate the non-thermal radiation produced by electrons in the jet of nearby radio galaxy Cen A.

Collaboration

– not specified –

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