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*Session 8 //*

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Observational evidence as well as theoretical considerations from MHD simulations suggest that relativistic jets of active galactic nuclei (AGN) are radially stratified, comprising a fast inner spine surrounded by a slower outer sheath. These relativistic shear layers are believed to be potential sites for relativistic particle acceleration in jets from AGN and gamma-ray bursts (GRBs). We present results from particle-in-cell simulations investigating magnetic-field generation and particle acceleration in the relativistic shear boundary layers (SBLs) of jets. We investigate the impact of inverse Compton cooling on the accelerated relativistic particles, including a self-consistent calculation of the radiation spectrum produced by inverse Compton scattering of relativistic electrons interacting with an isotropic external soft photon field.

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