

# Inverse Compton emission from relativistic particles accelerated at shear layers in relativistic jets

*Tuesday 11 October 2022 10:30 (1 minute)*

Both observational evidence and theoretical considerations from MHD simulations of jets suggest that the relativistic jets of active galactic nuclei (AGN) are radially stratified, with a fast inner spine surrounded by a slower-moving outer sheath. The resulting relativistic shear layers are a prime candidate for the site of relativistic particle acceleration in the jets of AGN and gamma-ray bursts (GRBs). In this talk, we will present the results of particle-in-cell simulations of magnetic-field generation and particle acceleration in the relativistic shear boundary layers (SBLs) of jets in AGN and GRBs including the self-consistent calculation of the radiation spectrum produced by inverse Compton scattering of relativistic electrons in an external soft photon field.

## Track

AGN

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**Session Classification:** Poster session