Contribution ID: 26

Do we understand pair cascade in AGN jets?

Monday, 5 May 2025 14:45 (20 minutes)

Observations of the 3C120 jet indicate that this jet is likely pair-dominated [Zdziarski, et al. 2022]. This result implies strong production of the electron-positron plasma in the system. The currently accepted model of pair production involves an electromagnetic cascade near the base of the jet. Numerically solving the model equations one shows that the cascade indeed forms and can populate the jet with lepton plasma. Yet, it seems the pair plasma production rate is smaller than that following from observations. Here we discuss this problem.

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Track Classification: Relativistic jets