

What blazar jets tell us about axion-like particles

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Prompt emissions from TeV blazars pair produce on the extragalactic background light and the resulting electrons and positrons then undergo inverse Compton scattering, giving rise to secondary gamma-rays. The non-observation of such reprocessed emission implies a suppression of cascades from TeV blazars. In addition to the deflection of the electron-positron pairs off the line of sight by the extragalactic magnetic field, plasma instabilities can transport some of the energy away from the pair beam and into the intergalactic medium. In this talk, I will discuss how certain dark matter candidates such as axion-like particles can affect the evolution of blazar jets and vice versa.

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