

Effects of the intergalactic magnetic field on the propagation of gammas originated in blazars

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Abstract

The intergalactic magnetic field is poorly known, at present there are just constraints on its coherence length and magnitude obtained mainly from the observations of the radiation emitted by distant quasars. A new technique has been recently introduced. It is based on the observation of the effects produced in the electromagnetic cascades originated from gamma rays emitted by blazars, due to the presence of the mentioned intergalactic magnetic field. In this work we study, using numerical simulations, the possibility to observe these effects in the context of the planned Cherenkov Telescope Array Observatory.