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Polarization Variability in Leptonic and Hadronic Blazar Models

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We present results of time-dependent flux and polarization calculations in the framework of an internal-shock model for blazars. Both a leptonic and hadronic model are considered. It is shown that polarization-angle swings, accompanied by multi-wavelength flares, are a natural consequence of an internal shock in a jet pervaded by a helical magnetic field, without the need for bent or otherwise asymmetric jet features. However, if the high-energy emission is dominated by hadronic processes, such PA wings do not occur. Coupled MHD plus time- and polarization-dependent radiation-transfer simulations of such internal shocks will be shown for both leptonic and hadronic scenarios.

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