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# Compton polarization signatures in gamma-ray burst models

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There is still much debate around the inner workings of the GRB prompt emission phase with many questions still left unanswered. Polarization signatures offer a promising new avenue to discriminate between the various GRB prompt emission models. The aim of the study is to estimate energy and time resolved polarization signatures resulting from inverse Compton (IC) scattering for two specific GRB prompt emission models, namely the back-scattering-dominated cork model by M. K. Vyas et al. (2021) and a Compton drag model by G. Ghisellini et al. (2000). In order to achieve this we apply an IC polarization Monte Carlo algorithm to the two GRB models in order to estimate the expected polarization signatures.

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