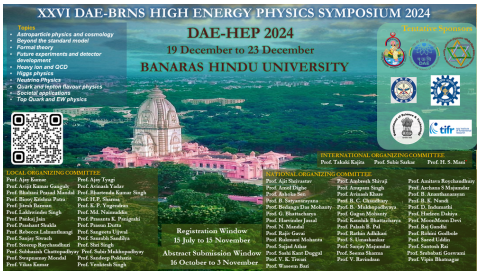

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Gamma Ray light curves from cosmic string wakes .

We study the Gamma Ray light curves which occur from magnetic reconnection in cosmic string wakes. As the string moves, the reconnection points in the cosmic string wake give rise to shocks with relativistic velocities. Since the shock waves arise from different points of magnetic reconnections, they have different velocties and therefore different relativistic gamma factors. As the shocks move out, collisions between these shocks give rise to bursts of energy. We model these energy bursts using a simple model based on the timescales involved in the process. We obtain the temporal structure of the expected light curves. This model can be used to look for signals of gamma ray bursts in cosmic string wakes.

Field of contribution

Theory

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