

Abstract

In this talk we present a mechanism for leptogenesis which is based on gravity waves produced during inflation. We show that when inflation is driven by a pseudo-scalar field the metric perturbations generated during inflation can become birefringent, therefore giving a non-vanishing contribution to the gravitational triangle anomaly and sourcing lepton anti-lepton asymmetry. As this asymmetry is sourced by the fields which are active during inflation, it is not washed out or diluted by inflation. The amount of matter asymmetry generated in our model can be of realistic size for the parameters within the range of some inflationary scenarios and grand unified theories. This talk is based on Ref.[1] which has appeared on the arXiv as hep-th/0403069.