

Sourcing electroweak baryogenesis

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In electroweak baryogenesis the observed matter-antimatter asymmetry in the Universe is created during a first order electroweak phase transition. The scenario requires new physics at the electroweak scale, which can be tested by current and upcoming experiments. Unfortunately, theoretical predictions for the baryon asymmetry may vary by orders of magnitude, depending on the approximation scheme used. A careful and systematic analysis of the so-called vev-insertion-approximation scheme shows that the leading order contributions to the asymmetry cancel exactly, making this approach much less efficient than previously thought.

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