

Numerical analysis of the Biermann battery mechanism of magnetogenesis for relativistic MHD turbulence

Sunday 9 September 2018 15:50 (20 minutes)

We present the results of Relativistic Magnetohydrodynamic simulations utilizing a range of initial conditions in order to see if seed magnetic fields may be generated via the Biermann battery mechanism of magnetogenesis. These simulations occur in a simulated early universe around the time of the electroweak era 10^{-11} seconds after the Big Bang. Our results are characterized by the characteristic turbulent velocity of the mag-neto fluid and whether or not the relativistic version of the Biermann battery was utilized.

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