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## Electroweak baryogenesis in aligned two Higgs doublet model

*Thursday, July 7, 2022 5:45 PM (15 minutes)*

We have evaluated baryon asymmetry produced by electroweak baryogenesis in aligned two Higgs doublet model, in which Yukawa interactions are aligned to avoid dangerous flavor changing neutral currents, and coupling constants of the lightest Higgs boson with the mass 125 GeV coincide with those in the standard model at tree level to satisfy the current LHC data [1]. In this model, the severe constraint from the electric dipole moment of electrons, which are normally difficult to be satisfied, can be avoided by destructive interferences between CP-violating phases in Yukawa interactions and scalar couplings in the Higgs potential. We will show some benchmark scenarios and the predictions for various future experiments under the current available data and basic theoretical bounds.

[1] K. Enomoto, S. Kanemura and Y. Mura, JHEP 01 (2022) 104

### In-person participation

Yes

**Primary authors:** ENOMOTO, Kazuki (U. Tokyo); KANEMURA, Shinya (Osaka University); MURA, Yushi

**Presenter:** MURA, Yushi

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