



Contribution ID: 13

Type: **Oral presentation**

Discovery prospects for eEDM and nEDM in the general two Higgs doublet model

Tuesday 9 September 2025 16:10 (20 minutes)

Baryon asymmetry of the Universe offers one of the strongest hints for physics Beyond the Standard Model (BSM). Remarkably, in the general two Higgs Doublet Model (g2HDM) that possesses a second set of Yukawa matrices, one can have electroweak baryogenesis (EWBG), while the electron EDM is evaded by a natural flavor tuning that echoes SM. We show that eEDM may first emerge around 10^{-30} ecm or so, followed by neutron EDM (nEDM) down to 10^{-27} ncm. We illustrate a cancellation mechanism for nEDM itself, which in turn can be probed when a facility capable of pushing down to 10^{-28} ncm becomes available, followed by neutron EDM (nEDM) which in turn can be probed when a facility capable of pushing down to 10^{-28} ncm becomes available. We illustrate a cancellation mechanism for nEDM itself, which in turn can be probed when a facility capable of pushing down to 10^{-28} ncm becomes available.

Author: Dr KUMAR, Girish (South Carolina University)

Co-author: HOU, George W.S. (National Taiwan University)

Presenter: HOU, George W.S. (National Taiwan University)

Session Classification: Session