

International Conference on High Energy Particle & Astroparticle Physics
(ICHEPAP2023)



Contribution ID: 87

Type: Poster

Neutrino mass and leptogenesis in a hybrid seesaw model with a spontaneously broken CP

Tuesday, 12 December 2023 12:15 (1 hour)

Abstract: We introduce a novel hybrid framework combining type I and type II seesaw models for neutrino mass where a complex vacuum expectation value of a singlet scalar field breaks CP spontaneously. Using pragmatic organizing symmetries we demonstrate that such a model can simultaneously explain the neutrino oscillation data and generate observed baryon asymmetry through leptogenesis. Interestingly, natural choice of parameters leads to a mixed leptogenesis scenario driven by nearly degenerate scalar triplet and right handed singlet neutrino fields for which we present a detailed quantitative analysis.

Presenter: PRAMANICK, Rohan (IIT, Kharagpur)

Session Classification: Poster Session 1