

# 30th International Symposium on Lepton Photon Interactions at High Energies



Contribution ID: 156

Type: Poster

## Implications of $A_4$ modular symmetry on neutrino mass, mixing and leptogenesis with linear seesaw

Monday, January 10, 2022 4:18 PM (1 minute)

We consider the application of  $A_4$  modular symmetry in the linear seesaw framework, which restricts the use of multiple flavon fields. Linear seesaw is realized with six heavy  $SU(2)_L$  singlet fermion superfields and a weighton in a supersymmetric framework. The non-trivial transformation of Yukawa couplings under the  $A_4$  modular symmetry helps to explore the neutrino phenomenology with a specific flavor structure of the mass matrix. We discuss the phenomena of neutrino mixing and show that the obtained mixing angles and CP violating phase in this framework are compatible with the observed  $3\sigma$  range of the current oscillation data. In addition, we also investigate the non-zero CP asymmetry from the decay of lightest heavy fermion superfield to explain the preferred phenomena of baryogenesis through leptogenesis including flavor effects.

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**Session Classification:** Beyond the Standard Model

**Track Classification:** Beyond the Standard Model