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## Dirac neutrino in inverse seesaw framework using A4 modular symmetry

We propose a model based on  $A_4$  modular symmetry in the Inverse seesaw framework to realise light Dirac neutrino mass. This requires extension of SM fermionic sector by three right-handed neutrinos  $(_R)$ , three heavy right-handed fermion field  $(S_R)$  and three heavy left-handed fermion field  $(S_L)$ . The scalar sector of SM is also extended by  $SU(2)_L$  singlet  $\psi$ . The application of modular symmetry restricts the use of additional flavon fields. The Yukawa couplings are transformed non-trivially under the modular symmetry and it enables the study of neutrino phenomenology with a specific flavor structure of mass matrix. We investigate the phenomenology of neutrino mass and mixing and all are found to be compatible with the observed  $3\sigma$  limit of current neutrino oscillation data.

## **Field of contribution**

Phenomenology

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