

Exploring Linear Seesaw with Modular S_3 Symmetry

We typically prioritize discrete symmetries when exploring neutrino phenomenology. In this context, we examine neutrino masses and mixing within the linear seesaw framework by utilizing a simple permutation group known as S_3 symmetry. To simplify the complexity of vacuum alignments and avoid the need for multiple flavon fields, we incorporate modular symmetries, which prove advantageous. Our aim is to elucidate the effects and significance of the modular S_3 symmetry in explaining viable neutrino mixing consistent with current observations. Furthermore, we discuss the inclusion of a non-zero reactor mixing angle and adjust the model parameters accordingly. Additionally, we provide a brief overview of leptogenesis.

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