

A minimalist flavour symmetry for neutrinos: the revival of modular S_3

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In the recent past, substantial effort has been devoted to exploring flavour symmetries to solve the flavour puzzle. However, traditional flavour symmetry models proved to be quite unsatisfactory. In 2017, a new 'bottom-up' approach based on modular invariance was suggested, wherein the Yukawa couplings of the Standard Model become modular forms. Within this framework, we addressed the following question: is it possible to employ the smallest and most minimal modular group S_3 to construct predictive neutrino mass models? As demonstrated in our work, the answer is affirmative if we assume a certain set of guiding principles that fully exploit modular invariance.

Poster prize

Yes

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