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## Non zero $\theta_13$ and $\delta_CP$ in a realistic neutrino mass model with discrete A\_4 family symmetry and perturbation to Tri-bimaximal mixing via z\_2 ×z\_2 invariant perturbation in the neutrino sector.

Friday 1 October 2021 10:50 (2 hours)

In this work, a flavour theory, of a neutrino mass model implementing an  $A_4$  family symmetry is proposed. This scheme provides a simple way to derive tribimaximal mixing in the neutrino sector via spontaneous breaking of  $A_4$  symmetric model leading to acceptable values of  $\theta_{13}$  and maximal CP violation. A  $z_2 \times z_2$  invariant perturbations in this model is introduced in the neutrino sector which leads to testable predictions of  $\theta_{13}$  and CP violation. By changing the magnitudes of perturbations in neutrino sector, one can generate viable values of  $\theta_{13}$  and neutrino oscillation parameters.

## What is your topic?

Physics beyond the Standard Model

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