## Particle Physics on the Plains 2022



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## 3HDM under $S_3$ Symmetry and Flavor Constraints

Saturday 2 April 2022 17:10 (20 minutes)

We investigate the scalar potential with soft breaking terms and flavor part of a general  $S_3$ -symmetric three-Higgs-doublet model. By assuming that the quarks, leptons and Higgs fields belong to irreducible representation of the permutation group  $S_3$  and CP violation, parameter space that can reproduce quark masses, lepton masses, CKM matrix, PMNS matrix is obtained, which also satisfies the potential stability constraints, unitarity constraints, FCNC constraints and EDM constraints.

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