

Abstract Submitted  
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**Majorana Physics Through the Cabibbo Haze** JENNIFER KILE, MICHAEL PEREZ, PIERRE RAMOND, JUE ZHANG, University of Florida, Department of Physics — We present a model in which the Supersymmetric Standard Model is augmented by the family symmetry  $Z_7Z_3$ . Motivated by  $SO(10)$ , where the charge two-thirds and neutral Dirac Yukawa matrices are related, we propose, using family symmetry, a special form for the seesaw Majorana matrix; it contains a squared correlated hierarchy, allowing it to mitigate the severe hierarchy of the quark sector. It is reproduced naturally by the invariant operators of  $Z_7Z_3$ , with the hierarchy carried by familon fields. In addition to relating the hierarchy of the  $\Delta I_w = 1/2$  to the  $\Delta I_w = 0$  sector, it contains a Gatto-Sartori-Tonin like relation, predicts a normal hierarchy for Tri-bimaximal and Golden Ratio mixings, and gives specific values for the light neutrino masses.

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