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Neutrino Mass Ordering from Discrete Flavor Symmetry

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We present a model that explains the origin of the neutrino mass ordering through the spontaneous breaking of a discrete flavor symmetry. Our model addresses the hierarchy between neutrino masses by combining the seesaw and scotogenic mechanisms, both emerging naturally from an A_4 discrete symmetry broken at the electroweak scale. The model incorporates a scalar dark matter particle stabilized by a residual $\mathbb{Z}_2$ symmetry, as well as an extensive beyond the Standard Model scalar sector, and it provides a prediction for neutrino masses.

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