

Note on a Simple PMNS Relation for JUNO

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An intriguing empirical relation among PMNS mixing angles is:

$$\sin^2(2\theta_{12}) + \sin^2(2\theta_{23}) \approx 1.$$

How it can be tested: JUNO's high precision measurement of θ_{12} , combined with global data on θ_{23} , enables a direct check of this sum. Current and future uncertainties are sufficiently small to make the test meaningful.

Why it may be important: If confirmed, this would indicate a hidden constraint in the lepton mixing sector, with potential implications for flavor symmetries.