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Ultra-high-energy event KM3-230213A constraints on Lorentz Invariance Violation in neutrino sector

We discuss the constraints on superluminal neutrino Lorentz Invariance Violation (LIV) parameters from the observation of the ultra-high-energy event KM3-230213A by the KM3NeT collaboration in cases of linear n=1 and quadratic n=2 LIV scenarios. Assuming extragalactic origin of the event, we obtain the constraints on LIV mass scale Λ_1=1.1×10ˆ30 GeV and Λ_2=1.1×1019 GeV from the absence of neutrino splitting.

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