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Implication of nonstandard interaction in the generation of microscopic black hole events from ultra high energy neutrinos

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Ultra high energy (UHE) neutrinos are capable of producing microscopic black holes (MBH) by colliding with the nucleons present in the Earth's atmosphere in presence of large extra dimensions (LED) [DOI: [10.1103/PhysRevD.65.124015](#)]. The signature of these events can be identified with highly efficient terrestrial neutrino telescopes, like IceCube detector. The nature of these exotic events can be differentiated from the events generated by the ordinary neutrino nucleon scattering process allowed in standard model (SM) [DOI: [10.1007/JHEP04\(2020\)187](#)]. We explore the effect of non standard interaction (NSI) on the events generated by these MBHs and analyse whether the scenario of NSI can influence the number of such events significantly [DOI:[10.1140/epjc/s10052-022-10674-6](#)].

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