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The eight-year high energy sterile neutrino result from IceCube

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Recent global fit results to the 3+1 sterile neutrino model indicate a preference for an eV-scale sterile state. The IceCube Neutrino Observatory is uniquely positioned to search for the signature of this state using matter enhanced oscillations of atmospheric muon neutrinos passing through the core of the Earth. We present the results from two such searches using eight years of IceCube data. The first result is from a sensitive search for a matter enhanced resonance at TeV neutrino energies. The second seeks to explore a higher mass sterile hypothesis, where the oscillations are averaged out.

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