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Characterizing the search for UHE neutrinos with the ARIANNA detector KAMLESH DOOKAYKA, UC Irvine, ARIANNA COLLABORATION — The ARIANNA experiment exploits unique properties of the Ross Iceshelf, namely its radio transparency and its radio reflectivity at the ice-water boundary beneath the shelf, to search for UHE neutrinos. Simulation studies show that, with the full array, we expect to detect ∼40 GZK events/year using the ESS model. The excellent sensitivity results from the low energy threshold ($> 3\text{x}10^{17}$ eV), large volume (513 km^3), continuous operation throughout the Antarctic summer, and viewing slightly more than half the sky. We have developed simulation tools to estimate the sensitivity to all neutrino flavors. In this talk, we will also present the angular and energy dependent sensitivity of the detector.

Kamlesh Dookayka
UC Irvine

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