

Recent results from the NINJA experiment

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The NINJA experiment aims to measure neutrino-nucleus scattering using the J-PARC neutrino beam in the energy range of sub-GeV to a few-GeV. The NINJA detector comprises nuclear emulsion films interleaved with target materials, offering submicron spatial resolution and precise measurement of charged particles, particularly with the proton momentum threshold of 200 MeV/c.

We have collected data on neutrino interactions with water and iron target materials so far. The first and second physics runs, utilizing the target masses of 150 kg iron and 75 kg water, were conducted from November 2019 to February 2020 and from November 2023 to February 2024, respectively. The total effective P.O.T. in the NINJA detector is 7.6×10^{20} .

In this talk, we present the recent analysis results of the NINJA experiment.

Working Group

WG 2: Neutrino Scattering Physics

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