Contribution ID: **1238** Type: **Parallel Talk**

Research and Development Studies for Reactor Neutrino Experiments in Turkey (RNET)

Friday, 8 July 2022 15:45 (15 minutes)

In this talk, the program of the Reactor Neutrino Experiments of Turkey (RNET) will be presented.
This program includes a small portable Water-based Liquid Scintillator Detector (WbLS) to detect neutrinos from the Akkuyu nuclear power plant, planned begin operating in 2023. The small near-field detector will weigh about 2-3 tons and will be placed less than 100 meters from the reactor cores. The RNET program also includes a medium-size, 30-ton WbLS detector, which will be placed 1-2 km away from the reactor cores and will be used as a far detector. Both detectors and their response to neutrino interactions were simulated using a GEANT4-based RAT-PAC simulation package. Here, we will share the technical and physical details of both detectors, and discuss the ongoing R\&D effort for neutrino studies in Turkey.

In-person participation

No

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