

Contribution ID: 60 Type: Poster

Status of the BEST* project (Baksan Experiment on Sterile Transitions)

The very short-baseline neutrino oscillation experiment BEST is currently under construction at the Baksan Neutrino Observatory of the Institute for Nuclear Research RAS. The experiment will use an upgraded Gallium-Germanium Neutrino Telescope (GGNT) and an artificial 51Cr neutrino source with activity ~ 3 MCi to search for transitions of active neutrinos to sterile states with $\Delta m2 \sim 1$ eV2. The sensitivity to disappearance of electron neutrinos is expected to be a few percent.

Construction of a set of new facilities, including a two-zone tank for irradiation of 50 tons of Ga metal with the intense 51Cr source, as well as additional modules of the GGNT counting and extraction systems, is close to completion. Before beginning Ga measurements with a 51Cr source the new facilities will be used for SAGE solar neutrino measurements. Agreement of the results of these measurements with the results obtained in the long-term measurements of the solar neutrino capture rate by SAGE will serve as an independent check of the new systems.

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Track Classification: Short Baseline Oscillations / Sterile Neutrinos / Non-standard Oscillations