

The search for sterile neutrinos in Troitsk ν -mass experiment

Thursday, 13 October 2016 14:00 (15)

The Troitsk ν -mass experiment was started in the 1985 and was initially intended to search for the mass of electron neutrino. Currently it gives the best direct upper limit on that mass. In 2012, after reanalyzing old data for traces of relatively light sterile neutrinos (with masses up to 200 eV), the setup was modified to search for sterile neutrinos in a wider range (up to 3 keV and in future probably up to 5 keV). The report contains a brief overview of the experiment layout, past results, some unique techniques developed in this experiment and finally, some preliminary results on keV sterile neutrinos.

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Session Classification : Nuclear physics and particle physics - parallel VI

Track Classification : Nuclear physics and particle physics