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Resent results from the DANSS experiment

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Solid state spectrometer of reactor antineutrino DANSS is placed below the core of the 3.1 GW_{th} industrial nuclear reactor of Kalininskaya NPP. In the closest position to the reactor the detector counts more than 5000 inverse beta-decay (IBD) events per day with background below 2 %. The distance to the reactor is changed weekly between 10.9 and 12.9 m, which allows to make a model-free search for a short range neutrino oscillations. Spectrum evolution with the distance is measured directly by the same detector.

The talk is based on the statistics of 6 million events, obtained during 6 years between April 2016 and March 2022. We present limits in the short range oscillation parameter space. We also compared the anti-neutrino energy spectrum with theoretical predictions and confirm a bump in their ratio similar to the bumps observed in several other experiments.

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