Contribution ID: **579** Type: **Parallel session talk**

Recent results from the DANSS experiment

Thursday 18 July 2024 09:15 (15 minutes)

New DANSS results on searches for sterile neutrinos based on 8.5M ν events exclude an important part of the ν_s parameter space. Obtained limits exclude practically all sterile neutrino parameters preferred by BEST results for $m^2 < 5\ eV^2$. Analysis relying on absolute ν flux predictions excludes practically all ν_s parameters preferred by the BEST results. The neutrino spectrum dependence on the ^{239}Pu fission fraction agrees with predictions of the Huber-Mueller model. The ratio of cross sections for ^{235}U and ^{239}Pu also agrees with the Huber-Mueller model and somewhat larger than in other experiments. The reactor power was measured using the ν event rate during 7.5 years with a statistical accuracy of 1.5% in 2 days and with the relative systematic uncertainty of less than 0.5%. The fraction of the antineutrino yield with energies above 8 MeV is measured. A new method of calibration using the Bragg curve for stopping muons is presented.

Alternate track

I read the instructions above

Yes

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Session Classification: Neutrino Physics

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