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## Shape analysis of the pure- $^{235}\text{U}$ antineutrino spectrum measured by the STEREO experiment.

STEREO is a short baseline experiment measuring antineutrinos emitted by the  $^{235}\text{U}$  highly-enriched compact reactor of the Institut Laue-Langevin (Grenoble, France). It consists in a segmented detector, located at 10m from the core to shed a new light on the Reactor Antineutrino Anomaly by testing the sterile neutrino hypothesis and measure with the greatest possible accuracy the reactor antineutrino spectrum.

Here, we discuss in detail the impact on the measured spectrum shape of all possible distortions of the energy scale allowed within the stringent constraints of our data. We present the results of two independent analyses developed in the collaboration to provide the unfolded spectrum shape in antineutrino energy space. Finally, we show results of this formalism extended to a joint analysis of the STEREO and PROSPECT data, improving our sensitivity in the comparison with various shape models, like the Huber prediction or the experimental Daya Bay spectrum.

### Mini-abstract

The STEREO experiment reports a new antineutrino energy spectrum from the fission of pure  $^{235}\text{U}$ .

### Experiment/Collaboration

STEREO

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