

A Joint Analysis of the PROSPECT and STEREO ^{235}U Antineutrino Spectra

Tuesday, 13 July 2021 17:00 (15 minutes)

The PROSPECT and STEREO experiments recently reported modern measurements of the ^{235}U antineutrino energy spectra from highly-enriched uranium (HEU) research reactors using liquid scintillator based detectors. At HEU reactors, 99% of the antineutrino flux comes from ^{235}U , providing a direct measure of the energy spectrum and antineutrino flux from a single isotope. STEREO and PROSPECT have provided independent measurements with different systematics from detectors at ILL (France) and HFIR (US). This analysis compares and combines both measurements to test their consistency and provide the best combined measurement of the pure ^{235}U antineutrino spectrum. In this talk, I will present the current status of this joint spectral analysis.

Are you are a member of the APS Division of Particles and Fields?

Yes

Primary author: FOUST, Benjamin (Yale University)

Presenter: FOUST, Benjamin (Yale University)

Session Classification: Neutrinos

Track Classification: Neutrino Physics