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Effects of new ^{238}U fission yields data on reactor antineutrino spectra[1] ANDREA MATTERA, ALEJANDRO A. SONZOGNI, ELIZABETH A. MCCUTCHAN, RYAN LOREK, SHAOFEI ZHU, MATTEO VORABBI, GINO FABRICANTE, TUNISIA SOLOMON, Brookhaven National Laboratory — The reactor antineutrino anomaly is a decade-long puzzle, identified when improved calculations led to a $\approx 5\%$ overall shortfall in the antineutrino flux, as well as an excess of antineutrinos at 5 MeV - colloquially known as 'the bump' - in all short-baseline experiments.
It has recently been speculated by A.C. Hayes and collaborators that 'the bump' could be due to deficient knowledge of the ^{238}U antineutrino spectrum. Fission yields (FYs) are, along with decay data, the key quantity needed to predict reactor antineutrino spectra, but the last evaluation of ^{238}U dates back to the 1990's.
We started from new experimental data, measured with innovative experimental techniques such as inverse kinematics, and we corrected and constrained them using fission models and historical high-quality measurements. We present here several ^{238}U FY distributions and their effects on reactor antineutrino spectra.

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