

Help needed towards a new $^{252}\text{Cf}(\text{sf})$ nu-bar evaluation

Wednesday 29 January 2025 14:00 (45 minutes)

This talk motivates why we need a new $^{252}\text{Cf}(\text{sf})$ nu-bar (uncertainty) evaluation and what help is needed to do so. The previous standard evaluation gave an uncertainty value of 0.13% while the current one gives a value of 0.42%. This increase of this standard uncertainty leads to increased major and minor actinide nu-bar uncertainties as most data are measured relative to the $^{252}\text{Cf}(\text{sf})$ nu-bar. Therefore, this increase in the standard impacts uncertainty bounds on applications down-stream distinctly. After the release of the newest standards, new work has shown that neither the 0.13% nor the 0.42% are likely realistic. We need a new uncertainty estimate with a completely new evaluation. Given the importance of this particular evaluation, I am asking here for help from the standards committee in reviewing the data to counter-check my uncertainty estimate, as we'd better be sure of the uncertainties we want to publish next.

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