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Current estimates of the energy released following the fission of actinide nuclides[1] ALEJANDRO SONZOGNI, ELIZABETH MCCUTCHAN, National Nuclear Data Center, Brookhaven National Laboratory — We calculate the energy released following the neutron induced fission of the main fuel nuclides in a reactor, 235U, 238U, 239Pu and 241Pu. These energies are used in a number of fields, but we were particularly motivated by their application in the recent measurements of reactor antineutrinos spectra and yields. The calculations are performed using the best estimates of cumulative fission yields for long-lived fission products and the recently released 2016 Atomic Mass Evaluation by Wang et al. Additionally, we obtain more precise values of the energy taken away by antineutrinos by using the latest Total Absorption Gamma Spectroscopy (TAGS) results. An important part of this project is also to obtain realistic estimates of the uncertainties. A comparison with earlier calculations will be presented.

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Alejandro Sonzogni
National Nuclear Data Center, Brookhaven National Laboratory

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