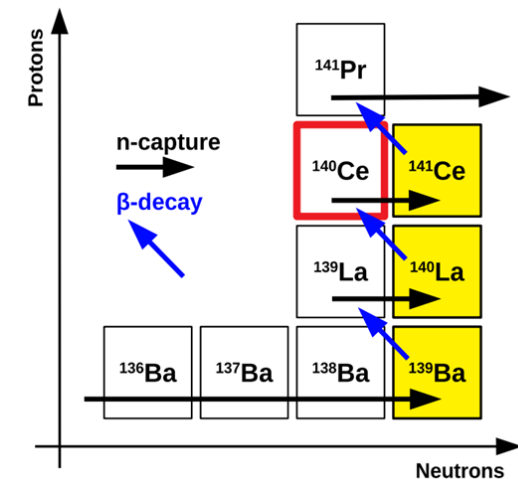


The $^{140}\text{Ce}(n,\gamma)$ cross section measured at n_TOF and its astrophysical implications

Discrepancies present in different evaluated libraries: Inconsistent values of the MACS at $kT = 25$ keV, ranging from 7.3 ± 4.0 to 13.9 ± 1.0 mb.



Aim: Measure the $^{140}\text{Ce}(n,\gamma)$ reaction cross-sections using n_TOF facility, CERN

$$Y_{exp}(E_n) = N \frac{C_W(E_n) - B_W(E_n)}{\varepsilon(E_n) \phi(E_n)}$$

Counts Background

Normalization Efficiency Neutron flux

