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# Measurement of the $^{236}\text{U}(n,f)$ cross-section at n\_TOF

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Accurate knowledge of the U-236 neutron-induced fission cross-section is important for the development of accelerator-driven systems and fast reactors based on the Th-U cycle. The evaluated data presently stored in the nuclear data libraries rely on old measurements and show large discrepancies in the energy region between 1 keV and 100 keV. Recent measurements yielded results which are in disagreement with the literature for the resonance region and below 10 eV.

A new measurement of the  $^{236}\text{U}(n,f)$  cross-section was performed at the neutron Time-Of-Flight facility n\_TOF at CERN, Geneva. A Fast Ionization Chamber has been used to determine the  $^{236}\text{U}(n,f)$  cross-section relative to the standard  $^{235}\text{U}(n,f)$  cross-section. Six resonance structures in the resonance and intermediate energy regions have been observed following the event reconstruction analysis, which included the subtraction of the  $^{235}\text{U}$  contamination in the sample together with the alpha-particle background, as well as the dead-time and detection efficiency corrections.

In this talk, a detailed report on the  $^{236}\text{U}(n,f)$  cross-section measurement at n\_TOF will be given. The present high-resolution results point to several shortcomings in the current evaluations in the sub-threshold region and provide the basis for a re-evaluation of the cross-section.

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