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## MEASUREMENTS AT n\_TOF OF THE NEUTRON CAPTURE CROSS SECTION OF MINOR ACTINIDES RELEVANT TO THE NUCLEAR WASTE TRANSMUTATION

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Accurate and reliable neutron capture cross section data for actinides are necessary for the proper design, safety regulation and precise performance assessment of transmutation devices such as Fast Critical Reactors or Accelerator Driven Systems. In particular, the neutron capture cross sections of  $^{237}\text{Np}$ ,  $^{240,242}\text{Pu}$ ,  $^{241,243}\text{Am}$  and  $^{245}\text{Cm}$  play a key role in the design and optimization of a strategy for the Nuclear Waste Transmutation. For this reason, the afore mentioned cross sections will be measured in 2004 at n\_TOF with high accuracy due to a combination of features unique in the world: high instantaneous neutron fluence and excellent energy resolution of the n\_TOF facility, innovative Data Acquisition System based on flash ADCs and the use of a high performance  $\text{BaF}_2$  Total Absorption Calorimeter as a detection device. The experimental technique will be described and preliminary experimental data will be presented at the time of the conference.