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Results from particle-induced fission yield measurements at IGISOL-4

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The yield of fission products is an important nuclear physics quantity. For applications, quantification of the amount of fission products in the fuel is at the basis of accurate reactor kinetics calculations. For fundamental research, fission yields and isomeric yield ratios (i.e., the fraction of a product populating a metastable state) shed light on the properties of the compound nucleus at scission and on the nascent fragments.
At JYFL-ACCLAB (University of Jyväsklyä Accelerator Laboratory), the Ion Guide and Isotope Separator On-Line (IGISOL) technique was used, in conjunction with gamma spectroscopy and mass identification with the JYFLTRAP Penning trap, to extract independent, cumulative and isomeric yields of various fissioning systems.
Yields from high-energy neutron induced fission of ^{nat}U will be presented for Sn and Sb, in the mass-range between A=128 and A = 133. Also 5 isomeric yield ratios have been measured in the same experimental campaign with gamma-spectroscopy.
Isomeric Yield Ratios from 25 MeV proton-induced fission of ²³²Th and ^{nat}U, obtained with JYFLTRAP for 6 nuclides, will also be shown.

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