

## Detailed investigation on the relation between energy dissipation in fission and fissility

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Different experimental observations, as neutron multiplicity or global even-odd staggering in fission-fragment yields, are commonly interpreted as a signature for the correlation between energy dissipation and fissility [1]. The availability of high-energy U beam combined with the Fragment Separator at GSI has provided for the first time a systematic overview on the properties of the complete fission-fragment distributions over a broad range of light actinides [2]. Based on the results obtained in this campaign, completed with neutron-induced fission data, the local even-odd effect in fission-fragment yields is investigated for symmetric and asymmetric charge splits. This analysis shows that the usually reported decrease of the global even-odd effect with fissility of the fissioning nucleus is not present for symmetric split, for which a constant even-odd effect is observed. A complementary detailed analysis of neutron multiplicities and energies suggests a constant energy dissipated for symmetric scission configuration, forcing to revisit our understanding of the correlation between fissility and energy dissipation.

[1] F. Gönnenwein, in *The Nuclear Fission Process* (C. Wagemans Ed., CRC Press, London, 1991) 409-423

[2] K.-H. Schmidt et al, Nucl. Phys. A 665 (2000) 221