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Neutron-multiplicity experiments for enhanced fission modelling

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ND2016
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It is well known that nubar(A) increases as a function of En. But how does the extra neutron emission depend on A?

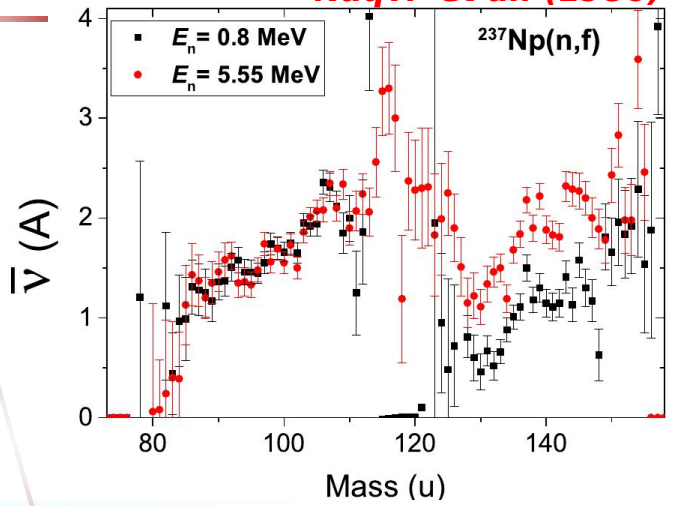
Few existing experiments for (n,f)!

Average- or "heavy-fragment" increase ?
Significant impact on measured mass yields

Fission modelling:
Seems no agreement has been reached among the theoreticians/models.

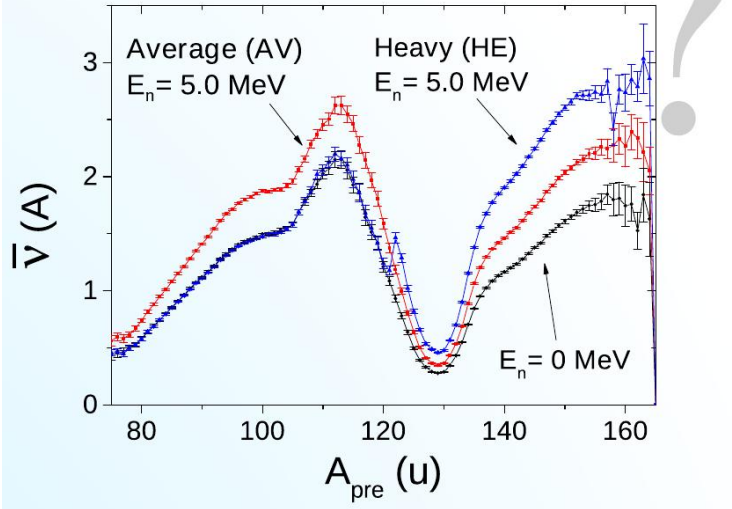
UU + JRC-Geel: Joint efforts to experimentally study this effect.

Naqvi et al. (1986)

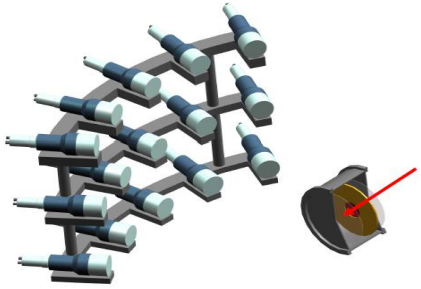


Al-Adili et al. (2012)

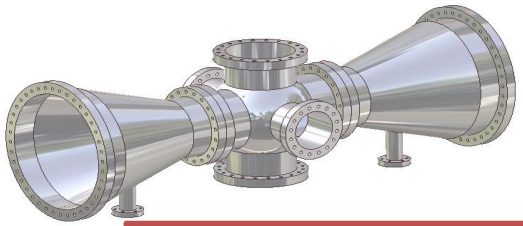
Which?



(2E technique) + ND



(2E-2v technique)



VERDI See the talk of Kaj Jansson

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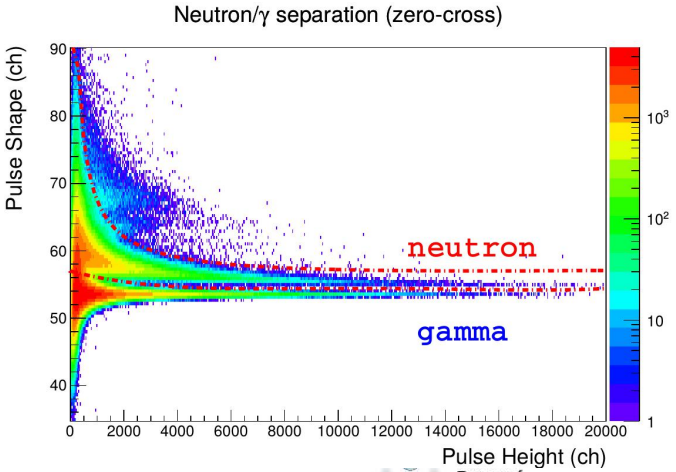
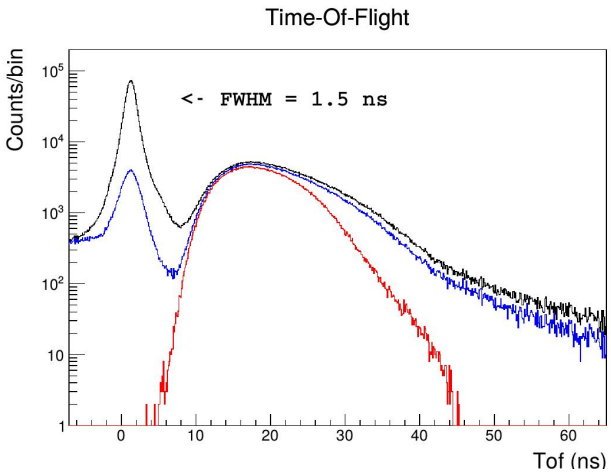
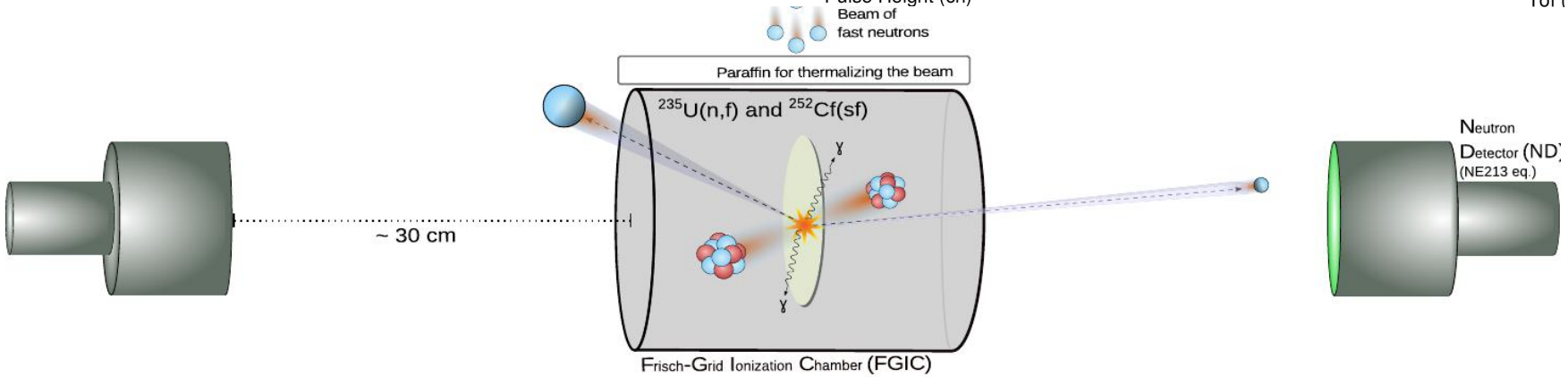
First test cases: Cf-252(sf) and U-235(n_{th},f).

Frisch Grid Ionziation Chamber + Neutron detectors NE213 equivalent

Neutron multiplicity from the ratio of coincidences and non-coincidences.







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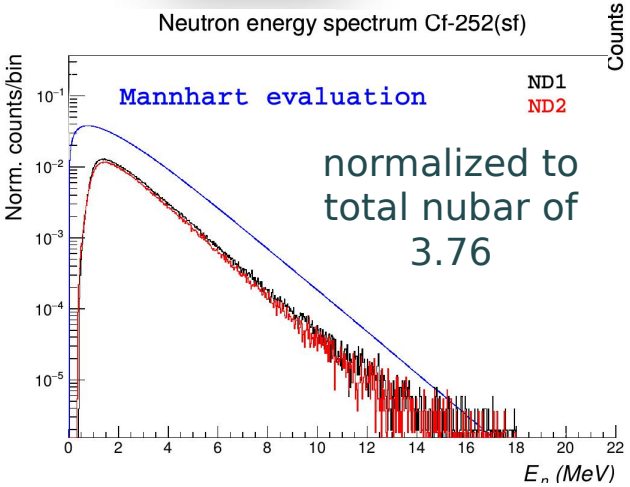
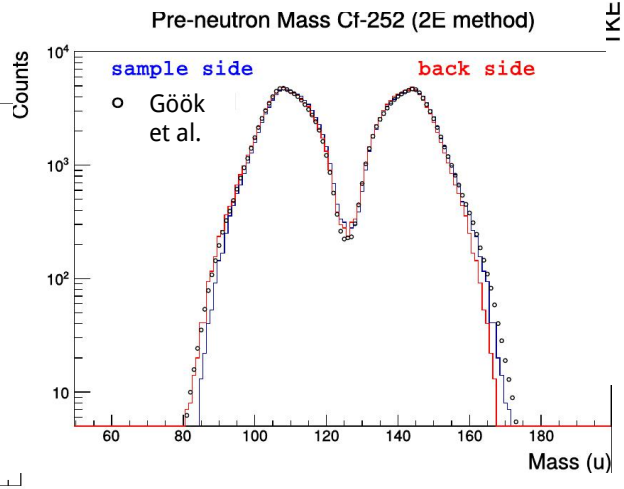
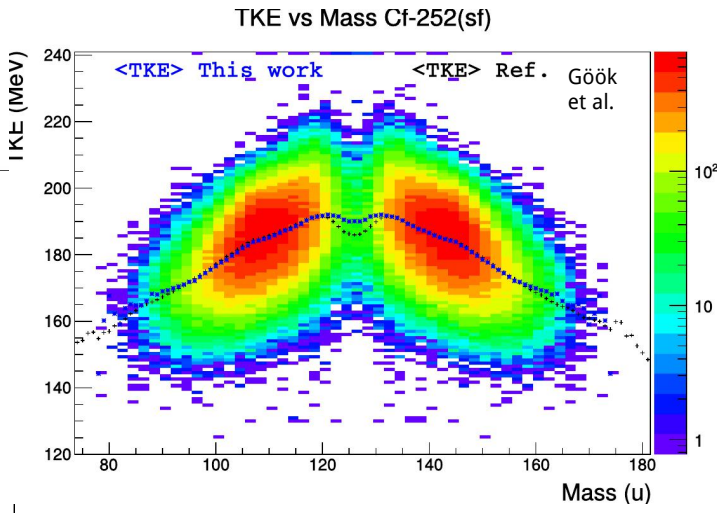
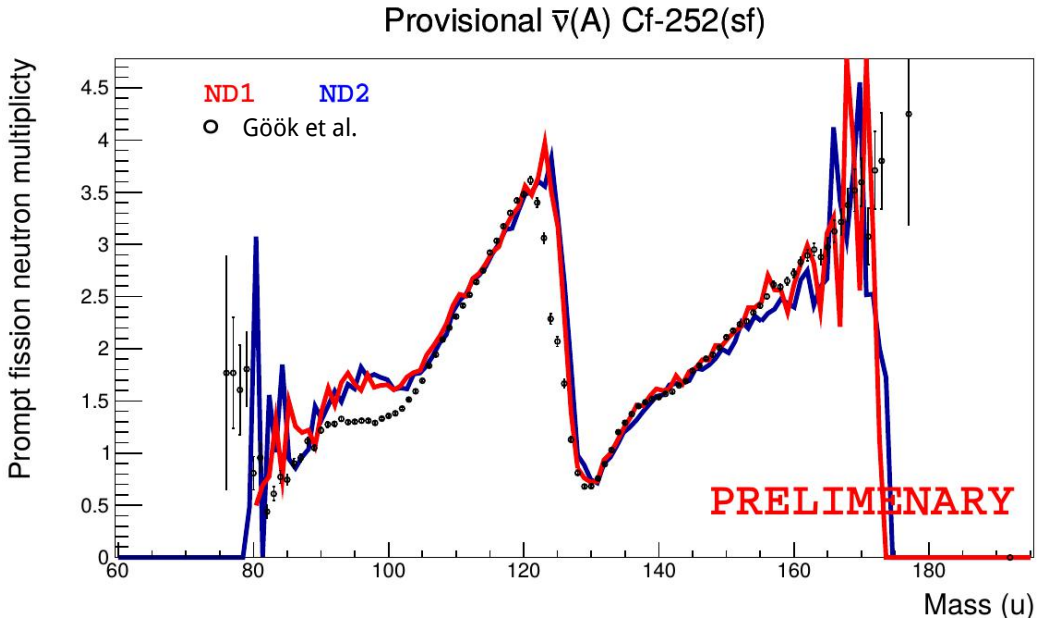
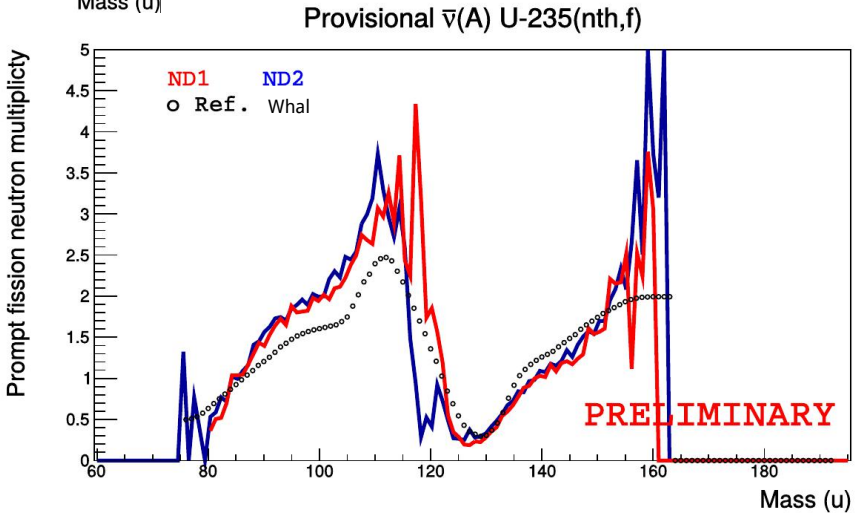
First test cases: Cf-252(sf) and U-235(nth,f).











Welcome to my poster (P001) for more details & discussions