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## Fission of Hg-194

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We present results of experiment focused on a previously unknown fission characteristic of Hg-194 performed at the ALTO facility during the campaign with the nu-ball-2 spectrometer. The nuclide of interest was created in a fusion reaction of C-12 beam on a thick W-182 target. Independent fission yields of even-even nuclei were determined by detecting gamma-gamma cascades in the fission fragments. The number of emitted neutrons was determined from the fragment distribution, as well as from the study of fission partners observed by gamma-gamma coincidences. Finally, an average momentum carried by the gamma-rays was determined by the Manchester method.

The results were compared with calculations by M. Mumpower et al. and the GEF model. The latter was found to describe the fragment distribution more closely. However, in this case, we found that other observables - the number of emitted neutrons and the angular momentum of fragments - are overpredicted. It seems that the mechanism of fragment excitation based on the deformation of fragments might not be the correct one, or the parameters tuned for the actinides region are not universal.

These observations, helpful in addressing the long-standing question of the excitation mechanism of fission fragments, might not be accessible with other experimental methods, where access to the full mass and charge distribution of fragments and their excitation energy is more limited. This proves that accessing information about fission with gamma spectroscopy is a valuable and complementary method that should be employed simultaneously with other experimental techniques.

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