



Contribution ID: 41

Type: **not specified**

Coming Back to the Problem of True Ternary Fission - Actual View

In the past, there were multiple attempts to find the so-called “true ternary fission” i.e. ternary fission with comparable masses of the fragments. So far, it has not been done, at least not in the frame of the traditional experimental approaches. In a series of our experiments, we have observed ternary partition of the heavy nuclei [1, 2] when one of the fragments of binary fission undergoes a break-up while passing through a solid-state foil. Among such events, there is a fraction of them with comparable masses of the resultant fragments. It should be stressed that the fragment undergoing a break-up is born in the shape isomer state [3]. In our presentation, we discuss a possible mechanism of the ternary partition leading to comparable masses of the fragments.

References

1. Yu.V. Pyatkov et al., Eur. Phys. J. A 48 (2012) 94–110.
2. D.V. Kamanin, Yu. V. Pyatkov, “Clusters in Nuclei –Vol.3” ed. by C. Beck, Lecture Notes in Physics 875, pp. 183–246 (2013).
3. Yu.V. Pyatkov et al., Physics of Atomic Nuclei, 2024, Vol. 87, Suppl. 3, pp. S418–S425.

Primary author: Prof. PYATKOV, Yuri (JINR)

Co-authors: Dr KAMANIN, Dmitry (JINR); Dr ZHUCHKO, Vladimir (JINR); Ms GORYAINOVA, Zoya (JINR); KUZNETSOVA, Elena (JINR); Dr SEREDA, Yuri (JINR); Mr SOLODOV, Alexey (JINR); Dr STREKALOVSKY, Oleg (JINR); Mrs ZHUKOVA, Alena (JINR)

Presenter: Prof. PYATKOV, Yuri (JINR)

Session Classification: Poster Session

Track Classification: Poster session