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Breakup of fission fragments when passing foil from C and Ta.

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In our previous publications [1-5] we presented experimental evidences of rare ternary decay mode unknown in the past in which some fraction of fission fragments (FFs) born during binary fission of low excited heavy nuclei undergo a break-up, while they pass a solid-state foil. Experimental evidences obtained so far allowed us to suppose that such FFs are formed in the shape-isomer states. Since the decay is caused by the Coulomb interaction of the fragment with the foil nucleus [6], it's important to figure out how the foil's nuclear charge affects the process parameters. New results obtained in our experiments with light carbon and heavy Ta foils are presented. References 1. Yu.V. Pyatkov et al., Eur. Phys. J. A 45, 29 (2010). 2. Yu.V. Pyatkov et al., Eur. Phys. J. A 48, 94 (2012). 3. Yu.V. Pyatkov et al., Phys. Rev. C 96 (2017) 064606. 4. Yu. V. Pyatkov et al., Physics of Atomic Nuclei, 85, 763 (2022) 5. D. V. Kamanin et al., International Journal of Modern Physics E Vol. 34, Nos. 2 & 3 (2025) 2541002 6. F. O. Otakhonov et al., Phys. Lett. B 872 (2026) 140088

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