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ANALYSIS OF SOME MODES OF COLLINEAR CLUSTER TRI-PARTITION (CCT)

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In our previous publications [1–4] we discussed various manifestations of a new decay channel of the low excited heavy nuclei called collinear cluster tri-partition (CCT). In the frame of the essentially modified experimental method, additional linear structures corresponding to the relations M1 + M2 = const and M1 - M2 = const for the masses M1 and M2 of the fission fragments (FFs) from 252Cf(sf) detected in the opposite spectrometer arms form the rhombic-like configurations with the vertices corresponding to the magic nuclei. The structures are statistically reliable, they are conditioned by a pronounced and complex correlation between the masses of the FFs measured independently. Possible physical scenario standing behind the structures are discussed.

- 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, 064606 (2017).
- 4. Yu.V. Pyatkov et al., Eurasian Journal of Physics and Functional Materials, 4, 13 (2020).

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