

OBSERVATION OF CLUSTER STRUCTURE OF FISSION FRAGMENTS

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In our previous publications [1–3] we have discussed new original effect appeared at crossing of the metal foils by fission fragments (FFs). We have observed significant mass deficit in the total mass M_s of the FFs detected in coincidence with ions knocked out from the foil. In series of the recent more detailed experiments we have compared event by event the mass of the FF before (M_{tt}) and after (M_{te}) it passes the foil. In the light of the results obtained a FF from conventional binary fission is supposed to be born in the shape isomer state which looks like di-nuclear system consisting of the magic core and lighter cluster. Comparison of the correlation mass distributions M_{tt} - M_{te} for different metal foils is presented aimed at testing possible models of the effect.

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