ISOLDE Workshop and Users meeting 2022



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Neutron measurement in the IS581 experiment

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Four Timepix3 pixel detectors were installed on the body of Actar TPC demonstrator during the November 2021 beamtime of the IS581 experiment. Polyethylene converters were used for detection of fast neutrons. Since no significant background was observed, it was possible to measure the angular distribution of emitted neutrons. Subsequent simulations emplying the results of Talys code and available data on fragment distributions allowed to estimate directly the value of fission barrier height for neutron-deficient nucleus 210Fr, which was a main goal of the IS581 beamtime.

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