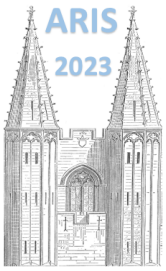

ID de Contribution: **392** Type: **oral contribution**

Determination of fission barrier height of 210Fr via neutron measurement

mardi 6 juin 2023 12:00 (15 minutes)

Fission of 210Fr, produced by (d,p)-transfer reaction of the 209Fr beam was investigated at HIE-ISOLDE. Four Timepix3 pixel detectors were installed on the body of Actar TPC demonstrator chamber. Polyethylene converters were used for the detection of fast neutrons. Since no significant background was observed, it was possible to measure the spatial distribution of emitted neutrons. Subsequent simulations employing the results of Talys code and available data on fission fragment distributions allowed to estimate directly the value of fission barrier height for neutron-deficient nucleus 210Fr, which confirmed the reduction of the fission barrier compared to theoretical models by 15 - 30 % for such extremely neutron-deficient unstable nuclei.

Author: VESELSKÝ, Martin (Czech Technical University Prague)

Orateur: VESELSKÝ, Martin (Czech Technical University Prague)

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Classification de thématique: reactions