

## Data analysis of OEDO day 0 experiment measuring $^{93}\text{Zr} + d$ transmutation reactions for the study of deuteron breakup

In Autumn 2017, the OEDO setup was commissioned during a series of day 0 experiments performed by the ImPACT 17-02-01 collaboration. One of these experiments measured  $^{93}\text{Zr}+d$  transmutation reactions at  $\sim 28$  MeV/u, the lowest energy to date. Deuterons have a low binding energy (2.224 MeV) and therefore undergo breakup whilst in the presence of Coulomb and nuclear fields. By comparing measured cross-sections of the  $^{93}\text{Zr}+d$  reactions with theoretical calculations, the role of deuteron breakup on the production cross-sections may be better understood. During 2022 data analysis of the  $^{93}\text{Zr}+d$  measurement has been performed and cross sections extracted. Comparisons with theoretical calculations such as DEURACs are now underway. We report the status of the analysis and results.

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