

Target and Ion Source Development : (n,X) reaction for ^6He neutrino beams tested at ISOLDE

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We report here results obtained this year on the production of Beams by (n,X) reactions with the ISOLDE neutron converter. The converter is traditionally used to produce n-rich fission fragments in UCx targets.

We present here data on $^9\text{Be}(n,\alpha)^6\text{He}$ obtained with a new BeO target coupled to the VADIS ion source. Record ^6He intensities were indeed obtained. Information on the neutron spectrum were collected, and future options for optimization will be discussed, together with other possible beams based on this scheme.

This work was done in a framework of a large collaboration between GANIL, SOREQ-Weissman Inst. and CERN, as part of the 100kW Target task of EURISOL-DS.

Remaining and new beam developments (TISD) requested by INTC are discussed and prioritized in the Group for Upgrade of ISOLDE.

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