

2 Neutron transfer reactions: present and future

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We present results of the experiment performed to measure the $^{10}\text{Be}(t,p)^{12}\text{Be}$ reaction with SOLARIS and results for the experiment performed to measure the ^{14}C , in particular, the inelastic and (p,t) reaction channels with AT-TPC. These two solenoidal spectrometers present both great capabilities and benefits for direct-reaction measurements, but there is room for improvement. We propose simulations to study improvements with AT-TPC that will allow the use of new targets, such as tritium, better granularity read-out to obtain greater resolution or higher magnetic fields. To validate simulations, we analyze the same reactions under the new conditions.

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