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Study of the 10Be(t,p)12Be reaction with the SOLARIS spectrometer

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We present preliminary results of a recent experiment performed to measure the ^{10}Be(t,p)^{12}Be reaction with the SOLARIS solenoidal spectrometer. This is among the first experiments using a long-lived radioisotopes in conjunction with the re-accelerated beam facility (ReA6) at the Facility for Rare Isotope Beams. SOLARIS provides excellent resolution (about 150˜keV FWHM) and background rejection capabilities for direct-reaction measurements. Using a re-accelerated ^{10}Be beam at 9.6˜MeV/u on a titanium tritide target we observed bound states of ^{12}Be and those above the one- and two-neutron separation energies.The data reaffirm assignments and observations of a previous study in normal kinematics, while also offering new insights that hint at a resolution of some outstanding questions with regards to the structure of ^{12}Be. In this talk, we will discuss the experiment, the analysis procedure and the preliminary results.

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Topic

Experiment

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