

Abstract Submitted
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Test of multi-wire drift chambers for the precision spectroscopy of pionic atoms at RIBF HITOSHI NAKANISHI, The University of Tokyo — We conducted a spectroscopy experiment of the pionic atom in the $^{122}\text{Sn}(d, {}^3\text{He})$ reaction at the RIKEN RIBF in June 2014. We had two sets of multi-wire drift chamber (MWDC) on focal plane at BigRIPS and measured precisely ${}^3\text{He}$ hit positions. Each MWDC consisted of 8 layers (X-X'-X-X'-U-U'-V-V') and each layer had 48 sense wires every 5mm. Before the experiment, we tested them by electrons from a ${}^{90}\text{Sr}$ source placed in front of the chamber. A scintillator placed behind the chamber provided trigger signals. Timing information was converted into drift lengths on each plane, and hit positions were calculated on the base of wire position data. Applying the least square fitting for them, 3D tracks were reconstructed, and proper operation of MWDCs was successfully confirmed in the test.

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