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Using the ^{11}Be(p, d)^{10}Be* transfer reaction at 110 MeV at TRIUMF-ISAC II to study halo features[1] K. KUHN, R. BRAID, F. SARAZIN, D. SMALLEY, U. HAGER, S. ILYUSHKIN, P. O'MALLEY, Colorado School of Mines, M. ALVAREZ, J. GOMEZ, Universdad de Sevilla, C. ANDREOIU, Simon Frasier University, P.C. BENDER, G. HACKMAN, C. UNSWORTH, Z. WANG, TRIUMF, W.N. CATFORD, University of Surrey, C.AA. DIGET, University of York, A. DIPIETRO, P. FIGUERA, INFN Laboratori Nazionali del Sud, T.E. DRAKE, University of Toronto, E. NACHER, A. PEREA, O. TENGBLAD, Insitituto de Estructura de la Materia, C.E. SVENSSON, University of Guelph —
To simultaneously study the halo wavefunction of the ^{11}Be ground-state, and also possible excited halo states in ^{10}Be, the ^{11}Be(p, d)^{10}Be* reaction was studied at 10 MeV/nucleon at TRIUMF-ISAC II. This one-neutron transfer reaction allows the study of the single-particle states in ^{11}Be and in ^{10}Be by removing either the halo neutron or a core neutron respectively. A compact silicon array along with the TRIUMF ISAC Gamma-Ray Escape-Suppressed Spectrometer (TIGRESS) was used to detect the outgoing deuteron in coincidence with gamma-rays to determine the final state of the ^{10}Be nucleus. Results from the May 2013 experiment will be shown.

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