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Investigating halo features with the ^{11}Be(p, d)^{10}Be transfer reaction at 110 MeV at TRIUMF-ISAC II K. KUHN, R. BRAID, F. SARAZIN, D. SMALLEY, U. HAGER, S. ILYUSHKIN, P. O'MALLEY, Physics Dept, Colorado School of Mines, M.A.G. ALVAREZ, Dept. de FAMN, Univ. de Sevilla, C. ANDREOIU, Chemistry Dept, Simon Fraser Univ., P.C. BENDER, G. HACKMAN, C. UNSWORTH, TRIUMF, Vancouver, Z. WANG, TRIUMF and Simon Fraser Univ., W.N. CATFORD, Physics Dept, Univ. of Surrey, C.AA. DIGET, Physics Dept, Univ. of York, A. DIPIETRO, INFN Laboratori Nazionali del Sud, Catania, P. FIGUERA, INFN Laboratori Nazionali del Sud Catania, T.E. DRAKE, Physics Dept, Univ. of Toronto, J. GOMEZ, Centro Nacional de Aceleradores, Univ. de Sevilla, E. NACHER, A. PEREA, O. TENGBLAD, Instituto de Estructura de la Materia, CSIC Madrid, C.E. SVENSSON, Physics Dept, Univ. of Guelph — One-neutron transfer reactions are being used to study single-particle neutron states in nuclei. For one-neutron halo nuclei, such as ^{11}Be, the (p,d) reaction enables the removal of the halo neutron or of one of the core neutrons. This way, it is possible to simultaneously study the halo wavefunction of the ^{11}Be ground-state but also possible excited halo states in ^{10}Be. The ^{11}Be(p, d)^{10}Be transfer reaction at 10 MeV/nucleon is being investigated at the TRIUMF-ISAC II facility with a compact silicon array and the TRIUMF ISAC Gamma-Ray Escape-Suppressed Spectrometer (TIGRESS). The goal of this experiment is to study halo states in ^{11}Be and ^{10}Be created by the removal of a single neutron from ^{11}Be. An initial experiment was carried out last summer and preliminary results will be presented.

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