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NP pairing in N=Z nuclei : The ^{44}Ti(^{3}He,p) reaction A.O. MACCHIAVELLI, P. FALLON, R.M. CLARK, M. CROMAZ, I.Y. LEE, M. WIEDEKING, Lawrence Berkeley National Laboratory, K.E. REHM, I. AHMAD, J. GREENE, R.V.F. JANSSENS, M. NOTANI, R. PARDO, J.P. SCHIFFER, D. SEWERYNIAK, X.D. TANG, Argonne National Laboratory, A. WUOSMAA, Western Michigan University — Neutron-proton pairing in N=Z nuclei is a subject of current interest in nuclear physics. Data from two-neutron transfer reactions using Ca and Ni isotopes are consistent with a picture of isovector pairing vibrations. However, it is still an open question whether the isoscalar component generates collective modes. The (^{3}He,p) reaction stands out as an ideal tool to study *np* correlations and we started a program to study it in inverse kinematics using radioactive beams at the Argonne ATLAS facility. ^{44}Ti (60y half-life) provides an excellent case that allows for a practical chemical separation and for better conditions to optimize the accelerator parameters. A pellet containing 100μci of ^{44}Ti was used in the Tandem ion source to deliver a 5 MeV/A ^{44}Ti beam onto a ^{3}He gas cell ($\sim$100μg/cm^2 thickness) placed in a scattering chamber in front of the FMA. A beam intensity of 10^6 /s was achieved during the four day run. Protons were detected in two Si ring detectors in coincidence with ^{46}V recoils selected by the FMA. Details of the experiment and preliminary results will be discussed. - Supported by U.S. DOE under contracts DE-AC02-05CH11231 (LBNL) and DE-AC02-06CH11357 (ANL)

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