

Abstract Submitted
for the DNP07 Meeting of
The American Physical Society

Structure of ^8B through $^7\text{Be}+\text{p}$ scattering¹ J.C. BLACKMON, ORNL & LSU, R.J. LIVESAY, U. GREIFE, Colorado Sch. of Mines, D.W. BAR-DAYAN, K.Y. CHAE, ORNL, A.E. CHAMPAGNE, UNC-CH, C. DIEBEL, Yale Univ., R. FITZGERALD, UNC-CH & NIST, M.S. JOHNSON, ORAU & LLNL, K.L. JONES, Rutgers Univ. & Univ. Tenn., R.L. KOZUB, Tenn. Tech. Univ., Z. MA, C.D. NESARAJA, ORNL, S.D. PAIN, Rutgers Univ., F. SARAZIN, Colorado Sch. of Mines, J.F. SHRINER, JR., Tenn. Tech. Univ., D.W. STRACENER, M.S. SMITH, ORNL, J.S. THOMAS, Rutgers Univ. & Univ. Surrey, D.W. VISSER, UNC-CH, C. WREDE, Yale Univ. — Cross sections for $^7\text{Be}+\text{p}$ elastic and inelastic scattering were measured at the HRIBF. Beams of ^7Be at 17 incident energies between $E_{cm}=0.5\text{-}3.4$ MeV bombarded CH_2 targets. Scattered protons were detected in a silicon-strip detector array covering $\theta_{cm}=70^\circ\text{-}150^\circ$. We have performed a multi-level R-matrix analysis of the combined cross sections (about 400 data points) to determine properties of states in ^8B . The inelastic scattering data provide evidence for positive-parity states that were previously unobserved but were predicted by theory. Results and implications will be discussed.

¹ORNL is managed by UT-Battelle, LLC for the US Dept. of Energy.

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Date submitted: 02 Jul 2007

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