High pressure structure of Orthorhombic Multiferroic Systems L. WANG, Mineral Physics Institute, Stony Brook University, T. WU, T.A. TYSON, H. CHEN, Department of Physics, New Jersey Institute of Technology, S. KIM, S.-W. CHEONG, Department of Physics and Astronomy, Rutgers University, MINERAL PHYSICS INSTITUTE, STONY BROOK UNIVERSITY TEAM, DEPARTMENT OF PHYSICS, NEW JERSEY INSTITUTE OF TECHNOLOGY TEAM, DEPARTMENT OF PHYSICS AND ASTRONOMY, RUTGERS UNIVERSITY COLLABORATION — It is known that pressure modifies the ferroelectric properties of orthorhombic perovskite systems. However, only limited structural studies have been performed. Here we report structural measurements of the impact of pressure on Orthorhombic REMnO$_3$ multiferroic systems using x-ray diffraction and x-ray absorption to probe the structural changes. Comments on the influence of pressure on the electrical polarization will be made. This work is supported by DOE Grant DE-FG02-07ER46402.

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