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Pressure Induced Metallization In ACrO₃ **Perovskite Compounds** CHANGQING JIN, L.X. YANG, Y.W. LONG, Institute of Physics, Chinese Academy of Sciences, Beijing, China, H.Z. LIU, G.Y. SHEN, H.K. MAO, HPCAT at Advanced Photon Source, Argonne National Lab, USA, J.S. ZHOU, J.B. GOOD-ENOUGH, Texas Materials Institute, University of Texas at Austin, USA — We have studied the electrical conductivity of ACrO₃ (A=alkaline earth) perovskites performed at various pressures up to 60 GPa using diamond anvil cell techniques. The samples were synthesized under high pressure high temperatures. Pressure induced metallizations were observed in both samples. However the x ray diffraction experiments with synchrotron radiation source indicated no discernable crystal structural transition up to 60 GPa. Therefore the pressure induced metallizations were ascribed to electronic type phase transitions. It possibly came from the change of electronic structure due to an orbital ordering evolution induced by pressure.

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