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**Low Temperature Phonon Properties of Orthorhombic REMnO<sub>3</sub>**<sup>1</sup> ZHENXIAN LIU, Geophysical Laboratory, Carnegie Institution of Washington, PENG GAO, HAIYAN CHEN, TREVOR A. TYSON, Physics Department, New Jersey Institute of Technology — We present the temperature dependent phonon spectra of orthorhombic-LuMnO<sub>3</sub> and DyMnO<sub>3</sub>. The temperature dependent phonon spectra results are compared with the XAFS measurement results to probe for structural changes in the low temperature region which may coincide with ferroelectric behavior.

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