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Spin excitations and phonons in $\text{La}_{1.5}\text{Sr}_{0.5}\text{CoO}_4$ ANDREI SAVICI,
IGOR ZALIZNYAK, Brookhaven National Laboratory — Inelastic neutron scattering measurements were performed in $\text{La}_{1.5}\text{Sr}_{0.5}\text{CoO}_4$. At room temperature, the excitation spectrum is dominated by phonons. At low temperatures we see a mix of lattice vibrations and spin modes. By subtracting phonon contributions we are able to identify purely magnetic modes. A resonance mode was found at energies around 25-27meV, the nature of which is under investigation.

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