

# Experimental thermal equations of state of B2 RbBr and CsI

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The alkali halides are often used as transparent pressure-transmitting media and thermal insulators in laser-heated diamond anvil cell experiments. High P-T equations of state for these materials allow them to be used simultaneously as *in situ* pressure markers, making both sample preparation and data analysis simpler. However, equation of state data for RbBr and CsI, two alkali halides, is currently limited to room temperature conditions. We report high-pressure, high-temperature data of the B2 phase of alkali halides RbBr and CsI that have been collected for the purpose of producing Mie-Grüneisen-Debye thermal equations of state for these materials. Synchrotron X-ray diffraction measurements were made on these alkali halides in laser heated diamond anvil cells, to pressures exceeding 50 GPa and temperatures  $>2500$  K. Platinum was used as the laser absorber and internal pressure calibrant, allowing the equations of state of RbBr and CsI to be determined.