

Abstract Submitted
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Rovibrationally Inelastic Velocity-Dependent Cross Sections from Doppler Lineshapes PAULA MATEI, STEVEN COPPAGE, BRIAN STEWART, Wesleyan University — We are studying rovibrationally inelastic processes in the Li_2^* (A) – noble gas system through a spectroscopic technique that employs the Doppler shift for velocity selection of the lithium molecules. Our goals are to look for experimental evidence of a novel vibrational transfer mechanism that involves impacts with the side of the molecule, and to investigate and compare different combinations of rotational and vibrational energy transfer. The experimental results will be compared with cross sections calculated from *ab initio* potential surfaces.

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