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**Electron Loss Cross-Sections for Low Energy Proton-Lithium Collisions** PAUL OXLEY, College of the Holy Cross — We present measurements of the electron loss cross-section for collisions between protons and lithium atoms in the energy range 0.75 – 4 keV. In this energy range the contribution from ionization is negligible and our results are effectively a measure of the charge transfer cross-section. Our measured cross-sections are approximately 70% higher than previous measurements, which used a different experimental technique. To investigate possible reasons for the discrepancy we provide a detailed description of our experimental apparatus and method, along with our results from experiments using helium and neon ions in place of protons. A brief description of the technique used in the prior work is also given, and possible reasons for the discrepancy between our results are highlighted.

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