

# STATE-SELECTIVE ELECTRON CAPTURE BY $\text{Si}^{4+}$ FROM D IN A MERGED-BEAMS APPARATUS<sup>1</sup>

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We demonstrate the feasibility of using a multi-grid energy analyzer in a merged-beams apparatus for studies of state-selective electron capture at near-thermal collision energies. In collisions of  $\text{Si}^{4+}$  with D from 4-100 eV  $\text{u}^{-1}$ , electron capture to  $\text{Si}^{3+}$  (3d) and  $\text{Si}^{4+}$  (4s) are identified. The corresponding partial cross sections have been determined and compared with theoretical predictions.

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