

Abstract Submitted
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Electron capture scaling law in multiply charged ions H2 collisions revisited KEVIN CORNELIUS, Ouachita Baptist University — Single electron capture involving the system $A^{q+} + H_2$ at intermediate to high collision energies is re-examined to incorporate the many recent advances in experimental electron capture measurements. An original study done by Berkner *et. al.* determined an empirical expression for electron capture cross sections for $Fe^{q+} + H_2$ collisions over the energy range 275 to 3400 keV/u and a charge q range from 9 to 25. This current work examines the effect of recent data from other recent collision systems and provides an updated scaling law with the same form as the original. This updated empirical work is also compared to a capture scaling law determined from a system of collisions calculated using the classical trajectory Monte Carlo method.

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