A.3.7. Collisions of Slow, Highly Charged Ions with Coherent Elliptical State Rydberg Atoms: Impact Perpendicular to the Minor Axis--*B.D. DePaola, E. Horsdal-Pedersen**

In previous collisions work with CES targets, we had studied [Publication #111] ion impact perpendicular to the major axis of the CES, and in the process gained a great deal of physical insight into the dynamical aspects of the charge transfer process. We have now extended these experiments to include studies of ion impact perpendicular to the minor axis of the CES. As before, the electron capture cross section was studied as a function of v_r, e, and ϕ, the scaled projectile velocity, the CES generalized eccentricity, and the angle between the projectile axis and the CES major axis. The results of these studies have been published [Publication #114]. They show that the cross section depends dramatically on all of these three parameters. The results are in fair agreement with CTMC calculations, though significant discrepancies are seen. This work was carried out at the University of Aarhus and was the master's thesis work of L. Kristensen at that institution.

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