

PRODUCTION AND COLLISIONS OF NEUTRAL BEAMS IN THE 100 KeV TO 6 MeV RANGE¹

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High energy beams of neutral atoms can be produced by using electron capture to neutralize an accelerated ion beam. Useful beams of neutral atoms with $Z = 1$ to 6 and squared-velocities up to 0.5 MeV/u have been produced in this manner. The neutral beams may then be used to study a wide variety of processes: electron capture, electron loss from the projectile, ionization of the target, and multiple-electron processes involving both collision partners. Systematics of these processes as functions of energy, projectile charge state, and projectile Z will be discussed.

1. Abstract of published paper: CP392, *Application of Accelerators in Research and Industry*, edited by J. L. Duggan and I. L. Morgan, AIP Press, New York (1997), p. 93.

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