

ON THE NEUTRALIZATION OF SINGLY AND MULTICHARGED PROJECTILES DURING GRAZING INTERACTIONS WITH LiF(100)¹

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Measurements are reported of scattered neutral fractions for Na, K, Cs and Ne singly and multicharged ions, and of scattered negative ion fractions for incident O, F and B projectiles grazingly incident on LiF(100) as function of projectile velocity. In the case of the Na and Ne incident ions, significant dependence of the scattered neutral fractions on incident charge state is found, which is most pronounced at the lowest investigated velocities. Possible reasons for the observed initial charge state dependence are considered. In addition, results are reported for the target azimuthal dependence of the final neutral fraction observed for grazingly incident 35 keV Cs⁷⁺ ions.

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