

Target orientation dependence of the backscattered intensities and charge fractions observed for large angle quasi-binary collisions of Ar^{q+} ions with Au(110)

Morozov, V.A. ^a; Meyer, F.W.

^a Div. of Phys., Oak Ridge Nat. Lab., TN, USA

Abstract

Using a time-of-flight technique we have investigated the flux intensity variations for 5 keV Ar^{q+} ions (q=2,7,9,11) backscattered from Au(110) by 120 degrees in quasi-binary collisions. A strong dependence on target orientation is found for the neutral flux, while for the charged components only a weak dependence is seen. An analysis of the observed dependences based on trajectory simulations clearly shows site-specific neutralization differences between the various possible binary collisions and a role of reionization processes in formation of multiply charged scattered ions. [Conference Paper; 7 Refs]

Physica Scripta

Volume T92 , 2001, Pages 31-34