Abstract Submitted
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HEAVIER-THAN-TARGET SURFACE SCATTERING DHRUVA KULKARNI, CHAD SOSOLIK, Clemson University — We have measured the scattering of hyperthermal Cs^+ ions (m=132.9u) incident at 45^o and 60^o to the surface of a Cu (0 0 1) (m=63.5u) crystal. Energy resolved spectra were measured for a range of angles about the specular angle in the forward direction. Deviation from standard spectra, typically interpreted as binary collisions, is observed due to the projectile-heavier-than-target nature of scattering. The measured spectra can be interpreted as collective events that are more pronounced due to an inverted mass ratio. Linear relationships in perpendicular and parallel "components" of energy loss at the two different incident angles help identify scattering events that lead to reflection of heavy atoms from the surface.

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