LAMBDA-DOUBLET PROPENSITIES OF NO $(X^2\Pi)$ IN ROTATIONALLY INELASTIC SCATTERING BY Ar AT 212 meV

AO LIN, STILIANA ANTONOVA, ANTONIS P. TSAKOTELLIS, and GEORGE C. MCBANE, *Department of Chemistry, The Ohio State University, Columbus, OH 43210*.

A rotationally inelastic scattering experiment of NO with Ar was done at a (Center Of Mass) collision energy of 212 meV. NO $(X^2\Pi)$ was prepared in its lowest rotational and spin-orbit state by supersonic expansion of the seeded beam, and was crossed with a second beam of Ar. REMPI through the $A^2\Sigma^+$ state was used to measure the postcollision populations of NO molecules. An ionization reference signal from room temperature NO recorded simultaneously was used to correct the power dependence of the REMPI signal intensities. The preference for populating the $\Pi(A'')$ Lambda-doublet component predicted by Alexander[1] is confirmed.

[1] M. H. Alexander, private communiation.