

MOLECULAR BEAM OPTICAL STARK MEASUREMENTS OF ScS

T C. STEIMLE, D. M. GOODRIDGE and A. J. MARR, *Dept. of Chemistry and Biochemistry, Arizona State University, Tempe, AZ 85287-1604.*

The molecular beam optical LIF spectrum of the $B^2\Sigma^- - X^2\Sigma^+$ band system of scandium monosulfide, ScS, has been recorded. The branch features associated with the low rotational levels were also recorded in the presence of a static electric field. The spectra were analyzed to produce magnetic hyperfine parameters and permanent electric dipole moments. Comparisons with the theoretical predictions of Bauschlicher and Langhoff^a, and experimentally determined values for ScO^b are made.

^aC.W. Bauschlicher, Jr. and S.R. Langhoff, *J. Chem. Phys.* 85, 5936 (1986)

^bJ. Shirley, C. Scurlock, and T.C. Steimle, *J. Chem. Phys.* 93, 1568 (1990)