MOLECULAR BEAM OPTICAL STARK MEASURMENTS OF ScS

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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 hypefine 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.

[a]C.W. Bauschlicher, Jr. and S.R. Langhoff, J. Chem. Phys. 85, 5936 (1986)
[b]J. Shirley, C. Scurlock, and T.C. Steimle, J. Chem. Phys. 93, 1568 (1990)