THE PURE ROTATIONAL SPECTRA OF THE MINOR ISOTOPES OF SrS, $X^1\Sigma^+$, RECORDED USING A LASER ABLATION, FOURIER TRANSFORM MICROWAVE SPECTROMETER

K.C. ETCHISON, C. T. DEWBERRY and S. A. COOKE, *The Department of Chemistry, University of North Texas, P.O. Box 305070, Denton, TX, 76203-5070*.

A dilute mixture of OCS dissolved in Ar has been reacted with laser ablated strontium atoms to produce strontium monosulfide, SrS. Rotational spectra have been recorded between 6 and 26 GHz. The intensity of the spectra was such that transitions from isotopomers containing minor isotopes of Sr and/or S have been observed. Our data, together with prior millimeter/submillimeter wave data on the parent isotopomer (D. T. Halfen, A. J. Apponi, J. M. Thompsen and L.M. Ziurys *J. Chem. Phys.*, 115, 11131, (2001)), have been used to perform a multi-isotopomer fit yielding Born-Oppenheimer breakdown terms for both Sr and S. The previously unknown value of the ^{87}Sr nuclear quadrupole coupling constant in SrS will be presented.