

THE PURE ROTATIONAL SPECTRUM OF SrSH (\tilde{X}^2A)

D. T. HALFEN, A. J. APPONI, L. M. ZIURYS, *University of Arizona*.

The pure rotational spectrum of SrSH (\tilde{X}^2A) in the vibrational ground state has been measured using direct absorption mm/sub-mm spectroscopy. The radical was produced by the reaction of vaporized Sr and H₂S gas in the presence of a DC discharge. Ten a-type dipole allowed transitions with K_a asymmetry components up to K_a = 6 have been recorded in the range of 350-405 GHz. Preliminary rotational constants (MHz) have been determined and are listed below. A full analysis of the spectrum, as well as a structure, will be presented.

$$A = 283504, B = 2877.287, C = 2845.508, (\epsilon_{bb} + \epsilon_{cc})/2 = 57.2$$