HIGH TEMPERATURE FOURIER TRANSFORM SPECTROSCOPY OF THE B $^1\Pi$ - X $^1\Sigma^+$ TRANSITION OF ZrO

JASON J SORENSEN, PETER F. BERNATH, *Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA, USA*.

S-type stars are characterized by the presence of ZrO electronic transitions. Analysis of several ZrO band systems has, to date, relied upon data collected using photographic plates and has escaped a more modern spectral analysis made possible with programs such as PGOPHER. We present a re-analysis of a number of vibrational bands associated with the B $^1\Pi$ - X $^1\Sigma^+$ transition based on a high resolution (0.04 cm^{-1}) Fourier transform emission spectrum collected at the National Solar Observatory by S. Davis. The ZrO source was a carbon tube furnace at 2390 K. Updated spectroscopic constants are presented and discussed.