

HOT WATER EMISSION IN THE NEAR INFRARED

K. TERESZCHUK, T. HIRAO, and P. F. BERNATH, *Department of Chemistry, University of Waterloo, Waterloo, Ontario, CANADA N2L 3G1.*

Hot water lines are found in a variety of sources including hydrocarbon flames and astronomical objects such as brown dwarfs. Thus far, our laboratory has reported on high resolution emission spectra of water vapor at 1550 °C in the region of 400 – 6000 cm^{-1} . In our current investigation, we have now recorded our laboratory hot water spectra from 5000 – 9000 cm^{-1} with a Bruker IFS 120 HR spectrometer. The spectra will be compared with absorption spectra of water in sunspots in the same spectral region.