

INFRARED ABSORPTION CROSS SECTIONS OF COLD PROPANE IN THE LOW FREQUENCY REGION BETWEEN 600 - 1300 cm^{-1}

ANDY WONG, Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA, USA; ROBERT J. HARGREAVES, Atmospheric, Oceanic & Planetary Physics, Oxford University, Oxford, United Kingdom; BRANT E. BILLINGHURST, EFD, Canadian Light Source Inc., Saskatoon, Saskatchewan, Canada; PETER F. BERNATH, Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA, USA.

Propane is one of several hydrocarbons present in the atmospheres of the Giant Planets, Jupiter and Saturn. In order to characterize the atmospheres of the Giant Planets, it is necessary to provide absorption cross sections which can be used to determine abundances. Absorption cross sections have been obtained from high resolution transmission spectra recorded at the Canadian Light Source Far Infrared beamline. The experimental conditions used mimic those of the atmospheres belonging to the Giant Planets using He and H₂ as foreign broadeners.