

MILLIMETER WAVE SPECTRA OF CHLORINE NITRATE

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Chlorine nitrate is a planar, slightly asymmetric molecule of atmospheric interest. It has a dense rotational spectrum due to its relatively small rotational constants and its several low-lying vibrational modes. We have recorded this spectrum with a FASSST spectrometer over a range of 128-350 GHz, and will report on our analysis of many of these lower vibrational states, including $2\nu_9$, $3\nu_9$, $4\nu_9$, $5\nu_9$, ν_7 , $2\nu_7$, $\nu_7+\nu_9$, and ν_6 , taking into account several perturbations between states.