INTRACAVITY LASER SPECTRA OF METHANE 790 AND 861 NM BANDS AT LOW TEMPERATURES

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Methane is a very important molecule in planetary studies. The intracavity laser spectroscopy is used to collect the spectra of methane in the visible to near infrared region. A special intracavity cryogenic chamber is used to record the spectra of methane at various low temperatures from 161K to 99K. Spectra of methane for 790 and 861 nm bands have been recorded and absorption coefficients derived from the spectra for both these bands at different low temperatures are presented.