



## **Infrared Laboratory Spectroscopy of CH<sub>4</sub> and CH<sub>3</sub>D for Planetary Studies**

L. R. Brown

Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Drive,  
Pasadena, CA 91109-8099, USA

Knowledge of methane spectroscopy is crucial for the interpretation of astronomical observations, particularly for the outer planets. Results from recent high resolution laboratory studies of CH<sub>4</sub> and CH<sub>3</sub>D will be reviewed for the 1 to 200 micron spectral region. Line intensities and line shape parameters will be emphasized. An overview will be given of methane parameters available from websites and public databases.