

## CARS STUDY OF LIQUID PARA-HYDROGEN AT DIFFERENT TEMPERATURES

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Vibrational and rotational spectra of liquid para-H<sub>2</sub> at temperature T = 14 - 26 K and at pressures less than 25 bar have been obtained using coherent anti-Stokes Raman scattering technique. The spectra in solid para-H<sub>2</sub> have also been measured at T = 6 - 13 K. The vibrational frequency in the liquid increases with temperature by about 2 cm<sup>-1</sup>, and the shift scales with the square of the density of the sample. An extrapolation of the vibrational frequency in metastable para-H<sub>2</sub> liquid below the freezing point is discussed. The results of this study indicate that the vibron hopping between the molecules is active in the liquid, similar to that previously found in the solid.