

K2

HIGH SENSITIVE SPECTROSCOPY OF HIGHLY EXCITED STATES

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The lecture presents an overview of the recent progress which has been achieved in highly excited molecular states investigation.

The high sensitive Intracavity Laser Spectrometers and Fourier Transform Spectrometers with long multipass absorption cells were used to measure spectra in 6000 - 13000 cm^{-1} range.

Water vapor isotopomers, H_2S , and other molecules were investigated.

The analysis of the obtained data revealed some remarkable features in the energy spectrum e.g., strong coupling of the vibration states which formally belong to different resonance polyads; fourfold clustering of rotational levels belonging to the components of local mode manifolds at high degree of stretching excitation.