

DISCHARGE MODULATION TECHNIQUE FOR DETECTION OF TRANSIENT SPECIES PRODUCED IN PULSED SUPERSONIC JET BY COLOR CENTER LASER SPECTROSCOPY

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A discharge modulation technique has been applied to color center laser spectroscopy for the detection of radical species generated in a pulsed supersonic jet<sup>a</sup>. Transitions in the  $\nu_3$  band of the CH<sub>3</sub> radical rotationally cooled to 23 K were recorded by the phase sensitive detection technique with an improved signal to noise ratio. The sensitivity attained corresponds to  $6 \times 10^{-5}$  absorption.

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<sup>a</sup>M. Ishiguro, T. Imajo, K. Harada, and M. Matsubara, K. Tanaka, and T. Tanaka, Chem. Phys. Lett. 263, 629 (1996).