

## MILLIMETER WAVE JET SPECTROSCOPY OF CARBON MONOXIDE-CONTAINING VAN DER WAALS COMPLEXES

KALEY A. WALKER and A. R. W. MCKELLAR, *Steacie Institute for Molecular Sciences, National Research Council of Canada, Ottawa, Ontario K1A 0R6, Canada.*

A new pulsed supersonic jet millimeter wave spectrometer has been constructed at NRC. In similar instruments of this type<sup>a,b</sup>, the supersonic jet is injected perpendicular to the millimeter wave radiation. We have found that there is an increase in the sensitivity of our spectrometer by introducing the expansion parallel to the millimeter wave radiation. As a test of this new spectrometer, the pure rotational spectra of KrCO and XeCO. *b*-type transitions of 5 isotopomers of Kr<sup>12</sup>C<sup>16</sup>O and 6 isotopomers of Xe<sup>12</sup>C<sup>16</sup>O have been detected between 75 and 100 GHz, including those of species containing rare gas atoms of low natural abundance (<sup>80</sup>Kr (2.25%) and <sup>130</sup>Xe (4.1%)).

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<sup>a</sup>M. Hepp, W. Jäger, I. Pak and G. Winnewisser, *J. Mol. Spectrosc.*, **176**, 58-63 (1996)

<sup>b</sup>K. Uemura, A. Hara and K. Tanaka, *J. Chem. Phys.*, **104**, 9747-9753 (1996)