



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 2229

Type: Oral (Non-Student) / Orale (non-étudiant(e))

Room temperature study of nitrous oxide in the bending band

Thursday 14 June 2018 12:00 (15 minutes)

Nitrous oxide is of interest for atmospheric composition studies. Spectroscopic remote sensing studies rely on the availability of accurate sets of line parameters for molecular atmospheric constituents. In this study we have extended the set of line parameters for nitrous oxide obtained using the speed-dependent Voigt line profile with a weak line mixing component. We have used five room temperature spectra recorded at Kitt Peak, AZ. An extension of this study over a range of temperatures is underway using spectra recorded at the same facility and preliminary results will be presented as well. In addition, we compare our measurement results with published results obtained using different spectral line profiles.

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Session Classification: R2-3 Laser Physics and Spectroscopy** (DAMOPOC) | Physique des lasers et spectroscopie (DPAMPC)

Track Classification: Division of Atomic, Molecular and Optical Physics, Canada / Division de la physique atomique, moléculaire et photonique, Canada (DAMOPOC-DPAMPC)