

## INFRARED SPECTRA OF THE NE<sub>2</sub>-N<sub>2</sub>O, AR<sub>2</sub>-N<sub>2</sub>O TRIMERS

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Spectra of the van der Waals trimers Ar<sub>2</sub>-N<sub>2</sub>O and Ne<sub>2</sub>-N<sub>2</sub>O are studied in the region of the N<sub>2</sub>O  $\nu_1$  fundamental ( $\sim 2224$  cm<sup>-1</sup>) using a tunable quantum cascade laser to probe a pulsed supersonic expansion from a slit jet nozzle. Improved data are also obtained for the dimers Ar-N<sub>2</sub>O and Ne-N<sub>2</sub>O, with the latter representing a significant improvement on the best previous results. As well, a feature in the spectrum is tentatively assigned as the Q-branch of Ar<sub>3</sub>-N<sub>2</sub>O. The observed vibrational shifts for Ne<sub>n</sub>-N<sub>2</sub>O are almost exactly linear for  $n = 0-2$ . However, for Ar<sub>n</sub>-N<sub>2</sub>O the  $n = 2$  band origin is slightly blue-shifted compared to the linear prediction, and the  $n = 3$  origin (if correct) is more significantly blue-shifted (by 0.09 cm<sup>-1</sup>).