

## ROTATIONAL SPECTRA OF THE Ne-NH<sub>3</sub> and Kr-NH<sub>3</sub> VAN DER WAALS COMPLEXES

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Rotational spectra of the Ne-NH<sub>3</sub> and Kr-NH<sub>3</sub> van der Waals complexes were measured between 4 and 24 GHz using a pulsed jet cavity Fourier transform microwave spectrometer. The isotopomers studied include those of <sup>14</sup>NH<sub>3</sub> and <sup>15</sup>NH<sub>3</sub> with <sup>22</sup>Ne and <sup>20</sup>Ne and with the 5 most abundant isotopes of Kr. Transitions corresponding to the RG+NH<sub>3</sub>  $\Sigma(j=0, |k|=0)$  internal rotor state have been measured and assigned for the Ne and Kr isotopomers and transitions related to the  $\Sigma(j=1, |k|=1)$  state have been tentatively assigned for the Kr isotopomers. The spectra of the complexes containing <sup>83</sup>Kr and <sup>14</sup>N showed nuclear hyperfine structure due to the quadrupole moments of the nuclei. Rotational, centrifugal distortion and quadrupole coupling constants were determined and used to calculate structural parameters.