Special attention was given to the possible occurence of a fifth phase in NH<sub>4</sub>Br as reported by Garland and Young<sup>3)</sup> and more recently by Ebisuzaki<sup>4)</sup> and by Wang and Wright<sup>5)</sup>. We calculated the Raman spectra of phase IV and of the two suggested structures of phase V<sup>3)</sup> using a method published recently<sup>6)</sup>. Comparison of the calculated spectra with our measurements and with those published previously<sup>4)5)</sup> shows that in the P,T-range where phase V was expected, actually only phase IV was observed.

The Raman scattering experiment was performed in a high pressure He-cell kept in a temperature regulated cryostat. Near the triple point in  $NH_4I$  a hysteresis between  $3^\circ$  -  $4^\circ$  K and 100 - 200 bar was found.

## References:

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