

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
DEPARTMENT OF CHEMISTRY  
CAMBRIDGE, MASSACHUSETTS 02139

NH<sub>4</sub>Cl

December 12, 1973

Dr. Leo Merrill  
High Pressure Data Center  
Brigham Young University  
Provo, Utah 84602

Dear Dr. Merrill:

I rather doubt that the narrowing of the high-frequency ir bands reported by Klyuev has any connection with phase transitions in NH<sub>4</sub>Cl. Certainly his 13-15 kbar region does not correspond to the order-disorder transition. The detailed interpretation of these internal NH<sub>4</sub><sup>+</sup> combination bands would be complicated and possibly unrewarding.

You might be interested in the high-pressure spectra of Y. Ebisuzaki and M. Nicol [Chem. Phys. Letters 3, 480 (1969)] and more recent work by Ebisuzaki alone [same journal I believe]. Also there is some very recent work by J. Wang of the Department of Chemistry at the University of Utah (to be published in J. Chem. Phys.). I think that Dr. Wang is the best person to contact for more details.

Sincerely yours,

  
Carl W. Garland

CWG:mmm