

The results obtained are generally consistent with the configurational co-ordinate model proposed by SEITZ<sup>(2)</sup> and amplified by WILLIAMS.<sup>(6)</sup> However, since the 'B' band appears so sharply at the transition and disappears equally sharply below

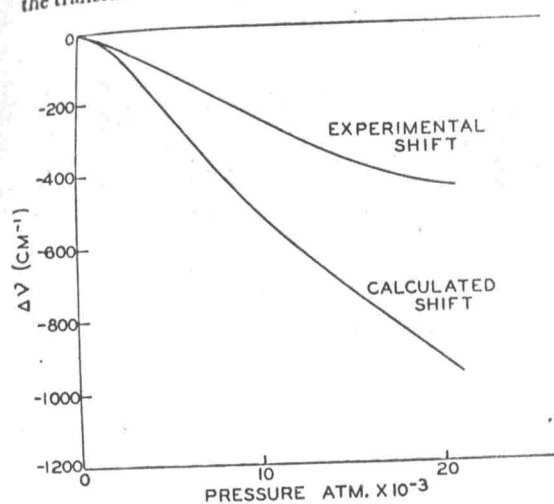


FIG. 7. Comparison of WILLIAMS' theory with experiment.

the transition, it is doubtful that it is associated with lack of cubic symmetry due to imperfections, as has been suggested.<sup>(2)</sup>

JOHNSON and WILLIAMS<sup>(7)</sup> have proposed a model for calculation of the effect of pressure on

the 'A' peak for  $KCl : Tl$ . Using this model, calculations have been made to 20,000 atm. These are compared with experiment in Fig. 7. The calculation predicts the correct direction for the shift, but about twice the magnitude obtained experimentally. The discrepancy is probably associated with the assumption that pressure contributes equally to the ground and first excited states of the thallous ion.

*Acknowledgement*—R. A. EPPLER would like to thank the Dow Chemical Company for fellowship support.

#### REFERENCES

1. FITCH R. A., SLYKHOUSE T. E., and DRICKAMER H. *G. J. Opt. Soc. Amer.* **47**, 1015 (1957).
2. SEITZ F. *J. Chem. Phys.* **6**, 150 (1938).  
SEITZ F. *Trans. Faraday Soc.* **35**, 74 (1939).
3. FORRO M. *Z. Phys.* **58**, 613 (1930).
4. BRIDGMAN P. W. *Proc. Amer. Acad. Arts Sci.* **76**, 1 (1945).
5. GARLICK G. F. J. *Luminescent Materials*. Clarendon Press, Oxford (1949).
6. WILLIAMS F. E. and EYRING H. *J. Chem. Phys.* **15**, 289 (1947).  
WILLIAMS F. E. *Phys. Rev.* **73**, 1257 (1948); **80**, 306 (1950).  
WILLIAMS F. E. *J. Chem. Phys.* **19**, 457 (1951).  
WILLIAMS F. E. *J. Phys. Chem.* **57**, 780 (1953).
7. JOHNSON P. D. and WILLIAMS F. E. *J. Chem. Phys.* **21**, 125 (1953).  
JOHNSON P. D. and WILLIAMS F. E. *Phys. Rev.* **95**, 69 (1954).