TABLE XXVII. Elastic anisotropy factor A and δ and $\frac{1}{2}(dC_{12}^T/dP - dC_{44}/dP)$ as a function of temperature and pressure for RbCl, RbBr, and RbI.

	Temp. (°K)	A: Pressure 0.001	A: (kbar) 3.0	$\delta = C_{12}^T/C_{44}$ $P=0$	$\frac{1}{2}[(dC_{12}^T/dP)_T - (dC_{44}/dP)_T]$
RbCl	300	0.311	0.266	1.152	1.065
	180	0.279	0.243	1.086	0.997
RbBr	300	0.287	0.239	1.142	1.115
	180	0.258	0.220	1.079	0.823
RbI	300	0.255	0.205	1.150	1.025
	180	0.266	0.185	1.058	0.884

increasing pressure, those of C_{44} decrease with increasing pressure at all temperatures. Also, C_{44} is weakly dependent on pressure in comparison to C_{11} and C_{12}.

(iii) Whereas the values of C_{11} and C_{44} increase with a decrease in temperature at any pressure P, the values of C_{12} decrease with a decrease in temperature at a pressure P.

(iv) The elastic constants of RbI as a function of temperature and pressure are plotted in Figs. 1 and 2 to show the validity of the results (i), (ii), (iii). The other two salts behave the same way.

(v) The values of Δ decrease linearly with an increase in pressure or decrease in temperature.

(vi) Table XXIV indicates that the pressure derivatives of the elastic constants of these halides generally changes slightly between 300° and 180°K.

(vii) The linear behavior of λ with pressure and temperature indicates that to detect the presence of the nonlinear behavior of these halides, if any, the measurements necessary are to be more precise, or to the limit of the respective transition pressures of these halides, their equation of state may be represented by

$$B(T,P) = B(300°, 1) + [\partial B(T,P)/\partial T]_{P=1} \times (T-300) + [\partial B(T,P)/\partial P]_{T=300}(P-1),$$

where $B(T,P)$ is the bulk modulus at a temperature T (°K) and pressure P (bars).

(viii) The values of aniostropic factor tend to deviate away from unity with either a decrease in temperature or/and an increase in pressure. The difference in the values of this factor for the three halides at any temperature or pressure confirms the observation of Reinitz.

(ix) An increase in temperature tends to increase the value of parameter $\delta = C_{12}/C_{44}$.

Note: The theoretical investigation of the present work is the subject of the next paper.

ACKNOWLEDGMENTS

We wish to acknowledge the support of the U.S. Atomic Energy Commission. We also thank the Advanced Research Projects Agency for support through the facilities of the Cornell Materials Science Center. We wish to thank R. Lincoln, Hari Rao, and K. M. Koliwad for their helpful assistance. We also appreciate the help of the High Pressure Laboratory, R. Terry, and G. Chevalier for their technical assistance.

* Work supported by the U.S. Atomic Energy Commission.

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