With the aid of this formula, the measuring results are discussed and numerical values for the parameters of the tunnelling model are determined.

2. Experimental

Pressure was generated with the thermal-compressor method. Helium gas was used as the pressure-transmission medium. The apparatus is described in [11]. The pressure was determined by a Bourdon-type manometer to an accuracy of $\Delta p = \pm 16$ bar. For temperature measurement a platinum resistance thermometer was used. The single crystals we received from the Physics Institutes of the Czechoslovakian Academy of Sciences in Prague and the Polish Academy of Sciences in Poznań. The KH_2AsO_4 crystals had a surface of about 30 mm² and a thickness of about 1 mm, and the RbH_2PO_4 crystals were 80 mm² and 1.7 mm, respectively. Silver and gold electrodes have been evaporated under high vacuum. The capacity was measured at a frequency of 800 Hz, at an electric field strength $E < 20$ V/cm for KH_2AsO_4 and $E < 8$ V/cm for RbH_2PO_4, respectively.

3. Results

Fig. 1 and 2 show the anomalies of the dielectric constants in the phase transition region for a KH_2AsO_4 and a RbH_2PO_4 crystal. In both cases, by

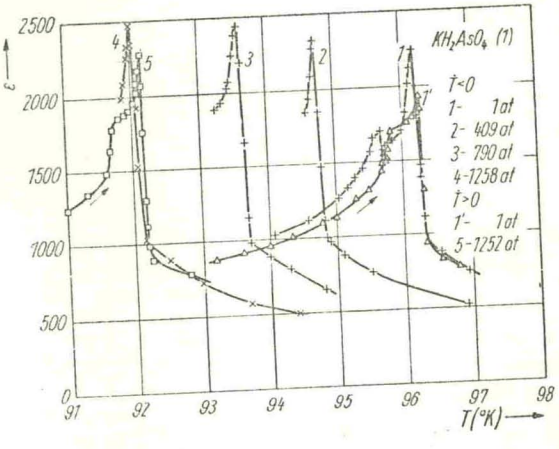

Fig. 1. Temperature dependence of the dielectric constant under different pressure for a KH_2AsO_4 crystal in the phase-transition region (10^3 at = 0.981 kbar). Curves 1 to 4: measured with decreasing temperature; curves 1' and 5: measured with increasing temperature

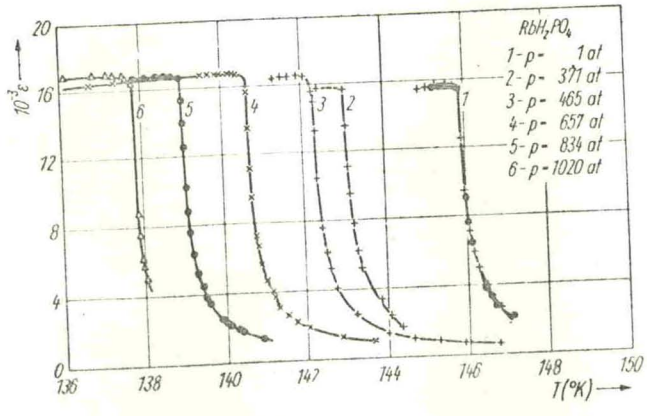

Fig. 2. Temperature dependence of the dielectric constant under different pressure for a RbH_2PO_4 crystal in the phase-transition region, measured with decreasing temperature