of the phase transformation in cerium  $Q_{Cd}$  calculated from the formula \*

where  $q_{Hg}$  is the heat of fusion of 1 g of mercury according to Bridgman's data /9/ at the temperature of the experiment, K is the ratio of the areas of the differential record of the thermograms ( $S_{Ce}$ :  $S_{Hg}$ ).

The average value of Q<sub>Ce</sub> from the three series of experiments (a new pairm of samples and new thermocouples were taken for each series) equals 880+40 cal/g-atom.

## Discussion of Results

The results of the present investigation confirm the identity of the type of cerium formed at high pressures with the low-temperature form. Earlier Trombe and Foex /11/ xx studied the behavior of cerium at low temperatures and observed/its transformation at 109°K, with a 10% fall in volume. In connection with this it was first suggested in /2/ that the form of cerium found by Trombe and Foex was identical with that discovered by Bridgman /1/ at high pressure. Two papers were later published in support of this view. Shuch and Sturdivant /12/ reported their earlier x-ray diffraction study of the crystal structure of cerium at 90°K.

\* We consider the cerium transformation as completed since the pressure in our experiments went up to  $13,000 \text{ kg/cm}^2$ ; at this pressure the less dense form could not be detected by x-ray diffraction. (see /2/).