change of structure into the CsCl type. A characteristic feature of this transformation is its exceptional sluggishness. The stability of the new phase at pressures close to atmospheric testifies to this, as does the fact that after a long time under pressure (an exposure lasted 10–20 hours) not more than 8% of the substance was transformed.

Shear forces occurring in our specimens also play a large part in the transition process. It is known that Jacobs[5] could not obtain transformation in an RbI specimen free from deformation by impressing a purely hydrostatic pressure of gas on it.

It is also possible that the further application of pressure leads to retardation of the transformation, and that it never proceeds throughout the entire mass of the specimen. The presence of a new phase in such a small volume specimen can be detected only with the aid of x-ray photographs, whereas the use of other methods for detecting a polymorphic transition necessitates establishment of a step change in some measured parameter—the magnitude of the step being usually related to the percentage of the transformed phase in the specimen.

As is well known, in Bridgman's experiment[1-4] the change in volume of a bulk specimen under hydrostatic pressure of liquid was measured while shear forces were insignificant. The experiment was performed rapidly compared with our prolonged exposures.

All that has been said above serves to explain why Bridgman did not detect a transformation in NaCl.

In the light of the new data, it is of interest to check the possibility of transitions in the lithium halides, since only in them has a transformation with a structure change into the CsCl type still not been discovered.

In conclusion we wish to draw attention to the fact that for all the cases studied in ionic crystals the face-centered cubic lattice structure changes into a CsCl type structure. It is, however, still difficult to say at present whether this is a general law.

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213