

FIG. 3. If cations are shifted in the way described by arrows, the trirutile structure is formed from the  $\text{Li}_2\text{ZrF}_6$  structure type.

structure type. Amongst the ternary compounds of general formula  $\text{AB}_2\text{X}_6$  a similar arrangement of (ordered) cations occurs in columbite  $\text{FeNb}_2\text{O}_6$ . By analogy with the rutile  $\rightleftharpoons \alpha\text{-PbO}_2$  transformation,

we might therefore expect the  $\text{AB}_2\text{X}_6$  compounds discussed above to transform at high enough pressures to a ternary analog of  $\alpha\text{-PbO}_2$ , possibly with the cations ordered as in  $\text{FeNb}_2\text{O}_6$ .

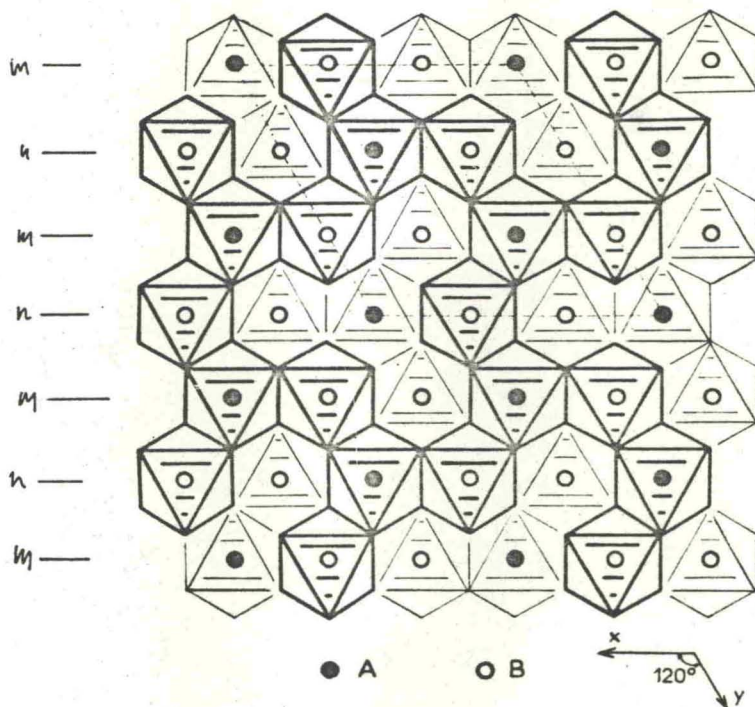


FIG. 4. The  $\text{Na}_2\text{SiF}_6$  structure type.

osition  $\text{AB}_2\text{X}_6$ . In both

$n$ -planes to  $z=0$ . ned. This involves h octahedral faces on lattice remains their relative order ordered  $\text{Na}_2\text{SiF}_6$  erse way, be geo- n the ordered tri- and  $\beta\text{-Li}_2\text{GeF}_6$  are with, respectively. res, indicates that bed here may very

approximately the d) anion arrange- ie preferred cation hat in the  $\alpha\text{-PbO}_2$