1.89: Pseudo symmetry

A crystal space can in general be divided in N components S_1 to S_N. When a coincidence operation $\varphi(S_i) \rightarrow S_j$ brings the i-th component S_i to coincide with the j-th component S_j, for any i and j, φ is a symmetry operation of the space group.

Sometimes, φ brings S_i close to, but not exactly on, the position and orientation of S_j: in this case the operation mapping S_i onto S_j is not crystallographic but the linear and/or rotational deviation from a space group operation is limited. For this reason, it is preferable to describe the crystallographic operation φ as a **pseudo symmetry operation**.

Pseudo symmetry operations for the lattice play an important role in twinning, namely in the case of twinning by pseudomerohedry and twinning by reticular pseudomerohedry.