

Fig. 3. Orientation data for specimen II.

a. [0001]-axes of 500 quartz grains, measured in three sections. Contours: 4, 3, 2, 1% per 1% area.

b. Poles of deformation lamellae in 207 grains (209 sets of lamellae). Contours: 9, 6, 4, 2, 1½% per 1% area.

c. [0001]-axes of the same 207 grains containing deformation lamellae. Contours: 9, 6, 3, 1½, ½% per 1% area.

d. Poles of deformation lamellae (point of arrow) and [0001]-axes (end of arrow) in a representative number of grains from each section. *B* is the fold axis and *A.P.* is the axial plane of the fold. *A₂* is the axis of the small circle defined by the poles of lamellae and [0001]-axes in grains containing lamellae. All four diagrams have the same orientation, shown by south (*S*) and west (*W*) directions in diagram a.

Analyses were made of the orientation of [0001]-axes and deformation lamellae in quartz in two *ac* sections of the fold, one from the hinge and one from a limb, and a *bc* section from one of the limbs.

The orientation of [0001]-axes of quartz is homogeneous throughout the fold, as in specimen I. The preferred orientation of [0001]-axes is shown in the composite diagram (fig. 3a). The pattern consists of a diffuse girdle normal to the fold-axis *B*, incomplete near the axial plane of the fold, and cleft at the pole of the axial plane; the girdle contains maxima inclined at high angles to the axial plane.

The poles of deformation lamellae (fig. 3b) in the quartz grains define a portion of a small-circle girdle which contains two maxima of unequal strength. The axis of the small-circle is A_2 and the radius is approximately 44° . The $[0001]$ -axes of grains containing these deformation lamellae (fig. 3c) are oriented in a well-defined small-circle about A_2 and the small-circle contains a number of maxima which correspond more or less in orientation to those in the pattern of poles of lamellae (fig. 3b). The radius of the small-circle defined by $[0001]$ -axes is approximately 60° . The great-circles containing poles of deformation lamellae and $[0001]$ -axes in individual grains (fig. 3d) generally pass through the axis A_2 , as in specimen I.

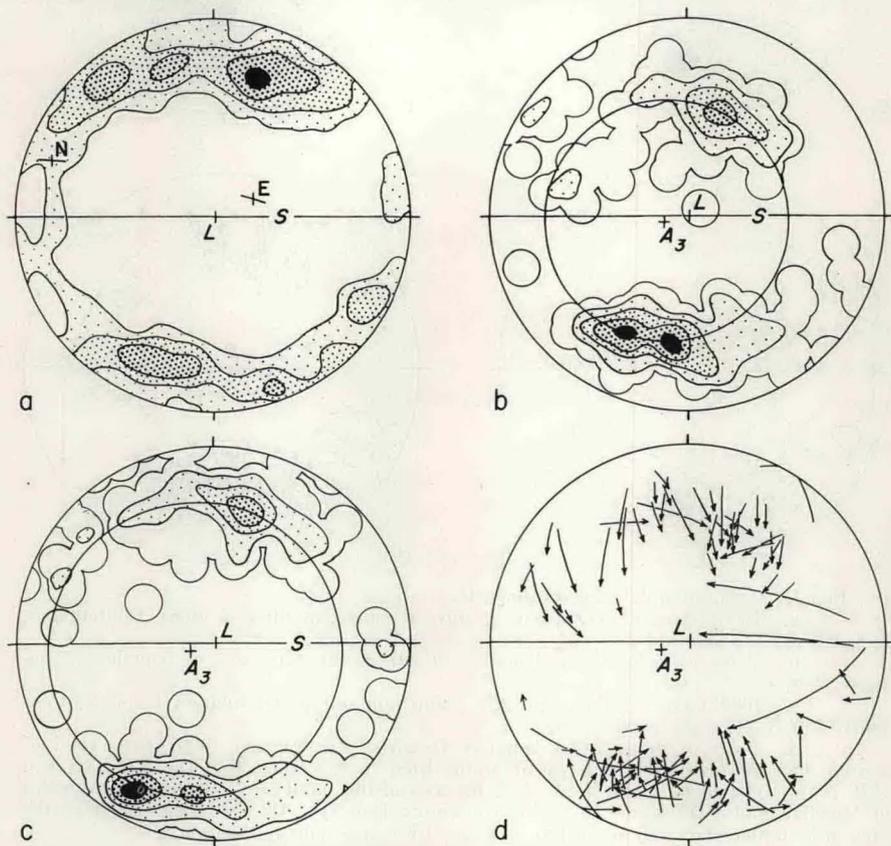


Fig. 4. Orientation data for specimen III.

a. $[0001]$ -axes of 742 quartz grains, measured in two sections. Contours: 4, 3, 2, 1% per 1% area.

b. Poles of deformation lamellae in 144 grains (148 sets of lamellae). Contours: 8, 6, 4, 2, $\frac{2}{3}$ % per 1% area.

c. $[0001]$ -axes of the same 144 grains containing deformation lamellae. Contours: 8, 6, 4, 2, $\frac{2}{3}$ % per 1% area.

d. Poles of deformation lamellae (point of arrow) and $[0001]$ -axes (end of arrow) in a representative number of grains from each section, S is the foliation and L the lineation. A_3 is the axis of the small circle defined by the poles of lamellae and $[0001]$ -axes in grains containing lamellae. All four diagrams have the same orientation, shown by north (N) and east (E) directions in diagram a.