showed a grain diameter of 0.13 mm, and traverses parallel to the foliation, 0.29 mm.

Figure 5 schematically illustrates the sample and the sections used to obtain *B*, *C*, and *D*, plate 1. Diagram *B* makes use of data from sections A, D, E, H, and I; diagram *C* makes use of data from sections A, B, F, G, H, and I; and diagram *D* makes use of data from sections B, C, D, E, F, and G. Diagrams *C* and *D*, therefore, make use of four sections inclined 45° to the plane representing the primitive circle and two sections normal thereto, whereas diagram *B* makes use of two inclined and three normal sections. In diagrams *B* and *C* the primitive circle corresponds to section C and in diagram *D* the primitive circle corresponds to section A. Although the type of orientation of diagram *B* yields a net giving results that agree in major detail with optical data, there appears to be some duplication of minor detail in the diagram. This feature seems to be the result of the symmetry of the net itself.

Diagram *A*, plate 1, represents optical data for the Sierra Pelona quartzite and is based on 250 c-axes of the quartz. Note the small-circle girdle (in addition to the main a-c girdle) whose axis diverges slightly from the c fabric axis. The x-ray petrofabric diagram *B* might show a trace of this girdle, but diagram *C* confirms this feature in a more definite way.

Although rotation of data points or contours will give diagram *D* from diagram *B* directly, the data from the four inclined sections D, E, F, G and two normal sections B and C (with A = primitive circle) were combined and recontoured.

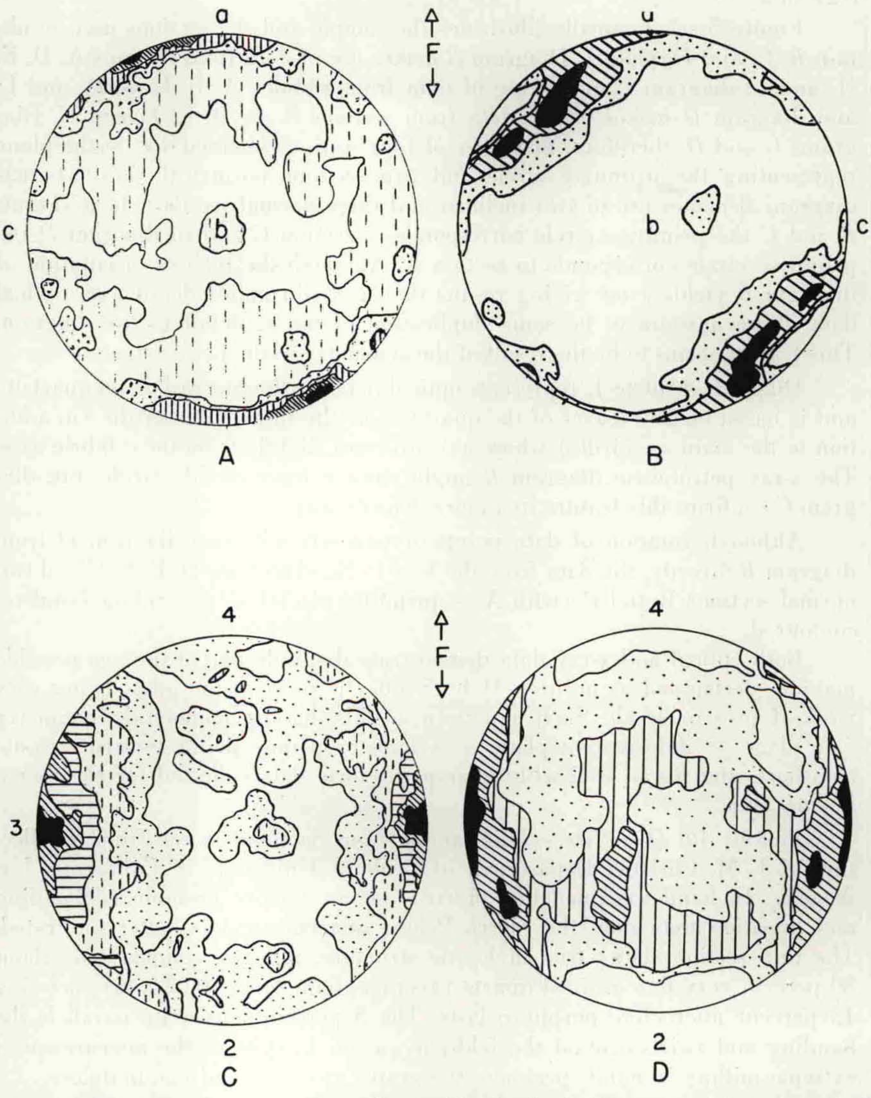
Both optical and x-ray data demonstrate that only one of the two possible maxima designated as position II by Sander is present, the other being very weak if present at all. Such a pattern as this, having monoclinic symmetry (a-c plane = deformation plane = symmetry plane) points toward tectonic transport, and fits in well with other petrofabric data collected for the Sierra Pelona area.

*Fionne Allt Quartzite.*—This sample from Scotland is one from a collection of J. M. Christie, Department of Geology, University of California, Los Angeles. In hand specimen the quartzite shows a more pronounced banding and lineation than does the Sierra Pelona quartzite and is better indurated. The thin section shows true mylonitic structure, it being composed of about 80 percent very fine grained quartz (average diameter = 0.03 mm) inclosing 15 percent microcline porphyroclasts. The 5 percent muscovite parallels the banding and swirls around the feldspar augen. In spite of the appearance of extreme milling in hand specimen, the grains are clear and non-undulose.

Diagrams *A* and *B*, plate 2, show the fabric based on 300 c-axes of quartz and the x-ray data respectively. The data for the x-ray diagram was compiled from two sections inclined 45° and two sections normal to the primitive circle section.

Again, as in the Sierra Pelona example, the major features of the x-ray and optical diagrams agree, but the reality of the small-circle girdle of the x-ray diagram is questionable. The symmetry of fabric is monoclinic with unequal development of Sander's maximum II.

PLATE 2




A. Fine-grained quartzite from Fionne Allt, Scotland. 300 c-axes with contours 1, 3, 5, 8, 10% per 1% area. F and b are megascopic foliation and lineation, respectively. Schmidt Equal Area Net.

B. X-ray petrofabric diagram for Fionne Allt quartzite. Contours not precisely identifiable but approximately 1.5, 1.8, 2.1 times powder intensity. Megascopic coordinates as in A. Schmidt Equal Area Net.

C. Optical data for Yule marble, T-section. 300 c-axes with contours 0.3, 1, 3, 5, 7% per 1% area. From Turner and others (1956). F = foliation. Schmidt Equal Area Net.

D. X-ray petrofabric diagram for Yule marble, T-section. Contours 1.0, 1.3, 1.5, 2.0 times powder intensity. Schmidt Equal Area Net.