In most specimens however there was a tendency for only one rhombohedron to develop in an individual grain, either the positive or negative one. It may be that some of the quartz which seem to contain corresponding forms of opposite signs are actually twinned, each twin developing its own form.

Similar observations can be made using $\{10\bar{1}2\}$ and $\{01\bar{1}2\}$ or $\{10\bar{1}1\}$ and $\{01\bar{1}1\}$ faces. However due to the blind circle, the number of grains in which all 6 planes of these steeper rhombohedra are observable is much more restricted. Good statistics are not readily obtained.

In grains with sets parallel to all three rhombohedra, it is common that $\{10\bar{1}3\}$ (or $\{01\bar{1}3\}$) is combined with $\{01\bar{1}2\}$ (or $\{10\bar{1}2\}$) and $\{10\bar{1}1\}$ (or $\{01\bar{1}1\}$). If various crystallographic forms coexist positive and negative forms tend to alternate (with increasing inclination to c).

Table 6 shows the percentage of quartz grains containing sets of planar structures parallel to identical planes. $\{10\bar{1}3\}$ or $\{01\bar{1}3\}$ occurs in more than 80% of all grains The most frequent combinations are the rhombohedra $\{10\bar{1}3\}$ (or $\{01\bar{1}3\}$), $\{10\bar{1}2\}$ (or $\{01\bar{1}2\}$) and $\{10\bar{1}1\}$ (or $\{01\bar{1}1\}$), often coexisting with the trapezohedron $\{21\bar{3}1\}$.

Table 6. *Frequency of planar structures parallel to different planes. The figures represent the percentage of quartz grains containing planar structures parallel to a particular crystallographic plane (hkil), including all equivalent forms*

Sample No.	B 10	B 51	S 289	B 36	B 151	B 1	S 350	S 349	B 7	B 9
$\{0001\}$	17	18	—	20	2	57	27	2	9	12
$\{10\bar{1}3\}$	92	90	94	96	98	92	87	98	96	94
$\{10\bar{1}2\}$	3	8	62	84	72	81	93	98	93	94
$\{10\bar{1}1\}$	13	26	58	58	70	84	77	75	25	66
$\{11\bar{2}2\}$	4	16	14	24	20	33	3	23	18	16
$\{11\bar{2}1\}$	1	4	20	14	18	24	13	29	20	16
$\{21\bar{3}1\}$	5	12	26	48	58	57	57	58	48	64
$\{51\bar{6}1\}$	8	8	22	18	30	31	13	31	20	26
$\{10\bar{1}0\}$ $\{11\bar{2}0\}$	4	8	12	16	24	37	23	27	14	32

Sometimes a historic sequence of formation can be observed for sets with different orientation: in most cases $\{10\bar{1}3\}$ or $\{01\bar{1}3\}$ structures are strongly developed spreading evenly almost over the entire grain. Their interspace is filled with more closely spaced elements parallel to $\{10\bar{1}2\}$ or $\{01\bar{1}2\}$ thus indicating a later generation. An example is shown in Fig. 12.

In most cases planar structures parallel to $\{0001\}$ and $\{10\bar{1}1\}$ or $\{01\bar{1}1\}$ seem to have formed prior to $\{10\bar{1}3\}$ or other forms.

Even within correlate forms sometimes a difference in time of formation exists: Fig. 5 shows planar elements parallel to $\{10\bar{1}3\}$ (or $\{01\bar{1}3\}$) apparently older than those parallel to $\{01\bar{1}2\}$ (or $\{10\bar{1}2\}$).

In quartz containing smaller amounts of planar structures the width between the numerous individual planes of one set is rather irregular. Frequently two or three planes are close to each other, separated from the next cluster by a broader interval, void of planar elements: see Fig. 13. Quartz grains with the highest

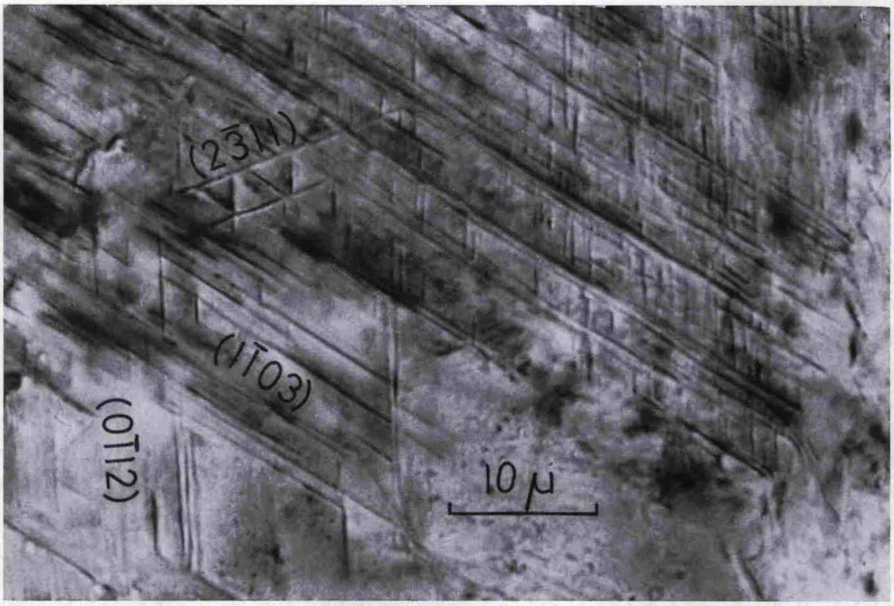

Fig. 12. Non-decorated planar elements parallel to {101̄2}, probably formed later than those parallel to {101̄3}. Quartz from sample S 350. Plane polarized light

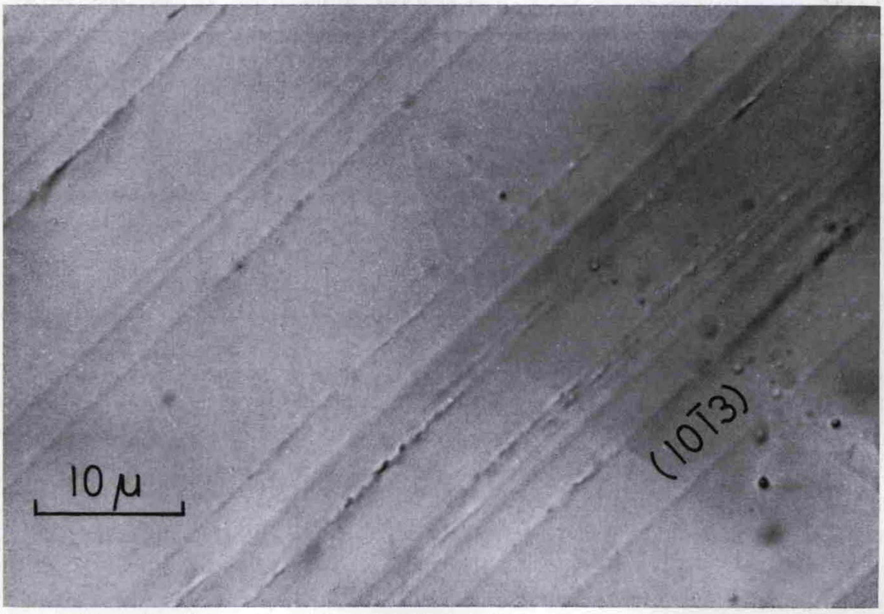

Fig. 13. Irregular distances within multiple sets of planar elements parallel to {101̄3}. Quartz from sample B 10. Crossed nicols

concentrations of planar structures (B 7 and B 9, see Figs. 3 and 16) display a very regular spacing of the planar elements. The individuals are so closely packed that measurement of their orientation becomes increasingly difficult.