

a 100, *c* 001, *r* 011, *m* 110, *x* 302 twin-face, *z* 322 twin-face. *x* truncates the edge *ac*; *z* truncates the solid angle *cma*.

<i>rc</i>	55° 22'	<i>ma</i>	64° 40'	<i>zc</i>	60° 37'
<i>rr'</i>	110 44	<i>mm'</i>	50 40	<i>za</i>	59 42
<i>xc</i>	45 48	<i>mc</i>	90 0		

FIG. 304.

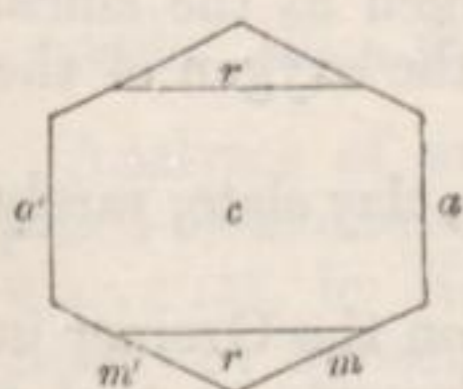


FIG. 305.

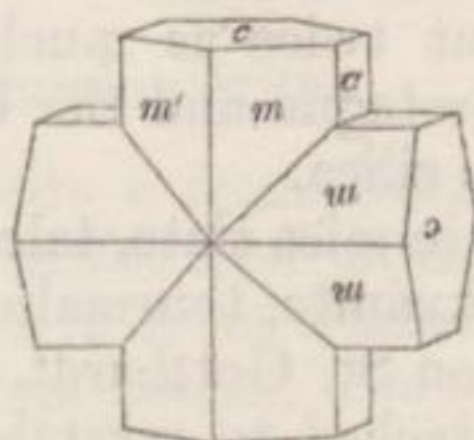
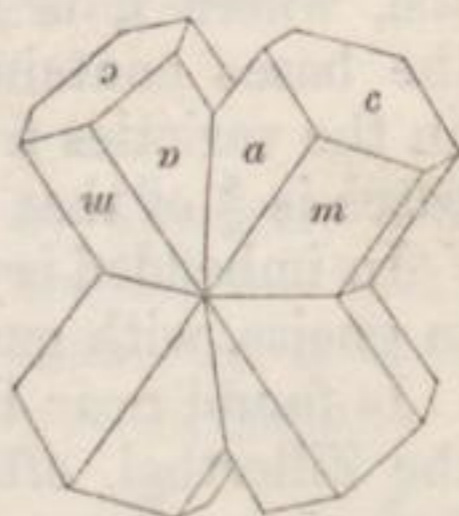


FIG. 306.



Combinations. *cm*, *cma*, *erma*. Twins. 1. Twin-face *x*. (fig. 305.) $c\omega = 91^\circ 36'$. 2. Twin-face *z*. (fig. 306.) $c\omega = 58^\circ 46'$, $av = -60^\circ 36'$. The faces *c* sometimes rough. Cleavage. *a* perfect, but interrusted; *m* traces. Fracture conchoidal...uneven. Translucent...translucent on the edges. Lustre vitreous, inclining to resinous. For red rays in a plane parallel to *c*, and polarized in that plane, $\mu = 1.7526$. The optic axes make angles of $42^\circ 30'$ with a normal to *c*, in a plane perpendicular to the edge *ac*. Reddish-brown...blackish-brown. Streak white. $H = 7.0...7.5$. $G = 3.52...3.79$.

Nearly infusible before the blowpipe. In borax melts with difficulty into a glass coloured green by iron. Soluble with very great difficulty in salt of phosphorus into a colourless opalescent glass. With soda melts with effervescence into a yellow slag. Partially decomposed by sulphuric acid either before or after ignition.

Analyses of staurolite *a*, *b* from Airolo, $G = 3.66...3.73$, *c*, *d* from Bretagne, $G = 3.527...3.529$, *e*, *f* from Polewskoi in the Ural, $G = 3.547...3.588$, all by Jacobson:—

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>
Silica	33.45	32.99	39.19	40.35	38.68	38.33
Alumina	47.23	47.92	44.87	44.22	47.43	45.97
Red oxide of iron	16.51	16.65	15.09	15.77	15.06	14.60
Ox. mangan.	—	—	0.17	0.10	—	—
Magnesia	1.99	1.66	0.32	—	2.44	2.47

Analyses of staurolite *g*, *h*, *k*, *l* from St. Gotthardt, $G = 3.737$ in fragments, $G = 3.744$ in powder, by Jacobson, *m* by Marignac:—