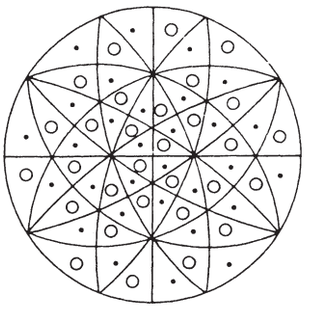
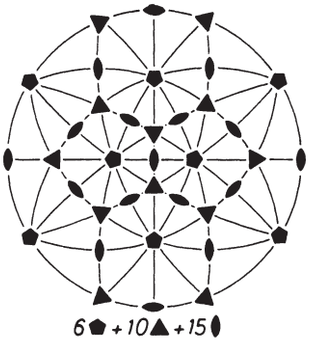
Table 3.2.3.3
The two icosahedral point groups

Each point group is specified by its Hermann–Mauguin and Schoenflies symbol. For each point group, the stereographic projections show (on the left) the general position and (on the right) the symmetry elements.
The list of the Wyckoff positions includes:
Columns 1 to 3: multiplicity, Wyckoff letter, oriented site-symmetry symbol;
Under the left stereographic projection: face forms (in roman type) and point forms (in italics), corresponding to the values for the Miller indices and coordinates listed in the last column; only 'initial' Miller indices and coordinates are given (see text).

235 *I*





60	*d*	1	Pentagon-hexecontahedron *Snub pentagon-dodecahedron* (= *pentagon-dodecahedron + icosahedron + pentagon-hexecontahedron*)	(*hkl*) *x*, *y*, *z*
			Trisicosahedron *Pentagon-dodecahedron truncated by icosahedron* (poles between axes 2 and 3)	(0*kl*) with $\|l\| < 0.382\|k\|$ 0, *y*, *z with* $\|z\| < 0.382\|y\|$
			Deltoid-hexecontahedron *Rhomb-triacontahedron* & *pentagon-dodecahedron* & *icosahedron* (poles between axes 3 and 5)	(0*kl*) with $0.382\|k\| < \|l\| < 1.618\|k\|$ 0, *y*, *z with* $0.382\|y\| < \|z\| < 1.618\|y\|$
			Pentakisdodecahedron *Icosahedron truncated by pentagon-dodecahedron* (poles between axes 5 and 2)	(0*kl*) with $\|l\| > 1.618\|k\|$ 0, *y*, *z with* $\|z\| > 1.618\|y\|$
30	*c*	2..	Rhomb-triacontahedron *Icosadodecahedron* (= *pentagon-dodecahedron* & *icosahedron*)	(100) *x*, 0, 0
20	*b*	.3.	Regular icosahedron *Regular pentagon-dodecahedron*	(111) *x*, *x*, *x*
12	*a*	..5	Regular pentagon-dodecahedron *Regular icosahedron*	(01τ) 0, *y*, τy } with $\tau = \frac{1}{2}(\sqrt{5}+1) = 1.618$
1	*o*	235	*Point in origin*	0, 0, 0

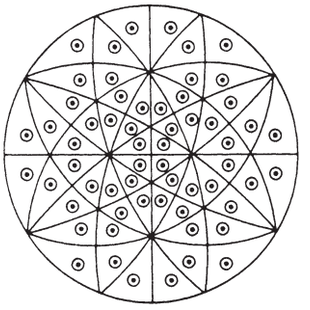
Symmetry of special projections

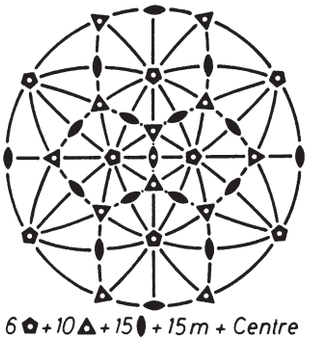
Along [001]	Along [111]	Along [1τ0]
2*mm*	3*m*	5*m*

Table 3.2.3.3 (continued)

$m\bar{3}\bar{5}$

$\frac{2}{m}\bar{3}\bar{5}$ I_h





120	*e*	1	Hecatonicosahedron or hexaicosahedron *Pentagon-dodecahedron truncated by icosahedron and by rhomb-triacontahedron*	(*hkl*) *x*, *y*, *z*
60	*d*	*m*..	Trisicosahedron *Pentagon-dodecahedron truncated by icosahedron* (poles between axes 2 and $\bar{3}$)	(0*kl*) with $\lvert l\rvert < 0.382\lvert k\rvert$ 0, *y*, *z with* $\lvert z\rvert < 0.382\lvert y\rvert$
			Deltoid-hexecontahedron *Rhomb-triacontahedron* & *pentagon-dodecahedron* & *icosahedron* (poles between axes $\bar{3}$ and $\bar{5}$)	(0*kl*) with $0.382\lvert k\rvert < \lvert l\rvert < 1.618\lvert k\rvert$ 0, *y*, *z with* $0.382\lvert y\rvert < \lvert z\rvert < 1.618\lvert y\rvert$
			Pentakisdodecahedron *Icosahedron truncated by pentagon-dodecahedron* (poles between axes $\bar{5}$ and 2)	(0*kl*) with $\lvert l\rvert > 1.618\lvert k\rvert$ 0, *y*, *z with* $\lvert z\rvert > 1.618\lvert y\rvert$
30	*c*	2*mm*..	Rhomb-triacontahedron *Icosadodecahedron* (= *pentagon-dodecahedron* & *icosahedron*)	(100) *x*, 0, 0
20	*b*	3*m* (*m*3.)	Regular icosahedron *Regular pentagon-dodecahedron*	(111) *x*, *x*, *x*
12	*a*	5*m* (*m*.5)	Regular pentagon-dodecahedron *Regular icosahedron*	(01τ) 0, *y*, τy } with $\tau = \frac{1}{2}(\sqrt{5}+1) = 1.618$
1	*o*	$2/m\bar{3}\bar{5}$	*Point in origin*	0, 0, 0

Symmetry of special projections

Along [001]	Along [111]	Along [1τ0]
2*mm*	6*mm*	10*mm*

references