$CaTa_4O_{11}$	*hP*32	(182) $P6_322$ – ig^2fdc

$CaTa_4O_{11}$ [2], calciotantite
Structural features: Infinite layers of edge-linked TaO_7 pentagonal bipyramids share vertices with TaO_6 octahedra to form a 3D-framework. See Fig. IV.38.

Isobe M. et al. (1975) [1]
$CaO_{11}Ta_4$
$a = 0.62173$, $c = 1.2271$ nm, $c/a = 1.974$, $V = 0.4108$ nm^3, $Z = 2$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	12*i*	1	0.43	0.059	0.344		non-colinear Ta_2
O2	6*g*	.2.	0.25	0	0		non-colinear Ta_2
Ta3	6*g*	.2.	0.6411	0	0		pentagonal bipyramid O_7
O4	4*f*	3..	$^1/_3$	$^2/_3$	0.038		non-coplanar triangle Ta_3
Ta5	2*d*	3.2	$^1/_3$	$^2/_3$	$^3/_4$		octahedron O_6
Ca6	2*c*	3.2	$^1/_3$	$^2/_3$	$^1/_4$		8-vertex polyhedron O_8

Transformation from published data: origin shift 0 0 $^1/_2$
Experimental: single crystal, diffractometer, X-rays, R = 0.032

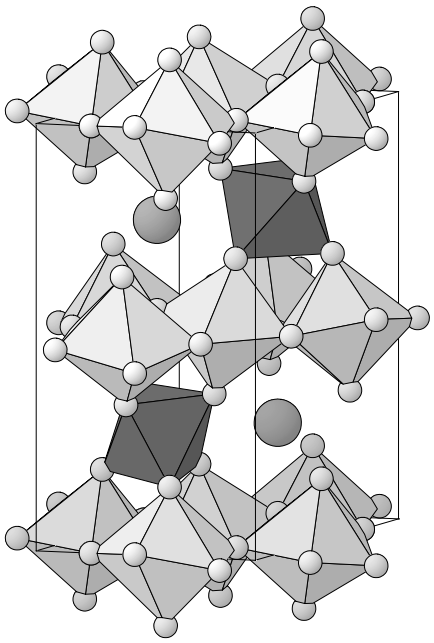

Fig. IV.38. **$CaTa_4O_{11}$**

Arrangement of TaO_6 octahedra (dark), TaO_7 pentagonal bipyramids (light) (O atoms small) and Ca atoms (large).

References: [1] Isobe M., Marumo F., Iwai S., Kimura M. (1975), Acta Crystallogr. B 31, 908-910. [2] Jahnberg L. (1970), J. Solid State Chem. 1, 454-462.