$Cu_7Ta_{15}O_{41}$	*hP*130	(176) $P6_3/m$ – i^8hgf^4eb

$Cu_7Ta_{15}O_{41}$ [1]

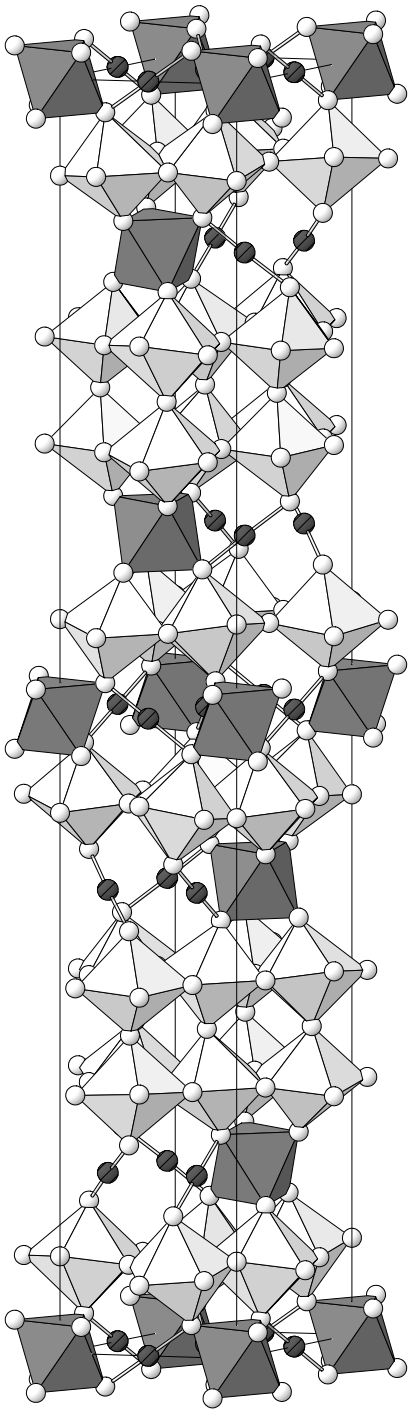

Fig. IV.84. **$Cu_7Ta_{15}O_{41}$**

Arrangement of TaO_6 octahedra (dark), TaO_7 pentagonal bipyramids (light) (O atoms light) and Cu atoms (dark; partly occupied sites).

Structural features: Double and simple infinite slabs of edge-linked TaO_7 pentagonal bipyramids (common vertices between the slabs) share vertices with TaO_6 octahedra to form a 3D-framework; Cu in linear coordination. See Fig. IV.84.

Jahnberg L., Sundberg M. (1992) [1]
$Cu_7O_{41}Ta_{15}$
$a = 0.62262$, $c = 4.4877$ nm, $c/a = 7.208$, $V = 1.5066$ nm^3, $Z = 2$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Ta1	12*i*	1	0.0	0.36	0.208		pentagonal bipyramid O_7
O2	12*i*	1	0.06	0.43	0.166		non-coplanar triangle Ta_2Cu
O3	12*i*	1	0.23	0.27	0.026		non-coplanar triangle $CuTa_2$
O4	12*i*	1	0.25	0.25	0.208		non-colinear Ta_2
Ta5	12*i*	1	0.3	0.33	0.069		pentagonal bipyramid O_7
O6	12*i*	1	0.3	0.39	0.112		non-coplanar triangle $CuTa_2$
Cu7	12*i*	1	0.33	0.17	0.139	0.778	non-colinear O_2
O8	12*i*	1	0.42	0.09	0.069		non-colinear Ta_2
O9	6*h*	*m*..	0.41	0.04	$^1/_4$		non-colinear Ta_2
Cu10	6*g*	-1	$^1/_2$	0	0	0.778	colinear O_2
O11	4*f*	3..	$^1/_3$	$^2/_3$	0.062		non-coplanar triangle Ta_3
Ta12	4*f*	3..	$^1/_3$	$^2/_3$	0.139		octahedron O_6
O13	4*f*	3..	$^1/_3$	$^2/_3$	0.212		non-coplanar triangle Ta_3
O14	4*f*	3..	$^1/_3$	$^2/_3$	0.701		non-coplanar triangle Ta_3
O15	4*e*	3..	0	0	0.076		non-coplanar triangle Ta_3
Ta16	2*b*	-3..	0	0	0		octahedron O_6

Transformation from published data: *y*,*x*,-*z*; origin shift 0 0 $^1/_2$
Experimental: polycrystalline sample, electron diffraction

References: [1] Jahnberg L., Sundberg M. (1992), J. Solid State Chem. 100, 212-219.