$IrSi_3$	*hP*8	(186) $P6_3mc$ – cb

$IrSi_3$ [1]
Structural features: Kagomé-mesh Si layers in h stacking; Ir in voids between hexagons and triangles. Vacancy derivative of $MgZn_2$ (hexagonal Laves phase).

White J.G., Hockings E.F. (1971) [1]
$IrSi_3$
a = 0.4351, c = 0.6622 nm, c/a = 1.522, V = 0.1086 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Si1	6*c*	.*m*.	0.818	0.182	0.167		7-vertex polyhedron Si_4Ir_3
Ir2	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.0		9-vertex polyhedron Si_9

Transformation from published data: -*x*,-*y*,-*z*; origin shift 0 0 0.250
Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.072

Remarks: Preliminary data in [2]. Supersedes a report on $IrSi_3$ with Na_3As-type structure in [3]. The existence of hexagonal $IrSi_3$ could not be confirmed in [4] where an orthorhombic modification with related cell parameters was observed.

References: [1] White J.G., Hockings E.F. (1971), Inorg. Chem. 10, 1934-1935. [2] Bhan S., Schubert K. (1960), Z. Metallkd. 51, 327-339. [3] Finnie L.N. (1962), J. Less-Common Met. 4, 24-34. [4] Engström I., Zdansky E. (1982), Acta Chem. Scand. A 36, 857-858.