Au_7Ga_2	*hP*27	(189) *P*-62*m* – i^2hgfeda

Au_7Ga_2 ht [1]
Structural features: $GaAu_{10}$ polyhedra (tetracapped trigonal prism) share atoms to form a dense 3D-framework. Substitution derivative of Fe_2P (or its branch Mg_2In).

Frank K. (1971) [1]
Au_7Ga_2
a = 0.7724, c = 0.8751 nm, c/a = 1.133, V = 0.4521 nm^3, Z = 3

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Au1	6*i*	..*m*	0.312	0	0.170		anticuboctahedron Ga_3Au_9
Au2	6*i*	..*m*	0.637	0	0.332		13-vertex polyhedron Ga_3Au_{10}
Ga3	4*h*	3..	$^1/_3$	$^2/_3$	0.175		pentacapped trigonal prism $Au_{10}Ga$
Au4	3*g*	*m*2*m*	0.278	0	$^1/_2$		anticuboctahedron Ga_2Au_{10}
Au5	3*f*	*m*2*m*	0.631	0	0		13-vertex polyhedron Au_9Ga_4
Ga6	2*e*	3.*m*	0	0	0.314		pentacapped trigonal prism $Au_{10}Ga$
Au7	2*d*	-6..	$^1/_3$	$^2/_3$	$^1/_2$		pentacapped trigonal prism Au_9Ga_2
Au8	1*a*	-62*m*	0	0	0		pentacapped trigonal prism Ga_2Au_9

Transformation from published data: -*x*,-*y*,-*z*
Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.170

Remarks: Phase referred to as β-(AuGa), stable at T > 555 K. Preliminary data in [2].

References: [1] Frank K. (1971), J. Less-Common Met. 23, 83-87. [2] Wallace W., Kitchingman W.J. (1969), J. Less-Common Met. 17, 263-270.