

1.6. METHODS OF SPACE-GROUP DETERMINATION

Table 1.6.4.14

Reflection conditions and possible space groups with Bravais lattice tP and Laue class $4/mmm$; hk are permutable; Patterson symmetry $P4/mmm$

Reflection conditions					Space group	No.	Space group	No.	Space group	No.
$hk0$	$0kl$	$h \pm hl$	$00l$	$h00$						
					$P422$	89	$P4mm$	99	$\overline{P4}2m$	111
					$P4m2$	115	$P4/mmm$	123		
				h	$P42_12$	90	$\overline{P4}2_1m$	113		
			l		$P4_222$	93				
			l	h	$P4_22_12$	94				
			$l = 4n$		$P4_122$	91	$P4_322$	95		
			$l = 4n$	h	$P4_12_12$	92	$P4_32_12$	96		
		l	l		$P4_2mc$	105	$\overline{P4}2c$	112	$P4_2/mmc$	131
		l	l	h	$\overline{P4}2_1c$	114				
	k			h	$P4bm$	100	$\overline{P4}b2$	117	$P4/mbm$	127
	k	l	l	h	$P4_2bc$	106	$P4_2/mbc$	135		
	l		l		$P4_2cm$	101	$\overline{P4}c2$	116	$P4_2/mcm$	132
	l	l	l		$P4cc$	103	$P4/mcc$	124		
	$k + l$		l	h	$P4_2nm$	102	$\overline{P4}n2$	118	$P4_2/mnm$	136
	$k + l$	l	l	h	$P4nc$	104	$P4/mnc$	128		
$h + k$				h	$P4/nmm$	129				
$h + k$		l	l	h	$P4_2/nmc$	137				
$h + k$	k			h	$P4/nbm$	125				
$h + k$	k	l	l	h	$P4_2/nbc$	133				
$h + k$	l		l	h	$P4_2/ncm$	138				
$h + k$	l	l	l	h	$P4/ncc$	130				
$h + k$	$k + l$		l	h	$P4_2/nmm$	134				
$h + k$	$k + l$	l	l	h	$P4/nnc$	126				

Table 1.6.4.15

Reflection conditions and possible space groups with Bravais lattice tI and Laue class $4/m$; hk are permutable; Patterson symmetry $I4/m$

Reflection conditions							Space group	No.	Space group	No.	Space group	No.
hkl	$hk0$	$0kl$	$h \pm hl$	$00l$	$h00$	$h \pm h0$						
$h + k + l$	$h + k$	$k + l$	l	l	h		$I4$	79	$\overline{I4}$	82	$I4/m$	87
$h + k + l$	$h + k$	$k + l$	l	$l = 4n$	h		$I4_1$	80				
$h + k + l$	h, k	$k + l$	l	$l = 4n$	h	h	$I4_1/a$	88				