International Tables for Crystallography (2006). Vol. E, Scanning table for space group 138, pp. 493–494.

No. 137 $P4_2/nmc$ D_{4h}^{15}

$$\mathcal{G} = P\frac{4_2}{n}\frac{2_1}{m}\frac{2}{c} \quad \text{origin 2}$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Scanning group $\mathcal{H}$	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
(001)	**a**	**b**	**c**	$P4_2/nmc$ (origin 2)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pmmn$	L46
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$p\bar{4}m2$ $[(\mathbf{a}+3\mathbf{b})/4$ or $(\mathbf{a}+3\mathbf{b})/4]$	L59
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pmm2$ $[(\mathbf{a}+\mathbf{b})/4]$	L23
(100)	**b**	**c**	**a**	$Pmnm$ (origin 2)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p2_1/m11$	L15
(010)	$-\mathbf{a}$	**c**	**b**		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pm2m$ $(\mathbf{a}'/4)$	L27
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pm11$ $(\mathbf{a}'/4)$	L11
(110)	$(-\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}+\mathbf{b})$	*Bbcb* (or. 1) $[(\mathbf{a}'+\mathbf{b}')/4]$ or *Bbcb* (or. 2)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pban$	L39
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pbab$ $(\mathbf{a}'/4)$	L43
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pba2$ $[(\mathbf{a}'+\mathbf{b}')/4]$	L25
(1$\bar{1}$0)	$(\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}-\mathbf{b})$	*Bbcb* (or. 1) $[(\mathbf{b}'+\mathbf{d})/4]$ or *Bbcb* (or. 2) $[(\mathbf{a}'+\mathbf{d})/4]$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pbab$	L43
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pban$ $(\mathbf{a}'/4)$	L39
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pba2$ $(\mathbf{b}'/4)$	L25

No. 138 $P4_2/ncm$ D_{4h}^{16}

$$\mathcal{G} = P\frac{4_2}{n}\frac{2_1}{c}\frac{2}{m} \quad \text{origin 1}$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Scanning group $\mathcal{H}$	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
(001)	**a**	**b**	**c**	$P4_2/ncm$ (origin 1)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p\bar{4}2_1m$	L58
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$\widehat{c}mme$ $[(\mathbf{a}+3\mathbf{b})/4$ or $(3\mathbf{a}+\mathbf{b})/4]$	L48
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$\widehat{c}mm2$ $(\mathbf{a}/2$ or $\mathbf{b}/2)$	L26
(100)	**b**	**c**	**a**	*Pbnb* $[(\mathbf{a}'+\mathbf{b}'+\mathbf{d})/4]$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pb2b$ $(\mathbf{b}'/4)$	L30
(010)	$-\mathbf{a}$	**c**	**b**		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$p2_1/b11$ $[(\mathbf{a}'+\mathbf{b}')/4]$	L17
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pb11$ $(\mathbf{b}'/4)$	L12
(110)	$(-\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}+\mathbf{b})$	*Bmcm* $[(\mathbf{b}'+\mathbf{d})/4]$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pmaa$ $[(\mathbf{a}'+\mathbf{b}')/4]$	L38
(1$\bar{1}$0)	$(\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}-\mathbf{b})$		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pmam$ $(\mathbf{b}'/4)$	L40
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pma2$ $(\mathbf{b}'/4)$	L24

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No. 138 $P4_2/ncm$ D_{4h}^{16}

$$\mathcal{G} = P\frac{4_2}{n}\frac{2_1}{c}\frac{2}{m} \quad \text{origin 2}$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Scanning group $\mathcal{H}$	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
(001)	**a**	**b**	**c**	$P4_2/ncm$ (origin 2)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$\widehat{c}mme$	L48
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$p\bar{4}2_1m$ $[(\mathbf{a}+3\mathbf{b})/4$ or $(3\mathbf{a}+\mathbf{b})/4]$	L58
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$\widehat{c}mm2$ $[(\mathbf{a}+\mathbf{b})/4]$	L26
(100)	**b**	**c**	**a**	$Pbnb$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p2_1/b11$	L17
(010)	$-\mathbf{a}$	**c**	**b**		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pb2b$ $(\mathbf{a}'/4)$	L30
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pb11$ $(\mathbf{a}'/4)$	L12
(110)	$(-\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}+\mathbf{b})$	$Bmcm$ $[(\mathbf{a}'+\mathbf{d})/4]$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pmaa$	L38
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pmam$ $(\mathbf{a}'/4)$	L40
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pma2$ $(\mathbf{a}'/4)$	L24
$(1\bar{1}0)$	$(\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}-\mathbf{b})$	$Bmcm$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pmam$	L40
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pmaa$ $(\mathbf{a}'/4)$	L38
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pma2$	L24

No. 139 $I4/mmm$ D_{4h}^{17}

$$\mathcal{G} = I\frac{4}{m}\frac{2}{m}\frac{2}{m}$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Scanning group $\mathcal{H}$	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
(001)	**a**	**b**	**c**	$I4/mmm$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p4/mmm$	L61
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$p4/nmm$	L64
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$p4mm$	L55
(100)	**b**	**c**	**a**	$Immm$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$pmmm$	L37
(010)	$-\mathbf{a}$	**c**	**b**		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$pmmn$ $[(\mathbf{a}'+\mathbf{b}')/4]$	L46
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$pmm2$	L23
(110)	$(-\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}+\mathbf{b})$	$Fmmm$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$cmmm$	L47
$(1\bar{1}0)$	$(\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}-\mathbf{b})$		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$cmme$ $(\mathbf{b}'/4)$	L48
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	$cmm2$	L26

No. 142 $I4_1/acd$ D_{4h}^{20}

$\mathcal{G} = I\frac{4_1}{a}\frac{2}{c}\frac{2}{d}$ origin 2

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Scanning group $\mathcal{H}$	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
(001)	**a**	**b**	**c**	$I4_1/acd$ (origin 2)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d};$	*pbab*	L43
					$\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*pbaa* $[(\mathbf{a}+\mathbf{b})/4]$	L43
					$[\frac{1}{8}\mathbf{d}, \frac{5}{8}\mathbf{d};$	$p\bar{4}b2$ $(3\mathbf{b}/4)$	L60
					$\frac{3}{8}\mathbf{d}, \frac{7}{8}\mathbf{d}]$	$p\bar{4}b2$ $(\mathbf{b}/4)$	L60
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{4})\mathbf{d},$		
					$(\pm s+\frac{1}{2})\mathbf{d}, (\pm s+\frac{3}{4})\mathbf{d}]$	*pba*2 $(\mathbf{b}/4)$	L25
(100)	**b**	**c**	**a**	*Ibca*	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	*pbab*	L43
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*pbaa* $[(\mathbf{a}'+\mathbf{b}')/4]$	L43
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	*pba*2 $(\mathbf{b}'/4)$	L25
(010)	$-\mathbf{a}$	**c**	**b**	*Ibca*	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	*pbaa*	L43
				$[(\mathbf{a}'+\mathbf{b}'+\mathbf{d})/4]$	$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*pbab* $[(\mathbf{a}'+\mathbf{b}')/4]$	L43
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	*pba*2 $(\mathbf{a}'/4)$	L25
(110)	$(-\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}+\mathbf{b})$	*Fddd* (or. 1)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d};$	$\widehat{p}112/b$	L16
				$[3(\mathbf{a}'+\mathbf{b}'+\mathbf{d})/8]$	$\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$\widehat{p}112/a$ $(\mathbf{a}'/4$ or $\mathbf{b}'/4)$	L16
				or	$[\frac{1}{8}\mathbf{d}, \frac{5}{8}\mathbf{d};$	$c222$ $[(\mathbf{a}'+\mathbf{b}')/8]$	L22
				Fddd (or. 2)	$\frac{3}{8}\mathbf{d}, \frac{7}{8}\mathbf{d}]$	$c222$ $[3(\mathbf{a}'+\mathbf{b}')/8]$	L22
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{4})\mathbf{d};$		
					$(\pm s+\frac{1}{2})\mathbf{d}, (\pm s+\frac{3}{4})\mathbf{d}]$	$\widehat{p}112$ $[(\mathbf{a}'+\mathbf{b}')/8]$	L03
$(1\bar{1}0)$	$(\mathbf{a}+\mathbf{b})$	**c**	$(\mathbf{a}-\mathbf{b})$	*Fddd* (or. 1)	$[0\mathbf{d}, \frac{1}{2}\mathbf{d};$	$\widehat{p}112/b$	L16
				$[(\mathbf{a}'+\mathbf{b}'+3\mathbf{d})/8]$	$\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	$\widehat{p}112/a$ $(\mathbf{a}'/4$ or $\mathbf{b}'/4)$	L16
				or	$[\frac{1}{8}\mathbf{d}, \frac{5}{8}\mathbf{d};$	$c222$ $[3(\mathbf{a}'+\mathbf{b}')/8]$	L22
				Fddd (or. 2)	$\frac{3}{8}\mathbf{d}, \frac{7}{8}\mathbf{d}]$	$c222$ $[(\mathbf{a}'+\mathbf{b}')/8]$	L22
				$[(\mathbf{a}'+\mathbf{b}')/4]$	$[\pm s\mathbf{d}, (\pm s+\frac{1}{4})\mathbf{d};$		
					$(\pm s+\frac{1}{2})\mathbf{d}, (\pm s+\frac{3}{4})\mathbf{d}]$	$\widehat{p}112$ $[(\mathbf{a}'+\mathbf{b}')/8]$	L03

Auxiliary tables for Laue class $D_{4h}-4/mmm$

Centring type *P*

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Auxiliary basis of the scanning group $\widehat{\mathbf{a}}$	$\widehat{\mathbf{b}}$	$\widehat{\mathbf{c}}$
$(mn0)$	**c**	$n\mathbf{a}-m\mathbf{b}$	$p\mathbf{a}+q\mathbf{b}$	**a**	**b**	**c**
$(\bar{n}m0)$	**c**	$m\mathbf{a}+n\mathbf{b}$	$-q\mathbf{a}+p\mathbf{b}$			
$(\bar{m}n0)$	**c**	$n\mathbf{a}+m\mathbf{b}$	$-p\mathbf{a}+q\mathbf{b}$			
$(nm0)$	**c**	$m\mathbf{a}-n\mathbf{b}$	$q\mathbf{a}+p\mathbf{b}$			
$(0mn)$	**a**	$n\mathbf{b}-m\mathbf{c}$	$p\mathbf{b}+q\mathbf{c}$	**b**	**c**	**a**
$(0\bar{m}n)$	**a**	$n\mathbf{b}+m\mathbf{c}$	$-p\mathbf{b}+q\mathbf{c}$			
$(m0n)$	**b**	$m\mathbf{c}-n\mathbf{a}$	$q\mathbf{c}+p\mathbf{a}$	**c**	**a**	**b**
$(m0\bar{n})$	**b**	$m\mathbf{c}+n\mathbf{a}$	$-q\mathbf{c}+p\mathbf{a}$			
(hhl)	$\mathbf{a}-\mathbf{b}$	$n(\mathbf{a}+\mathbf{b})-m\mathbf{c}$	$p(\mathbf{a}+\mathbf{b})+q\mathbf{c}$	$\mathbf{a}+\mathbf{b}$	**c**	$\mathbf{a}-\mathbf{b}$
$(\bar{h}\bar{h}l)$	$\mathbf{a}-\mathbf{b}$	$n(\mathbf{a}+\mathbf{b})+m\mathbf{c}$	$-p(\mathbf{a}+\mathbf{b})+q\mathbf{c}$			
$(h\bar{h}l)$	$\mathbf{a}+\mathbf{b}$	$n(\mathbf{b}-\mathbf{a})-m\mathbf{c}$	$p(\mathbf{b}-\mathbf{a})+q\mathbf{c}$	$\mathbf{b}-\mathbf{a}$	**c**	$\mathbf{a}+\mathbf{b}$
$(\bar{h}hl)$	$\mathbf{a}+\mathbf{b}$	$n(\mathbf{b}-\mathbf{a})+m\mathbf{c}$	$-p(\mathbf{b}-\mathbf{a})+q\mathbf{c}$			
l odd $\Rightarrow n=l, m=2h$; l even $\Rightarrow n=l/2, m=h$						

Arithmetic class $4/mmmP$ (*cont.*)

Serial No. Group type Group	135 D_{4h}^{13} $P4_2/mbc$	136 D_{4h}^{14} $P4_2/mnm$	137 D_{4h}^{15} $P4_2/nmc$		138 D_{4h}^{16} $P4_2/ncm$	
			Origin 1	Origin 2	Origin 1	Origin 2
$(mn0)$ $(\overline{n}m0)$ $(\overline{m}n0)$ $(nm0)$	$P112/m$	$P112/m$	$P112/n$	$P112/n$	$P112/n$ $(\mathbf{a}+\mathbf{b}+\mathbf{c})/4$	$P112/n$
$(0mn)$ $(0\overline{m}n)$	$P112_1/a$	$P112_1/n$	$P112_1/m$ $(\mathbf{a}+\mathbf{b}+\mathbf{c})/4$	$P112_1/m$	$P112_1/b$ $(\mathbf{a}+\mathbf{b}+\mathbf{c})/4$	$P112_1/b$
$(m0n)$ $(m0\overline{n})$	$P112_1/b$				$P112_1/a$ $(\mathbf{a}+\mathbf{b}+\mathbf{c})/4$	$P112_1/a$
(hhl) $(\overline{h}hl)$	$B112/b$ ($\mathbf{a}/2$ or $\mathbf{b}/2$)	$B112/m$	$B112/b$ $(\mathbf{a}-\mathbf{b}+\mathbf{c})/4$	$B112/b$	$B112/m$ $(\mathbf{a}-\mathbf{b}+\mathbf{c})/4$	$B112/m$
$(h\overline{h}l)$ $(\overline{h}hl)$			$B112/b$ $(\mathbf{a}+\mathbf{b}+\mathbf{c})/4$	$B112/b$ ($\mathbf{a}/2$ or $\mathbf{b}/2$)	$B112/m$ $(\mathbf{a}+\mathbf{b}+\mathbf{c})/4$	$B112/m$ ($\mathbf{a}/2$ or $\mathbf{b}/2$)

Centring type *I*

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Auxiliary basis of the scanning group $\widehat{\mathbf{a}}$	$\widehat{\mathbf{b}}$	$\widehat{\mathbf{c}}$
$(mn0)$ $(\overline{n}m0)$ $(\overline{m}n0)$ $(nm0)$	$\mathbf{c}$ $\mathbf{c}$ $\mathbf{c}$ $\mathbf{c}$	$n\mathbf{a}-m\mathbf{b}$ $m\mathbf{a}+n\mathbf{b}$ $n\mathbf{a}+m\mathbf{b}$ $m\mathbf{a}-n\mathbf{b}$	$p\mathbf{a}+q\mathbf{b}$ $-q\mathbf{a}+p\mathbf{b}$ $-p\mathbf{a}+q\mathbf{b}$ $q\mathbf{a}+p\mathbf{b}$	$\mathbf{a}$	$\mathbf{b}$	$\mathbf{c}$
$(0mn)$ $(0\overline{m}n)$	$\mathbf{a}$ $\mathbf{a}$	$n\mathbf{b}-m\mathbf{c}$ $n\mathbf{b}+m\mathbf{c}$	$p\mathbf{b}+q\mathbf{c}$ $-p\mathbf{b}+q\mathbf{c}$	$\mathbf{b}$	$\mathbf{c}$	$\mathbf{a}$
$(m0n)$ $(m0\overline{n})$	$\mathbf{b}$ $\mathbf{b}$	$m\mathbf{c}-n\mathbf{a}$ $m\mathbf{c}+n\mathbf{a}$	$q\mathbf{c}+p\mathbf{a}$ $-q\mathbf{c}+p\mathbf{a}$	$\mathbf{c}$	$\mathbf{a}$	$\mathbf{b}$
(hhl) $(\overline{h}hl)$	$\mathbf{a}-\mathbf{b}$ $\mathbf{a}-\mathbf{b}$	$n\widehat{\mathbf{a}}-m\mathbf{c}$ $n\widehat{\mathbf{a}}+m\mathbf{c}$	$p\widehat{\mathbf{a}}+q\mathbf{c}$ $-p\widehat{\mathbf{a}}+q\mathbf{c}$	$(\mathbf{a}+\mathbf{b}+\mathbf{c})/2$	$\mathbf{c}$	$\mathbf{a}-\mathbf{b}$
$(h\overline{h}l)$ $(\overline{h}hl)$	$\mathbf{a}+\mathbf{b}$ $\mathbf{a}+\mathbf{b}$	$n\widehat{\mathbf{a}}-m\mathbf{c}$ $n\widehat{\mathbf{a}}+m\mathbf{c}$	$p\widehat{\mathbf{a}}+q\mathbf{c}$ $-p\widehat{\mathbf{a}}+q\mathbf{c}$	$(\mathbf{b}-\mathbf{a}+\mathbf{c})/2$	$\mathbf{c}$	$\mathbf{a}+\mathbf{b}$
l odd $\Rightarrow n=2l, m=2h+l$; l even $\Rightarrow n=l, m=h+l/2$						

Arithmetic classes $422I$ and $4mmI$

Serial No. Group type Group	97 D_4^9 $I422$	98 D_4^{10} $I4_122$	107 C_{4v}^9 $I4mm$	108 C_{4v}^{10} $I4cm$	109 C_{4v}^{11} $I4_1md$	110 C_{4v}^{12} $I4_1cd$
$(mn0)$ $(\overline{n}m0)$ $(\overline{m}n0)$ $(nm0)$	$I112$	$I112$	$I112$	$I112$	$I112$	$I112$
$(0mn)$ $(0\overline{m}n)$	$I112$	$I112$ $(\mathbf{b}/4+\mathbf{c}/8)$	$I11m$	$I11b$	$I11m$	$I11b$
$(m0n)$ $(m0\overline{n})$		$I112$ $(\mathbf{a}/4+3\mathbf{c}/8)$		$I11a$		$I11a$
(hhl) $(\overline{h}hl)$	$A112$	$A112$	$A11m$	$A11m$ ($\mathbf{a}/2$ or $\mathbf{b}/2$)	$A11n$ $(\mathbf{a}-\mathbf{b})/8$	$A11n$ $3(\mathbf{a}-\mathbf{b})/8$
$(h\overline{h}l)$ $(\overline{h}hl)$					$A11n$ $3(\mathbf{a}+\mathbf{b})/8$	$A11n$ $(\mathbf{a}+\mathbf{b})/8$