International Tables for Crystallography (2006). Vol. E, Scanning table for space group 39, p. 448.

No. 37 *Ccc*2 C_{2v}^{13}

$$\mathcal{G} = Ccc2$$

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**	*Ccc*2	$[s\mathbf{d}, (s+\frac{1}{2})\mathbf{d}]$	$\widehat{p}112$	L03
(100)	**b**	**c**	**a**	*Bb*2*b*	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	*pb*2*b*	L30
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*pb*2*n* ($\mathbf{a}'/4$)	L34
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	*pb*11	L12
(010)	**c**	**a**	**b**	*A*2*aa*	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	*p*2*aa*	L30
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*p*2*an* ($\mathbf{b}'/4$)	L34
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	*p*1*a*1	L12

No. 38 *Amm*2 C_{2v}^{14}

$$\mathcal{G} = Amm2$$

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**	*Amm*2	$[s\mathbf{d}, (s+\frac{1}{2})\mathbf{d}]$	*pmm*2	L23
(100)	**b**	**c**	**a**	*Cm*2*m*	$0\mathbf{d}, \frac{1}{2}\mathbf{d}$	*cm*2*m*	L35
					$[s\mathbf{d}, -s\mathbf{d}]$	*cm*11	L13
(010)	**c**	**a**	**b**	*B*2*mm*	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	*p*2*mm*	L27
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*p*2$_1$*ma*	L28
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	*p*1*m*1	L11

No. 39* *Aem*2 C_{2v}^{15}

$$\mathcal{G} = Abm2$$

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**	*Abm*2	$[s\mathbf{d}, (s+\frac{1}{2})\mathbf{d}]$	*pbm*2	L24
(100)	**b**	**c**	**a**	*Cm*2*a*	$0\mathbf{d}, \frac{1}{2}\mathbf{d}$	*cm*2*e*	L36
					$[s\mathbf{d}, -s\mathbf{d}]$	*cm*11 ($\mathbf{a}'/4$)	L13
(010)	**c**	**a**	**b**	*B*2*cm*	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	*p*2*aa*	L30
					$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$	*p*2$_1$*am*	L29
					$[\pm s\mathbf{d}, (\pm s+\frac{1}{2})\mathbf{d}]$	*p*1*a*1	L12

*New symbol. Old symbol: *Abm*2.

Arithmetic classes 222*C* and *mm*2*C*

Serial No.	20	21	35	36	37
Group type	D_2^5	D_2^6	C_{2v}^{11}	C_{2v}^{12}	C_{2v}^{13}
Group	$C222_1$	$C222$	$Cmm2$	$Cmc2_1$	$Ccc2$
$(hk0)$ $(\overline{h}k0)$	$P112_1$	$P112$	$P112$	$P112_1$	$P112$
$(0mn)$ $(0\overline{m}n)$	$B112$	$B112$	$B11m$	$B11m$	$B11b$
$(n0m)$ $(n0\overline{m})$	$A112$ $(\mathbf{c}/4)$	$A112$	$A11m$	$A11a$	$A11a$

Arithmetic class *mmm*C

Serial No.	63	64	65	66	67	68	
Group type	D_{2h}^{17}	D_{2h}^{18}	D_{2h}^{19}	D_{2h}^{20}	D_{2h}^{21}	D_{2h}^{22}	
Group	$Cmcm$	$Cmce$	$Cmmm$	$Cccm$	$Cmme$	$Ccce$	
						Origin 1	Origin 2
$(hk0)$ $(\overline{h}k0)$	$P112_1/m$	$P112_1/n$	$P112/m$	$P112/m$	$P112/n$	$P112/n$ $[(\mathbf{b}+\mathbf{c})/4]$	$P112/n$
$(0mn)$ $(0\overline{m}n)$	$B112/m$	$B112/m$	$B112/m$	$B112/b$	$B112/m$	$B112/n$ $[(\mathbf{a}+\mathbf{c})/4]$	$B112/n$
$(n0m)$ $(n0\overline{m})$	$A112/a$	$A112/n$	$A112/m$	$A112/a$	$A112/m$ $[(\mathbf{a}+\mathbf{b})/4]$	$A112/a$ $[(\mathbf{b}+\mathbf{c})/4]$	$A112/a$

Centring type *A*

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}'$	$\mathbf{b}'$	$\mathbf{d}$	Auxiliary basis of the scanning group $\widehat{\mathbf{a}}$	$\widehat{\mathbf{b}}$	$\widehat{\mathbf{c}}$
$(mn0)$	$\mathbf{c}$	$n\mathbf{a}-m\mathbf{b}$	$p\mathbf{a}+q\mathbf{b}$	$\mathbf{a}$	$\mathbf{b}$	$\mathbf{c}$
$(\overline{m}n0)$	$\mathbf{c}$	$n\mathbf{a}+m\mathbf{b}$	$-p\mathbf{a}+q\mathbf{b}$			
$(0kl)$	$\mathbf{a}$	$n\widehat{\mathbf{a}}-m\widehat{\mathbf{b}}$	$p\widehat{\mathbf{a}}+q\widehat{\mathbf{b}}$	$(\mathbf{b}-\mathbf{c})/2$	$(\mathbf{b}+\mathbf{c})/2$	$\mathbf{a}$
$(\overline{k}l0)$	$\mathbf{a}$	$n\widehat{\mathbf{a}}+m\widehat{\mathbf{b}}$	$-p\widehat{\mathbf{a}}+q\widehat{\mathbf{b}}$			
k even, l odd or k odd, l even $\Rightarrow n=k+l, m=k-l$ k, l odd $\Rightarrow n=(k+l)/2, m=(k-l)/2$						
$(n0m)$	$\mathbf{b}$	$n\mathbf{c}-m\mathbf{a}$	$p\mathbf{c}+q\mathbf{a}$	$\mathbf{c}$	$\mathbf{a}$	$\mathbf{b}$
$(n0\overline{m})$	$\mathbf{b}$	$n\mathbf{c}+m\mathbf{a}$	$-p\mathbf{c}+q\mathbf{a}$			

Arithmetic class *mm*2*A*

Serial No.	38	39	40	41
Group type	C_{2v}^{14}	C_{2v}^{15}	C_{2v}^{16}	C_{2v}^{17}
Group	$Amm2$	$Aem2$	$Ama2$	$Aea2$
$(mn0)$ $(\overline{m}n0)$	$A112$	$A112$	$A112$	$A112$
$(0kl)$ $(0\overline{k}l)$	$P11m$	$P11n$	$P11m$ $(\mathbf{a}/4)$	$P11n$ $(\mathbf{a}/4)$
$(n0m)$ $(n0\overline{m})$	$B11m$	$B11m$ $(\mathbf{b}/4)$	$B11b$	$B11b$ $(\mathbf{b}/4)$