No. 1 C_1 1 [triclinic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$$

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A)}$	1									

No. 2 C_i -1 [triclinic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 0 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 0 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_g)}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$								
#2	$\mathbb{Q}_1^{(s,A_u,1)}$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$								

No. 3 C_2 2 (b-axis setting) [monoclinic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 0 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 0 \end{pmatrix}$$

type)	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A)}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$								
#2	$\mathbb{Q}_1^{(s,B,1)}$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$								

No. 4 C_s m (b-axis setting) [monoclinic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 0 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & 0 \end{pmatrix}$$

type	;	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A')}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$								
#2	$\mathbb{Q}_1^{(s,A^{\prime\prime})}$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$								

No. 5 C_{2h} 2/m (b-axis setting) [monoclinic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 1 & 1 \end{pmatrix}$$
 $\begin{pmatrix} -1 & 1 & -1 \end{pmatrix}$ $\begin{pmatrix} -1 & -1 & -1 \end{pmatrix}$ $\begin{pmatrix} 1 & -1 & 1 \end{pmatrix}$

type	:	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_g)}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$						
#2	$\mathbb{Q}_1^{(s,A_u)}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$						
#3	$\mathbb{Q}_1^{(s,B_u,1)}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$						
#4	$\mathbb{Q}_2^{(s,B_g,1)}$	$\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$						

No. 6 D_2 222 [orthorhombic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 1 & 1 \end{pmatrix}$$
 $\begin{pmatrix} -1 & -1 & 1 \end{pmatrix}$ $\begin{pmatrix} -1 & 1 & -1 \end{pmatrix}$ $\begin{pmatrix} 1 & -1 & -1 \end{pmatrix}$

type	,	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A)}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$						
#2	$\mathbb{Q}_1^{(s,B_1)}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$						
#3	$\mathbb{Q}_1^{(s,B_2)}$	$\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$						
#4	$\mathbb{Q}_1^{(s,B_3)}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$						

No. 7 C_{2v} mm2 [orthorhombic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & 0 \end{pmatrix} \quad \begin{pmatrix} 1 & -1 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & 1 & 0 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1 Q	(s,A_1)	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$						
#2 Q	(s,B_1)	$\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$						
#3 Q	(s,B_2)	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$						
#4 Q	(s, A_2)	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$						

No. 8 D_{2h} mmm [orthorhombic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & 1 \\ 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & -1 & -1 \\ -1 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & -1 \\ -1 & 1 & 1 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_g)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#2	$\mathbb{Q}_1^{(s,B_{1u})}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#3	$\mathbb{Q}_1^{(s,B_{2u})}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#4	$\mathbb{Q}_1^{(s,B_{3u})}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#5	$\mathbb{Q}_2^{(s,B_{1g})}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#6	$\mathbb{Q}_2^{(s,B_{2g})}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#7	$\mathbb{Q}_2^{(s,B_{3g})}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#8	$\mathbb{Q}_3^{(s,A_u)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		

No. 9 C_4 4 [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 0 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & 0 \end{pmatrix}$$

type	;	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A)}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$						
#2	$\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$	0	0						
#3	$\mathbb{Q}_{1,1}^{(s,E)}$	0	0	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$						
#4	$\mathbb{Q}_2^{(s,B,1)}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$						

No. 10 S_4 -4 [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & -1 \end{pmatrix}$$

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A)}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$						
#2 $\mathbb{Q}_1^{(s,B)}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$						
#3 $\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$	0	0						
#4 $\mathbb{Q}_{1,1}^{(s,E)}$	0	0	$-\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$						

No. 11 C_{4h} 4/m [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 0 & 1 \end{pmatrix} & \begin{pmatrix} -1 & 0 & 1 \end{pmatrix} & \begin{pmatrix} 0 & 1 & 1 \end{pmatrix} & \begin{pmatrix} 0 & -1 & 1 \end{pmatrix} & \begin{pmatrix} -1 & 0 & -1 \end{pmatrix} \\ \begin{pmatrix} 1 & 0 & -1 \end{pmatrix} & \begin{pmatrix} 0 & -1 & -1 \end{pmatrix} & \begin{pmatrix} 0 & 1 & -1 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_g)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#2	$\mathbb{Q}_1^{(s,A_u)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#3	$\mathbb{Q}_{1,0}^{(s,E_u)}$	$\frac{1}{2}$	$-\frac{1}{2}$	0	0	$-\frac{1}{2}$	$\frac{1}{2}$	0	0		
#4	$\mathbb{Q}_{1,1}^{(s,E_u)}$	0	0	$\frac{1}{2}$	$-\frac{1}{2}$	0	0	$-\frac{1}{2}$	$\frac{1}{2}$		
#5	$\mathbb{Q}_2^{(s,B_g,1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#6	$\mathbb{Q}_{2,0}^{(s,E_g)}$	0	0	$\frac{1}{2}$	$-\frac{1}{2}$	0	0	$\frac{1}{2}$	$-\frac{1}{2}$		
#7	$\mathbb{Q}_{2,1}^{(s,E_g)}$	$-\frac{1}{2}$	$\frac{1}{2}$	0	0	$-\frac{1}{2}$	$\frac{1}{2}$	0	0		
#8	$\mathbb{Q}_3^{(s,B_u,2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		

No. 12 D_4 422 [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 2 & 1 & 1 \end{pmatrix} & \begin{pmatrix} -2 & -1 & 1 \end{pmatrix} & \begin{pmatrix} 2 & -1 & -1 \end{pmatrix} & \begin{pmatrix} -2 & 1 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 2 & -1 \end{pmatrix} \\ \begin{pmatrix} -1 & -2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & 1 \end{pmatrix} & \begin{pmatrix} 1 & -2 & 1 \end{pmatrix}$$

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_1)}$		$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
$\#2$ $\mathbb{Q}_1^{(s,A_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#3 $\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$		
#4 $\mathbb{Q}_{1,1}^{(s,E)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$		
#5 $\mathbb{Q}_2^{(s,B_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#6 $\mathbb{Q}_2^{(s,B_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#7 $\mathbb{Q}_{2,0}^{(s,E)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$		
#8 $\mathbb{Q}_{2,1}^{(s,E)}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$		

No. 13 C_{4v} 4mm [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 2 & 1 & 0 \end{pmatrix} & \begin{pmatrix} -2 & -1 & 0 \end{pmatrix} & \begin{pmatrix} -1 & 2 & 0 \end{pmatrix} & \begin{pmatrix} 1 & -2 & 0 \end{pmatrix} & \begin{pmatrix} -2 & 1 & 0 \end{pmatrix} \\ \begin{pmatrix} 2 & -1 & 0 \end{pmatrix} & \begin{pmatrix} -1 & -2 & 0 \end{pmatrix} & \begin{pmatrix} 1 & 2 & 0 \end{pmatrix} & \begin{pmatrix} 1 & 2 & 0 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#2	$\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$		
#3	$\mathbb{Q}_{1,1}^{(s,E)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$		
#4	$\mathbb{Q}_2^{(s,B_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#5	$\mathbb{Q}_2^{(s,B_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#6	$\mathbb{Q}_{3,0}^{(s,E,1)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$		
#7	$\mathbb{Q}_{3,1}^{(s,E,1)}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$		
#8	$\mathbb{Q}_4^{(s,A_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		

No. 14 D_{2d} -42m (-42m setting) [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 2 & 1 & 1 \\ 1 & 2 & 1 \end{pmatrix} \quad \begin{pmatrix} -2 & -1 & 1 \\ 1 & -2 & -1 \end{pmatrix} \quad \begin{pmatrix} 2 & -1 & -1 \\ -1 & 2 & -1 \end{pmatrix} \quad \begin{pmatrix} -2 & 1 & -1 \\ -1 & 2 & -1 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#2	$\mathbb{Q}_1^{(s,B_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#3	$\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$		
#4	$\mathbb{Q}_{1,1}^{(s,E)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$		
#5	$\mathbb{Q}_2^{(s,B_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#6	$\mathbb{Q}_{2,0}^{(s,E)}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$		
#7	$\mathbb{Q}_{2,1}^{(s,E)}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$		
#8	$\mathbb{Q}_3^{(s,A_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		

No. 14 $D_{2d} - 1$ -4m2 (-4m2 setting) [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 2 & 1 & 1 \end{pmatrix} & \begin{pmatrix} -2 & -1 & 1 \end{pmatrix} & \begin{pmatrix} 1 & 2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & -2 & -1 \end{pmatrix} & \begin{pmatrix} -2 & 1 & 1 \end{pmatrix} \\ \begin{pmatrix} 2 & -1 & 1 \end{pmatrix} & \begin{pmatrix} 1 & -2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & -1 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		
#2	$\mathbb{Q}_1^{(s,B_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#3	$\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$		
#4	$\mathbb{Q}_{1,1}^{(s,E)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$		
#5	$\mathbb{Q}_2^{(s,B_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$		
#6	$\mathbb{Q}_{2,0}^{(s,E)}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$		
#7	$\mathbb{Q}_{2,1}^{(s,E)}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{10}$	$-\frac{\sqrt{5}}{5}$	$\frac{\sqrt{5}}{5}$	$-\frac{\sqrt{5}}{10}$	$\frac{\sqrt{5}}{10}$		
#8	$\mathbb{Q}_3^{(s,A_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$		

No. 15 D_{4h} 4/mmm [tetragonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 2 & 1 & 1 \end{pmatrix} & \begin{pmatrix} -2 & -1 & 1 \end{pmatrix} & \begin{pmatrix} 2 & -1 & -1 \end{pmatrix} & \begin{pmatrix} -2 & 1 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 2 & -1 \end{pmatrix} \\ \begin{pmatrix} -1 & -2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & 1 \end{pmatrix} & \begin{pmatrix} 1 & -2 & 1 \end{pmatrix} & \begin{pmatrix} -2 & -1 & -1 \end{pmatrix} & \begin{pmatrix} 2 & 1 & -1 \end{pmatrix} \\ \begin{pmatrix} -2 & 1 & 1 \end{pmatrix} & \begin{pmatrix} 2 & -1 & 1 \end{pmatrix} & \begin{pmatrix} -1 & -2 & 1 \end{pmatrix} & \begin{pmatrix} 1 & 2 & 1 \end{pmatrix} & \begin{pmatrix} 1 & -2 & -1 \end{pmatrix} \\ \begin{pmatrix} -1 & 2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & -1 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_{1g})}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$				
#2 $\mathbb{Q}_1^{(s,A_{2u})}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$
	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$				
#3 $\mathbb{Q}_{1,0}^{(s,E_u)}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$
	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$				
#4 $\mathbb{Q}_{1,1}^{(s,E_u)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$
	$\frac{\sqrt{10}}{20}$	$-rac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$				
#5 $\mathbb{Q}_2^{(s,B_{1g})}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$				
$\#6$ $\mathbb{Q}_2^{(s,B_{2g})}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$				
#7 $\mathbb{Q}_{2,0}^{(s,E_g)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$
	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$				
$\#8 \mathbb{Q}_{2,1}^{(s,E_g)}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\tfrac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$
	$-\tfrac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\tfrac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\tfrac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$				

表 16

X 10										
type	1	2	3	4	5	6	7	8	9	10
$#9 \mathbb{Q}_3^{(s,B_{1u})}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$
	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$				
#10 $\mathbb{Q}_3^{(s,B_{2u})}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$
	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$				
#11 $\mathbb{Q}_{3,0}^{(s,E_u,1)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$
	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$				
#12 $\mathbb{Q}_{3,1}^{(s,E_u,1)}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$
	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$				
#13 $\mathbb{Q}_4^{(s,A_{2g})}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$				
#14 $\mathbb{Q}_{4,0}^{(s,E_g,1)}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$
	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$				
#15 $\mathbb{Q}_{4,1}^{(s,E_g,1)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$
	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$				
#16 $\mathbb{Q}_{5}^{(s,A_{1u})}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$
	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$	$-\frac{1}{4}$				

No. 16 C_3 3 [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 0 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 0 \end{pmatrix}$$

type)	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A)}$	$\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{3}$							
#2	$\mathbb{Q}_{1,0}^{(s,E)}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{3}$	$-\frac{\sqrt{6}}{6}$							
#3	$\mathbb{Q}_{1,1}^{(s,E)}$	$-\frac{\sqrt{2}}{2}$	0	$\frac{\sqrt{2}}{2}$							

No. 17 C_{3i} -3 [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \\ 0 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & -1 \end{pmatrix}$$

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_g)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#2 $\mathbb{Q}_1^{(s,A_u)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$				
#3 $\mathbb{Q}_{1,0}^{(s,E_u)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$				
#4 $\mathbb{Q}_{1,1}^{(s,E_u)}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$				
#5 $\mathbb{Q}_{2,0}^{(s,E_g,1)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$				
#6 $\mathbb{Q}_{2,1}^{(s,E_g,1)}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$-\frac{1}{2}$	0	$\frac{1}{2}$				

No. 18 D_3 312 (312 setting) [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \\ 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 1 \end{pmatrix}$$

type)	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#2	$\mathbb{Q}_1^{(s,A_2)}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#3	$\mathbb{Q}_{1,0}^{(s,E)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$				
#4	$\mathbb{Q}_{1,1}^{(s,E)}$	$-\frac{1}{2}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	0	$\frac{1}{2}$				
#5	$\mathbb{Q}_{2,0}^{(s,E,1)}$	$-\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	0	$\frac{1}{2}$				
#6	$\mathbb{Q}_{2,1}^{(s,E,1)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$				

No. 18 $D_3 - 1$ 321 (321 setting) [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & -1 & 1 \\ -2 & -1 & 1 \end{pmatrix} \quad \begin{pmatrix} 2 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & -2 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 2 & 1 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#2	$\mathbb{Q}_1^{(s,A_2)}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#3	$\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	0	$-\frac{1}{2}$				
#4	$\mathbb{Q}_{1,1}^{(s,E)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$				
#5	$\mathbb{Q}_{2,0}^{(s,E,1)}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$				
#6	$\mathbb{Q}_{2,1}^{(s,E,1)}$	$-\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	0	$\frac{1}{2}$				

No. 19 C_{3v} 3m1 (3m1 setting) [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 0 \\ 1 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 0 \end{pmatrix}$$

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		1	2	3	4	5	6	7	8	9	10
	#1 $\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#4 $\mathbb{Q}_{2,0}^{(s,E,2)}$ $-\frac{1}{2}$ 0 $\frac{1}{2}$ $\frac{1}{2}$ 0 $-\frac{1}{2}$ #5 $\mathbb{Q}_{2,1}^{(s,E,2)}$ $\frac{\sqrt{3}}{6}$ $-\frac{\sqrt{3}}{3}$ $\frac{\sqrt{3}}{6}$ $\frac{\sqrt{3}}{6}$ $-\frac{\sqrt{3}}{3}$ $\frac{\sqrt{3}}{6}$	#2 $\mathbb{Q}_{1,0}^{(s,E)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$				
#5 $\mathbb{Q}_{2,1}^{(s,E,2)}$ $\frac{\sqrt{3}}{6}$ $-\frac{\sqrt{3}}{3}$ $\frac{\sqrt{3}}{6}$ $\frac{\sqrt{3}}{6}$ $-\frac{\sqrt{3}}{3}$ $\frac{\sqrt{3}}{6}$	#3 $\mathbb{Q}_{1,1}^{(s,E)}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$-\frac{1}{2}$	0	$\frac{1}{2}$				
	#4 $\mathbb{Q}_{2,0}^{(s,E,2)}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$				
#6 $\mathbb{Q}_3^{(s,A_2)}$ $\frac{\sqrt{6}}{6}$ $\frac{\sqrt{6}}{6}$ $\frac{\sqrt{6}}{6}$ $-\frac{\sqrt{6}}{6}$ $-\frac{\sqrt{6}}{6}$ $-\frac{\sqrt{6}}{6}$	#5 $\mathbb{Q}_{2,1}^{(s,E,2)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$				
	#6 $\mathbb{Q}_3^{(s,A_2)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$				

No. 19 $C_{3v} - 1$ 31m (31m setting) [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & -1 & 0 \\ -1 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 1 & 2 & 0 \end{pmatrix} \quad \begin{pmatrix} -2 & -1 & 0 \end{pmatrix} \quad \begin{pmatrix} 2 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & -2 & 0 \end{pmatrix}$$

type)	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#2	$\mathbb{Q}_{1,0}^{(s,E)}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$				
#3	$\mathbb{Q}_{1,1}^{(s,E)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$				
#4	$\mathbb{Q}_{2,0}^{(s,E,2)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$				
#5	$\mathbb{Q}_{2,1}^{(s,E,2)}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{1}{2}$	0	$\frac{1}{2}$				
#6	$\mathbb{Q}_3^{(s,A_2)}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				

No. 20 D_{3d} -31m (-31m setting) [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix}
1 & -1 & 1 \\
-2 & -1 & -1 \\
-2 & -1 & 1
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & -1 & -1 \\
-1 & 1 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & 1 & -1 \\
-1 & -2 & 1
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & -2 & 1 \\
2 & 1 & 1
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & -2 & 1 \\
2 & 1 & -1
\end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_{1g})}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
$\#2$ $\mathbb{Q}_1^{(s,A_{2u})}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#3 $\mathbb{Q}_{1,0}^{(s,E_u)}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
	0	$\frac{\sqrt{2}}{4}$								
#4 $\mathbb{Q}_{1,1}^{(s,E_u)}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$								
#5 $\mathbb{Q}_{2,0}^{(s,E_g,1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
	0	$-\frac{\sqrt{2}}{4}$								
#6 $\mathbb{Q}_{2,1}^{(s,E_g,1)}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$								
#7 $\mathbb{Q}_{2,0}^{(s,E_g,2)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$								
#8 $\mathbb{Q}_{2,1}^{(s,E_g,2)}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
	0	$-\frac{\sqrt{2}}{4}$								
#9 $\mathbb{Q}_3^{(s,A_{1u})}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$

表 23

type		1	2	3	4	5	6	7	8	9	10
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#10	$\mathbb{Q}_{3,0}^{(s,E_u,2)}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$								
#11	$\mathbb{Q}_{3,1}^{(s,E_u,2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		0	$\frac{\sqrt{2}}{4}$								
#12	$\mathbb{Q}_4^{(s,A_{2g})}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								

No. 20
$$D_{3d} - 1$$
 $-3m1$ (-3m1 setting) [trigonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 1 \end{pmatrix}$$

$$\begin{pmatrix} 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & 1 \end{pmatrix}$$

$$\begin{pmatrix} -1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & -1 \end{pmatrix}$$

* site basis

type)	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_{1g})}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2	$\mathbb{Q}_1^{(s,A_{2u})}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#3	$\mathbb{Q}_{1,0}^{(s,E_u)}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$								
#4	$\mathbb{Q}_{1,1}^{(s,E_u)}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		0	$-\frac{\sqrt{2}}{4}$								
#5	$\mathbb{Q}_{2,0}^{(s,E_g,1)}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$								
#6	$\mathbb{Q}_{2,1}^{(s,E_g,1)}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		0	$\frac{\sqrt{2}}{4}$								
#7	$\mathbb{Q}_{2,0}^{(s,E_g,2)}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
		0	$\frac{\sqrt{2}}{4}$								
#8	$\mathbb{Q}_{2,1}^{(s,E_g,2)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$								
#9	$\mathbb{Q}_3^{(s,A_{1u})}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$

表 24

type		1	2	3	4	5	6	7	8	9	10
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#10	$\mathbb{Q}_{3,0}^{(s,E_u,2)}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
		0	$-\frac{\sqrt{2}}{4}$								
#11	$\mathbb{Q}_{3,1}^{(s,E_u,2)}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$								
#12	$\mathbb{Q}_4^{(s,A_{2g})}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								

No. 21 C_6 6 [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & -1 & 0 \\ -1 & -2 & 0 \end{pmatrix} \quad \begin{pmatrix} -1 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 1 & 2 & 0 \end{pmatrix} \quad \begin{pmatrix} -2 & -1 & 0 \end{pmatrix} \quad \begin{pmatrix} 2 & 1 & 0 \end{pmatrix}$$

type		1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A)}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#2	$\mathbb{Q}_{1,0}^{(s,E_1)}$	$\frac{1}{2}$	$-\frac{1}{2}$	0	$-\frac{1}{2}$	$\frac{1}{2}$	0				
#3	$\mathbb{Q}_{1,1}^{(s,E_1)}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$				
#4	$\mathbb{Q}_{2,0}^{(s,E_2)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$				
#5	$\mathbb{Q}_{2,1}^{(s,E_2)}$	$\frac{1}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{1}{2}$	0				
#6	$\mathbb{Q}_3^{(s,B,1)}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				

No. 22 C_{3h} -6 [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \\ 1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & -1 \end{pmatrix}$$

$$\begin{pmatrix} 1 & 0 & -1 \end{pmatrix}$$

type)	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A')}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$				
#2	$\mathbb{Q}_1^{(s,A^{\prime\prime})}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$				
#3	$\mathbb{Q}_{1,0}^{(s,E')}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$				
#4	$\mathbb{Q}_{1,1}^{(s,E')}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$	0				
#5	$\mathbb{Q}_{2,0}^{(s,E^{\prime\prime})}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{3}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{3}$				
#6	$\mathbb{Q}_{2,1}^{(s,E'')}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	0				

No. 23 C_{6h} 6/m [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & 1 \end{pmatrix}$$

$$\begin{pmatrix} -1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & -1 \end{pmatrix}$$

$$\begin{pmatrix} 0 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & -1 \end{pmatrix}$$

* site basis

type	;	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_g)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2	$\mathbb{Q}_1^{(s,A_u)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#3	$\mathbb{Q}_{1,0}^{(s,E_{1u})}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#4	$\mathbb{Q}_{1,1}^{(s,E_{1u})}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
		$\frac{\sqrt{2}}{4}$	0								
#5	$\mathbb{Q}_{2,0}^{(s,E_{1g})}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#6	$\mathbb{Q}_{2,1}^{(s,E_{1g})}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		$-\frac{\sqrt{2}}{4}$	0								
#7	$\mathbb{Q}_{2,0}^{(s,E_{2g})}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$
		$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#8	$\mathbb{Q}_{2,1}^{(s,E_{2g})}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		$\frac{\sqrt{2}}{4}$	0								
#9	$\mathbb{Q}_3^{(s,B_u,2)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$

表 27

type		1	2	3	4	5	6	7	8	9	10
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#10	$\mathbb{Q}_{3,0}^{(s,E_{2u})}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#11	$\mathbb{Q}_{3,1}^{(s,E_{2u})}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
		$-\frac{\sqrt{2}}{4}$	0								
#12	$\mathbb{Q}_4^{(s,B_g,1)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								

No. 24 D_6 622 [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \\ 0 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & 1 \\ -1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & -1 \\ 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & -1 \\ 1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & -1 \\ 0 & 1 & 1 \end{pmatrix}$$

$$\begin{pmatrix} 0 & -1 & 1 \\ -1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 1 \\ -1 & 0 & 1 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2 $\mathbb{Q}_1^{(s,A_2)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#3 $\mathbb{Q}_{1,0}^{(s,E_1)}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#4 $\mathbb{Q}_{1,1}^{(s,E_1)}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	0								
#5 $\mathbb{Q}_{2,0}^{(s,E_1)}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	0								
#6 $\mathbb{Q}_{2,1}^{(s,E_1)}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#7 $\mathbb{Q}_{2,0}^{(s,E_2)}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#8 $\mathbb{Q}_{2,1}^{(s,E_2)}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
	$\frac{\sqrt{2}}{4}$	0								
#9 $\mathbb{Q}_3^{(s,B_2)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$

表 28

type		1	2	3	4	5	6	7	8	9	10
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#10 ($\mathbb{Q}_{3,0}^{(s,E_2)}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		$\frac{\sqrt{2}}{4}$	0								
#11 ($\mathbb{Q}_{3,1}^{(s,E_2)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#12 ($\mathbb{Q}_4^{(s,B_1)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								

No. 25 C_{6v} 6mm [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix}
3 & 1 & 0 \\
1 & -2 & 0
\end{pmatrix} \quad
\begin{pmatrix}
-3 & -1 & 0 \\
-2 & 1 & 0
\end{pmatrix} \quad
\begin{pmatrix}
-1 & 2 & 0 \\
3 & 2 & 0
\end{pmatrix} \quad
\begin{pmatrix}
-2 & -3 & 0 \\
-1 & -3 & 0
\end{pmatrix} \quad
\begin{pmatrix}
2 & 3 & 0 \\
2 & -1 & 0
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & -2 & 0
\end{pmatrix} \quad
\begin{pmatrix}
1 & 3 & 0
\end{pmatrix}$$

* site basis

type	!	1	2	3	4	5	6	7	8	9	10
#1	$\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2	$\mathbb{Q}_{1,0}^{(s,E_1)}$	$\frac{5\sqrt{42}}{84}$	$-\frac{5\sqrt{42}}{84}$	$-\frac{\sqrt{42}}{21}$	$-\frac{\sqrt{42}}{84}$	$\frac{\sqrt{42}}{84}$	$\frac{\sqrt{42}}{21}$	$-\frac{5\sqrt{42}}{84}$	$\frac{\sqrt{42}}{21}$	$\frac{\sqrt{42}}{84}$	$\frac{5\sqrt{42}}{84}$
		$-\frac{\sqrt{42}}{21}$	$-\frac{\sqrt{42}}{84}$								
#3	$\mathbb{Q}_{1,1}^{(s,E_1)}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{14}$	$-\tfrac{3\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{14}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{14}$	$-\tfrac{3\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$
		$-\frac{\sqrt{14}}{14}$	$\frac{3\sqrt{14}}{28}$								
#4	$\mathbb{Q}_{2,0}^{(s,E_2)}$	$\frac{11\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{84}$	$\frac{\sqrt{6}}{42}$	$-\frac{13\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{84}$	$\frac{\sqrt{6}}{42}$	$\frac{11\sqrt{6}}{84}$	$\frac{\sqrt{6}}{42}$	$-\frac{13\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{84}$
		$\frac{\sqrt{6}}{42}$	$-\tfrac{13\sqrt{6}}{84}$								
#5	$\mathbb{Q}_{2,1}^{(s,E_2)}$	$-\frac{5\sqrt{2}}{28}$	$-\frac{5\sqrt{2}}{28}$	$\frac{2\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{2\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{28}$	$-rac{2\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{28}$	$\frac{5\sqrt{2}}{28}$
		$-\frac{2\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{28}$								
#6	$\mathbb{Q}_3^{(s,B_1)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#7	$\mathbb{Q}_3^{(s,B_2)}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#8	$\mathbb{Q}_{4,0}^{(s,E_2,1)}$	$\frac{5\sqrt{2}}{28}$	$\frac{5\sqrt{2}}{28}$	$-rac{2\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$-\frac{2\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{28}$	$-rac{2\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{28}$	$\frac{5\sqrt{2}}{28}$
		$-\frac{2\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{28}$								
#9	$\mathbb{Q}_{4,1}^{(s,E_2,1)}$	$\frac{11\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{84}$	$\frac{\sqrt{6}}{42}$	$-\tfrac{13\sqrt{6}}{84}$	$-\tfrac{13\sqrt{6}}{84}$	$\frac{\sqrt{6}}{42}$	$-\tfrac{11\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{42}$	$\frac{13\sqrt{6}}{84}$	$-\tfrac{11\sqrt{6}}{84}$

表 29

type		1	2	3	4	5	6	7	8	9	10
		$-\frac{\sqrt{6}}{42}$	$\frac{13\sqrt{6}}{84}$								
#10	$\mathbb{Q}_{5,0}^{(s,E_1,1)}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{14}$	$-\frac{3\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{14}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{14}$	$\frac{3\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$
		$\frac{\sqrt{14}}{14}$	$-\tfrac{3\sqrt{14}}{28}$								
#11	$\mathbb{Q}_{5,1}^{(s,E_1,1)}$	$-\tfrac{5\sqrt{42}}{84}$	$\frac{5\sqrt{42}}{84}$	$\frac{\sqrt{42}}{21}$	$\frac{\sqrt{42}}{84}$	$-\frac{\sqrt{42}}{84}$	$-\frac{\sqrt{42}}{21}$	$-\tfrac{5\sqrt{42}}{84}$	$\frac{\sqrt{42}}{21}$	$\frac{\sqrt{42}}{84}$	$\frac{5\sqrt{42}}{84}$
		$-\frac{\sqrt{42}}{21}$	$-\frac{\sqrt{42}}{84}$								
#12	$\mathbb{Q}_6^{(s,A_2)}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								

No. 26 D_{3h} -6m2 (-6m2 setting) [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} -1 & -1 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & -1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & 1 \end{pmatrix}$$

$$\begin{pmatrix} 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 0 & -1 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & 0 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} -1 & -1 & -1 \end{pmatrix}$$

$$\begin{pmatrix} 0 & 1 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & -1 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_1')}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2 $\mathbb{Q}_1^{(s,A_2'')}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$
	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#3 $\mathbb{Q}_{1,0}^{(s,E')}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#4 $\mathbb{Q}_{1,1}^{(s,E')}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$
	$\frac{\sqrt{2}}{4}$	0								
#5 $\mathbb{Q}_{2,0}^{(s,E')}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$
	$\frac{\sqrt{2}}{4}$	0								
#6 $\mathbb{Q}_{2,1}^{(s,E')}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#7 $\mathbb{Q}_{2,0}^{(s,E'')}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#8 $\mathbb{Q}_{2,1}^{(s,E'')}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	0								
#9 $\mathbb{Q}_3^{(s,A_2')}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$

表 30

type		1	2	3	4	5	6	7	8	9	10
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#10	$\mathbb{Q}_{3,0}^{(s,E^{\prime\prime})}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$
		$-\frac{\sqrt{2}}{4}$	0								
#11	$\mathbb{Q}_{3,1}^{(s,E^{\prime\prime})}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
		$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#12	$\mathbb{Q}_4^{(s,A_1'')}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								

No. 26
$$D_{3h} - 1$$
 $-62m$ (-62m setting) [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & -1 & 1 \end{pmatrix} \qquad \begin{pmatrix} 2 & 1 & -1 \end{pmatrix} \qquad \begin{pmatrix} -1 & -2 & -1 \end{pmatrix} \qquad \begin{pmatrix} -1 & 1 & -1 \end{pmatrix} \qquad \begin{pmatrix} 1 & 2 & 1 \end{pmatrix}$$

$$\begin{pmatrix} -2 & -1 & 1 \end{pmatrix} \qquad \begin{pmatrix} 1 & -1 & -1 \end{pmatrix} \qquad \begin{pmatrix} 2 & 1 & 1 \end{pmatrix} \qquad \begin{pmatrix} -1 & -2 & 1 \end{pmatrix} \qquad \begin{pmatrix} -1 & 1 & 1 \end{pmatrix}$$

$$\begin{pmatrix} -2 & -1 & -1 \end{pmatrix} \qquad \begin{pmatrix} 1 & 2 & -1 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_1')}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2 $\mathbb{Q}_1^{(s,A_2'')}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#3 $\mathbb{Q}_{1,0}^{(s,E')}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	0								
#4 $\mathbb{Q}_{1,1}^{(s,E')}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#5 $\mathbb{Q}_{2,0}^{(s,E')}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#6 $\mathbb{Q}_{2,1}^{(s,E')}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	0								
#7 $\mathbb{Q}_{2,0}^{(s,E'')}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
	$\frac{\sqrt{2}}{4}$	0								
#8 $\mathbb{Q}_{2,1}^{(s,E'')}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$								
#9 $\mathbb{Q}_3^{(s,A_2')}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$

表 31

type		1	2	3	4	5	6	7	8	9	10
		$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$								
#10	$\mathbb{Q}_{3,0}^{(s,E^{\prime\prime})}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$
		$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{6}$								
#11	$\mathbb{Q}_{3,1}^{(s,E^{\prime\prime})}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
		$\frac{\sqrt{2}}{4}$	0								
#12	$\mathbb{Q}_4^{(s,A_1'')}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$
		$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								

No. 27 D_{6h} 6/mmm [hexagonal] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 3 & 1 & 1 \end{pmatrix} & \begin{pmatrix} -3 & -1 & 1 \end{pmatrix} & \begin{pmatrix} 2 & -1 & -1 \end{pmatrix} & \begin{pmatrix} -3 & -2 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 3 & -1 \end{pmatrix} \\ \begin{pmatrix} -2 & 1 & -1 \end{pmatrix} & \begin{pmatrix} 3 & 2 & -1 \end{pmatrix} & \begin{pmatrix} -1 & -3 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & 1 \end{pmatrix} & \begin{pmatrix} -2 & -3 & 1 \end{pmatrix} \\ \begin{pmatrix} 2 & 3 & 1 \end{pmatrix} & \begin{pmatrix} 1 & -2 & 1 \end{pmatrix} & \begin{pmatrix} -3 & -1 & -1 \end{pmatrix} & \begin{pmatrix} -2 & 1 & 1 \end{pmatrix} & \begin{pmatrix} 3 & 2 & 1 \end{pmatrix} \\ \begin{pmatrix} -1 & -3 & 1 \end{pmatrix} & \begin{pmatrix} 3 & 1 & -1 \end{pmatrix} & \begin{pmatrix} 2 & -1 & 1 \end{pmatrix} & \begin{pmatrix} -3 & -2 & 1 \end{pmatrix} & \begin{pmatrix} 1 & 3 & 1 \end{pmatrix} \\ \begin{pmatrix} 1 & -2 & -1 \end{pmatrix} & \begin{pmatrix} 2 & 3 & -1 \end{pmatrix} & \begin{pmatrix} -2 & -3 & -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 & -1 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_{1g})}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
$\#2$ $\mathbb{Q}_1^{(s,A_{2u})}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#3 $\mathbb{Q}_{1,0}^{(s,E_{1u})}$	$\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$-\tfrac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$						
#4 $\mathbb{Q}_{1,1}^{(s,E_{1u})}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$
	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$
	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$						
#5 $\mathbb{Q}_{2,0}^{(s,E_{1g})}$	$\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$
	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$						
#6 $\mathbb{Q}_{2,1}^{(s,E_{1g})}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$

type	1	2	3	4	5	6	7	8	9	
	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	3
	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$						
#7 $\mathbb{Q}_{2,0}^{(s,E_{2g})}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	_
	$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	_
	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$						
#8 $\mathbb{Q}_{2,1}^{(s,E_{2g})}$	$-\frac{5}{28}$	$-\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{2}{7}$	_
	$-\frac{3}{28}$	$\frac{2}{7}$	$-\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$-\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	
	$\frac{2}{7}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{2}{7}$						
#9 $\mathbb{Q}_3^{(s,B_{1u})}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	-
	$-\frac{\sqrt{6}}{12}$ $\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#10 $\mathbb{Q}_3^{(s,B_{2u})}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$ $\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#11 $\mathbb{Q}_{3,0}^{(s,E_{2u})}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	_
	$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	_
	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$						
#12 $\mathbb{Q}_{3,1}^{(s,E_{2u})}$	$-\frac{5}{28}$	$-\frac{5}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$	$-\frac{3}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$	$-\frac{3}{28}$	$\frac{2}{7}$	_
	$-\frac{3}{28}$	$\frac{2}{7}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	
	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{2}{7}$						
#13 $\mathbb{Q}_4^{(s,B_{1g})}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#14 $\mathbb{Q}_4^{(s,B_{2g})}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	

type		1	2	3	4	5	6	7	8	9	10
		$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#15	$\mathbb{Q}_{4,0}^{(s,E_{2g},1)}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$
		$\frac{3}{28}$	$-\frac{2}{7}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$
		$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{2}{7}$						
#16	$\mathbb{Q}_{4,1}^{(s,E_{2g},1)}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13}{84}$
		$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$
		$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$						
#17	$\mathbb{Q}_{5,0}^{(s,E_{1u},1)}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{3}}{28}$
		$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{28}}{28}$
		$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$						
#18	$\mathbb{Q}_{5,1}^{(s,E_{1u},1)}$	$-\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$
		$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{2}}{84}$
		$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$						
#19	$\mathbb{Q}_{5,0}^{(s,E_{2u},1)}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$	$-\frac{3}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$	$-\frac{3}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$
		$\frac{3}{28}$	$-\frac{2}{7}$	$-\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$	$-\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$
		$\frac{2}{7}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{2}{7}$						
#20	$\mathbb{Q}_{5,1}^{(s,E_{2u},1)}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\frac{13}{84}$
		$-\tfrac{13\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$-\tfrac{11\sqrt{3}}{84}$	$-\tfrac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\tfrac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$
		$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$						
#21	$\mathbb{Q}_{6}^{(s,A_{2g})}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
		$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#22	$\mathbb{Q}_{6,0}^{(s,E_{1g},1)}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{28}}{28}$

表 32

type	1	2	3	4	5	6	7	8	9	10
	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$
	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$						
#23 $\mathbb{Q}_{6,1}^{(s,E_{1g},1)}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$
	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\tfrac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$						
#24 $\mathbb{Q}_7^{(s,A_{1u})}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						

No. 28 T 23 [cubic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 1 & 1 & 0 \end{pmatrix} & \begin{pmatrix} -1 & -1 & 0 \end{pmatrix} & \begin{pmatrix} 1 & -1 & 0 \end{pmatrix} & \begin{pmatrix} -1 & 1 & 0 \end{pmatrix} & \begin{pmatrix} 0 & 1 & 1 \end{pmatrix} \\ \begin{pmatrix} 0 & -1 & 1 \end{pmatrix} & \begin{pmatrix} 0 & -1 & -1 \end{pmatrix} & \begin{pmatrix} 0 & 1 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 0 & 1 \end{pmatrix} & \begin{pmatrix} -1 & 0 & -1 \end{pmatrix} \\ \begin{pmatrix} -1 & 0 & 1 \end{pmatrix} & \begin{pmatrix} 1 & 0 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 0 & -1 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
$\#1$ $\mathbb{Q}_0^{(s,A)}$	$\frac{\sqrt{3}}{6}$									
	$\frac{\sqrt{3}}{6}$	$\frac{\sqrt{3}}{6}$								
#2 $\mathbb{Q}_{1,0}^{(s,T)}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0	0	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$								
#3 $\mathbb{Q}_{1,1}^{(s,T)}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	0
	0	0								
#4 $\mathbb{Q}_{1,2}^{(s,T)}$	0	0	0	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$
	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$								
#5 $\mathbb{Q}_{2,0}^{(s,E)}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$-\frac{\sqrt{6}}{6}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$								
#6 $\mathbb{Q}_{2,1}^{(s,E)}$	0	0	0	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$
	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$								
#7 $\mathbb{Q}_{2,0}^{(s,T)}$	0	0	0	0	$\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	0	0
	0	0								
#8 $\mathbb{Q}_{2,1}^{(s,T)}$	0	0	0	0	0	0	0	0	$\frac{1}{2}$	$\frac{1}{2}$
	$-\frac{1}{2}$	$-\frac{1}{2}$								
#9 $\mathbb{Q}_{2,2}^{(s,T)}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	0	0	0	0	0	0

表 33

type		1	2	3	4	5	6	7	8	9	10
		0	0								
#10	$\mathbb{Q}_{3,0}^{(s,T,2)}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0	0	0	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$
		$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$								
#11	$\mathbb{Q}_{3,1}^{(s,T,2)}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	0	0
		0	0								
#12	$\mathbb{Q}_{3,2}^{(s,T,2)}$	0	0	0	0	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$
		$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$								

No. 29 T_h m-3 [cubic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix}
3 & 2 & 1 \end{pmatrix} & \begin{pmatrix}
-3 & -2 & 1 \end{pmatrix} & \begin{pmatrix}
3 & -2 & -1 \end{pmatrix} & \begin{pmatrix}
-3 & 2 & -1 \end{pmatrix} & \begin{pmatrix}
1 & 3 & 2 \end{pmatrix} \\
\begin{pmatrix}
-1 & -3 & 2 \end{pmatrix} & \begin{pmatrix}
1 & -3 & -2 \end{pmatrix} & \begin{pmatrix}
-1 & 3 & -2 \end{pmatrix} & \begin{pmatrix}
2 & 1 & 3 \end{pmatrix} & \begin{pmatrix}
-2 & 1 & -3 \end{pmatrix} \\
\begin{pmatrix}
-2 & -1 & 3 \end{pmatrix} & \begin{pmatrix}
2 & -1 & -3 \end{pmatrix} & \begin{pmatrix}
-3 & -2 & -1 \end{pmatrix} & \begin{pmatrix}
3 & 2 & -1 \end{pmatrix} & \begin{pmatrix}
-3 & 2 & 1 \end{pmatrix} \\
\begin{pmatrix}
3 & -2 & 1 \end{pmatrix} & \begin{pmatrix}
-1 & -3 & -2 \end{pmatrix} & \begin{pmatrix}
1 & 3 & -2 \end{pmatrix} & \begin{pmatrix}
-1 & 3 & 2 \end{pmatrix} & \begin{pmatrix}
-1 & 3 & 2 \end{pmatrix} \\
\begin{pmatrix}
-2 & -1 & -3 \end{pmatrix} & \begin{pmatrix}
2 & -1 & 3 \end{pmatrix} & \begin{pmatrix}
2 & 1 & -3 \end{pmatrix} & \begin{pmatrix}
2 & 1 & 3 \end{pmatrix} & \begin{pmatrix}
2 &$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_g)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#2 $\mathbb{Q}_{1,0}^{(s,T_u)}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$
	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$
	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$						
#3 $\mathbb{Q}_{1,1}^{(s,T_u)}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$
	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$
	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$						
#4 $\mathbb{Q}_{1,2}^{(s,T_u)}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$
	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$
	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$						
#5 $\mathbb{Q}_{2,0}^{(s,E_g)}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$
	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$
	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$						
#6 $\mathbb{Q}_{2,1}^{(s,E_g)}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{3}{28}$

表 34										
type	1	2	3	4	5	6	7	8	9	10
	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$
	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$						
#7 $\mathbb{Q}_{2,0}^{(s,T_g)}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$
	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$
	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$						
#8 $\mathbb{Q}_{2,1}^{(s,T_g)}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$
	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$
	$\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$						
#9 $\mathbb{Q}_{2,2}^{(s,T_g)}$	$\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$
	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$
	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$						
#10 $\mathbb{Q}_3^{(s,A_u)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#11 $\mathbb{Q}_{3,0}^{(s,T_u,1)}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#12 $\mathbb{Q}_{3,1}^{(s,T_u,1)}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#13 $\mathbb{Q}_{3,2}^{(s,T_u,1)}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#14 $\mathbb{Q}_{3,0}^{(s,T_u,2)}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$

表 34										
type	1	2	3	4	5	6	7	8	9	10
	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$						
#15 $\mathbb{Q}_{3,1}^{(s,T_u,2)}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$
	$-\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$
	$-\tfrac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$						
#16 $\mathbb{Q}_{3,2}^{(s,T_u,2)}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\tfrac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$
	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$						
#17 $\mathbb{Q}_{4,0}^{(s,T_g,1)}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$
	$\frac{64\sqrt{829}}{5803}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$
	$-\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$-\frac{64\sqrt{829}}{5803}$						
#18 $\mathbb{Q}_{4,1}^{(s,T_g,1)}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{9\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$
	$-\tfrac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{9\sqrt{829}}{23212}$
	$\frac{125\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\frac{125\sqrt{829}}{23212}$	$-\frac{125\sqrt{829}}{23212}$						
#19 $\mathbb{Q}_{4,2}^{(s,T_g,1)}$	$\frac{125\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$-\frac{64\sqrt{829}}{5803}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$
	$\frac{9\sqrt{829}}{23212}$	$-rac{9\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$\frac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$-\tfrac{125\sqrt{829}}{23212}$	$-\frac{64\sqrt{829}}{5803}$	$-\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$	$\frac{64\sqrt{829}}{5803}$
	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$	$\frac{9\sqrt{829}}{23212}$	$-\frac{9\sqrt{829}}{23212}$						
#20 $\mathbb{Q}_{4,0}^{(s,T_g,2)}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$-\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$
	$\frac{\sqrt{829}}{829}$	$-\frac{\sqrt{829}}{829}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$
	$-\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$-\frac{\sqrt{829}}{829}$						
#21 $\mathbb{Q}_{4,1}^{(s,T_g,2)}$	$-\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$-\frac{\sqrt{829}}{829}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$
	$\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$-\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$-\frac{\sqrt{829}}{829}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$\frac{39\sqrt{829}}{3316}$
	$-\frac{11\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$						
#22 $\mathbb{Q}_{4,2}^{(s,T_g,2)}$	$-\frac{11\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$-\frac{\sqrt{829}}{829}$	$-\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$

表 34

type	1	2	3	4	5	6	7	8	9	10
	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$-\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$\frac{11\sqrt{829}}{3316}$	$-\frac{\sqrt{829}}{829}$	$-\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$	$\frac{\sqrt{829}}{829}$
	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$	$\frac{39\sqrt{829}}{3316}$	$-\frac{39\sqrt{829}}{3316}$						
#23 $\mathbb{Q}_{5,0}^{(s,E_u)}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{3}{28}$
	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{5}{28}$	$-\frac{5}{28}$	$-\frac{5}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$	$\frac{2}{7}$	$\frac{2}{7}$	$\frac{2}{7}$
	$-\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$						
#24 $\mathbb{Q}_{5,1}^{(s,E_u)}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{\sqrt{3}}{42}$	$\frac{\sqrt{3}}{42}$	$\frac{\sqrt{3}}{42}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$
	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$
	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$						

No. 30 O 432 [cubic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 3 & 2 & 1 \end{pmatrix} & \begin{pmatrix} -3 & -2 & 1 \end{pmatrix} & \begin{pmatrix} 3 & -2 & -1 \end{pmatrix} & \begin{pmatrix} -3 & 2 & -1 \end{pmatrix} & \begin{pmatrix} 2 & 3 & -1 \end{pmatrix} \\ \begin{pmatrix} 1 & -2 & 3 \end{pmatrix} & \begin{pmatrix} -3 & 1 & 2 \end{pmatrix} & \begin{pmatrix} -2 & -3 & -1 \end{pmatrix} & \begin{pmatrix} -1 & -2 & -3 \end{pmatrix} & \begin{pmatrix} -3 & -1 & -2 \end{pmatrix} \\ \begin{pmatrix} 1 & 3 & 2 \end{pmatrix} & \begin{pmatrix} -1 & -3 & 2 \end{pmatrix} & \begin{pmatrix} 1 & -3 & -2 \end{pmatrix} & \begin{pmatrix} -1 & 3 & -2 \end{pmatrix} & \begin{pmatrix} 2 & 1 & 3 \end{pmatrix} \\ \begin{pmatrix} -2 & 1 & -3 \end{pmatrix} & \begin{pmatrix} -2 & -1 & 3 \end{pmatrix} & \begin{pmatrix} 2 & -1 & -3 \end{pmatrix} & \begin{pmatrix} -2 & 3 & 1 \end{pmatrix} & \begin{pmatrix} 3 & -1 & 2 \end{pmatrix} \\ \begin{pmatrix} 1 & 2 & -3 \end{pmatrix} & \begin{pmatrix} 2 & -3 & 1 \end{pmatrix} & \begin{pmatrix} 3 & 1 & -2 \end{pmatrix} & \begin{pmatrix} -1 & 2 & 3 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#2 $\mathbb{Q}_{1,0}^{(s,T_1)}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$
	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$
	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$						
#3 $\mathbb{Q}_{1,1}^{(s,T_1)}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{28}$
	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$
	$\frac{\sqrt{7}}{14}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$						
#4 $\mathbb{Q}_{1,2}^{(s,T_1)}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$
	$\frac{\sqrt{7}}{14}$	$\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{3\sqrt{7}}{28}$	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$\frac{\sqrt{7}}{14}$
	$-\frac{3\sqrt{7}}{28}$	$\frac{\sqrt{7}}{28}$	$-\frac{\sqrt{7}}{14}$	$\frac{3\sqrt{7}}{28}$						
#5 $\mathbb{Q}_{2,0}^{(s,E)}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$-\frac{11\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$
	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$
	$\frac{13\sqrt{3}}{84}$	$-\tfrac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$						
#6 $\mathbb{Q}_{2,1}^{(s,E)}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$-\frac{5}{28}$	$-\frac{3}{28}$	$\frac{2}{7}$	$-\frac{5}{28}$	$-\frac{3}{28}$	$\frac{2}{7}$

表 35

12 00										
type	1	2	3	4	5	6	7	8	9	10
	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$
	$-\frac{3}{28}$	$-\frac{5}{28}$	$\frac{2}{7}$	$-\frac{3}{28}$						
#7 $\mathbb{Q}_{2,0}^{(s,T_2)}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$
	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$-\frac{\sqrt{2}}{14}$
	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$						
#8 $\mathbb{Q}_{2,1}^{(s,T_2)}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$-\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{14}$
	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$
	$-\frac{3\sqrt{2}}{28}$	$\frac{\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{28}$						
#9 $\mathbb{Q}_{2,2}^{(s,T_2)}$	$\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$
	$\frac{3\sqrt{2}}{28}$	$\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$-\frac{3\sqrt{2}}{28}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$\frac{\sqrt{2}}{14}$	$-\frac{\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{28}$
	$\frac{\sqrt{2}}{14}$	$-\frac{3\sqrt{2}}{14}$	$\frac{3\sqrt{2}}{28}$	$-\frac{\sqrt{2}}{14}$						
#10 $\mathbb{Q}_3^{(s,A_2)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#11 $\mathbb{Q}_{3,0}^{(s,T_1)}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#12 $\mathbb{Q}_{3,1}^{(s,T_1)}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						
#13 $\mathbb{Q}_{3,2}^{(s,T_1)}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#14 $\mathbb{Q}_{3,0}^{(s,T_2)}$	$\frac{9\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$\frac{4\sqrt{181}}{181}$	$-\frac{5\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$	$-\frac{4\sqrt{181}}{181}$	$\frac{5\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$

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type	1	2	3	4	5	6	7	8	9	10
	$\frac{5\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$-\frac{4\sqrt{181}}{181}$	$\frac{4\sqrt{181}}{181}$	$\frac{4\sqrt{181}}{181}$	$-\frac{4\sqrt{181}}{181}$	$-\frac{4\sqrt{181}}{181}$	$-\frac{9\sqrt{181}}{724}$
	$-\frac{5\sqrt{181}}{724}$	$\frac{4\sqrt{181}}{181}$	$-\frac{9\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$						
#15 $\mathbb{Q}_{3,1}^{(s,T_2)}$	$-\frac{4\sqrt{181}}{181}$	$\frac{4\sqrt{181}}{181}$	$\frac{4\sqrt{181}}{181}$	$-\frac{4\sqrt{181}}{181}$	$-\frac{9\sqrt{181}}{724}$	$-\frac{4\sqrt{181}}{181}$	$-\frac{5\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$	$-\frac{4\sqrt{181}}{181}$	$\frac{5\sqrt{181}}{724}$
	$\frac{9\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$-\tfrac{5\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$
	$\frac{4\sqrt{181}}{181}$	$\frac{9\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$\frac{4\sqrt{181}}{181}$						
#16 $\mathbb{Q}_{3,2}^{(s,T_2)}$	$\frac{5\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$\frac{5\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$\frac{4\sqrt{181}}{181}$	$\frac{5\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$	$-\frac{4\sqrt{181}}{181}$
	$-\frac{4\sqrt{181}}{181}$	$-\frac{4\sqrt{181}}{181}$	$\frac{4\sqrt{181}}{181}$	$\frac{4\sqrt{181}}{181}$	$\frac{9\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$\frac{9\sqrt{181}}{724}$	$-\frac{9\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$\frac{4\sqrt{181}}{181}$
	$\frac{9\sqrt{181}}{724}$	$-\frac{5\sqrt{181}}{724}$	$-\frac{4\sqrt{181}}{181}$	$-\frac{9\sqrt{181}}{724}$						
#17 $\mathbb{Q}_{4,0}^{(s,E)}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{5}{28}$	$\frac{3}{28}$	$-\frac{2}{7}$	$\frac{5}{28}$	$\frac{3}{28}$	$-\frac{2}{7}$
	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$-\frac{2}{7}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$
	$\frac{3}{28}$	$\frac{5}{28}$	$-\frac{2}{7}$	$\frac{3}{28}$						
#18 $\mathbb{Q}_{4,1}^{(s,E)}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$\frac{11\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$-\frac{11\sqrt{3}}{84}$	$\frac{13\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$
	$\frac{\sqrt{3}}{42}$	$\frac{\sqrt{3}}{42}$	$\frac{\sqrt{3}}{42}$	$\frac{\sqrt{3}}{42}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$
	$\frac{13\sqrt{3}}{84}$	$-\frac{11\sqrt{3}}{84}$	$-\frac{\sqrt{3}}{42}$	$\frac{13\sqrt{3}}{84}$						
#19 $\mathbb{Q}_{4,0}^{(s,T_1)}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$
	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$
	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$						
#20 $\mathbb{Q}_{4,1}^{(s,T_1)}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$-\frac{5\sqrt{21}}{84}$
	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$
	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$						
#21 $\mathbb{Q}_{4,2}^{(s,T_1)}$	$\frac{5\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$	$-\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$
	$-\frac{\sqrt{21}}{21}$	$-\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$-\frac{\sqrt{21}}{21}$
	$-\frac{\sqrt{21}}{84}$	$\frac{5\sqrt{21}}{84}$	$\frac{\sqrt{21}}{21}$	$\frac{\sqrt{21}}{84}$						
#22 $\mathbb{Q}_{4,0}^{(s,T_2)}$	$\frac{111\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$-\frac{11\sqrt{181}}{1267}$	$\frac{59\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{59\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$

表 35

type		1	2	3	4	5	6	7	8	9	10
		$-\frac{59\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{11\sqrt{181}}{1267}$	$-\frac{11\sqrt{181}}{1267}$	$\frac{11\sqrt{181}}{1267}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{111\sqrt{181}}{5068}$
		$\frac{59\sqrt{181}}{5068}$	$-\frac{11\sqrt{181}}{1267}$	$-\frac{111\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$						
#23 $\mathbb{Q}_{4,1}^{(s,7)}$	$T_2)$	$\frac{11\sqrt{181}}{1267}$	$-\frac{11\sqrt{181}}{1267}$	$-\frac{11\sqrt{181}}{1267}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{111\sqrt{181}}{5068}$	$\frac{11\sqrt{181}}{1267}$	$\frac{59\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{59\sqrt{181}}{5068}$
		$\frac{111\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$
		$-rac{11\sqrt{181}}{1267}$	$\frac{111\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$-\frac{11\sqrt{181}}{1267}$						
#24 $\mathbb{Q}_{4,2}^{(s,7)}$	$\Gamma_2)$	$-\frac{59\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$-\frac{59\sqrt{181}}{5068}$	$-\tfrac{111\sqrt{181}}{5068}$	$-\frac{11\sqrt{181}}{1267}$	$-\frac{59\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$	$\frac{11\sqrt{181}}{1267}$
		$\frac{11\sqrt{181}}{1267}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{11\sqrt{181}}{1267}$	$-\frac{11\sqrt{181}}{1267}$	$\frac{111\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$\frac{111\sqrt{181}}{5068}$	$-\frac{111\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$-\frac{11\sqrt{181}}{1267}$
		$\frac{111\sqrt{181}}{5068}$	$\frac{59\sqrt{181}}{5068}$	$\frac{11\sqrt{181}}{1267}$	$-\frac{111\sqrt{181}}{5068}$						

No. 31 T_d -43m [cubic] (orthonormalized)

* site positions (reduced coordinate)

$$\begin{pmatrix} 2 & 1 & 0 \end{pmatrix} & \begin{pmatrix} -2 & -1 & 0 \end{pmatrix} & \begin{pmatrix} 2 & -1 & 0 \end{pmatrix} & \begin{pmatrix} -2 & 1 & 0 \end{pmatrix} & \begin{pmatrix} 0 & 2 & 1 \end{pmatrix} \\ \begin{pmatrix} 0 & -2 & 1 \end{pmatrix} & \begin{pmatrix} 0 & -2 & -1 \end{pmatrix} & \begin{pmatrix} 0 & 2 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 0 & 2 \end{pmatrix} & \begin{pmatrix} -1 & 0 & -2 \end{pmatrix} \\ \begin{pmatrix} -1 & 0 & 2 \end{pmatrix} & \begin{pmatrix} 1 & 0 & -2 \end{pmatrix} & \begin{pmatrix} -1 & -2 & 0 \end{pmatrix} & \begin{pmatrix} 0 & 1 & -2 \end{pmatrix} & \begin{pmatrix} 2 & 0 & -1 \end{pmatrix} \\ \begin{pmatrix} 1 & 2 & 0 \end{pmatrix} & \begin{pmatrix} 0 & 1 & 2 \end{pmatrix} & \begin{pmatrix} 2 & 0 & 1 \end{pmatrix} & \begin{pmatrix} 1 & -2 & 0 \end{pmatrix} & \begin{pmatrix} -2 & 0 & -1 \end{pmatrix} \\ \begin{pmatrix} 0 & -1 & 2 \end{pmatrix} & \begin{pmatrix} -1 & 2 & 0 \end{pmatrix} & \begin{pmatrix} -2 & 0 & 1 \end{pmatrix} & \begin{pmatrix} 0 & -1 & -2 \end{pmatrix}$$

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_1)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$						
#2 $\mathbb{Q}_{1,0}^{(s,T_2)}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	0	0	0	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$
	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$
	0	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0						
#3 $\mathbb{Q}_{1,1}^{(s,T_2)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	0	0
	0	0	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$	0
	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$						
#4 $\mathbb{Q}_{1,2}^{(s,T_2)}$	0	0	0	0	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$
	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{20}$
	$\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$						
#5 $\mathbb{Q}_{2,0}^{(s,E)}$	$-\frac{5\sqrt{39}}{156}$	$-\frac{5\sqrt{39}}{156}$	$-\frac{5\sqrt{39}}{156}$	$-\frac{5\sqrt{39}}{156}$	$-\tfrac{\sqrt{39}}{78}$	$-\frac{\sqrt{39}}{78}$	$-\frac{\sqrt{39}}{78}$	$-\tfrac{\sqrt{39}}{78}$	$\frac{7\sqrt{39}}{156}$	$\frac{7\sqrt{39}}{156}$
	$\frac{7\sqrt{39}}{156}$	$\frac{7\sqrt{39}}{156}$	$-\frac{5\sqrt{39}}{156}$	$\frac{7\sqrt{39}}{156}$	$-\frac{\sqrt{39}}{78}$	$-\frac{5\sqrt{39}}{156}$	$\frac{7\sqrt{39}}{156}$	$-\tfrac{\sqrt{39}}{78}$	$-\frac{5\sqrt{39}}{156}$	$-\frac{\sqrt{39}}{78}$
	$\frac{7\sqrt{39}}{156}$	$-\tfrac{5\sqrt{39}}{156}$	$-\tfrac{\sqrt{39}}{78}$	$\frac{7\sqrt{39}}{156}$						
#6 $\mathbb{Q}_{2,1}^{(s,E)}$	$\frac{3\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$-\tfrac{\sqrt{13}}{13}$	$-\tfrac{\sqrt{13}}{13}$	$-\tfrac{\sqrt{13}}{13}$	$-\frac{\sqrt{13}}{13}$	$\frac{\sqrt{13}}{52}$	$\frac{\sqrt{13}}{52}$

type	1	2	3	4	5	6	7	8	9	10
	$\frac{\sqrt{13}}{52}$	$\frac{\sqrt{13}}{52}$	$-\frac{3\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{52}$	$\frac{\sqrt{13}}{13}$	$-\frac{3\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{52}$	$\frac{\sqrt{13}}{13}$	$-\frac{3\sqrt{13}}{52}$	$\frac{\sqrt{13}}{13}$
	$-\frac{\sqrt{13}}{52}$	$-\frac{3\sqrt{13}}{52}$	$\frac{\sqrt{13}}{13}$	$-\frac{\sqrt{13}}{52}$	10	02	02	10	52	10
#7 $\mathbb{Q}_{2,0}^{(s,T_2)}$	0	0	0	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0
	0	0	0	$-\frac{\sqrt{2}}{4}$	0	0	$\frac{\sqrt{2}}{4}$	0	0	0
	$-\frac{\sqrt{2}}{4}$	0	0	$\frac{\sqrt{2}}{4}$						
#8 $\mathbb{Q}_{2,1}^{(s,T_2)}$	0	0	0	0	0	0	0	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$
	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0	$-\frac{\sqrt{2}}{4}$	0	0	$\frac{\sqrt{2}}{4}$	0	$\frac{\sqrt{2}}{4}$
	0	0	$-\frac{\sqrt{2}}{4}$	0						
#9 $\mathbb{Q}_{2,2}^{(s,T_2)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0	0	0	0	0
	0	0	$\frac{\sqrt{2}}{4}$	0	0	$\frac{\sqrt{2}}{4}$	0	0	$-\frac{\sqrt{2}}{4}$	0
	0	$-\frac{\sqrt{2}}{4}$	0	0						
#10 $\mathbb{Q}_{3,0}^{(s,T_1)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	0	0	0	0	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$
	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$
	0	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0						
#11 $\mathbb{Q}_{3,1}^{(s,T_1)}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	0	0
	0	0	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$	0
	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$						
#12 $\mathbb{Q}_{3,2}^{(s,T_1)}$	0	0	0	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{1}}{20}$
	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{1}}{10}$
	$-\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$						
#13 $\mathbb{Q}_{3,0}^{(s,T_2)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	0	0	0	0	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$
	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{1}}{20}$
	0	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0						
#14 $\mathbb{Q}_{3,1}^{(s,T_2)}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	0	0

表 36

type		1	2	3	4	5	6	7	8	9	10
		0	0	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$	0
		$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$						
#15	$\mathbb{Q}_{3,2}^{(s,T_2)}$	0	0	0	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$
		$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{10}$
		$\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$						
#16	$\mathbb{Q}_{4,0}^{(s,E)}$	$\frac{3\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{13}$	$-\frac{\sqrt{13}}{13}$	$-\frac{\sqrt{13}}{13}$	$-\frac{\sqrt{13}}{13}$	$\frac{\sqrt{13}}{52}$	$\frac{\sqrt{13}}{52}$
		$\frac{\sqrt{13}}{52}$	$\frac{\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$\frac{\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{13}$	$\frac{3\sqrt{13}}{52}$	$\frac{\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{13}$	$\frac{3\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{13}$
		$\frac{\sqrt{13}}{52}$	$\frac{3\sqrt{13}}{52}$	$-\frac{\sqrt{13}}{13}$	$\frac{\sqrt{13}}{52}$						
#17	$\mathbb{Q}_{4,1}^{(s,E)}$	$\frac{5\sqrt{39}}{156}$	$\frac{5\sqrt{39}}{156}$	$\frac{5\sqrt{39}}{156}$	$\frac{5\sqrt{39}}{156}$	$\frac{\sqrt{39}}{78}$	$\frac{\sqrt{39}}{78}$	$\frac{\sqrt{39}}{78}$	$\frac{\sqrt{39}}{78}$	$-\tfrac{7\sqrt{39}}{156}$	$-\tfrac{7\sqrt{39}}{156}$
		$-\tfrac{7\sqrt{39}}{156}$	$-\frac{7\sqrt{39}}{156}$	$-\frac{5\sqrt{39}}{156}$	$\frac{7\sqrt{39}}{156}$	$-\frac{\sqrt{39}}{78}$	$-\frac{5\sqrt{39}}{156}$	$\frac{7\sqrt{39}}{156}$	$-\tfrac{\sqrt{39}}{78}$	$-\frac{5\sqrt{39}}{156}$	$-\frac{\sqrt{39}}{78}$
		$\frac{7\sqrt{39}}{156}$	$-\frac{5\sqrt{39}}{156}$	$-\tfrac{\sqrt{39}}{78}$	$\frac{7\sqrt{39}}{156}$						
#18	$\mathbb{Q}_{4,0}^{(s,T_1)}$	0	0	0	0	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0
		0	0	0	$\frac{\sqrt{2}}{4}$	0	0	$-\frac{\sqrt{2}}{4}$	0	0	0
		$\frac{\sqrt{2}}{4}$	0	0	$-\frac{\sqrt{2}}{4}$						
#19	$\mathbb{Q}_{4,1}^{(s,T_1)}$	0	0	0	0	0	0	0	0	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$
		$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0	$\frac{\sqrt{2}}{4}$	0	0	$-\frac{\sqrt{2}}{4}$	0	$-\frac{\sqrt{2}}{4}$
		0	0	$\frac{\sqrt{2}}{4}$	0						
#20	$\mathbb{Q}_{4,2}^{(s,T_1)}$	$\frac{\sqrt{2}}{4}$	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{4}$	0	0	0	0	0	0
		0	0	$-\frac{\sqrt{2}}{4}$	0	0	$-\frac{\sqrt{2}}{4}$	0	0	$\frac{\sqrt{2}}{4}$	0
		0	$\frac{\sqrt{2}}{4}$	0	0						
#21	$\mathbb{Q}_{5,0}^{(s,T_1)}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	0	0	0	0	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$
		$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$
		0	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	0						
#22	$\mathbb{Q}_{5,1}^{(s,T_1)}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	$-\tfrac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{10}$	0	0

表 36

type	1	2	3	4	5	6	7	8	9	10
	0	0	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{10}$	0
	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{20}$						
#23 $\mathbb{Q}_{5,2}^{(s,T_1)}$	0	0	0	0	$\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$
	$\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{10}$	0	$\frac{\sqrt{10}}{10}$	$\frac{\sqrt{10}}{20}$	0	$-\frac{\sqrt{10}}{10}$	$-\frac{\sqrt{10}}{20}$	0	$\frac{\sqrt{10}}{20}$
	$-\frac{\sqrt{10}}{10}$	0	$-\frac{\sqrt{10}}{20}$	$\frac{\sqrt{10}}{10}$						
#24 $\mathbb{Q}_6^{(s,A_2)}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$
	$\frac{\sqrt{6}}{12}$	$\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$
	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$	$-\frac{\sqrt{6}}{12}$						

No. 32
$$O_h$$
 $m-3m$ [cubic] (orthonormalized)

* site positions (reduced coordinate)

* site basis

type	1	2	3	4	5	6	7	8	9	10
#1 $\mathbb{Q}_0^{(s,A_{1g})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
#2 $\mathbb{Q}_{1,0}^{(s,T_{1u})}$	$\frac{3\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$-\tfrac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\tfrac{\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$
	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$
	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$		
#3 $\mathbb{Q}_{1,1}^{(s,T_{1u})}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$

表 37

type	1	2	3	4	5	6	7	8	9	10
	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$		
#4 $\mathbb{Q}_{1,2}^{(s,T_{1u})}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$
	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$
	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$		
$\#5 \mathbb{Q}_{2,0}^{(s,E_g)}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$
	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$
	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$		
$\#6$ $\mathbb{Q}_{2,1}^{(s,E_g)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$
	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$
	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$
	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$
	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$		
$\#7$ $\mathbb{Q}_{2,0}^{(s,T_{2g})}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$
	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$
	$-\frac{3}{14}$	$-\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$
	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{3}{28}$
	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$		

type	1	2	3	4	5	6	7	8	9
#8 $\mathbb{Q}_{2,1}^{(s,T_{2g})}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{28}$	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$
	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{1}{14}$
	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$
	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$
	$-\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	
#9 $\mathbb{Q}_{2,2}^{(s,T_{2g})}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$
	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$
	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$
	$-\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$
	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{1}{14}$	
#10 $\mathbb{Q}_3^{(s,A_{2u})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\frac{\sqrt{3}}{12}}{\frac{\sqrt{3}}{12}}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	
#11 $\mathbb{Q}_{3,0}^{(s,T_{1u})}$		$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	
#12 $\mathbb{Q}_{3,1}^{(s,T_{1u})}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$

表 37

type	1	2	3	4	5	6	7	8	9	10
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
#13 $\mathbb{Q}_{3,2}^{(s,T_{1u})}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
#14 $\mathbb{Q}_{3,0}^{(s,T_{2u})}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$
	$-\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$
	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$		
#15 $\mathbb{Q}_{3,1}^{(s,T_{2u})}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$
	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$
	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$
	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$
	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$		
#16 $\mathbb{Q}_{3,2}^{(s,T_{2u})}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$
	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$
	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$		
#17 $\mathbb{Q}_{4,0}^{(s,E_g)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$
	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$
	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$

表 37

type	1	2	3	4	5	6	7	8	9	10
	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{3}}{56}$
	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$		
#18 $\mathbb{Q}_{4,1}^{(s,E_g)}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{}{8}$
	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{8}}{8}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13}{168}$
	$-\frac{\sqrt{6}}{84}$	$-\tfrac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13}{10}$
	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$		
#19 $\mathbb{Q}_{4,0}^{(s,T_{1g})}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{1}}{1}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{4}}{16}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{16}}{16}$
	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{4}}{4}$
	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$		
#20 $\mathbb{Q}_{4,1}^{(s,T_{1g})}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5}{1}$
	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5}{1}$
	$-rac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-rac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{4}}{4}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5}{16}$
	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$		
#21 $\mathbb{Q}_{4,2}^{(s,T_{1g})}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{4}}{4}$
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	- <u>v</u>
	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\tfrac{5\sqrt{42}}{168}$	$\frac{\sqrt{2}}{16}$
	$-\frac{\sqrt{42}}{42}$	$-\tfrac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{v}{1}$
	$\frac{\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$		
#22 $\mathbb{Q}_{4,0}^{(s,T_{2g})}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	111v 101
	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111}{10}$

表 37

type	1	2	3	4	5	6	7	8	9	10
	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59}{101}$
	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11}{25}$
	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$		
#23 $\mathbb{Q}_{4,1}^{(s,T_{2g})}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59}{10}$
	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59}{10}$
	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{253}}{253}$
	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59}{10}$
	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$		
#24 $\mathbb{Q}_{4,2}^{(s,T_{2g})}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11}{25}$
	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11}{2}$
	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111}{10}$
	$-\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111}{10}$
	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$		
#25 $\mathbb{Q}_{5,0}^{(s,E_u)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	_ 2
	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	_ 2
	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3}{5}$
	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{3}{5}$
	$-\frac{3\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$		
#26 $\mathbb{Q}_{5,1}^{(s,E_u)}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	-\frac{\cdot}{\xi}
	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{5}{8}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13}{1}$
	$\frac{\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13}{16}$
	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$		
					$-\frac{\sqrt{42}}{}$					$-\frac{\sqrt{1}}{1}$

type	1	2	3	4	5	6	7	8	9	
	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	
	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	
	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	
	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$		
#28 $\mathbb{Q}_{5,1}^{(s,T_{1u},1)}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	
	$\frac{\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	
	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	
	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\tfrac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$		
#29 $\mathbb{Q}_{5,2}^{(s,T_{1u},1)}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\tfrac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\tfrac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	
	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	
	$\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	
	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$		
#30 $\mathbb{Q}_{5,0}^{(s,T_{2u})}$	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	
	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	-
	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	
	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	
	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$		
#31 $\mathbb{Q}_{5,1}^{(s,T_{2u})}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	
	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	
	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	
	$-\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	
	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$		

表 37

type	1	2	3	4	5	6	7	8	9	10
#32 $\mathbb{Q}_{5,2}^{(s,T_{2u})}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$
	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$
	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$
	$\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$
	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$		
#33 $\mathbb{Q}_6^{(s,A_{2g})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
#34 $\mathbb{Q}_{6,0}^{(s,T_{1g})}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
#35 $\mathbb{Q}_{6,1}^{(s,T_{1g})}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
#36 $\mathbb{Q}_{6,2}^{(s,T_{1g})}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$

type	1	2	3	4	5	6	7	8	9	
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
#37 $\mathbb{Q}_{6,0}^{(s,T_{2g},1)}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	_
	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	
	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	
	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	-
	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$		
#38 $\mathbb{Q}_{6,1}^{(s,T_{2g},1)}$	$\frac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	-
	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	-
	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	
	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	-
	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$		
#39 $\mathbb{Q}_{6,2}^{(s,T_{2g},1)}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	
	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	-
	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	
	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\tfrac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	
	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\tfrac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$		
#40 $\mathbb{Q}_{7,0}^{(s,E_u)}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	
	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	
	$\frac{\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	
	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$		
#41 $\mathbb{Q}_{7,1}^{(s,E_u)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\tfrac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	
	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\tfrac{5\sqrt{2}}{56}$	
	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	

type	1	2	3	4	5	6	7	8	9	
	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	-
	$-\frac{3\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$		
#42 $\mathbb{Q}_{7,0}^{(s,T_{2u},1)}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$	
	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	
	$\frac{3}{14}$	$\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	
	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	
	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$		
#43 $\mathbb{Q}_{7,1}^{(s,T_{2u},1)}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{28}$	$\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	
	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$\frac{1}{14}$	
	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	
	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	
	$-\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$		
#44 $\mathbb{Q}_{7,2}^{(s,T_{2u},1)}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$-\frac{3}{14}$	$-\frac{1}{14}$	
	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	
	$-\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	
	$-\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	
	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{1}{14}$		
#45 $\mathbb{Q}_{8,0}^{(s,T_{1g},1)}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	
	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	-
	$-\tfrac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	-
	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	
	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$		
#46 $\mathbb{Q}_{8,1}^{(s,T_{1g},1)}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	
,	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	

表 37

type	1	2	3	4	5	6	7	8	9	10
	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$		
#47 $\mathbb{Q}_{8,2}^{(s,T_{1g},1)}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\tfrac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$
	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$
	$-\tfrac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$		
$#48 \mathbb{Q}_9^{(s,A_{1u})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		