

表 1 rank 0

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
1	A'_1	$A1'$	—	—	$Q_0^{(h,A'_1)}$	$Qh(0, A1', ,)$	C_0

表 2 rank 1

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
2	A''_2	$A2''$	—	—	$Q_1^{(h,A''_2)}$	$Qh(1, A2'', ,)$	C_0
3	E'	E'	—	0	$Q_{1,0}^{(h,E')}$	$Qh(1, E', , 0)$	C_1
4	E'	E'	—	1	$Q_{1,1}^{(h,E')}$	$Qh(1, E', , 1)$	S_1

表 3 rank 2

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
5	A'_1	$A1'$	—	—	$Q_2^{(h,A'_1)}$	$Qh(2, A1', ,)$	C_0
6	E'	E'	—	0	$Q_{2,0}^{(h,E')}$	$Qh(2, E', , 0)$	C_2
7	E'	E'	—	1	$Q_{2,1}^{(h,E')}$	$Qh(2, E', , 1)$	$-S_2$
8	E''	E''	—	0	$Q_{2,0}^{(h,E'')}$	$Qh(2, E'', , 0)$	C_1
9	E''	E''	—	1	$Q_{2,1}^{(h,E'')}$	$Qh(2, E'', , 1)$	S_1

表 4 rank 3

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
10	A'_1	$A1'$	—	—	$Q_3^{(h,A'_1)}$	$Qh(3, A1', ,)$	C_3
11	A'_2	$A2'$	—	—	$Q_3^{(h,A'_2)}$	$Qh(3, A2', ,)$	S_3
12	A''_2	$A2''$	—	—	$Q_3^{(h,A''_2)}$	$Qh(3, A2'', ,)$	C_0
13	E'	E'	—	0	$Q_{3,0}^{(h,E')}$	$Qh(3, E', , 0)$	C_1
14	E'	E'	—	1	$Q_{3,1}^{(h,E')}$	$Qh(3, E', , 1)$	S_1
15	E''	E''	—	0	$Q_{3,0}^{(h,E'')}$	$Qh(3, E'', , 0)$	C_2
16	E''	E''	—	1	$Q_{3,1}^{(h,E'')}$	$Qh(3, E'', , 1)$	$-S_2$

表 5 rank 4

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
17	A'_1	$A1'$	—	—	$Q_4^{(h,A'_1)}$	$Qh(4, A1', ,)$	C_0
18	A''_1	$A1''$	—	—	$Q_4^{(h,A''_1)}$	$Qh(4, A1'', ,)$	S_3
19	A''_2	$A2''$	—	—	$Q_4^{(h,A''_2)}$	$Qh(4, A2'', ,)$	C_3
20	E'	E'	1	0	$Q_{4,0}^{(h,E',1)}$	$Qh(4, E', 1, 0)$	C_4
21	E'	E'	1	1	$Q_{4,1}^{(h,E',1)}$	$Qh(4, E', 1, 1)$	S_4
22	E'	E'	2	0	$Q_{4,0}^{(h,E',2)}$	$Qh(4, E', 2, 0)$	C_2
23	E'	E'	2	1	$Q_{4,1}^{(h,E',2)}$	$Qh(4, E', 2, 1)$	$-S_2$
24	E''	E''	—	0	$Q_{4,0}^{(h,E'')}$	$Qh(4, E'', , 0)$	C_1
25	E''	E''	—	1	$Q_{4,1}^{(h,E'')}$	$Qh(4, E'', , 1)$	S_1

表 6 rank 5

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
26	A'_1	$A1'$	—	—	$\mathbb{Q}_5^{(h,A'_1)}$	$\text{Qh}(5, A1', ,)$	C_3
27	A'_2	$A2'$	—	—	$\mathbb{Q}_5^{(h,A'_2)}$	$\text{Qh}(5, A2', ,)$	S_3
28	A''_2	$A2''$	—	—	$\mathbb{Q}_5^{(h,A''_2)}$	$\text{Qh}(5, A2'', ,)$	C_0
29	E'	E'	1	0	$\mathbb{Q}_{5,0}^{(h,E',1)}$	$\text{Qh}(5, E', 1, 0)$	C_5
30	E'	E'	1	1	$\mathbb{Q}_{5,1}^{(h,E',1)}$	$\text{Qh}(5, E', 1, 1)$	$-S_5$
31	E'	E'	2	0	$\mathbb{Q}_{5,0}^{(h,E',2)}$	$\text{Qh}(5, E', 2, 0)$	C_1
32	E'	E'	2	1	$\mathbb{Q}_{5,1}^{(h,E',2)}$	$\text{Qh}(5, E', 2, 1)$	S_1
33	E''	E''	1	0	$\mathbb{Q}_{5,0}^{(h,E'',1)}$	$\text{Qh}(5, E'', 1, 0)$	C_4
34	E''	E''	1	1	$\mathbb{Q}_{5,1}^{(h,E'',1)}$	$\text{Qh}(5, E'', 1, 1)$	S_4
35	E''	E''	2	0	$\mathbb{Q}_{5,0}^{(h,E'',2)}$	$\text{Qh}(5, E'', 2, 0)$	C_2
36	E''	E''	2	1	$\mathbb{Q}_{5,1}^{(h,E'',2)}$	$\text{Qh}(5, E'', 2, 1)$	$-S_2$

表 7 rank 6

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
37	A'_1	$A1'$	1	—	$\mathbb{Q}_6^{(h,A'_1,1)}$	$\text{Qh}(6, A1', 1,)$	C_0
38	A'_1	$A1'$	2	—	$\mathbb{Q}_6^{(h,A'_1,2)}$	$\text{Qh}(6, A1', 2,)$	C_6
39	A''_1	$A1''$	—	—	$\mathbb{Q}_6^{(h,A''_1)}$	$\text{Qh}(6, A1'', ,)$	S_3
40	A'_2	$A2'$	—	—	$\mathbb{Q}_6^{(h,A'_2)}$	$\text{Qh}(6, A2', ,)$	S_6
41	A''_2	$A2''$	—	—	$\mathbb{Q}_6^{(h,A''_2)}$	$\text{Qh}(6, A2'', ,)$	C_3
42	E'	E'	1	0	$\mathbb{Q}_{6,0}^{(h,E',1)}$	$\text{Qh}(6, E', 1, 0)$	C_4
43	E'	E'	1	1	$\mathbb{Q}_{6,1}^{(h,E',1)}$	$\text{Qh}(6, E', 1, 1)$	S_4
44	E'	E'	2	0	$\mathbb{Q}_{6,0}^{(h,E',2)}$	$\text{Qh}(6, E', 2, 0)$	C_2
45	E'	E'	2	1	$\mathbb{Q}_{6,1}^{(h,E',2)}$	$\text{Qh}(6, E', 2, 1)$	$-S_2$
46	E''	E''	1	0	$\mathbb{Q}_{6,0}^{(h,E'',1)}$	$\text{Qh}(6, E'', 1, 0)$	C_5
47	E''	E''	1	1	$\mathbb{Q}_{6,1}^{(h,E'',1)}$	$\text{Qh}(6, E'', 1, 1)$	$-S_5$
48	E''	E''	2	0	$\mathbb{Q}_{6,0}^{(h,E'',2)}$	$\text{Qh}(6, E'', 2, 0)$	C_1
49	E''	E''	2	1	$\mathbb{Q}_{6,1}^{(h,E'',2)}$	$\text{Qh}(6, E'', 2, 1)$	S_1

表 8 rank 7

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
50	A'_1	$A1'$	—	—	$\mathbb{Q}_7^{(h,A'_1)}$	$\text{Qh}(7, A1', ,)$	C_3
51	A''_1	$A1''$	—	—	$\mathbb{Q}_7^{(h,A''_1)}$	$\text{Qh}(7, A1'', ,)$	S_6
52	A'_2	$A2'$	—	—	$\mathbb{Q}_7^{(h,A'_2)}$	$\text{Qh}(7, A2', ,)$	S_3
53	A''_2	$A2''$	1	—	$\mathbb{Q}_7^{(h,A''_2,1)}$	$\text{Qh}(7, A2'', 1,)$	C_0
54	A''_2	$A2''$	2	—	$\mathbb{Q}_7^{(h,A''_2,2)}$	$\text{Qh}(7, A2'', 2,)$	C_6
55	E'	E'	1	0	$\mathbb{Q}_{7,0}^{(h,E',1)}$	$\text{Qh}(7, E', 1, 0)$	C_7
56	E'	E'	1	1	$\mathbb{Q}_{7,1}^{(h,E',1)}$	$\text{Qh}(7, E', 1, 1)$	S_7
57	E'	E'	2	0	$\mathbb{Q}_{7,0}^{(h,E',2)}$	$\text{Qh}(7, E', 2, 0)$	C_5
58	E'	E'	2	1	$\mathbb{Q}_{7,1}^{(h,E',2)}$	$\text{Qh}(7, E', 2, 1)$	$-S_5$
59	E'	E'	3	0	$\mathbb{Q}_{7,0}^{(h,E',3)}$	$\text{Qh}(7, E', 3, 0)$	C_1
60	E'	E'	3	1	$\mathbb{Q}_{7,1}^{(h,E',3)}$	$\text{Qh}(7, E', 3, 1)$	S_1
61	E''	E''	1	0	$\mathbb{Q}_{7,0}^{(h,E'',1)}$	$\text{Qh}(7, E'', 1, 0)$	C_4
62	E''	E''	1	1	$\mathbb{Q}_{7,1}^{(h,E'',1)}$	$\text{Qh}(7, E'', 1, 1)$	S_4
63	E''	E''	2	0	$\mathbb{Q}_{7,0}^{(h,E'',2)}$	$\text{Qh}(7, E'', 2, 0)$	C_2
64	E''	E''	2	1	$\mathbb{Q}_{7,1}^{(h,E'',2)}$	$\text{Qh}(7, E'', 2, 1)$	$-S_2$

表 9 rank 8

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
65	A'_1	$A1'$	1	—	$\mathbb{Q}_8^{(h,A'_1,1)}$	$\text{Qh}(8, A1', 1,)$	C_0
66	A'_1	$A1'$	2	—	$\mathbb{Q}_8^{(h,A'_1,2)}$	$\text{Qh}(8, A1', 2,)$	C_6
67	A''_1	$A1''$	—	—	$\mathbb{Q}_8^{(h,A''_1)}$	$\text{Qh}(8, A1'', ,)$	S_3
68	A'_2	$A2'$	—	—	$\mathbb{Q}_8^{(h,A'_2)}$	$\text{Qh}(8, A2', ,)$	S_6
69	A''_2	$A2''$	—	—	$\mathbb{Q}_8^{(h,A''_2)}$	$\text{Qh}(8, A2'', ,)$	C_3
70	E'	E'	1	0	$\mathbb{Q}_{8,0}^{(h,E',1)}$	$\text{Qh}(8, E', 1, 0)$	C_8
71	E'	E'	1	1	$\mathbb{Q}_{8,1}^{(h,E',1)}$	$\text{Qh}(8, E', 1, 1)$	$-S_8$
72	E'	E'	2	0	$\mathbb{Q}_{8,0}^{(h,E',2)}$	$\text{Qh}(8, E', 2, 0)$	C_4
73	E'	E'	2	1	$\mathbb{Q}_{8,1}^{(h,E',2)}$	$\text{Qh}(8, E', 2, 1)$	S_4
74	E'	E'	3	0	$\mathbb{Q}_{8,0}^{(h,E',3)}$	$\text{Qh}(8, E', 3, 0)$	C_2
75	E'	E'	3	1	$\mathbb{Q}_{8,1}^{(h,E',3)}$	$\text{Qh}(8, E', 3, 1)$	$-S_2$
76	E''	E''	1	0	$\mathbb{Q}_{8,0}^{(h,E'',1)}$	$\text{Qh}(8, E'', 1, 0)$	C_7
77	E''	E''	1	1	$\mathbb{Q}_{8,1}^{(h,E'',1)}$	$\text{Qh}(8, E'', 1, 1)$	S_7
78	E''	E''	2	0	$\mathbb{Q}_{8,0}^{(h,E'',2)}$	$\text{Qh}(8, E'', 2, 0)$	C_5
79	E''	E''	2	1	$\mathbb{Q}_{8,1}^{(h,E'',2)}$	$\text{Qh}(8, E'', 2, 1)$	$-S_5$
80	E''	E''	3	0	$\mathbb{Q}_{8,0}^{(h,E'',3)}$	$\text{Qh}(8, E'', 3, 0)$	C_1
81	E''	E''	3	1	$\mathbb{Q}_{8,1}^{(h,E'',3)}$	$\text{Qh}(8, E'', 3, 1)$	S_1

表 10 rank 9

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
82	A'_1	$A1'$	1	—	$\mathbb{Q}_9^{(h,A'_1,1)}$	$\text{Qh}(9, A1', 1,)$	C_9
83	A'_1	$A1'$	2	—	$\mathbb{Q}_9^{(h,A'_1,2)}$	$\text{Qh}(9, A1', 2,)$	C_3
84	A''_1	$A1''$	—	—	$\mathbb{Q}_9^{(h,A''_1)}$	$\text{Qh}(9, A1'', ,)$	S_6
85	A'_2	$A2'$	1	—	$\mathbb{Q}_9^{(h,A'_2,1)}$	$\text{Qh}(9, A2', 1,)$	S_9
86	A'_2	$A2'$	2	—	$\mathbb{Q}_9^{(h,A'_2,2)}$	$\text{Qh}(9, A2', 2,)$	S_3
87	A''_2	$A2''$	1	—	$\mathbb{Q}_9^{(h,A''_2,1)}$	$\text{Qh}(9, A2'', 1,)$	C_0
88	A''_2	$A2''$	2	—	$\mathbb{Q}_9^{(h,A''_2,2)}$	$\text{Qh}(9, A2'', 2,)$	C_6
89	E'	E'	1	0	$\mathbb{Q}_{9,0}^{(h,E',1)}$	$\text{Qh}(9, E', 1, 0)$	C_7
90	E'	E'	1	1	$\mathbb{Q}_{9,1}^{(h,E',1)}$	$\text{Qh}(9, E', 1, 1)$	S_7
91	E'	E'	2	0	$\mathbb{Q}_{9,0}^{(h,E',2)}$	$\text{Qh}(9, E', 2, 0)$	C_5
92	E'	E'	2	1	$\mathbb{Q}_{9,1}^{(h,E',2)}$	$\text{Qh}(9, E', 2, 1)$	$-S_5$
93	E'	E'	3	0	$\mathbb{Q}_{9,0}^{(h,E',3)}$	$\text{Qh}(9, E', 3, 0)$	C_1
94	E'	E'	3	1	$\mathbb{Q}_{9,1}^{(h,E',3)}$	$\text{Qh}(9, E', 3, 1)$	S_1
95	E''	E''	1	0	$\mathbb{Q}_{9,0}^{(h,E'',1)}$	$\text{Qh}(9, E'', 1, 0)$	C_8
96	E''	E''	1	1	$\mathbb{Q}_{9,1}^{(h,E'',1)}$	$\text{Qh}(9, E'', 1, 1)$	$-S_8$
97	E''	E''	2	0	$\mathbb{Q}_{9,0}^{(h,E'',2)}$	$\text{Qh}(9, E'', 2, 0)$	C_4
98	E''	E''	2	1	$\mathbb{Q}_{9,1}^{(h,E'',2)}$	$\text{Qh}(9, E'', 2, 1)$	S_4
99	E''	E''	3	0	$\mathbb{Q}_{9,0}^{(h,E'',3)}$	$\text{Qh}(9, E'', 3, 0)$	C_2
100	E''	E''	3	1	$\mathbb{Q}_{9,1}^{(h,E'',3)}$	$\text{Qh}(9, E'', 3, 1)$	$-S_2$

表 11 rank 10

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
101	A'_1	$A1'$	1	—	$\mathbb{Q}_{10}^{(h,A'_1,1)}$	$\text{Qh}(10, A1', 1,)$	C_0
102	A'_1	$A1'$	2	—	$\mathbb{Q}_{10}^{(h,A'_1,2)}$	$\text{Qh}(10, A1', 2,)$	C_6
103	A''_1	$A1''$	1	—	$\mathbb{Q}_{10}^{(h,A''_1,1)}$	$\text{Qh}(10, A1'', 1,)$	S_9
104	A''_1	$A1''$	2	—	$\mathbb{Q}_{10}^{(h,A''_1,2)}$	$\text{Qh}(10, A1'', 2,)$	S_3
105	A'_2	$A2'$	—	—	$\mathbb{Q}_{10}^{(h,A'_2)}$	$\text{Qh}(10, A2', ,)$	S_6
106	A''_2	$A2''$	1	—	$\mathbb{Q}_{10}^{(h,A''_2,1)}$	$\text{Qh}(10, A2'', 1,)$	C_9
107	A''_2	$A2''$	2	—	$\mathbb{Q}_{10}^{(h,A''_2,2)}$	$\text{Qh}(10, A2'', 2,)$	C_3
108	E'	E'	1	0	$\mathbb{Q}_{10,0}^{(h,E',1)}$	$\text{Qh}(10, E', 1, 0)$	C_{10}
109	E'	E'	1	1	$\mathbb{Q}_{10,1}^{(h,E',1)}$	$\text{Qh}(10, E', 1, 1)$	S_{10}
110	E'	E'	2	0	$\mathbb{Q}_{10,0}^{(h,E',2)}$	$\text{Qh}(10, E', 2, 0)$	C_8
111	E'	E'	2	1	$\mathbb{Q}_{10,1}^{(h,E',2)}$	$\text{Qh}(10, E', 2, 1)$	$-S_8$
112	E'	E'	3	0	$\mathbb{Q}_{10,0}^{(h,E',3)}$	$\text{Qh}(10, E', 3, 0)$	C_4
113	E'	E'	3	1	$\mathbb{Q}_{10,1}^{(h,E',3)}$	$\text{Qh}(10, E', 3, 1)$	S_4
114	E'	E'	4	0	$\mathbb{Q}_{10,0}^{(h,E',4)}$	$\text{Qh}(10, E', 4, 0)$	C_2
115	E'	E'	4	1	$\mathbb{Q}_{10,1}^{(h,E',4)}$	$\text{Qh}(10, E', 4, 1)$	$-S_2$
116	E''	E''	1	0	$\mathbb{Q}_{10,0}^{(h,E'',1)}$	$\text{Qh}(10, E'', 1, 0)$	C_7
117	E''	E''	1	1	$\mathbb{Q}_{10,1}^{(h,E'',1)}$	$\text{Qh}(10, E'', 1, 1)$	S_7
118	E''	E''	2	0	$\mathbb{Q}_{10,0}^{(h,E'',2)}$	$\text{Qh}(10, E'', 2, 0)$	C_5
119	E''	E''	2	1	$\mathbb{Q}_{10,1}^{(h,E'',2)}$	$\text{Qh}(10, E'', 2, 1)$	$-S_5$
120	E''	E''	3	0	$\mathbb{Q}_{10,0}^{(h,E'',3)}$	$\text{Qh}(10, E'', 3, 0)$	C_1
121	E''	E''	3	1	$\mathbb{Q}_{10,1}^{(h,E'',3)}$	$\text{Qh}(10, E'', 3, 1)$	S_1

表 12 rank 11

No.	irrep.	(tag)	mul.	comp.	harmonics	(tag)	definition
122	A'_1	$A1'$	1	—	$Q_{11}^{(h,A'_1,1)}$	$Qh(11, A1', 1,)$	C_9
123	A'_1	$A1'$	2	—	$Q_{11}^{(h,A'_1,2)}$	$Qh(11, A1', 2,)$	C_3
124	A''_1	$A1''$	—	—	$Q_{11}^{(h,A''_1)}$	$Qh(11, A1'', ,)$	S_6
125	A'_2	$A2'$	1	—	$Q_{11}^{(h,A'_2,1)}$	$Qh(11, A2', 1,)$	S_9
126	A'_2	$A2'$	2	—	$Q_{11}^{(h,A'_2,2)}$	$Qh(11, A2', 2,)$	S_3
127	A''_2	$A2''$	1	—	$Q_{11}^{(h,A''_2,1)}$	$Qh(11, A2'', 1,)$	C_0
128	A''_2	$A2''$	2	—	$Q_{11}^{(h,A''_2,2)}$	$Qh(11, A2'', 2,)$	C_6
129	E'	E'	1	0	$Q_{11,0}^{(h,E',1)}$	$Qh(11, E', 1, 0)$	C_{11}
130	E'	E'	1	1	$Q_{11,1}^{(h,E',1)}$	$Qh(11, E', 1, 1)$	$-S_{11}$
131	E'	E'	2	0	$Q_{11,0}^{(h,E',2)}$	$Qh(11, E', 2, 0)$	C_7
132	E'	E'	2	1	$Q_{11,1}^{(h,E',2)}$	$Qh(11, E', 2, 1)$	S_7
133	E'	E'	3	0	$Q_{11,0}^{(h,E',3)}$	$Qh(11, E', 3, 0)$	C_5
134	E'	E'	3	1	$Q_{11,1}^{(h,E',3)}$	$Qh(11, E', 3, 1)$	$-S_5$
135	E'	E'	4	0	$Q_{11,0}^{(h,E',4)}$	$Qh(11, E', 4, 0)$	C_1
136	E'	E'	4	1	$Q_{11,1}^{(h,E',4)}$	$Qh(11, E', 4, 1)$	S_1
137	E''	E''	1	0	$Q_{11,0}^{(h,E'',1)}$	$Qh(11, E'', 1, 0)$	C_{10}
138	E''	E''	1	1	$Q_{11,1}^{(h,E'',1)}$	$Qh(11, E'', 1, 1)$	S_{10}
139	E''	E''	2	0	$Q_{11,0}^{(h,E'',2)}$	$Qh(11, E'', 2, 0)$	C_8
140	E''	E''	2	1	$Q_{11,1}^{(h,E'',2)}$	$Qh(11, E'', 2, 1)$	$-S_8$
141	E''	E''	3	0	$Q_{11,0}^{(h,E'',3)}$	$Qh(11, E'', 3, 0)$	C_4
142	E''	E''	3	1	$Q_{11,1}^{(h,E'',3)}$	$Qh(11, E'', 3, 1)$	S_4
143	E''	E''	4	0	$Q_{11,0}^{(h,E'',4)}$	$Qh(11, E'', 4, 0)$	C_2
144	E''	E''	4	1	$Q_{11,1}^{(h,E'',4)}$	$Qh(11, E'', 4, 1)$	$-S_2$