

$$L_2(31) \pmod{2}$$

|       | blocks | defect | matrix        |
|-------|--------|--------|---------------|
| 2.G : | 1      | 6      | $21 \times 3$ |
|       | 2      | 1      | $2 \times 1$  |
|       | 3      | 1      | $2 \times 1$  |
|       | 4      | 1      | $2 \times 1$  |
|       | 5      | 1      | $2 \times 1$  |
|       | 6      | 1      | $2 \times 1$  |
|       | 7      | 1      | $2 \times 1$  |
|       | 8      | 1      | $2 \times 1$  |

| Block 1:              | $\varphi_1$ | $\varphi_2$ | $\varphi_3$ |                    |
|-----------------------|-------------|-------------|-------------|--------------------|
| $1_1 = \chi_1$        | 1           | .           | .           |                    |
| $15_1 = \chi_2$       | .           | 1           | .           |                    |
| $15_2 = \chi_3$       | .           | .           | 1           |                    |
| $30_1 = \chi_4$       | .           | 1           | 1           |                    |
| $30_2 = \chi_5$       | .           | 1           | 1           |                    |
| $30_3 = \chi_6$       | .           | 1           | 1           |                    |
| $30_4 = \chi_7$       | .           | 1           | 1           |                    |
| $30_5 = \chi_8$       | .           | 1           | 1           |                    |
| $30_6 = \chi_9$       | .           | 1           | 1           |                    |
| $30_7 = \chi_{10}$    | .           | 1           | 1           | $\varphi_1 = 1_1$  |
| $31_1 = \chi_{11}$    | 1           | 1           | 1           | $\varphi_2 = 15_1$ |
| $16_1 = \chi_{19}$    | 1           | .           | 1           | $\varphi_3 = 15_2$ |
| $16_2 = \chi_{20}$    | 1           | 1           | .           |                    |
| $30_8 = \chi_{21}$    | .           | 1           | 1           |                    |
| $30_9 = \chi_{22}$    | .           | 1           | 1           |                    |
| $30_{10} = \chi_{23}$ | .           | 1           | 1           |                    |
| $30_{11} = \chi_{24}$ | .           | 1           | 1           |                    |
| $30_{12} = \chi_{25}$ | .           | 1           | 1           |                    |
| $30_{13} = \chi_{26}$ | .           | 1           | 1           |                    |
| $30_{14} = \chi_{27}$ | .           | 1           | 1           |                    |
| $30_{15} = \chi_{28}$ | .           | 1           | 1           |                    |

| Block 2:           | $\varphi_4$ |                    |
|--------------------|-------------|--------------------|
| $32_1 = \chi_{12}$ | 1           | $\varphi_4 = 32_1$ |
| $32_8 = \chi_{29}$ | 1           |                    |

| Block 3:           | $\varphi_5$ |                    |
|--------------------|-------------|--------------------|
| $32_2 = \chi_{13}$ | 1           | $\varphi_5 = 32_2$ |
| $32_9 = \chi_{30}$ | 1           |                    |

| Block 4:              | $\varphi_6$ |                    |
|-----------------------|-------------|--------------------|
| $32_3 = \chi_{14}$    | 1           | $\varphi_6 = 32_3$ |
| $32_{10} = \chi_{31}$ | 1           |                    |

| Block 5:              | $\varphi_7$ |                    |
|-----------------------|-------------|--------------------|
| $32_4 = \chi_{15}$    | 1           | $\varphi_7 = 32_4$ |
| $32_{11} = \chi_{32}$ | 1           |                    |

| Block 6:              | $\varphi_8$ |                    |
|-----------------------|-------------|--------------------|
| $32_5 = \chi_{16}$    | 1           | $\varphi_8 = 32_5$ |
| $32_{12} = \chi_{33}$ | 1           |                    |

| Block 7:              | $\varphi_9$ |                    |
|-----------------------|-------------|--------------------|
| $32_6 = \chi_{17}$    | 1           | $\varphi_9 = 32_6$ |
| $32_{13} = \chi_{34}$ | 1           |                    |

| Block 8:              | $\varphi_{10}$ |                       |
|-----------------------|----------------|-----------------------|
| $32_7 = \chi_{18}$    | 1              | $\varphi_{10} = 32_7$ |
| $32_{14} = \chi_{35}$ | 1              |                       |