

$S_4(4).4 \pmod{5}$

| | blocks | defect | matrix |
|-------|---------------|--------|------------------------------------|
| $G :$ | 1 | 2 | 20×14 |
| | 2 | 0 | $50_1 = \chi_{5,0}, \varphi_{5,0}$ |
| | 3 | 0 | $50_2 = \chi_{5,1}, \varphi_{5,1}$ |
| | 4 | 0 | $50_3 = \chi_{5,2}, \varphi_{5,2}$ |
| | $5 = \bar{3}$ | 0 | $50_4 = \chi_{5,3}, \varphi_{5,3}$ |
| | 6 | 1 | 5×4 |
| | 7 | 0 | $900_1 = \chi_{17+}, \varphi_{9+}$ |

| Block 1: | $\varphi_{1,0}$ | $\varphi_{1,1}$ | $\varphi_{1,2}$ | $\varphi_{1,3}$ | $\varphi_{2,0}$ | $\varphi_{2,1}$ | $\varphi_{2,2}$ | $\varphi_{2,3}$ | $\varphi_{3,0+}$ | $\varphi_{3,1+}$ | $\varphi_{8,0}$ | $\varphi_{8,1}$ | $\varphi_{8,2}$ |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|-----------------|-----------------|-----------------|
| $1_1 = \chi_{1,0}$ | 1 | . | . | . | . | . | . | . | . | . | . | . | . |
| $1_2 = \chi_{1,1}$ | . | 1 | . | . | . | . | . | . | . | . | . | . | . |
| $1_3 = \chi_{1,2}$ | . | . | 1 | . | . | . | . | . | . | . | . | . | . |
| $1_4 = \chi_{1,3}$ | . | . | . | 1 | . | . | . | . | . | . | . | . | . |
| $18_1 = \chi_{2,0}$ | . | . | . | . | 1 | . | . | . | . | . | . | . | . |
| $18_2 = \chi_{2,1}$ | . | . | . | . | . | 1 | . | . | . | . | . | . | . |
| $18_3 = \chi_{2,2}$ | . | . | . | . | . | . | 1 | . | . | . | . | . | . |
| $18_4 = \chi_{2,3}$ | . | . | . | . | . | . | . | 1 | . | . | . | . | . |
| $68_1 = \chi_{3,0+}$ | 1 | . | 1 | . | . | . | . | . | 1 | . | . | . | . |
| $68_2 = \chi_{3,1+}$ | . | 1 | . | 1 | . | . | . | . | . | 1 | . | . | . |
| $204_1 = \chi_{6+}$ | . | . | . | . | 1 | 1 | 1 | 1 | 1 | 1 | . | . | . |
| $153_1 = \chi_{12,0}$ | . | . | . | . | . | . | . | . | . | . | 1 | . | . |
| $153_2 = \chi_{12,1}$ | . | . | . | . | . | . | . | . | . | . | . | 1 | . |
| $153_3 = \chi_{12,2}$ | . | . | . | . | . | . | . | . | . | . | . | . | 1 |
| $153_4 = \chi_{12,3}$ | . | . | . | . | . | . | . | . | . | . | . | . | . |
| $816_1 = \chi_{13+}$ | . | . | . | . | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $256_1 = \chi_{25,0}$ | 1 | . | . | . | 1 | 1 | . | . | 1 | . | 1 | . | . |
| $256_2 = \chi_{25,1}$ | . | 1 | . | . | . | 1 | 1 | . | . | 1 | . | 1 | . |
| $256_3 = \chi_{25,2}$ | . | . | 1 | . | . | . | 1 | 1 | 1 | . | . | . | 1 |
| $256_4 = \chi_{25,3}$ | . | . | . | 1 | 1 | . | . | 1 | . | 1 | . | . | . |

| (Block 1:) | $\varphi_{8,3}$ | | |
|-----------------------|-----------------|-------------------------|--|
| $1_1 = \chi_{1,0}$ | . | | |
| $1_2 = \chi_{1,1}$ | . | | |
| $1_3 = \chi_{1,2}$ | . | $\varphi_{1,0} = 1_1$ | |
| $1_4 = \chi_{1,3}$ | . | $\varphi_{1,1} = 1_2$ | |
| $18_1 = \chi_{2,0}$ | . | $\varphi_{1,2} = 1_3$ | |
| $18_2 = \chi_{2,1}$ | . | $\varphi_{1,3} = 1_4$ | |
| $18_3 = \chi_{2,2}$ | . | $\varphi_{2,0} = 18_1$ | |
| $18_4 = \chi_{2,3}$ | . | $\varphi_{2,1} = 18_2$ | |
| $68_1 = \chi_{3,0+}$ | . | $\varphi_{2,2} = 18_3$ | |
| $68_2 = \chi_{3,1+}$ | . | $\varphi_{2,3} = 18_4$ | |
| $204_1 = \chi_{6+}$ | . | $\varphi_{3,0+} = 66_1$ | |
| $153_1 = \chi_{12,0}$ | . | $\varphi_{3,1+} = 66_2$ | |
| $153_2 = \chi_{12,1}$ | . | $\varphi_{8,0} = 153_1$ | |
| $153_3 = \chi_{12,2}$ | . | $\varphi_{8,1} = 153_2$ | |
| $153_4 = \chi_{12,3}$ | 1 | $\varphi_{8,2} = 153_3$ | |
| $816_1 = \chi_{13+}$ | 1 | $\varphi_{8,3} = 153_4$ | |
| $256_1 = \chi_{25,0}$ | . | | |
| $256_2 = \chi_{25,1}$ | . | | |
| $256_3 = \chi_{25,2}$ | . | | |
| $256_4 = \chi_{25,3}$ | 1 | | |

| Block 6: | $\varphi_{6,0+}$ | $\varphi_{6,1+}$ | $\varphi_{13,0+}$ | $\varphi_{13,1+}$ | | |
|------------------------|------------------|------------------|-------------------|-------------------|---------------------------|--|
| $170_1 = \chi_{10,0+}$ | 1 | . | . | . | $\varphi_{6,0+} = 170_1$ | |
| $170_2 = \chi_{10,1+}$ | . | 1 | . | . | $\varphi_{6,1+} = 170_2$ | |
| $1020_1 = \chi_{21+}$ | . | . | 1 | 1 | $\varphi_{13,0+} = 510_1$ | |
| $680_1 = \chi_{26,0+}$ | 1 | . | 1 | . | $\varphi_{13,1+} = 510_2$ | |
| $680_2 = \chi_{26,1+}$ | . | 1 | . | 1 | | |