# $L_3(9).2_2 \pmod 7$

| | blocks | defect | matrix |
|---|---|---|---|
| $G:$ | 1 | 1 | $7 \times 6$ |
| | 2 | 0 | $91_1 = \chi_{3,0}, \varphi_{3,0}$ |
| | 3 | 0 | $91_2 = \chi_{3,1}, \varphi_{3,1}$ |
| | 4 | 0 | $182_1 = \chi_{4+}, \varphi_{4+}$ |
| | 5 | 0 | $182_2 = \chi_{6+}, \varphi_{6+}$ |
| | $6 = \overline{5}$ | 0 | $182_3 = \chi_{7+}, \varphi_{7+}$ |
| | 7 | 1 | $5 \times 2$ |
| | $8 = \overline{7}$ | 1 | $5 \times 2$ |
| | 9 | 1 | $5 \times 2$ |
| | $10 = \overline{9}$ | 1 | $5 \times 2$ |
| | 11 | 0 | $1456_1 = \chi_{40+}, \varphi_{15+}$ |
| | 12 | 0 | $1456_2 = \chi_{42+}, \varphi_{17+}$ |
| | 13 | 0 | $1456_3 = \chi_{44+}, \varphi_{19+}$ |
| | $14 = \overline{13}$ | 0 | $1456_4 = \chi_{45+}, \varphi_{20+}$ |
| | 15 | 0 | $1456_5 = \chi_{48+}, \varphi_{23+}$ |
| | $16 = \overline{15}$ | 0 | $1456_6 = \chi_{49+}, \varphi_{24+}$ |
| | 17 | 0 | $1456_7 = \chi_{52+}, \varphi_{27+}$ |
| | $18 = \overline{17}$ | 0 | $1456_8 = \chi_{53+}, \varphi_{28+}$ |
| | 19 | 0 | $1456_9 = \chi_{56+}, \varphi_{31+}$ |
| | $20 = \overline{19}$ | 0 | $1456_{10} = \chi_{57+}, \varphi_{32+}$ |
| | 21 | 0 | $1456_{11} = \chi_{60+}, \varphi_{35+}$ |
| | $22 = \overline{21}$ | 0 | $1456_{12} = \chi_{61+}, \varphi_{36+}$ |
| | 23 | 0 | $1456_{13} = \chi_{64+}, \varphi_{39+}$ |
| | $24 = \overline{23}$ | 0 | $1456_{14} = \chi_{65+}, \varphi_{40+}$ |
| | 25 | 0 | $1456_{15} = \chi_{68+}, \varphi_{43+}$ |
| | $26 = \overline{25}$ | 0 | $1456_{16} = \chi_{69+}, \varphi_{44+}$ |
| | 27 | 0 | $1456_{17} = \chi_{72+}, \varphi_{47+}$ |
| | $28 = \overline{27}$ | 0 | $1456_{18} = \chi_{73+}, \varphi_{48+}$ |
| | 29 | 0 | $819_1 = \chi_{77,0}, \varphi_{51,0}$ |
| | 30 | 0 | $819_2 = \chi_{77,1}, \varphi_{51,1}$ |
| | 31 | 0 | $1638_1 = \chi_{78+}, \varphi_{52+}$ |
| | 32 | 0 | $1638_2 = \chi_{80+}, \varphi_{54+}$ |
| | $33 = \overline{32}$ | 0 | $1638_3 = \chi_{81+}, \varphi_{55+}$ |
| | 34 | 0 | $910_1 = \chi_{84,0}, \varphi_{58,0}$ |
| | 35 | 0 | $910_2 = \chi_{84,1}, \varphi_{58,1}$ |
| | 36 | 0 | $1820_1 = \chi_{85+}, \varphi_{59+}$ |
| | 37 | 0 | $1820_2 = \chi_{87+}, \varphi_{61+}$ |
| | 38 | 0 | $910_3 = \chi_{89,0}, \varphi_{63,0}$ |
| | 39 | 0 | $910_4 = \chi_{89,1}, \varphi_{63,1}$ |
| | $40 = \overline{38}$ | 0 | $910_5 = \chi_{90,0}, \varphi_{64,0}$ |

| | blocks | defect | matrix |
|---|---|---|---|
| | $41 = \overline{39}$ | 0 | $910_6 = \chi_{90,1}, \varphi_{64,1}$ |

| **Block 1:** | $\varphi_{1,0}$ | $\varphi_{1,1}$ | $\varphi_{2,0}$ | $\varphi_{2,1}$ | $\varphi_{10,0}$ | $\varphi_{10,1}$ |
|---|---|---|---|---|---|---|
| $1_1 = \chi_{1,0}$ | 1 | . | . | . | . | . |
| $1_2 = \chi_{1,1}$ | . | 1 | . | . | . | . |
| $90_1 = \chi_{2,0}$ | 1 | . | 1 | . | . | . |
| $90_2 = \chi_{2,1}$ | . | 1 | . | 1 | . | . |
| $1280_1 = \chi_{10+}$ | . | . | . | . | 1 | 1 |
| $729_1 = \chi_{76,0}$ | . | . | 1 | . | 1 | . |
| $729_2 = \chi_{76,1}$ | . | . | . | 1 | . | 1 |

$\varphi_{1,0} = 1_1$
$\varphi_{1,1} = 1_2$
$\varphi_{2,0} = 89_1$
$\varphi_{2,1} = 89_2$
$\varphi_{10,0} = 640_1$
$\varphi_{10,1} = 640_2$

| **Block 7:** | $\varphi_{11,0}$ | $\varphi_{11,1}$ |
|---|---|---|
| $640_1 = \chi_{12,0}$ | 1 | . |
| $640_2 = \chi_{12,1}$ | . | 1 |
| $1280_2 = \chi_{16+}$ | 1 | 1 |
| $1280_6 = \chi_{24+}$ | 1 | 1 |
| $1280_{10} = \chi_{32+}$ | 1 | 1 |

$\varphi_{11,0} = 640_3$
$\varphi_{11,1} = 640_4$

| **Block 8:** | $\varphi_{12,0}$ | $\varphi_{12,1}$ |
|---|---|---|
| $640_3 = \chi_{13,0}$ | 1 | . |
| $640_4 = \chi_{13,1}$ | . | 1 |
| $1280_3 = \chi_{17+}$ | 1 | 1 |
| $1280_7 = \chi_{25+}$ | 1 | 1 |
| $1280_{11} = \chi_{33+}$ | 1 | 1 |

$\varphi_{12,0} = 640_5$
$\varphi_{12,1} = 640_6$

| **Block 9:** | $\varphi_{13,0}$ | $\varphi_{13,1}$ |
|---|---|---|
| $640_5 = \chi_{14,0}$ | 1 | . |
| $640_6 = \chi_{14,1}$ | . | 1 |
| $1280_4 = \chi_{20+}$ | 1 | 1 |
| $1280_8 = \chi_{28+}$ | 1 | 1 |
| $1280_{12} = \chi_{36+}$ | 1 | 1 |

$\varphi_{13,0} = 640_7$
$\varphi_{13,1} = 640_8$

| **Block 10:** | $\varphi_{14,0}$ | $\varphi_{14,1}$ |
|---|---|---|
| $640_7 = \chi_{15,0}$ | 1 | . |
| $640_8 = \chi_{15,1}$ | . | 1 |
| $1280_5 = \chi_{21+}$ | 1 | 1 |
| $1280_9 = \chi_{29+}$ | 1 | 1 |
| $1280_{13} = \chi_{37+}$ | 1 | 1 |

$\varphi_{14,0} = 640_9$
$\varphi_{14,1} = 640_{10}$