

## $L_2(81).4_2 \pmod{3}$

	blocks	defect	matrix
$G :$	1	4	$24 \times 22$
	2	0	$81_1 = \chi_{24,0}, \varphi_{41,0}$
	3	0	$81_2 = \chi_{24,1}, \varphi_{41,3}$
	4	0	$81_3 = \chi_{24,2}, \varphi_{41,1}$
	$5 = \bar{3}$	0	$81_4 = \chi_{24,3}, \varphi_{41,2}$

<b>Block 1:</b>	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{1,2}$	$\varphi_{1,3}$	$\varphi_{2+}$	$\varphi_{6,0+}$	$\varphi_{6,1+}$	$\varphi_{8+}$	$\varphi_{12,1+}$	$\varphi_{12,0+}$	$\varphi_{14+}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.	.
$1_2 = \chi_{1,1}$	.	.	.	1	.	.	.	.	.	.	.
$1_3 = \chi_{1,2}$	.	1	.	.	.	.	.	.	.	.	.
$1_4 = \chi_{1,3}$	.	.	1	.	.	.	.	.	.	.	.
$82_1 = \chi_{2,0+}$	1	1	.	.	.	1	1	2	.	.	.
$82_2 = \chi_{2,1+}$	.	.	1	1	.	1	1	2	.	.	.
$320_1 = \chi_{4+}$	1	1	1	1	1	2	2	4	.	.	.
$320_2 = \chi_{8+}$	.	.	.	.	1	1	1	1	.	.	1
$320_3 = \chi_{12+}$	1	1	1	1	.	.	.	1	.	.	.
$320_4 = \chi_{16+}$	.	.	.	.	1	.	.	1	1	1	.
$320_5 = \chi_{20+}$	.	.	.	.	1	1	1	1	.	.	1
$82_3 = \chi_{25,0}$	.	.	.	.	.	.	.	.	.	1	.
$82_4 = \chi_{25,1}$	.	.	.	.	.	.	.	.	1	.	.
$82_5 = \chi_{25,2}$	.	.	.	.	.	.	.	.	.	1	.
$82_6 = \chi_{25,3}$	.	.	.	.	.	.	.	.	1	.	.
$164_1 = \chi_{26,0+}$	1	1	.	.	.	.	.	1	.	1	.
$164_2 = \chi_{26,1+}$	.	.	1	1	.	.	.	1	1	.	.
$164_3 = \chi_{28,0+}$	.	.	.	.	1	1	1	1	.	.	.
$164_4 = \chi_{28,1+}$	.	.	.	.	1	1	1	1	.	.	.
$164_5 = \chi_{30,0+}$	.	.	.	.	.	1	.	.	.	.	1
$164_6 = \chi_{30,1+}$	.	.	.	.	.	.	1	.	.	.	1
$328_1 = \chi_{32+}$	1	1	1	1	.	1	1	2	.	.	1
$328_2 = \chi_{36+}$	.	.	.	.	1	.	.	1	.	.	.
$328_3 = \chi_{40+}$	.	.	.	.	2	1	1	2	.	.	.

(Block 1:)	$\varphi_{18+}$	$\varphi_{22+}$	$\varphi_{26+}$	$\varphi_{30,0}$	$\varphi_{30,1}$	$\varphi_{30,2}$	$\varphi_{30,3}$	$\varphi_{31+}$	$\varphi_{35+}$	$\varphi_{39,0+}$	$\varphi_{39,1+}$
$1_1 = \chi_{1,0}$	.	.	.	.	.	.	.	.	.	.	.
$1_2 = \chi_{1,1}$	.	.	.	.	.	.	.	.	.	.	.
$1_3 = \chi_{1,2}$	.	.	.	.	.	.	.	.	.	.	.
$1_4 = \chi_{1,3}$	.	.	.	.	.	.	.	.	.	.	.
$82_1 = \chi_{2,0+}$	.	.	.	.	.	1	1	.	.	.	.
$82_2 = \chi_{2,1+}$	.	.	.	1	1	.	.	.	.	.	.
$320_1 = \chi_{4+}$	1	1	1	1	1	1	1	.	.	.	.
$320_2 = \chi_{8+}$	2	.	.	.	.	.	.	.	.	1	1
$320_3 = \chi_{12+}$	.	.	1	.	.	.	.	1	1	.	.
$320_4 = \chi_{16+}$	.	3	1	1	1	1	1	.	.	.	.
$320_5 = \chi_{20+}$	1	.	1	.	.	.	.	.	1	.	.
$82_3 = \chi_{25,0}$	.	1	.	.	.	1	.	.	.	.	.
$82_4 = \chi_{25,1}$	.	1	.	.	1	.	.	.	.	.	.
$82_5 = \chi_{25,2}$	.	1	.	.	.	.	1	.	.	.	.
$82_6 = \chi_{25,3}$	.	1	.	1	.	.	.	.	.	.	.
$164_1 = \chi_{26,0+}$	.	1	1	.	.	1	1	.	.	.	.
$164_2 = \chi_{26,1+}$	.	1	1	1	1	.	.	.	.	.	.
$164_3 = \chi_{28,0+}$	1	.	.	.	.	.	.	.	.	1	.
$164_4 = \chi_{28,1+}$	1	.	.	.	.	.	.	.	.	.	1
$164_5 = \chi_{30,0+}$	1	.	.	.	.	.	.	.	.	.	1
$164_6 = \chi_{30,1+}$	1	.	.	.	.	.	.	.	.	1	.
$328_1 = \chi_{32+}$	1	.	1	.	.	.	.	.	1	.	.
$328_2 = \chi_{36+}$	.	.	1	.	.	.	.	1	1	.	.
$328_3 = \chi_{40+}$	1	2	1	1	1	1	1	.	.	.	.

$$\begin{array}{ll}
\varphi_{1,0} = 1_1 & \varphi_{18+} = 48_1 \\
\varphi_{1,1} = 1_2 & \varphi_{22+} = 48_2 \\
\varphi_{1,2} = 1_3 & \varphi_{26+} = 48_3 \\
\varphi_{1,3} = 1_4 & \varphi_{30,0} = 16_2 \\
\varphi_{2+} = 12_1 & \varphi_{30,1} = 16_3 \\
\varphi_{6,0+} = 8_1 & \varphi_{30,2} = 16_4 \\
\varphi_{6,1+} = 8_2 & \varphi_{30,3} = 16_5 \\
\varphi_{8+} = 16_1 & \varphi_{31+} = 108_1 \\
\varphi_{12,1+} = 18_1 & \varphi_{35+} = 144_1 \\
\varphi_{12,0+} = 18_2 & \varphi_{39,0+} = 72_1 \\
\varphi_{14+} = 36_1 & \varphi_{39,1+} = 72_2
\end{array}$$