

$L_2(81).2_1 \pmod{41}$

	blocks	defect	matrix
$G :$	1	1	14×4
	2	0	$41_1 = \chi_{2,0}, \varphi_{2,0}$
	3	0	$41_2 = \chi_{2,1}, \varphi_{2,1}$
	4	0	$41_3 = \chi_{3,0}, \varphi_{3,0}$
	5	0	$41_4 = \chi_{3,1}, \varphi_{3,1}$
	6	0	$82_1 = \chi_{25,0}, \varphi_{5,0}$
	7	0	$82_2 = \chi_{25,1}, \varphi_{5,1}$
	8	0	$82_3 = \chi_{26,0}, \varphi_{6,0}$
	9	0	$82_4 = \chi_{26,1}, \varphi_{6,1}$
	10	0	$82_5 = \chi_{27,0}, \varphi_{7,0}$
	11	0	$82_6 = \chi_{27,1}, \varphi_{7,1}$
	12	0	$82_7 = \chi_{28,0}, \varphi_{8,0}$
	13	0	$82_8 = \chi_{28,1}, \varphi_{8,1}$
	14	0	$82_9 = \chi_{29,0}, \varphi_{9,0}$
	15	0	$82_{10} = \chi_{29,1}, \varphi_{9,1}$
	16	0	$82_{11} = \chi_{30,0}, \varphi_{10,0}$
	17	0	$82_{12} = \chi_{30,1}, \varphi_{10,1}$
	18	0	$82_{13} = \chi_{31,0}, \varphi_{11,0}$

	blocks	defect	matrix
	19	0	$82_{14} = \chi_{31,1}, \varphi_{11,1}$
	20	0	$164_1 = \chi_{32+}, \varphi_{12+}$
	21	0	$164_2 = \chi_{34+}, \varphi_{14+}$
	22	0	$164_3 = \chi_{36+}, \varphi_{16+}$
	23	0	$164_4 = \chi_{38+}, \varphi_{18+}$
	24	0	$164_5 = \chi_{40+}, \varphi_{20+}$
	25	0	$164_6 = \chi_{42+}, \varphi_{22+}$
$2.G :$	26	1	14×4
	27	0	$164_7 = \chi_{66+}, \varphi_{26+}$
	28	0	$164_8 = \chi_{68+}, \varphi_{28+}$
	29	0	$164_9 = \chi_{70+}, \varphi_{30+}$
	30	0	$164_{10} = \chi_{72+}, \varphi_{32+}$
	31	0	$164_{11} = \chi_{74+}, \varphi_{34+}$
	32	0	$164_{12} = \chi_{76+}, \varphi_{36+}$
	33	0	$164_{13} = \chi_{78+}, \varphi_{38+}$
	34	0	$164_{14} = \chi_{80+}, \varphi_{40+}$
	35	0	$164_{15} = \chi_{82+}, \varphi_{42+}$
	36	0	$164_{16} = \chi_{84+}, \varphi_{44+}$

Block 1:	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{4,0}$	$\varphi_{4,1}$
$1_1 = \chi_{1,0}$	1	.	.	.
$1_2 = \chi_{1,1}$.	1	.	.
$160_1 = \chi_{4+}$.	.	1	1
$160_2 = \chi_{6+}$.	.	1	1
$160_3 = \chi_{8+}$.	.	1	1
$160_4 = \chi_{10+}$.	.	1	1
$160_5 = \chi_{12+}$.	.	1	1
$160_6 = \chi_{14+}$.	.	1	1
$160_7 = \chi_{16+}$.	.	1	1
$160_8 = \chi_{18+}$.	.	1	1
$160_9 = \chi_{20+}$.	.	1	1
$160_{10} = \chi_{22+}$.	.	1	1
$81_1 = \chi_{24,0}$	1	.	1	.
$81_2 = \chi_{24,1}$.	1	.	1

$\varphi_{1,0} = 1_1$
 $\varphi_{1,1} = 1_2$
 $\varphi_{4,0} = 80_1$
 $\varphi_{4,1} = 80_2$

Block 26:	$\varphi_{24,0}$	$\varphi_{24,1}$	$\varphi_{25,0}$	$\varphi_{25,1}$
$40_1 = \chi_{44,0}$	1	.	.	.
$40_2 = \chi_{44,1}$.	1	.	.
$40_3 = \chi_{45,0}$.	.	1	.
$40_4 = \chi_{45,1}$.	.	.	1
$160_{11} = \chi_{46+}$	1	1	1	1
$160_{12} = \chi_{48+}$	1	1	1	1
$160_{13} = \chi_{50+}$	1	1	1	1
$160_{14} = \chi_{52+}$	1	1	1	1
$160_{15} = \chi_{54+}$	1	1	1	1
$160_{16} = \chi_{56+}$	1	1	1	1
$160_{17} = \chi_{58+}$	1	1	1	1
$160_{18} = \chi_{60+}$	1	1	1	1
$160_{19} = \chi_{62+}$	1	1	1	1
$160_{20} = \chi_{64+}$	1	1	1	1

$$\begin{aligned} \varphi_{24,0} &= 40_1 \\ \varphi_{24,1} &= 40_2 \\ \varphi_{25,0} &= 40_3 \\ \varphi_{25,1} &= 40_4 \end{aligned}$$