

$L_2(81).2_2 \pmod{41}$

	blocks	defect	matrix
$G :$	1	1	22×2
	2	1	22×2
	3	0	$82_1 = \chi_{2+}, \varphi_{2+}$
	4	0	$82_2 = \chi_{25,0}, \varphi_{5,0}$
	5	0	$82_3 = \chi_{25,1}, \varphi_{5,1}$
	6	0	$82_4 = \chi_{26,0}, \varphi_{6,0}$
	7	0	$82_5 = \chi_{26,1}, \varphi_{6,1}$
	8	0	$82_6 = \chi_{27,0}, \varphi_{7,0}$
	9	0	$82_7 = \chi_{27,1}, \varphi_{7,1}$
	10	0	$82_8 = \chi_{28,0}, \varphi_{8,0}$
	11	0	$82_9 = \chi_{28,1}, \varphi_{8,1}$
	12	0	$82_{10} = \chi_{29,0}, \varphi_{9,0}$
	13	0	$82_{11} = \chi_{29,1}, \varphi_{9,1}$
	14	0	$82_{12} = \chi_{30,0}, \varphi_{10,0}$
	15	0	$82_{13} = \chi_{30,1}, \varphi_{10,1}$
	16	0	$82_{14} = \chi_{31,0}, \varphi_{11,0}$
	17	0	$82_{15} = \chi_{31,1}, \varphi_{11,1}$
	18	0	$82_{16} = \chi_{32,0}, \varphi_{12,0}$
	19	0	$82_{17} = \chi_{32,1}, \varphi_{12,1}$
	20	0	$82_{18} = \chi_{33,0}, \varphi_{13,0}$
	21	0	$82_{19} = \chi_{33,1}, \varphi_{13,1}$
	22	0	$82_{20} = \chi_{34,0}, \varphi_{14,0}$
	23	0	$82_{21} = \chi_{34,1}, \varphi_{14,1}$
	24	0	$82_{22} = \chi_{35,0}, \varphi_{15,0}$
	25	0	$82_{23} = \chi_{35,1}, \varphi_{15,1}$
	26	0	$82_{24} = \chi_{36,0}, \varphi_{16,0}$
	27	0	$82_{25} = \chi_{36,1}, \varphi_{16,1}$
	28	0	$82_{26} = \chi_{37,0}, \varphi_{17,0}$
	29	0	$82_{27} = \chi_{37,1}, \varphi_{17,1}$
	30	0	$82_{28} = \chi_{38,0}, \varphi_{18,0}$
	31	0	$82_{29} = \chi_{38,1}, \varphi_{18,1}$
	32	0	$82_{30} = \chi_{39,0}, \varphi_{19,0}$
	33	0	$82_{31} = \chi_{39,1}, \varphi_{19,1}$
	34	0	$82_{32} = \chi_{40,0}, \varphi_{20,0}$
	35	0	$82_{33} = \chi_{40,1}, \varphi_{20,1}$
	36	0	$82_{34} = \chi_{41,0}, \varphi_{21,0}$
	37	0	$82_{35} = \chi_{41,1}, \varphi_{21,1}$
	38	0	$82_{36} = \chi_{42,0}, \varphi_{22,0}$
	39	0	$82_{37} = \chi_{42,1}, \varphi_{22,1}$
	40	0	$82_{38} = \chi_{43,0}, \varphi_{23,0}$

	blocks	defect	matrix
	41	0	$82_{39} = \chi_{43,1}, \varphi_{23,1}$
$2.G :$	42	1	41×1
	43	0	$82_{40} = \chi_{66,0}, \varphi_{26,0}$
	44	0	$82_{41} = \chi_{66,1}, \varphi_{26,1}$
	45	0	$82_{42} = \chi_{67,0}, \varphi_{27,0}$
	46	0	$82_{43} = \chi_{67,1}, \varphi_{27,1}$
	47	0	$82_{44} = \chi_{68,0}, \varphi_{28,0}$
	48	0	$82_{45} = \chi_{68,1}, \varphi_{28,1}$
	49	0	$82_{46} = \chi_{69,0}, \varphi_{29,0}$
	50	0	$82_{47} = \chi_{69,1}, \varphi_{29,1}$
	51	0	$82_{48} = \chi_{70,0}, \varphi_{30,0}$
	52	0	$82_{49} = \chi_{70,1}, \varphi_{30,1}$
	53	0	$82_{50} = \chi_{71,0}, \varphi_{31,0}$
	54	0	$82_{51} = \chi_{71,1}, \varphi_{31,1}$
	55	0	$82_{52} = \chi_{72,0}, \varphi_{32,0}$
	56	0	$82_{53} = \chi_{72,1}, \varphi_{32,1}$
	57	0	$82_{54} = \chi_{73,0}, \varphi_{33,0}$
	58	0	$82_{55} = \chi_{73,1}, \varphi_{33,1}$
	59	0	$82_{56} = \chi_{74,0}, \varphi_{35,0}$
	60	0	$82_{57} = \chi_{74,1}, \varphi_{35,1}$
	61	0	$82_{58} = \chi_{75,0}, \varphi_{34,0}$
	62	0	$82_{59} = \chi_{75,1}, \varphi_{34,1}$
	63	0	$82_{60} = \chi_{76,0}, \varphi_{37,0}$
	64	0	$82_{61} = \chi_{76,1}, \varphi_{37,1}$
	65	0	$82_{62} = \chi_{77,0}, \varphi_{36,0}$
	66	0	$82_{63} = \chi_{77,1}, \varphi_{36,1}$
	67	0	$82_{64} = \chi_{78,0}, \varphi_{38,0}$
	68	0	$82_{65} = \chi_{78,1}, \varphi_{38,1}$
	69	0	$82_{66} = \chi_{79,0}, \varphi_{39,0}$
	70	0	$82_{67} = \chi_{79,1}, \varphi_{39,1}$
	71	0	$82_{68} = \chi_{80,0}, \varphi_{40,0}$
	72	0	$82_{69} = \chi_{80,1}, \varphi_{40,1}$
	73	0	$82_{70} = \chi_{81,0}, \varphi_{41,0}$
	74	0	$82_{71} = \chi_{81,1}, \varphi_{41,1}$
	75	0	$82_{72} = \chi_{82,0}, \varphi_{43,0}$
	76	0	$82_{73} = \chi_{82,1}, \varphi_{43,1}$
	77	0	$82_{74} = \chi_{83,0}, \varphi_{42,0}$
	78	0	$82_{75} = \chi_{83,1}, \varphi_{42,1}$
	79	0	$82_{76} = \chi_{84,0}, \varphi_{45,0}$
80	0	$82_{77} = \chi_{84,1}, \varphi_{45,1}$	

	blocks	defect	matrix
	81	0	$82_{78} = \chi_{85,0}, \varphi_{44,0}$
	82	0	$82_{79} = \chi_{85,1}, \varphi_{44,1}$

Block 1:	$\varphi_{1,0}$	$\varphi_{4,1}$	
$1_1 = \chi_{1,0}$	1	.	
$80_2 = \chi_{4,1}$.	1	
$80_4 = \chi_{5,1}$.	1	
$80_6 = \chi_{6,1}$.	1	
$80_8 = \chi_{7,1}$.	1	
$80_{10} = \chi_{8,1}$.	1	
$80_{12} = \chi_{9,1}$.	1	
$80_{14} = \chi_{10,1}$.	1	
$80_{16} = \chi_{11,1}$.	1	
$80_{18} = \chi_{12,1}$.	1	$\varphi_{1,0} = 1_1$
$80_{20} = \chi_{13,1}$.	1	$\varphi_{4,1} = 80_2$
$80_{22} = \chi_{14,1}$.	1	
$80_{24} = \chi_{15,1}$.	1	
$80_{26} = \chi_{16,1}$.	1	
$80_{28} = \chi_{17,1}$.	1	
$80_{30} = \chi_{18,1}$.	1	
$80_{32} = \chi_{19,1}$.	1	
$80_{34} = \chi_{20,1}$.	1	
$80_{36} = \chi_{21,1}$.	1	
$80_{38} = \chi_{22,1}$.	1	
$80_{40} = \chi_{23,1}$.	1	
$81_2 = \chi_{24,1}$	1	1	

Block 2:	$\varphi_{1,1}$	$\varphi_{4,0}$
$1_2 = \chi_{1,1}$	1	.
$80_1 = \chi_{4,0}$.	1
$80_3 = \chi_{5,0}$.	1
$80_5 = \chi_{6,0}$.	1
$80_7 = \chi_{7,0}$.	1
$80_9 = \chi_{8,0}$.	1
$80_{11} = \chi_{9,0}$.	1
$80_{13} = \chi_{10,0}$.	1
$80_{15} = \chi_{11,0}$.	1
$80_{17} = \chi_{12,0}$.	1
$80_{19} = \chi_{13,0}$.	1
$80_{21} = \chi_{14,0}$.	1
$80_{23} = \chi_{15,0}$.	1
$80_{25} = \chi_{16,0}$.	1
$80_{27} = \chi_{17,0}$.	1
$80_{29} = \chi_{18,0}$.	1
$80_{31} = \chi_{19,0}$.	1
$80_{33} = \chi_{20,0}$.	1
$80_{35} = \chi_{21,0}$.	1
$80_{37} = \chi_{22,0}$.	1
$80_{39} = \chi_{23,0}$.	1
$81_1 = \chi_{24,0}$	1	1

$$\begin{aligned} \varphi_{1,1} &= 1_2 \\ \varphi_{4,0} &= 80_1 \end{aligned}$$

Block 42:	φ_{24+}
$80_{41} = \chi_{44+}$	1
$80_{42} = \chi_{46,0}$	1
$80_{43} = \chi_{46,1}$	1
$80_{44} = \chi_{47,0}$	1
$80_{45} = \chi_{47,1}$	1
$80_{46} = \chi_{48,0}$	1
$80_{47} = \chi_{48,1}$	1
$80_{48} = \chi_{49,0}$	1
$80_{49} = \chi_{49,1}$	1
$80_{50} = \chi_{50,0}$	1
$80_{51} = \chi_{50,1}$	1
$80_{52} = \chi_{51,0}$	1
$80_{53} = \chi_{51,1}$	1
$80_{54} = \chi_{52,0}$	1
$80_{55} = \chi_{52,1}$	1
$80_{56} = \chi_{53,0}$	1
$80_{57} = \chi_{53,1}$	1
$80_{58} = \chi_{54,0}$	1
$80_{59} = \chi_{54,1}$	1
$80_{60} = \chi_{55,0}$	1
$80_{61} = \chi_{55,1}$	1
$80_{62} = \chi_{56,0}$	1
$80_{63} = \chi_{56,1}$	1
$80_{64} = \chi_{57,0}$	1
$80_{65} = \chi_{57,1}$	1
$80_{66} = \chi_{58,0}$	1
$80_{67} = \chi_{58,1}$	1
$80_{68} = \chi_{59,0}$	1
$80_{69} = \chi_{59,1}$	1
$80_{70} = \chi_{60,0}$	1
$80_{71} = \chi_{60,1}$	1
$80_{72} = \chi_{61,0}$	1
$80_{73} = \chi_{61,1}$	1
$80_{74} = \chi_{62,0}$	1
$80_{75} = \chi_{62,1}$	1
$80_{76} = \chi_{63,0}$	1
$80_{77} = \chi_{63,1}$	1
$80_{78} = \chi_{64,0}$	1
$80_{79} = \chi_{64,1}$	1
$80_{80} = \chi_{65,0}$	1

(Block 42:)	φ_{24+}
$80_{81} = \chi_{65,1}$	1

$$\varphi_{24+} = 80_3$$