

# $L_2(81).2_2 \pmod{5}$

	blocks	defect	matrix
$G :$	1	1	$4 \times 2$
	2	1	$4 \times 2$
	3	1	$5 \times 1$
	4	0	$80_1 = \chi_{4,0}, \varphi_{4,0}$
	5	0	$80_2 = \chi_{4,1}, \varphi_{4,1}$
	6	0	$80_3 = \chi_{5,0}, \varphi_{5,0}$
	7	0	$80_4 = \chi_{5,1}, \varphi_{5,1}$
	8	0	$80_5 = \chi_{6,0}, \varphi_{6,0}$
	9	0	$80_6 = \chi_{6,1}, \varphi_{6,1}$
	10	0	$80_7 = \chi_{7,0}, \varphi_{7,0}$
	11	0	$80_8 = \chi_{7,1}, \varphi_{7,1}$
	12	0	$80_9 = \chi_{8,0}, \varphi_{8,0}$
	13	0	$80_{10} = \chi_{8,1}, \varphi_{8,1}$
	14	0	$80_{11} = \chi_{9,0}, \varphi_{9,0}$
	15	0	$80_{12} = \chi_{9,1}, \varphi_{9,1}$
	16	0	$80_{13} = \chi_{10,0}, \varphi_{10,0}$
	17	0	$80_{14} = \chi_{10,1}, \varphi_{10,1}$
	18	0	$80_{15} = \chi_{11,0}, \varphi_{11,0}$
	19	0	$80_{16} = \chi_{11,1}, \varphi_{11,1}$
	20	0	$80_{17} = \chi_{12,0}, \varphi_{12,0}$
	21	0	$80_{18} = \chi_{12,1}, \varphi_{12,1}$
	22	0	$80_{19} = \chi_{13,0}, \varphi_{13,0}$
	23	0	$80_{20} = \chi_{13,1}, \varphi_{13,1}$
	24	0	$80_{21} = \chi_{14,0}, \varphi_{14,0}$
	25	0	$80_{22} = \chi_{14,1}, \varphi_{14,1}$
	26	0	$80_{23} = \chi_{15,0}, \varphi_{15,0}$
	27	0	$80_{24} = \chi_{15,1}, \varphi_{15,1}$
	28	0	$80_{25} = \chi_{16,0}, \varphi_{16,0}$
	29	0	$80_{26} = \chi_{16,1}, \varphi_{16,1}$
	30	0	$80_{27} = \chi_{17,0}, \varphi_{17,0}$
	31	0	$80_{28} = \chi_{17,1}, \varphi_{17,1}$
	32	0	$80_{29} = \chi_{18,0}, \varphi_{18,0}$
	33	0	$80_{30} = \chi_{18,1}, \varphi_{18,1}$
	34	0	$80_{31} = \chi_{19,0}, \varphi_{19,0}$
	35	0	$80_{32} = \chi_{19,1}, \varphi_{19,1}$
	36	0	$80_{33} = \chi_{20,0}, \varphi_{20,0}$
	37	0	$80_{34} = \chi_{20,1}, \varphi_{20,1}$
	38	0	$80_{35} = \chi_{21,0}, \varphi_{21,0}$
	39	0	$80_{36} = \chi_{21,1}, \varphi_{21,1}$
	40	0	$80_{37} = \chi_{22,0}, \varphi_{22,0}$

	blocks	defect	matrix
	41	0	$80_{38} = \chi_{22,1}, \varphi_{22,1}$
	42	0	$80_{39} = \chi_{23,0}, \varphi_{23,0}$
	43	0	$80_{40} = \chi_{23,1}, \varphi_{23,1}$
	44	1	$5 \times 1$
	45	1	$5 \times 1$
	46	1	$5 \times 1$
	47	1	$5 \times 1$
	48	1	$5 \times 1$
	49	1	$5 \times 1$
$2.G :$	50	0	$80_{41} = \chi_{44+}, \varphi_{28+}$
	51	0	$80_{42} = \chi_{46,0}, \varphi_{30,0}$
	52	0	$80_{43} = \chi_{46,1}, \varphi_{30,1}$
	53	0	$80_{44} = \chi_{47,0}, \varphi_{31,0}$
	54	0	$80_{45} = \chi_{47,1}, \varphi_{31,1}$
	55	0	$80_{46} = \chi_{48,0}, \varphi_{32,0}$
	56	0	$80_{47} = \chi_{48,1}, \varphi_{32,1}$
	57	0	$80_{48} = \chi_{49,0}, \varphi_{33,0}$
	58	0	$80_{49} = \chi_{49,1}, \varphi_{33,1}$
	59	0	$80_{50} = \chi_{50,0}, \varphi_{34,0}$
	60	0	$80_{51} = \chi_{50,1}, \varphi_{34,1}$
	61	0	$80_{52} = \chi_{51,0}, \varphi_{35,0}$
	62	0	$80_{53} = \chi_{51,1}, \varphi_{35,1}$
	63	0	$80_{54} = \chi_{52,0}, \varphi_{36,0}$
	64	0	$80_{55} = \chi_{52,1}, \varphi_{36,1}$
	65	0	$80_{56} = \chi_{53,0}, \varphi_{37,0}$
	66	0	$80_{57} = \chi_{53,1}, \varphi_{37,1}$
	67	0	$80_{58} = \chi_{54,0}, \varphi_{38,0}$
	68	0	$80_{59} = \chi_{54,1}, \varphi_{38,1}$
	69	0	$80_{60} = \chi_{55,0}, \varphi_{39,0}$
	70	0	$80_{61} = \chi_{55,1}, \varphi_{39,1}$
	71	0	$80_{62} = \chi_{56,0}, \varphi_{40,0}$
	72	0	$80_{63} = \chi_{56,1}, \varphi_{40,1}$
	73	0	$80_{64} = \chi_{57,0}, \varphi_{41,0}$
	74	0	$80_{65} = \chi_{57,1}, \varphi_{41,1}$
	75	0	$80_{66} = \chi_{58,0}, \varphi_{42,0}$
	76	0	$80_{67} = \chi_{58,1}, \varphi_{42,1}$
	77	0	$80_{68} = \chi_{59,0}, \varphi_{43,0}$
	78	0	$80_{69} = \chi_{59,1}, \varphi_{43,1}$
	79	0	$80_{70} = \chi_{60,0}, \varphi_{44,0}$
	80	0	$80_{71} = \chi_{60,1}, \varphi_{44,1}$

	blocks	defect	matrix		blocks	defect	matrix
	81	0	$80_{72} = \chi_{61,0}, \varphi_{45,0}$		90	0	$80_{81} = \chi_{65,1}, \varphi_{49,1}$
	82	0	$80_{73} = \chi_{61,1}, \varphi_{45,1}$		91	1	$5 \times 1$
	83	0	$80_{74} = \chi_{62,0}, \varphi_{46,0}$		92	1	$5 \times 1$
	84	0	$80_{75} = \chi_{62,1}, \varphi_{46,1}$		93	1	$5 \times 1$
	85	0	$80_{76} = \chi_{63,0}, \varphi_{47,0}$		94	1	$5 \times 1$
	86	0	$80_{77} = \chi_{63,1}, \varphi_{47,1}$		95	1	$5 \times 1$
	87	0	$80_{78} = \chi_{64,0}, \varphi_{48,0}$		96	1	$5 \times 1$
	88	0	$80_{79} = \chi_{64,1}, \varphi_{48,1}$		97	1	$5 \times 1$
	89	0	$80_{80} = \chi_{65,0}, \varphi_{49,0}$		98	1	$5 \times 1$

Block 1:	$\varphi_{1,0}$	$\varphi_{24,1}$	
$1_1 = \chi_{1,0}$	1	.	$\varphi_{1,0} = 1_1$
$81_2 = \chi_{24,1}$	.	1	$\varphi_{24,1} = 81_2$
$82_4 = \chi_{26,0}$	1	1	
$82_6 = \chi_{27,0}$	1	1	

Block 2:	$\varphi_{1,1}$	$\varphi_{24,0}$	
$1_2 = \chi_{1,1}$	1	.	$\varphi_{1,1} = 1_2$
$81_1 = \chi_{24,0}$	.	1	$\varphi_{24,0} = 81_1$
$82_5 = \chi_{26,1}$	1	1	
$82_7 = \chi_{27,1}$	1	1	

Block 3:	$\varphi_{2+}$	
$82_1 = \chi_{2+}$	1	
$82_{12} = \chi_{30,0}$	1	$\varphi_{2+} = 82_1$
$82_{13} = \chi_{30,1}$	1	
$82_{14} = \chi_{31,0}$	1	
$82_{15} = \chi_{31,1}$	1	

Block 44:	$\varphi_{25,0}$	
$82_2 = \chi_{25,0}$	1	$\varphi_{25,0} = 82_2$
$82_{16} = \chi_{32,0}$	1	
$82_{18} = \chi_{33,0}$	1	
$82_{21} = \chi_{34,1}$	1	
$82_{23} = \chi_{35,1}$	1	

Block 45:	$\varphi_{25,1}$	
$82_3 = \chi_{25,1}$	1	$\varphi_{25,1} = 82_3$
$82_{17} = \chi_{32,1}$	1	
$82_{19} = \chi_{33,1}$	1	
$82_{20} = \chi_{34,0}$	1	
$82_{22} = \chi_{35,0}$	1	

Block 46:	$\varphi_{26,0}$	
$82_8 = \chi_{28,0}$	1	$\varphi_{26,0} = 82_4$
$82_{24} = \chi_{36,0}$	1	
$82_{27} = \chi_{37,1}$	1	
$82_{37} = \chi_{42,1}$	1	
$82_{38} = \chi_{43,0}$	1	

Block 47:	$\varphi_{26,1}$	
$82_9 = \chi_{28,1}$	1	$\varphi_{26,1} = 82_5$
$82_{25} = \chi_{36,1}$	1	
$82_{26} = \chi_{37,0}$	1	
$82_{36} = \chi_{42,0}$	1	
$82_{39} = \chi_{43,1}$	1	

Block 48:	$\varphi_{27,0}$	
$82_{10} = \chi_{29,0}$	1	$\varphi_{27,0} = 82_6$
$82_{28} = \chi_{38,0}$	1	
$82_{31} = \chi_{39,1}$	1	
$82_{32} = \chi_{40,0}$	1	
$82_{35} = \chi_{41,1}$	1	

Block 49:	$\varphi_{27,1}$	
$82_{11} = \chi_{29,1}$	1	$\varphi_{27,1} = 82_7$
$82_{29} = \chi_{38,1}$	1	
$82_{30} = \chi_{39,0}$	1	
$82_{33} = \chi_{40,1}$	1	
$82_{34} = \chi_{41,0}$	1	

Block 91:	$\varphi_{50,0}$	
$82_{40} = \chi_{66,0}$	1	$\varphi_{50,0} = 82_8$
$82_{48} = \chi_{70,0}$	1	
$82_{63} = \chi_{77,1}$	1	
$82_{67} = \chi_{79,1}$	1	
$82_{77} = \chi_{84,1}$	1	

Block 92:	$\varphi_{50,1}$	
$82_{41} = \chi_{66,1}$	1	$\varphi_{50,1} = 82_9$
$82_{49} = \chi_{70,1}$	1	
$82_{62} = \chi_{77,0}$	1	
$82_{66} = \chi_{79,0}$	1	
$82_{76} = \chi_{84,0}$	1	

Block 93:	$\varphi_{51,0}$	
$82_{42} = \chi_{67,0}$	1	$\varphi_{51,0} = 82_{10}$
$82_{50} = \chi_{71,0}$	1	
$82_{61} = \chi_{76,1}$	1	
$82_{64} = \chi_{78,0}$	1	
$82_{78} = \chi_{85,0}$	1	

Block 94:	$\varphi_{51,1}$	
$82_{43} = \chi_{67,1}$	1	$\varphi_{51,1} = 82_{11}$
$82_{51} = \chi_{71,1}$	1	
$82_{60} = \chi_{76,0}$	1	
$82_{65} = \chi_{78,1}$	1	
$82_{79} = \chi_{85,1}$	1	

Block 95:	$\varphi_{52,0}$	
$82_{44} = \chi_{68,0}$	1	$\varphi_{52,0} = 82_{12}$
$82_{52} = \chi_{72,0}$	1	
$82_{57} = \chi_{74,1}$	1	
$82_{71} = \chi_{81,1}$	1	
$82_{74} = \chi_{83,0}$	1	

Block 96:	$\varphi_{52,1}$	
$82_{45} = \chi_{68,1}$	1	$\varphi_{52,1} = 82_{13}$
$82_{53} = \chi_{72,1}$	1	
$82_{56} = \chi_{74,0}$	1	
$82_{70} = \chi_{81,0}$	1	
$82_{75} = \chi_{83,1}$	1	

Block 97:	$\varphi_{53,0}$	
$82_{46} = \chi_{69,0}$	1	$\varphi_{53,0} = 82_{14}$
$82_{54} = \chi_{73,0}$	1	
$82_{58} = \chi_{75,0}$	1	
$82_{68} = \chi_{80,0}$	1	
$82_{72} = \chi_{82,0}$	1	

Block 98:	$\varphi_{53,1}$	
$82_{47} = \chi_{69,1}$	1	$\varphi_{53,1} = 82_{15}$
$82_{55} = \chi_{73,1}$	1	
$82_{59} = \chi_{75,1}$	1	
$82_{69} = \chi_{80,1}$	1	
$82_{73} = \chi_{82,1}$	1	