

$$O_{10}^-(2).2 \pmod{5}$$

	blocks	defect	matrix
$G :$	1	2	20×14
	2	2	20×14
	3	2	20×14
	4	1	5×4
	5	1	5×4
	6	1	5×4
	7	0	$11900_1 = \chi_{11+}, \varphi_{11+}$
	8	1	5×4
	9	1	5×4
	10	1	5×4
	11	1	5×4
	12	0	$7700_1 = \chi_{15,0}, \varphi_{15,0}$
	13	0	$7700_2 = \chi_{15,1}, \varphi_{15,1}$
	14	0	$9350_1 = \chi_{16,0}, \varphi_{16,0}$
	15	0	$9350_2 = \chi_{16,1}, \varphi_{16,1}$
	16	1	5×4
	17	1	5×4
	18	0	$32725_1 = \chi_{27,0}, \varphi_{28,0}$
	19	0	$32725_2 = \chi_{27,1}, \varphi_{28,1}$
	20	0	$56100_1 = \chi_{32,0}, \varphi_{31,0}$
	21	0	$56100_2 = \chi_{32,1}, \varphi_{31,1}$
	22	0	$65450_1 = \chi_{34,0}, \varphi_{33,0}$
	23	0	$65450_2 = \chi_{34,1}, \varphi_{33,1}$
	24	0	$130900_1 = \chi_{35+}, \varphi_{34+}$
	25	0	$142800_1 = \chi_{37+}, \varphi_{36+}$
	26	0	$123200_1 = \chi_{47,0}, \varphi_{47,0}$
	27	0	$123200_2 = \chi_{47,1}, \varphi_{47,1}$
	28	0	$130900_2 = \chi_{48,0}, \varphi_{48,0}$
	29	0	$130900_3 = \chi_{48,1}, \varphi_{48,1}$
	30	0	$130900_4 = \chi_{49,0}, \varphi_{49,0}$
	31	0	$130900_5 = \chi_{49,1}, \varphi_{49,1}$
	32	0	$130900_6 = \chi_{50,0}, \varphi_{50,0}$
	33	0	$130900_7 = \chi_{50,1}, \varphi_{50,1}$
	34	0	$130900_8 = \chi_{51,0}, \varphi_{51,0}$
	35	0	$130900_9 = \chi_{51,1}, \varphi_{51,1}$
	36	0	$261800_1 = \chi_{52+}, \varphi_{52+}$
	37	0	$380800_1 = \chi_{58+}, \varphi_{57+}$
	38	1	5×4
	39	0	$261800_2 = \chi_{66,0}, \varphi_{60,0}$
	40	0	$261800_3 = \chi_{66,1}, \varphi_{60,1}$

	blocks	defect	matrix
	41	0	$261800_4 = \chi_{67,0}, \varphi_{61,0}$
	42	0	$261800_5 = \chi_{67,1}, \varphi_{61,1}$
	43	0	$261800_6 = \chi_{68,0}, \varphi_{62,0}$
	44	0	$261800_7 = \chi_{68,1}, \varphi_{62,1}$
	45	0	$294525_1 = \chi_{69,0}, \varphi_{64,0}$
	46	0	$294525_2 = \chi_{69,1}, \varphi_{64,1}$
	47	0	$294525_3 = \chi_{70,0}, \varphi_{65,0}$
	48	0	$294525_4 = \chi_{70,1}, \varphi_{65,1}$
	49	0	$589050_1 = \chi_{71+}, \varphi_{66+}$
	50	0	$1047200_1 = \chi_{82+}, \varphi_{75+}$
	51	0	$1178100_1 = \chi_{88+}, \varphi_{78+}$
	52	0	$1178100_2 = \chi_{90+}, \varphi_{80+}$
	53	0	$598400_1 = \chi_{92,0}, \varphi_{82,0}$
	54	0	$598400_2 = \chi_{92,1}, \varphi_{82,1}$
	55	0	$1445850_1 = \chi_{98+}, \varphi_{84+}$
	56	0	$1445850_2 = \chi_{100+}, \varphi_{86+}$
	57	0	$1445850_3 = \chi_{102+}, \varphi_{88+}$
	58	0	$1047200_2 = \chi_{109,0}, \varphi_{91,0}$
	59	0	$1047200_3 = \chi_{109,1}, \varphi_{91,1}$
	60	0	$1136025_1 = \chi_{112,0}, \varphi_{92,0}$
	61	0	$1136025_2 = \chi_{112,1}, \varphi_{92,1}$
	62	0	$1178100_3 = \chi_{113,0}, \varphi_{93,0}$
	63	0	$1178100_4 = \chi_{113,1}, \varphi_{93,1}$
	64	0	$1403325_1 = \chi_{114,0}, \varphi_{94,0}$
	65	0	$1403325_2 = \chi_{114,1}, \varphi_{94,1}$
	66	0	$1403325_3 = \chi_{115,0}, \varphi_{95,0}$
	67	0	$1403325_4 = \chi_{115,1}, \varphi_{95,1}$

Block 1:	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{7,1}$	$\varphi_{8,1}$	$\varphi_{9,0}$	$\varphi_{17,1}$	$\varphi_{18,1}$	$\varphi_{26,0}$	$\varphi_{27,1}$	$\varphi_{38,0}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.
$154_1 = \chi_{2,0}$	1	1	.	.	.	.	.	.	.	.
$748_2 = \chi_{7,1}$	.	.	1	.	.	.	.	.	.	.
$2244_2 = \chi_{8,1}$	1	.	.	1	.	.	.	.	.	.
$5236_1 = \chi_{9,0}$	.	1	.	.	1	.	.	.	.	.
$10692_2 = \chi_{17,1}$	.	.	1	.	.	1	.	.	.	.
$15147_2 = \chi_{20,1}$	.	.	.	1	.	.	1	.	.	.
$22848_2 = \chi_{24,1}$	.	.	.	.	.	1	1	.	.	.
$35904_1 = \chi_{28,0}$	.	.	.	.	1	.	.	1	.	.
$41888_2 = \chi_{31,1}$	.	.	.	.	.	1	.	.	1	.
$83776_2 = \chi_{40,1}$	1	1	.	1	.	.	.	.	.	.
$106029_3 = \chi_{44,0}$	.	.	.	.	.	.	.	1	.	1
$171072_2 = \chi_{56,1}$	.	.	1	.	.	1	1	.	1	.
$191488_2 = \chi_{60,1}$	.	.	1	.	.	.	.	.	.	1
$212058_3 = \chi_{61,1}$	.	.	.	1	.	.	1	.	.	.
$424116_3 = \chi_{79,0}$	.	.	.	.	.	.	.	1	.	.
$630784_1 = \chi_{95,0}$	.	1	.	.	1	.	.	.	.	.
$848232_2 = \chi_{106,0}$	.	.	.	.	.	.	.	.	1	1
$969408_1 = \chi_{108,0}$	.	.	.	.	.	.	.	.	1	.
$1048576_1 = \chi_{110,0}$	.	.	.	.	1	.	.	1	.	1

(Block 1:)	$\varphi_{40,1}$	$\varphi_{46,1}$	$\varphi_{72,0}$	$\varphi_{77,0}$	
$1_1 = \chi_{1,0}$	.	.	.	.	$\varphi_{1,0} = 1_1$
$154_1 = \chi_{2,0}$	.	.	.	.	$\varphi_{2,0} = 153_1$
$748_2 = \chi_{7,1}$	.	.	.	.	$\varphi_{7,1} = 748_2$
$2244_2 = \chi_{8,1}$	.	.	.	.	$\varphi_{8,1} = 2243_2$
$5236_1 = \chi_{9,0}$	.	.	.	.	$\varphi_{9,0} = 5083_1$
$10692_2 = \chi_{17,1}$	.	.	.	.	$\varphi_{17,1} = 9944_2$
$15147_2 = \chi_{20,1}$	.	.	.	.	$\varphi_{18,1} = 12904_2$
$22848_2 = \chi_{24,1}$	.	.	.	.	$\varphi_{26,0} = 30821_1$
$35904_1 = \chi_{28,0}$	.	.	.	.	$\varphi_{27,1} = 31944_2$
$41888_2 = \chi_{31,1}$	.	.	.	.	$\varphi_{38,0} = 75208_1$
$83776_2 = \chi_{40,1}$	1	.	.	.	$\varphi_{40,1} = 81379_2$
$106029_3 = \chi_{44,0}$	.	.	.	.	$\varphi_{46,1} = 115532_2$
$171072_2 = \chi_{56,1}$	.	1	.	.	$\varphi_{72,0} = 393295_1$
$191488_2 = \chi_{60,1}$	.	1	.	.	$\varphi_{77,0} = 544169_1$
$212058_3 = \chi_{61,1}$	1	1	.	.	
$424116_3 = \chi_{79,0}$	.	.	1	.	
$630784_1 = \chi_{95,0}$	1	.	.	1	
$848232_2 = \chi_{106,0}$	1	1	.	1	
$969408_1 = \chi_{108,0}$	.	.	1	1	
$1048576_1 = \chi_{110,0}$	.	.	1	1	

Block 2:	$\varphi_{1,1}$	$\varphi_{2,1}$	$\varphi_{7,0}$	$\varphi_{8,0}$	$\varphi_{9,1}$	$\varphi_{17,0}$	$\varphi_{18,0}$	$\varphi_{26,1}$	$\varphi_{27,0}$	$\varphi_{38,1}$
$1_2 = \chi_{1,1}$	1	.	.	.	.	.	.	.	.	.
$154_2 = \chi_{2,1}$	1	1	.	.	.	.	.	.	.	.
$748_1 = \chi_{7,0}$	.	.	1	.	.	.	.	.	.	.
$2244_1 = \chi_{8,0}$	1	.	.	1	.	.	.	.	.	.
$5236_2 = \chi_{9,1}$	.	1	.	.	1	.	.	.	.	.
$10692_1 = \chi_{17,0}$	.	.	1	.	.	1	.	.	.	.
$15147_1 = \chi_{20,0}$	.	.	.	1	.	.	1	.	.	.
$22848_1 = \chi_{24,0}$	.	.	.	.	.	1	1	.	.	.
$35904_2 = \chi_{28,1}$	.	.	.	.	1	.	.	1	.	.
$41888_1 = \chi_{31,0}$	.	.	.	.	.	1	.	.	1	.
$83776_1 = \chi_{40,0}$	1	1	.	1	.	.	.	.	.	.
$106029_4 = \chi_{44,1}$	.	.	.	.	.	.	.	1	.	1
$171072_1 = \chi_{56,0}$	.	.	1	.	.	1	1	.	1	.
$191488_1 = \chi_{60,0}$	.	.	1	.	.	.	.	.	.	1
$212058_2 = \chi_{61,0}$	.	.	.	1	.	.	1	.	.	.
$424116_4 = \chi_{79,1}$	.	.	.	.	.	.	.	1	.	.
$630784_2 = \chi_{95,1}$	.	1	.	.	1	.	.	.	.	.
$848232_3 = \chi_{106,1}$	.	.	.	.	.	.	.	.	1	1
$969408_2 = \chi_{108,1}$	.	.	.	.	.	.	.	.	1	.
$1048576_2 = \chi_{110,1}$	.	.	.	.	1	.	.	1	.	1

(Block 2:)	$\varphi_{40,0}$	$\varphi_{46,0}$	$\varphi_{72,1}$	$\varphi_{77,1}$	
$1_2 = \chi_{1,1}$	.	.	.	.	$\varphi_{1,1} = 1_2$
$154_2 = \chi_{2,1}$	.	.	.	.	$\varphi_{2,1} = 153_2$
$748_1 = \chi_{7,0}$	.	.	.	.	$\varphi_{7,0} = 748_1$
$2244_1 = \chi_{8,0}$	.	.	.	.	$\varphi_{8,0} = 2243_1$
$5236_2 = \chi_{9,1}$	.	.	.	.	$\varphi_{9,1} = 5083_2$
$10692_1 = \chi_{17,0}$	.	.	.	.	$\varphi_{17,0} = 9944_1$
$15147_1 = \chi_{20,0}$	.	.	.	.	$\varphi_{18,0} = 12904_1$
$22848_1 = \chi_{24,0}$	.	.	.	.	$\varphi_{26,1} = 30821_2$
$35904_2 = \chi_{28,1}$	.	.	.	.	$\varphi_{27,0} = 31944_1$
$41888_1 = \chi_{31,0}$	.	.	.	.	$\varphi_{38,1} = 75208_2$
$83776_1 = \chi_{40,0}$	1	.	.	.	$\varphi_{40,0} = 81379_1$
$106029_4 = \chi_{44,1}$	.	.	.	.	$\varphi_{46,0} = 115532_1$
$171072_1 = \chi_{56,0}$	.	1	.	.	$\varphi_{72,1} = 393295_2$
$191488_1 = \chi_{60,0}$	.	1	.	.	$\varphi_{77,1} = 544169_2$
$212058_2 = \chi_{61,0}$	1	1	.	.	
$424116_4 = \chi_{79,1}$	.	.	1	.	
$630784_2 = \chi_{95,1}$	1	.	.	1	
$848232_3 = \chi_{106,1}$	1	1	.	1	
$969408_2 = \chi_{108,1}$	.	.	1	1	
$1048576_2 = \chi_{110,1}$	.	.	1	1	

Block 3:	$\varphi_{3,0}$	$\varphi_{3,1}$	$\varphi_{10,0}$	$\varphi_{10,1}$	φ_{21+}	$\varphi_{23,0}$	$\varphi_{23,1}$	φ_{41+}	$\varphi_{43,0}$	$\varphi_{43,1}$
$187_1 = \chi_{3,0}$	1	.	.	.	.	.	.	.	.	.
$187_2 = \chi_{3,1}$	.	1	.	.	.	.	.	.	.	.
$5236_3 = \chi_{10,0}$	.	.	1	.	.	.	.	.	.	.
$5236_4 = \chi_{10,1}$	.	.	.	1	.	.	.	.	.	.
$15708_1 = \chi_{21,0}$	1	.	.	.	.	1	.	.	.	.
$15708_2 = \chi_{21,1}$	.	1	.	.	.	.	1	.	.	.
$31416_1 = \chi_{22+}$	1	1	.	.	1	.	.	.	.	.
$106029_1 = \chi_{43,0}$	.	.	1	.	.	.	.	.	1	.
$106029_2 = \chi_{43,1}$	.	.	.	1	.	.	.	.	.	1
$212058_1 = \chi_{45+}$	.	.	1	1	.	.	.	1	.	.
$181764_1 = \chi_{57,0}$	1	.	.	.	1	1	.	.	.	.
$181764_2 = \chi_{57,1}$	.	1	.	.	1	.	1	.	.	.
$251328_1 = \chi_{63,0}$	.	.	.	.	.	1	.	.	1	.
$251328_2 = \chi_{63,1}$	.	.	.	.	.	.	1	.	.	1
$502656_1 = \chi_{64+}$	.	.	.	.	1	.	.	1	.	.
$424116_1 = \chi_{78,0}$	.	.	.	.	.	.	.	.	1	.
$424116_2 = \chi_{78,1}$	.	.	.	.	.	.	.	.	.	1
$848232_1 = \chi_{80+}$	.	.	.	.	.	.	.	1	.	.
$765952_1 = \chi_{104,0}$	.	.	1	.	.	.	.	1	1	.
$765952_2 = \chi_{104,1}$	.	.	.	1	.	.	.	1	.	1

(Block 3:)	$\varphi_{54,0}$	$\varphi_{54,1}$	$\varphi_{69,0}$	$\varphi_{69,1}$
$187_1 = \chi_{3,0}$	.	.	.	.
$187_2 = \chi_{3,1}$	.	.	.	.
$5236_3 = \chi_{10,0}$	.	.	.	.
$5236_4 = \chi_{10,1}$	.	.	.	.
$15708_1 = \chi_{21,0}$	.	.	.	.
$15708_2 = \chi_{21,1}$	.	.	.	.
$31416_1 = \chi_{22+}$	.	.	.	.
$106029_1 = \chi_{43,0}$	.	.	.	.
$106029_2 = \chi_{43,1}$	.	.	.	.
$212058_1 = \chi_{45+}$	.	.	.	.
$181764_1 = \chi_{57,0}$	1	.	.	.
$181764_2 = \chi_{57,1}$	.	1	.	.
$251328_1 = \chi_{63,0}$	1	.	.	.
$251328_2 = \chi_{63,1}$	.	1	.	.
$502656_1 = \chi_{64+}$	1	1	.	.
$424116_1 = \chi_{78,0}$	.	.	1	.
$424116_2 = \chi_{78,1}$	.	.	.	1
$848232_1 = \chi_{80+}$	.	.	1	1
$765952_1 = \chi_{104,0}$	1	.	1	.
$765952_2 = \chi_{104,1}$	.	1	.	1

$$\begin{aligned}
\varphi_{3,0} &= 187_1 \\
\varphi_{3,1} &= 187_2 \\
\varphi_{10,0} &= 5236_1 \\
\varphi_{10,1} &= 5236_2 \\
\varphi_{21+} &= 31042_1 \\
\varphi_{23,0} &= 15521_1 \\
\varphi_{23,1} &= 15521_2 \\
\varphi_{41+} &= 201586_1 \\
\varphi_{43,0} &= 100793_1 \\
\varphi_{43,1} &= 100793_2 \\
\varphi_{54,0} &= 135014_1 \\
\varphi_{54,1} &= 135014_2 \\
\varphi_{69,0} &= 323323_1 \\
\varphi_{69,1} &= 323323_2
\end{aligned}$$

Block 4:	$\varphi_{4,0}$	$\varphi_{20,0}$	$\varphi_{32,1}$	$\varphi_{63,1}$
$340_1 = \chi_{4,0}$	1	.	.	.
$14960_1 = \chi_{19,0}$	1	1	.	.
$59840_2 = \chi_{33,1}$	.	.	1	.
$302940_2 = \chi_{73,1}$	.	1	.	1
$348160_2 = \chi_{75,1}$	.	.	1	1

$$\begin{aligned}
\varphi_{4,0} &= 340_1 \\
\varphi_{20,0} &= 14620_1 \\
\varphi_{32,1} &= 59840_2 \\
\varphi_{63,1} &= 288320_2
\end{aligned}$$

Block 5:	$\varphi_{4,1}$	$\varphi_{20,1}$	$\varphi_{32,0}$	$\varphi_{63,0}$
$340_2 = \chi_{4,1}$	1	.	.	.
$14960_2 = \chi_{19,1}$	1	1	.	.
$59840_1 = \chi_{33,0}$	.	.	1	.
$302940_1 = \chi_{73,0}$	.	1	.	1
$348160_1 = \chi_{75,0}$	.	.	1	1

$$\begin{aligned}
\varphi_{4,1} &= 340_2 \\
\varphi_{20,1} &= 14620_2 \\
\varphi_{32,0} &= 59840_1 \\
\varphi_{63,0} &= 288320_1
\end{aligned}$$

Block 6:	φ_{5+}	φ_{24+}	φ_{44+}	φ_{73+}	
$1190_1 = \chi_{5+}$	1	.	.	.	$\varphi_{5+} = 1190_1$
$52360_1 = \chi_{25+}$	1	1	.	.	$\varphi_{24+} = 51170_1$
$209440_1 = \chi_{41+}$	.	.	1	.	$\varphi_{44+} = 209440_1$
$1060290_1 = \chi_{86+}$	.	1	.	1	$\varphi_{73+} = 1009120_1$
$1218560_1 = \chi_{93+}$	.	.	1	1	

Block 8:	$\varphi_{13,0}$	$\varphi_{29,0}$	$\varphi_{55,0}$	$\varphi_{70,0}$	
$6545_1 = \chi_{13,0}$	1	.	.	.	$\varphi_{13,0} = 6545_1$
$39270_3 = \chi_{30,0}$	.	1	.	.	$\varphi_{29,0} = 39270_1$
$157080_1 = \chi_{54,0}$	1	.	1	.	$\varphi_{55,0} = 150535_1$
$418880_1 = \chi_{76,0}$	.	1	.	1	$\varphi_{70,0} = 379610_1$
$530145_3 = \chi_{85,0}$	.	.	1	1	

Block 9:	$\varphi_{13,1}$	$\varphi_{29,1}$	$\varphi_{55,1}$	$\varphi_{70,1}$	
$6545_2 = \chi_{13,1}$	1	.	.	.	$\varphi_{13,1} = 6545_2$
$39270_4 = \chi_{30,1}$	.	1	.	.	$\varphi_{29,1} = 39270_2$
$157080_2 = \chi_{54,1}$	1	.	1	.	$\varphi_{55,1} = 150535_2$
$418880_2 = \chi_{76,1}$	.	1	.	1	$\varphi_{70,1} = 379610_2$
$530145_4 = \chi_{85,1}$	.	.	1	1	

Block 10:	$\varphi_{14,0}$	$\varphi_{30,1}$	$\varphi_{56,0}$	$\varphi_{71,1}$	
$6545_3 = \chi_{14,0}$	1	.	.	.	$\varphi_{14,0} = 6545_3$
$39270_2 = \chi_{29,1}$	.	1	.	.	$\varphi_{30,1} = 39270_4$
$157080_3 = \chi_{55,0}$	1	.	1	.	$\varphi_{56,0} = 150535_3$
$418880_4 = \chi_{77,1}$	.	1	.	1	$\varphi_{71,1} = 379610_4$
$530145_2 = \chi_{84,1}$	.	.	1	1	

Block 11:	$\varphi_{14,1}$	$\varphi_{30,0}$	$\varphi_{56,1}$	$\varphi_{71,0}$	
$6545_4 = \chi_{14,1}$	1	.	.	.	$\varphi_{14,1} = 6545_4$
$39270_1 = \chi_{29,0}$	.	1	.	.	$\varphi_{30,0} = 39270_3$
$157080_4 = \chi_{55,1}$	1	.	1	.	$\varphi_{56,1} = 150535_4$
$418880_3 = \chi_{77,0}$	.	1	.	1	$\varphi_{71,0} = 379610_3$
$530145_1 = \chi_{84,0}$	.	.	1	1	

Block 16:	$\varphi_{19,0}$	$\varphi_{39,1}$	$\varphi_{68,0}$	$\varphi_{90,1}$	
$13090_1 = \chi_{18,0}$	1	.	.	.	$\varphi_{19,0} = 13090_1$
$78540_2 = \chi_{39,1}$	.	1	.	.	$\varphi_{39,1} = 78540_2$
$314160_1 = \chi_{74,0}$	1	.	1	.	$\varphi_{68,0} = 301070_1$
$837760_2 = \chi_{105,1}$	.	1	.	1	$\varphi_{90,1} = 759220_2$
$1060290_3 = \chi_{111,1}$	.	.	1	1	

Block 17:	$\varphi_{19,1}$	$\varphi_{39,0}$	$\varphi_{68,1}$	$\varphi_{90,0}$	
$13090_2 = \chi_{18,1}$	1	.	.	.	$\varphi_{19,1} = 13090_2$
$78540_1 = \chi_{39,0}$	.	1	.	.	$\varphi_{39,0} = 78540_1$
$314160_2 = \chi_{74,1}$	1	.	1	.	$\varphi_{68,1} = 301070_2$
$837760_1 = \chi_{105,0}$	.	1	.	1	$\varphi_{90,0} = 759220_1$
$1060290_2 = \chi_{111,0}$	.	.	1	1	

Block 38:	$\varphi_{59,0}$	$\varphi_{59,1}$	$\varphi_{83,0}$	$\varphi_{83,1}$	
$227205_1 = \chi_{62,0}$	1	.	.	.	$\varphi_{59,0} = 227205_1$
$227205_2 = \chi_{62,1}$	.	1	.	.	$\varphi_{59,1} = 227205_2$
$1363230_1 = \chi_{96+}$	.	.	1	1	$\varphi_{83,0} = 681615_1$
$908820_1 = \chi_{107,0}$	1	.	1	.	$\varphi_{83,1} = 681615_2$
$908820_2 = \chi_{107,1}$	.	1	.	1	