

$S_{12} \pmod{5}$

	blocks	defect	matrix
$G :$	1	2	20×14
	2	2	20×14
	3	1	5×4
	4	1	5×4
	5	1	5×4
	6	0	$275_1 = \chi_{8,0}, \varphi_{9,0}$
	7	0	$275_2 = \chi_{8,1}, \varphi_{9,1}$
	8	1	5×4
	9	1	5×4
	10	0	$2100_1 = \chi_{17+}, \varphi_{18+}$
	11	0	$1650_1 = \chi_{25,0}, \varphi_{25,0}$
	12	0	$1650_2 = \chi_{25,1}, \varphi_{25,1}$

	blocks	defect	matrix
	13	0	$1925_1 = \chi_{27,0}, \varphi_{26,0}$
	14	0	$1925_2 = \chi_{27,1}, \varphi_{26,1}$
	15	0	$1925_3 = \chi_{28,0}, \varphi_{27,0}$
	16	0	$1925_4 = \chi_{28,1}, \varphi_{27,1}$
	17	0	$7700_1 = \chi_{38+}, \varphi_{31+}$
	18	0	$5775_1 = \chi_{43,0}, \varphi_{33,0}$
	19	0	$5775_2 = \chi_{43,1}, \varphi_{33,1}$
$2.G :$	20	2	13×10
	21	1	4×2
	22	1	4×2
	23	0	$5600_1 = \chi_{62,0}, \varphi_{47,0}$
	24	0	$5600_2 = \chi_{62,1}, \varphi_{47,1}$

Block 1:	$\varphi_{1,0}$	$\varphi_{2,1}$	$\varphi_{3,1}$	$\varphi_{5,1}$	$\varphi_{6,0}$	$\varphi_{7,0}$	$\varphi_{12,0}$	$\varphi_{13,0}$	$\varphi_{14,1}$	$\varphi_{15,0}$	$\varphi_{21,0}$	$\varphi_{23,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.	.	.
$11_2 = \chi_{2,1}$.	1	.	.	.	.	.	.	.	.	.	.
$54_2 = \chi_{3,1}$.	1	1	.	.	.	.	.	.	.	.	.
$132_2 = \chi_{5,1}$.	.	1	1	.	.	.	.	.	.	.	.
$154_1 = \chi_{6,0}$	1	.	.	.	.	1	.	.	.	.	.	.
$297_1 = \chi_{9,0}$	1	1	.	.	.	.	.	.
$462_1 = \chi_{12,0}$	1	.	.	.	.
$462_3 = \chi_{13,0}$	1	.	.	1	.	.	1	.	.	.	.	.
$616_2 = \chi_{14,1}$.	.	1	.	.	.	.	.	1	.	.	.
$891_1 = \chi_{15,0}$	1	.	.	.	1	.	.
$1408_1 = \chi_{23,0}$	1	.	.	.	1	1	1	.	.	1	.	.
$1728_1 = \chi_{26,0}$	1	.	.	1	.
$2079_2 = \chi_{29,1}$	1	.	.	1
$2112_2 = \chi_{30,1}$.	1	.	.	1	.	.	.	.	.	.	.
$2376_1 = \chi_{31,0}$	1	.	.	1	1	.
$2673_2 = \chi_{32,1}$.	1	1	1	.	.	.	.	1	.	.	.
$3564_2 = \chi_{36,1}$	1	.	.	.	1
$3696_1 = \chi_{37,0}$	1	1	.	.	1	.
$4158_2 = \chi_{40,1}$.	.	.	1	1	.	1	.	.	.	.	.
$5632_2 = \chi_{42,1}$	1	.	.	1

(Block 1:)	$\varphi_{24,1}$	$\varphi_{28,1}$		
$1_1 = \chi_{1,0}$.	.		
$11_2 = \chi_{2,1}$.	.		
$54_2 = \chi_{3,1}$.	.	$\varphi_{1,0} =$	1_1
$132_2 = \chi_{5,1}$.	.	$\varphi_{2,1} =$	11_2
$154_1 = \chi_{6,0}$.	.	$\varphi_{3,1} =$	43_2
$297_1 = \chi_{9,0}$.	.	$\varphi_{5,1} =$	89_2
$462_1 = \chi_{12,0}$.	.	$\varphi_{6,0} =$	144_1
$462_3 = \chi_{13,0}$.	.	$\varphi_{7,0} =$	153_1
$616_2 = \chi_{14,1}$.	.	$\varphi_{12,0} =$	372_1
$891_1 = \chi_{15,0}$.	.	$\varphi_{13,0} =$	462_1
$1408_1 = \chi_{23,0}$.	.	$\varphi_{14,1} =$	573_2
$1728_1 = \chi_{26,0}$.	.	$\varphi_{15,0} =$	738_1
$2079_2 = \chi_{29,1}$.	.	$\varphi_{21,0} =$	1266_1
$2112_2 = \chi_{30,1}$.	1	$\varphi_{23,1} =$	1506_2
$2376_1 = \chi_{31,0}$.	.	$\varphi_{24,1} =$	1596_2
$2673_2 = \chi_{32,1}$.	1	$\varphi_{28,1} =$	1957_2
$3564_2 = \chi_{36,1}$	1	.		
$3696_1 = \chi_{37,0}$	1	.		
$4158_2 = \chi_{40,1}$	1	1		
$5632_2 = \chi_{42,1}$	1	1		

Block 2:	$\varphi_{1,1}$	$\varphi_{2,0}$	$\varphi_{3,0}$	$\varphi_{5,0}$	$\varphi_{6,1}$	$\varphi_{7,1}$	$\varphi_{12,1}$	$\varphi_{13,1}$	$\varphi_{14,0}$	$\varphi_{15,1}$	$\varphi_{21,1}$	$\varphi_{23,0}$
$1_2 = \chi_{1,1}$	1	.	.	.	.	.	.	.	.	.	.	.
$11_1 = \chi_{2,0}$.	1	.	.	.	.	.	.	.	.	.	.
$54_1 = \chi_{3,0}$.	1	1	.	.	.	.	.	.	.	.	.
$132_1 = \chi_{5,0}$.	.	1	1	.	.	.	.	.	.	.	.
$154_2 = \chi_{6,1}$	1	.	.	.	.	1	.	.	.	.	.	.
$297_2 = \chi_{9,1}$	1	1	.	.	.	.	.	.
$462_2 = \chi_{12,1}$	1	.	.	.	.
$462_4 = \chi_{13,1}$	1	.	.	1	.	.	1	.	.	.	.	.
$616_1 = \chi_{14,0}$.	.	1	.	.	.	.	.	1	.	.	.
$891_2 = \chi_{15,1}$	1	.	.	.	1	.	.
$1408_2 = \chi_{23,1}$	1	.	.	.	1	1	1	.	.	1	.	.
$1728_2 = \chi_{26,1}$	1	.	.	1	.
$2079_1 = \chi_{29,0}$	1	.	.	1
$2112_1 = \chi_{30,0}$.	1	.	.	1	.	.	.	.	.	.	.
$2376_2 = \chi_{31,1}$	1	.	.	1	1	.
$2673_1 = \chi_{32,0}$.	1	1	1	.	.	.	.	1	.	.	.
$3564_1 = \chi_{36,0}$	1	.	.	.	1
$3696_2 = \chi_{37,1}$	1	1	.	.	1	.
$4158_1 = \chi_{40,0}$.	.	.	1	1	.	1	.	.	.	.	.
$5632_1 = \chi_{42,0}$	1	.	.	1

(Block 2:)	$\varphi_{24,0}$	$\varphi_{28,0}$		
$1_2 = \chi_{1,1}$.	.		
$11_1 = \chi_{2,0}$.	.		
$54_1 = \chi_{3,0}$.	.	$\varphi_{1,1} =$	1_2
$132_1 = \chi_{5,0}$.	.	$\varphi_{2,0} =$	11_1
$154_2 = \chi_{6,1}$.	.	$\varphi_{3,0} =$	43_1
$297_2 = \chi_{9,1}$.	.	$\varphi_{5,0} =$	89_1
$462_2 = \chi_{12,1}$.	.	$\varphi_{6,1} =$	144_2
$462_4 = \chi_{13,1}$.	.	$\varphi_{7,1} =$	153_2
$616_1 = \chi_{14,0}$.	.	$\varphi_{12,1} =$	372_2
$891_2 = \chi_{15,1}$.	.	$\varphi_{13,1} =$	462_2
$1408_2 = \chi_{23,1}$.	.	$\varphi_{14,0} =$	573_1
$1728_2 = \chi_{26,1}$.	.	$\varphi_{15,1} =$	738_2
$2079_1 = \chi_{29,0}$.	.	$\varphi_{21,1} =$	1266_2
$2112_1 = \chi_{30,0}$.	1	$\varphi_{23,0} =$	1506_1
$2376_2 = \chi_{31,1}$.	.	$\varphi_{24,0} =$	1596_1
$2673_1 = \chi_{32,0}$.	1	$\varphi_{28,0} =$	1957_1
$3564_1 = \chi_{36,0}$	1	.		
$3696_2 = \chi_{37,1}$	1	.		
$4158_1 = \chi_{40,0}$	1	1		
$5632_1 = \chi_{42,0}$	1	1		

Block 3:	$\varphi_{4,0}$	$\varphi_{11,1}$	$\varphi_{20,0}$	$\varphi_{30,1}$		
$55_1 = \chi_{4,0}$	1	.	.	.	$\varphi_{4,0} =$	55_1
$330_2 = \chi_{11,1}$	.	1	.	.	$\varphi_{11,1} =$	330_2
$1320_1 = \chi_{20,0}$	1	.	1	.	$\varphi_{20,0} =$	1265_1
$3520_2 = \chi_{35,1}$	.	1	.	1	$\varphi_{30,1} =$	3190_2
$4455_1 = \chi_{41,0}$	.	.	1	1		

Block 4:	$\varphi_{4,1}$	$\varphi_{11,0}$	$\varphi_{20,1}$	$\varphi_{30,0}$		
$55_2 = \chi_{4,1}$	1	.	.	.	$\varphi_{4,1} =$	55_2
$330_1 = \chi_{11,0}$	.	1	.	.	$\varphi_{11,0} =$	330_1
$1320_2 = \chi_{20,1}$	1	.	1	.	$\varphi_{20,1} =$	1265_2
$3520_1 = \chi_{35,0}$	.	1	.	1	$\varphi_{30,0} =$	3190_1
$4455_2 = \chi_{41,1}$	.	.	1	1		

Block 5:	$\varphi_{8,0}$	$\varphi_{8,1}$	$\varphi_{22,0}$	$\varphi_{22,1}$
$165_1 = \chi_{7,0}$	1	.	.	.
$165_2 = \chi_{7,1}$	.	1	.	.
$2640_1 = \chi_{21+}$	.	.	1	1
$1485_1 = \chi_{24,0}$	1	.	1	.
$1485_2 = \chi_{24,1}$	.	1	.	1

$$\begin{aligned}
\varphi_{8,0} &= 165_1 \\
\varphi_{8,1} &= 165_2 \\
\varphi_{22,0} &= 1320_1 \\
\varphi_{22,1} &= 1320_2
\end{aligned}$$

Block 8:	$\varphi_{10,0}$	$\varphi_{16,0}$	$\varphi_{17,1}$	$\varphi_{29,1}$
$320_1 = \chi_{10,0}$	1	.	.	.
$945_2 = \chi_{16,1}$	.	.	1	.
$1155_1 = \chi_{19,0}$	1	1	.	.
$2970_2 = \chi_{33,1}$	.	1	.	1
$3080_2 = \chi_{34,1}$	.	.	1	1

$$\begin{aligned}
\varphi_{10,0} &= 320_1 \\
\varphi_{16,0} &= 835_1 \\
\varphi_{17,1} &= 945_2 \\
\varphi_{29,1} &= 2135_2
\end{aligned}$$

Block 9:	$\varphi_{10,1}$	$\varphi_{16,1}$	$\varphi_{17,0}$	$\varphi_{29,0}$
$320_2 = \chi_{10,1}$	1	.	.	.
$945_1 = \chi_{16,0}$	.	.	1	.
$1155_2 = \chi_{19,1}$	1	1	.	.
$2970_1 = \chi_{33,0}$	.	1	.	1
$3080_1 = \chi_{34,0}$	.	.	1	1

$$\begin{aligned}
\varphi_{10,1} &= 320_2 \\
\varphi_{16,1} &= 835_2 \\
\varphi_{17,0} &= 945_1 \\
\varphi_{29,0} &= 2135_1
\end{aligned}$$

Block 20:	$\varphi_{34,0}$	$\varphi_{34,1}$	$\varphi_{37,0}$	$\varphi_{37,1}$	$\varphi_{40,0}$	$\varphi_{40,1}$	$\varphi_{41,0}$	$\varphi_{41,1}$	$\varphi_{46,0}$	$\varphi_{46,1}$
$32_1 = \chi_{44,0}$	1	.	.	.	.	.	.	.	.	.
$32_2 = \chi_{44,1}$	.	1	.	.	.	.	.	.	.	.
$1408_3 = \chi_{47+}$	1	1	1	1	.	.	.	.	.	.
$2816_1 = \chi_{49+}$	.	.	.	.	.	.	1	1	.	.
$1792_1 = \chi_{56,0}$	.	.	1	.	1	.	.	.	.	.
$1792_2 = \chi_{56,1}$	.	.	.	1	.	1	.	.	.	.
$4224_1 = \chi_{57+}$	1	1	1	1	.	.	1	1	.	.
$5632_3 = \chi_{63,0}$	.	.	.	.	1	.	.	.	1	.
$5632_4 = \chi_{63,1}$	.	.	.	.	.	1	.	.	.	1
$7392_1 = \chi_{64,0}$	1	1	.	.	.	.	1	1	1	.
$7392_2 = \chi_{64,1}$	1	1	.	.	.	.	1	1	.	1
$7776_1 = \chi_{65,0}$	1	1	1	.	1	.	1	.	1	.
$7776_2 = \chi_{65,1}$	1	1	.	1	.	1	.	1	.	1

$$\begin{array}{llll}
\varphi_{34,0} & = & 32_1 & \varphi_{40,1} & = & 1120_2 \\
\varphi_{34,1} & = & 32_2 & \varphi_{41,0} & = & 1408_1 \\
\varphi_{37,0} & = & 672_1 & \varphi_{41,1} & = & 1408_2 \\
\varphi_{37,1} & = & 672_2 & \varphi_{46,0} & = & 4512_1 \\
\varphi_{40,0} & = & 1120_1 & \varphi_{46,1} & = & 4512_2
\end{array}$$

Block 21:	φ_{35+}	φ_{44+}	
$320_3 = \chi_{45+}$	1	.	$\varphi_{35+} = 320_3$
$3520_4 = \chi_{54+}$	.	1	$\varphi_{44+} = 3520_2$
$3840_1 = \chi_{61,0}$	1	1	
$3840_2 = \chi_{61,1}$	1	1	

Block 22:	φ_{38+}	φ_{42+}	
$1760_1 = \chi_{51,0}$	1	.	$\varphi_{38+} = 1760_1$
$1760_2 = \chi_{51,1}$	1	.	$\varphi_{42+} = 3520_1$
$3520_3 = \chi_{52+}$	.	1	
$5280_1 = \chi_{59+}$	1	1	