

## $G_2(4) \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	$7 \times 6$
	2	1	$5 \times 3$
	3	0	$350_1 = \chi_6, \varphi_6$
	4	0	$364_1 = \chi_7, \varphi_7$
	5	0	$364_2 = \chi_8, \varphi_8$
	6	0	$378_1 = \chi_9, \varphi_9$
	7	0	$819_1 = \chi_{11}, \varphi_{11}$
	8	0	$819_2 = \chi_{12}, \varphi_{12}$
	9	0	$819_3 = \chi_{13}, \varphi_{13}$
	10	0	$819_4 = \chi_{14}, \varphi_{14}$
	11	0	$1365_1 = \chi_{16}, \varphi_{16}$
	12	0	$3276_1 = \chi_{20}, \varphi_{19}$
	13	0	$3276_2 = \chi_{21}, \varphi_{20}$
	14	0	$3276_3 = \chi_{22}, \varphi_{21}$
	15	0	$3276_4 = \chi_{23}, \varphi_{22}$
	16	0	$4095_1 = \chi_{24}, \varphi_{23}$
	17	0	$4095_2 = \chi_{25}, \varphi_{24}$
	18	0	$4095_3 = \chi_{26}, \varphi_{25}$

	blocks	defect	matrix
	19	0	$4095_4 = \chi_{27}, \varphi_{26}$
	20	0	$4725_1 = \chi_{30}, \varphi_{27}$
	21	0	$4725_2 = \chi_{31}, \varphi_{28}$
	22	0	$5460_1 = \chi_{32}, \varphi_{29}$
$2.G :$	23	1	$5 \times 3$
	24	1	$7 \times 6$
	25	0	$364_3 = \chi_{36}, \varphi_{33}$
	26	0	$560_1 = \chi_{37}, \varphi_{34}$
	27	0	$1260_1 = \chi_{38}, \varphi_{35}$
	28	0	$1820_1 = \chi_{41}, \varphi_{38}$
	29	0	$1820_2 = \chi_{42}, \varphi_{39}$
	30	0	$2016_1 = \chi_{43}, \varphi_{40}$
	31	0	$2184_1 = \chi_{44}, \varphi_{43}$
	32	0	$2184_2 = \chi_{45}, \varphi_{44}$
	33	0	$3276_5 = \chi_{46}, \varphi_{45}$
	34	0	$5824_1 = \chi_{53}, \varphi_{48}$
	35	0	$5824_2 = \chi_{54}, \varphi_{49}$

<b>Block 1:</b>	$\varphi_1$	$\varphi_3$	$\varphi_4$	$\varphi_5$	$\varphi_{10}$	$\varphi_{17}$	
$1_1 = \chi_1$	1	.	.	.	.	.	$\varphi_1 = 1_1$
$78_1 = \chi_3$	.	1	.	.	.	.	$\varphi_3 = 78_1$
$300_1 = \chi_4$	.	.	1	.	.	.	$\varphi_4 = 300_1$
$300_2 = \chi_5$	.	.	.	1	.	.	$\varphi_5 = 300_2$
$650_1 = \chi_{10}$	1	.	.	.	1	.	$\varphi_{10} = 649_1$
$2925_3 = \chi_{19}$	.	1	.	.	.	1	$\varphi_{17} = 2847_1$
$4096_1 = \chi_{28}$	.	.	1	1	1	1	

<b>Block 2:</b>	$\varphi_2$	$\varphi_{15}$	$\varphi_{18}$	
$65_1 = \chi_2$	1	.	.	$\varphi_2 = 65_1$
$1300_1 = \chi_{15}$	1	1	.	$\varphi_{15} = 1235_1$
$2925_1 = \chi_{17}$	.	.	1	$\varphi_{18} = 2925_1$
$2925_2 = \chi_{18}$	.	.	1	
$4160_1 = \chi_{29}$	.	1	1	

<b>Block 23:</b>	$\varphi_{30}$	$\varphi_{46}$	$\varphi_{47}$	
$12_1 = \chi_{33}$	1	.	.	$\varphi_{30} = 12_1$
$3600_1 = \chi_{47}$	.	1	.	$\varphi_{46} = 3600_1$
$3900_1 = \chi_{50}$	1	.	1	$\varphi_{47} = 3888_1$
$3900_2 = \chi_{51}$	1	.	1	
$7488_1 = \chi_{55}$	.	1	1	

<b>Block 24:</b>	$\varphi_{31}$	$\varphi_{32}$	$\varphi_{36}$	$\varphi_{37}$	$\varphi_{41}$	$\varphi_{42}$	
$104_1 = \chi_{34}$	1	.	.	.	.	.	$\varphi_{31} = 104_1$
$104_2 = \chi_{35}$	.	1	.	.	.	.	$\varphi_{32} = 104_2$
$1800_1 = \chi_{39}$	.	1	.	1	.	.	$\varphi_{36} = 1696_1$
$1800_2 = \chi_{40}$	1	.	1	.	.	.	$\varphi_{37} = 1696_2$
$3744_1 = \chi_{48}$	.	.	1	.	1	.	$\varphi_{41} = 2048_1$
$3744_2 = \chi_{49}$	.	.	.	1	.	1	$\varphi_{42} = 2048_2$
$4096_2 = \chi_{52}$	.	.	.	.	1	1	