## $He.2 \pmod{5}$

	blocks	defect	matrix
G:	1	2	$20 \times 16$
	2	1	$5 \times 4$
	3	1	$5 \times 4$
	4	0	$1275_1 = \chi_{9,0}, \varphi_{11,0}$
	5	0	$1275_2 = \chi_{9,1}, \varphi_{11,1}$
	6	0	$2550_1 = \chi_{10+}, \varphi_{12+}$
	7	0	$7650_1 = \chi_{19,0}, \varphi_{20,0}$
	8	0	$7650_2 = \chi_{19,1}, \varphi_{20,1}$
	9	0	$15300_1 = \chi_{20+}, \varphi_{21+}$

blocks	defect	matrix
10 11 12 13 14 15 16 17 18	0 0 0 0 0 0 0 0	$22950_1 = \chi_{23+}, \varphi_{25+}$ $11900_1 = \chi_{25,0}, \varphi_{27,0}$ $11900_2 = \chi_{25,1}, \varphi_{27,1}$ $14400_1 = \chi_{27,0}, \varphi_{28,0}$ $14400_2 = \chi_{27,1}, \varphi_{28,1}$ $20825_1 = \chi_{29,0}, \varphi_{29,0}$ $20825_2 = \chi_{29,1}, \varphi_{29,1}$ $22050_1 = \chi_{32,0}, \varphi_{30,0}$ $22050_2 = \chi_{32,1}, \varphi_{30,1}$

Block 1:	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{2+}$	$\varphi_{4,0}$	$\varphi_{4,1}$	$\varphi_{5+}$	$\varphi_{8+}$	$\varphi_{14+}$	$\varphi_{17,0}$	$\varphi_{17,1}$	$\varphi_{18,0}$	$\varphi_{18,1}$
$1_1 = \chi_{1,0}$	1					•						
$1_2 = \chi_{1,1}$		1	•			•		•	•			
$102_1 = \chi_{2+}$			1			•		•	•			
$306_1 = \chi_{4+}$			•			1		•	•			
$2058_1 = \chi_{7+}$				1	1		1	•	•			
$4352_1 = \chi_{14,0}$	1		1					•	•		1	
$4352_2 = \chi_{14,1}$		1	1			•		•	•			1
$6272_1 = \chi_{15,0}$						1	1	•	1			
$6272_2 = \chi_{15,1}$						1	1	•	•	1		
$6528_1 = \chi_{16,0}$								•	•			
$6528_2 = \chi_{16,1}$								•	•			
$14994_1 = \chi_{17+}$			1					1	•		1	1
$17493_1 = \chi_{28,0}$		1		1				•	•			
$17493_2 = \chi_{28,1}$	1				1			•	•			
$21504_1 = \chi_{30,0}$	1		•			•		1	•		1	
$21504_2 = \chi_{30,1}$		1	•			•		1	•			1
$21504_3 = \chi_{31,0}$			•			•		•	1			
$21504_4 = \chi_{31,1}$		•								1		
$23324_1 = \chi_{33,0}$				1			1	1	1	•	•	
$23324_2 = \chi_{33,1}$					1		1	1		1		

(Block 1:)	$\varphi_{19,0}$	$\varphi_{19,1}$	$\varphi_{24,0}$	$\varphi_{24,1}$			
$1_1 = \chi_{1,0}$							
$1_2 = \chi_{1,1}$					$\varphi_{1,0}$	=	$1_1$
$102_1 = \chi_{2+}$					$\varphi_{1,1}$	=	$1_2$
$306_1 = \chi_{4+}$					$arphi_{2+}$	=	$102_{1}$
$2058_1 = \chi_{7+}$					$\varphi_{4,0}$	=	$104_{1}$
$4352_1 = \chi_{14,0}$					$\varphi_{4,1}$	=	$104_{2}$
$4352_2 = \chi_{14,1}$					$arphi_{5+}$	=	$306_{1}$
$6272_1 = \chi_{15,0}$					$arphi_{8+}$	=	$1850_{1}$
$6272_2 = \chi_{15,1}$					$\varphi_{14+}$	=	$6394_{1}$
$6528_1 = \chi_{16,0}$	1				$\varphi_{17,0}$	=	$4116_{1}$
$6528_2 = \chi_{16,1}$		1			$\varphi_{17,1}$	=	$4116_{2}$
$14994_1 = \chi_{17+}$					$\varphi_{18,0}$	=	$4249_{1}$
$17493_1 = \chi_{28,0}$	1			1	$\varphi_{18,1}$	=	$4249_{2}$
$17493_2 = \chi_{28,1}$		1	1		$\varphi_{19,0}$	=	$6528_{1}$
$21504_1 = \chi_{30,0}$			1		$\varphi_{19,1}$	=	$6528_{2}$
$21504_2 = \chi_{30,1}$				1	$\varphi_{24,0}$	=	$10860_{1}$
$21504_3 = \chi_{31,0}$	1			1	$\varphi_{24,1}$	=	$10860_2$
$21504_4 = \chi_{31,1}$		1	1		,		
$23324_1 = \chi_{33,0}$		•	•	1			
$23324_2 = \chi_{33,1}$		•	1				

Block 2:	$\varphi_{7,0}$	$\varphi_{10,0}$	$\varphi_{16,1}$	$\varphi_{23,0}$
$680_1 = \chi_{6,0}$	1			
$1920_1 = \chi_{12,0}$	1	1		
$4080_2 = \chi_{13,1}$			1	•
$10880_1 = \chi_{22,0}$		1		1
$13720_2 = \chi_{26,1}$		•	1	1

Block 3:	$arphi_{7,1}$	$\varphi_{10,1}$	$\varphi_{16,0}$	$\varphi_{23,1}$
$680_2 = \chi_{6,1}$	1			
$1920_2 = \chi_{12,1}$	1	1		
$4080_1 = \chi_{13,0}$			1	
$10880_2 = \chi_{22,1}$		1		1
$13720_1 = \chi_{26,0}$			1	1

 $\begin{array}{ll} = & 680_2 \\ = & 1240_2 \\ = & 4080_1 \\ = & 9640_2 \end{array}$