Tables of Hecke algebras

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Abstract

These tables contain data computed with the MAGMA package `HeckeAlgebra.mg` by the second author. Each row corresponds to a local factor of a Hecke algebra over a finite field of characteristic p belonging to a Hecke eigenform of weight p. The data were chosen so that all the associated mod p Galois representations are completely split at p.

The tables show that in all these cases the Gorenstein defect is equal to 2.

Characteristic $p = 2$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
431 [1]	2	1	4	3	1	2	6	20	D_3
503 [2]	2	1	4	3	1	2	3	23	D_3
1319	2	2	4	3	1	2	6	47	D_5
1439	2	1	4	3	1	2	4	52	D_3
1559	2	1	4	3	1	2	7	55	D_3
1607	2	1	4	3	1	2	3	56	D_3
1759	2	1	4	3	1	2	5	62	D_3
1823	2	2	4	3	1	2	3	62	D_5
1879	2	1	16	4	5	2	6	65	D_3
1951	2	1	4	3	1	2	4	66	D_3
1999	2	1	4	3	1	2	5	67	D_3
2039	2	2	6	3	2	2	4	68	D_5

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[1] See L. J. P. Kilford, *Some non-Gorenstein Hecke algebras attached to spaces of modular forms*, J. Number Theory, **97(1)**, 2002, 157–164

[2] See Kilford, loc. cit.

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
2089 [3]	2	1	18	4	7	2	5	70	D_3
2351	2	1	6	3	2	2	6	77	D_3
3407	2	1	16	4	5	2	7	103	D_3
3527	2	2	4	3	1	2	3	107	D_5
3623	2	1	6	3	2	2	3	110	D_3
3967	2	1	14	4	4	2	4	121	D_3
4231	2	1	4	3	1	2	10	126	D_3
4481	2	1	8	4	2	2	7	132	D_3
4799	2	1	12	4	3	2	5	139	D_3
4943	2	2	6	3	2	2	4	143	D_5
5167	2	1	6	3	2	2	5	149	D_3
5591	2	1	12	4	3	2	8	158	D_3
5591	2	3	4	3	1	2	5	158	D_9
5791	2	1	8	3	3	2	8	162	D_3
6199	2	1	16	4	5	2	7	174	D_3
6287	2	1	6	3	2	2	4	175	D_3
6343	2	1	12	4	3	2	5	177	D_3
6551	2	1	6	3	2	2	7	182	D_3
6823	2	1	4	3	1	2	4	189	D_3
6911	2	1	4	3	1	2	4	190	D_3
6967	2	1	12	4	3	2	8	191	D_3
7057	2	1	16	4	4	2	6	193	D_3
7103	2	3	4	3	1	2	3	194	D_7
7151	2	2	4	3	1	2	4	195	D_5
7351	2	1	12	4	3	2	9	200	D_3
7487	2	2	6	3	2	2	3	203	D_5
7583	2	1	4	3	1	2	6	205	D_3
7951	2	1	4	3	1	2	6	216	D_3
8111	2	5	4	3	1	2	5	217	D_{11}
8167	2	1	6	3	2	2	4	218	D_3
8191	2	2	6	3	2	2	5	218	D_5
8623	2	1	4	3	1	2	8	227	D_3
8713	2	1	16	4	4	2	4	231	D_3
9127	2	1	16	4	5	2	4	240	D_3
9281	2	1	12	4	3	2	8	243	D_3
9439	2	1	8	3	3	2	4	248	D_3
9623	2	2	6	3	2	2	5	252	D_5

[3] See Kilford, loc. cit.

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
9967	2	1	6	3	2	2	4	260	D_3
10079	2	1	12	4	3	2	8	263	D_3
10103	2	1	4	3	1	2	4	263	D_3
10391	2	1	6	3	2	2	9	269	D_3
10391	2	3	4	3	1	2	8	269	D_9
10487	2	1	10	3	4	2	3	272	D_3
10567	2	1	12	3	5	2	5	274	D_3
10639	2	1	4	3	1	2	4	274	D_3
10663	2	1	6	3	2	2	9	275	D_3
10687	2	1	6	3	2	2	4	275	D_3
10799	2	1	14	3	6	2	8	278	D_3
11159	2	3	4	3	1	2	4	283	D_7
11321	2	1	8	4	2	2	9	289	D_3
11743	2	1	4	3	1	2	5	297	D_3
13063	2	1	6	3	2	2	5	326	D_3
13487	2	1	8	3	3	2	6	334	D_3
13999	2	3	4	3	1	2	4	345	D_7
14303	2	1	4	3	1	2	5	354	D_3
14543	2	3	4	3	1	2	3	360	D_7
14639	2	2	4	3	1	2	5	361	D_5
15121	2	2	8	4	2	2	6	369	D_5
15193	2	1	16	4	6	2	4	370	D_3
15271	2	1	6	3	2	2	8	372	D_3
15383	2	2	6	3	2	2	3	375	D_5
15391	2	1	6	3	2	2	7	375	D_3
15551	2	1	4	3	1	2	11	377	D_3
15607	2	1	6	3	2	2	8	378	D_3
15641	2	1	32	4	7	2	8	378	D_3
15919	2	1	26	4	7	2	6	383	D_3
15991	2	1	12	4	3	2	9	386	D_3
16127	2	3	4	3	1	2	3	390	D_7
16369	2	1	24	4	6	2	6	398	D_3
16487	2	1	6	3	2	2	4	400	D_3
16649	2	1	16	4	4	2	8	403	D_3
17471	2	1	6	3	2	2	11	421	D_3
18047	2	1	30	4	6	2	4	431	D_3
18097	2	1	36	5	6	2	9	432	D_3
18127	2	1	12	4	3	2	5	433	D_3

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
18257	2	1	12	4	4	2	4	436	D_3
19079	2	1	4	3	1	2	4	449	D_3
19079	2	3	4	3	1	2	4	449	D_9
19441	2	1	16	4	4	2	7	457	D_3
19543	2	2	4	3	1	2	4	460	D_5
19583	2	1	4	3	1	2	7	461	D_3
19751	2	1	4	3	1	2	4	462	D_3
19919	2	1	16	4	5	2	7	467	D_3
19927	2	1	6	3	2	2	4	467	D_3
20183	2	2	4	3	1	2	7	474	D_5
20599	2	1	6	3	2	2	6	481	D_3
20759	2	1	18	4	6	2	9	483	D_3
20887	2	2	6	3	2	2	4	487	D_5
21319	2	3	4	3	1	2	9	497	D_7
21647	2	1	6	3	2	2	6	504	D_3
21737	2	1	24	5	4	2	7	507	D_3
21839	2	2	4	3	1	2	7	509	D_5
22159	2	2	4	3	1	2	9	515	D_5
22511	2	1	4	3	1	2	6	522	D_3
22567	2	3	4	3	1	2	4	523	D_7
22751	2	3	4	3	1	2	4	526	D_7
23159	2	1	20	4	6	2	6	535	D_3
23159	2	3	6	3	2	2	5	535	D_9
23279	2	1	8	3	3	2	4	537	D_3
23321	2	1	12	4	4	2	7	538	D_3
23417	2	1	26	4	7	2	10	539	D_3
23567	2	1	4	3	1	2	3	544	D_3
23687	2	3	4	3	1	2	3	548	D_7
23743	2	2	4	3	1	2	4	548	D_5
24151	2	2	4	3	1	2	5	556	D_5
24281	2	1	16	4	4	2	5	557	D_3
24439	2	2	6	3	2	2	7	561	D_5
24847	2	2	4	3	1	2	8	570	D_5
25031	2	1	8	3	3	2	7	573	D_3
25111	2	1	6	3	2	2	8	574	D_3
25247	2	1	6	3	2	2	10	575	D_3
25409	2	1	8	4	2	2	8	580	D_3
25439	2	1	4	3	1	2	6	580	D_3

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
25447	2	1	6	3	2	2	11	581	D_3
25793	2	1	16	4	4	2	5	590	D_3
26431	2	2	6	3	2	2	4	599	D_5
26839	2	3	4	3	1	2	5	607	D_7
26959	2	1	6	3	2	2	23	610	D_3
27143	2	1	4	3	1	2	4	615	D_3
27143	2	3	4	3	1	2	3	615	D_9
27647	2	1	26	4	10	2	7	623	D_3
27673	2	1	8	4	2	2	7	623	D_3
27743	2	3	4	3	1	2	3	624	D_7
28031	2	2	6	3	2	2	5	631	D_5
28031	2	1	8	3	3	2	5	631	D_3
28031	2	4	4	3	1	2	7	631	D_{15}
28279	2	1	8	3	3	2	4	635	D_3
28279	2	1	26	4	8	2	14	635	D_3
28279	2	1	4	3	1	2	11	635	D_3
28279	2	1	6	3	2	2	6	635	D_3
28703	2	1	20	4	5	2	5	642	D_3
28759	2	1	8	3	3	2	5	645	D_3
29023	2	1	4	3	1	2	8	650	D_3
29287	2	2	8	3	3	2	4	653	D_5
29311	2	3	6	3	2	2	5	653	D_7
29399	2	1	6	3	2	2	7	654	D_3
29567	2	1	6	3	2	2	6	657	D_3
29879	2	2	4	3	1	2	5	666	D_5
29959	2	1	6	3	2	2	4	668	D_3
29959	2	3	4	3	1	2	4	668	D_9
30223	2	1	8	3	3	2	5	674	D_3
30367	2	2	6	3	2	2	5	677	D_5
30431	2	2	4	3	1	2	4	677	D_5
30559	2	3	4	3	1	2	9	680	D_7
30727	2	1	6	3	2	2	9	685	D_3
30911	2	2	4	3	1	2	5	686	D_5
31079	2	2	4	3	1	2	5	690	D_5
31159	2	1	16	4	5	2	6	691	D_3
31247	2	6	4	3	1	2	3	692	D_{13}
31271	2	1	6	3	2	2	9	693	D_3
31321	2	3	8	4	2	2	7	693	D_7

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
31513	2	1	16	4	4	2	4	697	D_3
31543	2	2	4	3	1	2	5	697	D_5
31847	2	5	4	3	1	2	3	703	D_{11}
32009	2	1	12	4	3	2	9	706	D_3
32143	2	3	4	3	1	2	4	708	D_7
32183	2	3	4	3	1	2	3	708	D_7
32327	2	1	16	4	5	2	5	710	D_3
32327	2	3	4	3	1	2	3	710	D_9
32353	2	1	20	4	6	2	5	711	D_3
32401	2	1	20	4	6	2	6	712	D_3
32479	2	5	4	3	1	2	4	714	D_{11}
32647	2	3	4	3	1	2	4	719	D_7
32687	2	5	4	3	1	2	3	720	D_{11}
32719	2	2	4	3	1	2	14	721	D_5
32887	2	2	6	3	2	2	6	724	D_5
32983	2	1	4	3	1	2	4	725	D_3
33223	2	1	4	3	1	2	9	732	D_3
33343	2	1	4	3	1	2	5	733	D_3
33679	2	1	4	3	1	2	5	738	D_3
33767	2	3	4	3	1	2	3	739	D_7
34351	2	2	4	3	1	2	8	753	D_5
34471	2	2	12	4	3	2	6	756	D_5
34487	2	1	14	4	4	2	7	756	D_3
34591	2	2	4	3	1	2	5	757	D_5
34679	2	1	6	3	2	2	4	758	D_3
34679	2	3	4	3	1	2	4	758	D_9
34721	2	1	12	4	4	2	9	759	D_3
34847	2	1	16	4	5	2	6	762	D_3
35401	2	1	56	5	8	2	10	776	D_3
35591	2	9	4	3	1	2	7	779	D_{19}
35759	2	3	6	3	2	2	5	781	D_7
35839	2	2	4	3	1	2	5	781	D_5
35977	2	2	8	4	2	2	5	783	D_5
36191	2	1	46	5	7	2	11	786	D_3
36791	2	1	12	4	3	2	8	799	D_3
36871	2	2	6	3	2	2	5	801	D_5
37087	2	1	32	4	11	2	5	804	D_3
37199	2	1	18	4	4	2	8	806	D_3

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
37607	2	1	4	3	1	2	3	814	D_3
37831	2	2	4	3	1	2	5	820	D_5
37879	2	3	4	3	1	2	5	821	D_7
37993	2	2	8	4	2	2	5	824	D_5
38047	2	2	4	3	1	2	9	825	D_5
38167	2	1	14	4	4	2	10	829	D_3
38231	2	1	4	3	1	2	4	830	D_3
38287	2	1	4	3	1	2	5	832	D_3
38303	2	1	4	3	1	2	3	832	D_3
38593	2	1	20	4	6	2	9	836	D_3
38959	2	1	10	3	4	2	9	842	D_3
38977	2	1	20	4	6	2	13	842	D_3
39023	2	1	40	5	7	2	10	842	D_3
39199	2	2	4	3	1	2	7	844	D_5
39631	2	1	16	4	5	2	11	853	D_3
39679	2	1	6	3	2	2	12	854	D_3
39679	2	3	4	3	1	2	4	854	D_9

Characteristic $p = 2$ and non-prime square-free levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
1055	2	1	24	4	9	2	5	47	D_3
1727	2	1	16	4	5	2	6	65	D_3
2071 [4]	2	1	8	4	2	2	5	73	D_3
2631	2	1	40	4	17	2	6	106	D_3
2991	2	1	40	4	17	2	4	121	D_3
3095	2	1	40	4	17	2	4	114	D_3
3431	2	1	24	5	4	2	6	107	D_3
3471	2	1	16	5	3	2	5	146	D_3
3639	2	1	28	4	11	2	5	140	D_3
4031	2	1	16	4	4	2	6	125	D_3
4087	2	1	8	4	2	2	6	126	D_3
4119	2	1	12	4	3	2	4	156	D_3
4415	2	1	8	4	2	2	6	153	D_3

[4] First found by W. Stein; see Ribet, Kenneth A.; Stein, William A. Lectures on Serre's conjectures. *Arithmetic algebraic geometry (Park City, UT, 1999)*, 143–232, *IAS/Park City Math. Ser.*, 9, Amer. Math. Soc., Providence, RI, 2001, Section 3.7.1.

Characteristic $p = 2$, icosahedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
89491	2	2	12	4	3	2	4	1746	A_5

Characteristic $p = 3$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
1031	3	2	4	3	1	2	4	55	D_5
1511	3	3	4	3	1	2	9	74	D_7
2087	3	2	4	3	1	2	3	98	D_5
4259	3	2	4	3	1	2	3	179	D_5
4799	3	3	22	4	9	2	9	196	D_7
5939	3	2	4	3	1	2	4	235	D_5
6899	3	2	4	3	1	2	3	269	D_5
6959	3	2	4	3	1	2	4	270	D_5
7523	3	2	4	3	1	2	4	289	D_5
7559	3	2	4	3	1	2	6	290	D_5
7583	3	3	20	3	9	2	6	290	D_7
8219	3	2	4	3	1	2	6	310	D_5
8447	3	5	20	3	9	2	3	318	D_{11}
8699	3	2	6	3	2	2	9	326	D_5
9431	3	3	4	3	1	2	4	350	D_7
9743	3	2	8	3	3	2	3	360	D_5
9887	3	2	8	3	3	2	3	365	D_5
10079	3	2	60	3	29	2	5	368	D_5
10247	3	2	10	4	3	2	5	375	D_5
10847	3	3	22	4	9	2	9	395	D_7
12011	3	2	4	3	1	2	3	431	D_5
12119	3	2	56	3	27	2	8	434	D_5
12263	3	2	8	3	3	2	3	438	D_5
12959	3	5	20	3	9	2	4	457	D_{11}
13907	3	2	22	4	9	2	8	487	D_5
14699	3	2	4	3	1	2	6	513	D_5
14783	3	3	20	3	9	2	3	515	D_{13}
14783	3	3	20	3	9	2	3	515	D_{13}

Characteristic $p = 5$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
419	5	1	4	3	1	2	3	40	D_3
439	5	1	14	4	5	2	10	42	D_3
491	5	1	4	3	1	2	3	46	D_3
751	5	1	12	3	5	2	3	65	D_3
839	5	1	6	3	2	2	6	70	D_3
1231	5	1	4	3	1	2	3	97	D_3
2579	5	1	4	3	1	2	3	180	D_3
2699	5	1	14	4	5	2	8	188	D_3
3299	5	1	4	3	1	2	6	220	D_3
3359	5	1	4	3	1	2	6	222	D_3
4111	5	1	4	3	1	2	3	267	D_3
4219	5	1	20	3	6	2	5	274	D_3
4931	5	3	12	3	5	2	3	310	D_7
5011	5	1	4	3	1	2	5	316	D_3
5639	5	1	6	3	2	2	5	348	D_3
5939	5	3	12	3	5	2	5	366	D_7
6079	5	1	6	3	2	2	5	370	D_3
6271	5	1	4	3	1	2	3	379	D_3
6571	5	1	12	3	5	2	5	399	D_3
6691	5	1	4	3	1	2	5	405	D_3
6779	5	1	6	3	2	2	6	410	D_3
7459	5	1	12	3	5	2	7	443	D_3
7759	5	3	4	3	1	2	3	457	D_7
8779	5	1	12	3	5	2	12	511	D_3
8819	5	3	4	3	1	2	3	513	D_7
9011	5	1	4	3	1	2	6	522	D_3

Characteristic $p = 7$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
199	7	1	4	3	1	2	3	30	D_3
839	7	1	4	3	1	2	6	93	D_3
1259	7	1	4	3	1	2	3	130	D_3
1291	7	1	4	3	1	2	4	133	D_3
1319	7	1	4	3	1	2	6	136	D_3

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
1399	7	1	4	3	1	2	3	141	D_3
1559	7	1	4	3	1	2	7	155	D_3
1567	7	1	8	3	4	2	3	156	D_3
1823	7	1	6	3	2	2	4	179	D_3
1823	7	3	4	3	1	2	4	179	D_9

Characteristic $p = 11$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
431	11	3	4	3	1	2	5	77	D_7
563	11	1	4	3	1	2	3	97	D_3
1187	11	1	6	3	2	2	6	181	D_3
1223	11	3	4	3	1	2	4	187	D_7
1231	11	1	4	3	1	2	3	189	D_3
1231	11	3	4	3	1	2	3	189	D_9
1327	11	1	4	3	1	2	3	199	D_5
1327	11	1	4	3	1	2	4	199	D_5
1583	11	1	24	3	11	2	4	230	D_3
1619	11	1	4	3	1	2	3	235	D_3
1823	11	1	4	3	1	2	4	263	D_3
2243	11	1	4	3	1	2	3	310	D_3
2351	11	1	4	3	1	2	6	325	D_3
2351	11	3	4	3	1	2	6	325	D_9
2503	11	1	4	3	1	2	3	341	D_3
2591	11	1	4	3	1	2	5	351	D_3
2647	11	1	4	3	1	2	3	360	D_3
2767	11	1	4	3	1	2	3	370	D_3
2791	11	1	4	3	1	2	3	375	D_3
3011	11	1	4	3	1	2	5	402	D_3
3119	11	1	4	3	1	2	5	415	D_3
3299	11	1	4	3	1	2	4	434	D_3
3299	11	3	4	3	1	2	4	434	D_9
3571	11	1	4	3	1	2	4	462	D_3

Characteristic $p = 13$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
367	13	1	4	3	1	2	3	78	D_3
439	13	2	4	3	1	2	4	91	D_5
563	13	1	4	3	1	2	3	111	D_3
971	13	2	4	3	1	2	4	177	D_5
1223	13	2	4	3	1	2	4	216	D_5
1427	13	1	4	3	1	2	5	243	D_3
1439	13	1	28	3	13	2	5	246	D_3
1823	13	1	4	3	1	2	4	298	D_3

Characteristic $p = 17$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
59	17	1	6	3	2	2	3	23	D_3
239	17	2	4	3	1	2	5	68	D_5
1327	17	1	4	3	1	2	3	289	D_3
1427	17	2	4	3	1	2	3	306	D_5
1951	17	1	4	3	1	2	4	402	D_3
2503	17	1	4	3	1	2	3	497	D_3
2687	17	1	36	3	17	2	4	529	D_3

Characteristic $p = 19$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
439	19	1	6	3	2	2	3	125	D_3
751	19	1	4	3	1	2	5	195	D_5
751	19	1	4	3	1	2	5	195	D_5
1427	19	1	6	3	2	2	3	335	D_3

Characteristic $p = 23$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
83	23	1	4	3	1	2	3	37	D_3
503	23	3	4	3	1	2	4	162	D_7
971	23	2	4	3	1	2	4	284	D_5
1259	23	1	4	3	1	2	3	358	D_3

Characteristic $p = 29$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
107	29	1	4	3	1	2	3	55	D_3
199	29	1	4	3	1	2	3	92	D_3

Characteristic $p = 31$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
367	31	1	4	3	1	2	3	161	D_3
743	31	3	4	3	1	2	4	293	D_7

Characteristic $p = 37$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
139	37	1	4	3	1	2	4	83	D_3

Characteristic $p = 41$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
83	41	1	4	3	1	2	3	61	D_3
139	41	1	4	3	1	2	4	92	D_3
431	41	1	4	3	1	2	5	233	D_3

Characteristic $p = 43$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
419	43	1	4	3	1	2	3	239	D_3

Characteristic $p = 47$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
31	47	1	4	3	1	2	3	30	D_3
107	47	1	4	3	1	2	3	82	D_3
139	47	1	4	3	1	2	4	101	D_3

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
179	47	2	4	3	1	2	3	126	D_5

Characteristic $p = 53$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
131	53	2	4	3	1	2	3	106	D_5
211	53	1	4	3	1	2	4	159	D_3

Characteristic $p = 59$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
23 [5]	59	1	4	3	1	2	4	30	D_3
211	59	1	4	3	1	2	4	175	D_3
227	59	1	4	3	1	2	3	187	D_5
227	59	1	4	3	1	2	3	187	D_5
367	59	1	4	3	1	2	3	279	D_3

Characteristic $p = 61$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
239	61	1	4	3	1	2	4	199	D_5
239	61	1	4	3	1	2	4	199	D_5
431	61	1	4	3	1	2	5	327	D_3

Characteristic $p = 67$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
31	67	1	4	3	1	2	6	41	D_3
239	67	2	4	3	1	2	5	217	D_5

Characteristic $p = 71$, prime levels, dihedral

[5] First found by K. Buzzard, unpublished.

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
59	71	1	4	3	1	2	3	71	D_3
239	71	1	4	3	1	2	5	223	D_3
283	71	1	4	3	1	2	5	263	D_3

Characteristic $p = 73$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
211	73	1	4	3	1	2	4	209	D_3
283	73	1	4	3	1	2	5	269	D_3

Characteristic $p = 79$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
307	79	1	4	3	1	2	5	307	D_3

Characteristic $p = 83$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
47	83	2	4	3	1	2	4	67	D_5
79	83	2	4	3	1	2	3	101	D_5
107	83	1	6	3	2	2	3	132	D_3
211	83	1	4	3	1	2	4	232	D_3
251	83	1	4	3	1	2	3	271	D_7
251	83	1	4	3	1	2	3	271	D_7
251	83	1	4	3	1	2	3	271	D_7

Characteristic $p = 89$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
131	89	1	4	3	1	2	3	165	D_5
131	89	1	4	3	1	2	3	165	D_5

Characteristic $p = 97$, prime levels, dihedral

Level	Wt	ResD	Dim	EmbDim	NilO	GorDef	#Ops	#(p<HB)	Gp
307	97	1	4	3	1	2	5	367	D_3