HCAL Detector Grid

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213	214	215	216
217	218	219	220	221	222	223	224	225	226	227	228
229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252
253	254	255	256	257	258	259	260	261	262	263	264
265	266	267	268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285	286	287	288

HCAL Clusters

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18

HCAL Group	HCAL Cluster Number			
A	1	2	4	5
B	2	3	5	6
C	4	5	7	8
D	5	6	8	9
E	7	8	10	11
F	8	9	11	12
G	10	11	13	14
H	11	12	14	15
I	13	14	16	17
J	14	15	17	18

Cluster Number	Number of times Used
1	1
2	2
3	1
4	2
5	4
6	2
7	2
8	4
9	2
10	2
11	4
12	2
13	2
14	4
15	2
16	1
17	2
18	1

HCAL consists of 288 detector modules in 24 rows of 12 modules each shown in the left panel. To form a hardware trigger, clusters of 16 detectors (4x4) are formed using the Sum-16 modules. This results in 18 clusters as shown in the second panel. These 18 clusters are then summed together to form cluster groups which will be called HCAL Groups for simplciity. These sums are groups of 4 clusters such that they overlap each neighboring groups. The HCAL Groups are listed in the table second from the right. The last table just tallies the number of outputs that will be needed by the Sum-16 modules to feed the Sum-4 units.