

## K-means results

Nclust	inertia	score	TotObj	N1	N2	N3	N4	N5	N6	N7	N8
3	5267.77937931	0.429883662069	14586	7398	5137	2051	0	0	0	0	0
5	3706.71194784	0.309641805115	14586	4328	4297	3193	2036	732	0	0	0
6	3237.92381314	0.31282132208	14586	4209	3884	2607	2027	1132	727	0	0
7	2930.13919026	0.285750411871	14586	3378	3047	2806	2282	1500	1095	478	0
8	2625.5427983	0.294390464357	14586	3380	3005	2767	2245	1243	1035	475	436

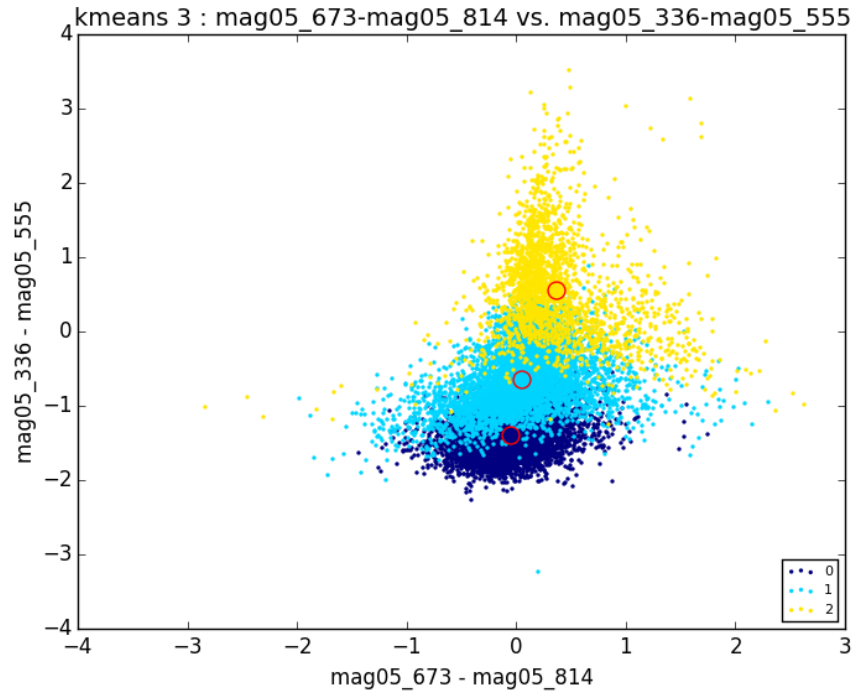


Figure 1: kmeans\_base\_color\_3cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

### kmeans results, Ncl=3

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	7398	0.429883662069	0.531448902807	0.8326	0.5944	3.2072	0.0020	0.6957	-0.0439322789943
2	5137	0.429883662069	0.319547108571	0.4566	0.7874	4.4965	0.0017	0.4495	0.0547331127117
3	2051	0.429883662069	0.339888159554	0.9827	1.0747	5.7872	0.0041	0.6249	0.366638712823

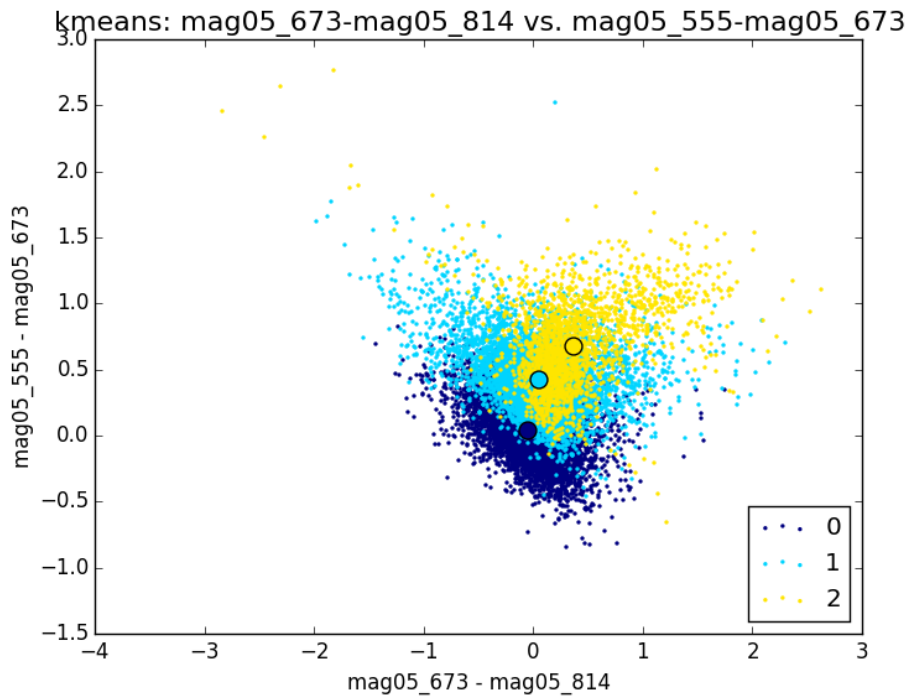


Figure 2: kmeans\_3d\_3cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

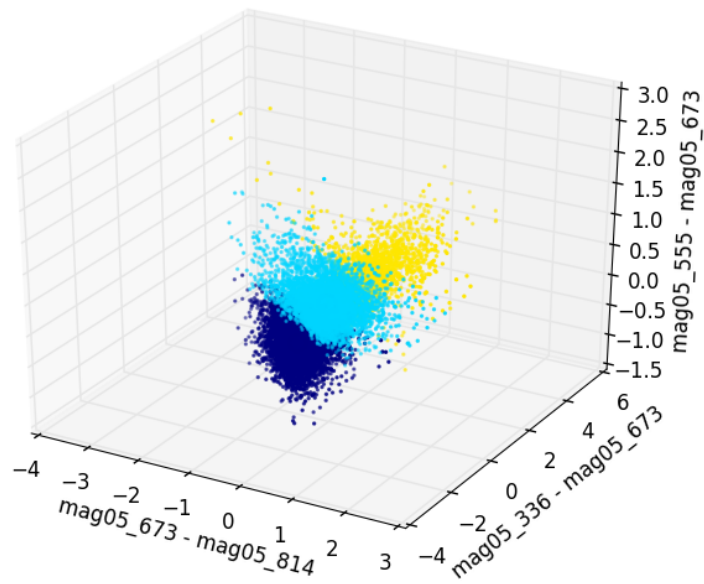


Figure 3: kmeans\_3d\_color\_3cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

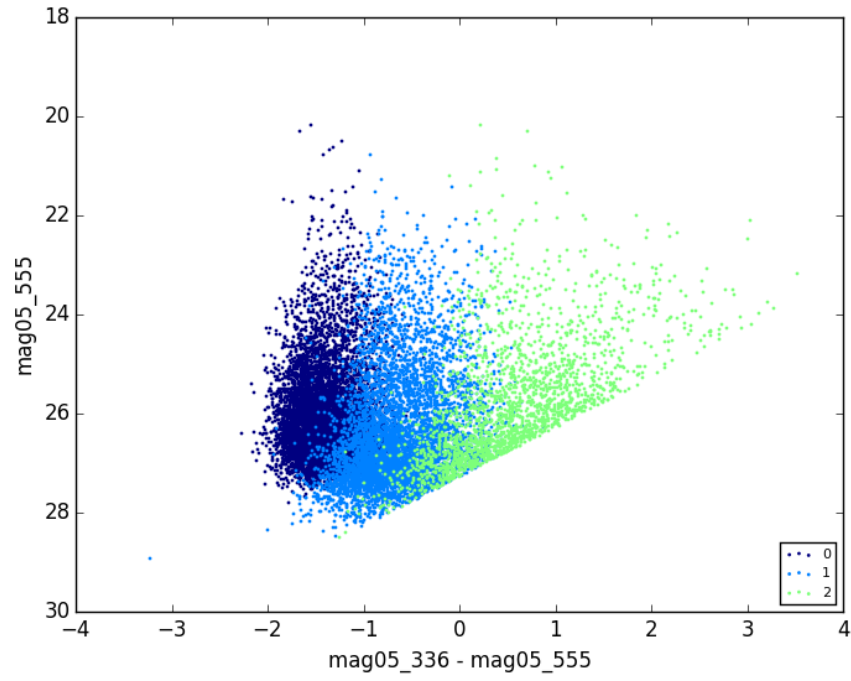


Figure 4: kmeans\_CMD\_3cl\_mag05\_336-mag05\_555vsmag05\_555.png

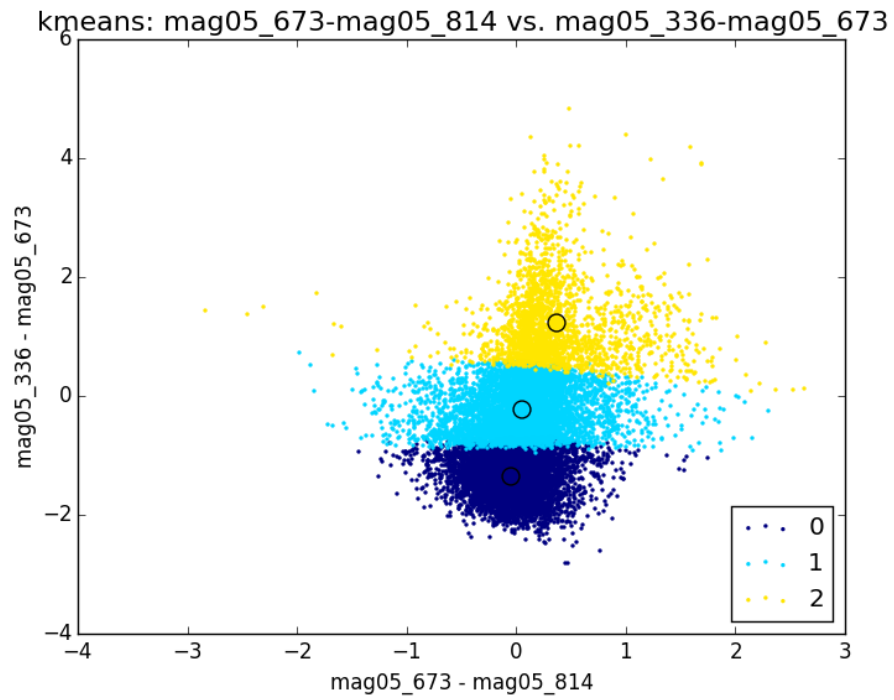


Figure 5: kmeans\_3d\_3cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

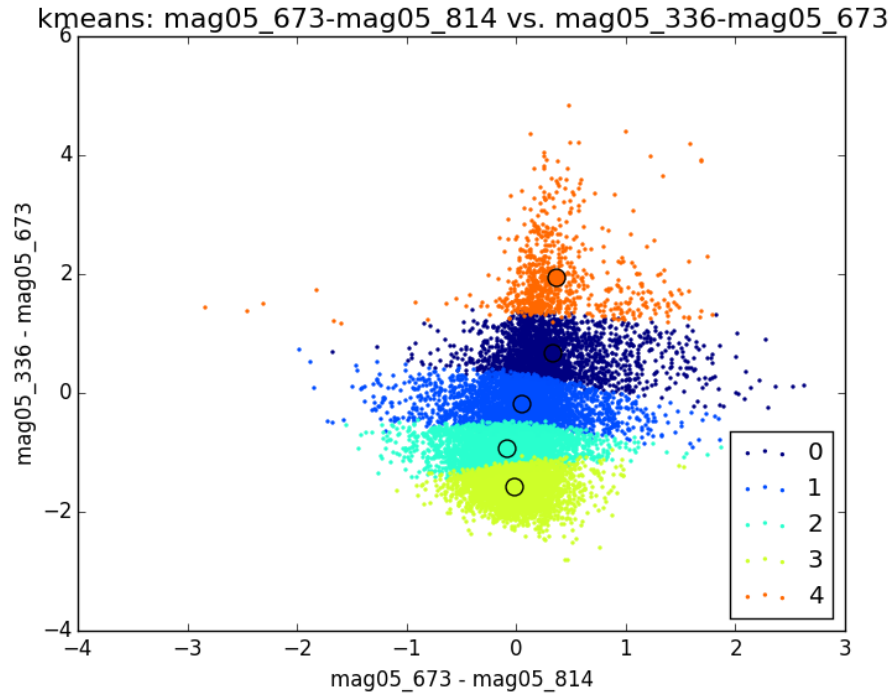


Figure 6: kmeans\_3d\_5cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

### kmeans results, Ncl=5

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	2036	0.309641805115	0.258833496273	0.6536	0.7898	4.4058	0.0041	0.3891	0.339569253438
2	3193	0.309641805115	0.23082291211	0.4274	0.6892	4.4965	0.0017	0.4152	0.0533564046351
3	4297	0.309641805115	0.278567965652	0.6138	0.5338	3.4709	0.0033	0.5506	-0.0810686525483
4	4328	0.309641805115	0.421662621374	0.9393	0.4647	2.6405	0.0020	0.7572	-0.0174054990758
5	732	0.309641805115	0.314850326378	1.3276	1.0040	5.3980	0.0141	0.8237	0.368964480874

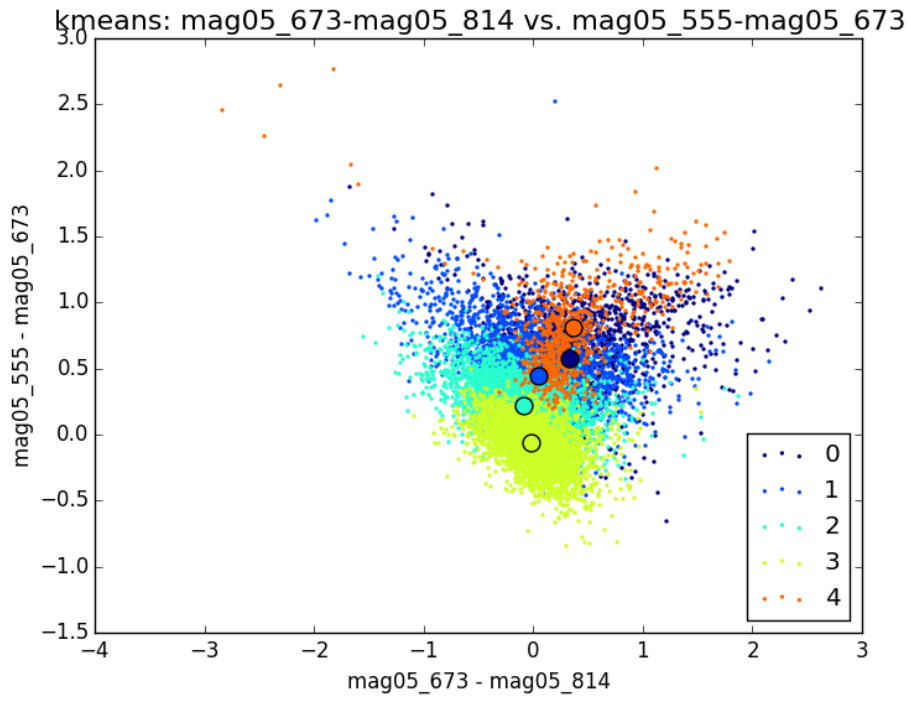


Figure 7: kmeans\_3d\_5cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

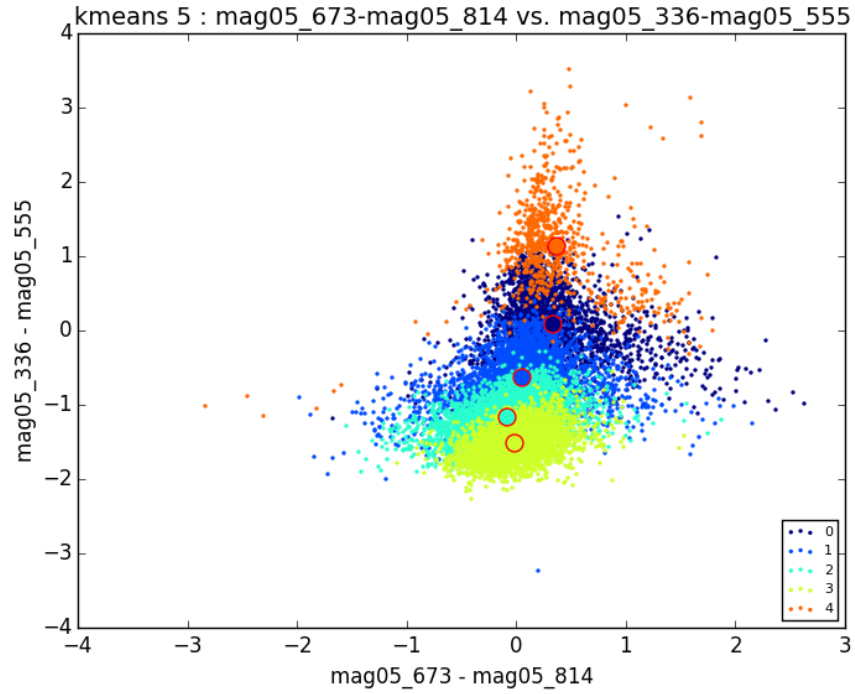


Figure 8: kmeans\_base\_color\_5cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

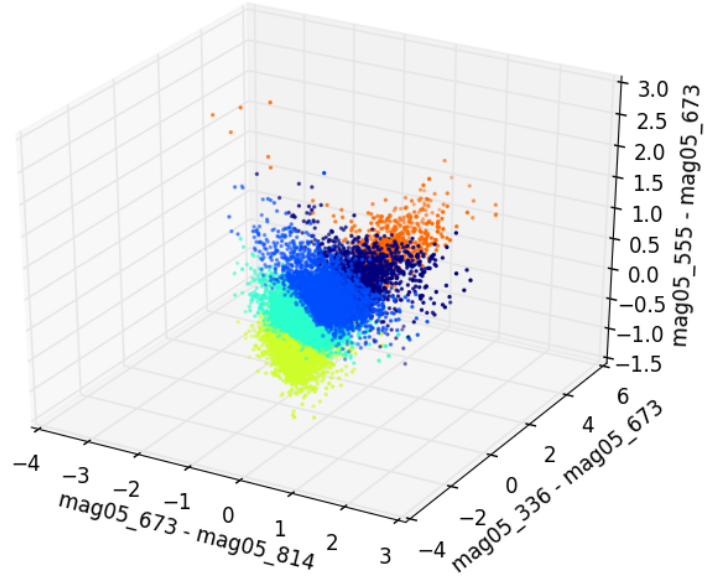


Figure 9: kmeans\_3d\_color\_5cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

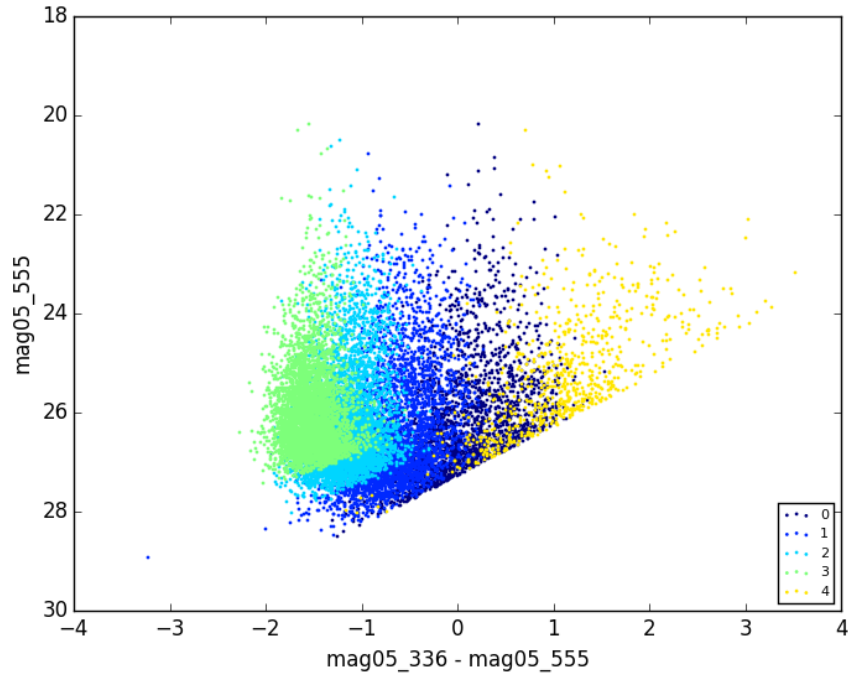


Figure 10: kmeans\_CMD\_5cl\_mag05\_336-mag05\_555vsmag05\_555.png

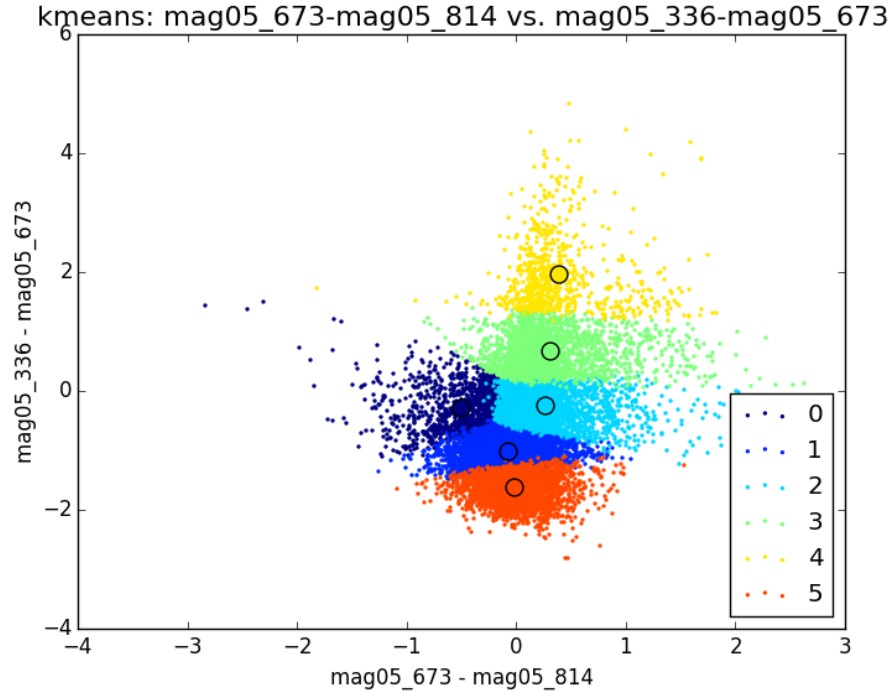


Figure 11: kmeans\_3d\_6cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

### kmeans results, Ncl=6

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	1132	0.31282132208	0.216808650219	0.6196	0.7043	3.9336	0.0052	0.6189	-0.503451413428	-0
2	4209	0.31282132208	0.301401405151	0.6334	0.4745	2.3451	0.0028	0.5566	-0.0693960560703	-
3	2607	0.31282132208	0.277519745348	0.3958	0.5932	2.6788	0.0017	0.3786	0.269031070196	-0
4	2027	0.31282132208	0.269936343617	0.6361	0.7465	3.6298	0.0041	0.3729	0.313505180069	0
5	727	0.31282132208	0.320010330944	1.3223	0.9756	4.5467	0.0141	0.808	0.39241127923	1
6	3884	0.31282132208	0.397910258061	0.9570	0.4517	2.6405	0.0020	0.7683	-0.0133877445932	-



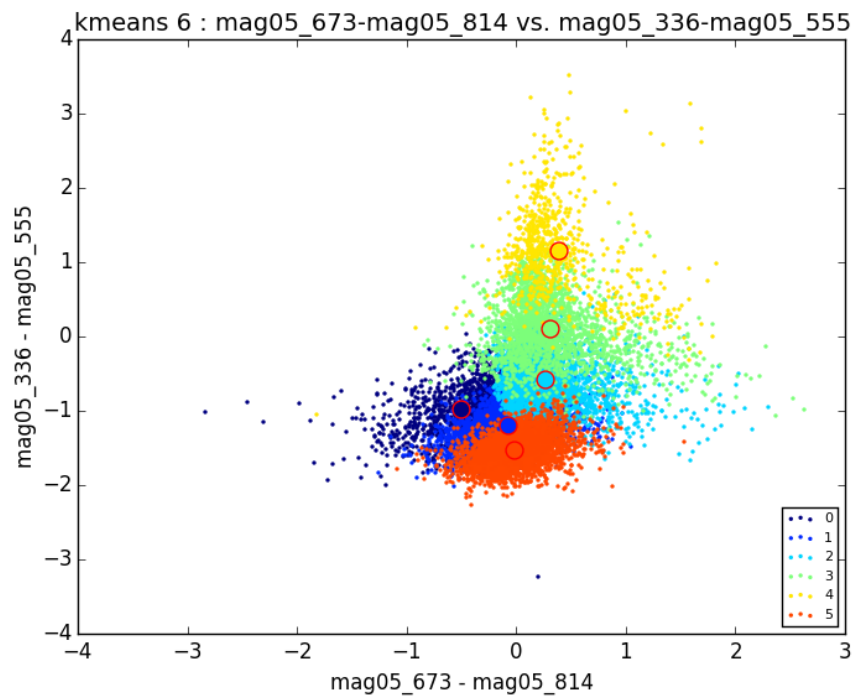


Figure 12: kmeans\_base\_color\_6cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

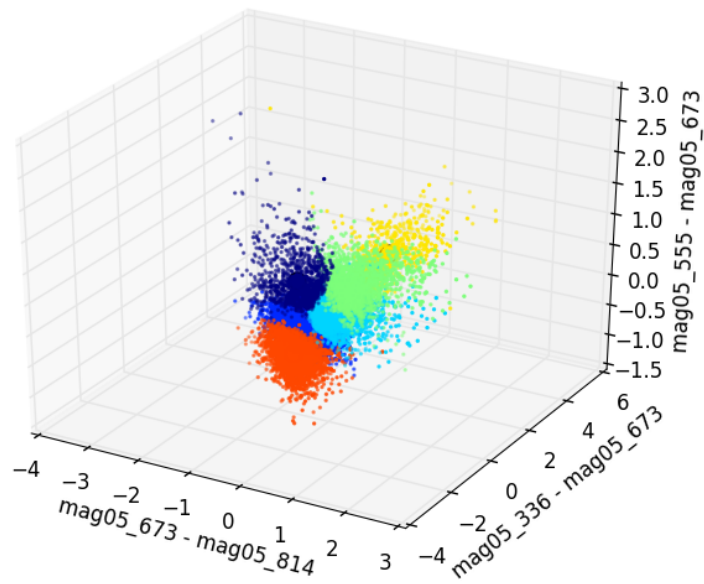


Figure 13: kmeans\_3d\_color\_6cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

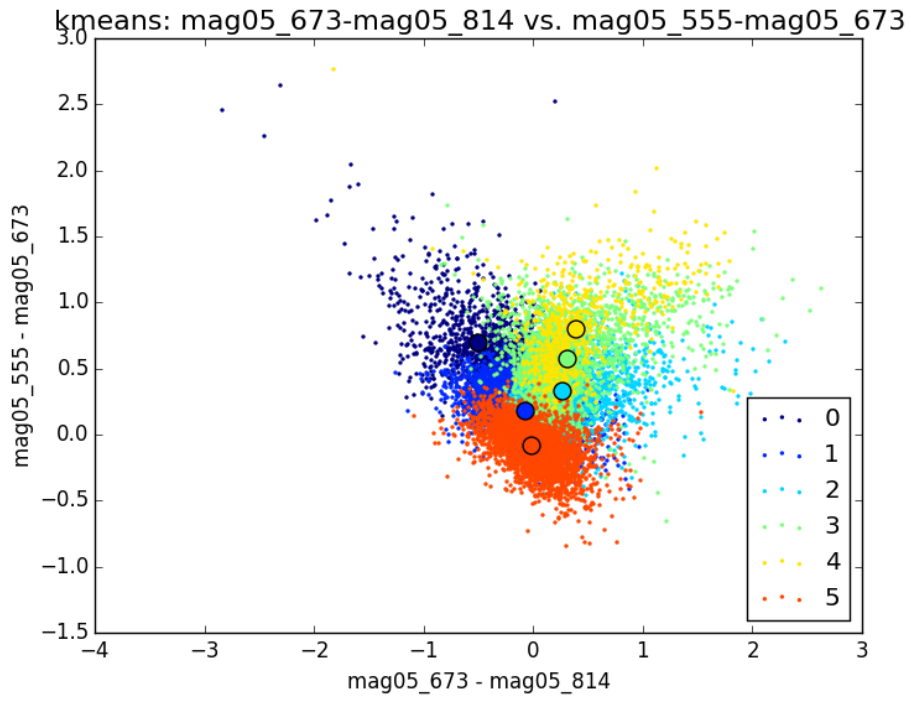


Figure 14: kmeans\_3d\_6cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

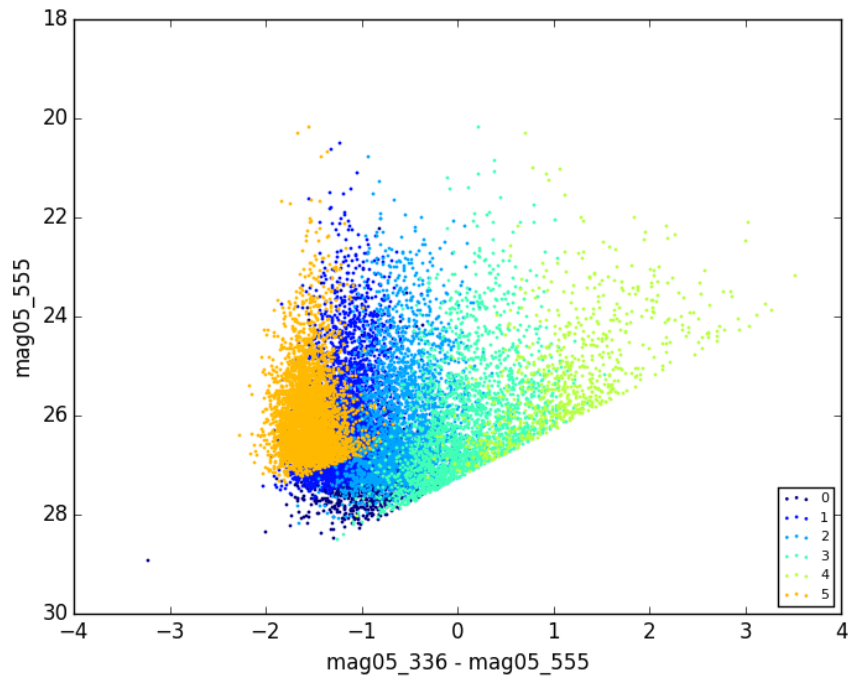


Figure 15: kmeans\_CMD\_6cl\_mag05\_336-mag05\_555vsmag05\_555.png

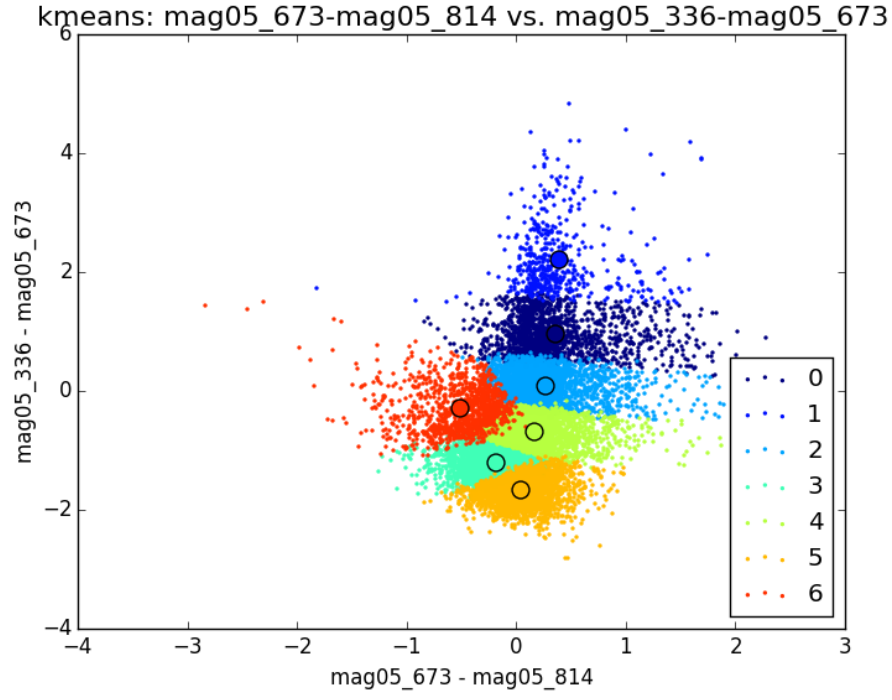


Figure 16: kmeans\_3d\_7cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

### kmeans results, Ncl=7

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	1500	0.285750411871	0.240764151879	0.7734	0.7715	3.1415	0.0041	0.4303	0.353191333333
2	478	0.285750411871	0.331175762128	1.4597	0.9476	4.5467	0.0141	0.9009	0.391479079498
3	2282	0.285750411871	0.270764660215	0.4072	0.6083	3.2347	0.0017	0.3145	0.265453111306
4	3378	0.285750411871	0.307791540034	0.7368	0.4094	1.7016	0.0022	0.609	-0.181376850207
5	2806	0.285750411871	0.252178028072	0.4886	0.5026	2.5662	0.0033	0.4773	0.16120634355
6	3047	0.285750411871	0.344924234277	0.9850	0.4306	1.9637	0.0020	0.7924	0.0365592385953
7	1095	0.285750411871	0.212152328743	0.6239	0.6988	3.8862	0.0046	0.6228	-0.516528767123

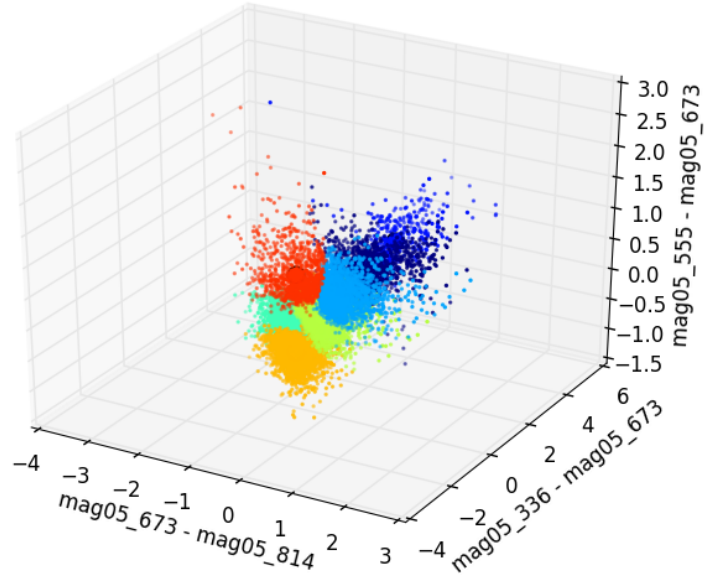


Figure 17: kmeans\_3d\_color\_7cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

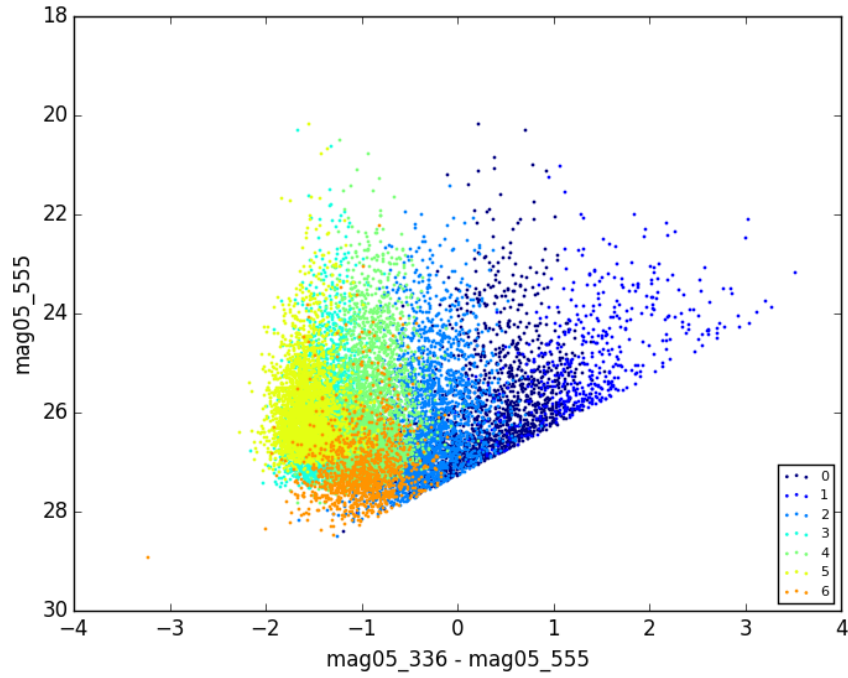


Figure 18: kmeans\_CMD\_7cl\_mag05\_336-mag05\_555vsmag05\_555.png

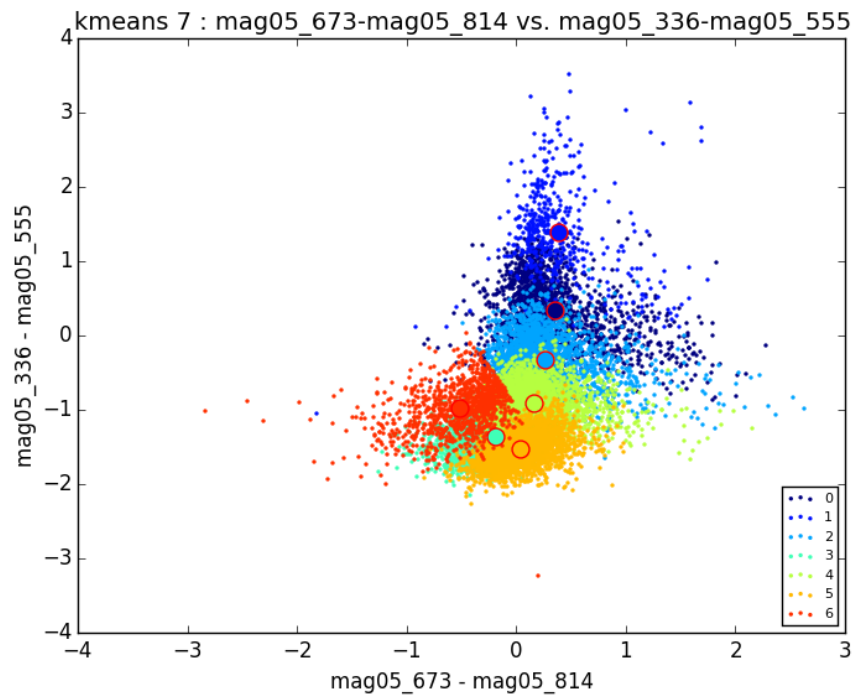


Figure 19: kmeans\_base\_color\_7cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

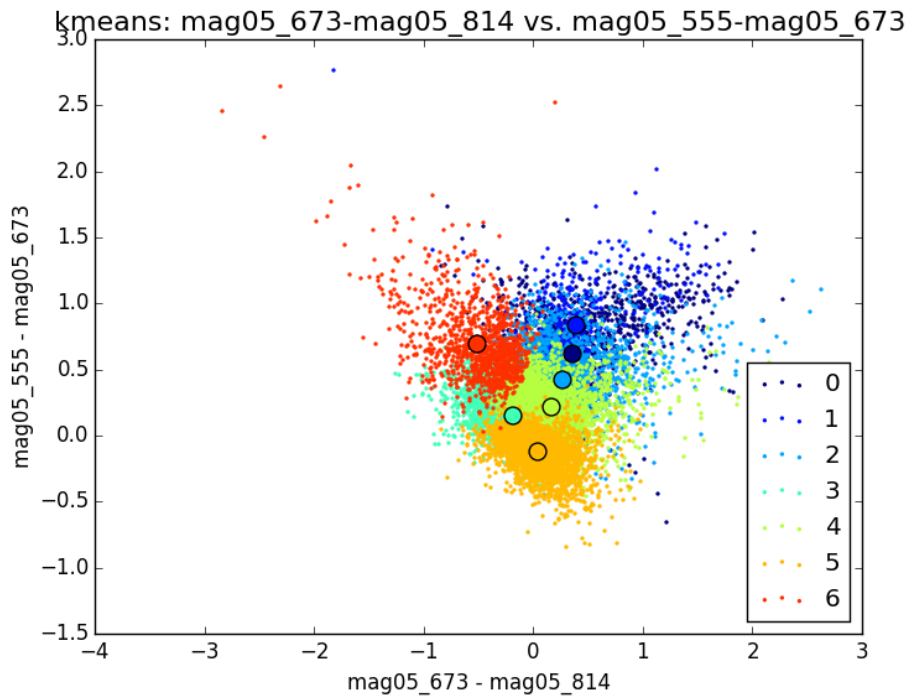


Figure 20: kmeans\_3d\_7cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

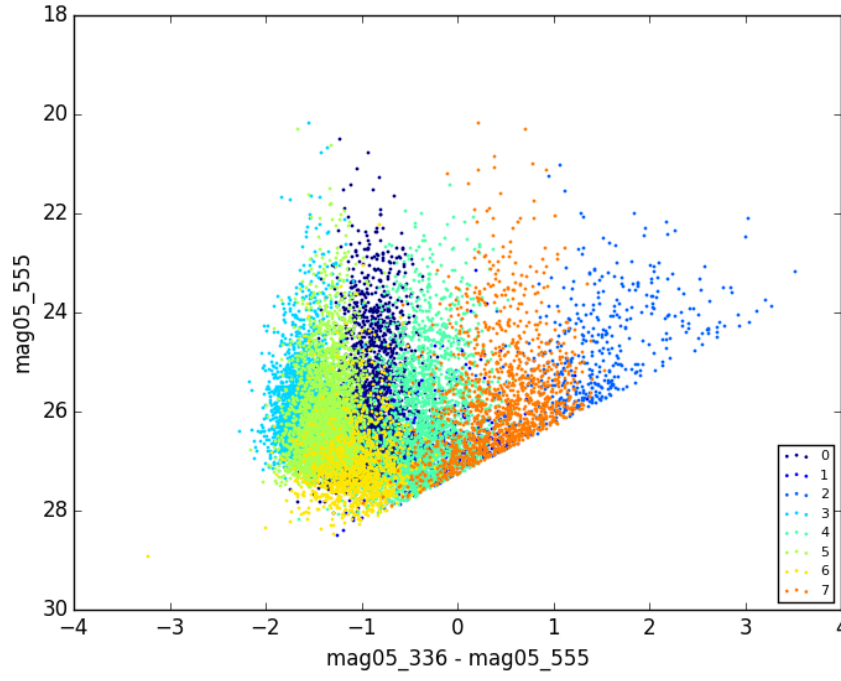


Figure 21: kmeans\_CMD\_8cl\_mag05\_336-mag05\_555vsmag05\_555.png

### kmeans results, Ncl=8

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	2767	0.294390464357	0.240761557893	0.4924	0.5026	2.2765	0.0033	0.4811	0.167747741236	-0
2	475	0.294390464357	0.217225373097	0.9688	0.8526	2.8127	0.0084	0.4198	1.07044631579	0
3	436	0.294390464357	0.340911816041	1.4807	0.9058	4.5467	0.0141	0.9244	0.367394495413	
4	3005	0.294390464357	0.341844107488	0.9874	0.4295	1.9637	0.0020	0.7939	0.036462562396	-
5	2245	0.294390464357	0.298754996033	0.3598	0.5433	1.8982	0.0017	0.2815	0.192109131403	0.
6	3380	0.294390464357	0.311687584518	0.7383	0.4046	1.7210	0.0022	0.6098	-0.17485739645	-
7	1035	0.294390464357	0.209574954815	0.6384	0.6912	3.9088	0.0046	0.6349	-0.545571980676	-0
8	1243	0.294390464357	0.327925869191	0.7081	0.6187	2.8291	0.0041	0.4362	0.152980691874	0

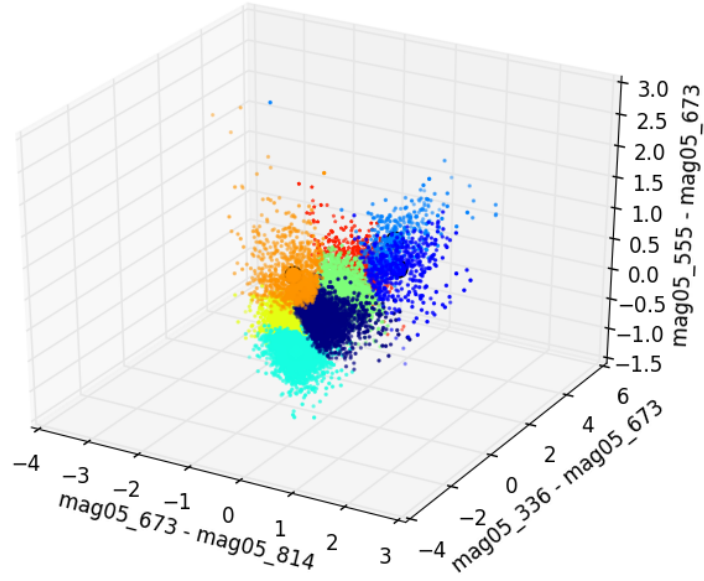


Figure 22: kmeans\_3d\_color\_8cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

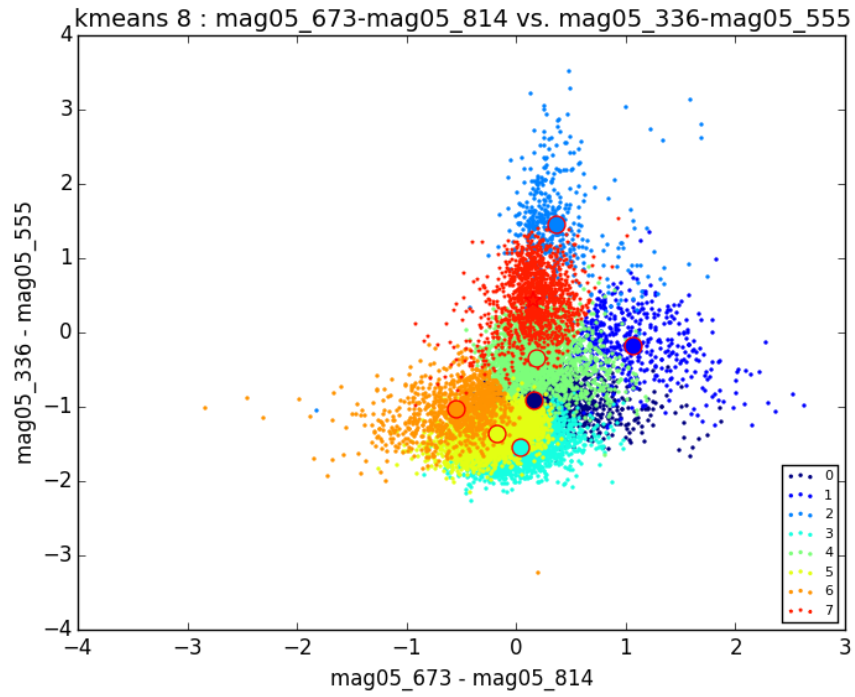


Figure 23: kmeans\_base\_color\_8cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

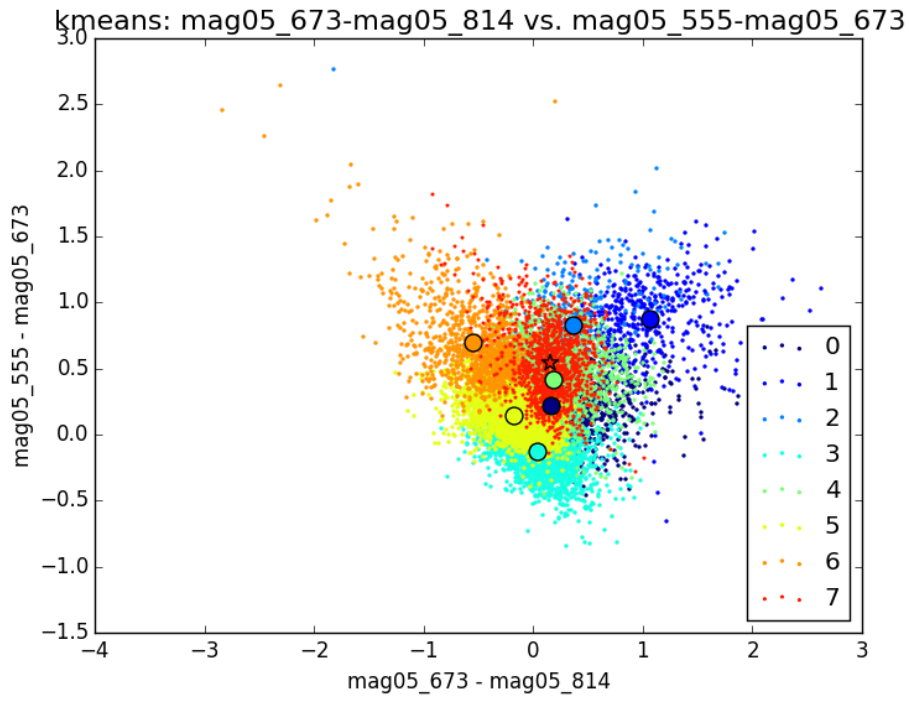


Figure 24: kmeans\_3d\_8cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

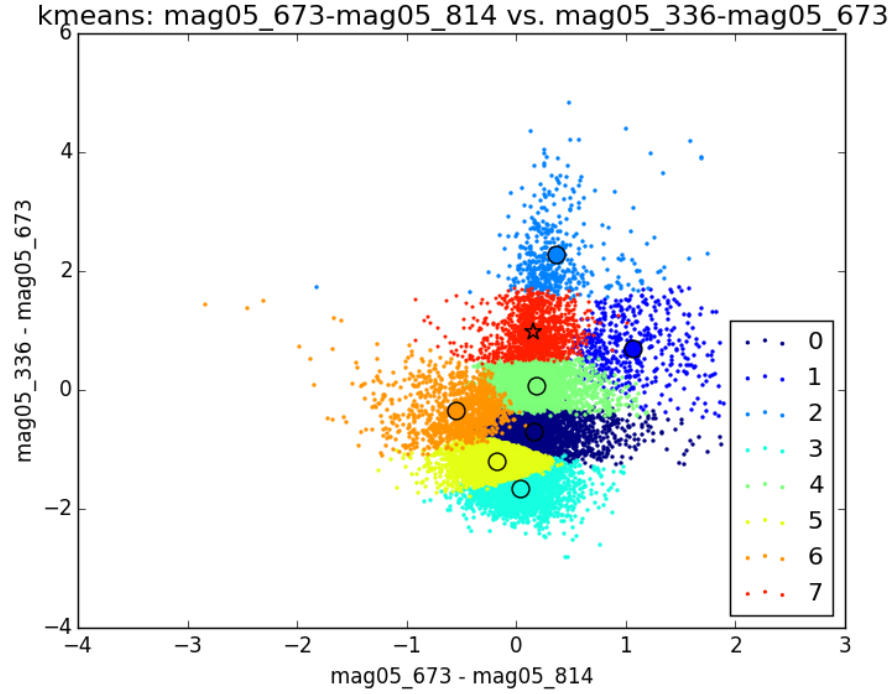


Figure 25: kmeans\_3d\_8cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png



## Meanshift results

Bandw	Nclust	score	TotObj	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10
0.8522	4	0.392770096405	14586	13659	515	351	61	0	0	0	0	0	0
0.4000	34	0.205035010043	14586	10042	1827	847	446	336	290	202	133	122	88
0.5500	8	0.332806132527	14586	11959	2045	404	76	57	38	4	3	0	0
0.6000	8	0.33636610311	14586	12013	2012	387	92	42	34	4	2	0	0
0.6500	4	0.387606430733	14586	13509	536	503	38	0	0	0	0	0	0

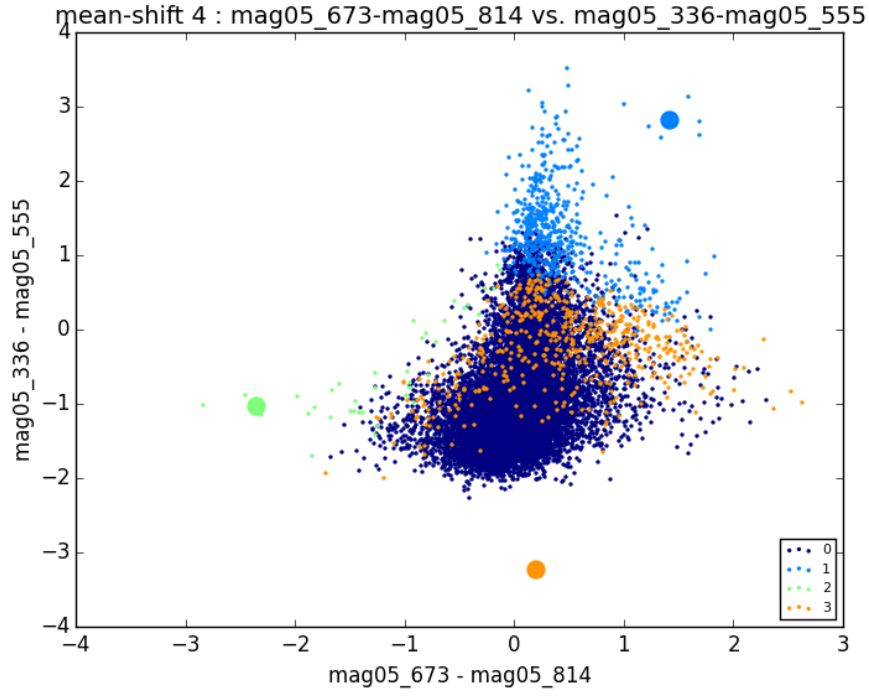


Figure 26: meanshift\_base\_color\_4cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

#### meanshift results, Ncl=4

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	13659	0.392770096405	0.397034467002	0.6998	1.1297	4.6677	0.0017	0.6788	-0.0433818418253
2	515	0.392770096405	0.397168517034	1.4341	0.9575	3.9097	0.0141	0.8672	1.42283333333
3	61	0.392770096405	0.245877763656	1.2411	1.2173	3.2868	0.0429	1.1482	-2.2186
4	351	0.392770096405	0.245898893234	0.9818	1.0473	4.4063	0.0102	0.5317	0.199
1	13509	0.387606430733	0.392804529733	0.6985	1.1118	4.6074	0.0017	0.6751	-0.0533932046101
2	536	0.387606430733	0.394556226949	1.4193	0.9554	3.9097	0.0141	0.8615	1.42283333333
3	38	0.387606430733	0.326343442779	1.3506	1.2071	3.2112	0.0581	1.2782	-2.35725
4	503	0.387606430733	0.24522429033	0.9360	1.0437	4.4063	0.0102	0.538	0.199

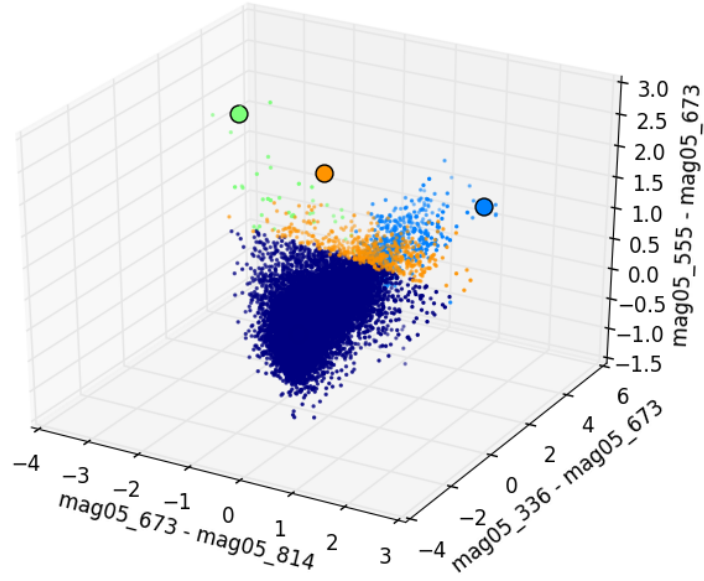


Figure 27: meanshift\_3d\_color\_4cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

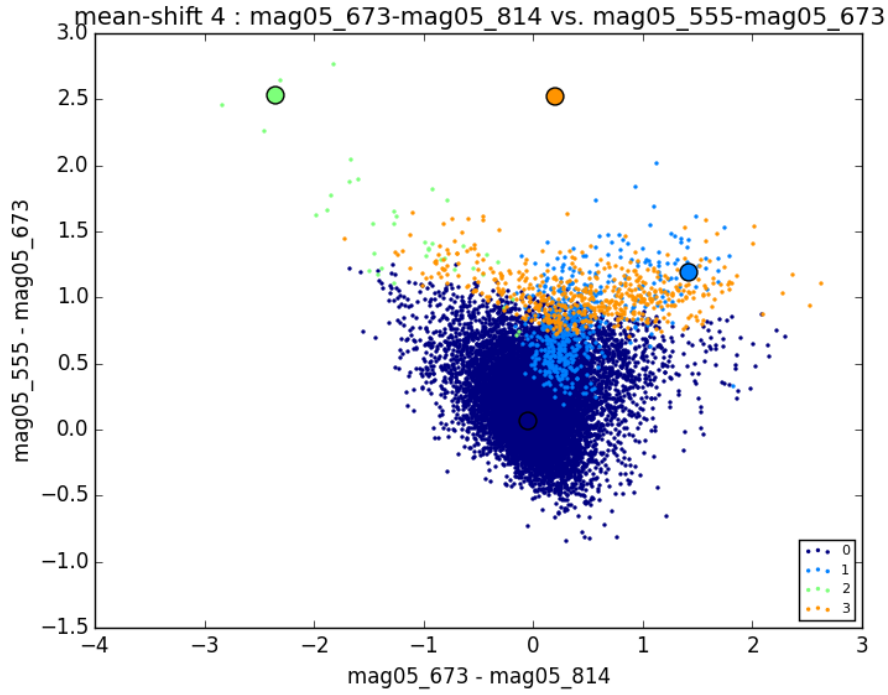


Figure 28: meanshift\_3d\_color\_4cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

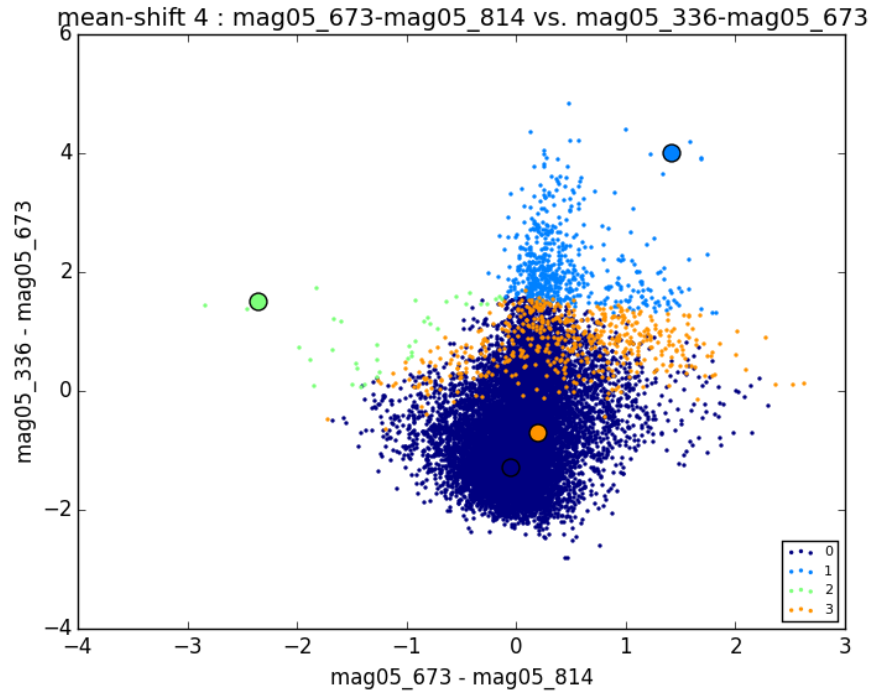


Figure 29: meanshift\_3d\_color\_4cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

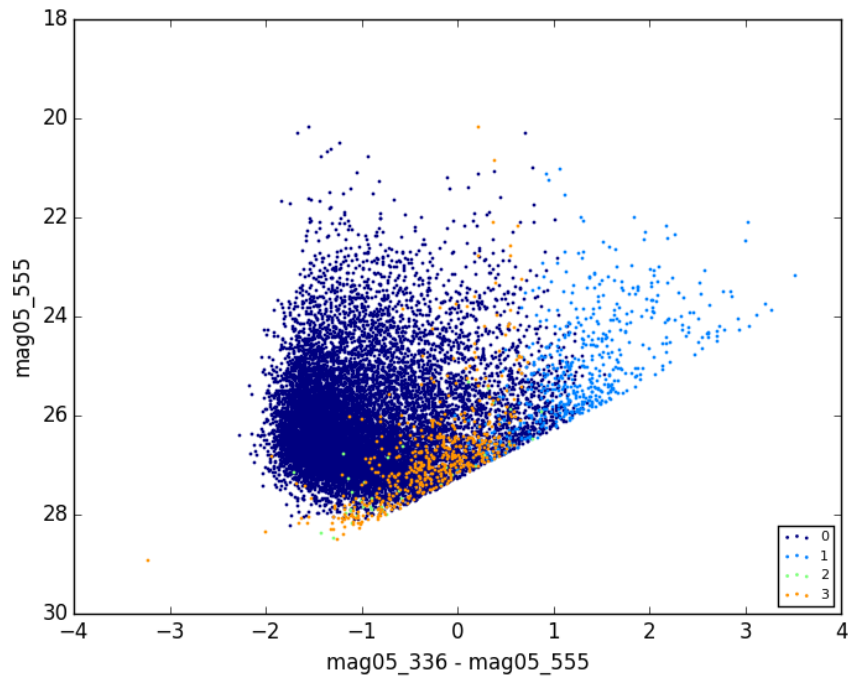


Figure 30: meanshift\_CMD\_4cl\_mag05\_336-mag05\_555vsmag05\_555.png

meanshift results, Ncl=8

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	11959	0.332806132527	0.370327407047	0.7039	0.9201	3.6895	0.0017	0.6522	-0.0574402144772
2	404	0.332806132527	0.17891243057	0.7994	0.8688	3.0769	0.0102	0.7413	-1.64428571429
3	57	0.332806132527	0.104695469125	1.7869	0.7516	2.2459	0.0229	1.07	1.5082
4	4	0.332806132527	0.756504456213	2.1920	0.6604	1.0975	0.4322	2.1194	-2.19633333333
5	38	0.332806132527	0.395162549972	0.7605	0.6617	1.9425	0.0477	0.5697	0.199
6	3	0.332806132527	0.572426451778	2.6778	0.6006	0.7411	0.4440	1.792	0.479
7	2045	0.332806132527	0.15757747664	0.8483	0.9561	3.7612	0.0041	0.4939	1.825
8	76	0.332806132527	0.0698830350533	1.9217	0.7057	2.3052	0.0227	1.2435	0.574
1	12013	0.33636610311	0.371029543122	0.7031	0.9256	3.7672	0.0017	0.6524	-0.0566097046414
2	387	0.33636610311	0.191265304323	0.8086	0.8724	3.0769	0.0102	0.7491	-1.64428571429
3	42	0.33636610311	0.0427575401584	1.8050	0.8300	2.2459	0.0229	1.0484	1.5082
4	92	0.33636610311	0.141169284912	1.9000	0.6959	2.3052	0.0227	1.2317	0.933333333333
5	4	0.33636610311	0.755204058877	2.1920	0.6604	1.0975	0.4322	2.1194	-2.535
6	34	0.33636610311	0.39453489207	0.7761	0.6746	1.9382	0.0477	0.5824	0.199
7	2012	0.33636610311	0.170285743612	0.8533	0.9562	3.7612	0.0041	0.4953	1.825
8	2	0.33636610311	0.602548025729	2.7604	0.6166	0.6166	0.6166	1.8532	0.479

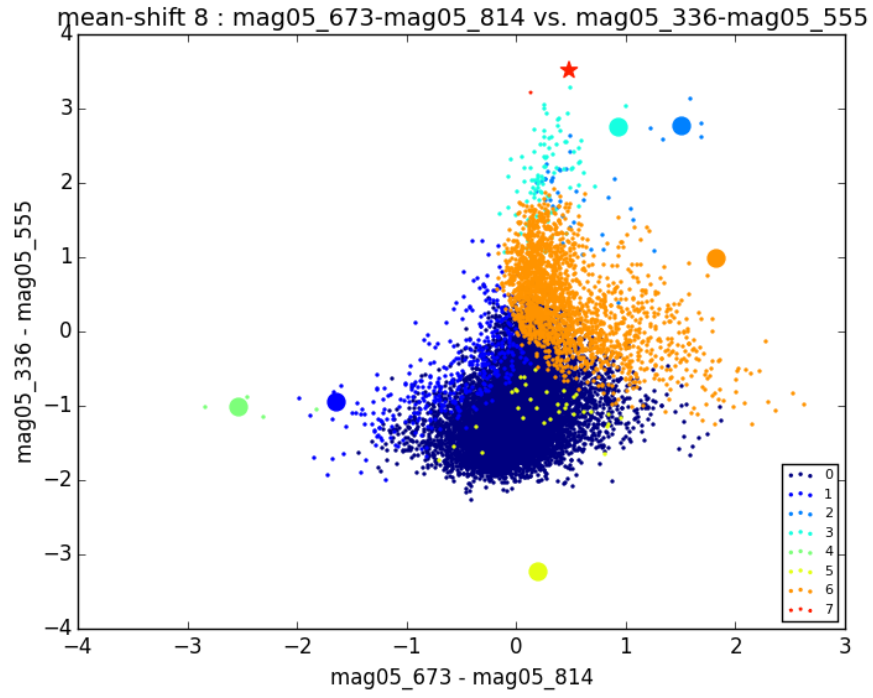


Figure 31: meanshift\_base\_color\_8cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png

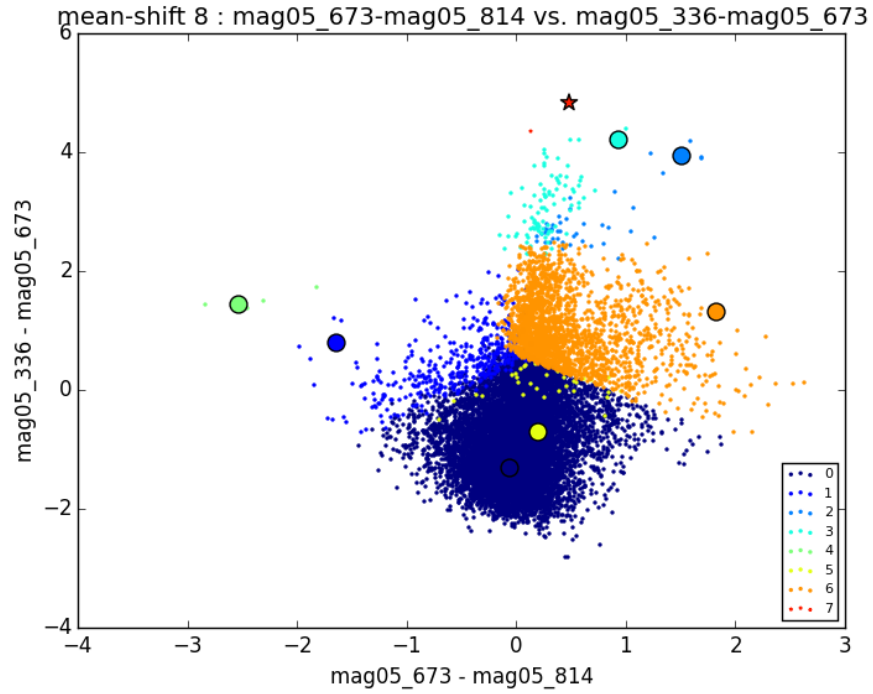


Figure 32: meanshift\_3d\_color\_8cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

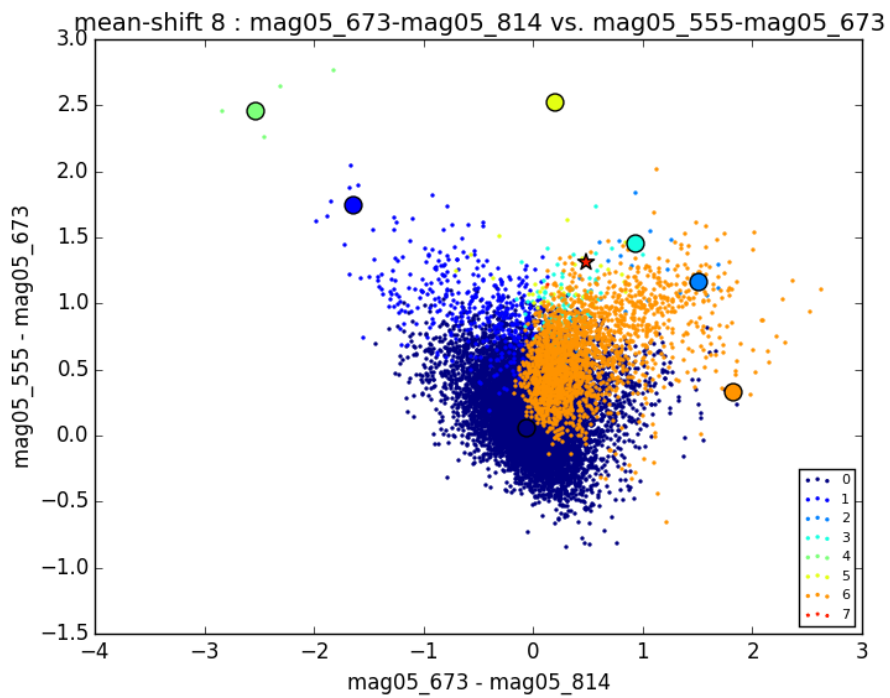


Figure 33: meanshift\_3d\_color\_8cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

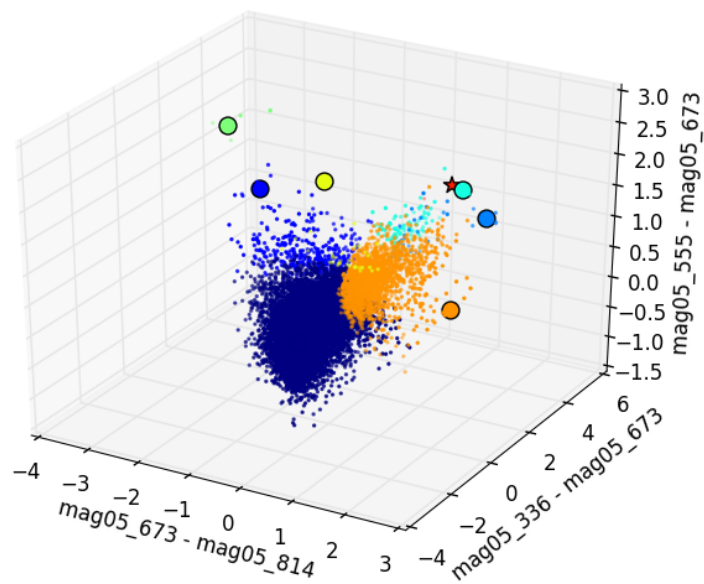


Figure 34: meanshift\_3d\_color\_8cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

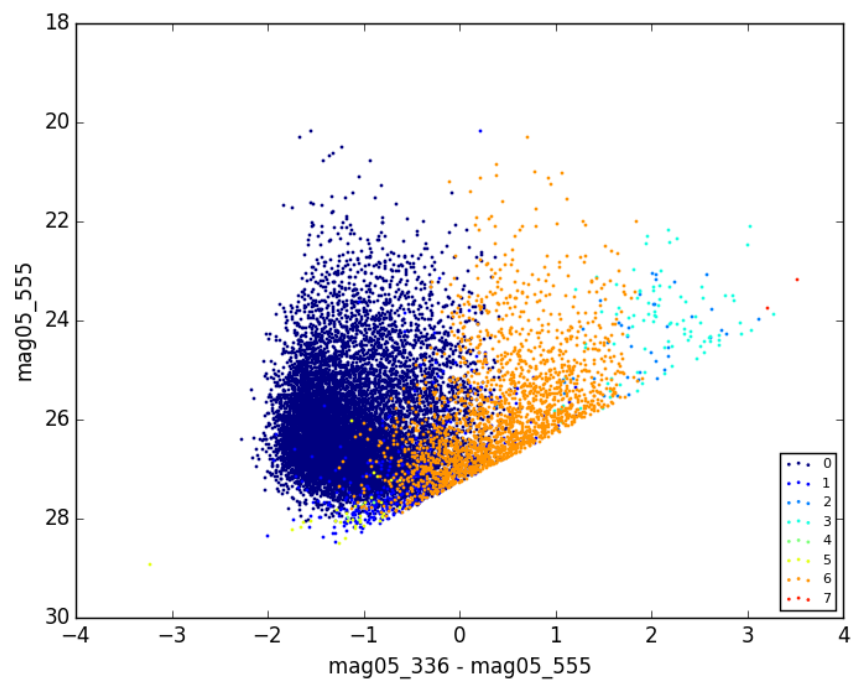


Figure 35: meanshift\_CMD\_8cl\_mag05\_336-mag05\_555vsmag05\_555.png

**meanshift results, Ncl=34**



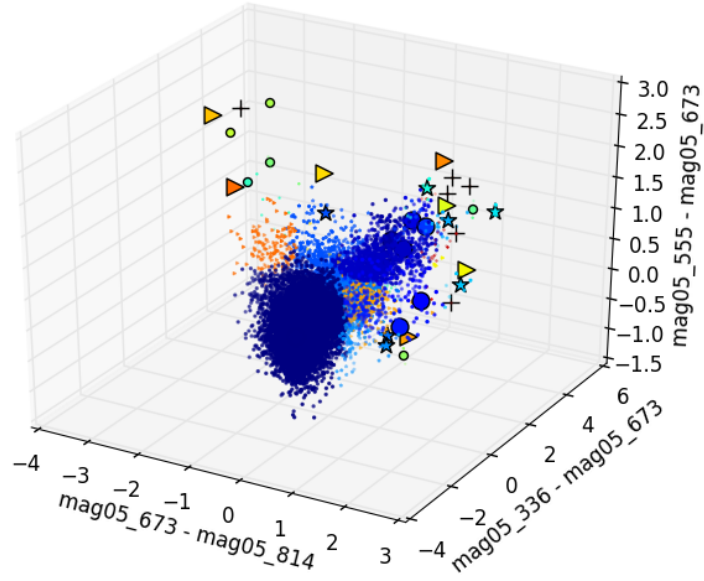


Figure 36: meanshift\_3d\_color\_34cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673vsmag05\_555-mag05\_673.png

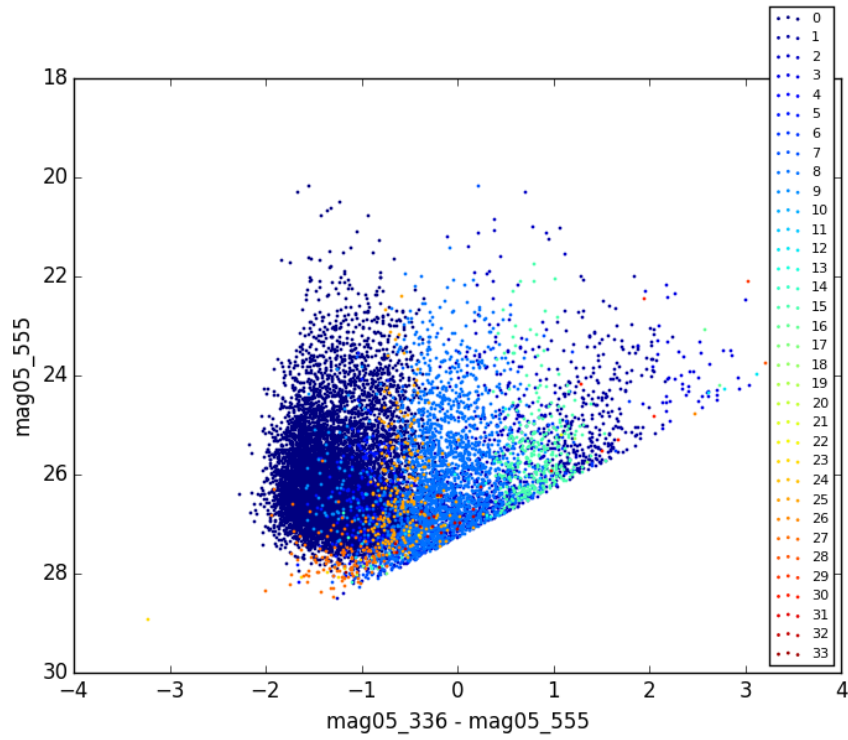


Figure 37: meanshift\_CMD\_34cl\_mag05\_336-mag05\_555vsmag05\_555.png

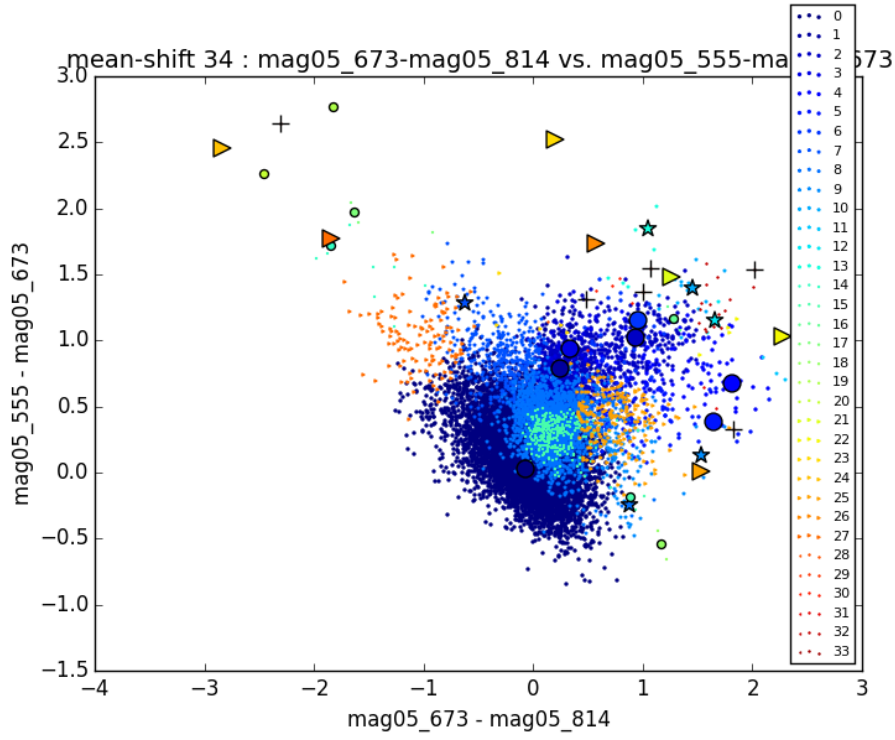


Figure 38: meanshift\_3d\_color\_34cl\_mag05\_673-mag05\_814vsmag05\_555-mag05\_673.png

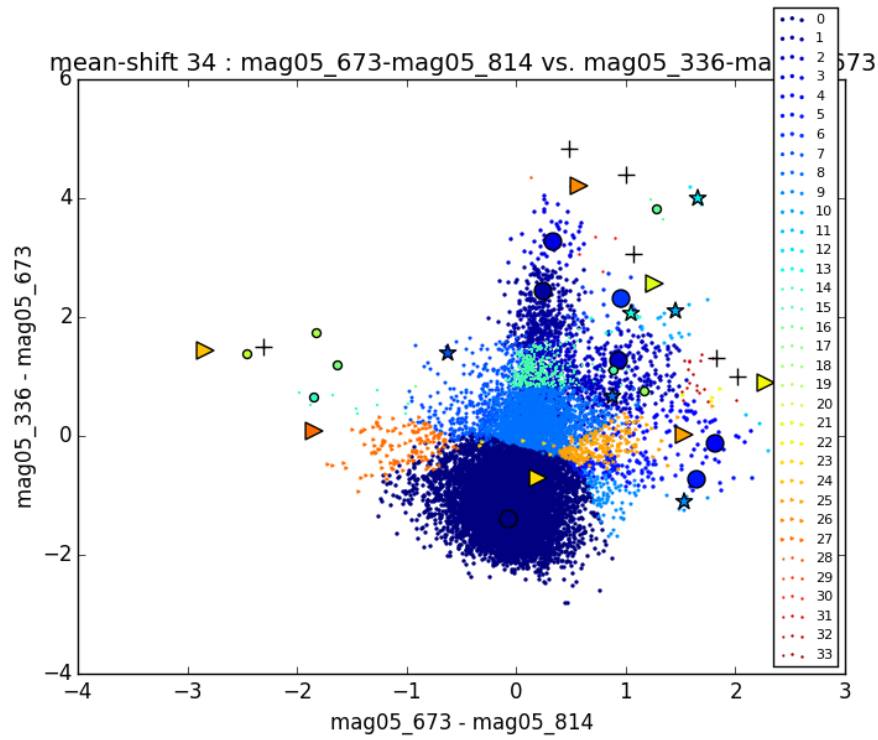


Figure 39: meanshift\_3d\_color\_34cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_673.png

Cluster	Nobj	tScore	cScore	rms	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	10042	0.205035010043	0.226403473952	0.7459	0.7605	3.3115	0.0017	0.6561	-0.0671033112583
2	336	0.205035010043	0.219229001571	1.2763	0.5642	1.5810	0.0141	0.8164	0.240347368421
3	847	0.205035010043	-0.115162776581	0.8416	0.7399	2.0389	0.0071	0.3758	0.937975903614
4	51	0.205035010043	0.328297142265	2.0336	0.4914	1.2276	0.0570	1.3233	0.332028571429
5	88	0.205035010043	0.00165587834599	0.9423	0.6549	1.6892	0.0298	0.5818	1.81205263158
6	133	0.205035010043	0.166517093774	0.7135	0.4788	1.8961	0.0099	0.6539	1.64283333333
7	25	0.205035010043	0.158749869174	1.4750	0.5077	1.0056	0.0624	0.6178	0.9588
8	446	0.205035010043	0.015370004883	0.6962	0.7143	2.0305	0.0102	0.5809	-0.628555555556
9	1827	0.205035010043	0.220542293744	0.3513	0.5153	1.7241	0.0041	0.2392	0.876
10	86	0.205035010043	0.288023574689	0.8077	0.5118	1.3407	0.0269	0.8077	1.53666666667
11	14	0.205035010043	0.318712267147	1.5668	0.4099	0.8295	0.0643	0.2871	1.4576
12	6	0.205035010043	0.455770944543	1.4738	0.4517	0.6527	0.2027	0.9476	2.43625
13	3	0.205035010043	0.4220907015	2.5899	0.2812	0.3760	0.1713	1.2439	1.65566666667
14	6	0.205035010043	0.270210545866	1.5728	0.4568	0.7030	0.0595	0.4659	1.051
15	9	0.205035010043	0.195016288445	1.2553	0.6029	1.1627	0.2269	1.2401	-1.84166666667
16	290	0.205035010043	0.524579309075	0.6902	0.3675	1.2758	0.0085	0.4384	0.885
17	2	0.205035010043	0.179126779866	2.4255	0.3970	0.3970	0.3970	1.2294	1.287
18	3	0.205035010043	0.270331620749	1.5184	0.5967	0.8644	0.1727	1.4215	-1.629
19	2	0.205035010043	0.793670360574	0.8667	0.2485	0.2485	0.2485	0.7352	1.1765
20	1	0.205035010043	0.0	N/A	N/A	N/A	N/A	1.9631	-1.824
21	1	0.205035010043	0.0	N/A	N/A	N/A	N/A	2.0457	-2.456
22	1	0.205035010043	0.0	N/A	N/A	N/A	N/A	0.5723	1.258
23	5	0.205035010043	0.276583240965	1.3039	0.3926	0.7873	0.0684	0.4983	2.274
24	6	0.205035010043	0.214229145784	0.8971	0.8226	1.5973	0.1973	0.8058	0.199
25	1	0.205035010043	0.0	N/A	N/A	N/A	N/A	2.2946	-2.84
26	202	0.205035010043	0.213577435142	0.5433	0.4629	1.6673	0.0114	0.4325	1.528
27	1	0.205035010043	0.0	N/A	N/A	N/A	N/A	1.5161	0.574
28	122	0.205035010043	0.390154765282	0.8829	0.5731	1.5827	0.0234	0.8812	-1.839
29	2	0.205035010043	0.104145898065	2.7604	0.6166	0.6166	0.6166	1.8532	0.479
30	2	0.205035010043	-0.141121069831	2.6150	0.6904	0.6904	0.6904	1.6032	0.996
31	5	0.205035010043	0.253835697227	2.0366	0.4443	0.6041	0.2300	0.9898	1.072
32	3	0.205035010043	0.307198943168	1.1640	0.4901	0.6442	0.2103	0.5215	1.825
33	17	0.205035010043	0.0687163998167	1.3530	0.4571	0.8584	0.0795	0.3437	2.016
34	1	0.205035010043	0.0	N/A	N/A	N/A	N/A	2.1173	-2.309

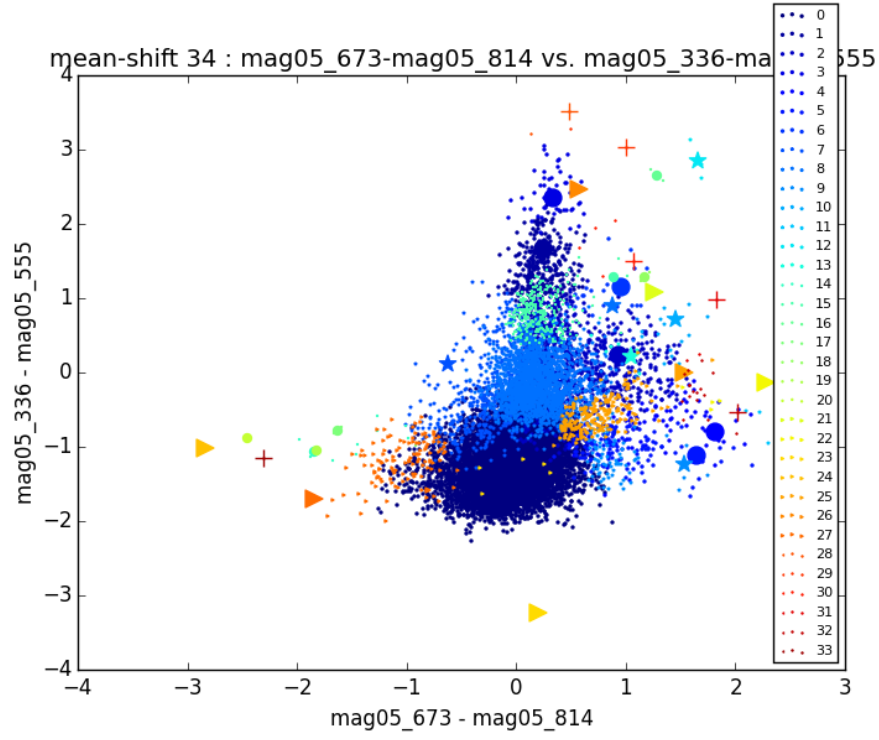


Figure 40: meanshift\_base\_color\_34cl\_mag05\_673-mag05\_814vsmag05\_336-mag05\_555.png