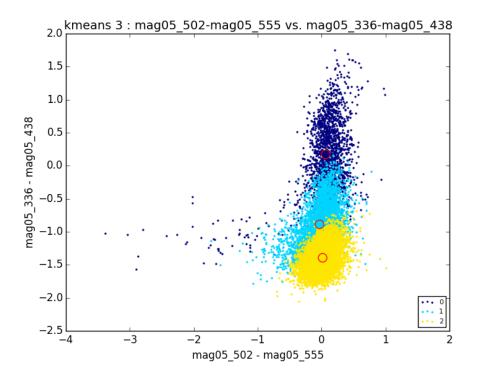
$Clustering\ output, found\ in/home/pauline/Research/m83_clustering/results/broad_narrow/OIII_V/clustering/mag05_502\\mag05_555_mag05_336-mag05_502_mag05_438-mag05_502$

K-means results

Nclust	inertia	score	TotObj	N1	N2	N3	N4	N5	N6	N7	N8
3	2411.10751718	0.45890644798	13390	7505	4176	1709	0	0	0	0	0
4	1889.30582587	0.388225790319	13390	5674	4434	2274	1008	0	0	0	0
5	1616.5037932	0.343653816528	13390	4408	4348	2518	1489	627	0	0	0
6	1388.76381404	0.350399537338	13390	4404	4321	2517	1414	598	136	0	0
7	1236.57762243	0.305154340492	13390	4033	2944	2820	1835	1159	460	139	0
8	1096.42564331	0.32033456753	13390	3945	3182	2269	1608	994	992	337	63



 $Figure~1:~kmeans_base_color_3cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	1709	0.45890644798	0.369950228638	0.6198	0.8430	6.0869	0.0017	0.4851	0.0652299590404	
2	4176	0.45890644798	0.340006779014	0.4675	0.5340	2.7273	0.0020	0.444	-0.0305181992337	
3	7505	0.45890644798	0.545322330253	0.8483	0.3940	2.6049	0.0010	0.6946	0.0122215856096	

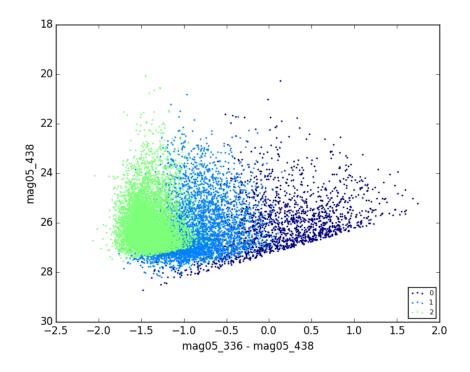
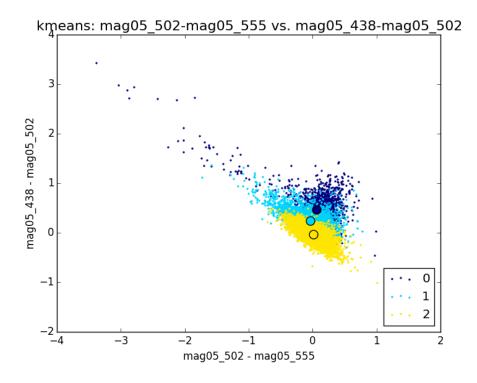
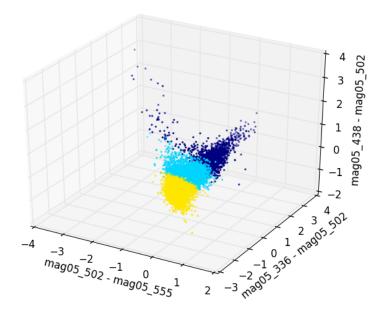


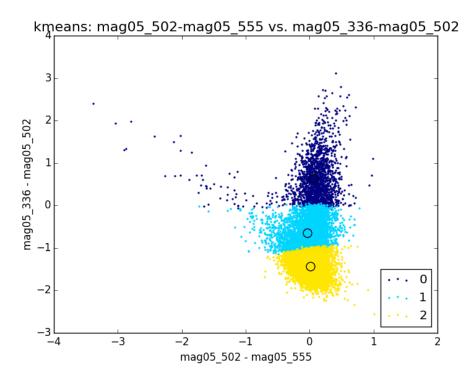
Figure 2: kmeans_CMD_3cl_mag05_336-mag05_438vsmag05_438.png



 $Figure \ 3: \ kmeans_3d_3cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$



 $\label{eq:figure 4: kmeans_3d_color_3cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$



 $Figure~5:~kmeans_3d_3cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

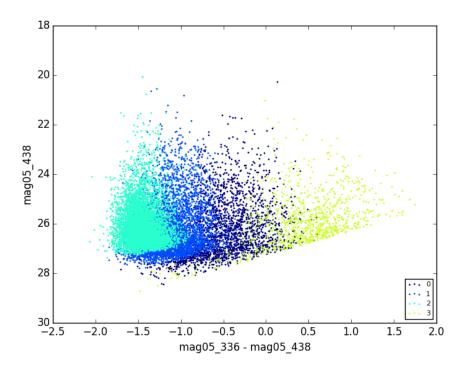
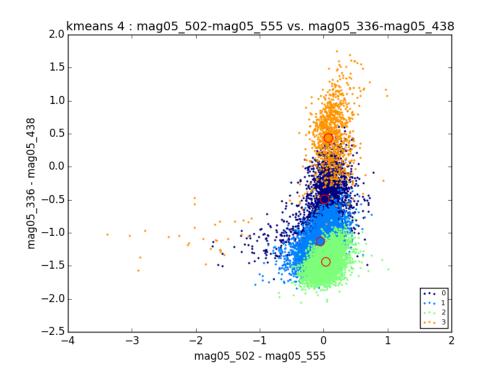
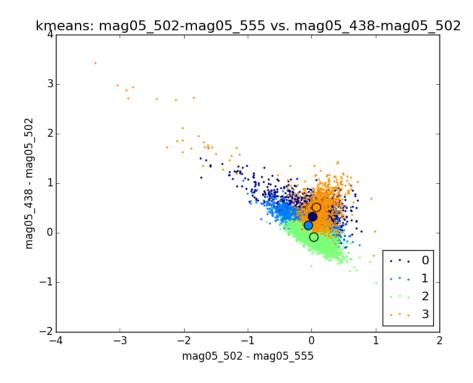


Figure 6: kmeans_CMD_4cl_mag05_336-mag05_438vsmag05_438.png

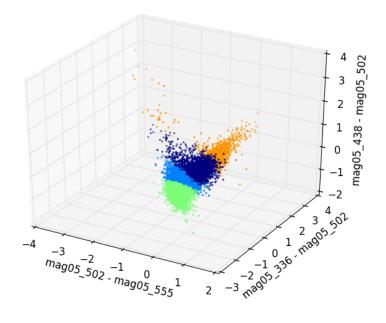
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	2274	0.388225790319	0.3106327784	0.3409	0.5725	2.9831	0.0024	0.3355	0.0195021987687
2	4434	0.388225790319	0.325437516562	0.6001	0.4053	2.2439	0.0010	0.5251	-0.0514772214705
3	5674	0.388225790319	0.475540574618	0.8943	0.3395	2.4517	0.0017	0.7247	0.0320997532605
4	1008	0.388225790319	0.347973437974	0.7530	0.8046	6.0869	0.0017	0.5513	0.0769097222222



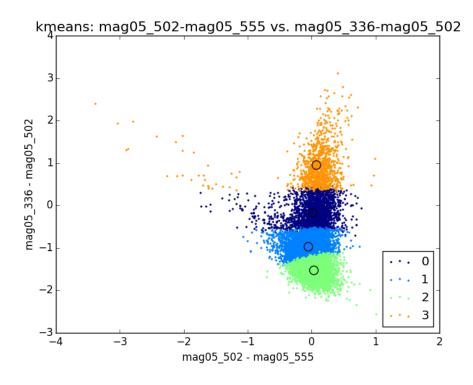
 $Figure~7:~kmeans_base_color_4cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$



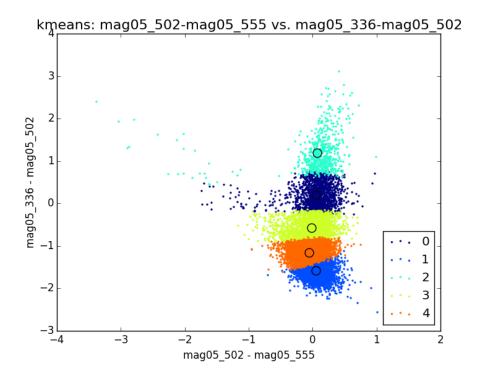
 $Figure~8:~kmeans_3d_4cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$



 $\label{eq:figure 9: kmeans_3d_color_4cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$

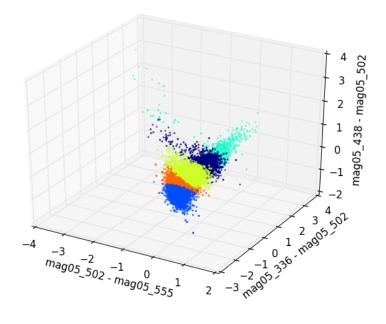


 $Figure~10:~kmeans_3d_4cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$



 $Figure~11:~kmeans_3d_5cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	1489	0.343653816528	0.299434832824	0.3658	0.5777	3.3870	0.0032	0.3025	0.0533613163197
2	4348	0.343653816528	0.425795438489	0.9280	0.3108	2.2873	0.0017	0.7487	0.0542803587856
3	627	0.343653816528	0.307979436156	0.8875	0.8082	5.6942	0.0017	0.6351	0.0720606060606
4	2518	0.343653816528	0.282269229442	0.4182	0.4560	2.1035	0.0022	0.4029	-0.0161032565528
5	4408	0.343653816528	0.317706566352	0.6889	0.3393	1.9203	0.0010	0.5805	-0.0554317150635



 $\label{eq:figure 12:mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png} \\ \text{kmeans_3d_color_5cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png}$

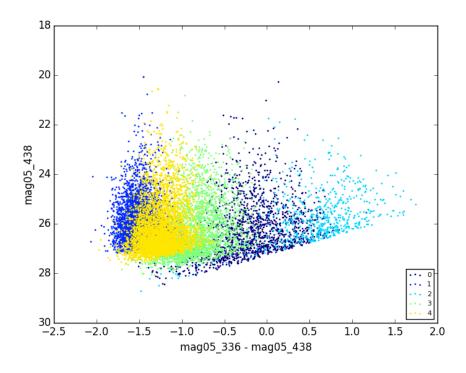
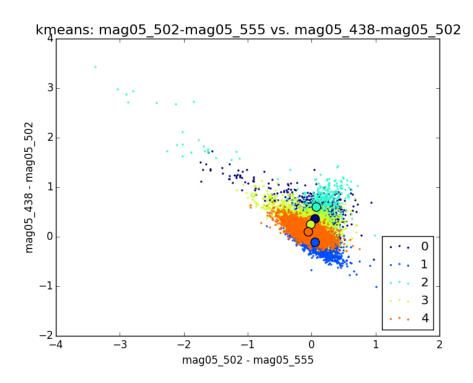
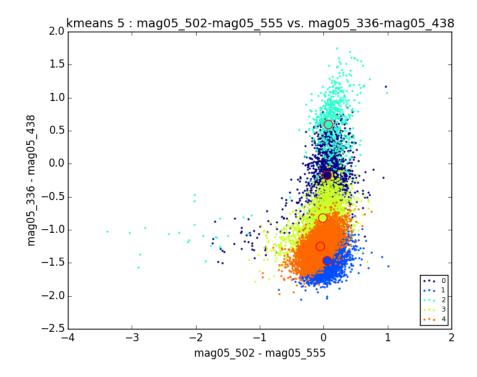


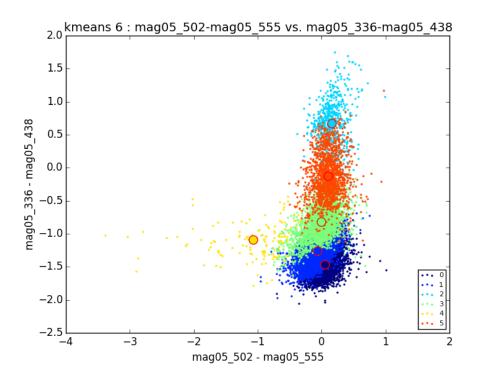
Figure 13: kmeans_CMD_5cl_mag05_336-mag05_438vsmag05_438.png



 $Figure~14:~kmeans_3d_5cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$

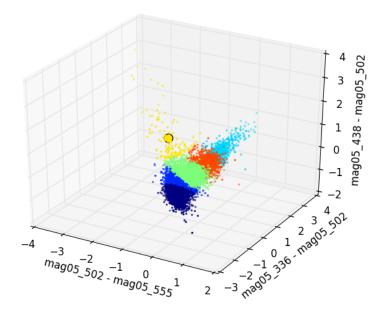


 $Figure~15:~kmeans_base_color_5cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

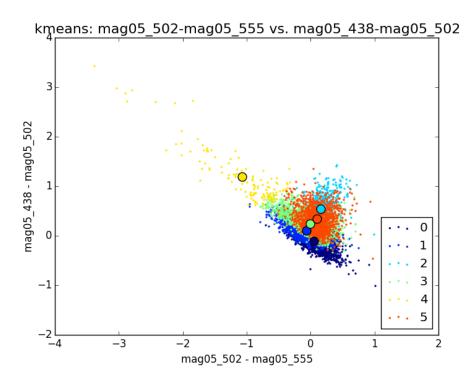


 $Figure~16:~kmeans_base_color_6cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	4321	0.350399537338	0.425385996465	0.9286	0.3102	2.2873	0.0017	0.7492	0.0552261050683
2	4404	0.350399537338	0.314222057599	0.6910	0.3387	1.9203	0.0010	0.5818	-0.0577175295186
3	598	0.350399537338	0.383119540676	0.8239	0.6440	2.7096	0.0017	0.5299	0.158321070234
4	2517	0.350399537338	0.291518223583	0.4114	0.4356	1.6333	0.0022	0.3959	-0.000176400476758
5	136	0.350399537338	0.240794288096	1.0857	1.0770	4.8725	0.0131	1.0833	-1.07103676471
6	1414	0.350399537338	0.33544419753	0.3241	0.5061	2.0568	0.0032	0.2441	0.100949080622



 $\label{eq:figure 17: kmeans_3d_color_6cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$



 $Figure~18:~kmeans_3d_6cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$

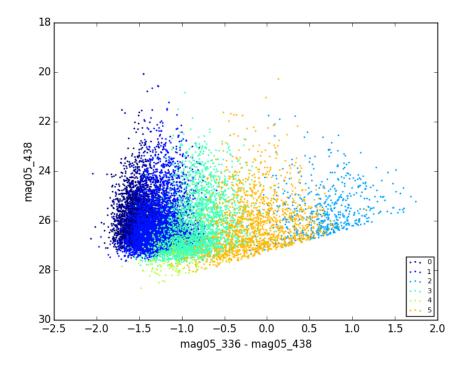
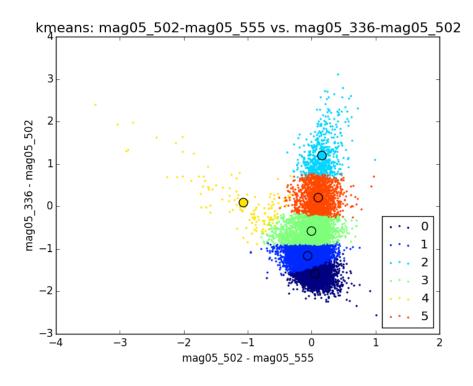
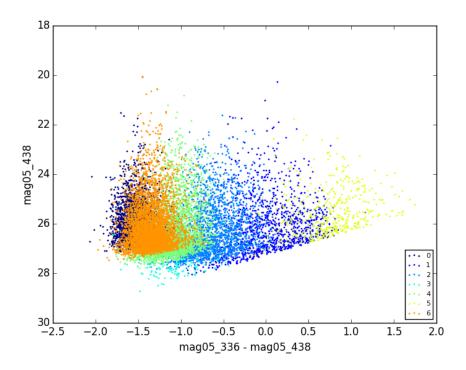


Figure 19: kmeans_CMD_6cl_mag05_336-mag05_438vsmag05_438.png

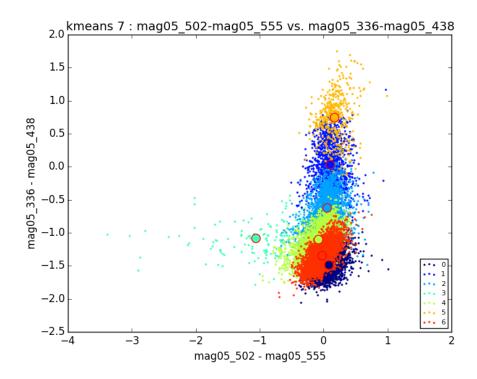


 $Figure~20:~kmeans_3d_6cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

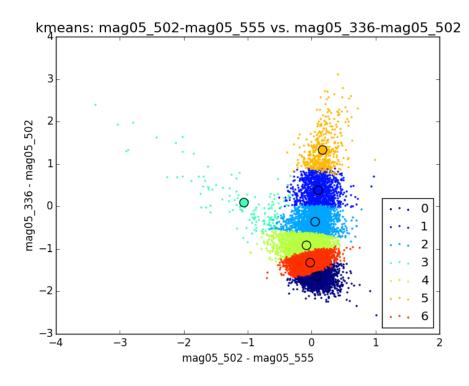


 $Figure~21:~kmeans_CMD_7cl_mag05_336-mag05_438vsmag05_438.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	2944	0.305154340492	0.366356931117	0.9673	0.2874	1.9621	0.0020	0.7777	0.0852985733696
2	1159	0.305154340492	0.314932890159	0.3771	0.5040	2.0568	0.0022	0.2547	0.106348576359
3	1835	0.305154340492	0.286059324965	0.3249	0.4284	1.6422	0.0024	0.3244	0.0542305177112
4	139	0.305154340492	0.238893019002	1.0765	1.0676	4.8189	0.0131	1.0743	-1.0601294964
5	2820	0.305154340492	0.238500127329	0.5679	0.3683	1.6361	0.0010	0.5006	-0.0782166666667
6	460	0.305154340492	0.373504483509	0.8922	0.6311	2.5885	0.0017	0.5643	0.171834782609
7	4033	0.305154340492	0.307450330239	0.7746	0.2848	1.6864	0.0017	0.6375	-0.0270885197124



 $Figure~22:~kmeans_base_color_7cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$



 $Figure~23:~kmeans_3d_7cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

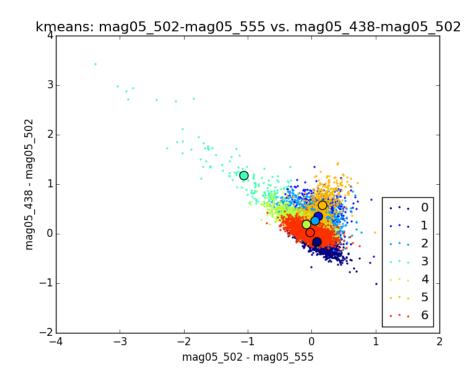
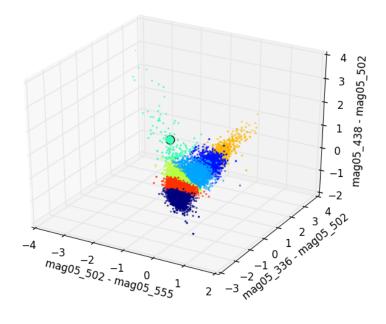
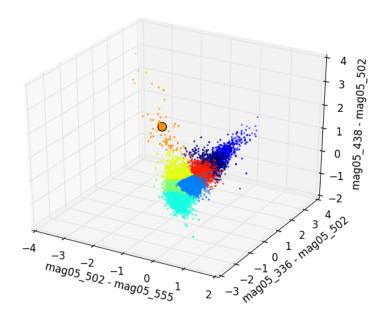


Figure 24: kmeans_3d_7cl_mag05_502-mag05_555vsmag05_438-mag05_502.png



 $\label{eq:figure 25:mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png} \text{kmeans_3d_color_7cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png}$



 $\label{lem:sigma} Figure 26: kmeans_3d_color_8cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	992	0.32033456753	0.319708777346	0.4454	0.5088	2.2435	0.0017	0.2906	0.0990080645161	0
2	337	0.32033456753	0.387411662977	0.9736	0.6142	2.5316	0.0079	0.6023	0.189596439169	
3	2269	0.32033456753	0.305541018382	0.5226	0.3180	1.2812	0.0010	0.4697	0.070800793301	-(
4	3182	0.32033456753	0.368397778296	0.9585	0.2913	1.9577	0.0020	0.7719	0.0848526084224	-
5	3945	0.32033456753	0.315445926522	0.7679	0.2800	1.3257	0.0017	0.6309	-0.0576103929024	-
6	994	0.32033456753	0.213955020193	0.5789	0.4282	1.3995	0.0024	0.5304	-0.329562374245	-(
7	63	0.32033456753	0.38973089176	1.4127	1.1472	4.2921	0.0131	1.4017	-1.50233333333	0
8	1608	0.32033456753	0.30746156968	0.2799	0.4232	1.6661	0.0032	0.276	0.0824029850746	-(

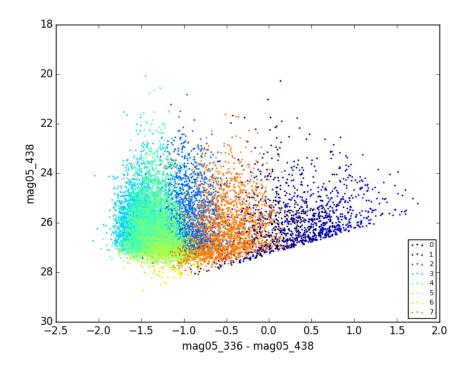
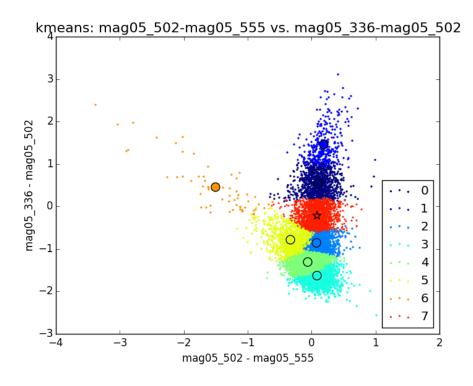
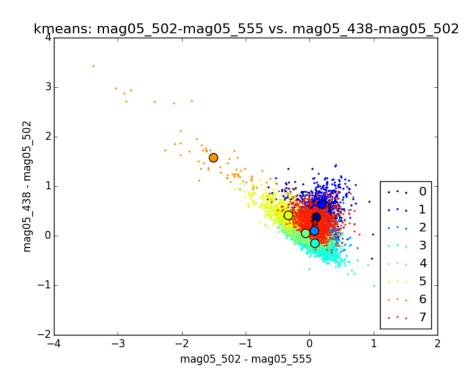


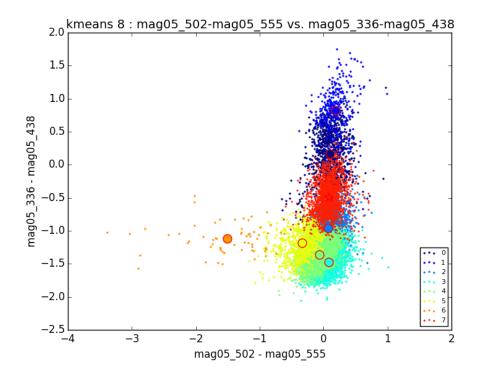
Figure 27: kmeans_CMD_8cl_mag05_336-mag05_438vsmag05_438.png



 $Figure~28:~kmeans_3d_8cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$



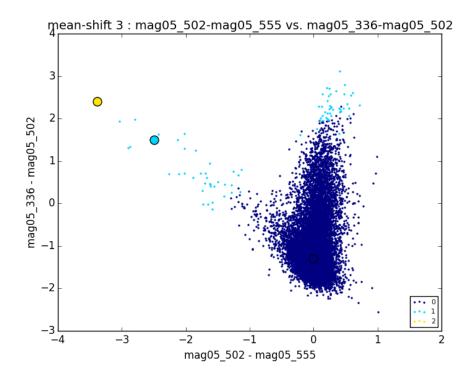
 $Figure~29:~kmeans_3d_8cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$



 $Figure~30:~kmeans_base_color_8cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

Meanshift results

Bandw	Nclust	score	TotObj	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10
0.5992	5	0.597344137727	13390	11706	1638	40	5	1	0	0	0	0	0
0.5500	8	0.43359282615	13390	11607	1158	494	121	5	2	2	1	0	0
0.5700	7	0.429798364923	13390	11670	1174	486	52	4	3	1	0	0	0
0.6500	4	0.648966730085	13390	13220	164	5	1	0	0	0	0	0	0
0.7000	3	0.687890055796	13390	13311	78	1	0	0	0	0	0	0	0
0.5000	9	0.434338674847	13390	11586	1158	502	134	3	2	2	2	1	0



 $Figure~31:~meanshift_3d_color_3cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	$\operatorname{MinDist}$	Stdev	Cen1
1	13311	0.687890055796	0.690021784307	0.7135	0.9066	5.1721	0.0010	0.6582	-0.0024643541179
2	78	0.687890055796	0.332921489619	1.5351	1.8069	4.2506	0.0131	1.3371	-2.49316666667
3	1	0.687890055796	0.0	N/A	N/A	N/A	N/A	2.9958	-3.378

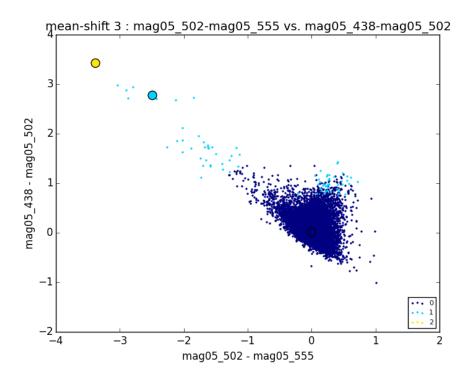
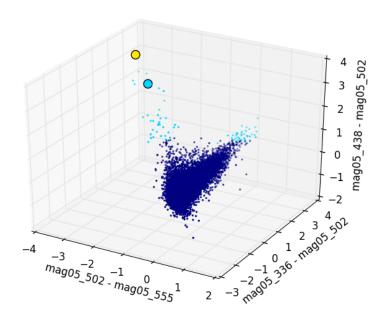
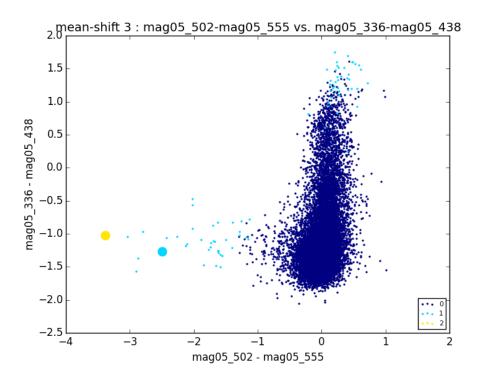


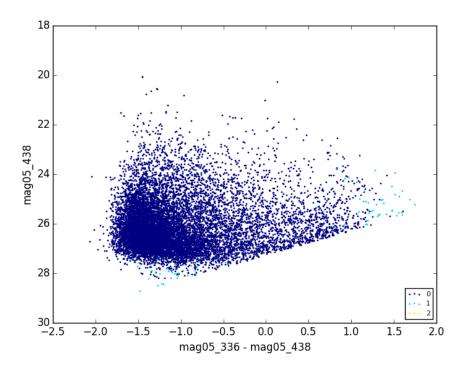
Figure 32: meanshift_3d_color_3cl_mag05_502-mag05_555vsmag05_438-mag05_502.png



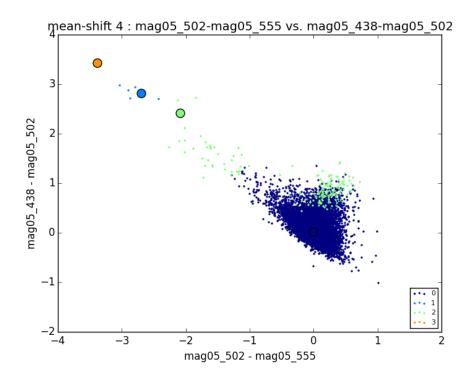
 $\label{eq:figure 33:meanshift_3d_color_3cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$



 $Figure~34:~meanshift_base_color_3cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

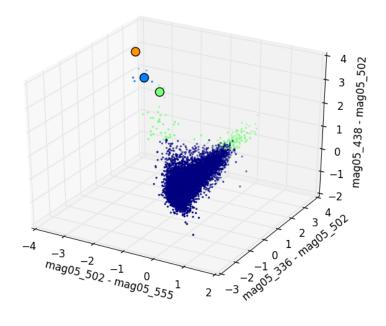


 $Figure~35:~meanshift_CMD_3cl_mag05_336-mag05_438vsmag05_438.png$



 $Figure~36:~meanshift_3d_color_4cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	13220	0.648966730085	0.651015688281	0.7104	0.8820	4.5724	0.0010	0.6516	-0.00293545172719
2	5	0.648966730085	0.480922190445	2.4983	0.5537	0.7336	0.1663	2.4358	-2.69183333333
3	164	0.648966730085	0.492881132947	1.2529	1.2642	3.8132	0.0079	0.968	-2.0864
4	1	0.648966730085	0.0	N/A	N/A	N/A	N/A	2.9958	-3.378



 $\label{eq:figure 37:meanshift_3d_color_4cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$

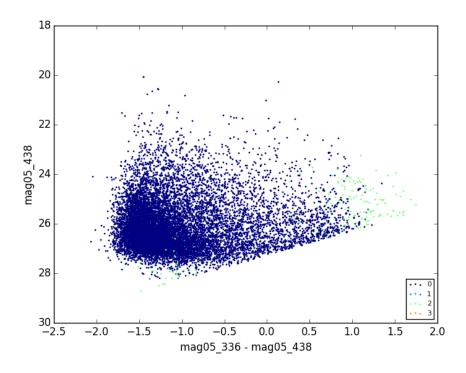
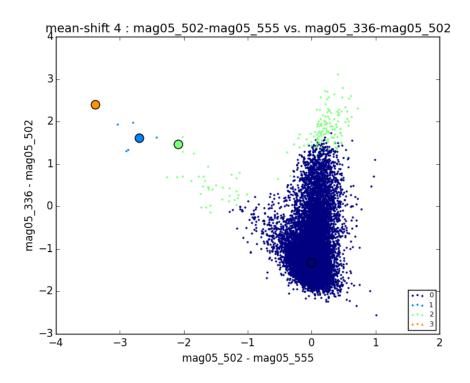
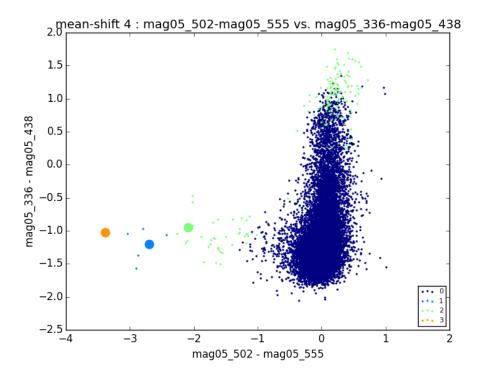


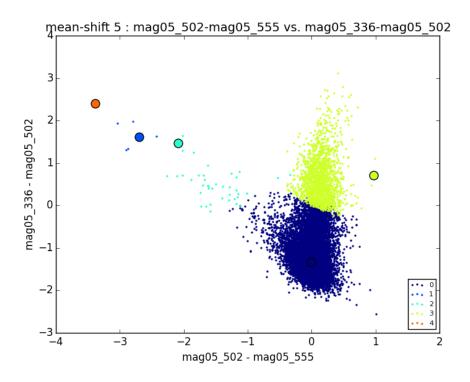
Figure 38: meanshift_CMD_4cl_mag05_336-mag05_438vsmag05_438.png



 $Figure~39:~meanshift_3d_color_4cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$



 $Figure~40:~meanshift_base_color_4cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$



 $Figure~41:~meanshift_3d_color_5cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	11706	0.597344137727	0.602510728994	0.7355	0.6577	4.0076	0.0010	0.6394	-0.00232035893253
2	5	0.597344137727	0.480922190445	2.4983	0.5537	0.7336	0.1663	2.4358	-2.69183333333
3	40	0.597344137727	0.488942554991	1.3437	0.8317	2.3575	0.0131	1.3295	-2.0864
4	1638	0.597344137727	0.563788215756	0.5661	0.7531	3.7836	0.0017	0.412	0.979
5	1	0.597344137727	0.0	N/A	N/A	N/A	N/A	2.9958	-3.378

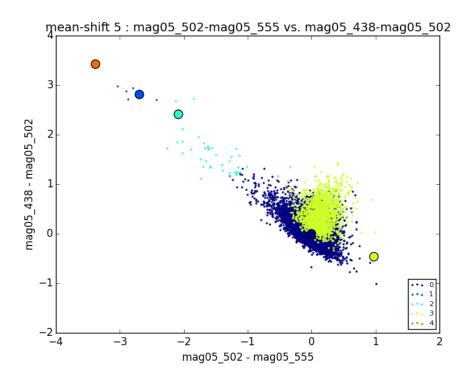
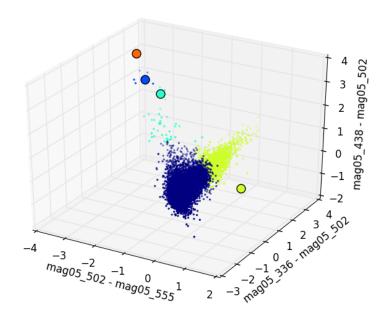
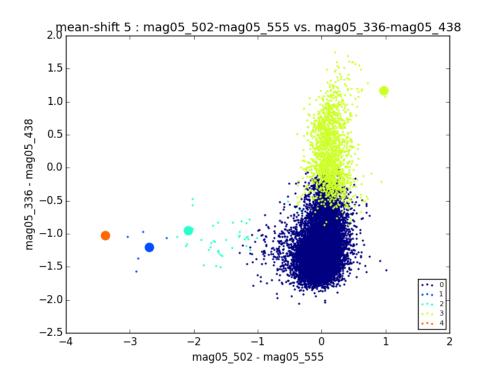


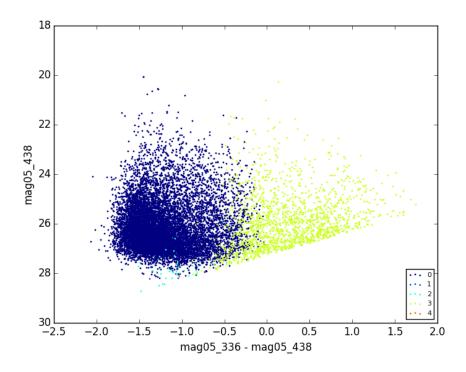
Figure 42: meanshift_3d_color_5cl_mag05_502-mag05_555vsmag05_438-mag05_502.png



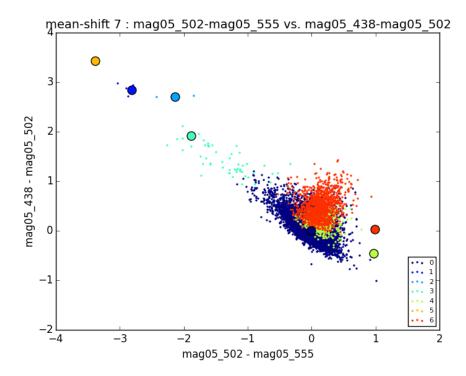
 $\label{eq:figure 43:meanshift_3d_color_5cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$



 $Figure~44:~meanshift_base_color_5cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

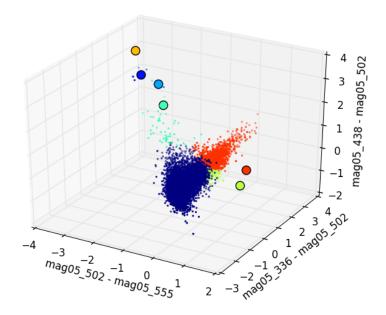


 $Figure~45:~meanshift_CMD_5cl_mag05_336-mag05_438vsmag05_438.png$

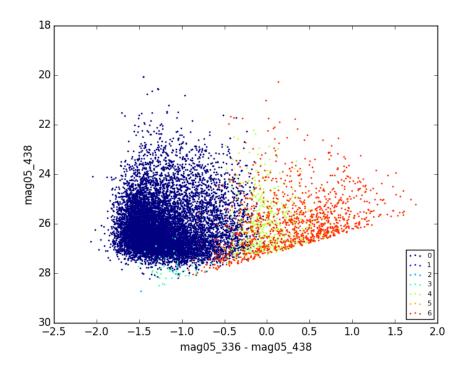


 $Figure~46:~meanshift_3d_color_7cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$

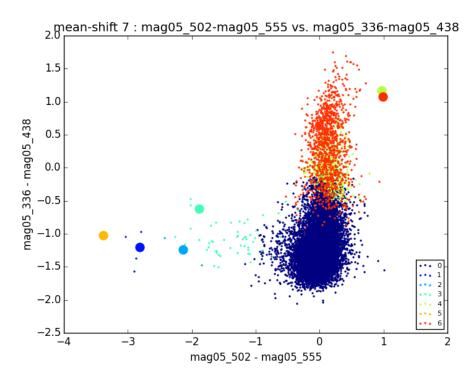
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	11670	0.429798364923	0.457087740109	0.7358	0.6518	3.7833	0.0010	0.6389	-0.00270196689854
2	4	0.429798364923	0.354476018626	2.5466	0.5182	0.6883	0.1663	2.4895	-2.805
3	3	0.429798364923	0.431005801215	2.1621	0.4677	0.6967	0.3340	2.0546	-2.13233333333
4	52	0.429798364923	0.464128316926	1.1954	0.7798	2.2981	0.0131	1.1877	-1.8846666667
5	486	0.429798364923	0.581910260664	0.2232	0.3598	1.5142	0.0035	0.162	0.979
6	1	0.429798364923	0.0	N/A	N/A	N/A	N/A	2.9958	-3.378
7	1174	0.429798364923	0.094661157246	0.6555	0.7239	3.2511	0.0017	0.4443	0.995



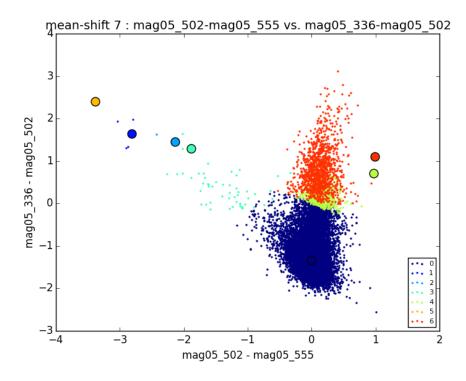
 $\label{eq:figure 47:mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png} \\ \text{Figure 47: meanshift_3d_color_7cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png}$



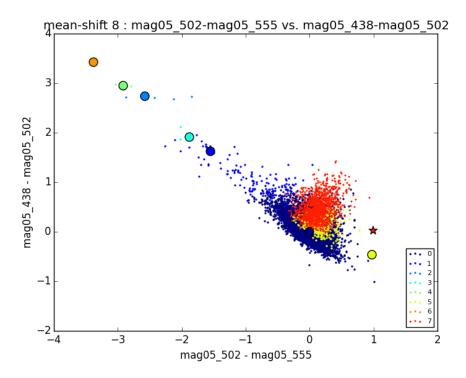
 $Figure~48:~meanshift_CMD_7cl_mag05_336-mag05_438vsmag05_438.png$



 $Figure~49:~meanshift_base_color_7cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

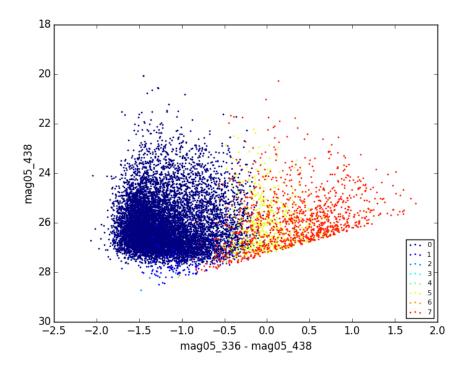


 $Figure~50:~meanshift_3d_color_7cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

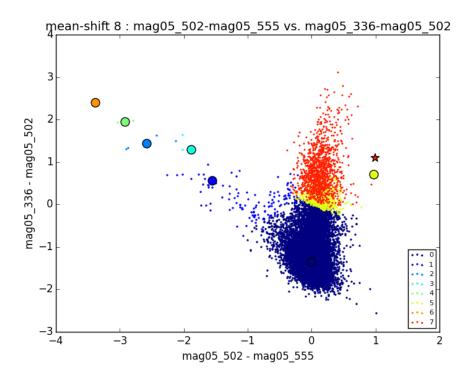


 $Figure~51:~meanshift_3d_color_8cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$

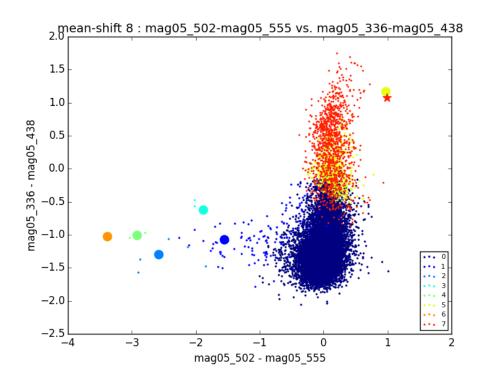
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	11607	0.43359282615	0.462322840924	0.7362	0.6424	3.4238	0.0010	0.6382	-0.00293266986116
2	121	0.43359282615	0.29027790286	0.9059	0.8266	2.3433	0.0131	0.8996	-1.55489473684
3	5	0.43359282615	0.0948513639454	2.2775	0.6388	1.0669	0.1663	2.2058	-2.58125
4	2	0.43359282615	0.545748275336	1.8464	0.4323	0.4323	0.4323	1.783	-1.8846666667
5	2	0.43359282615	0.672580370327	2.6485	0.2518	0.2518	0.2518	2.5638	-2.913
6	494	0.43359282615	0.581124354819	0.2227	0.3602	1.5142	0.0035	0.1621	0.979
7	1	0.43359282615	0.0	N/A	N/A	N/A	N/A	2.9958	-3.378
8	1158	0.43359282615	0.0988918444765	0.6559	0.7185	3.2511	0.0017	0.4426	0.995



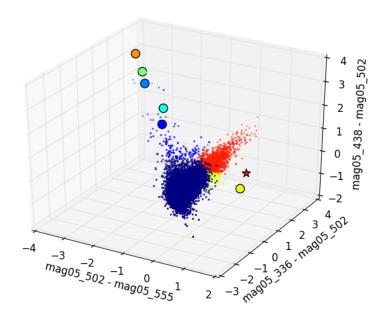
 $Figure~52:~meanshift_CMD_8cl_mag05_336-mag05_438vsmag05_438.png$



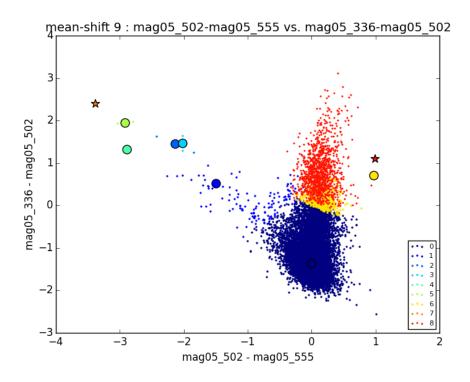
 $Figure~53:~meanshift_3d_color_8cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$



 $Figure~54:~meanshift_base_color_8cl_mag05_502-mag05_555vsmag05_336-mag05_438.png$

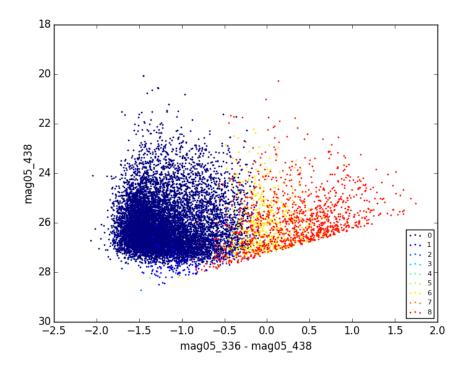


 $\label{eq:figure 55:meanshift_3d_color_8cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$

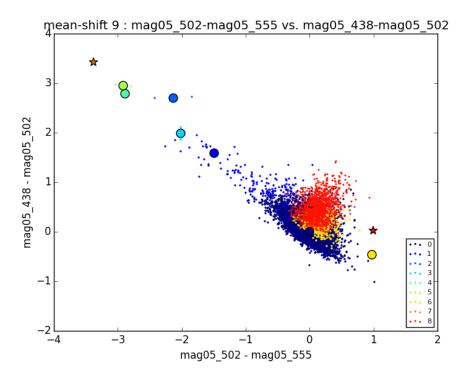


 $Figure~56:~meanshift_3d_color_9cl_mag05_502-mag05_555vsmag05_336-mag05_502.png$

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	11586	0.434338674847	0.46316628479	0.7367	0.6400	3.3670	0.0010	0.6382	-0.00244405043341
2	134	0.434338674847	0.276933602667	0.8781	0.8244	2.3448	0.0131	0.872	-1.4976
3	3	0.434338674847	0.314658724087	2.1621	0.4677	0.6967	0.3340	2.0546	-2.13233333333
4	2	0.434338674847	0.444047200147	1.8464	0.4323	0.4323	0.4323	1.783	-2.0175
5	2	0.434338674847	0.752780794434	2.4403	0.1663	0.1663	0.1663	2.4061	-2.886
6	2	0.434338674847	0.625675139855	2.6485	0.2518	0.2518	0.2518	2.5638	-2.913
7	502	0.434338674847	0.580210978249	0.2227	0.3616	1.5142	0.0035	0.1627	0.979
8	1	0.434338674847	0.0	N/A	N/A	N/A	N/A	2.9958	-3.378
9	1158	0.434338674847	0.100679002026	0.6556	0.7189	3.2511	0.0017	0.4426	0.995



 $Figure~57:~meanshift_CMD_9cl_mag05_336-mag05_438vsmag05_438.png$



 $Figure~58:~meanshift_3d_color_9cl_mag05_502-mag05_555vsmag05_438-mag05_502.png$

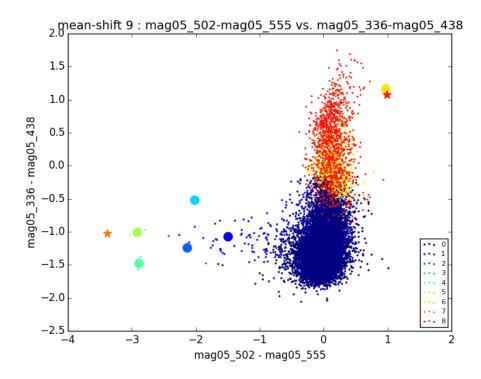
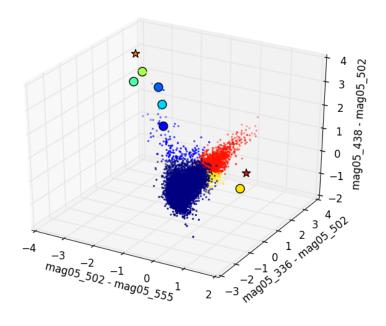


Figure 59: meanshift_base_color_9cl_mag05_502-mag05_555vsmag05_336-mag05_438.png



 $\label{eq:figure 60:meanshift_3d_color_9cl_mag05_502-mag05_555vsmag05_336-mag05_502vsmag05_438-mag05_502.png$