$Clustering\ output, found\ in/home/pauline/Research/m83\_clustering/results/broad\_narrow/UVW\_U/clustering/mag05\_225-mag05\_336\_mag05\_225-mag05\_225-mag05\_225-mag05\_225-mag05\_814$ 

# K-means results

Nclust	inertia	score	TotObj	N1	N2	N3	N4	N5	N6	N7	N8
3	6142.73512532	0.468960758909	14098	7518	5181	1399	0	0	0	0	0
4	4436.77477634	0.42183090397	14098	5624	5375	2353	746	0	0	0	0
5	3509.67167769	0.387067972652	14098	5301	3708	3262	1444	383	0	0	0
6	2885.35338116	0.370867537541	14098	4780	3592	2822	1835	881	188	0	0
7	2546.91145774	0.334661719942	14098	3784	3563	2447	2020	1367	748	169	0
8	2293.7975777	0.339638184837	14098	3774	3525	2408	2020	1119	688	401	163

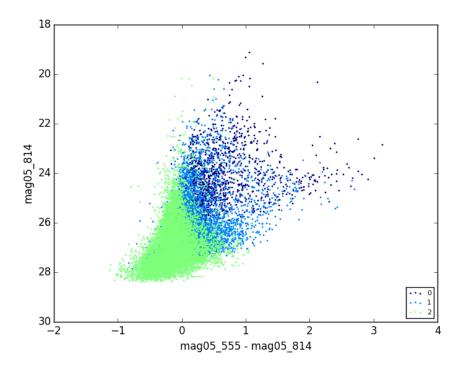
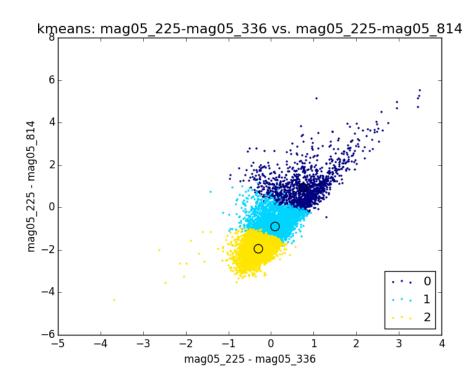
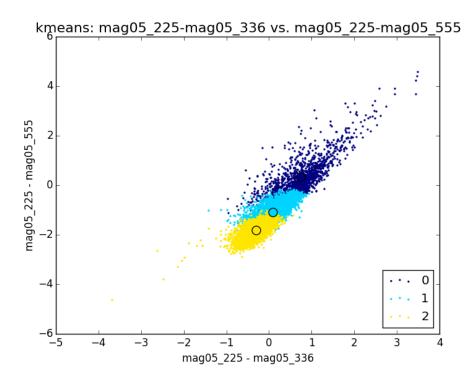


Figure 1: kmeans\_CMD\_3cl\_mag05\_555-mag05\_814vsmag05\_814.png

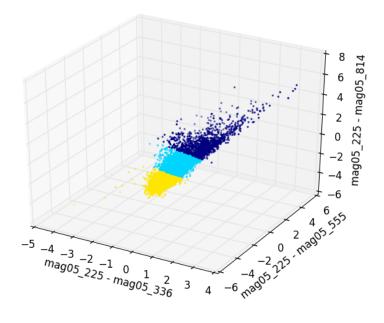
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	1399	0.468960758909	0.375210639965	1.0328	1.4601	8.2974	0.0094	0.7858	0.753320943531
2	5181	0.468960758909	0.409161166317	0.8839	0.7395	3.0848	0.0014	0.6205	0.0885865662999
3	7518	0.468960758909	0.527617064524	1.5726	0.6239	6.0090	0.0010	0.805	-0.293675046555



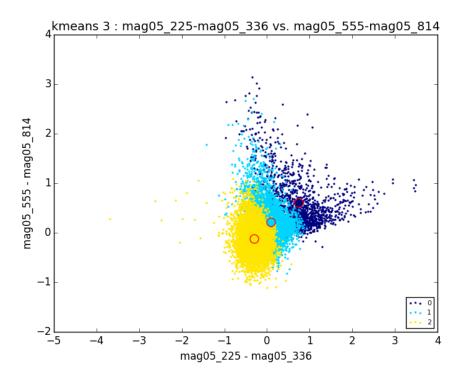
 $Figure~2:~kmeans\_3d\_3cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 



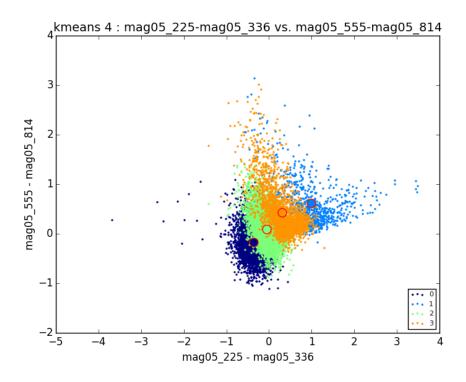
 $Figure \ 3: \ kmeans\_3d\_3cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 



 $\label{lem:figure 4: kmeans_3d_color_3cl_mag05_225-mag05_336vsmag05_225-mag05_555vsmag05_225-mag05_814.png$ 



 $Figure~5:~kmeans\_base\_color\_3cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 



 $Figure~6:~kmeans\_base\_color\_4cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	5375	0.42183090397	0.466982855068	1.6741	0.5485	5.7408	0.0010	0.8263	-0.350965767442	
2	746	0.42183090397	0.3616712135	1.3331	1.4375	7.3983	0.0141	0.78	0.999908847185	
3	5624	0.42183090397	0.414616849867	1.1142	0.5482	2.2830	0.0014	0.6525	-0.0514388335704	
4	2353	0.42183090397	0.355005248302	0.5690	0.8454	3.1874	0.0017	0.5454	0.312288567786	

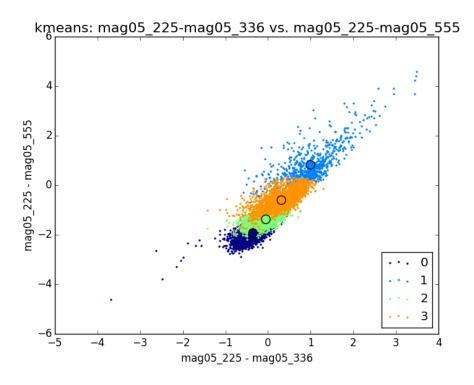
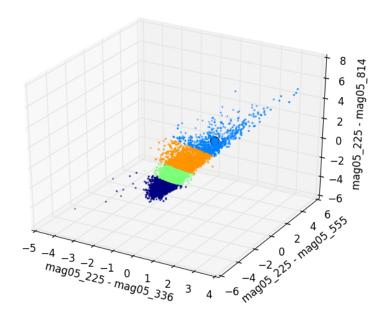


Figure 7: kmeans\_3d\_4cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png



 $\label{lem:figure 8: kmeans_3d_color_4cl_mag05_225-mag05_336vsmag05_225-mag05_555vsmag05_225-mag05_814.png$ 

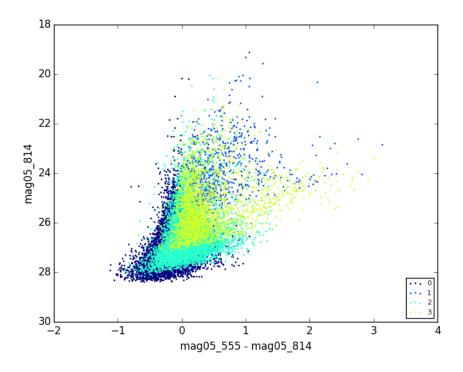
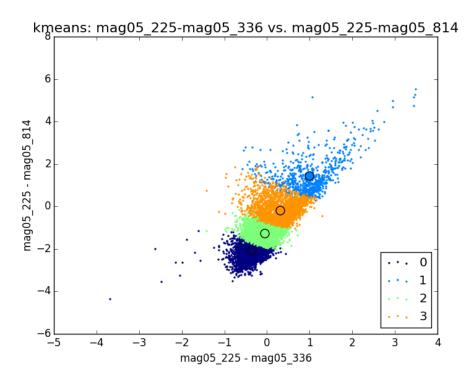
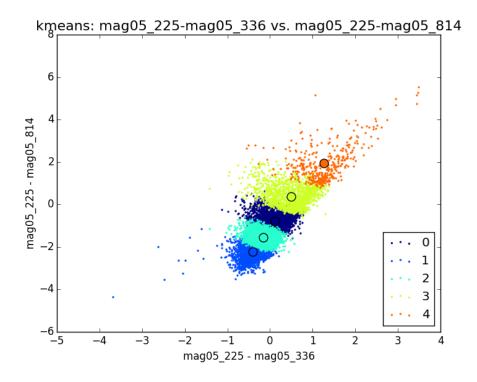


Figure 9: kmeans\_CMD\_4cl\_mag05\_555-mag05\_814vsmag05\_814.png



 $Figure~10:~kmeans\_3d\_4cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 



 $Figure~11:~kmeans\_3d\_5cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	3262	0.387067972652	0.360641750208	0.8062	0.5978	2.6141	0.0014	0.5709	0.125420294298
2	3708	0.387067972652	0.430943575596	1.7666	0.4976	5.4509	0.0010	0.8488	-0.403369201726
3	5301	0.387067972652	0.38921859912	1.2924	0.4643	2.2115	0.0014	0.6948	-0.152663837012
4	1444	0.387067972652	0.332138794886	0.5714	0.9447	3.1468	0.0061	0.5265	0.494423130194
5	383	0.387067972652	0.364689026682	1.7068	1.4547	6.8337	0.0160	0.7993	1.27130548303

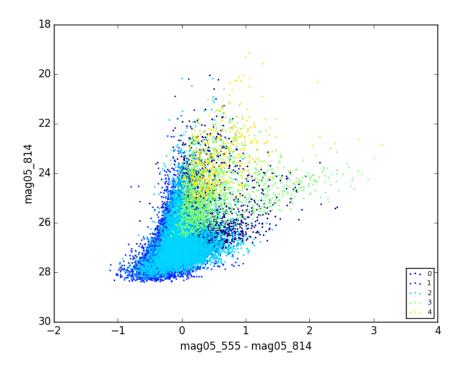
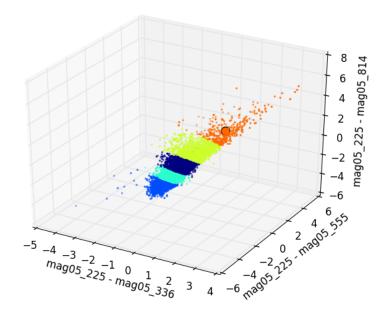
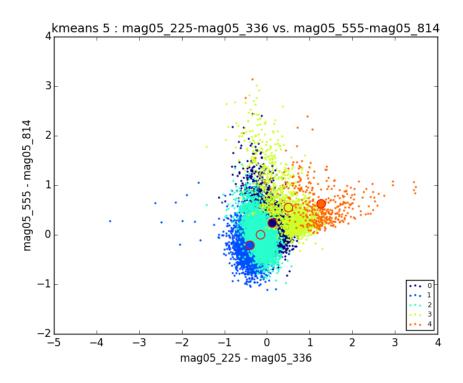


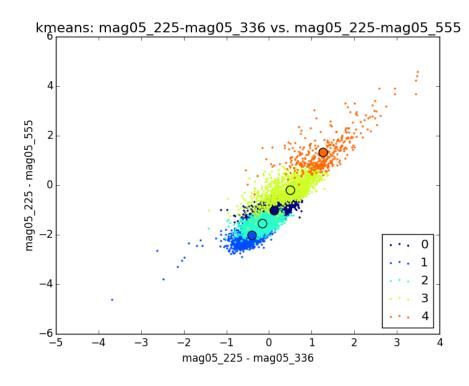
Figure 12: kmeans\_CMD\_5cl\_mag05\_555-mag05\_814vsmag05\_814.png



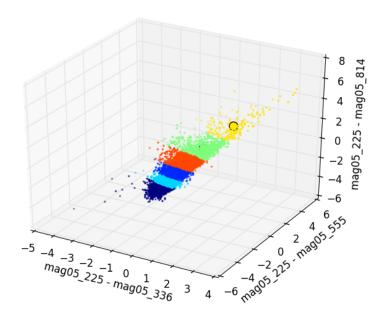
 $\label{lem:figure 13: kmeans_3d_color_5cl_mag05_225-mag05_336vsmag05_225-mag05_555vsmag05_225-mag05_814.png$ 



 $Figure~14:~kmeans\_base\_color\_5cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 

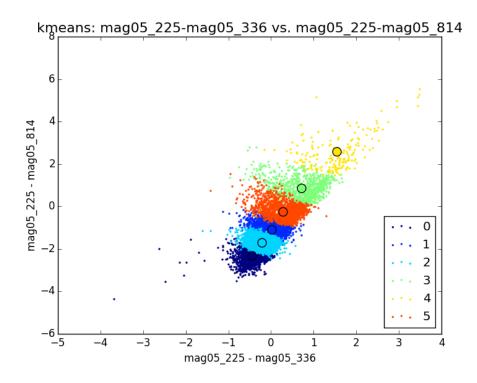


 $Figure~15:~kmeans\_3d\_5cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 

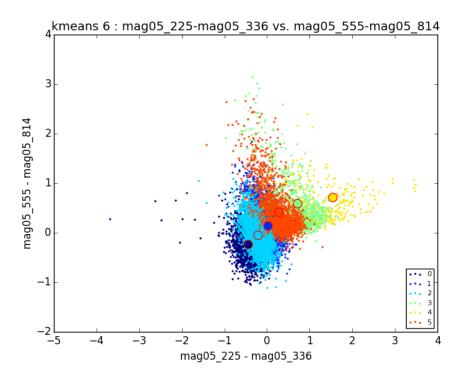


 $\label{lem:figure 16:mag05_225-mag05_336vsmag05_225-ma$ 

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	$\operatorname{MinDist}$	Stdev	Cen1
1	2822	0.370867537541	0.415570646789	1.8263	0.4686	5.2493	0.0010	0.8651	-0.435338058115
2	3592	0.370867537541	0.361657495622	0.9784	0.4901	2.1770	0.0014	0.6049	0.0226659242762
3	4780	0.370867537541	0.370575739879	1.3947	0.4250	2.5066	0.0022	0.7226	-0.20789790795
4	881	0.370867537541	0.369012858846	0.7899	0.9461	3.0897	0.0094	0.5038	0.712677639047
5	188	0.370867537541	0.40703876852	2.1541	1.4520	5.7466	0.0262	0.8378	1.53970212766
6	1835	0.370867537541	0.318093079563	0.5533	0.7098	3.1375	0.0017	0.5117	0.288033242507



 $Figure~17:~kmeans\_3d\_6cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 



 $Figure~18:~kmeans\_base\_color\_6cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 

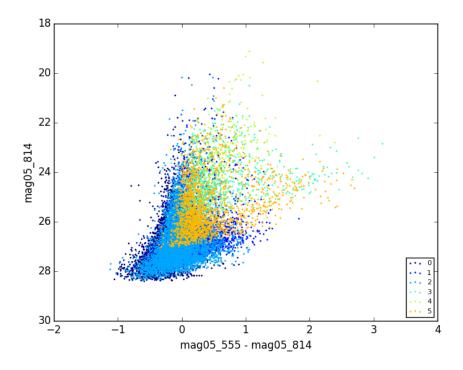
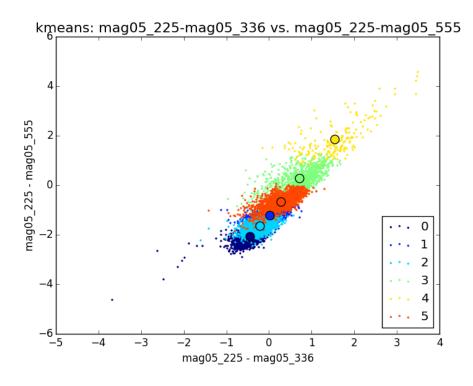
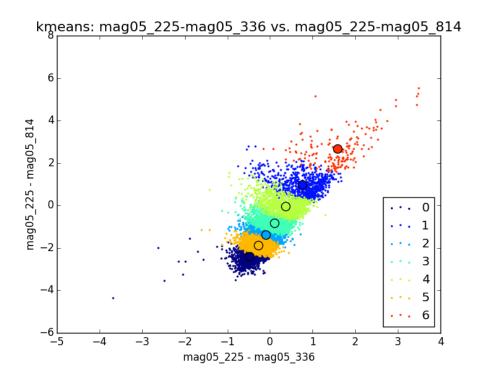


Figure 19: kmeans\_CMD\_6cl\_mag05\_555-mag05\_814vsmag05\_814.png

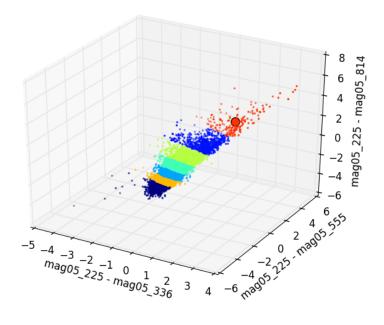


 $Figure~20:~kmeans\_3d\_6cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 



 $Figure~21:~kmeans\_3d\_7cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	2020	0.334661719942	0.391106671071	1.8928	0.4401	5.0295	0.0010	0.8821	-0.474669306931
2	748	0.334661719942	0.354642860946	0.8568	0.9301	3.1255	0.0094	0.4976	0.756764705882
3	3563	0.334661719942	0.311748376064	1.1766	0.4191	2.0129	0.0014	0.6533	-0.0949388156048
4	2447	0.334661719942	0.312345278388	0.8156	0.5095	2.4954	0.0014	0.5591	0.111788720883
5	1367	0.334661719942	0.298550880558	0.4935	0.7172	3.1375	0.0054	0.4894	0.3647746891
6	3784	0.334661719942	0.346544413824	1.5090	0.3838	2.5066	0.0022	0.7568	-0.265529598309
7	169	0.334661719942	0.40379358832	2.2245	1.4489	5.5878	0.0262	0.8427	1.5894852071



 $\label{lem:color_7cl_mag05_225-mag05_336vsmag05_225-$ 

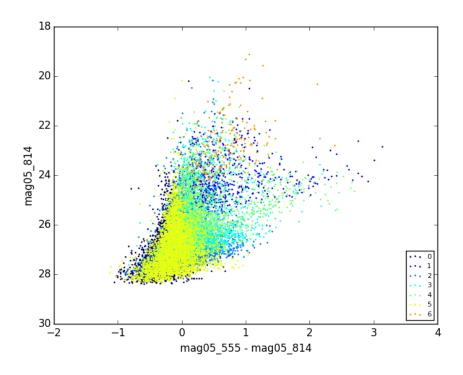
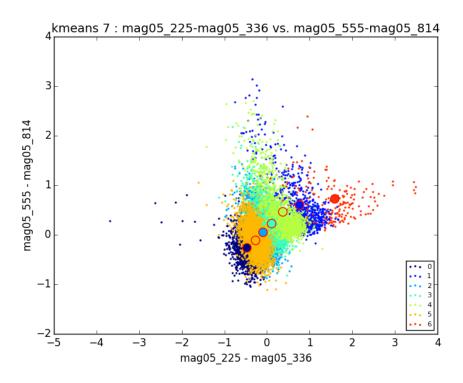
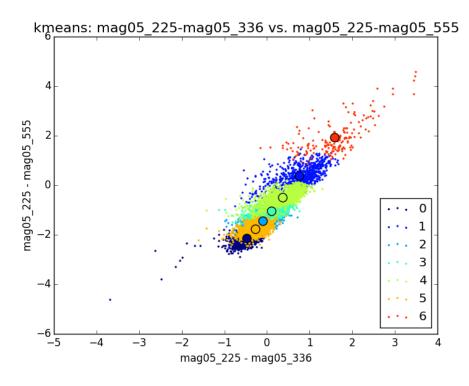


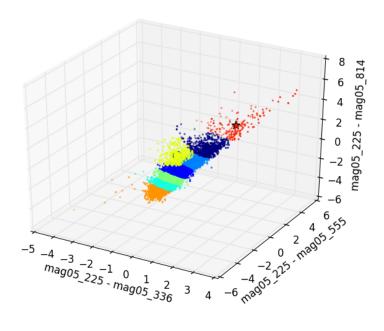
Figure 23: kmeans\_CMD\_7cl\_mag05\_555-mag05\_814vsmag05\_814.png



 $Figure~24:~kmeans\_base\_color\_7cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 

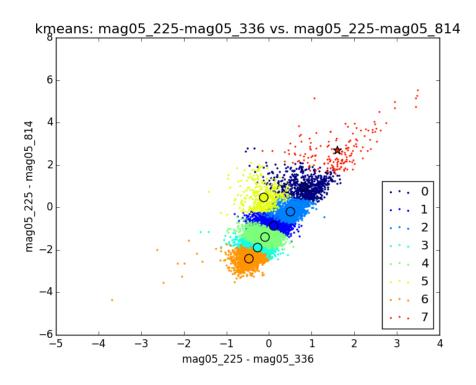


 $Figure~25:~kmeans\_3d\_7cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 

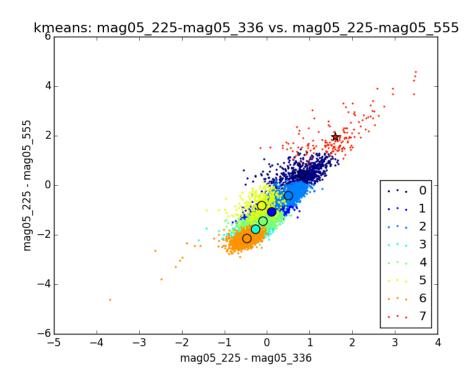


 $\label{lem:sigma} Figure 26: kmeans\_3d\_color\_8cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555vsmag05\_225-mag05\_814.png$ 

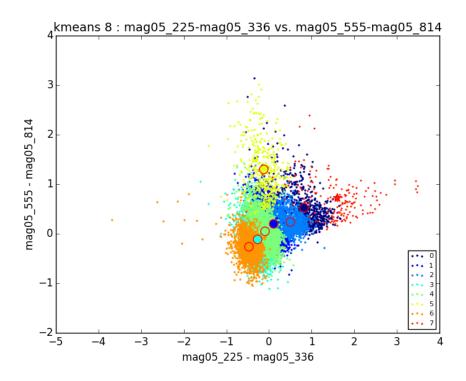
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	688	0.339638184837	0.380966073331	0.8678	0.8511	3.0427	0.0094	0.4484	0.825824127907
2	2408	0.339638184837	0.315746089179	0.8214	0.4812	1.9636	0.0014	0.5587	0.115901578073
3	1119	0.339638184837	0.40802344106	0.4620	0.5327	1.5928	0.0054	0.4603	0.496565683646
4	3774	0.339638184837	0.344839906335	1.5094	0.3833	2.5066	0.0022	0.7569	-0.26578245893
5	3525	0.339638184837	0.305641223267	1.1795	0.4173	2.0129	0.0014	0.6532	-0.0982272340426
6	401	0.339638184837	0.192995140941	0.6841	0.8774	2.5319	0.0189	0.6656	-0.126885286783
7	2020	0.339638184837	0.390412194473	1.8928	0.4401	5.0295	0.0010	0.8821	-0.474669306931
8	163	0.339638184837	0.394999111727	2.2482	1.4491	5.5559	0.0262	0.8464	1.602



 $Figure~27:~kmeans\_3d\_8cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 



 $Figure~28:~kmeans\_3d\_8cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 



 $Figure~29:~kmeans\_base\_color\_8cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 

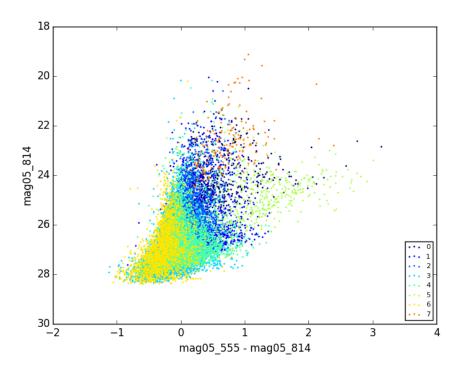
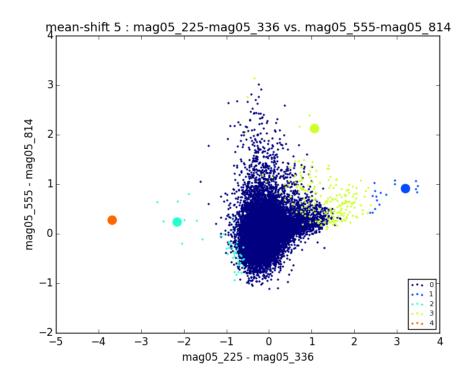


Figure 30: kmeans\_CMD\_8cl\_mag05\_555-mag05\_814vsmag05\_814.png

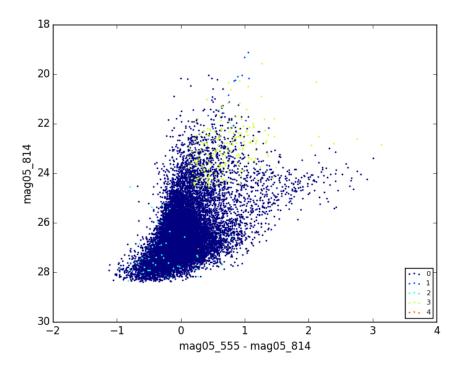
# Meanshift results

Bandw	Nclust	score	TotObj	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10
0.8870	8	0.437208014904	14098	13665	411	7	5	4	3	2	1	0	0
0.8000	9	0.263019460858	14098	13493	438	152	5	4	3	1	1	1	0
0.9000	7	0.440049991194	14098	13661	418	7	7	3	1	1	0	0	0
0.9200	5	0.517567190758	14098	13857	217	17	6	1	0	0	0	0	0
0.9500	5	0.34300609473	14098	13822	217	41	17	1	0	0	0	0	0
1.0000	5	0.340474643261	14098	13822	215	43	17	1	0	0	0	0	0

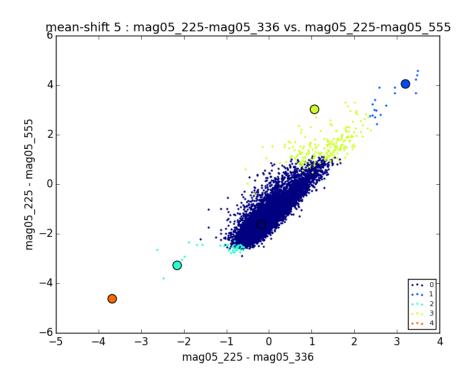
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	13857	0.517567190758	0.516980835167	1.2917	1.3008	6.3600	0.0010	0.8965	-0.187170060539	-
2	17	0.517567190758	0.561911316492	3.5516	1.2956	3.3914	0.0892	0.8295	3.19542857143	4
3	6	0.517567190758	0.46805017423	2.7566	1.3005	2.3763	0.4113	0.703	-2.469	
4	217	0.517567190758	0.555290456074	1.8387	1.2434	4.5151	0.0184	0.7133	1.071	
5	1	0.517567190758	0.0	N/A	N/A	N/A	N/A	0.3988	-3.682	
1	13822	0.34300609473	0.338508117497	1.2882	1.2962	6.0498	0.0010	0.8945	-0.184524091202	-
2	17	0.34300609473	0.561911316492	3.5516	1.2956	3.3914	0.0892	0.8295	3.19542857143	4
3	41	0.34300609473	0.653724547164	2.3721	0.7798	2.5340	0.0254	0.9115	-2.1555	
4	1	0.34300609473	0.0	N/A	N/A	N/A	N/A	0.3988	-3.682	
5	217	0.34300609473	0.555232832477	1.8387	1.2434	4.5151	0.0184	0.7133	1.071	
1	13822	0.340474643261	0.335897596064	1.2880	1.2967	6.1009	0.0010	0.8947	-0.181904385783	-
2	17	0.340474643261	0.560595417831	3.5516	1.2956	3.3914	0.0892	0.8295	3.19542857143	4
3	43	0.340474643261	0.661235147466	2.3695	0.7624	2.5340	0.0254	0.9191	-2.1555	
4	215	0.340474643261	0.55475216025	1.8433	1.2420	4.5151	0.0184	0.7142	1.071	
5	1	0.340474643261	0.0	N/A	N/A	N/A	N/A	0.3988	-3.682	



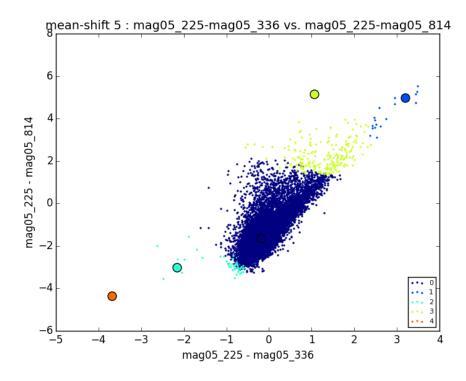
 $Figure~31:~meanshift\_base\_color\_5cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 



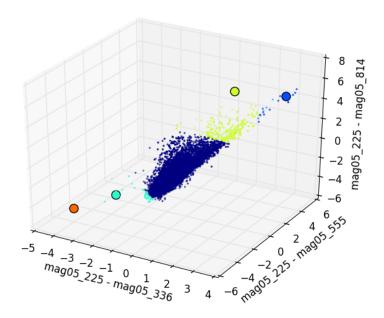
 $Figure~32:~meanshift\_CMD\_5cl\_mag05\_555-mag05\_814vsmag05\_814.png$ 



 $Figure~33:~meanshift\_3d\_color\_5cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 

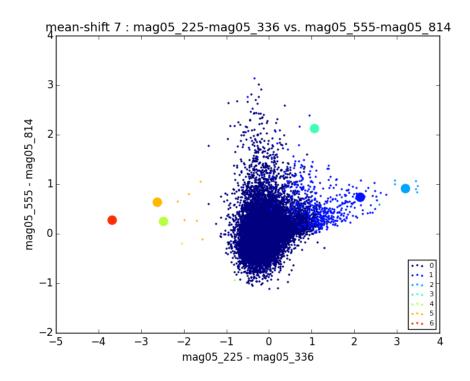


 $Figure~34:~meanshift\_3d\_color\_5cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 

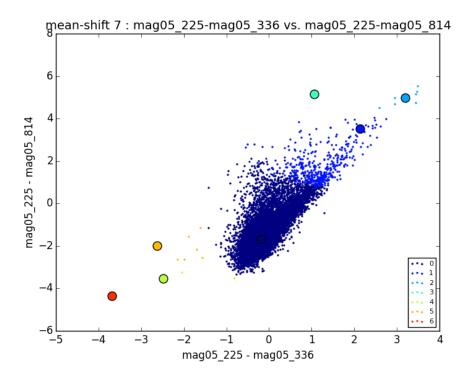


 $\label{eq:figure 35:mag05_225-mag05_336vsmag05_225-mag$ 

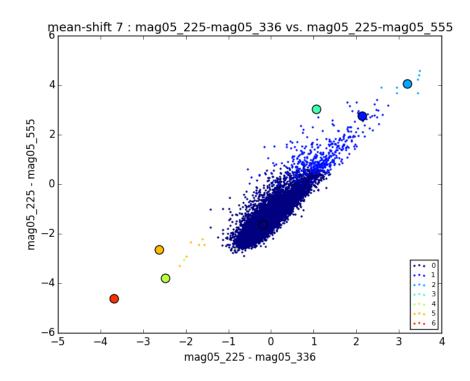
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1	
1	13661	0.440049991194	0.436009497785	1.2948	1.2369	5.8869	0.0010	0.8729	-0.186554265297	-
2	418	0.440049991194	0.574557856443	1.5613	1.3340	4.8674	0.0160	0.7135	2.14762068966	4
3	7	0.440049991194	0.657030921031	4.1486	0.8049	1.5105	0.2196	0.7961	3.19542857143	4
4	1	0.440049991194	0.0	N/A	N/A	N/A	N/A	1.6649	1.071	
5	3	0.440049991194	0.114315301232	2.9278	1.4415	2.0585	0.9223	0.8887	-2.469	
6	7	0.440049991194	0.341668609824	2.2757	1.0261	1.8901	0.3909	0.5075	-2.621	
7	1	0.440049991194	0.0	N/A	N/A	N/A	N/A	0.3988	-3.682	



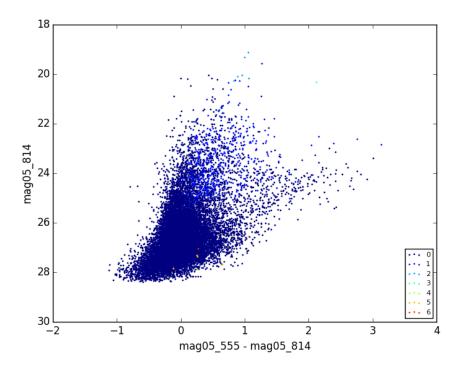
 $Figure~36:~meanshift\_base\_color\_7cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 



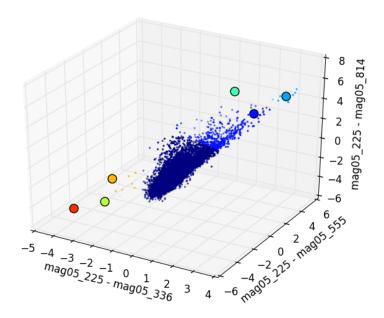
 $Figure~37:~meanshift\_3d\_color\_7cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 



 $Figure~38:~meanshift\_3d\_color\_7cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 

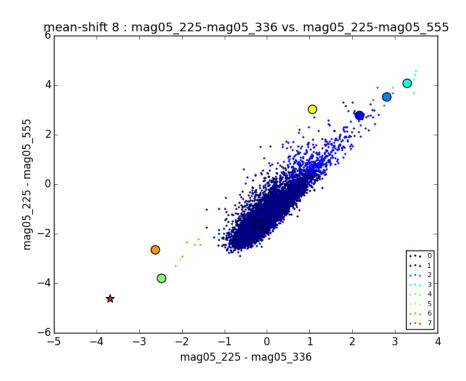


 $Figure~39:~meanshift\_CMD\_7cl\_mag05\_555-mag05\_814vsmag05\_814.png$ 

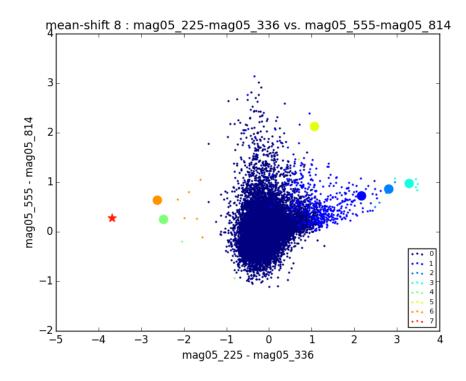


 $\label{eq:figure 40:meanshift_3d_color_7cl_mag05_225-mag05_336vsmag05_225-mag05_555vsmag05_225-mag05_814.png$ 

Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	MinDist	Stdev	Cen1
1	13665	0.437208014904	0.434946123546	1.2946	1.2381	5.8869	0.0010	0.8733	-0.187322438859
2	411	0.437208014904	0.518806097656	1.5496	1.3063	4.6282	0.0160	0.6976	2.16732142857
3	4	0.437208014904	0.395276762334	3.5688	0.7207	0.9250	0.3509	0.6911	2.81085714286
4	5	0.437208014904	0.41794609712	4.2827	0.6885	1.2076	0.2196	0.7696	3.29483333333
5	3	0.437208014904	0.114315301232	2.9278	1.4415	2.0585	0.9223	0.8887	-2.469
6	2	0.437208014904	0.292338127502	3.0925	1.5337	1.5337	1.5337	1.5318	1.071
7	7	0.437208014904	0.341721431505	2.2757	1.0261	1.8901	0.3909	0.5075	-2.621
8	1	0.437208014904	0.0	N/A	N/A	N/A	N/A	0.3988	-3.682



 $Figure~41:~meanshift\_3d\_color\_8cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 



 $Figure~42:~meanshift\_base\_color\_8cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 

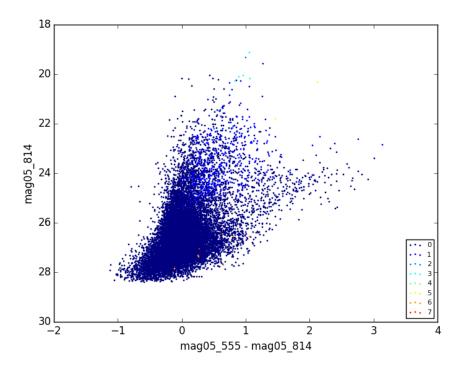
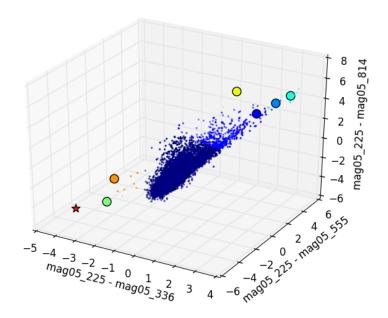
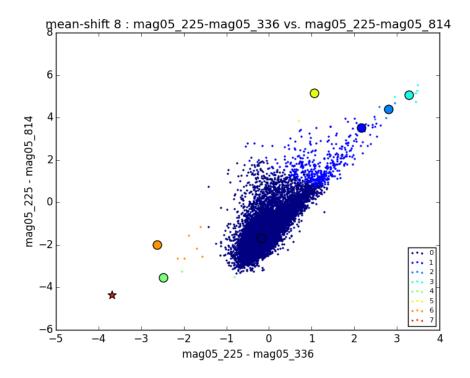


Figure 43: meanshift\_CMD\_8cl\_mag05\_555-mag05\_814vsmag05\_814.png

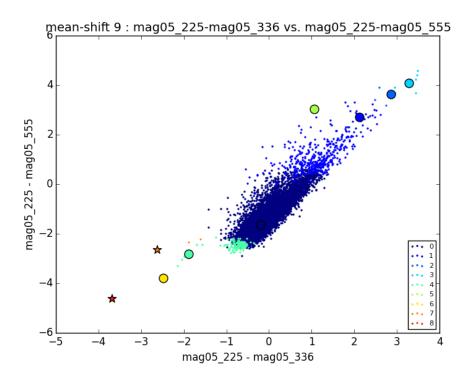


 $\label{eq:figure 44:mag05_225-mag05_336vsmag05_225-ma$ 

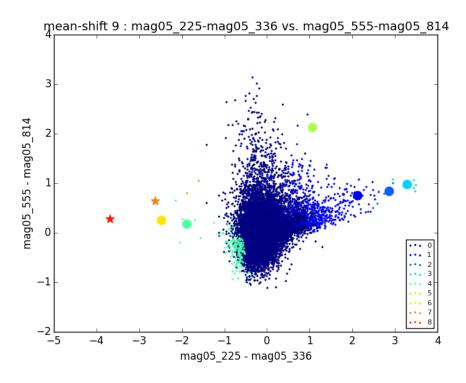


 $Figure~45:~meanshift\_3d\_color\_8cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 

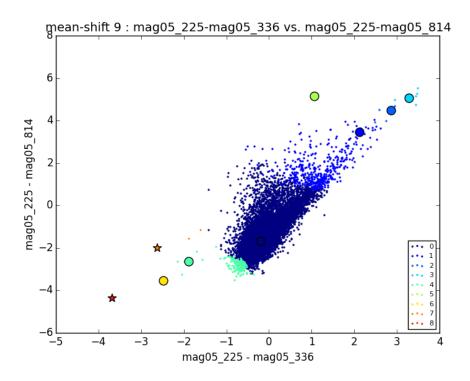
Cluster	Nobj	tScore	cScore	${ m rms}$	AvgDist	MaxDist	$\operatorname{MinDist}$	Stdev	Cen1
1	13493	0.263019460858	0.247818562654	1.2820	1.2150	5.5816	0.0010	0.8632	-0.193455546044
2	438	0.263019460858	0.555860056433	1.5200	1.3139	4.6282	0.0160	0.6999	2.12476923077
3	4	0.263019460858	0.395276762334	3.5688	0.7207	0.9250	0.3509	0.6911	2.867
4	5	0.263019460858	0.41794609712	4.2827	0.6885	1.2076	0.2196	0.7696	3.29483333333
5	152	0.263019460858	0.760396455807	2.2161	0.4126	2.1066	0.0100	0.9301	-1.8812
6	1	0.263019460858	0.0	N/A	N/A	N/A	N/A	1.6649	1.071
7	1	0.263019460858	0.0	N/A	N/A	N/A	N/A	0.5809	-2.469
8	3	0.263019460858	0.504896580168	2.0638	0.9240	1.3732	0.4973	0.4737	-2.621
9	1	0.263019460858	0.0	N/A	N/A	N/A	N/A	0.3988	-3.682



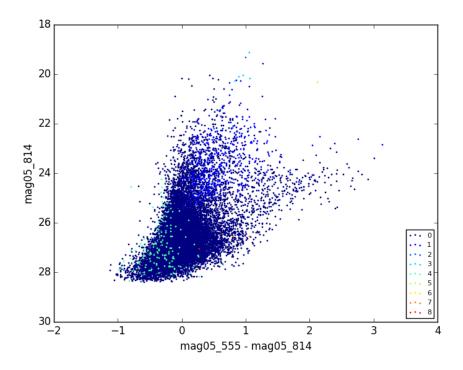
 $Figure~46:~meanshift\_3d\_color\_9cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_555.png$ 



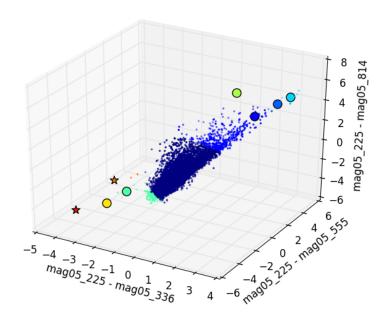
 $Figure~47:~meanshift\_base\_color\_9cl\_mag05\_225-mag05\_336vsmag05\_555-mag05\_814.png$ 



 $Figure~48:~meanshift\_3d\_color\_9cl\_mag05\_225-mag05\_336vsmag05\_225-mag05\_814.png$ 



 $Figure~49:~meanshift\_CMD\_9cl\_mag05\_555-mag05\_814vsmag05\_814.png$ 



 $\label{eq:figure 50:meanshift_3d_color_9cl_mag05_225-mag05_336vsmag05_225-mag05_255vsmag05_225-mag05_814.png$