

Caldwell Objects

The Caldwell Catalogue is an astronomical catalog of 109 bright star clusters, nebulae, and galaxies for observation by amateur astronomers. The list was compiled by Sir Patrick Caldwell-Moore, better known as Patrick Moore, as a complement to the Messier Catalogue.



The Messier Catalogue is used frequently by amateur astronomers as a list of interesting deep-sky objects for observations, but Moore noted that the list did not include many of the sky's brightest deep-sky objects, including the Hyades, the Double Cluster (NGC 869 and NGC 884), and NGC 253. Moreover, Moore observed that the Messier Catalogue, which was compiled based on observations in the Northern Hemisphere, excluded bright deep-sky objects visible in the Southern Hemisphere such as Omega Centauri, Centauri A, the Jewel Box, and 47 Tucanae. He quickly compiled a list of 109 objects (to match the number of objects in the Messier Catalogue) and published it in *Sky & Telescope* in December 1995.

Since its publication, the catalogue has grown in popularity and usage within the amateur astronomical community. Small compilation errors in the original 1995 version of the list have since been corrected. Moore used his other surname to name the list as M for Moore was already taken by Messier, and the catalogue adopts "C" numbers to rename objects with more common designations.

As stated above, the list was compiled from objects already identified by professional astronomers and commonly observed by amateur astronomers. Unlike objects in the Messier catalogue, which are listed in the order they were discovered, the Caldwell catalogue is ordered by declination, with C1 being the most northerly and C109 being the most southerly, although two objects (NGC 4244 and the Hyades) are listed out of sequence. The original list also incorrectly identified S Normae Cluster (NGC 6087) as NGC 6067 and incorrectly labeled the Lambda Centauri Cluster (IC 2944) as the Gamma Centauri Cluster.

A natural progression for the amateur astronomer wishing to observe deep sky objects would be to view the Messier catalogue, followed by the Caldwell catalogue, and then the Herschel 400 Catalogue. At the end of this exercise the observer would have viewed nearly 600 objects. Although there are 618 objects listed in these three catalogues the Herschel 400 Catalogue does contain some objects from the Messier and Caldwell catalogues.

Caldwell Catalog

oc:	open cluster	pn:	planetary nebula	sg:	spiral galaxy
gc:	globular cluster	bn:	bright nebula	eg:	elliptical galaxy
sr:	supernova remnant	dn:	dark nebula	ig:	irregular galaxy

C	NGC	Type	Mag	RA	Dec	Con
1	188	oc	8.1	00h 44.4m	85° 20'	Cep
2	40	pn	12.4	00h 13.0m	72° 32'	Cep
3	4236	sg	9.7	12h 16.7m	69° 28'	Dra
4	7023	bn	7.7	21h 01.8m	68° 12'	Cep
5	IC342	sg	9.2	03h 46.8m	68° 06'	Cam
6	6543	pn	8.1	17h 58.6m	66° 38'	Dra
7	2403	sg	8.4	07h 36.9m	65° 36'	Cam
8	559	oc	9.5	01h 29.5m	63° 18'	Cas
9	Sh2-155	bn	10.0	22h 56.6m	62° 37'	Cep
10	663	oc	7.1	01h 46.0m	61° 15'	Cas
11	7635	bn	10.0	23h 20.7m	61° 12'	Cas
12	6946	sg	8.9	20h 34.8m	60° 09'	Cep
13	457	oc	6.4	01h 19.1m	58° 20'	Cas
14	869/884	oc	4.3	02h 20.0m	57° 08'	Per
15	6826	pn	8.8	19h 44.8m	50° 31'	Cyg
16	7243	oc	6.4	22h 15.3m	49° 53'	Lac
17	147	eg	9.3	00 33.2m	48° 30'	Cas
18	185	eg	9.2	00h 39.0m	48° 20'	Cas
19	IC5146	bn	9.3	21h 53.5m	47° 16'	Cyg
20	7000	bn	5.8	20h 58.8m	44° 20'	Cyg
21	4449	ig	9.4	12h 28.2m	44° 06'	CVn
22	7662	pn	8.3	23h 25.9m	42° 33'	And
23	891	sg	9.9	02h 22.6m	42° 21'	And
24	1275	sg	11.6	03h 19.8m	41° 31'	Per
25	2419	gc	10.4	07h 38.1m	38° 53'	Lyn
26	4244	sg	10.2	12h 17.5m	37° 49'	CVn
27	6888	bn	8.8	20h 12.0m	38° 21'	Cyg
28	752	oc	5.7	01h 57.8m	37° 41'	And
29	5005	sg	9.8	13h 10.9m	37° 03'	CVn
30	7331	sg	9.5	22h 37.1m	34° 25'	Peg
31	IC405	bn	9.2	05h 16.2m	34° 16'	Aur
32	4631	sg	9.3	12h 42.1m	32° 32'	CVn
33	6992/5	sr	7.5	20h 56.4m	31° 43'	Cyg
34	6960	sr	7.9	20h 45.7m	30° 43'	Cyg
35	4889	eg	11.4	13h 00.1m	27° 59'	Com
36	4559	sg	9.8	12h 36.0m	27° 58'	Com
37	6885	oc	5.9	20h 12.0m	26° 29'	Vul

C	NGC	Type	Mag	RA	Dec	Con
38	4565	sg	9.6	12h 36.3m	23° 59'	Com
39	2392	pn	9.2	07h 29.2m	20° 55'	Gem
40	3626	sg	10.9	11h 20.1m	18° 21'	Leo
41	Hyades	oc	0.5	04h 27.0m	16° 00'	Tau
42	7006	gc	10.6	21h 01.5m	16° 11'	Del
43	7814	sg	10.5	00h 03.3m	16° 09'	Peg
44	7479	sg	11.0	23h 04.9m	12° 19'	Peg
45	5248	sg	10.2	13h 37.5m	08° 53'	Boo
46	2261	bn	10.0	06h 39.2m	08° 44'	Mon
47	6934	gc	8.9	20h 34.2m	07° 24'	Del
48	2775	sg	10.3	09h 10.3m	07° 02'	Cnc
49	2237	bn	5.0	06h 32.3m	05° 03'	Mon
50	2244	oc	4.8	06h 32.4m	04° 52'	Mon
51	IC1613	ig	9.3	01h 04.8m	02° 07'	Cet
52	4697	eg	9.3	12h 48.6m	-05° 48'	Vir
53	3115	eg	9.1	10h 05.2m	-07° 43'	Sex
54	2506	oc	7.6	08h 00.2m	-10° 47'	Mon
55	7009	pn	8.0	21h 04.2m	-11° 22'	Aqr
56	246	pn	10.9	00h 47.0m	-11° 53'	Cet
57	6822	ig	8.8	19h 44.9m	-14° 48'	Sgr
58	2360	oc	7.2	07h 17.8m	-15° 37'	CMA
59	3242	pn	7.8	10h 24.8m	-18° 38'	Hya
60	4038	sg	10.7	12h 01.9m	-18° 52'	Crv
61	4039	sg	10.7	12h 01.9m	-18° 53'	Crv
62	247	sg	9.1	00h 47.1m	-20° 46'	Cet
63	7293	pn	7.3	22h 29.6m	-20° 48'	Aqr
64	2362	oc	4.1	07h 17.8m	-24° 57'	CMA
65	253	sg	7.1	00h 47.6m	-25° 17'	Scl
66	5694	gc	10.2	14h 39.6m	-26° 32'	Hya
67	1097	sg	9.2	02h 46.3m	-30° 17'	For
68	6729	bn	9.5	19h 01.9m	-36° 57'	CrA
69	6302	pn	9.6	17h 13.7m	-37° 06'	Sco
70	300	sg	8.7	00h 54.9m	-37° 41'	Scl
71	2477	oc	5.8	07h 52.3m	-38° 33'	Pup
72	55	sg	7.9	00h 14.9m	-39° 11'	Scl
73	1851	gc	7.3	05h 14.1m	-40° 03'	Col
74	3132	pn	9.4	10h 07.7m	-40° 26'	Vel
75	6124	oc	5.8	16h 25.6m	-40° 40'	Sco
76	6231	oc	2.6	16h 54.0m	-41° 48'	Sco
77	5128	sg	7.0	13h 25.5m	-43° 01'	Cen
78	6541	gc	6.6	18h 08.0m	-43° 42'	CrA
79	3201	gc	6.7	10h 17.6m	-46° 25'	Vel
80	5139	gc	3.6	13h 26.8m	-47° 29'	Cen

C	NGC	Type	Mag	RA	Dec	Con
81	6352	gc	8.1	17h 25.5m	-48° 25'	Ara
82	6193	oc	5.2	16h 41.3m	-48° 46'	Ara
83	4945	sg	8.7	13h 05.4m	-49° 28'	Cen
84	5286	gc	7.6	13h 46.4m	-51° 22'	Cen
85	IC2391	oc	2.5	08h 40.2m	-53° 04'	Vel
86	6397	gc	5.6	17h 40.7m	-53° 40'	Ara
87	1261	gc	8.4	03h 12.3m	-55° 13'	Hor
88	5823	oc	7.9	15h 05.7m	-55° 36'	Cir
89	6087	oc	5.4	16h 18.9m	-57° 54'	Nor
90	2867	pn	9.7	09h 21.4m	-58° 19'	Car
91	3532	oc	3.0	11h 06.4m	-58° 40'	Car
92	3372	bn	4.5	10h 43.8m	-59° 52'	Car
93	6752	gc	5.4	19h 10.9m	-59° 59'	Pav
94	4755	oc	4.2	12h 53.6m	-60° 20'	Cru
95	6025	oc	5.1	16h 03.7m	-60° 30'	TrA
96	2516	oc	3.8	07h 58.3m	-60° 52'	Car
97	3766	oc	5.3	11h 36.1m	-61° 37'	Cen
98	4609	oc	6.9	12h 42.3m	-62° 58'	Cru
99	Coal Sack	dn		12h 53.0m	-63° 00'	Cru
100	IC2944	oc	4.5	11h 36.6m	-63° 02'	Cen
101	6744	sg	8.3	19h 09.8m	-63° 51'	Pav
102	IC2602	oc	1.9	10h 43.2m	-64° 24'	Car
103	2070	bn	4.0	05h 38.7m	-69° 06'	Dor
104	362	gc	6.6	01h 03.2m	-70° 51'	Tuc
105	4833	gc	7.3	12h 59.6m	-70° 53'	Mus
106	104	gc	4.0	00h 24.1m	-72° 05'	Tuc
107	6101	gc	9.3	16h 25.8m	-72° 12'	Aps
108	4372	gc	7.8	12h 25.8m	-72° 40'	Mus
109	3195	pn	11.6	10h 09.5m	-80° 52'	Cha

Caldwell Observing Log

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1		39		77	
2		40		78	
3		41		79	
4		42		80	
5		43		81	
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25		63		101	
26		64		102	
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28		66		104	
29		67		105	
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31		69		107	
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38		76			



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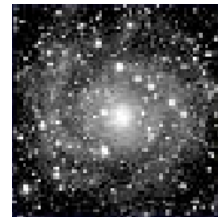
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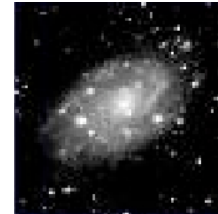
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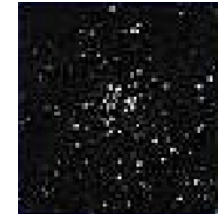
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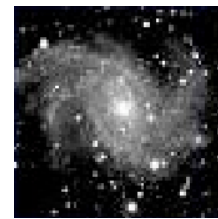
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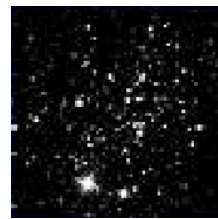
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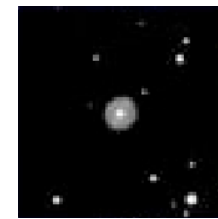
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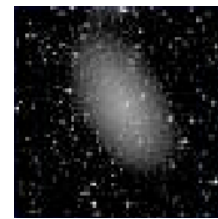
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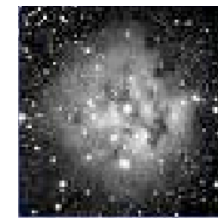
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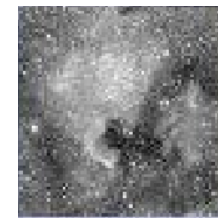
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C19



C20



C21



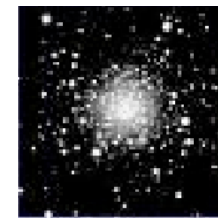
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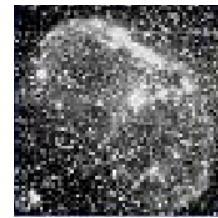
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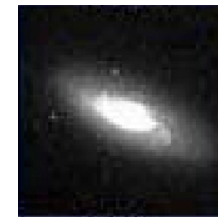
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C27



C28



C29



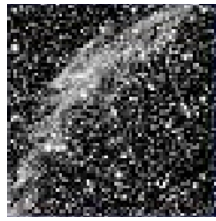
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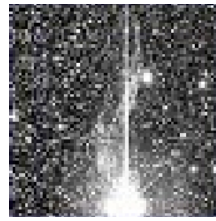
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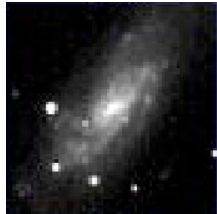
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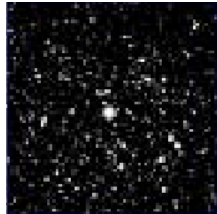
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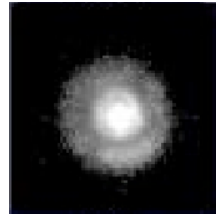
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C37



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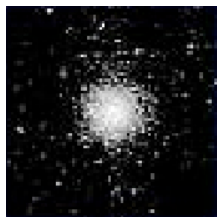
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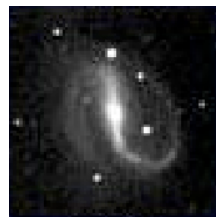
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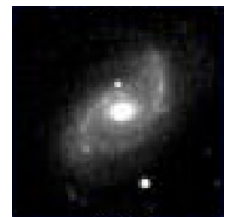
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C45



C46



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C48



C49



C50



C51



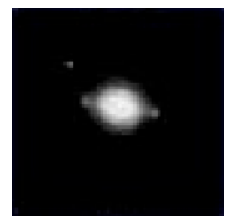
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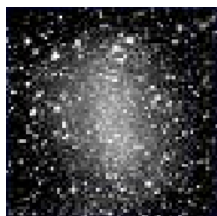
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C55



C56



C57



C58



C59



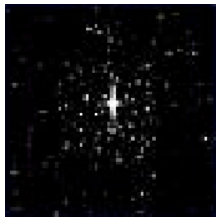
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C62



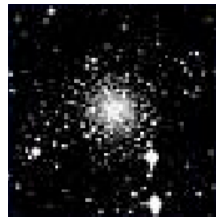
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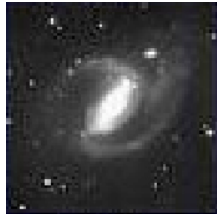
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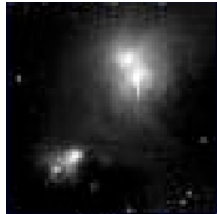
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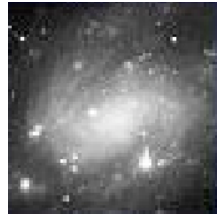
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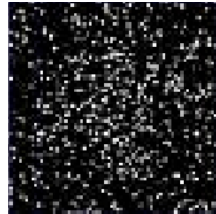
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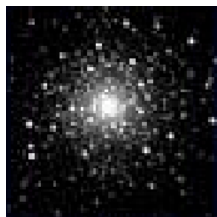
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C71



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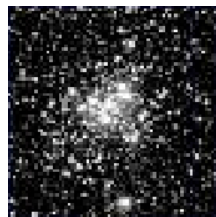
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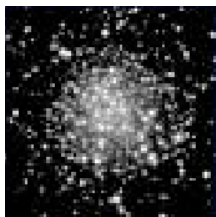
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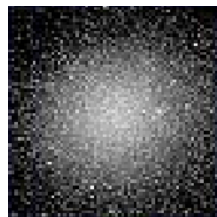
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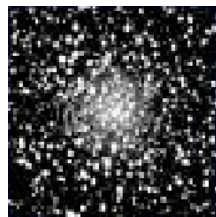
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C79



C80



C81



C82



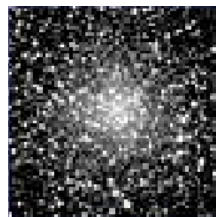
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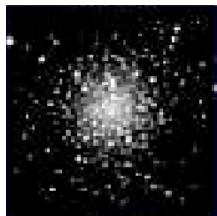
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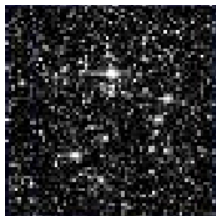
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C87



C88



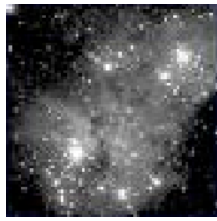
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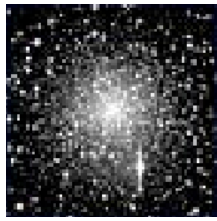
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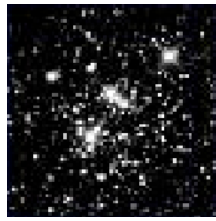
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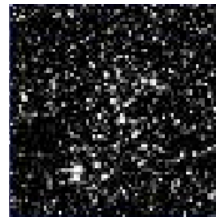
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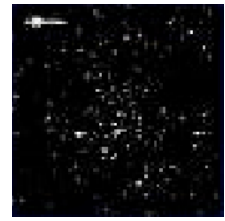
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C94



C95



C96



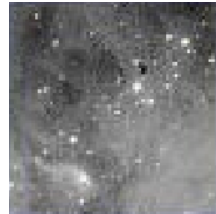
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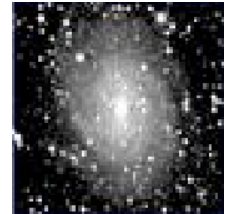
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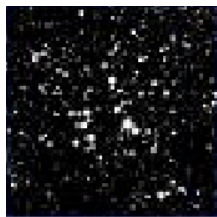
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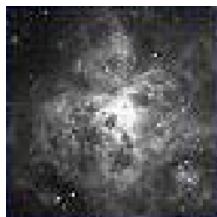
C100



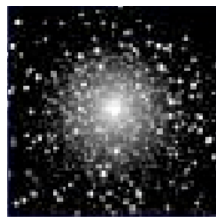
C101



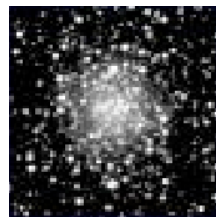
C102



C103



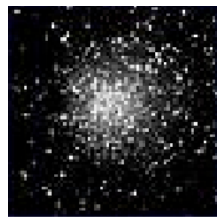
C104



C105



C106



C107



C108



C109