



TURNING FAINT
“FUZZY THINGS” INTO
SOMETHING YOU CAN
FIND, IDENTIFY AND
TALK ABOUT

CELESTIAL CATALOGUES

Astronomical objects are often referred to by a catalogue designation rather than by a common name. These designations usually consist of a prefix or letter followed by a number. The prefix identifies the catalogue, while the number identifies the object within that catalogue.

PRACTICAL ASTRONOMY GUIDE #9

This guide is designed to help newcomers make sense of the catalogue designations used in books, magazines, planetarium software, observing guides and astrophotography to identify objects in the night sky.

This list focuses on those catalogues most frequently used in astronomy.



... HAD SUCH A
RESEMBLANCE TO A
COMET IN ITS FORM
AND BRIGHTNESS,
THAT I ENDEAVORED
TO FIND OTHERS...

CHARLES MESSIER

MESSIER CATALOGUE (M)

Created by: Charles Messier (1730-1817)

First published: 1774

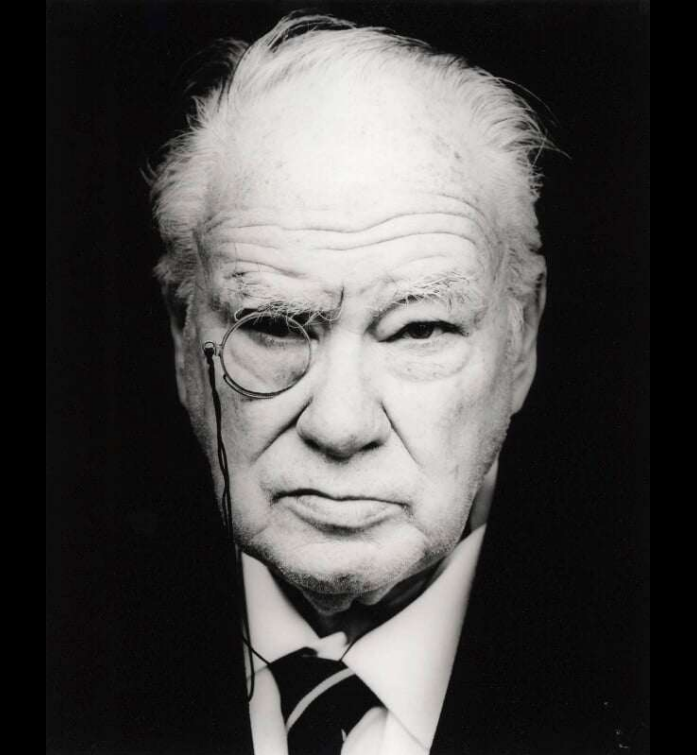
Objects: 110

The Messier Catalogue is probably the best-known catalogue of deep-sky objects among amateur astronomers. Charles Messier originally compiled it, with important contributions from Pierre Méchain, while searching for comets, recording fuzzy objects that could otherwise be mistaken for comets. The catalogue contains a mixture of galaxies, nebulae and star clusters.

The first version, published in 1774, contained 45 objects. The final version published by Messier in 1781 contained 103. Objects M104-M110 were added later based on observations and historical records.

Its objects are designated M1, M2, M3, and so on.

Example: M31 – Andromeda Galaxy



CALDWELL CATALOGUE (C)

Created by: Sir Patrick Moore (1923-2012)

First published: 1995

Objects: 109

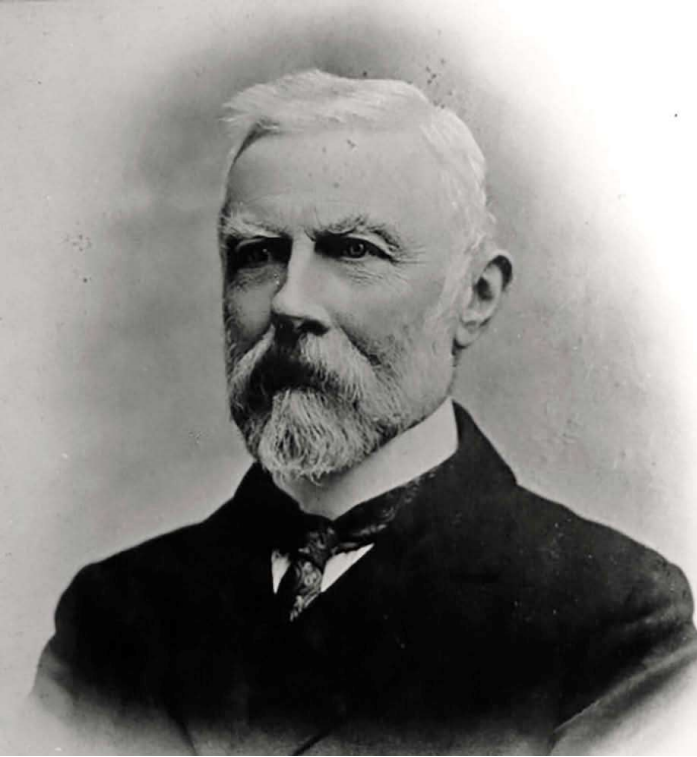
The Caldwell Catalogue was compiled by British amateur astronomer and broadcaster Patrick Moore as a complement to the Messier Catalogue. It includes prominent deep-sky objects that are not all included in the Messier list and gives better coverage of the southern sky. The catalogue was deliberately designed with amateur observers in mind.

Objects are designated C1 through C109.

Example: C33 - Eastern Veil Nebula

ASTRONOMY IS A
FASCINATING SUBJECT.
YOU LOOK UP... YOU
CAN'T HELP GETTING
INTERESTED

SIR PATRICK MOORE



JOHN HERSCHEL'S
CATALOGUE ...
REVISED, CORRECTED,
AND ENLARGED

NEW GENERAL CATALOGUE (NGC)

Created by: J. L. E. Dreyer (1852-1926)

First published: 1888

Objects: 7,840

The New General Catalogue is one of the most important catalogues used by amateur and professional astronomers. It contains galaxies, nebulae, star clusters and other deep-sky objects. The catalogue was compiled by the Danish-Irish astronomer J. L. E. Dreyer, building on earlier catalogues and observations, particularly those of William Herschel and John Herschel. It was published in 1888.

Objects are designated NGC 1, NGC 2, and so on.

Example: NGC 7000 - North America Nebula



DREYER GAVE
ASTRONOMERS A
LASTING WAY TO
IDENTIFY AND SHARE
INFORMATION ABOUT
DEEP-SKY OBJECTS

INDEX CATALOGUE (IC)

Created by: J. L. E. Dreyer (1852-1926)

First published: 1895

Objects: 5,386 across the two Index Catalogues

The Index Catalogue supplements the NGC with objects discovered or catalogued after the NGC was compiled. There are actually two Index Catalogues: the first was published in 1895, followed by the Second Index Catalogue in 1908.

Objects are designated IC 1, IC 2, and so on.

Example: IC 434 - the Horsehead Nebula's surrounding emission nebula



BY MAPPING CLOUDS
OF IONISED HYDROGEN,
SHARPLESS CREATED A
LASTING REFERENCE
FOR MAPPING OUR
GALAXY

SHARPLESS CATALOGUE (Sh2)

Created by: Stewart L. Sharpless (1926-2013)

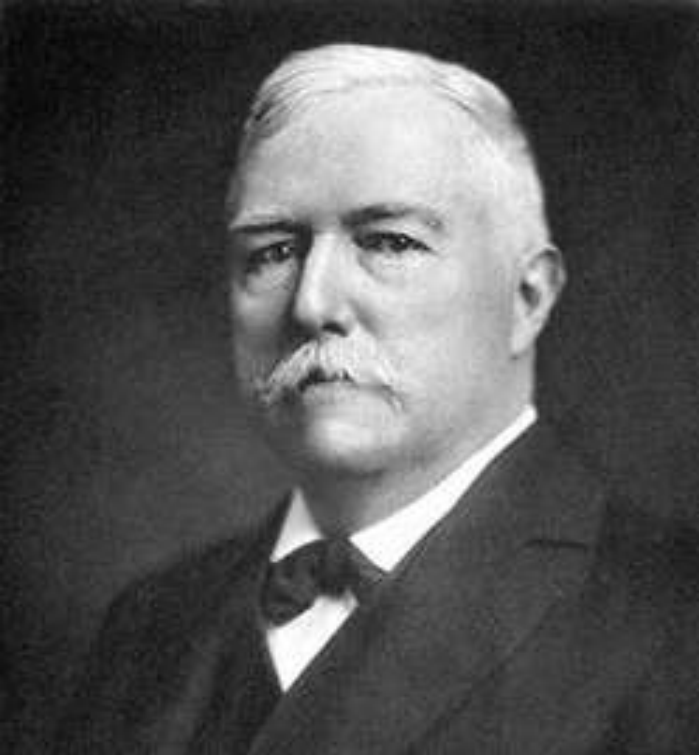
First published: 1953

Objects: 313

The Sharpless Catalogue is a catalogue of emission nebulae and H II regions in the Milky Way. It was compiled from photographic surveys of the sky. The catalogue is particularly familiar to astrophotographers because many of its objects are prominent emission nebulae. Published in two editions, the first in 1953 with 142 nebula, and the second and final edition was published in 1959 with 313 nebulae.

Objects are designated Sh2-1, Sh2-2, and so on.

Example: Sh2-101 - Tulip Nebula



THE MILKY WAY HAS
ALWAYS BEEN OF
THE DEEPEST
INTEREST TO ME

EDWARD BARNARD

BARNARD CATALOGUE (B)

Created by: Edward Emerson Barnard (1857-1923)

First published: 1919; expanded catalogue published in 1927

Objects: 369 in the commonly used catalogue

Barnard's Catalogue lists dark nebulae - clouds of dust that obscure the stars and brighter nebulae behind them. The first version appeared in 1919. A larger catalogue containing 369 dark objects was published posthumously in Barnard's 'Photographic Atlas of Selected Regions of the Milky Way' in 1927.

Objects are designated B1, B2, and so on.

Example: B33 - Horsehead Nebula



OTHER NOTABLE CATALOGUES I

VAN DEN BERGH CATALOGUE (vdB)

Created by: Sidney van den Bergh (1929-)

First published: 1966

Objects: 158

The van den Bergh Catalogue contains reflection nebulae - clouds of dust that shine by reflecting light from nearby stars. Objects are designated vdB 1, vdB 2, etc.

Example: vdB 142 - a reflection nebula in the region of IC 1396

ABELL CATALOGUE

Created by: George O. Abell (1927-1983)

First published: 1958

Objects: 2,712 in the original northern sky edition; extended by 1,361 in the southern sky

The Abell Catalogue is best known for its catalogue of galaxy clusters. It was compiled from photographic surveys and contains many distant clusters that are primarily of interest to experienced observers and astrophotographers. The southern extension was later produced by Abell, Harold Corwin and Ronald Olowin. The name Abell can also refer to a separate 1966 catalogue of planetary nebulae, so the context is important.

Example: Abell 1656 - the Coma Cluster



OTHER NOTABLE CATALOGUES II

ARP CATALOGUE - Atlas of Peculiar Galaxies

Created by: Halton Arp (1927-2013)

First published: 1966

Objects: 338

The Arp catalogue contains galaxies with unusual shapes or structures, including interacting and merging galaxies. It was created as an atlas of examples of unusual galactic forms rather than as a general catalogue of galaxies.

Objects are designated Arp 1, Arp 2, and so on.

Example: Arp 242 - the Mice Galaxies

UPPSALA GENERAL CATALOGUE OF GALAXIES (UGC)

Created by: Peter Nilson (1937-1998)

First published: 1973

Objects: about 12,900

The UGC is a catalogue of galaxies, particularly those visible from the northern sky. It is encountered fairly frequently in galaxy observing and astrophotography.

Objects are designated UGC 1, UGC 2, and so on.



OTHER NOTABLE CATALOGUES III

COLLINDER CATALOGUE (Cr)

Created by: Per Collinder (1890-1974)

First published: 1931

Objects: 471

The Collinder Catalogue contains mainly open star clusters. It is frequently encountered in observing lists and star-cluster databases. The catalogue was published as part of Collinder's work on the structure and distribution of open Galactic clusters.

Objects may be designated Cr 1, Cr 2, etc., or written as Collinder 1, Collinder 2.

Example: Cr 399 – the Coat Hanger asterism

OUR GALAXY IS FILLED
WITH LOOSE FAMILIES
OF STARS,
EACH A WINDOW
INTO THE STRUCTURE
OF THE MILKY WAY

ABOUT NSO

Our Vision

We envision a world where anyone with an interest in astronomy can begin their journey with confidence and enjoy rewarding first light experiences. Where choosing equipment is exciting rather than overwhelming, expert guidance is always within reach, and every astronomer has a trusted partner throughout their journey under the stars.

Our Commitment

We believe our responsibility doesn't end with a sale. We are committed to supporting our customers throughout their astronomy journey.

- Expert Guidance
- Carefully Selected Stock
- Accessible Value
- Long-Term Partnership

