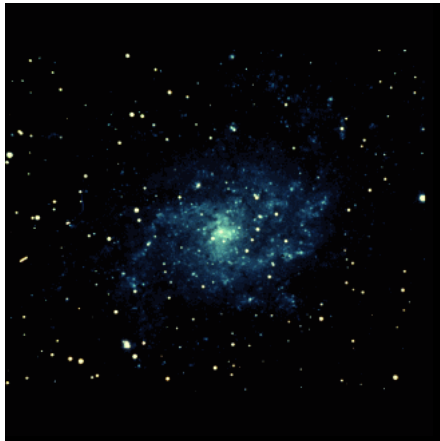
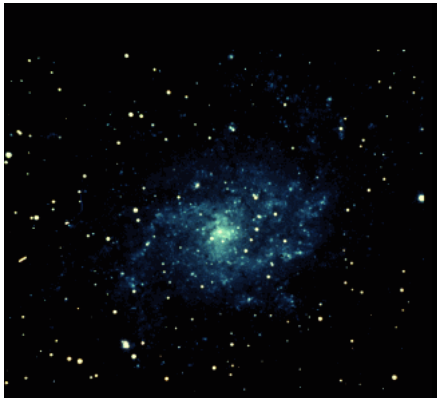
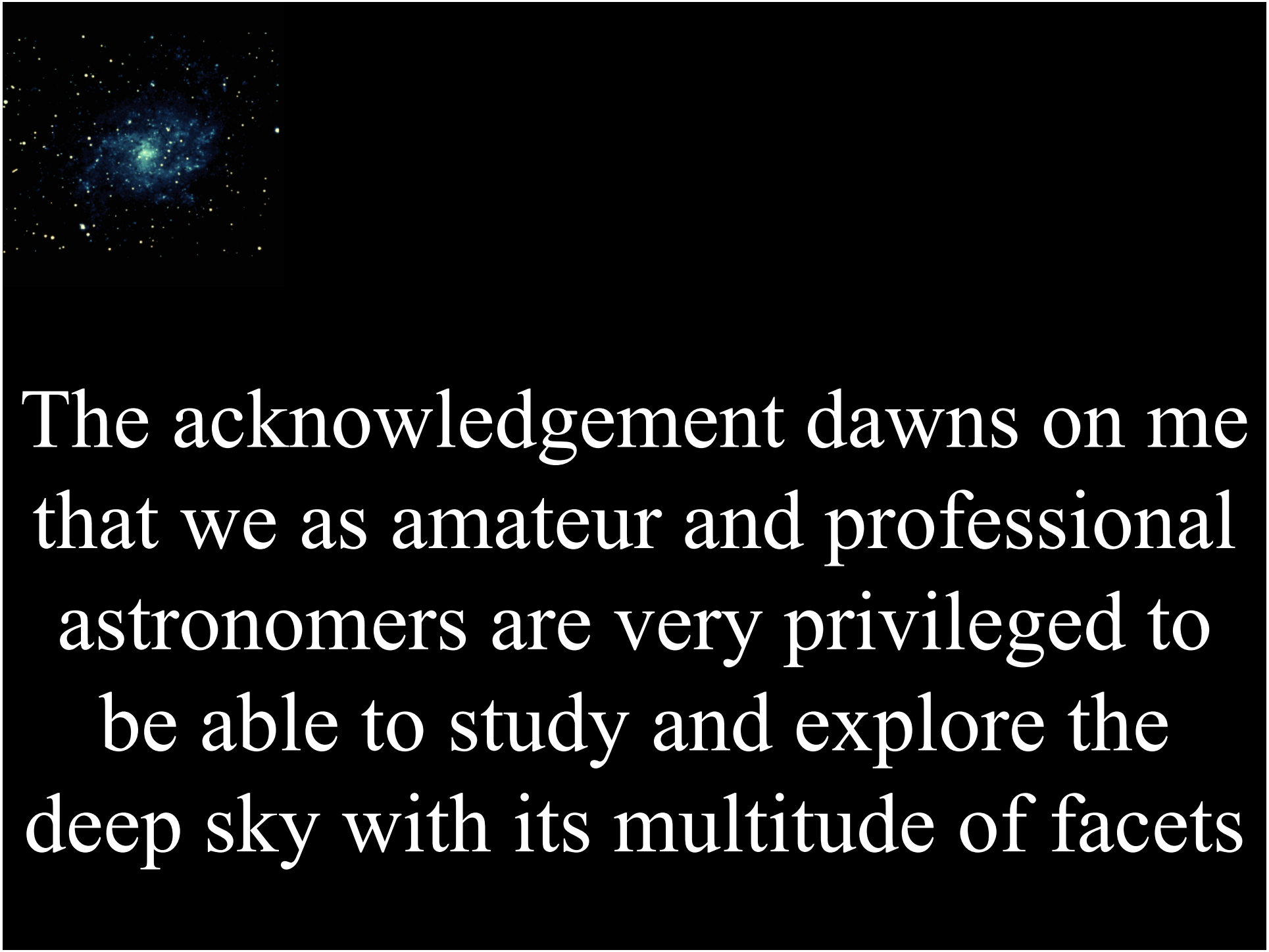


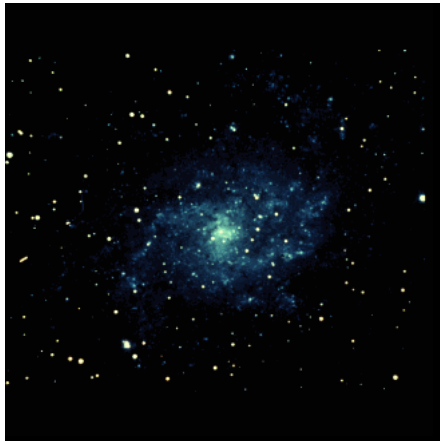
Deep Sky

Magda Streicher

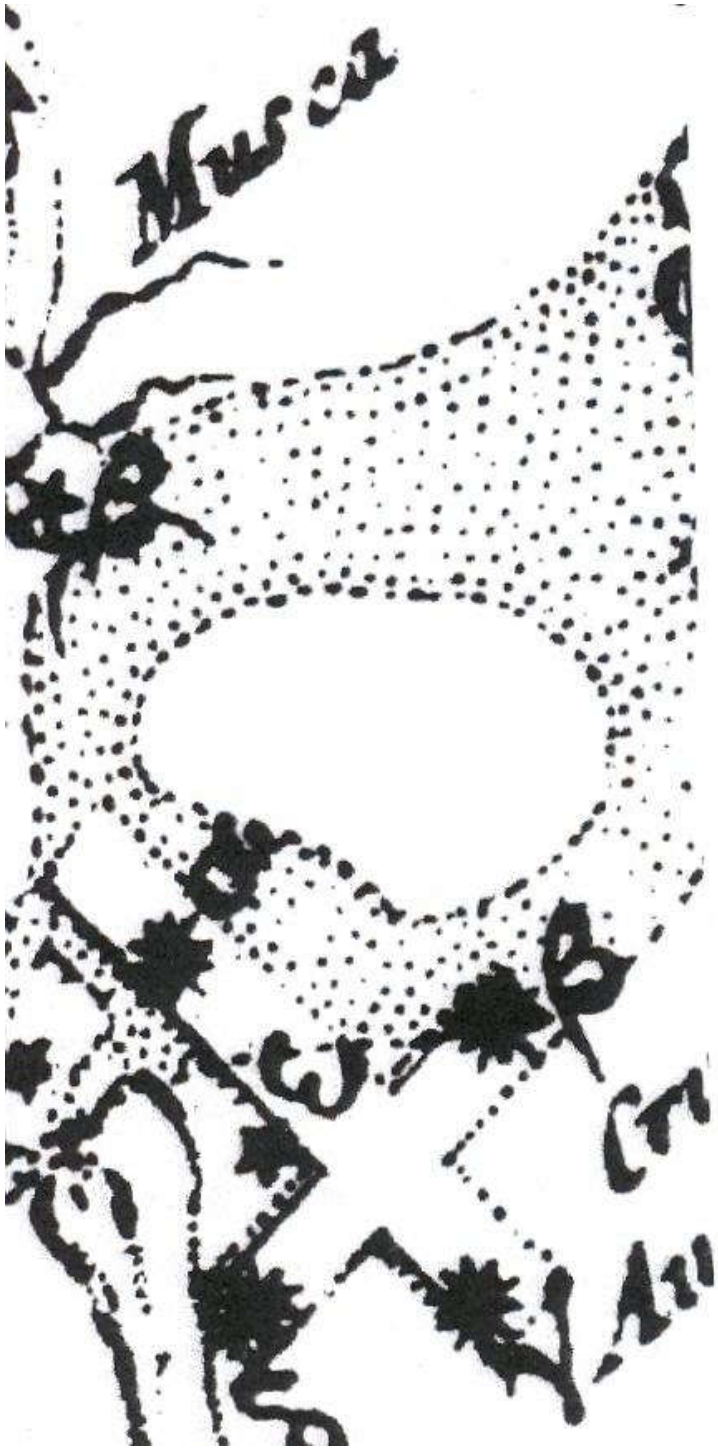


Stephen O' Meara, well-known amateur and author said astronomy is the most integral part of his life. It is the root and trunk of a tree on which all his other interests grow


The acknowledgement dawns on me
that we as amateur and professional
astronomers are very privileged to
be able to study and explore the
deep sky with its multitude of facets

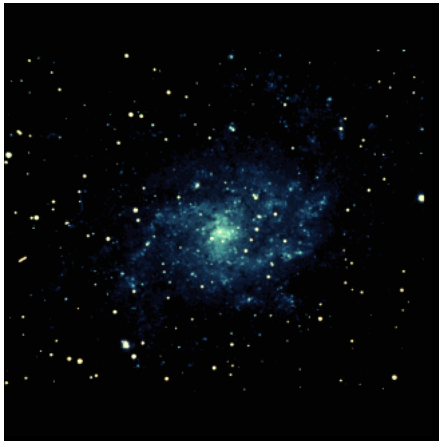


Discover the Deep Sky for yourself

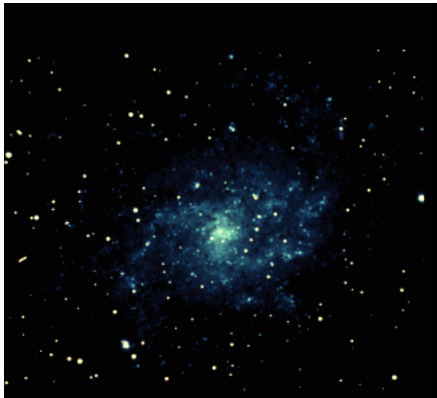


Discover!

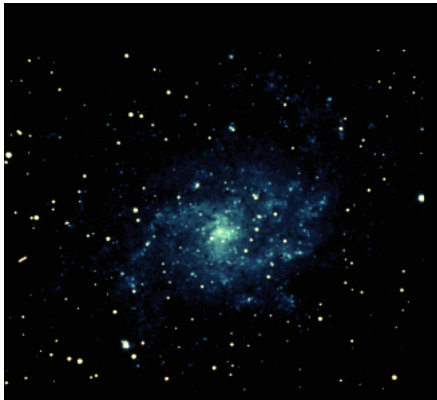
An observing project of the ASSA Deepsky Section



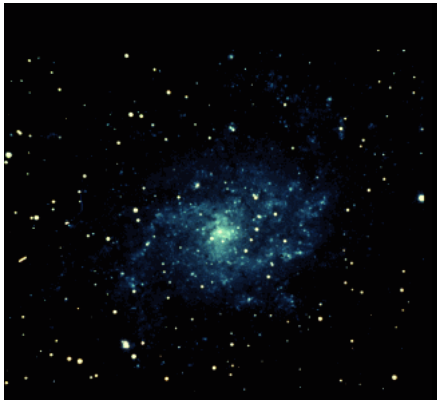
This is an astronomy workbook created by Auke Slotegraaf, ideal for learning all the constellations visible from the southern hemisphere and for discovering the brighter deep sky objects on your own



Binocular observers already familiar with the constellations may also use the maps in the workbook as an aid to seek out any non-stellar objects hidden amongst the stars

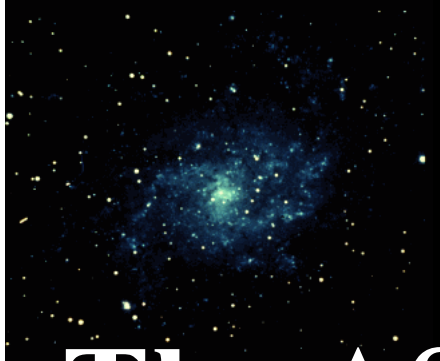


This wonderful workbook is available free of charge. The star charts, with your observation notes can be send to our ASSA Deep Sky Section Director Auke Slotegraaf. He is very skilled in deep-sky observation and is always willing to provide you with feedback and motivation

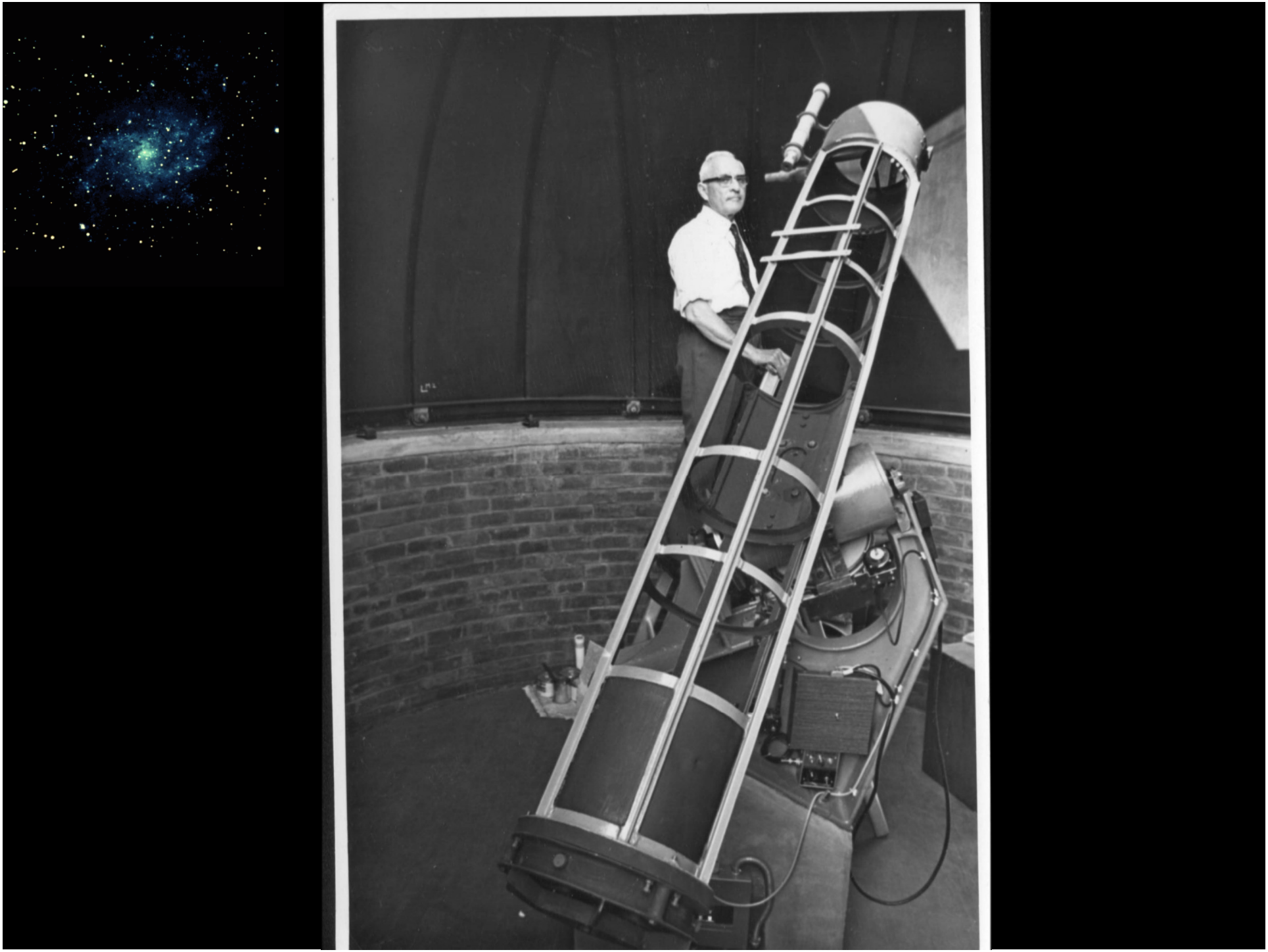


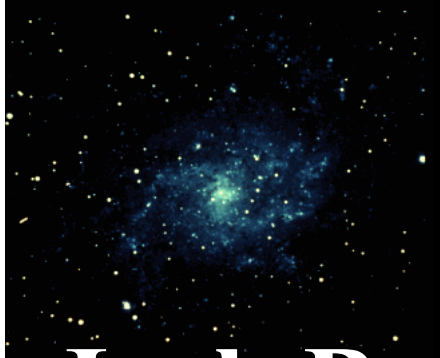
What does the Deep Sky offer for astronomy in South Africa?

Various projects for the beginner as well as for the more advanced amateur

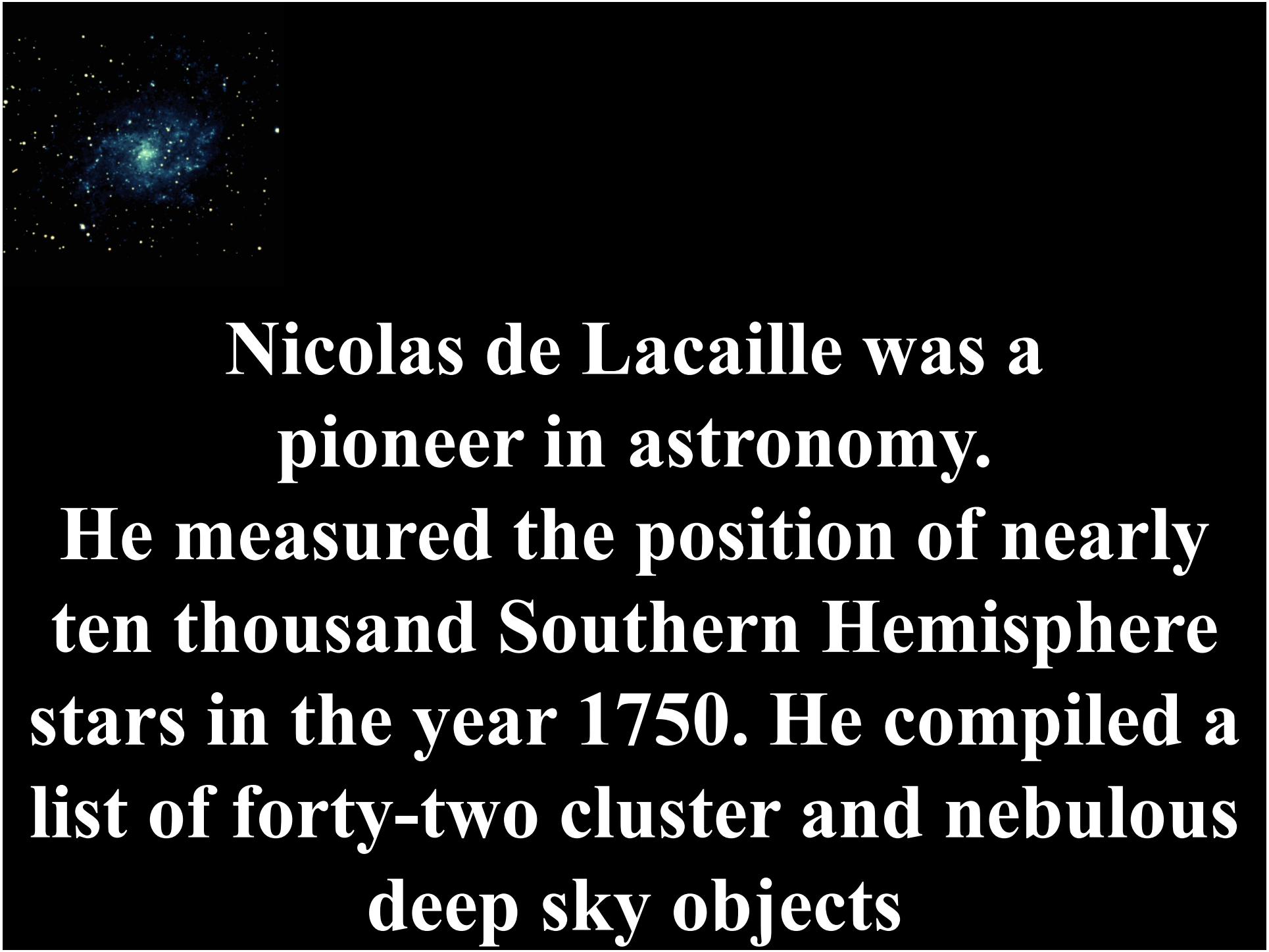


The ASSA Catalogue consists of more than one hundred and twenty deep sky objects, guaranteed to enhance the understanding of exotic deep sky objects

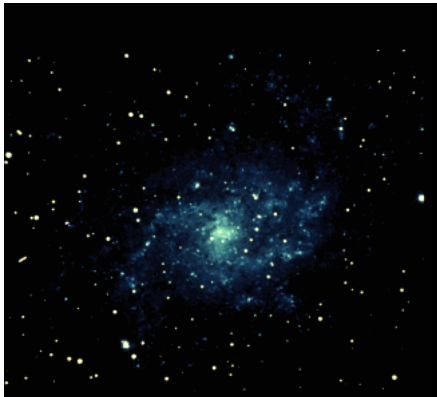




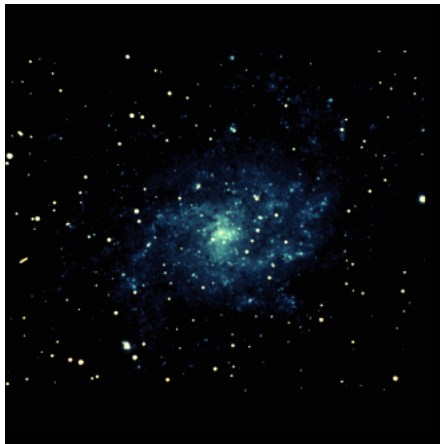
Jack Bennett was a comet hunter, who patrolled the South African skies for two decades starting in the late 1960's. He compiled a catalogue consisting of hundred and fifty-two deep sky objects, and is guaranteed to enhance the understanding of deep sky objects

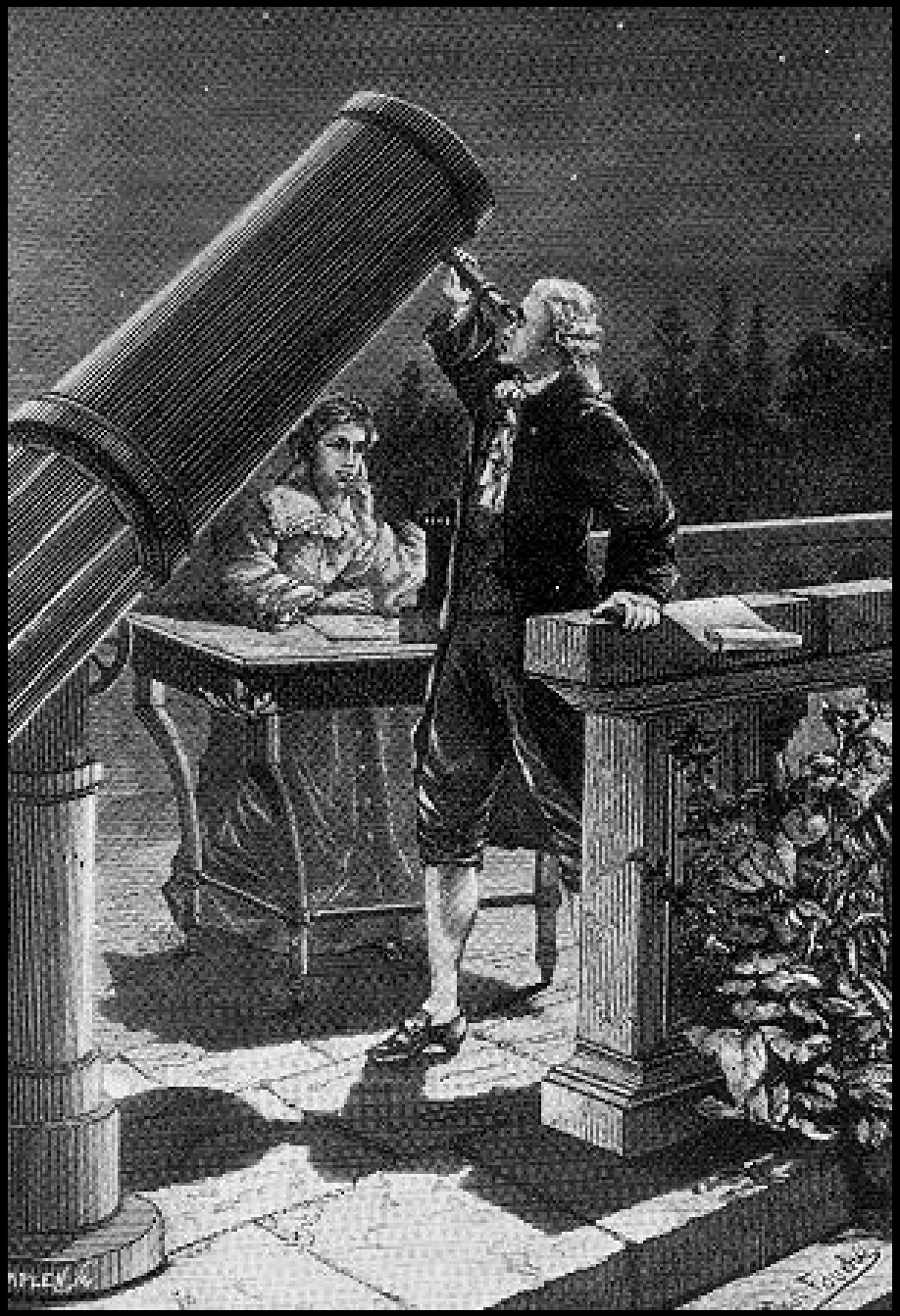


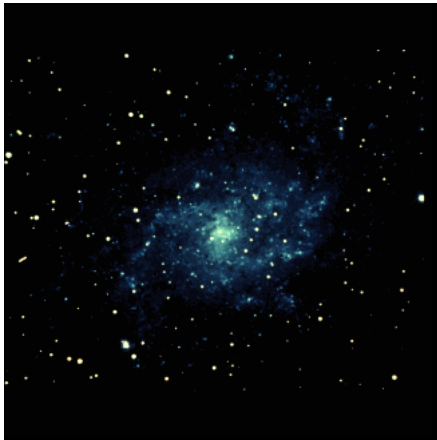
Nicolas de Lacaille was a pioneer in astronomy. He measured the position of nearly ten thousand Southern Hemisphere stars in the year 1750. He compiled a list of forty-two cluster and nebulous deep sky objects



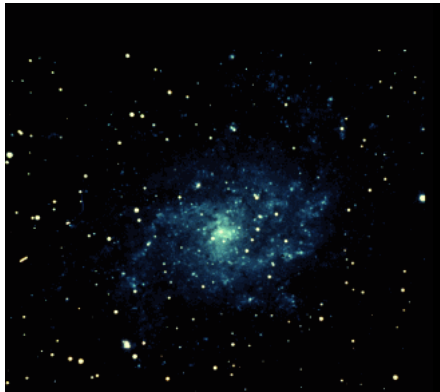
On 8 February 1882 James Dunlop presented his Catalogue of Nebulae and Clusters of Stars in the Southern Hemisphere to the Royal Society. He compiled a catalogue of more than one hundred Southern deep sky objects





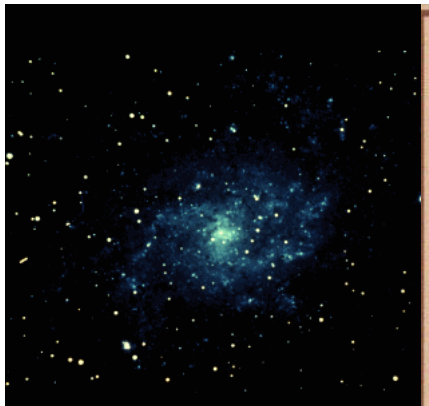


John Herschel



Who is more famous than William and John Herschel who created the New General Catalogue astronomers still use today?

It will keep you busy for a lifetime!



Astronomical Society of Southern Africa

ASSA

Upon the recommendation of

this Society

R Goosen

has been awarded a

GENERAL OBSERVER'S CERTIFICATE

for observations of Meteor Showers;

Geminids, Leonids and Pegasids

&

for observations of Comets;

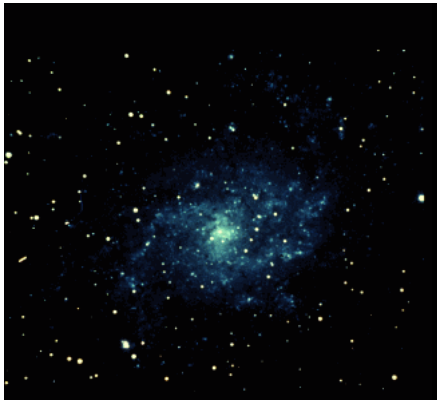
2001 Q4, 2002 T7, 2004 K4, 2004 Q2 and 9P

submitted to the

ASSA COMET & METEOR SECTION

President

DIRECTOR



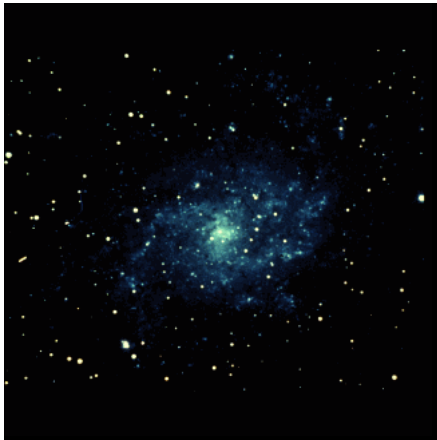
Certificates of merit are presented by ASSA for contributions made in the different categories of astronomy, and various certificates will be handed out tomorrow night

Deep Sky Observers Checklist

- Date and time
- Telescope information
- Eyepieces and field sizes
- Filters
- Star maps

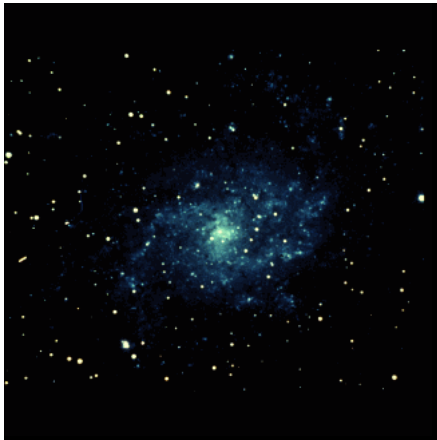
Deep Sky Guidelines

- Seeing condition of the night sky
- Transparency of the night
- Sky darkness
- General appearance with surroundings



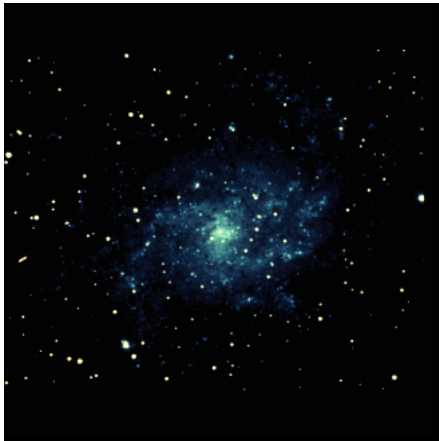
Documentation

- Identity of the numbered objects
- Summary of the first impression
- Estimate verbal brightness
- Angular estimate of object size
- General shape and character
- Brightness profile
- Unique characteristics

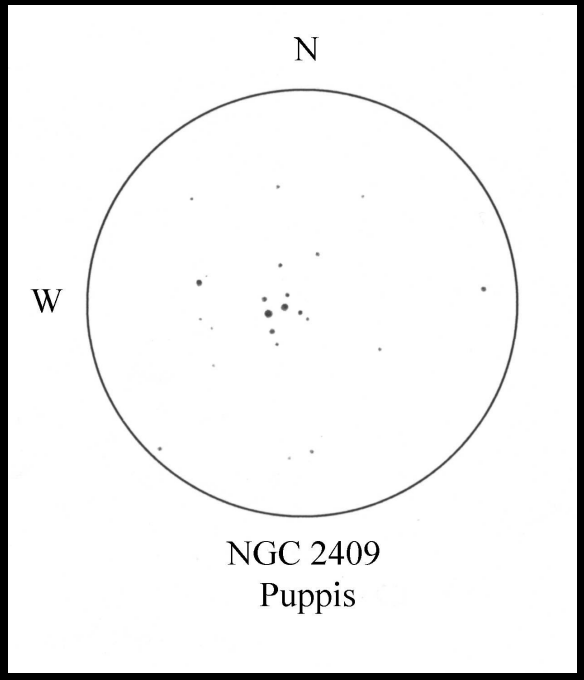


Open Clusters

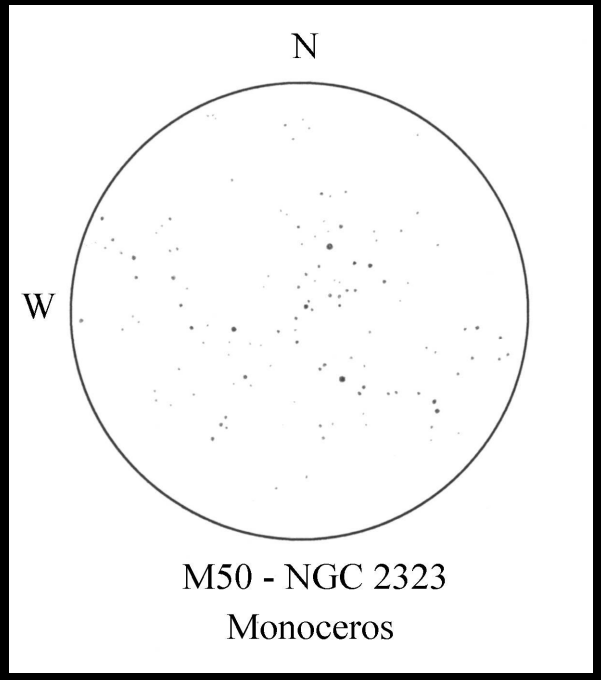
- Relation to field stars
- Estimate number of stars?
- Range of brightness and star concentration
- Starless patches?
- Clumps and chains of stars?
- Unresolved glow of stars, or nebulosity involved?
- Striking double and colour stars?



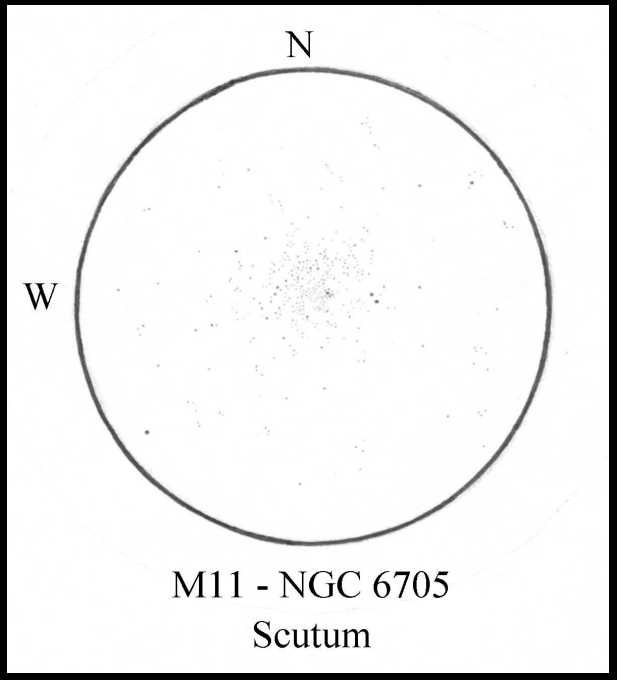
Open Clusters



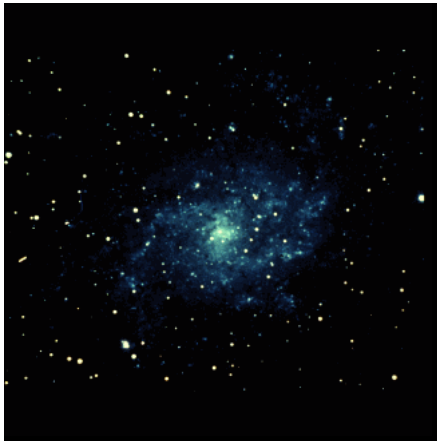
NGC 2409
Puppis

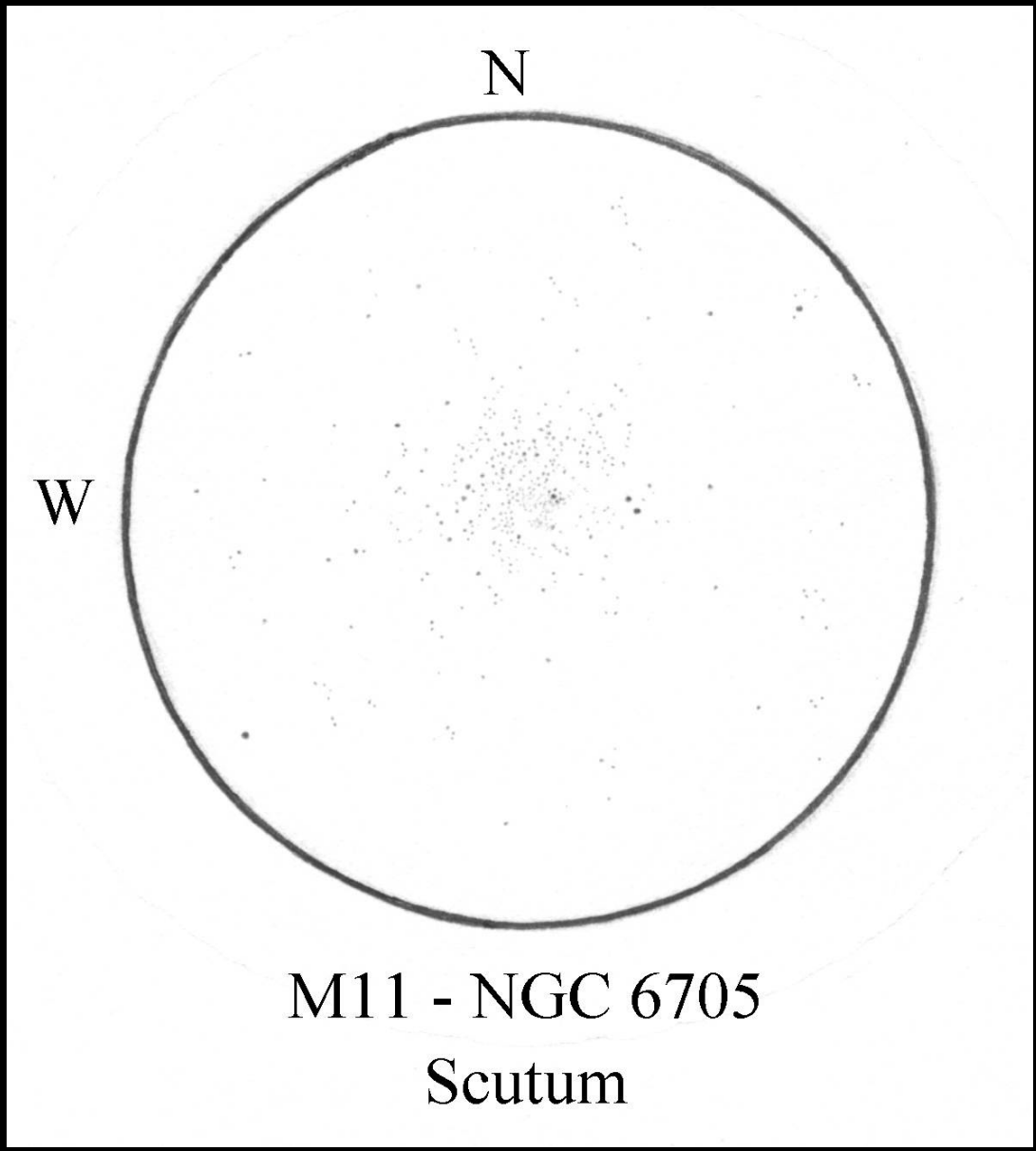


M50 - NGC 2323
Monoceros



M11 - NGC 6705
Scutum

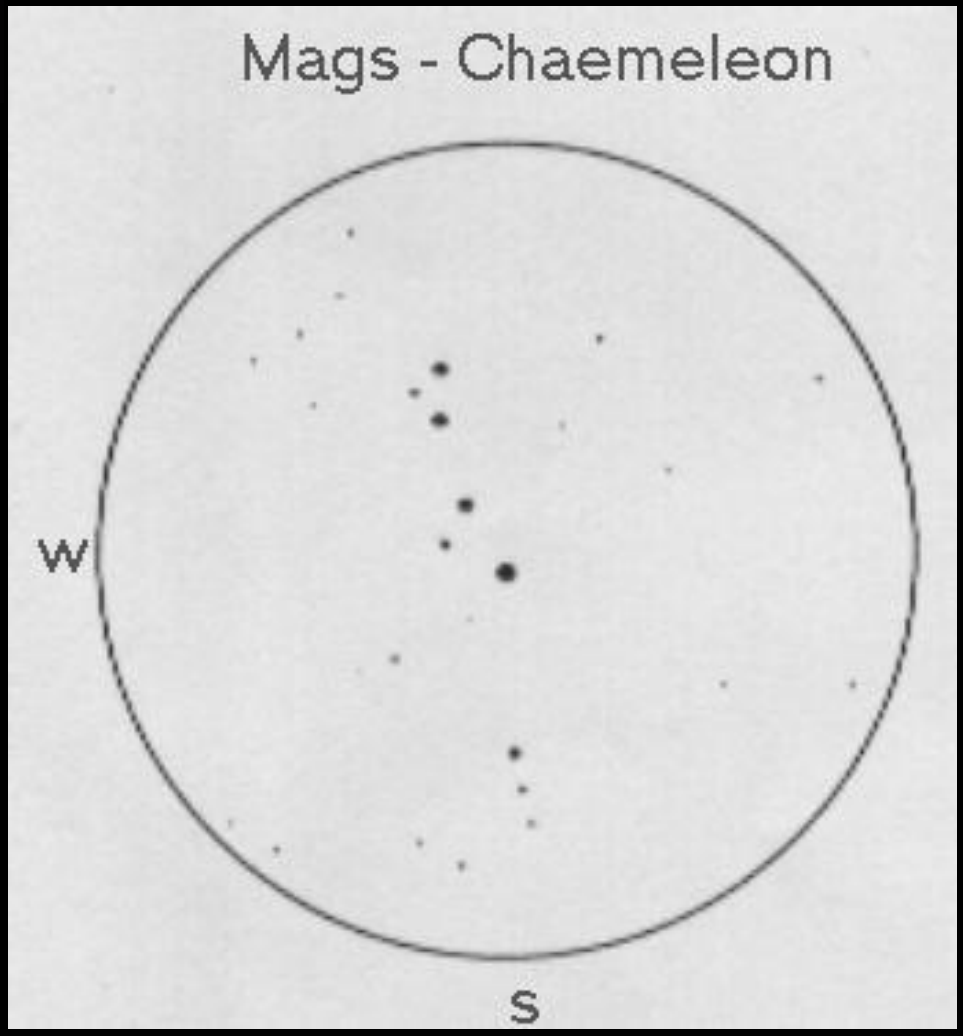


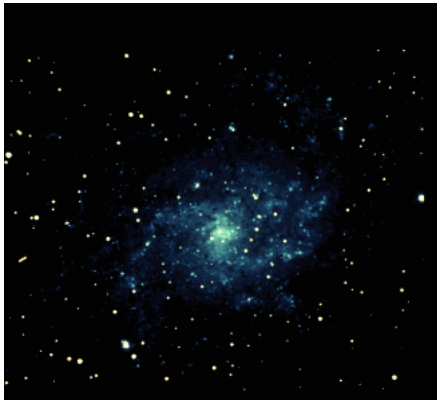


M11 - NGC 6705

Scutum

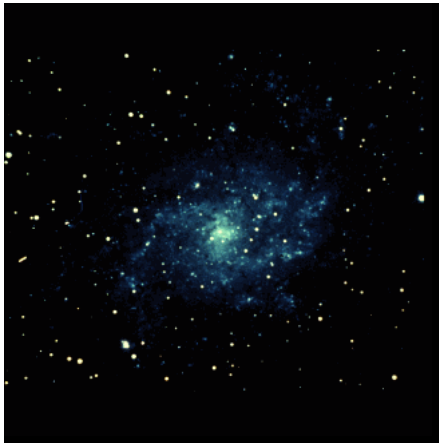
Asterisms



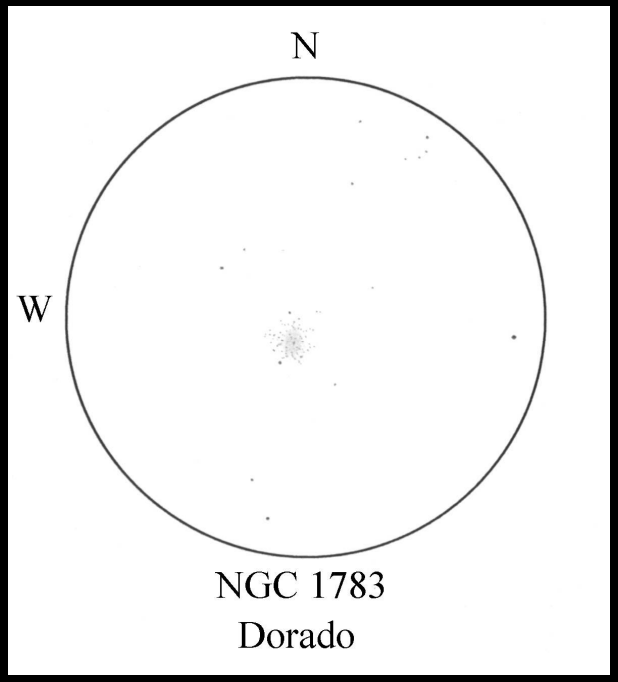


Globular Clusters

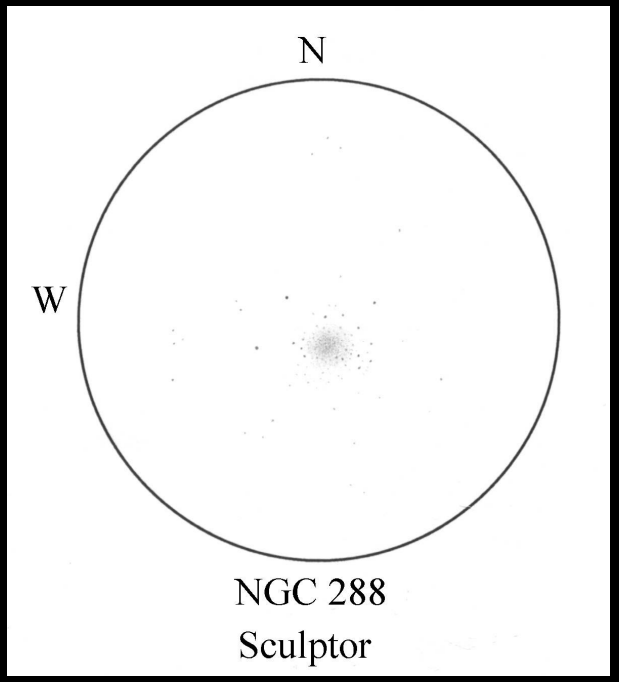
- General impression and character
- Unresolved, granular, partially or well resolved?
- Concentration of stars towards the nucleus?
- Estimate size of nucleus?
- Shape and direction
- Prominent starless patches?
- Any clumps and chains of stars?



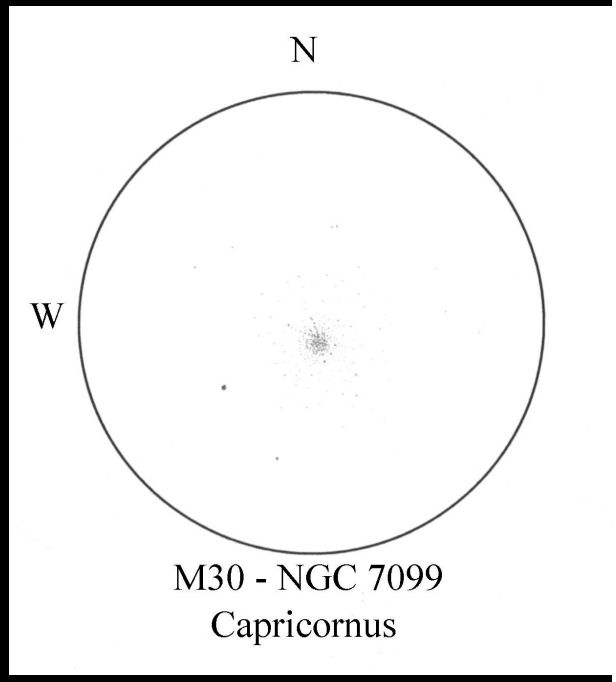
Globular Clusters



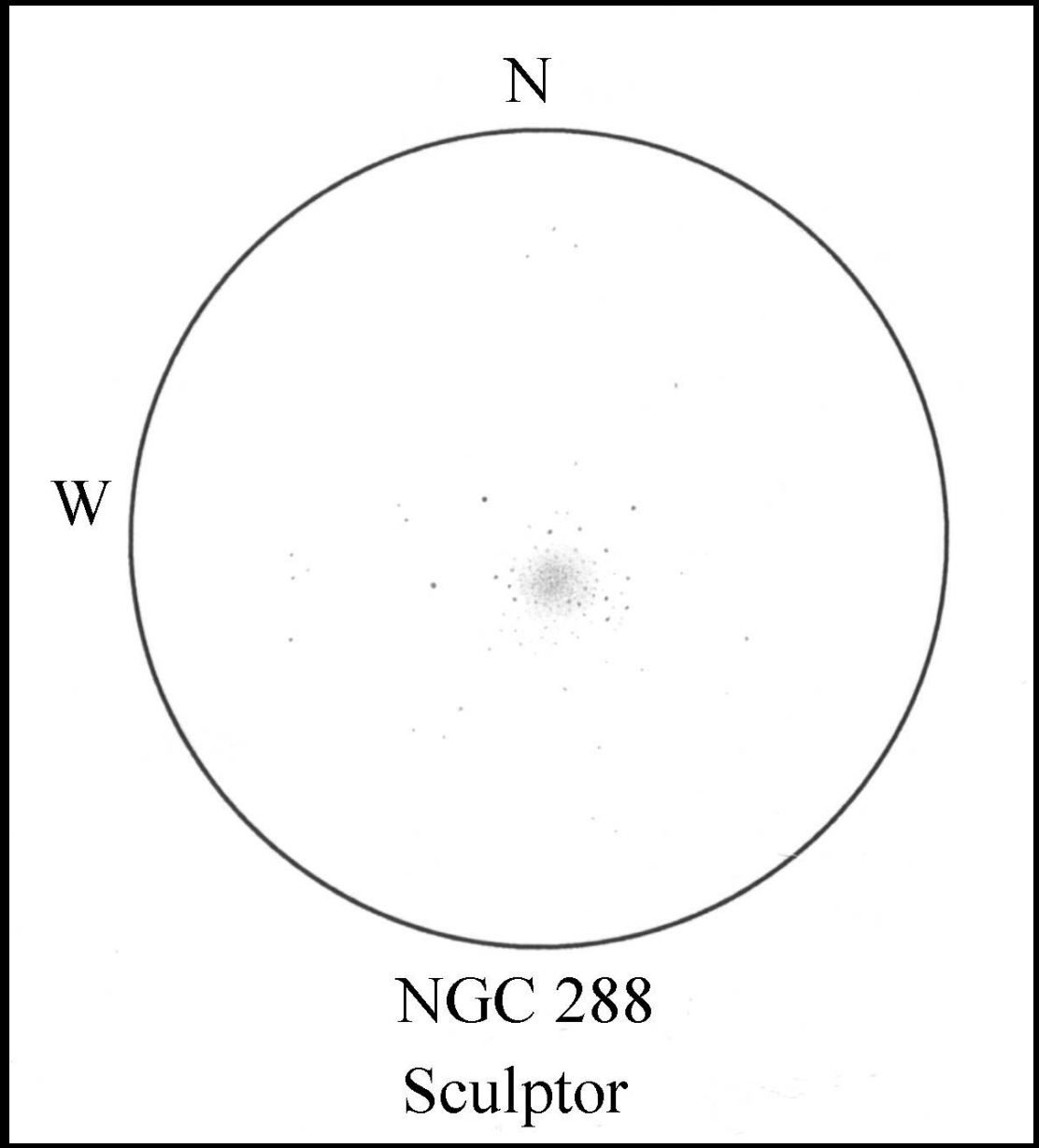
NGC 1783
Dorado



NGC 288
Sculptor



M30 - NGC 7099
Capricornus

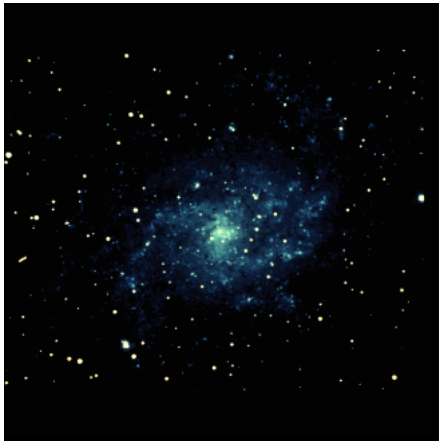


NGC 288

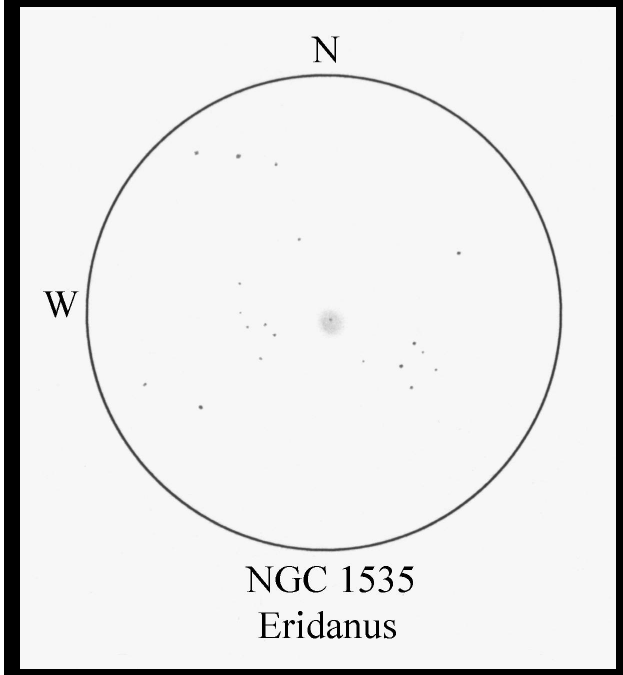
Sculptor

Planetary Nebulae

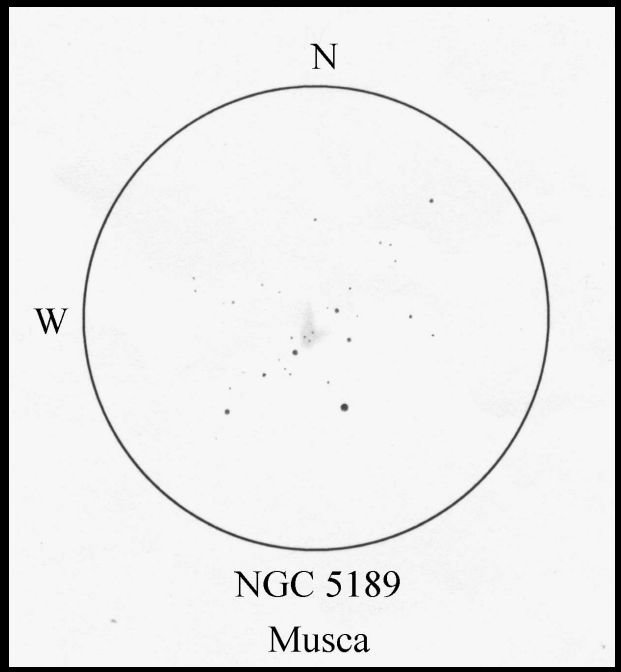
- At what magnification is the disk seen?
- Size and shape, edge sharply defined or hazy?
- Colour of the nebula?
- Central star?
- General impression



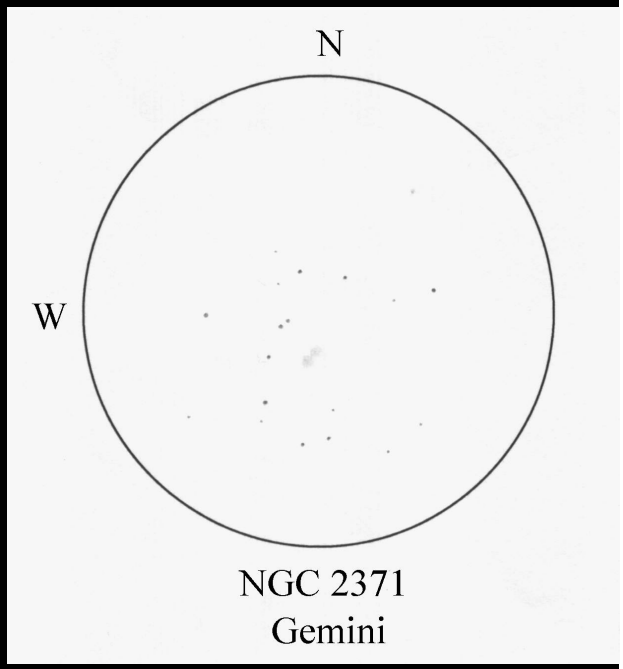
Planetary Nebulae



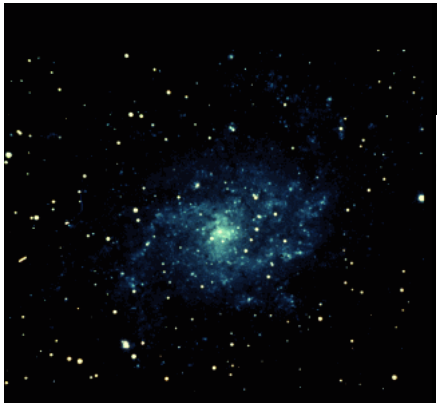
NGC 1535
Eridanus



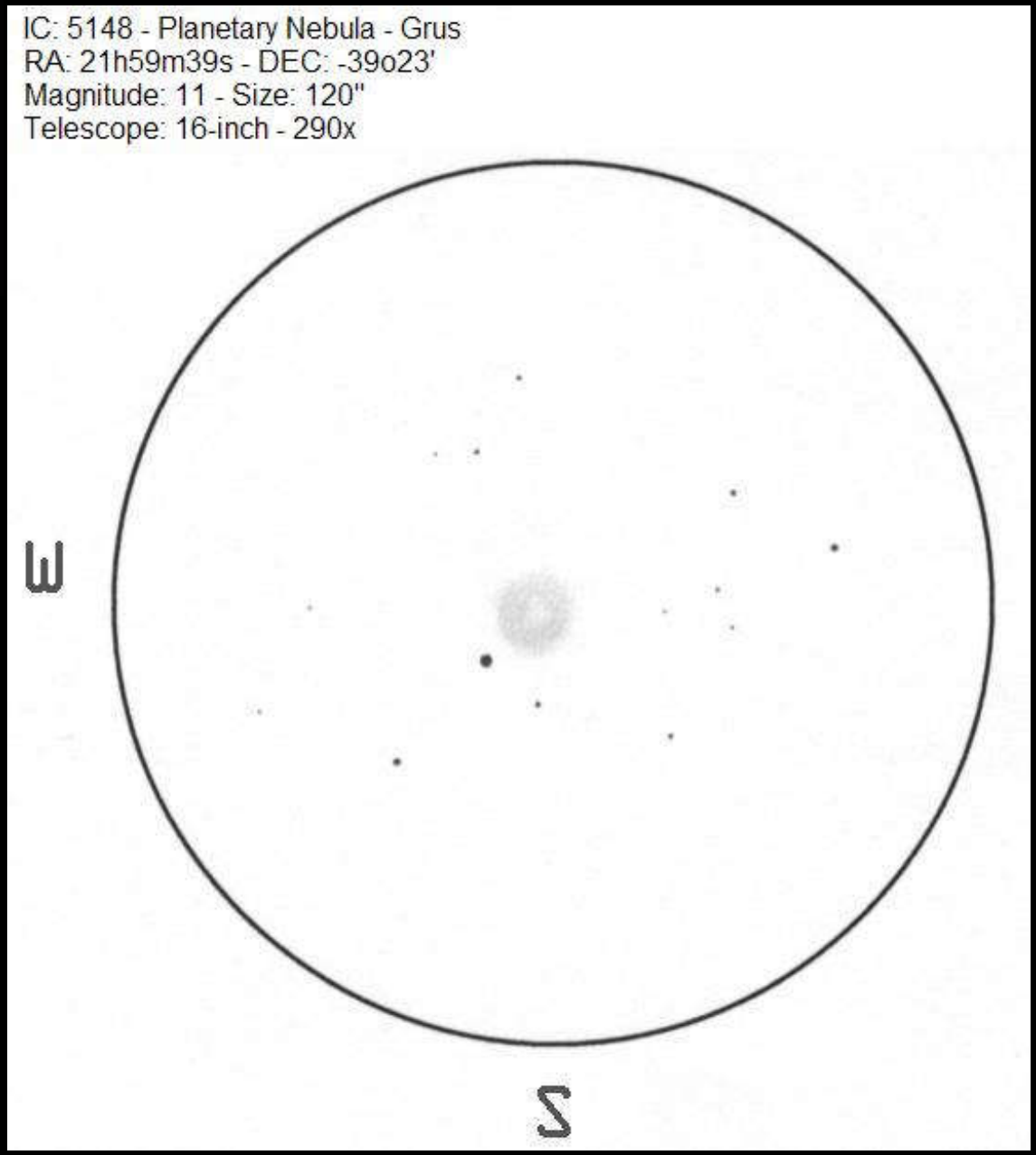
NGC 5189
Musca



NGC 2371
Gemini

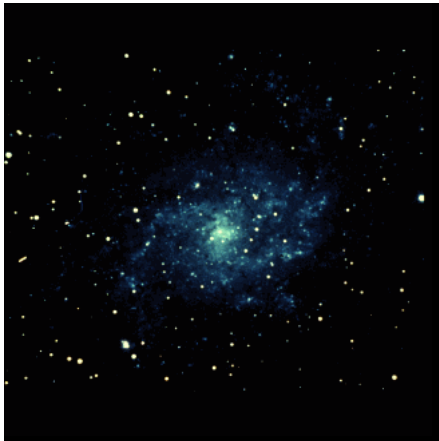


IC: 5148 - Planetary Nebula - Grus
RA: 21h59m39s - DEC: -39o23'
Magnitude: 11 - Size: 120"
Telescope: 16-inch - 290x

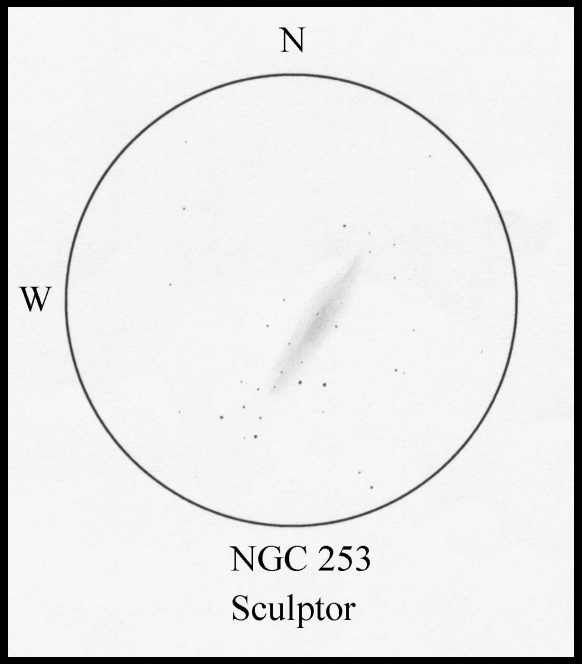


Galaxies

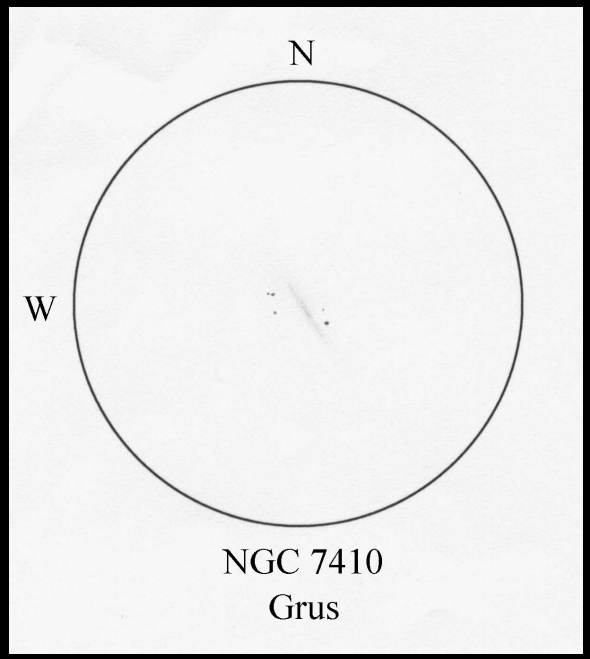
- What does the galactic nucleus look like?
- Estimate brightness of the galaxy
- Size, shape, edge-on, round, elliptical, direction
- Stars near by or within the galaxy?
- Any darker and uneven areas within the galaxy?



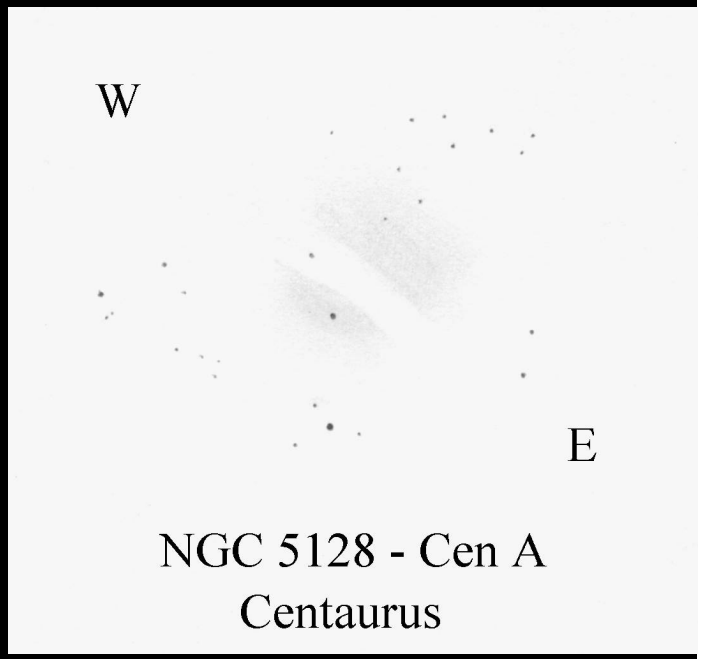
Galaxies



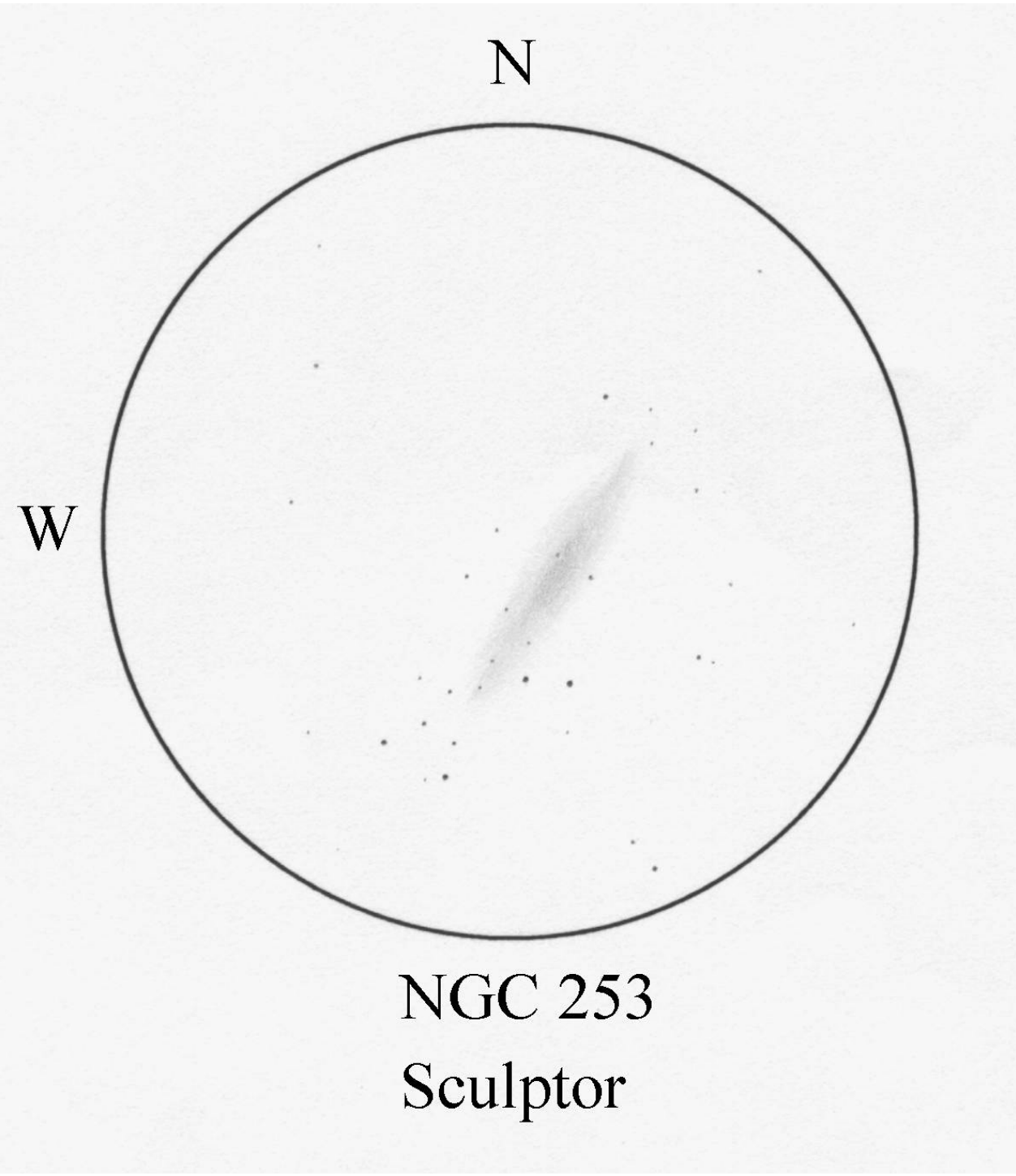
NGC 253
Sculptor



NGC 7410
Grus

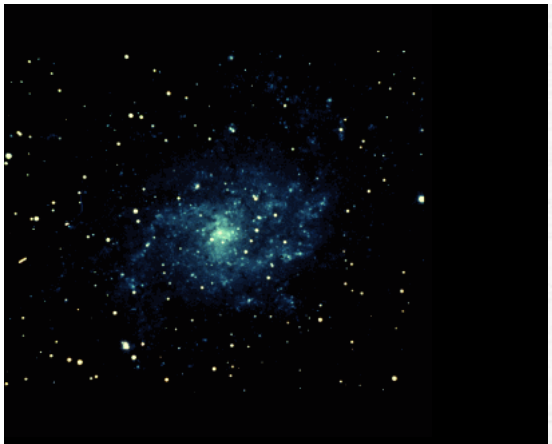


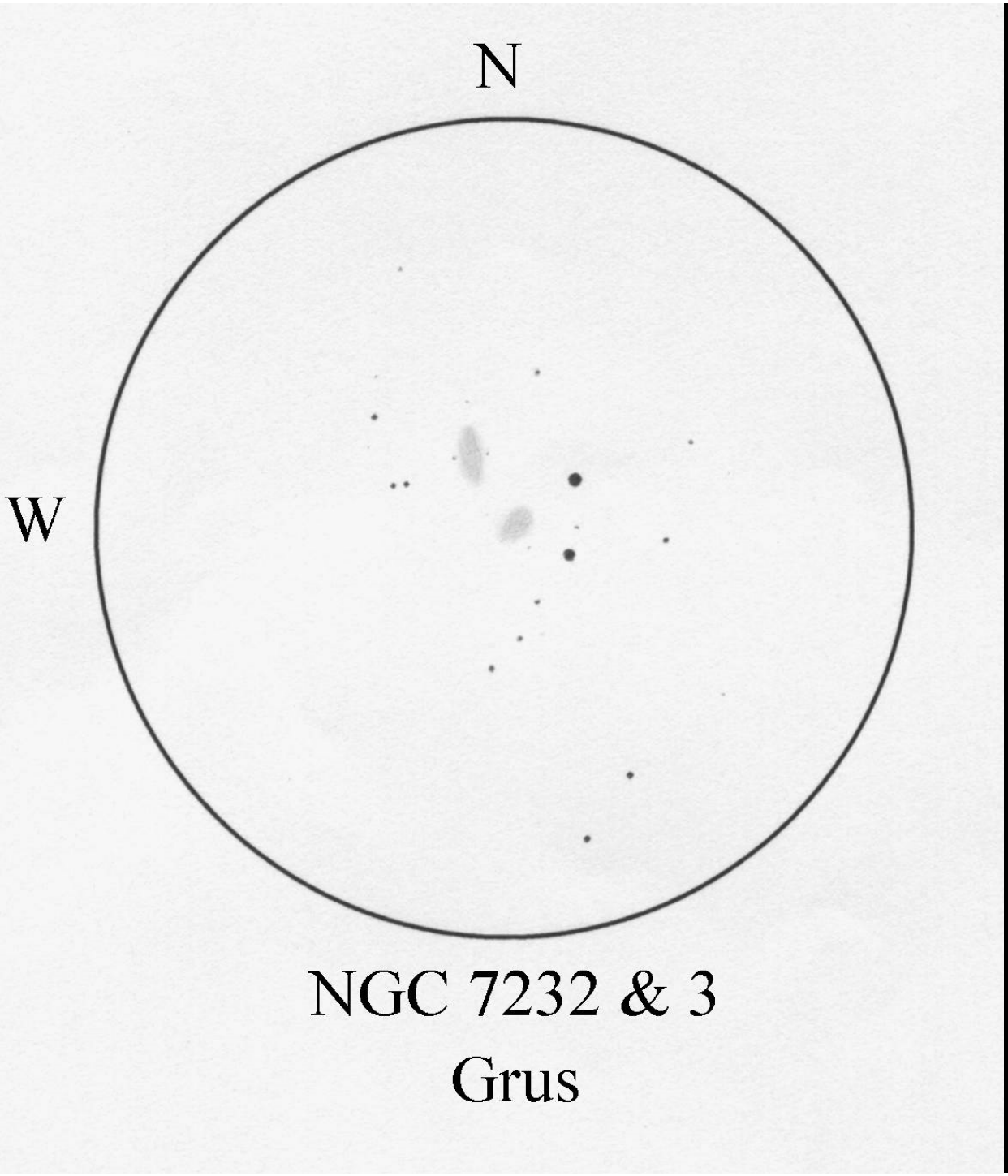
NGC 5128 - Cen A
Centaurus



NGC 253

Sculptor



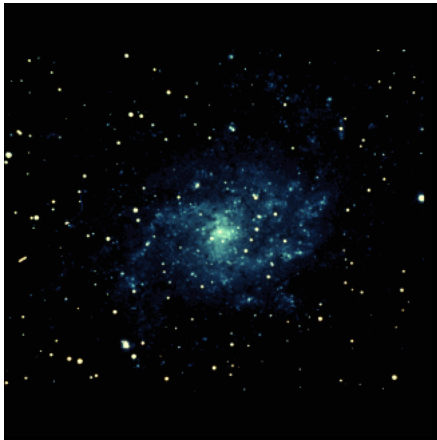


NGC 7232 & 3

Grus

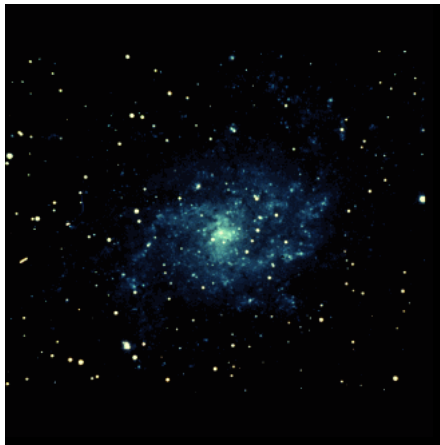
Dark Nebulae

- How well does the nebula stand out against the background?
- Is it isolated, or part of a larger complex?
- How dark is the nebula?
- Are the edges, sharp or diffuse?
- Any stars superimposed on the nebula?

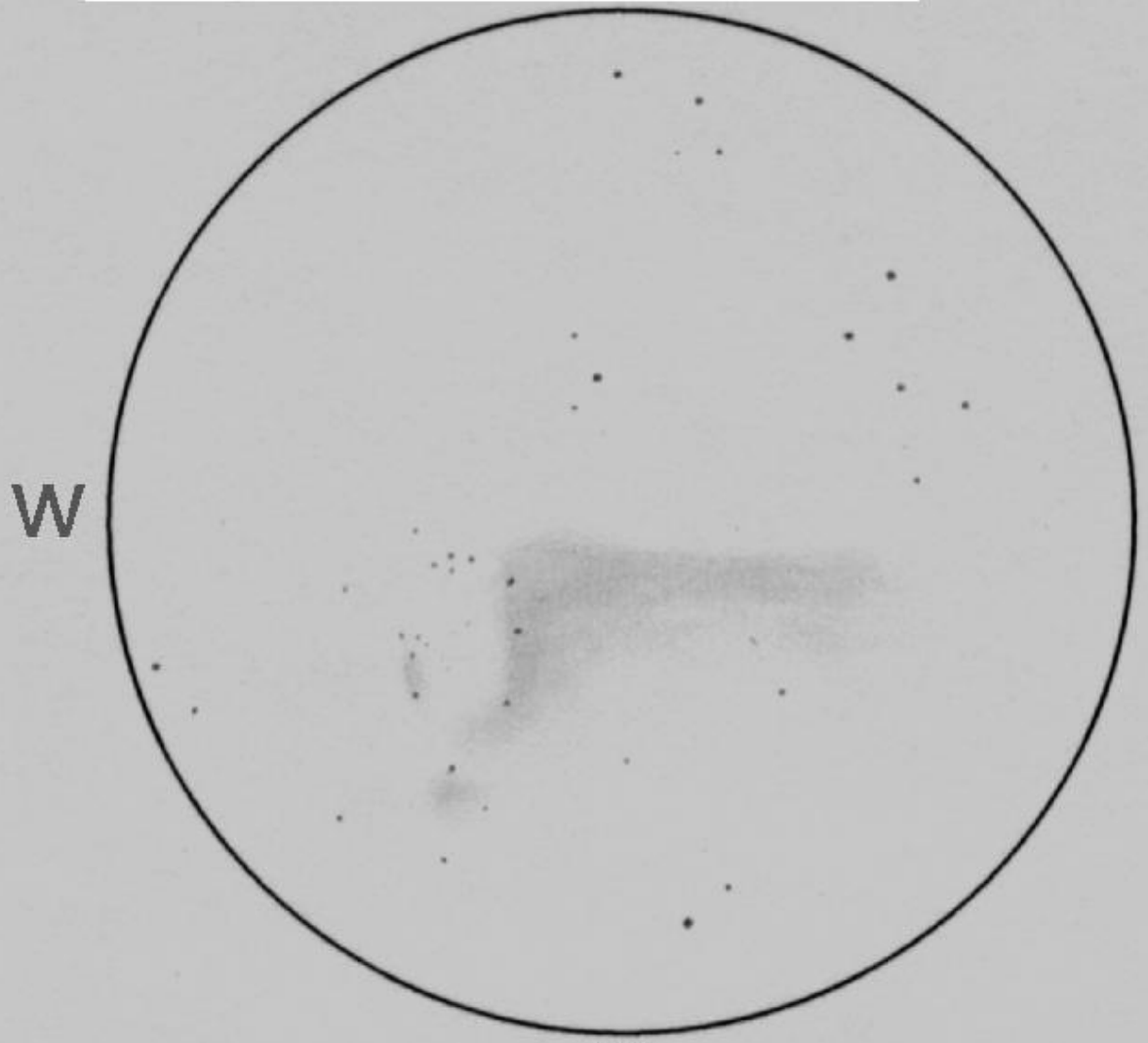


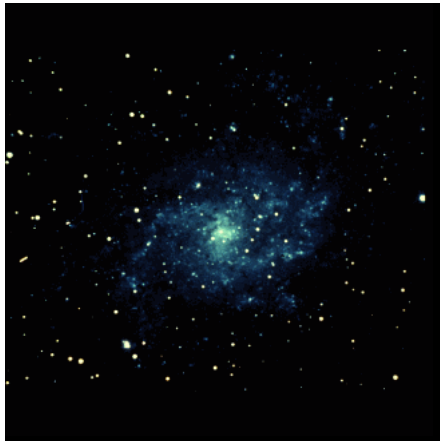
Bright Nebulae

- Areas of uneven brightness?
- Dark lanes and patches?
- Any other structures visible?

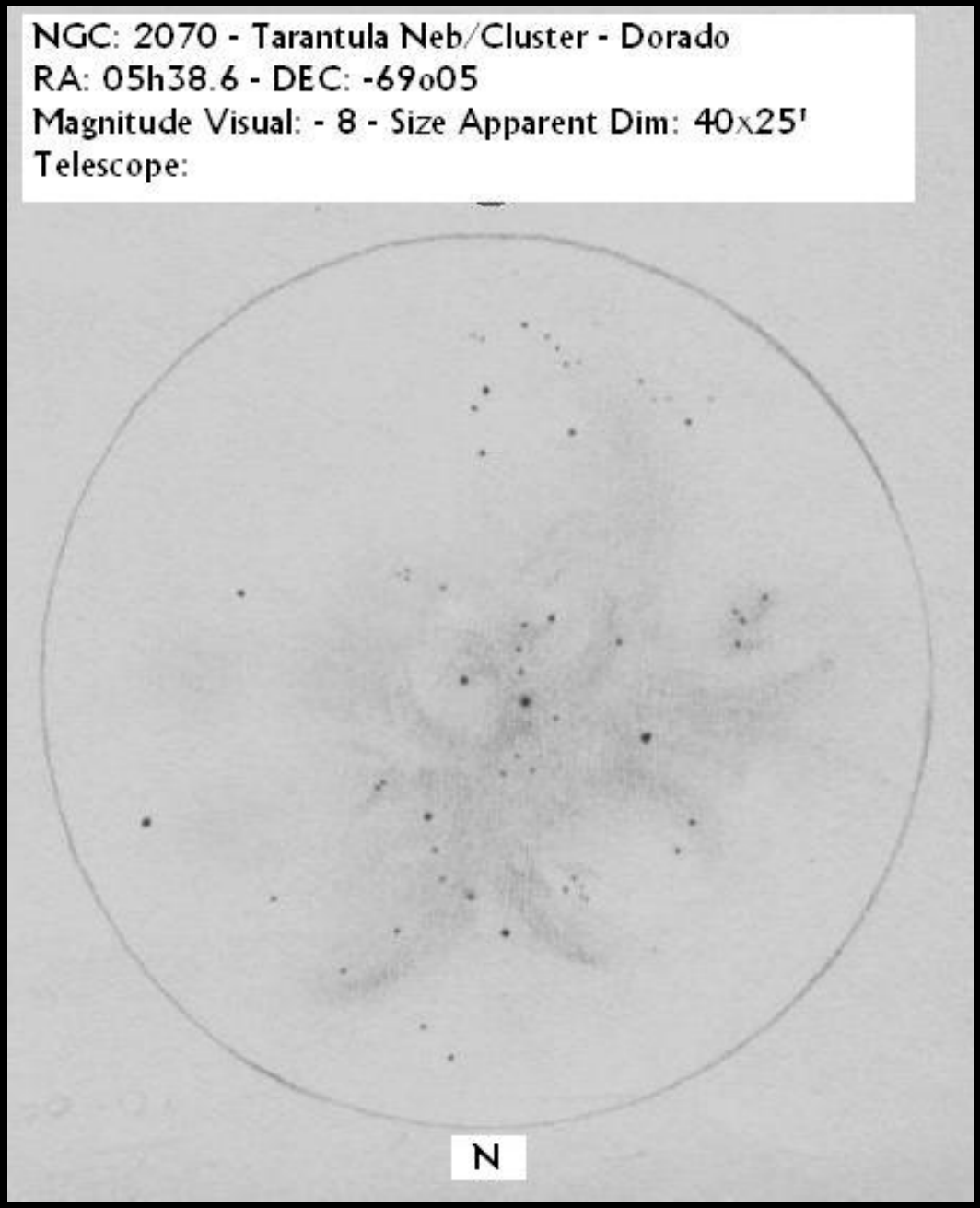


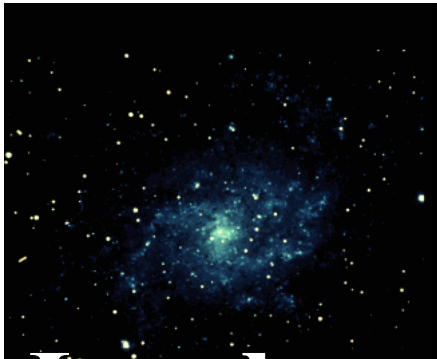
NGC: 6618 (M17) - Swan Nebula
Emission Nebula and Open Cluster - Sagittarius
RA: 18h21m.1 - DEC: -16o11'
Magnitude: 6.0 - Size: 25'
Tel: 12" S/C - 218x





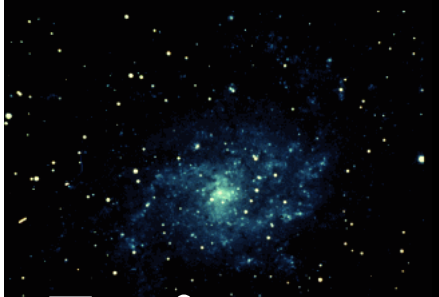
NGC: 2070 - Tarantula Neb/Cluster - Dorado
RA: 05h38.6 - DEC: -69o05
Magnitude Visual: - 8 - Size Apparent Dim: 40x25'
Telescope:





I end my presentation with a request to invest in your own data basis and create your own projects.

Sketching deep sky objects help to summarise and proves invaluable for further study.



It is easy to glance through a coffee table book of deep sky objects or spend hours in front of a computer looking at astronomy deep sky objects, but it is not the real thing, believe me!