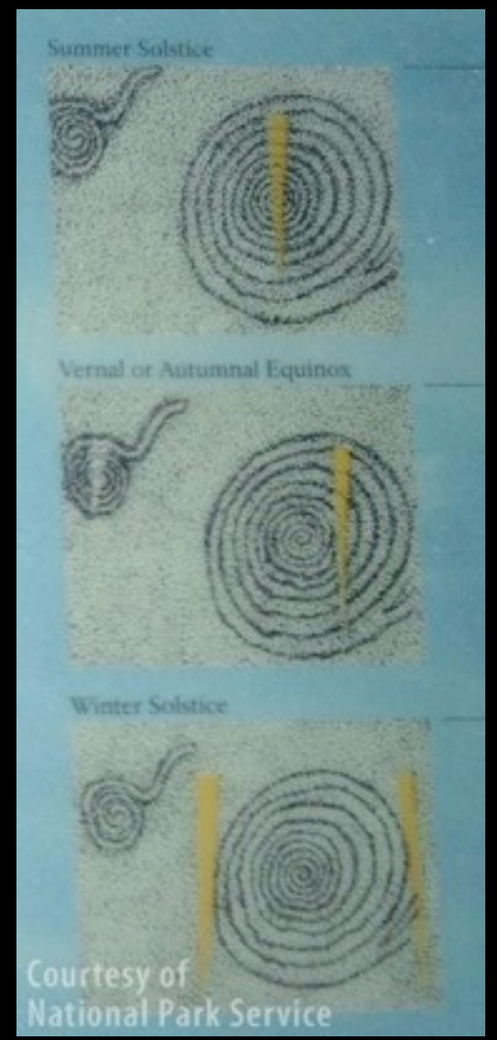
Astronomical Sketching

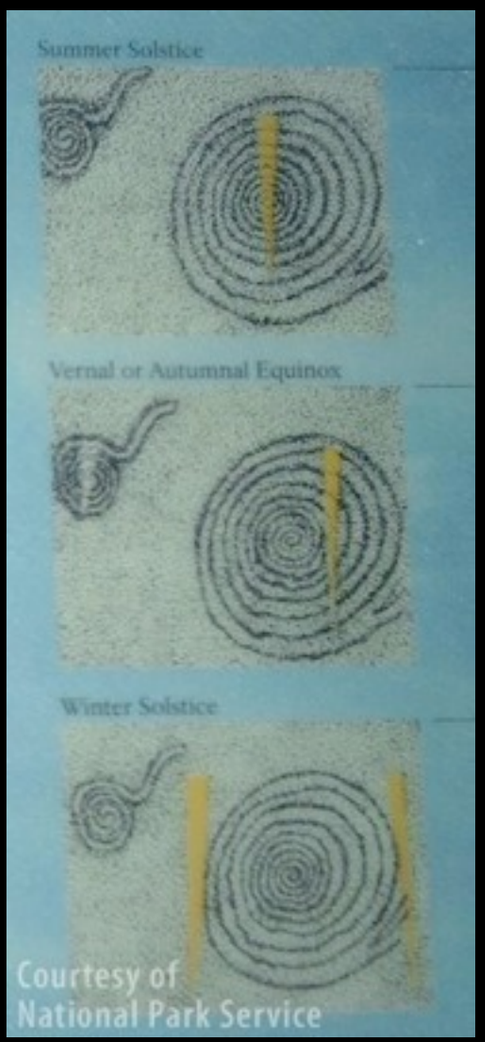
Jeremy Perez

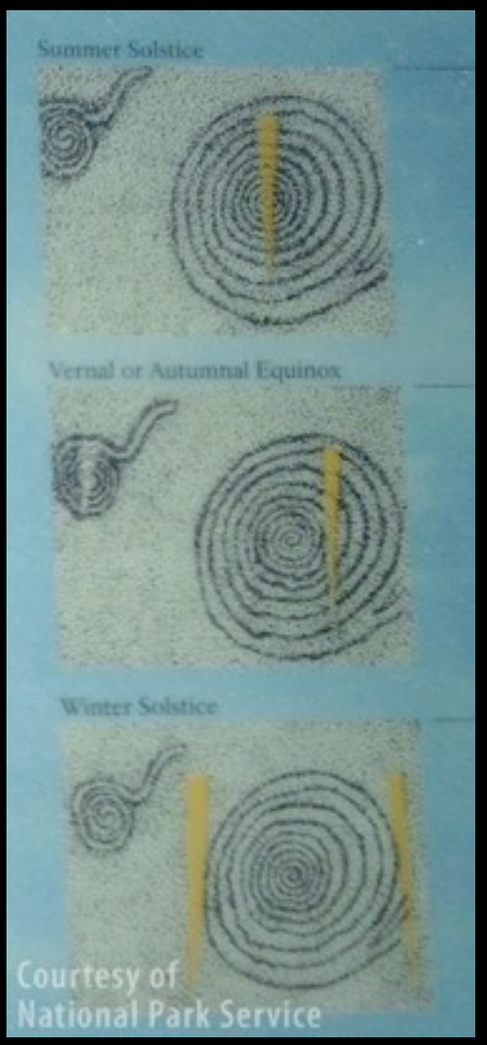
Summer Solstice

Vernal or Autumnal Equinox

Winter Solstice

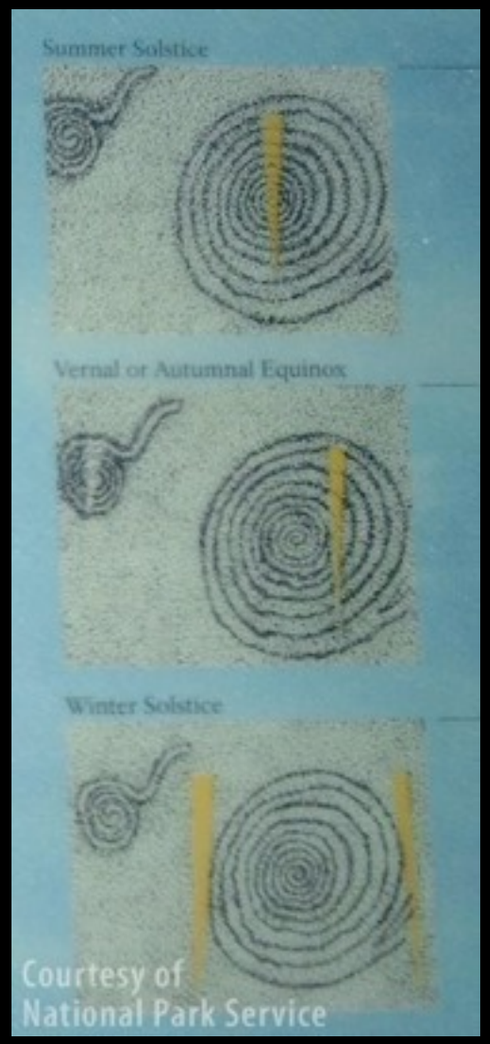

Summer Solstice
Vernal or Autumnal Equinox
Winter Solstice
Courtesy of
National Park Service


Summer Solstice
Vernal or Autumnal Equinox
Winter Solstice
Courtesy of
National Park Service


Summer Solstice
Vernal or Autumnal Equinox
Winter Solstice
Courtesy of
National Park Service

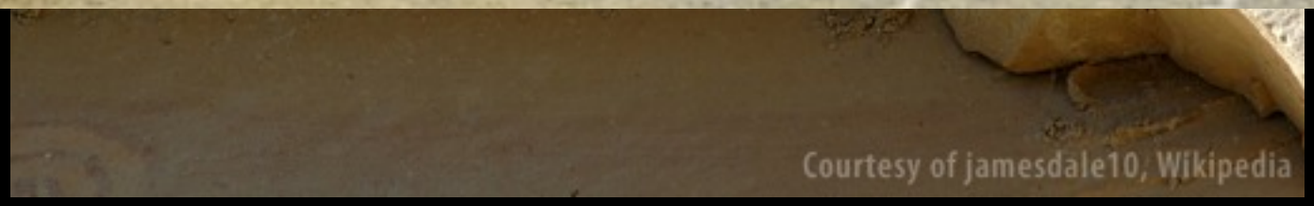
Courtesy of jamesdale10, Wikipedia

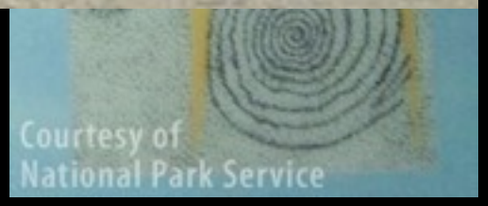
Courtesy of jamesdale10, Wikipedia



Courtesy of
National Park Service


Courtesy of Régis Lachaume


Courtesy of jamesdale10, Wikipedia


Courtesy of
National Park Service


Courtesy of Régis Lachaume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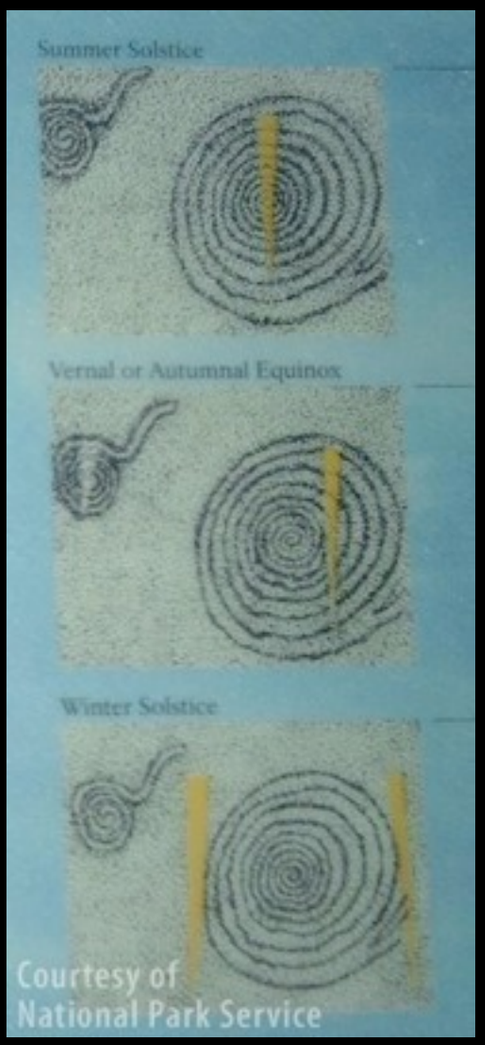
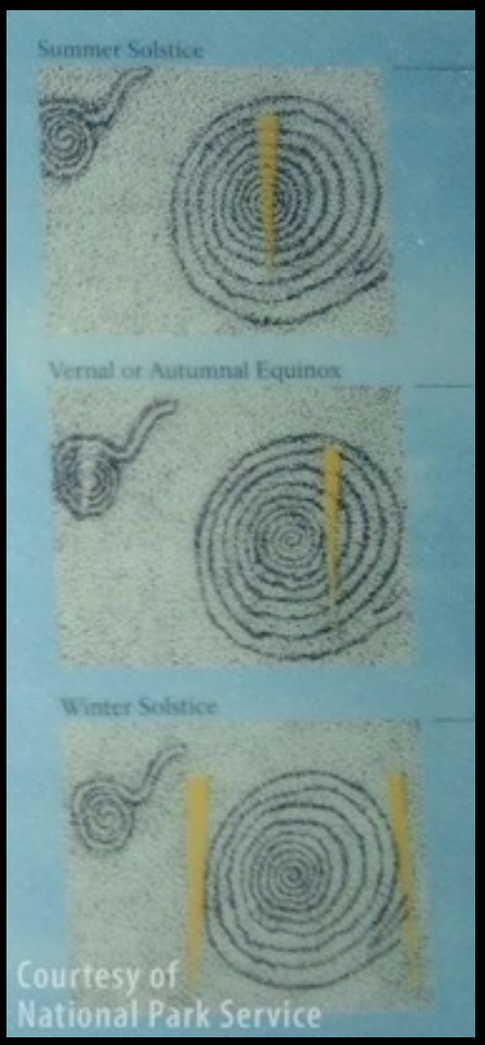

Summer Solstice
Vernal or Autumnal Equinox
Winter Solstice
Courtesy of
National Park Service

Courtesy of Clemensfranz, Wikipedia

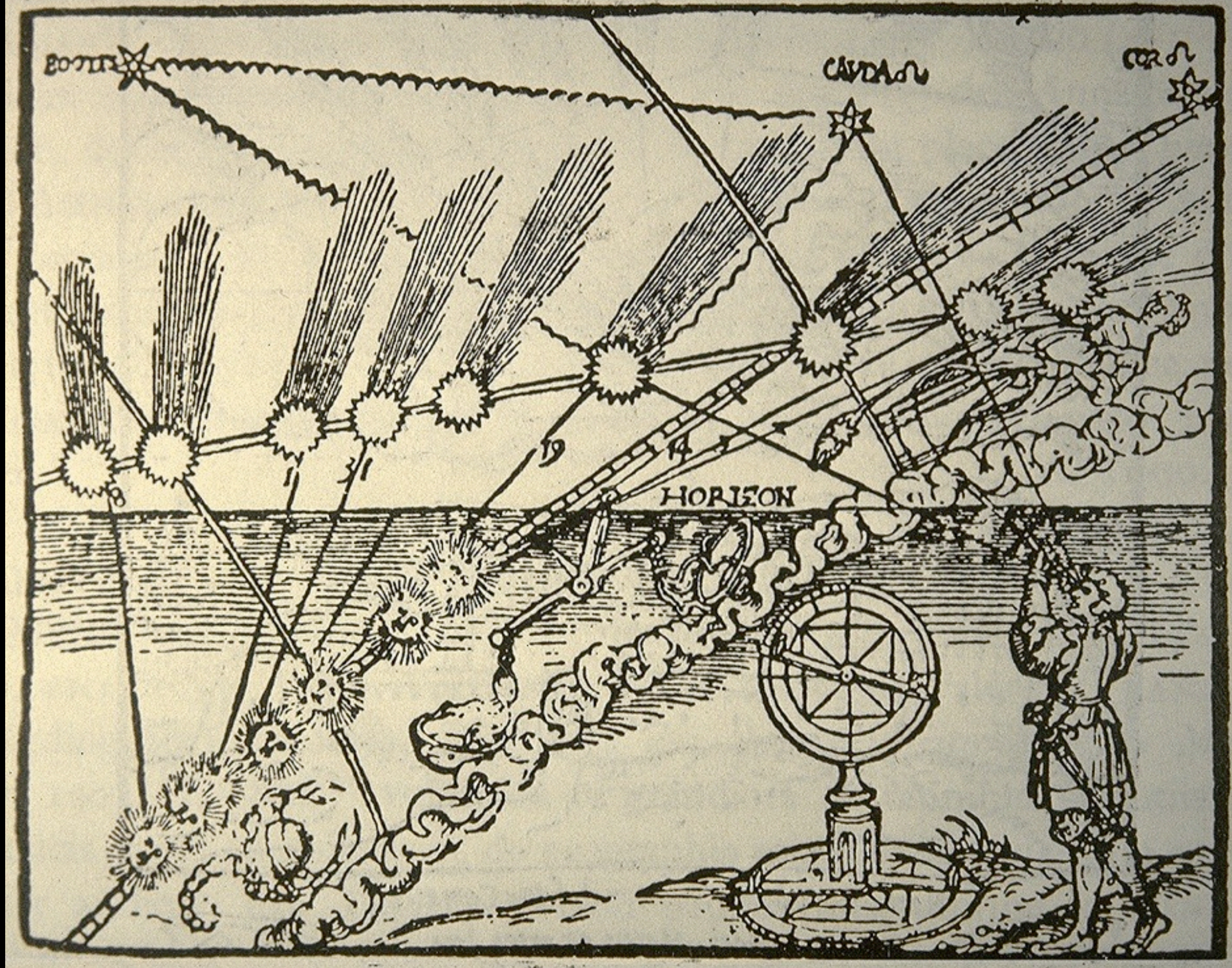

Courtesy of Régis Lachaume

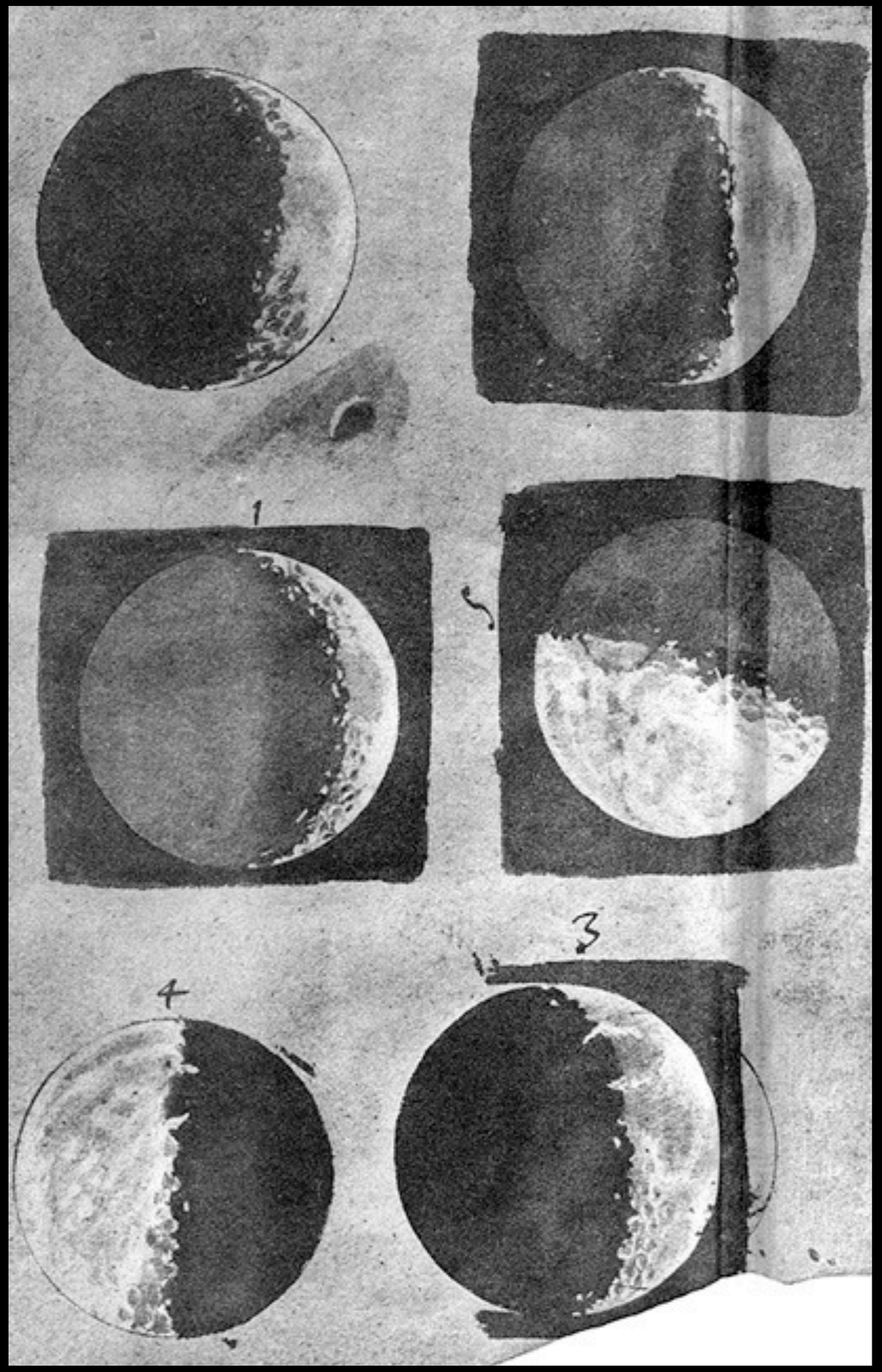

Courtesy of Clemensfranz, Wikipedia

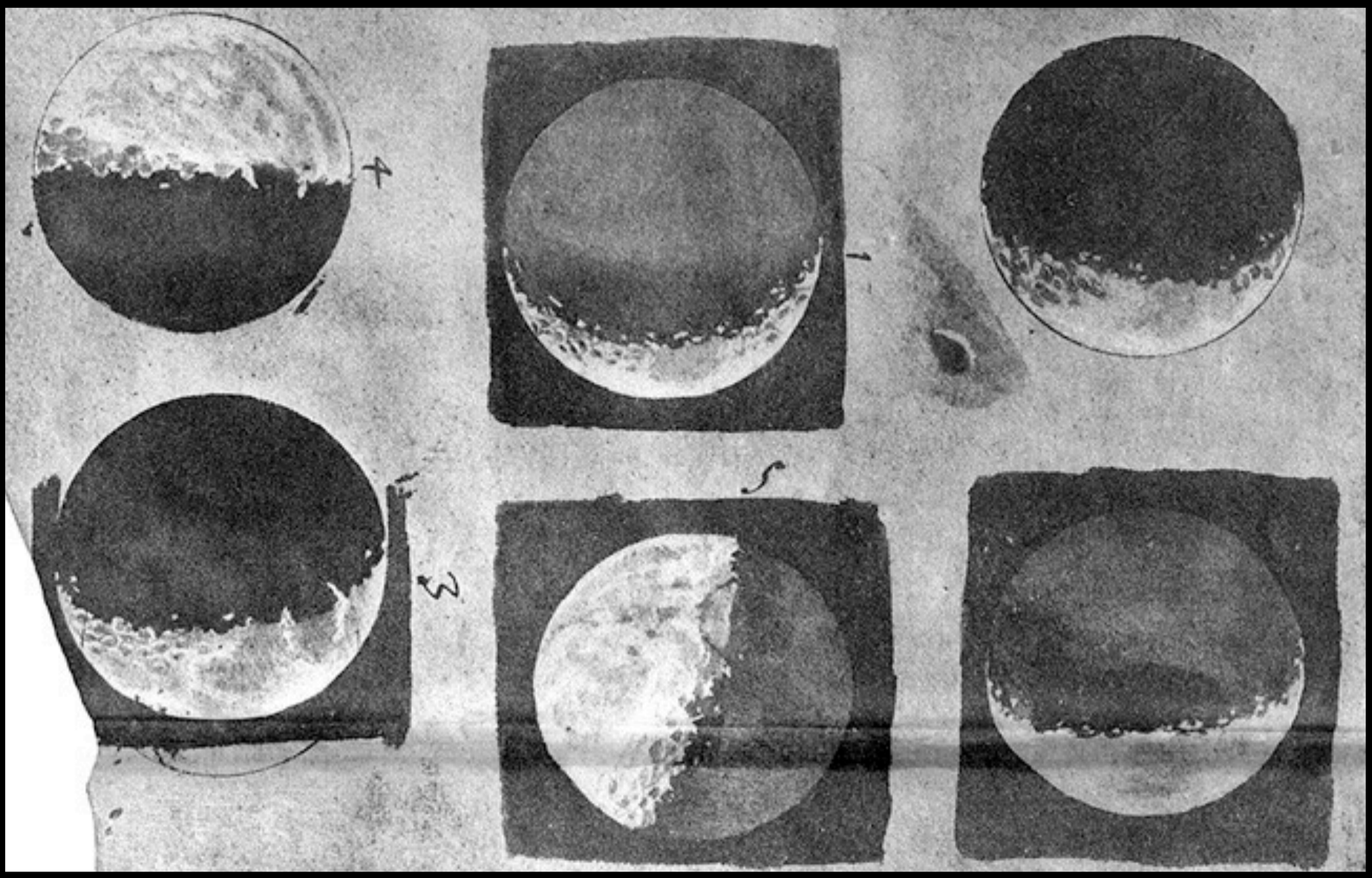

Courtesy of jamesdale10, Wikipedia



Courtesy of
National Park Service


BOOTES
CAPELLA
CORONA
HORIZON


1
2
3
4



palesarsi alla caccia al combattimento o alla fuga, o pure ancora nella campagna aperta vedere et particolarmente distinguere ogni suo moto et preparamento.

Adi 7. di Gennaio

Giove si vedde così   * * ⊗ * così:

Adi 8 così   12. ⊗ * * *   11. ⊗ * * *

⊗ * * * era dunque diretto et non retrogrado

Adi 12. si vedde in tale costituzione così * * ⊗ *

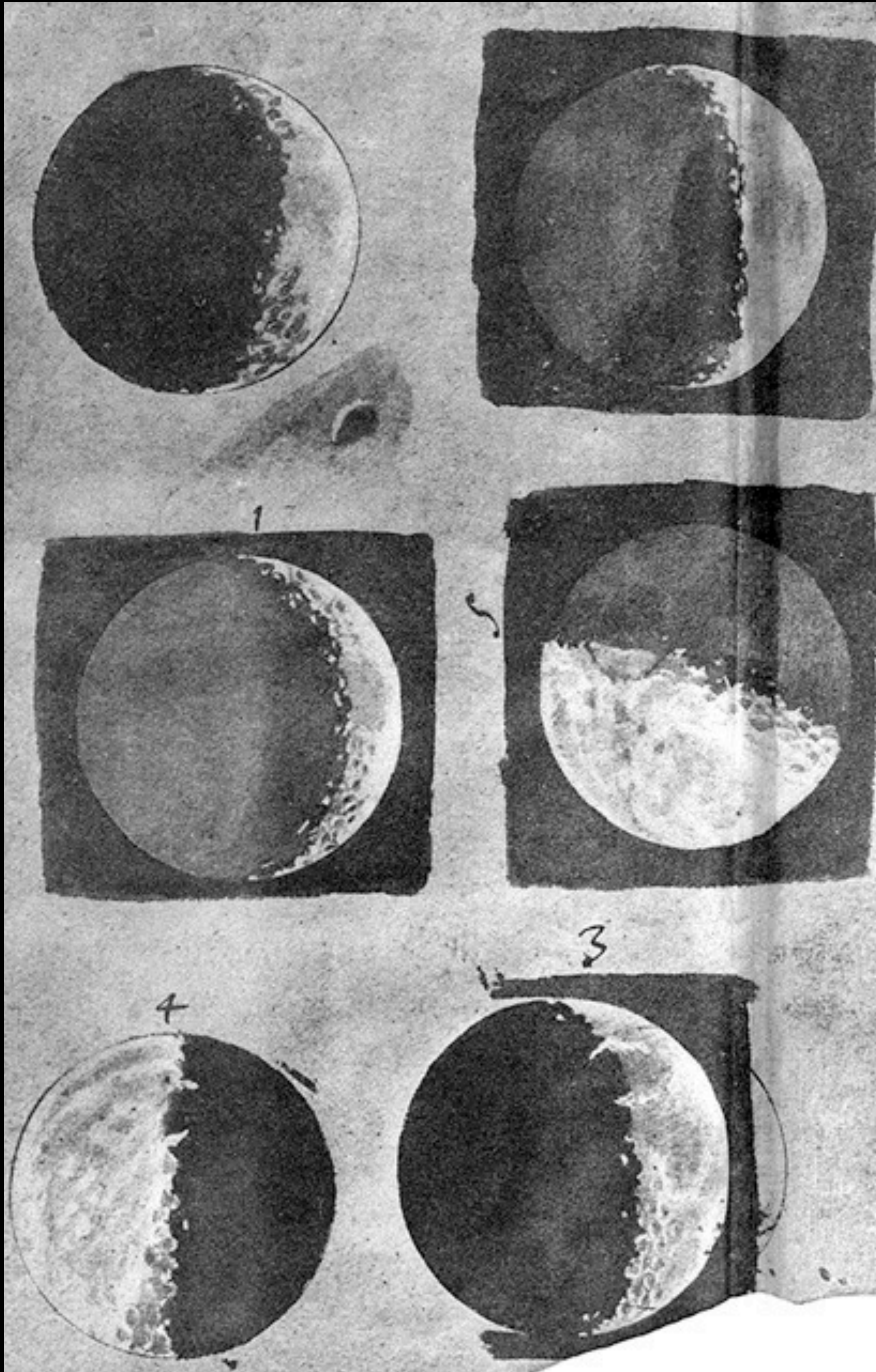
Il 13 si veddono vicinissime à Giove 4 stelle * ⊗ * * * ò meglio così * ⊗ * * *

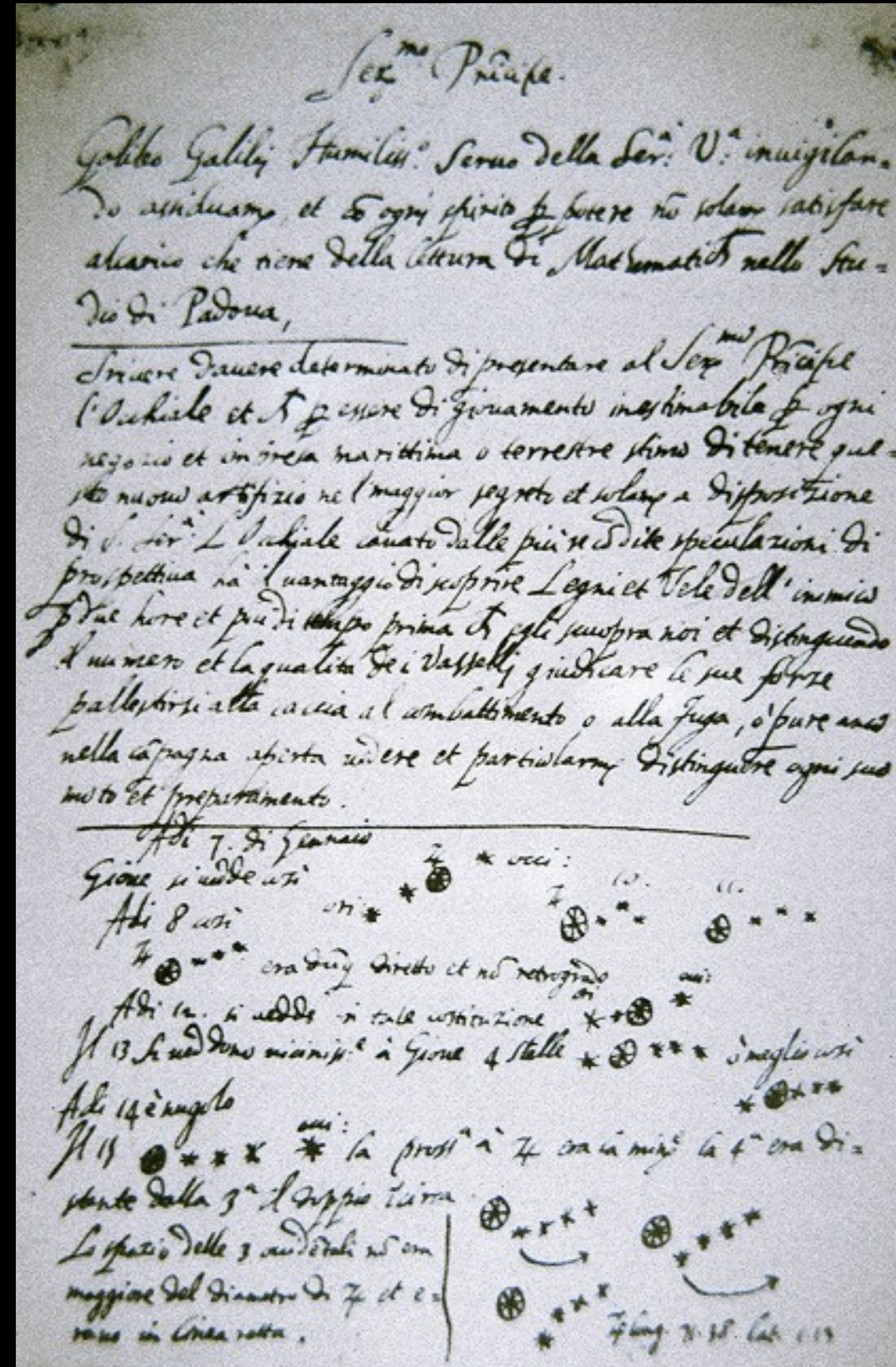
Adi 14 è nugolo

Il 15 così: ⊗ * * * * la pross.a à ♃ era la minore la 4a era distante dalla 3a il doppio incirca.

Lo spatio delle 3 occidentali non era maggiore del diametro di ♃ et erano in linea retta.

♃ long. 71.38. lat. 1.13





Ser.mo Principe.

Galileo Galilei Humiliss.o Servo della Ser.tà V.a invigilando assiduam.te et con ogni spirito per potere non solam.te satisfare al carico che tiene della lettura di Matematiche nello Studio di Padova,

Tiene d'avere determinato di presentare al Ser.mo Principe l'Occhiale et per essere di giovamento inestimabile per ogni negotio et impresa marittima o terrestre stimo di tenere questo nuovo artifizio nel maggior segreto et solam.te a disposizione di V. Ser.tà L'Occhiale cavato dalle più recondite speculazioni di prospettiva ha il vantaggio di scoprire Legni et Vele dell'inimico per due hore et più di tempo prima che egli scuopra noi et distinguendo il numero et la qualità dei Vasselli giudicare le sue forze pallestirsi alla caccia al combattimento o alla fuga, o pure ancora nella campagna aperta vedere et particolarm.te distinguere ogni suo moto et preparamento.

Adi 7. di Gennaio Giove si vedeva così

Adi 8 così

era dunque diretto et non retrogrado

Adi 12. si vedde in tale costituzione

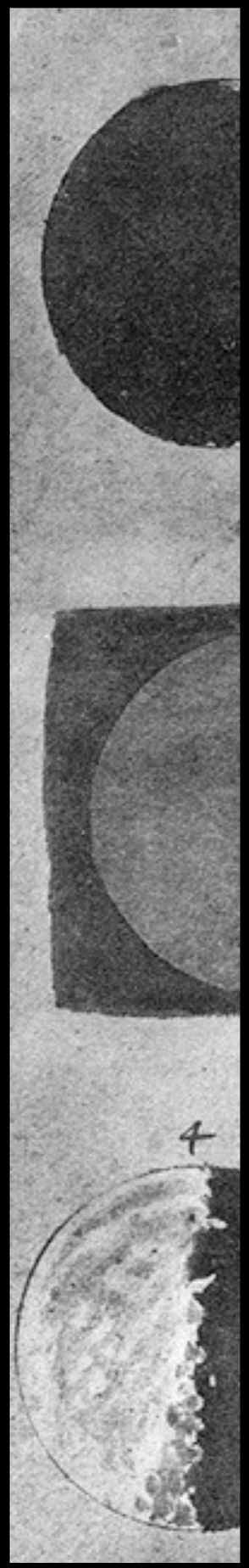
Il 13 si veddono vicinissime à Giove 4 stelle o meglio così

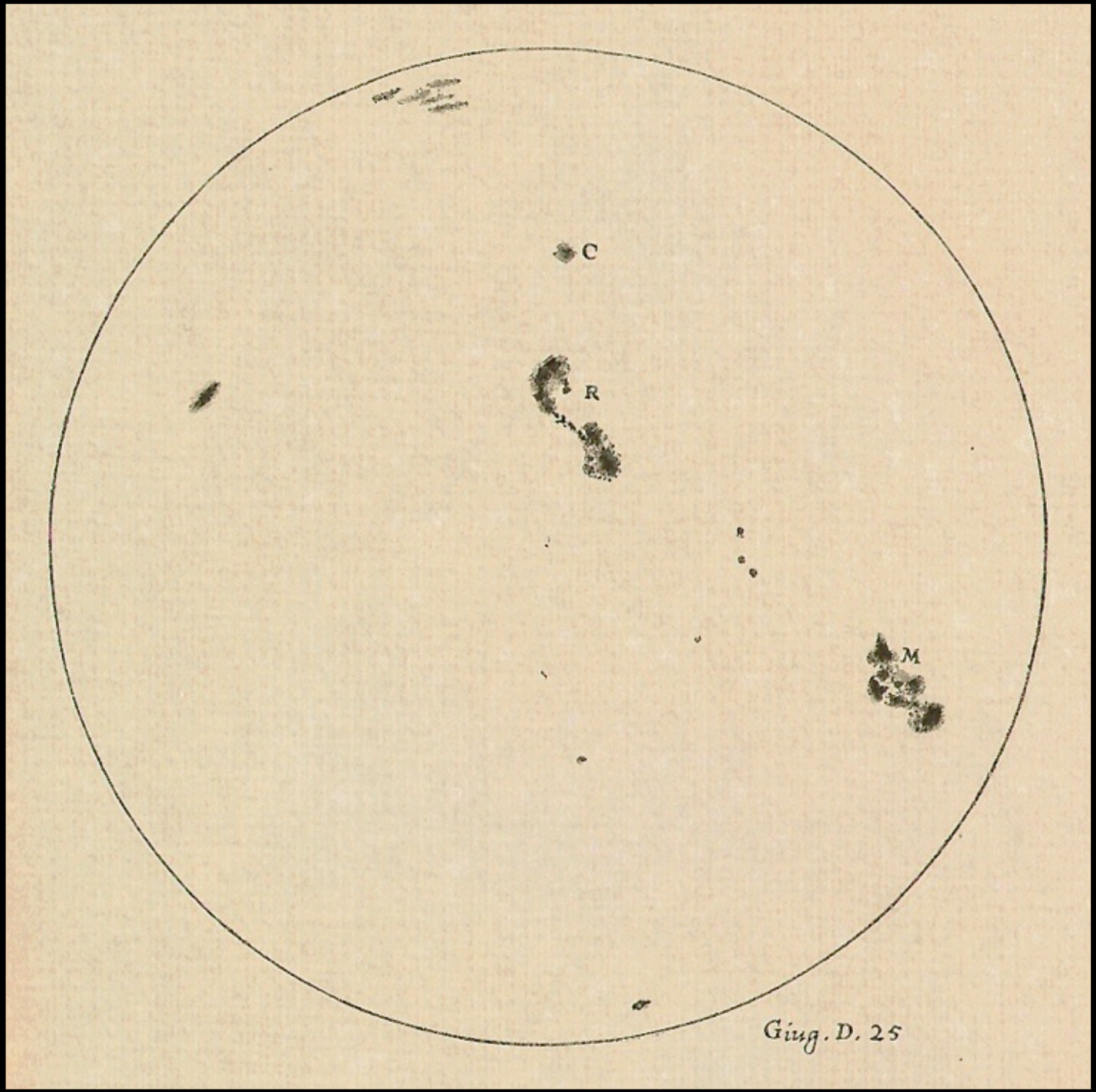
Adi 14 è nugolo

Il 15 la pross.a à ♃ era la mi.re la 4.a era distante dalla 3.a il doppio in circa

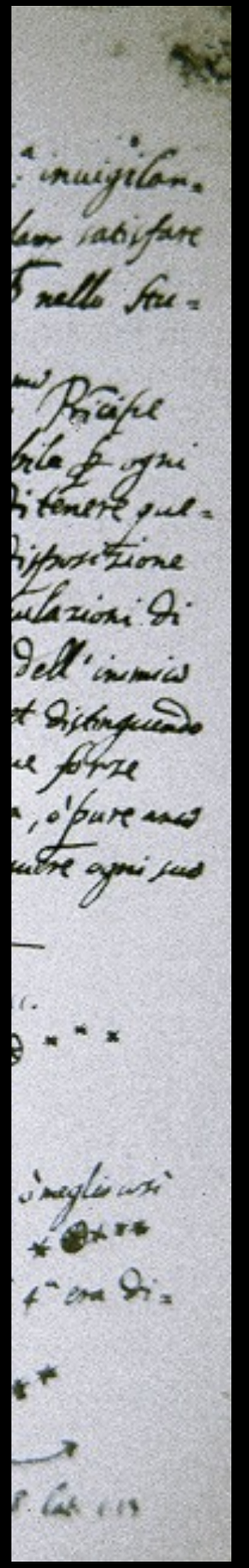
Lo spatio delle 3 occidentali non era maggiore del diametro di ♃ et erano in linea retta.

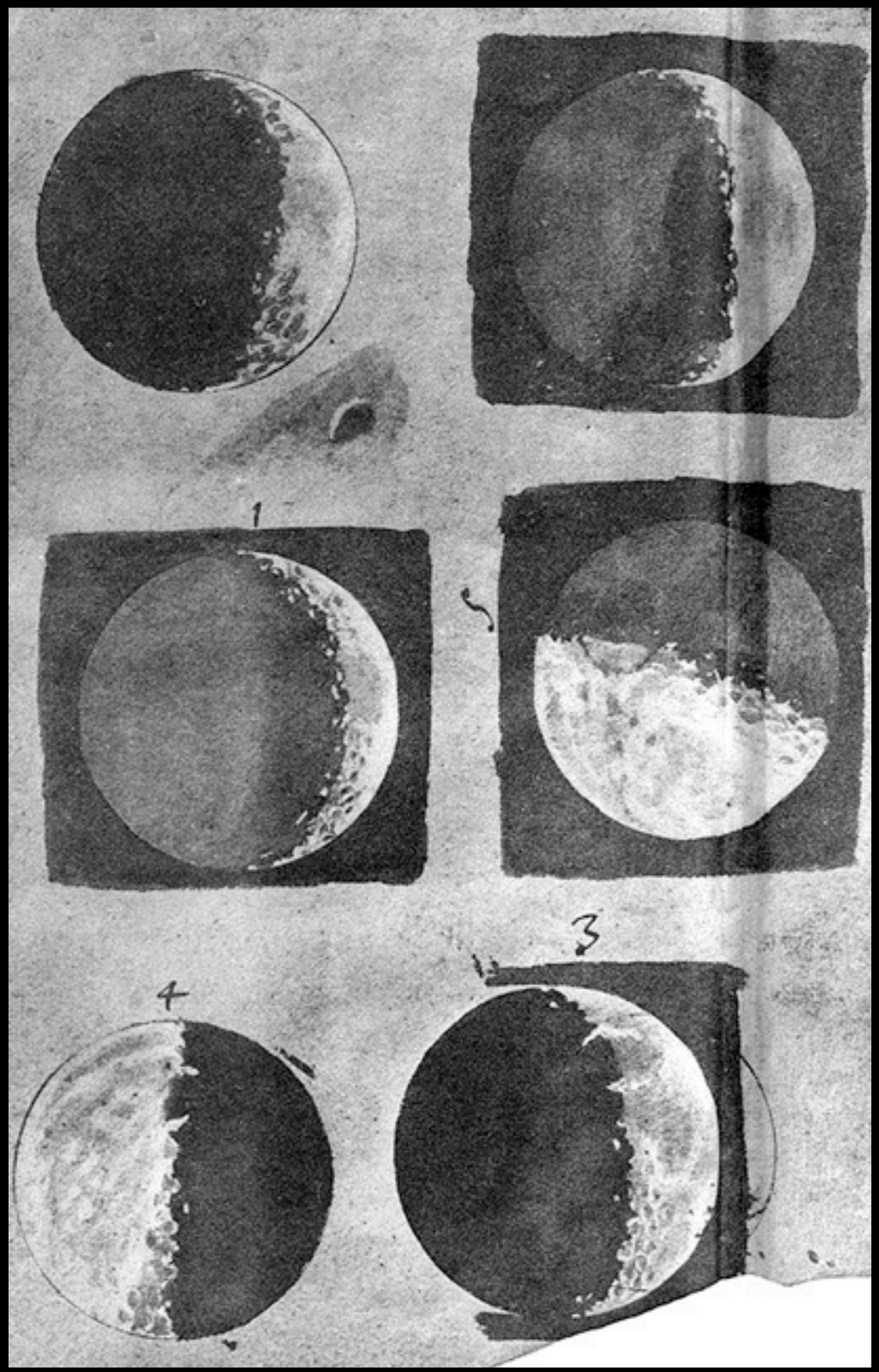
♃ long. 71.38 Lat. 1.13





Giug. D. 25





Adì 7. di Gennaio
Giove si vidde così ✻ ✻ così:
Adì 8 così così ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻
✻ ✻ ✻ ✻ era drizzo diretto et nō retrogrado così
Adì 12. si vidde in tale costituzione ✻ ✻ così
Il 13 si vedevano vicinissime a Giove 4 stelle ✻ ✻ ✻ ✻ disuguali così
Adì 14 è unito così
Il 15 ✻ ✻ ✻ ✻ così: la prossima a ✻ era più lucida la 4ª era distante dalla 3ª il doppio di essa
La grandezza delle 3 suddette nō era maggiore del diametro di ✻ et erano in linea retta.

✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ Fileng. 1. 15. Cal. 113

Adi 7. di Gennaio
Giove si vedde così ♃ occ:
Adi 8 così ori.
♃ era dunq diretto et no retrogrado occ:
Adi 12. si vedde in tale costituzione ori.
Il 13 si veddono vicinissime à Giove 4 stelle o meglio così
Adi 14 è nugolo
Il 15 occ: la pross.ª à ♃ era la minor la 4ª era di=
stante dalla 3ª il doppio circa
Lo spatio delle 3 occidentali no era
maggiore del diametro di ♃ et e=
rano in linea retta.
♃ long. 71.38. lat. 1.13

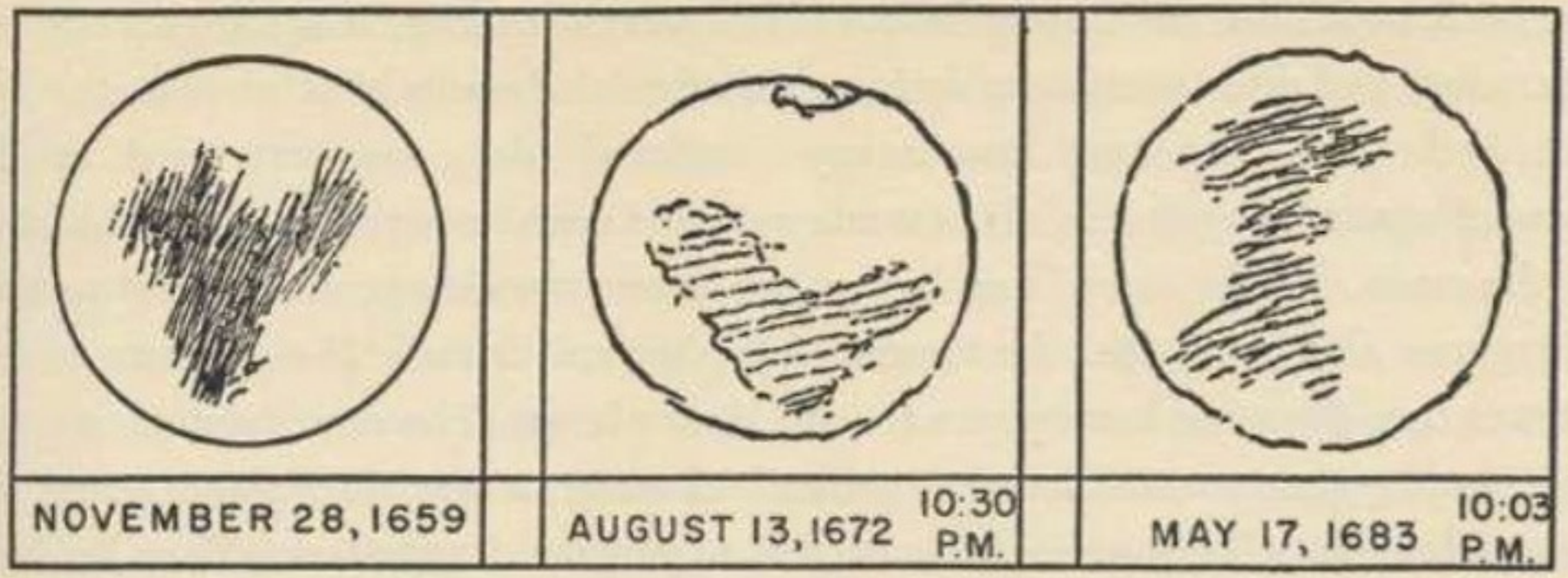
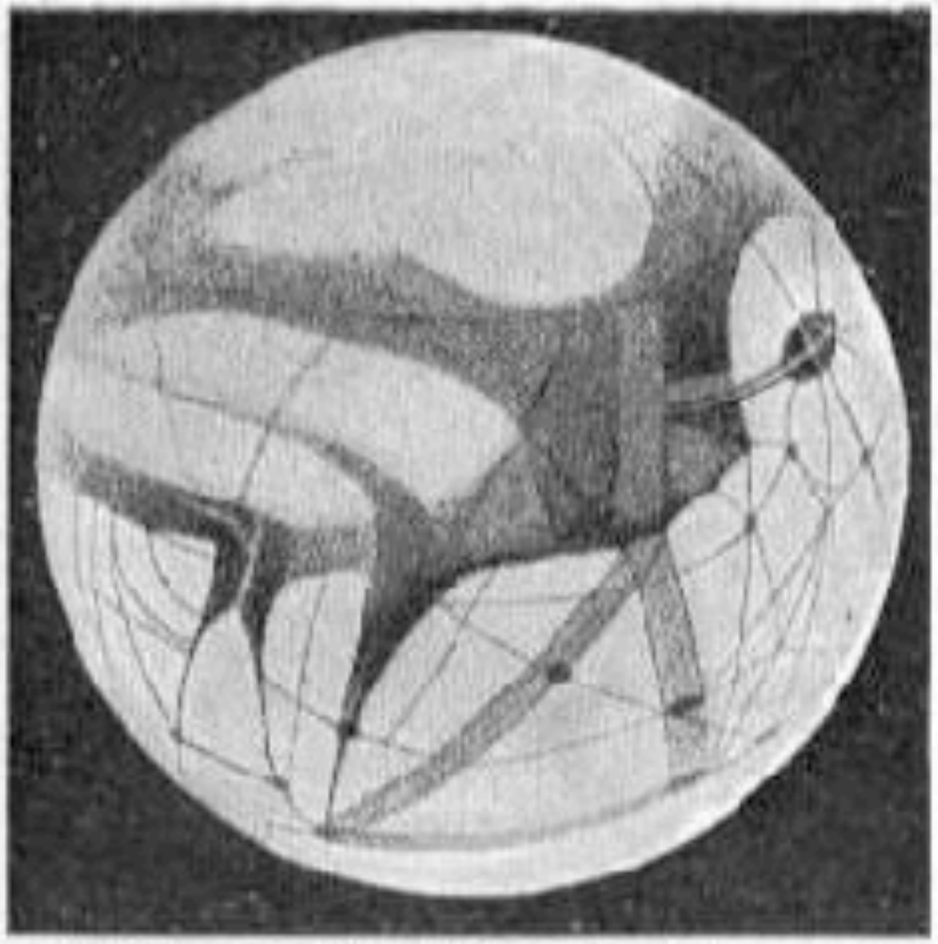


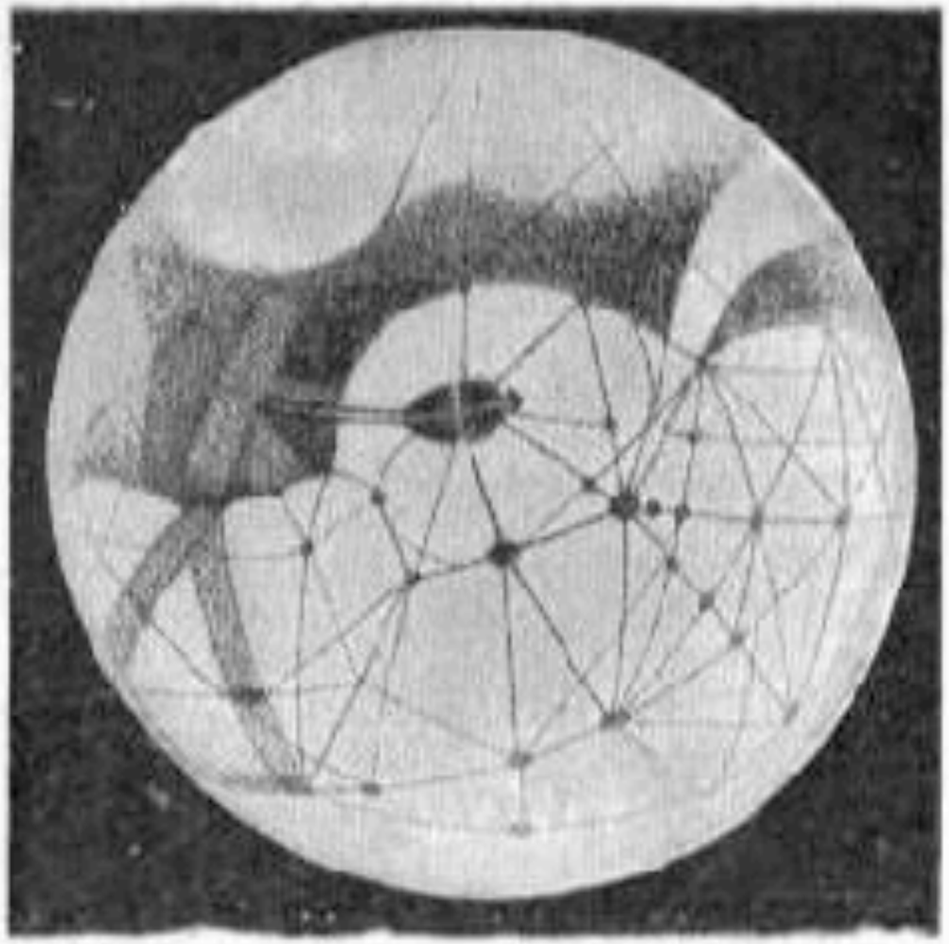
FIG. 3. Three drawings of Mars by Christiaan Huyghens

FIG. 4. Three drawings of Mars by Giacomo Filippo Maraldi

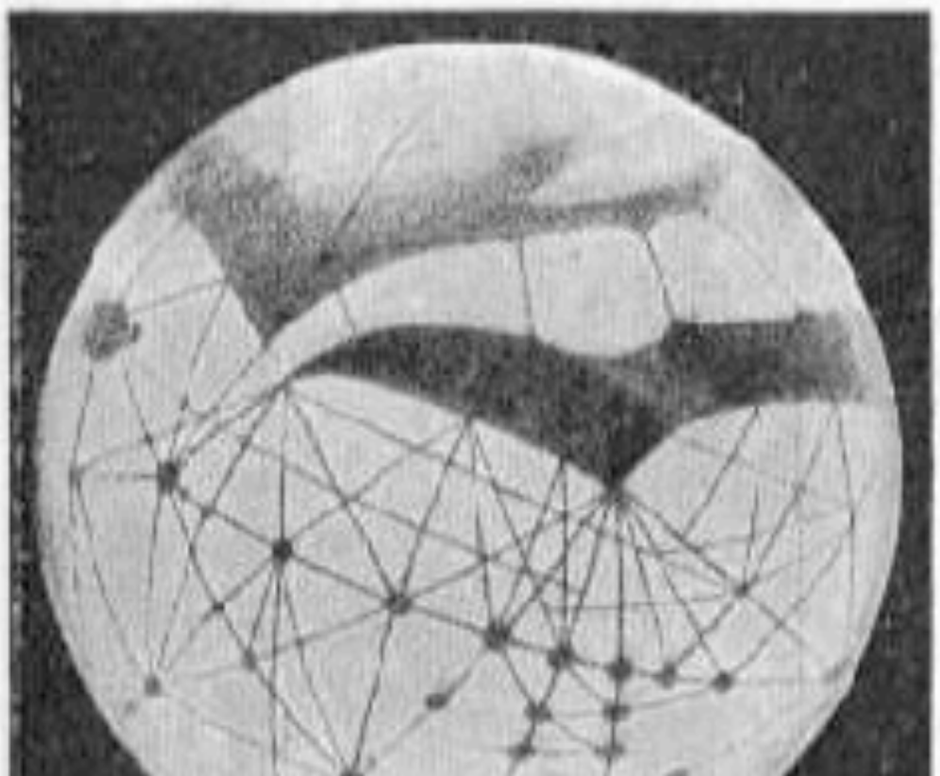
Drawing of Mars by
E. M. Antoniadi, 1909

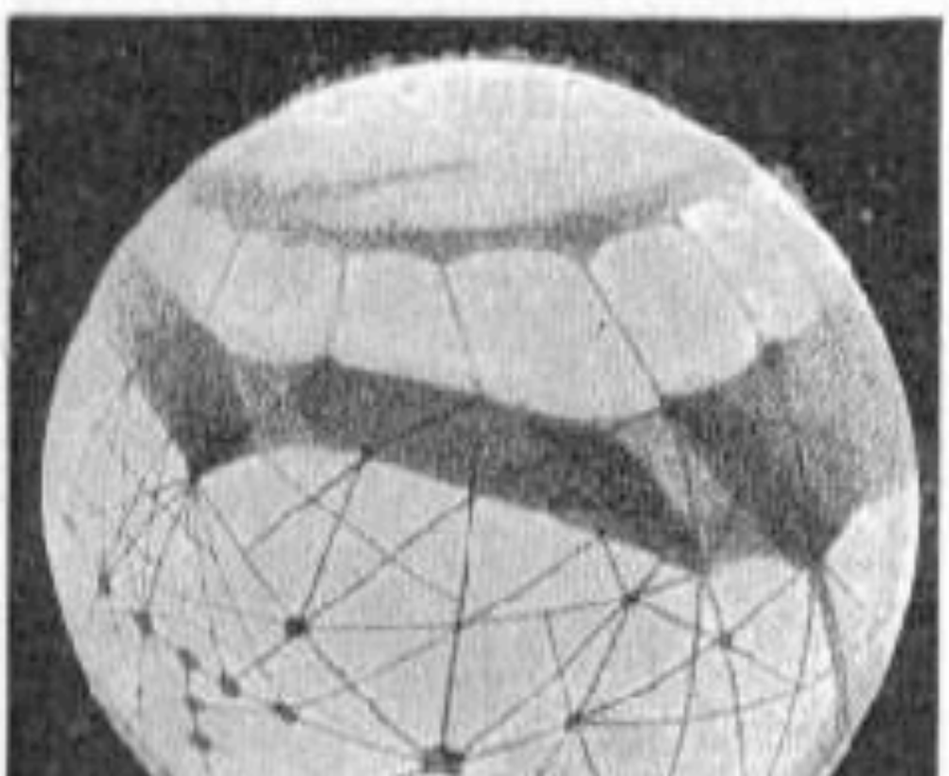


(1) Top of Fork on left is Fastigium Aryn. Dark Horn nearly central is Margaritifer Sinus



(2) Solis Lacus is nearly central. Double Nectar runs to the left from it

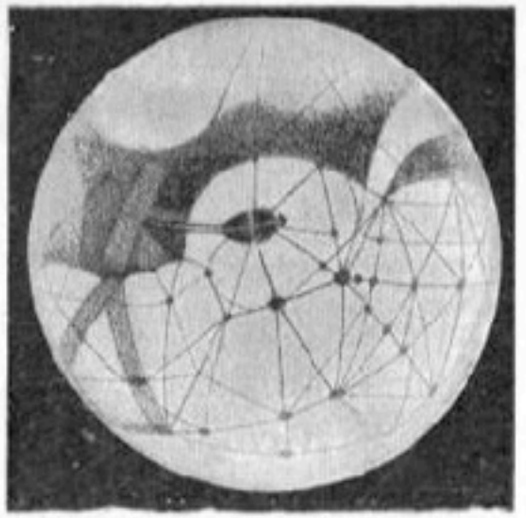




1.—1909 September 20. [illegible]
Excellent definition.

Drawing of Mars by
E. M. Antoniadi, 1909

(1) Top of Fork on left is Fastigium Aryn. Dark Horn nearly central is Margaritifer Sinus



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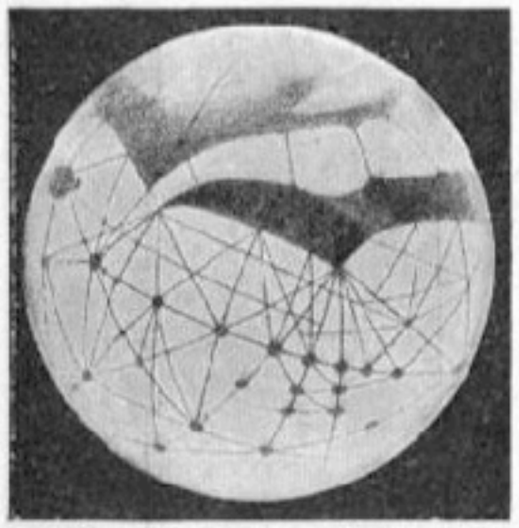
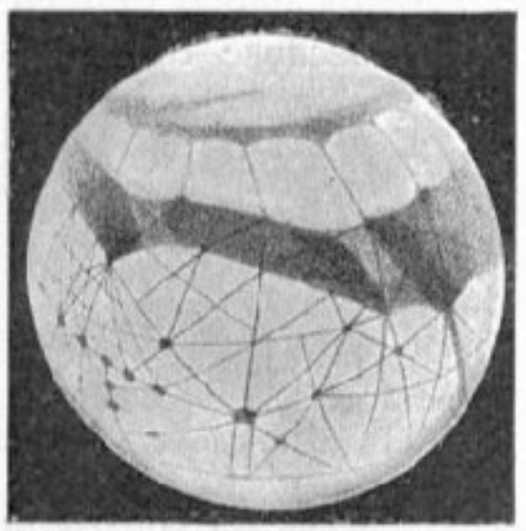
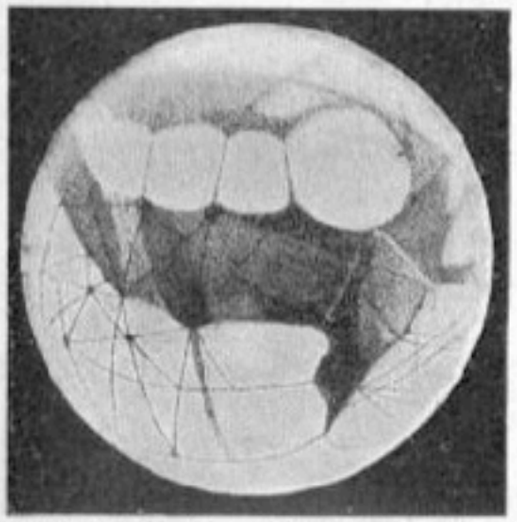


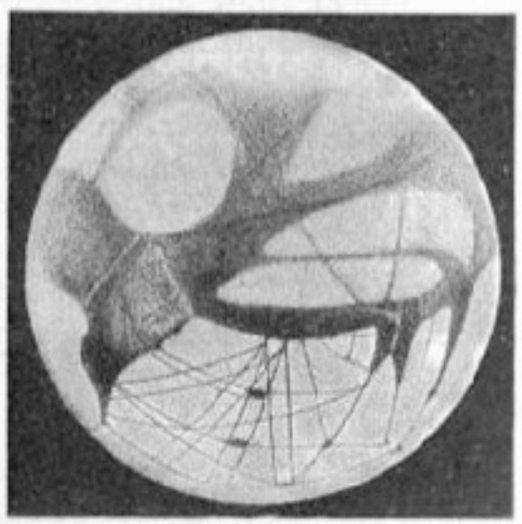
(3) Seven Canals diverge from Sinus Titanum. Eumenides Orcus threads Nine Oases



(4) The Rectangle is Trivium Charontis. Dark Mare Cimmerium is central

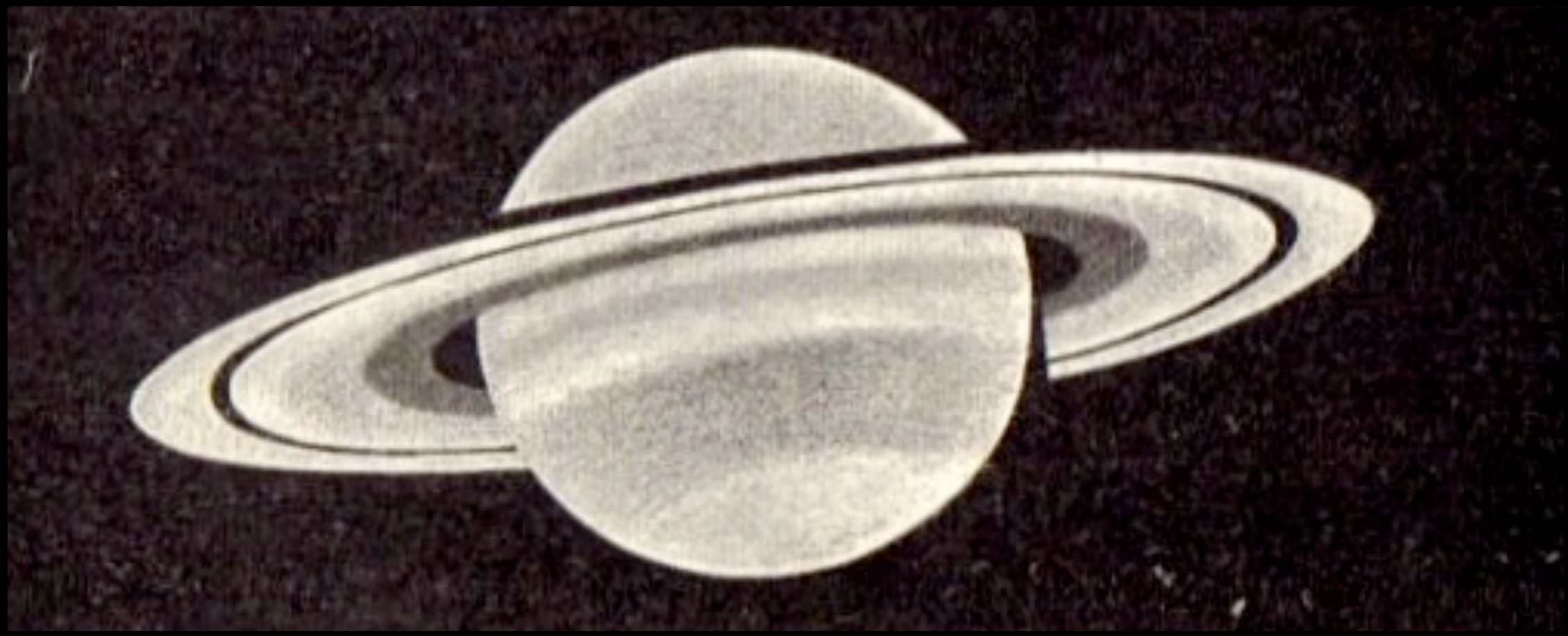


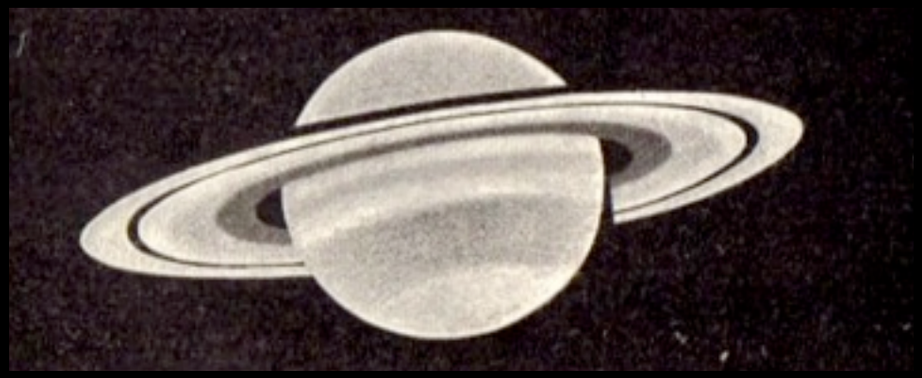
(5) Largest Roundish Area is Hellas. Below Hellas is the pointed Syrtis Major

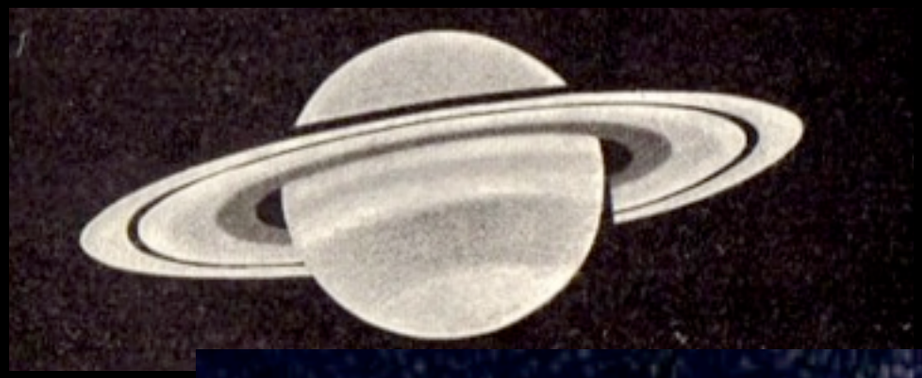


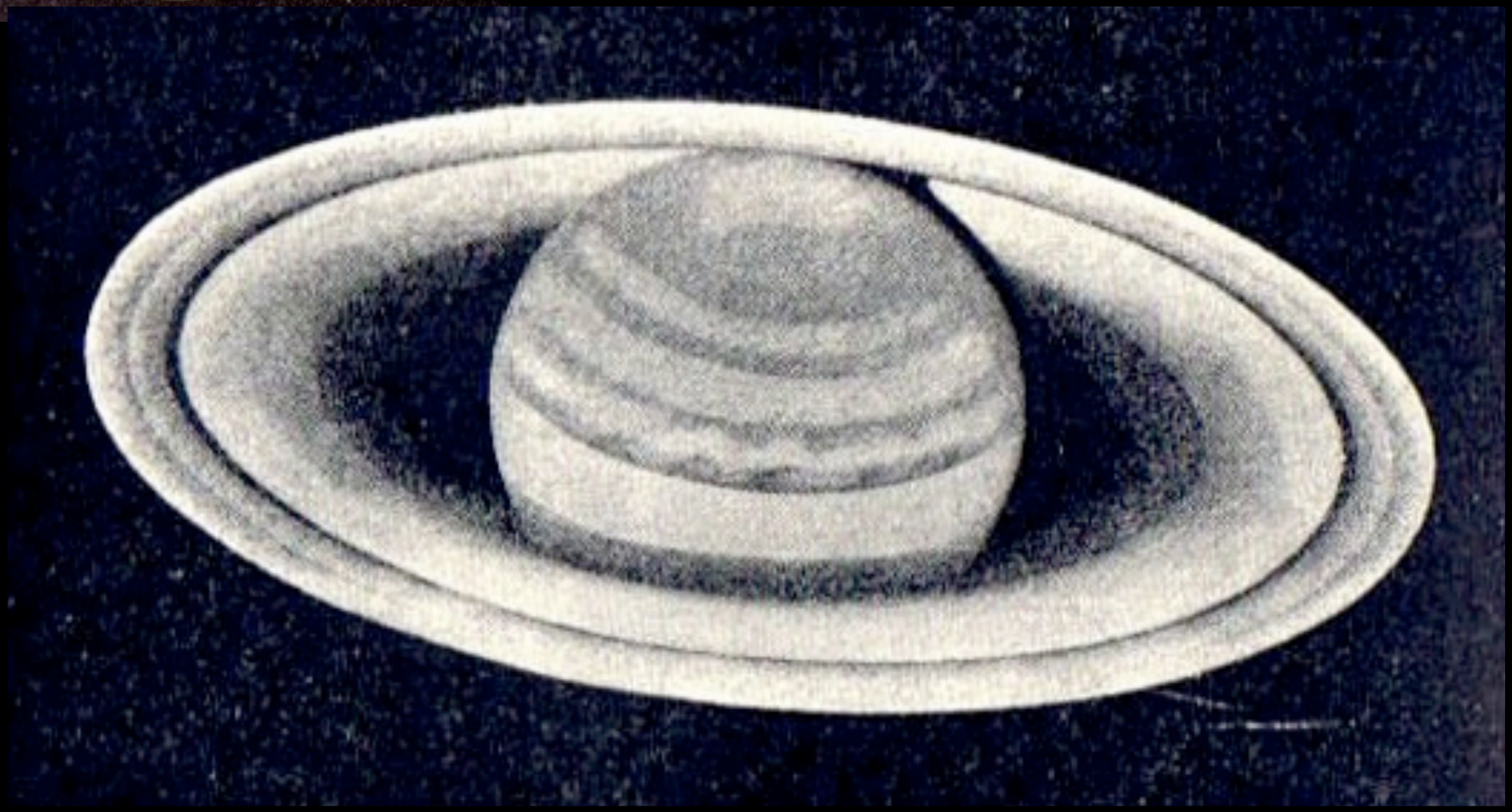
(6) Among Double Canals are Euphrates (nearly vertical), and Asopus perpendicular to it

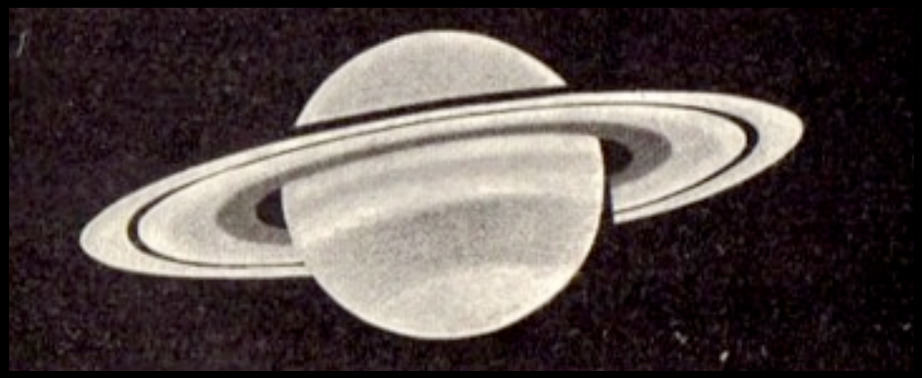
Mars according to Schiaparelli and Lowell (1877–1894)

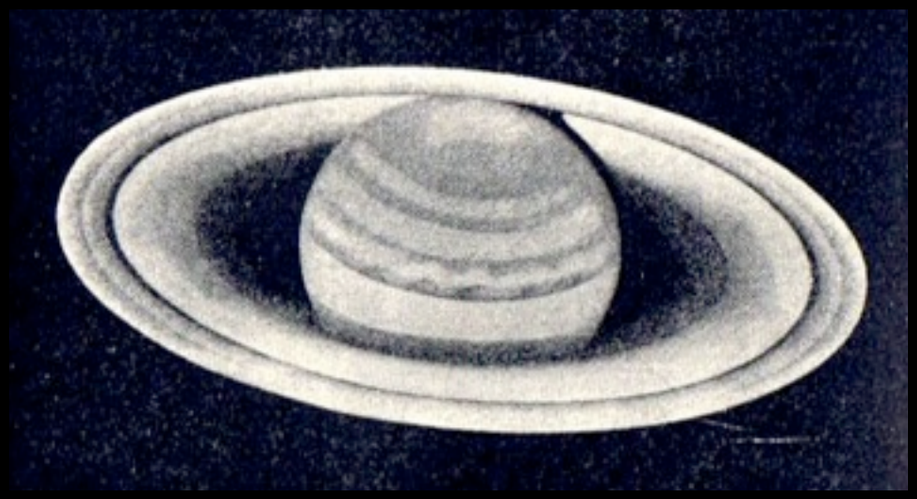


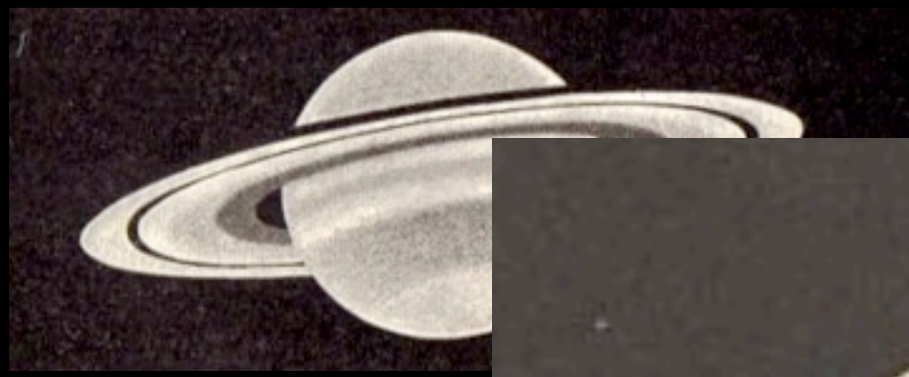


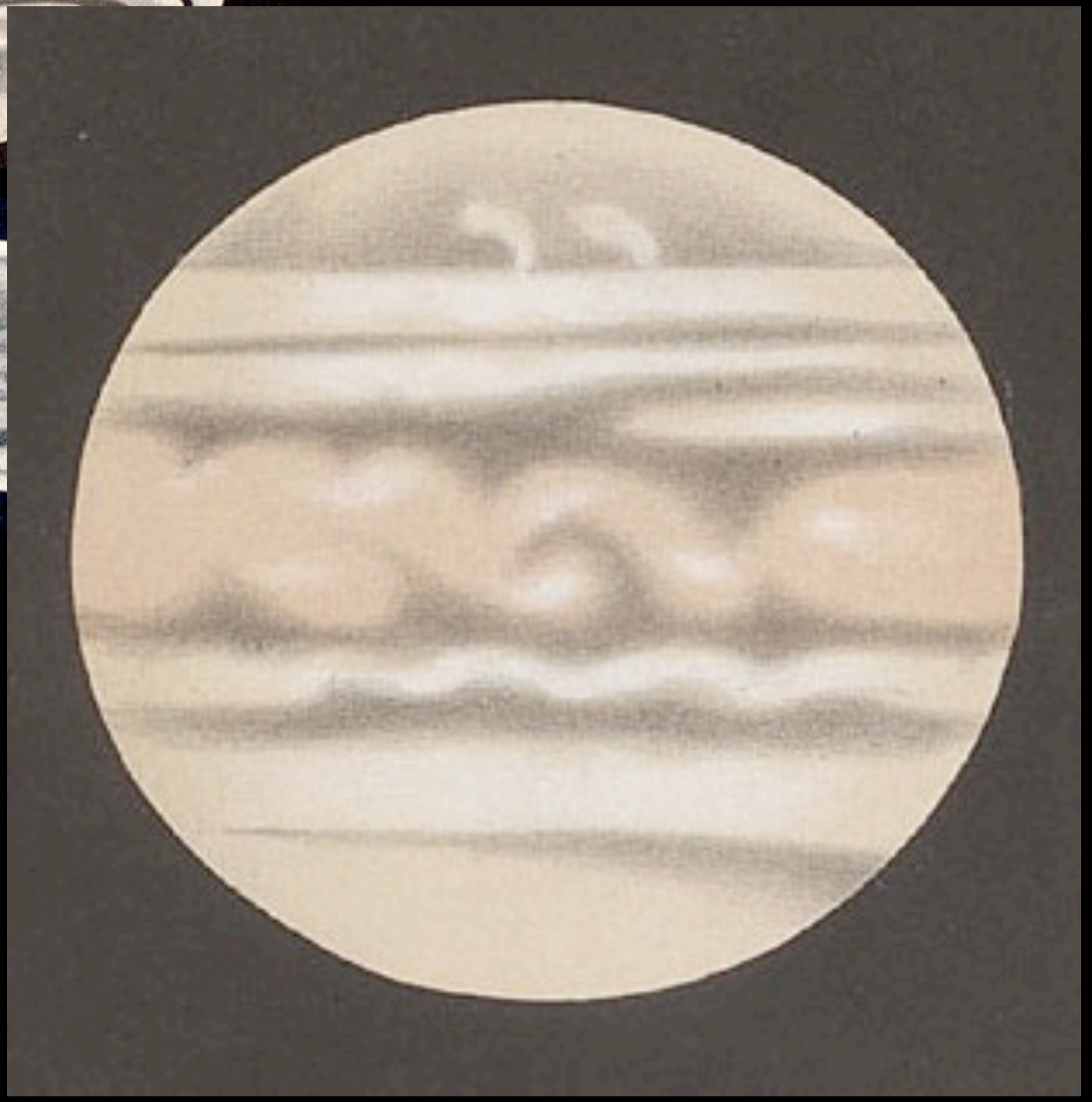


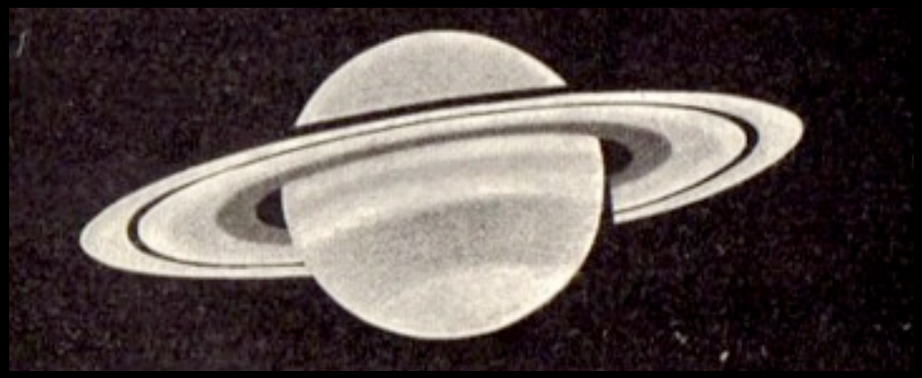


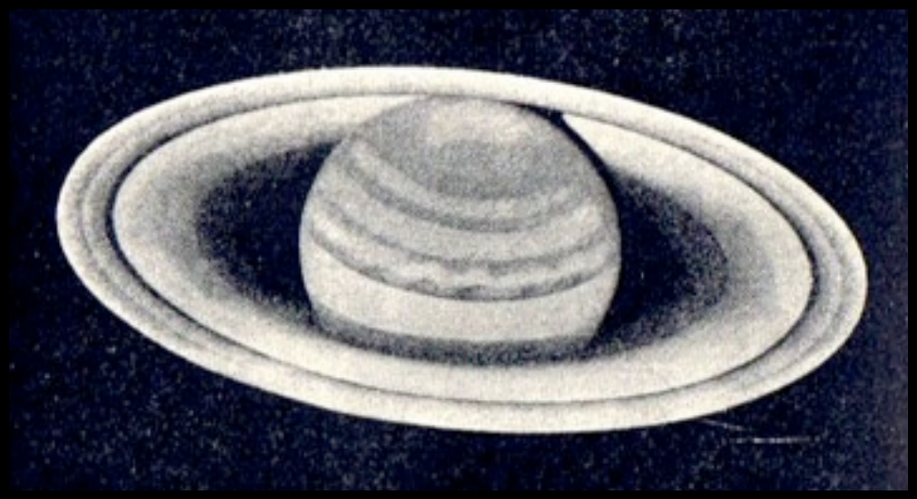


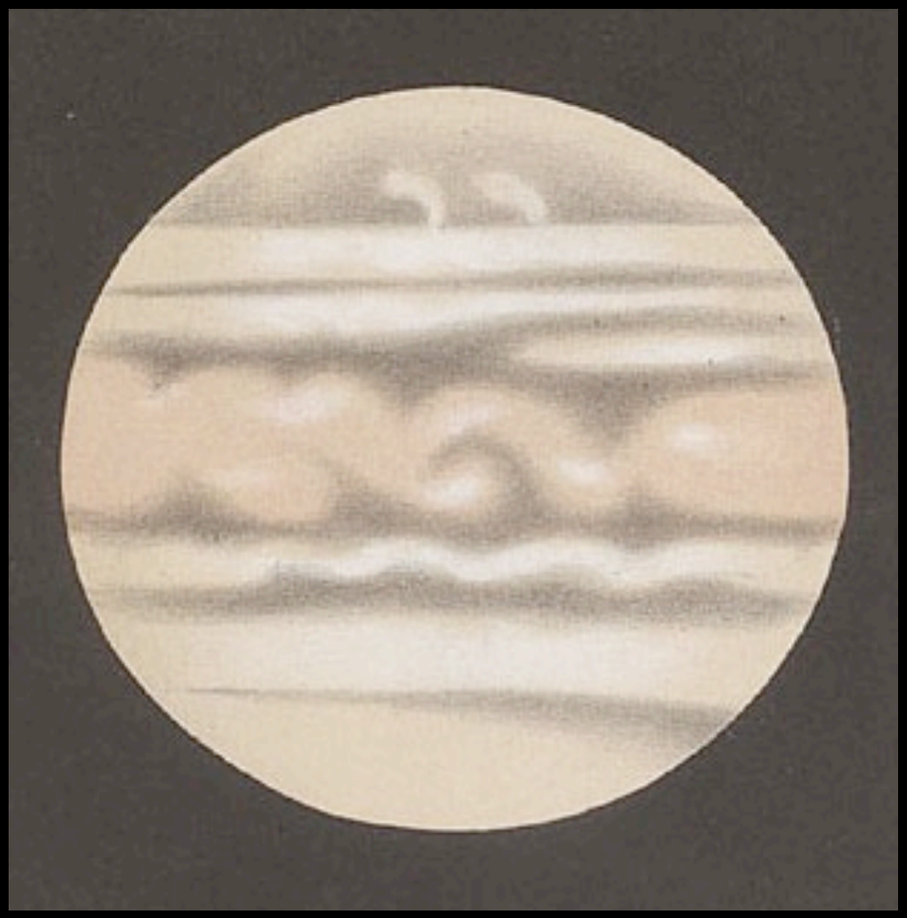


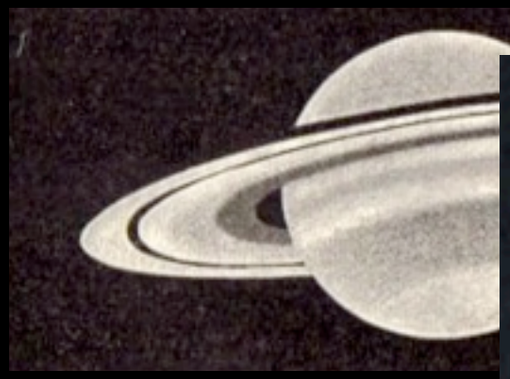


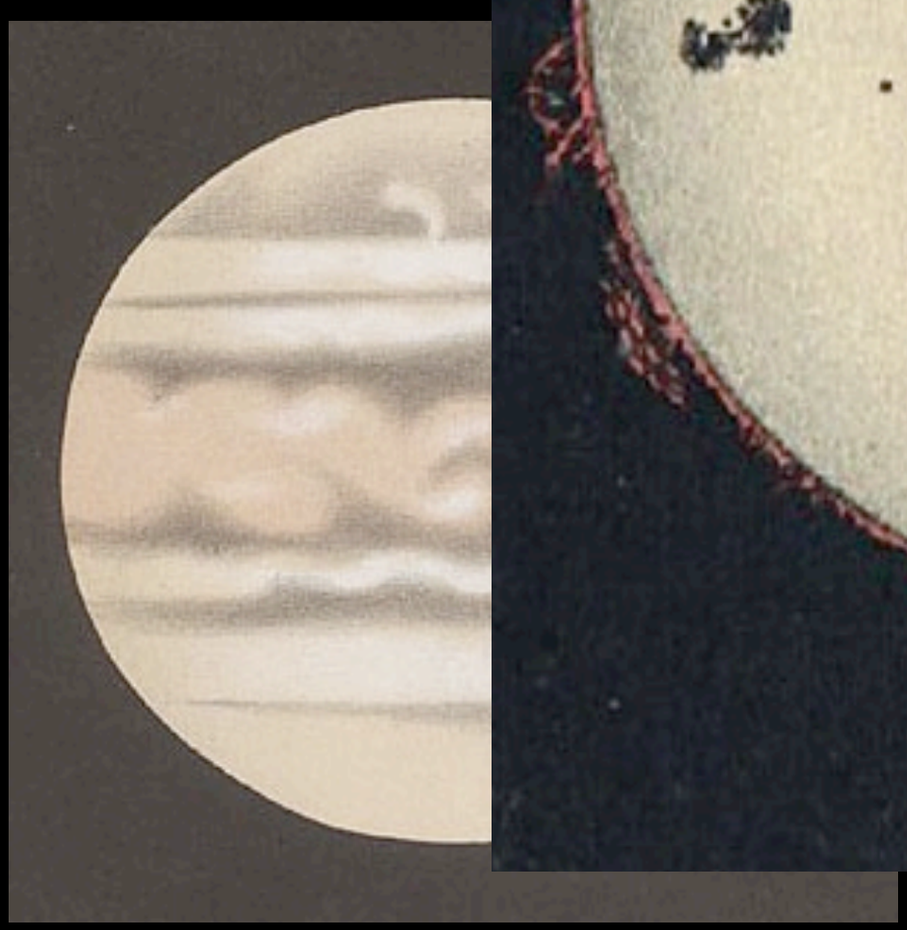


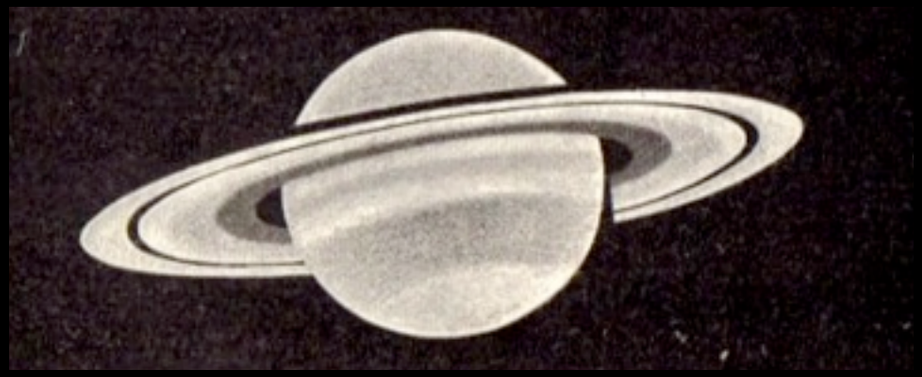


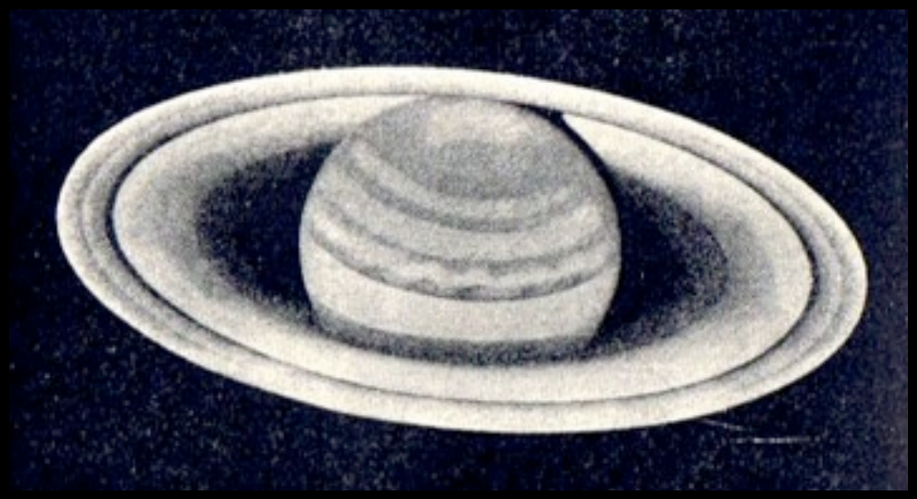


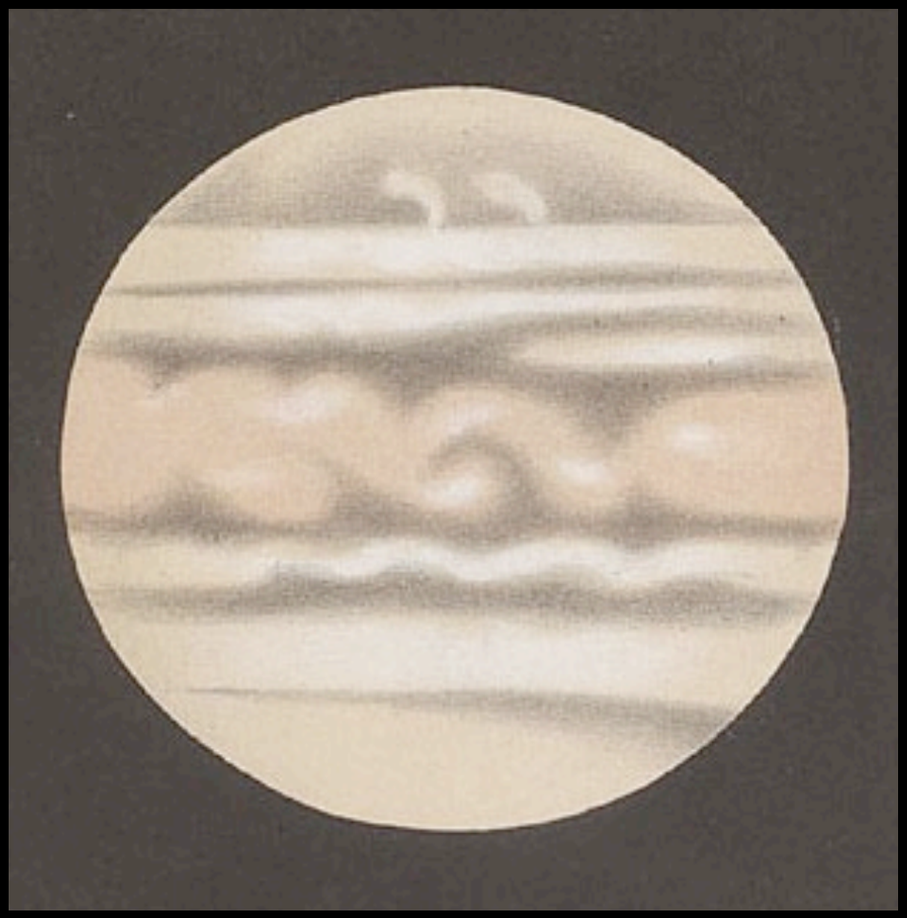


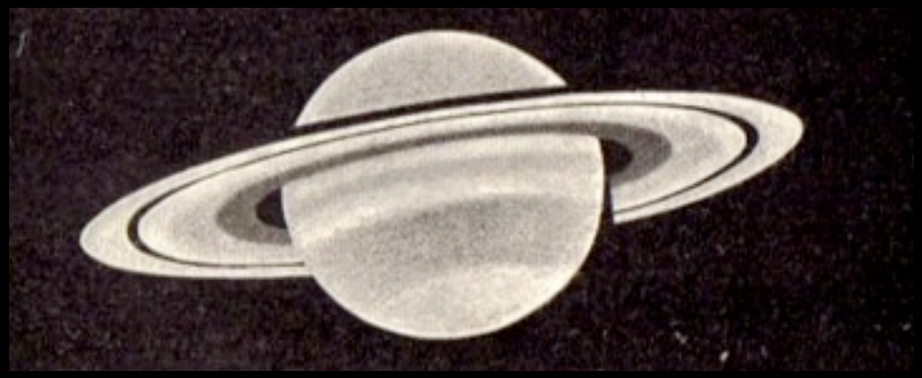


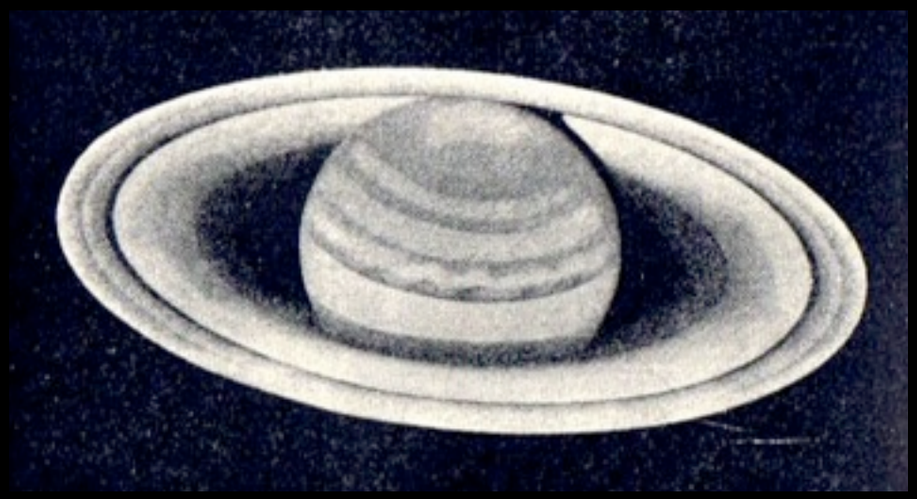












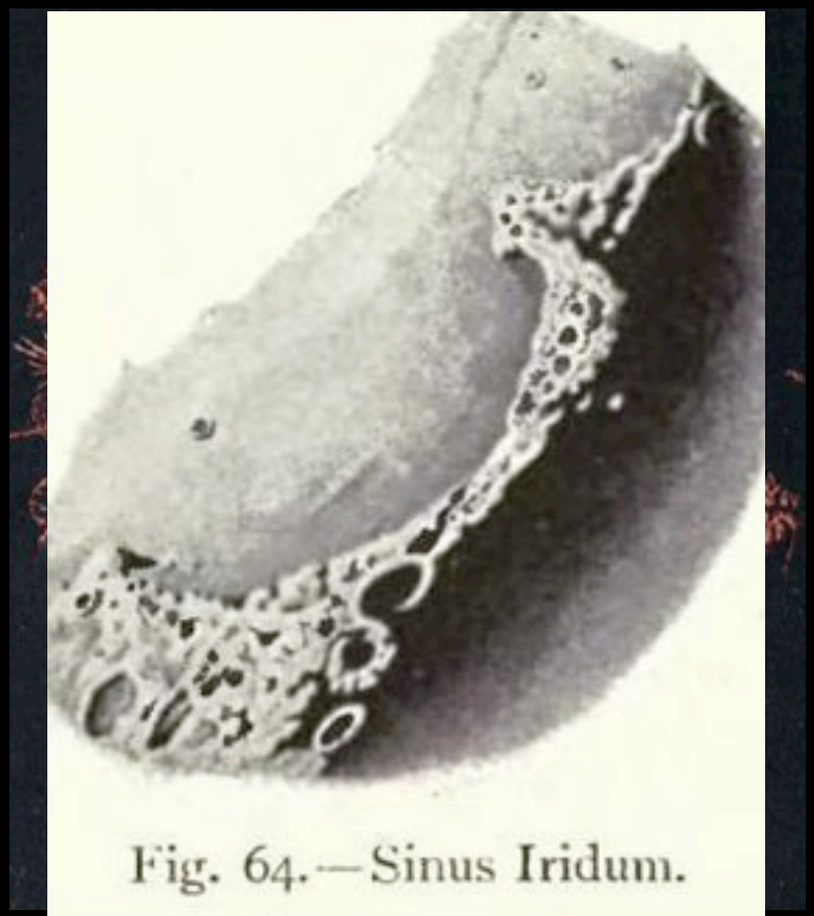
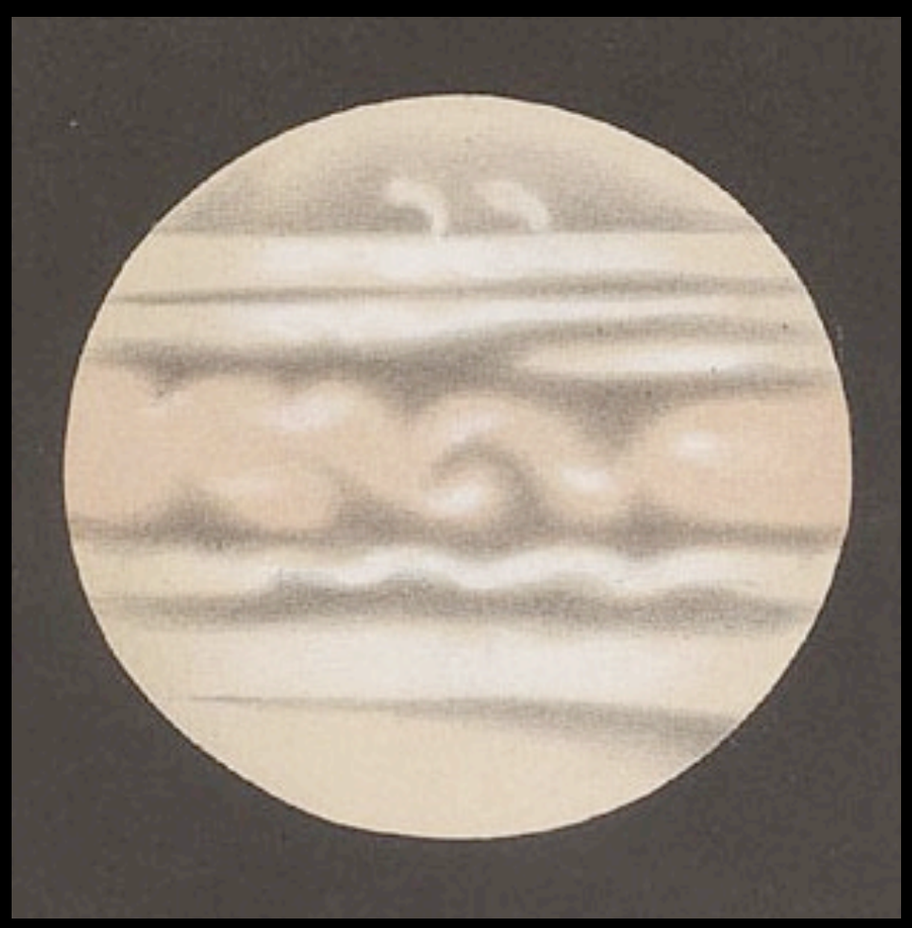


Fig. 64.—Sinus Iridum.



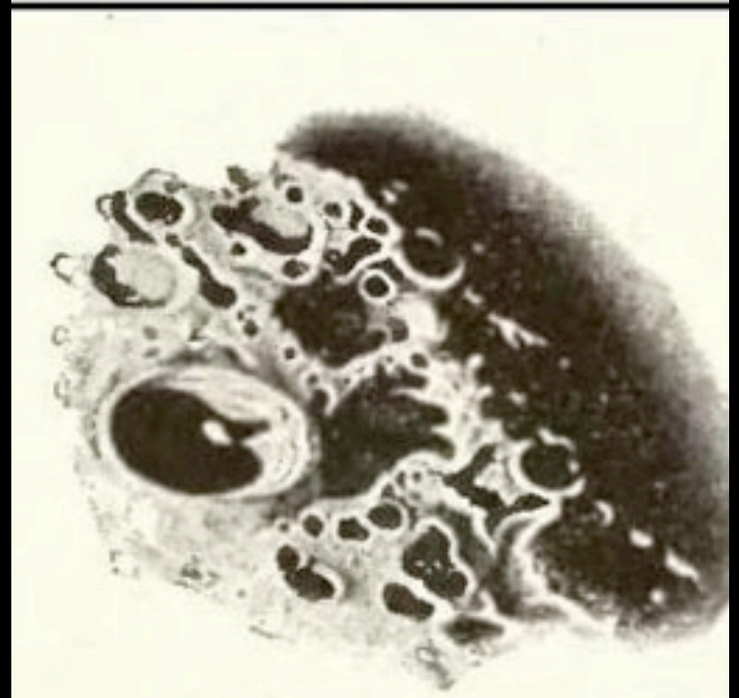
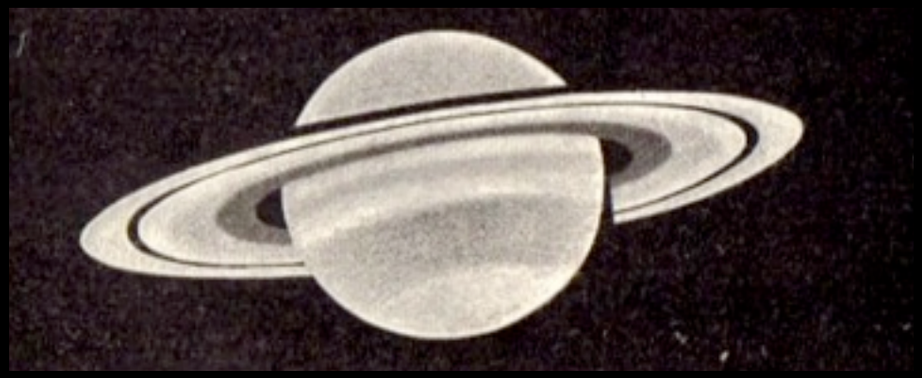
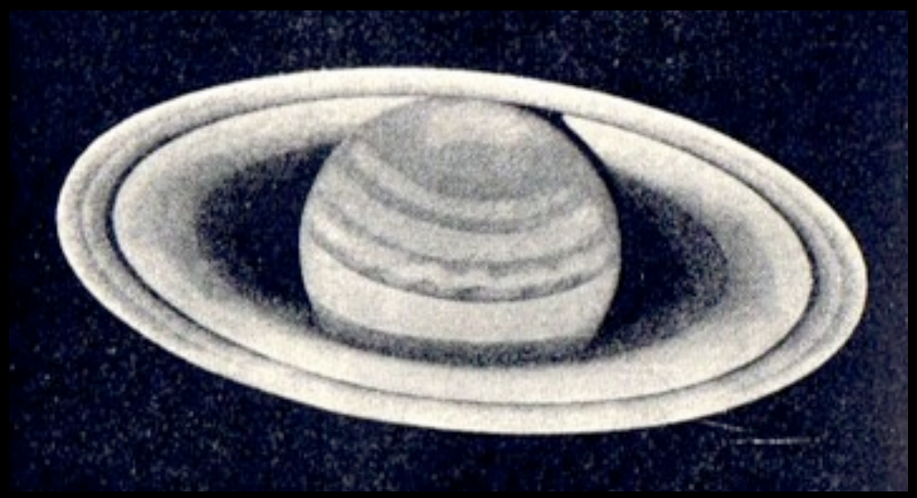


Fig. 67.—Tycho.





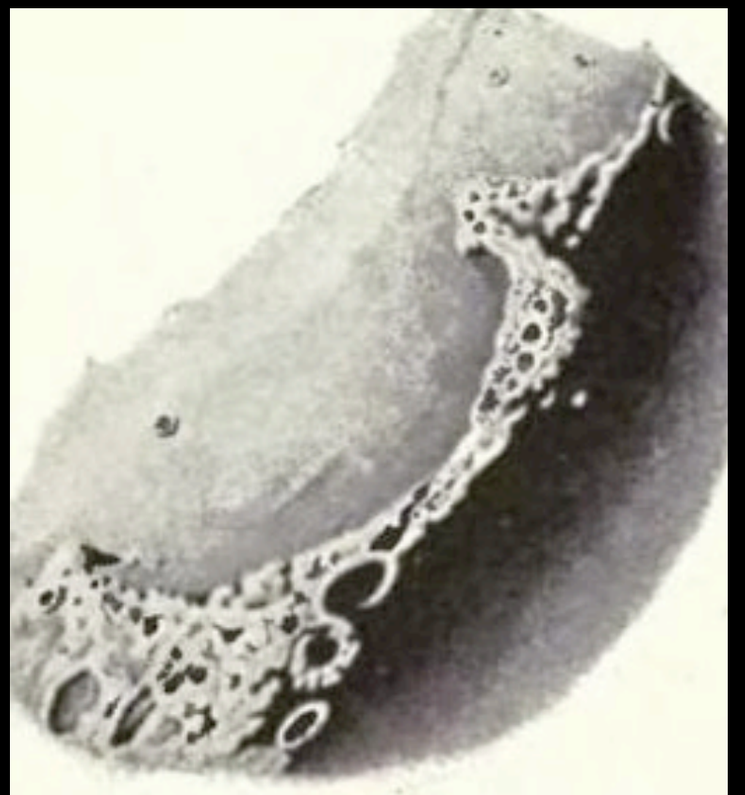


Fig. 64.—Sinus Iridum.

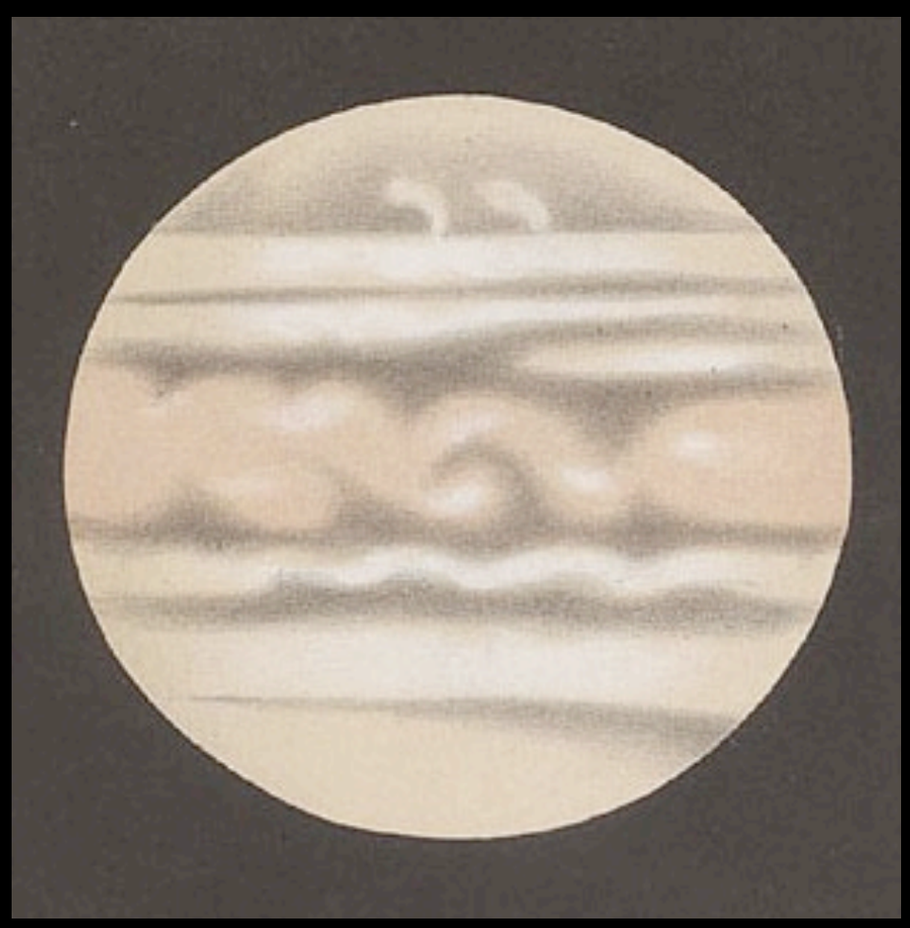
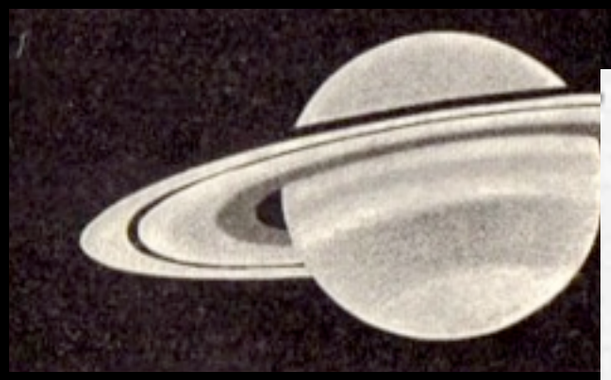
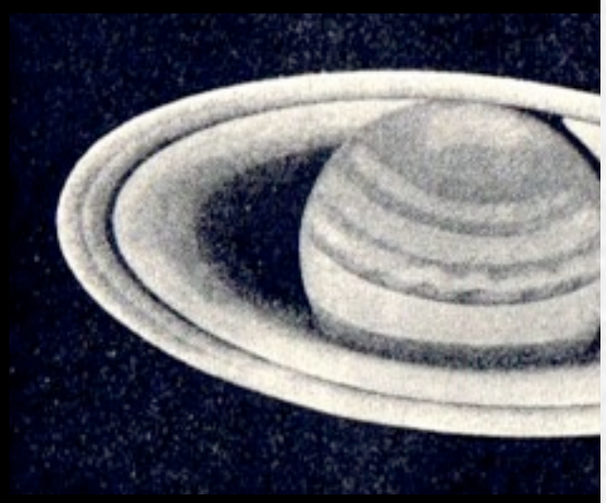
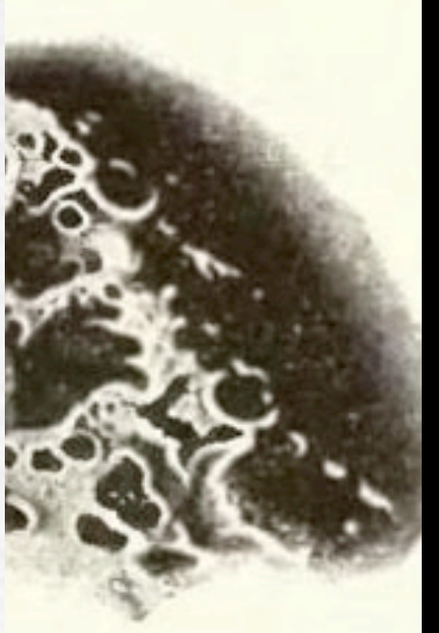


Fig. 67.—Tycho.

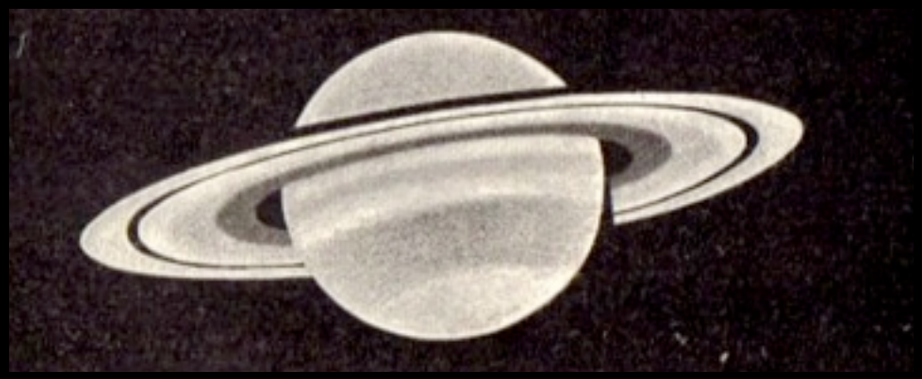


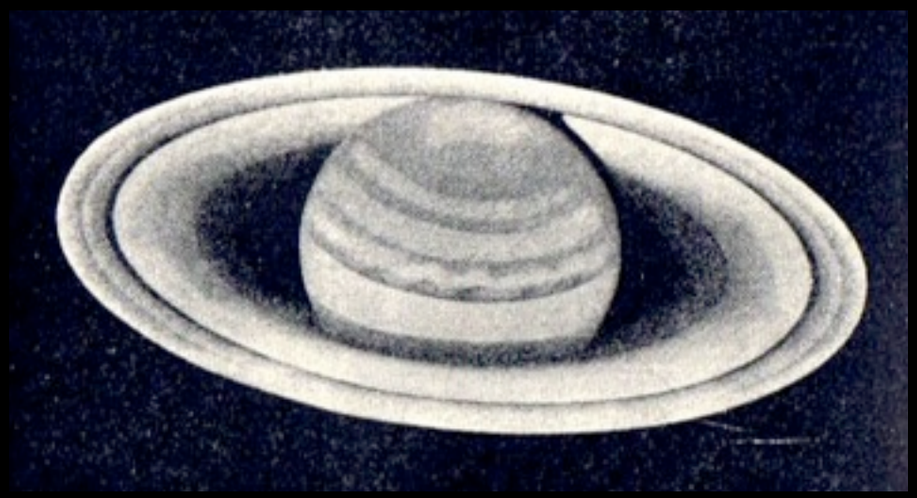


Sinus Iridum.



67.—Tycho.





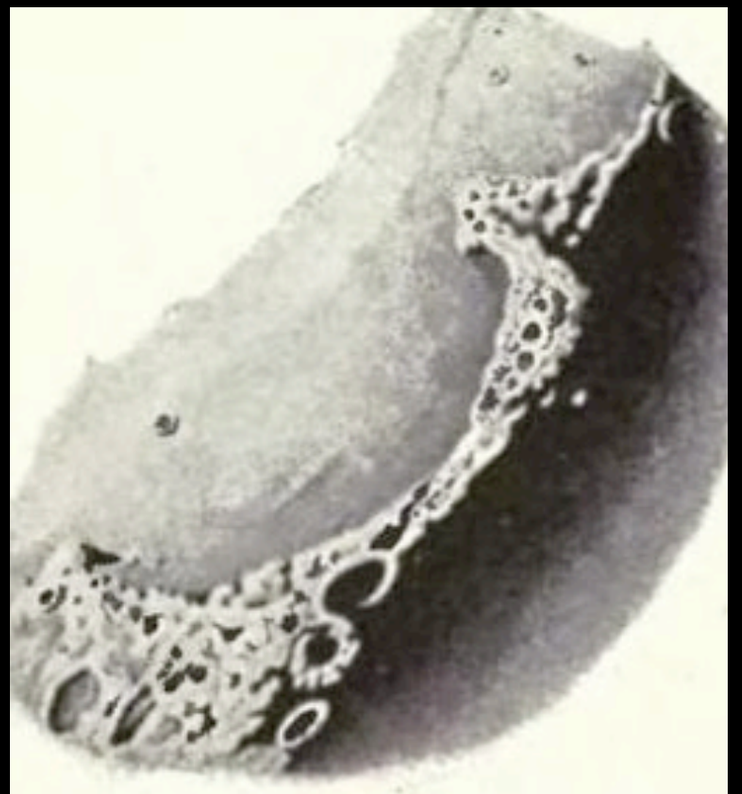
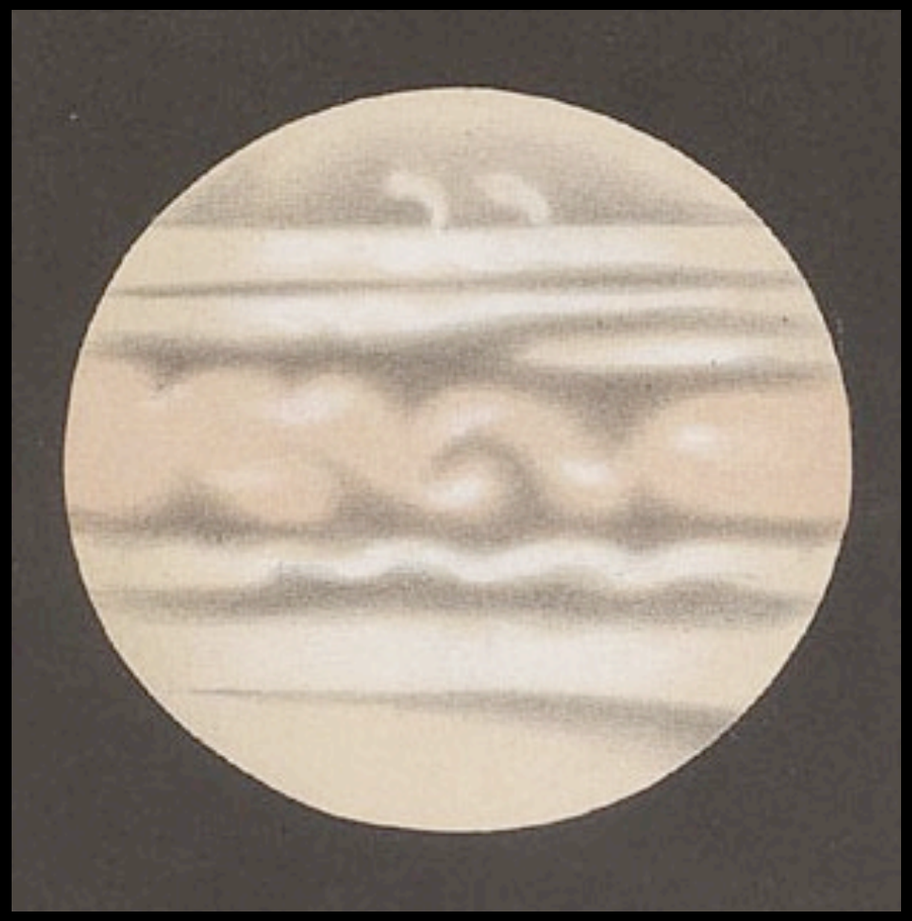
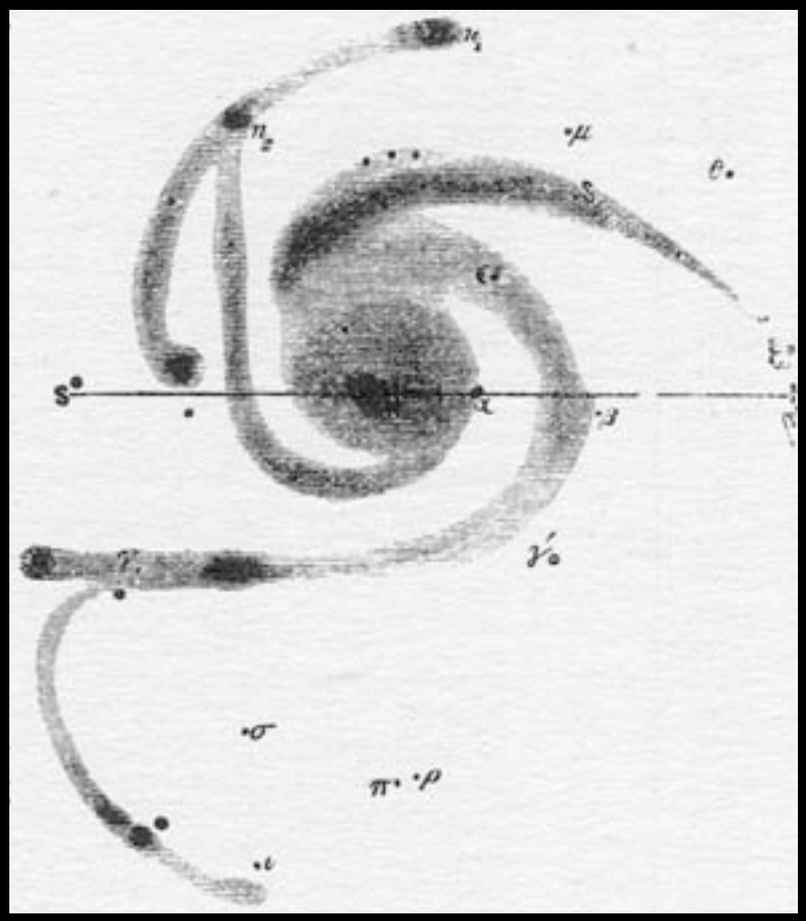


Fig. 64.—Sinus Iridum.





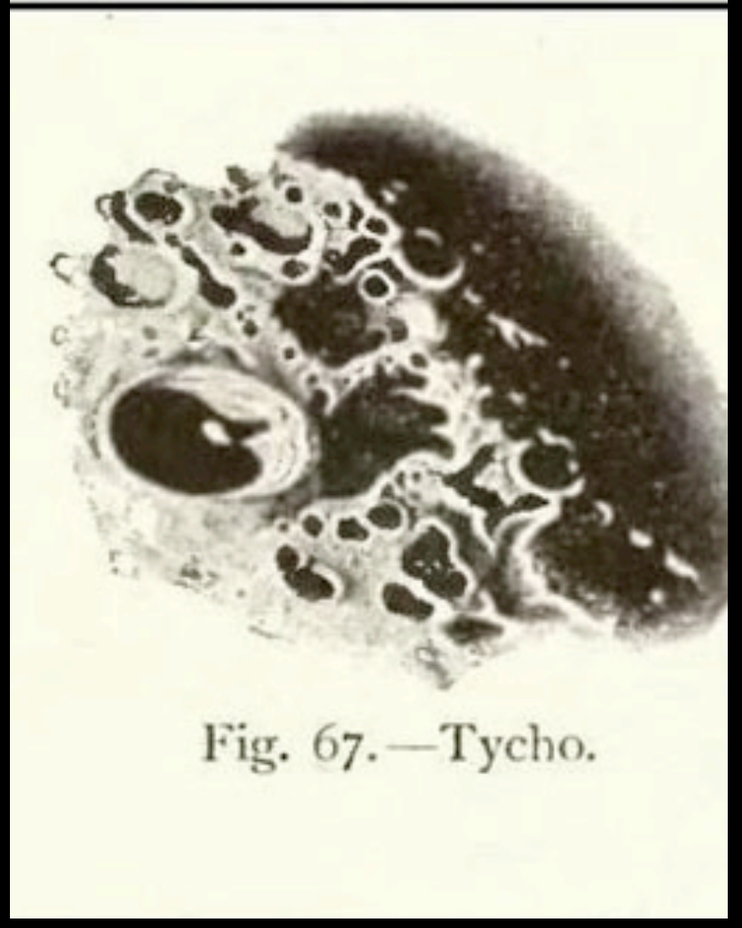
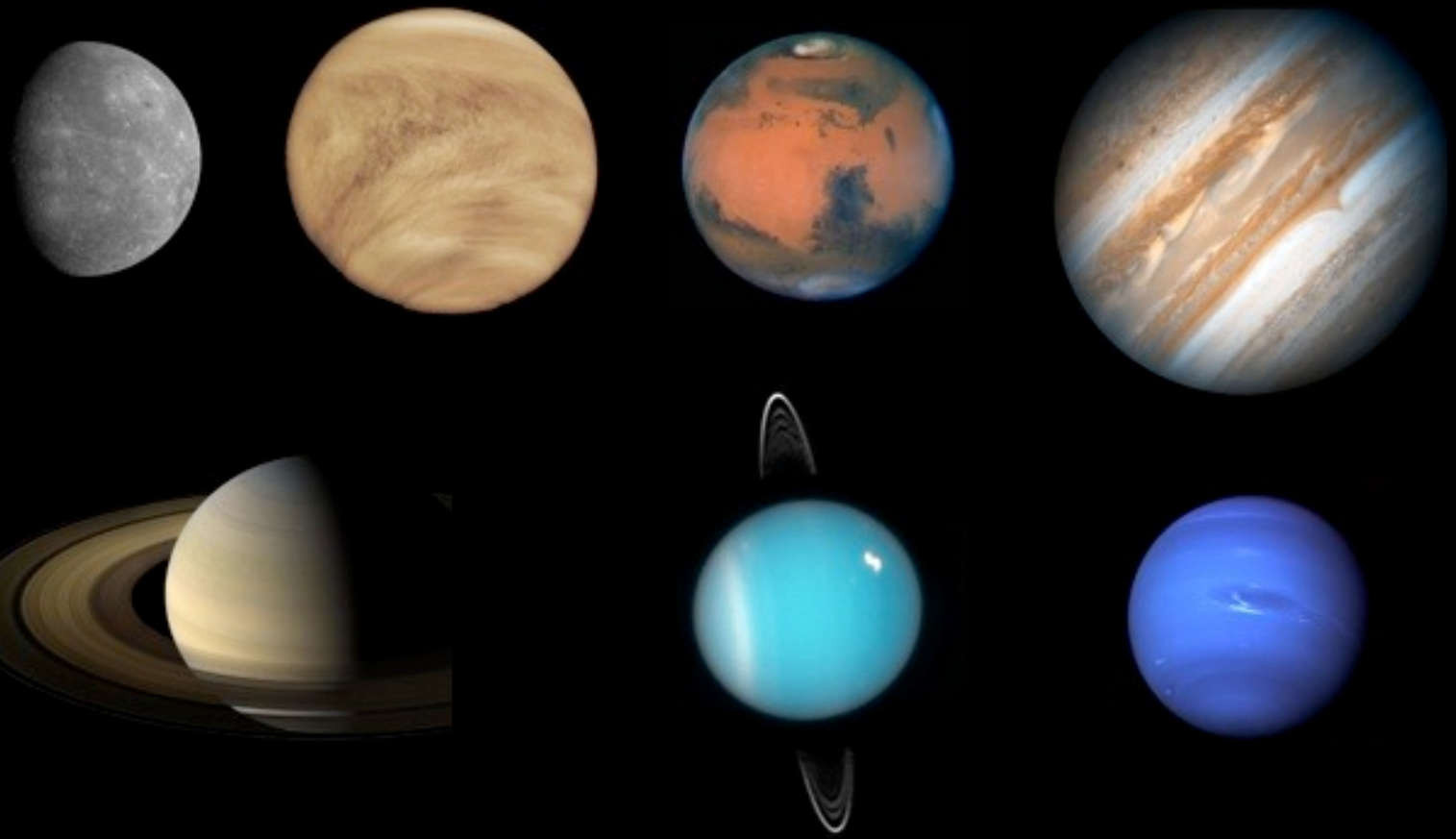
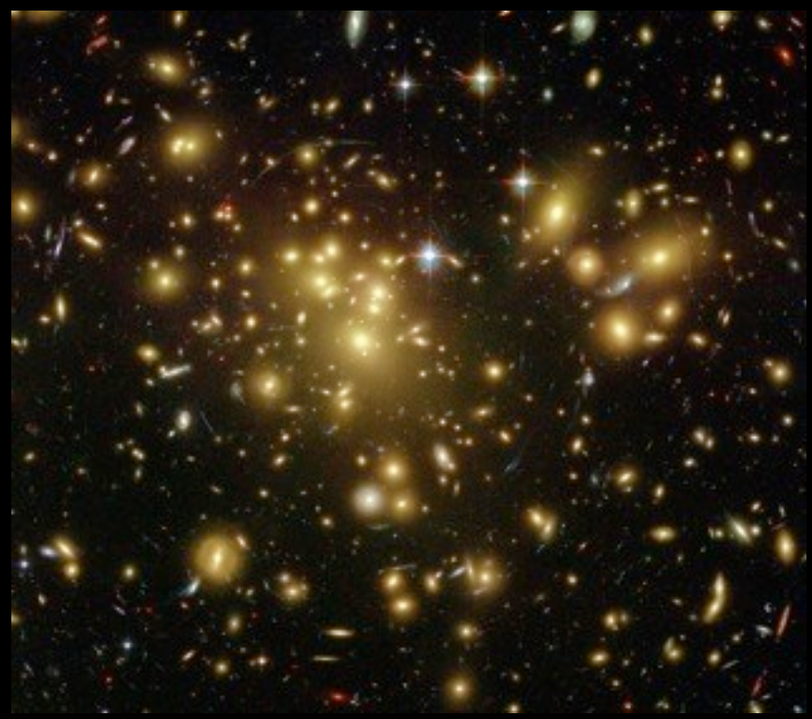


Fig. 67.—Tycho.

Orion Nebula - Photographed by Andrew Ainslie Common - 1883



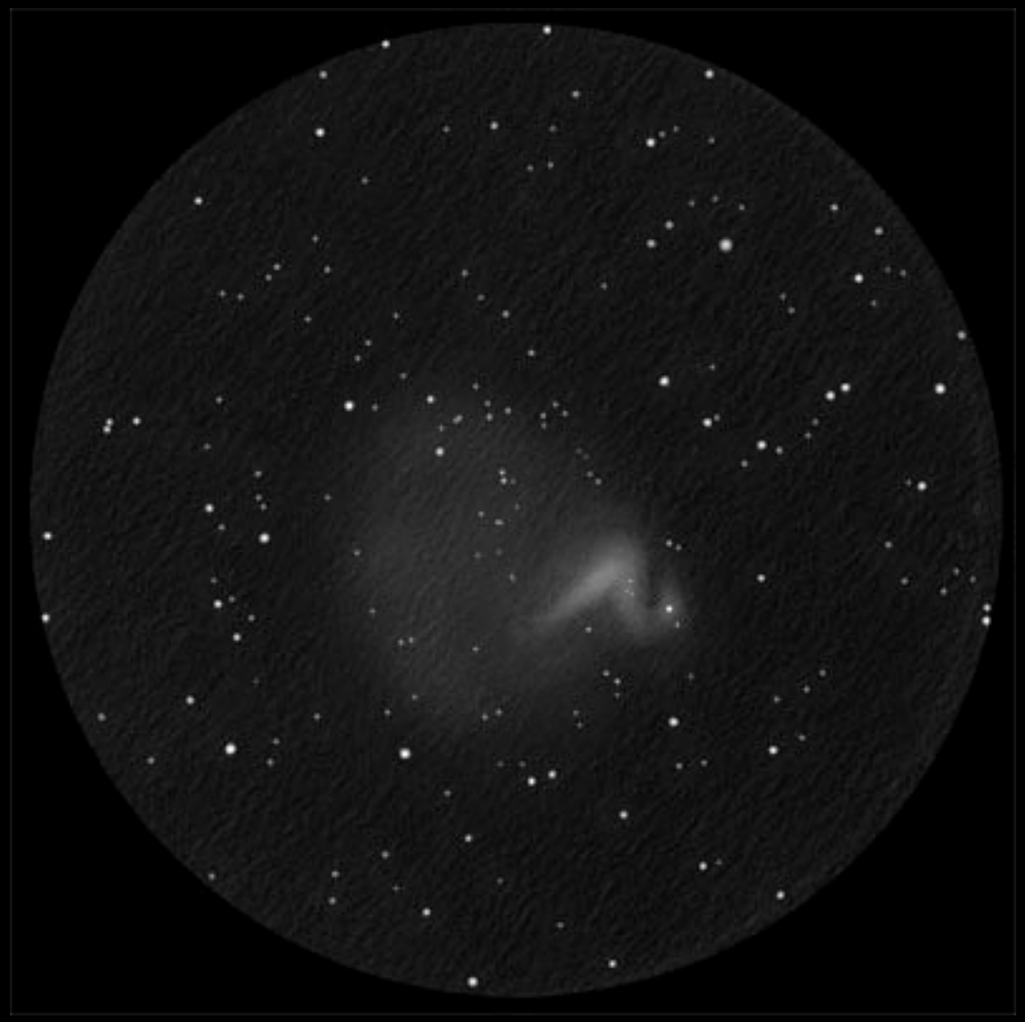



oh!

seeing more

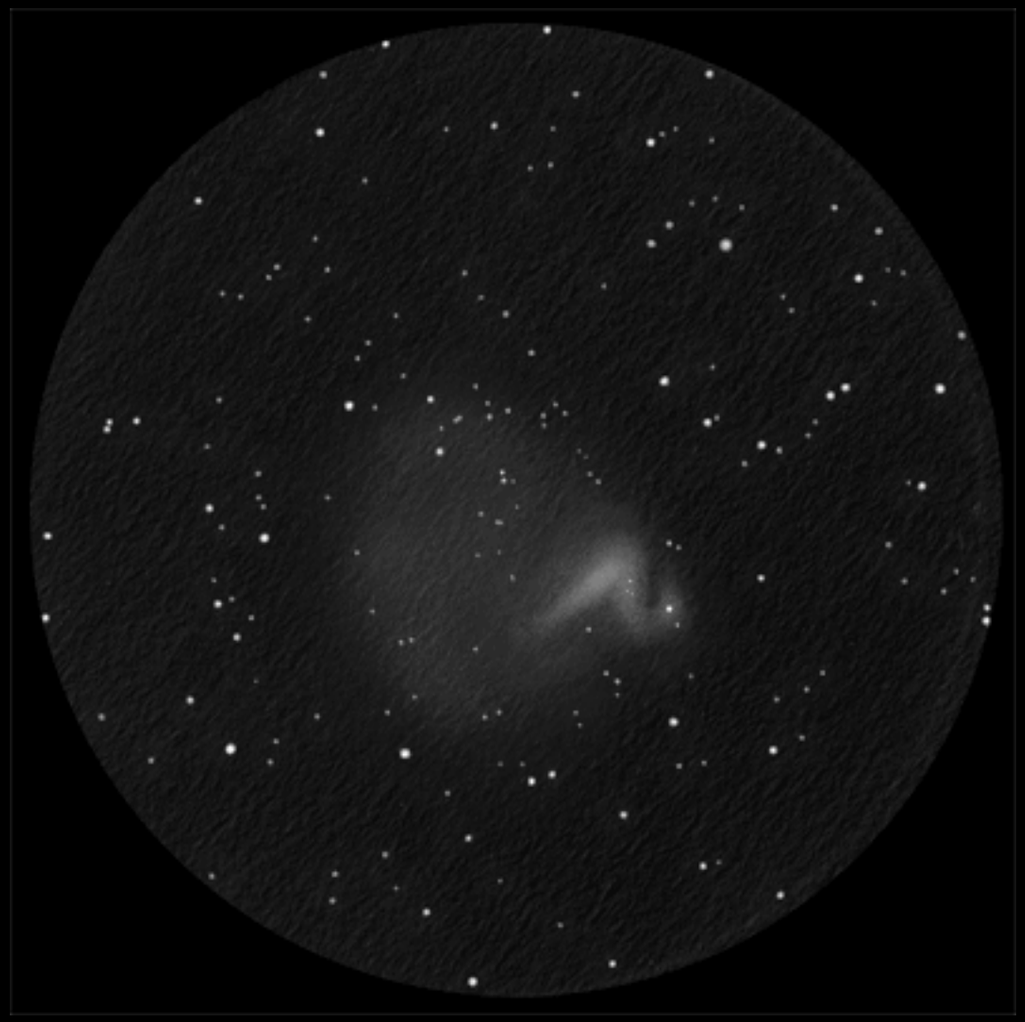
[Messier 17]

seeing more



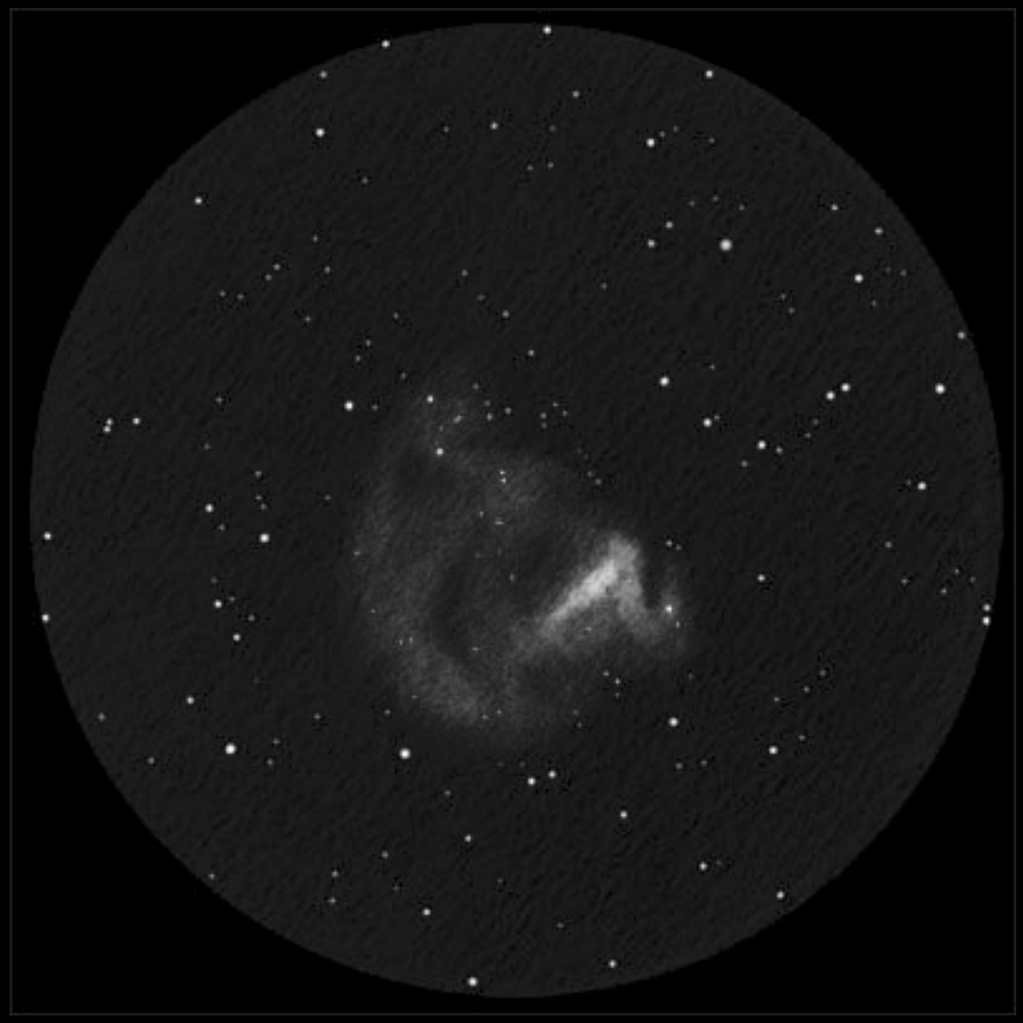
[Messier 17]

seeing more



[Messier 17]

seeing more



[Messier 17]

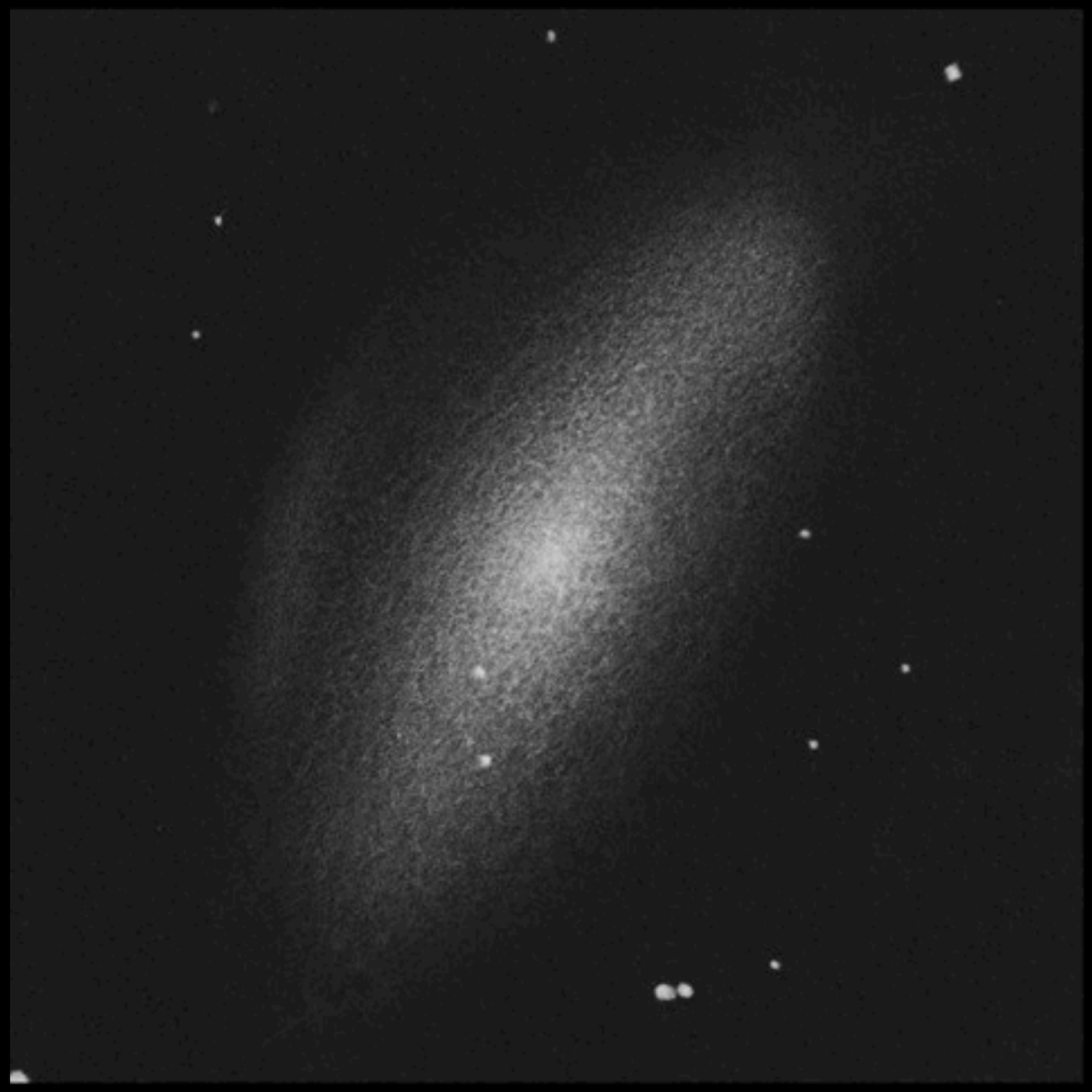
seeing more

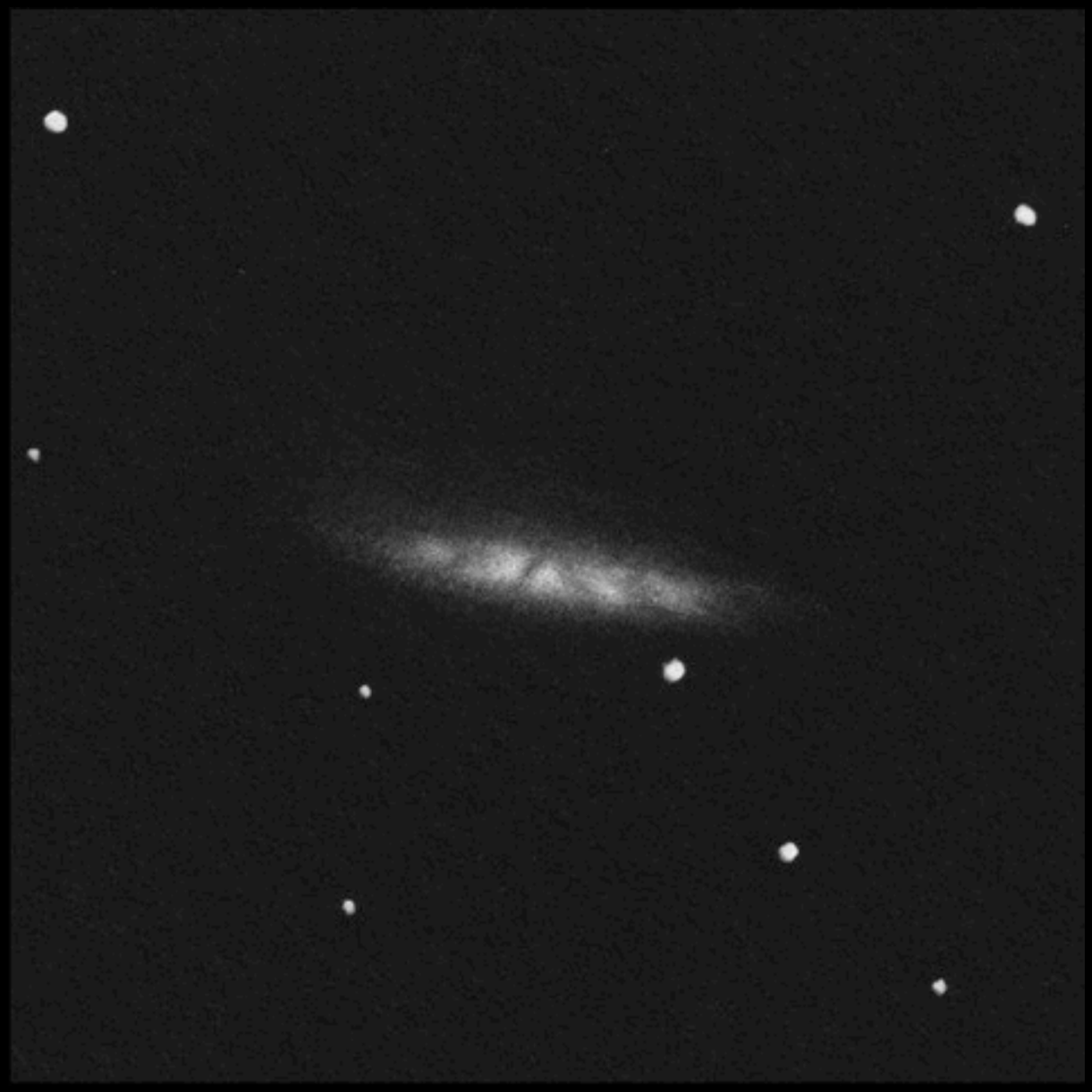
[Messier 81 / 82]

seeing more

[Messier 81 / 82]

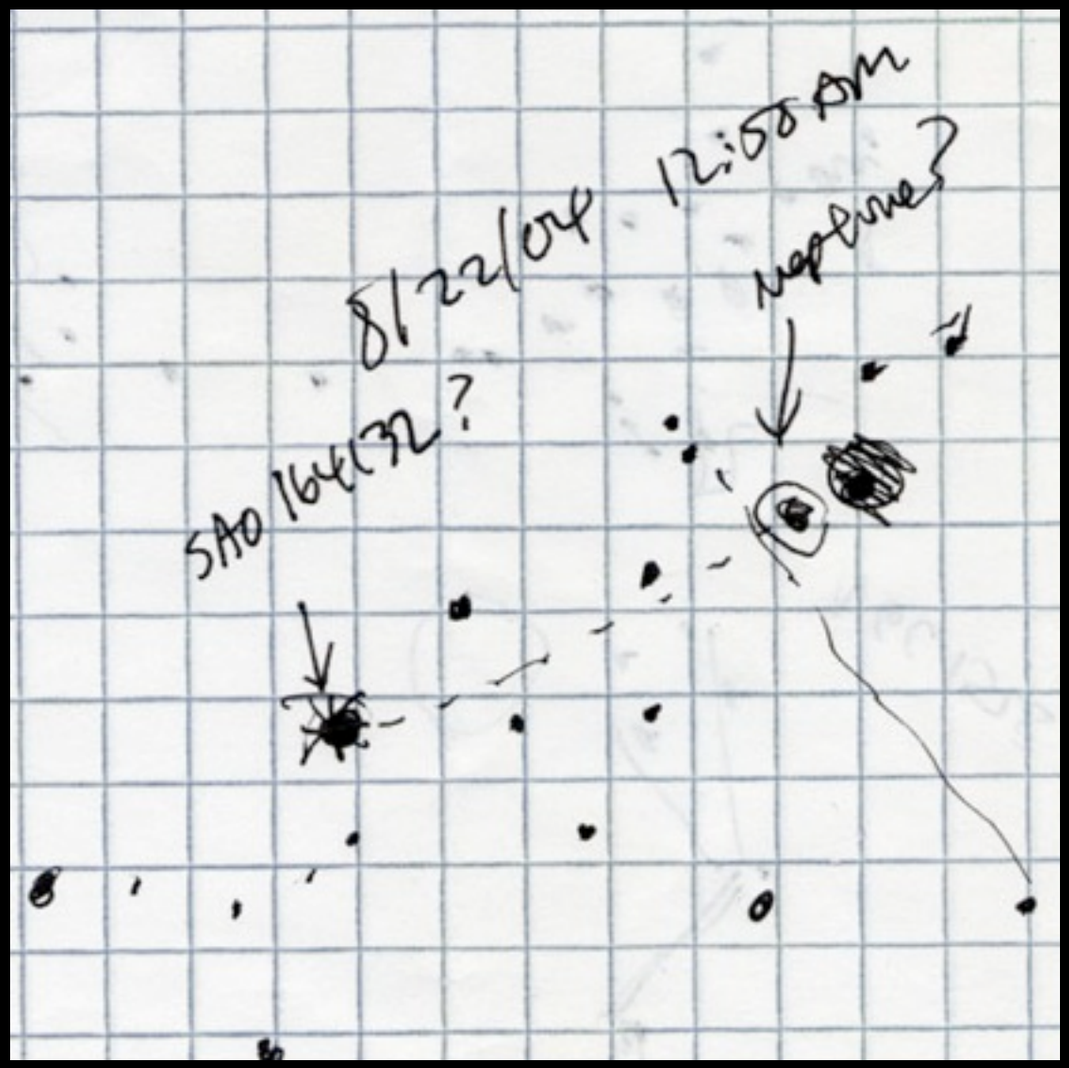
seeing more





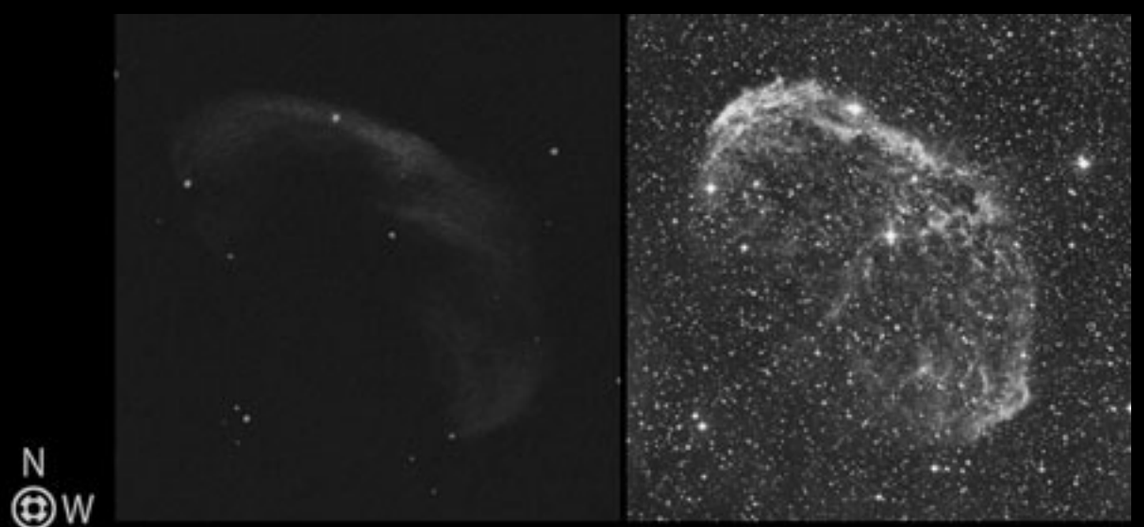
[Messier 81 / 82]

confirming observations

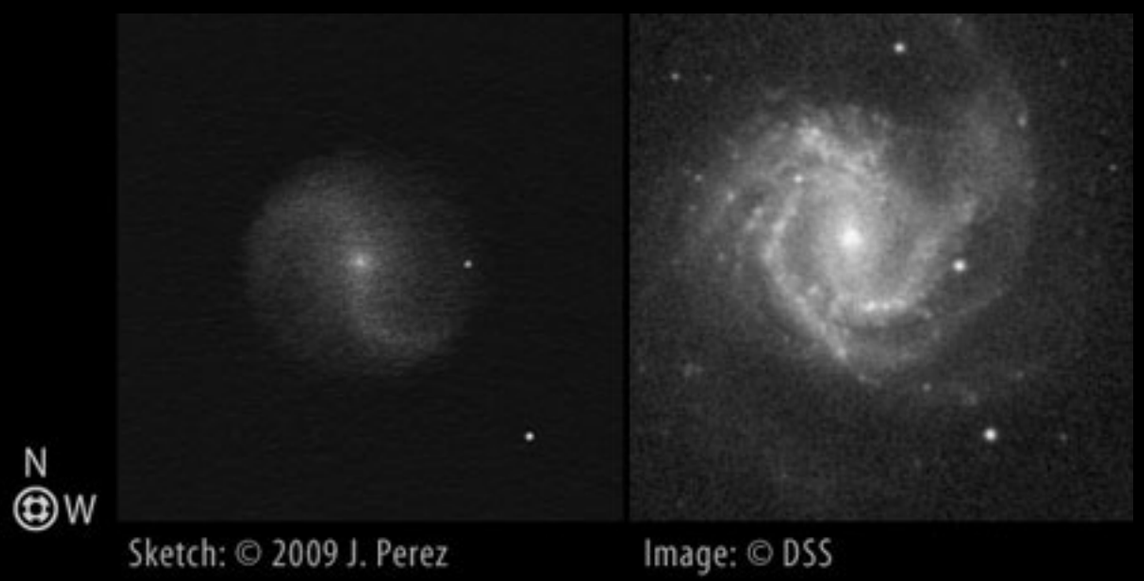


feedback

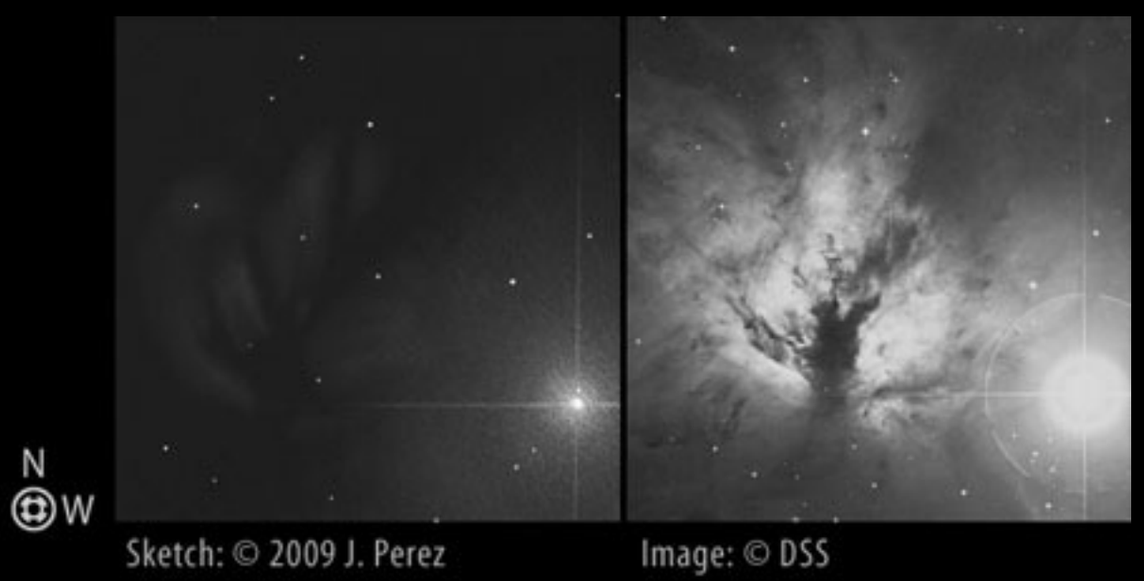
[HGC 92]



[NGC 6888]



[Messier 61]



[NGC 2024]

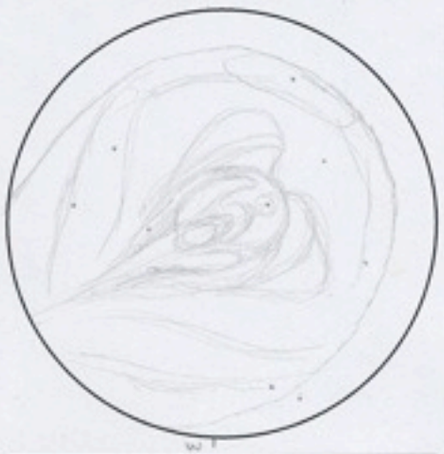
personal record

Finder

Astronomy Observation Record
Jeremy Perez

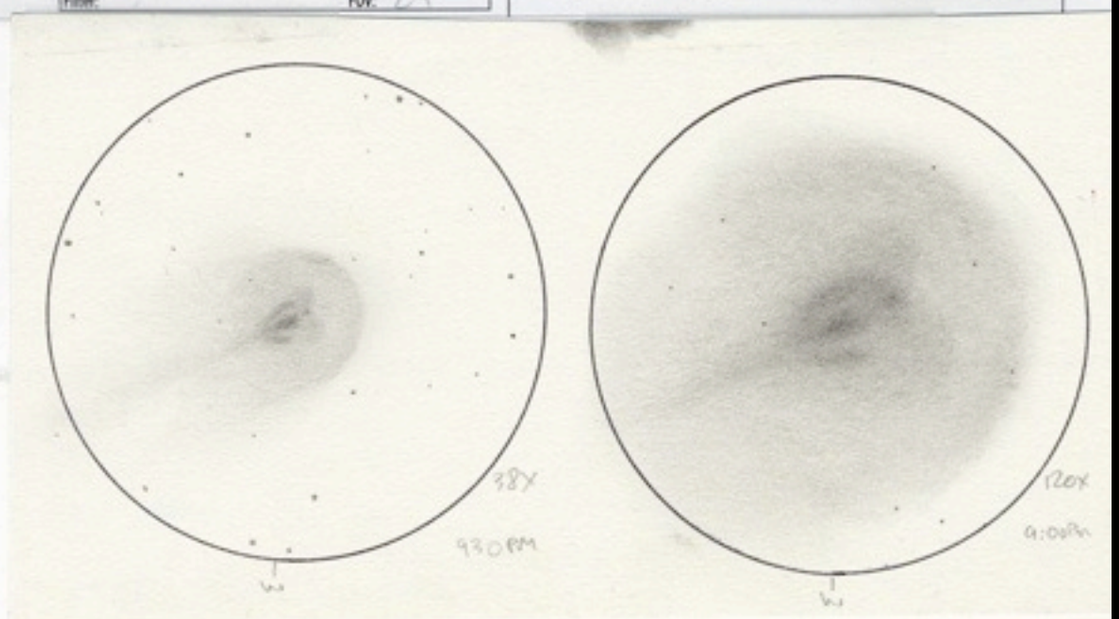
Index: 20071107-01

Subject(s): 17P / Holmes
Date: Nov 7, 2007 Time: 9:00 PM Location: Flagstaff, AZ - Home
Instrument: XT8 Aperture: 203mm Focal Length: 1200mm
Eyepieces/Magnifications: 32mm, 25mm, 10mm, 17mm Ortoscopic
Conditions: Calm, Passing high cirrus Seeing: 4/10?
Transparency/basis: ~5.5



EP: 10 mm SP Mag: 80X
Filter: FOV: 24'

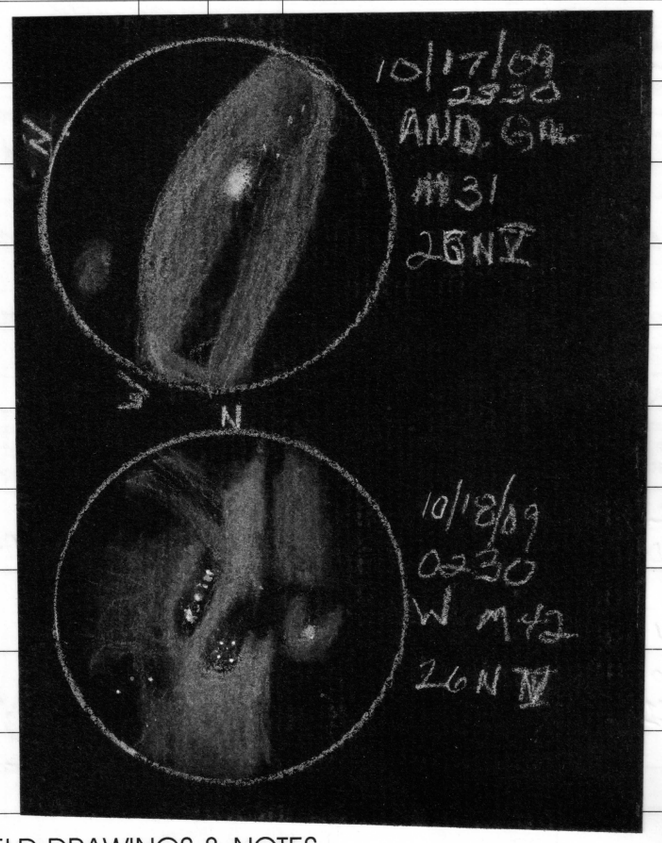
Notes:
Inner envelope has almost outgrown 120X (24') view. Color at low power & through binoculars is bluish green. SW half of inner envelope blinks between direct & averted vision. Outer envelope seems about as wide as 88' 32mm ETP field.
Some lumpy irregularities seen in inner envelope at 120X.
At 38X, very subtle extensions reel outward to SE. SE half of inner envelope appears farthest to the SE.
Inner Env = 18.7' x 20.7'
Outer Env = 88' (Elongated Cond. 37' x 51')



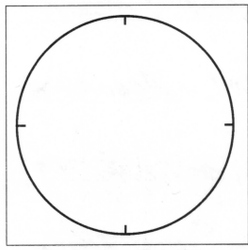
Date(s): 10/17 – 18/09

OBJECTS OBSERVED

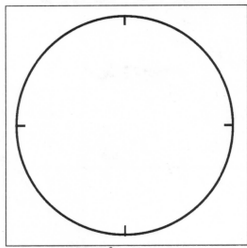
Object Catalog # / Name	Type / Const.	Time / Oculars	Description / Activity	Ref / Sketch



FIELD DRAWINGS & NOTES



Object: M31 - ANDROMEDA GAL Time: 2330
OBS 18 - 12 mm NAGLER TYPE IV
171X FOV .5°
NOTES ON p. 13

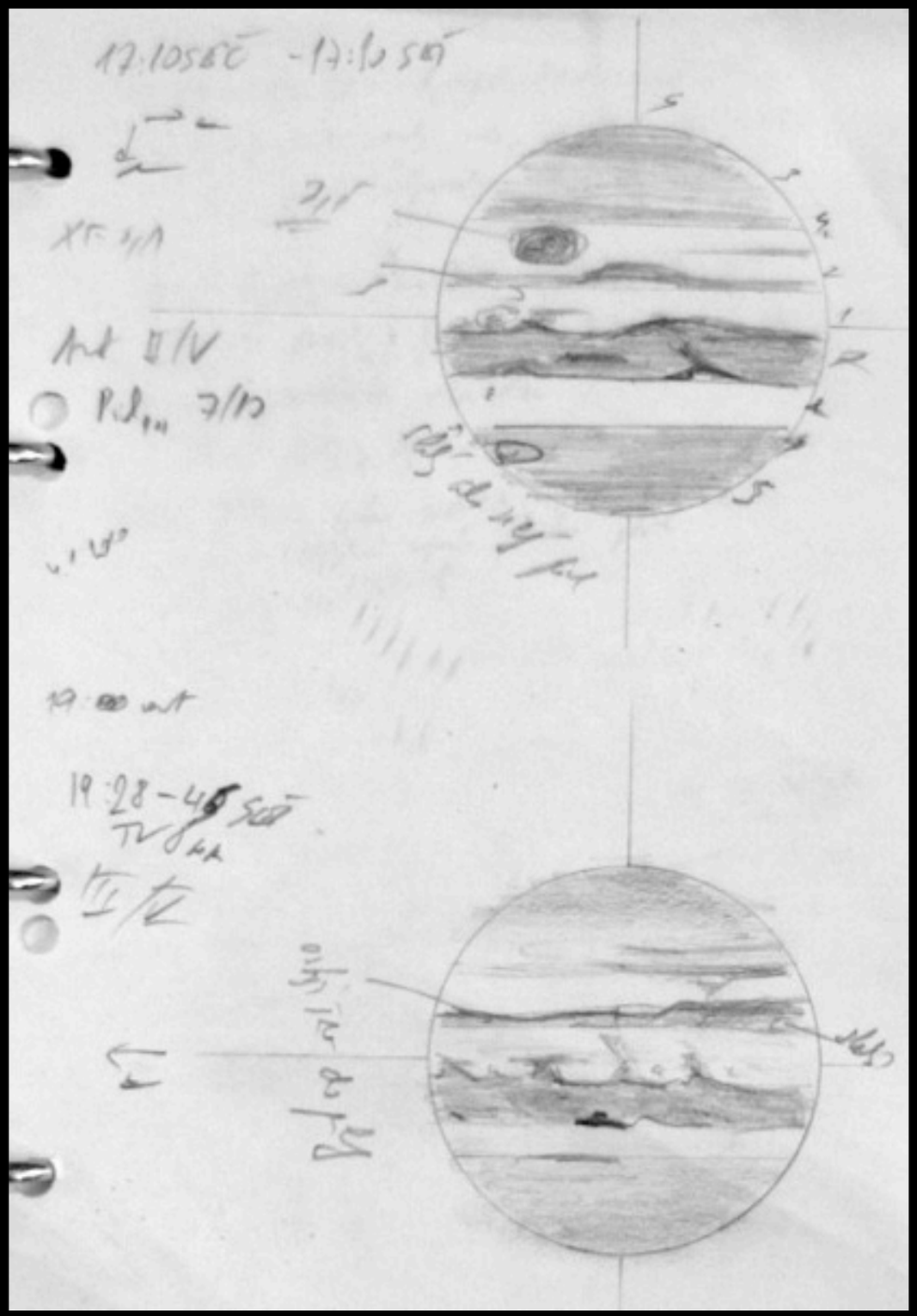


Object: M42 - ORION NEBULA Time: 0230
OBS 18 - 8mm ETHOS
257X FOV .4°
NOTES ON p. 13

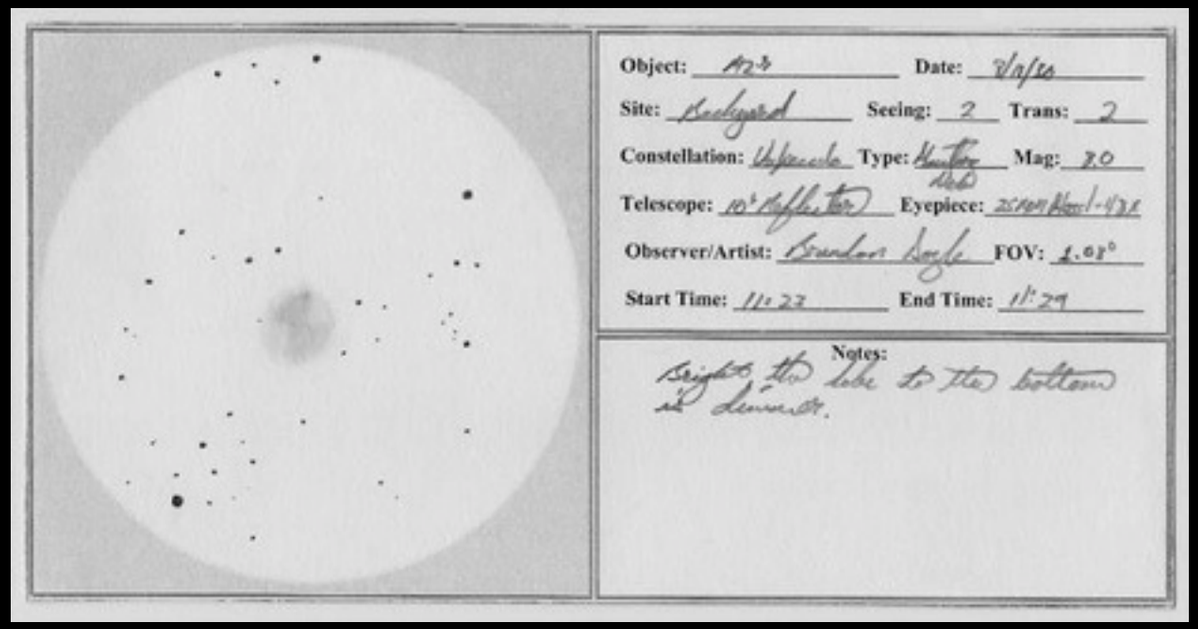
Page 14

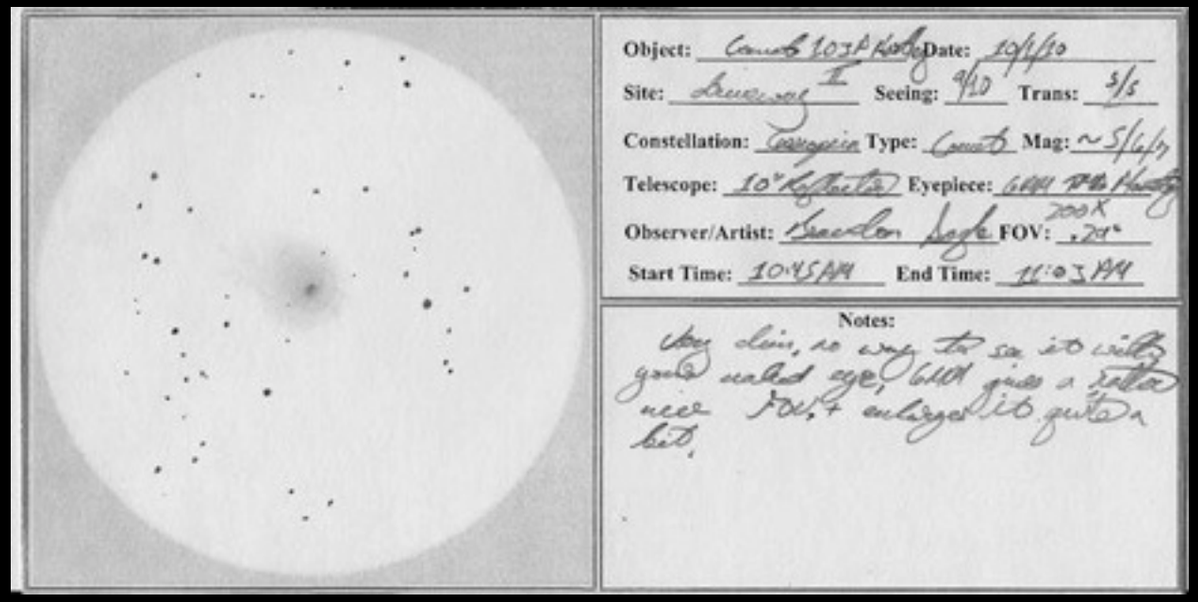
Anonymous Contributor

personal record



Alexander Kupco | www-hep2.fzu.cz/~kupco/astro





Brandon Doyle | brandon-doyle.weebly.com

personal record

SATURN.

28TH DECEMBER. 22·00 to 23·00. 2002.

SEEING GOOD. LIGHT WIND. GUSTING & MOVING TELESCOPE. LIGHT CLOUD INCREASING THROUGH THE HOUR, EVENTUALLY SPOILING VIEW.

MEADE ETX 125. ×304.

- RING A IS DARKER THAN RING B, IT IS SLIGHTLY BRIGHTER AT ITS INNER EDGE.
- CASSINI'S DIVISION IS CLEARLY VISIBLE
- RING B IS BRIGHTER THAN RING A, IT IS SLIGHTLY DARKER AT ITS INNER EDGE.
- RING C IS JUST VISIBLE. IT IS CLEARLY VISIBLE ACROSS THE DISC.
- THE PLANETS SHADOW ON THE RINGS IS JUST VISIBLE.
- ON THE PLANET, THE FOLLOWING FEATURES WERE SEEN: EQUATORIAL ZONE (BRIGHT), SOUTH EQUATORIAL BELT (DARK), A PALE AND LIGHTLY BANDED REGION, SOUTH POLAR REGION & CAP (DARKEST)
- I TWICE SUSPECTED FURTHER DETAIL ON RING A.

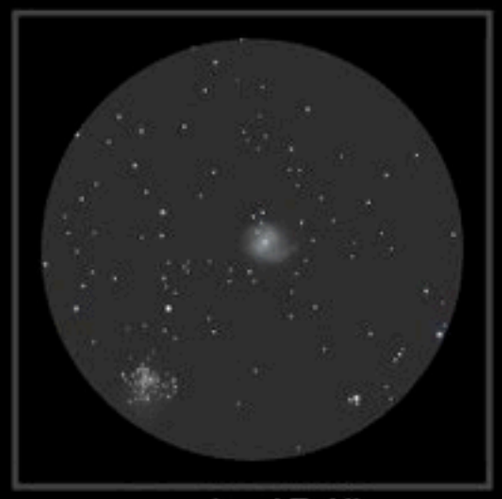
23:05 23:40 JUPITER

OPPOSITION - 5 DAYS • SIZE 44·4" • MAG -2·5 • MEADE ETX 125 @ × 271 & × 304 •

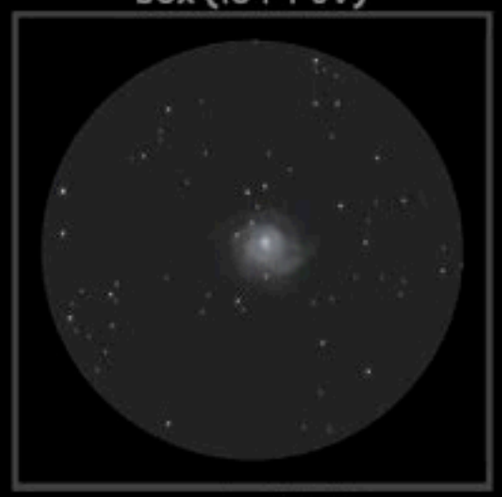
- Io CAN BE SEEN
- GRS SHOULD BE VISIBLE ON THE PM SIDE OF THE DISC, BUT ONLY A WIDENING OF THE SEB CAN BE SEEN.
- LARGE DARK OVAL ON AM SIDE OF NEB
- SMALL DARK OVAL ON PM SIDE OF NEB
- Io NEAR THE LIMB
- LARGE DARK OVAL IN NEB IS FOLLOWED BY A SOUTHWARD DEFLECTION OF ENTIRE BELT, POSSIBLY A RESULT OF THE ROTATION OF THE OVAL

Chris Nuttall

sharing with others



30x (104' FoV)



60x (52' FoV)

120x (26' FoV)

NGC 6946 (H.IV.76)
Spiral Galaxy in Cepheus

Right Ascension (2000.0): 20h 34.9m
Declination (2000.0): +60° 09'
Dimensions: 11.0' x 9.8'
Magnitude: 8.8
Surface Brightness: 13.8
Position Angle: 85°
Hubble Classification: Sc
Distance: 15 million light years

Observer: Eric C. Graff
Date/Time: 22 October 2006, 03:30 UT
Transparency: NELM 6.6
Seeing: Pickering 6
Location: Oakzanita Springs (4,000 ft.)
Telescope: Parks 6-inch f/6 Reflector
Magnification(s): 30x, 60x, 120x
Filter(s): Lumicon OIII

Eric Graff

sharing with others

2010 Jan 14, 2038UT – 2200UT

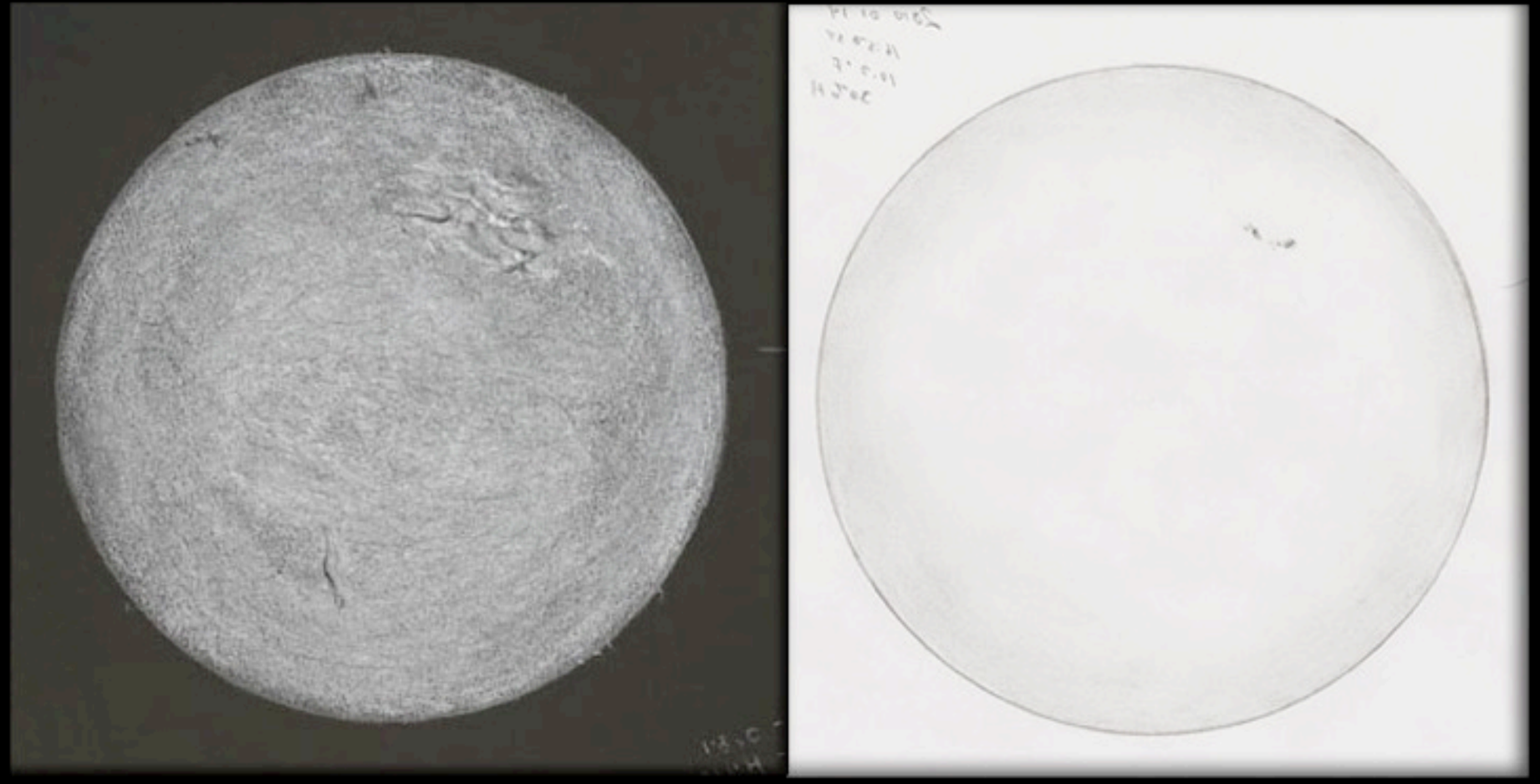
Solar h-alpha and white light, AR1040, Cycle 24
PCW Memorial Observatory, Zanesville, Ohio USA - Erika Rix

DS 60mm Maxscope, LXD75, ETX70-AT w/tilt plate, 21-7mm Zhumell

H-alpha sketch created scopeside with black Canson paper, white Conte' crayon and pencil, white Prang watercolor pencil, Derwent charcoal pencil, black oil pencil. White light sketch created scopeside with white copy paper, #2 pencil, 0.5mm mechanical pencil.

Temp: 1.8°C-10.7°C, Humidity 61%-30%
Seeing: Wilson 4, Transparency: 3/6
Light cirrus, calm, Alt: 15.4, Az: 223.8

Solar Graphic by Tilting Sun



Erika Rix | pcwobservatory.com/

capturing visual aesthetics

Janis R.

capturing visual aesthetics

Perseïden 2010 (1)

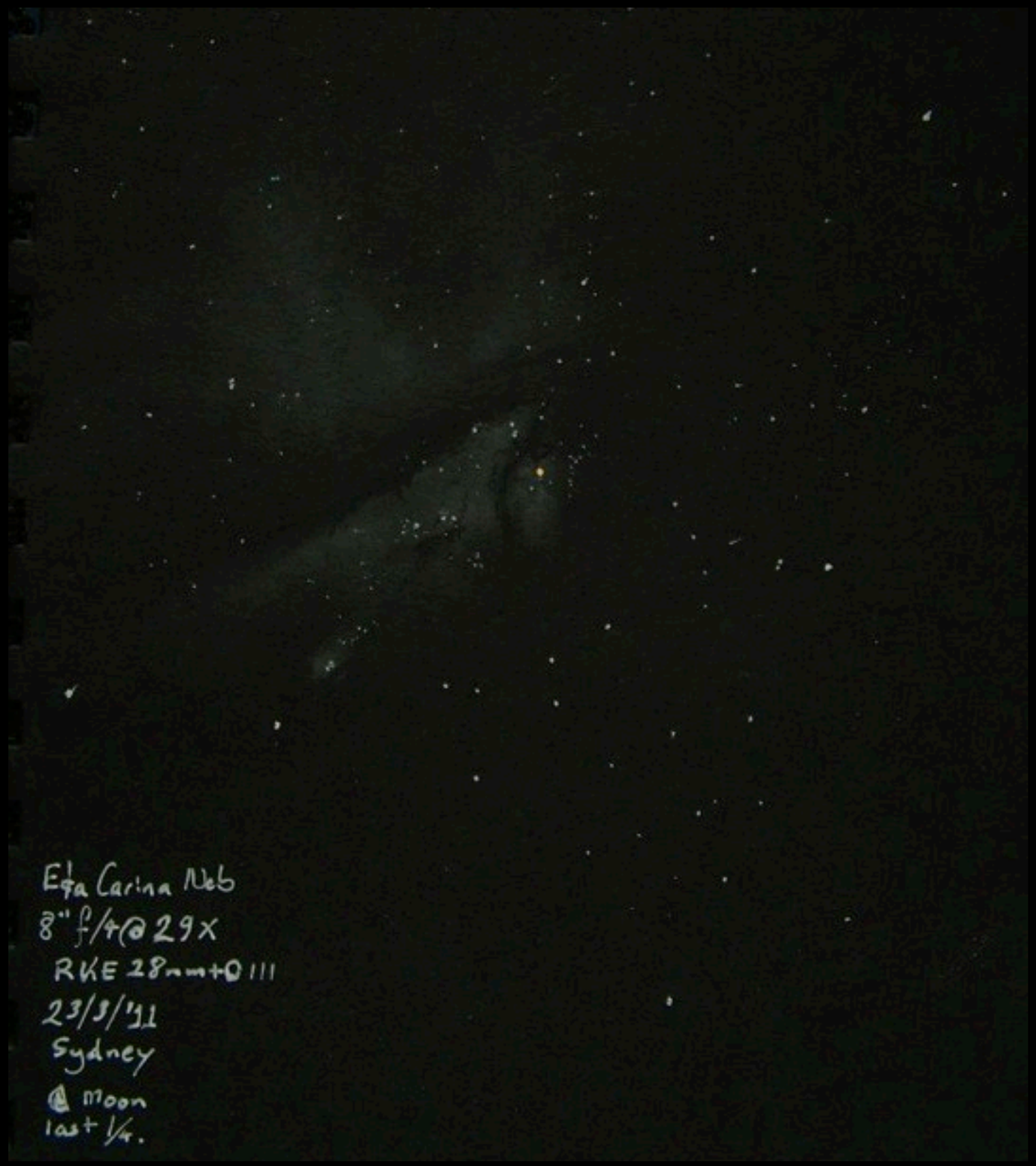
Lochem, 13 augustus 2010, 00.00 uur - 020.00 uur

Roel Weijenberg | www.roelblog.nl

capturing visual aesthetics

Pierre Desvaux | dobsonfactory.blogspot.com

capturing visual aesthetics



Alexander Massey

capturing visual aesthetics

Frank McCabe

creative inspiration

Mark Seibold | www.markseibold.com

creative inspiration

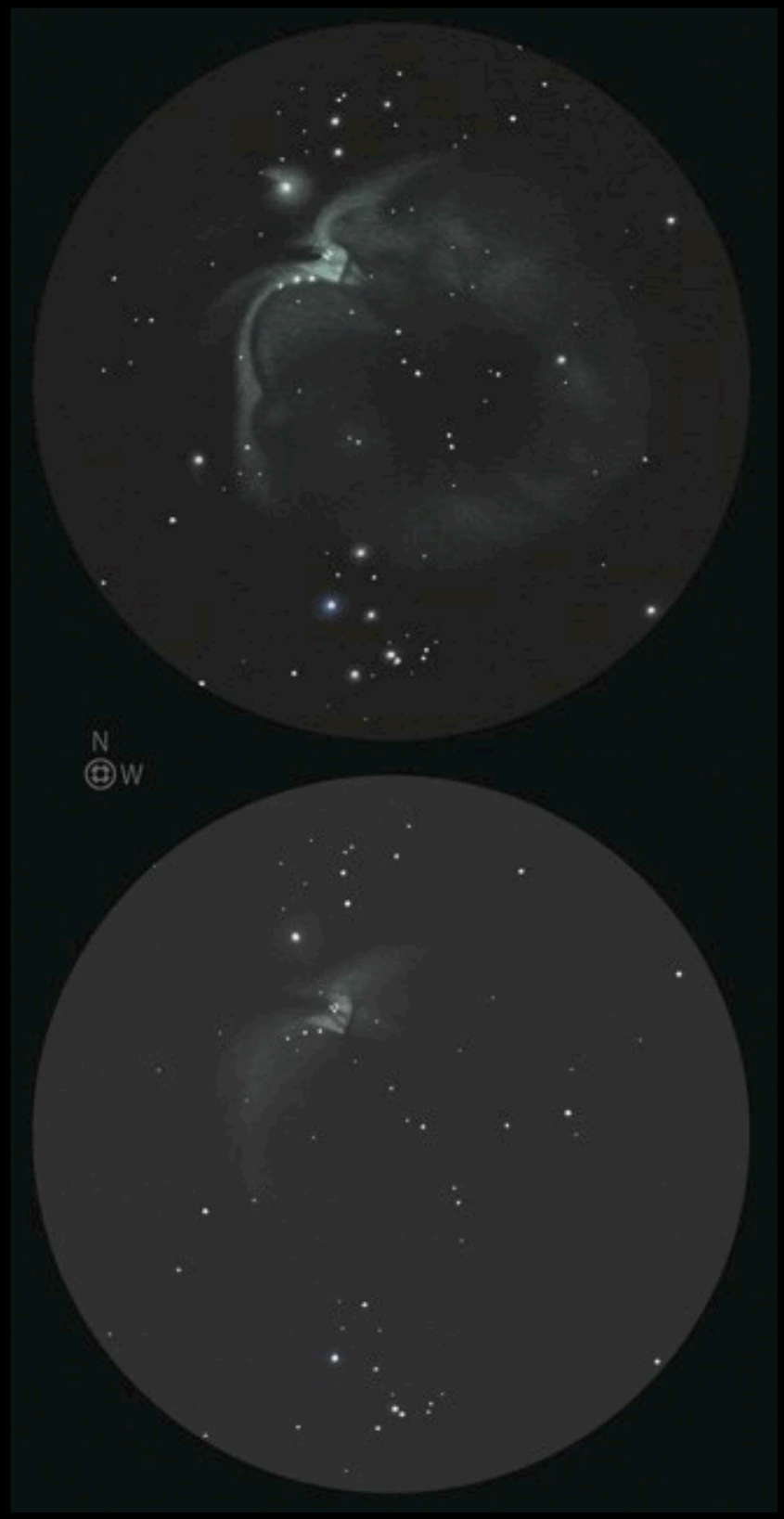
connecting with your subject

relaxation

meditation

outreach • education

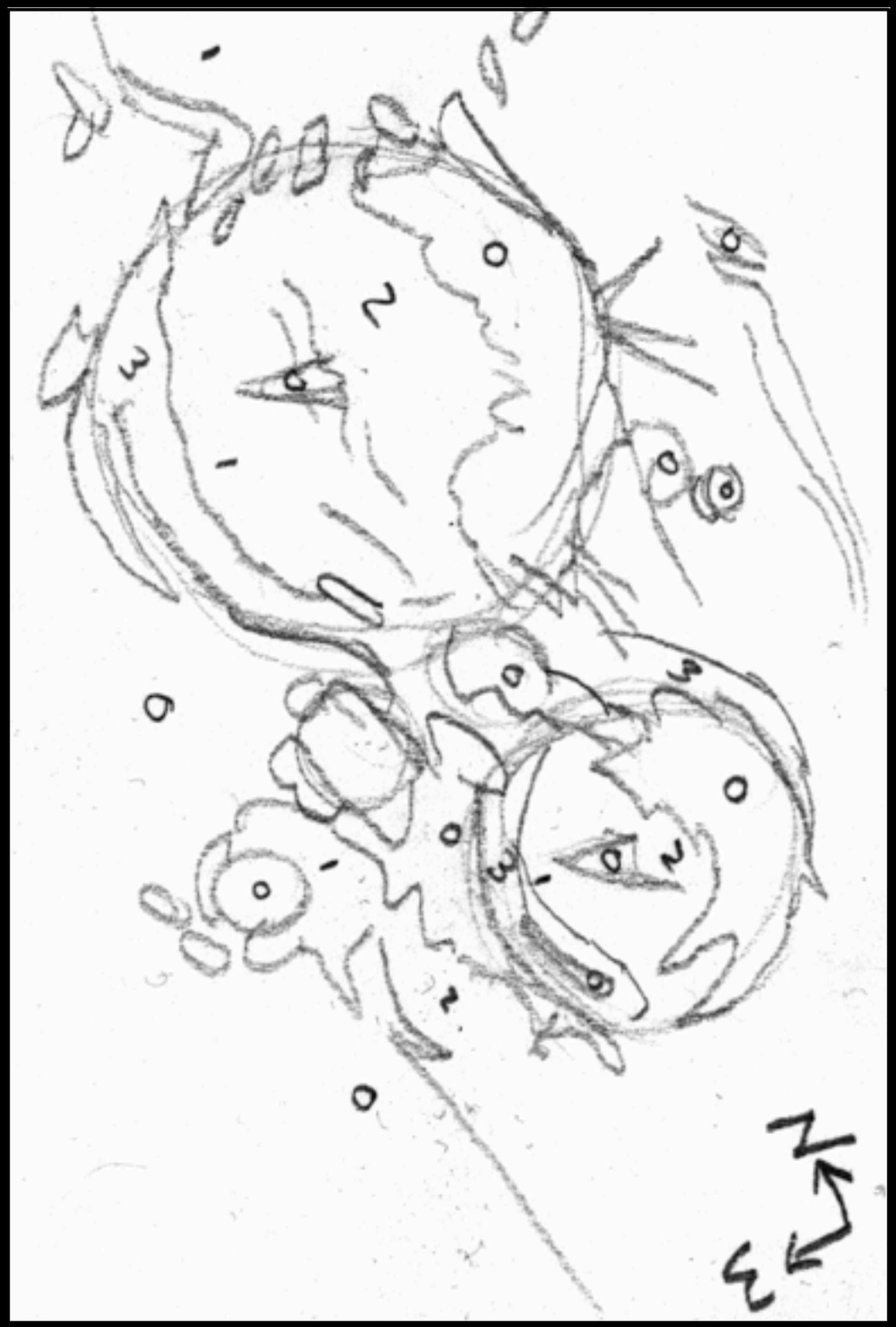
17P / Holmes
OCT 24, 2007 - 8:30 PM
Orion XT8 (8″ f/6 Dobsonian)
32 mm Sirius Plössl (37.5X)
Sketch by Giselle Perez © 2007



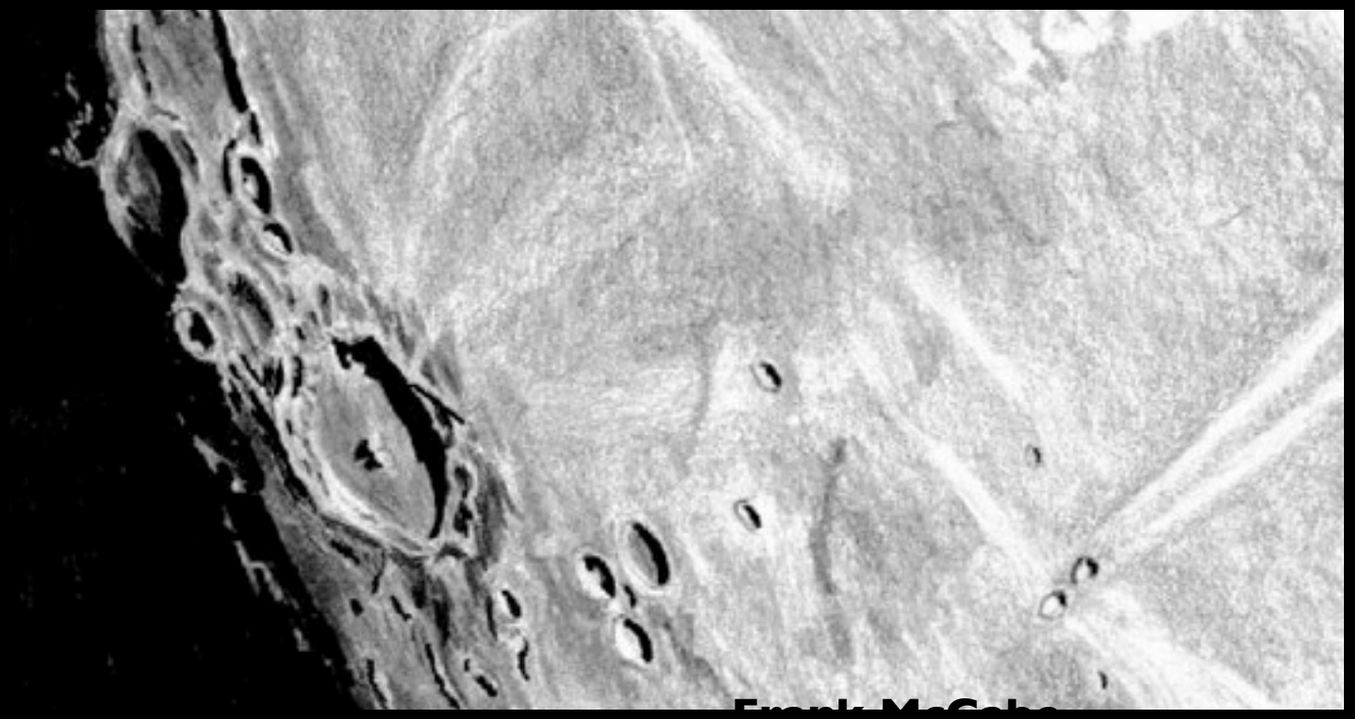
objects and sketching styles

lunar

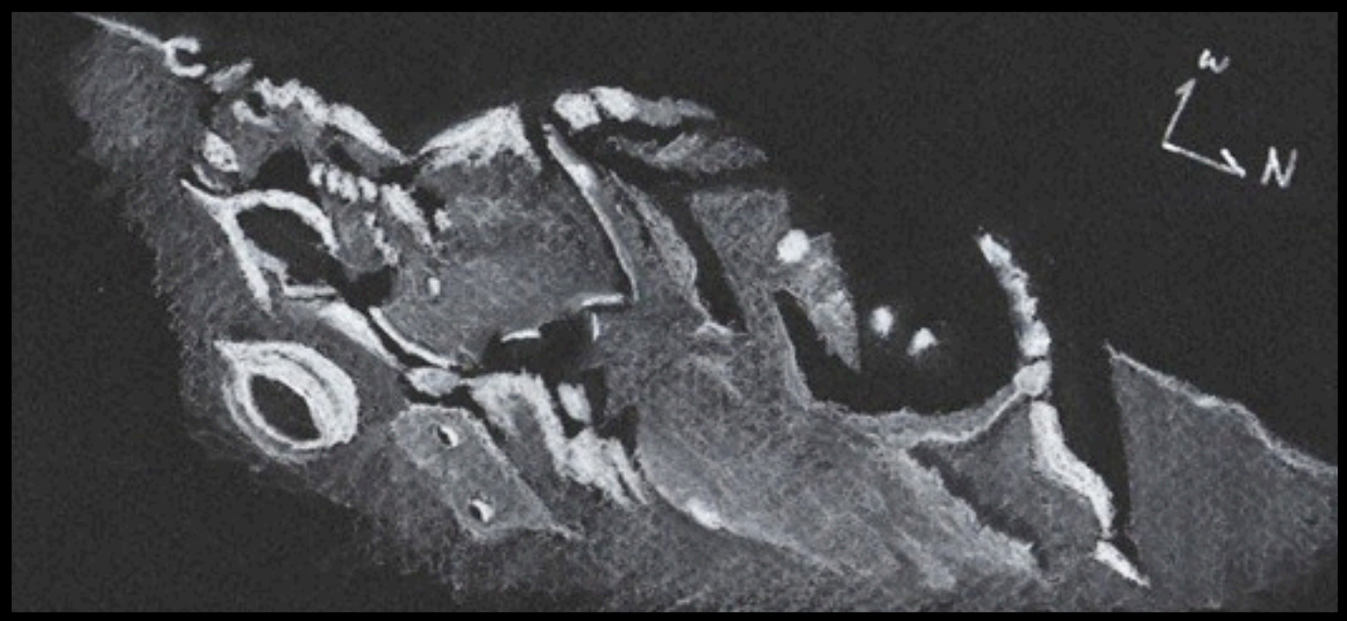
Alphonsus and Arzachel



Langrenus

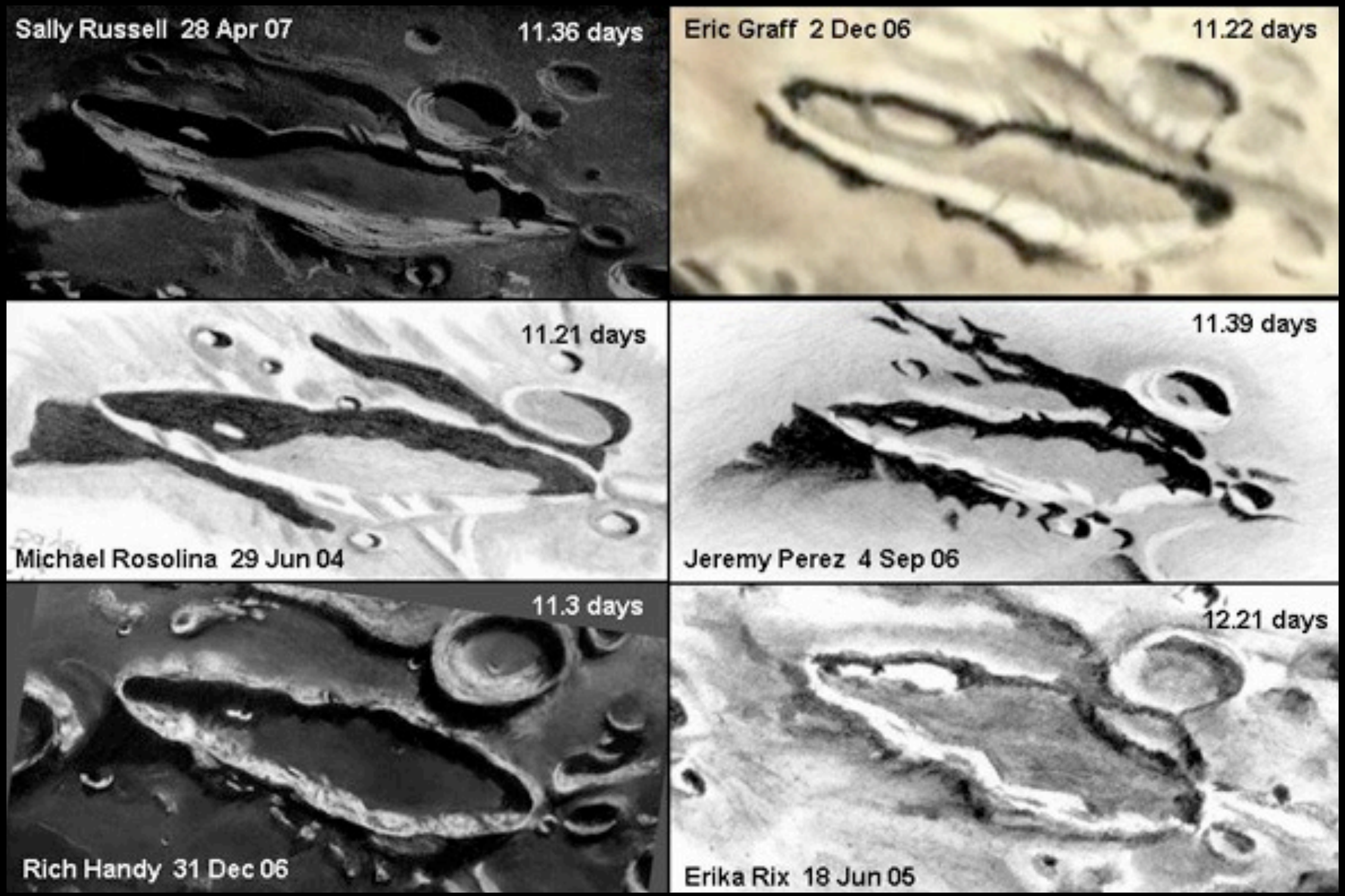


Vallis Schröteri and Surroundings



lunar

Schiller and Bayer



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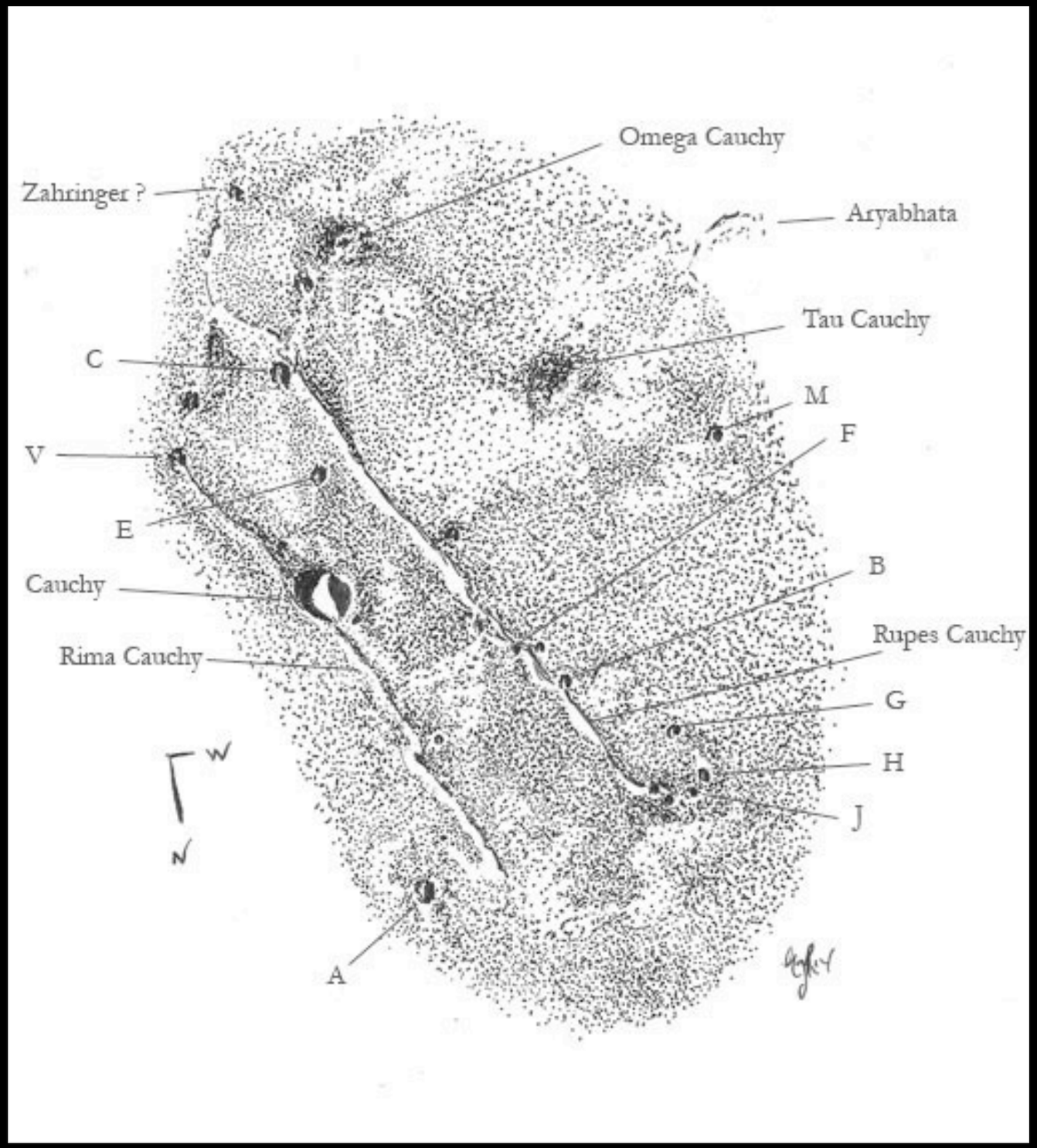


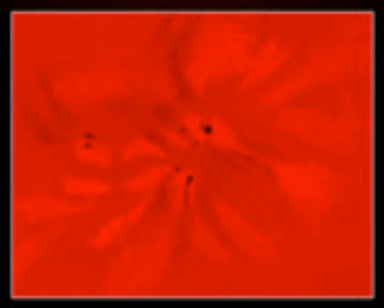
Erika Rix | pcwobservatory.com/

lunar

Mark Seibold | www.markseibold.com

solar

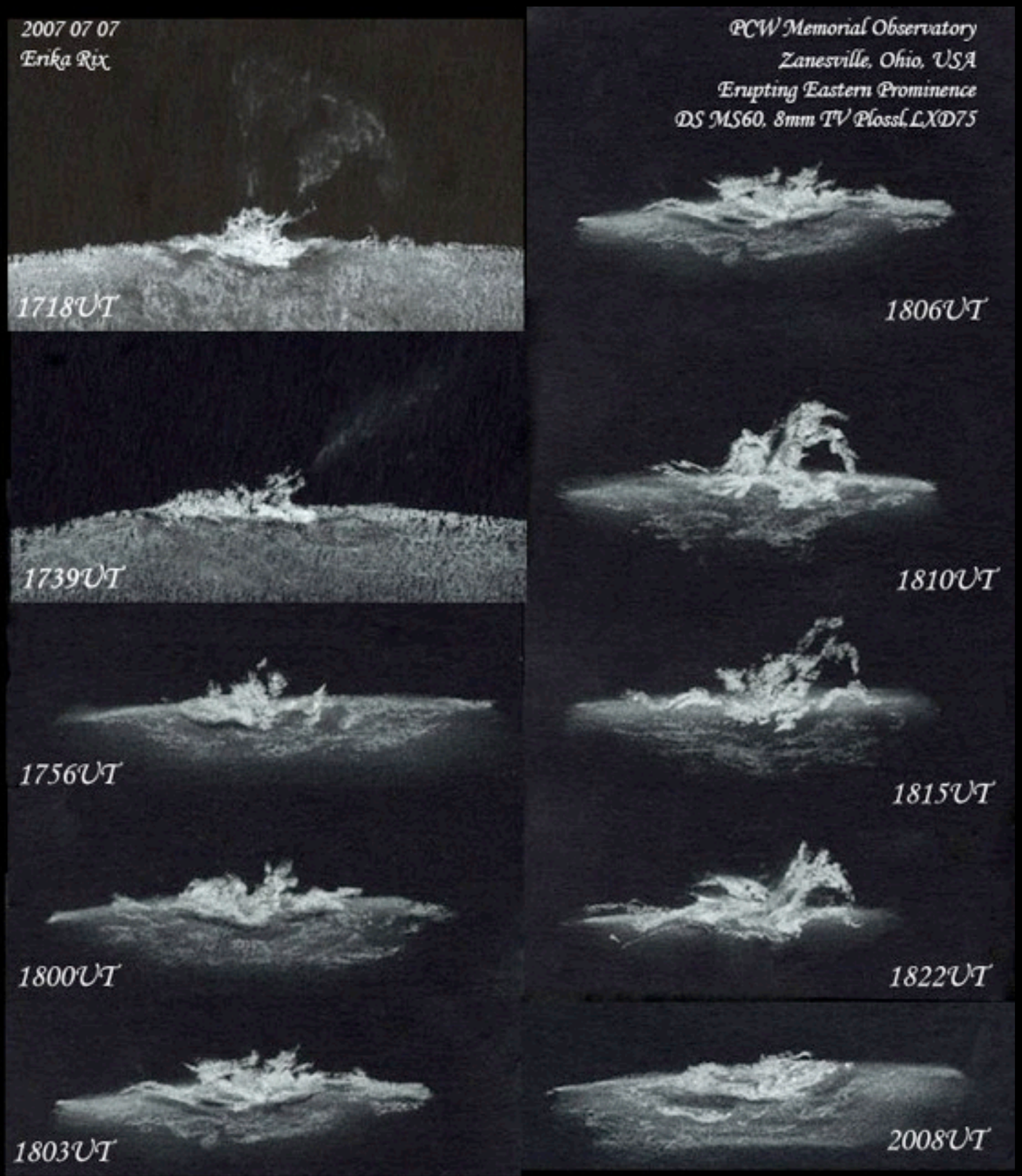
Solar H-Alpha • OCT 25, 2009 • 21:00 UT



AR 1029

Coronado PST (40 mm f/10) • Pentax XW10 (40X)
Sketch by Jeremy Perez © 2009 • beltofvenus.perezmedia.net

solar



Erika Rix | pcwobservatory.com/

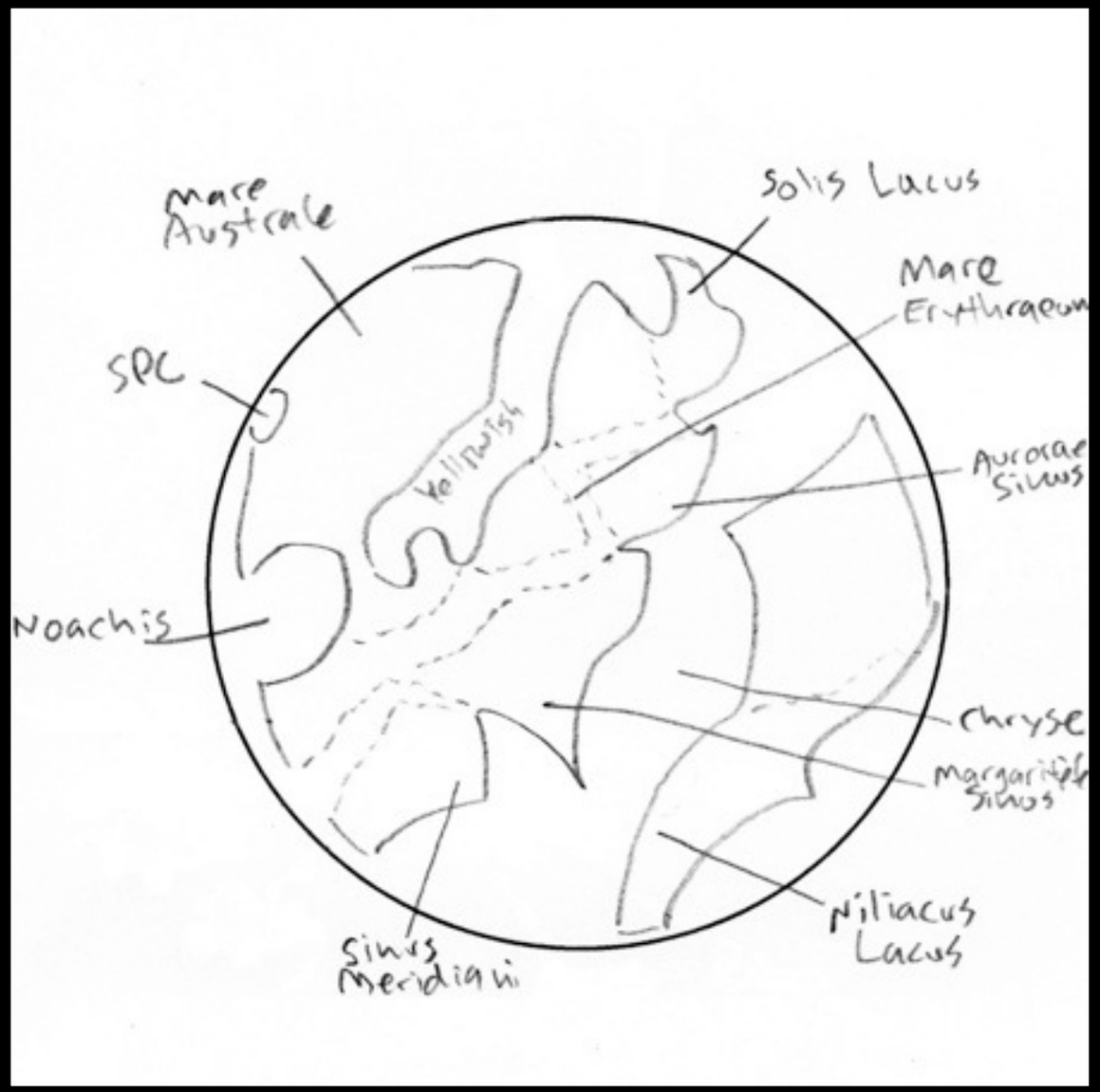
solar

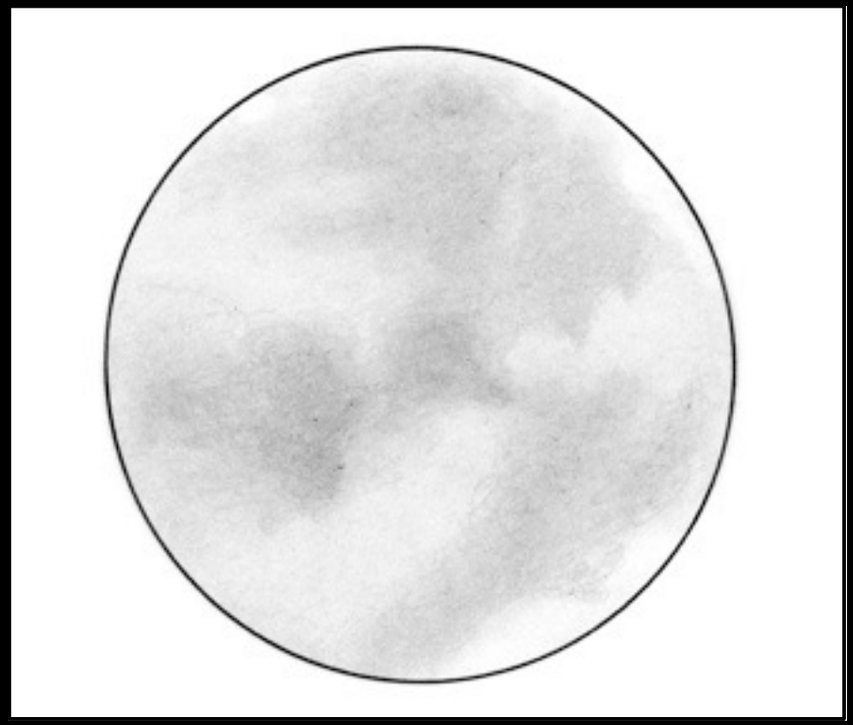
Roel Weijenberg | www.roelblog.nl

solar

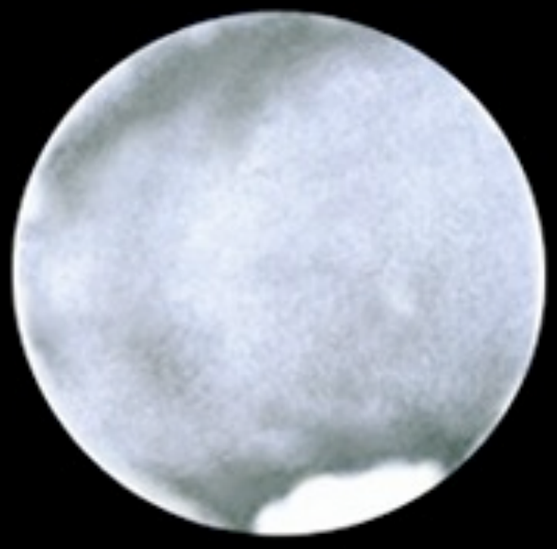
Jeff Young | www.rokeby.ie/observatory

planetary: Mars





planetary: Mars

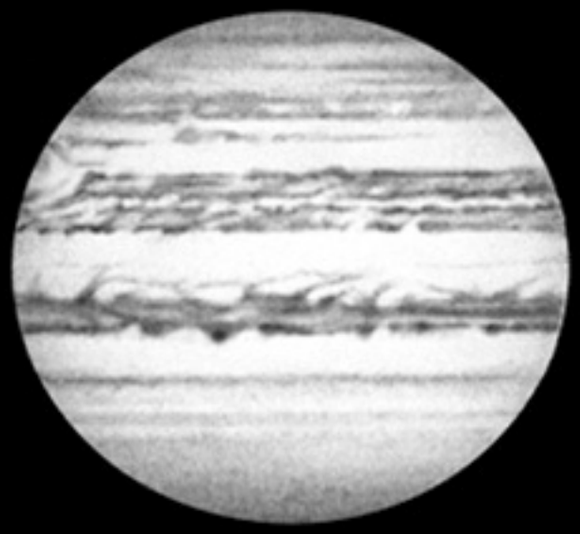


Sol Robbins

Frank McCabe

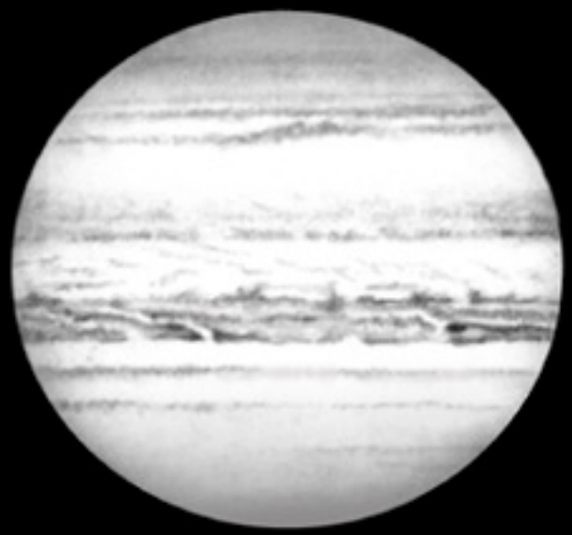
Eric Graff

planetary: Jupiter

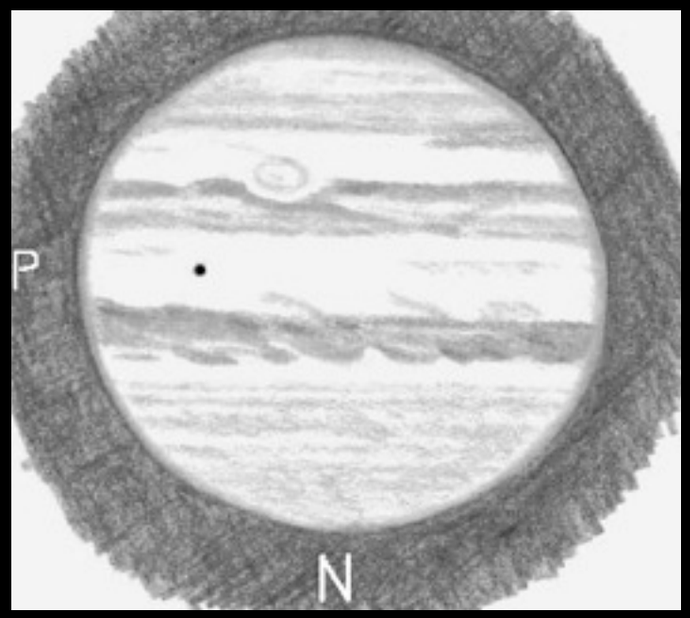


Pierre Desvaux

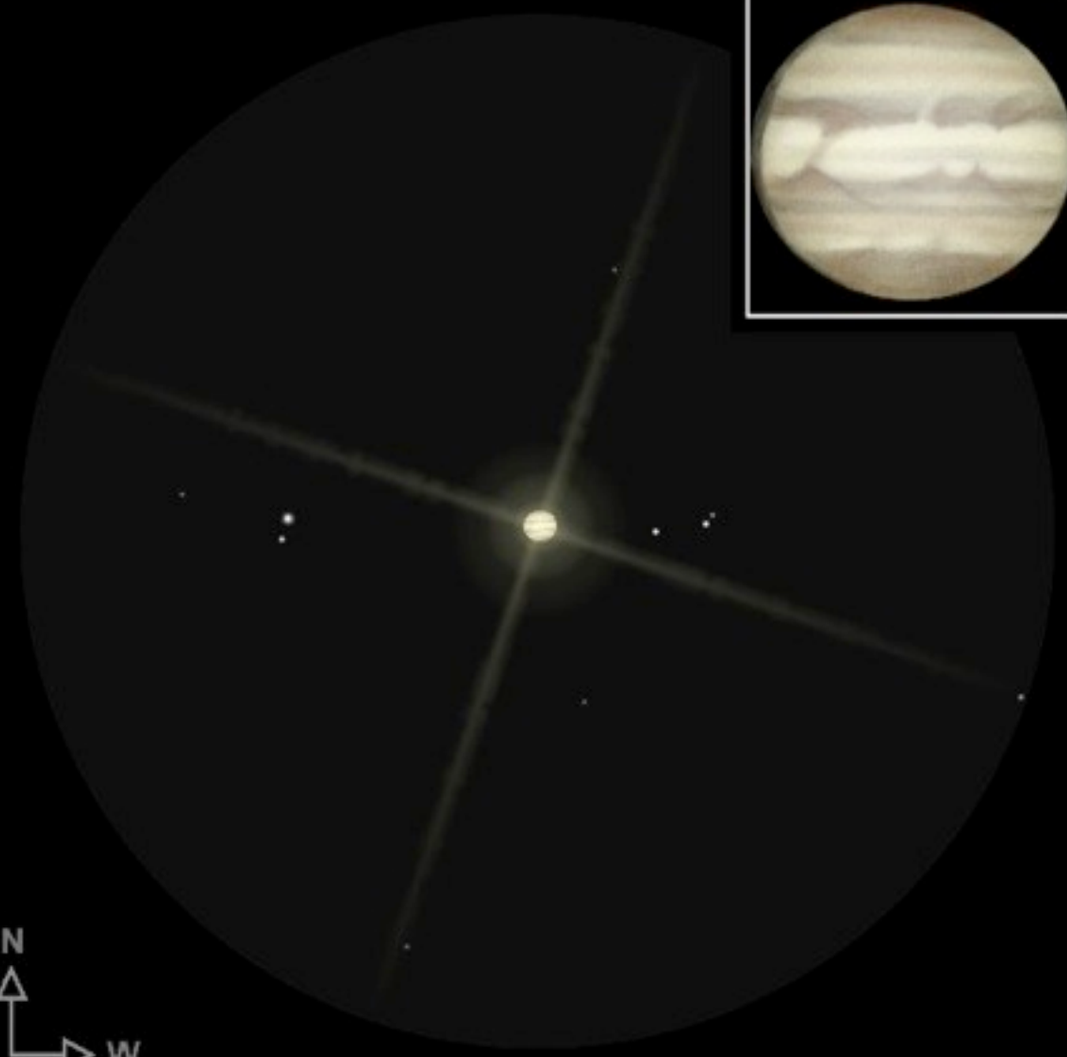
dobsonfactory.blogspot.com/



Sol Robbins

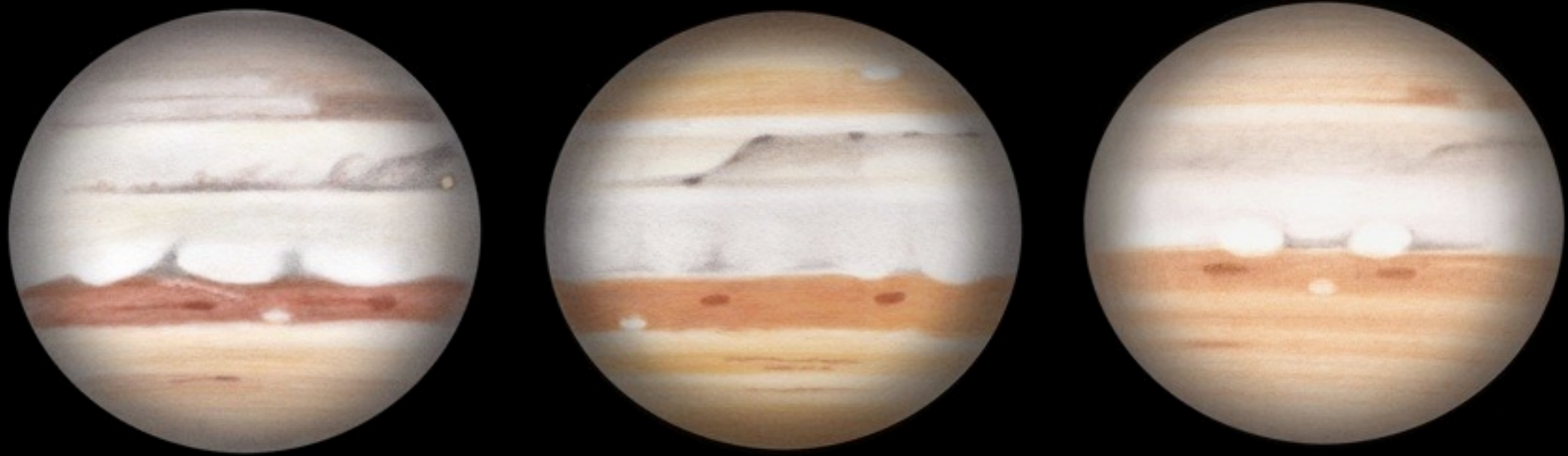


Frank McCabe

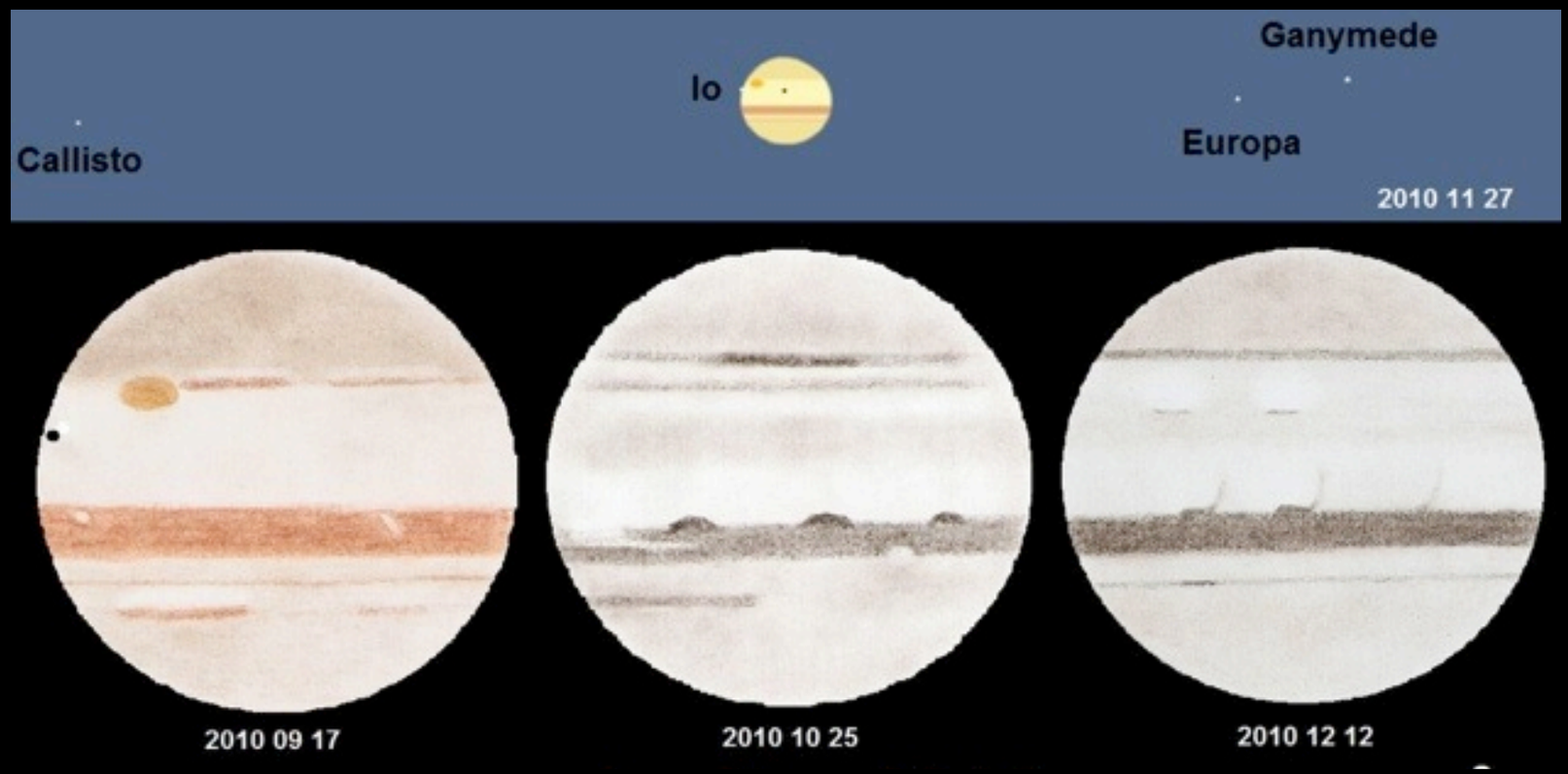


Eric Graff

planetary: Jupiter

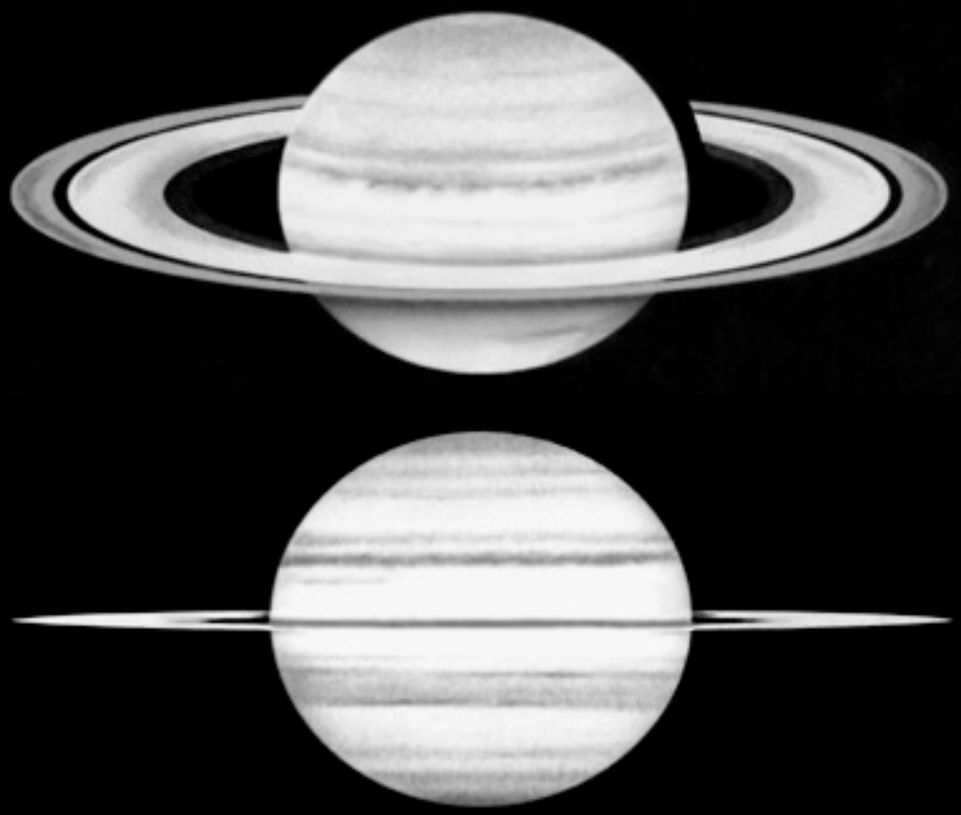


Chris Nuttall



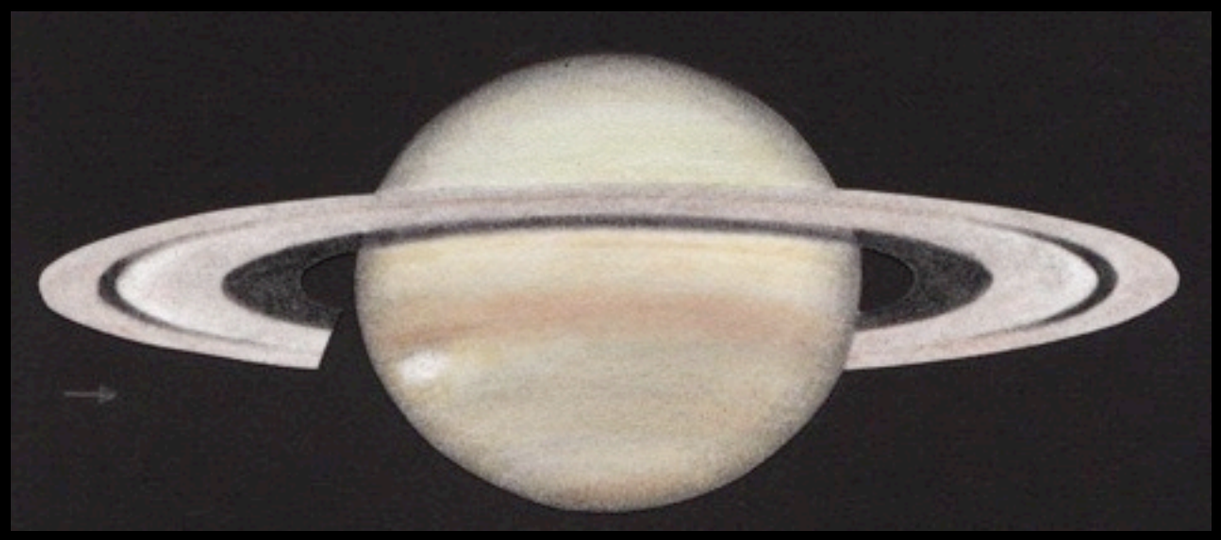
Jef De Wit

planetary: Saturn



Sol Robbins

Pierre Desvaux
dobsonfactory.blogspot.com/



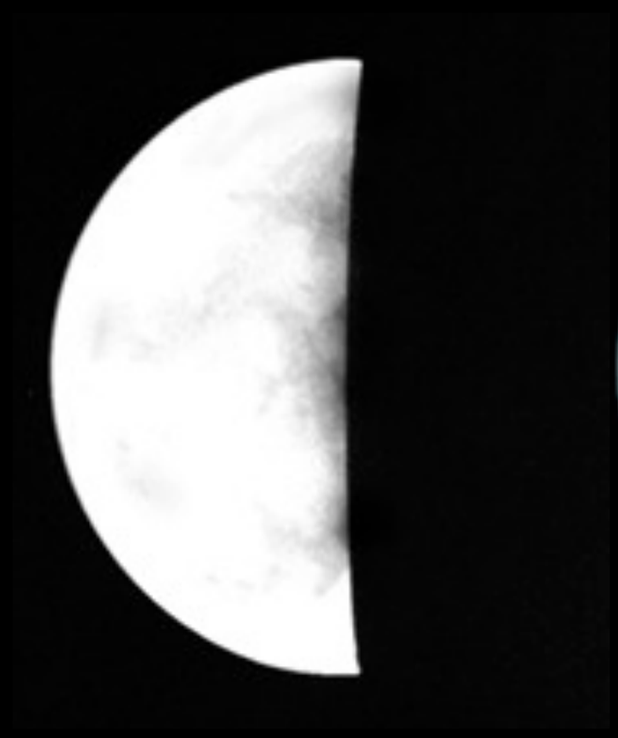
Chris Nuttall

planetary: others

Venus

Eric Graff

Venus

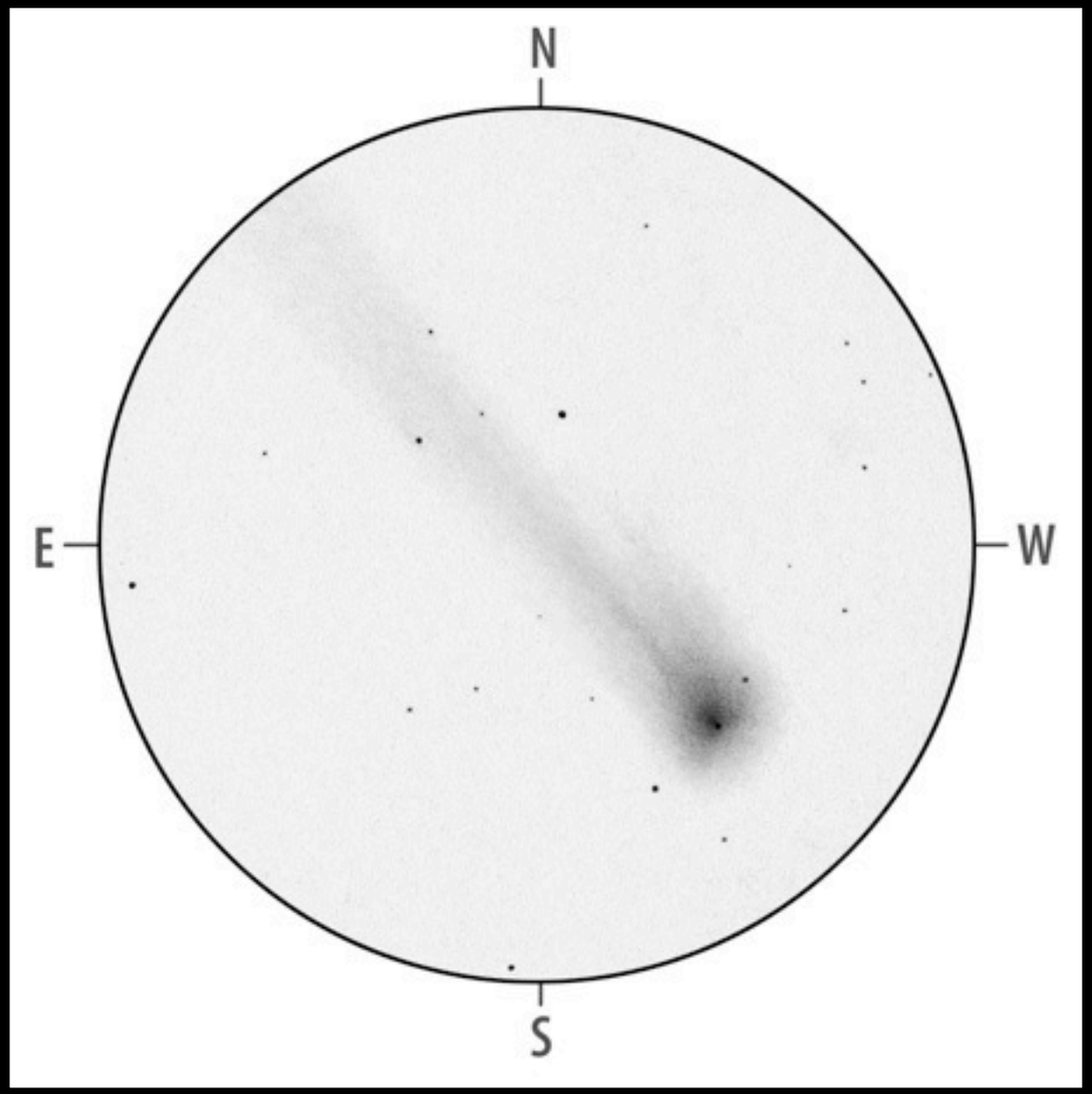


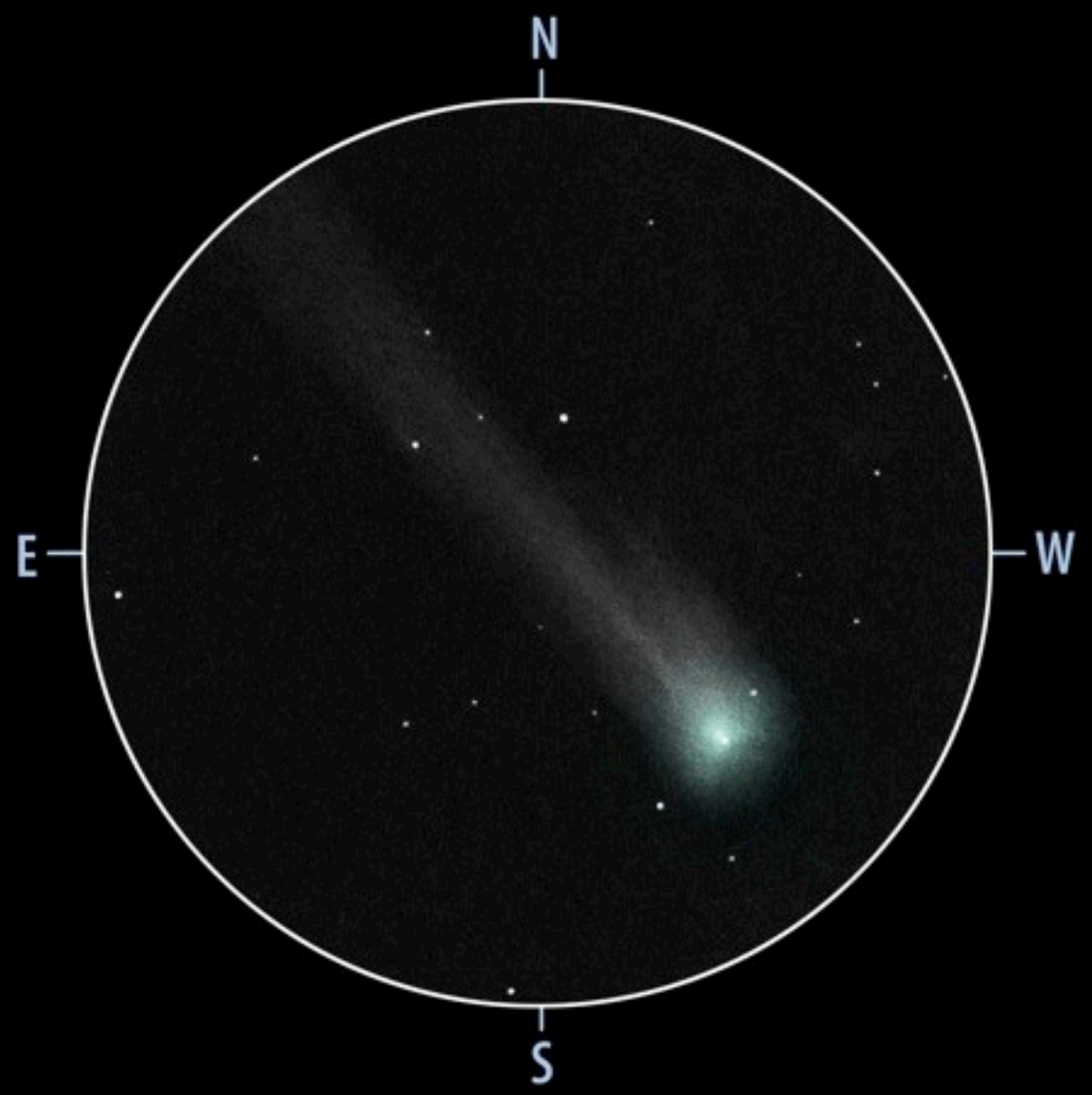
Uranus

Sol Robbins

comets

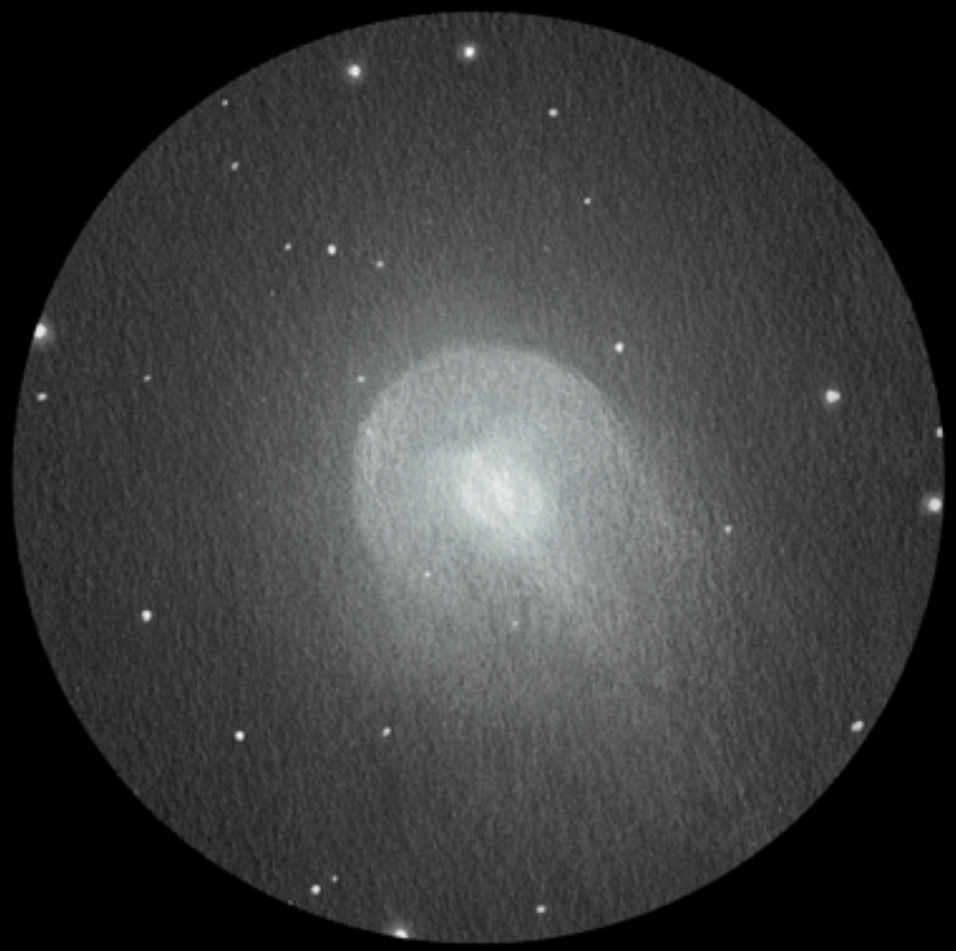
C/2006 M4 (SWAN)





comets

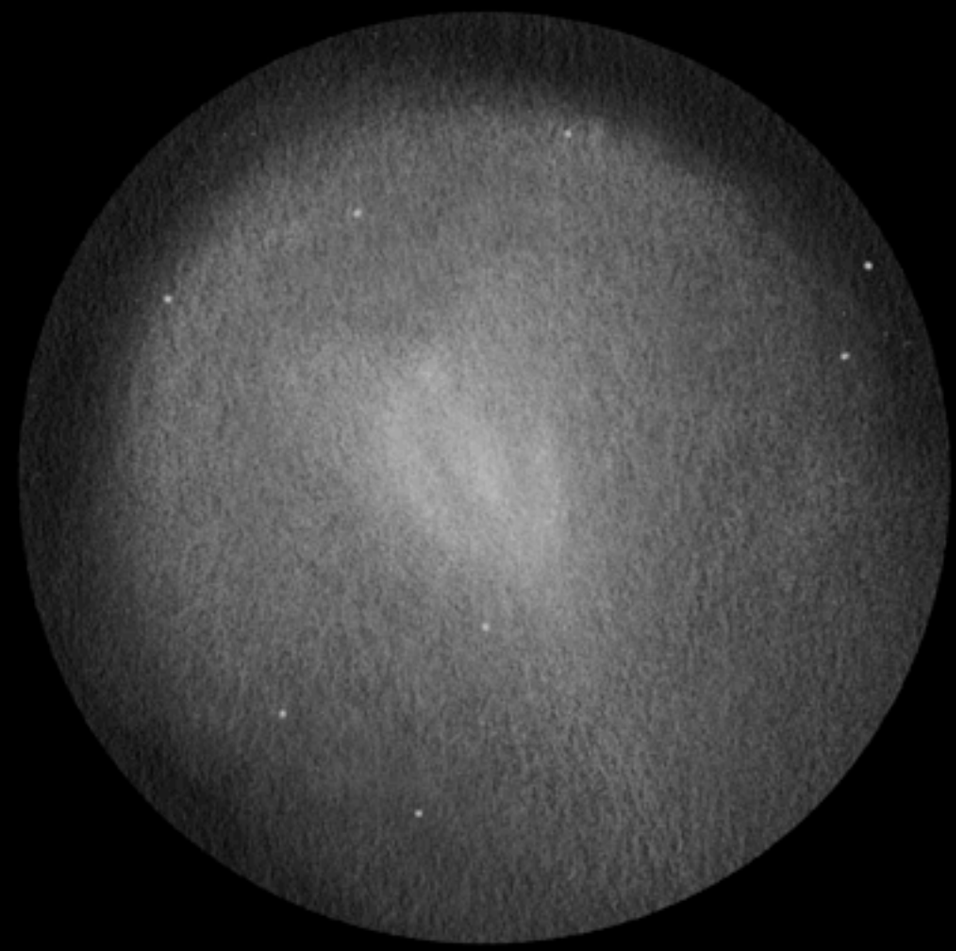
17P / Holmes



NOV 7, 2007 • 04:30 UT
Orion XT8 - 8" f/6 Newtonian
32 mm Sirius Plössl: 38X / 88' TFOV
Sketch by Jeremy Perez © 2007

N
W

17P / Holmes

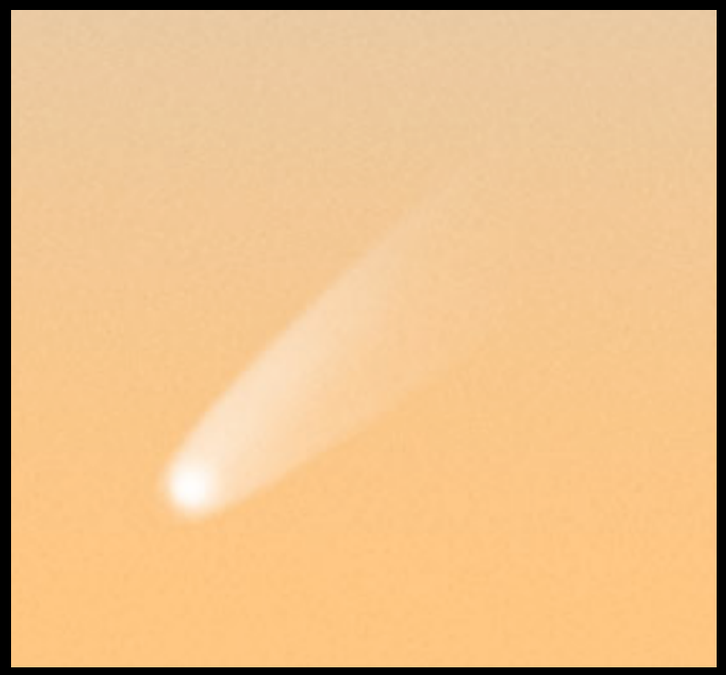


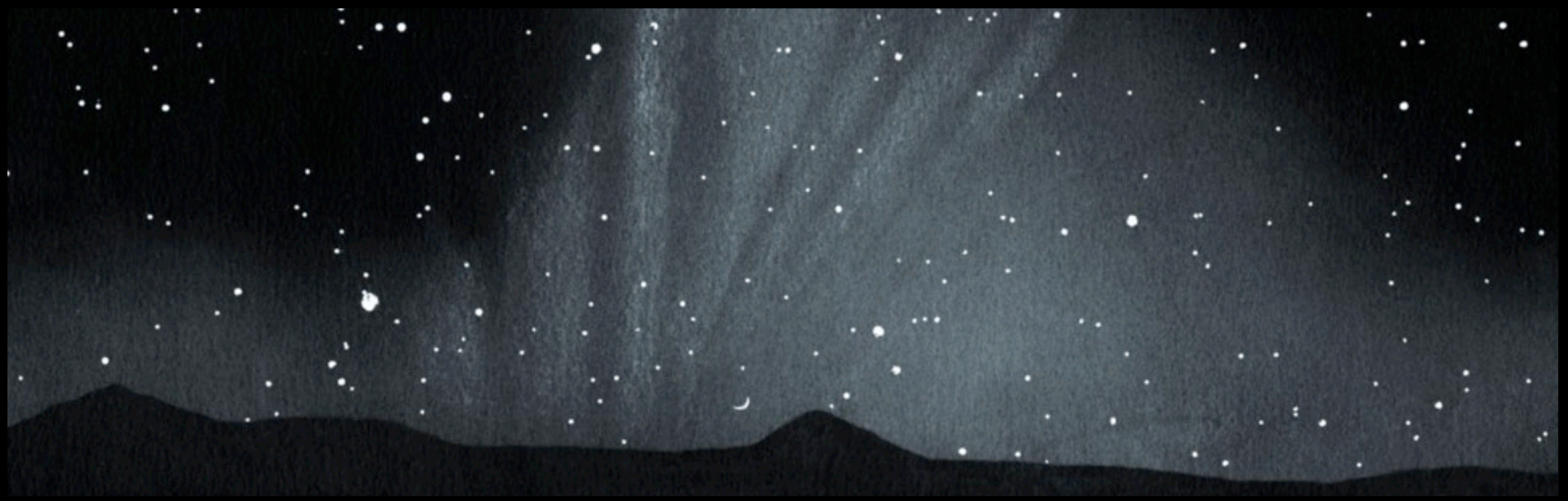
NOV 7, 2007 • 04:00 UT
Orion XT8 - 8" f/6 Newtonian
10 mm Sirius Plössl: 120X / 24' TFOV
Sketch by Jeremy Perez © 2007

N
W

comets

C/2006 P1 (McNaught)





comets

Hale-Bopp

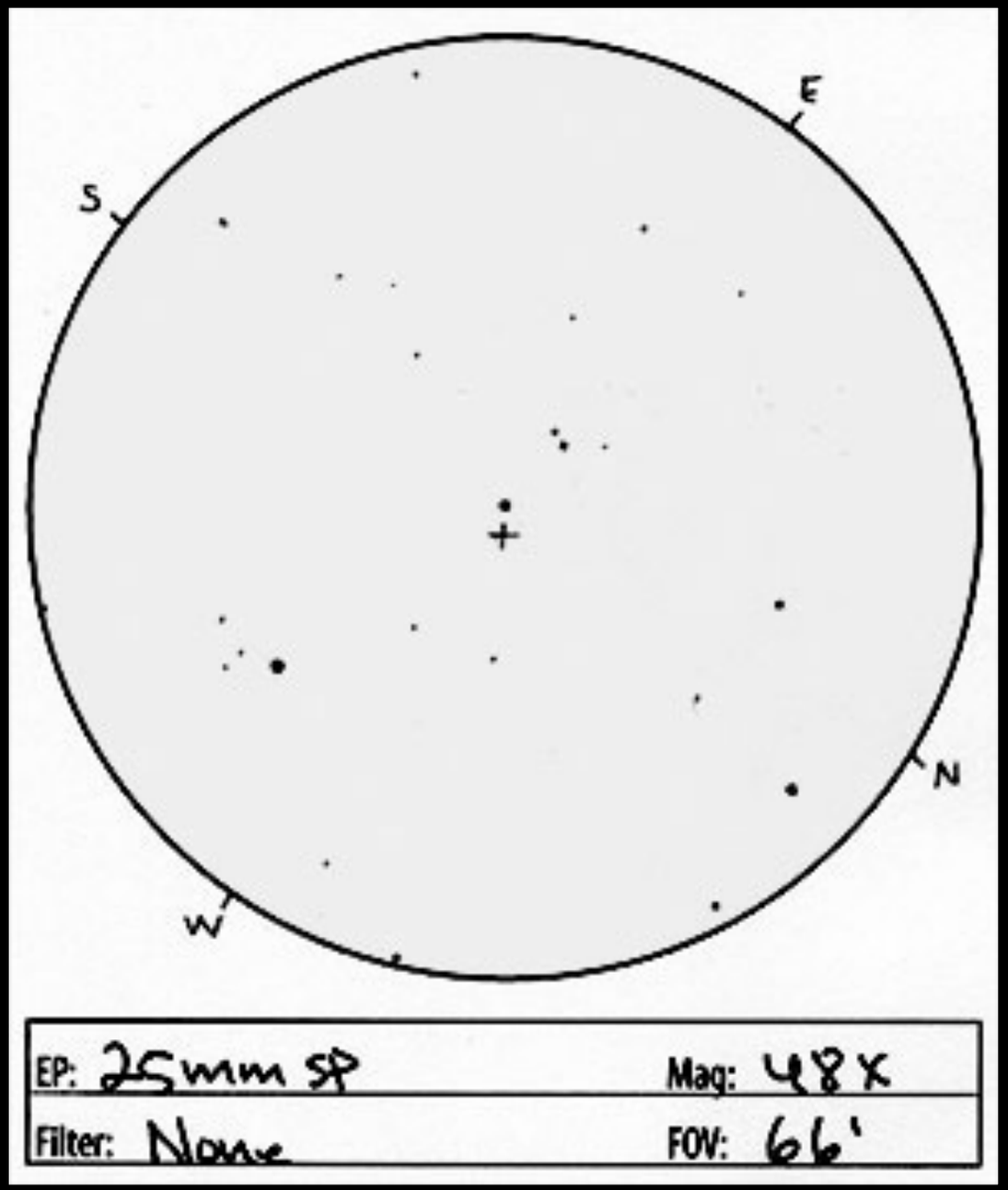
Janis R.

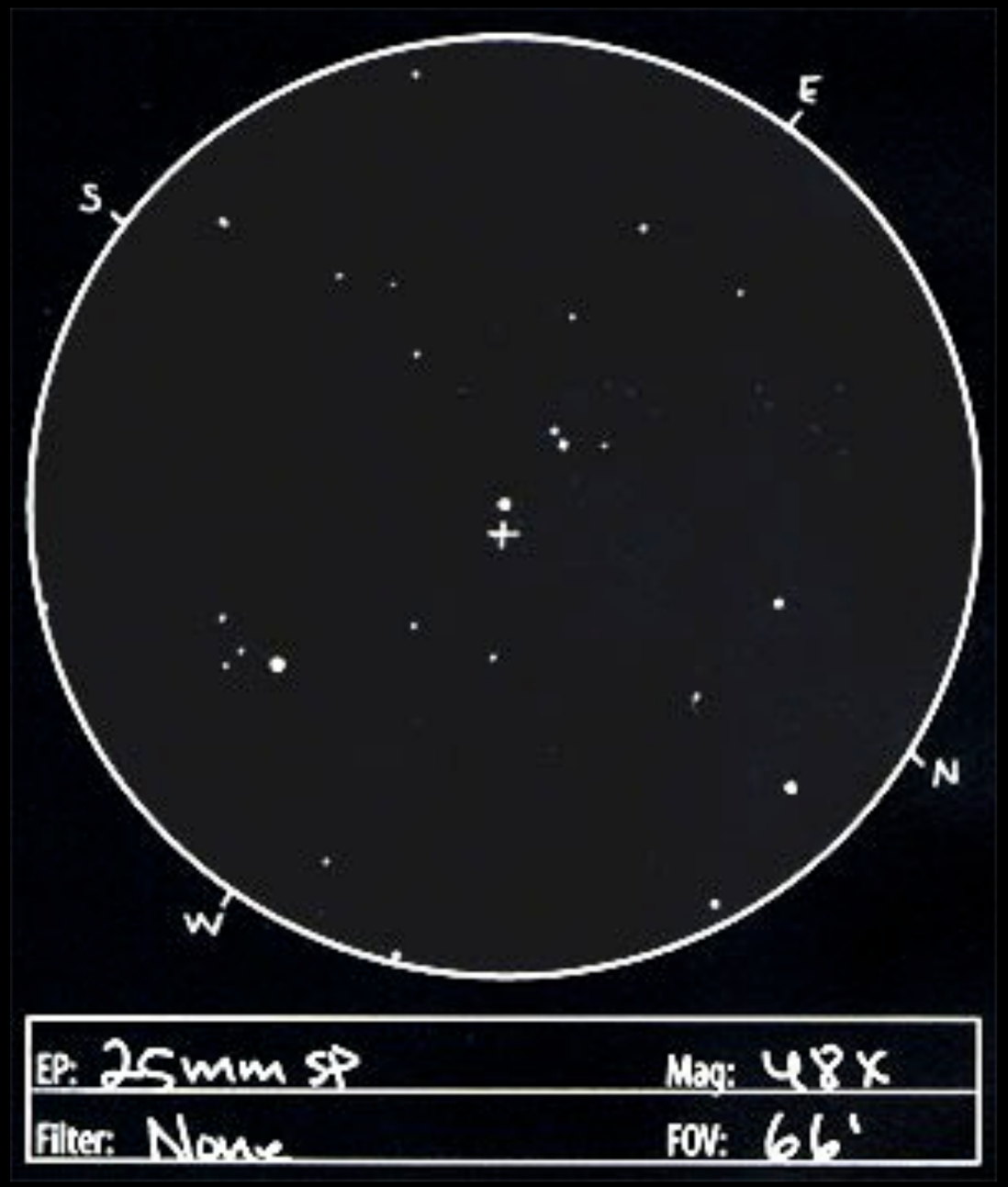
17P/Holmes

Eric Graff

asteroids

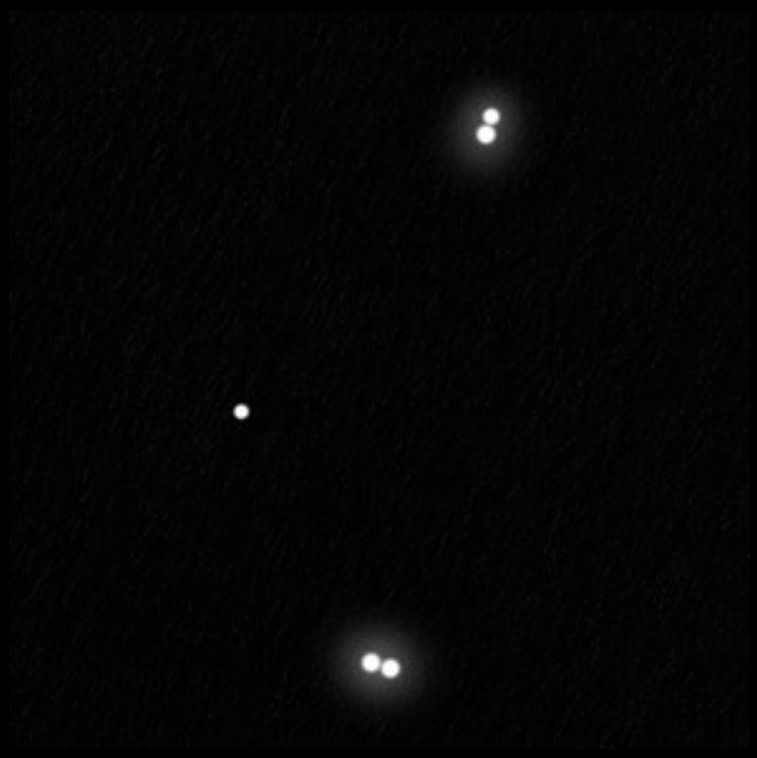
3 Juno



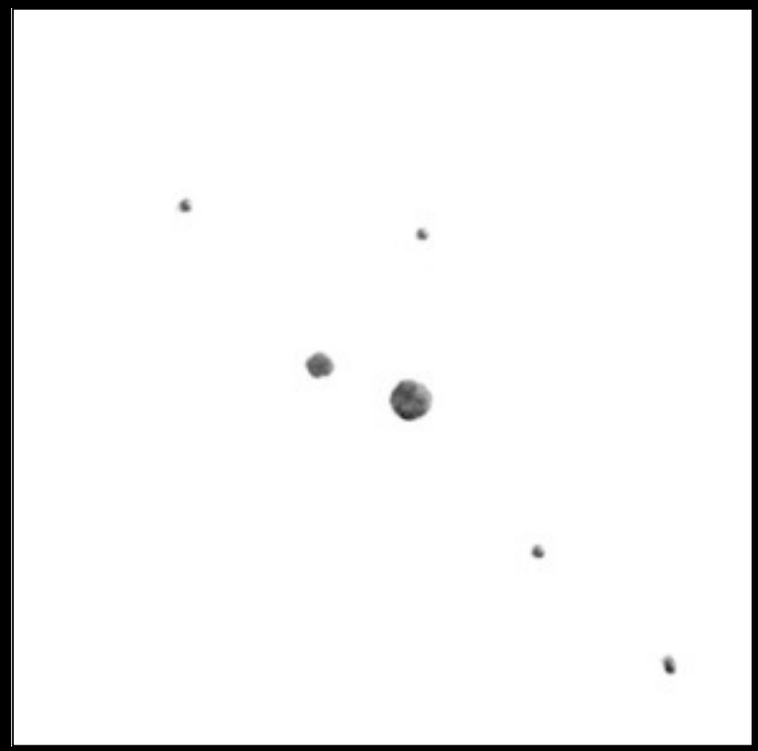


double stars

Epsilon Lyrae

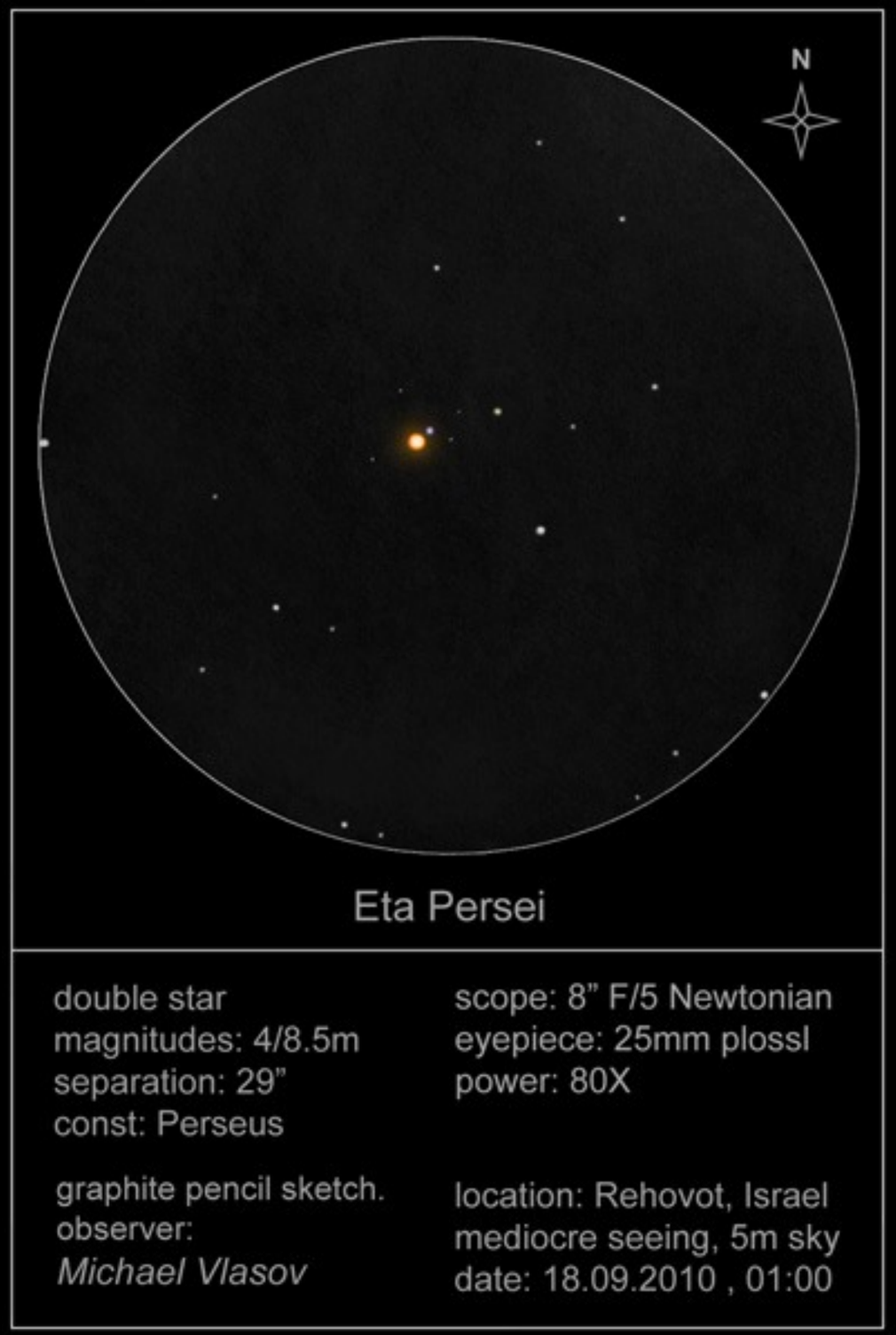


Albireo



double stars

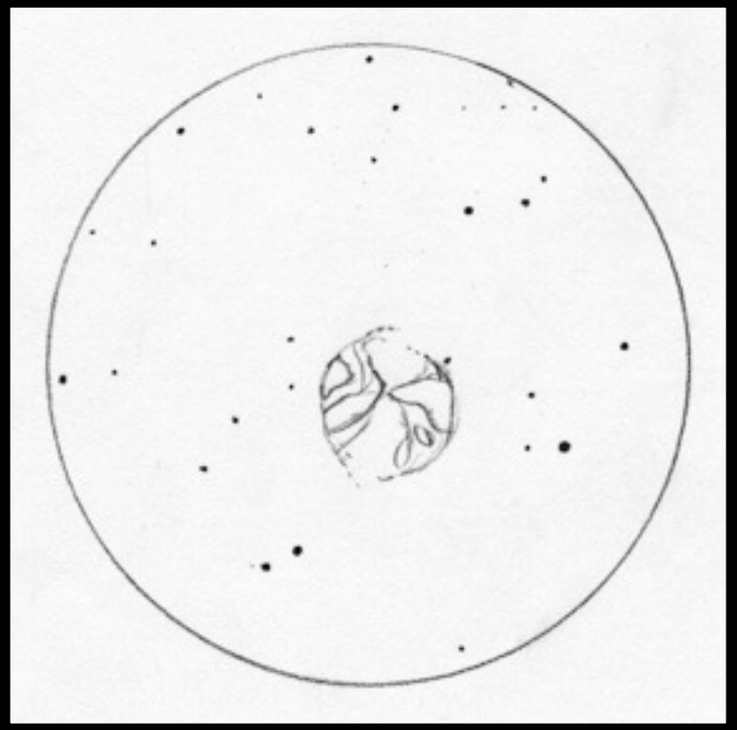
Eric Graff

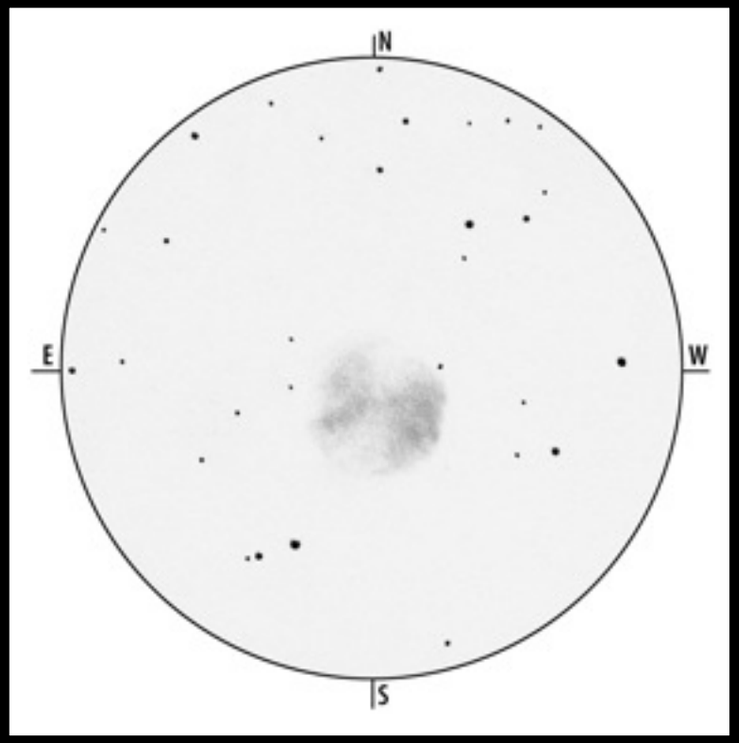


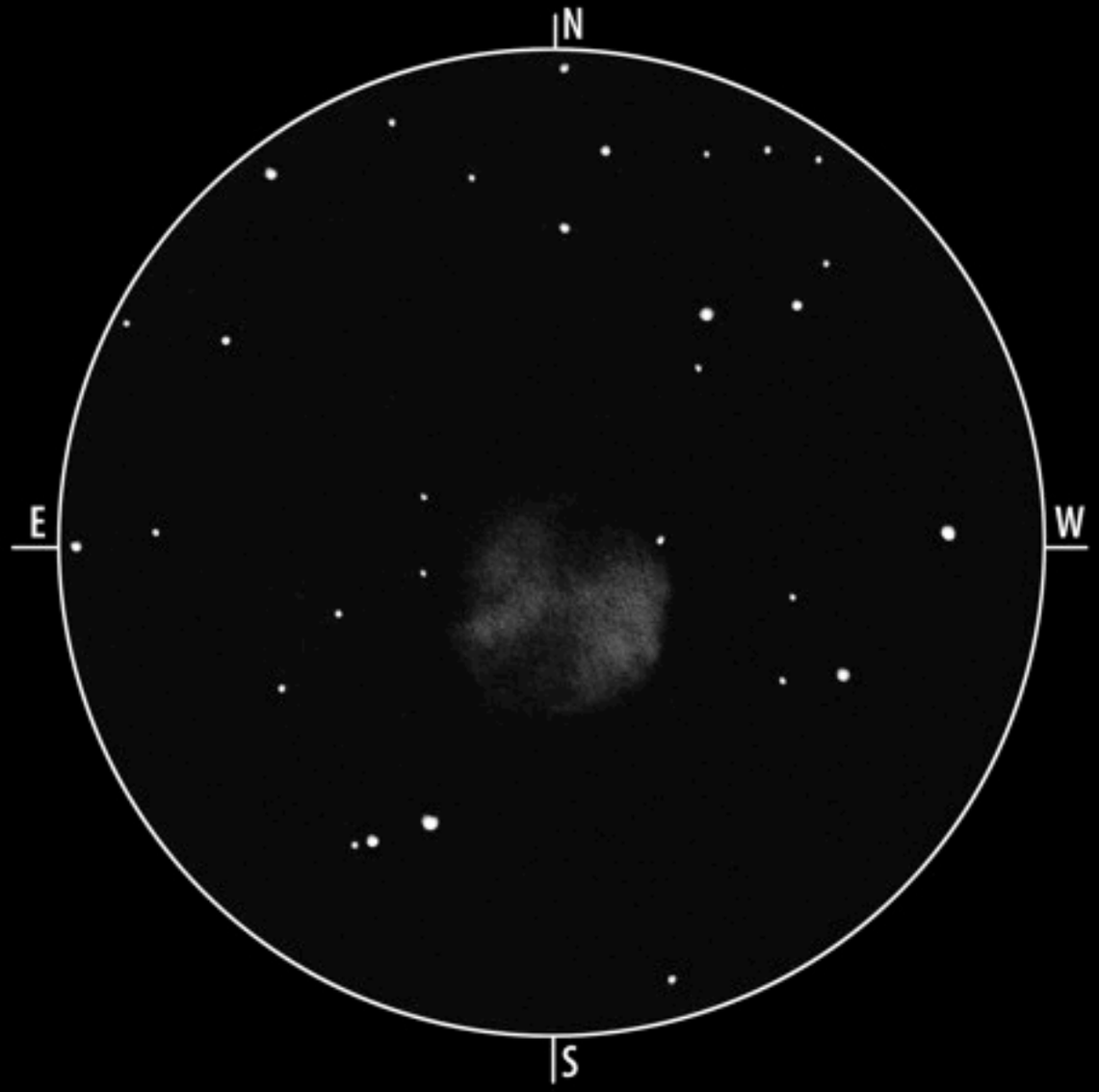
Michael Vlasov
www.deepskywatch.com/astronomy-sketches.html

deep sky

Messier 27





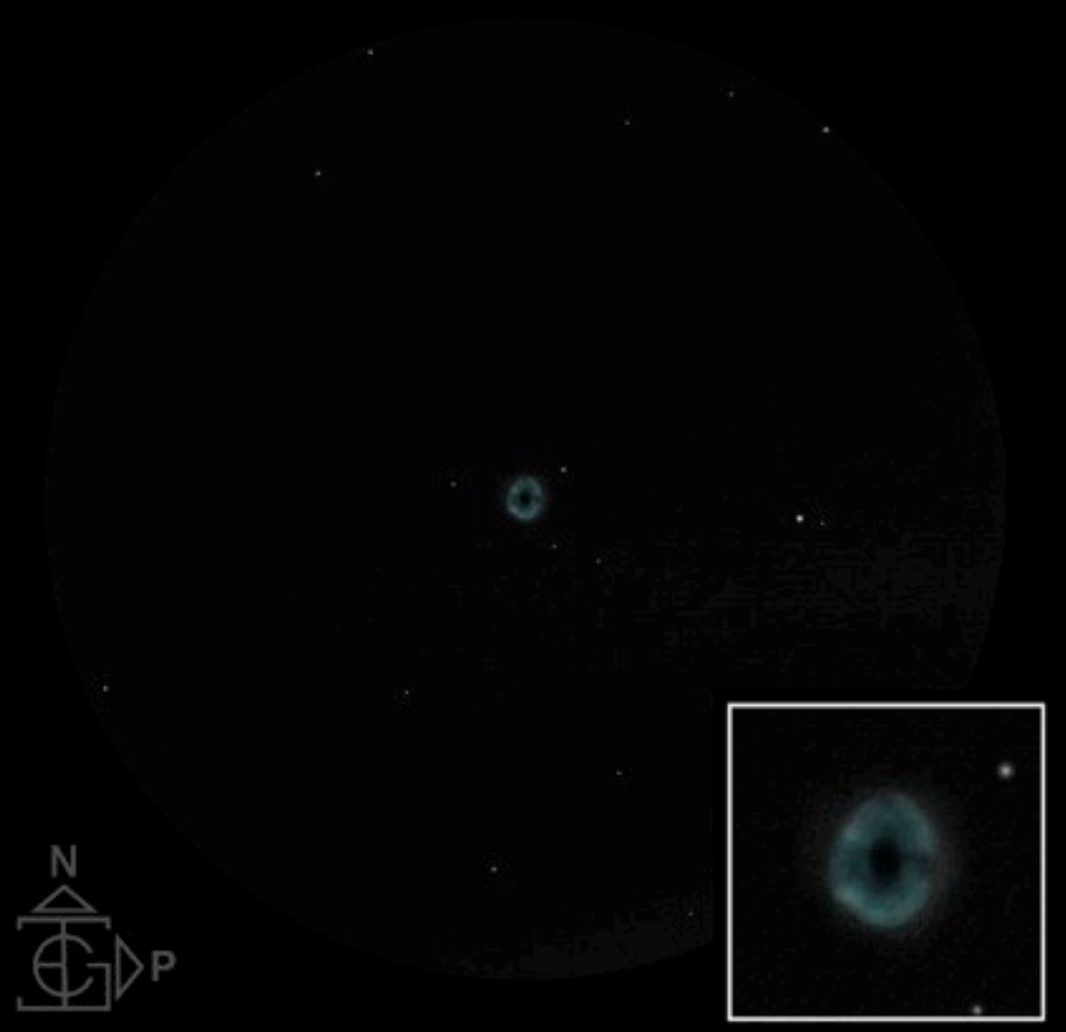


deep sky

Messier 27

Brandon Doyle | brandon-doyle.weebly.com

NGC 6818



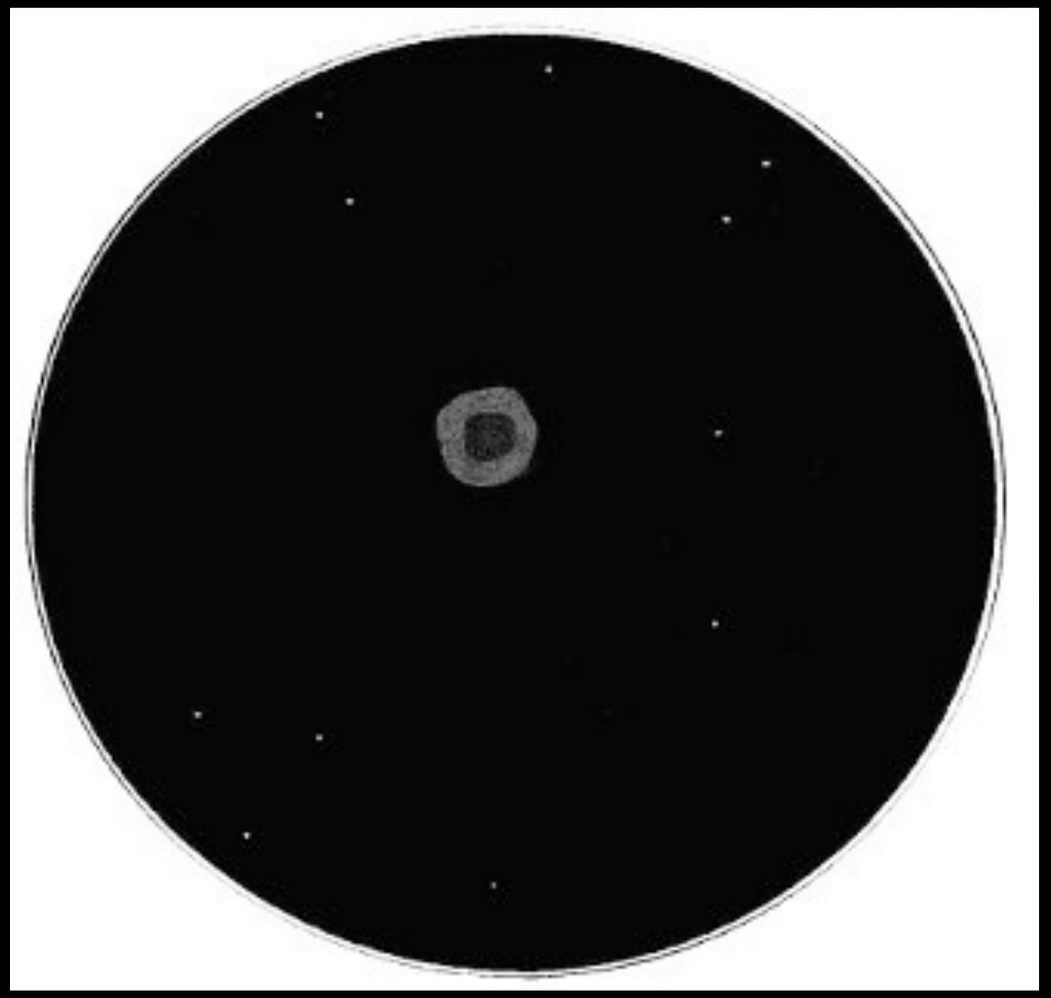
Eric Graff

deep sky

NGC 2392

Ferenc Lovró | www.graphitegalaxy.com

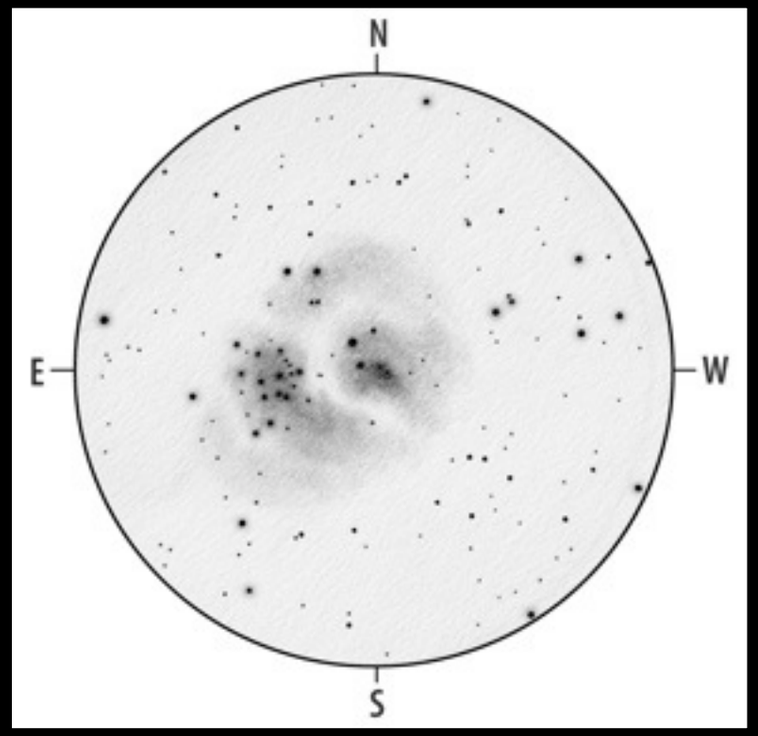
Messier 57

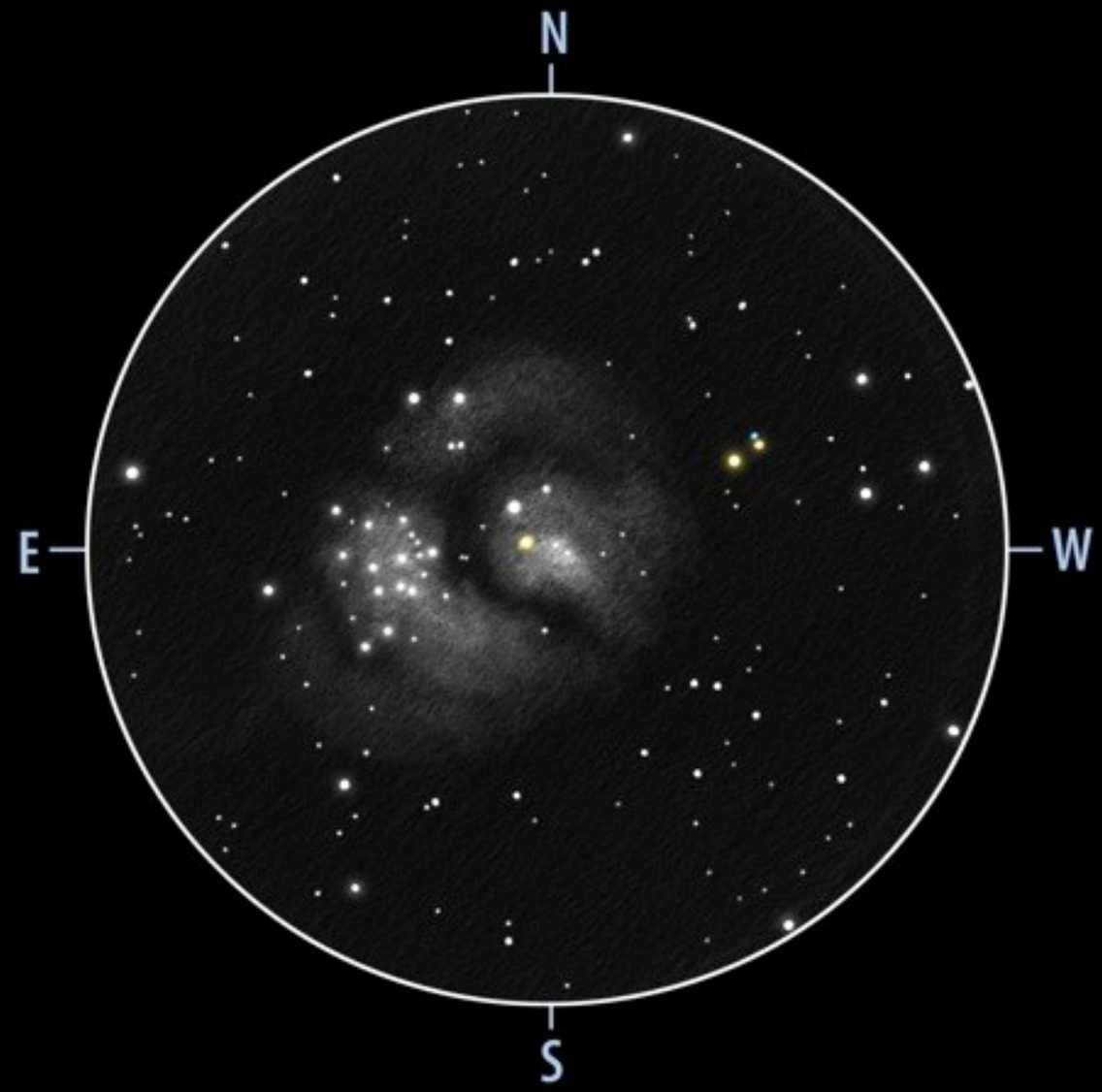


Lynn (ladip63)

deep sky

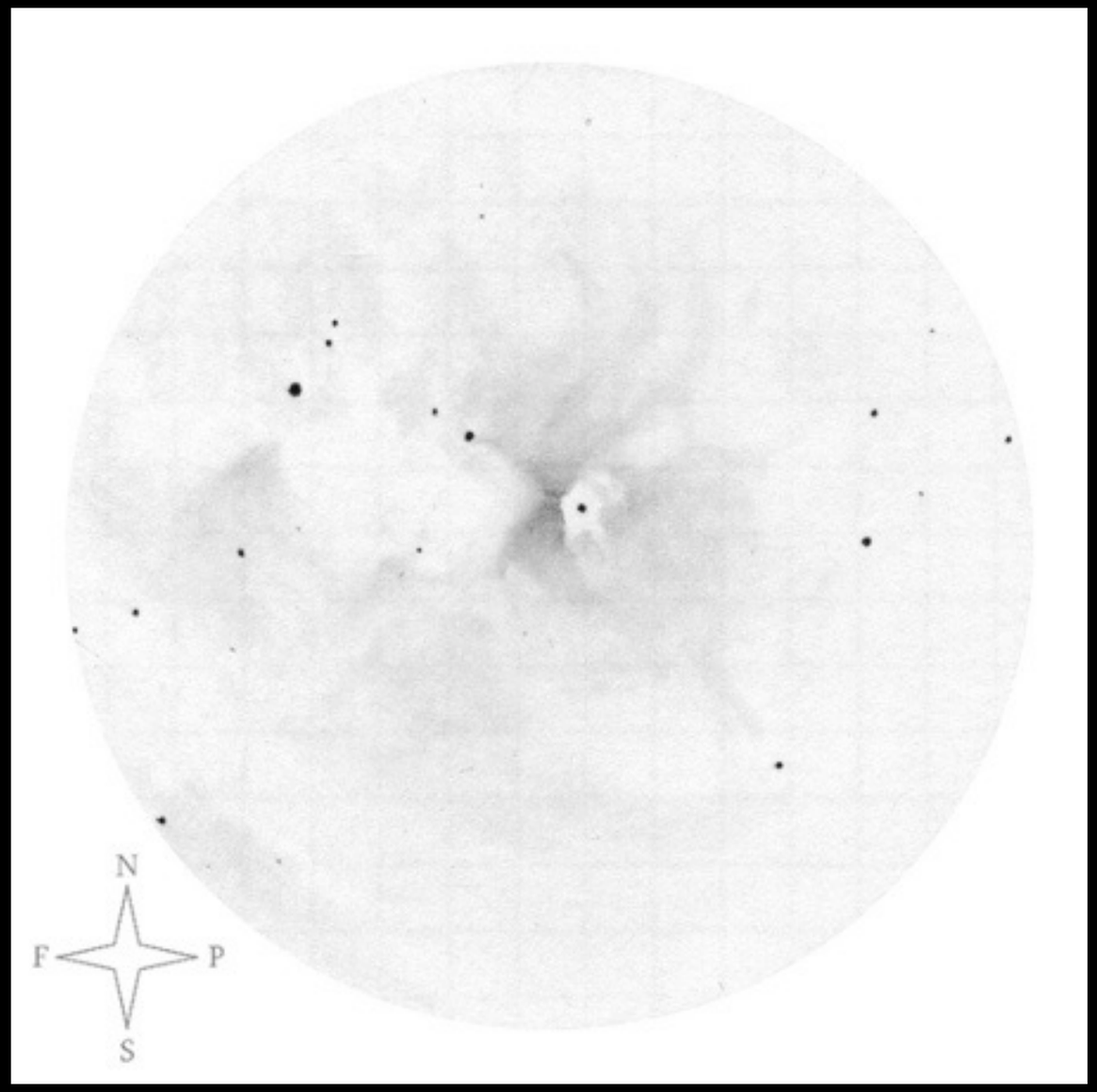
Messier 8





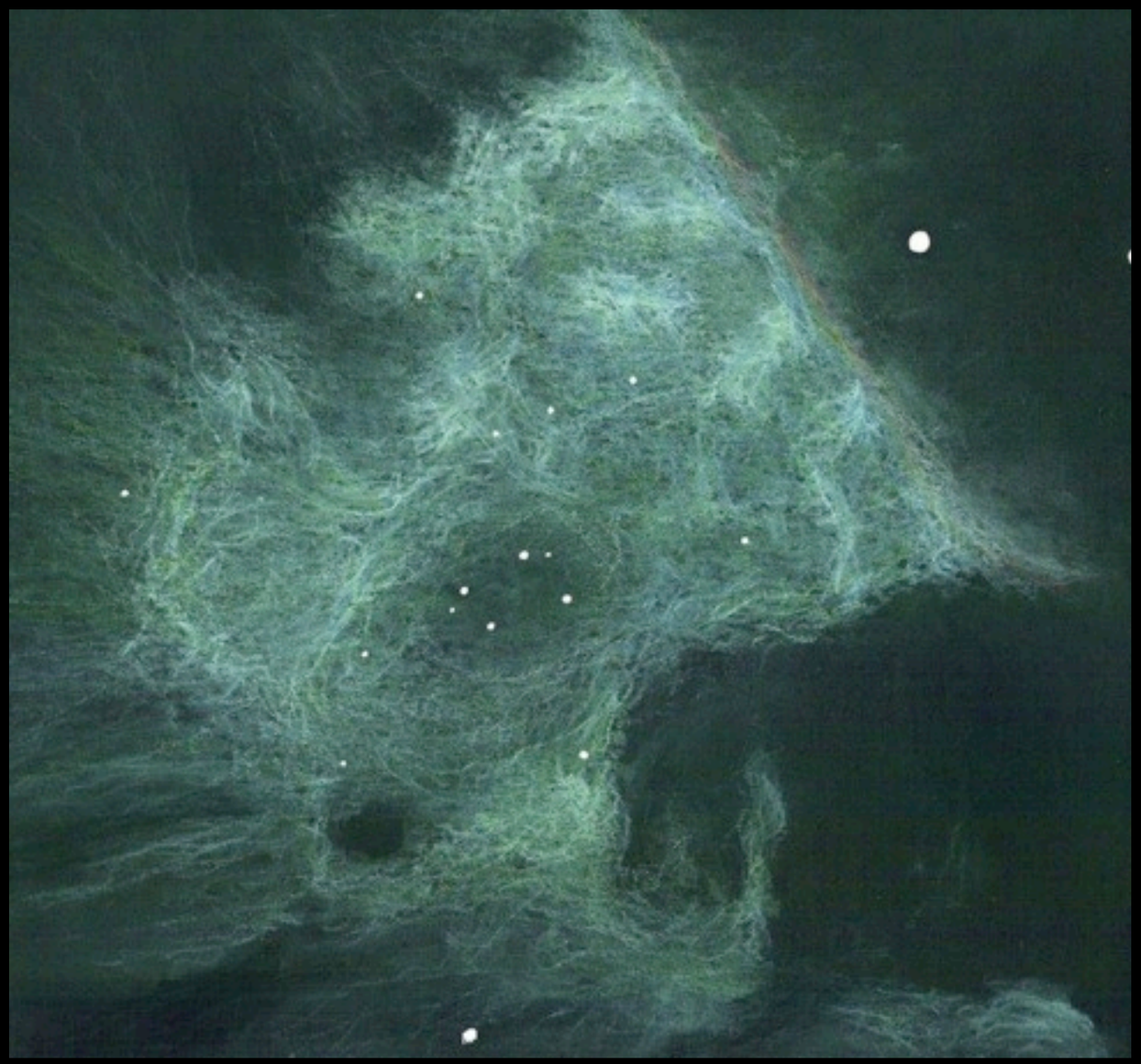
deep sky

Messier 8 - Hourglass Nebula



Eric Graff

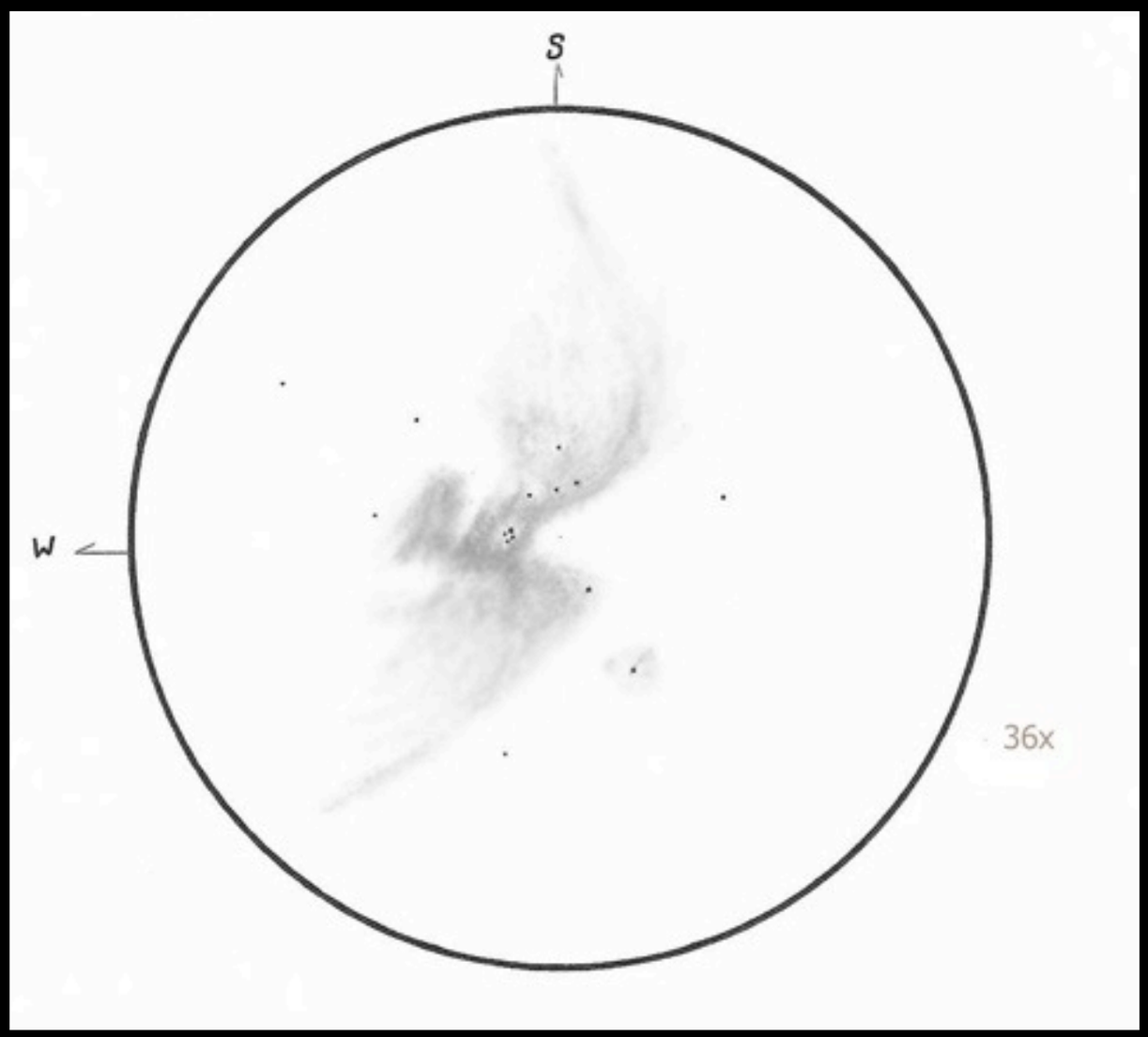
Messier 42 - Trapezium



Pierre Desvaux | dobsonfactory.blogspot.com

deep sky

Messier 42 and 43



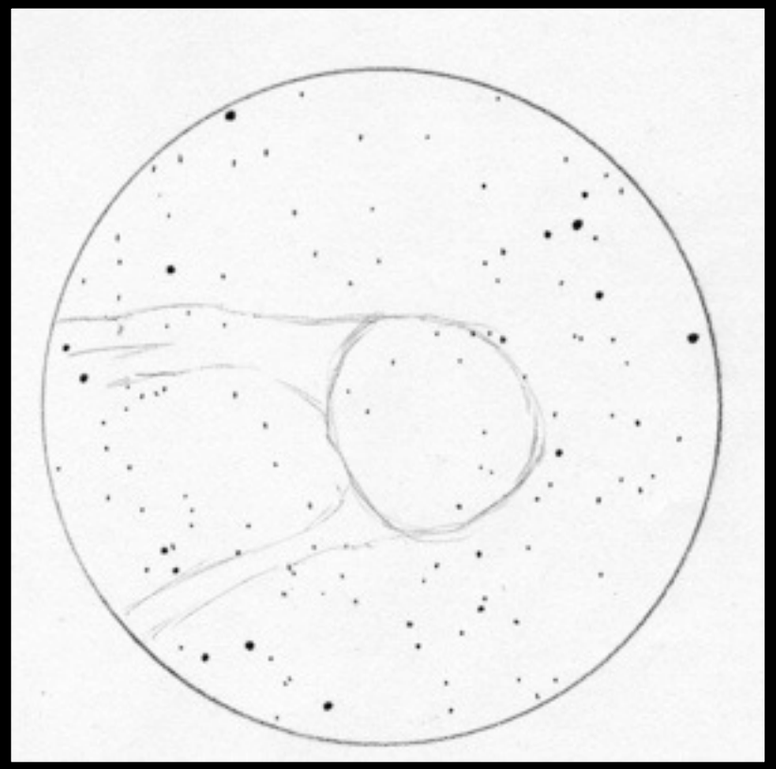
Faith Jordan | visualdeepskyobserving.blogspot.com

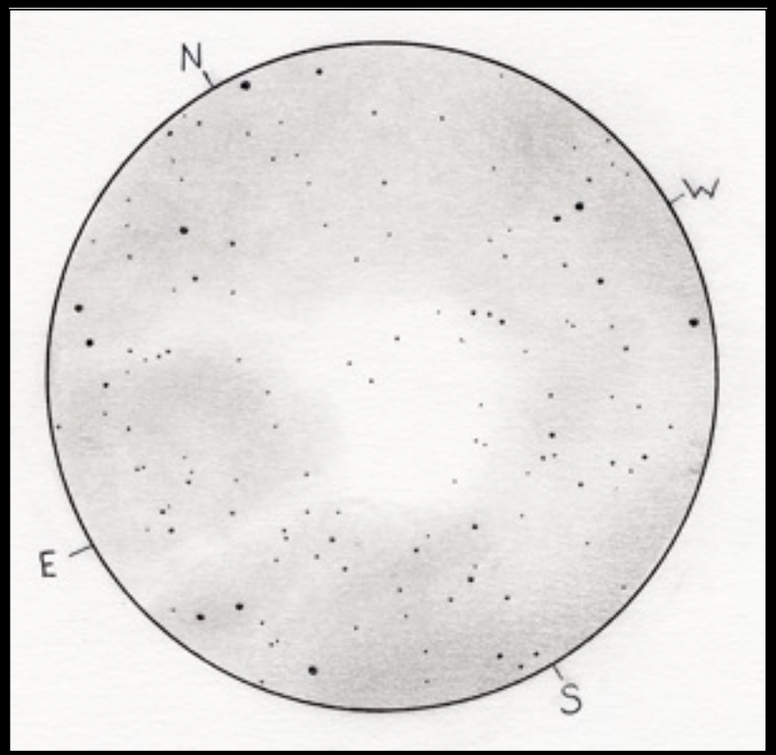
Horsehead Nebula Region

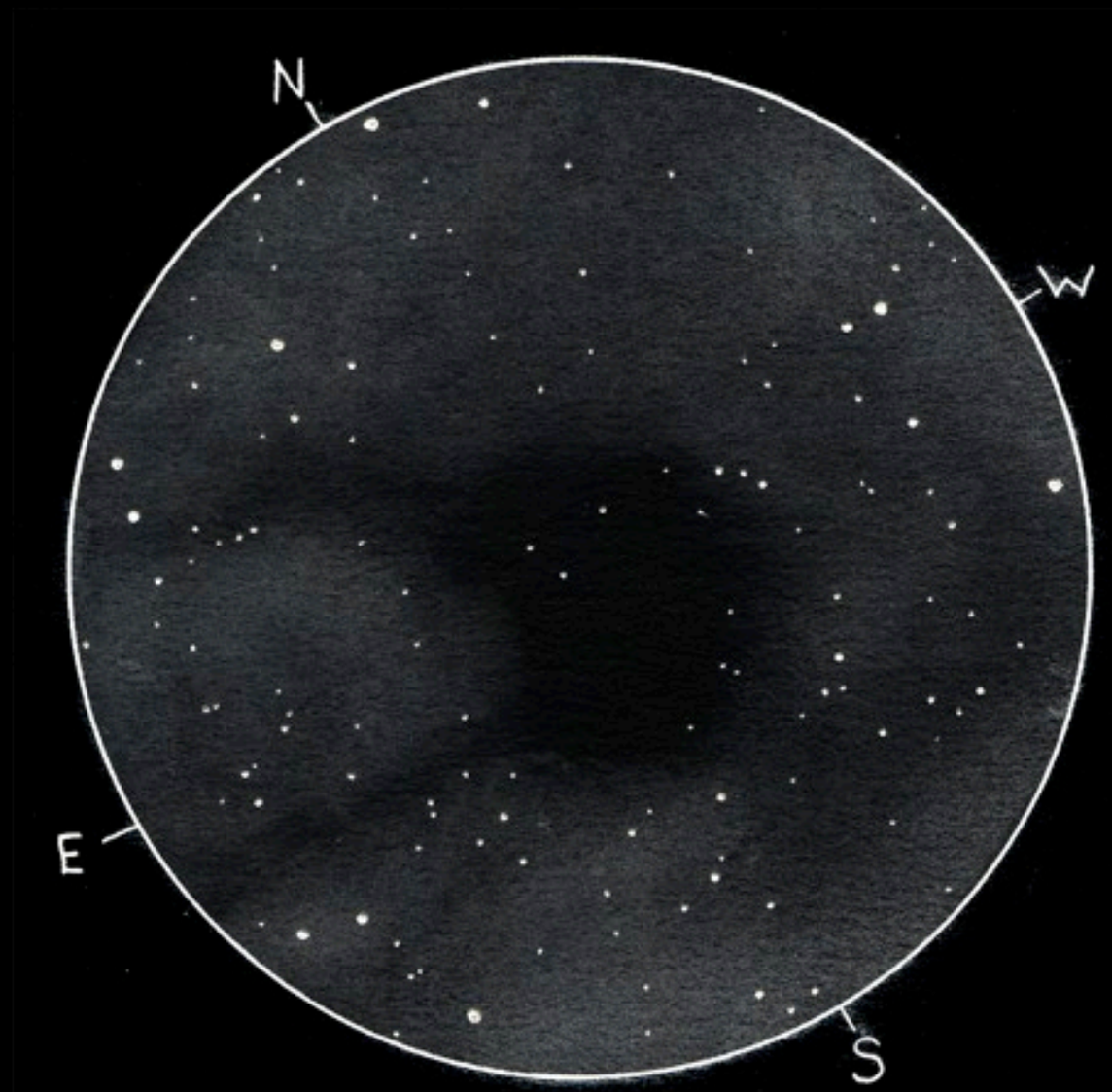
Michael Vlasov
www.deepskywatch.com/astronomy-sketches.html

deep sky

Barnard 34

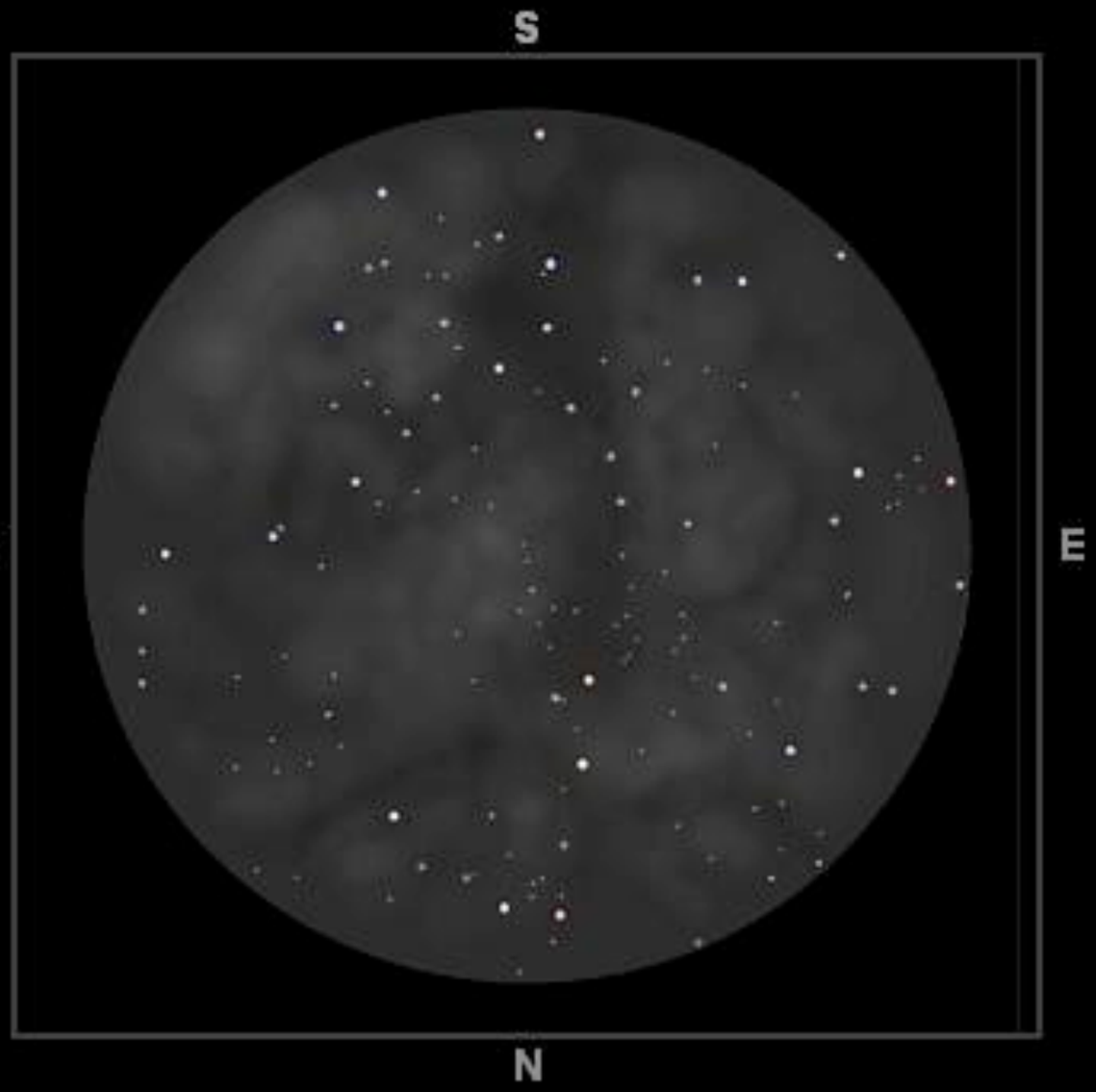






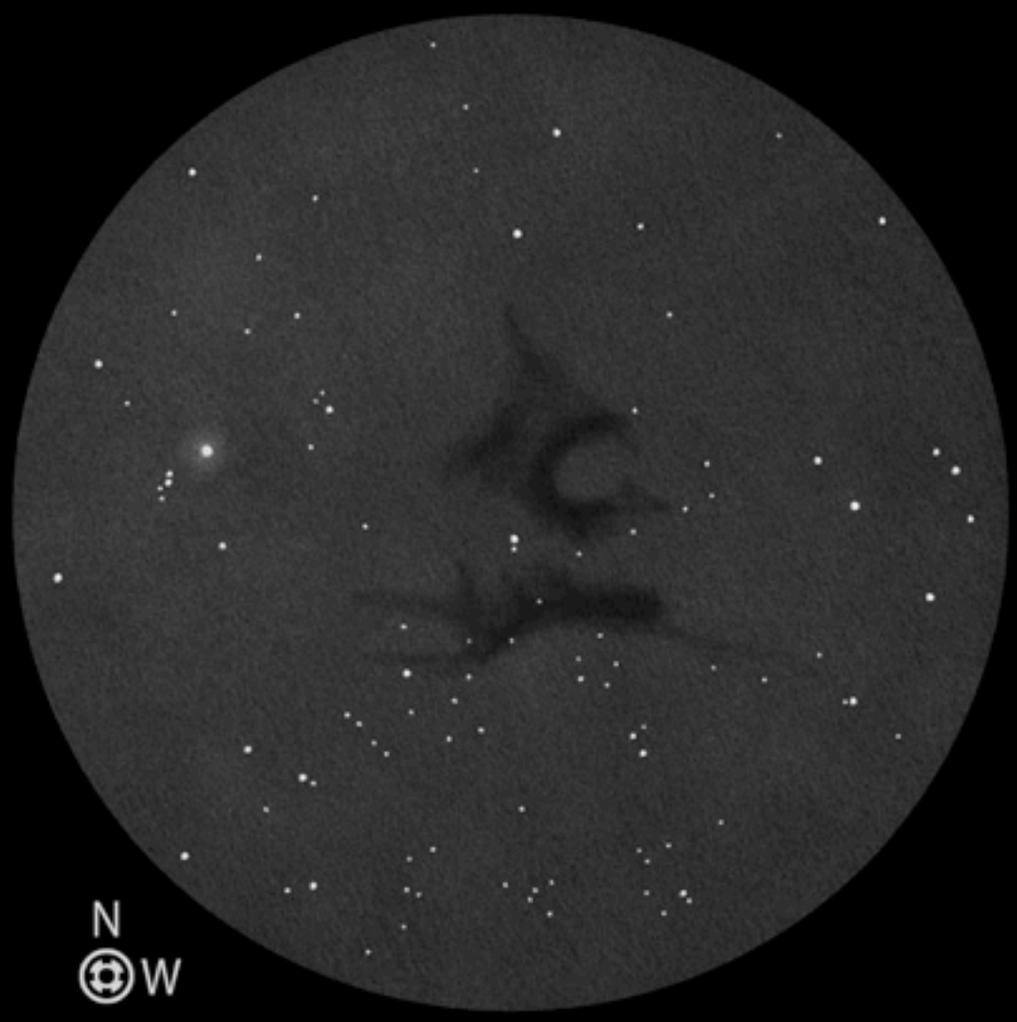
deep sky

LDN 514/515 (Barnard 114/115)



Eric Graff

Barnard 142/143



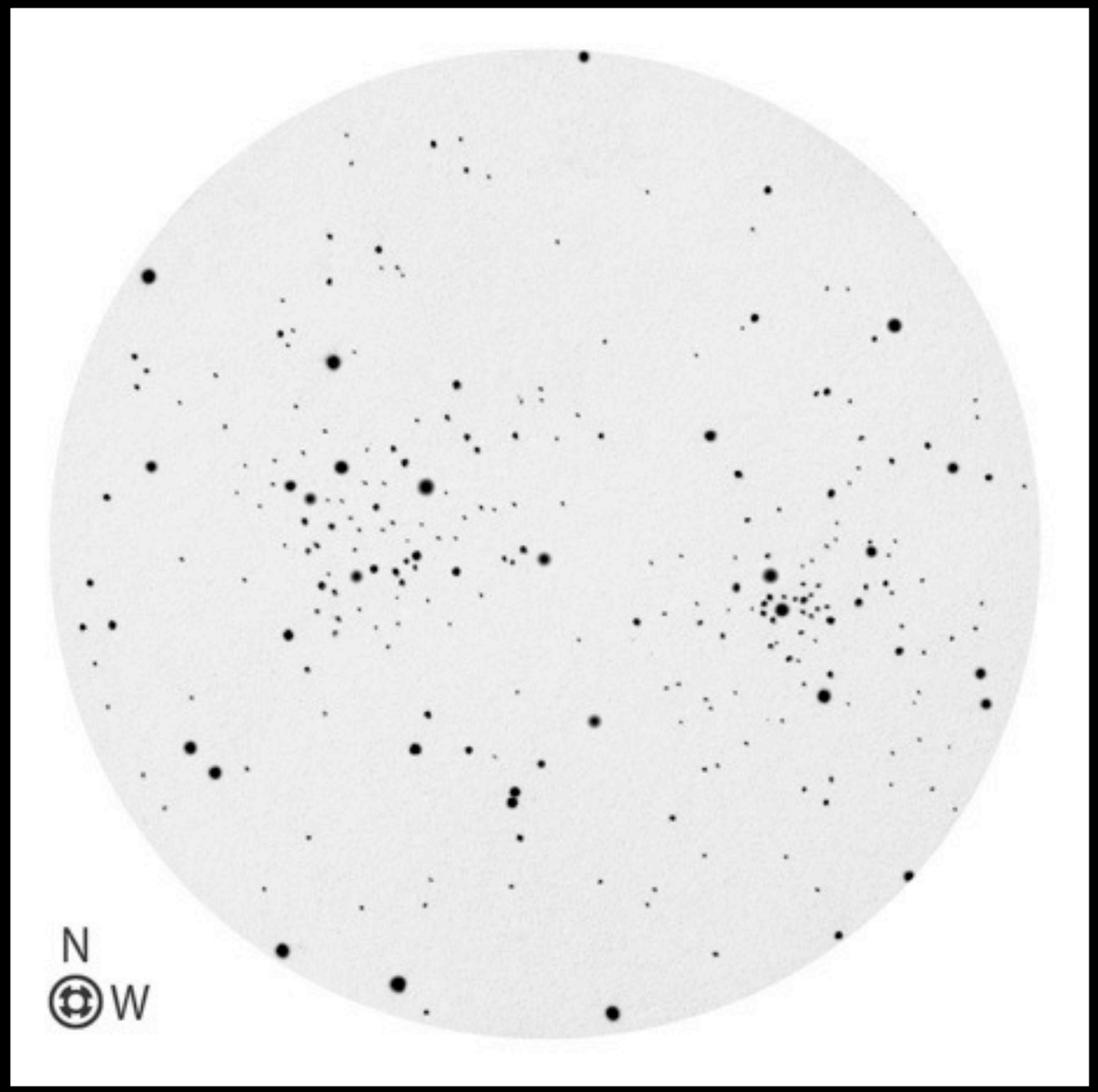
MAY 02, 2009 • 10:00 UT

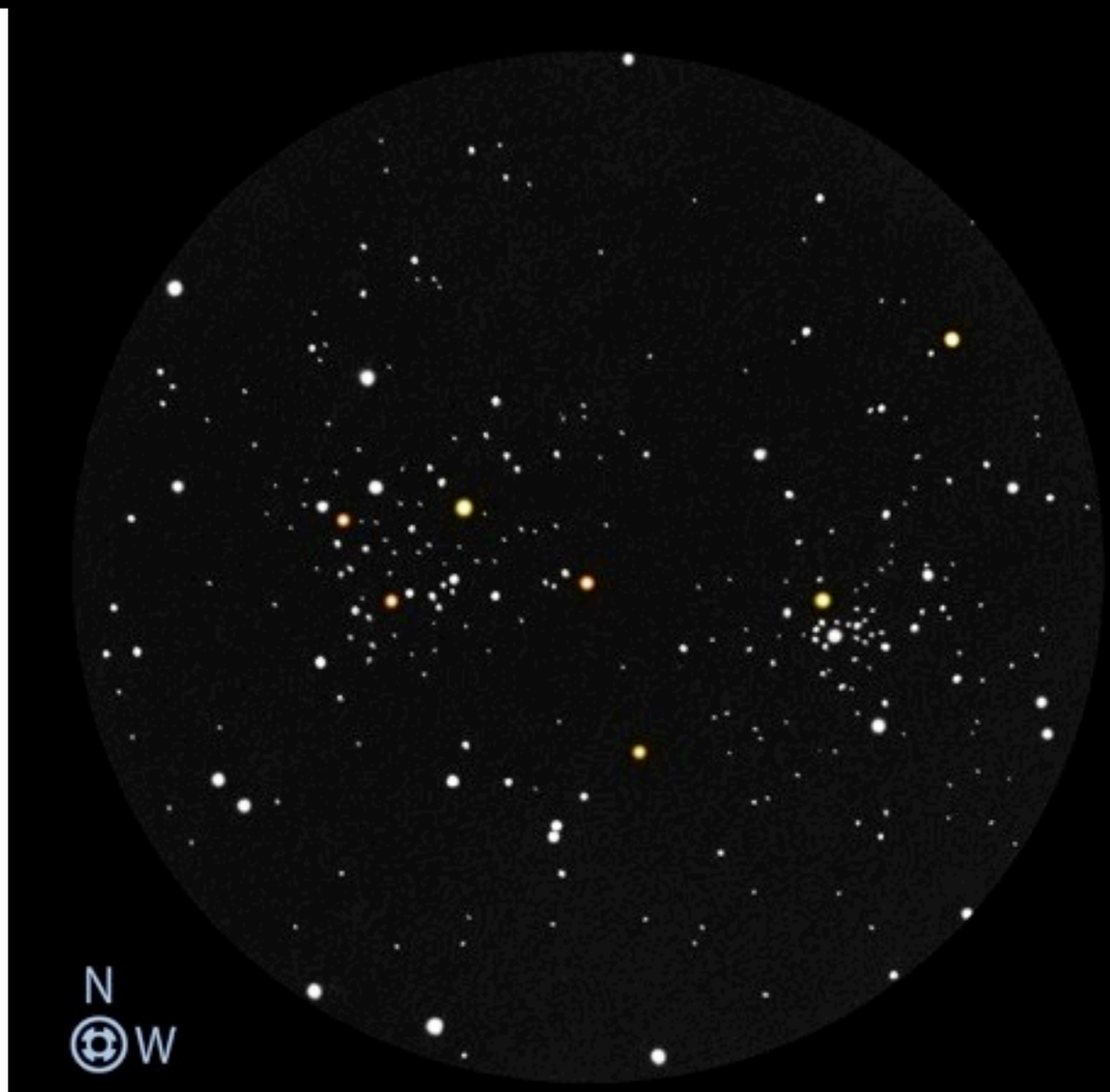
Oberwerk 15 x 70 Binoculars • 4.4° TFOV

Sketch by Jeremy Perez © 2009
beltofvenus.perezmedia.net

deep sky

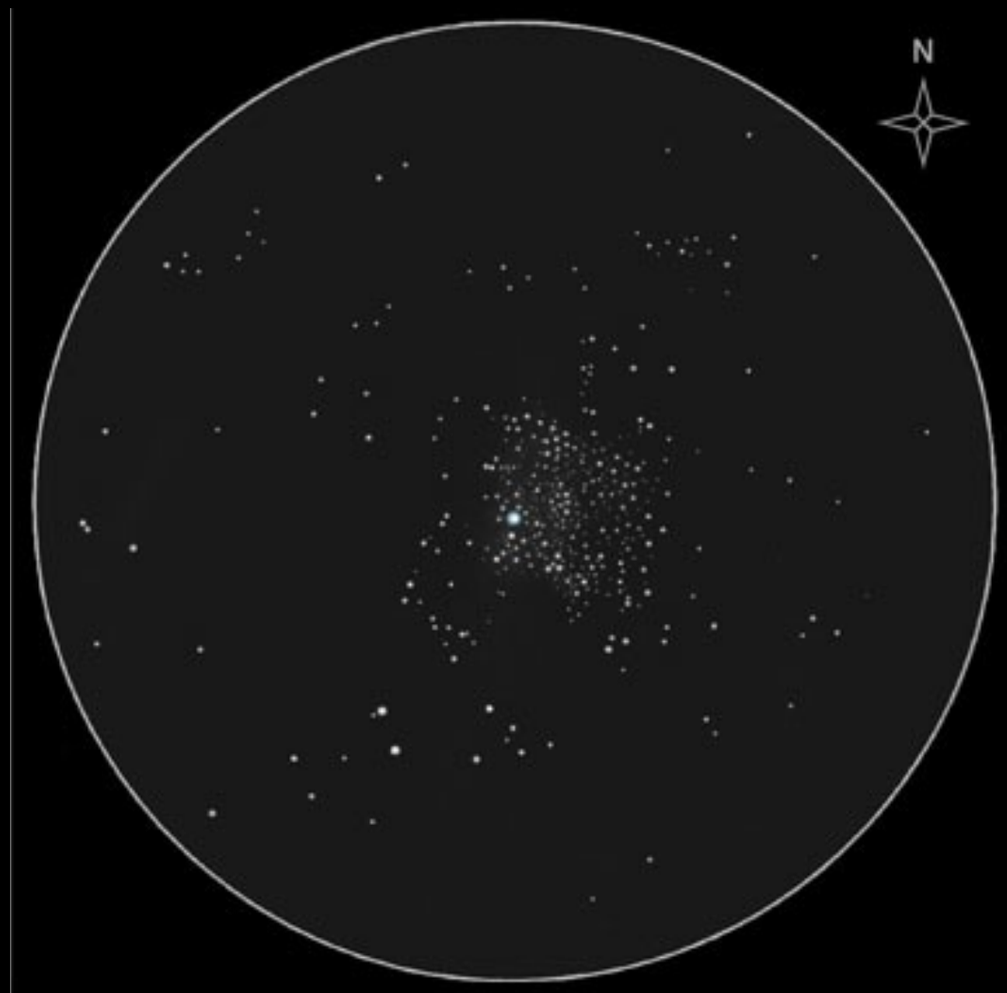
NGC 869 and 884





deep sky

Messier 11



Michael Vlasov
www.deepskywatch.com/astronomy-sketches.html

Messier 35 and NGC 2158

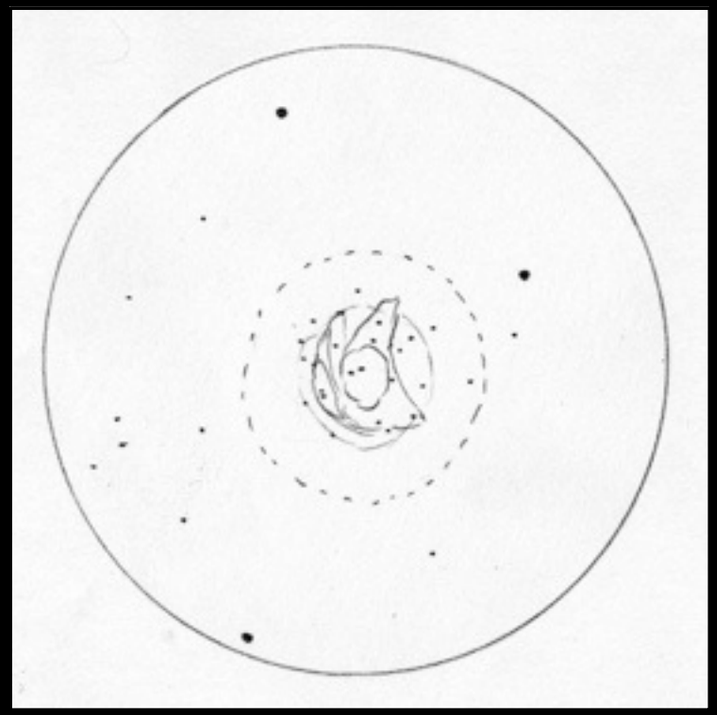
FEB 4, 2005 • 06:00 UT

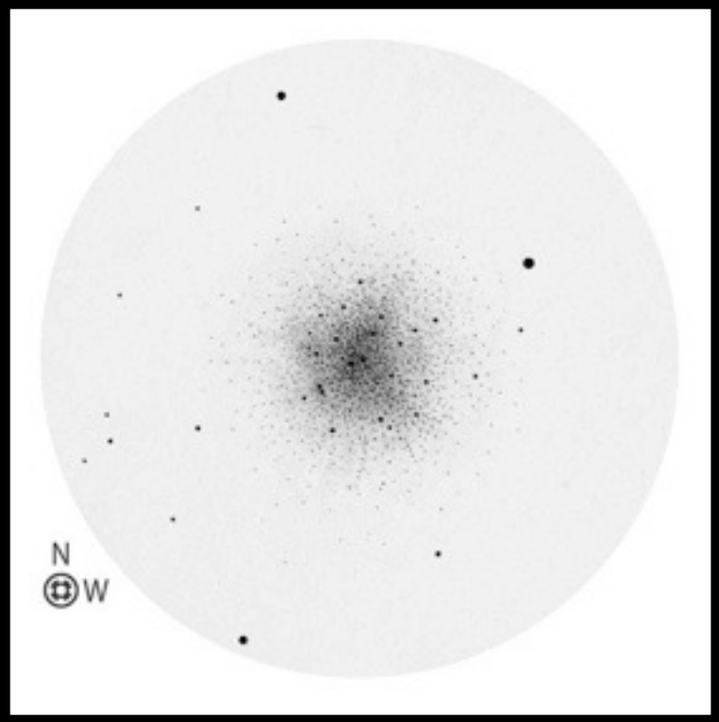
Orion SkyView Pro 6LT - 6" f/8 Newtonian
32 mm Plössl: 37.5X / 88' TFOV

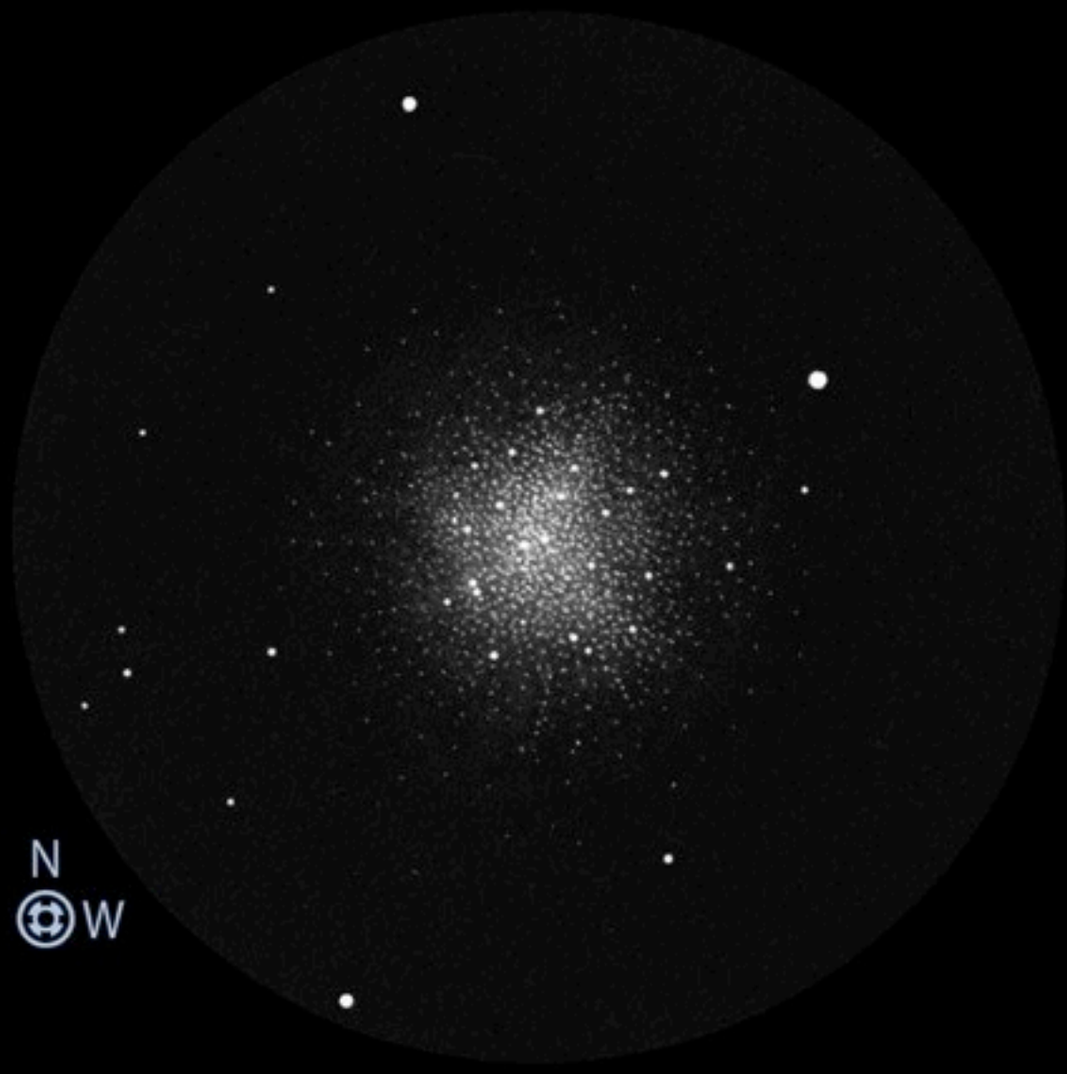
Sketch by Jeremy Perez © 2005, 2009
beltofvenus.perezmedia.net

deep sky

Messier 3

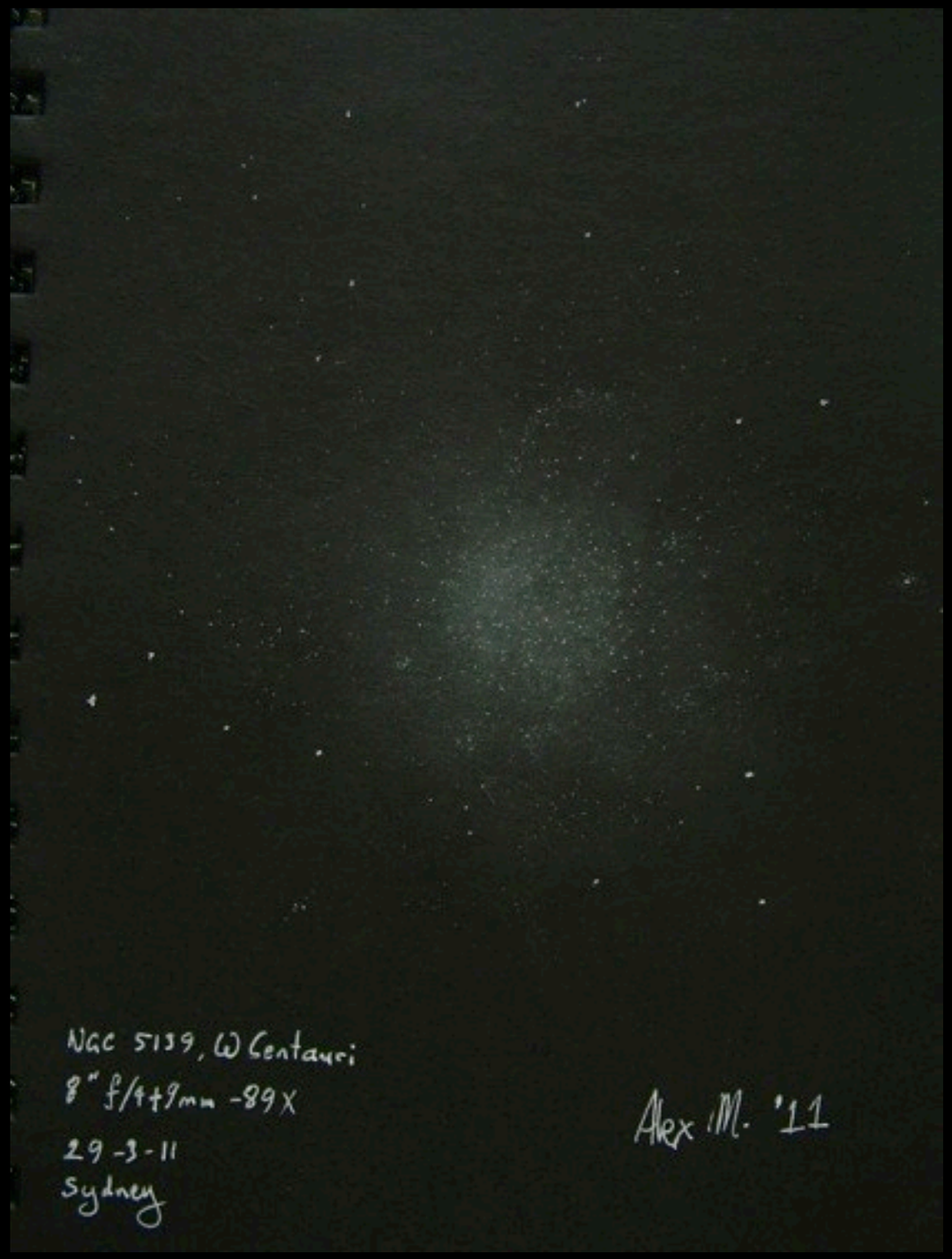






deep sky

NGC 5139



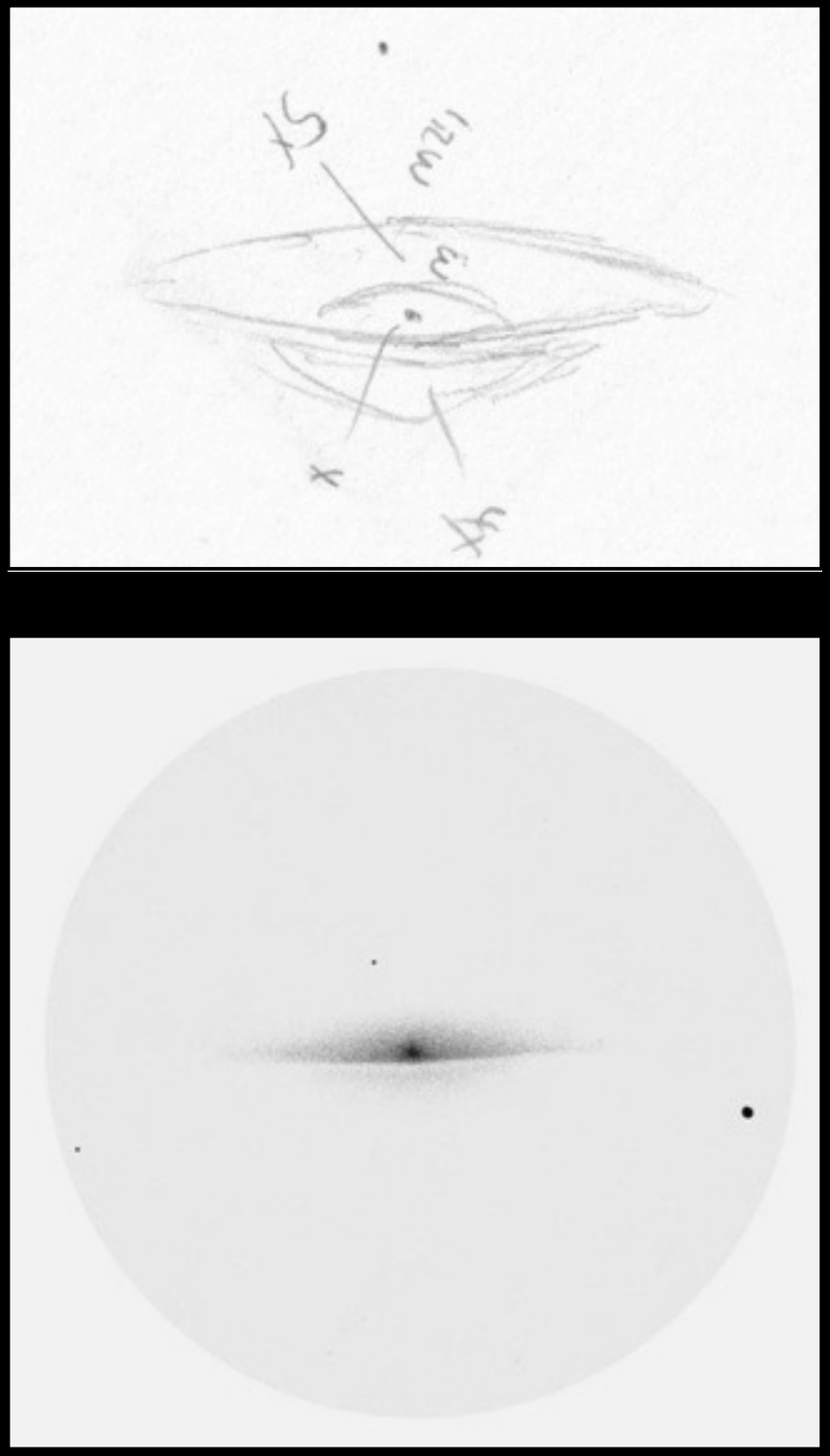
Alexander Massey

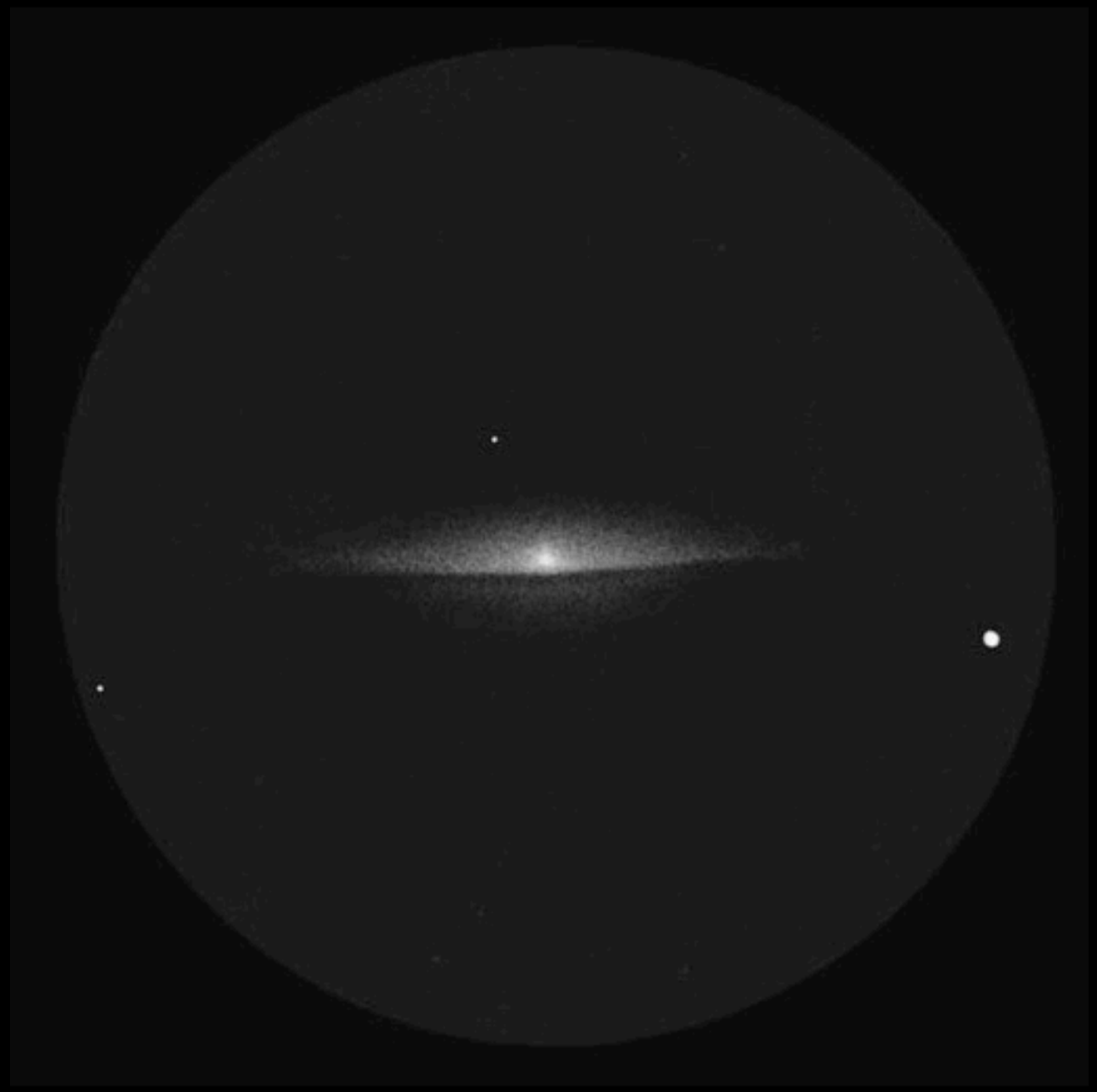
Messier 13

Eric Graff

deep sky

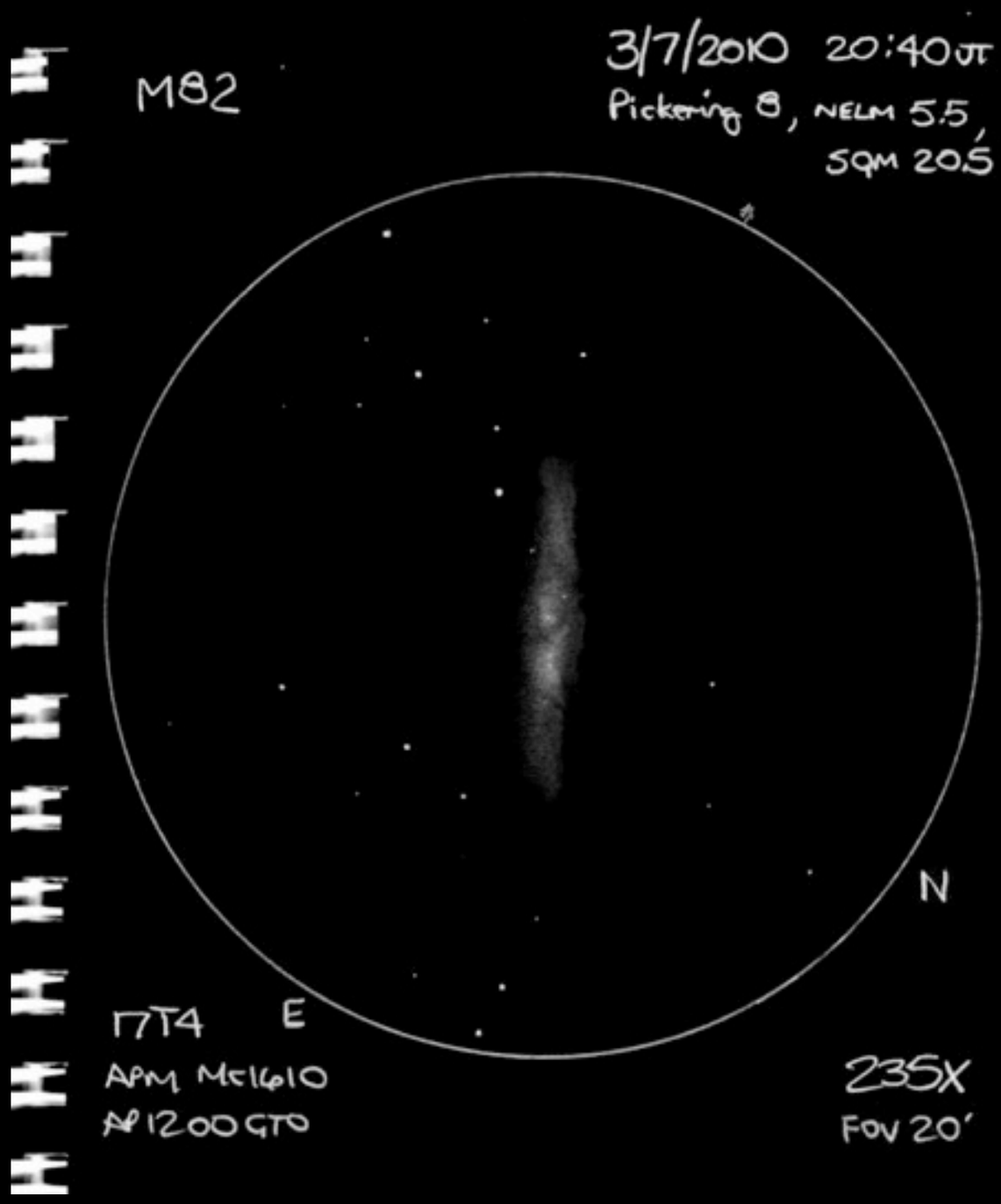
Messier 104





deep sky

Messier 82



Jeff Young | www.rokeby.ie/observatory

Messier 51 and NGC 5195

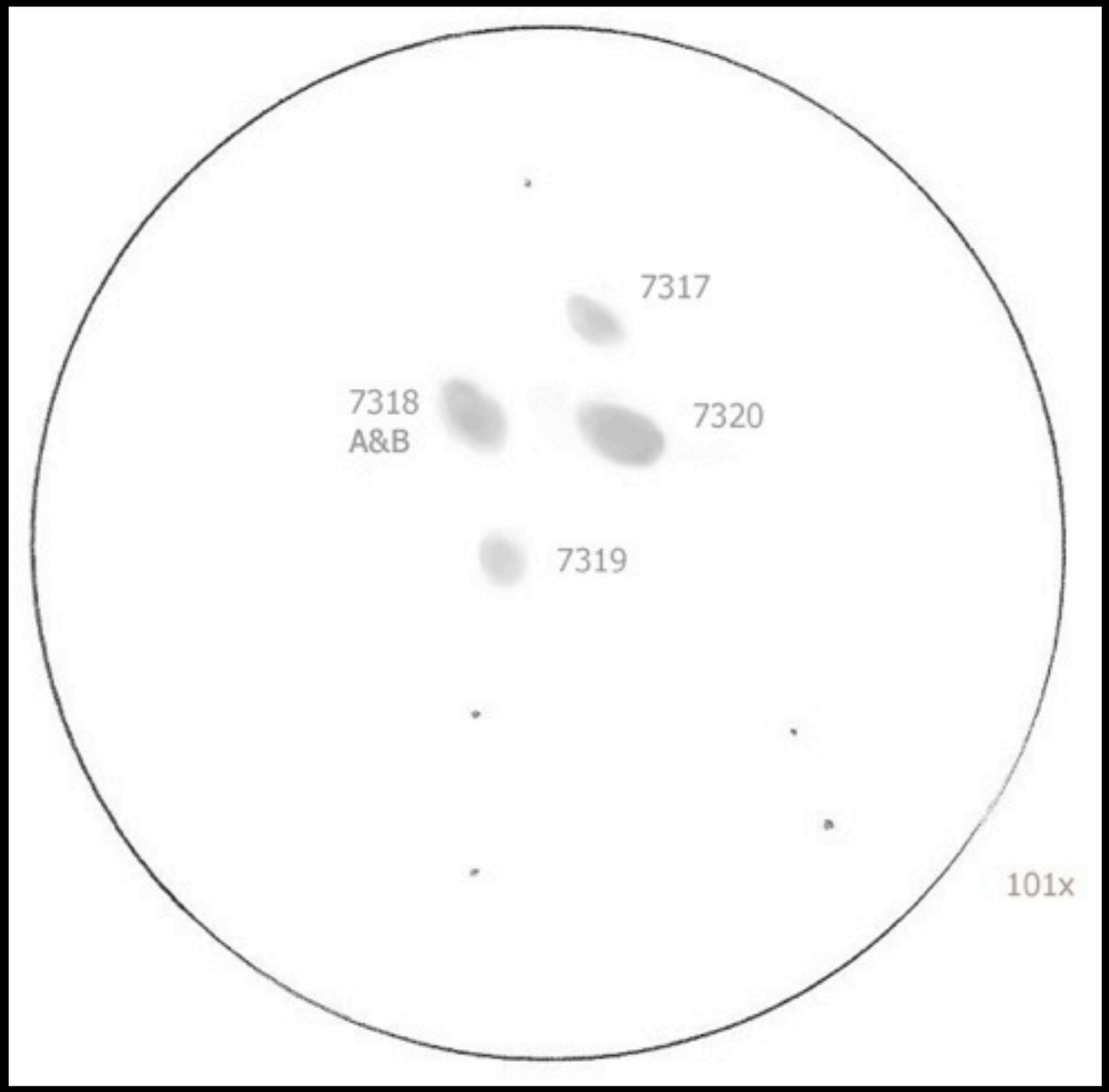
Pierre Desvaux | dobsonfactory.blogspot.com

deep sky

NGC 4631/4627

Roel Weijenberg | www.roelblog.nl

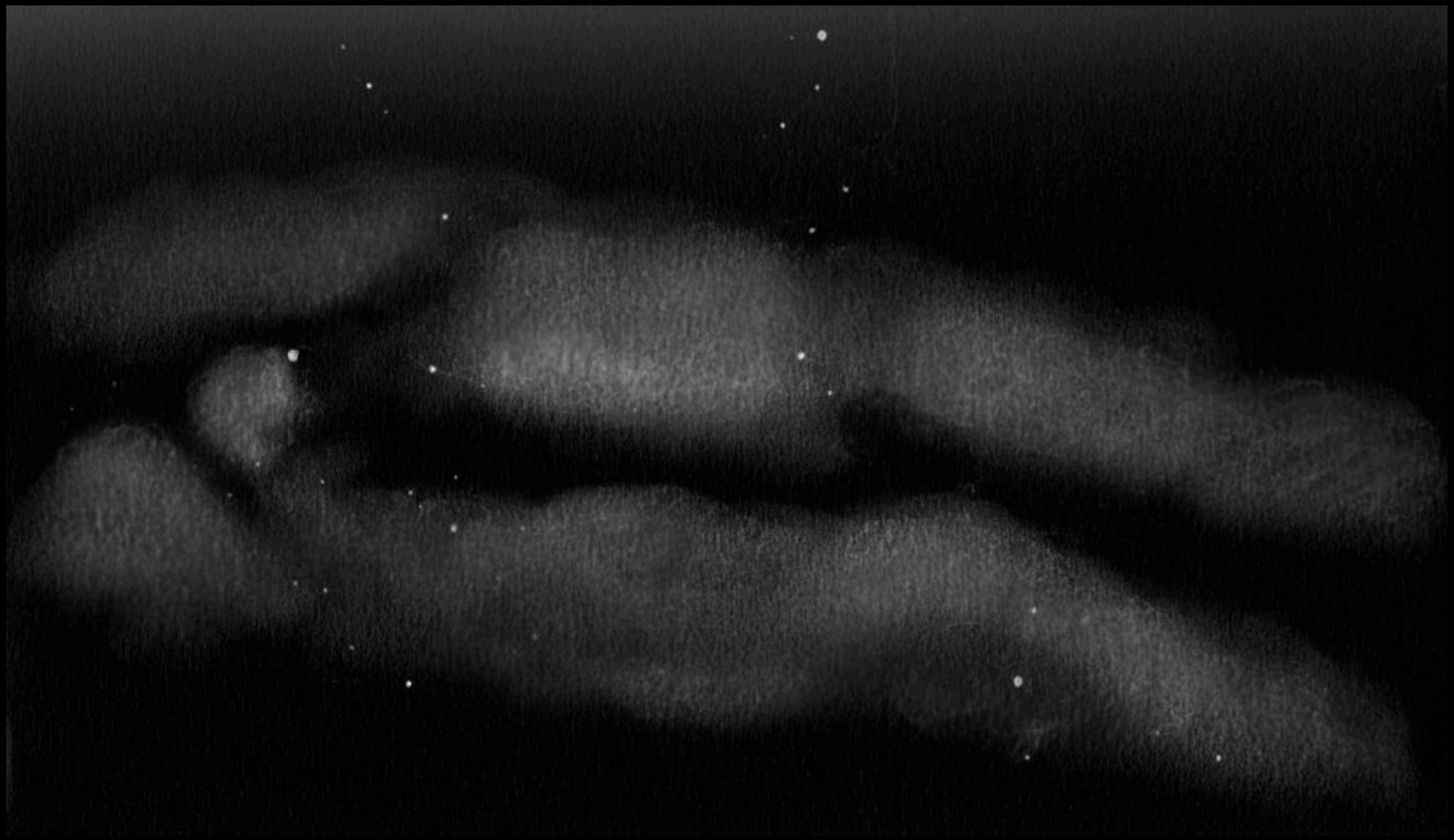
Hickson 92



Faith Jordan | visualdeepskyobserving.blogspot.com

deep sky

Milky Way



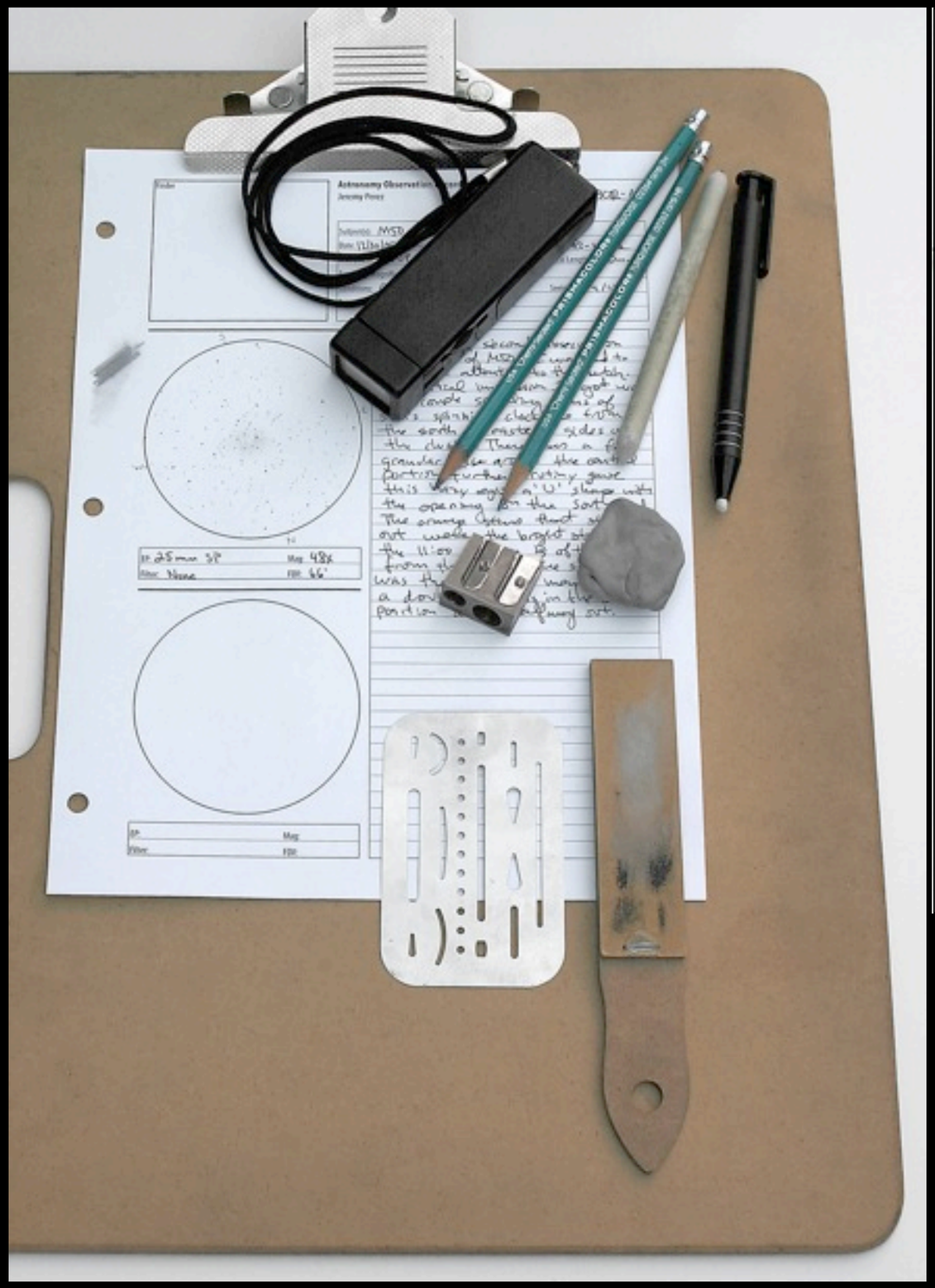
Faith Jordan | visualdeepskyobserving.blogspot.com

other phenomena

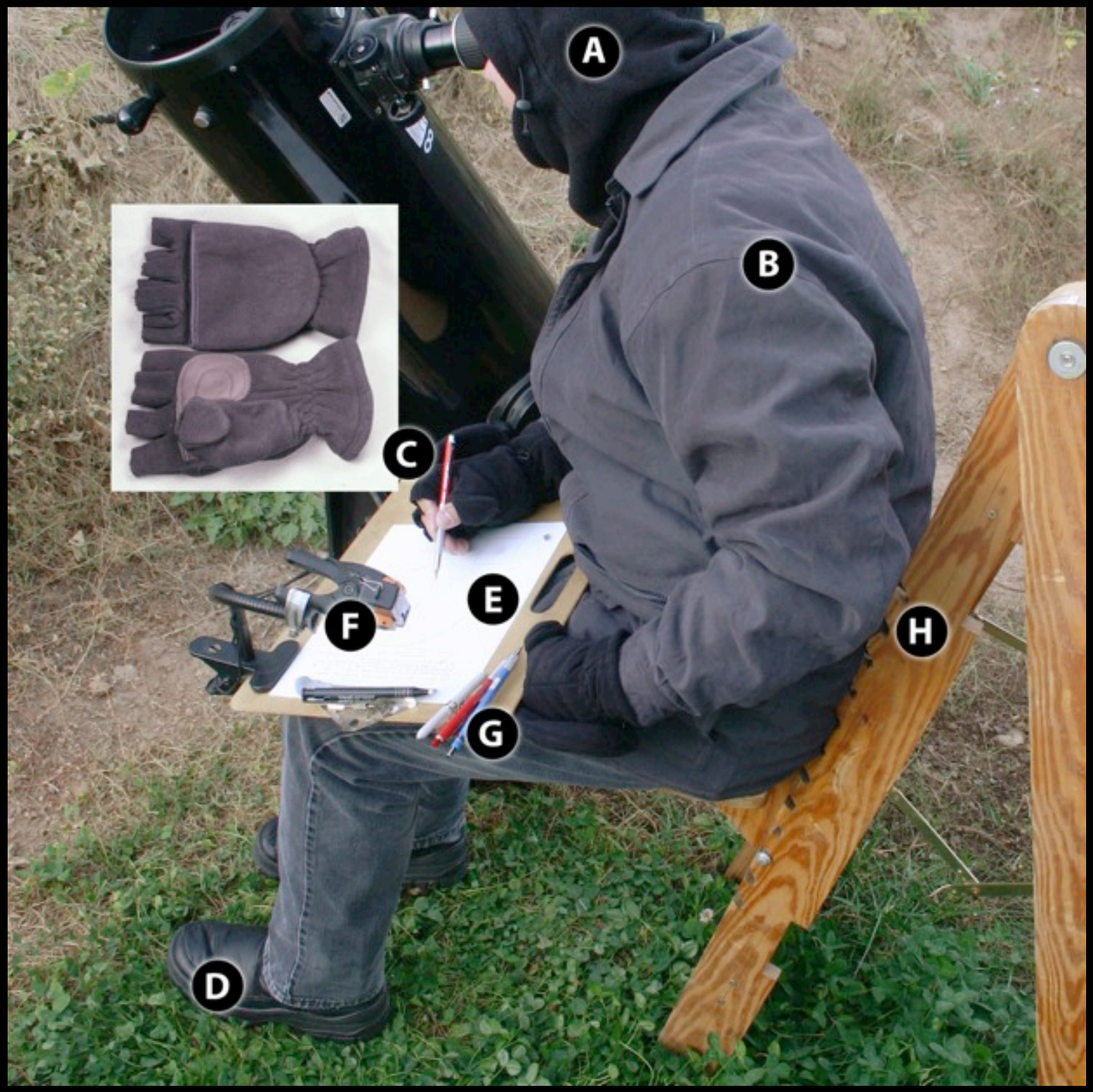
Aurora

Janis R.

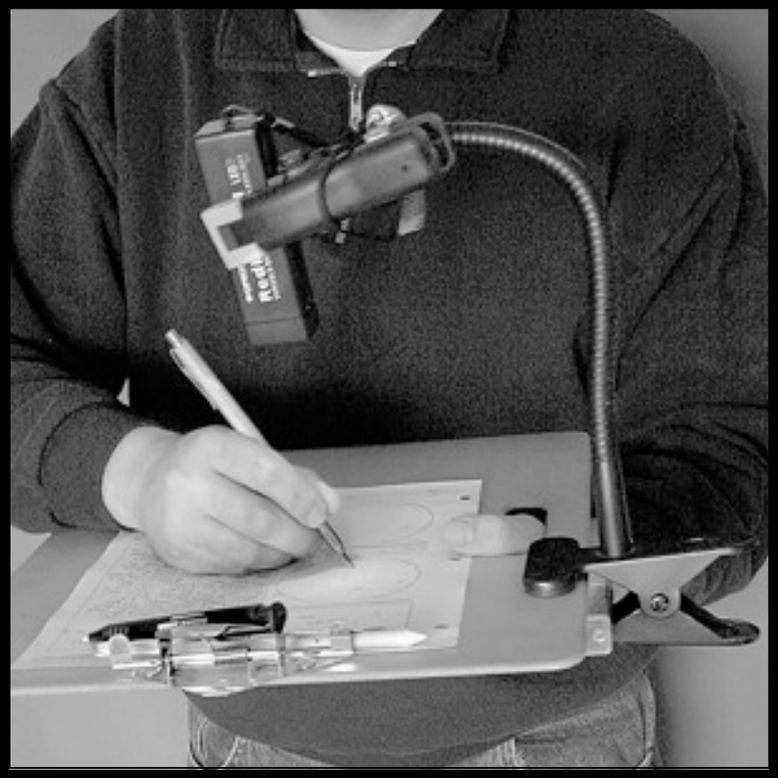
materials



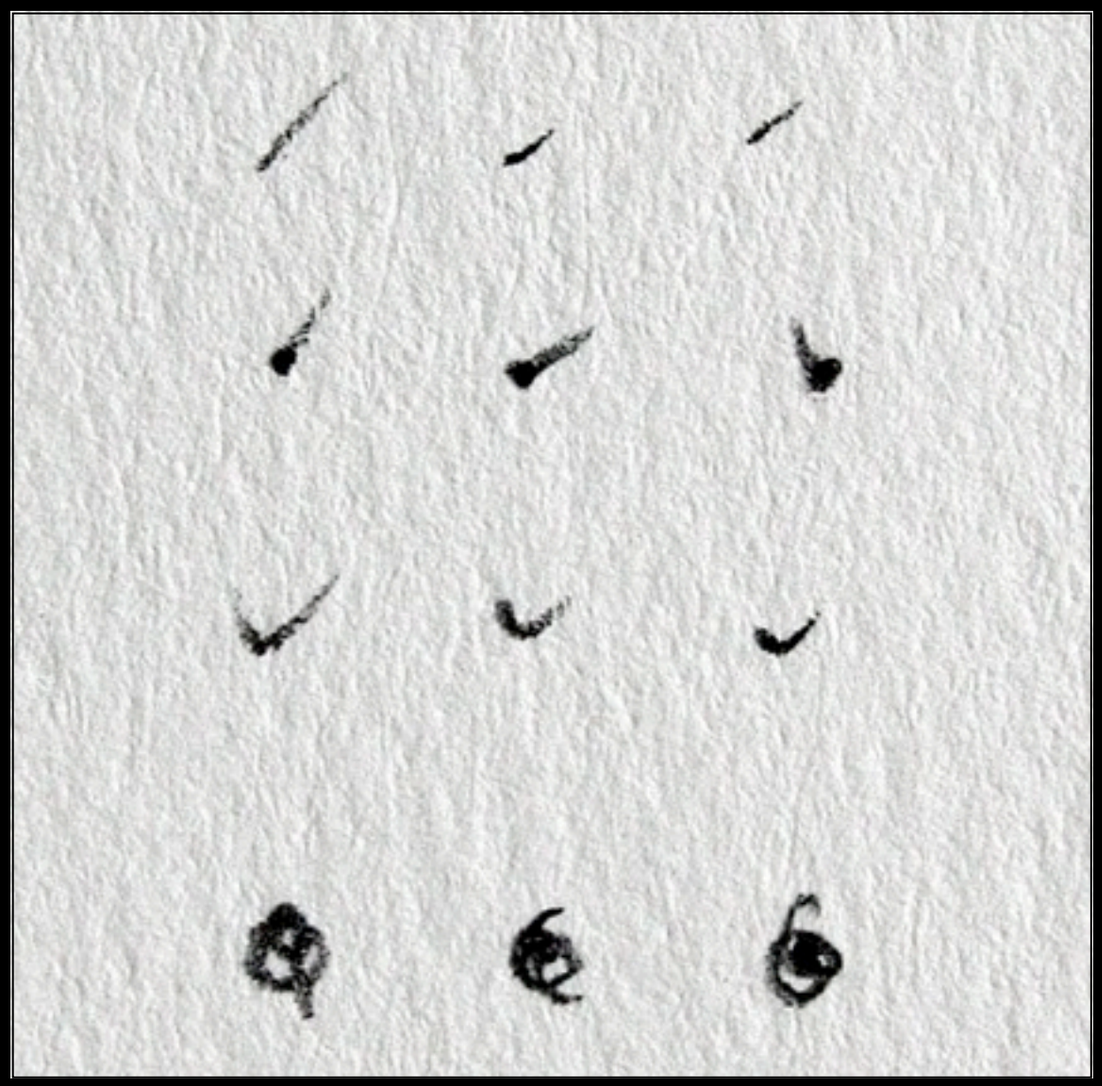
materials

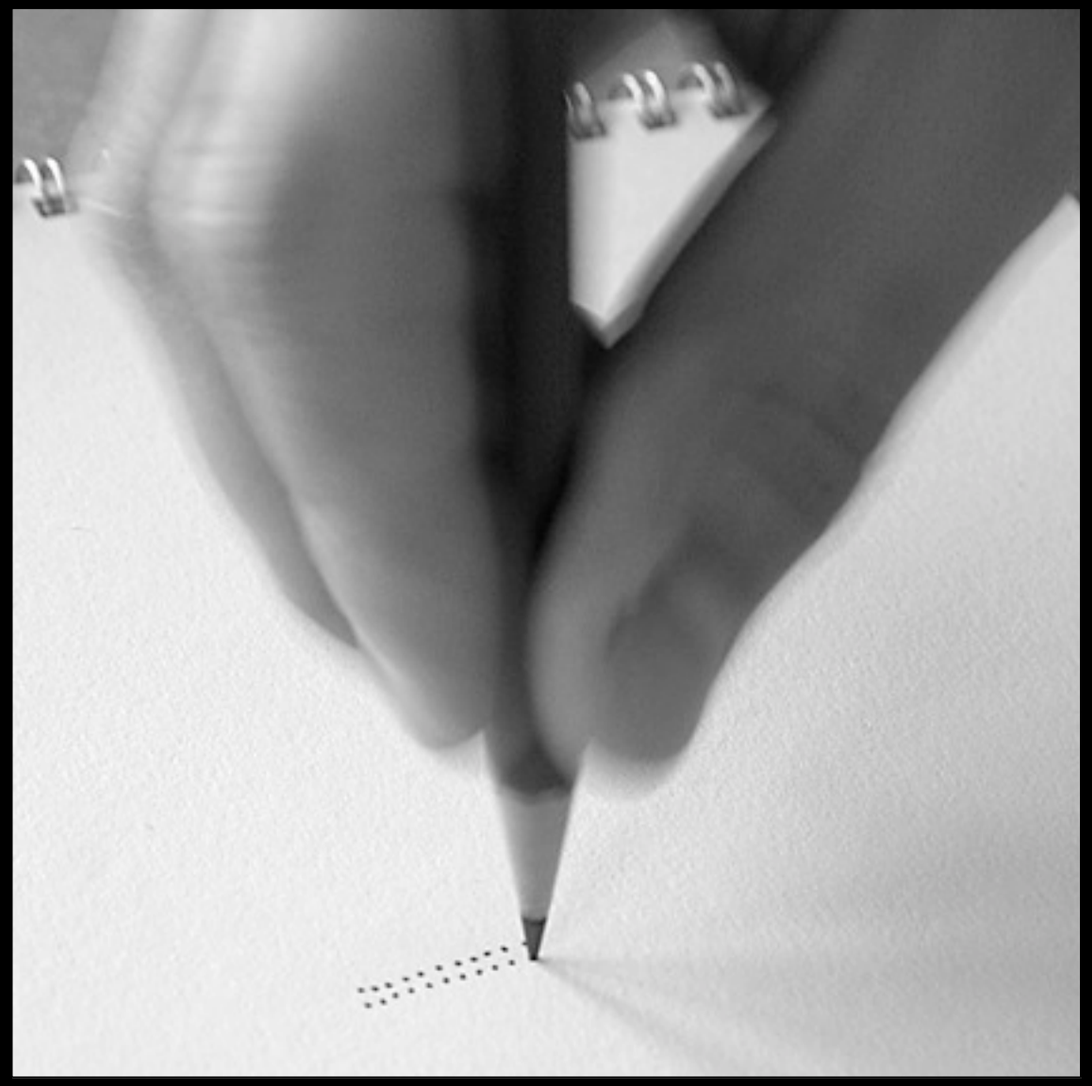


sketch lighting

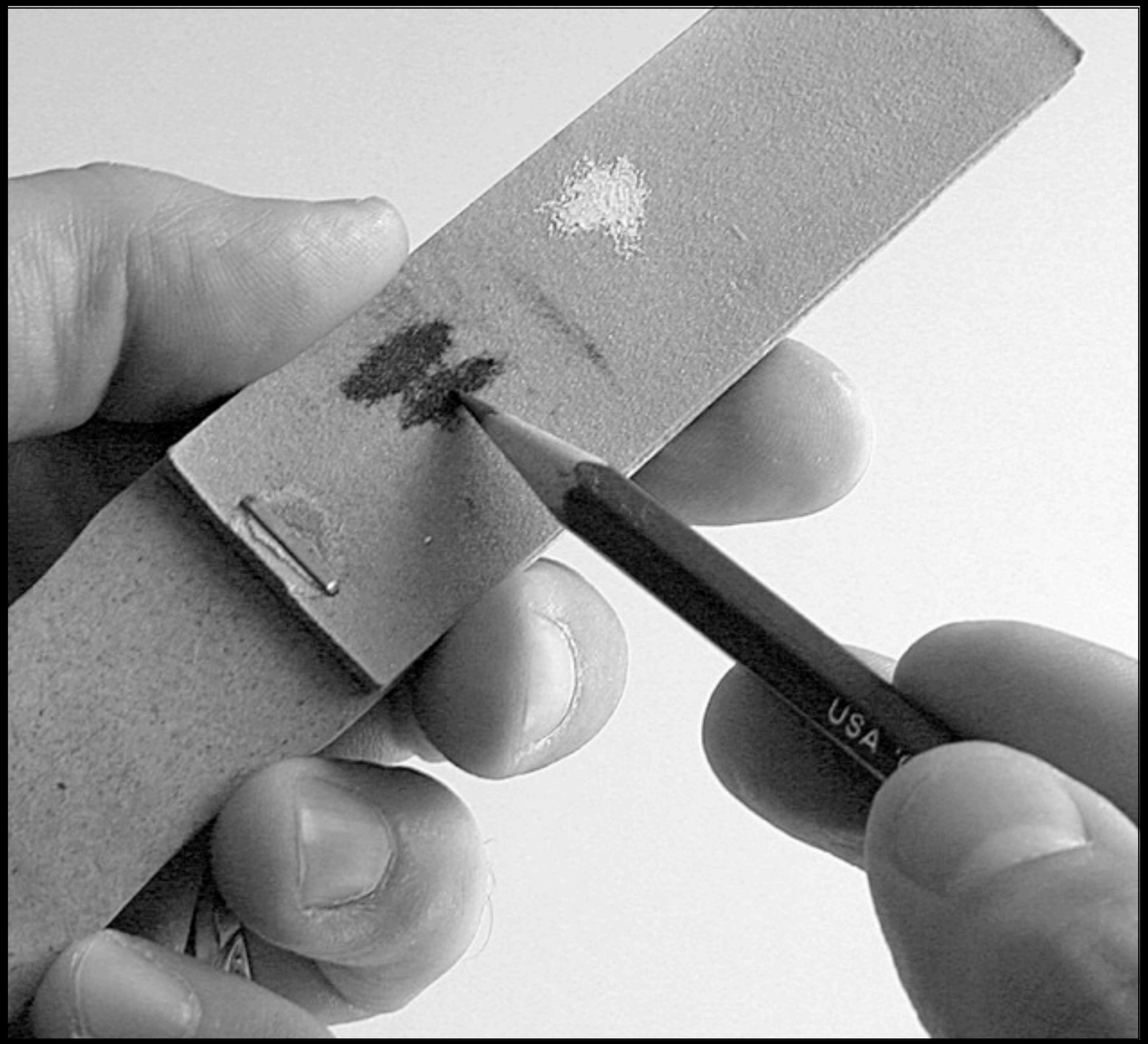


plotting stars

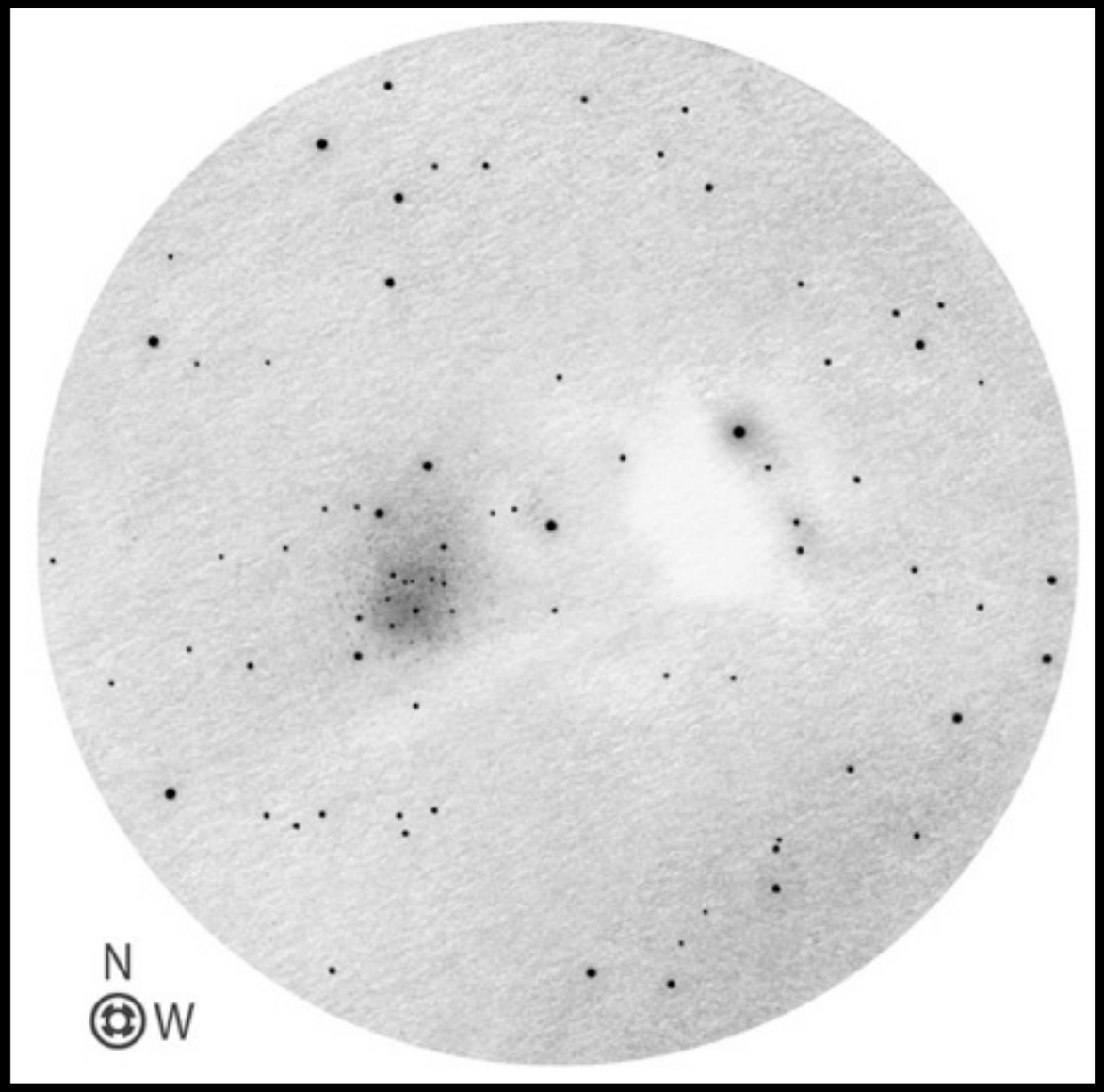


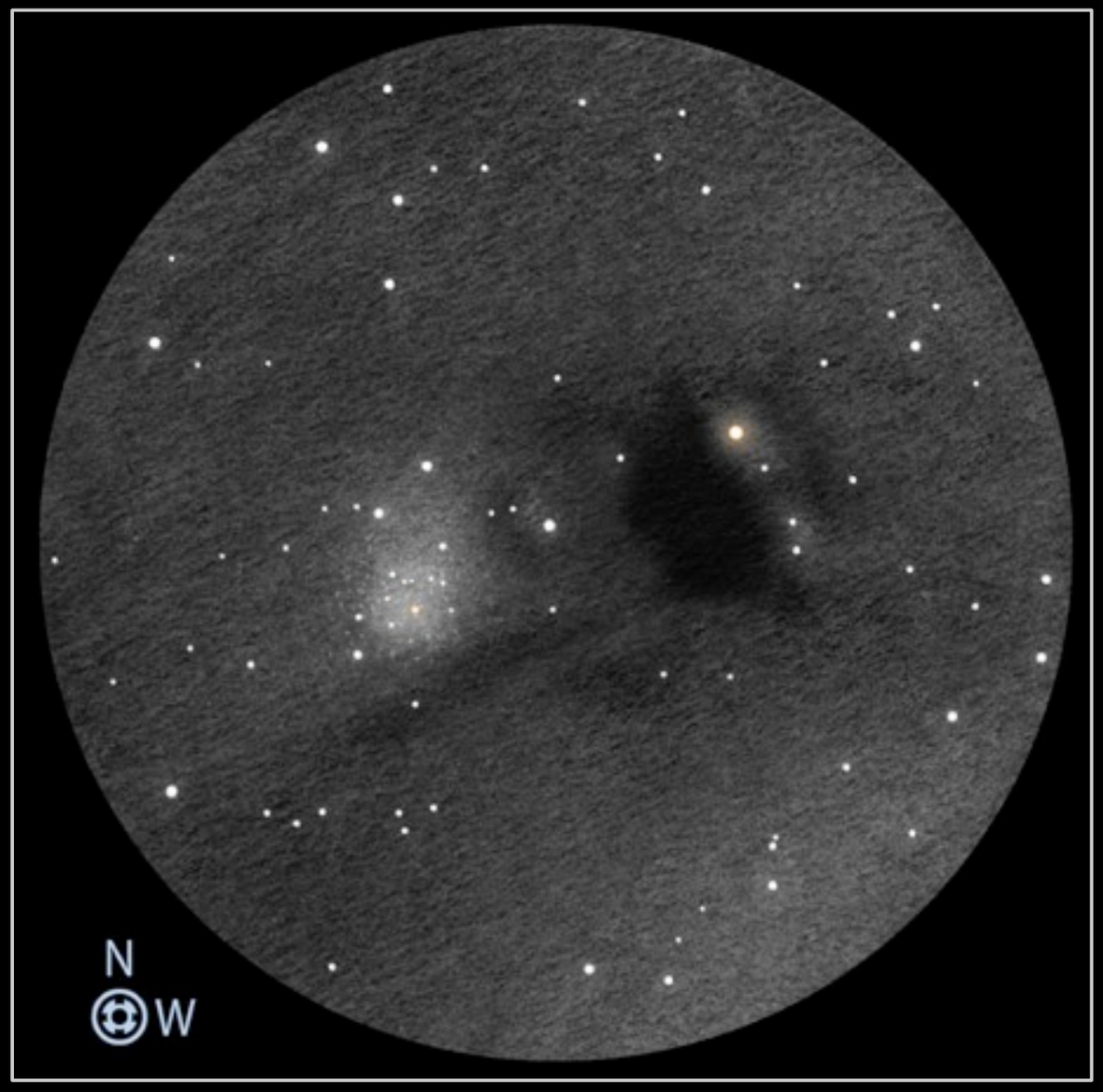


honing a pencil

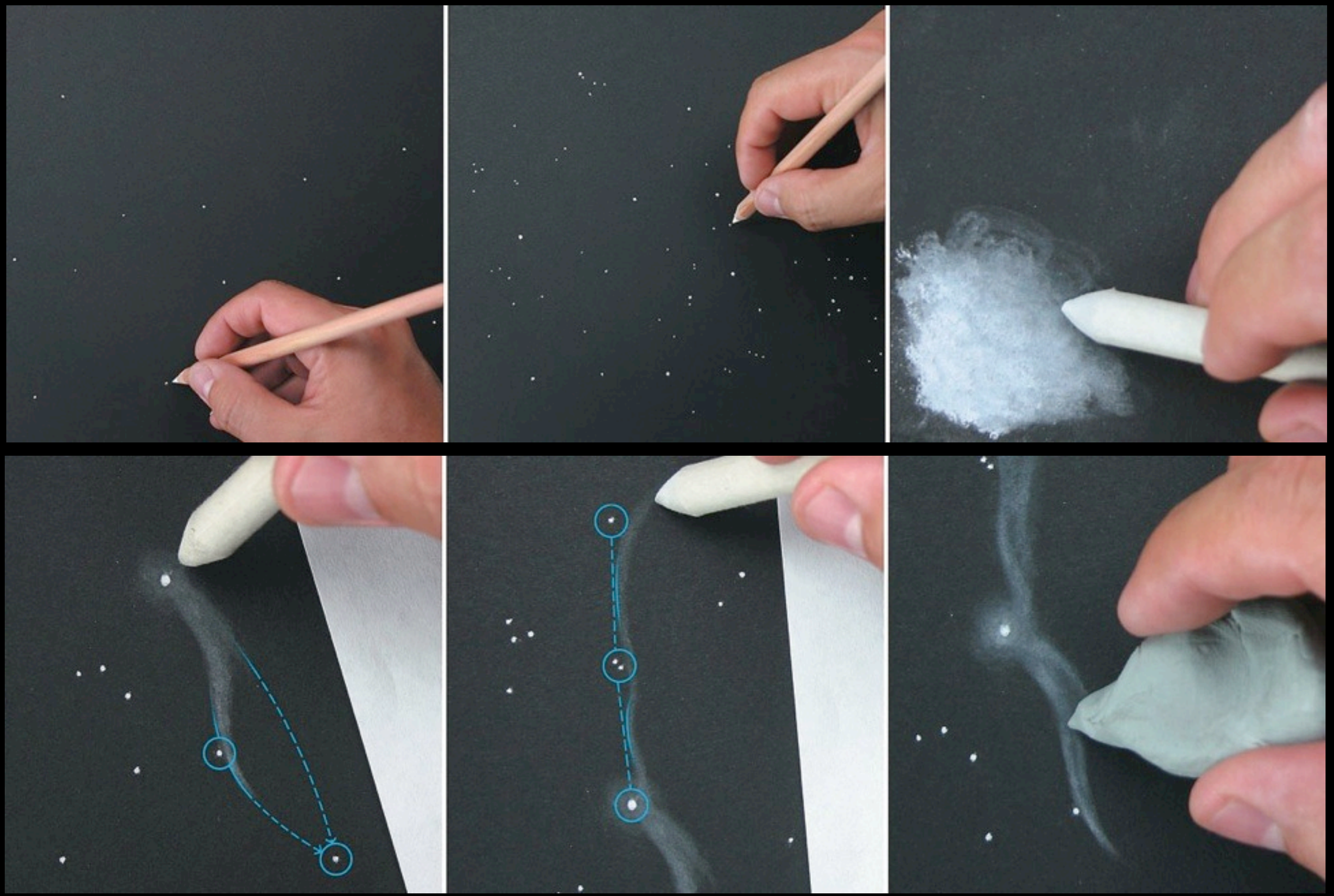


sketching negative vs positive



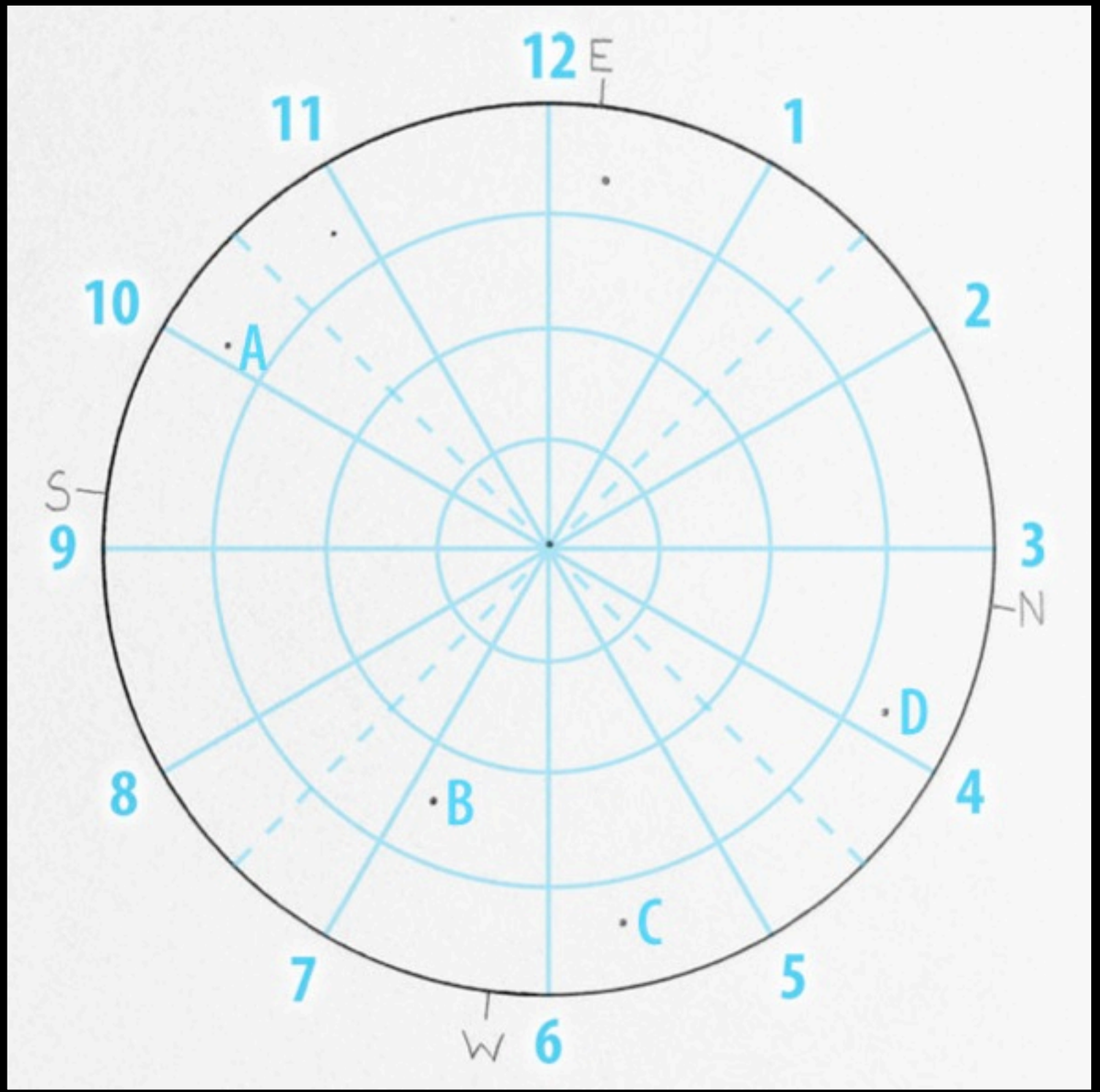


sketching negative vs positive

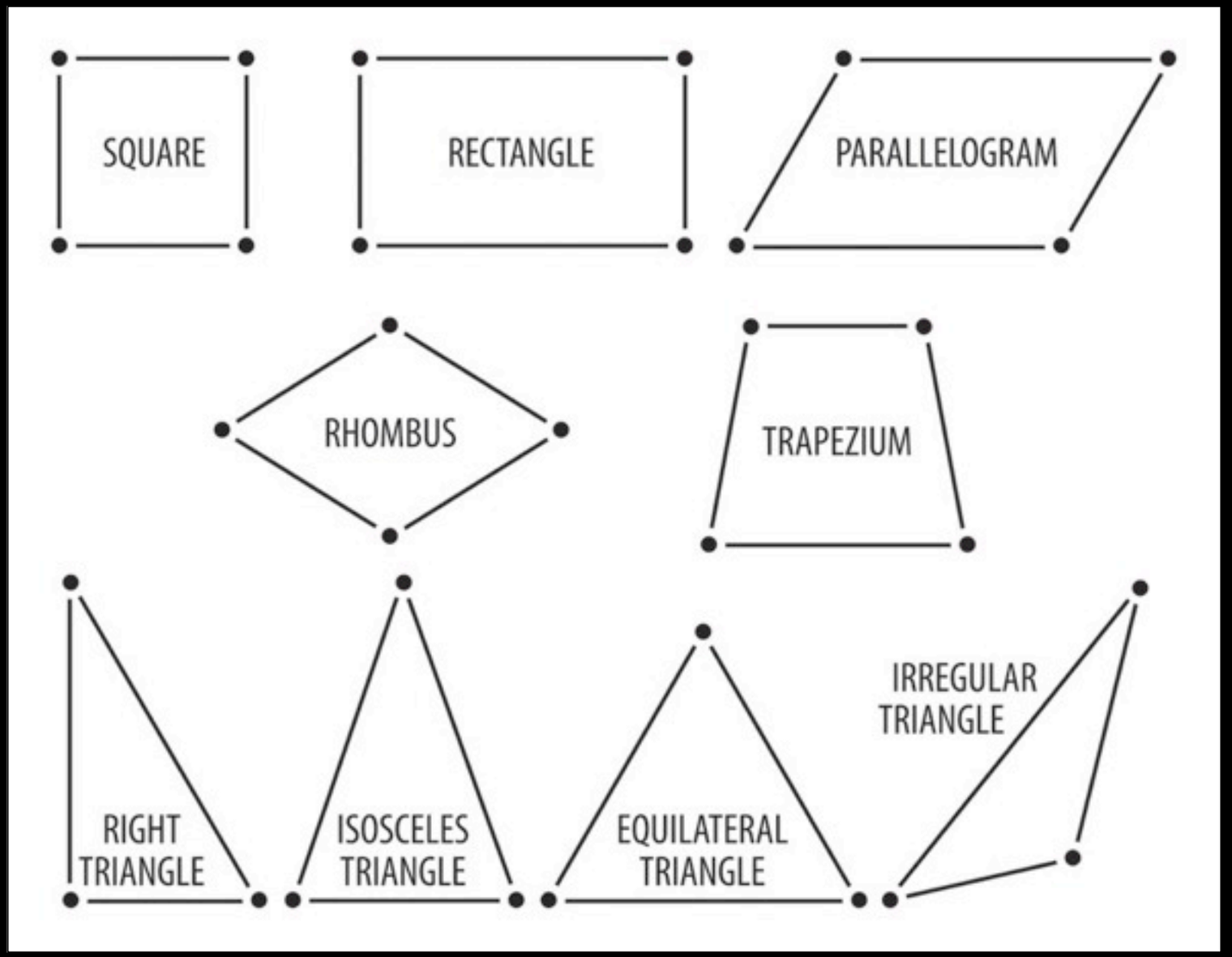


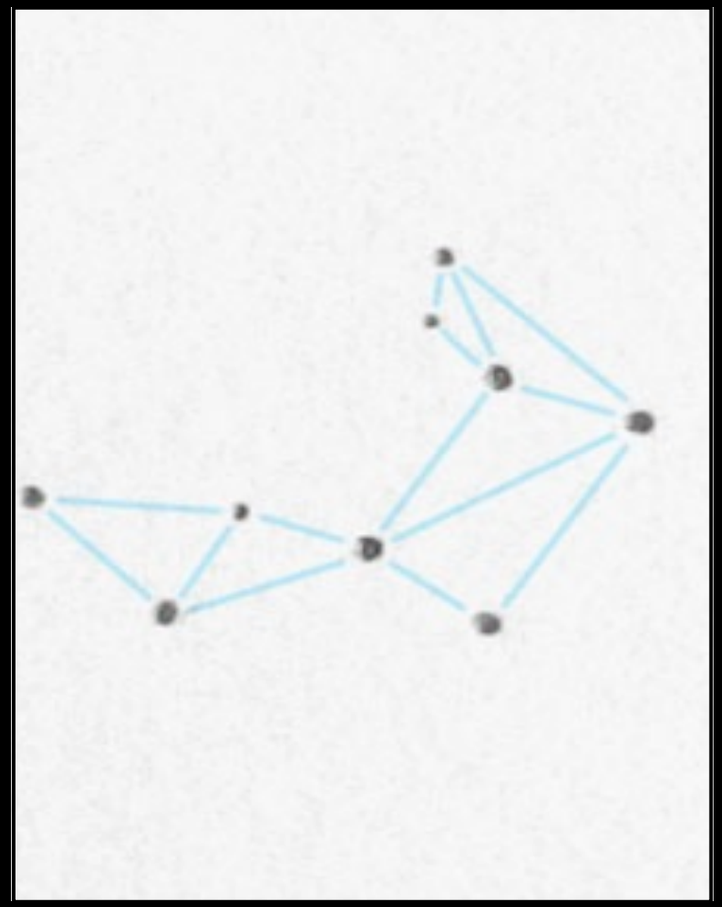
sketching negative vs positive

sketching a star field

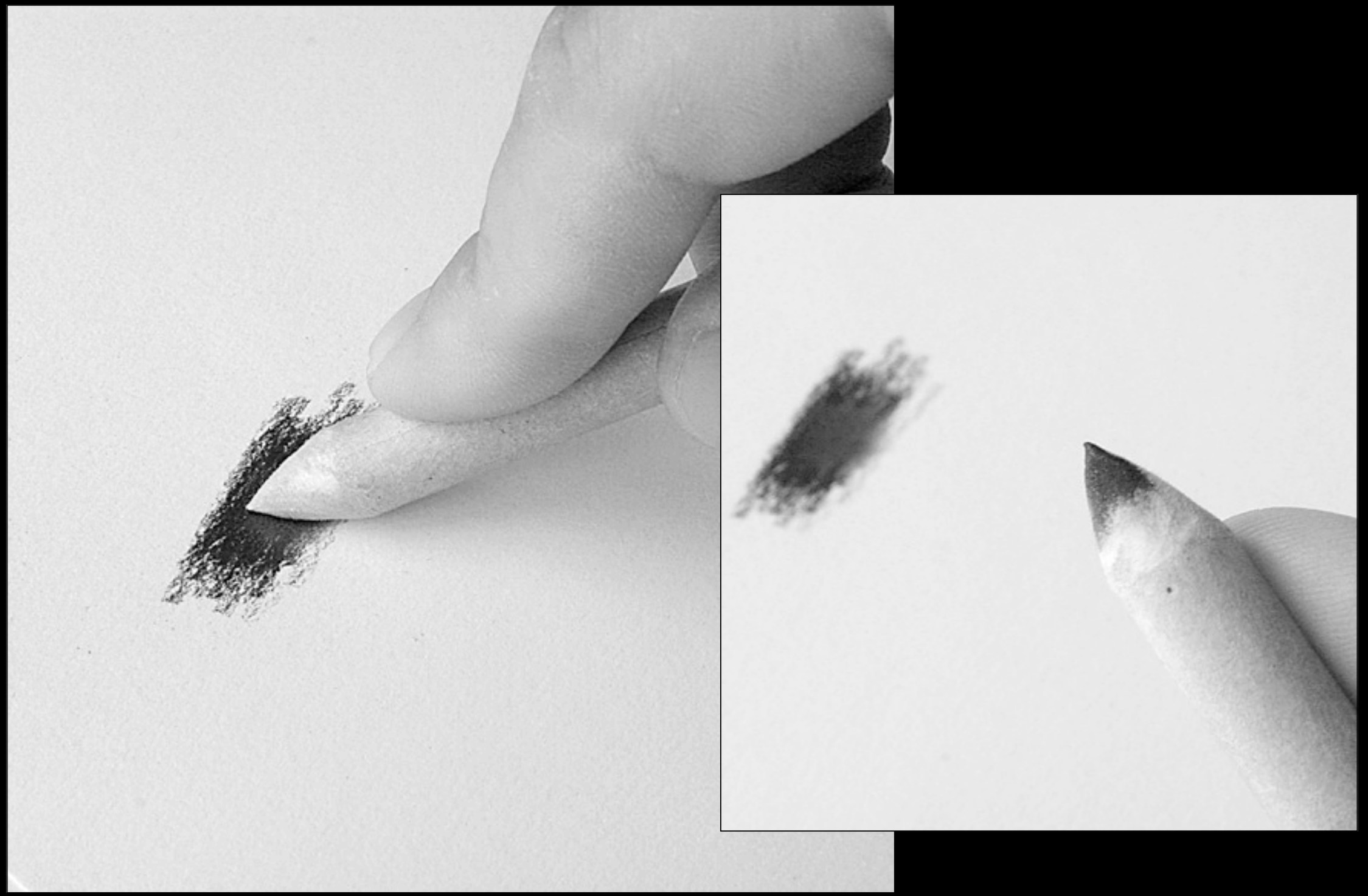


sketching a star field





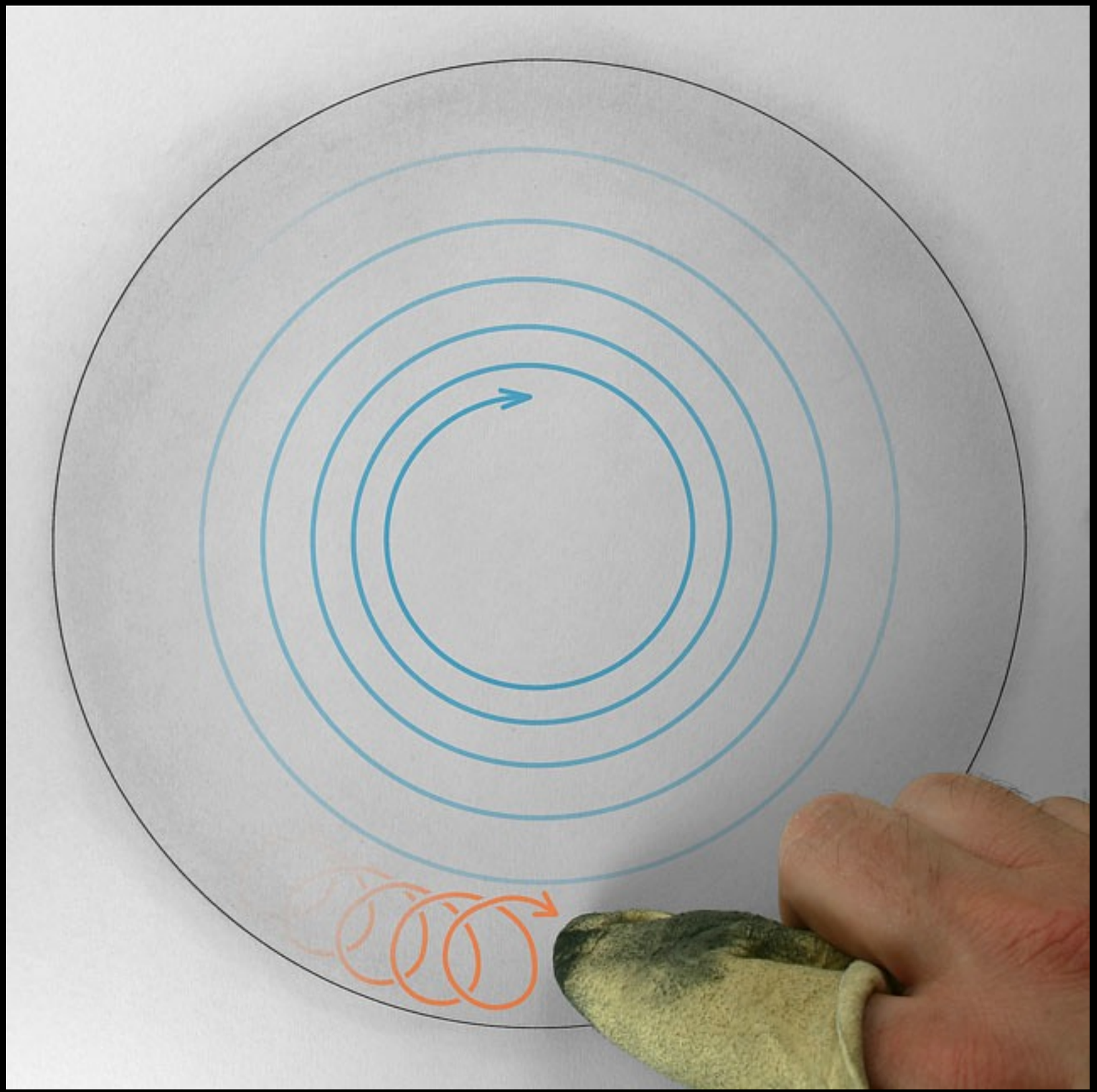
shading



shading

shading

shading



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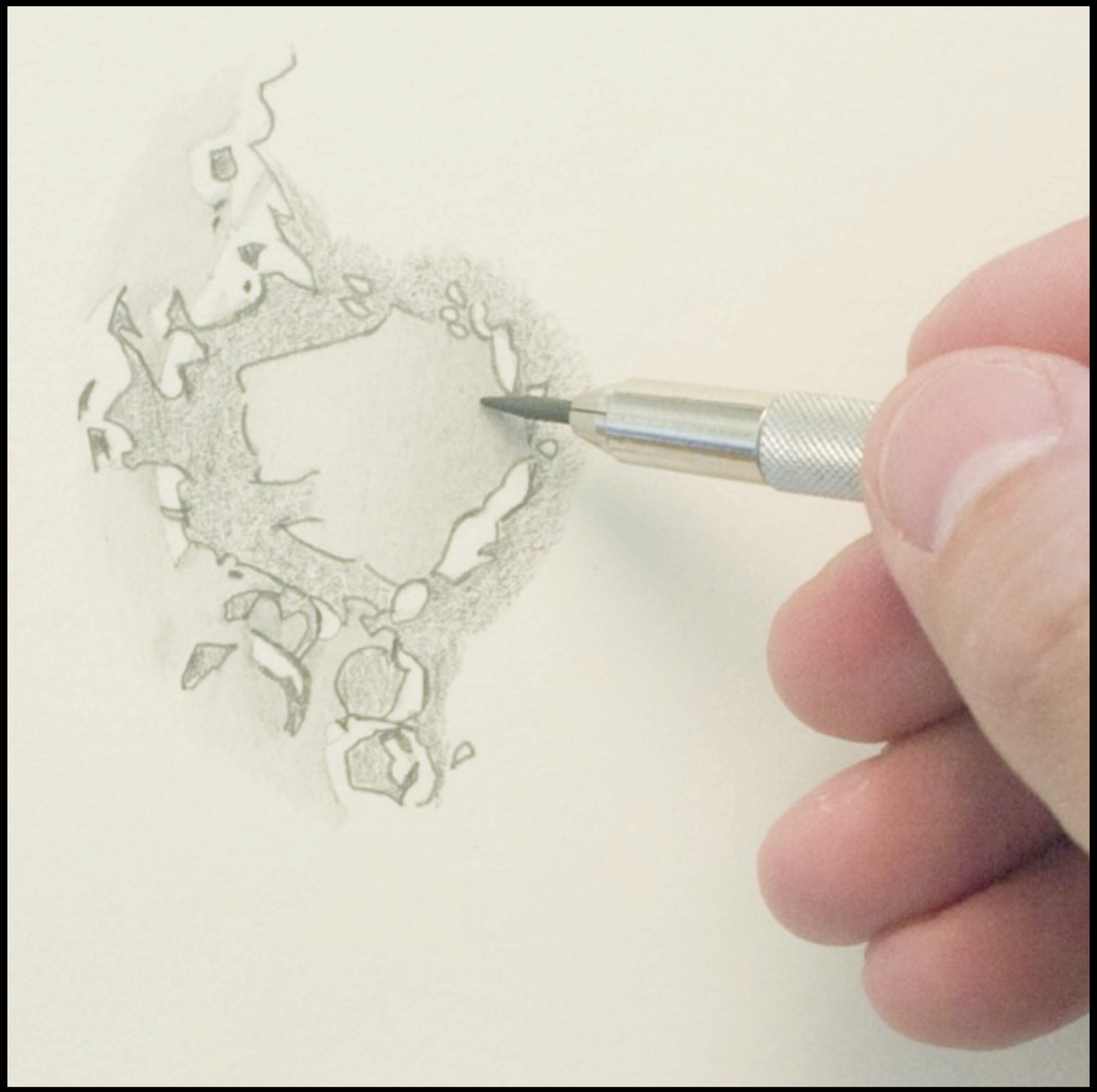
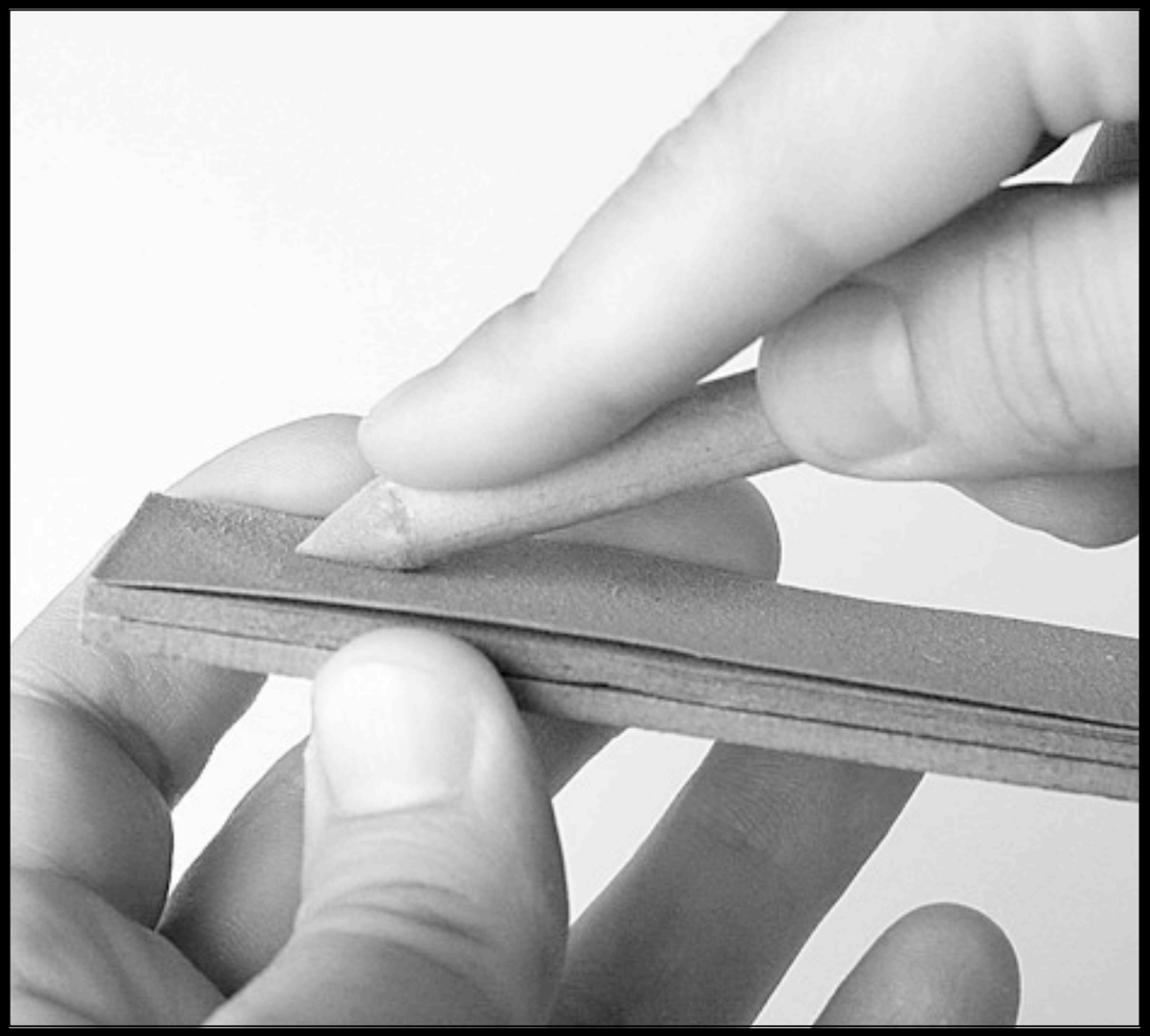
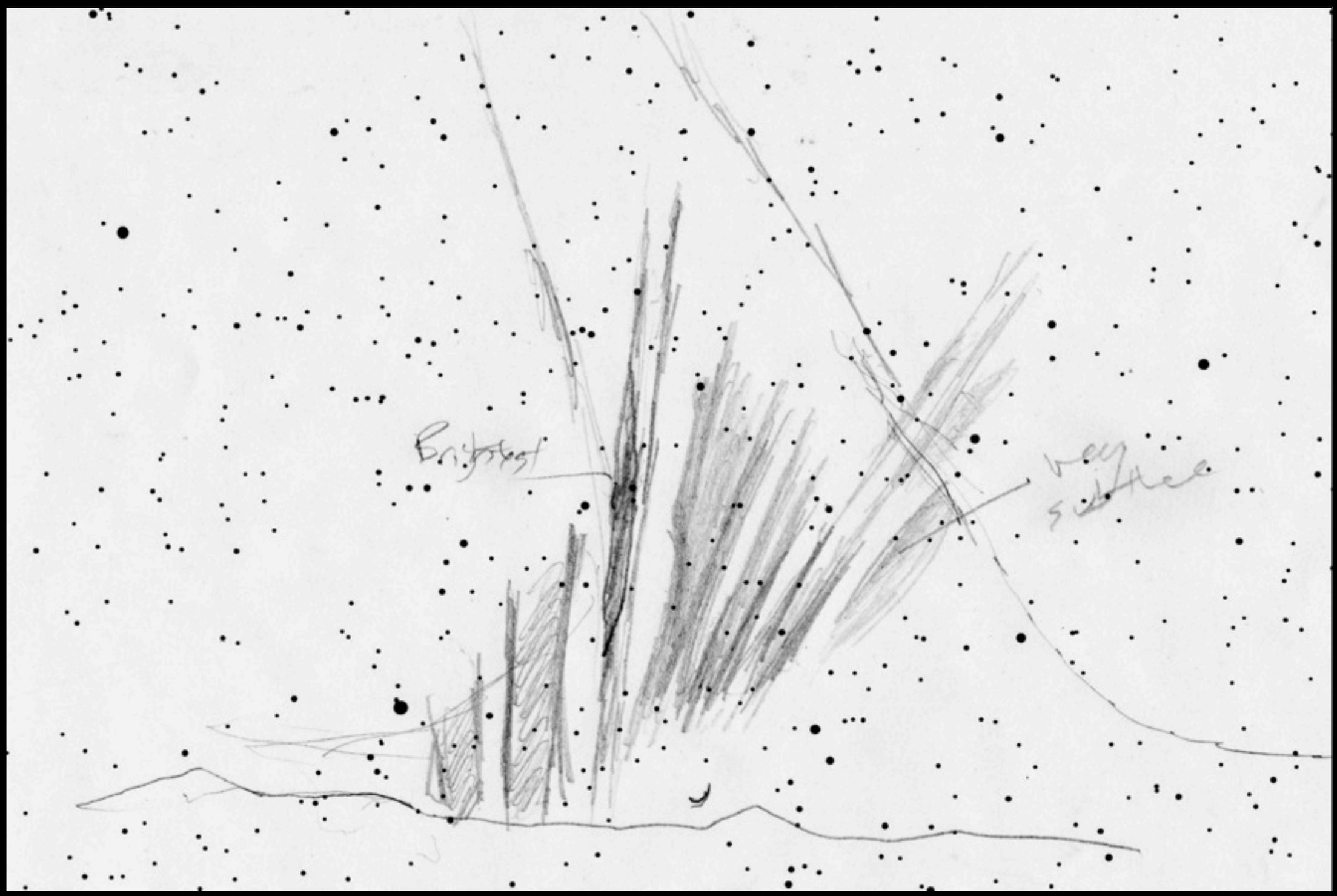


shading



finishing or recreating later



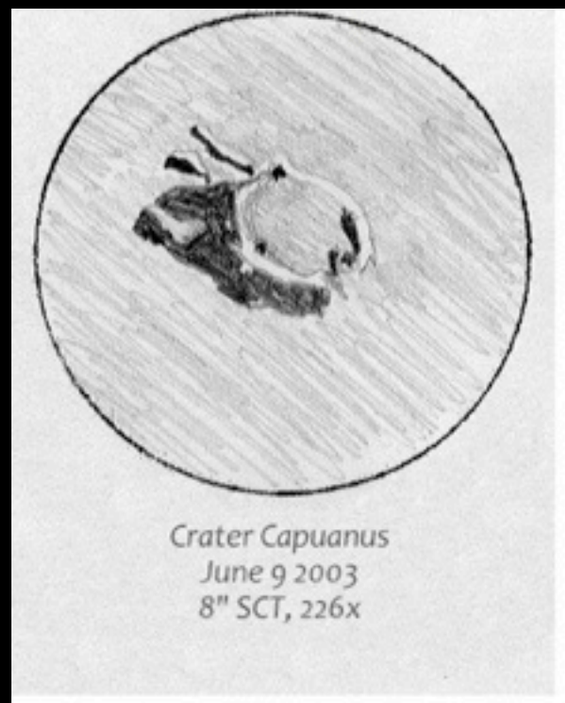
finishing or recreating later

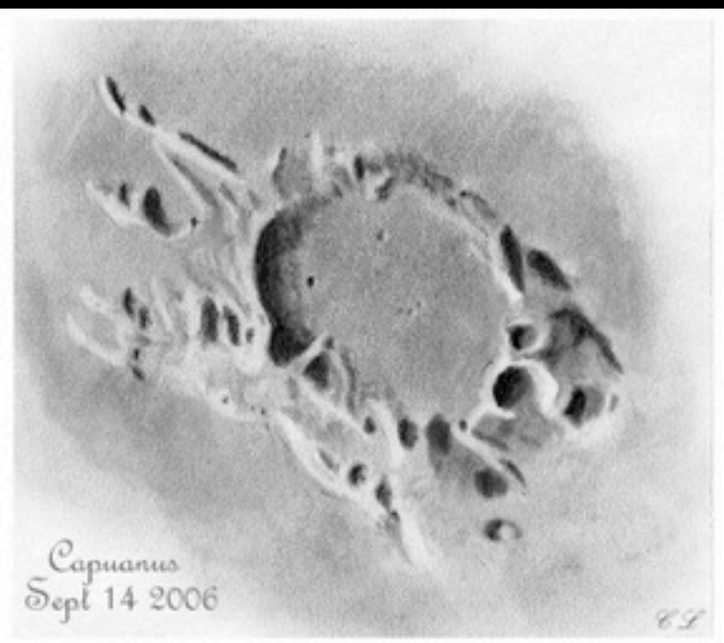
finishing or recreating later

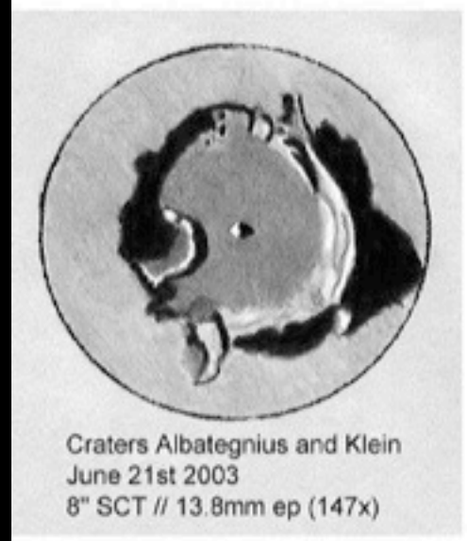
C/2006 P1 (McNaught) Synchronic Bands and Zodiacal Light

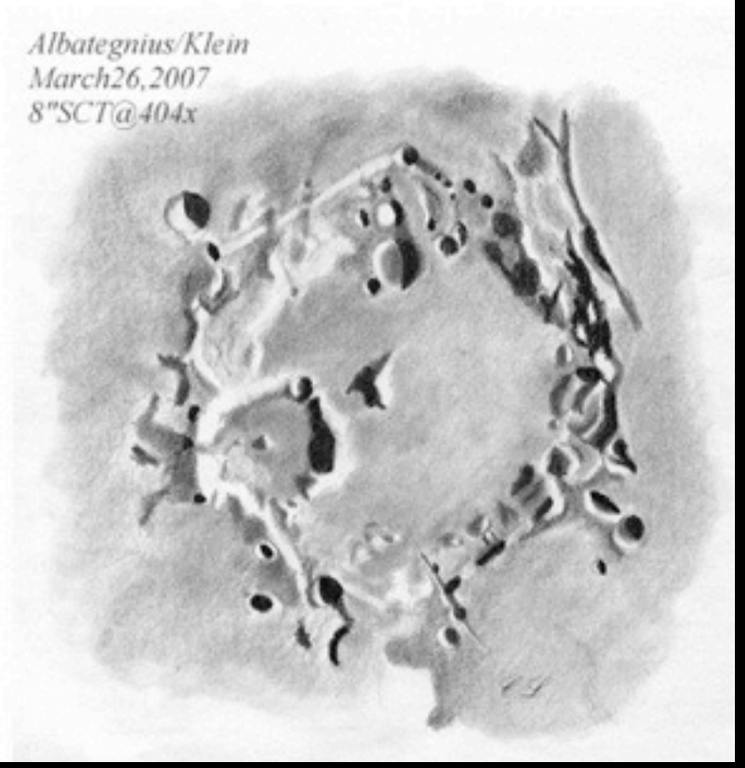
JAN 21, 2007, 02:10 - 02:40 UT (JAN 20, 2007 - 07:10 - 07:40 PM Local Time)
Naked Eye
Sketch by Jeremy Perez (star field generated by Starry Night Pro)

improving with practice



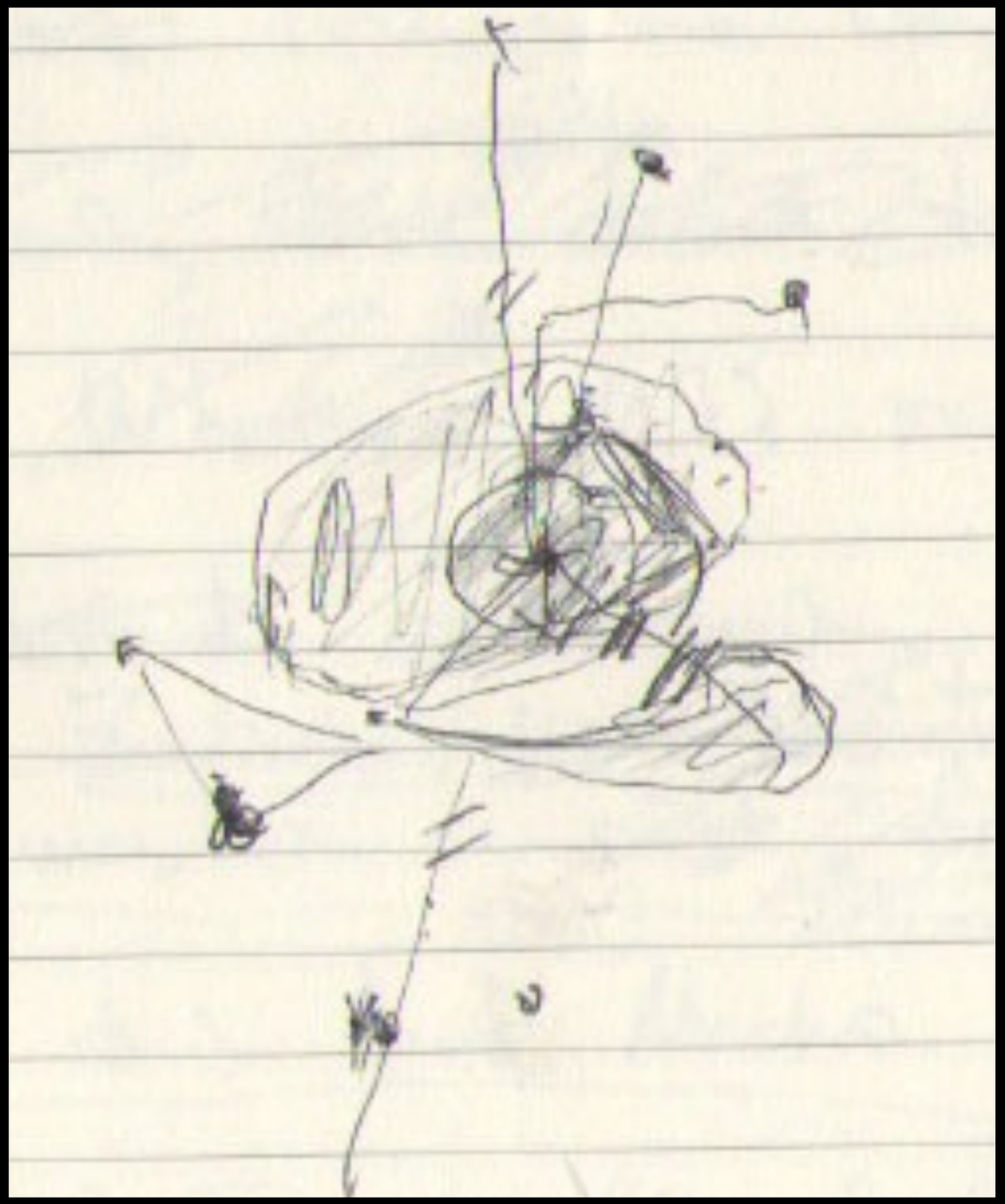






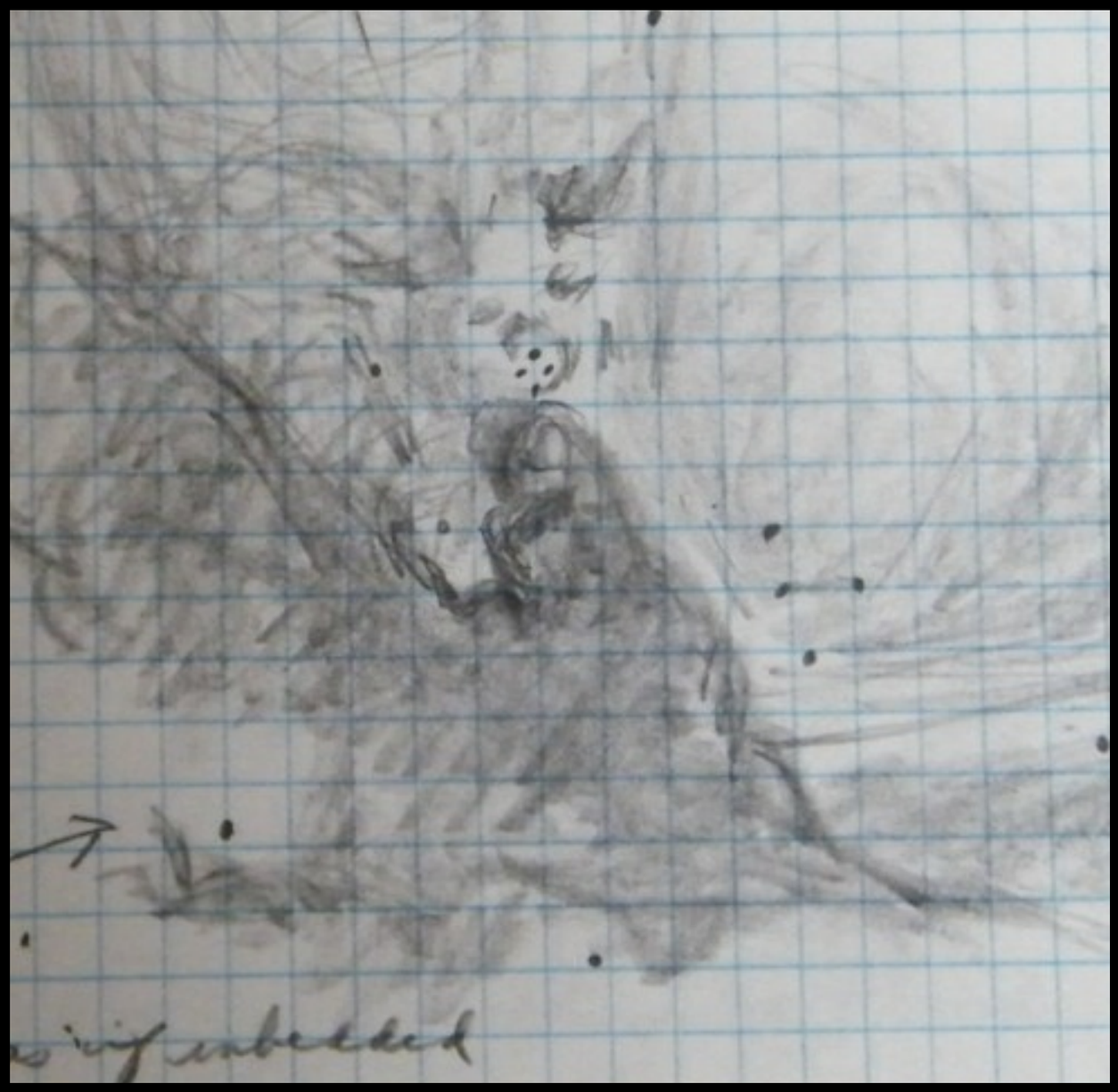
Carol Lakomiak

improving with practice



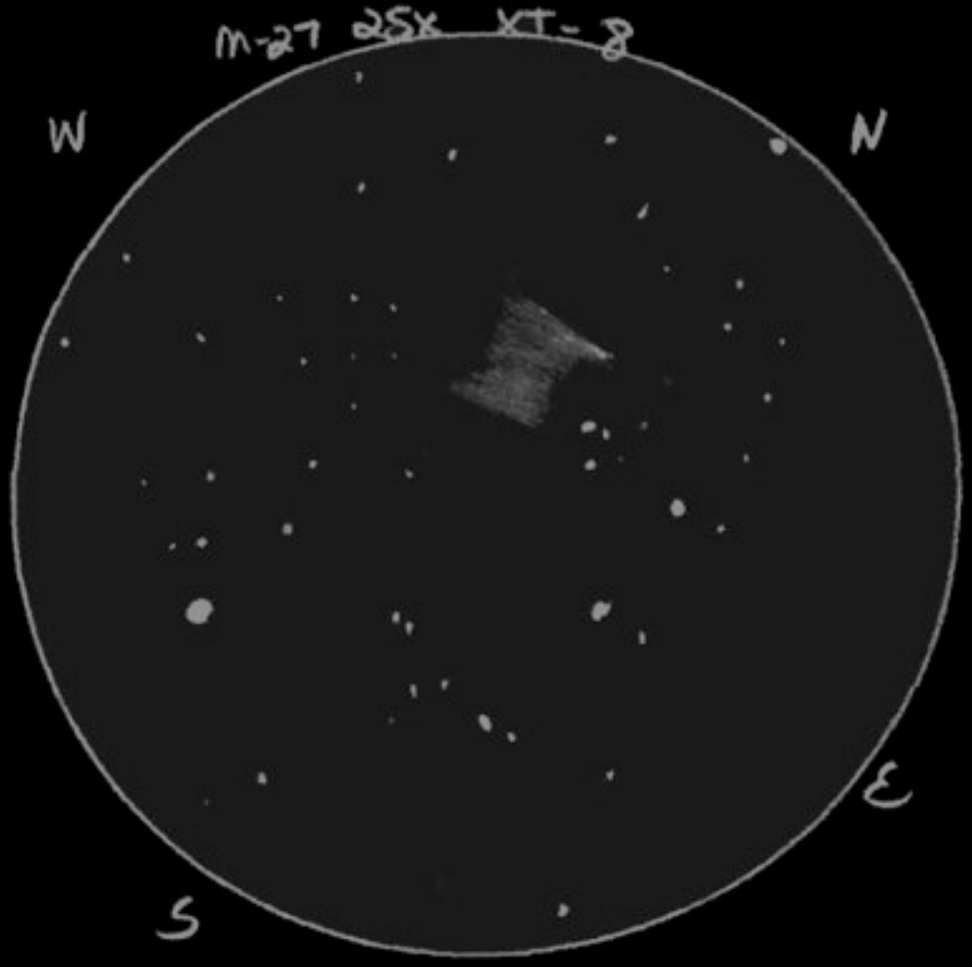
Ivan Maly

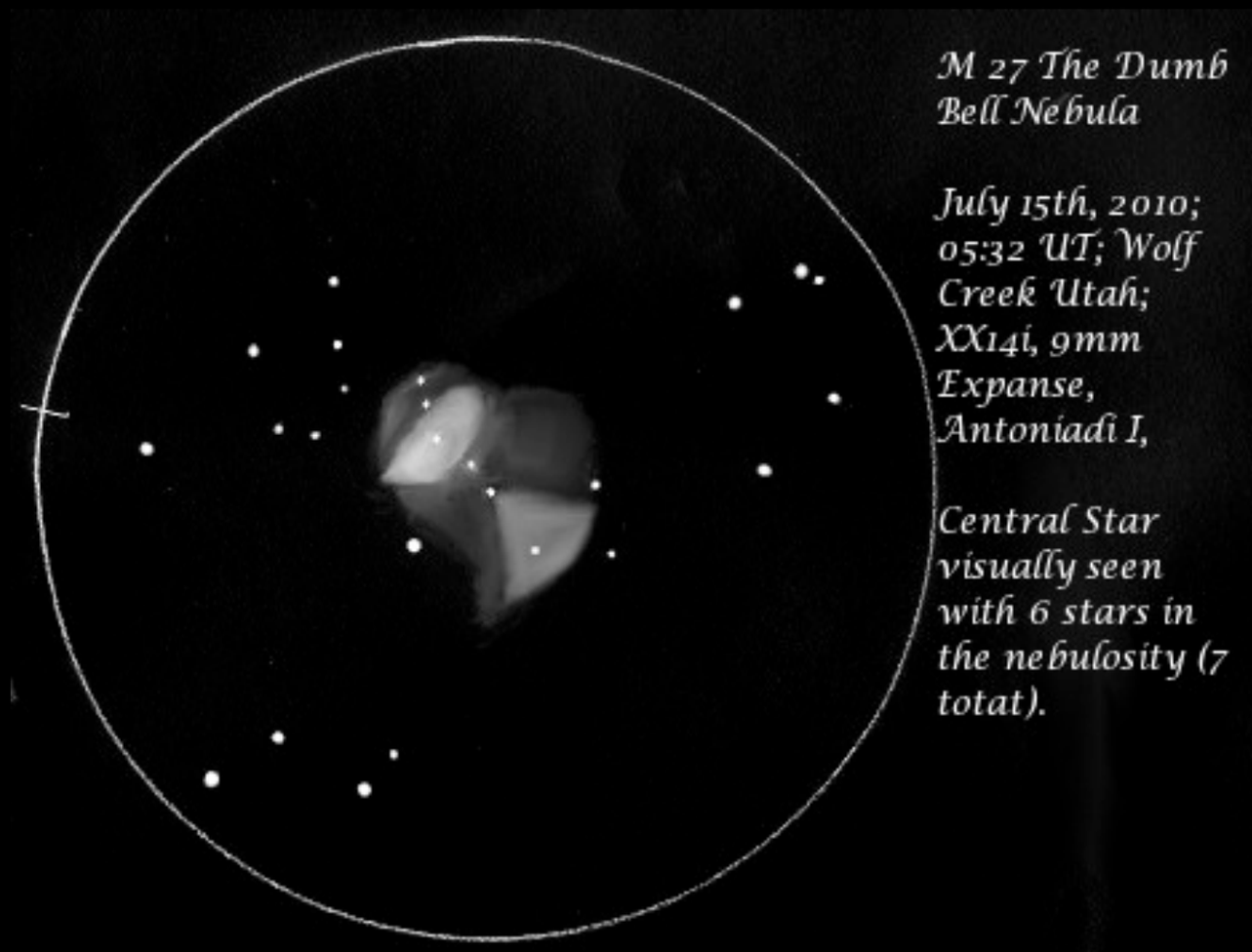
improving with practice



Janis R.

improving with practice





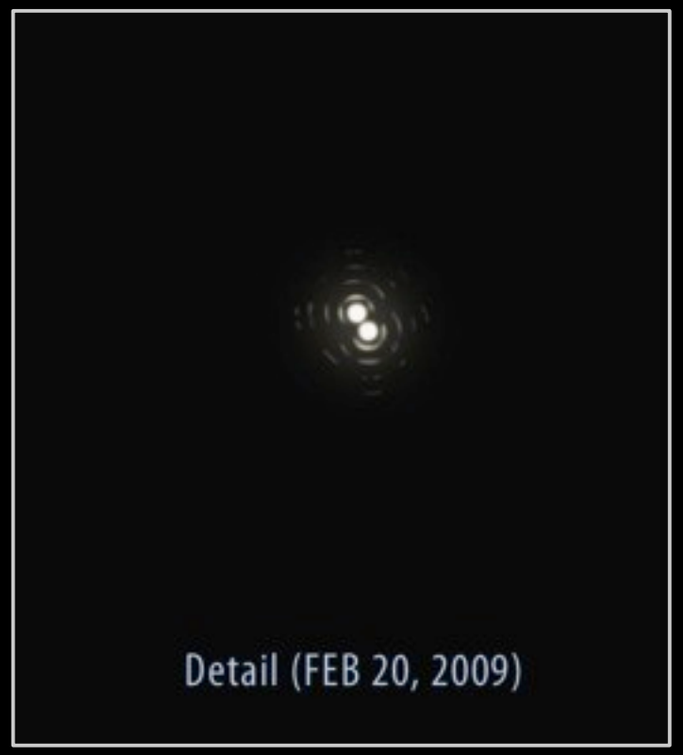
Jay L. Eads

digging doubles

tracking Porrima's progress

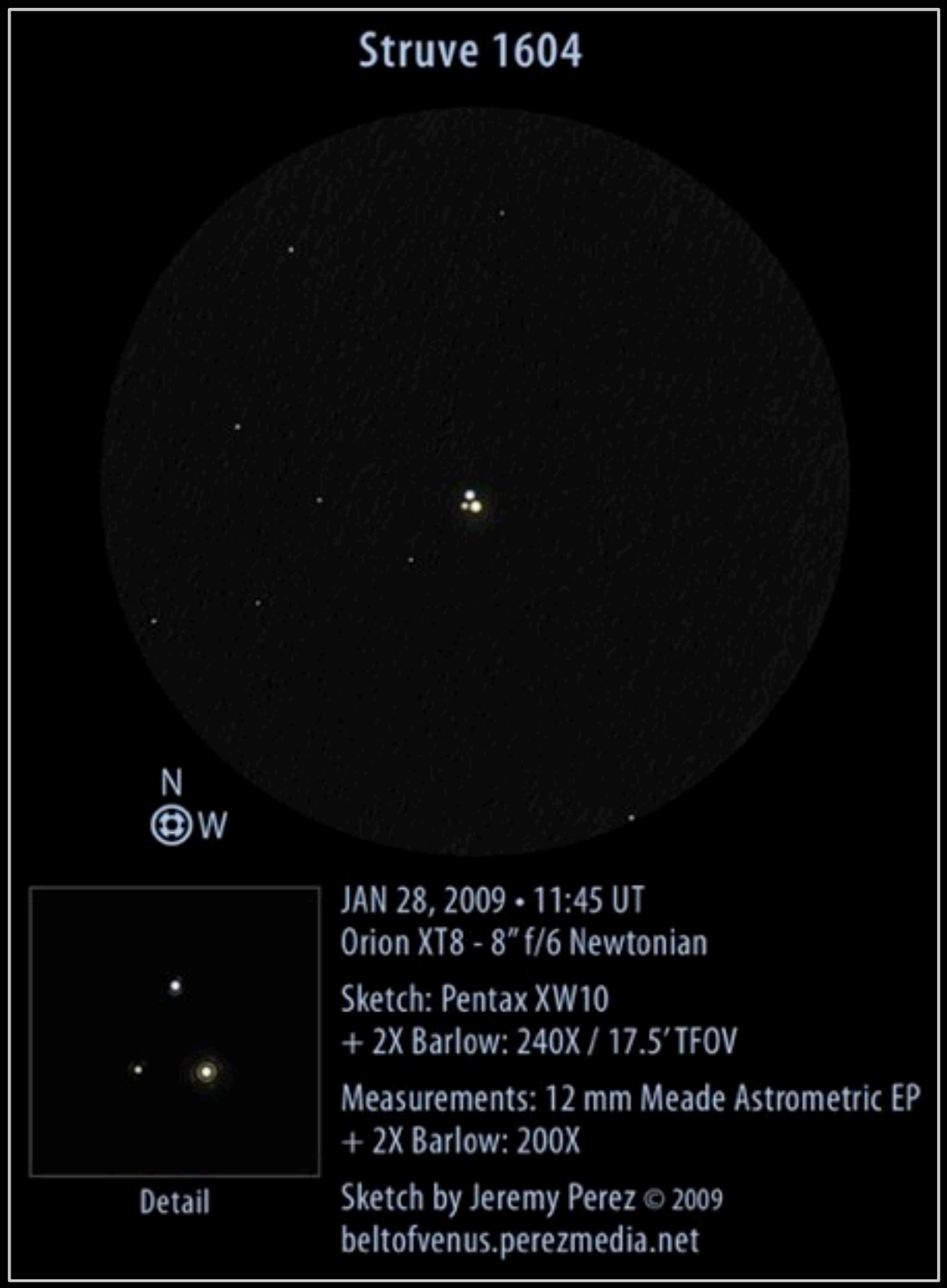
Detail (JAN 26, 2007)

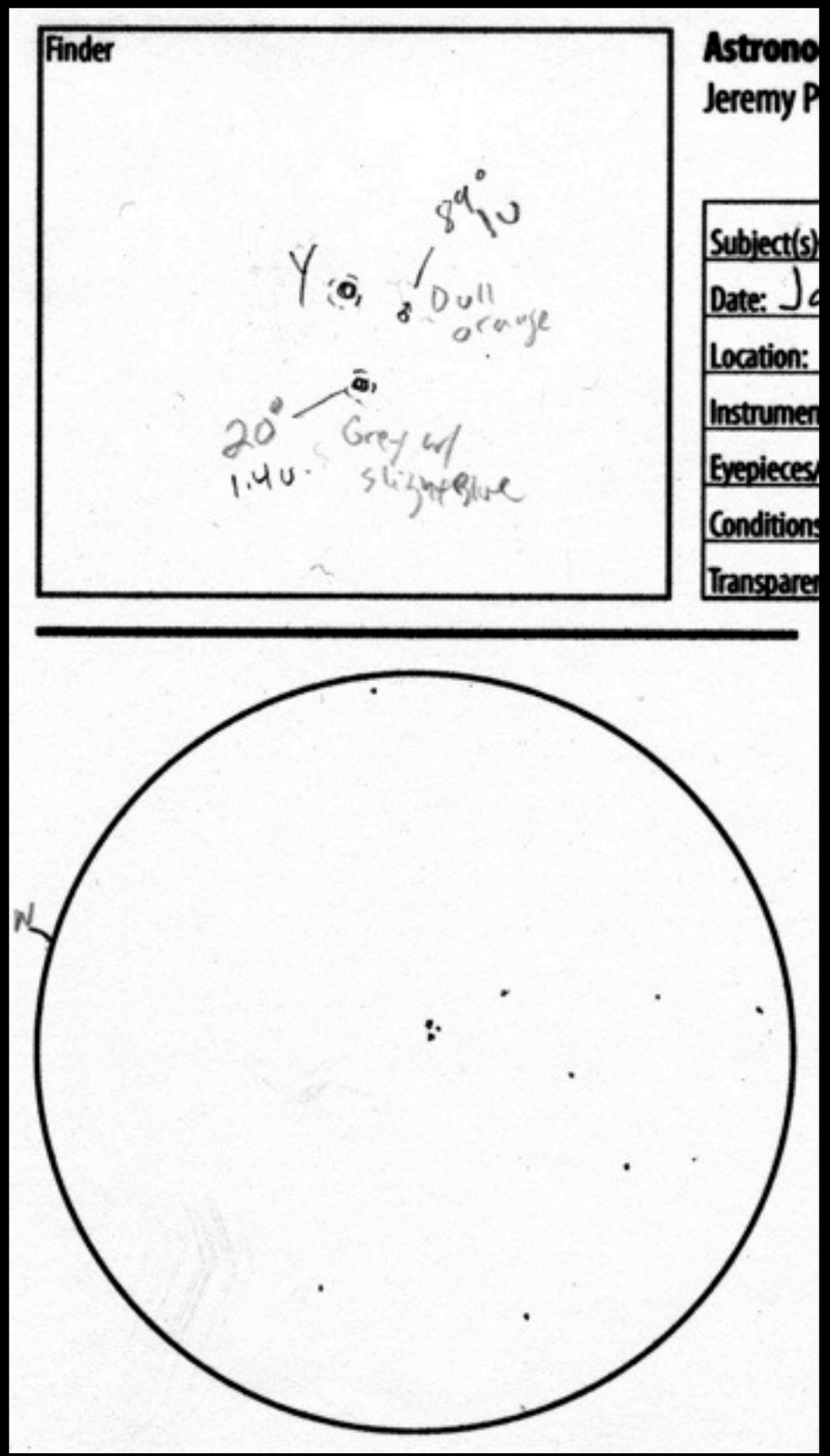
Detail (APR 11, 2008)



Detail (FEB 20, 2009)

creating a digital DS sketch





creating a digital DS sketch

B/wds/wds

The Washington Visual Double Star Catalog (Mason+ 2001-2009)

The Washington Double Star Catalog (main part) *(104225 rows)*

To get all details for a row, just click on the row number in the leftmost `Full' column.

The 3 columns in *color* are computed by VizieR, and are *not part of the original data* *(note that the computed coordinates are computed from proper motions given in the table)*

Full	_r arcmin	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	WDS	Disc	Comp	Obs1 yr	pa1 deg	sep1 arcsec	mag1 mag	mag2 mag	DM	Notes	n_	RAJ2000 "h:m:s"	DEJ2000 "d:m:s"
1	0.0178	12 09 29.13	-11 51 25.0	12095-1151	STF1604	BC	1831	98	46.1	9.73	10.10		N D		12 09 29.13	-11 51 25.0
2	0.1639	12 09 28.52	-11 51 25.5	12095-1151	STF1604	AB	1831	93	12.0	6.56	9.73	-11 3246	NLD		12 09 28.52	-11 51 25.5
3	0.1639	12 09 28.52	-11 51 25.5	12095-1151	STF1604	AC	1831	97	58.0	6.81	8.12	-11 3248	NLD		12 09 28.52	-11 51 25.5

Basic data :

NLTT 29772 -- High proper-motion Star

quer

Other object types: ** (**,ADS,CCDM,IDS) ,* (BD,CSI,GJ,YZC) ,PM* (NLTT,LTT)

ICRS coord. (ep=2000 eq=2000) : 12 09 29.19 -11 51 25.6 (~Unknown) [~ ~ ~] C 2003ApJ...582.1011S

FK5 coord. (ep=2000 eq=2000) : 12 09 29.19 -11 51 25.6 (~Unknown) [~ ~ ~] C 2003ApJ...582.1011S

FK4 coord. (ep=1950 eq=1950) : 12 06 53.93 -11 34 35.6 (~Unknown) [~ ~ ~] C 2003ApJ...582.1011S

Gal coord. (ep=2000 eq=2000) : 286.9419 +49.7077 (~Unknown) [~ ~ ~] C 2003ApJ...582.1011S

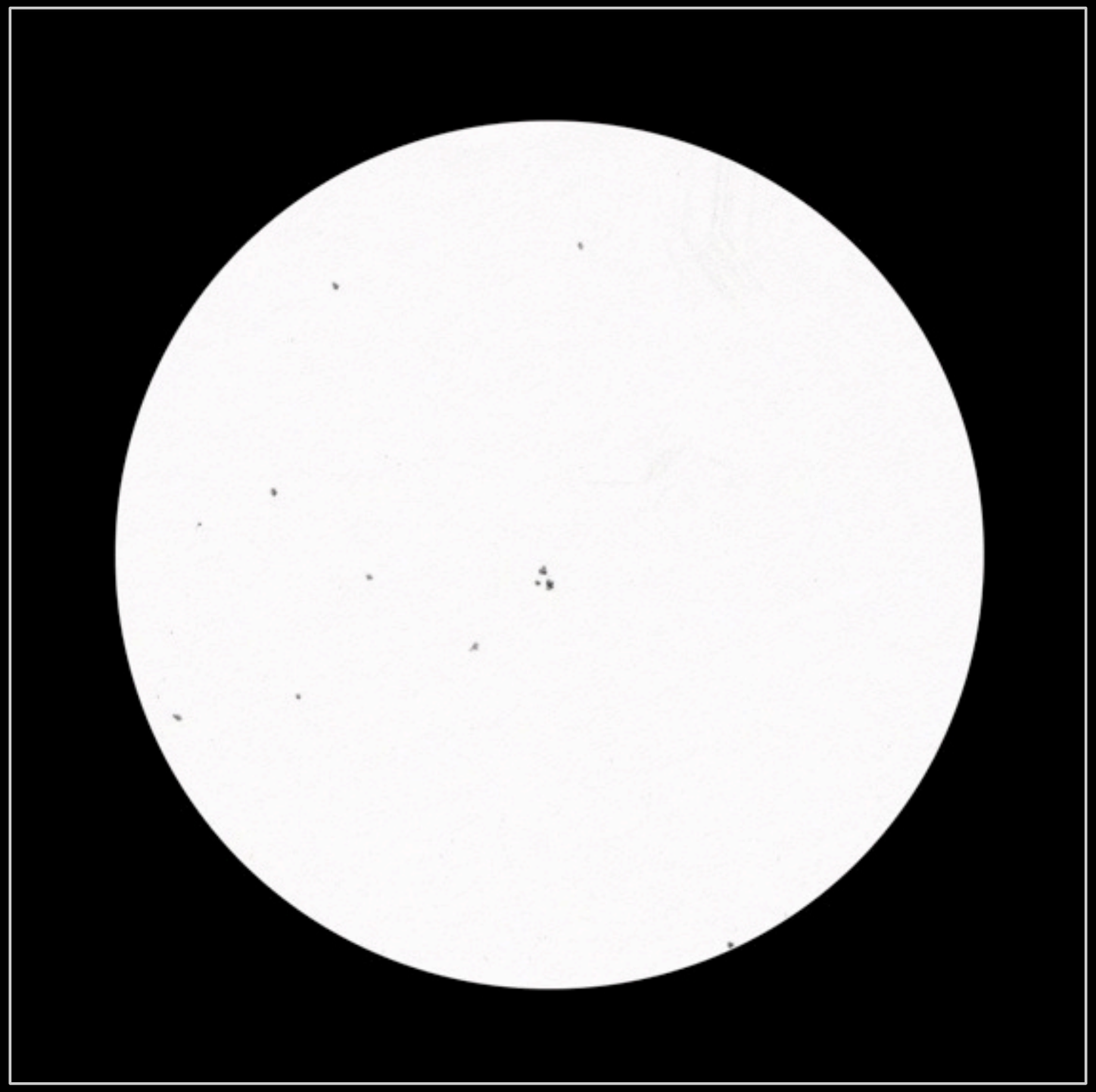
Proper motions *mas/yr* [error ellipse]: 295 -167 C [~ ~ ~] 2003ApJ...582.1011S

Spectral type: K5 (~) D ~

Fluxes (2) : B 9.5 [~] D ~
V 9.4 [~] E ~

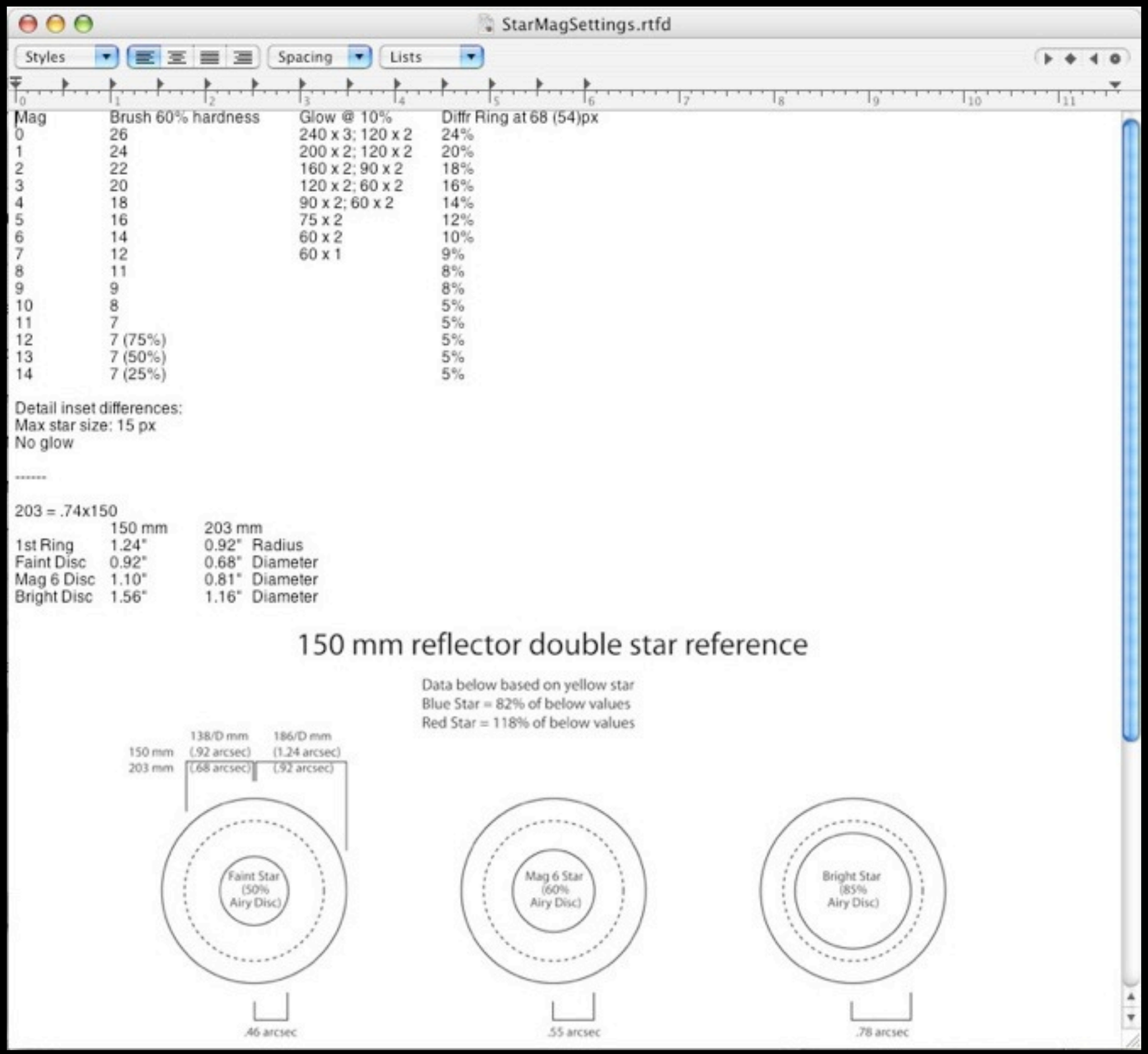
essential notes: • HIC 59272 includes the components CCDM J12095-1151 A and CCDM J12095-1151 B

creating a digital DS sketch

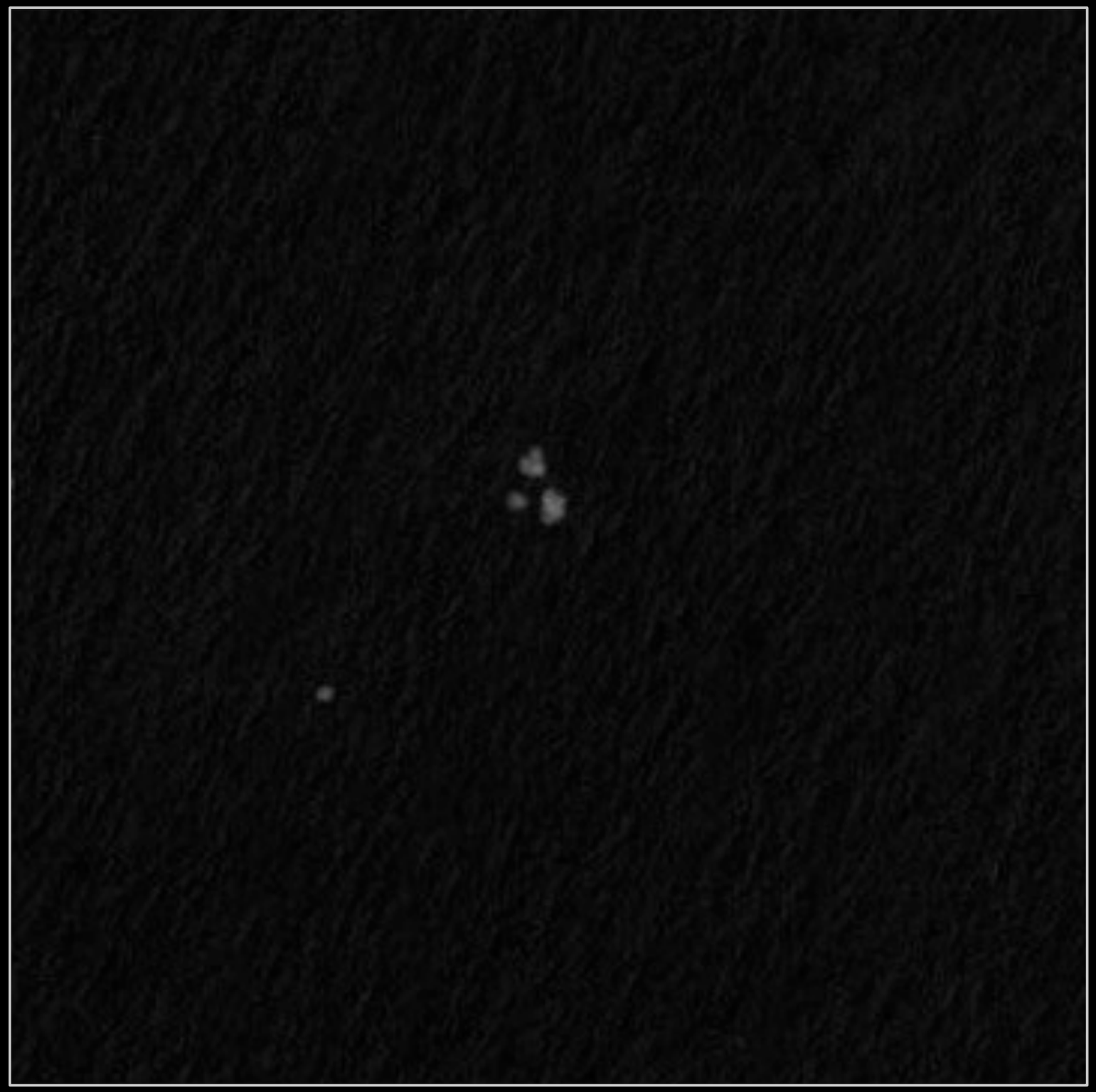


creating a digital DS sketch

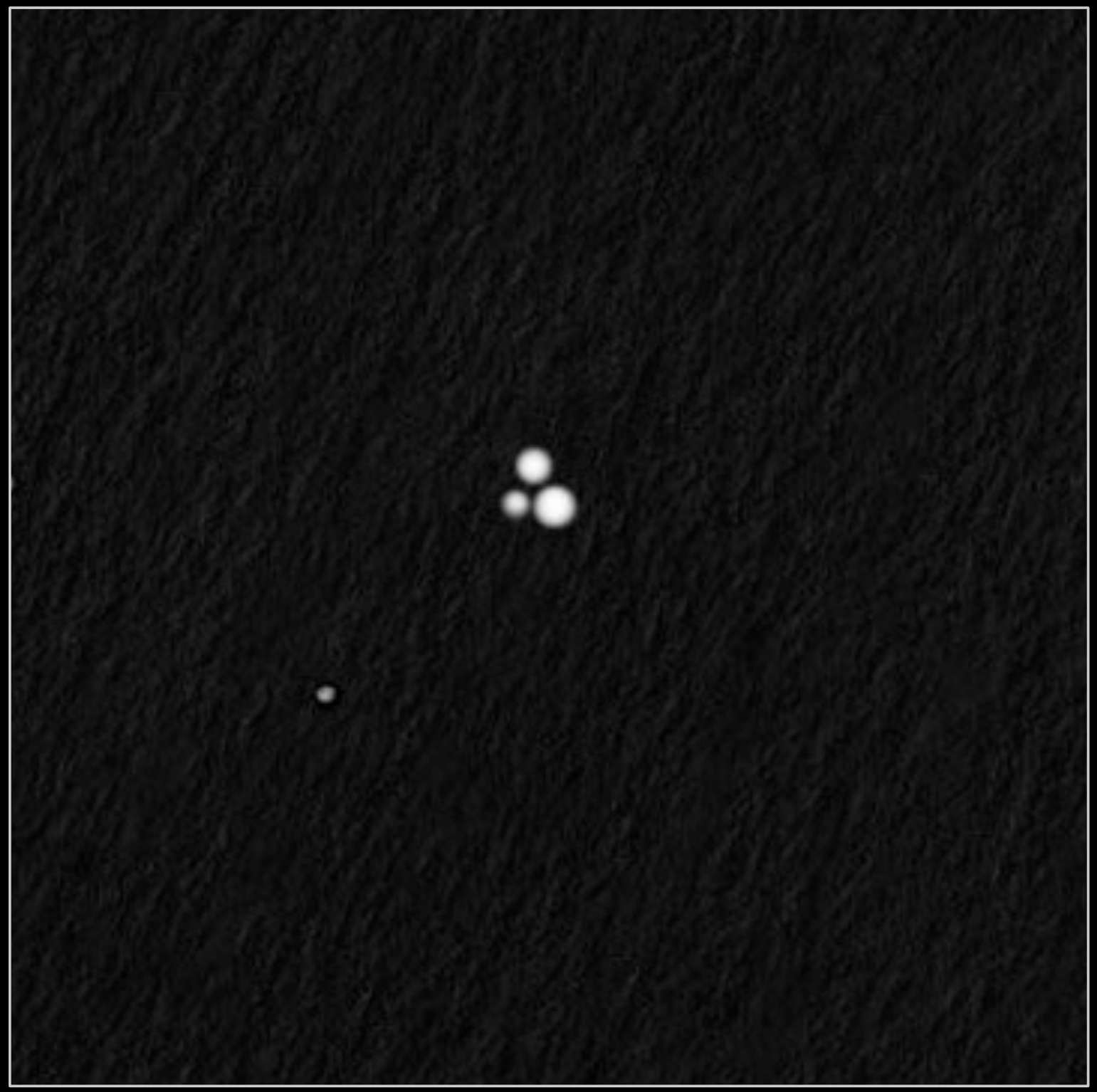
creating a digital DS sketch



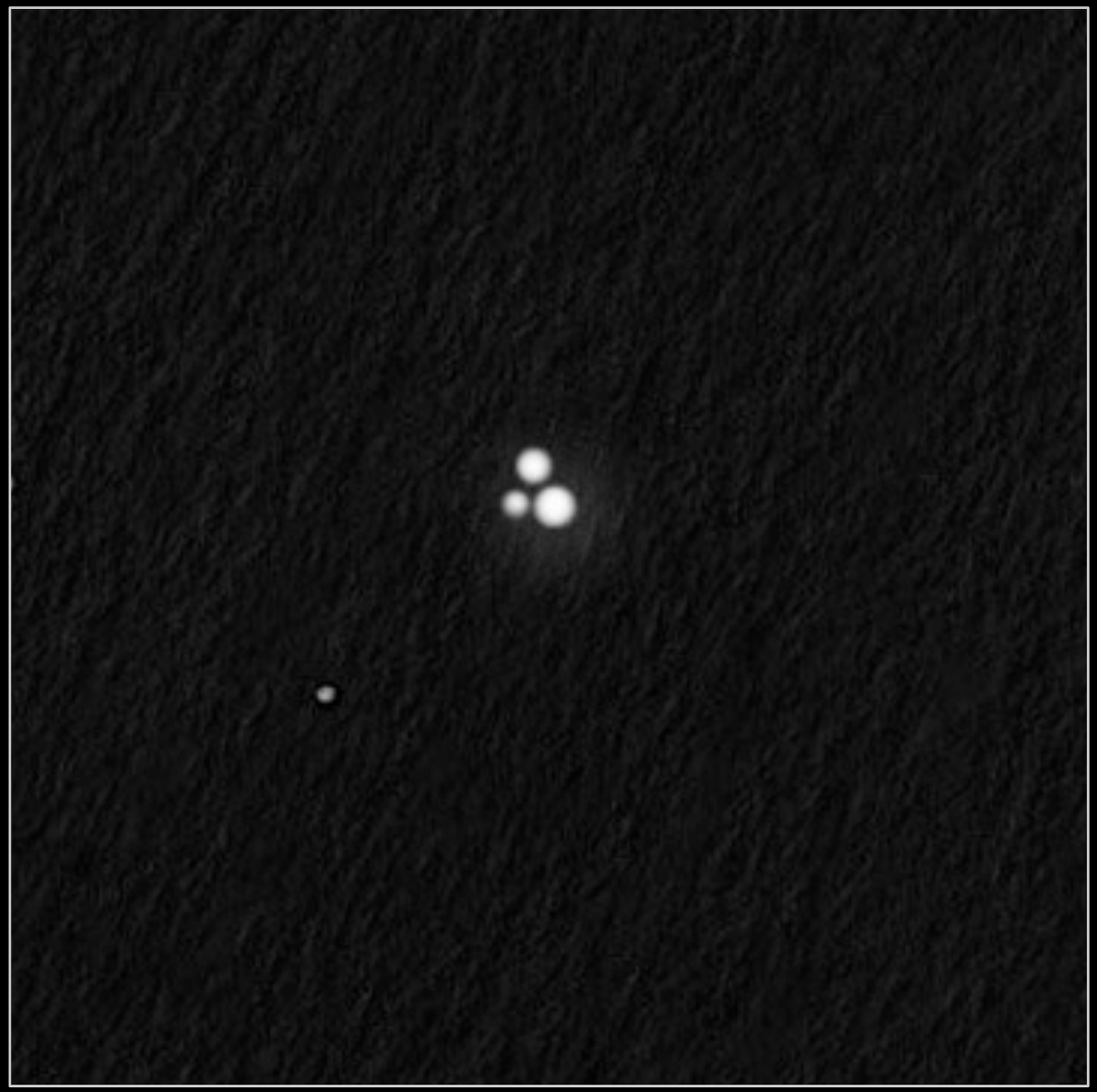
creating a digital DS sketch



creating a digital DS sketch



creating a digital DS sketch



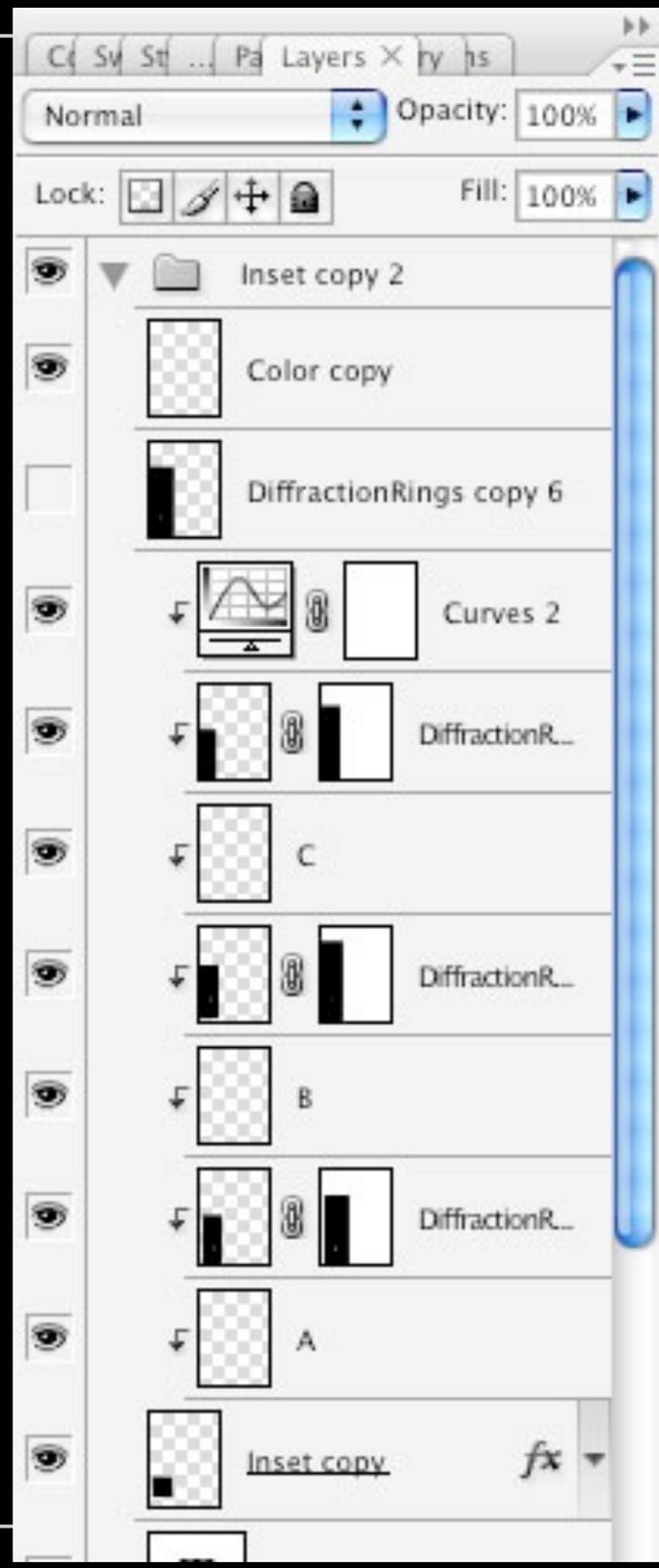
creating a digital DS sketch

creating a digital DS sketch

Detail

creating a digital DS sketch

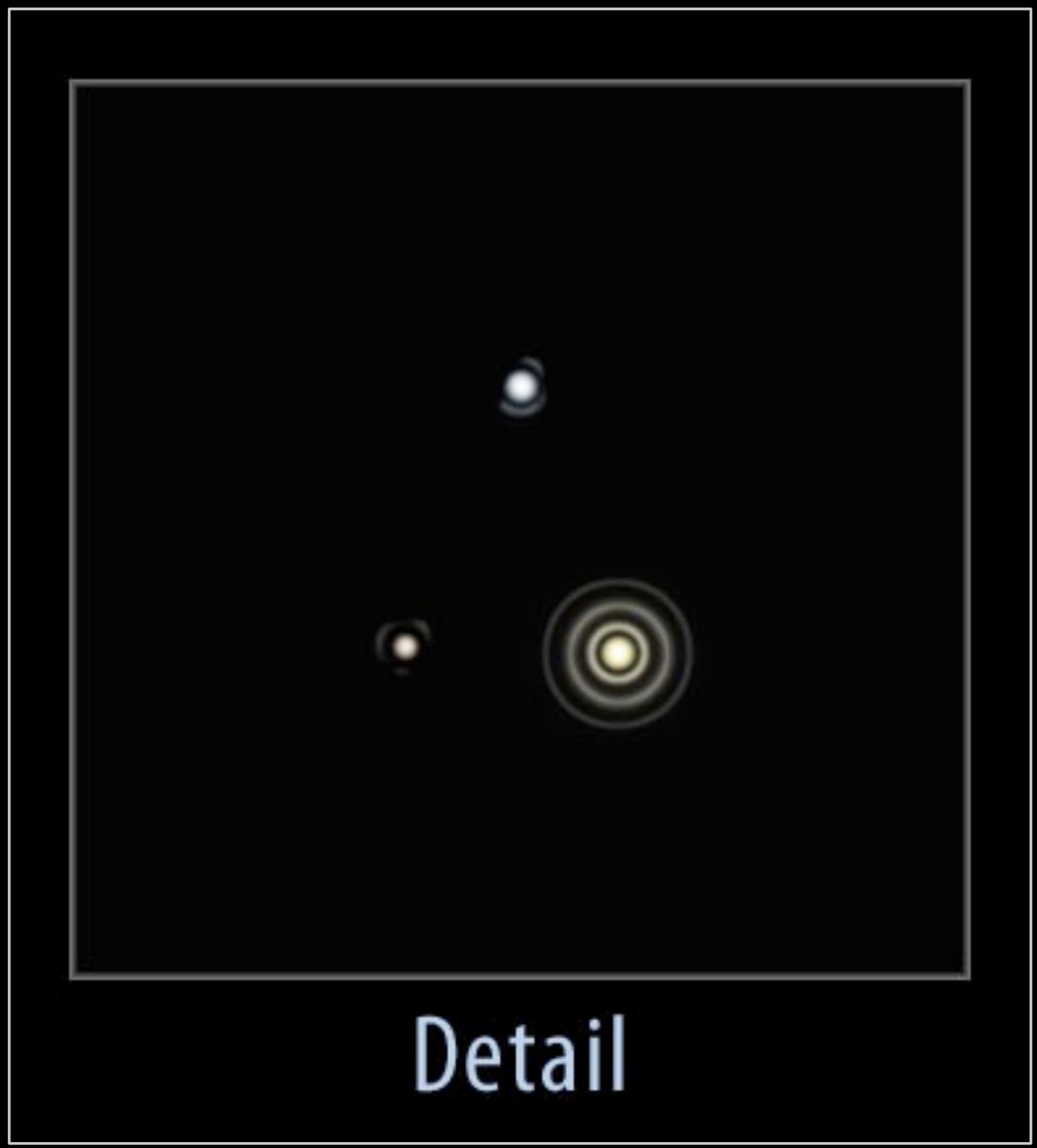
Detail



creating a digital DS sketch

Detail

creating a digital DS sketch

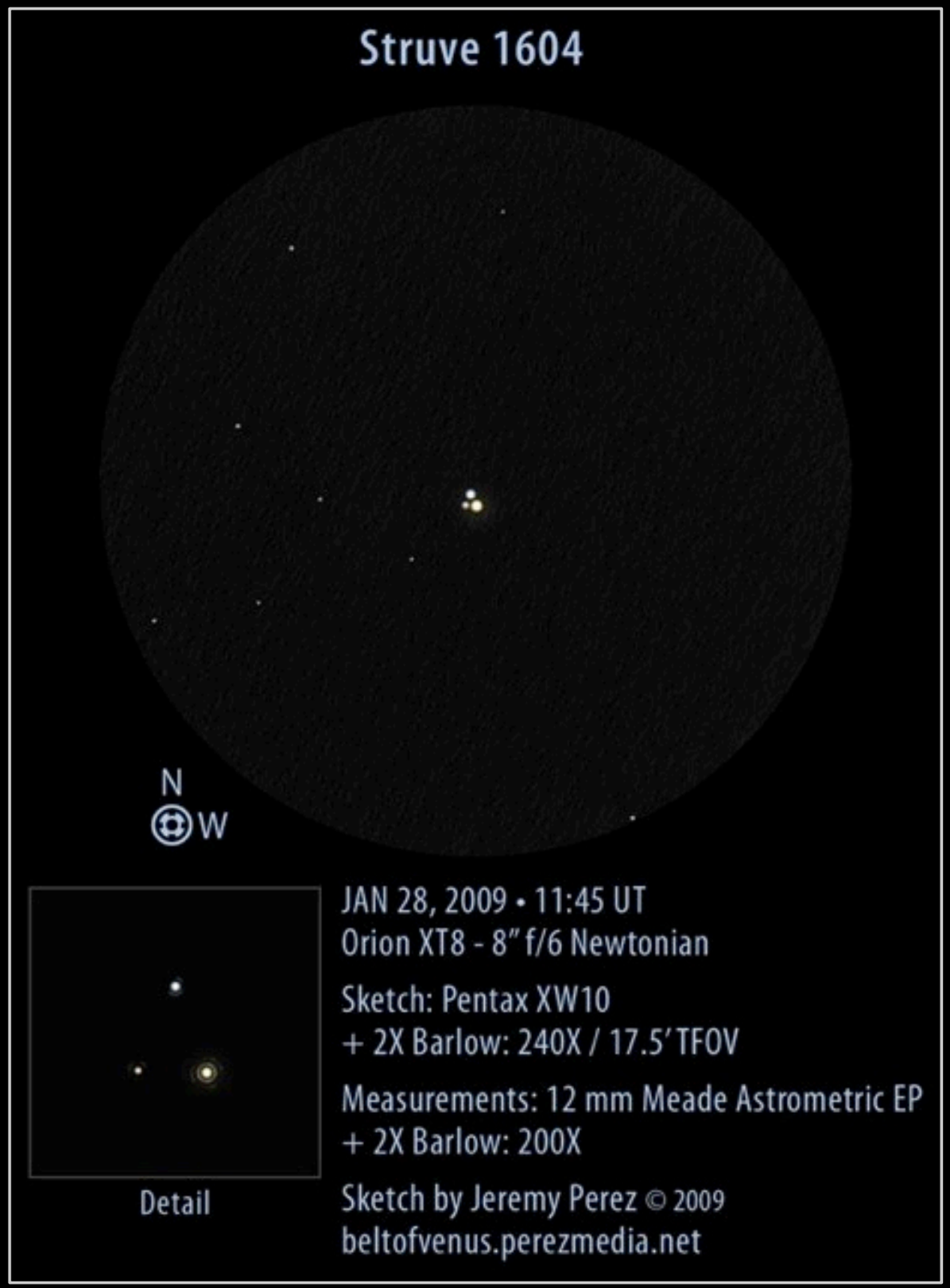


Detail

creating a digital DS sketch

Detail

creating a digital DS sketch



additional resources

www.cloudynights.com
www.beltofvenus.net
www.asod.info
www.dickblick.com (art supply)

Astronomical Sketching: A Step-by-Step Introduction

***Astronomy Now* Column: Drawn to the Universe**
***Sky at Night* Sketching Column (Carol Lakomiak)**