The Atlanta Astronomy Club

Charlie Elliot Chapter

This Month's Sky

This Month's Sky – Feb /Mar 2012

- The Sky Tonight
- Our Solar System This Week
- This Month's Astro Events
- Target List
- Observing the Red Planet

The Sky Tonight

- Sunset at 6:21 PM
- Mercury sets at 7:04 PM
- Mars rises at 7:42 PM
- Uranus sets at 8:56 PM
- Venus sets at 9:44 PM
- Saturn rises at 10:55 PM
- Jupiter sets at 11:30 PM

The Sky Tonight

Tomorrow morning:

- Pluto rises at 4:08 AM
- Moon rises at 5:31 AM
- Sunrise at 7:15 AM

Our Solar System this week

- Mercury - Barely above the western horizon 30 minutes after sunset
- Venus - Visible high in the southwest after sunset
- Mars - Rises in the east before 8:00 PM and can be seen high in the south around 1:00 AM
- Jupiter - Highest in the southwest after sunset to the upper left of Venus
- Saturn - Rises in the east around 11:00 PM and high in the south before dawn to the lower left of Spica
- Uranus - Low in the west after sunset to the lower right of brilliant Venus
- Neptune- Lost in the glare of the Sun

This Month's Astro Events

- Feb 21 - New moon
- Feb 22 - Thin crescent moon near Mercury
- Feb 25 - Waxing crescent moon near Venus
- Feb 26 - Waxing crescent moon near Jupiter
- Feb 28 - Waxing crescent moon near the Pleiades
- Feb 29 - 1st quarter moon near the Hyades
- Mar 3 - Mars at opposition
- Mar 3 - Observe lunar craters Kepler and Encke
- Mar 7 - Waxing gibbous moon near Mars
- Mar 8 - Full moon
- Mar 15 - Venus & Jupiter just 3º apart
- Mar 22 - New moon
- Mar 24 - Next CE Chapter meeting at 5:00 PM


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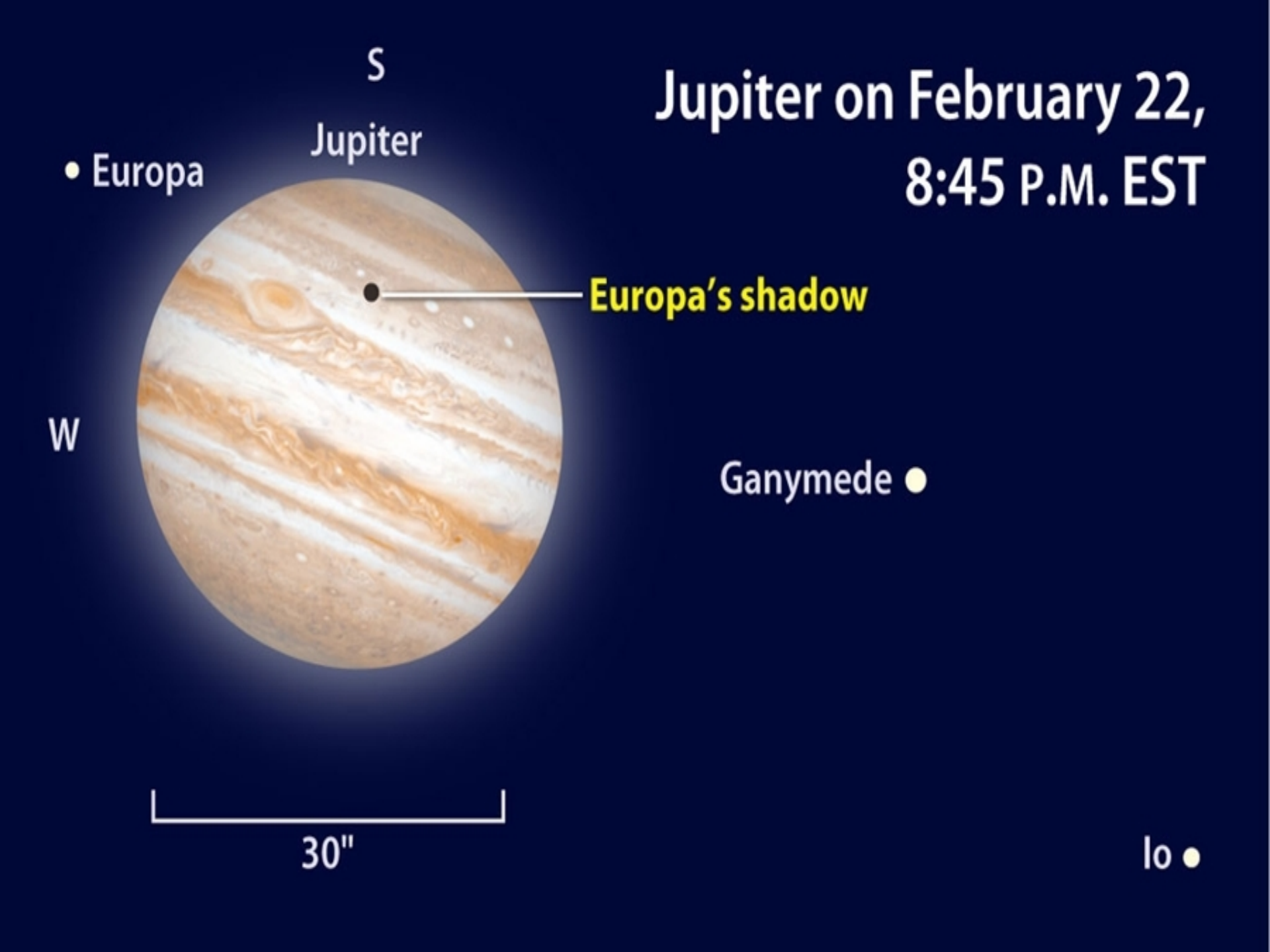
W
S
URSA MINOR
Polaris
Mizar
URSA MAJOR
CASSIOPEIA
Capella
GEMINI
Castor
Pollux
M37
Pleiades
AURIGA
TAURUS
PATH OF SUN
Aldebaran
Hyades
Procyon
Betelgeuse
ORION
CANIS MINOR
Orion Nebula
Rigel
Sirius
CANIS MAJOR


Venus
PEGASUS
CETUS
PISCES
Mercury
Moon
5°
February 22, 30 minutes after sunset
Looking west


S
Jupiter
Europa
Jupiter on February 22,
8:45 P.M. EST
Europa's shadow
W
Ganymede
30"
Io


Dusk, Feb 22 — 24
30 minutes after sunset
Venus
Moon
Feb 24
Moon
Feb 23
Moon
Feb 22
Mercury
Looking West
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ARIES
Jupiter
ANDROMEDA
Moon
Venus
PEGASUS
CETUS
10°
Mercury
February 25, 1 hour after sunset
Looking west


Feb 23 — 26
shortly after dark
Jupiter
Moon
Feb 26
Moon
Feb 25
Venus
Moon
Feb 24
Moon
Feb 23
Looking West
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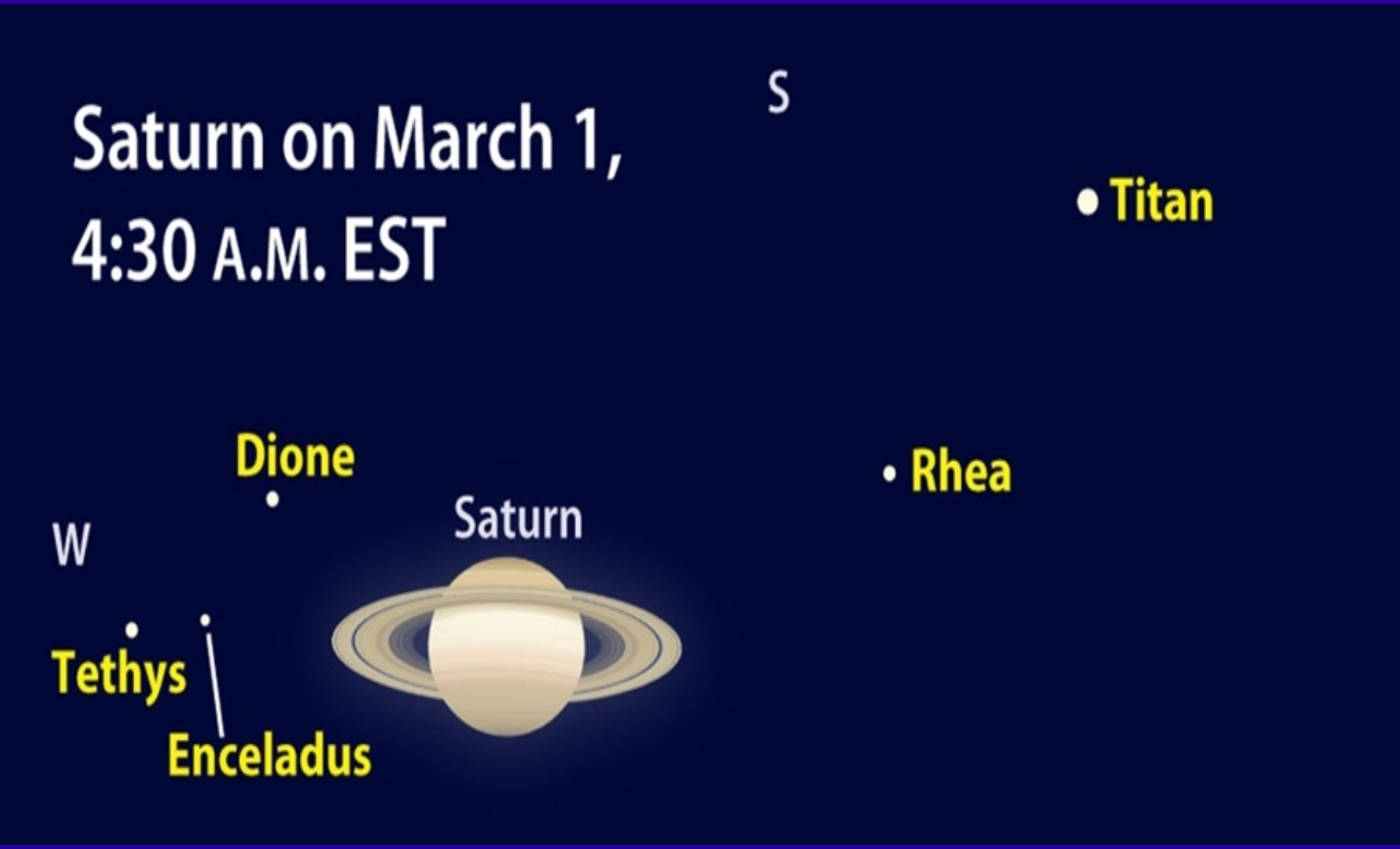
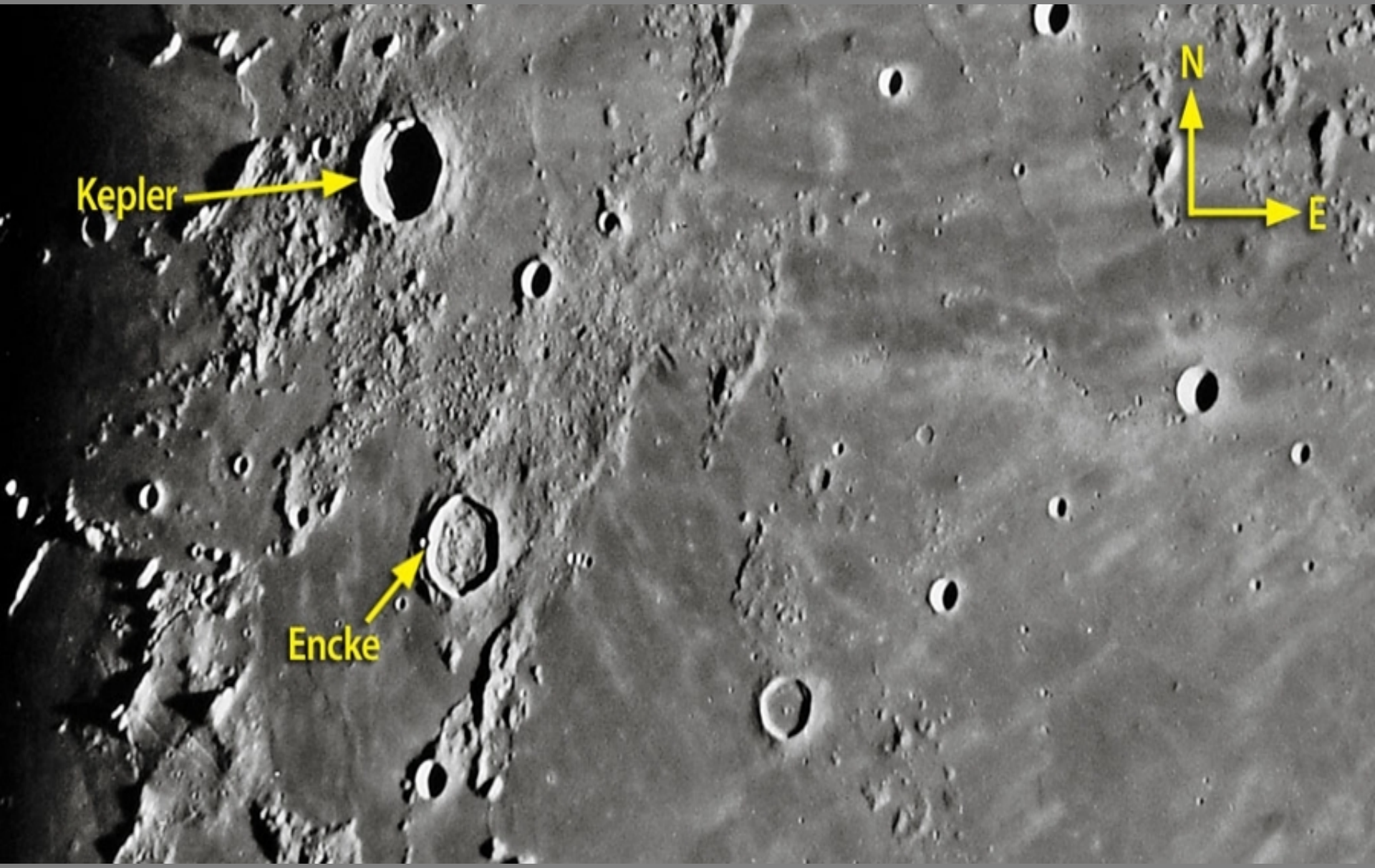

Saturn on March 1,
4:30 A.M. EST
S
Titan
Dione
Rhea
Saturn
W
Tethys
Enceladus


Kepler
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URSA MAJOR
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Regulus
Alphard
Mars
Denebola
HYDRA
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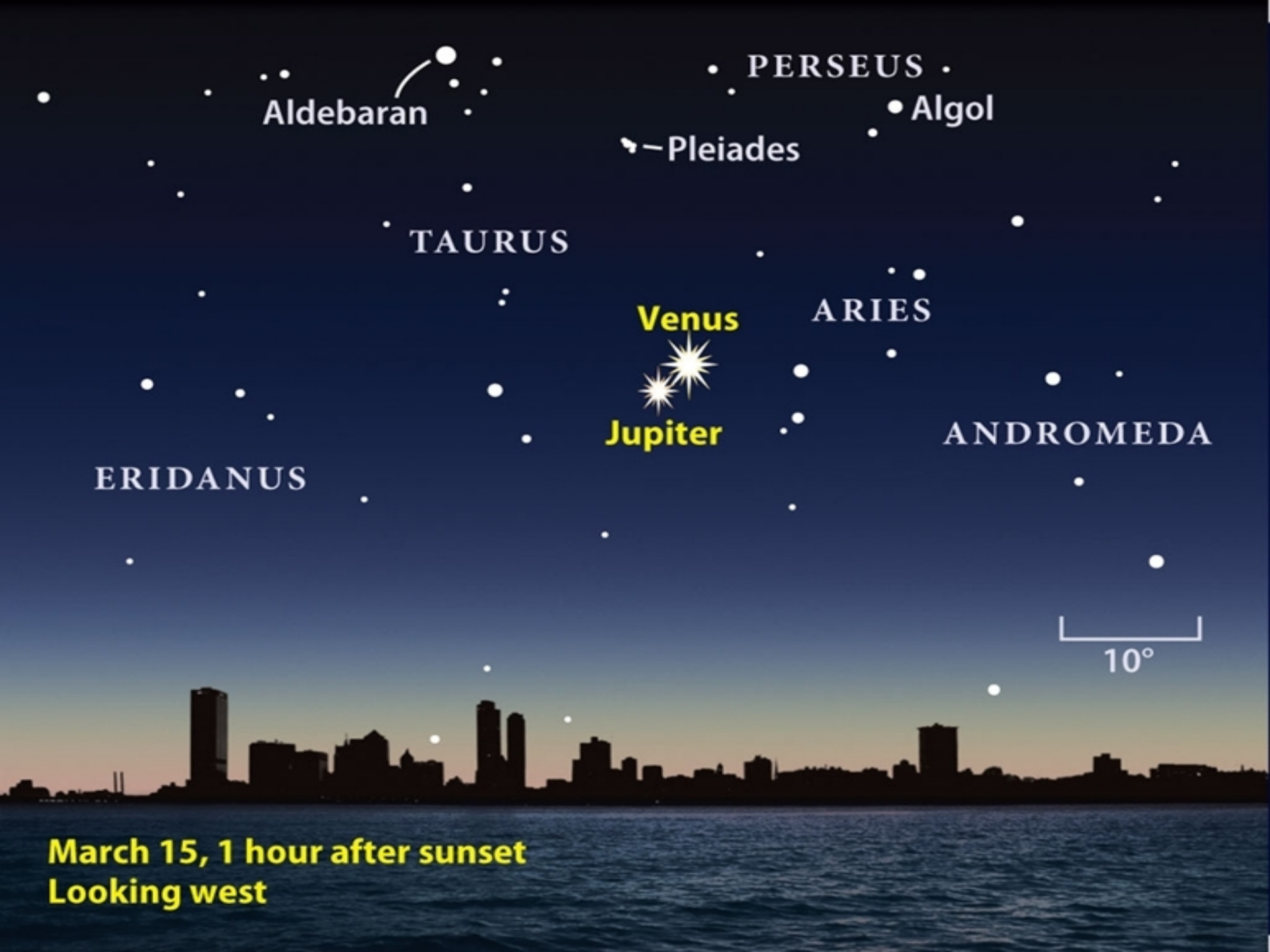
Early March, 8 P.M.
Looking east


PERSEUS
Aldebaran
Algol
Pleiades
TAURUS
ARIES
Venus
Jupiter
ANDROMEDA
ERIDANUS
10°
March 15, 1 hour after sunset
Looking west

Astro Events

Events visible during the next month.....

- Feb 28 - Mar 10: Mercury is more than 10º above the western horizon ½ hr after sunset. This is Mercury's best evening apparition in 2012
- Feb 2012 : Comet C/2009 P1 (Garradd) glides through northern Hercules and the tail of Draco
- Feb 2012 : Comet P/2006 T1 (Levy) cruises from Eridanus through the constellation Lepus and into Canis Major
- Feb 2012 : Asteroid 5 Astraea glows near Magnitude 9 in the constellation Virgo
- Mar 2012 : Asteroid 6 Hebe glides through Leo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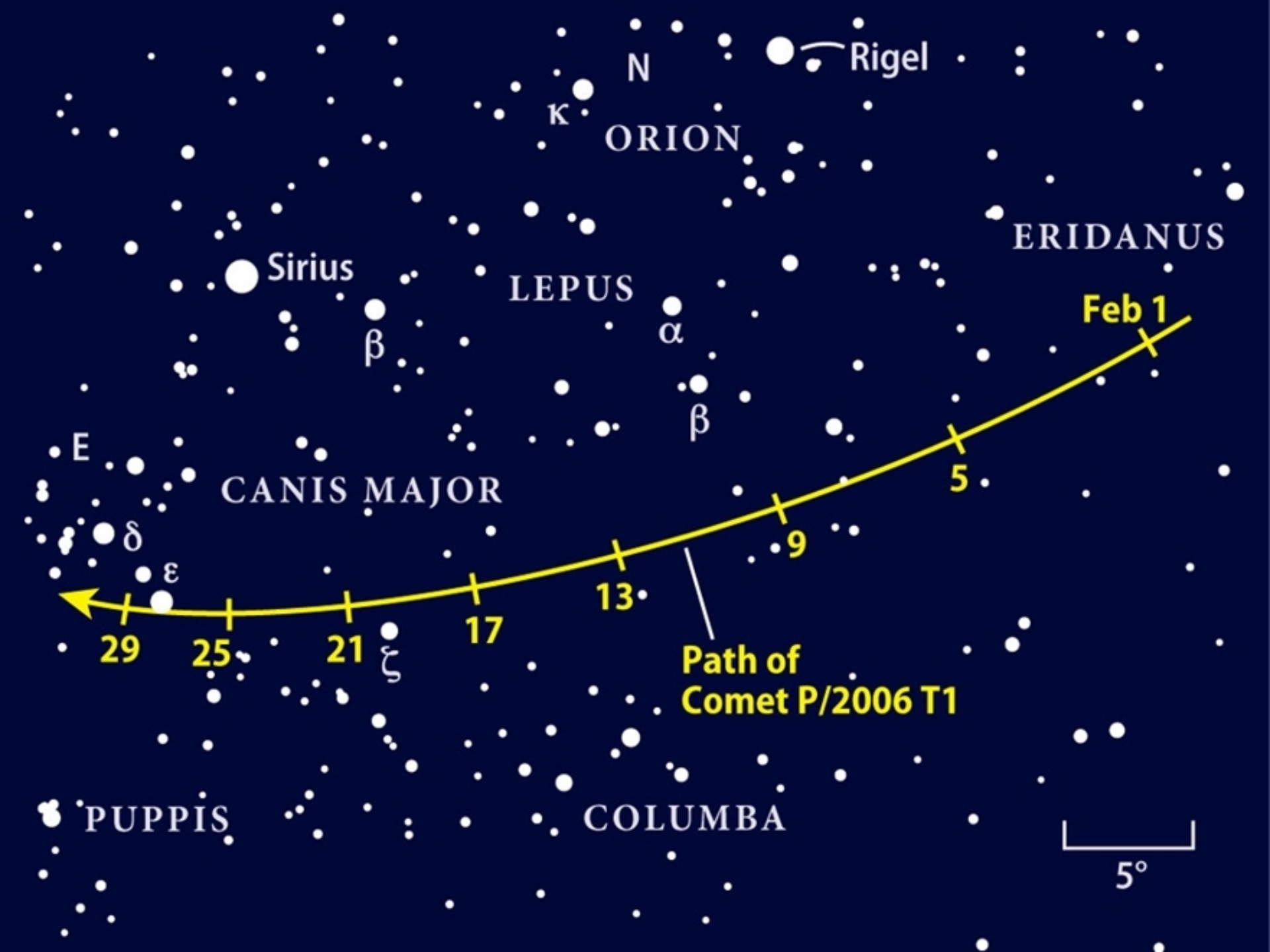
Path of Comet
C/2009 P1
5°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Feb 1
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Path of
Comet P/2006 T1
PUPPIS
COLUMBA
5°


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Feb 1
Path of Astraea
VIRGO
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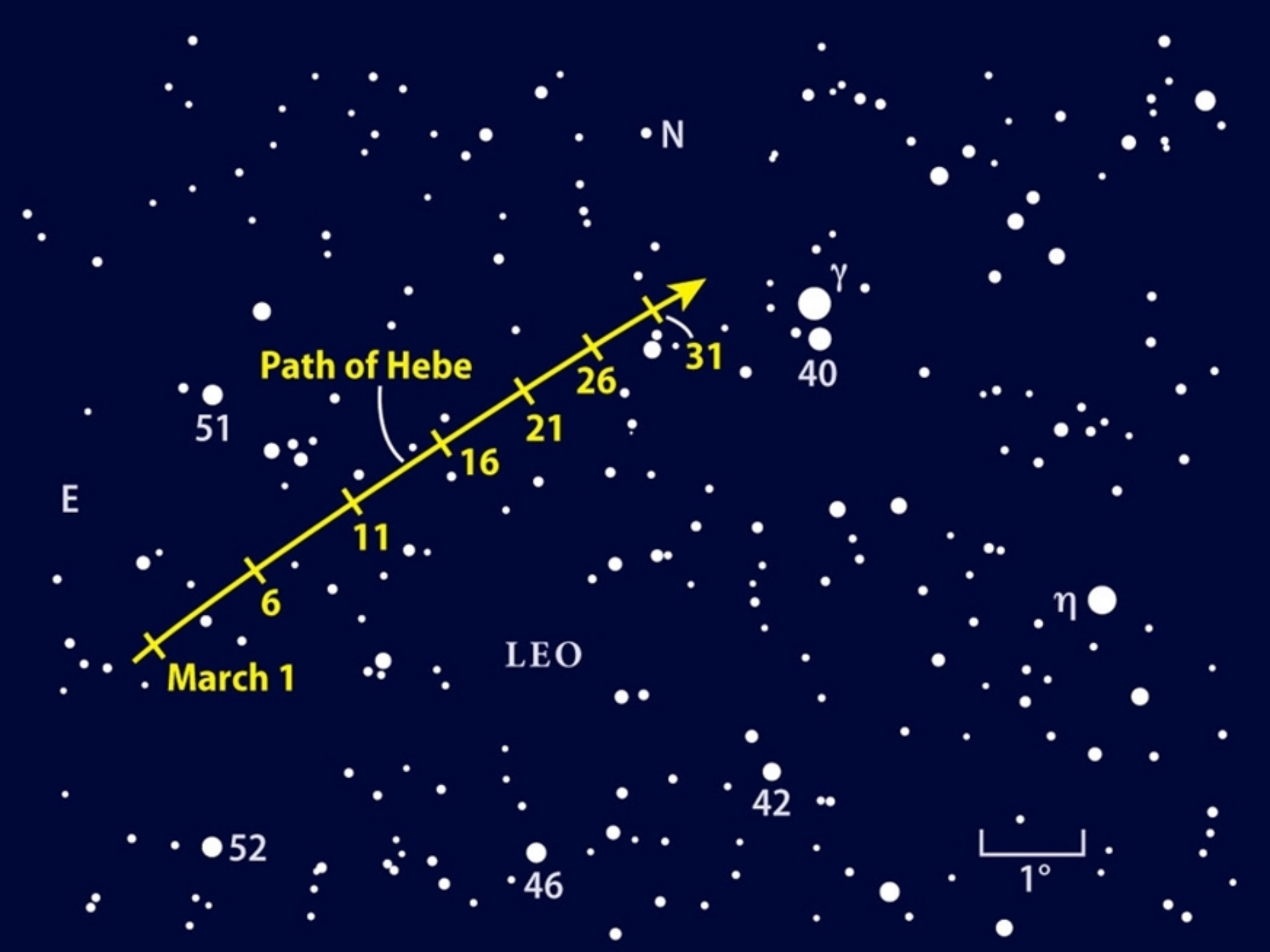
1°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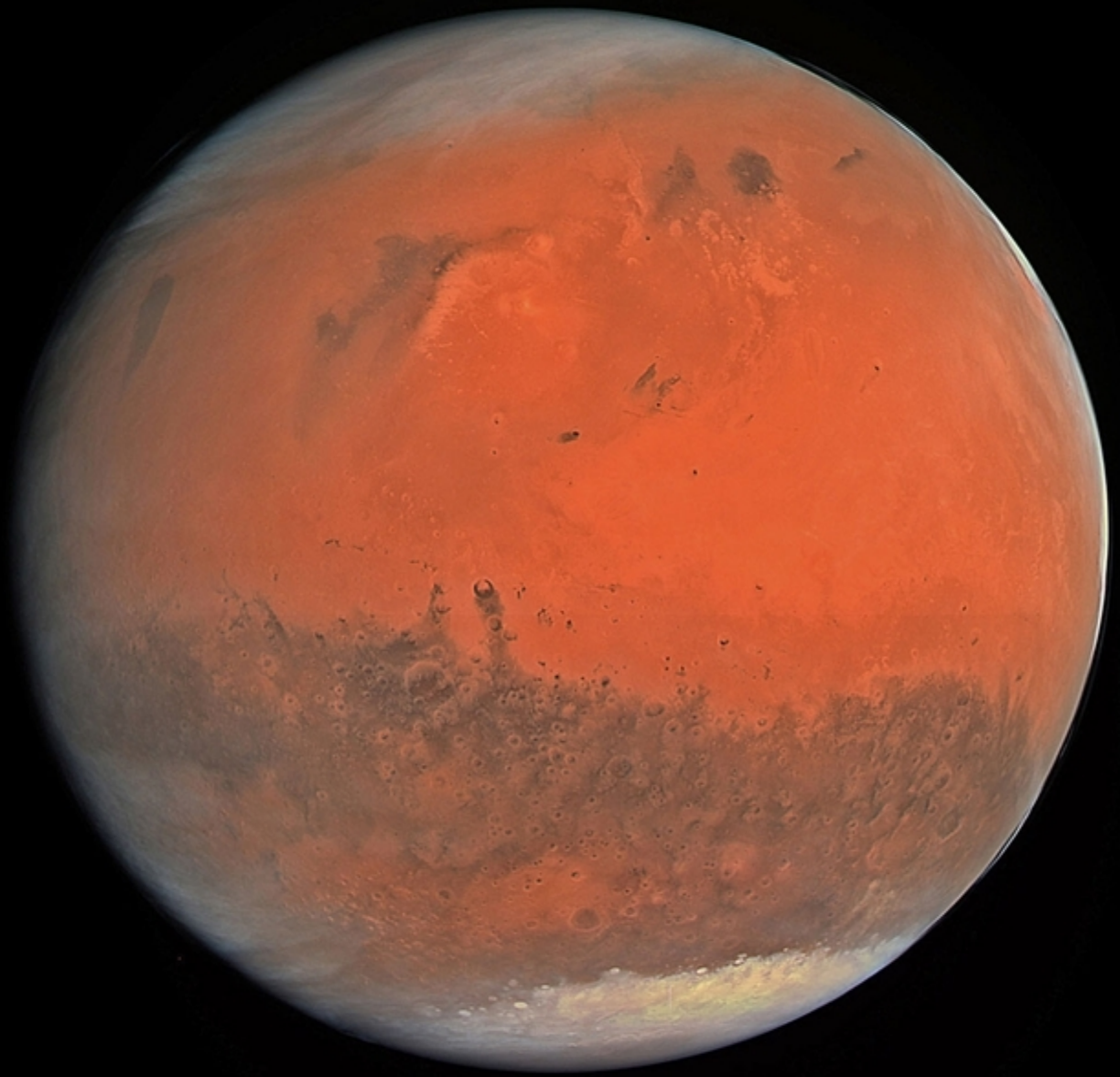
46
42
LEO
Path of Hebe
March 1
6
11
16
21
26
31
1°

Target List – Small Telescopes & Binoculars

Object	Type	Mag	Size/Sep	Constellation
M42	Diffuse Nebula	4.0	66'	Orion
Bogardus	Double Star	2.6	3.5”	Auriga
Elnath	Double Star	1.6	33.4”	Taurus
Y Persei	Double Star	2.9	57.0”	Perseus
M81	Galaxy	7.8	25' x 11'	Ursa Major
M82	Galaxy	9.2	10' x 5'	Ursa Major
M36	Open Cluster	6.5	12'	Auriga
M37	Open Cluster	6.0	24'	Auriga
M38	Open Cluster	7.0	21'	Auriga
M44	Open Cluster	4.0	95'	Cancer
M45	Open Cluster	1.6	120'	Taurus
Trumpler 2	Open Cluster	5.9	20'	Perseus
M1	Supernova Rem	8.0	6' x 4'	Taurus
R Leporis	Carbon Star	5.9	N/A	Lepus
U Camelo	Carbon Star	6.9	N/A	Camelopardalis

Mars – The Red Planet



Mars – Physical Characteristics

- Mars is a terrestrial planet. The iron oxide on it's surface gives the planet a reddish color.
- Mean diameter 4221 miles
- Rotational period 24.6 hours
- Mars has an elliptical orbit with a period of 687 days and an average distance from the sun of 141 million miles
- The martian atmosphere is over 95% Carbon Dioxide with small amounts of Nitrogen & Argon, as well as trace amounts of Oxygen and CO
- Mars has 2 small moons Deimos and Phobos which are thought to be captured asteroids

Mars – Telescopic Observation & Theories

Brief Video Presentation..... enjoy !

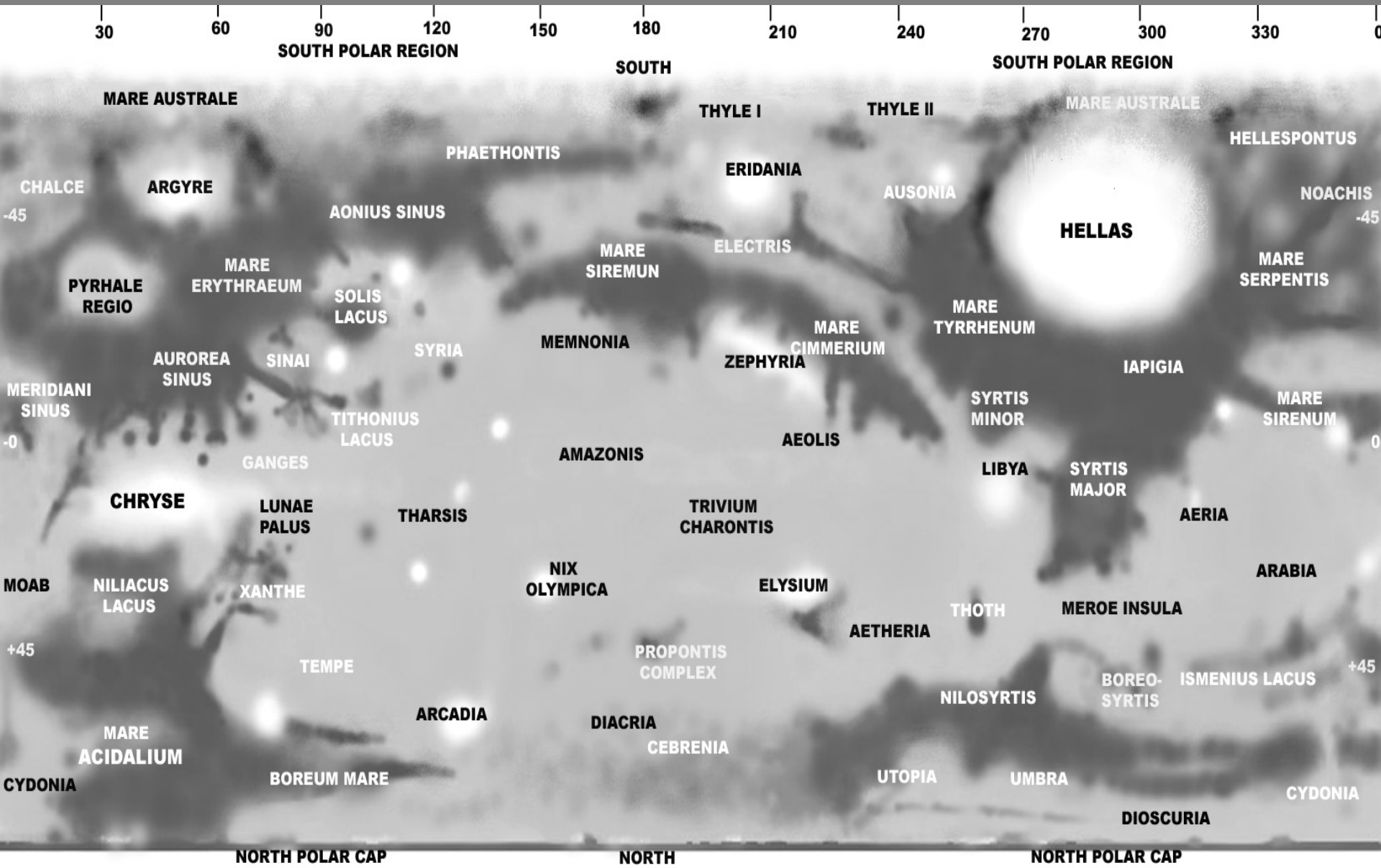
Mars – Features to Observe

- Polar Caps
- Dark Regions and Deserts
- Dust Storms
- Atmospheric Clouds
- Frost Patches
- Fogs, Limb Hazes, Polar Hazes

Tips for Observing Mars

- The best time to observe Mars is a few months before, during, and after opposition
- Acclimatize your telescope for 30 - 60 minutes
- Study martian features on a map before you observe
- Observe on nights with steady air and good seeing conditions while the planet is near the meridian
- Use High Magnification to see details on the surface and in the atmosphere
- Make regular sketches to train your eyes and brain to see fine detail
- Observe frequently over several weeks to see both sides of the planet
- Try using Colored Filters to improve image contrast

Martian Features Map



Using Colored Filters

- Yellow (#12,#15) – Brightens desert regions and darkens bluish and brownish features
- Orange (#21,#23A) – Increases contrast between light and dark features, penetrates hazes and clouds
- Red (#25, #29) - Gives maximum contrast of surface features, dust cloud and polar cap boundaries
- Green (#57) – Darkens red and blue features, enhances frost patches and surface fogs
- Blue Green(#64) - Helps to detect fogs and polar hazes
- Blue (#80A,#38,#38A) / Deep Blue (#46,#47) – Shows atmospheric clouds, limb hazes, polar cloud hoods.
- Magenta (#30,#32) – Enhances red and blue features and darkens green ones. Improves polar features.


No 25 Red

Web Links

- Astronomy Magazine
  - www.astronomy.com
- Sky & Telescope Magazine
  - www.skyandtelescope.com
- The Old Farmer's Almanac
  - www.almanac.com
- Starry Skies
  - www.starryskies.com
- One-Minute Astronomer
  - www.oneminuteastronomer.com
- The Association of Lunar and Planetary Observers
  - www.alpo-astronomy.org
- The Nine Planets
  - www.nineplanets.org

Clear Skies!