

The Atlanta Astronomy Club

Charlie Elliot Chapter

This Month's Sky

This Month's Sky – Mar / April 2012

- The Sky Tonight
- Our Solar System This Week
- This Month's Astro Events
- Target List
- Saturn – The Ringed Planet

The Sky Tonight

- Sunset at 7:50 PM
- Saturn rises at 9:29 PM
- Moon sets at 9:59 PM
- Jupiter sets at 10:44 PM
- Venus sets at 11:35 PM

The Sky Tonight

Tomorrow morning:

- Pluto rises at 2:53 AM
- Neptune rises at 6:06 AM
- Mars sets at 6:36 AM
- Sunrise at 7:31 AM

Our Solar System this week

- Mercury - Lost in the glare of Sunrise
- Venus - Visible high in the southwest after sunset
- Mars - In the Eastern sky after sunset in the constellation Leo and visible all night
- Jupiter - In the southwest after sunset below Venus
- Saturn - Rises in the east around 9:30 PM to the left of the bright star Spica and highest in the south in the early morning
- Uranus - Lost in the glare of the Sun
- Neptune - Lost in the glare of the Sun
- Pluto - Visible in the East before dawn

This Month's Astro Events

- Mar 25 - Moon 3° north of Jupiter at 8:00PM
- Mar 26 - Moon near Venus and the Pleiades
- Mar 27 - Venus at greatest eastern elongation
- April 2 - Venus near the Pleiades
- April 6 - Full Moon
- April 6 - Moon near Spica
- April 7 - Observe the crater Petavius on the lunar surface
- April 15 - Saturn at opposition
- April 18 - Mercury at greatest western elongation
- April 19 - Moon 6° north of Uranus at 4:00AM
- April 21 - New moon
- April 21 - Next CE Chapter meeting at 5:00 PM

Pleiades 


Dusk, March 23 – 26

1 hour after sunset

Moon 
March 26

 Venus

Jupiter 

Moon 
March 25

 α Ceti

ARIES 

Moon 
March 24

Moon 
March 23

Looking West

© 2012 Sky & Telescope

URSA MAJOR

LEO

● Regulus

● Alphard

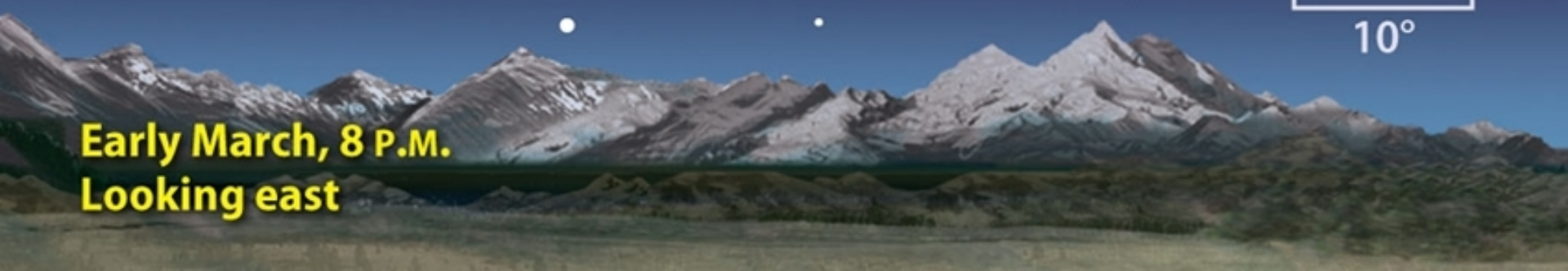
★ Mars

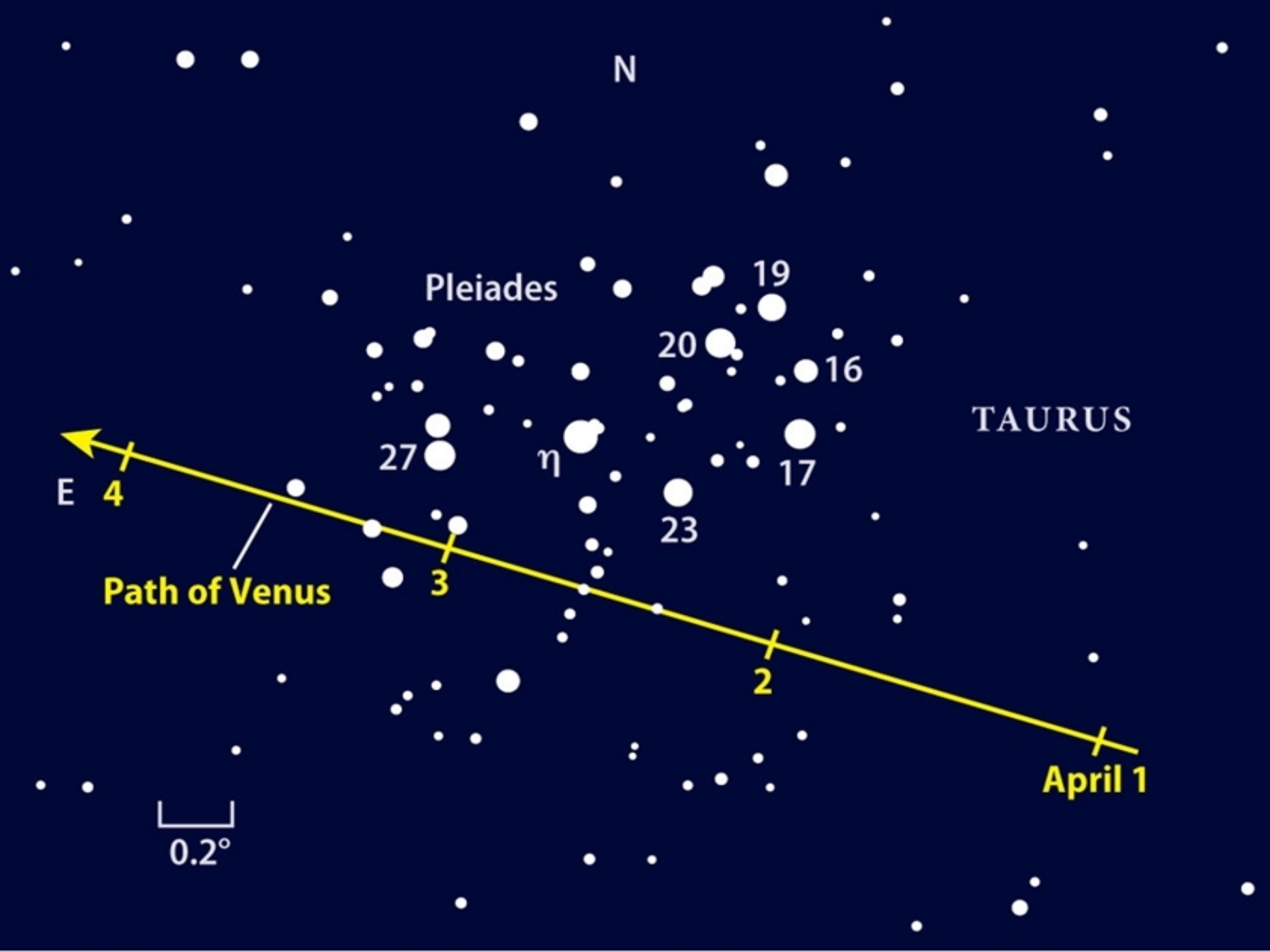
● Denebola

HYDRA

10°

Early March, 8 P.M.
Looking east





N

Pleiades

19

20

16

TAURUS

27

η

17

E

Path of Venus

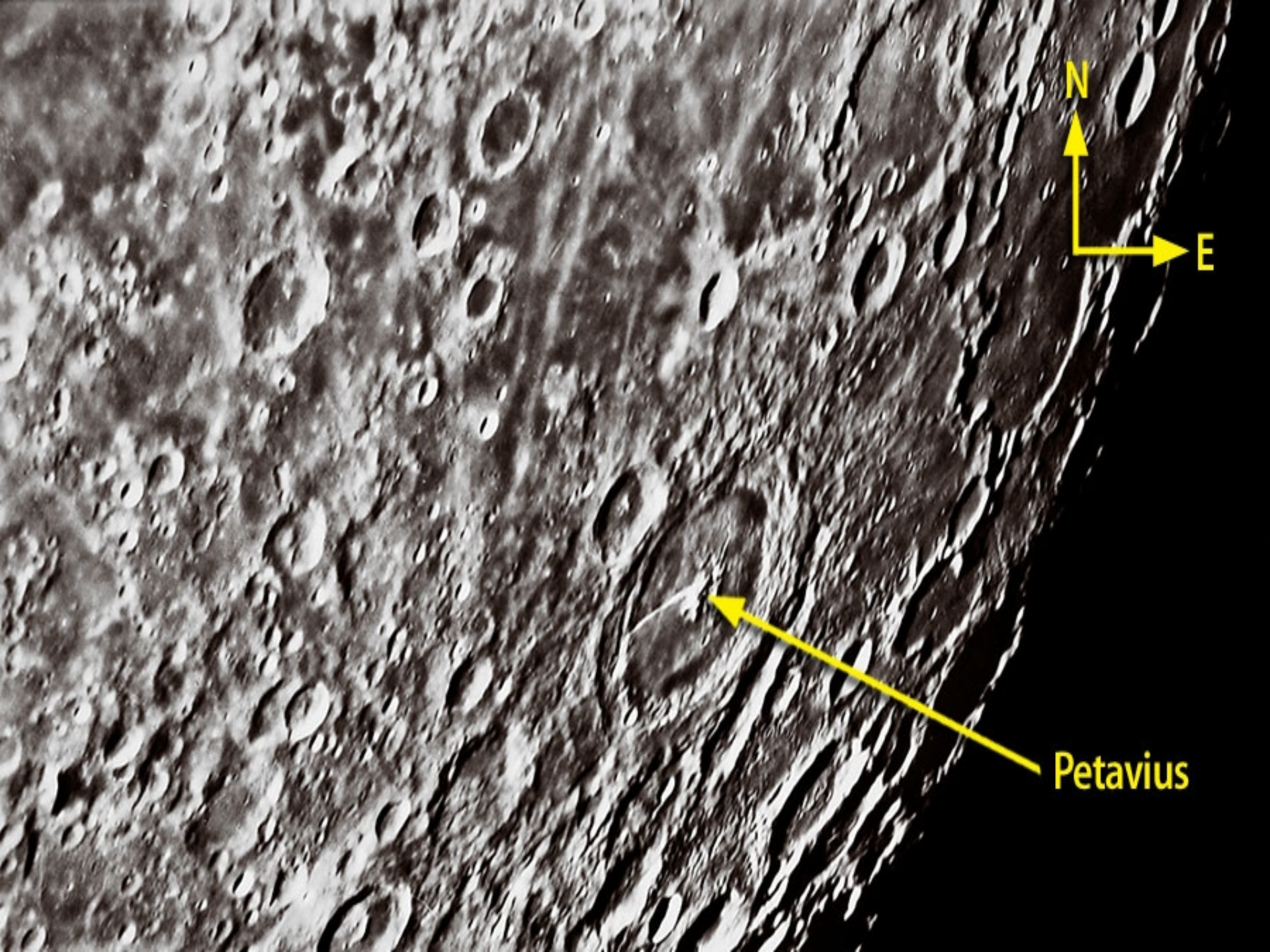
3

23

2

April 1

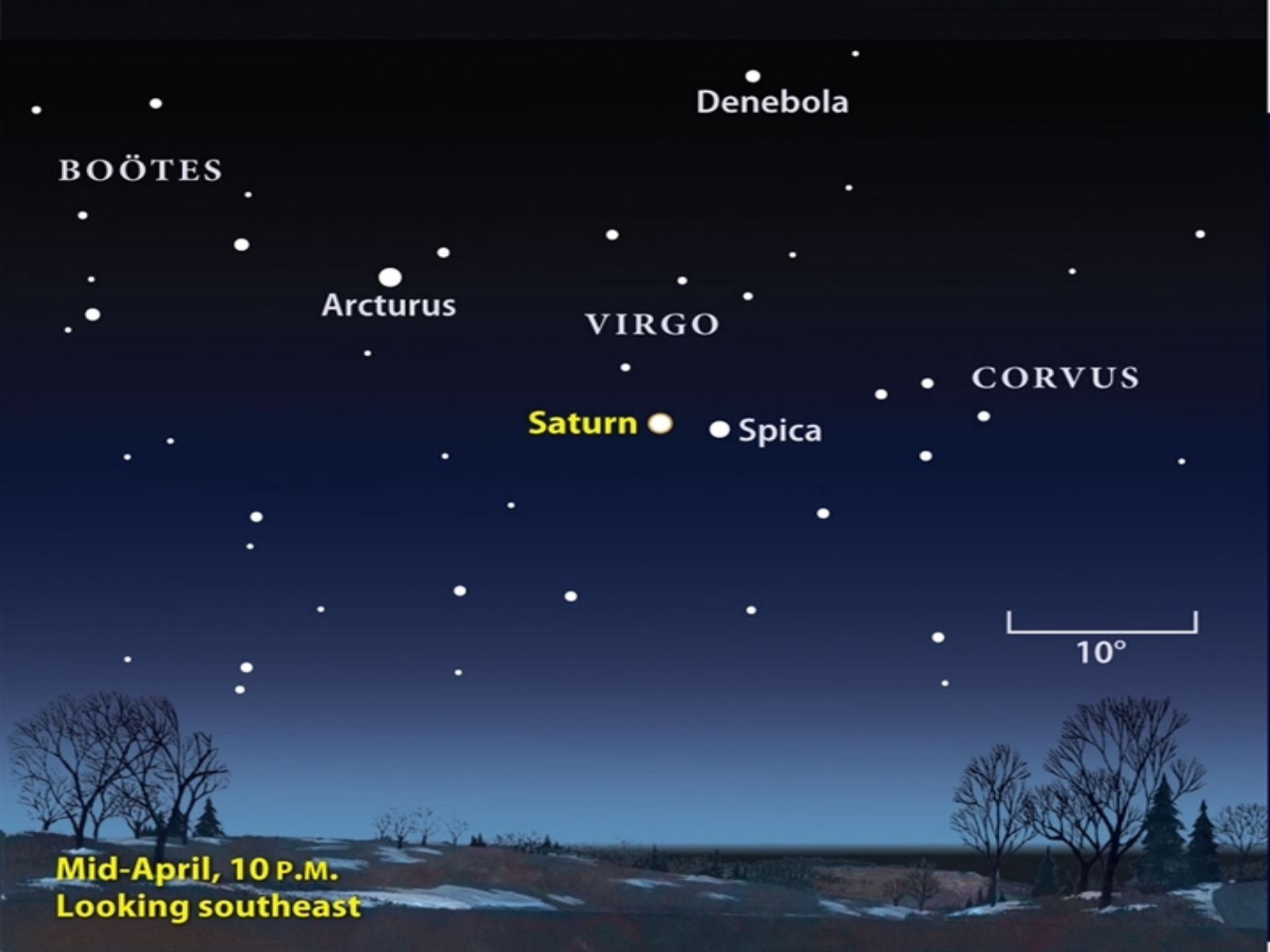
0.2°



N

E

Petavius



Denebola

BOÖTES

Arcturus

VIRGO

CORVUS

Saturn ● Spica

10°

Mid-April, 10 P.M.
Looking southeast

Saturn on April 15, 11:30 P.M. EDT

S



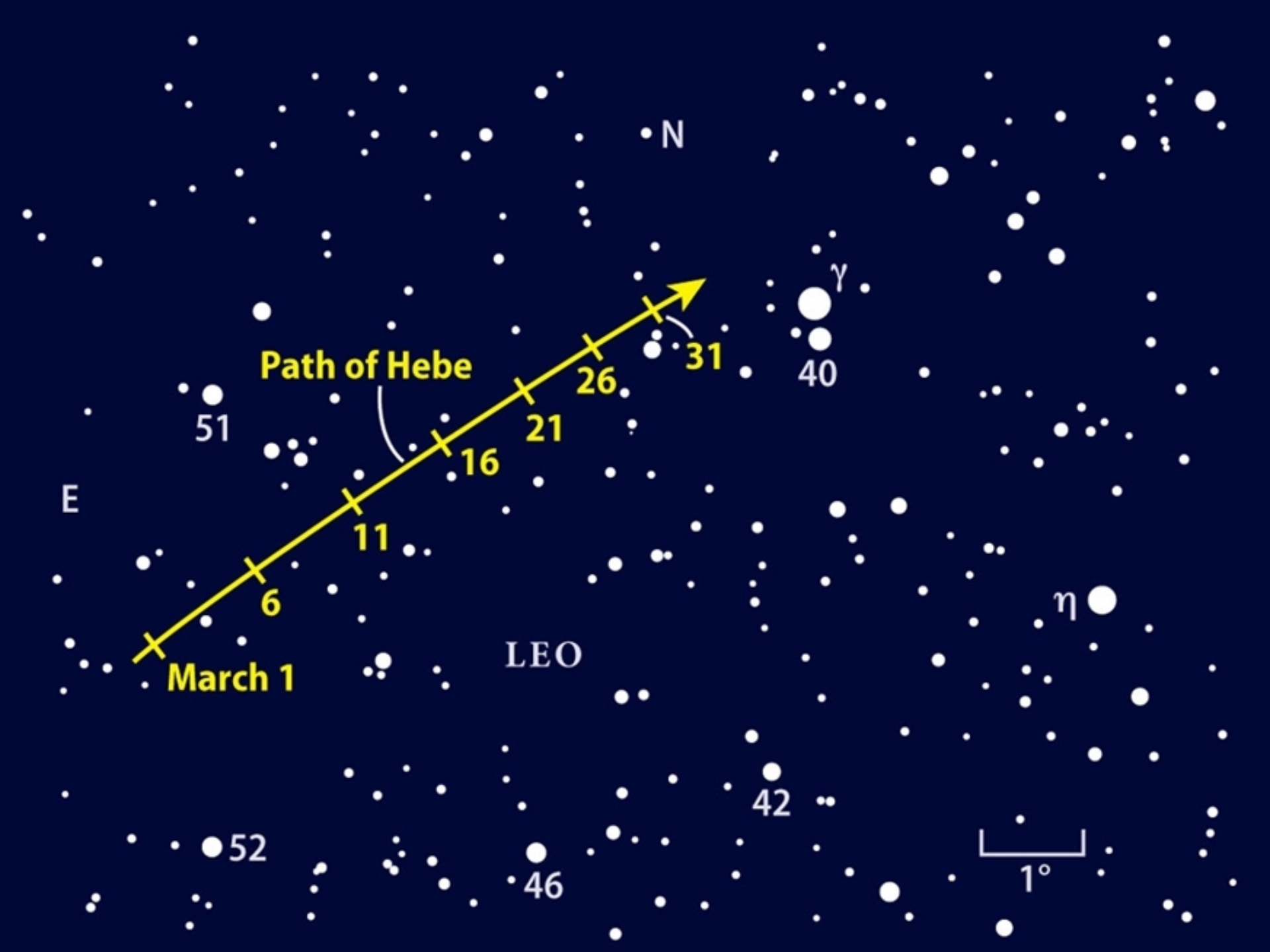
30"

Astro Events

Events visible during the next month.....

- Mar 2012 - Zodiacal light visible on the western horizon after the evening twilight fades
- Mar 2012 - Asteroid 6 Hebe glides through Leo
- April 2012 - Comet Garradd passes between Ursa Major and the North Pole (Polaris)





Path of Hebe

March 1

31

LEO

40

η

42

51

52

46

1°

E

N





Target List – Small Telescopes & Binoculars

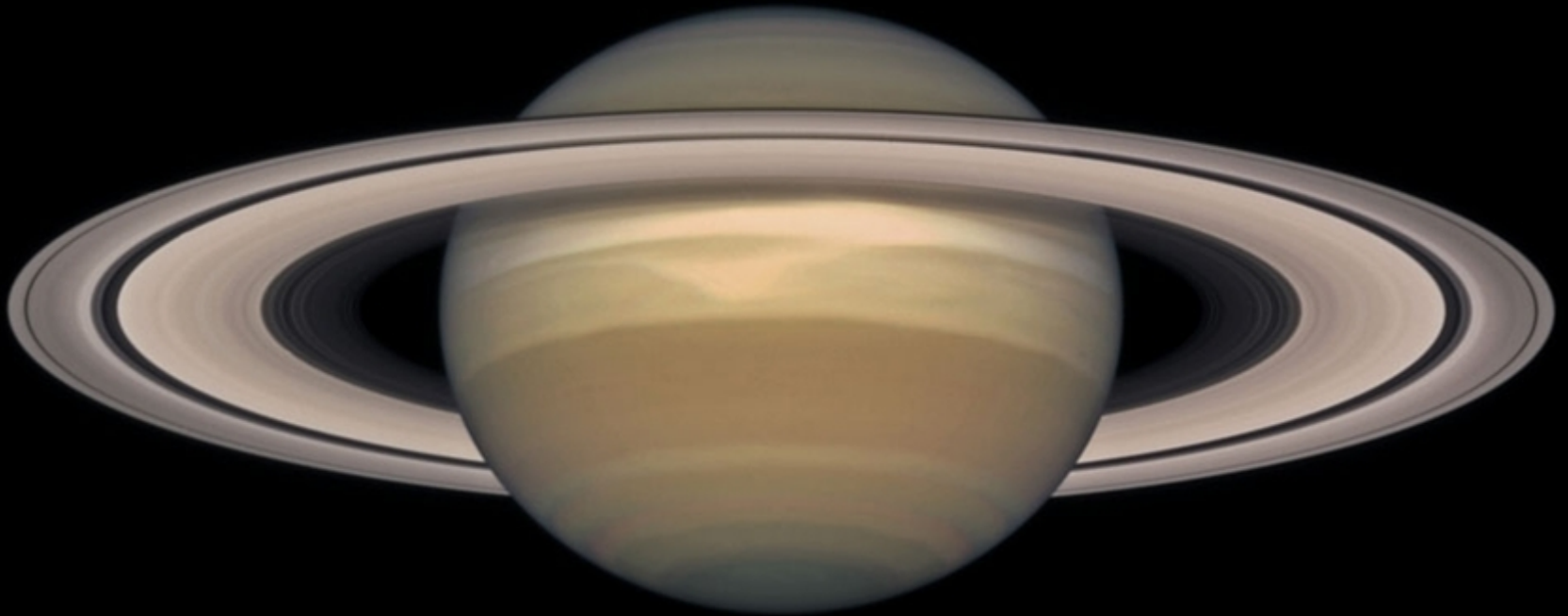
Object	Type	Mag	Size/Sep	Constellation
M42	Diffuse Nebula	4.0	66'	Orion
Bogardus	Double Star	2.6	3.5"	Auriga
Alnath	Double Star	1.6	33.4"	Taurus
Talitha	Double Star	3.1	3.9"	Ursa Major
M81	Galaxy	7.8	25' x 11'	Ursa Major
M82	Galaxy	9.2	10' x 5'	Ursa Major
NGC2903	Galaxy	8.9	28'	Gemini
M36	Open Cluster	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
M1	Supernova Rem	8.0	6' x 4'	Taurus
NGC2392	Planetary Neb	9.2	.78'	Gemini
X Cancri	Carbon Star	6.1	N/A	Cancer

Mars



Praesepe
(M44)

Saturn – The Ringed Planet



Saturn – Physical Characteristics

- The 6th planet from the sun with a mean orbital distance of 888,187 miles
- Mean diameter 74,897 miles
- Estimated rotational period 10 hrs, 34 minutes
- Saturn consists of a rocky core surrounded by a layer of liquid metallic hydrogen which is in turned covered with an atmosphere of molecular hydrogen and helium plus trace amounts of other gases.
- Saturn is the least dense of the planets with a specific gravity (0.7) less than water
- Saturn is visibly oblate (flattened) when observed through a small telescope due due to it's rapid rotation and fluid state.

Tips for Observing Saturn

- Your optics need to be collimated and cooled down
- Observe on nights with steady air and good seeing conditions while the planet is near the meridian
- Use a comfortable observing chair to avoid fatigue
- Use High Magnification to see details in the atmosphere and in the ring system
- Make regular sketches to train your eyes and brain to see fine detail
- Colored filters can enhance detail and improve contrast
- Observing Saturn can become a long term project as it takes 29 years for the planet to go through a complete cycle and ring tilt.

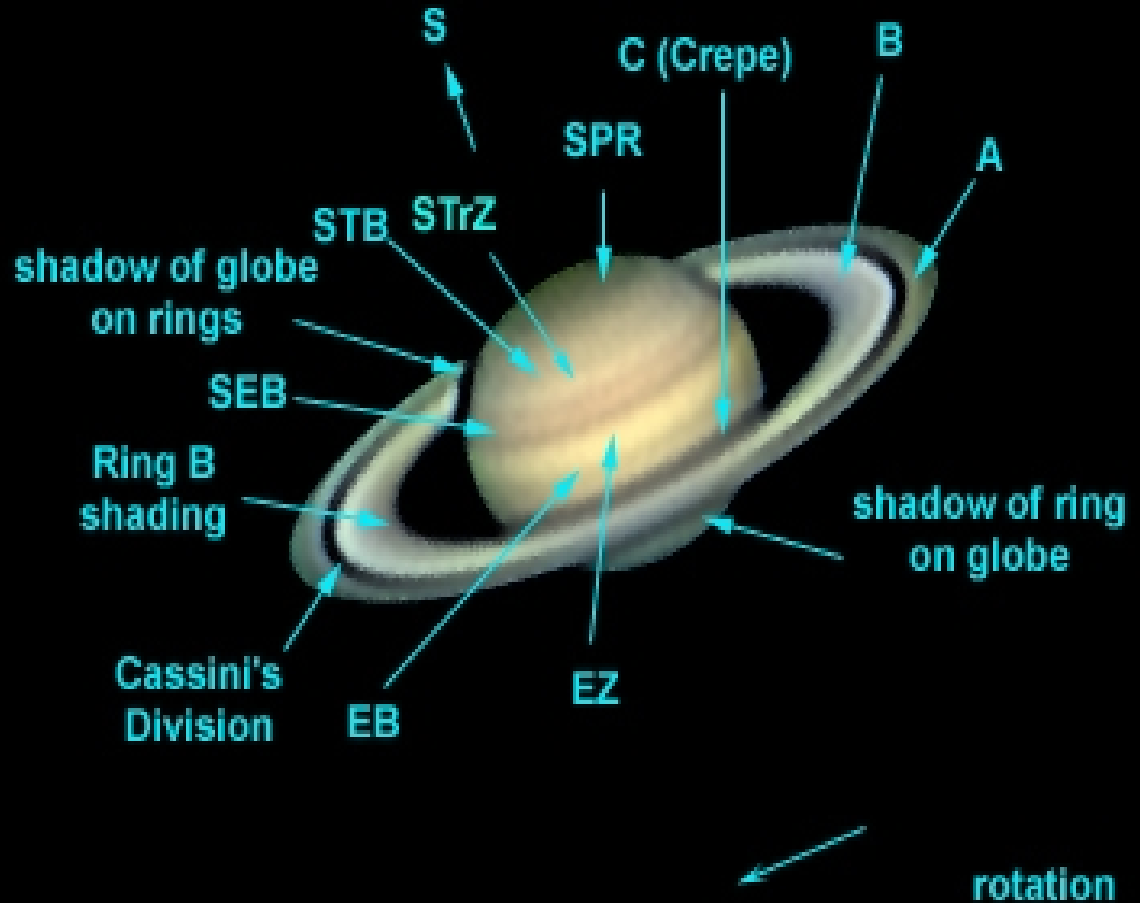
Saturn – Features to Observe

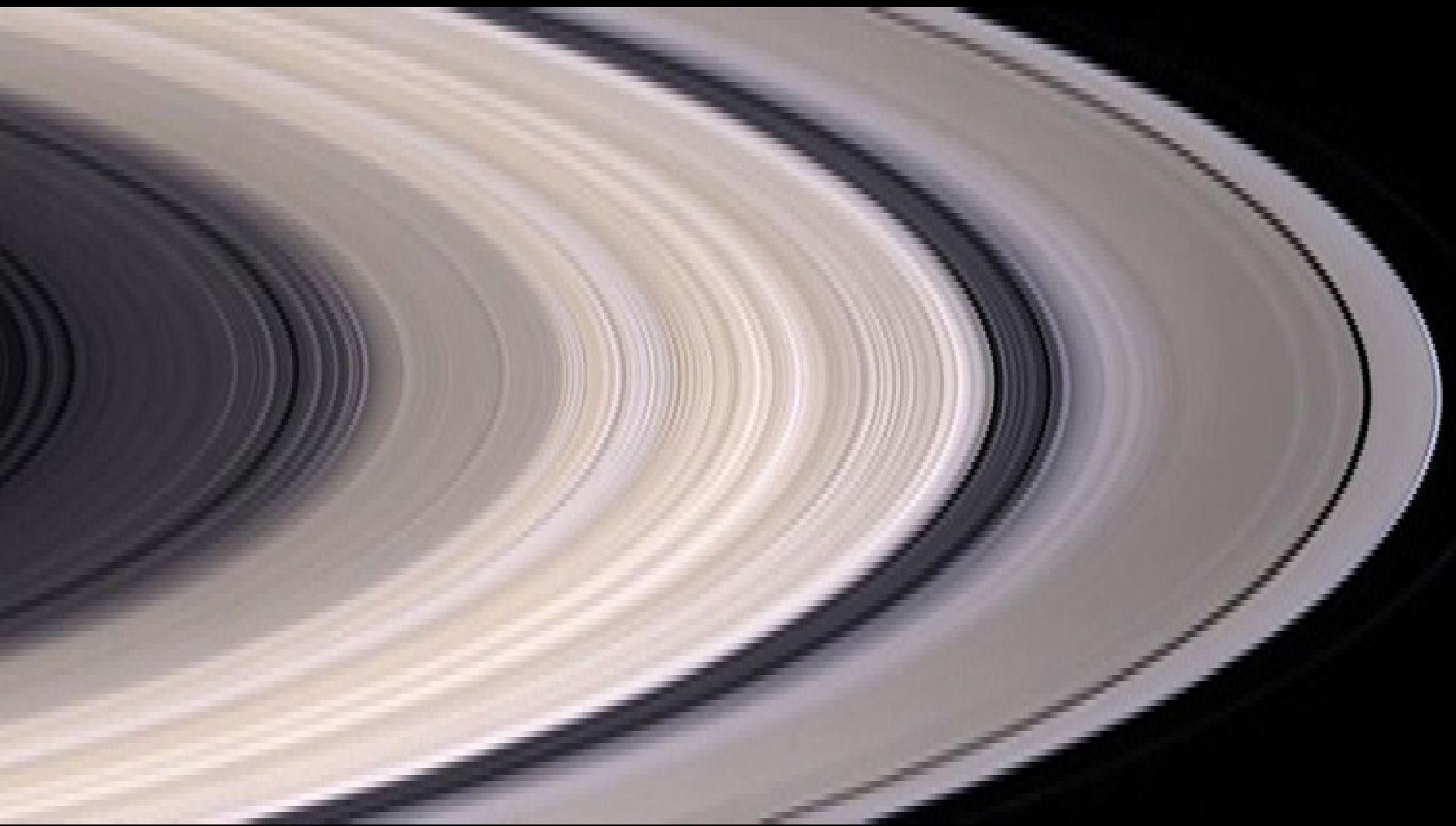
- Rings A, B, and C
- The Cassini division and Encke gap
- The shadow of Saturn on the ring system
- The shadow of the ring system on Saturn
- The belts and bands in the atmosphere
- Take note of the olive green color of the south polar region
- An occasional festoon or storm
- Saturn's attendant moons

Courtesy of
127mm Tele Vue NP127 f/5.2



view through refractor
with diagonal and
eyepiece pointed
straight up





Saturn's 9 Largest Moons

Des	Name	Mag	Discoverer
S1	Mimas	12.1	Herschel
S2	Enceladus	11.7	Herschel
S3	Tethys	10.3	Cassini
S4	Dione	10.4	Cassini
S5	Rhea	9.7	Cassini
S6	Titan	8.2	Huygens
S7	Hyperion	14.2	Bond
S8	Iapetus	10.2-11.9	Cassini
S9	Phoebe	16.3	Pickering

Using Colored Filters on Saturn

- Yellow/Green (#11) – Enhances dark surface detail
- Light Red (#23) – Enhances surface detail in large telescopes
- Magenta (#30) – Enhances the ring system
- Dark Blue (#38) – Increases contrast in large telescopes
- Violet (#47) – Improves ring contrast in large telescopes
- Light Green (#56) – Enhances the ring system
- Blue (#80A) – Enhances detail in belts and polar features
- Light Blue (#82A) – Brings out detail in belts and polar features while maintaining overall image brightness



Web Links

- Astronomy Magazine
 - www.astronomy.com
- Sky & Telescope Magazine
 - www.skyandtelescope.com
- The Old Farmer's Almanac
 - www.almanac.com
- Cloudy Nights Telescope Reviews
 - www.cloudynights.com
- Astronomical Observations & Research
 - www.astroscience.org
- The Nine Planets
 - www.nineplanets.org
- Astronomy Online
 - www.astronomyonline.org

Clear Skies!