

June 2011 Sky Events – the Planets

- ★ **Saturn** continues to be the only planet visible in the sky after dusk and until well after midnight.
- ★ All the **other planets** (6 of them) are still congregating in the pre-dawn sky as June begins. Mercury will leave this group during the month.
- ★ **Mercury** reaches **superior conjunction** (moving around the back side of the Sun) on June 12th, and can be found just after sunset very low in the W-NW during the last 10 days of the month.

June 2011 Sky Events – Mercury

- ★ Looking low to the **west-northwest at dusk**, find Mercury during the final days of the month.
- ★ **Binoculars** may be useful for locating Mercury in the twilight.

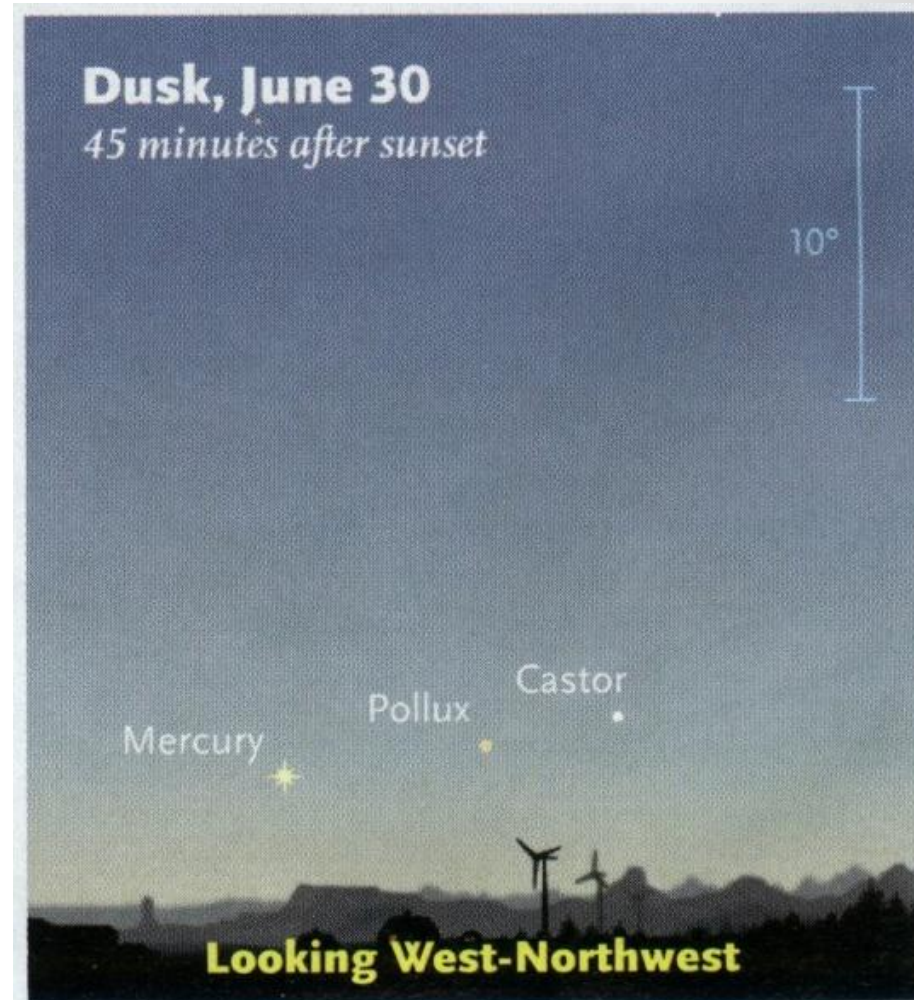
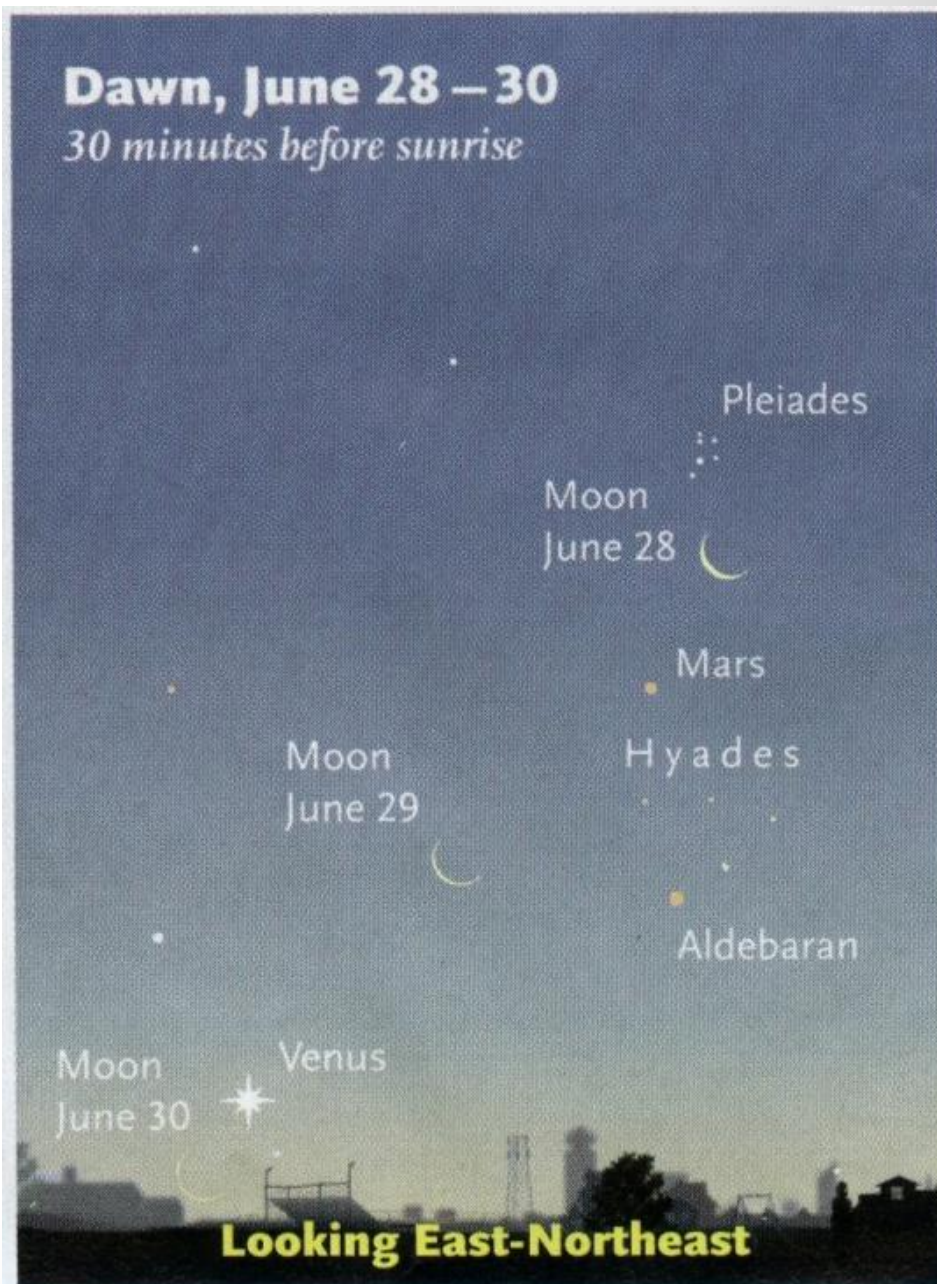


Image courtesy of
Sky & Telescope

June 2011 Sky Events – the Moon Passes 3 Planets

- ★ The **waning crescent Moon** joins 3 planets at dawn on the mornings of June 28 – 30.
- ★ You can see **Mars** and **Venus** in the image to the right; but where's the 3rd planet?
- ★ Bright **Jupiter** is 27° above and to the right of the Pleiades star cluster; it's off the top of this image!

Image courtesy of
Sky & Telescope

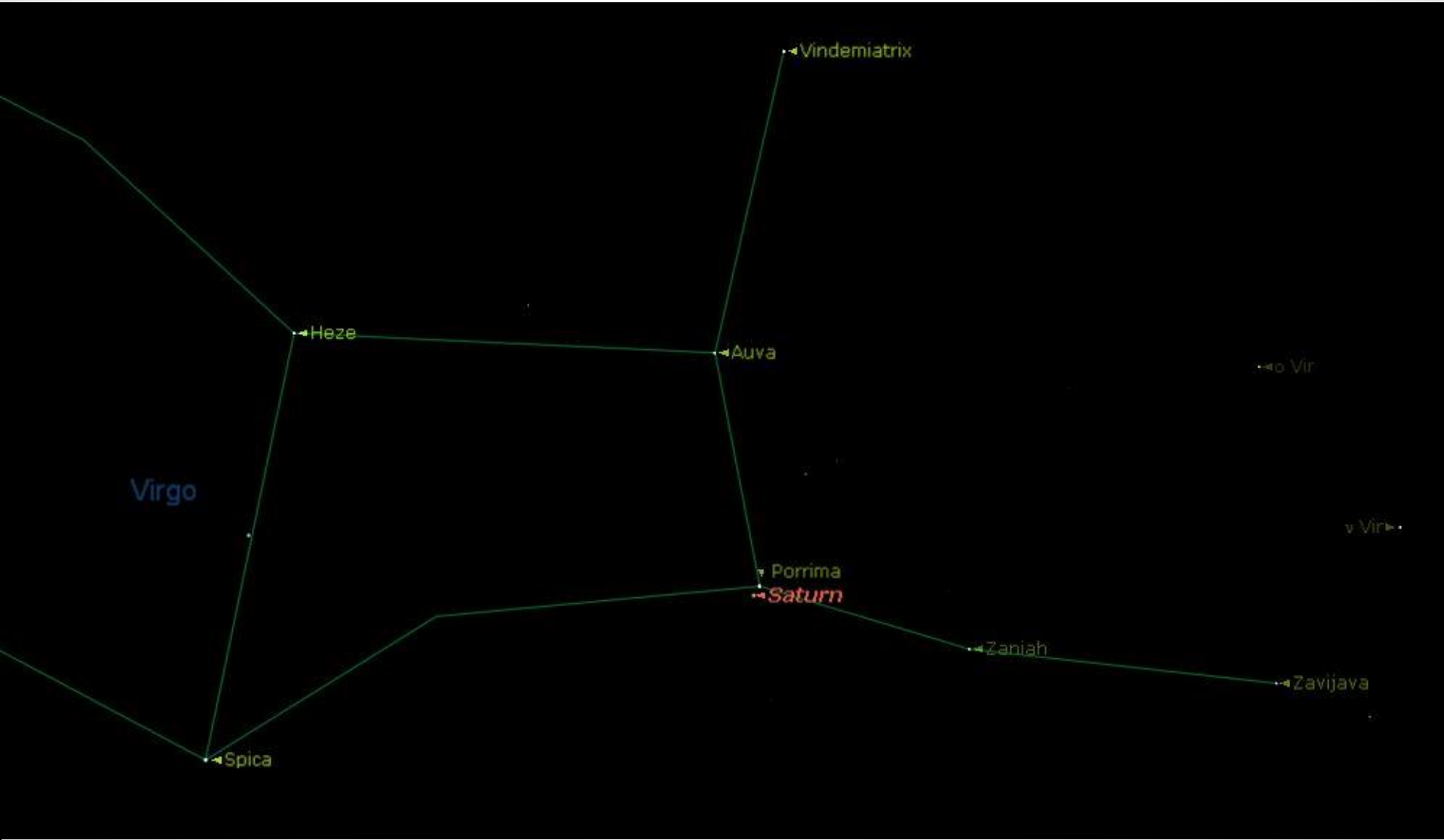


June 2011 Sky Events – Saturn

- ★ Saturn is high and in great observing position right after sunset this month.
- ★ It sets around 3:30 a.m. EDT on June 1st and around 1:30 a.m. EDT on June 30th.
- ★ **Saturn** (at magnitude 0.8) spends the entire month in the constellation Virgo, less than ½ degree from the dimmer 3rd magnitude binary star **Porrima** (gamma Virginis).
- ★ While Saturn is about 77 light minutes away, Porrima is 39 light years away!

June 2011 Sky Events

Saturn very near the star Porrima in Virgo



June 2011 Sky Events – the Planets

- ★ **Jupiter** remains high and bright in the eastern pre-dawn sky all month.
- ★ **Venus** remains brilliant but low in the eastern morning sky.
- ★ **Mars** is visible above Venus in the pre-dawn sky this month.
- ★ Faint **Uranus & Neptune** may be found with a telescope in the pre-dawn sky **in the constellations Pisces & Aquarius respectively.**

June 2011 Sky Events

- ★ The northern hemisphere's **summer solstice** occurs on Tuesday, **June 21st**, at 1:16 p.m. EDT.
- ★ On this date the Sun reaches its farthest point north of the celestial equator.
- ★ So days are longest and nights shortest (other way around for the southern hemisphere where the winter solstice occurs on this date).

June 2011 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Saturn	9.3 AU _s	Virgo	17.8 but 41 with rings	0.8	Very near the star Porrima
Jupiter	5.5 AU _s	Pisces & Aries	36.0	-2.1	High in the eastern morning sky
Mercury	1.2 AU _s	Taurus & Gemini	5.4	-1.5	Superior conjunction on June 12th

June 2011 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Venus	1.6 AU _s	Aries & Taurus	10.3	-3.8	Brilliant “morning star” low in the East
Mars	2.2 AU _s	Aries & Taurus	4.1	1.4	In the eastern morning sky
Uranus	20 AU _s	Pisces	3.5	5.9	Rises about 2:00 a.m. EDT

June 2011 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Neptune	30 AU _s	Aquarius	2.3	7.9	Rises about 12:30 a.m. EDT

The Moon this month – June 2011

- ☾★ New Moon – 1st at 5:03 p.m.
- ☾★ First Quarter – 8th at 10:11 p.m.
- ☾★ Full Moon – 15th at 4:14 p.m.
- ☾★ Last Quarter – 23rd at 7:48 a.m.

Unless otherwise indicated, all times are EDT

Friday evening, June 3rd

Monthly club stargaze at Mt. Pisgah

- ★ **Sunset:** 8:41 p.m. EDT
- ★ **Saturn** will be well placed for viewing high in the south in the constellation Virgo right after sunset.
- ★ **Saturn's rings** will be tilted at about a 7 degree angle, and easily visible.
- ★ How many of **Saturn's moons** can you see in a telescope tonight?
- ★ Saturn will be only 17 arc minutes from the 3.4 magnitude **tight binary star Porrima** – Gamma Virginis. Can you split this binary – 39 light years away and with a separation under 2"?

Friday evening, June 3rd

Monthly club stargaze at Mt. Pisgah

- ★ The [Heavens-Above website](#) is predicting both the **Hubble Space Telescope** (HST) and an **Iridium Flare** (IF) over our area & Mt. Pisgah this night.
- ★ The **HST** will be magnitude 2.0 and begin to be appear around 10:32 p.m. in the WSW, and be visible for about 3 minutes.
- ★ The **IF** will be magnitude -6 and occur about 11:06:48 p.m. at the following coordinates: Alt. 10°; Az. 266°. That would put it below the star Regulus in Leo and 10° above the west horizon.
- ★ Continue to check the [Heavens-Above website](#) for the latest updates on the timings.

June 2011 Highlight:

4 Bright Spring Globular Star Clusters

- ★ Four great globular star clusters (all Messier objects) are visible in the June evening skies.
- ★ **M3** in Canes Venatici, mag. 5.9; **M5** in Serpens Caput, mag. 5.7; and **M13 & M92** in Hercules, mag. 5.7 & 6.5 respectively.
- ★ All 4 are bright globulars that show up grandly under clear, dark skies, even in small telescopes .

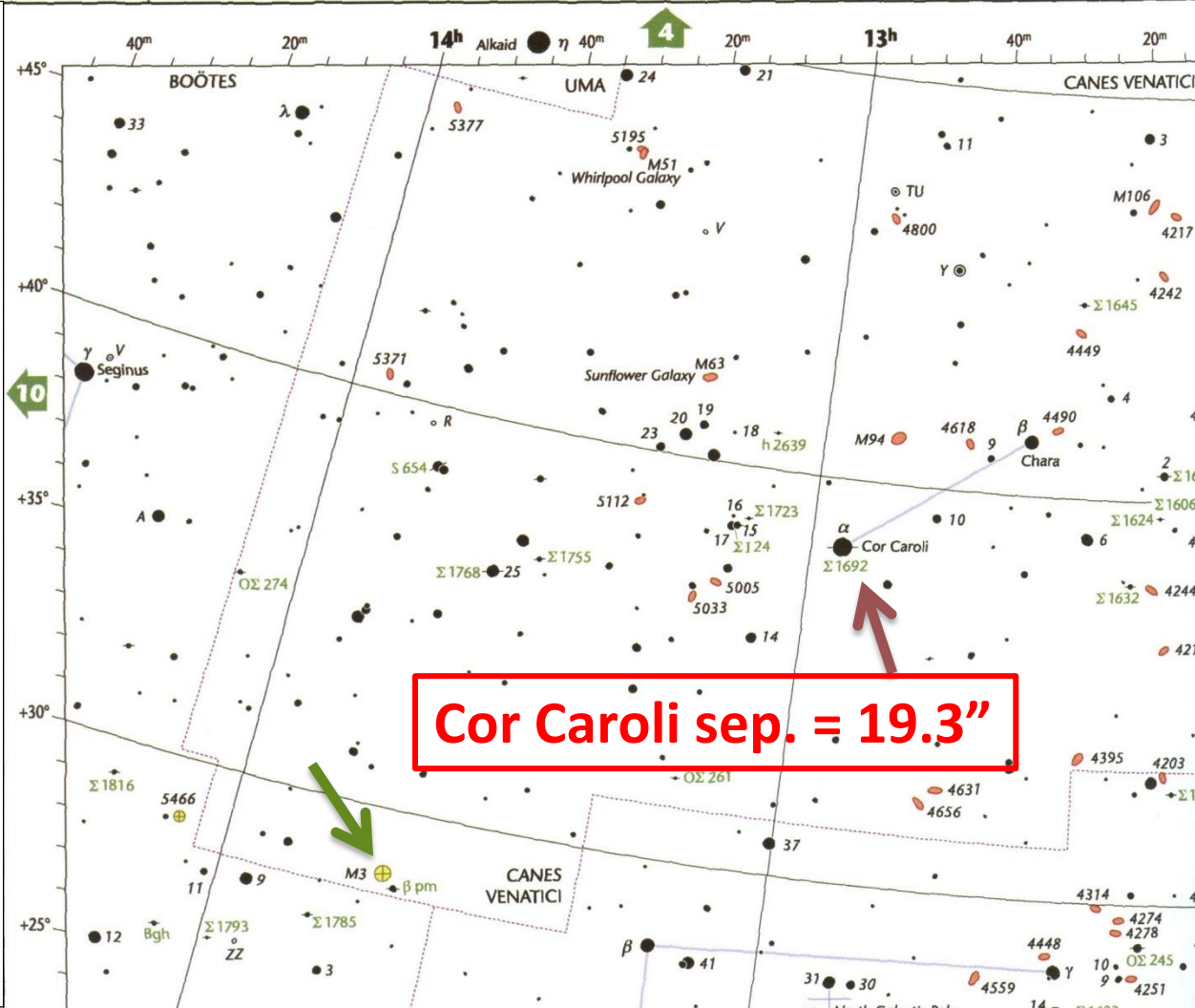
June 2011 Highlight: Spring Globular Star Cluster M3

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Magnitudes

brighter than 0.0 0.0-0.5 0.5-1.0 1.0-1.5 1.5-2.0 2.0-2.5 2.5-3.0 3.0-3.5 3.5-4.0 4.0-4.5 4.5-5.0 5.0-5.5 5.5-6.0 6.0-6.5 6.5-7.0 7.0-7.5

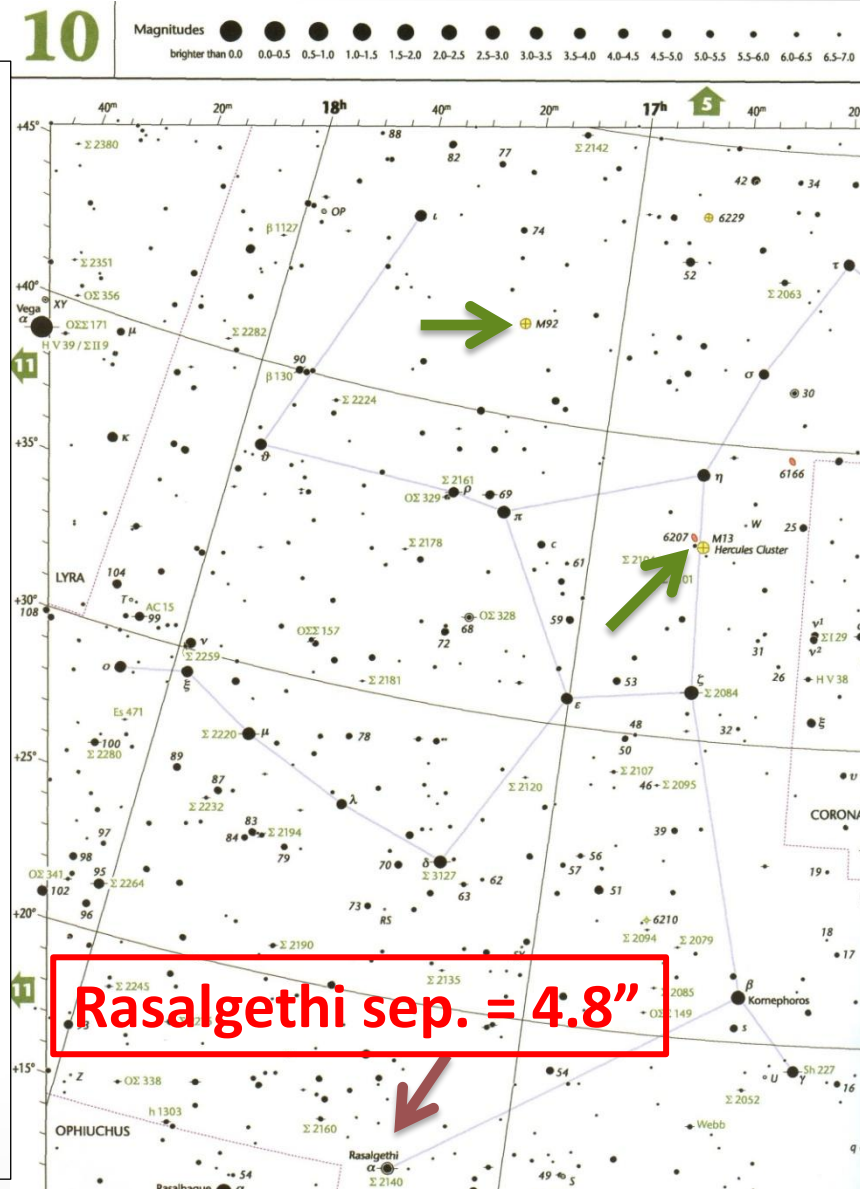
After observing
M3 (34,000 light
years away), point
your telescope at
star **alpha Canum
Venaticorum** (Cor
Caroli) – a
beautiful **binary**
some 110 light
years away.



June 2011 Highlight: Spring Globular Star Clusters M13 & M92

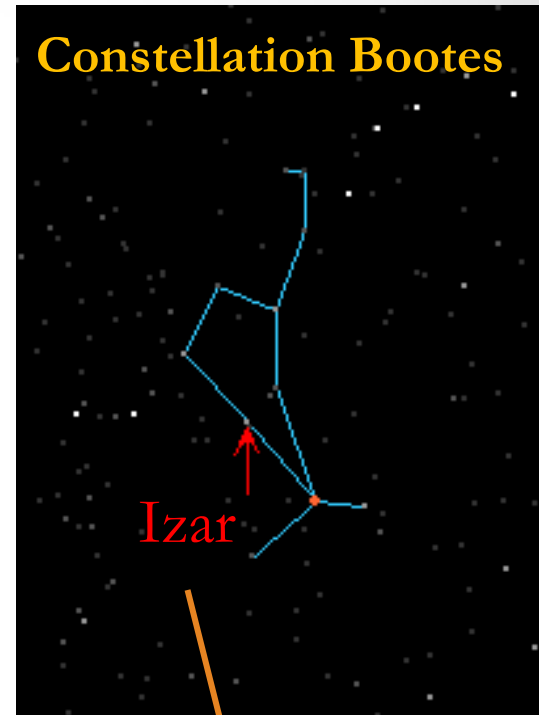
After observing **M13 & M92** (26,000 & 27,000 light years away), point your telescope at star **alpha Herculis** (Rasalgethi) – a beautiful **binary** some 400 light years away.

Then take a peek at the 11th magnitude **galaxy (NGC 6207)** located only 28 arc minutes N-NE of M13 and some 30 million light years away.



June 2011 Highlight: Beautiful Binary Star Izar

- ★ The 2.3 magnitude star **epsilon Bootis** is a “most beautiful” binary star.
- ★ It’s alternative Latin name “**Pulcherimma**” means just that, ‘most beautiful’, referring to this colorful binary pair as viewed through the eyepiece.
- ★ Most of us know this star by its Arabic name **Izar** meaning “girdle” or “loincloth”.
- ★ This is a tight binary with a separation of only 2.9 arc seconds, requiring high magnification and a night of steady, good “seeing” to split this amber and blue pair.



June 2011 Highlight: Binary Star Challenge: Porrima

★ Saturn spends the entire month less than $\frac{1}{2}$ degree from the dimmer 3rd magnitude binary star Porrima (gamma Virginis) in the constellation Virgo.

★ Porrima, named after a Roman goddess, consists of a pair of identical white stars orbiting each other once every 169 years.

★ This is a very tight binary with a separation of only 1.8 arc seconds this year, requiring high magnification and a night of steady, good “seeing” to split.

★ The pair is getting easier to split as they move apart from periastron (2005). →



Porrima is
39 light years
away

Periastron is the point at which two stars, orbiting each other in a binary star system, are closest together.

End