



**A presentation of what's up, what's rising and what's setting
In short...**

“All of the Above”

HeeHeeHee...Get it?



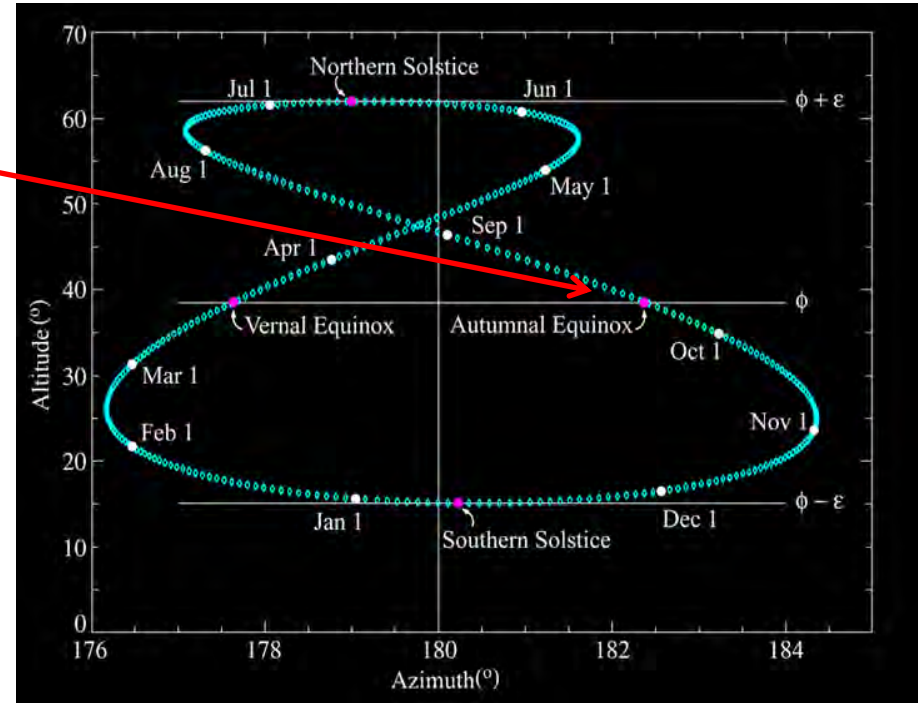
The Equinox!

September 23, 2015: 4:21 EST

Earlier sunsets, longer nights, clearer skies, more sleep!



You are Here



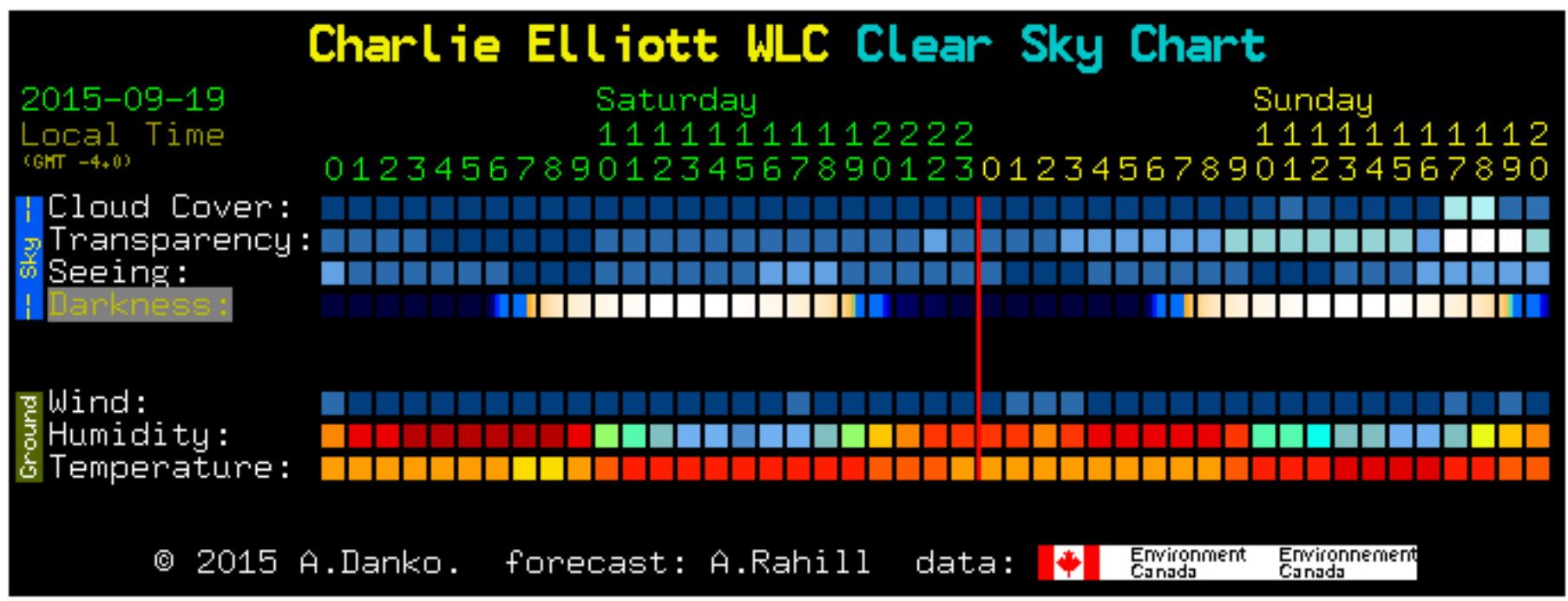


This Month's Sky: September 2015

- **Conditions over the Jon Wood Field**
- **The Planets**
- **The Sun**
- **The Moon (International Observe the Moon Day)**
- **Celestial Events**
- **The Constellations**
- **Target List**
- **Challenges**

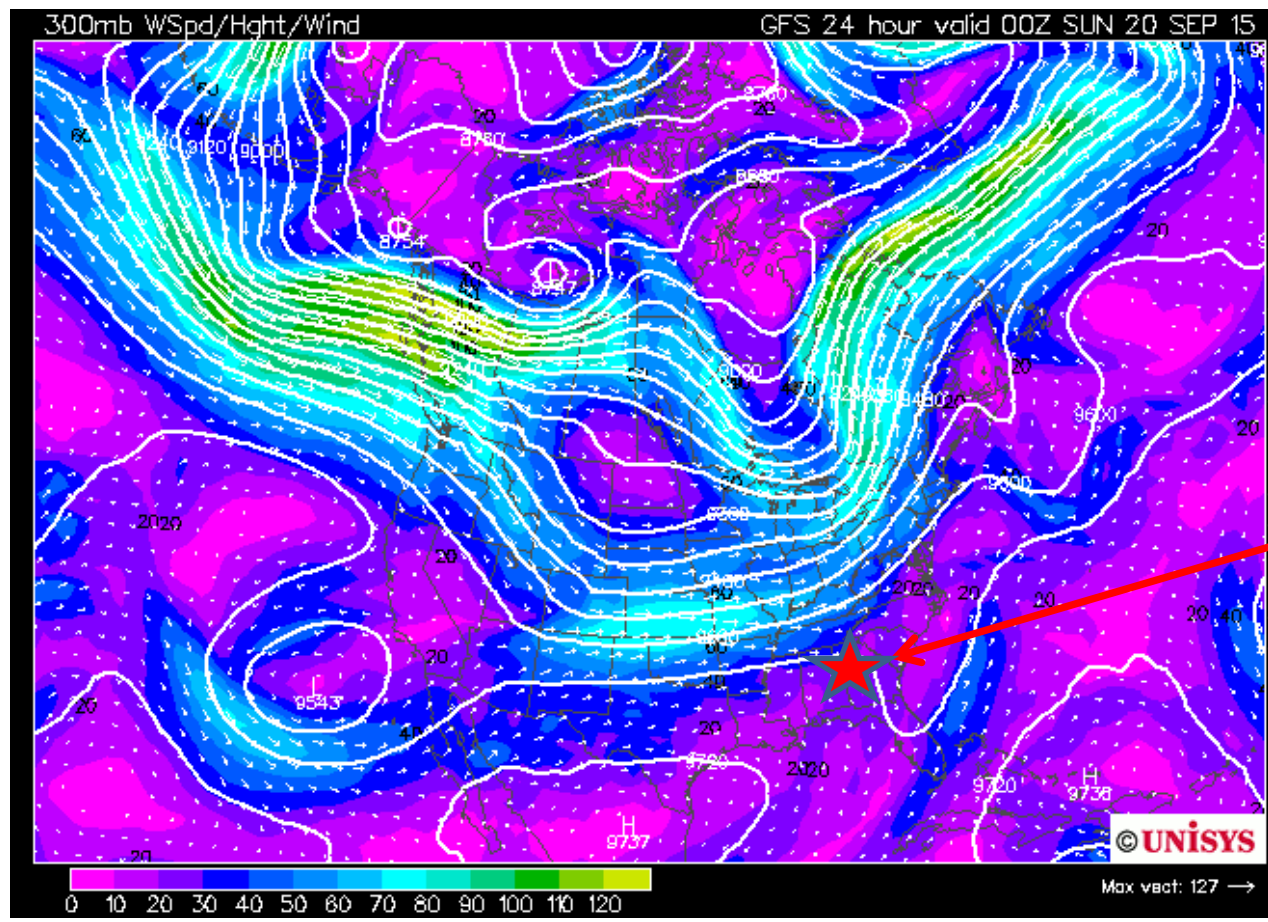


Current Conditions at Jon Wood Field



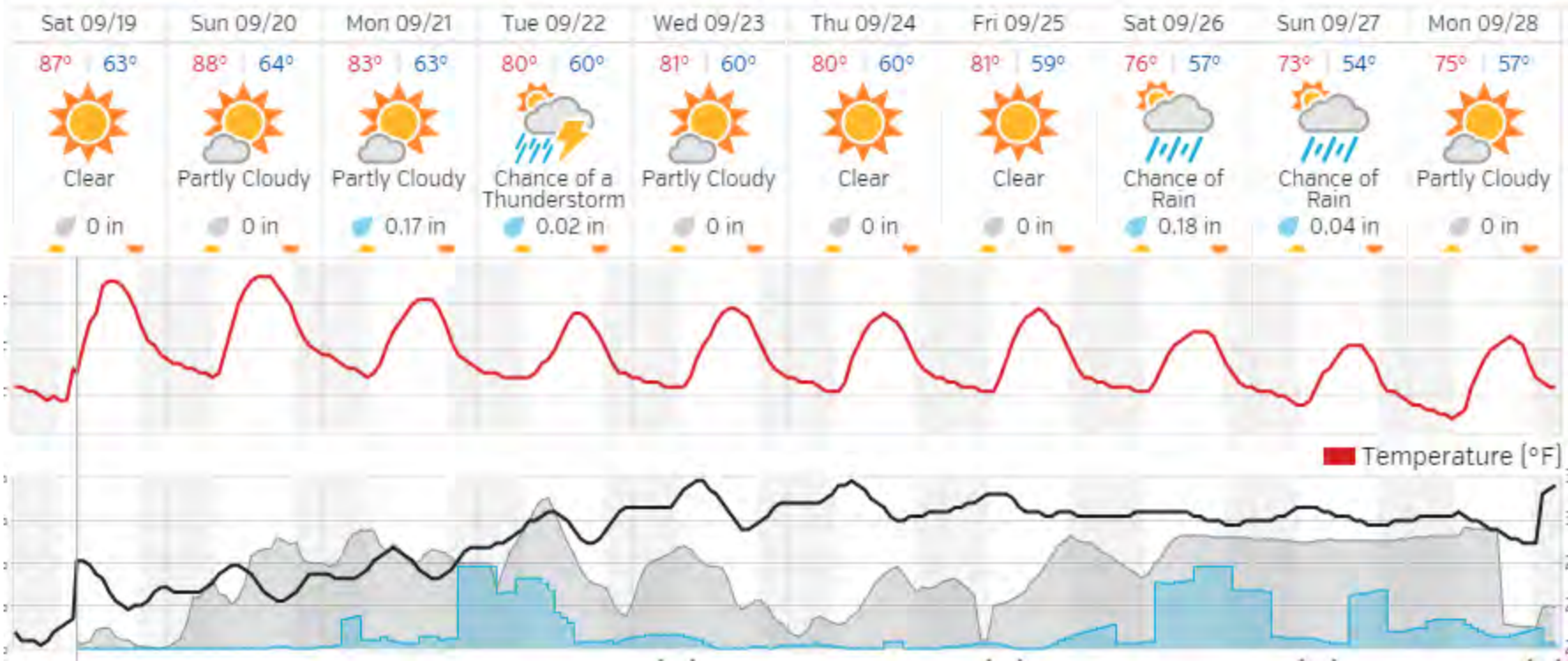


Current Conditions at Jon Wood Field





Current Conditions at Jon Wood Field





Current Conditions at Jon Wood Field





The Planets: September 19, 2015

Body	Constellation	Rise	Set	When to View
Sun	Virgo	7:23 AM	7:39 PM	Really?
Moon	Ophiuchus	12:55 PM	11:41 PM	Early Evening
Mercury	Virgo	8:59 AM	8:09 PM	Too Bad
Venus	Cancer	4:25 AM	5:29 PM	Dawn
Mars	Leo	5:00 AM	6:20 PM	Dawn
Jupiter	Leo	5:58 AM	6:52 PM	Dawn
Saturn	Libra	12:25 PM	10:46 PM	Early Evening
Uranus	Pisces	8:33 PM	9:18 AM	All night
Neptune	Aquarius	6:44 PM	6:01 AM	All night
Pluto*	Sagittarius	3:35 PM	1:44 AM	Early Evening

* I know Pluto isn't a Planet but it stays in my list anyway.

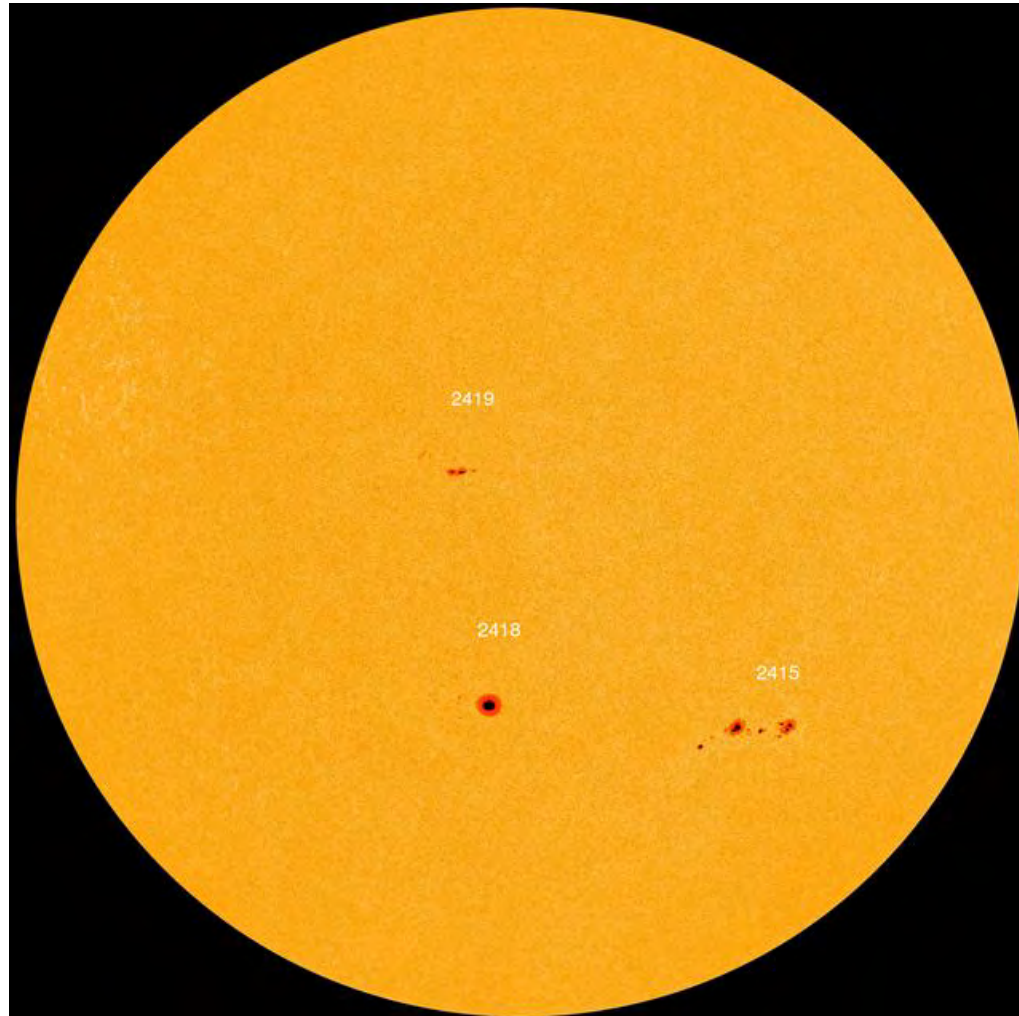


The Solar Update



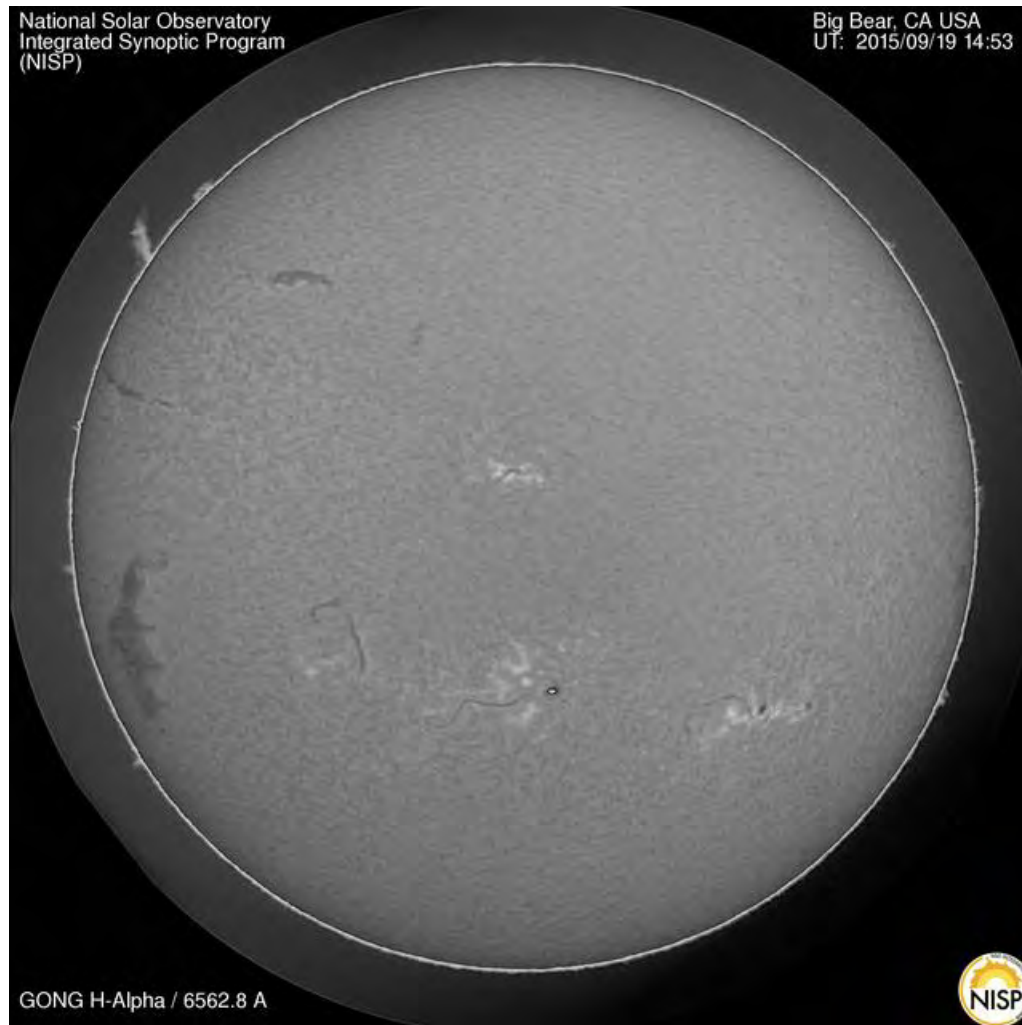


The Sun: September 19, 2015



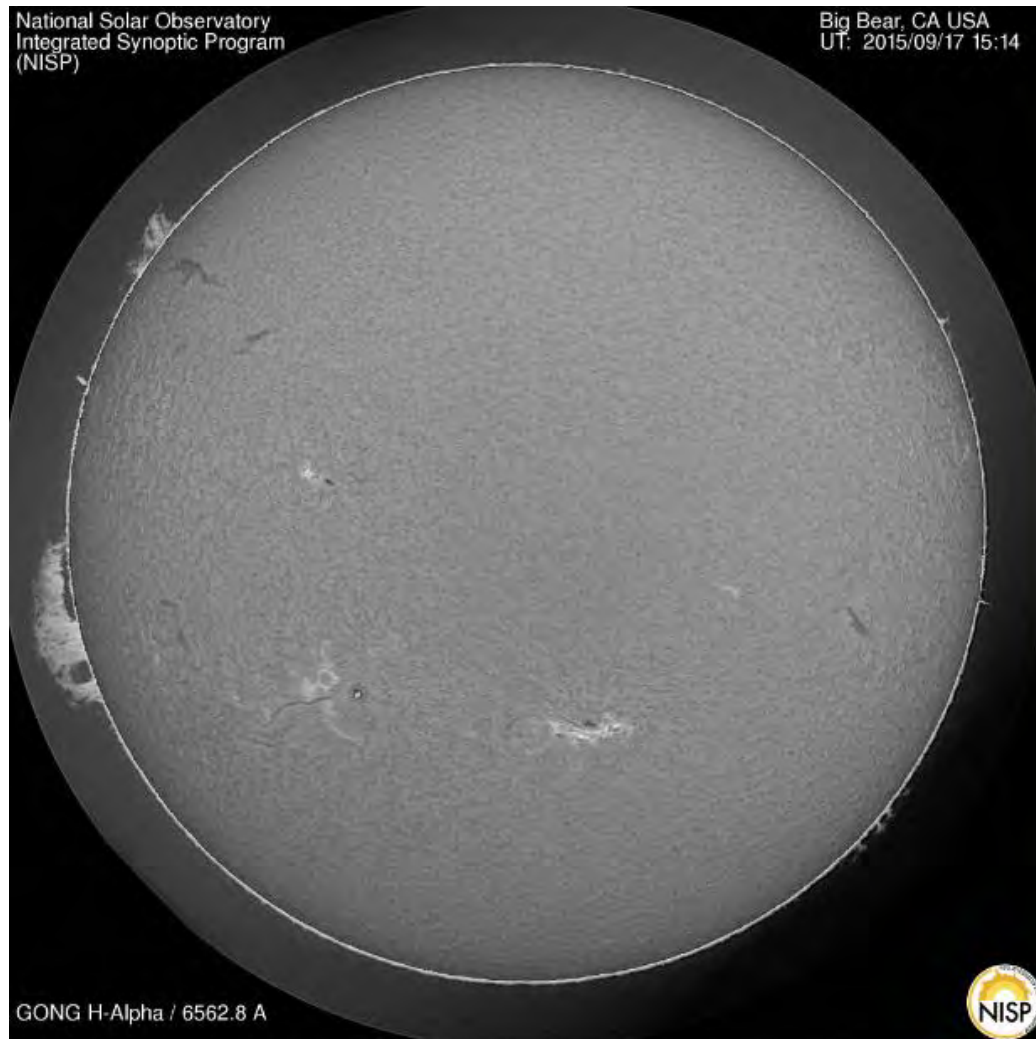


The Sun-H α : September 19, 2015





The Sun-H α : September 17, 2015



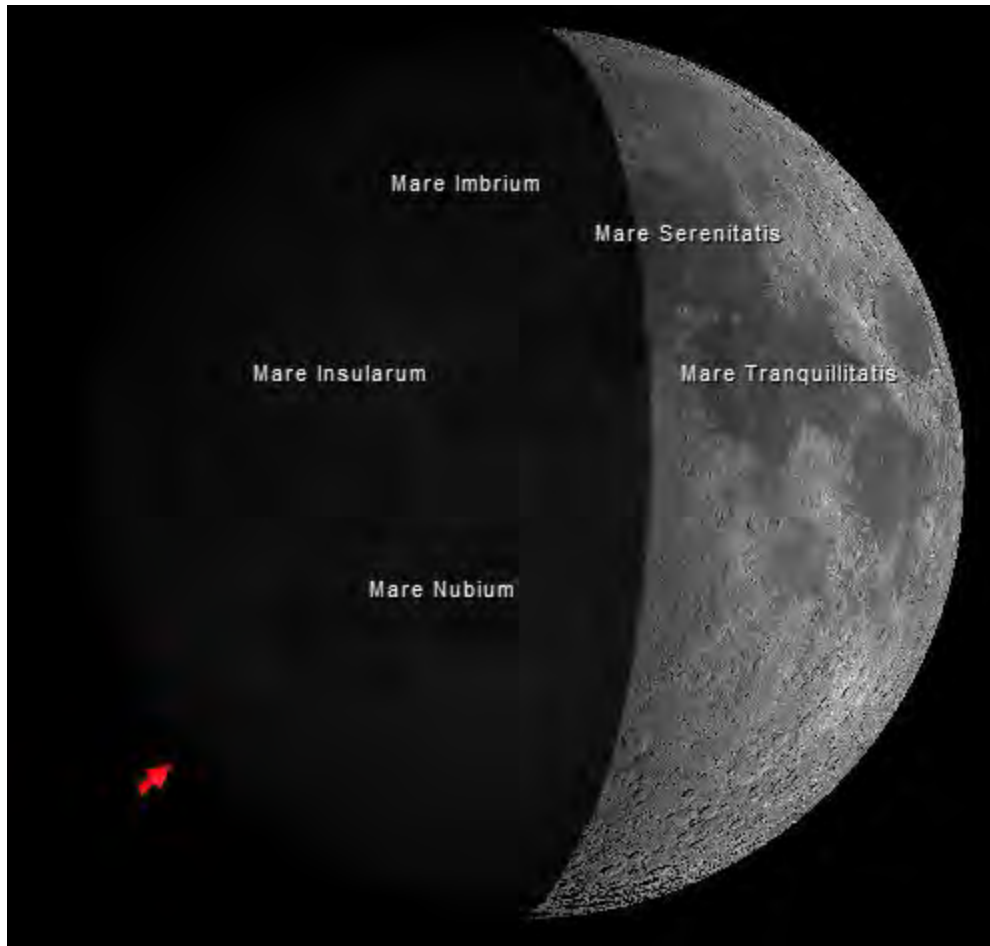


The Lunar Update





The Moon: September 19, 2015



Lunation: 6.6 Days

Illumination: 36%

Distance:

242,795 mi

390,747 km

1.31 Light Second

Apparent Diameter: 30.6'

Location: Ophiuchus



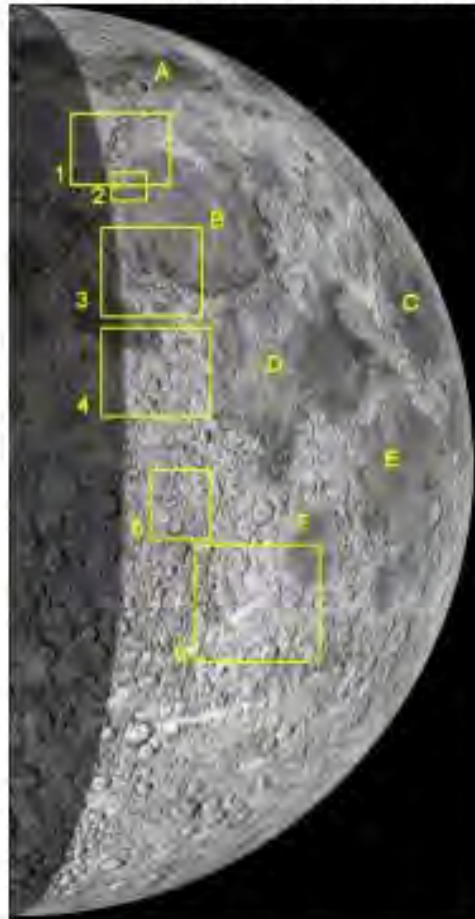
The Moon: September 19, 2015





The Moon: September 19, 2015

International Observe the Moon Night, Sept 19 2015



Lunar Maria (Seas)

You can see a number of maria tonight. These are large, flat plains of solidified basaltic lava. They can be viewed in binoculars or even with the unaided eye.

- A. Mare Frigoris
- B. Mare Serenitatis
- C. Mare Crisium
- D. Mare Tranquillitatis
- E. Mare Fecunditatis
- F. Mare Nectaris

Selected Telescopic Objects

Some of the more interesting lunar landforms that have favorable lighting for viewing tonight are identified here. Details for each are on the reverse side of this map.

- 1. Caucasus Mountains
- 2. Valentinus Dome
- 3. Haemus Mountains
- 4. Hyginus and Ariadeus Rilles
- 5. Descartes Highlands (Apollo 16)
- 6. Alta Scarp

This map is for the northern hemisphere with north up. Photos on the reverse all have north up.

The above map depicts the Moon as it will appear at approximately 10:30 PM EDT and 7:30 PM PDT on International Observe the Moon Night, September 19, 2015. Many of the most detailed views will occur along the terminator (the line between the day and night side) of the Moon.

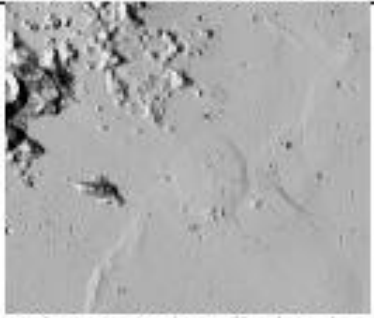


The Moon: September 19, 2015

InOMN 2015 – Selected Objects for Telescopic Viewing



1. Caucasus Mountains: Mountain range on the northwest edge of Mare Serenitatis. 520 km long and 6 km high. *



2. Valentine Dome: A low-profile volcanic dome just east of south tip of Caucasus Mountains. Visible only when very near the terminator, like tonight! 39 km across and about 350 m tall. **



3. Haemus Mountains: Mountain range at the southwestern edge of the Mare Serenitatis. 400 km long and 2.4 km high. *



4. Hyginus and Ariadeus Rilles: Formed by magma rising up through and widening cracks in the lunar crust. Hyginus (angled) to the west and Ariadeus to the east. *



5. Descartes Highlands: Apollo 16 landed north of the crater Descartes. *



6. Altai Scarp: An arcing, 3.5-4 km high cliff (highlighted by white arrows in the image), 480 km long that is part of the outer ring of mountains around the impact basin that contains Mare Nectaris. *

*Lunar Reconnaissance Orbiter LROC Wide Angle Camera image **Lunar Reconnaissance Orbiter Laser Altimeter map - <http://lro.gsfc.nasa.gov/>

All 6 images on this page retrieved using NASA's Lunar Mapping and Modeling Portal - <http://lmp.nasa.gov>

International Observe the Moon Night - <http://observethemoonnight.org/>



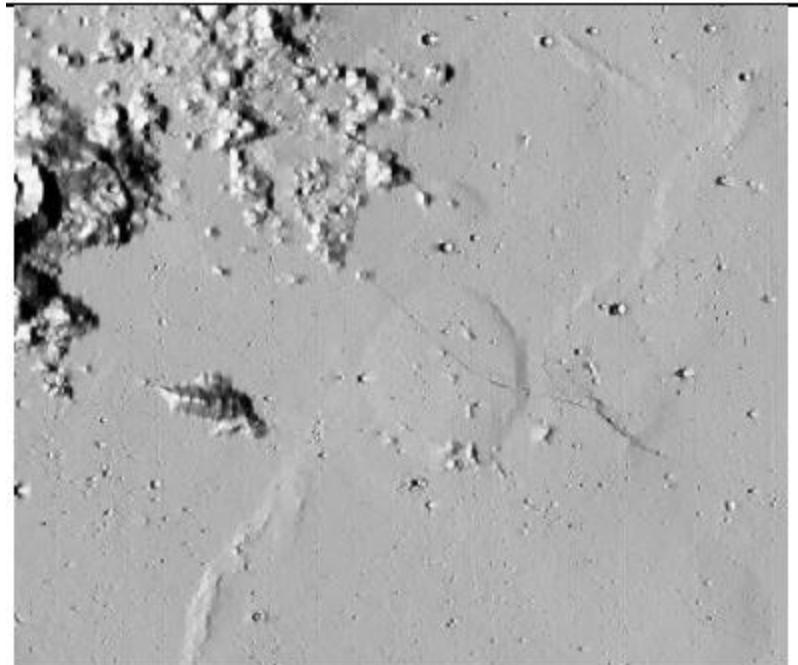
The Moon: September 19, 2015



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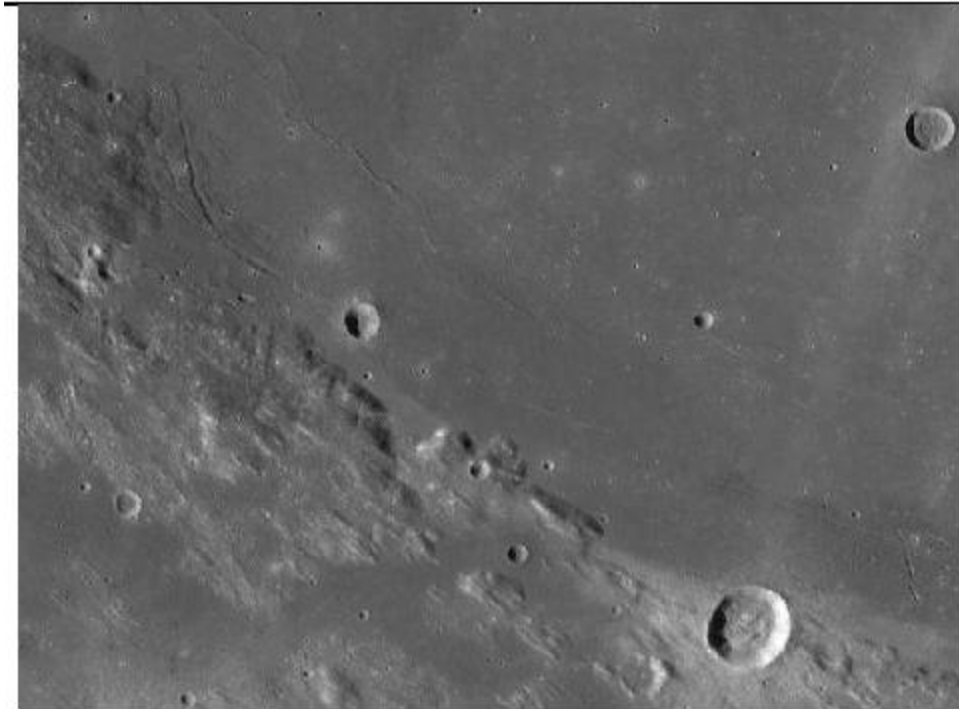
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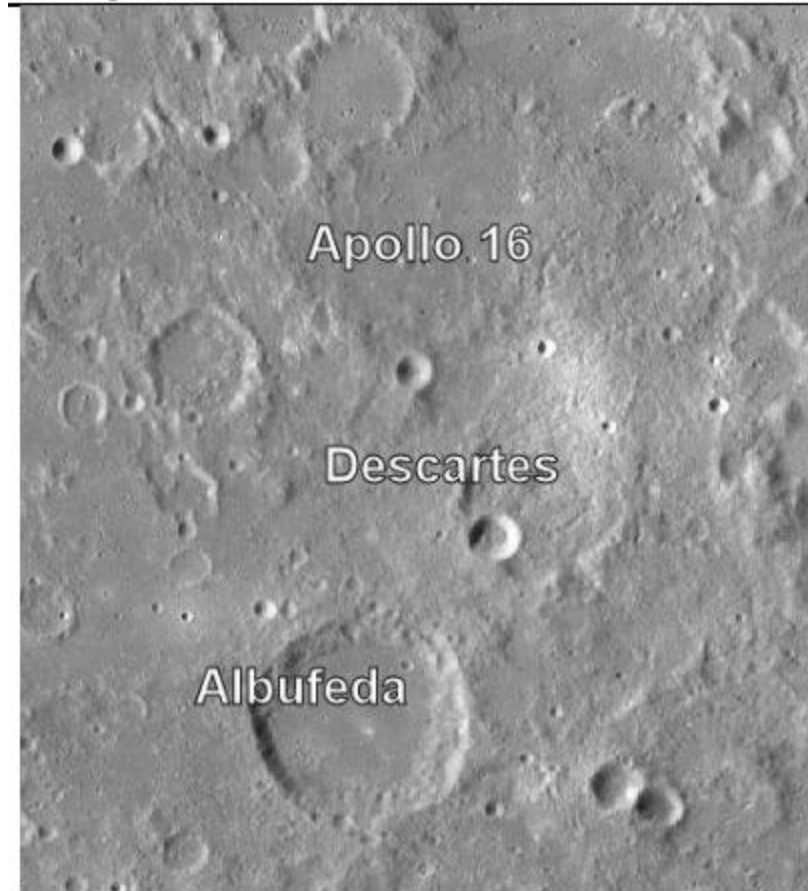
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4. Hyginus and Ariadeus Rilles: Formed by magma rising up through and widening cracks in the lunar crust. Hyginus (angled) to the west and Ariadeus to the east. *



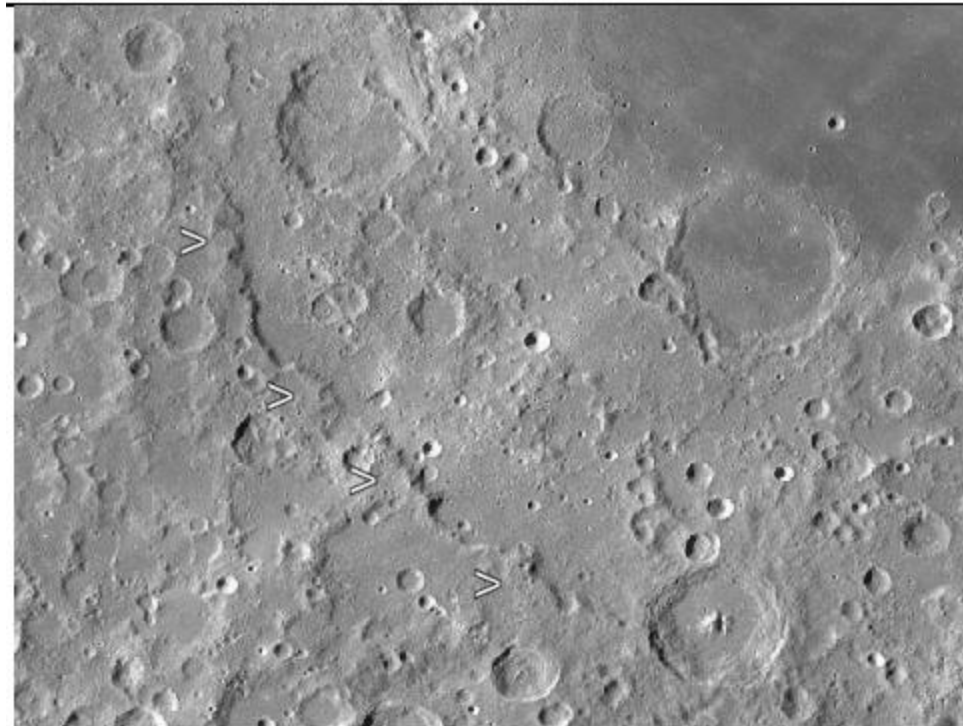
The Moon: September 19, 2015



5. Descartes Highlands: Apollo 16 landed north of the crater Descartes. *



The Moon: September 19, 2015



6. Altai Scarp: An arcing, 3.5-4 km high cliff (highlighted by white arrows in the image), 480 km long that is part of the outer ring of mountains around the impact basin that contains Mare Nectaris. *



The Moon: September 27, 2015



Total Lunar Eclipse. April 14-15, 2014 Alberto Levy



Lunar Events

- September 19th: International Observe the Moon Night
- September 21st: First Quarter
- September 26th: Moon at perigee (closest to Earth)
- September 27th: Full Moon, **TOTAL LUNAR ECLIPSE**
- October 2nd: Conjunction with Aldebaran (0.5 degree)
- October 8th: Conjunction with Venus (0.7 degrees)
- October 12th: New Moon



Constellation Action

Last Chance for 2015

Draco	Ophiuchus
Canes Venatici	Libra
Bootes	Scorpius
Serpens	

High in the Sky (Chiropractor time for binocular users):

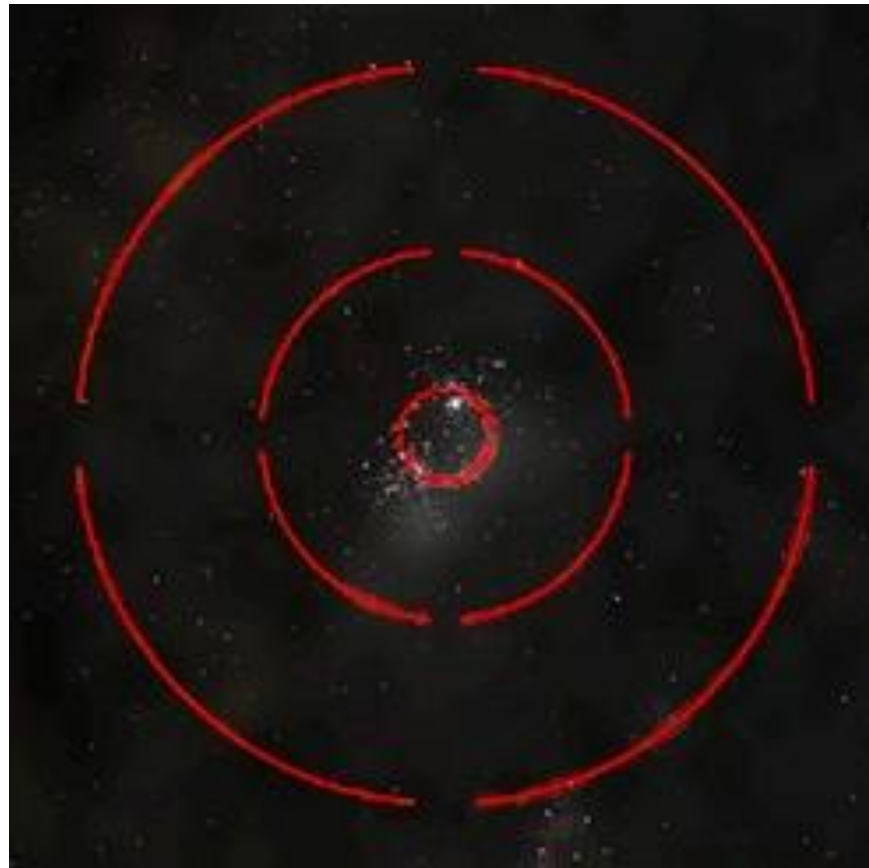
Cygnus	Delphinus
Lyra	Aquila
Sagitta	Scutum
Vulpecula	Sagittarius

New to the game:

Pegasus	Triangulum
Aquarius	Aries
Pisces	Cassiopeia
Andromeda	




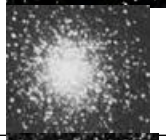
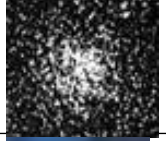



September Target Lists





September Target List: Relaxing




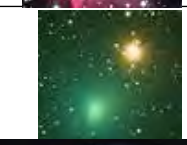


Naked Eye and Binocular

Target	Type	Constellation	Notes	Image
M27	PN	Vulpecula	Dumbbell Nebula	
M15	GC	Pegasus	Globular Cluster near Enif	
M11	OC	Scutum	Wild Duck Cluster – Does it look like ducks to you? Me neither.	
Rho Ophiuchi	DS	Ophiuchus	Multiple star system in reflection nebula.	
M8	NB	Sagittarius	Lagoon Nebula – Try UHC or OIII filters to enhance the detail	
M31	GX	Andromeda	Andromeda Galaxy – Naked eye at 2,500,000 light years away!	







September Target List: Intriguing

Small to medium telescopes

Target	Type	Constellation	Notes	Image
NGC 7009	PN	Aquarius	Saturn Nebula	
M28	GC	Sagittarius	Globular Cluster near Kaus Borealis at top of teapot	
NGC 6611	OC	Serpens	Open cluster inside the Eagle Nebula near Pillars of Creation	
Delta Lyrae	DS	Lyra	Orange and Blue pair in Lyra – check Albireo for comparison	
NGC 6826	PN	Cygnus	Blinking Planetary – Can you see how it got the nickname?	
				



September Target List: Taxing Light Buckets

Target	Type	Constellation	Notes	Image
NGC 7293	PN	Aquarius	Helix Nebula – low surface brightness. Use low power.	
NGC 6624	GC	Sagittarius	Near Kaus Media inside the teapot	
NGC 6910	OC	Cygnus	Small tight cluster near Sadr – rich star field makes it difficult	
Epsilon Pegasi	DS	Pegasus	Enif: +2.4 primary, +12.8 companion, 86" separation	
NGC 6992/6995	NB	Cygnus	Veil Nebula – Use low power and hope for very dark skies	
M33	GX	Triangulum	Pinwheel Galaxy – Very low surface brightness.	



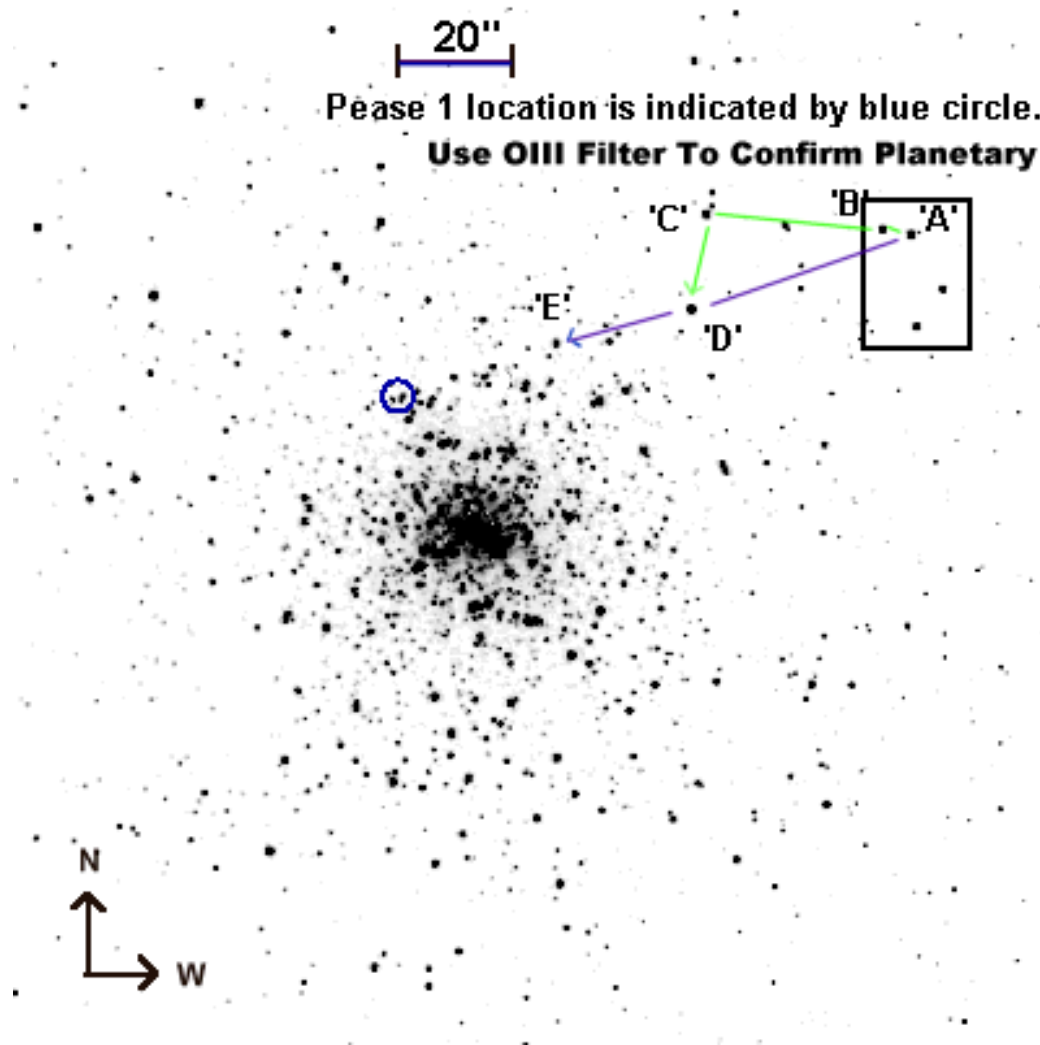
September Challenge Object: Pease 1

- Planetary Nebula
- Located INSIDE Globular Cluster M15
- Size: 1"
- Visual Magnitude: +15
- Distance: 28 kly
- Requires OIII filter to identify
- Must have detailed star chart of M15 to locate



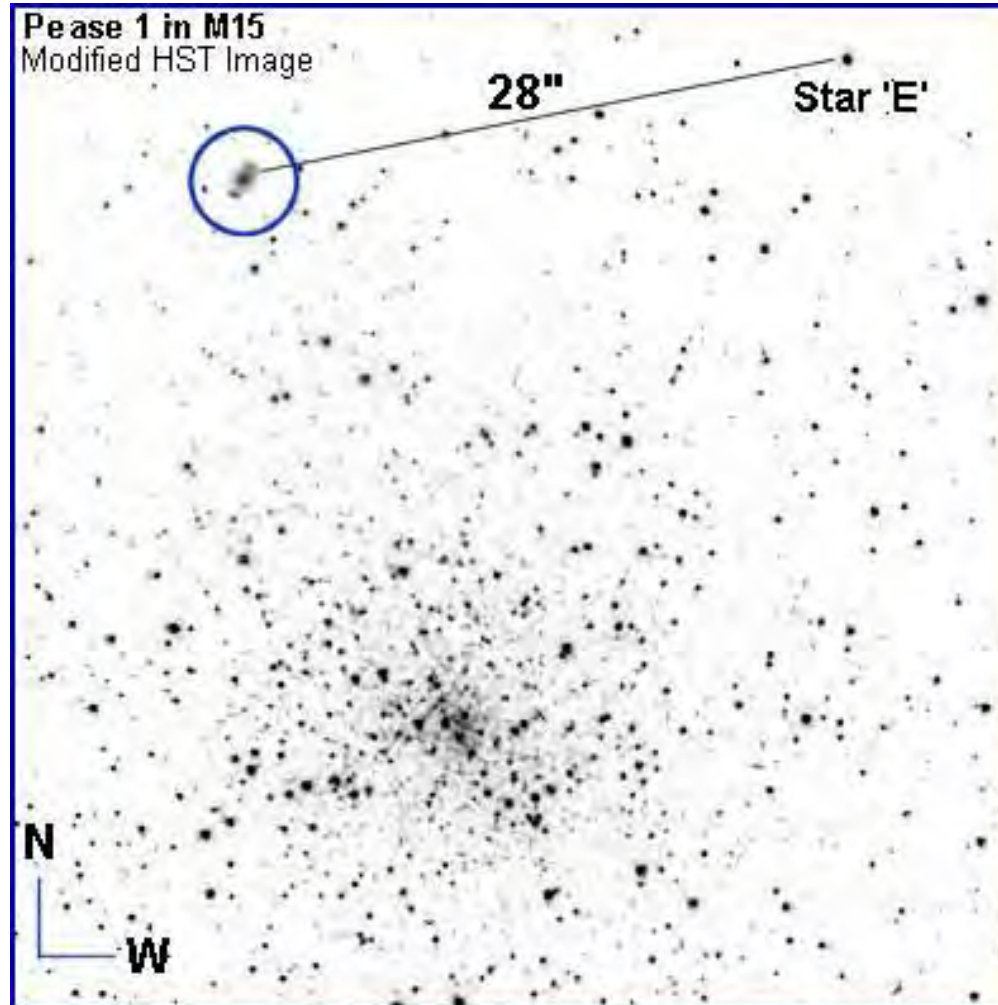


September Challenge Object:





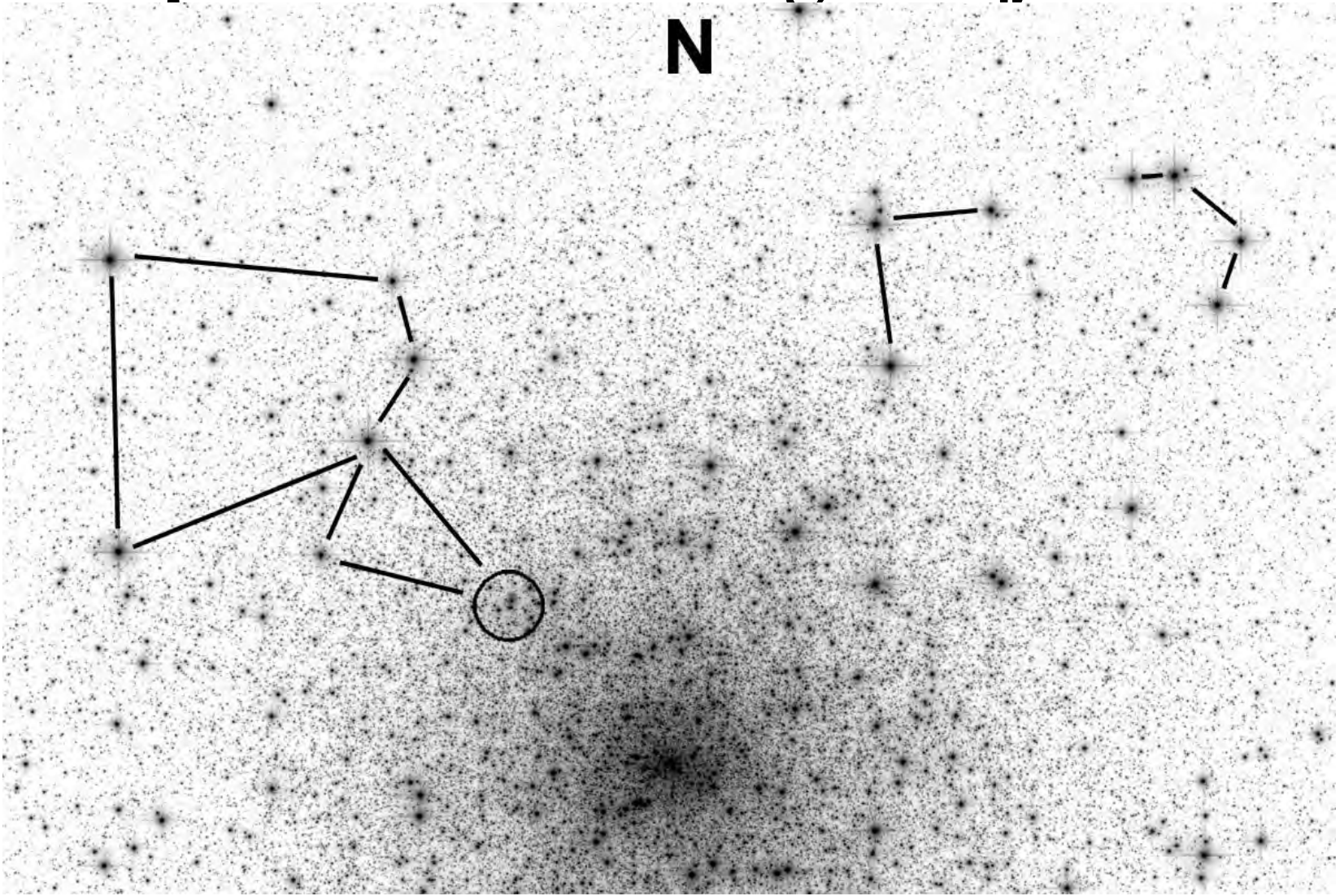
September Challenge Object:





September Challenge Object:

N





Celestial Events to Note:

- **September 21st: Venus shines at Magnitude -4.8**
- **September 23rd: Fall Equinox 4:40 AM EST**
- **September 27th: Full Moon, TOTAL LUNAR ECLIPSE**
- **October 10th: Charlie Elliott Astronomy meeting**
- **October 11th: Peach State Star Gaze**
- **October 12th: New Moon**

▪ **Special Note: Venus, Jupiter and Mars are heading for some fantastic conjunctions in October, but you have to come back on the 10th to hear about it.**



Clear Skies!