



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

“All of the Above”





Daylight Savings Time is Over



Don't forget to reset your mounts to the correct time zone (UT-5)



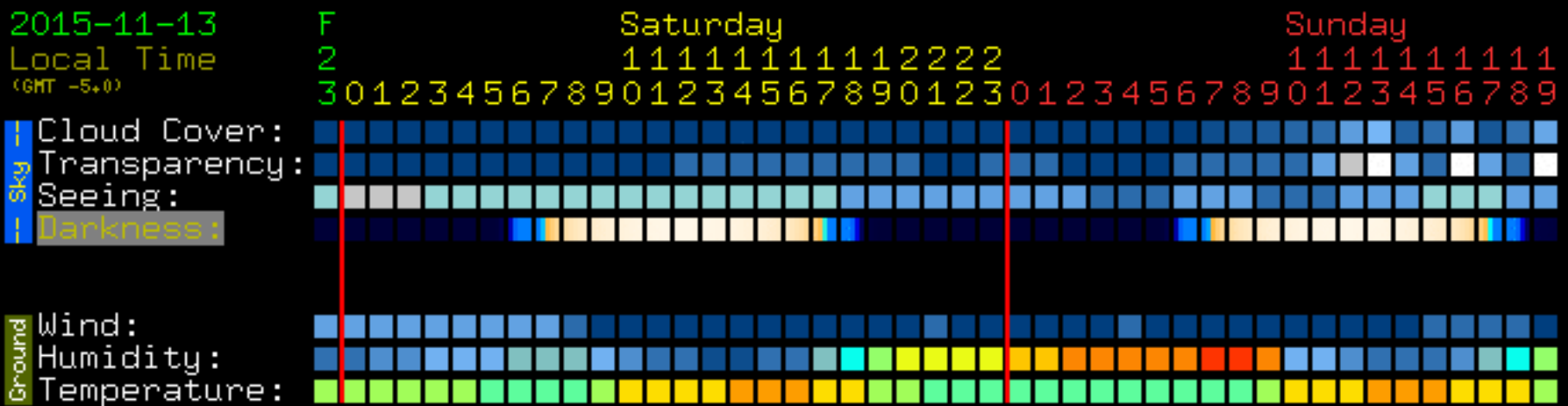
This Month's Sky: November 2015

- **Conditions over the Jon Wood Field**
- **The Planets**
- **The Sun**
- **The Moon**
- **Celestial Events**
- **The Constellations**
- **Target List**
- **Challenges**



Current Conditions at Jon Wood Field

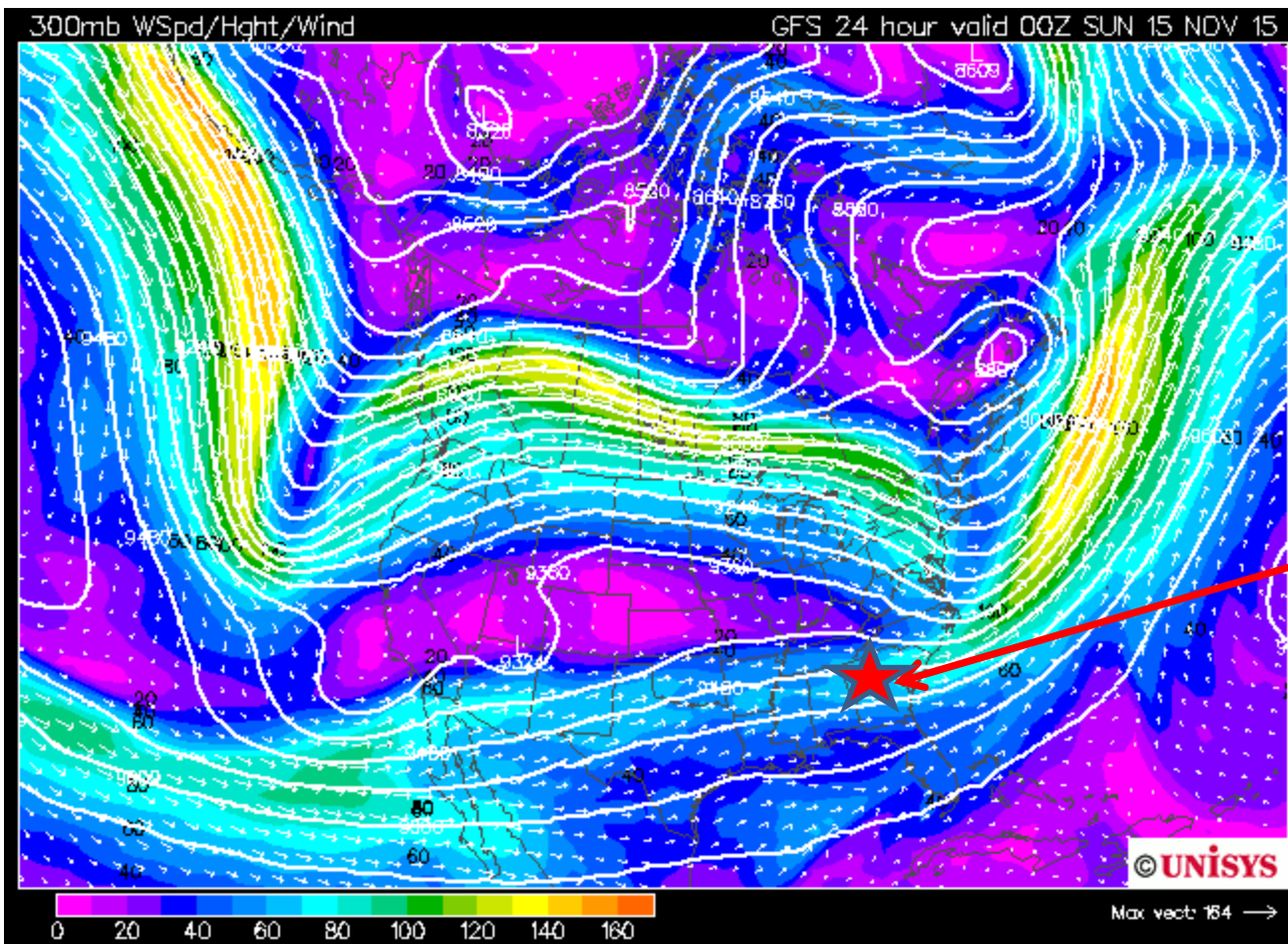
Charlie Elliott WLC Clear Sky Chart





Current Conditions at Jon Wood Field

(Jet Stream data by www.weatherstreet.com)

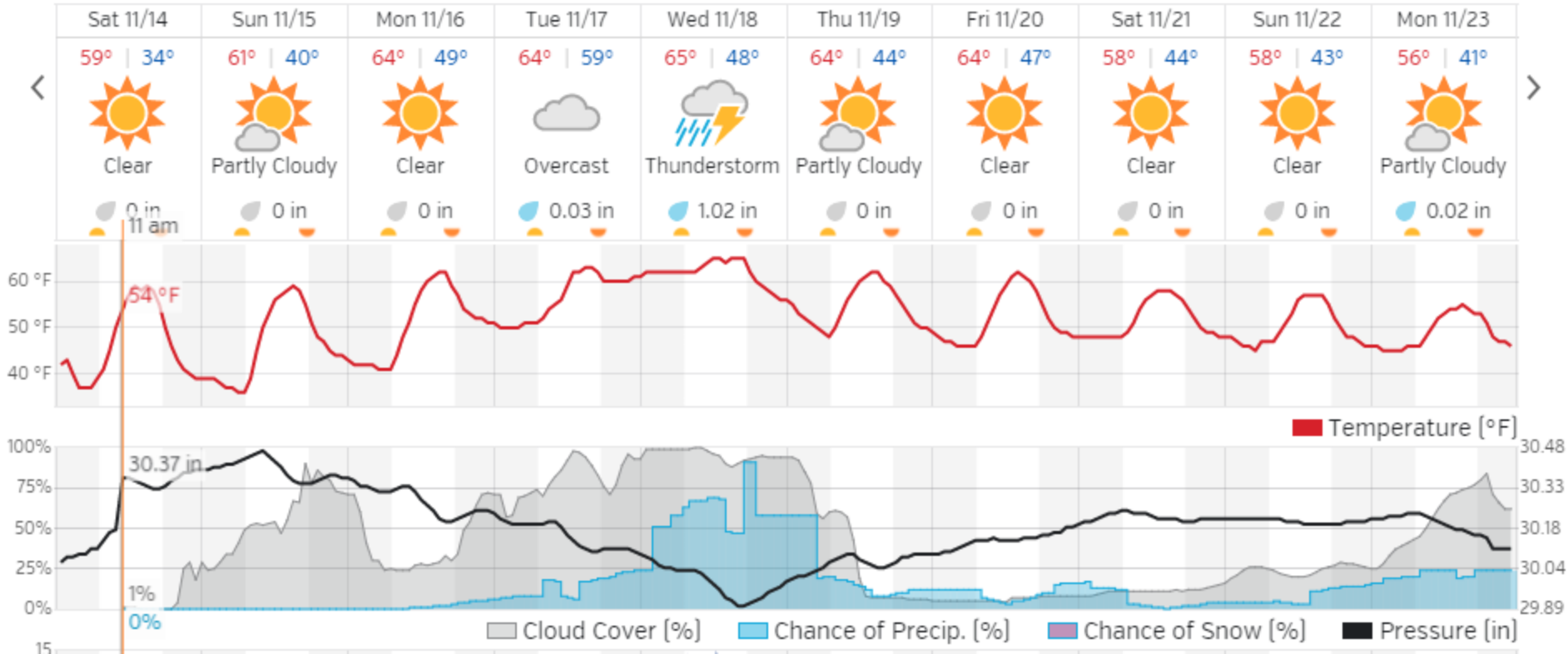


You are Here



Current Conditions at Jon Wood Field

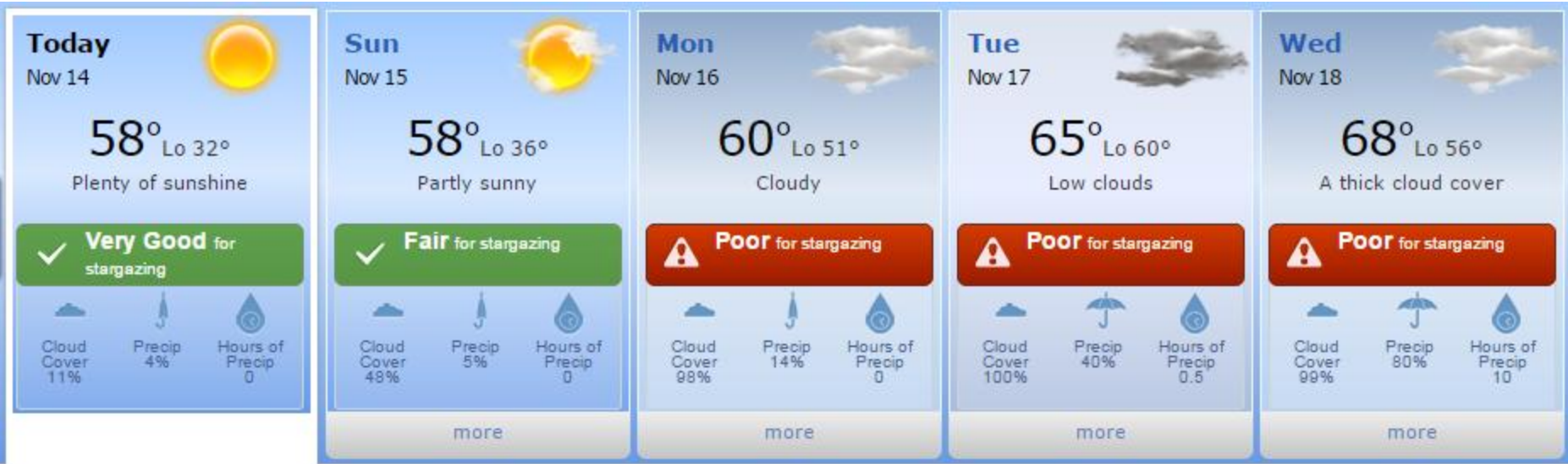
(Weather forecast data by www.wunderground.com)





Current Conditions at Jon Wood Field

(Stargazing forecast by www.accuweather.com)





The Solar System: November 14, 2015

Body	Constellation	Rise	Set	When to View
Sun	Libra	7:09 AM	5:35 PM	When its up
Moon	Leo	9:34 AM	8:12 PM	Sunset
Mercury	Libra	7:01 AM	5:29 PM	Not right now
Venus	Virgo	3:31 AM	3:20 PM	Dawn
Mars	Virgo	3:05 AM	3:15 PM	Dawn
Jupiter	Leo	2:09 AM	2:41 PM	Dawn
Saturn	Scorpius	8:13 AM	6:27 PM	Late Spring
Uranus	Pisces	3:48 PM	4:29 AM	Dusk-til-Dawn
Neptune	Aquarius	2:03 PM	1:18 AM	Dusk-til-Dawn
Pluto*	Sagittarius	10:59 AM	9:04 PM	Early Evening

* Pluto looks more like a planet every day.



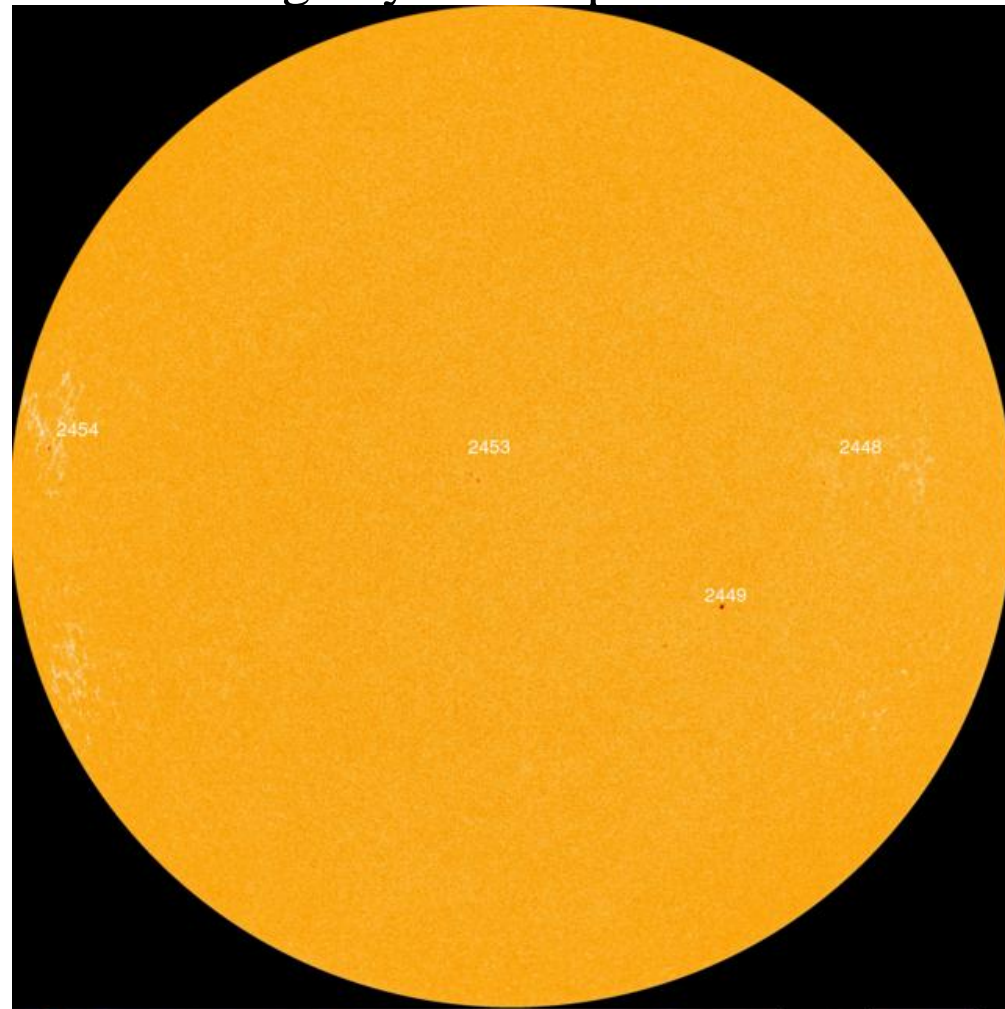
The Solar Update





The Sun: November 14, 2015

Solar image by www.spaceweather.com





The Sun-H α : November 14, 2015

Image by www.gong2.nso.edu – Cerro Tololo



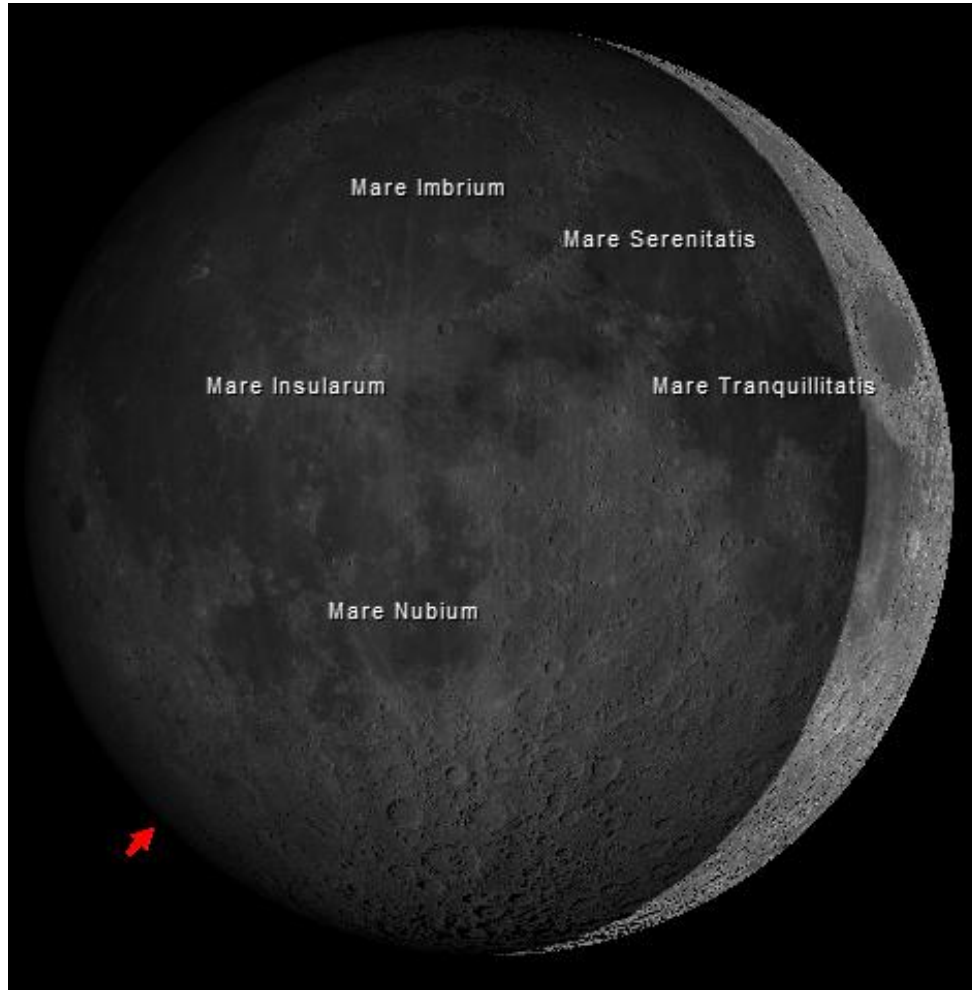


The Lunar Update





The Moon: November 14, 2015



Lunation: 3.1 Days

Illumination: 9.6%

Distance:

240,512 mi

387,068 km

1.29 Light Second

Apparent Diameter: 30.9'

Location: Virgo



Lunar Events for November

- **November 19th – 1st Quarter Moon**
- **November 23rd – Moon at Perigee**
- **November 25th – Full Moon**
- **November 25th – Libration favors Byrd Crater**
- **November 26th – Possible Occultation of Aldebaran, 06:21
(We may be too far south.)**



Special Lunar Event: December 7

Daytime Occultation of Venus

- 13% illuminated, waning crescent moon
- Venus should disappear around 12:35PM EST
- Venus should re-appear around 1:55 PM EST
- Visible in Central and North America
- Clear blue skies are a must





Comet Catalina Update

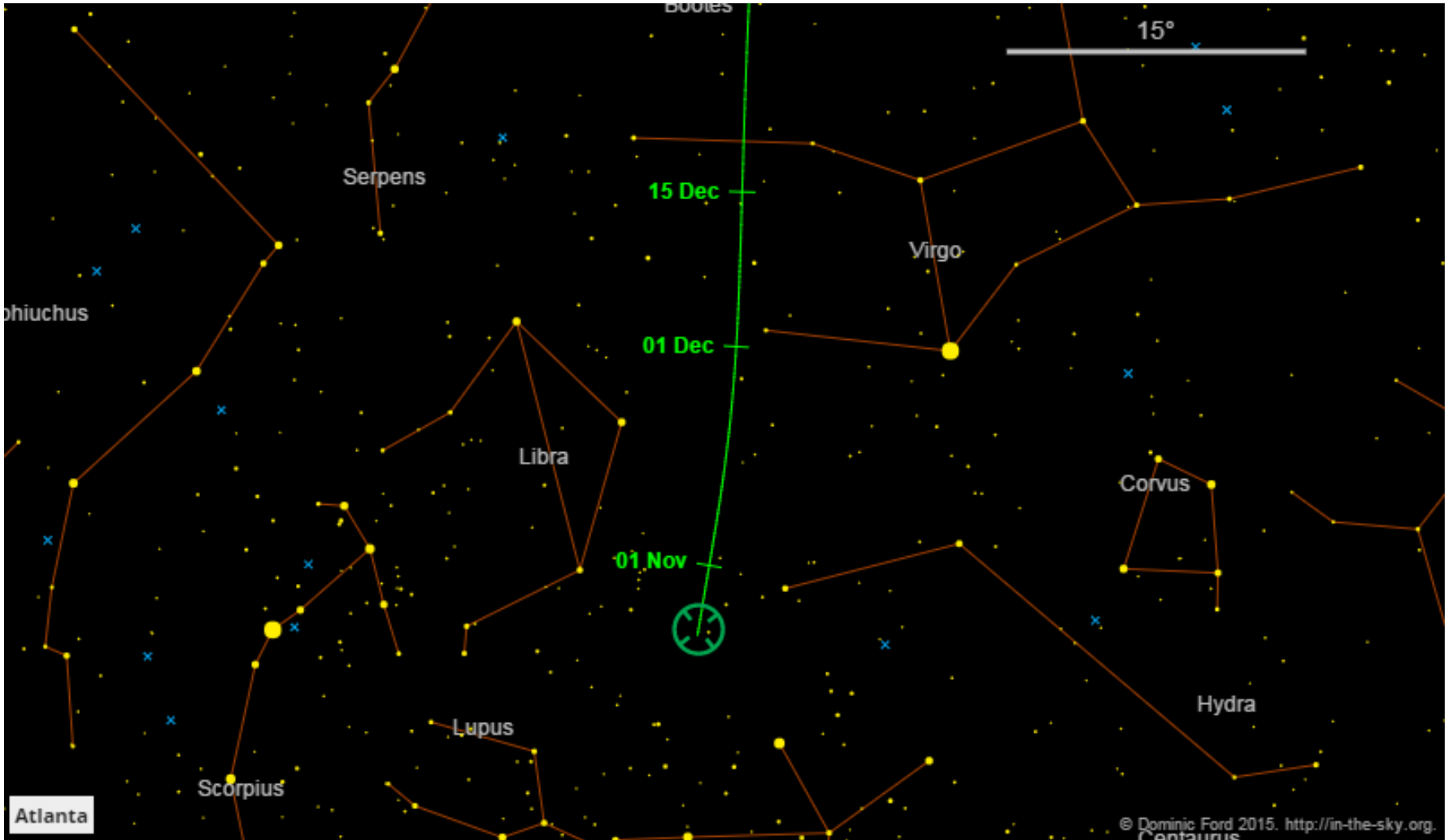
- Moving from Libra through Virgo in November and December.
- Look low in the East just before sunrise.
- Catalina (C/2013 US10)
- 100,800mph
- Perihelion: November 15



Comet C/2013 US10 (Catalina) imaged on August 9, 2015. // José J. Chambó



Comet Catalina Location





Constellation Action

Last Chance for 2015

Sagitta	Scutum
Vulpecula	Capricornus
Hercules	Aquila
Corona Borealis	Lyra

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

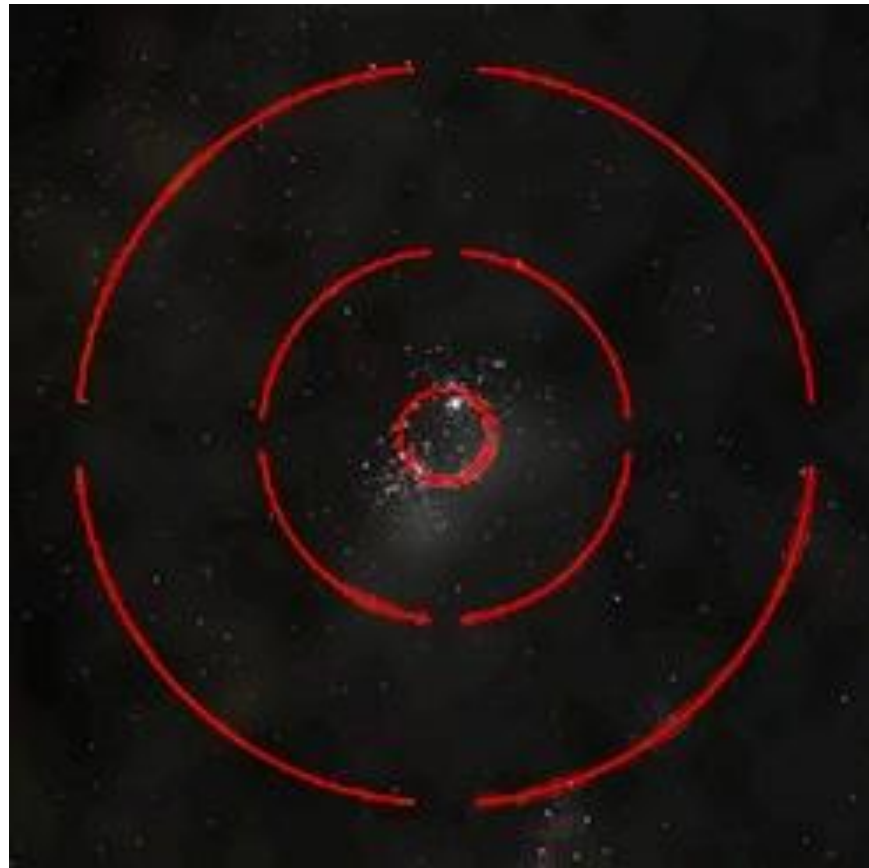
Pegasus	Cassiopeia
Cygnus	Cepheus
Andromeda	Lacerta
Pisces	Cetus

New to the game:

Perseus	Auriga
Triangulum	Camelopardalis
Aries	Taurus
Sculptor	Eridanus



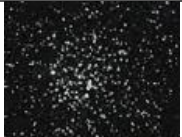




Target Lists





November Target List: Relaxing




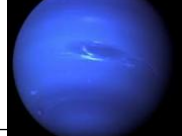


Naked Eye and Binocular

Target	Type	Constellation	Notes	Image
M52	OC	Cassiopeia	A line from Alpha Cas through Beta Cas points to it.	
Algol	VS	Perseus	Variable star – variations caused by eclipsing binary system.	
Melotte 20	OC	Perseus	Huge star cluster around Mirfak	
Uranus	PL	Pisces	Pale green dot in Pisces	
M45	OC	Taurus	Bright naked eye object. Good to use when judging seeing.	






November Target List: Intriguing

Small to medium telescopes

Target	Type	Constellation	Notes	Image
NGC 7789	OC	Cassiopeia	Caroline's Rose – named after the discoverer, Caroline Herschel	
Mu Cephei	Star	Cepheus	Red Supergiant also known as Herschel's Garnet Star	
M74	GX	Pisces	Face-on spiral Galaxy in Pisces	
Neptune	PL	Aquarius	Blue-green dot in Aquarius	
NGC 6939 & NGC 6946	OC & GX	Cepheus	Open Cluster and Spiral Galaxy in the same FOV. Two in the view.	
				



November Target List: Taxing Light Buckets

Target	Type	Constellation	Notes	Image
NGC 1499	NB	Perseus	California Nebula – Large but visually elusive	
IC 1805	NB	Cassiopeia	Heart Nebula – Large and faint nebulosity	
IC 1396	NB	Cepheus	Elephant Trunk Nebula -	



November Observing Challenge Object: Asteroid Vesta

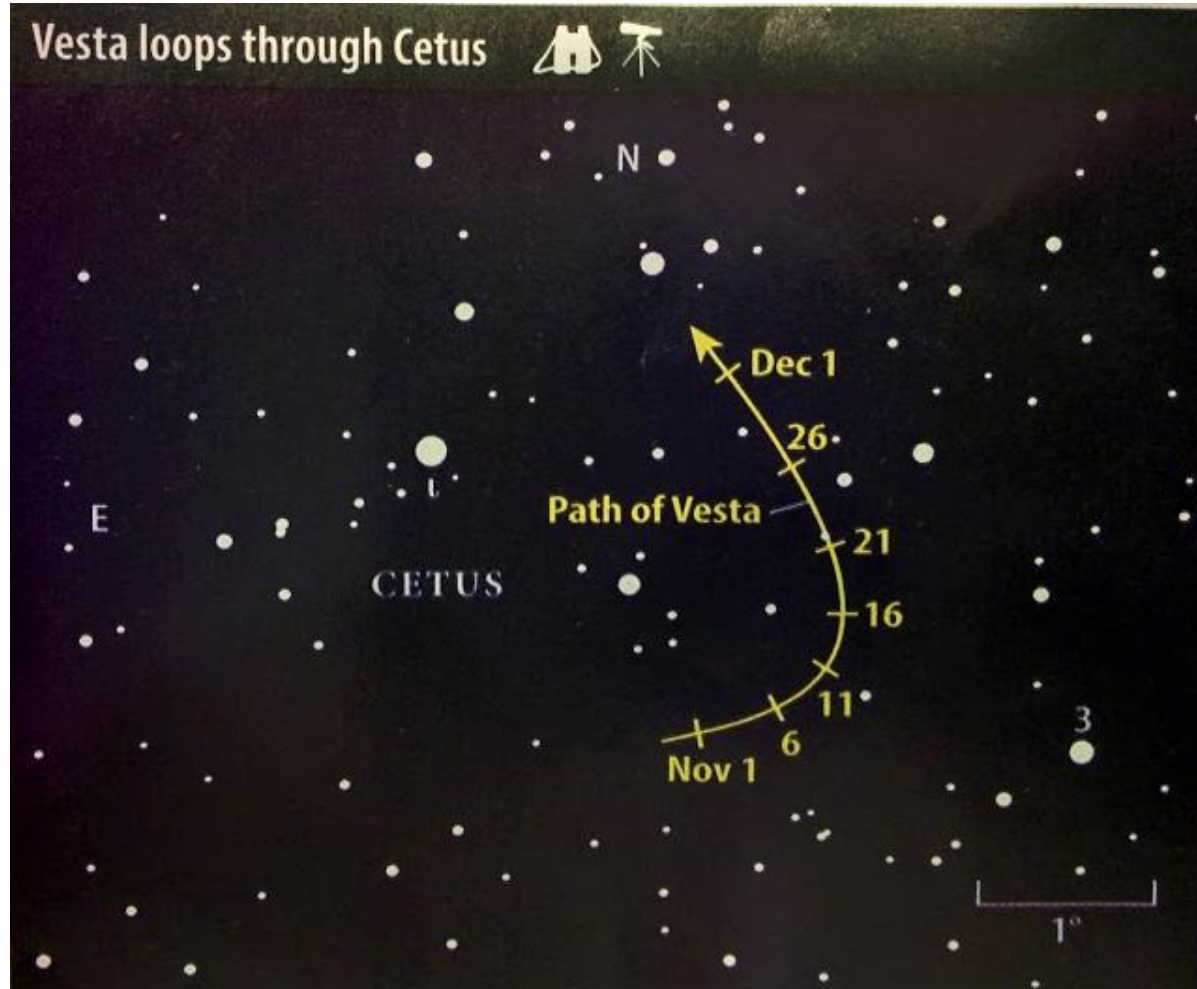
- Minor Planet Designation: 4 Vesta
- Discovered: March 29, 1807
- Mean orbit: 2.36 AU
- Mean diameter: 326 mi
- Orbital period: 3.63 years
- Surface Gravity: 0.025 g
- Visual Magnitude: 6.5 (November)



- Brightest object visible in the asteroid belt



So where is the darn thing?





Celestial Events to Note:

- **November 18th – Leonid Meteors**
- **December 7th – Daytime Lunar Occultation of Venus**
- **Nov-Jan - Comet Catalina rising in the dawn sky**



Clear Skies!