



Charlie Elliott Chapter of the Atlanta Astronomy Club



M33, Annette & Pierre Michel, 10/20/2012



“WHAT’S UP”

A presentation of “what’s up” in the
night sky



This Month's Sky: September 2012

- **Our Solar System Tonight**
- **This Month's Astro Events**
- **Target List**
- **Gee Whiz Question of the Month**
- **CE Observing Challenge**



Our Solar System Tonight

	Rises	Sets
Sun	7:39 A.M.	5:48 P.M.
Moon	8:02 A.M.	7:10 P.M.
Mercury	7:34 A.M.	5:25 P.M.
Venus	6:27 A.M.	4:22 P.M.
Mars	8:59 A.M.	7:26 P.M.
Jupiter	2:24 P.M.	4:29 A.M.
Saturn	2:13 A.M.	1:09 P.M.
Uranus	11:19 A.M.	11:29 P.M.
Neptune	9:49 A.M.	8:50 P.M.
Pluto	6:40 A.M.	4:54 P.M.



This Month's Astro Events

- **Earth Reached Perihelion on 2 Jan.**
- **Jupiter and Moon meeting**
- **Jupiter Red Spot**
- **Saturn returns**
- **Vesta rides with Jupiter**
- **Last Call for Mars**



Jupiter and Moon meet: 21 Jan.

Jupiter

Magnitude: -2.16 (extincted to: -1.91)
 Absolute Magnitude: 26.17
 RA/DE (J2000): 4h18m2.1s/+20°44'04.9"
 RA/DE (of date): 4h18m48s/+20°45'57"
 Hour angle/DE: 21h23m4s/+20°45'57" (geometric)
 Hour angle/DE: 21h23m5s/+20°46'07" (apparent)
 Az/Alt: +102°15'20"/+52°45'29" (geometric)
 Az/Alt: +102°15'20"/+52°45'48" (apparent)
 Ecliptic Geocentric (of date): +66°26'46.5"/-0°37'37.4"
 Obliquity (of date): +23°26'15.3"
 Distance: 4.44927099AU
 Apparent diameter: +0°00'44.3"
 Phase Angle: +9°13'14"
 Elongation: +124°21'44"
 Phase: 0.99
 Illuminated: 99.4%

Date and Time

2013	/	1	/	21	18	:	0	:	0
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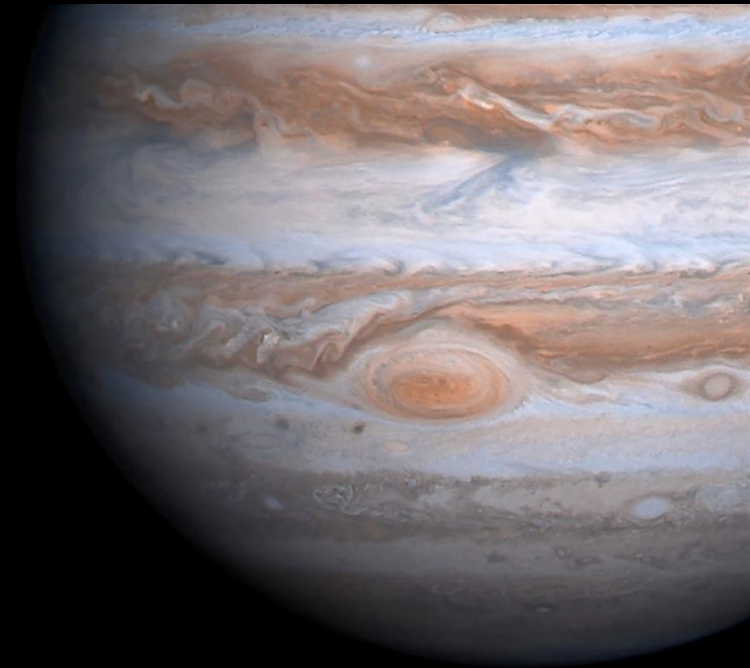




Jupiter Red Spot

This list gives some of the best evening times during January to observe the Great Red Spot which should then lie on the central meridian of the planet.

DATE	TIME
January 1 st	20:20
January 3 rd	22:40
January 5 th	23:37
January 8 th	21:06
January 13 th	20:14
January 15 th	21:53
January 17 th	23:31
January 20 th	21:01
January 22 nd	22:40
January 25 th	20:10
January 27 th	21:48
January 29 th	23:27
January 30 th	19:18





Saturn Returns!

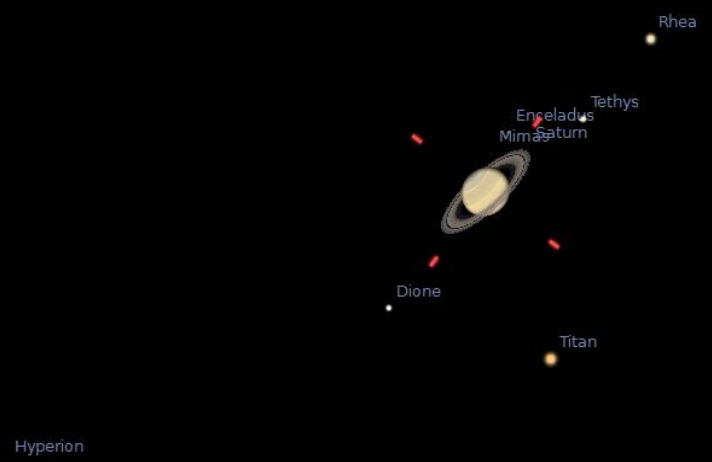
Rings at 19° by month's end. Great shadows on planet by rings!

Saturn

Magnitude: 0.75 (extincted to: 1.27)
 Absolute Magnitude: 27.38
 RA/DE (J2000): 14h37m36.4s/-12°48'42.7"
 RA/DE (of date): 14h38m19s/-12°52'05"
 Hour angle/DE: 20h40m31s/-12°52'05" (geometric)
 Hour angle/DE: 20h40m37s/-12°50'31" (apparent)
 Az/Alt: +126°08'53"/+22°37'04" (geometric)
 Az/Alt: +126°08'53"/+22°39'11" (apparent)
 Ecliptic Geocentric (of date): +221°13'48.7"/+2°26'57.0"
 Obliquity (of date): +23°26'15.3"
 Distance: 9.74386395AU
 Apparent diameter: +0°00'17.1", with rings: +0°00'39.7"
 Phase Angle: +5°46'12"
 Elongation: +90°22'48"
 Phase: 1.00
 Illuminated: 99.7%

Date and Time

2013 / 1 / 31 3 : 0 : 0





Vesta rides with Jupiter

Vesta

Magnitude: 6.59 (extincted to: 6.80)
Absolute Magnitude: 36.94
RA/DE (J2000): 4h36m33.4s/+18°40'27.5"
RA/DE (of date): 4h37m19s/+18°41'00"
Hour angle/DE: 23h29m34s/+18°41'60" (geometric)
Hour angle/DE: 23h29m34s/+18°42'02" (apparent)
Az/Alt: +155°52'27"/+72°07'52" (geometric)
Az/Alt: +155°52'27"/+72°07'54" (apparent)
Ecliptic Geocentric (of date): +70°25'52.4"/-3°20'40.0"
Obliquity (of date): +23°26'15.4"
Distance: 1.75751837AU
Apparent diameter: +0°00'00.4"
Phase Angle: +15°03'33"
Elongation: +137°16'48"
Phase: 0.98
Illuminated: 98.3%

Date and Time

2013 / 1 / 12 21 : 0 : 0



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Last Call for Mars

Last chance to spot Mars on the 13th lying below a very thin waxing crescent Moon. Earthshine on the moon will also be significant.

Mars

Magnitude: 1.39 (extincted to: 2.29)
 Absolute Magnitude: 31.19
 RA/DE (J2000): 21h10m4.2s/-17°29'15.2"
 RA/DE (of date): 21h10m48s/-17°26'03"
 Hour angle/DE: 3h59m32s/-17°26'03" (geometric)
 Hour angle/DE: 3h59m19s/-17°23'09" (apparent)
 Az/Alt: +237°44'14"/+12°35'35" (geometric)
 Az/Alt: +237°44'14"/+12°39'47" (apparent)
 Ecliptic Geocentric (of date): +314°53'35.3"/-1°07'01.2"
 Obliquity (of date): +23°26'15.4"
 Distance: 2.25502472AU
 Apparent diameter: +0°00'04.2"
 Phase Angle: +14°45'51"
 Elongation: +20°59'07"
 Phase: 0.98
 Illuminated: 98.3%

Date and Time

2013 / 1 / 13 18 : 0 : 0





Target List

Object	Type	Mag	Constellation
M29	Open Cluster	6.7	Cygnus
NGC 7000 (N. Am Neb)	Bright Nebula	5.5	Cygnus
M15 (Sets at 9:15)	Globular Cluster	6.2	Pegasus
M52	Open Cluster	6.9	Cassiopeia
NGC 253 (Sculptor Galaxy)	Spiral Galaxy	7.2	Sculptor
NGC 1365	Spiral Galaxy	9.6	Fornax
M78	Bright Nebula	8.3	Orion
M41	Open Cluster	4.5	Canis Major
M67	Open Cluster	6.9	Cancer



Gee Whiz Question of the Month

- **Just 10-15 years ago, scientists believed that single star solar systems, like ours, were more common throughout the Milky Way. It has since been proven differently. What % of star systems are now believed to be multiple star systems?**



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Gee Whiz Question of the Month

85%



CE Observing Challenge

- **Flying Ghost Galaxy (NGC 520)**

- **Magnitude 11.4**
- **In Pisces**
- **R.A: 01h 25m 16.16s**
- **Dec: 03° 51' 45.9"**

- **ENJOY!!!**



Useful Websites

- <http://www.almanac.com/astronomy/>
- <http://astrojourney.wordpress.com>
- <http://www.astronomy.com/>



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