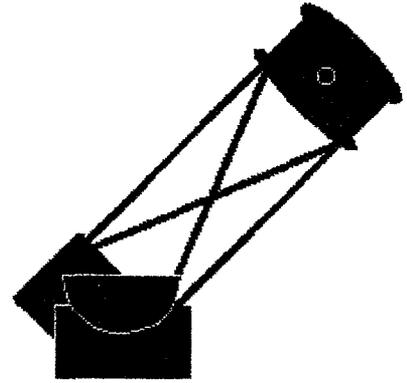


# The Shoreline Observer



The Online Newsletter of the Shoreline Amateur Astronomical Association

December, 1996

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## December Meeting

The December meeting of the Shoreline Amateur Astronomical Association will be held on Thursday, December 19th at 7:00 pm in the West Ottawa Middle School Planetarium (north end of the building).

- 7:00 - 7:15: Refreshments and socializing
- 7:15 - 7:30: December Night Sky featuring the constellation Perseus
- 7:30 - 8:30: Radio Astronomy - A program presented by Jim Jipping.



## November Meeting

At the November meeting of the SAAA, the 1997-1998 officers were elected: Mike Henry as Secretary/Treasurer, Pete Burkey as Vice-President, and Robert Wade as President. Many thanks to last year's officers: Phil Sherman for serving the past two years as President, Pete and Mike in the same posts.

Sandy then gave us her usual excellent night sky tour, followed by an excellent in-depth look at the constellation Andromeda by Arlin Ten Kley.

Robert then presented an overview of the Astronomical League's various observing programs. These include the Lunar, Double Star, Binocular Messier, regular Messier, and Herschel 400 lists. These programmed observing programs reward the observer with a pin and certificate from the Astronomical League when a certain number of objects are observed. He gave examples from the Lunar program and explained how these programs can help the amateur astronomer become much more familiar with the night sky. Most people at the meeting could readily get the Lunar Certificate and pin with only a few months of observing.



## Board Meeting

The December Board Meeting was called to order at 6:00 p.m. on December 2 at The Beechwood Inn. Robert Wade, Mark Logsdon, Edna and Tim Stoel were present. There was some initial discussion about the 1997 Program Schedule, but with Pete absent with a herniated spinal disc (he is the Program chair), further discussion was tabled until January. If you have ideas for upcoming meetings, please contact Pete.

The majority of the time was spent discussing the club newsletter, ideas, delivery schedule, etc. The club wishes to thank Mike Henry for handling the load over the past couple of years, but his busy work schedule and computer woes have dictated that he pass the baton. Robert Wade has assumed editorial responsibilities. On an experimental basis, and in order to save postage and some photocopying costs, this newsletter will now be available online for those with internet capability. Hard copy will only be mailed to those who do not have internet access. Formatting will be optimized for electronic distribution. Local residents without home internet access may subscribe to MacNet for free and access the internet through one of several computers at the Herrick Public Library. If you have ideas and would like to see some of

your handiwork in print, contact the editor. Articles should be attached as either plain text, rich text format (RTF) files, or as Microsoft Word files.



## What Star Am I?

"What Star Am I?" is now a regular feature of our online newsletter. Enigmatic clues as to the identity of a star currently placed in the sky are revealed. Who will solve the mystery? Contact Mark Logsdon if you think you know the answer!

*I'm having a "whale" of a time  
(even if I seem a bit nondescript)  
I'm the first recorded variable star  
(watched now for 358 years)  
Every 331 days I live up to my name  
(a "wonderful" time not to be skipped!)*

Answers to October's riddle: Albireo (Beta Cygni)

Submitted by Mark Logsdon



## Monthly Deep Sky

Compliments of the Constellation of the Month, the Deep Sky Object of the Month is The Double Cluster in Perseus. It is comprised of NGC 869 and NGC 884. This is actually two open star clusters in the immediate vicinity of each other, both visually and physically. This object is famous for this reason and many others.

Lying at a distance of about 7,000 light-years, or 5,865,696,000,000 miles away from us, it has an overall magnitude of 4.4. Magnitude is a brightness system used to tell the visible brightness of a star. It starts at 0.00 and goes both ways. Vega, a star now visible about halfway up the sky due West, has a magnitude of 0.00, Venus at -5.0, and the sun at -26.4! Magnitude 12.5 is about the limit of a good 6-inch telescope under a good, dark sky. In other words, the lower the number, the brighter the object. Limiting magnitude for the naked eye is about 6.0.

It can be observed this time of year about halfway up the sky in the northeast, near 9:00 PM local time. It appears as a fuzzy spot with the naked eye from a dark spot, and good binoculars or a telescope bring in some of its approximate 700 stars, 400 in NGC 869 and 300 in NGC 884. The two clusters are separated by « degree, about the diameter of the full moon.

The ten brightest stars are either class A or class B supergiants, having the luminosity, or light output, of 60,000 times of that of the sun. Between the two clusters, there are nine red stars down to the magnitude of 10.5. Most of the brighter stars are blue, others are mostly red.

The colors and classes that the stars are classified by color and size. The spectrum of stars goes from deep blue to near brown, going through the letters as follows: O, B, A, F, G, K, M, R, N, and S. The letter A is a star that is near pure white, like Deneb.

The Double Cluster is a worthy target with the telescope, too. You can begin to see individual stars with a 60mm telescope at 15x. With a 6 or 8-inch, try about 30x to 40x. Try sweeping the field of the cluster, from the outside to the inside, and back to the other edge. There are also many other deep-sky objects in Perseus and the vicinity worth exploring.

Submitted by Tim Stoel



## Geminid Meteor Shower

This meteor shower is active during the period December 6 to December 19. Upon reaching maximum activity during December 13 to 14 (solar longitude=261.3 deg), hourly rates are typically near 80, while the radiant is at RA=112.5 deg, DEC=+32.6 deg. The daily motion is about +0.83 deg in RA and -0.28 deg in DEC. The meteors are described as rapid and yellowish, with about 4% displaying persistent trains. They possess an average magnitude near 2.4. Visit the Geminid meteor page, produced by Gary Kronk. Information on observing meteors is available at Sky Publishing Corp's meteor page.

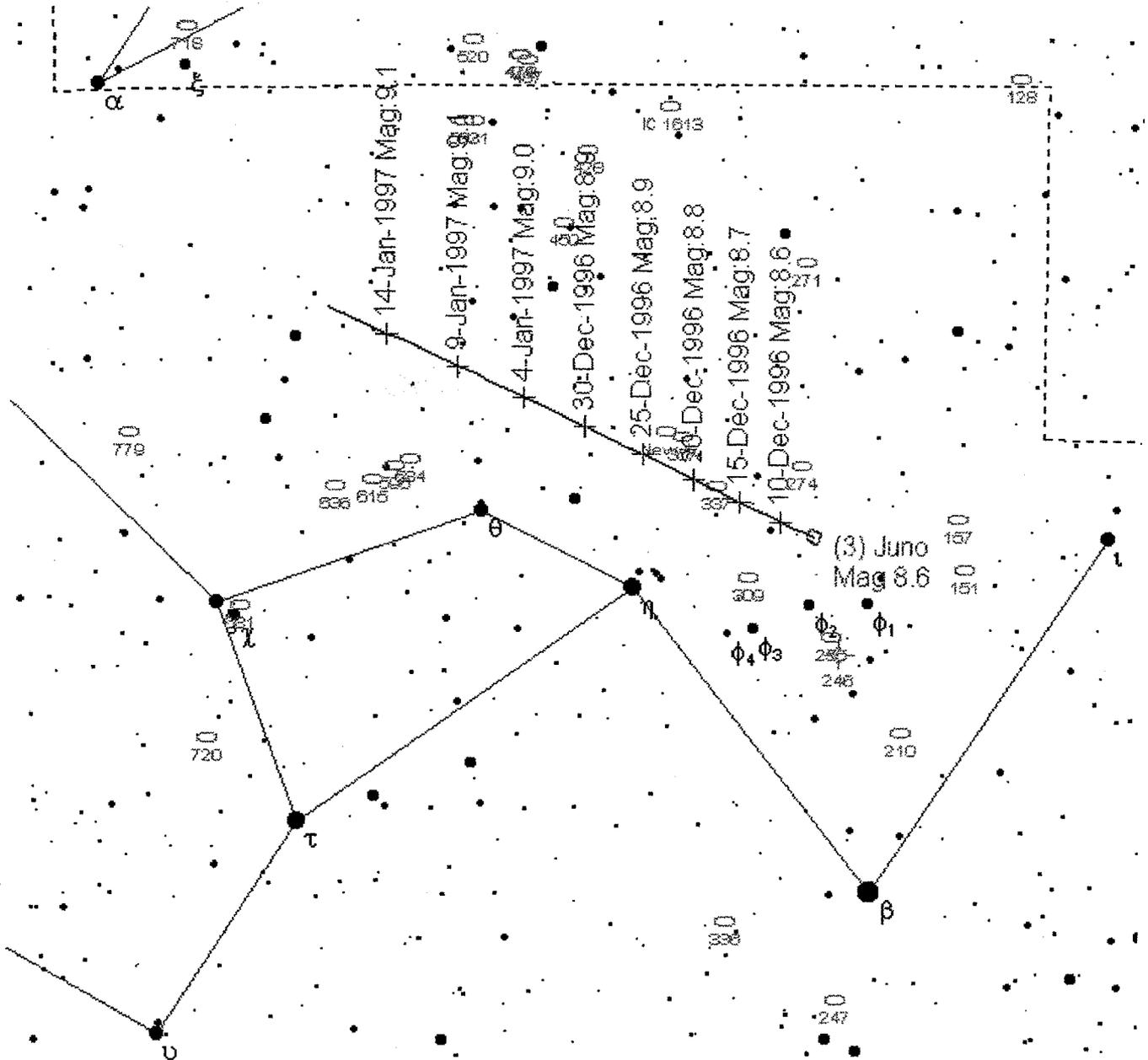
Text © Gary Kronk



## Juno

December is a good month to try your hand at observing an asteroid. Juno wanders eastward in the constellation Cetus (the Whale) throughout the month, with its brightness gradually falling from about 8.5 to about 9. It can be readily found with a good set of star charts. Look for Saturn, and Juno will be a few degrees to the lower left, near the star eta Ceti.

Around the 17th/18th, Juno passes within 7 minutes of arc of NGC 337, an 11.6 magnitude barred spiral galaxy (SBc; Size: 3.0'x2.0'; Dreyer: pFL, E, g1bM, \* 10 f 21). Together with your own set of star charts, use the attached graphic as an aid. You may wish to observe the asteroid several hours apart to see if you can detect its orbital motion in front of the background stars.



## StarMan

Winter begins for the northern hemisphere on December 21. On this day, the Sun reaches its lowest place in the noon sky for all observers north of the equator. The Sun is at its opposite extreme in the sky from the first day of summer, back in June. The Sun rises and sets far to the south and the days are at their shortest of the year. [Here is the graphic](#) (60-100k file!). Since this file is relatively large, it is best to link to it separately rather than have it slow loading of this page. After it is loaded into your browser, you can then print it to make viewing easier.

Text and strip © Jay Ryan



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## Subscribe to the Mars Global Surveyor Ops Team Status Reports

A list server has been set up that will e-mail the Ops Team Status Reports when they are published (now about every-other day).

Here's how to subscribe:

Send e-mail to "majordomo@mgs3.jpl.nasa.gov" and include "subscribe mgs-status" in the message body. The person subscribing will receive automatic confirmation. (Don't include any other message because their system won't read it!)

If you wish to be taken off this list, send a message to "majordomo@mgs3.jpl.nasa.gov", and include "unsubscribe mgs-status" in the body of the message.

See an online slideshow of the Mars Global Surveyor Mission by visiting <http://mgs-www.jpl.nasa.gov/mgs/sys/slides/01.html>.



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