

The Shoreline Observer



*Newsletter for the
Shoreline Amateur Astronomical Association*

President- Mark Logsdon

Vice President- Gary Stroven

Secretary/Treasurer- Phil Sherman

Robert Wade, Editor

December 1992

December Meeting

The December meeting of the Shoreline Amateur Astronomical Association will be held on December 17th, beginning promptly at 7:00 PM in the West Ottawa Middle School Planetarium in Holland, Michigan. This will be our second annual Family Night. The agenda will be as follows:

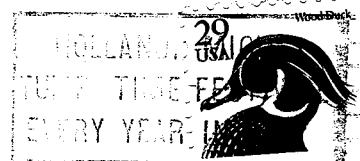
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| 7:00-7:15 | Refreshments: Christmas cookies and soft drinks. |
| 7:15-7:30 | Sandy Plakke will tour the December night sky. |
| 7:30-7:45 | Slide-show. |
| 7:45-8:00 | Activities: Folding stars, rocket power, star fields. |
| 8:00-8:30 | Refreshments: Ice-cream sundaes. |
| 8:30-8:45 | Comet making made easy - Demo by Pete Burkey |

Board Meeting

Mark called the meeting to order at 6:00 P.M. on November 25 with Gary, Phil and Pete present. Larry Wildschut welcomed as the new at-large board member.

Treasure's Report: \$ 606.62

3882 62nd Street
Holland, Michigan 49423

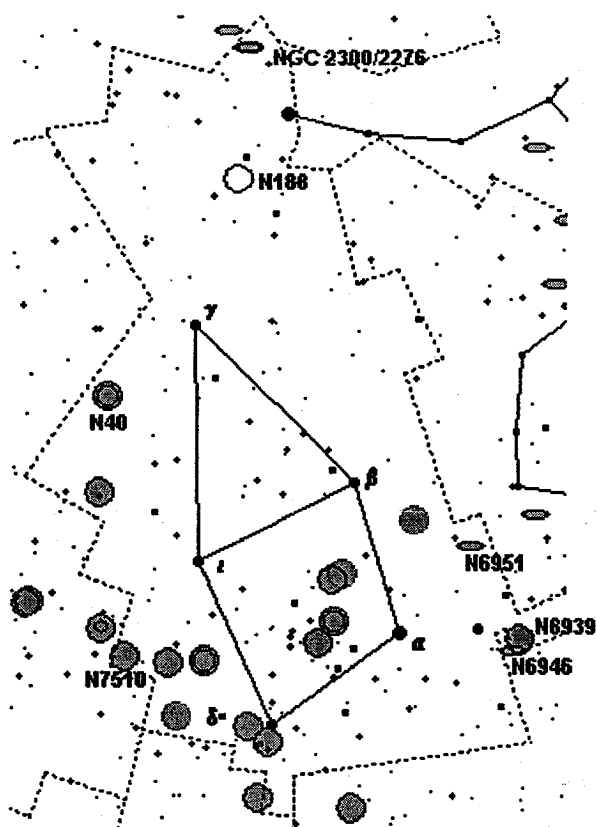


Old Business: Peter Gontheim's program on pulsars/neutron stars was reviewed and all agreed it was a winner. SAAA membership for 1992-1993 stood at 13 firm with 2 pending. Subscription requirements for *Astronomy* and *Sky & Telescope* have been met.

New Business: Note our plans for Family Night this month. Bring the family to help observe the holiday season at this fun-filled night on December 17th.

Star Parties (weather permitting): December 18th and January 29th at Bob's. No back-up at Mark's due to a recent move.

Cepheus: Constellation of the Month



α - Alderamin; mag 2.46, spectrum A7 IV or V; 52 ly distant. An optical companion of mag 10.5 lies 207" at PA 22°. Will replace Polaris (top of graphic) as the Pole star by about 7500 A.D.

β - Alfirk; mag 3.15 (slightly variable), spectrum B2 III; 980 ly distant and 4000 times as luminous as the sun. The 8th mag companion at 14" is an easy object for amateur telescopes.

γ - Er Rai; mag 3.21, spectrum K1 IV; about 50 ly distant. Like alpha, this star periodically takes its turn as the Pole Star, which role it will assume in about 2000 years.

δ - Variable star, spectrum F5 Ib. Delta Cephei is one of the most famous of the variable stars, the typical example of a large number of short-period pulsating variables whose light changes are NOT due to eclipse by a revolving companion, but to an actual pulsation of the star. Stars of this class are called "cepheids" in honor of Delta Cephei, the first example to be discovered. The variations were discovered in 1784 and can be seen from night to night (mag 3.6 to 4.3).

μ - The "Garnet Star", variable (3.7 - 5.0), spectrum M2 Ia. This star is perhaps the reddest star visible to the

naked eye in the north half of the sky. It usually appears a deep orange-red but on occasion takes on a peculiar purple tint. It lies near the northern edge of the extensive nebula IC1396.

NGC 188 is approximately 15' in diameter and contains some 150 stars, most of which are fainter than 13th mag. However, the cluster can be seen with a 6" telescope at low power, and appears as a large but dimly luminous spot with only a few of the brightest members individually seen. It is famous as the oldest known galactic star cluster.

NGC 6946 is a large Sc-type spiral galaxy of about 11th mag visually. The galactic star cluster NGC 6939 lies 38' to the northwest and both can be seen in the same field with a wide-angle eyepiece. The galaxy is a face-on spiral, with a low surface brightness, about 8' in diameter. The galaxy is also noted for an unusual number of supernovas.

NGC 2300 is an elliptical galaxy (E2) of mag 12.2 measuring 1.0' x 0.7' making it a good challenge for modest sized amateur scopes.

NGC 2276 is in the same field (6' distant), a 12.4 mag Sc spiral galaxy slightly larger at 2.5 x 2.0'.

NGC 6951 is a larger yet SB (early barred-spiral) galaxy, measuring 3.5' x 3.5' at mag 12.3. This should be less of a challenge as Burnham lists it as pretty large and pretty bright.

NGC 40 is a small, faint planetary, mag 10.5. It is 60" x 40" with a central star mag 11.5. Good luck!

NGC 7510 is a galactic cluster on the border of Cassiopeia. It is very elongated with about 30 stars beginning at magnitude 10. It is worth looking at just to see the asymmetry.

This information came from Robert Burnham's *Celestial Handbook*.