



The Celestial Observer

*Newsletter of the North Shore
Amateur Astronomy Club*

December, 2008

From the President

The estimated number of NSAAC members and guests that plan to attend the April 4th 20th Anniversary Celebration is eighty. At the November 7th business meeting we narrowed down the choices for food to either Pot Luck or purchase from a restaurant or caterers. It was also decided that cost per person for the food would be held in the \$10 to \$15 per person range. All caterers found to date have higher prices, so the choices were narrowed to:

1. Greater Lawrence Technical School Four Winds restaurant at about \$10/person.
2. Chateau Restaurant, 131 River Road, Andover at about \$15/person.

Both menus may be viewed online; please browse to www.nsaac.org/menus.html for the links.

The other option, Pot Luck, is to have members volunteer to bring a favorite dish. This will be coordinated so that the correct number of salads, main dishes and desserts are provided for the dinner. For this to work, several people are needed to volunteer to bring a dish. We will contact people that are planning to attend to get an idea of how many are willing to bring a favorite dish.

Food options for The 20th Anniversary Celebration will be discussed in the December business meeting. Be sure to attend and register your vote.

In my neighborhood I am known as telescope man. This is because every year (8 so far), weather permitting, I set my telescope up on Halloween. "Trick or Treaters" and parents get an opportunity to experience a view of the moon or planets. Lines form and people keep looking and asking questions. For the next few weeks I hear back about the unusual "Treat". Start your own neighborhood tradition.

An honored star party presenter appeared to help at the Topsfield School star party!!!



Cosmos Q Redshift (alias Dave Fournier)

If you have questions or comments email me: [jefoy at comcast.net](mailto:jefoy@comcast.net)

*James Foy,
President*

NSAAC Welcomes Our New Members:

Maura Liggio of Swampscott, MA
Sarah Smyth of Medford, MA
Lenny Simonelli of Boxford, MA
Paul Fougere of Salem, MA

*Theresa Earle,
Membership Director*

Young Astronomer Program

Below is the schedule for the YAP program. Also is a list of the schools that will receive the mailings. If you don't see your favorite school on the list (the program is open to grades 4 through 8) then email it to me [yap at nsaac.org](mailto:yap@nsaac.org) before December 1. Please include the school name, principal or science teacher, address, and email or phone numbers if you have them. The YAP page is now up on our website and contest participants are able to download the entry information from there.

First week of December – Mailing to schools
March 28 – Submission deadline
April 4 – Judging day
April 25 – Awards day

Amesbury Middle School, Amesbury • Andover West Middle School, Andover • Briscoe Middle School, Beverly • Locke Middle School, Billerica • Marshall Middle School, Billerica • Spofford Pond School, Boxford • Carlisle Public Schools, Carlisle • McCarthy Middle School, Chelmsford • Murdoch Middle Charter Public School, Chelmsford • Holten Richmond Middle School, Danvers • Georgetown Middle School, Georgetown • Bradford Elementary School, Haverhill • C. D. Hunking Middle School, Haverhill • Dr. A. B. Consentino Middle School, Haverhill • Dr. Paul Nettle Middle School, Haverhill • Golden Hill Elementary School, Haverhill • John Greenleaf Whittier Middle School, Haverhill • Pentucket Lake Elementary School, Haverhill • Silver Hill Horace Mann Charter School, Haverhill • Esperanza Academy, Lawrence • Lawrence Middle School, Lawrence • Science Education Center, Lawrence • B. F. Butler Middle School, Lowell • Henry J Robinson Middle School, Lowell • James S Daley Middle School, Lowell • James Sullivan Middle School, Lowell • Kathryn P. Stoklosa Middle School, Lowell • Rogers Middle School, Lowell • Wang Middle School, Lowell • Breed Middle School, Lynn • Lynnfield Middle School, Lynnfield • Methuen Middle School, Methuen • River Valley Charter School, Newburyport • Rupert A. Nock Middle School, Newburyport • North Reading Middle School, North Reading • J Henry Higgins Middle School, Peabody • Arthur W Coolidge Middle School, Reading • Walter S Parker Middle School, Reading • Rockport Middle School, Rockport • Collins Middle School, Salem • Nathaniel Bowditch, Salem • John W. Wynn Middle School, Tewksbury • Masconomet Middle/Junior High School, Topsfield • Odyssey Day School, Wakefield • Pentucket Middle School, West Newbury

Kevin Ackert

Minutes of the NSAAC Business Meeting, November 7th, 2008

President Foy called the November Business Meeting of the NSAAC to order at 8:05PM. There were two new members present: Maura Liggio of Swanpscott and Paul Fougere and his wife of Salem, MA. There were 10 members present plus 5 Board members. There was an official quorum.

Secretary: The minutes of the October business meeting were approved by acclamation.

Treasurer:

We are solvent. Treasurer made a summary report.

Membership:

There were 2 new members since the last business meeting,

Early Meeting Announcements:

Open forum on the agenda after New Business

Committee Reports:

Young Astronomers Program:

Kevin will be sending out the YAP packages to the schools. The package is all done and will be mailed out around the Christmas vacation. The website information has been completed by Kevin and needs to have Michael Deneen add the information to the website so that it is up and running before the mailing go out. The board needs to get a request to the members for a pre approval for money to purchase items for the event and for funds to cover expenses for the event.

Merrimack College:

Bill Drown and Kevin Ackert had bad weather all month.

Salem State:

The observatory is now closed for the installation of the new Meade 12" LX 200R scope. Ron Sampson is making a new pier plate for the Meade super wedge. It might take a month or more before all is completed. One of the new members in the club is interested in helping out at the observatory.

Entertainment Report:

Kevin plans to do another constellation conversation this year and would like for more members doing these.

Star Party Committee:

The star party at the Proctor school had bad weather and Jim Foy and David Fournier as Cosmo Q Redshift gave an engaging program. A \$250 donation was made to the club. The Trahan School star party had more favorable weather. Ted Blank gave the presentation and 5 scopes were provided by members. The Fort Hill star party was a success with good weather and many scopes.

The upcoming star parties are:

Nov 10th, Groveland Girl Scouts at the Adams Library in Groveland, MA

Nov 17th, Sanborn Elementary School, Andover. MA rain date Nov 10th

Nov 20th, West Elementary School, Andover, MA rain date Nov 21st

March 12, 2009, Salem MA Science night

Telescope Clinic:

There was one request for help before this evening meeting for Paul Fougere who need help with is ETX 125. Jim Foy and Kevin Ackert provided technical assistance.

Old Business:

We currently have 101 members in good standing,

The President asked if anyone was interested in becoming the membership director. See Jim Foy if interested.

The treasurer handed out the calendars and the RASC handbook for those who had ordered and prepaid. There will be a few extras of each if someone is still interested, contact Kevin if interested in one of these items..

New Business:

President is going to order another 1000 club business cards.

Thee 20th anniversary committee has received an estimate of 56 adults and 9 children. Jim Foy has been looking into caterers and passed out menus of several catering firms. Sandra talked about a pot luck and wanted to know how many would be interested. A discussion ensued that we should pool the people who responded to the invite and determine which they preferred, a catered event or a pot luck affair. We decided to keep the catering cost at under \$20/person. We will include the menus in the next Newsletter.

Dennis Gudzevich is going to try to contact original members of the club.

Entertainment for the evening was lectures 1 and 2 of the Understanding the Universe.

Board meeting is scheduled for Tuesday November 18th at 7:00 PM.

Meeting adjourned at 9:00 PM.

*Respectively submitted,
John Hobbs, Secretary NSAAC*

Star Party News

The star party at Fort Hill Park was a resounding success with about 75 participants. There was no presentation at this event, but members gave a tour of what was up for the evening. Thank you to the many members who supported.

The Trahan School star party had good weather. Ted Blank gave the presentation and scopes were provided by Jim Koerth, Jim Bastable, Kevin Ackert, Brewster LaMacchia, and Bob Fubel.

The upcoming star parties are:

- Nov 10th, Groveland Girl Scouts at the Adams Library in Groveland, MA
- Nov 17th, Sanborn Elementary School, Andover. MA rain date Nov 19th
- Nov 20th, West Elementary School, Andover, MA rain date Nov 21st
- March 12, 2009, Salem MA Science night

*John Hobbs,
Star Party Coordinator*

2009 Calendars and Handbooks

We have a limited number of RASC Calendars (2), RASC Handbooks (1), and Astronomy Calendars (4) that will be available at the business meeting on December 5. If you have ordered any of these products and not yet picked them up please plan to do so then, or make other arrangements with me. Astronomy Calendars are \$10.00, RASC Calendars are \$13.00, and the RASC Observer Handbooks are \$20.00.

Kevin Ackert

The logo for 'Astrotalk' is written in a bold, black, sans-serif font. The letters are slightly irregular and have a hand-drawn feel. The 'A' is particularly large and prominent.

by Barrie Sawyer

A Tale of Two Stars

When I thought I would write about different kinds of variable stars (stars that change in brightness) I forgot that there are over a hundred different types of variable stars in eight major categories. So, I will limit myself to one of the most important types; the Cepheids. This class is important because they change in brightness in very rhythmic manner that depends on the intrinsic or absolute brightness of their maximum and minimum light output. One can use this relationship, as Edwin Hubble did, to calculate the distance to a Cepheid.

With a large enough telescope you can detect a Cepheid in another galaxy and thereby get the distance to the galaxy itself. Astronomers had a couple problems when they first attempted to measure distance this way. First, they not take in to account the dimming of stars by interstellar dust. Second, they discovered two distance-luminosity relationships; one for short periods brightness fluctuations over the course of days and one for periods over many months.

Delta Cepheus is an example of a short period variable. It is star several times more massive than the Sun that has started to fuse helium. When helium is ionized, it becomes opaque to radiation somewhat like the way carbon dioxide is greenhouse gas. The trapped energy forces the star to expand. The helium cools, de-ionizes, and the star contracts to start the cycle over again.

Mira in the constellation of Cetus is an example of a long period Cepheid. It is a red giant star fusing carbon into oxygen in its core. However, some helium fusion is going on in its outer shell of gas. The combined energy output expands Mira so much that if it were at the center of our solar system its outer atmosphere would reach out to the orbit of Mars. Eventually, the expansion cools the gas to a point where helium fusion stops and the star contracts starting the next cycle. So there you are; just two of the many ways stars twinkle in the night.

Clear skies, Barrie (barrie_sawyer@yahoo.com)

Getting to Veasey Memorial Park

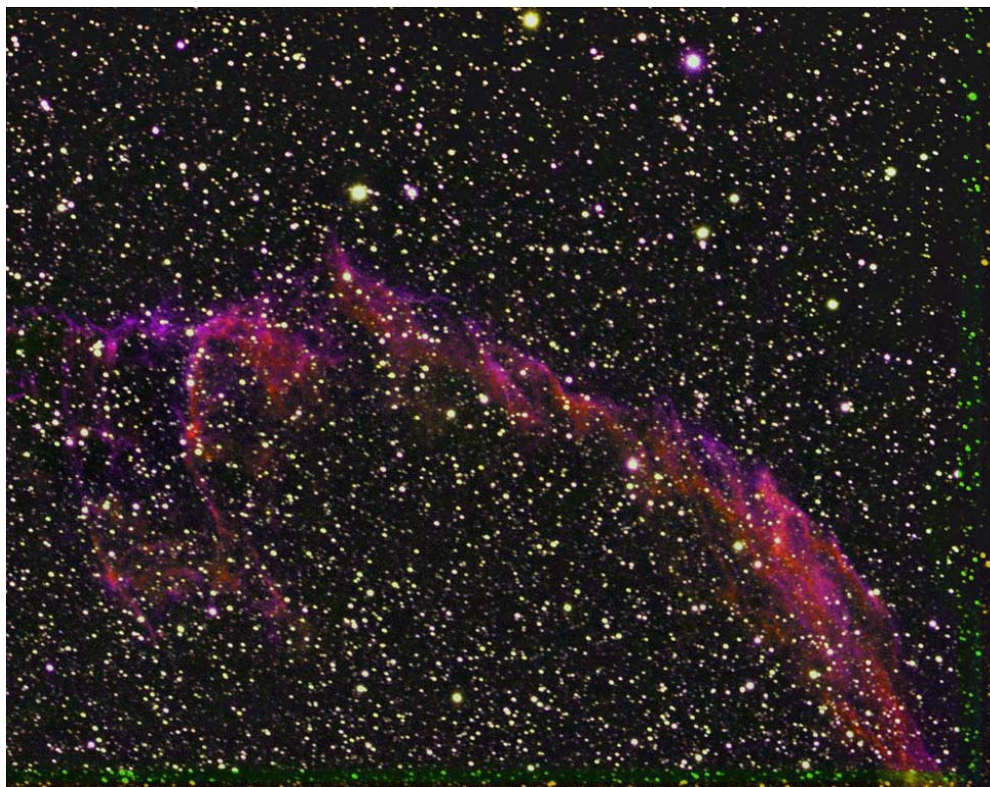
From Interstate 95 north, take the Route 133 west (54B) exit, and follow it into Georgetown Center. Go straight through the light, now on Route 97N. Go about 1.5 miles and take a left onto Salem Street (Tea Garden Restaurant at this intersection). Stay on Salem Street and turn left onto Washington Street. VMP is down a bit on the right.

Directions to all of the NSAAC observing sites are available on our web site's "About" page at:

<http://www.nsaac.org/about.htm>

Contact Information

For more information about the club and its activities, contact Therese Earle, Membership Director, email: membership@nsaac.org or contact Jim Foy, President, e-mail president@nsaac.org.



Subject: NGC 6992, Western Veil Nebulae in Cygnus Date: September 22, 2008
Author: John Hobbs Place: Groveland, MA, seeing excellent
Instruments: Williams Optics Mergez 80 fluorite triplet Super APO
Starlight Express HX916 Monochrome Camera, Astromick Type 2 LRGB filters
Orion manual filter wheel, Losmandy G11 Mount
Exposure time: 30 minutes each RGB, 10 x 3 min unguided exposures