



April 2012

Volume XII No. 4

# NORTH STAR

## NEWSLETTER

## NHAC GENERAL MEETING

March 23, 2012

### NOVICE PROGRAM

Dr. Aaron Clevenson

Messier Marathon Prep Session

6:30 - 7:15pm in the Cosmic Forum, upstairs in the CLA building

### MAIN PRESENTATION

Beginning at 7:30pm in the building CLA Teaching Theater, featuring:

- NHAC news and announcements
- "What's Up Doc?" by Aaron Clevenson

### FEATURED SPEAKER

Dr. Nicholas Suntzeff

Professor of Astronomy

Texas A&M University

*"The Accelerated Expansion of the Universe"*



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## NHAC wants to know...

What astronomy have YOU been doing?

Do you have any astronomy photos or stories you'd like to share?

Did you hear about something interesting that the club should know about?

## Tell Us!

*The deadline for submissions for the May 2012 newsletter is April 15, 2012. Send them to [newsletter@astronomyclub.org](mailto:newsletter@astronomyclub.org)*



# 2012 NHAC Officers



## PRESIDENT

**Bruce Pollard**

*president@astronomyclub.org*

## WEBMASTER

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## VICE PRESIDENT

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## SECRETARY

**Susan Pollard**

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## OBSERVATION COMMITTEE CHAIRPERSON

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## PROGRAM COMMITTEE CHAIRPERSON

**George Marsden**

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## NHAC is a proud member of:

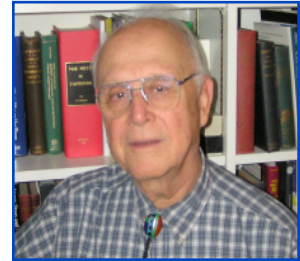


☆☆

# THANK YOU!

☆☆



Attendees of the NHAC February general club meeting received an interesting and in-depth account of the history of amateur astronomy in the Houston area when historian, former HAS president, and HAS member Tom Williams shared facts about the origins and development of the local astronomy community. Thank you, Tom!



# Observe - Learn - Share



The North Houston Astronomy Club is a non-profit organization sponsored by Kingwood College and the North Harris Montgomery Community College District, dedicated to increasing the awareness and knowledge of the science of astronomy. Public meetings are held each month on the fourth Friday. For information on club activities and upcoming meetings and speakers visit is online at:

-  <http://www.facebook.com/NorthHoustonAstronomyClub>
-  [http://www.twitter.com/NHAC\\_Info](http://www.twitter.com/NHAC_Info)

# News and Tidbits

## Messier Marathon - March 24, 2012 at O'Brien Dark Site

This Saturday 3/24 NHAC will be sponsoring a Messier observing session at the O'Brien Dark Site. (see page 6 for more info)

## Star Party and BBQ - April 21, 2012 at O'Brien Dark Site

April 21st is a new moon, so weather permitting, this is going to be a GREAT night. Save the date on your calendar NOW! (see page 6 for more info)

## Got a Favorite Piece of Equipment?

If you have a favorite piece of equipment, a novel way of solving a problem, or a shortcut for making observing easier, bring it to the monthly meeting for the **"Show-And-Tell"** segment. Each presentation should take about 3 - 5 minutes and all ideas are welcome. Please submit your idea to Program Committee Chair, at [program@astronomyclub.org](mailto:program@astronomyclub.org) before the next meeting so that he can reserve a spot for your presentation.

## Special Club Rate Magazine Subscriptions

Club rates for personal subscriptions to ASTRONOMY and SKY & TELESCOPE magazines save about 25% over the normal subscription costs. Each magazine has its own procedure to subscribe based upon initiating the order through the club treasurer.

For ASTRONOMY magazine, write your check to NHAC (or pay in cash) for \$34 (or \$60 for 2 years). The Treasurer then validates your membership by writing a club check for the same amount to the magazine and sending them your address. Renewals must also be processed through the club. Please save your renewal documents for this process.

For SKY & TELESCOPE, pay the club \$33 (or \$32.95 if by check). As above, we write a club check to validate your membership and start your subscription. SKY & TELESCOPE renewals are processed directly by the subscriber.

*Be sure to include a clearly printed name and address sheet for any new subscriptions.*

# UPCOMING EVENTS

## Messier Marathon - Saturday, 3/24

Next Saturday 3/24 NHAC will be sponsoring a Messier observing session at the O'Brien Dark Site. Bring your scopes, star maps, coffee, No-Doze or what ever and come on out. Aaron Clevenson will be leading the effort.

The club will supply drinks and you are welcome to bring your own snacks as well. Please note: this is not going to be a BBQ! We will schedule that for April.

If you haven't been out in a while, remember that it is now getting dark around 7:45 - 8:00. If you would like to try for the entire Messier catalog I would suggest being at the site and ready to go by about 7:30. You can make your own observing plan if you like, but I imagine Aaron will have one as well. If you haven't done one before, it is a little different than a normal observing session at the O'Briens. This one is really business and you will be busy most of the nite and into the early morning. Objects come and go at all hours so you have to be ready.

## Star Party and BBQ - Saturday, 4/21

Mark your calendars now for a BBQ Star Party on April 21st. Watch for updates on the Netslyder. Food will be served around 5:00 p.m., and observing will begin around 8:00 p.m. The club will provide the burgers and trimmings, but we encourage everyone to bring a yummy side dish or dessert to share!

# COME ON OUT!!!!

# From the Treasurer

## Membership

If you haven't yet renewed your dues for 2012, you have been officially dropped from the active roster. You can reinstate at any time by contacting Mary Moore at [treasurer@astronomyclub.org](mailto:treasurer@astronomyclub.org).

Please welcome our newest members from January and February.

- Sudheer Chand
- Juan Frenandez
- Aaron Gibson
- Bernard Koudelka
- Mike Matassa
- Mario Monaco, his wife Pilar, son Andrea and daughters, Victoria and Daniela
- Robert Weikel
- A special welcome to 20 new student members from a Plano, Texas elementary school who has joined NHAC to do their 'Sky Puppies' certification.

## Calendars

The 2012 calendars are in and spectacular! They are now only \$8.00 each and you can purchase them at any meeting. There are only 5 or 6 left so don't miss out!

If you have any questions about your current status, please see Mary Moore before or after any meeting or email her at [treasurer@astronomyclub.org](mailto:treasurer@astronomyclub.org).

# Citizen Scientists Reveal a Bubbly Milky Way

by Adam Hadhazy

A team of volunteers has pored over observations from NASA's Spitzer Space Telescope and discovered more than 5,000 "bubbles" in the disk of our Milky Way galaxy. Young, hot stars blow these bubbles into surrounding gas and dust, indicating areas of brand new star formation.

Upwards of 35,000 "citizen scientists" sifted through the Spitzer infrared data as part of the online Milky Way Project to find these telltale bubbles. The volunteers have turned up 10 times as many bubbles as previous surveys so far.

"These findings make us suspect that the Milky Way is a much more active star-forming galaxy than previously thought," said Eli Bressert, an astrophysics doctoral student at the European Southern Observatory, based in Germany, and the University of Exeter, England, and co-author of a paper submitted to the Monthly Notices of the Royal Astronomical Society.

"The Milky Way's disk is like champagne with bubbles all over the place," he said.

Computer programs struggle at identifying the cosmic bubbles. But human eyes and minds do an excellent job of noticing the wispy arcs of partially broken rings and the circles-within-circles of overlapping bubbles. The Milky Way Project taps into the "wisdom of crowds" by requiring that at least five users flag a potential bubble before its inclusion in the new catalog. Volunteers mark any candidate bubbles in the infrared Spitzer images with a sophisticated drawing tool before proceeding to scour another image.

"The Milky Way Project is an attempt to take the vast and beautiful data from Spitzer and make extracting the information a fun, online, public endeavor," said Robert Simpson, a postdoctoral researcher in astronomy at Oxford University, England, principal investigator of the Milky Way Project and lead author of the paper.

The data come from the Spitzer Galactic Legacy Infrared Mid-Plane Survey Extraordinaire (GLIMPSE) and Multiband Imaging Photometer for Spitzer Galactic (MIPSGAL) surveys. These datasets cover a narrow, wide strip of the sky measuring 130 degrees wide and just two degrees tall. From a stargazer's perspective, a two-degree strip is about the width of your index finger held at arm's length, and your arms opened to the sky span about 130 degrees. The surveys peer through the Milky Way's disk and right into the galaxy's heart.

The bubbles tagged by the volunteers vary in size and shape, both with distance and due to local gas cloud variations. The results will help astronomers better identify star formation across the galaxy. One topic under investigation is triggered star formation, in which the bubble-blowing birth of massive stars compresses nearby gas that then collapses to create further fresh stars.

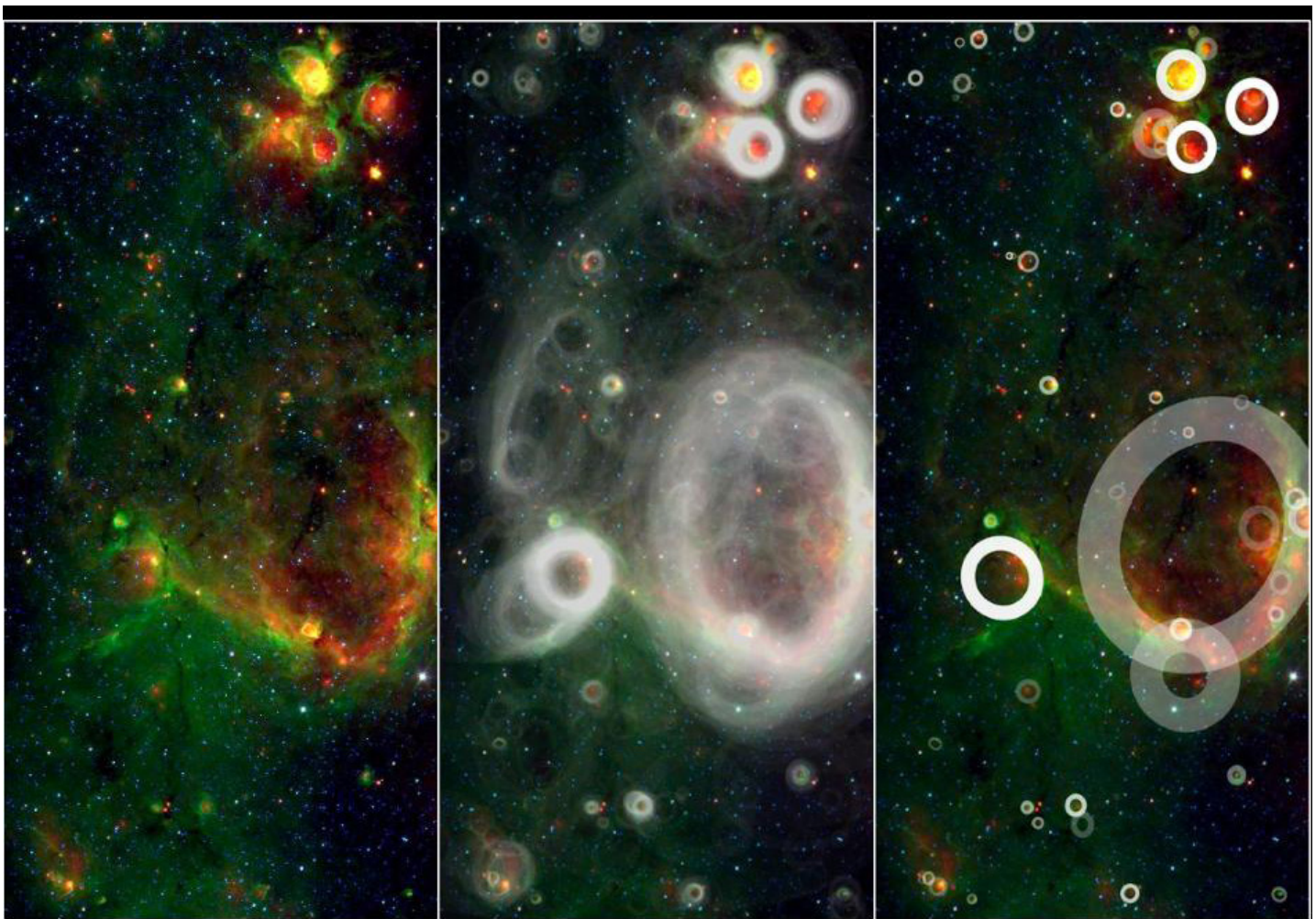
"The Milky Way Project has shown that nearly a third of the bubbles are part of 'hierarchies,' where smaller bubbles are found on or near the rims of larger bubbles," said Matthew Povich, a National Science Foundation Astronomy and Astrophysics Postdoctoral Fellow at Penn State, University Park, and co-author of the paper. "This suggests new generations of star formation are being spawned by the expanding bubbles."



Variations in the distribution pattern of the bubbles intriguingly hint at structure in the Milky Way. For example, a rise in the number of bubbles around a gap at one end of the survey could correlate with a spiral arm. Perhaps the biggest surprise is a drop-off in the bubble census on either side of the galactic center. “We would expect star formation to be peaking in the galactic center because that’s where most of the dense gas is,” said Bressert. “This project is bringing us way more questions than answers.”

In addition, the Milky Way Project users have pinpointed many other phenomena, such as star clusters and dark nebulae, as well as gaseous “green knots” and “fuzzy red objects.” Meanwhile, the work with the bubbles continues, with each drawing helping to refine and improve the catalog.

For those interested in counting bubbles and contributing to the Milky Way Project, visit the following link: [www.milkywayproject.org](http://www.milkywayproject.org) . To learn of other citizen science-based efforts, check out the Zooniverse: <https://www.zooniverse.org/> .



*A team of volunteers from the general public has pored over observations from NASA's Spitzer Space Telescope and discovered more than 5,000 "bubbles" in the disk of our Milky Way galaxy. Image credit: NASA/JPL-Caltech/Oxford University*

# Observation Sites

## O'Brien Observing Site

Have you been to O'Brien site yet? This is a great site that is available to NHAC members. It has open fields with a treed horizon in all directions at 5 degrees and is located in Montgomery, Texas (heading west on Highway 105).

If you would like to use this site in the future, please read the use policy on the NHAC web page (click on the "Star Party!" link from the Home page), and please follow this process:

- Tim and Wanda O'Brien and their family are our hosts. They are on Netslyder, the email list server.
- To request use of the site, send an email out on Netslyder to: [NHAC@mail.netslyder.net](mailto:NHAC@mail.netslyder.net) (you must already be a member of the Netslyder mailing list)
- Requests must be made more than 24 hours in advance.
- Wanda or Tim will reply on Netslyder to let you know it is ok.
- Other members are welcome to also attend that night. Once approved, another request is not necessary at that point.
- The site is open to members and their guests (only when the member is present).

If you have any questions, please contact Mike Kramer or James Billings at [observation@astronomyclub.org](mailto:observation@astronomyclub.org)



# Observation Sites

## White Eagle Lodge (WEL)

The White Eagle Lodge is a private church retreat in Montgomery, TX. It has an open field with dark western and northern skies, although the east does suffer from light pollution. The north and east have good low horizons, while the west and southwest are somewhat obstructed by trees.

Other notes and the procedure for reserving a night in addition to the regular monthly NHAC star parties may be found [here](#).

The property owners (St. John's Retreat Center) request that all users sign a [Release of Liability Waiver](#).

Additional information and Directions are available online at [www.astronomyclub.org](http://www.astronomyclub.org).



# The Insuperity Observatory at Humble ISD



*The Insuperity Observatory at Humble ISD, 2505 S. Houston Ave., Humble, TX 77396 281-641-STAR*

## 2012 Public Nights at the Observatory\*

- April 6, 2012 @ 7:45 p.m.
- May 4, 2012 @ 8:00 p.m.
- June 1, 2012 @ 8:15 p.m.
- July 6, 2012 @ 8:30 p.m.
- August 3, 2012 @ 8:15 p.m.
- September 7, 2012 @ 7:30 p.m.
- October 5, 2012 @ 7:00 p.m.
- November 2, 2012 @ 5:30 p.m.
- December 7, 2012 @ 5:30 p.m.

*\*Dates and times are subject to change.*

# Refreshment Committee Chairman Needed

**Your hungry club members need YOU! Yes, YOU!!**

Have you been thinking about getting more involved with the club, but weren't quite sure what to do? Well, this would be a great way to help out! We are looking for someone to be in charge of the meeting refreshments each month.

Your job would be to see that the refreshments are ordered, picked up and delivered to the meeting each month. They would need to be set up prior to the meeting and taken down after the meeting. You would also need to see that all of the necessary utensils were kept on hand.

As Chairman, you may choose to delegate this monthly, or handle it yourself with a few bodyguards. :)



*Position:* Available immediately

*Salary:* We will pay you on Tuesday for the hamburger today

*Satisfaction:* Priceless

**Contact** [board@astronomyclub.org](mailto:board@astronomyclub.org)

## We need YOU!!

# About NHAC

The North Houston Astronomy Club (NHAC), was formed for educational and scientific purposes, for people of all races, creeds, ethnic backgrounds and sex, for the primary purpose of developing and implementing programs designed to increase the awareness and knowledge of astronomy, especially for those living near the north side of Houston Texas.

NHAC is a non-profit organization dedicated to providing the opportunity for all individuals to pursue the science of astronomy, by observing in a dark-sky site, learning the latest technology, and sharing their knowledge and experience. Thus, our "Observe-Learn-Share" motto.

*North Houston Astronomy Club is Sponsored by:*



## Membership Benefits

- Loaner telescopes
- Borrow from the NHAC "Library"
- Observe from Dark Sky Observing Sites
- Learn from experienced amateur astronomers
- Share your knowledge at club hosted picnics and star parties
- Discount magazine subscriptions (contact our Treasurer)
- Includes membership in the Astronomical League
- The quarterly Astronomical League magazine "Reflector"
- Eligibility for NHAC Executive Board

[www.astronomyclub.org](http://www.astronomyclub.org)  
[www.nhac.info](http://www.nhac.info)

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