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OBSERVE - LEARN - SHARE

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UPCOMING EVENTS

- Nov 13 and 14
NHAC Star Party @ O'Brien Dark Site
- Nov 19
General Meeting (Zoom)
- Dec 12
NHAC Star Party @ O'Brien Dark Site
- Dec 17 (18?)
General Meeting (Zoom)

MONTHLY MEETING

The General Meeting (Zoom) will be at 7 P.M. on Thursday, November 19. The presenter will be Tom Field who has been a Contributing Editor at Sky & Telescope Magazine for the past 7 years. His presentation will be *“You can almost touch the stars”*.

Mr. Field is the author of the RSpec software (www.rspect-astro.com) which received the S&T “Hot Product” award in 2011. He is a popular speaker who has spoken to hundreds of clubs via the web and in-person at many conferences, including NEAF, the NEAF Imaging Conference, the Winter Star Party, the Advanced Imaging Conference, and others.

There will not be a Novice Meeting in November.

Please check your email and the [NHAC Website](#) for further details and updates.

CLUB NEWS



William W. (Bill) Leach

1949 – 2020

Bill Leach has been an anchor in the North Houston Astronomy Club since its inception. Bill moved on to the great observatory in the sky on the evening of October 28, 2020. Bill was an organizer and founder of the club in 1999. He served on the Board as President of NHAC as well as in many other roles. He was involved with all of the astronomy clubs in the Houston area as well as Astronomy Day at the George Observatory for many years. Bill could always be counted upon to bring an interesting and thought-provoking presentation to an NHAC Meeting, or to teach a Novice Session when there was a need. He was always anxious to share his knowledge with others, at meetings, outreach events, and through teaching astronomy at Lone Star College – Kingwood. His love for astronomy provided the spark that has brought the joy and excitement of astronomy to thousands of people. His guidance and wisdom through the years provided direction for NHAC and helped our club become the success it is today.

I remember picnics in the past where Bill would bring his infamous “beans” - They were a dish to remember. I remember his sharing the college’s 20-inch Dobsonian Telescope at those events to make the wonders of the night sky so much more real, and so much closer. Bill is one of the few people I know who actually saw the northern lights from west of Houston the one time they were visible near Houston in the past 20 years.

Bill’s dry humor and comradery will be greatly missed. Thank you, Bill, for all you have done for the North Houston Astronomy Club and the astronomy community in greater Houston. We wish you many clear skies as your journey through the universe continues.

Aaron Clevenson, NHAC

2021 NHAC Board Elections

Every December, Club members elect the NHAC Executive Board for the coming year. All members in good standing, with six months or more current membership, may run for office. In the event that no Candidates step forward, the Club Nominating Committee provides input.

The proposed Executive Board for 2021 is:

President - Bruce Pollard (current Vice President)
 Vice President – Robert Brayton
 Secretary - Rusty Hill (incumbent)
 Treasurer – Joana Tan Gramajo (incumbent)
 Astronomical League Coordinator – Aaron Clevenson (incumbent)
 Membership Chair – Hagen Miller (incumbent)
 Program Chair – Susan Pollard
 Observation Chair – James Billings (incumbent)
 Webmaster – Jamie Martin
 Newsletter – Jeff Schilling

Be sure to attend (via Zoom) the December General Meeting to cast your vote.

NHAC Outreach

The calendar at the [NHAC Website](#) shows dates and information about planned outreach events. These are generally held outdoors and are weather dependent.

These events are good opportunities for Club members to introduce visitors to the wonders in the sky. Typically, one or more Club members assist at each event. Watch for emails from Aaron Clevenson to announce the events and please help out when you can!

Any changes or cancellations will be announced by emails and will be posted on the [NHAC Website](#).

2021 NHAC Calendar

Orders are being taken for the 2021 NHAC calendar. These are full color calendars with photos by Club members, and dates with astronomical and historical significance. They are \$10 each. There will be a limited run and will be printed on demand. Place your order soon, with Joana Tan - [email](#).

Astronomical League

The North Houston Astronomy Club has been an affiliate of the Astronomical League since the Club's inception in 1999. NHAC members are automatically enrolled in the League and can participate in the League's observing programs according to their time and interests. Currently there are 72 observing programs, with more being added all the time.

Aaron Clevenson serves as the NHAC Astronomical League Coordinator. He can be contacted at aaron@clevenson.org.

We welcome news, photos, comments and contributions for the newsletter. Please send them to newsletter@astronomyclub.org by the 10th of each month.

The latest issue of "What's Up, Doc" by Aaron Clevenson is at [What's Up, Doc?](#)

GALLERY



Photo by Dick Locke

Zodiacal light, visible from very dark skies after sunset, is actually sunlight reflecting off dust! Above you can see the zodiacal light above the tree & scope, pointing up towards the Pleiades (M45) (see below). I used my red flashlight to paint the tree & scope for effect. Nikon D200 camera, 30 second exposure with super-wide lens, Tokina 12-24 F4 G lens at 12mm, from Spring 2009 trip to the Davis Mountains.

Photo by Joana Tan Gramajo

From my backyard on the evening of October 2, 2020, with my Nikon D3200 at 200 mm, f/5.6 at 1/100 second at ISO 100. Edited on Photoshop Express. Mars and the moon were separated by less than 2 degrees.



A FEW OF OUR FAVORITE BOOKS

Most stargazers have a respectable library of books about astronomy, including charts and atlases, reference books, histories, biographies, how-to manuals, etc. Following is a short list of some of our favorite books:

Bruce Pollard

- *Fields of Color: The theory of quantum fields that escaped Einstein* by Robney A. Brooks

One current line in Physics sets the particle nature of things aside and connects everything through quantum fields. This book describes the fields and traces the historical development of their theoretical development without burdening the reader with mathematical details.

- *Now: The Physics of Time* by Richard A. Muller

This book will help you fit time as the fourth dimension into your understanding of our dimension.

- *Astrophysics for People in a Hurry* by Neil deGrasse Tyson

Short chapters that address the current status of fundamental things we discuss and wonder about.

Rusty Hill

- *NightWatch: A Practical Guide to Viewing the Universe* by Terence Dickinson, 4th ed.

The best book out there for anyone starting out. Written so high schoolers can comprehend. Assumes zero starting knowledge, goes into simple concepts, types of equipment, first things to learn how to do to be a successful observer, planning an observing session, navigating around the sky, very good charts for all the seasons, and intermediate activities such as basic astrophotography with digital cameras. Gorgeous images, by the way. I found it fascinating reading, not text-bookish at all. If you told me I had to spend the rest of my life with only one reference, I would choose *NightWatch*.

Jesse Roberts

- *The Day We Found the Universe* by Marcia Bartusiak

This book appeals to my interests in history AND astronomy. Bartusiak provides the background of the people and their theories and discoveries concerning the nature of the universe. The cast of characters includes Curtis, Einstein, Hale, Hubble, Keeler, Leavitt, Lemaitre, Lowell, Shapley and Slipher. The “Day” was January 1, 1925. This is a really satisfying book.

- *Celestial Sleuth: Using Astronomy to Solve Mysteries in Art, History and Literature* by Donald W. Olson

Don Olson is a Professor of Physics and Astronomy at Texas State University. He and his students solve mysteries for fun and academic credit. One reviewer calls his work “forensic astronomy”. I guess that is a good way to describe the clever work that Olson and the students do. Enjoyable and entertaining reading. There is also a sequel.

- *Binocular Highlights: 99 Celestial Sights for Binocular Users* by Gary Seronick

This is an excellent book for a binocular or small telescope user who wants to see the highlights beyond our solar system. It’s printed on heavy moisture resistant paper, is spiral bound and has good charts with typical binocular fields of view, so it’s useful out in the field. There is also a newer edition with 109 sights.

1920s ASTRONOMY

Bill Leach was a frequent contributor to our North Star newsletter. His four part series on Cosmology (June, July, September and October 2020 issues) was very popular and readers were looking forward to more installments, but it was not to be, as Bill passed away on October 28 (see page 3 of this issue). 1920s Astronomy is the last article that Bill provided to us before his passing. Thank you, Bill!

By William W. Leach, Lone Star College Professor of Physics, NHAC Founder

- Rocket scientist Robert H. Goddard had been discussing space flight for several years but was ridiculed by The New York Times who held that spaceflight is impossible. When Apollo was on the way to the Moon, the Times retracted their statement.
- Albert Michelson measures the diameter of the star Betelgeuse using a stellar interferometer on Mt. Wilson in California. It was the first measurement of the diameter of a star besides the Sun.
- The Great 1920 Debate: Harlow Shapley from the Mt Wilson Observatory in southern California argued that there was only one galaxy. Hebert Curtis of the Lick Observatory in Northern California argued that there were many galaxies.
- Smithsonian Institute publishes article by Robert Goddard about “A Method of Researching Extreme Altitudes”.
- In 1920, Thomas Gold was born. He was one of the 1948 founders of the “Steady State Theory” that opposed the “Big Bang Theory”.
- Isaac Asimov was born. He was a professor of biochemistry and infamous science fiction writer.
- By 1920, American Astronomers had unprecedented influence on the international astronomical community because of wartime loses in Europe according to the Harvard Smithsonian Gazette.
- Ernest Rutherford predicts the existence of the neutron.
- Einstein presents his Leiden lecture where they are still debating the existence of the “ether”.
- John Brashear dies. He was an American astronomer and instrument builder.

REFLECTIONS OF A VERY AMATEUR ASTRONOMER

By Susan Pollard

I have always loved the night sky. I grew up in South Florida where the sky was fairly bright but there were places like the beach or the Keys which offered a darker sky. When I got to college, I took the 2 astronomy courses you could take without needing physics or math (that is where the very amateur part comes in, I don't have much of a physical science background). As good as the courses were, the best parts were the trips the dark site. After college, I continued to enjoy looking up, but I was not very connected with astronomy until I discovered the North Houston Astronomy Club several years ago. At first, I was bit intimidated because of my limited knowledge but the club is welcoming and members are so willing to share their knowledge that it was not an issue. The star parties have been phenomenal. I have looked through many telescopes and seen some amazing sights as members generously shared their views. I also found out just how much I could see with binoculars!

Joining the board of the astronomy club after a few years, took my experience to a different level. I served as both secretary and president and greatly enjoyed the opportunity to be a part of steering the club and helping plan for the future. I really loved working with the board and getting to know so many club members.

I have found that what I enjoy most is sharing astronomy with others. The Atascocita Star Parties, participating in Astronomy Day events and volunteering at Insperity Observatory has been so much fun. Talking with people who rarely see a dark sky and have the chance to see the moon or a globular cluster up close is energizing. There is nothing like hearing someone's surprise the first time they see Saturn. I am very happy to be a part of this group and continue to learn and share.

NOVEMBER STAR PARTY

By Rusty Hill

Star Party, 2 nights!

Friday and Saturday, November 13 and 14, 2020

Sunset: 5:25-5:30 P.M.

Moon—no moon until almost dawn.

Hello NHACERS:

With the weather for this weekend not being clear-cut, we are having a 2-night Star Party, and are requesting both Friday and Saturday for it. Hopefully at least one night will be good, and maybe both. Wouldn't that be neat? This might be our last pleasant temperature weekend of the fall.

As always, stay safe, wear masks for the protection of those around you in case you have COVID-19 and do not know it, and keep at least 6' away from those who are not family members.

Friday and Saturday evenings both look to be probably good observing. In the West at about 6 P.M., Bootes will still be up, and Sagittarius will also be well up in the Southwest. This will be the last Star Party to see them until late in the Spring.

Between Bootes and Sagittarius both Ophiuchus and Hercules will still be pretty high. Jupiter with Saturn just to the left (East) will be easily visible in the Southwest, but not for much longer. They are sinking rapidly. Pluto is very close to Jupiter, but bring a BIG telescope! Mars is somewhat to the East, and will continue to be easily seen for a few months longer.

Overhead you can easily see the Summer Triangle: Altair in Aquila, Deneb in Cygnus, and Vega in Lyra. You can easily see Albireo in the "head" of Cygnus, and M-57 will be visible in Lyra, although it may be difficult to see in smaller telescopes. The Great Square of Pegasus will be almost overhead, and the Andromeda Galaxy should be visible slightly to the East.

By 9:00 P.M. Taurus will be well up in the East. Aldebaran, the "red eye" and M45, The Pleiades, will be easily seen. Orion will be rising in the East. When it gets above the haze layer it should be easy to pick out the Orion Nebula, M42, and its sister M43 slightly closer to Orion's Belt.

Please remember to keep it safe: Covid-19 distancing, clothes enough to stay comfortable, cell phone, do pack up and leave while you are still feeling good. Do not wait until you are tired.

I will try to be there both evenings, and if anyone does not know how to get there, please let me know at 210-862-5478. I will meet you at the stop light on Highway 105 in Dobbin. I plan to bring my 8" Dobsonian telescope and also my 9x63 binocular. I will offer help to any who have questions. There will likely be others there who know more than I and can answer those questions.

Have a nice week, and I will see you this weekend.

Rusty

DARK SITE INFORMATION

If you are new to the club, Star Parties are especially for you. We, the members, are the reason we have observing Star Parties, and they are great occasions to get familiar with observing. We have 10" Dobsonian telescopes available at the Dark Site for your use. There will also be several other scopes available for all to try. And do bring a Binocular-- you can do lots of successful observing with nothing more.

NHAC Club Policy is that the focus of the Star Parties will be to give as much assistance as possible to new observers. For those who may not have been to the O'Brien Dark Site, it is just north of Dobbin, which is on Highway 105 west of Montgomery. It has reasonably dark skies and a great low horizon in all directions. The Owners, Tim and Wanda O'Brien, are very generous hosts, and they do turn off any outside lights which might bother us, if we remember to ask.

The specific Dark Site location is password protected. Any club officer can give you the password, but it is NOT FOR THE GENERAL PUBLIC!

Access to the Dark Site must be requested from the O'Brien's in advance via the NHAC email. It is only necessary for any 1 member to request access... Access approved for any of us is access approved for all of us.

On our NHAC web site, click on "Observing" then select "O'Brien Dark Site". Scroll down to the O'Brien Dark Site information and look for the "detailed directions" link. You will need to enter the password. There are maps as well as directions. It is well worth the drive, which is about 6- or 7-minutes driving time north of Dobbin off of State Highway 105 west of Montgomery.

Star Parties are routinely scheduled for the Saturday on, just before, or just after the New Moon throughout the year. This is to provide the best opportunity for dark skies.

INSPERITY OBSERVATORY



Public Night at the Insperity Observatory – December 4, 2020

Due to pandemic precautions, attendance is limited, by reservation only, and viewing will be video observations through the telescopes. Watch for emails with reservation announcements.

The Observatory has a 6" Takahashi refractor, a 16" Meade Schmidt-Cassegrain, and a 20" Plane Wave telescope. Each is computer controlled, and provides an awesome view of the sky. This can be a great opportunity to see a new or favorite object in a large telescope.

The Observatory is about 3/4 of a mile south of Will Clayton Parkway on S. Houston Ave, just north of Rankin Road in Humble, in the back part of the Jack Fields Elementary School on the East side of S. Houston Ave. The address is:

Jack Fields Elementary School
2505 S. Houston Ave.
Humble, TX 77396

For more information, the Observatory phone number is 281-641-STAR and the web site is <https://www.humbleisd.net/observatory>. Dates and times are subject to change.

ABOUT NHAC

The North Houston Astronomy Club (NHAC) is a not-for-profit organization established in 1999 for educational and scientific purposes, for people of all races, creeds, ethnic backgrounds and sex. Our primary purpose is to develop and implement programs to increase the awareness and knowledge of astronomy, especially for those living near the north side of Houston, Texas.

NHAC is dedicated to providing an opportunity for people to pursue the science of astronomy, to observe in a dark-sky site, to learn the latest technology, and to share their knowledge and experience, thus our "Observe-Learn-Share" motto.

Public meetings are normally held each month on the fourth Friday. In the months of October, November and December they are usually rescheduled for the third Friday of each month, so as to not conflict with the Annual All Clubs meeting, Thanksgiving, or Christmas.

The benefits for membership include:

- Loaner telescopes after being a member for 6 months.
- Opportunity to observe from dark sky observing sites.
- Learn from experienced observers.
- Astronomy Magazine subscriptions at a discount.
- Astronomical League membership, with its many observing programs.
- Subscription to the Astronomical League magazine "Reflector".
- Access to the NHAC library
- Discounts on purchases at Land, Sea and Sky. Be sure to identify yourself as an NHAC member.

More information at the [NHAC Website](#)

Check out our [Facebook page](#).

Our mailing address is:

North Houston Astronomy Club
Post Office Box 5043
Kingwood, TX 77335-5043

NHAC is sponsored by:



CALENDAR. MEMBERSHIP. OFFICERS

NHAC General Calendar			
	Executive Board Meeting	Star Party	Monthly Meeting
November 2020	Nov 9	Nov 13 and 14	Nov 19
December 2020		Dec 12	Dec 17 (18?)
Dates and times are subject to change. Star parties are weather permitting.			

Membership

Memberships run from January 1 through December 31.

Full year dues are:
 Students \$10
 Individuals \$30
 Family Groups \$40

Membership applications and dues payments can be made at the NHAC website at:
[NHAC Website](#)

2020 NHAC Executive Board

President	Carlos Gramajo - email
Vice-President	Bruce Pollard - email
Secretary	Rusty Hill - email
Treasurer	Joana Tan - email
Newsletter Editor	Jesse Roberts - email
Astronomical League Coordinator	Aaron Clevenson - email
Webmaster	Bruce Pollard (interim) - email
Observation Chair	James Billings - email
Membership Chair	Hagen Miller - email
Program Chair	Trevor Arnold - email

AFFILIATIONS

NHAC is a member of:



The Astronomical League

<https://www.astroleague.org/>



Night Sky Network

<https://nightsky.jpl.nasa.gov/>



INTERNATIONAL DARK-SKY ASSOCIATION

International Dark Sky Association

<https://www.darksky.org/>