

North Star Newsletter

November 2011

Volume XI No. 11

NHAC General Meeting

October 28, 2011

NOVICE PROGRAM

“Observing in the ‘Hood“
by Dr. Aaron Clevenson

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

MAIN PRESENTATION

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

- NHAC news and announcements
- *“What’s Up Doc?”* by Aaron Clevenson

FEATURED SPEAKER

Dave Clark
NHAC

“Video Astronomy - Occultations”



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The Deadline for submissions for the
December 2011 newsletter
is November 15, 2011.

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THANK YOU!

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photo credit: Roger Wheatley

The Fantastic Ways Stars Die” was the topic at the September meeting of the North Houston Astronomy Club. Dr. Reginald Dufour, Professor of Astrophysics at Rice University, described the origins, life and death of stars into pulsars, neutron stars, supernovae and planetary nebula. Describing how the mass of stars determines their fate and when they “die,” Dr. Dufour introduced chemistry, physics, and time into his discussion. He also alerted members to a current supernova close to the handle of the Big Dipper.

2012 Board Elections

NOMINATIONS FOR 2012 BOARD SERVICE NOW BEING ACCEPTED

A slate of candidates for 2012 NHAC officers and committees is being developed by our Nominating committee as you read this note. Elections will take place at the December General Meeting.

It takes more than dues to keep the club running. It takes some level of personal involvement, and it is here that YOU are invited to step forward and assist with the direction of club operation through service on the Executive Board.

Helping the club in board activity is both informative and educational. Build your resume, add to your experience, and help others all in one package. Start Now!

How do I do that? Let any member of the Nominating Committee know of your interests and availability. They are: Ken Dwight, Ed Knapton and George Marsden.

Prerequisites: Board service requires member be in good standing for the previous six months.



2011 NHAC OFFICERS



2011 Elected Officers

PRESIDENT

Bruce Pollard

president@astronomyclub.org

WEBMASTER

Ed Knapton

webmaster@astronomyclub.org

VICE PRESIDENT

Aaron Clevenson

vicepresident@astronomyclub.org

ALCOR

Jim Barbasso

alcor@astronomyclub.org

SECRETARY

Susan Pollard

secretary@astronomyclub.org

OBSERVATION COMMITTEE CHAIRPERSON

****open****

observation@astronomyclub.org

TREASURER

Mary Moore

treasurer@astronomyclub.org

MEMBERSHIP COMMITTEE CHAIRPERSON

Bruce Pollard/Stuart Davenport

membership@astronomyclub.org

EDITOR

Jamie Martin

newsletter@astronomyclub.org

PROGRAM COMMITTEE CHAIRPERSON

George Marsden

program@astronomyclub.org

“It is the chiefest point of happiness that a man is willing to be what he is.”
Desiderius Erasmus (1466 - 1536)

NHAC is a proud member of:



News and Tidbits

Upcoming Star Parties

The 28th Annual **Eldorado Star Party** will be held October 24 - 30, 2011 at the X Bar Ranch Nature Retreat in Eldorado, Texas. For more information and registration go to the [Eldorado website](#).

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, George Marsden at 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.

Remember to check out the North Houston Astronomy Club
Facebook and Twitter pages:



<http://www.facebook.com/NorthHoustonAstronomyClub>



http://www.twitter.com/NHAC_Info

Upcoming NHAC Events

October 29, 2011 - 5:00 p.m.

BBQ and Star Party!!!
Food, observing, and fun until ???

Where: O'Brien Dark Site

What to bring:

- Telescopes & binoculars if you have them
- bug spray
- drinks
- jacket/light blanket/warm stuff - in case it gets chilly.

Come for the food or come to observe, or better yet, come for both.

No equipment - no problem! Novices are welcome. We all love to share the sights through our telescopes. Great opportunity to work on or get started with your AL observing list.

Know someone who might be interested in joining the club? Bring them too!

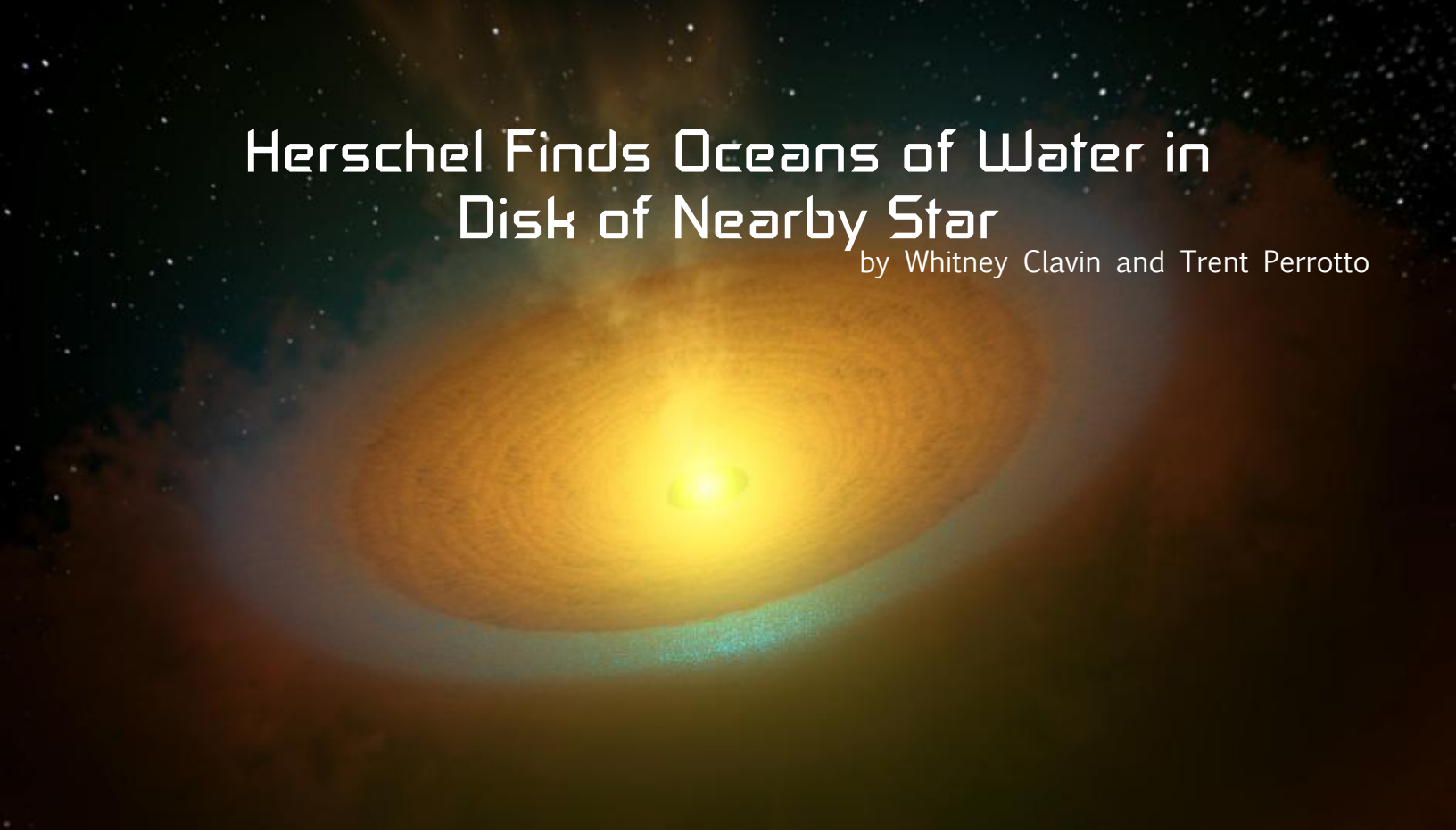
If you would like to bring a side or a dessert - great!
Check to sign up and see what others are bringing.

December 16, 2011

NHAC Executive Board Elections

Herschel Finds Oceans of Water in Disk of Nearby Star

by Whitney Clavin and Trent Perrotto



Using data from the Herschel Space Observatory, astronomers have detected for the first time cold water vapor enveloping a dusty disk around a young star. The findings suggest that this disk, which is poised to develop into a solar system, contains great quantities of water, suggesting that water-covered planets like Earth may be common in the universe. Herschel is a European Space Agency mission with important NASA contributions.

Scientists previously found warm water vapor in planet-forming disks close to a central star. Evidence for vast quantities of water extending out into the cooler, far reaches of disks where comets take shape had not been seen until now. The more water available in disks for icy comets to form, the greater the chances that large amounts eventually will reach new planets through impacts.

“Our observations of this cold vapor indicate enough water exists in the disk to fill thousands of Earth oceans,” said astronomer Michiel Hogerheijde of Leiden Observatory in The Netherlands. Hogerheijde is the lead author of a paper describing these findings in the Oct. 21 issue of the journal *Science*.

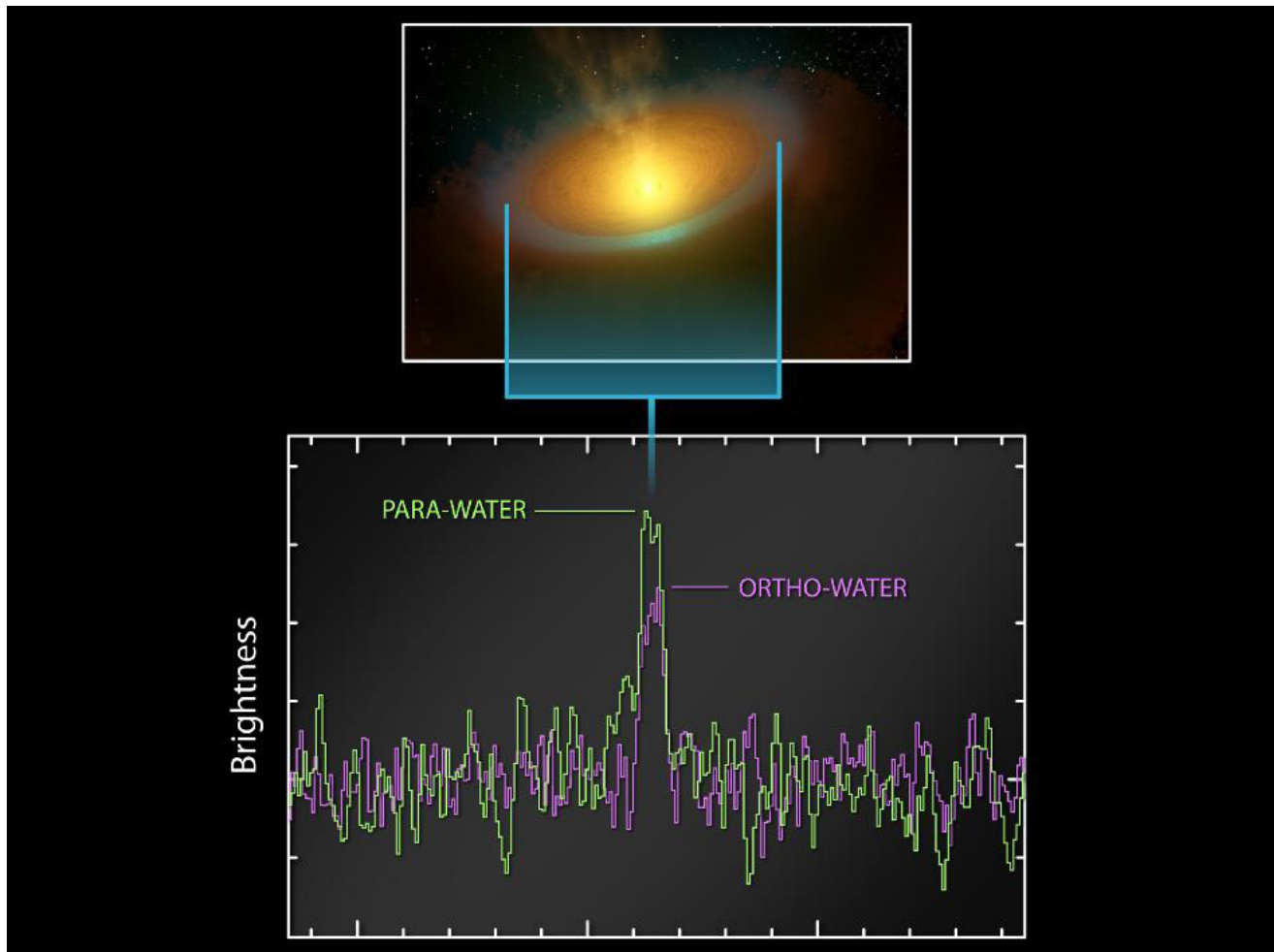
The star with this waterlogged disk, called TW Hydrae, is 10 million years old and located about 175 light-years away from Earth, in the constellation Hydra. The frigid, watery haze detected by Hogerheijde and his team is thought to originate from ice-coated grains of dust near the disk’s surface. Ultraviolet light from the star causes some water molecules to break free of this ice, creating a thin layer of gas with a light signature detected by Herschel’s Heterodyne Instrument for the Far-Infrared, or HIFI.

“These are the most sensitive HIFI observations to date,” said Paul Goldsmith, NASA project scientist for the Herschel Space Observatory at the agency’s Jet Propulsion Laboratory in Pasadena, Calif. “It is a testament to the instrument builders that such weak signals can be detected.”

Continued from page 7

TW Hydrae is an orange dwarf star, somewhat smaller and cooler than our yellow-white sun. The giant disk of material that encircles the star has a size nearly 200 times the distance between Earth and the sun. Over the next few million years, astronomers believe matter within the disk will collide and grow into planets, asteroids and other cosmic bodies. Dust and ice particles will assemble as comets.

As the new solar system evolves, icy comets are likely to deposit much of the water they contain on freshly created worlds through impacts, giving rise to oceans. Astronomers believe TW Hydrae and its icy disk may be representative of many other young star systems, providing new insights on how planets with abundant water could form throughout the universe.



This graph of data from Herschel shows how the cool water vapor was detected. Water molecules come in two “spin” forms, called ortho and para, in which the two spins of the hydrogen nuclei have different orientations. In this case, the team compared the ratio of ortho to para water seen in the TW Hydrae disk to that in comets, and found very low values. Lower ratios indicate cooler temperatures, though in practice the analysis is much more complicated. This is the first demonstration that water exists in large quantities in the frigid, outer regions of solar systems, where comets take shape.

Observation Sites

O'Brien Observing Site

Have you been to O'Brien site yet? This is a new location 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 (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 Aaron Clevenson, directly, at aaron@clevenson.org



Observation Sites

White Eagle Lodge (WEL) Monthly Star Parties

Come on out for Socializing and Stargazing!

Mark these dates on your calendar for future NHAC Star Parties at The White Eagle Lodge (WEL):

November 26, 2011

December 17, 2011

**These dates are tentative and subject to change.*

Rules and Directions are available online at www.astronomyclub.org.



The Insperity Observatory at Humble ISD



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

Upcoming Public Nights at the Observatory*

November 11, 2011 @ 5:30 p.m.

December 2, 2011 @ 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

**We need YOU!!
Step on up!!**

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
www.nhac.info

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Observe - Learn - Share

