



VBAS Highlights for November

Public Programs for November

Our next member's meeting will be held on Friday, November 21st at 7 PM. Former president and avid observer Jeff Delmas will present a program on selecting your first telescope. VBAS Member Meetings are held on the 3rd Friday of each month at 7 PM; they're open to the public and are free.

Regular planetarium programs are held on Saturdays at 7:30 PM. This month, we conclude our year-long series on the planets and other bodies of our Solar System with three family-friendly shows on the Sun, on November 1st, 8th, and 22nd. On the 15th, our own Observatories Director Wes Swift will present a planetarium program on his "day" job *Observing Meteoroids Striking the Moon*. Admission to planetarium shows is free for VBAS Members, \$5.00 for Adults, \$3.00 for Students, and free for children under 6. Observation of the night sky through various telescopes normally follows each planetarium program, weather permitting.

President's Message

On page 2, John Young discusses voting, Veteran's Day, the upcoming holidays, and fundraising.

Meteor Showers for November

Resident Astronomer Doug Horacek informs us about this month's upcoming meteor showers on page 3.

HATS Holiday Reception

On page 5, President John Young invites members to attend the upcoming Huntsville Association of Technical societies reception on December 4th.

The Student's Corner

On page 6, Student Director David Lofts writes about black holes.

The VBAS Library

On page 7, Librarian Terry Owens reviews *The Trained Eye* by Leon Palmer, a book just waiting to be checked out from our library.

Stuhlinger Symposium & von Braun Scholarship Memoriam

Information on the upcoming Stuhlinger Symposium begins on page 7.

VBAS Meeting Minutes

September and October meeting minutes start on page 10. Thanks go to everyone who filled in for me taking minutes the past couple of months.

VSSP 2008

On page 13, Jeff Delmas has submitted an article and pictures of the recent star party ably hosted by Eric Johnson.

Steve Sloan
Via Stellaris Editor
steve@sloan3d.com



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President's Message

by John Young

Greetings friends. I trust this finds you all well. I'd like to communicate three inter-related thoughts and put out a specific call for involvement by the VBAS membership.

Depending upon whether you're reading this issue of the Via Stellaris after November 4th, the first thought may be less relevant in some ways. That thought is obviously the Presidential election this coming Tuesday. We live in a great nation with many freedoms and a higher quality of life than is afforded to multitudes of our planet's inhabitants. Regardless of your stance, a democracy stands so much stronger and upright when we take part in our right and civic duty to vote, so please do.

As a veteran, my next thought is rooted in 10 years of proud and dedicated service to our country and its allies. November 11th is Veteran's Day and, as such, I would ask that you take a moment to give thanks to a veteran for their sacrifice and commitment to keep our nation safe and strong. Spend some time in silence for those that have fallen or will fall in the line of duty. My personal thanks to those that serve and those that support them!

The holiday season is fast approaching and for many this starts with Thanksgiving. I would gather that the traditions held by our diverse membership are varied, but trust that for all there is indeed an essence of gratitude for the good things we have in our lives. For many of you the promise of warm company and good food abound. If you know of someone who is less fortunate or who may not be able to spend it with their family give thought to sharing your home with them. Travel is undoubtedly in store for some of us as well ... safe travels to you and yours and have a pleasant Thanksgiving Day all.

Lastly, our fundraising effort for the facilities addition is in great need of help. The effort centers on raising money to pay for construction of much-needed restroom facilities and additional office-space on the west end of the planetarium. As past President, Jeff Delmas laid out an ambitious, but achievable plan earlier this year. The board approved this plan with the understanding that we would reassess our situation in six months. That

follow-up look took place at our last board meeting and the results are that we're far behind where we need to be. This is no small affair that can be accomplished by one or two people ... it will take a team effort and your help is needed and much appreciated. It matters not whether you specifically have fundraising skills as in many cases it's simply a matter of having contacts or knowing about grant programs within your own companies, having some ideas about alternative fundraising opportunities, or placing flyers in a break room or meeting place of other groups you may be involved with. Please consider getting involved by contacting Jeff at jeff@delmasfamily.net

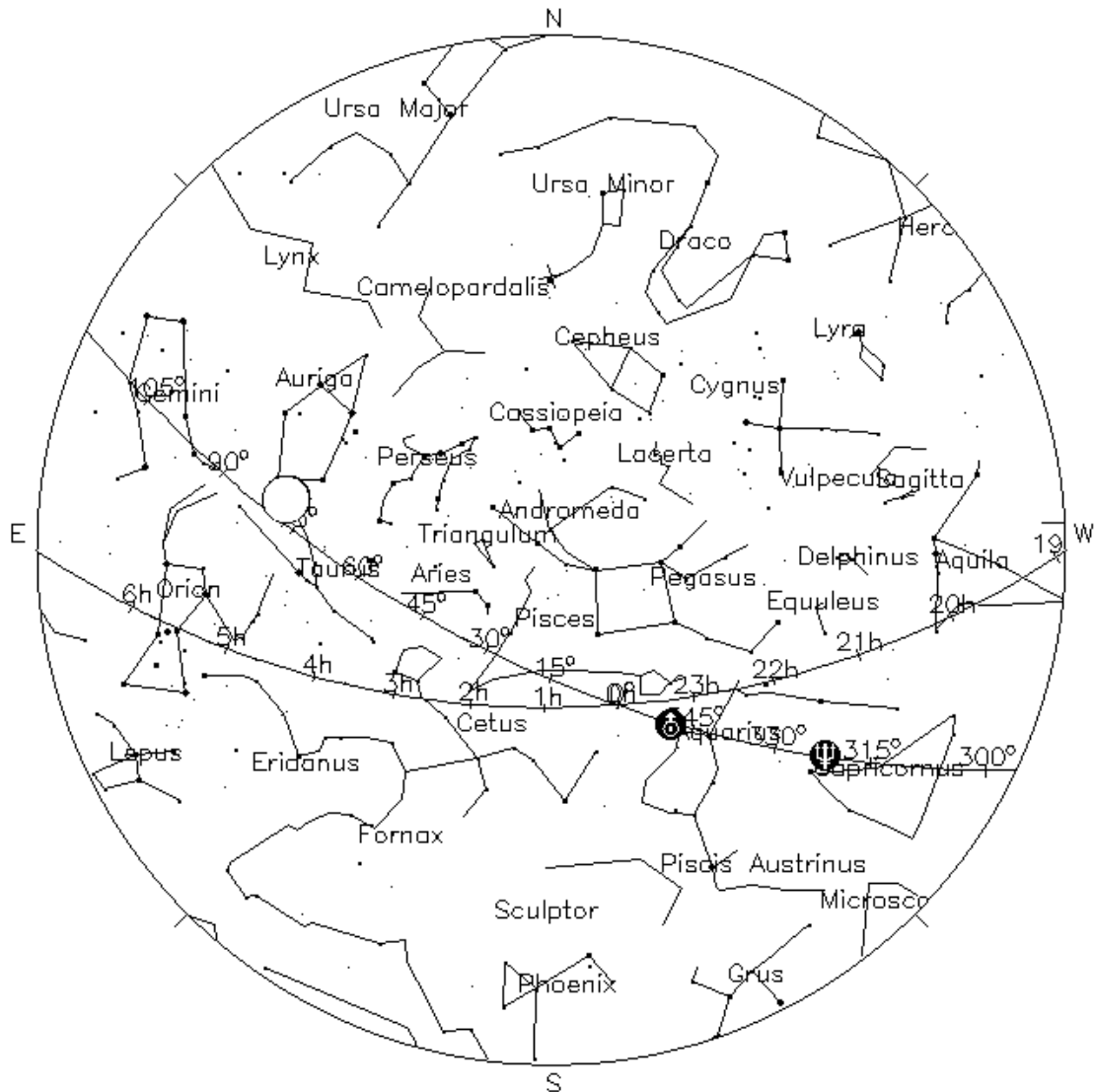
Clear skies to all,

John Young
VBAS President

The Night Sky for November, 2008

Here is the view at 9 PM in mid November, 2008, at 34° N Latitude, 86° W Longitude. The outer planets Uranus (ball and up arrow symbol) and Neptune (trident symbol) will be visible through a telescope.

Map courtesy of John Walker and YourSky (<http://www.fourmilab.to/yoursky/>).



Meteor Showers for November

by Doug Horacek, Resident Astronomer

On 5 November, the Southern Taurids peak. On 12 November, the Northern Taurids peak. On 17 November 2008, the Leonid Meteor shower will peak. However, the moon will interfere.

The Northern Taurids are associated with comet 2/P Encke/Taurid. The comet associated with the Leonid meteor shower is 55/P Tuttle-Temple.

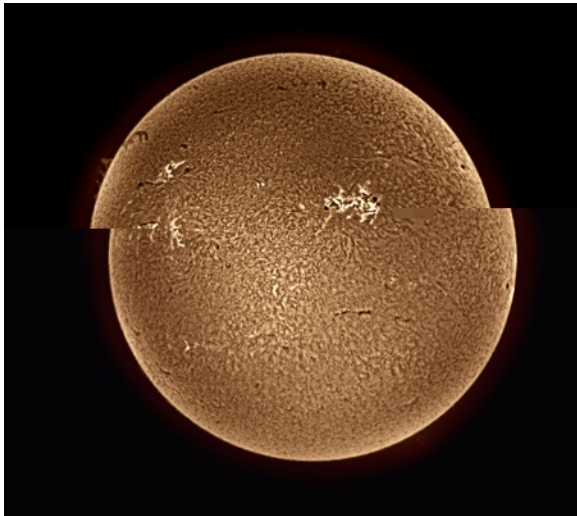
Those are the major showers for November: enjoy.

VBAS Calendar of Events

Saturday, November 1st, 8th, & 22nd, 2008, 7:30 PM

Planetarium Show: *The Sun, An Important Star*

The Sun is an average, active, evolving star. We know its mass, its power source, its surface temperature, and the temperatures of its atmosphere. But there are still many things we do not know: why is there a sunspot cycle, why do some magnetic loops explode and others do not, why is the upper layer of the solar atmosphere (corona) hotter than the lowest layer (photosphere)? This talk about the Sun will incorporate some of the latest data from solar satellites such as Hindoe to explore possible answers to the above questions.



Brown Sun Bubbling (Image credit: Robert Gendler)

Saturday, November 15th, 2008, 7:30 PM

Planetarium Show: *Observing Meteoroids Striking the Moon*

Presented by Wesley Swift

Earthlings have watched their Moon since they evolved the curiosity to do so. The moon goes through phases and cycles, used by the ancients to measure time, but nothing ever seems to happen on the moon itself, or so it seems. So called "Transient Lunar Phenomenon", TLP, have been recorded by careful observers on rare occasions over the millennia. Most TLP appear as hazes, brightenings, colors and flashes. There are many TLP theories but many astronomers have doubts as to their veracity. Until now. Recent advances in low light video cameras and computer video analysis have moved

one class of transient Lunar events into firm science. Moderate to large meteoroids strike the moon regularly, emitting a brief flash of light detectable with a moderate sized telescope equipped with an inexpensive video camera. This is science that can be done by the well equipped amateur astronomer. These observations are helping to define the Lunar environment and to establish the pathways for space travel. After Wes' talk, we'll be viewing the night sky through one or more of VBAS's powerful telescopes, weather permitting.

Friday, November 21st, 2008, 6 PM

Youth Observing Evening, Featuring Perseus and Other Simple Constellations

Location: VBAS

Presented by Doug Horacek

We will have a program at 6:00 PM, followed by an hour of observing afterward. Families are welcome to stay for the members meeting afterward and have pizza and soda or water and enjoy the members program, and if they want stay for some more observing after the members meeting. Call David Lofts at 726-0275 or Doug Horacek at 772-6788 for more information.

Friday, November 21st, 2008, 7 PM

Regular Monthly Meeting: Selecting Your First Telescope

After a short pizza social and marketplace swap meet we'll discuss pertinent society business before moving on to our program. Buying a telescope for yourself or your young astronomer can be a confusing task, given all the styles and range of choices available. Former president and avid observer Jeff Delmas will present a program on selecting your first telescope. Jeff will provide facts on basic telescope designs and current commercial telescope options to help you make an informed decision. After the program, Student Director David Lofts will lead an observing session for students, with several VBAS members available to help young observers of any age.

Friday, December 5th, 2008, 6 PM

Regular Observing Evening for Adults

Location: **VBAS**

Presented by **Doug Horacek**

Doug will be there before sundown to set up, and if the skies are clear we may observe as late as we wish. If cloudy, there will be a planetarium show on the Messier Objects for December. If sufficient progress has been made, those interested in working on the 21 inch may come up and tinker with the telescope. Call Doug Horacek at 772-6788 for more information.

Saturday, December 6th, 13th, & 20th, 2008, 7:30 PM

Planetarium Show: *Christmas Star Show*

What exactly was the object that the wise men saw? Was it a star that stood in the sky two-thousand years ago and marked a single location in Bethlehem? Each year at this special time, we turn back the hands of time to look into the sky of long ago and to search for this mysterious object. As we ponder the skies of Bethlehem, we'll explore several possibilities, including comets, meteors, novae and other phenomena.



In his famous work Adoration of the Magi, painted over a period of about 1304-1306, Renaissance artist Giotto suggested that the Christmas Star might have been a comet.

...And as always, for the most up-to-date information about VBAS events, be sure to check the web site at vbas.org.

HATS Holiday Reception December 4th at the Huntsville Botanical Gardens

by *John Young*

The Huntsville Association of Technical Societies (HATS), of which VBAS is a charter member, will be holding its annual Holiday Reception at the Huntsville Botanical Gardens on Thursday, December 4th from 5:30 to 8:00 p.m. in the Arbor Room. The event will be catered and will also include admission to the Botanical Garden's Festival of Lights. Cost for attending has not been set yet by the HATS planning committee, but I would expect it to be in the \$20-\$25 range.

HATS membership is comprised of over 70 area technical and professional societies so, in ad-

dition to having some good food and drink, you'll have the opportunity to mix and mingle with some interesting company. As in previous years, this event also affords VBAS the chance to share information about our society and our science.

Check out HATS website at www.hats.org for more information or please drop me a line at jgy71@knology.net or 797-6038 if you're interested in attending or getting involved with their event planning committee.

The Student's Corner

Black Holes: A Big Mystery of the Universe

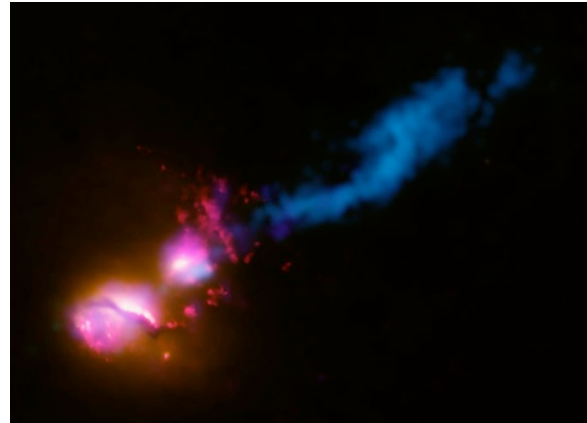
by David Lofts

Wouldn't it be neat if you could transfer yourself to a different universe through a black hole? Would it be like a fast roller coaster? Wouldn't it be nice if school and all of your homework were swallowed up by a black hole? The problem with that though is that it would swallow the Earth too. Your body would be stretched like spaghetti and would be sucked into the black hole, never to be seen again, because even light cannot run fast enough to escape.



The concept of a black hole started with Einstein's equation $E=mc^2$. The equation basically says that gravity curves space-time. What Einstein did not realize is that black holes were a by-product of his equation. A Russian scientist by the name of Karl Schwarzschild formulated a solution to the problem. The solution to the equation was $R=2/GM^2$. This means that mass can only move toward the center of a spot in space with infinite mass. Black Holes form from a dying star that has a mass greater than three times the mass of our sun. The Schwarzschild radius is the distance across the black hole at which light cannot escape. This is also known as the event horizon. A black hole has infinite mass, which means that light cannot escape when it has passed the event horizon. There is an object in Cygnus called Cyg X-1. It is a mas-

sive black hole which has a star orbiting it. We can tell that a star is orbiting by the shift in the spectrum of the star. Some black holes are in the centers of galaxies while others are spread through galaxies.



Wormholes are a mathematical concept. They are thought to be portals in space-time. If this were true a space ship could travel using wormholes as shortcuts to different parts of the universe as seen in some science fiction novels. The problem, though, is that the wormhole would focus a lot of radiation into itself, squirt it out the other side, and fry almost all space ships passing through. Wormholes are supposedly very unstable, which means that they cannot stay open very long. One possible way to keep a wormhole open is to use antimatter (if it even exists).

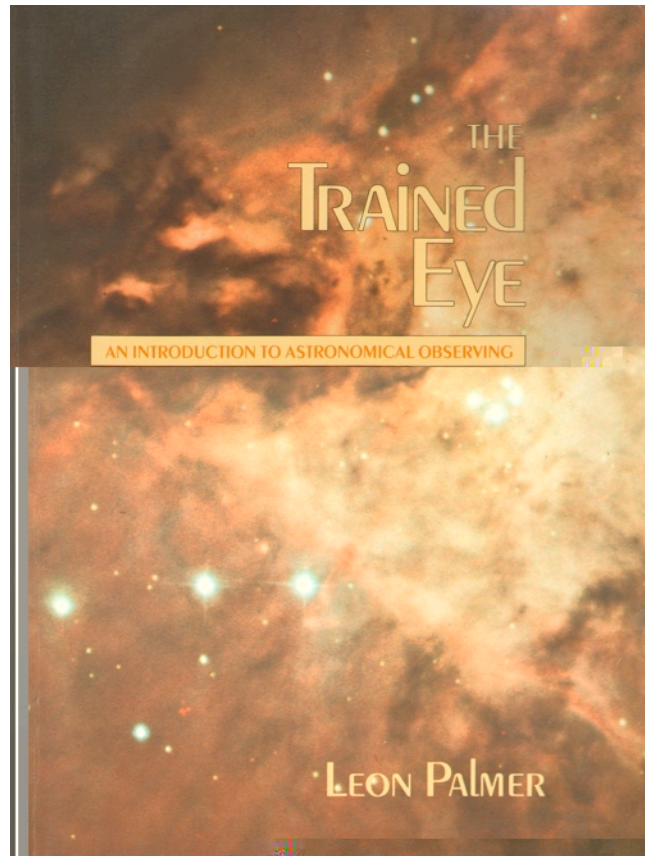
So what is a black hole? Some people think they are "fuzzy balls of string" referring to string theory, others think that they are worm holes. But most people think that black holes are of infinite mass and warp space time. Even though we know a whole lot about black holes (pun intended!), they are still a big mystery to us.

The VBAS Library

by Terry Owens

I love being librarian because I get to peruse all the books we have at our disposal. I have a new favorite book for observation. It's called *The Trained Eye: An Introduction to Astronomical Observing*, by Leon Palmer. This is one of the most comprehensive manuals I have seen. It appears to be a lab manual for an introductory college astronomy class. It provides a complete course structure that leaves no question unanswered. It's written in a very readable and personable style. The chapters flow through the framework of the celestial sphere, how that relates to the horizon coordinate system, telescope optics, pre-observing planning, and advanced observing techniques. This book includes projects you can do on both cloudy and clear nights that bring life to the concepts taught.

VBAS members have a broad interest in many different aspects of Astronomy. Our Library is a rich source of information in which our members can sink their teeth. If you have any over-due books that belong to our Library, please do the right thing and return them so that others can indulge.



Stuhlinger Symposium and VBAS' Memoriam to the von Braun Scholarship Fund

by John Young

Founding VBAS member and aerospace veteran, Dave Christensen, has invited the Society to participate in a symposium honoring the late Dr. Ernst Stuhlinger on Tuesday, November 18th.

As many of you know, in addition to being a pioneer in space exploration in his own right and alongside Wernher von Braun, Ernst was a founding member of our Society and championed our mission and interests for five decades. I have included details of the symposium below.

At the request of event organizers, VBAS will have a small, yet suitable display set up recognizing Dr. Stuhlinger's contributions to astronomy and

the Society. A representative of VBAS will also speak briefly to attendees.

Additionally, as was mentioned in the September Via Stellaris, we are collecting contributions from the membership for a Society donation to UAH's von Braun scholarship fund as a memoriam to Dr. Stuhlinger. We will make this presentation during the symposium. Please consider contributing to this most honorable tribute. Please send donations to:

VBAS
Attn: Treasurer – Stuhlinger memoriam
P.O. Box 1142
Huntsville, AL 35807

**Dr. Ernst Stuhlinger
Recognition Symposium**
Tuesday, November 18, 2008
UAHuntsville University Center Exhibit Hall



The symposium fee is \$85 (\$100 after November 11, 2008) and includes attendance to the symposium, refreshment breaks, lunch, and dinner.

Chairperson	C.R. (Rick) Chappell
1. Stuhlinger Role in Evolution of Space Science	Robert Naumann
2. Current and Future Status of Space Science	Martin Kress

Chairperson	Bernard Schroer
1. Stuhlinger Role in Electric Vehicles	Dieter Nowak
2. Current and Future Status of Electric Vehicles	TBD

Chairperson	William Snoddy
1. Stuhlinger as a Pioneer in Electrical Propulsion	Robert Seitz
2. Current & Future Status of Electrical Propulsion	Frank Curran

Chairperson	Owen Garriott
1. Early Reusable Space Plane	Scott Spearing
2. Evolution of Reusable Space Transportation	William Escher and Uwe Hueter

VBAS Member Meeting Minutes

7:30 PM on Friday, September 19, 2008

Recorded by Doshia Wilson and compiled by Melissa Snider

Called to order at 7:30 pm.

18 members present.

Minutes were read by Jared Cassidy; approved as read and published.

Observers meeting will be held in October.

Youth Observers' group under formation.

First meeting will be Oct 31.

Tennessee State Star Party will be held Oct 24-25.

Observatory notes (Swanson): North Side dome motor has failed. All motors will have to be repaired and/or replaced. Computer that was thought to be waterlogged is working. Dome has been pressure-washed and painted. Has 2 coats; needs a third coat.

HATS banquet was held 2 weeks ago. Melissa Snider was honored as VBAS' Professional of the Year.

Astronomy Day: Publicity: Gena Crook reported that all schools have been notified. Merchandise: Doshia Wilson reported that T-Shirts are in and we need help.

Recycling: Doug Horacek announced that the recycling program has begun at VBAS. Cans, bottles, cardboard and paper will be recycled. Doug and Melissa will take the bins to the recycling center after meeting and shows.

Jared spoke about Gemini Observatory picture. Maybe a planet.

Membership: We had one new member join this month.

Meeting adjourned at 8:15 pm.

VBAS Board Meeting Minutes

7 PM on Tuesday, September 23, 2008

by Jeff Delmas

Attendees:

John Young, Jared Cassidy, Sara Neale, David Lofts, Ethan Chew, Jeff Delmas

Other Attendees:

Doug Horacek, Richard Norman, Cassie Lofts, Doshia Wilson, Terry Owens

The meeting was called to order by President John Young at 7:09 pm. John noted that Secretary Steve Sloan was not able to attend and asked for a volunteer to take minutes. Jeff Delmas agreed to take the minutes for the meeting.

Officer Reports

- Treasurer's report: Sara presented her report to the board. John reported that Sara submitted her resignation, but will remain on staff until Nov 1 or until a replacement can be found.
- Vice President, Jared Cassidy: Jared contacted Chryssa Kouveliotou, senior astrophysicist at MSFC, about speaking at VBAS. She may speak early next year. She is the co-discoverer

of a magnetar with a "strange ring". The October members' program will be on the Cassini Mission from the Night Sky Network. There is currently no program planned for November.

- Student Director, David Lofts: David submitted the Junior Observer's Plan. On Friday, October 31, there will be an observing session for Sky Puppies Observers.
- Director of Administration, Ethan Chew: Ethan presented a plan for a process for handling new members applications and dues. He also presented a rough draft of a members' survey form. John requested that he email the plans to the officers. Action was tabled to a future meeting.
- Education and Programs, Melissa Snider: Melissa was not present, so Doshia Wilson reviewed the Astronomy Day plans and announced that the last planning meeting will be Thursday, September 25th at 6:30.

- Director of Planning and Research, Jeff Delmas: Jeff announced that there is no new action on fundraising.
 - Membership Director, Gerry Conrad: Not present
 - Observatory Director, Wes Swift: Not present. Jeff gave a short discussion on the current state of the Swanson 21", and announced that new dome motors are needed after one failed.
 - Dark Skies Director, Richard Norman: NASA is sponsoring a Star Count October 20 through November 3. Look for a Via Stellaris article for details. He also announced that he had a pleasant conversation with Birmingham News reporter Kent Faulk about the importance of federal funding for science.
 - Librarian, Terry Owens: Terry announced she's catalogued 18 books and wrote a VS article on her project.
 - Resident Astronomer, Doug Horacek: Doug announced that Friday, Oct 3rd will be an observer's night and if cloudy, there will be a planetarium presentation. He also announced that the Volunteer State Star Party, sponsored by VBAS member Eric Johnson will be Oct. 24-26. Please RSVP to Eric by Oct 20.
- NES was already paid \$180 for the lift rental. Jared moved we reimburse Richard for the \$212.32 for painting supplies. Jeff seconded. The motion passed.
- Doug announced that the recycling bins are in place and operational.
 - Roy Young was contacted by telephone and Roy reported on the possibility of acquiring the A3P projector from Walker County, Georgia. Roy said that the current proposal is that they would transfer the A3P to us and in exchange, they want our current projector (which was originally from Walker County) and four speakers per year for two years. John agreed to write a letter spelling out the proposal and to seek board approval at the next meeting or approval via email if time is critical. There will probably be costs of about \$2000 for speakers and modifications to install the A3P.
- Jeff moved to adjourn. The motion passed. The meeting adjourned at 8:37 pm.

Business

- Richard Norman submitted the following motion: *In accordance with the VBAS Bylaws, I, Richard Norman move on behalf of the committee that Terry Owens be appointed to fill the vacancy of Director of Facilities and Equipment for the remainder of the current term, at which time a Director will be elected in accordance with the VBAS Bylaws.* Jared seconded. *The motion passed.* Welcome, Terry!
- John announced that the HVAC unit for the Library was ordered with an invoice for \$671 and reminded all that the board had approved \$700 for the expenditure. John then moved that the HVAC come out of the general fund instead of the facilities budget. Sara seconded the motion. The motion passed.
- Richard reported that the dome painting expenses included \$212.32 for paint and supplies.

VBAS Social hour was from 7:00 pm to 7:35 pm.

At 7:35, Jared Cassidy, VBAS Vice President, called the business meeting to order. Board members were asked to introduce themselves.

Jared announced that the minutes from the last member's meeting did not get published. He then went on to discuss old business.

Our treasurer is collecting donations for the Stuhlinger Memorial. This collection will be donated to the UAH Von Braun Scholarship fund in Dr. Stuhlinger's name on November 18.

Accounting Audit Committee volunteers are needed. Tom Burleson, Jr. volunteered to help man that committee.

VBAS Treasurer position is vacant and needs to be filled. This position needs to be manned until regular elections occur in June of 2009. Richard Norman is currently taking nominations.

Officer Reports

Doug Horacek, VBAS Resident Astronomer, reports 2 observing sessions. The first one is October 31 and is a youth session. The second session is December 5.

VBAS Education Director, Melissa Snider, thanked everyone that helped on Astronomy Day. She announced there is an outreach Star Party at the Huntsville Library Thursday, October 23. Come help if you can.

Richard Norman, Dark Sky Rep, reported a new HSV mayoral administration and will make contact about Dark Skies Program.

Jeff Delmas reported the progress of the Swanson Project. He noted the need for a new computer w/ XP. They are also working on repairing the rotation rail of the Swanson dome.

Terry Owens, Director of Facilities, reported the leaks in the Angele appear to be plugged and the stairs have been replaced. John Young and his brother patched the

VSSP 2008

by Eric Johnson & Jeff Delmas



When Lewis and Clark charted their “Voyage of Discovery” across North America from 1804 to 1806, there was no such thing as light polluted cities. Now, whole regions of the country and major metropolitan areas of this once new territory mask the crispness of the true night sky from people. Nowadays, to fully appreciate what’s in our night sky, astronomers seek out the dark skies of times past, hoping for an ever more elusive site away from the encroaching sky glow and light pollution of civilization.

One such site away from this modern era of street lights, shopping centers, and all night gas stations is the home of the VBAS’s Volunteer State Star Party, sponsored by Eric Johnson. The site is a little hilltop deep in the woods just off the Natchez Trace Parkway near the final resting place of explorer Meriwether Lewis. Astronomers from Alabama and Tennessee gather each year to seek out dark skies from this site to find the objects they often can’t view at home.

Once again, this year’s Star Party held on October 24-26, provided crisp views of the night sky with the Milky Way visible from horizon to horizon. The cool night air kept the clouds at bay while astronomers identified and logged faint nebulae, clusters, galaxies and other deep sky objects. Not only was this year’s gathering ideal for some very respectable viewing but also for some fellowship around the campfire, while some tasty food was served up.

This was the fourth annual VSSP, and each year there seem to be more attendees and more

telescopes than the last. If you’re looking for a really dark sky observing opportunity, with the added bonus of sharing the experience with other amateur astronomers, the VSSP is an event you don’t want to miss in the future.



Some of the attendees of the 4th annual VSSP gathered for a photo. (photo: Eric Johnson)



As usual, Eric put on quite a spread Saturday evening. (photo: Billy Hix)

For more images from the VSSP, check out Eric Johnson’s photo album at: <http://picasaweb.google.com/bluechipjeper/VSSP2008>

Contributions to Via Stellaris

We welcome contributions to our newsletter that may be of interest to the astronomical community. Contributions are best sent by email to Steve Sloan at editor1@vbas.org. If you don't have access to email, you can send articles in either Word or ASCII format to Steve at 2110 Vilaret Dr, Huntsville, AL 35803.

Membership and Renewal

The VBAS currently has four categories of membership. All four include free admission to the planetarium shows; subscription to this newsletter; membership in the Astronomical League; and use of VBAS library and equipment. The four categories of membership, and the dues for each, are: REGULAR at \$24.00 per year, FAMILY at \$36.00 per year, STUDENT (must be full-time student) at \$12.00 per year, and LIFE at \$500.00. Newsletter Only is also available for \$12.00 per year. Membership renewal occurs for all members annually on March 1st.

All VBAS memberships came up for renewal on March 1, 2008. If you have questions regarding membership, please contact Gerry Conrad.

Please send your renewal to the Membership Secretary at VBAS, P.O. Box 1142, Huntsville, AL 35807. Make checks payable to the Von Braun Astronomical Society. If your mailing or email address changes, please report the new address promptly to the Membership Secretary, Gerry Conrad, at conrad1908@knology.net or 722-8212, to avoid missing issues of *Via Stellaris*.

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VIA STELLARIS



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We are trying to limit the paper copies we generate, to save costs, clutter, and a lot of work for everyone. If you would like to receive your newsletter electronically, please send your email address to editor1@vbas.org, and let me know.

Steve Sloan, Via Stellaris editor