



VBAS Highlights for May

Public Programs for May

Our next member's meeting will be the VBAS Annual Meeting, which will be held on Friday, May 16th at 7 p.m. We'll highlight the state of the society, including major accomplishments and future plans, present the annual budget for 2008-2009, hold our annual elections, and recognize some of our members for their outstanding contributions in forwarding the mission of VBAS. VBAS Member Meetings are held on the 3rd Friday of each month at 7 p.m.; they're open to the public and are free.

Regular planetarium programs start at 7:30 PM. This month, we continue a year long series on the planets and other bodies of our Solar System with three family friendly shows on asteroids, on May 3rd, 10th, and 24th. There will be a technical planetarium program topic TBA on the 17th. 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.

VBAS Officer Elections

We're electing a Vice President, Director of Administration, Director of Planning and Research, Student Director, and Secretary this month, at the VBAS Annual Meeting. Your ballot is attached to this newsletter.

Top Five Eagle Projects

The sidewalk lighting project Matthew Farnell completed for VBAS has recently been selected as one of the top five Eagle Projects in our area of Alabama. Learn more on page 3.

Amateur Astronomical Spectroscopy

On page 4, Walt Langley writes about his efforts in spectroscopy.

Earth Day Report

On page 5, Melissa Snider reports on the success of the VBAS Dark Sky exhibit at the Hayes Nature Preserve Earth Day event.

VBAS Board Meeting Minutes

Pages 6 and 7 have the minutes of March's board and member meetings.

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In This Issue:

VBAS Highlights for May.....1

Calendar of Events..... 2

The Night Sky for May.....3

Top Five Eagle Projects..... 3

Amateur Astronomical Spectroscopy.....4

Earth Day Report..... 5

VBAS Board Meeting Minutes.....6

VBAS Member Meeting Minutes..... 7

VBAS Calendar of Events

Friday, May 2nd, 2008, After Dark

Spring Messier Marathon

In the spring months, it's possible to log all 110 of the objects in the catalog compiled by French astronomer Charles Messier in one evening. Join us for a night of observing as many of the objects in the Messier catalog as you can find. We'll be up late to view as many of these "faint fuzzies" as possible. Members are encouraged to participate and bring your scopes. The public is welcome to join in with or without telescopes.



Saturday, May 3rd, 10th, 24th, & 31st, 2008, 7:30 PM

Planetarium Show: All About Asteroids

Got rocks? Our solar system sure does! It is a really rockin' place with a spectacular collection of asteroids! Come join us for a fun filled look at some of these big rocks as we tour the asteroid fields in our program. This trip is recommended for all ages. We will also explore where asteroids came from, what they are made of, and learn how they are discovered.

Ida and Dactyl: Asteroid and Moon. (Image credit: Galileo Project, JPL, NASA)



Friday, May 16th, 2008, 7 PM

Annual Meeting

Join us for our annual gathering. We'll highlight the state of the society, including major accomplishments and future plans, present the annual budget for 2008-2009, hold our annual elections, and recognize some of our members for their outstanding contributions in forwarding the

mission of VBAS. In addition, local physicist Je Cameron will highlight theory and demonstrate some advanced propulsion concepts.

Saturday, May 17th, 2008, 7:30 PM

Planetarium Show: Geology of Mars

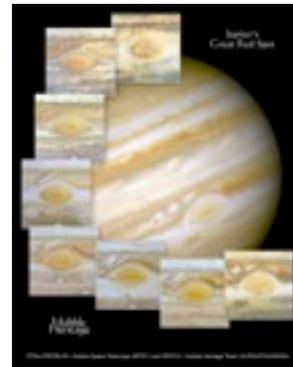
Presented by Barbara Cohen.

The topic and speaker for the third Saturday of each month is geared a little more to the technical side of astronomy and related sciences. With recent work on the NASA Mars Rover program, geologist Barbara Cohen will present a fascinating look at the topography and make up of the Martian surface.

Saturday, June 7th, 14th, & 28th, 2008, 7:30 PM

Planetarium Show: Exploring Jupiter

With its intriguing red spots and supersonic winds, our solar system's largest planet has long captured the fascination and eyes of mankind. With a mass equivalent to twice that of all the other planets combined, and high atmospheric concentrations of hydrogen and helium, it has become known as the Gas Giant. Listen as our presenters highlight its formation, historical significance, exploration efforts, and large system of moons.



Hubble Tracks Jupiter's Great Red Spot. (Image credit: Amy Simon et al. & the Hubble Heritage Team)

Friday, June 20th, 2008, 7 PM

Regular Monthly Meeting

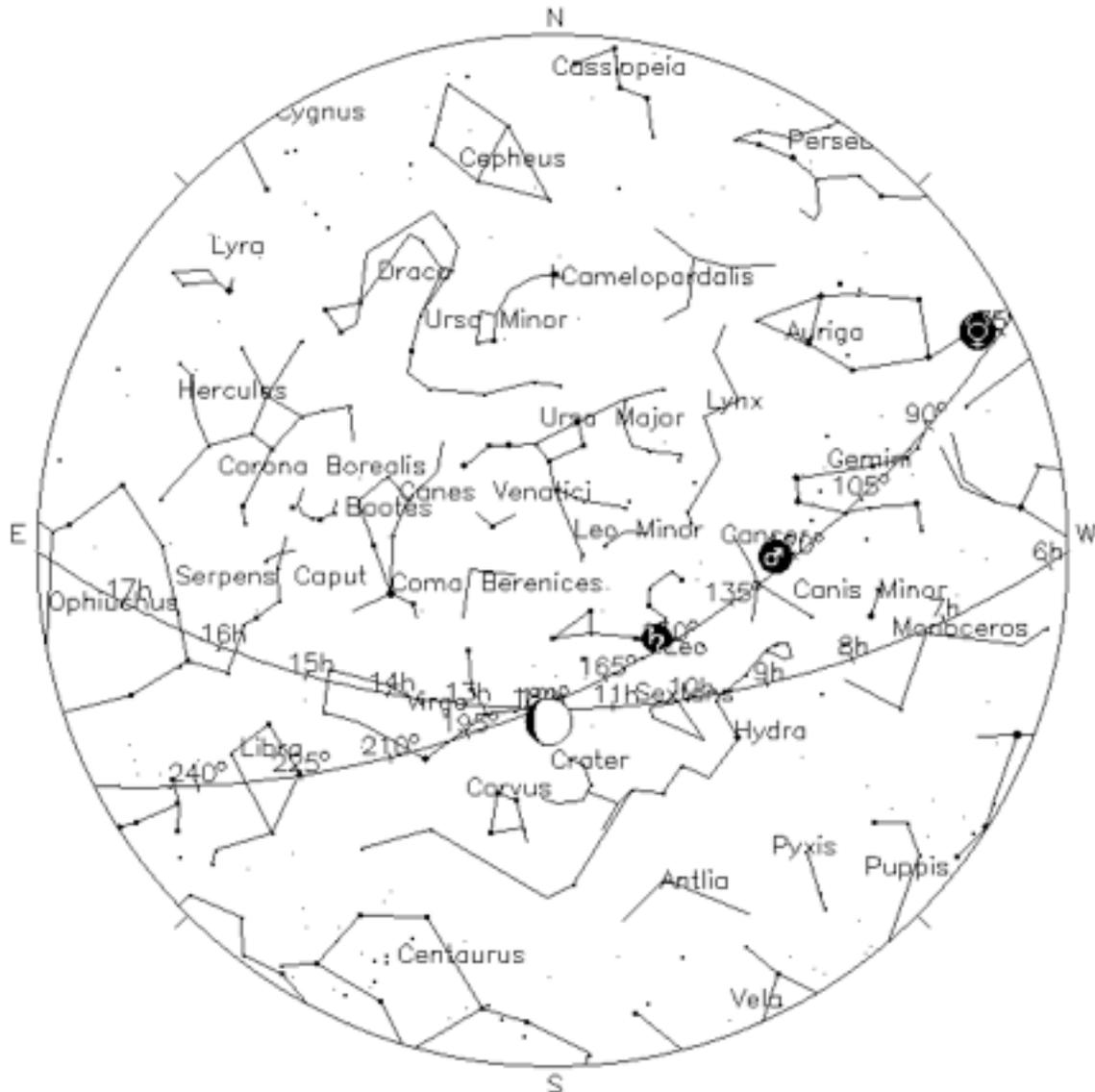
After a short pizza social and marketplace swap meet we'll discuss pertinent society business. The speaker for the evening will be NASA astrophysicist and long time VBAS planetarium director Mitzi Adams. The topic for the evening will be "Physics of the Sun". Visitors are welcome.

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

The Night Sky for May, 2008

Here is the view at 9 PM in mid May, 2008, at 34° N Latitude, 86° W Longitude. Mars, the spear and shield symbol, will be between Cancer and Gemini. Jupiter, the "h" like symbol, will be high overhead in Leo.

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



Top Five Eagle Projects

by Ken Farnell

Monte Sano Troop 304's scoutmaster, Paul Robinson, was notified this month that the VBAS walkway lighting project completed by Eagle Scout Matthew Farnell in January 2007 was been selected as one of the top five Eagle Projects in our area of Alabama. An independent selection committee of

community leaders reviewed service projects in our area that were completed in 2007 in order to make these selections. Awards will go to the top 3 finalists that will be announced at the upcoming Talakto district Spring camp out.

This notification was completely out of the blue to us, and a helpful scholarship is the top award.

Amateur Astronomical Spectroscopy

by Walt Langley

While there is no substitute for observational astronomy, there is a growing popularity of amateur spectroscopy. "Starlight" contains a tremendous amount of information that can be accessed with relatively modest equipment, combined with software obtained from the Internet.

Two principal hardware components are required to create and photograph a spectrum. This can be as simple as a CD with a digital camera or as detailed as a high resolution spectrograph.

Why Spectroscopy? There are three types of spectrums...

1. a continuous spectrum from a glowing body
2. an absorption when light passes through a gas
3. an emission spectra when light emanates from a hot gas.

All of these can be measured with a spectrograph.

Light can be dissected with a spectrograph to reveal much information about its origin. Spectrograph data from a star can be used to determine:

- Stellar classification
- Elements in stellar atmospheres
- Stellar temperature
- Stellar relative velocity Doppler shift

I have built several spectrographs, from a very simple combination of a CD and a digital camera, to a more complex device as shown below.

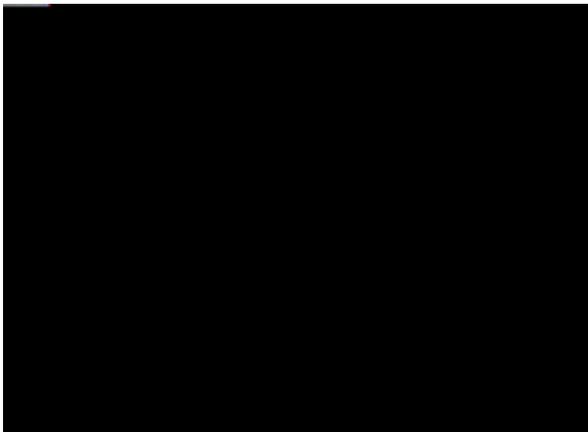


Figure 1. Home built Spectrograph

This is a variable dispersion 8.4 to 0.9 Angstrom/Pixel fiber optic spectrograph. It contains a variable slit, a 30 mm objective lens from an old finder, a 1200 line per mm reflective grating, a

TV camera zoom lens, and an astronomical CCD camera. It is connected to the telescope via a fiber optic cable. Use of fiber optical cable has both advantages and disadvantages. The principal advantage is that the weight of the spectrograph does not have to be supported by the telescope and the disadvantage is the light loss associated with the fiber cable.

Measurement of the solar spectrum with this device is very easy and will be illustrated here. No telescope or mount is required with this spectrograph to measure the solar spectrum. Simply hold the end of the fiber optic cable to an open window. Figures 2 and 3 show small spectral range images taken with this spectrograph.

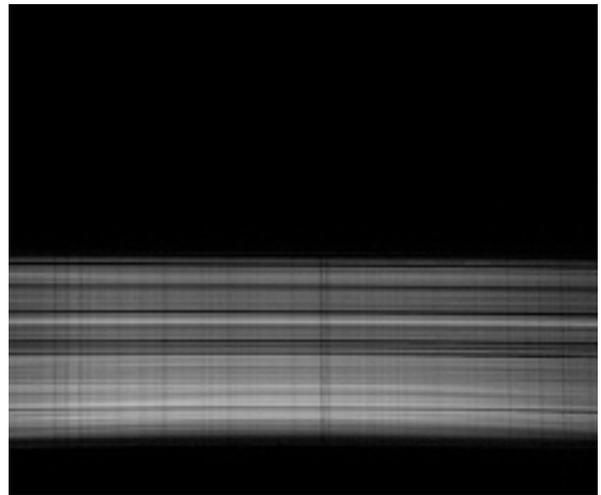


Figure 2. Solar Spectrum (segment)

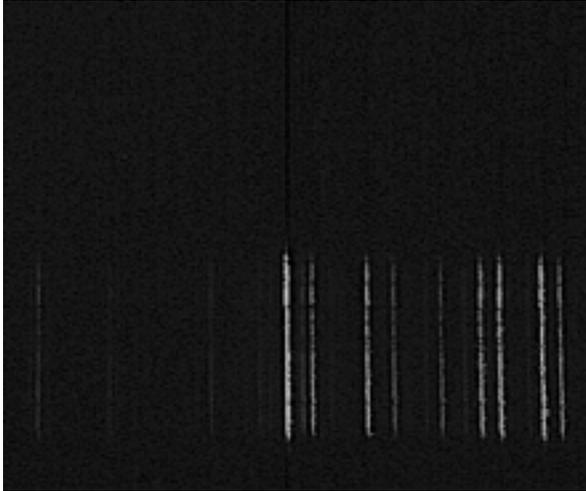


Figure 3. Neon Calibration Spectrum (segment)

Figure 2 is a portion of the solar spectrum at a dispersion of 0.92 Angstroms per pixel. Figure 3 is an image of the spectrum of Neon taken as same frame as figure 2, made easy by the use of a dual input fiber cable. Figure 3 is the solar spectrum segment also showing the corresponding Neon spectrum used for calibration.

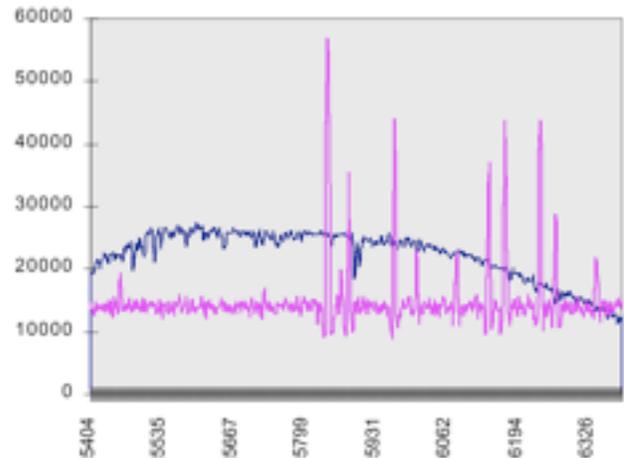


Figure 4. Solar Spectrum (segment)

I use IRIS www.astrosurf.com/buil software to preprocess the images and Visual Spec www.astrosurf.com/vdesnoux to compute the spectrums. Both are excellent freeware programs.

Capturing a stellar spectrum with a fiber optical cable is more complex. It requires a telescope that has an equatorial mount capable of "autoguiding". I use a separate guidescope and use PHD Guide www.starklabs.com also an excellent freeware program to keep the star centered in the slit for long exposure spectrums.

Earth Day at Hayes Nature Preserve

by Melissa Snider

VBAS was present again for the Earth Day celebration at the Hayes Nature Preserve on April 19. Our theme was Earth Day, All Day... and Night. Approximately 200 people stopped by our table and telescopes to learn about Earth friendly, sky friendly lighting, make a galaxy from a CD, or observe solar prominences. Many of them have already come up the mountain to catch a

planetarium show. Thanks to Gena Crook, Richard Norman, Terry Owens, and Paul Scorraco for making exhibits, setting up, and standing them. Mitzi Adams stopped by with a friendly snake to complete our Earth Day experience. Additional thanks to Lowell Crook for his "dark sky guy" drawings for Richard's interactive exhibit on shielded streetlights.

VBAS Board Meeting Minutes

USSRC Educator Training Facility

6:30 PM on Wednesday, March 20, 2008

by Steve Sloan.

Board Attendees:

Jared Cassidy, Je Delmas, Steve Sloan, Melissa Snider, and John Young

Other Attendees:

Doug Horacek

John called the meeting to order at 6:23 pm. It was announced that we added two or three new members the previous Saturday, and existing member Lonnie Puterbaugh became a lifetime member. A budget committee has been formed, currently consisting of three members.

There was discussion about restarting the practice of presenting treasurer's reports to the board, and having the board approve them, either in person or by email.

Melissa moved that we publish monthly minutes in Via Stellaris, and read the highlights at monthly members meetings. Je amended the motion to say that **minutes must be approved first.** Je seconded the amended motion. The board voted unanimously in favor of the motion, so it carried.

Nominating Committee

The following positions expire July 1, 2008: Vice President, Secretary, Director of Administration, Director of Planning and Research, and Student Director.

There was discussion of possible candidates for the unfilled slots.

According to the Bylaws, board nominations are due before the election at the annual meeting in May. We must have final ballots available six weeks prior. We're running behind, so the slate of officers will be presented at the April members meeting, and the election will happen at the May meeting.

According to the bylaws, we need more members in the Nominating Committee. Melissa volunteered, making her the second officer on the committee. We also need more regular members.

Jeff moved that we publish the board-approved monthly treasurer's report in the Via

Stellaris, and summarize it at members meetings. Melissa seconded. Je amended the motion to **quarterly approval and publishing** of the treasurer's report. The vote was unanimous, and the motion carried.

Facilities

VBAS members recently had an informal meeting with a contractor. The latest estimate not an official bid for the facilities expansion came to a little over 100K, before the contractor's fee. More realistically, the total would probably be closer to 120K. They asked him if there are small cost saving measures we could do, like reducing the cleaning and painting costs by doing those parts ourselves.

According to Je, the bottom line is that a quality addition would cost at least twice what we've put aside.

We discussed other possible ways of reducing costs, like using a manager's fee contract instead of a fixed rate contract.

In the end, these were the options presented:

1. Start serious fundraising to make up the 80K difference.
2. Scale the expansion plan down.
3. Convert existing storage room space into restroom facilities.
4. Drop the whole thing.

What would fundraising involve? Possibilities include big fundraising events, and seeking corporate donations or grants. In total, we need to raise about 80K.

Melissa moved that we proceed with a fundraising effort to raise \$80K for the currently planned facilities edition by April 1, 2009, and evaluate our ability to do so by October 1, 2008. Jared seconded. The vote was unanimous, so the motion carried.

On May 23, Mars will move through the Beehive Cluster. Doug suggested a star party on that night.

Jared moved to adjourn, Melissa seconded, and the motion to adjourn passed at 8:15 pm.

VBAS Member Meeting Minutes

VBAS Planetarium, 7:30 PM

Friday, March 21, 2008

by Steve Sloan

Vice President John Young welcomed everyone to the meeting at 7:39 PM. He introduced Wesley Swift, who would be presenting the night's program.

Upcoming Events

The "Earth, Home Sweet Home" planetarium show will be presented on March 22nd and 29th. Next month's planetarium program is on Mars.

Lights Out America will be March 29th.

The topic of the April Members Meeting will be members' choice. Voting ends tonight, so John will do a show of hands later. There are three choices: a talk on quantum gravity by Rob Preece, a panel about VBAS history by VBAS early/founding members, or a teleconference with planetary astronomer Michael Brown.

The Earth Day event at the Hayes Preserve will be April 19th. Our goal for the event will be for Dark Sky expert Richard Norman, to show the connection between dark skies, energy savings, and wildlife, with the help of Melissa Snider.

Rob Preece will be giving a planetarium show on quantum gravity on April 19th.

The Messier Marathon is coming up. There will be an informal session on the first Friday in April.

On May 22-23, Mars will pass through the Beehive Cluster. Doug will hold an observing session.

Member dues are due in March. Michael wanted to send an email reminder to members who aren't paid up yet. Jared read the fees for the various membership types. We have application and renewal forms available.

We had a couple of visitors at the meeting.

The Annual Meeting will be held in May. It will include the annual elections and a presentation of the budget.

The Nominating Committee needs at least five members, including two officers and three regular members. We would appreciate volunteers. John also asked for volunteers who would like to run for office.

Officers up for election this year are Vice President, Student Director, Director of Administration, Director of Planning and Research, and Secretary. The Nominating Committee is supposed to have nominations ready to announce two months prior to the elections, which is tonight. Steve Sloan will return as Secretary. David Lofts is interested in running for Student Director. Dr. Russell White would like to be Director of Planning.

Board Meeting

A summary of the most recent board meeting was read. We have about 50K in the bank, and we need about 80K more to complete our planned facilities improvements. Should we go ahead as planned? The board unanimously voted to move forward with the full facilities plan, and start major fundraising. It will take a total of 120K to 130K. We'd held off on serious fundraising until we were fully committed to the plan. We have the goal of raising 80K in one year, with a review six months in. Jeff Delmas will be coordinating the fundraising effort. Examples of fundraising sources include individual donations, corporate donations, and special events. Contact Jeff or the other officers if you would like to help.

Dark Sky Status

The Monte Sano Park plan is picking up speed. The Monte Sano Women's Club wrote Monte Sano's Councilman Russell, to suggest retrofitting existing street lights, and preventing new bad lighting. Richard Norman also wrote the Councilman. We need VBAS members to speak to developers about light pollution. If you know any developers or council members, we need your help.

The business meeting ended at 8:02 PM. After the business meeting, Wesley Swift gave a talk about *The NASA/MSFC Lunar Impact Program*.

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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Steve Sloan, Via Stellaris editor

ELECTION BALLOT

VBAS Officer Ballot

Vice President

_____ Jared Cassidy

_____ Write in: _____

Director of Administration

_____ Ethan Chew

_____ Write in: _____

Director of Planning and Research

_____ Je Delmas

_____ Write in: _____

Secretary

_____ Steve Sloan

_____ Write in: _____

Student Director

_____ David Lofts

_____ Write in: _____

ELECTION BALLOT

Place
Stamp
Here

Election Ballot



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