



VBAS Highlights for April

Public Programs for April

Our next member's meeting will be held on Friday, April 20th at 7:30 pm. VBAS Member Meetings are held on the 3rd Friday of each month at 7:30 p.m.; they're open to the public and are free. A Messier Marathon will begin immediately after this month's meeting.

Planetarium programs start at 7:30 PM. Roy Young will present a show on galaxies on April 14, and Taunya Sweet will present "New Horizons at Jupiter" on April 28. Admission to planetarium shows is free for VBAS Members, \$3.00 for Adults, \$2.00 for Children 6-11, 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, Jeff Delmas discusses the upcoming Messier Marathon, and the Nominating Committee's progress.

Dark Sky Update

On page 3, Richard Norman gives an update on his Dark Sky efforts.

Bats in the VBAS Belfry

In February, a bat living in the Angele observatory was safely moved to a cave preserve. See page 6 for details and pictures.

Your VBAS Facilities Are Getting Better Every Day

On page 7, John Young gives a report on the Facilities Committee's latest improvements, particularly the Stuhlinger Solar Telescope.

David Lofts' Science Fair Win

Young member David Lofts recently earned several prestigious awards at the North Alabama Regional Science and Engineering Fair. See page 8 for details.

VBAS Member Meeting and Board Meeting Minutes

Page 9 has the draft minutes of last month's members meeting, and page 10 has the draft board meeting minutes.

Steve Sloan

Via Stellaris Editor

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***Deadline for May 2007 Via Stellaris
submissions is Friday, April 27.***



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President's Message

by Jeff Delmas

I'm preparing now for the Messier Marathon on April 20, the same evening as our next members' meeting. If you aren't familiar with a Messier Marathon, it's an all-night observing session with the purpose of viewing as many of the faint objects in the Messier catalog as you can. Although it's possible to hold such an event any time of the year, only in the spring and again in the fall is it possible to view all 110 objects in the course of one

evening. I've never done that nor know anyone who has, but it's fun nonetheless.

I'm hoping to observe a few objects I've never logged before, so I can get my Messier certificate through the Astronomical League, of which VBAS is an affiliate society. If you would like to earn this or other observing certificates, look on the AL website for more information: <http://www.astroleague.org/observing.html>. One key requirement is that

you can't use a go-to telescope to earn the certificate. Bring your scope on the 20th and join in on the adventure. We expect to have the C16 and the LX200 operational for the evening's observing.

To help newer observers, look on this page for a list of Messier objects in a recommended order of observing. Since our meeting starts at 7:30 PM, we'll try to keep it short and start observing immediately afterward.

Also at the April meeting, the nominating committee plans to announce nominations for next year's officers and we'll take additional nominations from the floor.

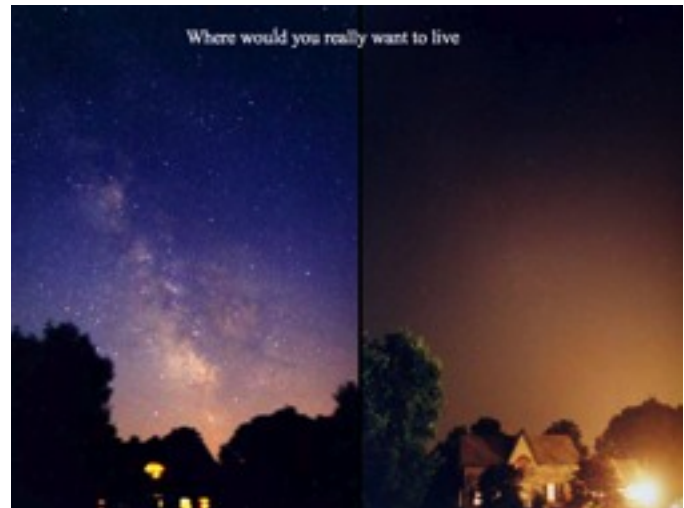
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Messier Object recommended order of observation.

Dark Sky Update

Earth Day always brings about thoughts of Dark Sky and energy conservation. VBAS and Monte Sano Civic Association have both endorsed the nomination of Monte Sano State Park for Dark Sky Park (bronze tier), which is offered by the National Park Service and International Dark-sky Association. Dark Sky Park is a new program to help stimulate Parks to actively protect their dark skies as part of the beauty of the park. To earn the Dark Sky Park award the park must make its lighting dark sky friendly, and work with organizations in the community to fix poor lighting around the community. VBAS members are encouraged to visit the recently updated dark sky section of the VBAS web site (<http://www.vbas.org/darksky>) to learn more about the Dark Sky Park program and ways to help. The park is planning an update to the campground that will include upgrading the lighting. The Park Manager, Kent Wilbourn deserves

our support and gratitude for his efforts to reclaim our dark skies.



Messier Objects



Andromeda Island Universe
Credit & Copyright: Robert Gendler

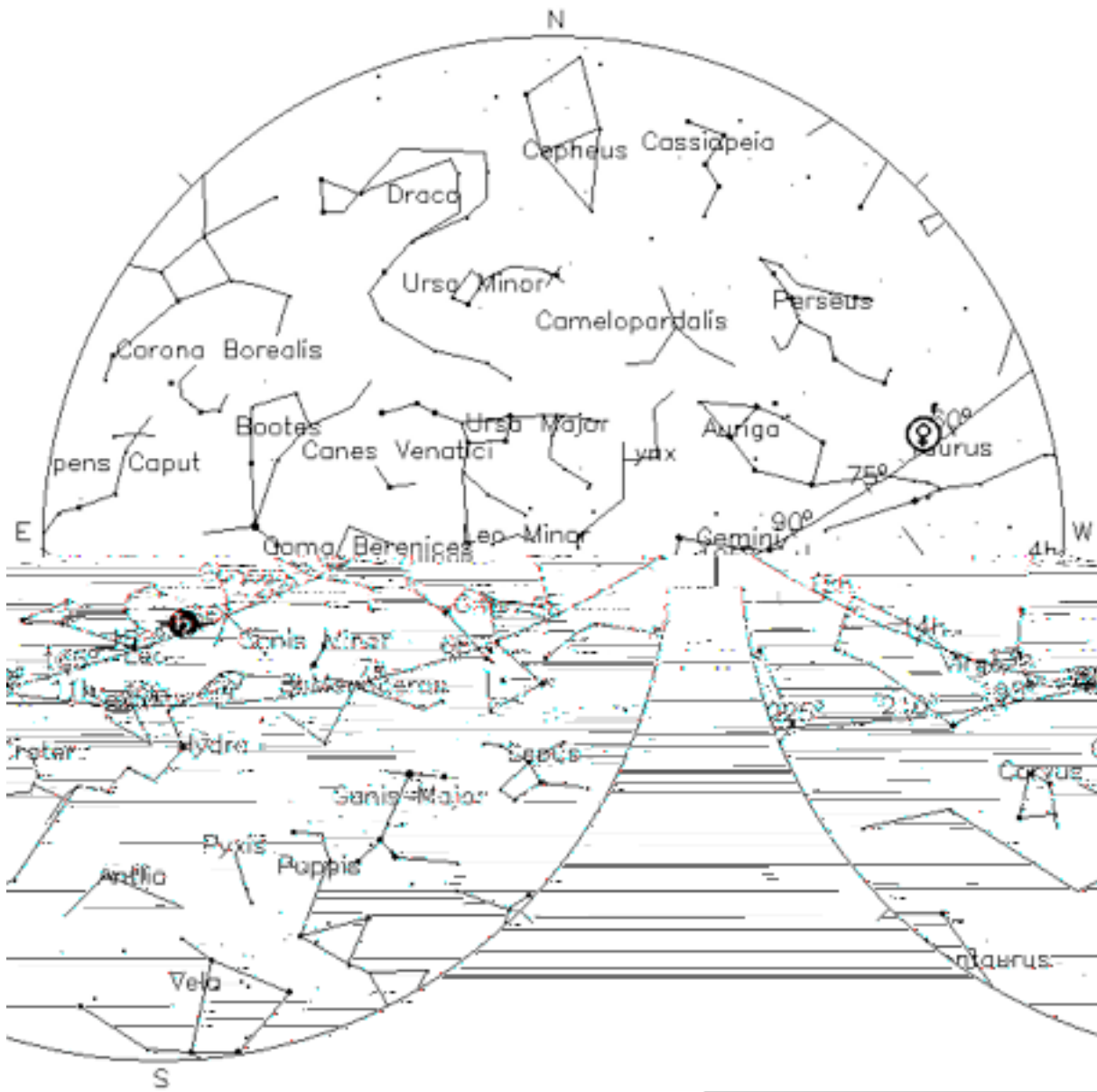


M101: The Pinwheel Galaxy
Credit & Copyright: Jean-Charles Cui//andre (CFHT), Hawaiian Starlight, CFHT

The Night Sky for April, 2007

Here is the view at 9 PM in mid April, 2007, at 34° N Latitude, 86° W Longitude. Jupiter, the lowercase-h symbol, will be almost overhead, between Leo and Cancer. Venus will still be high in the sky, in Taurus.

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



Saturday, April 7, 2007, 10 AM to 3 PM

Facilities Working Party

Help perform much-needed maintenance of the VBAS facilities.

April 11-14, 2007

Mid-South Star Gaze

Location: Rainwater Observatory, French Camp, Mississippi

The Mid-South Star Gaze is the annual star party held at Rainwater Observatory in April. It is a weekend gathering of amateur astronomers who come to share, listen to outside speakers, and observe together. Astronomers come from all over the Southeast United States to join in on the fun. The highlight of this year's event will be the dedication of the Sangre telescope facility with its 25.5" research telescope and control room. They will be having a teacher workshop, lectures, and informal deep-sky observing. The conference is \$20. Housing and meals are extra. The Observatory is one mile southeast of the Natchez Trace Parkway at French Camp. French Camp is between Jackson and Tupelo, Mississippi, at Natchez Trace mile marker 181. Call (662) 547-6377, email info@rainwaterobservatory.org, or visit the web site for more information.

Website: www.RainwaterObservatory.org/stargaze/

Saturday, April 14, 2007, 7:30 PM

Planetarium Show: *Realm of the Galaxies*

Presented by **Roy Young**

They say "March comes

Bats in the VBAS Belfry

by John Young

VBAS discovered it had a surprise visitor on January 30th. While working on the solar telescope, Walt Langley and I came upon a bat in the Angele observatory. After a little unsuccessful cajoling it was decided to let him hang out in the library while we contacted the professionals. A former, licensed animal rescuer for Monte Sano met us up at VBAS on Saturday, February 3rd. Also on hand was Marlene Hopkins, a personal friend from Huntsville's Environmental Ed group. The ladies got in touch with one of their colleagues, Soos Weber from the Hays Nature Preserve. She in turn got in touch



with Ronny Miller, who's a member of Bat Conservation International and the National Speleological Society (cave explorers for the unfamiliar). Ronny was up at VBAS within a matter of minutes, and expertly extricated the little fella from his perch. Turns out our visitor was an adult male "Big Brown" (species: *Eptesicus Fuscus*). And, yes, he was quite fussy about being taken out of our toasty library. Ronny shared some fascinating information about these wonderful little creatures, while Rick Laws and I snapped a few pictures. Ronny took our guest to the Shelta Cave near the NSS property in Huntsville (<http://www.caves.org/preserves/scp/shelta.html>) so he can hibernate in true bat fashion ... upside-down! Thanks to all who helped.



Your VBAS Facilities Are Getting Better Every Day

by John Young



A before picture, from January 23.

several weeks. The long-overdue restoration of the Stuhlinger Solar Telescope is nearly complete. The heliostat's electrical and mechanical portions were reworked and realigned to correct tracking errors, the first surface and secondary were recoated, and the structural and environmental integrity of the topside housing was regained by completely rebuilding the flip-down hatch and interior floor housing the heliostat. This project was definitely a team effort, with considerable time and energy put



New topside hatch for Stuhlinger.



New topside hatch open.

I wanted to take a few minutes to report on a few significant improvements VBAS members have made in the past several weeks. The long-overdue restoration of the Stuhlinger Solar Telescope is nearly complete. The heliostat's electrical and mechanical portions were reworked and realigned to correct tracking errors, the first surface and secondary were recoated, and the structural and environmental integrity of the topside housing was regained by completely rebuilding the flip-down hatch and interior floor housing the heliostat. This project was definitely a team effort, with considerable time and energy put in by Walt Langley, Wes Swift, Jeff Delmas, Ken Farnell, and myself.

Two of VBAS' portable telescopes

have also been repaired. The Arrington Sky Designs 18" Dob had repairs done to its primary mounting, along with a cleaning and collimation of the optics. Along with a delicate cleaning of the objective, the eyepiece tube tensioner of the Davis 94 mm Brandon APO was repaired. Although it was physically a small repair item, it functionally returned this fine instrument to usable status. VBAS member Walt Langley, a former colleague of the late John Davis, personally took this item for action.

Now I know this final item may seem trivial, but to many of us it was an eyesore and an inconvenience. Those who can attest please say "aye". The door to the storage closet under the stairs in the Angele foyer had been just barely hanging by a hinge for quite some time. It finally gave in to gravity, and promptly retired to a horizontal resting place a few weeks ago. Walt Langley also took this item for action. He procured a replacement door and cut it to size, rebuilt the frame, acquired replacement hardware, and even painted it. He's no Bob Villa or da Vinci, but it looks great!

Your facilities are quickly getting better through member support, in the form of direct involvement, and by the fact that your member dues and program income are put to the best use possible. I am proud of the work we have done thus far, and thankful to the support I have received during my tenure as facilities director. I would encourage all members to get involved when they can, as there are many projects awaiting members like you. Please feel free to contact me any time if you

would like to lend your time. And, by all means, if you haven't been up to the mountain in awhile, come on up and enjoy your society.



Inside of new hatch for Stuhlinger.

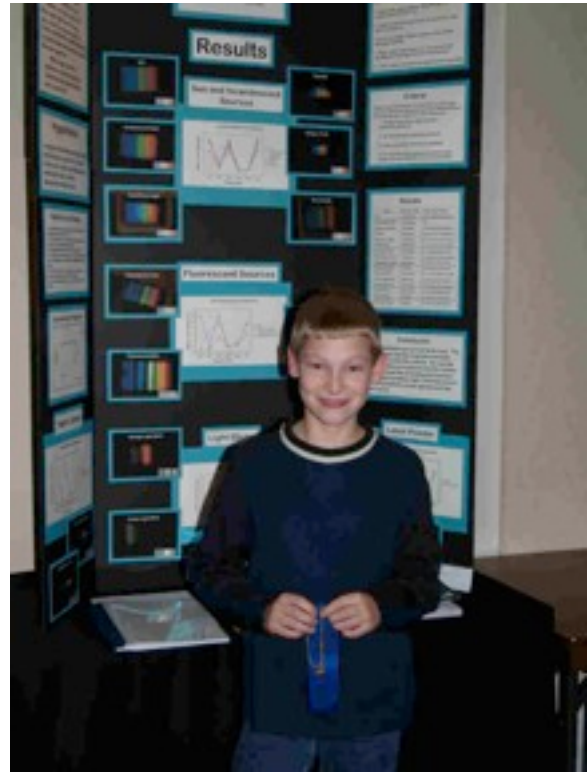
Astronomy's Future is Bright with David Lofts

by John Young

Young but seasoned VBAS member David Lofts recently earned several prestigious awards at the North Alabama Regional Science and Engineering Fair held at the UAH campus March 7 - 9th. David, a home-schooled 6th grader, is the son of VBAS member and presenter Cassie Lofts. He has been a member of VBAS for three years, during which time he has helped conduct programs for schools by setting up the planetarium equipment and solar telescopes. You know a child is passionately committed when he owns a go-to refractor and is able to cajole his mom out of her presenter's stipends to purchase his own Coronado PST!

Below is the abstract of David's project entitled: Spectroscopy - The Signature of Light. In addition to winning first place in physical sciences at the 2007 NARSEF, he also took home one of only four grand champion awards for best overall project. His hard work and technical acumen also earned five special awards, including "Best Astronomy Related Project" from VBAS, a cash award from SPIE-The International Society for Optical Engineering, the Naval Science medallion, the US Army Certificate of Achievement, the Boeing award, and the Sigma Xi award.

On behalf of the Officers and Members of VBAS, I would like to extend to David my heartiest congratulations on a job well done, and sincerest wishes for con-



tinued success at the State Science Fair at UAH on April 5-7th!

Spectroscopy: The Signature of Light

by David Lofts

The purpose of this experiment is to determine which man-made light source contains spectral characteristics most like sunlight. This project's hypothesis is that an incandescent light bulb will produce a spectrum most like the Sun's spectrum because incandescent light is yellow like sunlight.

A spectroscope was designed and built. The spectroscope's main component is the diffraction grating. It breaks light into individual wavelengths, and displays a source's unique signature of light. The spectroscope produced continuous, absorption, and emission spectra.

Raw data consisted of digital photographs and hand-drawn spectra. The digital photographs did not capture all spectral details. Therefore hand-drawn data was used to generate graphs. The Sun and fifteen other light sources in five categories were tested. These cate-

gories were: incandescents, fluorescents, chemical light sticks, vapor lamps, and the laser pointer.

Each light source's spectrum was compared to the Sun's spectrum using student-determined criteria. The criteria are: the spectrum has to approximate a continuous spectrum; no emission lines should be present; a few narrow absorption lines are acceptable; the spectrum must have about the same balance of colors that the sun's spectrum possesses.

The incandescent bulb met the criteria best, and the hypothesis was proven to be true. The incandescents as a group met the criteria best because they produce their light by heat in a manner similar to the Sun. The other groups have widely varying spectra because they use different methods of producing light.

VBAS Draft Member Meeting Minutes

VBAS Planetarium, 7:30 PM

Friday, March 16, 2006

by Steve Sloan

President Jeff Delmas introduced the meeting at 7:39 PM. One new member introduced himself. He is Russell White, an astronomer at UAH.

Gena left a report for Jeff to read. Our total income was \$1185, and our total expense was \$1534.

As Secretary, Steve Sloan read highlights from the March Board Meeting.

Roy Young talked about the new planetarium projector we will be getting from Walker County. They'll give the projector to us. In exchange, we will give our current one back to them, and provide a set number of speakers to them. The new projector is designed for a 40 foot dome. Our current projector was designed for only a 24 foot dome. We will probably start sending speakers to them starting in summer of next year.

Nominating Committee

The Nominating Committee will be sending an email to the membership Sunday afternoon, reporting their progress, and asking for more candidates. They already have a couple of candidates.

Facilities Committee

The Facilities Committee will have a work day tomorrow, from 10 AM to 3 PM. They will be working on the solar telescope. They have made progress on the Swanson.

Upcoming Events

Our next members meeting will be Friday, April 20, followed by a Messier Marathon.

Saturday, April 21 will be Earth Day at Hays Nature Preserve. Richard will be there promoting Dark Sky. Melissa will probably be there as well. We need one or two additional members to volunteer to help, so Richard and Melissa can take breaks.

Dark Sky

Global Learning and Observations to Benefit the Environment (GLOBE), a program to involve primary-and secondary-school students in scientific activities worldwide, is holding a Global Star Party from March 8 through March 21. To participate, make a naked eye observation of Orion from where you live, then compare what you saw (and especially how many stars you could see) to one of the pictures on the web site. They need data from multiple positions, at least one kilometer apart. Go to the web site to enter your latitude, longitude, and which picture best matches your view. Google Earth is a good way to find your

exact location. To get to the event's web site, either go directly to <http://www.globe.gov/GaN/>, or use the link on the VBAS site, at VBAS.org.

Richard contacted County Commissioners about an update to their county subdivision regulations a couple of months ago, but the motion was tabled before they could do anything. His current project is registering Monte Sano State Park as a Dark Sky Park. Perhaps they could do a street light retrofit around the Park area. A good time to get the news out about Dark Sky is before the upcoming new construction on Green Mountain. We want efficient, dark sky-friendly street lights there.

Jack Lundy worked with the Burritt Museum, to make a video for them. We should coordinate more with their museum, on Dark Sky and in other areas.

Richard says we really need other organizations to endorse the Dark Sky Park. VBAS and MSCA have endorsed it so far. Richard also needs two other IDA members to cosign the nomination letter.

Questions

There was a question about the work parties. Is there any advanced email saying what projects are under way? The work parties are scheduled for the first and third Saturdays of each month. There is a spreadsheet listing current projects on the web site.

There was another question: Is it possible to see the telescope's view through the projectors inside the planetarium? Yes, and it will probably be available by June.

Program

After the meeting, Michael Cowger introduced the program, The NASA Lunar Impact Monitoring Program, presented by Dr. Rob Suggs.

After the program, we held a VBAS auction. We sold several telescopes, computer equipment, and film camera equipment. We plan to make it a monthly thing.

VBAS Draft Board Meeting Minutes

VBAS Planetarium, 7:30 PM on Monday March 5, 2007
by Steve Sloan

The board meeting was called to order at 7:37 PM. Board members present were Gerry Conrad, Michael Cowger, Gena Crook, Jeff Delmas, Steve Sloan, Melissa Snider, and John Young. Four board members are required for a quorum. Planetarium Director Roy Young was also present.

Gerry Simpson Lifetime Membership

Architect Gerry Simpson will be arriving at about 8 PM. He would like a VBAS lifetime membership in exchange for his services designing the bathroom addition to the planetarium. Jeff moved that we grant Gerry a one-year membership immediately, then upon satisfactory completion of the project, change his membership to a lifetime membership for architectural services. John seconded, and the motion was approved in a unanimous vote.

March Members Meeting with Surplus Item Sales/Swap

The swap/auction will be a hook to get members interacting, and to let them know about the equipment and training the club has to offer. Several former members were contacted about the auction. They didn't renew their memberships for this year, but they were excited about the equipment available. John worked on gathering a stash of stuff that we were getting rid of anyway. There will be additional opportunities to get rid of stuff in the future.

There will be no movement of stuff during the program, then sales will start after the program ends. The remaining stuff that is not bought outright will be auctioned. Each item will be tagged with the seller's name and asking price before the meeting starts. According to John, we did this a long time ago, and people bought all kinds of stuff. We'll be selling non-astronomy stuff as well. Should 10-20% of the sales go to the Society? No, the encouragement of new members is worth more than that.

Astronomical League Bylaws Revision

The Astronomical League recently changed its bylaws. Melissa brought handouts for the officers to

read through. She hadn't had time to digest the changes. The big question is, will their publication still exist? We have until March 15 to decide whether to renew our membership. Melissa will look at the full bylaws, and she will ask them about the elimination of the publication, and whether they will reduce dues. The Board will wait until Melissa learns more, then vote by email, on whether to renew the Society's membership.

US Space and Rocket Center Memorandum of Understanding

Melissa handed out copies of the memorandum. The Space and Rocket Center wants a general show for ages 10-12. We will give shows on the four Thursday nights in August, for \$150 per show. This will be the only astronomy the kids will get during the course of their trip. We decide who signs the memorandum on our side. It will be much easier if we sign our version, not their lengthy, complex contract. USSRC says there will be the "potential of great expansion in future." However, these future shows will probably only happen in summer, since this is a travel agency.

Jeff said there is no legal or moral reason preventing us from paying presenters. Volunteer labor is not very elastic, meaning it's not easy to scale it up. Every successful non-profit in town hires people to help represent their group. Our facilities are largely empty and unused, so any additional use would be good.

Michael moved that we accept the Memorandum of Understanding with the US Space and Rocket Center. Gerry seconded. The ayes have it, with none opposed. Jeff will sign the memorandum, and give one copy to the secretary.

Two acronyms were explained. "MOU" is "Memorandum of Understanding", and "ItS" is "name and title" in Sprocketese.

Planetarium Projector

Roy Young talked about the replacement planetarium projector. It will come from the Walker County School System in Macon, Georgia. The projector is a Spitz AP3, a late-'60's machine that was used in a 40 foot dome. It has a single star ball. It doesn't come with a base, because the original base

was made of particle board and formica, and it essentially dissolved when they put it in storage. The projector was working when they took it out.

We will be getting the projector for free, in return for the following:

- a) We will give our current Goto projector back to them.
- b) "To be determined" speakers from VBAS will speak to their group. VBAS should authorize paying mileage to/from the speaking engagements. We propose sending speakers four times a year, for two years.

Roy was asked for a rough timeline for replacing the projector, particularly how much downtime we will have. In June, we will close for a month. During that time, the new projector will be in the floor next to the current projector, for easy cleaning and inspection. We can ask them to check it out for us, before they give it to us. Can we propose a month overlap, and keep both projectors during that time? Yes, because they're not ready for ours yet, so an even longer overlap would be fine. It will be next year before they can use our projector.

Will lamp replacement be viewed as a capital expense? We can expect a minimum of at least two years per lamp.

Roy moved that he will write a letter, and Jeff will sign it, stating that we want to swap our Goto projector back to Walker County School System, and provide four speakers per year for two years, in exchange for their Spitz AP3 projector. The following part of the motion won't be in the letter: In addition, we will authorize \$50 transportation fee for each speaker.

John proposed an amendment, authorizing up to \$1000 for facilities-related expenses involved in installing the new projector.

Both the motion and the amendment were seconded. There were all ayes for both motion and amendment, and both the motion and the amendment carried.

Gerry Simpson Restroom Addition

According to John, the permit for a new septic tank was approved by the county last week.

The restroom addition is typical of the jobs Gerry Simpson does. To contact Gerry with

questions, either contact Jeff or John. To contact him directly, call his office number at 539-0153, his cell phone number at 684-1795, or his home phone number at 534-4804. Just announce that you're a VBAS Board member.

NASA Grant Annual Report Coming Up

The NASA Grant annual report is due on March 8, 60 days prior to the grant's anniversary date. It should be a maximum of four pages, telling what we did during the year. If you did anything under the grant, we need a write-up about it from you. In particular, we need someone to describe our sidewalk astronomy activity.

Committee Reports

The Finance Committee needs a new budget in time for the annual meeting in May.

The Nominating Committee hadn't had a chance to meet, but Mitzi gave a large list of potential officers. Two are considering running for Treasurer. By March 16, we should have a list of candidates.

The VBAS 50th Anniversary event will happen in the September/October time frame.

Handouts of the Treasurer's Report were given out. Gena can email it to all officers.

Melissa moved to adjourn the board meeting at 9:19 PM. The motion carried.

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.or

VIA STELLARIS



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