



VBAS Highlights for July

Public Programs for July

Our next member's meeting will be held on Friday, July 18th at 7 p.m. NASA astrophysicist and long-time VBAS planetarium director Mitzi Adams will be speaking about *Physics of the Sun*. 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 Saturn, on July 5th, 12th, and 26th. Barbara Cohen will be speaking about the Mars Exploration Rovers on the 19th. 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

Incoming VBAS president John Young has written a President's Message on page 2.

Mars and Saturn Conjunction

Mars and Saturn will be passing very close to each other in the sky this month. On July 10th and 11th, they will be within 0.7 degrees of each other. Doug Horacek is planning an observing event. See the Calendar of Events for details.

Civil War Astronomer

On page 5, David Maker discusses a Union general and renowned astronomer who led the Union occupation of Huntsville during the Civil War.

Dr. Ernst Stuhlinger Tribute

VBAS historian Richard Norman has compiled interviews about the late Dr. Stuhlinger from some of the people who knew him, starting on page 6.

VBAS Member Meeting Minutes

Page 9 has the minutes of the June member meeting.

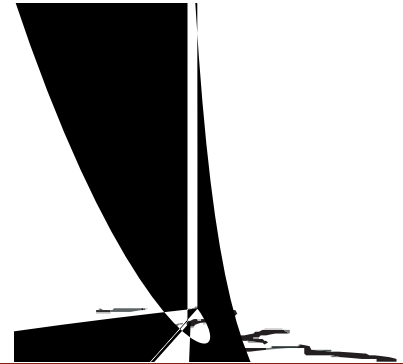
11" Schmidt-Cassegrain Telescope for Sale

Jim E. Reyer has a telescope, telescope case, and portable power source for sale. See page 9 for details.

Dark Sky Observation Event

A friend of Doug Horacek's is hosting a few club members at her Deep Sky site near New Market on July 25th. See page 4 for details.

Steve Sloan
Via Stellaris Editor
steve@sloan3d.com



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President's Message

by John Young

Greetings VBAS. I trust that all are doing well and enjoying another beautiful summer here in northern Alabama or wherever in this great land that you may currently reside. I hope that's included some nights up at our facilities attending one of our weekly planetarium and observing efforts or fun with the night skies in your own neck of the woods.

I would first like to say thank you to the retiring members of the board which includes Ken Farnell and Eduardo Mendoza. The personal time they devoted to the society is commendable and I hold fond memories for both. Aside from board-related interaction, thoughts of observing and facilities-centric efforts with Ken and manning the VBAS booth at the Sally Ride science festivals with Eduardo come to mind. The key element is doing things together as a team.

That element is what binds all of us that have a common interest ... in this case astronomy and its related sciences. We are fortunate to have a wonderful medium in which to learn, teach, and practice our craft ... the Von Braun Astronomical Society. Along with a strong volunteer spirit, as an amateur society we have a unique set of facilities that are not only historic and located in a truly beautiful setting, but something to be proud of, used and shared. I would encourage everyone to become more involved in the numerous opportunities that membership offers. Find out not only what you may be able to do to help maintain and improve the facilities and programs that we have, but also what your society can offer you.

On that note, I will devote much of my time this coming year to sustain and improve on-going projects while exploring and implementing some new paths. Much of this will require the committed efforts of not only the officers and committee leaders, but also the continued involvement of the membership as a whole. I look forward to the challenge of the

coming year and all that it promises. Most of all, however, I look forward to getting to know as many of my fellow members as I can and having some fun exploring the skies!

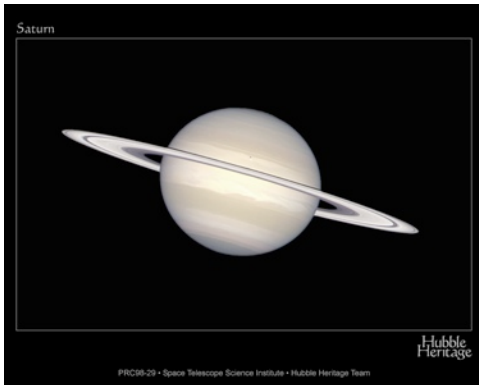
John Young
President

VBAS Calendar of Events

Saturday, July 5th, 12th, & 26th, 2008, 7:30 PM

Planetarium Show: *Exploring Saturn.*

Join us for a family-friendly program to explore the planet Saturn in the VBAS Planetarium as part of our year-long exploration of our Solar System! Weather permitting, we'll be viewing the night sky afterwards through one or more of VBAS's powerful telescopes, too.



Natural Saturn On The Cassini Cruise (Image credit: Hubble Heritage Team (AURA/ STScI/ NASA)

Thursday, July 10th, 2008, 7 PM

Mars-Saturn Conjunction Viewing

Location: Doug Horacek's Condo

The conjunction will be too low on the horizon to be seen at VBAS, so come to Doug's condo to watch Saturn and Mars, as they will be 0.7 degrees apart. Travel to Madison Town Center just west of Dublin Park, turn in and take the first left which is Water's Edge Lane. His condo is 289 Water's Edge Lane, at the southwest corner of Water's Edge Lane next to the Dollar Store. It's the top condo facing the parking lot. Call Doug Horacek for more information at 772-6788.

Friday, July 18th, 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 former VBAS Planetarium Director Mitzi Adams. The topic for the evening will be "Physics of the Sun". This is a fitting subject, considering we really start to feel the effects of our closest star here in the northern hemisphere this time of year. Visitors are welcome.

Saturday, July 19th, 2008, 7:30 PM

Planetarium Show: *The Mars Exploration Rovers: Still Going!*

Presented by Barbara Cohen, MER Athena Science Team Member

The two Mars Exploration Rovers, Spirit and Opportunity, touched down on Mars in January 2004, and despite exceeding their warranties many times over and showing signs of wear and tear, are still conducting groundbreaking science. The scientific goals of these "robot geologists" are to search for and characterize a wide range of rocks and soils that hold clues to past water activity on Mars. Each rover is sort of the mechanical equivalent of a geologist walking the surface of Mars. The mast-mounted cameras provide 360-degree, human-like views of the terrain. The robotic arm is capable of movement in much the same way as a human arm with an elbow and wrist, and in the mechanical "fist" of the arm is a microscopic camera that serves the same purpose as a geologist's handheld magnifying lens. The Rock Abrasion Tool serves the purpose of a geologist's rock hammer to expose the insides of rocks.

Friday, July 25th, 2008

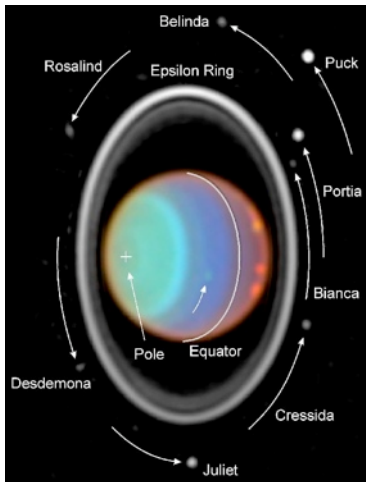
Dark Sky Observation Event

A friend of Doug Horacek's is hosting a few club members at her Deep Sky site near New Market. If you are interested, let Doug Horacek know at 772-6788. You can also email horacekd@bellsouth.net or the VBAS observers' email list. Doug will provide directions.

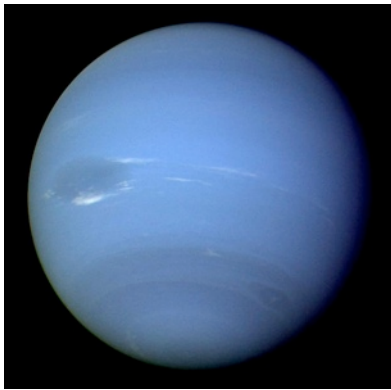
Saturday, August 2nd, 9th, & 23rd, 2008, 7:30 PM

Planetarium Show: *Exploring Uranus & Neptune*

Join us for a family-friendly program to explore Uranus the sideways planet, and his more conventional "twin" Neptune, in the VBAS Planetarium as part of our year-long exploration of our Solar System! Weather permitting, we'll be viewing the night sky afterwards through one or more of VBAS's powerful telescopes, too.



Uranian Moons, Rings, & Clouds (Image credit: E. Karkoschka, Univ. of Arizona, NASA)



Neptune, as seen by the Voyager 2 spacecraft in 1989.

Friday, August 15th, 2008, 7 PM

Regular Monthly Meeting

After a short pizza social and marketplace swap meet we'll discuss pertinent society business. The program has not been announced as of yet. Visitors are welcome.

Saturday, August 16th, 2008, 7:30 PM

Planetarium Show: To Be Announced

Presented by To Be Announced

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

Civil War-Era Astronomer in Huntsville History

by David Maker

I wish to draw the attention of the readers of Via Stellaris to an article in the Old Huntsville magazine (Jack Harwell, June 2008) on the subject of the Civil War.

That article contained a lot of information on General Ormsby MacKnight Mitchell, who led the Union Occupation of Huntsville during the Civil War, and is considered a hero or a villain depending on where your sympathies are on that conflict. Personally, I find it remarkable that he was able to lead a Union army occupation near the very center of the Confederacy during much of the Civil War.

What I find more intriguing however is that he was considered just before the war to be the most prominent US astronomer at that time! He

founded Cincinnati Observatory, founded the first magazine devoted to astronomy in the United States, was professor of mathematics at Cincinnati College, was director of the Cincinnati Observatory, and was on the lecture circuit traveling all over the country popularizing astronomy. Some have compared Mitchell in that respect to an early Carl Sagan. He was superintendent of Dudley observatory at Albany, New York when the Civil War began.

Anyway, it might interest some readers, that also have a parallel interest in the Civil War, that a (formerly) prominent US astronomer played such a large role in the early history of Huntsville.

Dr. Ernst Stuhlinger 1913-2008

Advocate for Space Exploration, Science, and Astronomy

by Richard Norman

Following his death, several Von Braun Astronomical Society (VBAS) members have shared stories and memories of Dr. Ernst Stuhlinger and his days with the VBAS. These stories suggest an intelligent, kind, and helpful man, an individual with whom one would wish to have been acquainted. Richard Norman, the VBAS Historian, has paraphrased many of those memories below; hopefully, the facts are truthfully represented.

VBAS member Lloyd Love remembers Ernst "...as a brilliant, yet gracious and humble man." Lloyd recalls telling a friend that, "...Ernst was the smartest person I had ever known. As a NASA employee, I have had the opportunity over the years to observe many smart people. I would say that the comment to my friend still holds true today. However, Dr. Stuhlinger never flaunted his intelligence and was a quite easy and pleasant person to work with."

Sandra Sherman McCandless remembers Ernst as "...confident, tremendously intelligent, level headed, and [he] had a wonderful sense of humor." In addition, he was recalled as "...being a very generous and kind man, a gentleman."

Dr. Stuhlinger was a firm believer in the benefits of scientific and technical research to explore space and similar goals. Skeet Vaughn recalled how Ernst had captured his beliefs in a letter responding to a nun's concern for why we should be spending money to explore space, when there are needy children on Earth.

A copy of the letter can be found online at <http://www.meaus.com/whyExplore.html>, and many of the reasons for exploring space are still valid today. The letter confirms Dr. Stuhlinger's advocacy for science and technology, as well as his sensitivity and generosity toward those in need.

During the earliest days of the space program (c. 1954) and the Rocket City Astronomical Association (RCAA), Ted Paludan recalls fond memories of working with Dr. Stuhlinger, "I had joined



"Bill", Conrad Swanson, George Ferrel, Dr. Ernst Stuhlinger (L to R)

the Guidance and Control Lab in 1951, and he and I worked in the same Building 112 on Squirrel Hill. I was interested in topographic maps and had collected those that TVA had published of the North Alabama region. He and I studied them to try to locate a place for our observatory, seeking unoccupied mountain tops. As Ernst left work one day, the MPs spotted the maps in his car and were shocked to see details of Redstone Arsenal. Dr. Stuhlinger had to go to the Provost Marshall to convince him that they were public documents which I had purchased for \$0.15 each. A few days later Dr. Stuhlinger rented a two seat Piper Cub at the old airport and he piloted it as we studied every hilltop in this region. It was my first ride in a small plane. After we got State land on Monte Sano, Dr. Stuhlinger and I, and several other members accompanied the Park Manager to the site and we marked off the area we wanted with wooden stakes. The rest is history. We owe thanks to Dr. Stuhlinger for his efforts in site selection. I worked with him with great pleasure until his NASA retirement."

Dr. Stuhlinger was a founding Director of RCAA, and Dave Christensen recalls during the early days of RCAA, "With his diverse scientific background and writing skills, Dr. Stuhlinger was a driving force behind the *Space Journal*." He

authored many technical papers and several books. Dr. Stuhlinger is regarded as a pioneer in electric propulsion for space travel, but Dave says, "Ernst was also heavily involved in electrical propulsion for automobiles after he retired from NASA." Dave says Ernst helped spearhead several local conferences and workshops, including a National Solar Energy workshop with invitees from all 50 states, and an international "Space Summit" focusing on the human exploration of Mars. According to Dave, Ernst also liked to pitch in on community projects such as the von Braun Hall exhibit at UAH. As Chairman of the exhibit, Dave recalls that many of the rocket team members, including Ernst, contributed to the exhibit, which covers the rocket team's efforts from 1950 to around 1974, and is open to the public. "Dr. Stuhlinger was also a willing speaker," recalls Dave, "for the von Braun Forums and panels for the space education community. One of his recent appearances was Oct 4, 2007 at a panel on the anniversary of Sputnik and the impact it had on the world."

The Angele observatory was designed by Wilhelm Angele and Ernst and built circa 1983-4 basically to house the MSFC/UAH 16" Celestron, and it included the opening for the solar telescope and heliostat. During 1985-6, Ken Farnell recalls working with Ernst and Wilhelm. "We spent several weekends doing preliminary design and construction for the placement of the heliostat, tube and

closeout at the top of the tube. The primary mirror support, diagonal support and screen placement evolved sometime later. The solar telescope evolved slowly due at first to the fact that Wilhelm and Ernst had different concepts for the closeout which were key to the assembly. The concept Wilhelm supported was a slide up/down, and Ernst's design was the current pivot closure. It was quite remarkable, as their helper - the young guy, to work one weekend on one concept and the next weekend on the other - just the two of us. I carefully pointed out this fact to both of them and they were equally convincing that when we got to that point in the construction it would go their way. The rest or lunch periods were spent talking about von Braun and the old days, Ernst's planned biography of vB, stories of how vB worked with people, why the rocket team was "retired," and the political development of the shuttle. It was awesome to work with these gentlemen engineer/scientist on our relatively simple project."

Mitzi Adams was among the first folks that Ernst taught how to use the solar telescope. Mitzi recalls, "After the solar telescope lesson, as we were leaving, Ernst commented on the Isuzu Rodeo I had just purchased. I bought the gas-guzzler because I intended to do a lot of caving and I told Ernst this. He said that he used to do a lot of caving in his youth. I told him that I had caved in Germany in Falkensteiner Cave. He caved there too! (although in the '40s before I was born!!) Ernst also explored Natural Well on Monte Sano, which meant that he did vertical caving as well. A man of many talents!!" Indeed Sandy Sherman McCandless noted, "Dr. Stuhlinger not only loved the stars, but music, art, history. I remember when Monet's gardens were recreated he and his wife went to France to see them."

Many of the members noted Dr. Stuhlinger's dedication to VBAS and how his technical expertise contributed greatly to the society. Ernst was a patient astronomical observer and earned Messier Cert #566, awarded November 21, 1983. In addition, Dr. Stuhlinger was qualified to



ANGELA STUHLINGER ELLIS

use the various telescopes of the VBAS. Sandy recalls Ernst "was interested in introducing everyone to the stars. Many a night he patiently showed the stars to the general public." Ernst taught many other members how to observe the sky and to become qualified telescope operators. But Lloyd Love also recalls that, "Ernst was equally willing to perform and enthusiastic about doing more mundane tasks. I remember one instance in particular when the VBAS needed a toilet. He picked out an appropriate unit and installed it himself."

Mitzi Adams recalls hosting a group of girl scouts to celebrate the launch of Explorer I. "I'd asked Ernst if he could come over and talk to the girls and he said he would. I gave him a time to arrive, hoping to show a film about that launch just before he got there. Things couldn't have gone better. The film shows Ernst himself actually pushing the button to launch Explorer I. Immediately after that, he walked in and it was like a rock star had arrived! Mothers and daughters both asked for an autograph." By day Dr. Stuhlinger launched rockets into space, and by night Ernst launched young minds toward careers in math, science, astronomy, and space exploration.

Skeet Vaughn remembers an evening when he took his young daughter Thera, who was about two years old at the time, to look through the telescope. "When we got to the observatory Dr. Stuhlinger and his son were there using the telescope. Ernst helped my daughter to look thru the eyepiece and I guess they were observing Alphonsus so when she saw the crater she said, "Daddy, there is Alphonsus Crater." Dr. Stuhlinger was impressed with her statement. I explained that I had been teaching her that that lunar crater might be an old volcano, and might be a landing site someday when she was older."

Perhaps Ernst described his reasons for serving VBAS best himself in the forward to the 25 year anniversary brochure, "*Von Braun Astronomical Society 1954-1979*."

"Like other technical and scientific societies, our astronomical society feels the competition of the excellent science programs offered by television networks. A local amateur society can never hope to compete with the accomplished presentations organized by a TV studio

with its almost unlimited access to experts, facilities, and funds. However, even the best television show cannot provide the exciting experience of an evening hour at the big telescope of a real observatory, with a look at a far-away spiral galaxy, and with the thought that the light signals from this remote world of stars have been traveling for a hundred million years through space before they entered in this very moment the eye and the mind of the observer to establish a personal link between man and a universe which is far greater than we imagine, and probably far greater than we will ever be able to imagine. It is the fascinating experience of this personal, immediate involvement which attracts members, friends, and guests to astronomical amateur societies. Our society has always endeavored to share this wonderful experience with those who wish to join us at the telescope, in the planetarium, at the workshop, or just for a good talk. This desire has guided us through the first twenty-five years of our existence; it will remain our guide as long as our society stays alive."

Dr. Ernst Stuhlinger

VBAS has since indeed survived another 25 years by pursuing the desire to educate and inspire the public and the youth of the community to explore space. Although technologies may have changed, the desire is still the same, and will guide us another 50 years... but we will miss our friend and teacher, Dr. Ernst Stuhlinger.

VBAS Member Meeting Minutes

7:30 PM on Friday, June 20, 2008

by Steve Sloan.

Prior to the business meeting, we had a potluck dinner.

VBAS President Michael Cowger called the business meeting to order at 7:57 PM. He introduced some of our guests. Many members of the Huntsville Amateur Radio Club (HARC) had come to hear Andy Wilson's program on amateur radio astronomy. Richard Stevens was visiting from Kennedy Space Center, where he serves as the deputy chief engineer of operations for the Constellation program. David York works with Eric Johnson on the Ares rocket, and he was visiting from Glenn Space Center. We also had a science teacher who works at Randolph School.

Michael announced that we would be showing off the Swanson dome to anyone interested.

We have a new member, John Gross, who just graduated from UAH.

Michael introduced Gerry Conrad as our new membership secretary.

Michael announced that we are currently delivering planetarium programs every Saturday night. One

of the original engineers on the Hubble Space Telescope will be speaking on Saturday.

Michael then went around to the officers, asking if they have anything to announce. He asked Steve Sloan if there is anything he needs to announce for the newsletter. Steve asked for submissions for July.

Michael introduced the new officers, who will begin serving July 1st. Jared Cassidy will become Vice President. Ethan Chew will be taking over as Director of Administration. John Young will be the new President.

Michael asked Gena Crook if she has any news from the kids' programs.

Michael announced that we had just received a \$3000 grant from Siemens, toward facilities improvements.

Michael Cowger announced the VBAS upcoming fall trip to visit the radio observatory in Green Bank, West Virginia.

At 8:07 PM, the business meeting adjourned, and the program began. Andy Wilson presented a talk on *Amateur Radio Astronomy*, geared toward the amateur astronomers and amateur radio operators in the audience.

II" Celestron Schmidt-Cassegrain Telescope For Sale

by Jim E. Reyer

Celestron II Inch CPC Schmidt-Cassegrain Telescope

- Fully computerized, GPS-enabled, GoTo technology with SkyAlign
- 40,000-object database with 400 user-definable objects
- 8x50 finder scope to help accurately find objects
- Flash-upgradeable hand controller keeps you up to date
- NexRemote telescope control software operates your telescope via PC
- Celestron aluminum carrying case
- Eyepiece filters No. 21, 56, 80A, & 96
- Eyepieces: E-lux 40 mm PLOSSL, 12.5 mm PLOSSL, & 32 mm PLOSSL

Jims Mobile (JMI) Telescope Case

- Four lockable latches for the removable cover (no hinge)
- Three steel-reinforced handles

- Die-cut foam lining with compartments for telescope, eyepieces and accessories
- 10" wheels
- Celestron Power Tank 12v Power Supply 7 Amp Hour

Portable power source

- Rechargeable 7-ampere-hour battery
- 3 V, 6 V, and 9 V outputs for accessories
- Emergency spotlight

Everything is practically in excellent condition. I have probably only used it about six or seven times since I purchased it new. If anyone has any questions, anyone can contact me by calling me at 256-617-0619, or by e-mailing me at jimreyer@yahoo.com. I am asking \$3000.00 or best reasonable offer.

Thank You,
Jim E. Reyer

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



A Publication of the
Von Braun Astronomical Society
A Member of the Astronomical League
P. O. Box 1142
Huntsville, AL 35807-1142

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Steve Sloan, Via Stellaris editor