

VBAS Highlights for May

www.vbas.org

Via Stellaris 36th Anniversary

This month's *Via Stellaris* has a retro look in honor of its 36th anniversary. Gert Schmitz contributed the first page of the first issue, which you can see on page 9. Gert has also contributed a classic article about the 1964 launch of the Ranger 6 lunar probe, starting on page 12.

Public Programs for May

This year's Annual Meeting will be held on Friday, May 15th at 7 PM. We'll be electing officers, presenting the 2009-2010 budget, and giving out awards. The program will feature a guest speaker from NASA, who will be discussing recent Chandra projects related to galaxy clusters and dark energy. 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 discuss *Star Myths & Constellation Lore* with shows on May 2nd, 9th, and 23rd. On the 16th, we'll give a seasonal sky tour, and on the 30th, we'll have a special program called *Two Pieces of Glass*. 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.

Stellar Events for May

Resident Astronomer Doug Horacek lists this month's upcoming sky events on page 3.

Messier Marathon, April 24th

On page 5, Jeff Delmas reports on the Messier Marathon.

100 Hours of Astronomy at Bridge Street

Jeff Delmas covers the sidewalk astronomy event on page 6.

The Student's Corner

On page 7, Student Director David Lofts writes about the recent winner of the VBAS science fair award.

VBAS Member and Board Meeting Minutes

The March member meeting minutes start on page 8, and the board meeting minutes start on page 10.

Thank You, CAS Cares!

On page 11, Director of Planning and Research Jeff Delmas reports on his latest fundraising victory.

Steve Sloan
Via Stellaris Editor
steve@sloan3d.com

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VBAS Calendar of Events

Saturday, May 2nd, 9th, & 23rd, 2009, 7:30 PM

Planetarium Show: *Star Myths & Constellation Lore*

Location: VBAS

Join us for a family-friendly program as we explore the era when civilizations started charting the stars and telling stories about the constellations, and explain why our modern star charts include Greek, Roman, and Arabic heroes and names. The whole family will enjoy our trip back in time to explore how the early civilizations made sense of the world around them and explained everyday astronomical events through story telling. We'll also fast-forward to the present day to discover the mystery and stories behind our modern constellations. Weather permitting, we'll be viewing the night sky afterwards through one of VBAS's powerful telescopes too.



This screen capture from Stellarium shows several characters from the same story. King Cepheus and Queen Cassiopeia sacrificed their daughter Andromeda to a sea monster, until Perseus rescued her.

Friday, May 15th, 2009, 7 PM

Annual Meeting

Location: VBAS

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 2009-2010, hold our annual elections, and recognize some of our members for their outstanding contributions in forwarding the mission of VBAS. The program will feature a guest speaker from NASA, who will be discussing recent Chandra projects related to galaxy clusters and dark energy.

Saturday, May 16th, 2009, 7:30 PM

Planetarium Show: *Seasonal Star Tour*

Location: VBAS

Join us for a relaxing evening at VBAS. We'll show you which constellations are visible this time of year, and teach you how to find them. We'll also learn about the fascinating and beautiful deep sky objects that can be found, along with a mix of mythology. Weather permitting, we'll be viewing the night sky afterwards through one of VBAS's powerful telescopes, too.

Friday, May 22nd, 2009, 7:30 PM

Adult Regular Observing Evening

Location: VBAS

Presented by Doug Horacek

The adult observing session will be starting at 7:30 P.M. You may get there earlier to set up your telescope. Contact Doug Horacek at 772-6788 for more information.

Friday, May 22nd, 2009, 8 PM - 10 PM

Youth Astronomy Evening

Location: VBAS

Presented by David Lofts

Call Chris Lofts at 256-726-0275 or Doug Horacek at 256-772-6788 for more information.

Saturday, May 30th, 2009, 7:30 PM

Planetarium Show: *Two Pieces of Glass*

Location: VBAS

Join us for a special planetarium program, and weather permitting, we'll be viewing the night sky afterwards through one of VBAS's powerful telescopes, too.

Friday, October 9th - Sunday, October 11th, 2009

Greenbank Radio Telescope Trip

Location: West Virginia

You're invited on a trip with Michael Cowger to see the world's largest movable radio telescope and to tour the National Radio Astronomy Observatory's Greenbank Facilities, which include several radio telescopes, in the mountains of West Virginia during the Fall colors! The group, including family members, will travel by bus on Friday, October 9th to a Star Party at nearby Snowshoe Resort's Rimfire Lodge, then tour the Greenbank facilities on Saturday, followed by dinner and a ride on the Cass Scenic Railroad, then another Star Party before returning on Sunday.



Contact Michael Cowger for additional details at mcowger@bellsouth.net and visit the related links below:

Observatory: www.gb.nrao.edu

Lodging: www.rimfirelodge.com

Dinner/Train: www.cassrailroad.com

Friday October 16 - Saturday October 17, 2009

Sixth Annual Volunteer State Star Party

*Location: Meriwether Lewis Observatory
Dark Sky Site, Summertown, Tennessee*

Presented by Eric Johnson

VBAS member Eric Johnson is opening up his dark sky site in Southern Tennessee for a weekend of observing, good food, and plenty of hospitality. The site is in Lewis County, Tennessee, between Hohenwald and Summertown. This is a very dark sky site. Primitive camping and facilities are on site. It is free to all astronomers near and far. Don't forget your scope. RSVP Eric Johnson at ejohnso4@yahoo.com.

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

Stellar Events for May

by Doug Horacek, Resident Astronomer

Morning of 7 May 2009 is the Eta Aquarid Meteor shower, the major meteor shower for the month of May. The associated comet is 1P/Halley or Halley's Comet. There will be about 60 meteors per hour. The moon will be low in the west by morning, so there should be little interference.

Morning of 10 May 2009 is the Eta Lyrid Meteor shower, a minor shower with only a handful of meteors per hour. The associated comet is Iras-Araki-Alcock.

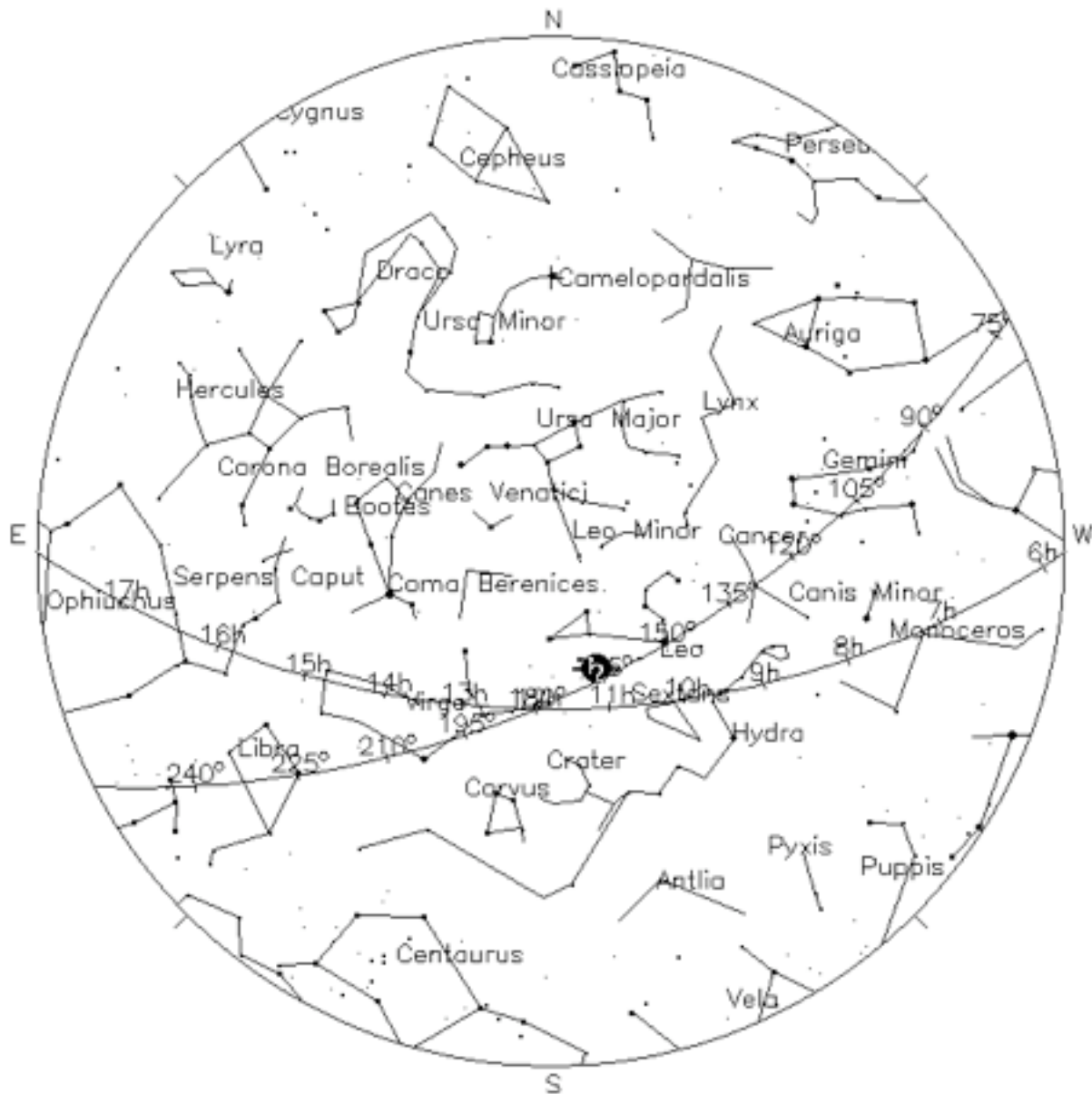
Morning of 27 May 2009, Jupiter and Neptune are less than a half of a degree apart. This is the first conjunction of these two planets this year. Later, when both are in retrograde motion, the two will have another conjunction earlier in the evening in July. Stay posted for the Stellar Events in July.

Before Midnight 30 May 2009, the shadow of Titan, Saturn's largest moon, will pass across the disk of Saturn. The initial contact is 31 May 2009 at 4:32 universal time.

The Night Sky for May, 2009

Here is the view at 9 PM in mid May, 2009, at 34° N Latitude, 86° W Longitude. Jupiter (the lowercase “h” symbol) will be high in the sky, between Leo and Virgo.

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



100 Hours of Astronomy at Bridge Street

by Jeff Delmas

April 2nd-5th brought over 100 countries together in a planet-wide celebration of astronomy. The world visited 80 professional observatories around the world during a 24-hour live online tour, and more than a million people had their first close-up views of the Moon, Saturn, the Sun and other objects of interest through telescopes at various sidewalk astronomy events, like ours at Bridge Street. A Cornerstone Project of the International Year of Astronomy brought the Universe to all the world's citizens to discover for themselves.

VBAS participated in this historic event by setting up telescopes in the middle of Bridge Street Town Center. We could not set up on Thursday the 2nd due to weather, but on both Friday the 3rd and Saturday the 4th, VBAS members set up society and personal scopes for the public to view primarily the Moon and Saturn. James Breilsford organized the event, which was attended one or both nights by fellow members Michael Cowger, Doug Horacek, Lorin Arnold, John McCullough, Melissa Snider, Jeff Delmas, and others.

Lines formed as hundreds of Bridge Street visitors waited their turn to look through one of our telescopes. We estimate about 400 visitors Friday evening and 500 on Saturday evening viewed through at least one of our telescopes. For most of them, it was the first time they had viewed any celestial object through a telescope. We had all kinds of people, from folks in overalls to couples in prom attire. James commented that "There is nothing like a person's reaction after they have seen the Moon or Saturn through a telescope for a first time. You all saw it. Our hobby can inspire."

We are tentatively planning another Bridge Street event in the early Fall, a few weeks prior to our next Astronomy Day.



The Student's Corner

Asteroid Study Wins VBAS Science Fair Award

by David Loftis

Last month two awards from VBAS were given to students at the Alabama Science and Engineering Fair. Megan Edwards, a 9th grader from Westminster Christian Academy, received a VBAS "Astronomical Excellence" prize for her project, "And Yet She Moves: An Examination of Jupiter and the Galilean Moons." The other "Astronomical Excellence" prize was awarded to John Ashburn, a 9th Grader from Covenant Christian Academy. Each prize recipient received a framed certificate and a free family membership to VBAS for one year. John Ashburn's project was called "The Danger of Tsunamis From Asteroid Impacts". He came up with this idea when his uncle

phy. Congratulations, John!



John Ashburn is second from the left.

ABSTRACT

The purpose of this work is to provide experimental support for some of the conclusions drawn from theory and mathematical models of asteroid-induced tsunamis. Doing so increases confidence in the simulations that would be used to predict affected areas and formulate evacuation plans in the event of such a disaster.

The experiment involved scale model water impacts of asteroids using six concrete spheres of varying mass dropped three times each from two different heights into a wading pool. A digital video camera recorded the impact and generated waves.

The video was studied frame-by-frame on a computer to obtain baseline water levels, impact times and positions, and wave heights and transit times for the first two waves at two different marks. From these, wave amplitude, wavelength, and energy were estimated. The data was then averaged across the three drops in each set. Finally, mathematical expressions describing the wave amplitude, wavelength, and energy as a function of the kinetic energy of the impacting spheres were generated.

Results supported the position that the amplitude and wavelength of the waves increase with the energy of the impacting asteroid according to simple power laws. It was further found that a relatively constant fraction of the asteroid energy is transferred to the largest wave. Extrapolating to the conditions of real asteroids, the estimated tsunami amplitudes were consistent with other works in the field and suggest that the waves caused by an asteroid impact could be much larger than those generated by the 2004 Indian Ocean Earthquake.

The meeting was introduced at 7:32 PM by President John Young. Visitors included Gary Walpole, who was up here camping from Memphis, and Craig Reinhardt, who is a local teacher.

The February member meeting minutes were discussed prior to approval. Terry Owens requested one change. Michael Cowger moved that the minutes be approved as amended, and Sam Tumminello seconded. The motion carried.

The second VBAS audit committee meeting will be held Sunday at 4 PM at Gena Crook's house. The committee will compile fiscal guidelines this time. They will probably hold one more wrap-up meeting after that.

Michael Cowger reported that VBAS will hold a fundraiser soon.

VBAS currently has two separate email lists, for planetarium workers and observers. Michael Cowger will soon add forums to the website, which should get people more involved. The forums should be up by this weekend. The forums will replace our current email lists, but the weekly email updates about VBAS events will continue.

Richard Norman gave a Dark Skies report. The Globe at Night program is underway. Richard and Michael will be representing VBAS at the Hays Nature Preserve's Earth Day event on April 18.

If the Messier Marathon is clouded out Friday and Saturday, we'll postpone it until next month.

Melissa Snider gave the Director of Education and Programs report. We have Astronomy Day plans for fall. How would you like to be involved? She also reported that we have had good school group attendance at our planetarium programs recently.

VBAS will be doing sidewalk astronomy with the 14" telescope at Bridge Street during the 100 Hours of Astronomy event, on April 2 through 4. We need volunteers to help.

For the Facilities Director's report, Terry Owens asked the membership to take what's on the table with them, indicating the stuff we later sold during the program.

According to Jared Cassidy, there is no news from the Nominating Committee. The committee will need to fill positions for Director of Facilities, Director of Administration, Treasurer, and Director of Education and Programs. Melissa is willing to con-



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Mr. Gert Schmitz, winner of our name the paper contest, has been a member since 1957. He has a keen interest in astrophotography. He is our current publicity chairman and TV personality (Ch. 48 twice in the last two months).

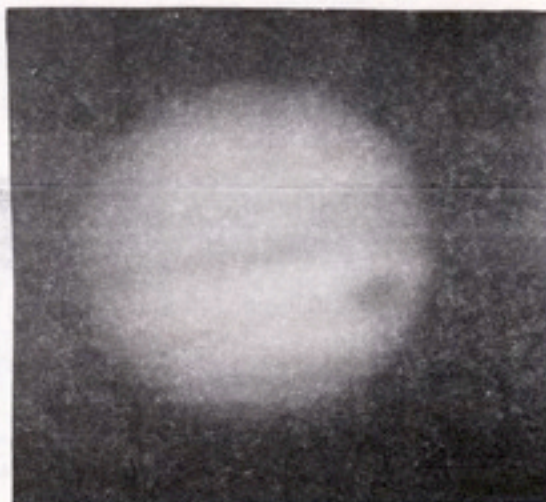


Photo by Dan Roberts

The photograph of Jupiter was made using TRI X film and an eyepiece projection that resulted in an effective ratio of focal length to mirror diameter of $f/90$. The exposure time was one second. The techniques of this type photography, and many others, will be demonstrated at the astrophotography workshop to be held Aug. 3, starting at 7:30 pm, in the Planetarium. Jupiter will reach opposition on July 30. The planet is fun to look at, but this year it will provide an extra display. An unusual alignment will occur, so that for several months before and after opposition, the orbital plane of Jupiter's moons will nearly line up with our line of sight. As a result of this alignment, it will be possible to see numerous eclipses and occultations of the moons of Jupiter as they revolve around the planet and occasionally pass in front of each other. The February issue of Sky & Telescope has complete details of this mutual phenomena.

VBAS Board Meeting Minutes

by Jeff Delmas & Steve Sloan

7 PM on Tuesday, March 5, 2009

Attendees:

John Young (Pres)
Melissa Snider (Ed & Programs)
Doug Horacek (Res. Astronomer)
Michael Cowger (Past Pres.)
Terry Owens (Facilities)
Ethan Chew (Admin)
Jeff Delmas (Planning & Research)
Steve Sloan (Secretary)
Roy Young (Planetarium Dir.)
James Brelsford

President John Young called the meeting to order at 7:13 pm.

The minutes from the previous meeting were presented. Terry moved to approve the minutes and Michael seconded. The motion passed.

Gena presented the financial statement and treasurer's report. Michael Cowger moved to approve the report as presented. Terry seconded. The motion passed.

John called for a renewed fundraising effort. Michael wants to schedule a social event for potential donors and is targeting sometime in May for the event. Jeff discussed a letter he's working on to send out to potential corporate and private donors. Michael and Jeff agreed to coordinate their efforts.

Terry then presented facilities repair needs as follows:

- Angele roof repair. The decking of the Angele roof needs to be cleaned and sealed. She presented an estimate for a product called Krystol T1 and T2 from Kryton. The estimate was approximately \$2000.
- The water table rises above the foundation due to poor drainage and soil saturation during heavy rains. This results in water seepage into the lower floor of the Angele. Terry presented an estimate from Olsham for approximately \$3600, another option where we hire someone to put in drains

under the floor of the Angele, and a third option where we do that work ourselves.

- The door at the top of the stairs to the Angele is rusting out. Terry recommends it be replaced. No estimate was provided.

After some discussion on these issues, we agreed to table all action until the next board meeting and, if necessary, call a special meeting or vote via email on the issues.

Steve needs to shrink the member survey, and it will be ready to send after that.

A member dues reminder note is already in Via Stellaris.

There has been no progress on the new planetarium projector. To prepare for the new projector, we'll need to build up a platform to the height of the edge of the dome. We had additional discussions about preparations for the new projector.

An audit committee meeting was held in February, and the next meeting will be March 24. The audit committee plans to be done by the end of June.

There was no news on strategic planning.

Upcoming observing events were discussed. The Messier Marathon is planned for March 27. Jeff put out a WLRH public service announcement, which will run two weeks prior.

On April 2, we will hold sidewalk astronomy events at Bridge Street for 100 Hours of Astronomy. Gena will help James with flyers for that event.

Eric Johnson's Volunteer State Star Party will be held October 16-18, 2009. Jeff will send it in to the Astronomical League's *Reflector* magazine for advertising.

Michael, John, and Ethan will catch up on website action items after the meeting.

We're looking for volunteers for Membership Secretary. A long-time member (i.e. for at least a few months) looking to get involved would be ideal.

Lonnie Puterbaugh requests that we set a date for Astronomy Day so he can put it on his calendar. Someone requested that we hold Astronomy Day in the spring. Melissa has no time to

run it if we do it in spring, due to work obligations, but if anyone else wants to organize one... The consensus was that we want to hold it in fall, not May, and not against the Big Spring Jam. Melissa suggested that we let Lonnie pick the date.

A local company called Digital Fusion would like to test a space-based star sensor against our planetarium. One of their guys wants to come up and see our facilities for himself. There will be no talk of money until after they see what they're getting. With the size of the projected stars, there's a good chance our planetarium won't be useful to them.

Doug Horacek will continue to keep in touch with the park for recycling.

Doug reported that Huntsville High School is starting a new astronomy club. They want advice from VBAS, and students there want to get involved here. This may be a good chance to grow a youth observers group for older kids. The new club wants its members to join VBAS and start participating. Could we get our college-age planetarium helpers to lead the new group? Un-

fortunately, they're not very dependable due to college commitments. John asked Doug and David to continue communicating with them.

Terry moved to adjourn at 8:57 PM.

CAS Cares Grants VBAS \$1000

by Jeff Delmas

We're pleased to announce that VBAS is the recipient of a CAS Cares grant for \$1000, which was presented to the society at the Bridge Street sidewalk astronomy event. The money is targeted for use on our handicap accessible restroom addition. Boyd Edmiston of CAS is pictured handing the \$1000 check to VBAS Director of Planning Jeff Delmas. The grant was awarded to VBAS to help our efforts at improving our facilities, in order to continue providing our community with the high-quality services and programs we conduct. Thanks, CAS Cares, Inc., for your kind support of VBAS!



Pictured are: Front row (L-R): Rick Watts (CAS), Jeff Delmas, Boyd Edmiston (CAS), Lorin Arnold, Back Row (L-R): James Brelsford, Michael Cowger, Doug Horacek, John McCullough

ViaStellaris

Via Stellaris is published monthly by the Von Braun Astronomical Society.

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Vice President Mike Laskey

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Treasurer Crystal Kitchens

Observatory Director Wesley Swift

Planetarium Director Mitzi Adams

Resident Astronomer Steve Sauerwein

Newsletter Editor Michael Cissell

Facilities Director Dave Gore

Librarian Doshia Wilson

Public Relations Sandy Sherman

We encourage contributions from members and the public. Send your letters, articles, announcements, rants, and ideas by electronic mail to mcissell@hiway.net. Please send articles in plain text format. Typed or handwritten articles are also welcome.

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P.O. Box 1142
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<http://members.vbas.com>
VBASTRUCOM.VBAS.com



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Volunteer Opportunities

Call Charles O'Donnell at 864-8879 if you are interested.

The VBAS is seeking a volunteer for the positions of Treasurer. Keep track of the vast VBAS financial empire. Maintain extraordinary levels of service in the membership. Must have a sunny disposition and a head for numbers.

WILL IT GO ROUND IN CIRCLES?

What Happens When it Gets There?

Armed with little more than a slide rule and some radio waves, landing is a toss-up.

In preparation for a controlled lunar landing, a number of very basic mysteries have to be solved. Some of the more pressing issues include how to control something a quarter of a million miles away, how to calculate where it will land (not within a few kilometers, but even within several hundred miles), and how will a landing site act under impact? Although by the early 'sixties, the scientific community has effectively dispelled rumors about a blue cheese lunar composition, they have no real working knowledge of the Moon's powdery regolith. After millions of years of ionic bombardment, the top layer of the Moon has been whipped up into a floury fluff. Would a spacecraft or an astronaut disappear into the quicksand? Scientists had some theories, and they didn't necessarily agree.

Among other objectives, the Ranger program, conducted throughout 1964 and 1965, set out to test telemetry (remote spacecraft guidance) as well as to determine the behavior of the Moon's surface. An experiment undertaken by JPL, SCI, and the Rocket City Astronomical Association was instrumental in studying these areas. VBAS Charter Member Gert Schmidt recounts the event.

Project:	Ranger 6
Report No:	Kennedy Space Center 1A (KHR-1A)
Launched:	January 30, 1964
Launch Vehicle:	Atlas-Agena B
Payload Code:	Ranger A (PS)
Evaluation:	Considered partially successful

The Ranger Program was intended to accomplish a hard impact on the moon, verifying the accuracy of its missile guidance system. An earlier flight missed the Moon by about 4,000 miles. We observed this craft (unofficially) as a blinking, magnitude-9 or -10 object.

In the Ranger 6 program, the Rocket City Astronomical Association [later the Von Braun Astronomical Society] participated in an official capacity in conjunction with JPL [NASA's Jet Propulsion Lab in Pasadena, CA]. Our

Und wenn er nicht

local support was provided by SCI [Space Craft Inc., in Huntsville]. SCI was to predetermine what the expected impact cloud would look like. Studies were conducted at the original SCI facility on South Memorial Parkway by shooting BB's into talcum powder. The expected mushroom cloud, artificially produced in the accompanying photographs, can be seen on the edge of Mare Imbrium.

On the night of the launch, we were at the observatory early to set things up; mounting the Leica IIIg with reflex housing on the scope, verifying the clocks, assigning tasks to participants, passing out time recording sheets, establishing phone communication with JPL for impact time, etc.

I was still pondering whether I should look through the reflex housing for the expected cloud, or just start shooting before, during, and after the expected impact time. I finally decided not to rely on my eyesite and the expected impact time. And since the cloud could show up anywhere in a 350-mile radius, it was very doubtful that I would discover it in a time to be useful—or see it at all.

I had 40 exposures on my Leica cartridge. We decided to shoot 20 pictures at 30 second intervals before predicted impact time and 20 pictures at 30 second intervals after predicted impact time. That gave us a total coverage of 20 minutes. One other thing bothered me; since I had eight years' experience in guidance and control, I doubted that the 350-mile impact radius was realistic. I decided to double that number and sacrifice magnification, which I compensated for later in the darkroom.

When the time came, the crew was ready with stopwatch and timing papers in hand, telescope

on target, focused, camera loaded and cocked. At ten minutes before JPL's predicted impact time, I started shooting. After every shot I looked to verify focus and target area, and rewound the camera. I also used a cable release to minimize telescope vibration during camera operation.

Everything went according to schedule. We closed the facility and I went straight to the Huntsville Times darkroom to develop the negatives. Dudley Campbell and I introduced forty 8" x 10" prints. We looked

for about an hour but could not find any mushroom cloud. We even got Conrad Swanson out of bed to help us look. After an hour or so, we were about to give up

gestorben ist dann lebt er heute noch!

when some strange streaks from left to right caught our attention. First, we could not make sense of them, then suddenly we realized that they appeared just before the center of the set and then slowly faded out over four to five prints. Besides, the streaks were outside the 350-mile predicted impact radius. So, we were the only ones in the world that got a picture.

Later, we did some tests to verify that the streaks were not caused from electrostatic discharge or scratches. It was the real thing!

The Huntsville Times covered our event with picture and print, and a few days later an agent from Time Magazine called me at work and offered \$20,000 per column and \$25,000 per picture. At that time SCI had not yet performed the verification tests on the negatives, so I told the agent this. The next day he withdrew his offer.

Since, at that time, our facilities were inadequate to store such delicate items, I decided to store them at the Alabama Space and Rocket Center, in the historical section.

I gave the set of negatives personally to Doris Hunter, who was, at the time, in charge of this section.

Und wenn er nicht gestorben ist dann lebt er heute noch!

Charter member of the RCAA, current member of VBAS, Gert is an accomplished astrophotographer and founding editor of Via Stellaris. He, in fact, coined the publication's name. 📷



Following her visit in June to the facilities built by her uncle (and other distinguished members), Elizabeth von Braun very kindly sent this letter to the

Von Braun Astronomical Society:

Dear Mr. O'Donnell and Ms. Adams,

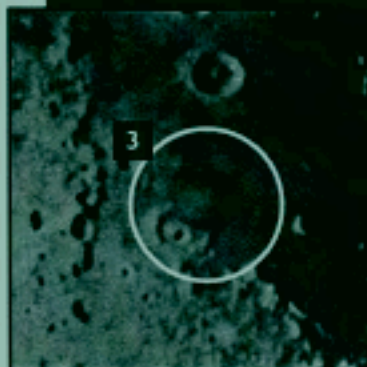
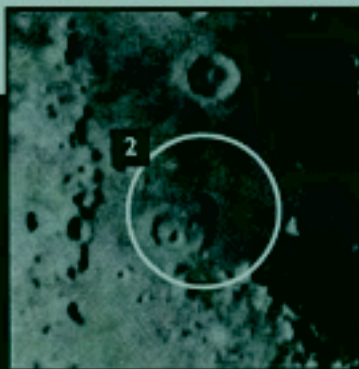
On behalf of the family of Magnus von Braun, I would like to thank you for showing us around your lovely planetarium and taking time out of your busy schedules to meet with us last week. I would also like to thank the telescope operator [Joe Fikes] for showing us Mars and the various other stars. What a magnificent sight!

I know that Wernher would be thrilled to know that the VBAS is thriving and continues to educate others on the beauty of the night sky. Keep up the good work!

Thank you again for your time and consideration. It is greatly appreciated.

Sincerely,

Elizabeth Emmy von Braun



Some theorists proposed that the impact of a spacecraft crashing into the moon's surface would create a mushroom cloud that would expand for miles, sending out a circular wave of ejecta that would eventually settle into a radially-shaped blanket.

These photographic images simulate the phenomenon. Tests conducted in Huntsville using ball bearings and talcum powder supported the speculation.

With little knowledge about the physical properties of extraterrestrial soil, the topic was critical in determining the feasibility and approach of a safe, manned lunar landing.

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, 2009. If you have questions regarding membership, please contact a VBAS officer.

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 to avoid missing issues of *Via Stellaris*.

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VIA STELLARIS



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A Member of the Astronomical League
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Huntsville, AL 35807-1142

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Steve Sloan, Via Stellaris editor

ELECTION BALLOT

VBAS Officer Ballot

President

_____ Michael Cowger

_____ Write-in: _____

Vice President

_____ Al Reisz

_____ Write-in: _____

Treasurer

_____ Gena Crook

_____ Write-in: _____

Director of Administration

_____ Neil Boyd

_____ Write-in: _____

Director of Education and Programs

_____ Melissa Snider

_____ Write-in: _____

Director of Facilities

_____ Don Martin

_____ Write-in: _____

ELECTION BALLOT

Place
Stamp
Here

Election Ballot



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