



## VBAS Highlights for December

### Public Programs for December

Because we traditionally don't have a member's meeting in December, our next member's meeting will be held on Friday, January 16th at 7 p.m. VBAS Member Meetings are held on the 3rd Friday of each month (except December) at 7 p.m.; they're open to the public and are free.

Regular planetarium programs are held on Saturdays at 7:30 PM. This month, we will present our annual special program about the Christmas Star to explore what exactly was the object that the wise men saw, on December 6th, 13th, and 20th. 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.

### Meteor Showers for December

Resident Astronomer Doug Horacek informs us about this month's upcoming meteor showers on page 2.

### Dark Skies

Dark Sky Rep Richard Norman asks us to write to our civic leaders about dark skies on page 4. On page 6, the EPA may treat dark skies as an environmental issue, and the dark sky problem made the cover of *National Geographic*.

### Fireball Bolide Over Canada

On page 5, Richard gives more information about the spectacular meteor that fell on November 20th.

### The Student's Corner

On page 7, Student Director David Lofts writes a review of Roger Reid's mystery novel *Space*, set partly at our own VBAS facilities.

### The VBAS Library

On page 8, Librarian Terry Owens reviews *Cosmic Catastrophes* by Chapman and Morrison, and lists the latest books catalogued and shelved at our library.

### VBAS Meeting Minutes

The November members meeting minutes are on page 9, and the October board meeting minutes start on page 10.

### Star Counting Report

Doug reports the results of Halloween's limiting magnitude study on page 11.

Steve Sloan

Via Stellaris Editor

[steve@sloan3d.com](mailto:steve@sloan3d.com)



### In This Issue:

VBAS Highlights for December..... 1

The Night Sky for December..... 2

December Meteor Showers... 2

Calendar of Events.....3

Write to Your Civic Leaders About Dark Skies..... 4

Fireball Bolide in Canada..... 5

Santa and Dark Skies..... 6

The Student's Corner..... 7

The VBAS Library.....8

VBAS November Members Meeting Minutes..... 9

VBAS October Board Meeting Minutes..... 10

Star Counting Report.....11

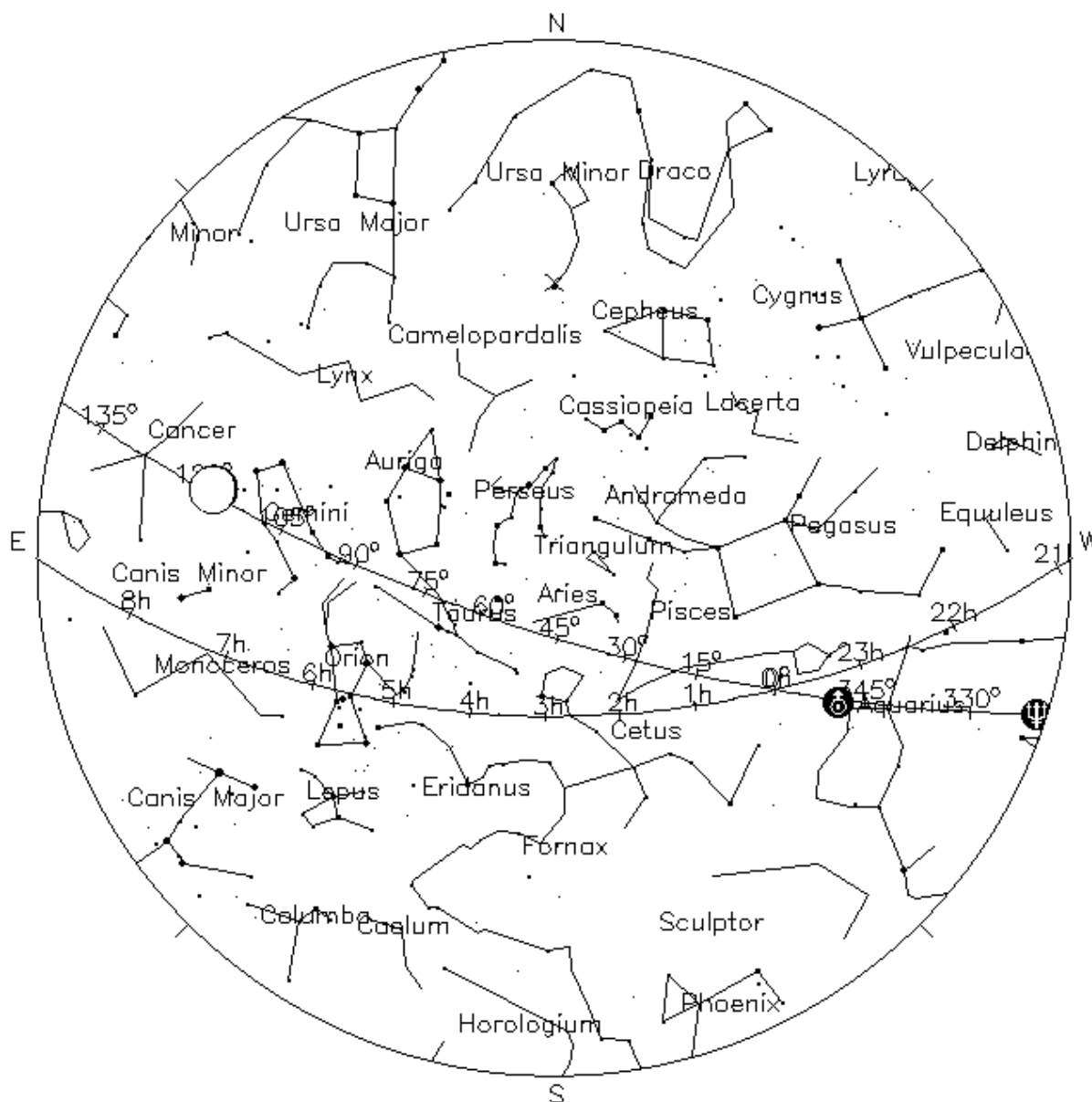
**Deadline for January 2009 Via Stellaris submissions is Monday, December 29.**



## The Night Sky for December, 2008

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

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



## Meteor Showers for December

by Doug Horacek, Resident Astronomer

The Meteor showers this month are the Geminids associated with the asteroid 3200 Pheathon on December 13/14, and the Ursids

that radiate from Ursa Minor associated with Comet 8P/Tuttle on December 21/22. The full moon will likely interfere with the Geminids, and the waning crescent after third quarter will interfere in the early morning hours for the Ursid shower that radiates from Ursa Minor.

## VBAS Calendar of Events

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

### **Planetarium Show: *Christmas Star Show***

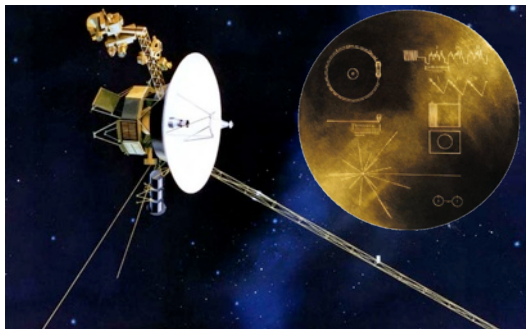
What exactly was the object that the wise men saw? What was this object that stood in the sky two thousand years ago and marked a single location in Bethlehem? Was it a star that stood in the sky two-thousand years ago and marked a single location in Bethlehem? Each year at this special time, we turn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



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

*Saturday, January 3rd, 10th, & 24th, 2008, 7:30 PM*

### **Planetarium Show: *Telescopes and Space Probes: Today's Starry Messengers***



*Friday, January 16th, 2008, 7 PM*

### **Regular Monthly Meeting**

After a short pizza social and marketplace swap meet we'll discuss pertinent society business before moving on to our program.

*Saturday, January 17th, 2008, 7:30 PM*

### **Planetarium Show: *Technical Program 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](http://vbas.org).



*The Moon, Venus, and Jupiter over the Saturn V mockup and Davidson Center at the Space and Rocket Center. The sky and the foreground were taken at different exposures by Richard Norman, and Steve Sloan composited them together.*

## Do You Care About Dark Skies?

by Richard Norman

At Friday's meeting none of the members besides myself had contacted any of the local civic leaders about the light pollution problem. Although Light Pollution is a technical issue and not a political issue, your local politicians still can help solve these problems if they know a technical issue is of concern to you. Therefore, you need to:

- Let them know that light pollution is a serious issue worthy of a cover story on the National Geographic November 2008 issue.
- Let them know that the old style street light fixtures are a major contributor to the problem by allowing light to go skyward above horizontal. The IESNA RP-8-00, Roadway Lighting, Section 4.6, page 15 strongly recommends the use of full cutoff street light fixtures to put the light on the road and not the sky.
- Let them know that eliminating light pollution is a green issue about conserving energy, beautifying our nightscape, and minimizing our impact on plants and wildlife.
- Let them know that eliminating light pollution helps VBAS educate and inspire the youth of the community about astronomy, math, and science.
- Let them know that eliminating light pollution helps professional and amateur astronomers to make the most of the modern marvels of optical, imaging, and computer equipment to make useful observations.
- Let them know that eliminating light pollution does NOT impair safety or security. In fact studies such as Cardiff in 1991 have shown that proper lighting improves both safety and security while reducing power consumption.

Efficient responsible outdoor lighting can be done. It has been done in other places. Alabama is just behind the curve as usual as shown by our ranking in energy consumption.

Since some of you mentioned at the meeting that you did know who your council member was, here are several ways to find out who your civic leaders are for the city and county.

Both the city and county have web sites:

<http://www.co.madison.al.us/>

<http://www.hsvcity.com>

Don't forget your county commissioner. Even if you live in the city of Huntsville, you still pay county sales tax. Let them hear from you as well.

<http://www.co.madison.al.us/about/county/> shows the current chair and the map of the districts.

Also there is a simple search tool online:

[http://www.co.madison.al.us/voter/address\\_search.shtml](http://www.co.madison.al.us/voter/address_search.shtml)

Or, if all else fails, you can call or write them at:

County Commission Office

256-532-3492, Fax 256-532-6994

Courthouse 700, 100 Northside Sq.,  
Huntsville, AL 35801

For the City of Huntsville:

<http://www.hsvcity.com/citycouncil>

If that doesn't work, you can simply call or write them and find out who your council member is:

City of Huntsville, AL

P.O. Box 308

Huntsville, AL 35804

Phone: 256.535.CITY (2489)

Web: [hsvcity.com](http://hsvcity.com)

Big hint: Councilman Russell is the President of the City Council and the Monte Sano area falls in his district.

In addition to these elected leaders, Huntsville Utilities board is appointed by the Huntsville City Mayor, and City Council. It is a three-member board. You can contact them as well since Huntsville Utilities works for you (i.e., it is a publicly owned utility).



Members		Term	Appt by:
George Moore	3	7/1/2004 - 7/1/2007	City Council
Ronald Boles	3	7/1/2005 - 7/1/2008	City Council
Thomas Winstead	3	7/1/2003 - 7/1/2006	City Council

112 Spragins St NW  
Huntsville, AL 35801  
(256) 535-1200

Information about other boards and committees can be found at:

<http://www.hsvcity.com/citycouncil/Boards>

If you'd like a draft letter instead of starting from scratch, just drop me a line via the web site, and I'll help you out.

Stellar Skies,

Richard Norman  
Dark Sky Rep  
Von Braun Astronomical Society  
Life Time Member of IDA  
[astrodude@mchsi.com](mailto:astrodude@mchsi.com)

## Fireball Bolide Produces Meteorites in Canada

by Richard Norman

Lots of folks claim to have seen fireballs, but the one that fell on Nov 20 in Canada was caught on tape.

<http://watch.ctv.ca/news/latest/fire-in-the-sky/#clip115020>

Now that is what I call a fireball! Also, the fragmentation of the bolide was caught on tape. Canada has a pretty good network of fireball cameras and at least one of them recorded it as well.

<http://www.astronomy.com/asy/default.aspx?c=a&id=7685>

With multiple recordings and numerous eye-witness accounts, they were able to estimate the fall zone for any meteorites. University of Calgary planetary scientist, Alan R. Hildebrand, has already found some of the fragments ranging from pebbles to fist size. If the name Hildebrand sounds familiar, it is because he was also involved in the analysis of the di-

nosaur killer Chicxulub crater discovered by Glen Penfield.

[http://en.wikipedia.org/wiki/Chicxulub\\_crater](http://en.wikipedia.org/wiki/Chicxulub_crater)

Meteorite hunters and collectors were quite excited. According to the CTV news, Robert Haag put up a reward for the first fragments found. <http://www.meteoriteman.com>

It is a little bit quirky to navigate the CTV site, but it has quite a few news clips on the event.

MSNBC also has a news reel on the fireball:

<http://www.msnbc.msn.com/id/27848645/>

Science Daily has a more detailed analysis of the fireball size, trajectory, and other data:

<http://www.sciencedaily.com/releases/2008/11/081125141602.htm>

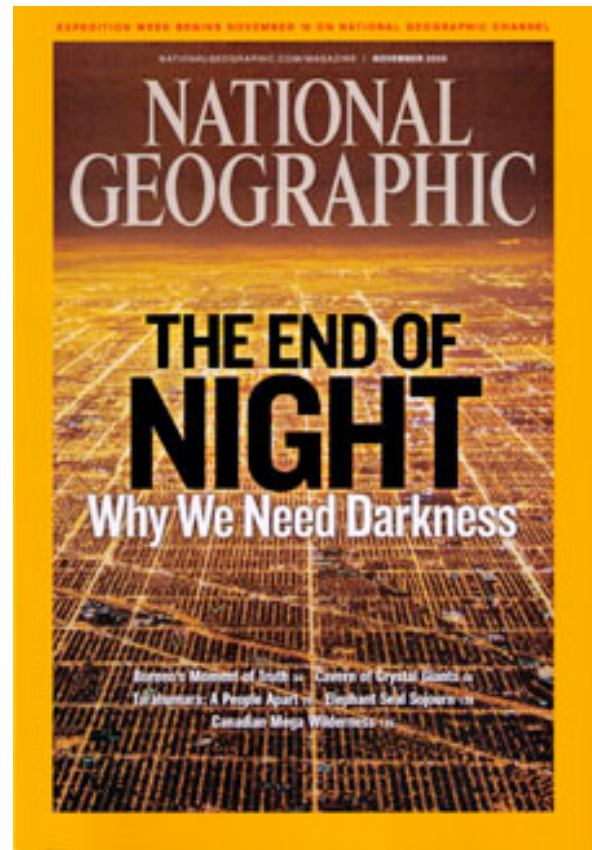
Stellar Skies,  
Richard Norman  
Dark Sky Rep  
Von Braun Astronomical Society

## Don't Forget to Ask Santa for Dark Skies for Christmas

by Richard Norman



The International Dark Sky Association has over 11,000 members worldwide and in all 50 states. The IDA now has its 207th Lifetime Member, Richard Norman. The IDA is actively working with Congress and the EPA to add light pollution to the EPA's environment protection programs. The EPA is considering requiring all energy star LED outdoor lighting to be fully shielded. The EPA is taking public comments. It will only take a moment to send your support for fully shielded outdoor lighting and the elimination of light pollution. The IDA website has all the details and contact info for the EPA (<http://www.darksky.org/mc/page.do?sitePageId=74975>) and some example emails. You can also show your support by joining the IDA.



The November issue of National Geographic has a cover story on light pollution, providing some long-overdue credibility to the magnitude of the problem. The International Year of Astronomy is also making dark sky one of its cornerstone projects. It is a good time to take advantage of the momentum and let your newly elected government officials know that you'd like something done about light pollution. If you'd like an example letter, send me an email via the web site, and I'll email you one so that you don't have to start from scratch. And don't forget Santa!

Stellar Skies,

Richard Norman  
Dark Sky Rep  
Von Braun Astronomical Society  
[astrodude@mchsi.com](mailto:astrodude@mchsi.com)

## The Student's Corner

### A Mystery at the Planetarium!!!

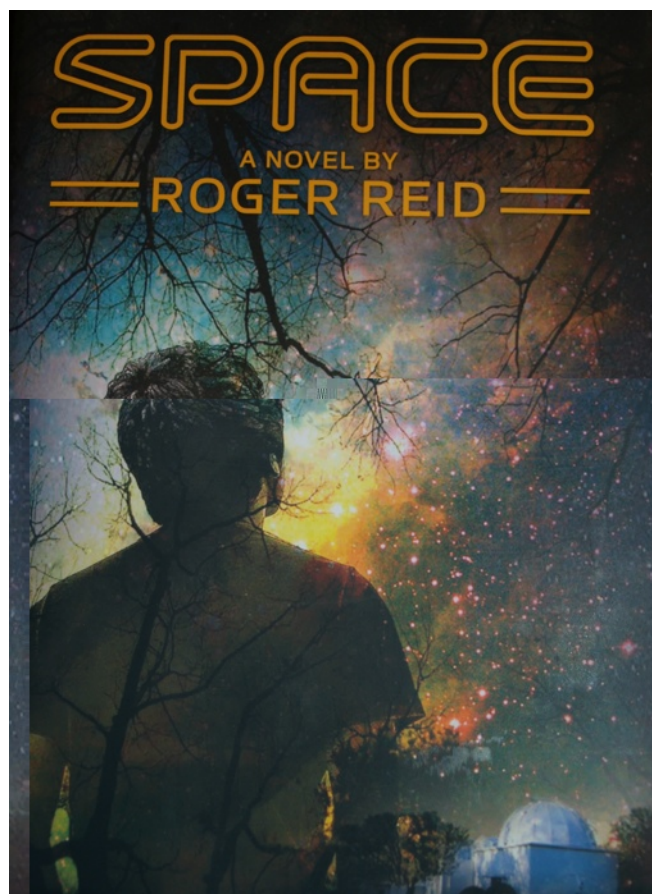
by David Lofts

I recently read one of Roger Reid's novels titled *Space*. I purchased an autographed copy at Astronomy Day and met Mr. Reid himself. Mr. Reid is also a writer for the *Discovering Alabama* program on PBS. One interesting thing about this novel is that it is set in Huntsville at the Von Braun Astronomical Society. Another interesting thing is all of the chase scenes, gun shots, and mysteriousness surrounding the planetarium.

Space tells the story of Jason Cadwell, who goes with his father to a reunion of a group of science-loving friends called the space cadets. VBAS gives them permission to use their facilities to observe the night sky. The space cadets like to sit around and discuss what they call impossible questions. These are questions that challenge your brain to think really hard. Jason did not want to come to the reunion because the last time he was in Alabama he almost got killed. He also did not want to come because of Stephen A. Warrensburg, who is a notorious know-it-all. Even worse, Jason is expected to keep Stephen company because the boys are about the same age. Stephen's father died in a car wreck that left Stephen paralyzed from the waist down. He suspects that someone in the group of space cadets tampered with the brakes of the car to cause the wreck. Stephen is determined to find out who caused the wreck, and he wants Jason to help him. Stephen believes that he is right and everybody else is wrong. If anybody disagrees with him they are automatically on his list of suspects, and he will say "You don't know the greater truth!" Sometimes he is very convincing. This is because he craftily repeats things he believes to be true.

In one scene Stephen convinces Jason to climb up on the dome of the Swanson Observatory (I don't recommend that you try this) to prove him wrong. Stephen thinks that the space cadets inside are talking about the wreck and

how Stephen's father was killed, but really an FBI agent is telling the space cadets that they are being investigated. However, he will not tell them who the suspect is. If you want to know how the mysteries are solved you will have to get a copy of *Space* and read it yourself.





## The VBAS Library

by Terry Owens

The book I chose to highlight this month is called *Cosmic Catastrophes* by Clark Chapman and David Morrison. Here's part of what the inside flap says: "...One of the most profound developments in science during the last two decades has been the recognition that sudden, immense, and often unpredictable forces – in short, catastrophes – have helped to shape the stars, the planets, and the Earth. Until recently, talk of catastrophes in the history of the Earth has been synonymous with pseudoscience. In this book, however, Chapman and Morrison describe evidence for an emerging view of the cosmos, one that punctuates eras of relative calm with sudden cataclysms. The authors approach the topic lucidly and with a philosophical rigor which will interest any reader with an inquisitive spirit. Their search for truth takes us on a fantastic adventure from hidden corners of the Earth to distant regions of space, revealing wondrous stories that both enrich our understanding of the universe and fire our imagination. With them we visit colliding worlds and exploding stars, probing the very limits of current scientific knowledge and speculation. We witness comet showers, pursue asteroids in their collision with the planets, and speculate about the fate of the sun..."

The following books have now been cataloged and shelved in the VBAS Library.

Apollo 16, The NASA Mission Reports, Vol. 1	Godwin, Robert
National Academy of Science: Physics of the Earth in Space: The Role of Ground-Based Research	
Astronomy Made Simple	Degani, Meir H.
The Wittich Connection: Conflict and Priority in Late Sixteenth-Century Cosmology	Gingerich, Owen
College Physics, 4th Edition	Serway, Raymond A.
College Physics (Printed Test Bank), 4th Edition	Van Wyk, Steve
Amateur Astronomer's Handbook	Sidgwick, J. B.
Optical Aberration Coefficients	Buchdahl, H. A.
Skysighting: Photography for Amateur Astronomers	Mayall, R. Newton
Apollo 17, The NASA Mission Reports, Vol. 1	Godwin, Robert
Astronomy of Stellar Energy and Decay	Johnson, Martin
National Academy of Science: Planetary Astronomy, An Appraisal of Ground-Based Opportunities	
Astronautics and Aeronautics, 1976, A Chronology	Ritchie, Eleanor H.
The Rings of Saturn	Palluconi, Frank Don
An Introduction to Celestial Mechanics, C1	Moulton, Forest Ray

An Introduction to Celestial Mechanics, C2	Moulton, Forest Ray
The Trained Eye, An Introduction to Astronomical Observing	Palmer, Leon
Introduction to Astrophysics: The Stars	Dufay, Jean
Astronomy	Baker, Robert H.
Sky Phenomena: A Guide to Naked-Eye Observation of the Stars	Davidson, Norman
Astrophotography II: Featuring the Techniques of the European Amateur	Martinez, Patrick
Astronomy Handbook	Hausman, Leon A.
Visual Astronomy of the Deep Sky	Clark, Roger
Galaxies	Shapley, Harlow
Introductory Astronomy and Astrophysics	Smith, Elske
A Complete Manual of Amateur Astronomy	Sherrod, P. Clay
Essentials of Astronomy	Motz, Lloyd
The Physical Principles of Astronomics	Berman, Arthur
Cosmic Catastrophes	Chapman, Clark
Amateur Astronomer's Handbook	Sidgwick, J. B.
Spherical Astronomy	Woolard, Edgar W.
Remote Access: Automatic Telescopes	Hayes, Donald S.
New Generation Small Telescopes	Hayes, Donald S.
Advances in Photoelectric Photometry, Vol. 1	Wolpert, Robert C.
How to Make and Use a Telescope	Wilkins, H. Percy
Physics of Non-Thermal Radio Sources	Maran, Stephen P.
Starlight Nights, The Adventures of a Stargazer	Peltier, Leslie C.
Making Your Own Telescope	Thompson, Allyn
Concise Encyclopedia of Astronomy	Weigert, A.
Space (2 copies)	Reid, Roger
Interrelationships Among Circumstellar, Interstellar and Interplanetary Dust	Nuth, Joseph A.
Exposure Guide for Astrophotography	Henderson, Robert B.
Space Telescope	McRoberts, Joseph J.
What's Out There	Baumann, Mary K.



## VBAS Member Meeting Minutes

*7:30 PM on Friday, November 21, 2008*

At 7:30, President John Young called the business meeting to order. New members were announced. Someone moved to approve the October member meeting minutes, and the motion was seconded and carried.

John announced that Gena Crook is our new Treasurer. The nominating committee recommended her, and the board approved her.

Jeff Delmas reported on his fundraising efforts. We got \$500 from Dynetics since last meeting. We need to send a thank you letter.

Lonnie has spoken to Jeff about donating a laptop to VBAS. He also has a DVD recorder we can borrow, to help synch the camera with TV.

Resident Astronomer Doug Horacek reported on recent observing activities. The second youth observing night was too cold to do the limiting magnitude study. He is considering making it a monthly project for youth observers. The next observing night is December 5. Doug needs someone to help transport a 16" telescope to an event at Brenda Cummings' house in New Market on the Friday and Saturday after Thanksgiving.

Secretary and newsletter editor Steve Sloan will need submissions soon for the December newsletter.

Membership secretary Gerry Conrad noted that membership renewals are due in March.

Dark Sky Rep Richard Norman noted the dark sky cover story in the November 2008 National Geographic. He will be sending issues to politicians, to show them that dark skies are a serious issue. The Monte Sano women's organization raised money for dark sky help. Huntsville Utilities is no longer installing light pollution hoods. The Green Coalition meets December 1, and Richard will be working with them. Richard urged VBAS members to contact their city councilmen about light pollution. We have momentum from the national press. Richard can give any interested member a sample letter to use to write to a politician.

Student Director David Lofts reported on the last youth observing event. It was so cold that they didn't get much done.

Vice President Jared Cassidy asked members if they have any ideas or suggestions for member meeting programs, and if they know any good presenters we can ask. He also reminded us that there will be no members meeting in December.

John announced that the HATS holiday reception will be held December 4. The cost is \$15 per individual, plus \$100 for VBAS.

Lonnie Puterbaugh arrived.

The Stuhlinger Symposium was pretty well attended, and four or five VBAS members contributed. Individual VBAS members contributed \$300 to the Von Braun Scholarship Fund, and VBAS matched their contribution with an additional \$300.

The VBAS membership survey is coming out soon, and it will ask member opinions on various parts of VBAS.

The VBAS annual audit can use help, especially by those who have experience with audits of small organizations.

We recently found records showing the first Messier Certificate at VBAS was awarded in 1973 to teenage student George Smith. Previously, we thought the first was in 1976. We will update the plaque listing VBAS Messier Certificate achievements soon.

Richard announced that the International Dark Sky Association is working with Congress to get light pollution included in the list of EPA environmental concerns.

Someone asked if the newsletter is still getting emailed out. It currently goes on the front page of the web site, instead. Maybe we should have a user preference determining whether you get the whole file or just the link by email.

Andy Wilson announced that the History Channel's TV special "Einstein" will be rebroadcast November 29.

After the business meeting, Jeff Delmas presented his program, "Selecting Your First Telescope".

## VBAS Board Meeting Minutes

7 PM on Tuesday, October 28, 2008

### Attendees:

John Young, Jared Cassidy, David Lofts, Ethan Chew, Jeff Delmas, Terry Owens, Steve Sloan

### Other Attendees:

Cassie Lofts, Doug Horacek

The meeting was called to order by President John Young at 7:11 PM. First order of business was approving the September 23 board minutes. Jeff read the minutes. Jared moved to approve the minutes as read, Terry seconded, and the motion passed. There is no formal treasurer nomination so far.

### Officer Reports

Jared reported on the Program Committee. Jeff will present his program on choosing the right telescope at the November members meeting. Wes Colley will speak on galaxy evolution soon, but he can't make the January member meeting, so we may schedule him for some time this spring. We're speaking to Krissa K. about the possibility of her presenting a program soon. Should we do a Via Stellaris announcement asking for program ideas?

Jared and Ethan discussed the membership survey.

Terry reported on the library. Her personal inkjet printer died, and she needs to get a replacement to finish cataloguing the remaining 25 books. There is no status on web search capability.

Terry reported on facilities. She needs a volunteer to help check out a leak near the A/C. She would like to purchase a trickle charger to attach to the lawn mower battery, to prevent it from dying during the winter. This has been a problem in the past. She has the VBAS credit card. She has opened tax-deferred accounts at Home Depot and Lowe's for facilities use. She wants to clean out the closet in the planetarium, and reorganize the shed. She wants to paint concrete block in the Angele foyer with block-filling

paint. She requested help at the last members meeting, and may try the VS. There was discussion about whether Terry wants to continue as both Librarian and Facilities Director. She will continue to do both.

Ethan reported on Astronomical League dues. Gerry now knows how to handle them. The number of VBAS members has a bearing on Astronomical League dues, and currently, we have about 170 out of 294 VBAS members with expired membership dues. Do we need to send out snail mail dues reminders to those people? Astronomical League dues are needed by November 1.

Ethan took an action item to contact the Astronomical League and find out how much time we have. Do they have some sort of grace period? See what kind of help Gerry needs.

Doug reported on two events coming up. The youth observers will be meeting before the November 21 member meeting. The adult observing session will be on December 5. The Volunteer State Star Party was apparently very successful. The youth are taking a constellation every month, finding the dimmest star, and using it to calculate how many stars are visible in the sky. There will also be an observing session on October 31.

David reported on the progress of youth observers. Four people are signed up, with three more possibles. Sky Puppies material is really young-oriented. David wants to make his own manual for older kids with illustrations, and maybe sell it at VBAS. He has a program planned out, which he summarized.

Jeff reported on the facilities addition fundraising. We have a 6-month review coming up. We have about \$48K from NASA. It will take about \$110K-\$120K, and probably \$120K-\$150K to complete the facilities addition. We're about \$75K short. To date, we have about \$3700 in corporate funds, and almost \$2K in private donations, which is far lower than necessary. Ethan noted that we got \$500 from Dynetics that day. John noted that CAS does not give money until early in the year. Jeff said we need a meeting to

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discuss other options. There may be renewed opportunities with the end of the fiscal year, and the end of the calendar year. John reported that the Stuhlinger Symposium is coming up. Dave Christensen wants to help with fundraising, as does Christina Hinkle with Mensa. Jared asked if we've done anything with our Chamber of Commerce ties for fundraising, There are possibilities there.

Membership renewal notices were discussed. John was all for sending them out, so we should set money aside. Should we call members, and skip mailing? John suggested sending membership renewal in January. Jeff thought that's too early, and the first week in March is the best time to send them.

### **Stuhlinger Memorial Scholarship**

We have a firm date for the symposium from Dave Christensen. Should we present something there? VBAS should make a minimum donation, where the society makes up for what members don't contribute. **Jared moved that VBAS donate to the Von Braun scholar-**

### 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](mailto: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](mailto:conrad1908@knology.net) or 722-8212, to avoid missing issues of *Via Stellaris*.

### Reprints

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## VIA STELLARIS



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*Steve Sloan, Via Stellaris editor*