

## **The April membership meeting will be held on Thursday, April 18, 2008 at 7:30 pm at the Adventure Science Center**



On Thursday, April 18, 2008 we will hold our regularly scheduled membership meeting at the Adventure Science Center at 7:30 p.m..

Austin Peay State University Physics and Astronomy professor, and long standing BSAS member and board member, Dr. Spencer Buckner will be presenting our program this month about his recent trip to Mauna Kea in Hawaii. He will be sharing photos, experiences and information about the great observatories and advances being made by the universities and organizations represented by this Astronomical epicenter.

This is a rare opportunity to learn more about the science we love, and Dr. Buckner is sure to be both informative and entertaining. Please be sure to attend!

### **Message from the President**

Just in case you missed it, we did not hold the Messier Marathon this past month. It would have been the evening after the big snowfall. The roads near Mark's place were not necessarily clear. The viewing field had just been covered in snow, so we would have gotten to stand in snow and/or mud. Also, the temperature was below freezing for most of the time. Of course, the irony was that the skies that night were beautiful.

We are using the alternate date of April 5. I really don't expect snow to be a problem. Rain or other spring-time weather could be. Keep a watch on the usual web sites for information as we get closer.

The following Saturday, April 12, we have a public star party at Warner Park. The favored targets will be the moon and planets. We will be at the Ridgefield location. (The Special Events Field is still not ready. Weather affects construction too.) The hours are from 8:00 PM through 10:00 PM. I have requested that we be allowed to stay after the public leaves. I have also asked that we be allowed to start setting up 90 minutes before the public arrives. Warner Park has requested that we not drive up onto the field. They would like for us to keep at least two wheels on the road. This is so that we don't get stuck in mud on the field. When the Special Events Field is ready, any perceived need to park off of the pavement should disappear. Also, you must arrive before the public starts arriving. Moving vehicles and crowds don't always mix.

After my "What's Up" presentation at the March Membership meeting, I was asked by someone about the sky charts I had put into the presentation for some of the objects. Unfortunately, the charts will not scale because of the limited resolution I was using. But, those sky charts which I generated from some free planetarium software are not the best resource for finding objects anyway. I recommend a couple of books as being much better: "Turn Left at Orion" by Guy

## Message from the President

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Consolmagno and Dan M. Davis and "The Year-Round Messier Marathon Field Guide" by Harvard Pennington. For the beginner, I especially recommend "Turn Left at Orion" since the targets it chooses are suitable for small scopes which means they will be easier to find, and might even be visible from your light-infested back yard. Both books give finder charts and instructions on how to find objects. Either one is much better than a sky chart because of the extra guidance.

Finally, if you are wanting to work on your observing skills, I should mention that our club is a member of the Astronomical League (<http://www.astroleague.org>). This means that you can choose to work on the observing pins that they offer. The various choices are listed on the web site under "Observing Clubs". There are many to choose from. The difficulty levels range from easy to quite hard. It may very well be that one or more of them would suit you. For those of us who have been showing up at the public star parties, I especially want to point out the Outreach Club. The first level requires participation in only five 2 hour events. All it takes is a little bit of record keeping to earn a pin for something that you are probably already doing.

Terry Reeves  
President

## **FREE TELESCOPE OFFER!!!**

**Did someone say free telescope? Yes, you did read that correctly.**

The BSAS Equipment & Facilities Committee has free telescopes ranging in size from 2.6" to 8" that current members can actually have to use for up to 60 days at a time. We also have some other items in the loaner program such as a photometer, H-alpha solar telescope, educational CDs, tapes, DVDs, and books. Some restrictions apply. A waiting list is applicable in some cases. The BSAS Equipment Committee will not be held responsible for lost sleep or other problems arising from use of this excellent astronomy gear. For information on what equipment is currently available, contact Lonnie Puterbaugh at (615) 661-9540

### **MAGAZINE SUBSCRIPTIONS FOR BSAS MEMBERS**

We are always able to accept requests for new and renewal yearly subscriptions to SKY AND TELESCOPE and ASTRONOMY from our members in good standing.

The current yearly rates are as follows:

SKY AND TELESCOPE: \$32.95

ASTRONOMY: \$34.00

Checks or Money Orders should be made out to the Barnard-Seyfert Astronomical Society (BSAS) and sent to the following address:

BSAS  
P. O. Box 150713  
Nashville, TN 37215-0713

### **DUES INFORMATION**

On your Eclipse mailing label is the expiration date for your current membership in the BSAS. There will be a two month grace period before any member's name is removed from the current mailing list. You will be receiving a number of warnings informing you that your membership is expiring.

Dues per year are \$20.00 Regular (1 vote); \$30 Family (2 votes); \$15.00 Student (under 22 years of age)(1 vote); \$15 Seniors (65 years or older)(1 vote); \$25 Senior Family (65 years or older)(2 votes).

Contact [president@bsasnashville.com](mailto:president@bsasnashville.com) if you have questions. Dues can be sent to:

BSAS  
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### **THE ECLIPSE NEWSLETTER**

Editor: Pam Thomas  
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#### **BSAS Officers:**

Terry Reeves, President  
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BSAS Logo by Tony Campbell

## Happy Birthday Eugene Shoemaker

by Robin Byrne

This month we celebrate the life of a man who was possibly the world's first astrogeologist. Eugene Merle Shoemaker was born April 28, 1928 in Los Angeles, California. His love of geology began early, so that by the time he began attending the California Institute of Technology, Gene already knew what he wanted to major in. Graduating with his B.S. in 1947 at the age of 19, Gene began his graduate work immediately, and earned his M.S. from CalTech the following year.

Gene then went to work for the United States Geological Survey (USGS) looking for petroleum deposits in Colorado and Utah. His travels for the USGS would bring him into close proximity of some of the most interesting geologic features in the country. It also brought Gene and Carolyn Spellman together, and in 1951 they married.

In 1952, Gene first visited Meteor Crater. This sparked his idea that this crater, and craters on the Moon, were the result of asteroid impacts, rather than the conventional wisdom that they were volcanic features. Gene tried to interest the USGS in creating a geological map of the Moon, but the country had higher priorities; the nation's nuclear needs came first. So, instead, Gene found himself in Yucca Flats, Nevada studying craters formed by underground nuclear tests. He noticed a similarity between these craters and Meteor Crater. The turning point was the discovery of coesite, which is a type of silica that forms as the result of violent impacts. This was present at both the nuclear craters and Meteor Crater. In 1960, Gene received his Ph.D. from Princeton University for his research, which proved that Meteor Crater had been formed by an impact. He had just invented the field of Astrogeology.

In 1961, Dr. Shoemaker founded the Astrogeology Research Program for the USGS, and in 1963 created, and was the first director of, the Field Center in Flagstaff, Arizona. It was during this time that Gene became involved with NASA. He worked on several programs that sent unmanned spacecraft to study the moon, including the Lunar Ranger and Surveyor missions, and years later was the science-team leader for the Clementine mission. Gene's dream was to go to the Moon to explore the craters first hand. He was well on his way to just that, with his first job in the Apollo program being to train the other astronauts in geology. However, a diagnosis of Addison's disease, which affects the adrenal gland, ended Gene's astronaut career. Instead, he continued training future moonwalkers, and he appeared on TV with Walter Cronkite, explaining the lunar geology to the nation.

In 1969, Gene took a position at CalTech as chair of the Division of Geological and Planetary Sciences, while still working for the USGS in Flagstaff. It was at CalTech that Gene began a systematic search for near Earth asteroids using the 0.46 inch Schmidt telescope at Palomar. The first asteroid was spotted in 1973. Gene's wife Carolyn, a planetary astronomer, began working on the project, too. In 1973, the pair initiated the Palomar Planet-crossing Asteroid Survey. In 1983, they began the Palomar Asteroid and Comet Survey. The duo discovered their first comet in 1983; they would go on to discover a total of 32 comets together. In 1994, the observing program ended, and they had discovered 40 of the, now known, 417 Amor, Apollo and Aten asteroids. Gene retired his professorship at CalTech in 1985, but continued to work for the USGS until 1993.

Of all of the comets Gene and Carolyn discovered, the most famous was Comet Shoemaker-Levy 9 (co-discovered with David Levy). First spotted as a train of comet pieces, it was soon realized that this comet was on a collision course with Jupiter for the summer of 1994. For the first time, astronomers and geologists could observe a comet impact as it occurred. Many doubted any sign of impact would be visible, since the fragments would simply plunge through Jupiter's gaseous atmosphere, so there was much surprise when the impacts created dark "scars" visible in Jupiter's clouds.

Despite being "retired," Gene never stopped hunting for previously undetected meteor craters on Earth. While exploring a suspected crater with Carolyn near Alice Springs, Australia, Gene's car collided head-on with another vehicle. Carolyn survived her injuries, but Gene was killed instantly.

Gene's death was felt by both the astronomical and geological communities. As the "father of astrogeology," Gene helped us all to understand the forces that have shaped the planets and moons. Fittingly, some of Gene's ashes were carried on the Lunar Prospector spacecraft, where they now rest on the Moon. Gene finally got to go to the Moon! The next time you look up at the Moon, marvel at the craters and maria, which we now know were formed by impact, and, while you're at it, say "Hi" to Gene, too.

### References:

Eugene Merle Shoemaker - Wikipedia, the free encyclopedia

[http://en.wikipedia.org/wiki/Eugene\\_Merle\\_Shoemaker](http://en.wikipedia.org/wiki/Eugene_Merle_Shoemaker)

USGS Astrogeology: Eugene M. Shoemaker by Mary G. Chapman

<http://astrogeology.usgs.gov/About/People/GeneShoemaker/>

Eugene Shoemaker (1928 - 1997) by Brian Marsden

<http://www2.jpl.nasa.gov/sl9/news81.html>

**Barnard-Seyfert Astronomical Society**  
**Minutes of a Regular Meeting of the Board of Directors**  
**Held on Thursday, March 6 , 2008**

The BSAS Board of Directors held their monthly meeting on March 6, 2008. Dr. Terry Reeves, presiding President, opened the meeting at 7:37 p.m. In attendance were Board members Dr. Donna Hummell, Dr. Spencer Buckner, Jana Ruth Ford, Mr. Steve Wheeler, Mr. Randy Smith, Mr. Bill Griswold, Mr. Tony Campbell, and visiting was Mr. Joe Boyd, as representative of the Dark Sky Committee.

Dr. Reeves opened the meeting with a discussion concerning the planned Messier Marathon on March 8, noting that the weather prospects looked poor and asked for the Board members' opinion concerning postponing the marathon for one month to the alternate date of April 5. Mr. Steve Wheeler, as Board member in charge of Star Parties, volunteered to provide a definite answer concerning the status of the March 8 event to the membership at large by Saturday afternoon. However, members were in agreement that if the weather was bitterly cold, even if the skies cleared, the Messier Marathon should be postponed. Dr. Donna Hummell pointed out that no Messier Marathon was held in 2007 due to unfavorable weather in March as well as in April. Jana Ruth Ford commented that Astronomy Day activities at ASC have been moved from May 3 to May 17, making the May 3 date available as a possible alternate date for the Messier Marathon. Dr. Hummell proposed a motion to consider holding an alternate date of May 3 if the proposed date for the Messier Marathon on April 5 fails to be suitable, the place yet to be determined. Dr. Reeves suggested that if a back-up date of May 3 was not convenient for holding the event on Mr. Mark Manner's property, it could still be held at Water Valley Overlook or the alternate site on the Natchez Trace Parkway. Mr. Bill Griswold seconded the motion, and the Board passed the motion with a unanimous vote.

Dr. Reeves then discussed that the Program Committee wishes to invite Dr. Richard Schmude to visit and speak at the membership meeting in May, but that he is requesting re-imburement for his travel by car from the Atlanta area, and lodging and food in Nashville. The Board members discussed the benefits that his lecture could provide for the membership. Options for advertising his visit and lecture were discussed. Mr. Randy Smith gave the current bank balance for the BSAS as \$2720.20, and proposed to approve the reimbursement of Dr. Schmude with a budget of \$350.00. Dr. Spencer Buckner seconded the motion and the board members passed the motion with a unanimous vote.

Mr. Bill Griswold then mentioned to the board that he had heard complaints from members that the monthly meetings were running too long. Reasons for this and options to control this were discussed. Conclusions were that speakers who have audiovisual content need to arrive early to properly set up equipment and start on time, and that an abbreviated business meeting could be held while this is happening. More lengthy business items may need to wait until the end of the program, to allow those who wish to depart to do so.

Dr. Terry Reeves then opened the topic of future star parties, reminding the board that the next Public Star Party is scheduled for Warner Park on April 12. He also then broached the topic of the future of TNSP, and informed the board that Mr. Mark Manner had confirmed that the TNSP name would be protected with copyright but that the status of the full name may not be, since it was considered generic. Mr. Tony Campbell, however, pointed out that it may be protected as a domain name for use on the web, and the board agreed that this was appropriate. A formal motion was sought for the status of the TNSP for 2008, given that the board had previously discussed the issue. Dr. Donna Hummell proposed that it be canceled for 2008, to allow for planning for 2009 with new ideas and new members involved. Mr. Randy Smith seconded the motion and the board members voted unanimously to pass the motion. Subsequent discussion addressed the possibility of attracting new members to become involved in the planning and operations of TNSP perhaps by having more funds available to allow all who offer their time to not only have time to observe using their telescopes, but also to defray some of their expenses in turn for the hours they offer.

Dr. Reeves then mentioned that the Finance Committee requested from the Board a listing of projects that require funding along with a proposed budget. He said that it would help the Committee to know how much money was required and for what purposes. The Board members discussed that some of the upcoming projects would be tied to The International Year of Astronomy, but some might not. No motion or vote was passed, but the conclusion was to consider discussing this issue at a general monthly meeting.

Mr. Joe Boyd then presented to the Board members a proposed listing of Resolutions composed by the Dark Sky Committee to be sent to the TVA concerning energy conservation measures. Jana Ruth Ford suggested adding a statement concerning the effects of light pollution on wildlife. Dr. Spencer Buckner made a motion to pass the resolutions with the addition, and Dr. Ford seconded the motion. The board members passed the motion unanimously.

There being no further business, Dr. Reeves called the meeting adjourned at 9:10 pm.

Respectfully submitted,  
Dr. Donna Hummell

**Barnard-Seyfert Astronomical Society  
Minutes of the Monthly Membership Meeting  
Held On Thursday, March 20, 2008**

President Terry Reeves called the meeting to order at 7:35 P.M. in the Adventure Science Center (ASC) and welcomed new members and guests. Reporting for Treasurer Randy Smith, Mr. Reeves announced that the Society had a bank balance of approximately \$2,700.00. He then asked for corrections to the minutes of the last membership meeting held on February 21, 2008 and, there being none, declared them to be approved without exception as published in the March 2008 edition of the *Eclipse* newsletter.

Before beginning the evening's program, Terry Reeves showed pictures of a recent avalanche on Mars' north polar region taken by the Mars Reconnaissance Orbiter using its HiRISE (high resolution) camera. He also showed a picture of the Earth and Moon taken from Mars when it was some 88 million miles distant. By looking carefully, the west coast of South America could be seen in this image.

Terry Reeves then delivered the program on "What's Up Tonight," the first in a planned series of presentations designed to provide seasonal guidance to observers about what can be seen in the night sky even from light-infested backyards. All items were carefully selected to include naked eye objects (e.g., Saturn, the Milky Way, the Pleiades, & the Hyades), binocular objects (e.g., the Pleiades & Hyades again & other open star clusters), and many telescopic objects including the Crab Nebula – the only supernova remnant in the Messier Catalog – along with a good selection of multiple stars and galaxies ranging easy to harder to see. The presentation was ordered by constellation and included winter objects still visible in the west along with spring objects rising in the east. Each object's location was illustrated with projected star charts derived from planetarium software. Following his presentation, Mr. Reeves answered questions from the audience.

Terry Reeves announced that the BSAS would not put on the Tennessee Star Party (TNSP) this year because the event was not making money and the core group of workers needed a rest. However, he emphasized that this just a temporary hiatus to allow time for evaluating alternate approaches to running future TNSPs.

Kris McCall led the group in a moment of silence to honor renowned science fiction and fact writer Arthur C. Clarke who died earlier this week. Ms McCall announced these upcoming star parties: April 12 at the Warner Parks' Ridgefield site and May 17 at the ASC. She then gave an update on the new planetarium construction noting that the dome was finished, the carpeting and seating were installed, and that the projector was scheduled go in soon.

Terry Reeves announced that BSAS member Lonnie Puterbaugh needed volunteers with telescopes to assist him with an outreach program that he was putting on at the Boy Scouts' Camp Boxwell near Gallatin on April 12. Spencer Buckner announced that Nobel Laureate and former FermiLab Director Leon Letterman would speak on "The State of Science Education" and the "Physics First" program at Austin Peay State University in Clarksville on March 29. Bill Griswold announced that famed sidewalk astronomy promoter John Dobson had recently entered the hospital. Joe Boyd announced that the March 20 *Wall Street Journal* had an excellent article on Arthur C. Clarke and that the current issue of *U.S. News and World Report* contained an insightful article on light pollution.

Since there was no further business to discuss, President Reeves declared the meeting to be adjourned at 8:20 P.M.

Respectfully submitted,  
Bob Rice, Secretary

**ACTIVITIES and EVENTS**

*April 1—30, 2008*

- 4/2 Conj. of Neptune & Moon
- 4/3 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
- 4/5 Messier Marathon (alt. date) at Spot Observatory, dusk to dawn
- 4/6 NEW MOON
- 4/9 Moon 1.0° N of Pleiades
- 4/12 FIRST QUARTER, Public star party at Warner Park 8:00-10:00 p.m.
- 4/15 Saturn 3° N of Moon
- 4/17 BSAS Membership mtg. 7:30 p.m. at ASC
- 4/20 FULL MOON
- 4/22 Lyrid meteors peak
- 4/27 Jupiter 3° N of Moon
- 4/28 LAST QUARTER

*May 1—31, 2008*

- 5/1 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
- 5/3 Public star party, Warner Park 8:30-10:30 p.m.
- 5/5 NEW MOON
- 5/6 Mercury 3.0° S of Moon
- 5/10 Conj. of Mars & Moon
- 5/12 FIRST QUARTER
- 5/13 Saturn 3° N of Moon
- 5/15 BSAS Membership mtg. 7:30 p.m. at ASC
- 5/17 Astronomy Day, ASC 10:00 a.m.-4:00 p.m., Public star party, ASC 8:30-10:30 p.m.
- 5/20 FULL MOON
- 5/24 Jupiter 2° N of Moon
- 5/27 Conj. of Neptune & Moon
- 5/28 LAST QUARTER

\*All times listed are Central Time

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