

The May membership meeting will be held on Thursday, May 15, 2008 at 7:30 pm at the Adventure Science Center

On Thursday, May 15, 2008 we will hold our regularly scheduled membership meeting at the Adventure Science Center. Our speaker this month is Dr. Richard Schmude.

Dr. Richard Schmude, Jr., Assistant Professor of Chemistry at Gordon College in Barnesville, Georgia, will give an update about interesting recent developments on the planet Jupiter including oscillating spots. As those who have heard him before will recall, Dr. Schmude is a dynamic speaker who keeps his audience on the edge of their seats. Dr. Schmude is currently the Associate Executive Director of the Association of Lunar and Planetary Observers (ALPO).

Dr. Schmude is a very energetic, entertaining speaker, and definitely one that is not to be missed!

Message from the President

Well, the Messier Marathon turned out to be less than what we hoped for this past month. This was one where the weather forecasts just simply fooled us. Every forecast during the morning and early afternoon said that the skies were going to clear up and be absolutely fantastic. Reality proved to be very overcast. Whatever it was that was supposed to blow the clouds away stalled to the north. On the other hand, those of us who did gather at Mark's home had some fine gumbo (Thanks, Donna) and a great time of fellowship just simply hanging out and talking to each other. If you decided to not show up just because of the weather, you actually missed a good time. We really should spend more time just hanging out with each other.

Our public star party at Warner Park also got clouded out in April. Luckily, Lonnie and Chuck had some luck with the Scouts at Camp Boxwell. We have two public star parties planned for May. The first is at Long Hunter State Park on the night of Saturday, May 3. Long Hunter is really very easy to find. You get off of I-65 at Old Hickory and drive east. Just after you cross Percy Priest

Lake, you take a right into the park. The field is then found by taking the next right into the parking lot for the main building. The field is behind that building, and is accessible by car. There will be Scouts camping there, so we will have a captive audience. Even if you do not have a telescope, or just do not yet feel comfortable sharing yours at a public star party, come on out anyway. Your presence really does help.

The second public star party is at the Adventure Science Center on Saturday, May 17, for Astronomy Day. We will be focusing on the moon and planets.

I would like to thank Spencer for a fine program this past month. I never get tired of hearing about the telescopes and people who are on the cutting edge of Astronomy research. I will also never again hear "Hotel California" in the same way.



Message from the President

Continued from Page 1

Finally, Kris showed us some of the work that has been finished in the new planetarium. Based on what we got to see, it is going to be awesome. (Don't miss the June membership meeting if you catch my drift.)

Speaking of meetings, you do not want to miss the speaker at this month's membership meeting is Dr. Richard Schmude. Dr. Schmude has spoken to us before at both our membership meetings and at TNSP. He is entertaining, energetic, and engaging. He is an associate professor at Gordon College's Department of Science and Physics in Barnesville, Georgia. He is the Associate Executive Director of the Association of Lunar and Planetary Observers (ALPO). He will be speaking to us on Jupiter. (He is also the Coordinator of the Jupiter Section of ALPO.)

Finally, I would like to mention the observing pins that you can earn through the Astronomical League again this month. The Astronomical League's web site is <http://www.astroleague.org>. Look at the various "Observing Clubs" for the requirements for each. There are many to choose from. The difficulty levels range from very easy to quite hard. It may very well be that one or more of them would suit you. This could be an excellent way for you to work on your observing skills. It is also a great way to force yourself to look at some objects outside of your "usual suspects" list.

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 if you have questions. Dues can be sent to:

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THE ECLIPSE NEWSLETTER

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Happy Birthday Faith 7

by Robin Byrne

This month we celebrate the last and most daring of the Mercury flights. When Wally Schirra's Mercury mission, dubbed Sigma 7, returned from a perfect flight, many felt it was time to end the Mercury program and move on to Gemini. They figured the Mercury spacecraft had been pushed as far as it was possible to be pushed. However, others were concerned that there was one Soviet accomplishment they had not yet achieved: putting a man and spacecraft in orbit for more than one day. The Soviets had accomplished this feat on their second flight. Mercury had completed 5 manned flights, but had still not met this goal. In September of 1962, the decision was made to modify the Mercury capsule for a one-day mission.

Once the mission was decided upon, the last of the Mercury 7, Gordon Cooper, was named the pilot. His backup would be the first Mercury astronaut to enter space, Alan Shepard. It had been a tradition for each pilot to name his capsule, and Cooper named his Faith 7, partly joking about the mission's daring goals.

The original launch date was May 14, 1963. When Cooper entered the capsule, he found a "gift" left by Shepard: a toilet plunger with an attached note saying "Remove Before Launch." Unfortunately, due to technical problems, the launch was scrubbed and rescheduled for the next day. At 13 seconds past 8:00 am EST on May 15, 1963, Faith 7 began its journey. Three minutes later, Cooper radioed back, "Faith 7 is all go."

After some housekeeping during the first two orbits, Cooper began work on the various planned experiments. The first experiment involved releasing from the capsule's nose a sphere with strobe lights on it. Never before had a satellite been deployed from a manned spacecraft. The experiment was meant to test whether Cooper could spot the flashing light. For most of one orbit, he could not see anything, but finally spotted it during the next 3 orbits.

Another experiment would have included deploying a tethered balloon attached to a strain gauge. It was meant to measure the difference in drag between the lowest and highest points of the orbit. Unfortunately, despite several attempts, Cooper could never get it to deploy.

After a tasty dinner of powdered roast beef mush and water, Cooper was scheduled for a rest period. After already proving that an astronaut could nap while on the launch pad, Cooper went on to confirm that sleeping in a weightless environment was possible. He managed to get about 8 hours of sleep. One of his concerns was that while sleeping, his floating arms might accidentally hit a switch. To prevent that from happening, Cooper wedged his thumbs under his helmet strap to keep his hands anchored.

Several experiments involved noting what an astronaut could observe through the cabin window. Cooper was able to see the zodiacal light, as well as the airglow layer Schirra had reported seeing. He also saw the "fireflies" first observed by John Glenn. However, what people found most amazing were the features on Earth that he could identify. One town in Africa had set up a flashing light, which Cooper could see. He also could easily identify various large cities, as well as smoke rising from houses in Asia.

About three fourth's of the way into the flight, Cooper sent a television picture of himself in the cabin. Although grainy and difficult to discern, his helmet and some hoses could be seen. This was the first time an American astronaut had broadcast a television signal from space.

With only four orbits remaining, Cooper began to have problems with the Mercury capsule. Indicators began to give faulty readings. A short circuit occurred in one of the inverters. He lost attitude readings, automatic stabilization and control. Carbon dioxide began to build up in his spacesuit. Cooper's only comment about all of these problems was to calmly state, "Things are beginning to stack up a little." With reentry rapidly approaching, and most of his systems not functioning, Cooper would have to execute a completely manual reentry. John Glenn, on the ground, helped develop a revised checklist to bring Cooper down safely. With Glenn giving the timings over the radio, Cooper manually hit the switches and fired the thrusters. Fifteen minutes later, Cooper landed closer to the recovery aircraft carrier than any of the previous Mercury flights. After 22 orbits, lasting 1 day, 10 hours and 19 minutes, Gordon Cooper was home. Despite experiencing over 34 hours of being weightless, Cooper was fine, thus proving man could endure extended periods of weightlessness.

After Cooper's flight, there was talk of another Mercury mission, sending Al Shepard into orbit for 3 days. However, it was decided that it was time for Mercury to end and Gemini to begin. With the end of Mercury, Gordon Cooper has the distinction of being the last man to go into Earth orbit alone. A week after Cooper's flight, President Kennedy awarded him with the NASA Distinguished Service Medal. The Faith 7 capsule can still be seen on display at the Johnson Space Center in Houston.

Just as Gordon Cooper's flight brought a space era to an end while achieving many ambitious goals, we will soon be seeing the Space Shuttle flights drawing to a close after finishing the International Space Station. The Mercury program ended to pave the way to meeting Kennedy's goal of landing on the Moon. Similarly, the Space Shuttle missions will end to make way for our return to the Moon. As the Shuttle program draws to a close, we should think back on all of the space programs that have come before, including our very first steps into space on the Mercury missions.

References:

Faith 7

<http://www-pao.ksc.nasa.gov/kscpao/history/mercury/ma-9/ma-9.htm>

Mercury-Atlas 9 - Wikipedia, the free encyclopedia

http://en.wikipedia.org/wiki/Mercury-Atlas_9

Cooper reviewed his experiences aboard Mercury Faith 7 from Grimwood, James M., Project Mercury: A Chronology, NASA Special Publication-4001.

<http://www.astronautix.com/details/coo23745.htm>

Manned Space Chronology: Mercury MA-9

<http://www.spacearium.com/special/spaceline/spaceline.org/flightchron/mercuryma9.html>

Barnard-Seyfert Astronomical Society
Minutes of a Regular Meeting of the Board of Directors
Held on Thursday, April 3, 2008

The board of directors of the Barnard-Seyfert Astronomical Society met in regular session at the Cumberland Valley Girl Scout Council Building in Nashville, Tennessee on April 3, 2008. A sign-in sheet was circulated in lieu of a roll call. Board members Dr. Spencer Buckner, Bill Griswold, Dr. Donna Hummell, Dr. Terry Reeves, Bob Rice, Randy Smith, and Steve Wheeler were present. Board members Keith Burneson, Tony Campbell, JanaRuth Ford, Kris McCall, and Theo Wellington were absent. A quorum being present, President Terry Reeves called the meeting to order at 7:30 P.M.

Dr. Terry Reeves reminded the board about the Messier Marathon scheduled for Saturday, April 5 at Mark Manner's Spot Observatory and suggested that if the weather and seeing were at all reasonable, we should continue to hold the event. He stated that a go or no go decision would be communicated to BSAS members early on the day of the Marathon. Dr. Reeves also announced these upcoming star public parties:

Apr 12 – Warner Park from 8 P.M. to 10 P.M. at the Ridgefield site,
May 3 – Long Hunter State Park from 8 P.M. to 10 P.M., and
May 17 – At the Adventure Science Center (ASC) in conjunction with Astronomy Day.

In addition, he suggested that since the ASC had two professional astronomers scheduled to speak on Astronomy Day, BSAS members might also speak on topics that were not likely to be covered by the pros (i.e., Selecting Telescopes and Binoculars, etc.). Dr. Spencer Buckner commented that this particular subject would work out well since he had already planned to bring a number of telescopes to the event.

Dr. Terry Reeves inquired about the results of the Middle Tennessee Science & Engineering Fair on March 13 for which the BSAS had authorized \$175.00 in prizes. Bill Griswold, who served as a volunteer judge, stated that no prizes were awarded because no astronomy related projects were entered. Dr. Reeves suggested that since the BSAS was not going to hold the Tennessee Star Party (TNSP) in 2008, feedback and suggestions for a 2009 event should be obtained from the membership at an upcoming meeting – perhaps in July. The board agreed with this suggestion. He also suggested that an informal ad hoc committee be formed to coordinate events with Mark Manner if the Society decided to accept his generous offer to have a BSAS members-only event at his Spot Observatory in lieu of the TNSP for 2008. Dr. Donna Hummell, Dr. Terry Reeves, and Bob Rice volunteered to serve on this committee.

Dr. Terry Reeves reiterated these upcoming membership meeting programs:

Apr 17 – Mauna Kau Observatories in Hawaii by Dr. Spencer Buckner,
May 15 – Update on the Last Jupiter Apparition by Dr. Richard Schmude,
Jun 19 – Preview of the renovated ASC Planetarium by Kris McCall, and
Jul 17 – What's Up in the Sky by Dr. Terry Reeves, et al.

Dr. Reeves suggested that we publicize Dr. Schmude's May 15 program by contacting other clubs.

Treasurer Randy Smith reported that the BSAS had \$2,992.20 in the bank. There being no further business to discuss, President Reeves asked for a motion to adjourn the meeting at 8:20 P.M. Dr. Spencer Buckner so moved and Steve Wheeler seconded his motion that carried by a unanimous voice vote.

Respectfully submitted,
Bob Rice, Secretary

Barnard-Seyfert Astronomical Society
Minutes of the Monthly Membership Meeting
Held On Thursday, April 17, 2008

Attendees gathered in the Adventure Science Center (ASC) on Thursday evening, May 17, 2008 for the BSAS' regular monthly meeting. Prior to starting the meeting, Sudekum Planetarium Director and BSAS member Kris McCall announced that the ASC's new Sudekum Planetarium and Space Chase wing should be ready by May 2008 and that attendees might get a sneak peek after the meeting concluded. She also reminded the audience about several upcoming public star parties.

President Terry Reeves called the meeting to order at 7:36 P.M. and welcomed new members and guests. Dr. Reeves then reiterated these upcoming public star parties previously mentioned by Ms McCall: May 03 at Long Hunter State Park and May 17 at the ASC. He also announced that the BSAS' annual picnic would be changed from May 6, 2008 to a yet to be determined date. Treasurer Randy Smith reported that the Society's bank balance was \$2,083.09 and reminded members that their club discounted subscriptions to *Sky & Telescope* could now be renewed directly through the magazine's publisher. Dr. Reeves then asked for corrections to the minutes of the last membership meeting held on March 20, 2008 and, there being none, declared them to be approved without exception as published in the April 2008 edition of the *Eclipse* newsletter.

Member Chuck Schlemm announced that his employer might have some 12-volt LEDs available. Dr. Reeves announced that NASA astronomer Steven Squyres would speak tomorrow evening (April 18) at Vanderbilt University's Stevenson Science Center on "Roving Mars." He noted that parking for this event was available behind the 2525 West End Building. He then displayed the SolarScope given to the BSAS by NASA's Night Sky Network as its first quarterly prize for 2008.

Dr. Terry Reeves introduced Dr. Spencer Buckner, BSAS member and Associate Professor of Physics and Astronomy at Austin Peay State University, who delivered the evening's program on "A Trip To Mauna Kea." This PowerPoint presentation accompanied by Dr. Buckner's commentary described his tour last summer to the 14,000-foot peak of the dormant volcano Mauna Kea on the big island of Hawaii. The mountaintop houses several of the largest telescopes in the world. Dr. Buckner noted that the mountain could be seen during the flight in from Honolulu to Hilo and sometimes contained snow even though it was located in the tropics. He emphasized that all tourists were required to stop for two hours some 9,000 feet up at the Onizuka Visitors Center to acclimate to the lower oxygen level. He also pointed out that only 4-wheel drive vehicles could be used from that point on to traverse the sparse and winding gravel roads up to the top of the mountain. Dr. Buckner showed detailed views of the 15-meter James Clerk Maxwell microwave telescope and the 8.2-meter Gemini telescope. He also explained that scientists working on Mauna Kea did not have to go all the way to the telescopes at the top, but could perform their research at a lesser height in the more comfortable Pohaku Astronomers Center. Dr. Buckner concluded his presentation by showing a humorous take-off of the Eagles' hit song *Hotel California* entitled *Hotel Mauna Kea* adapted from You Tube.

Since there was no further business to discuss, President Reeves declared the meeting to be adjourned at 8:30 P.M. After the meeting, Kris McCall treated members to an exciting preliminary tour of the ASC's new planetarium that will be opened to the public on June 28, 2008.

Respectfully submitted,
Bob Rice, Secretary

ACTIVITIES and EVENTS*May 1—31, 2008*

5/1 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout office

5/3 Public star party, Long Hunter 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 3.0° N of Moon

5/15 BSAS Membership mtg. 7:30 p.m. as 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 2.0° N of Moon

5/27 Conj. of Neptune & Moon

5/28 LAST QUARTER

June 1—30, 2008

6/1 NEW MOON

6/5 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout office

6/8 Conj. Of Mars & Moon

6/9 Saturn 3.0° N of Moon

6/10 FIRST QUARTER

6/18 FULL MOON

6/19 BSAS Membership mtg. 7:30 p.m. as ASC:
Preview newly renovated ASC Plantarium

6/20 Jupiter 2.0° N of Moon

6/21 Summer Solstice

6/23 Conj. of Neptune & Moon

6/26 LAST QUARTER

*All times listed are Central Time

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