The ECLIPSE

November 2011
Volume 4, Issue 11

The newsletter of the Barnard Seyfert Astronomical Society, PO Box 150713, Nashville, TN 37215-0713

Upcoming Events

Board of Directors Meeting

November 2nd at the Cumberland Valley Girl Scout Council Building – 7:30 pm

December 1st at the Cumberland Valley Girl Scout Council Building – 7:30 pm

Membership Meeting

November 16th at the Cumberland Valley Girl Scout Council Building – 7:30 pm

December 21st Meeting/Pot Luck Christmas Supper at the Cumberland Valley Girl Scout Council Building – 7:30 pm

Star Parties

November 5th – BSAS Public Star Party at Edwin Warner Park

November 11th – Percy Priest Elementary School Star Party

November 26th - BSAS Private Star Party at Natchez Trace mile marker 435.5

December 3rd – BSAS Public Star Party at Shelby Bottoms Nature Center

In this issue:

Selecting Astronomy Christmas Toys

Wednesday, November 16, 2011
Cumberland Valley Girl Scout Council Building
7:30 pm

BSAS President **Dr. Spencer Buckner** will be giving us an overview of the latest astronomy gear for that new or experienced backyard observer on your Christmas list. Don't miss it!

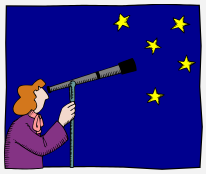
From The President

Greetings from your BSAS president. The fall season is definitely on us with the changing colors of the leaves and their inevitable fall onto the ground. Of course, that means raking them up and disposing of them. While the color changes are certainly pretty, the collection and disposal of their remains is a chore. At least we tend to get more clear nights during the fall.

It seems that the Earth has managed to dodge another bullet. The media hyped the passage of Near Earth Asteroid (NEO) 2005 YU55 as if it was a really big deal when in reality it was just another hunk of rock drifting past us in space. The real story was that it wasn't discovered until 2005. There are only a handful of amateurs with equipment capable of finding space rocks of this size and a couple of professional programs that are actively searching for them. The professional programs don't use really big telescopes, though, so they only discover the larger NEO's or the smaller ones like YU55 when they get close. Given the current state of NEO searches, a lead time of six years is typical. That means that had it been on a collision course we would have only had six years warning before impact.

According to Hollywood all we would have to do is throw together a quick space mission with the most powerful rocket ever built, send up Bruce Willis and a team of wildcat drillers and nuke it: problem solved. Reality doesn't work that way. Designing and building a rocket powerful enough to catch up to an Earth-crossing asteroid which can carry any significant payload takes years. If you want a human payload, that takes at least a decade. Even if we manage to build the rocket, what kind of payload do we use? Nuking it may not be a very good solution. The analogy I like to use in my astronomy class is: which would you rather have happen, being shot in the chest with a 38 caliber at short range (the original asteroid) or being shot in the chest at short range with a shotgun using birdshot (the nuked asteroid)? Either way, you're dead. Nuking an asteroid would just spread the debris over a larger area. And if you think all the pieces would burn up harmlessly in our atmosphere, think again. All that heat that is produced by all that debris burning up isn't just going away. It is staying in the atmosphere and will probably cause flash fires immediately under the area of entry.

Continued on Page 2



"We live in a changing universe, and few things are changing faster than our conception of it."

Timothy Ferris
Author – "The Whole Shebang"
1944 -

Observing Highlights

all times listed are Central Standard Time

LUNAR PHASES

November 2011

11/02	FIRST Quarter
11/10	FULL Moon
11/18	LAST Quarter
11/25	NEW Moon

December 2011

12/02	FIRST Quarter
12/10	FULL Moon
12/18	LAST Quarter
12/24	NEW Moon

OBJECTS VISIBLE THIS MONTH

Messier Objects:

Planetary Nebula:
M27, M57

Asterism:
M73

Globular Clusters:
M30, M56, M71, M72

From the President, cont.

So, what is the answer? At present, there isn't one. There have been a number of meetings among scientist where potential options were discussed but nothing has ever actually been built. If we had a decade or two warning we might be able to do something if scientists could convince the politicians of the urgency of the problem. Given the inability of politicians worldwide to solve our economic problems, despite the obvious urgency, I am not optimistic that we could get them to agree on how to solve a potential impact problem. If we only have a few years warning, forget it. My advice would be to stay away from the coast due to the tsunami hazard and hope it doesn't hit within 1000 miles of where you live. Until the governments of the world develop the political will to do something about the possibility of an impact and come up with the money to build something that can sit in standby awaiting use, nothing about the problem other than an occasional think-tank will happen.

On a lighter note, early November has had a couple of good observing opportunities. The star party at Warner Park on the 5th was a success with an estimated 150 people coming out, 11 telescopes and WSMV sending out a cameraman and giving us some airtime on the weekend news. The second opportunity was the 11th at Percy Priest Elementary School. As I write this message the event hasn't happened yet but the forecast is good so hopefully there will be a good turnout for it, too. Our next public star party is Saturday December 3 at the Shelby Bottoms Nature Center.

Finally, I want to encourage everyone to invite a guest to our November 16 public meeting. This is our annual "Selecting Astronomy Christmas Toys" program and people that are interested in getting into the astronomy hobby are the ones that will benefit the most. The idea is to give advice that people can use to select their first telescope or astronomy toy so that it will get used and not put into a closet. Invite other parents you met at your kids' school or sports event or just the kids (and their parents) down the street. Let's see if we can fill the room this month.

Dr. Spencer Buckner
President

FREE TELESCOPES!

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, and a waiting list may be 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.

Happy Birthday Triton by Robin Byrne

This month we celebrate the discovery of one of the largest and most unusual moons in our solar system. On September 23, 1846 in Germany, Johann Galle first observed the planet Neptune, using Urbain Leverrier's predicted coordinates to find it. Meanwhile, in England, William Lassell, who made his fortune as a brewer of beer, already had established his reputation for well-made, equatorially mounted reflecting telescopes, which were ideal for planetary observations and discovering moons. Upon hearing of Galle's finding Neptune, John Herschel wrote to Lassell, encouraging him to try to observe this new planet, with the intention of possibly being the first to spot its moons. Lassell first observed Neptune the night of October 2nd, which easily showed a disk. For the next week, Lassell continued to observe when weather permitted. Finally, on October 10, 1846, William Lassell spotted a satellite orbiting Neptune.

To name this new moon, a convention needed to be established for the naming of moons of this new planet. In mythology, Neptune is the Roman god of the oceans (his Greek equivalent being Poseidon), so its larger moons are named for mythological characters associated with Neptune or Poseidon. Smaller, irregularly shaped satellites are named for the Nereids, who are the daughters of Neptune's attendants. The name for the first moon of Neptune's to be discovered was proposed by Camille Flammarion in a book he published in 1880. He suggested the name Triton, who was Poseidon's son, but this was not adopted officially until many years later. The next moon of Neptune was not discovered until 1949, so for many years Triton was also known simply as "the satellite of Neptune."

Most of what we know about Triton comes from the Voyager 2 fly-by of Neptune in 1986. It is the seventh largest moon in the solar system, with more mass than all the remaining smaller moons combined. But, unlike all other large moons, Triton exhibits a retrograde orbit, orbiting Neptune opposite the direction that Neptune rotates on its axis. All moons that have retrograde orbits must have been captured, rather than forming along with the planet. Among the Jovian planets, it is common for the smaller, outermost moons to have been captured, but for a moon as large as Triton to be captured is quite rare. Triton is similar in composition and size to Pluto (with Triton being slightly larger), which implies that it originated in a manner similar to Pluto, somewhere in the Kuiper Belt. The Kuiper Belt is thought to be the source of short-period comets. It spans a region that begins near the orbit of Neptune and extends out beyond the orbit of Pluto, which would put Triton in a prime location to have an encounter with Neptune, leading to its ultimate capture.

Physically, it is difficult to capture an object as large as Triton. One hypothesis suggests Triton was originally part of a binary protoplanetary system. As it approached Neptune, the companion body was closer to Neptune and ejected from the solar system. This process would have removed energy from Triton's motion, allowing it to be captured. The original orbit around Neptune would have been very eccentric. This would have resulted in extreme tidal heating (even more extreme than that experienced by Io and Europa). The tidal heating would have liquified Triton's interior, allowing it to separate into layers. Over time, the orbit would have become more circular, and the heating would have diminished. The same gravitational interactions that circularized its orbit, also led to Triton being in synchronous rotation, with one side always facing Neptune. Due to a combination of Neptune's orbital and axial tilt, and Triton's orbital and axial tilt relative to Neptune's equator, when using the Sun as its reference, Triton appears to be tilted almost 90˚. This means that over time, it alternates between one pole or the other receiving almost continuous sunlight.

Not only is the orbit of Triton unlike other moons in the outer solar system, neither is its composition. The density of Triton is higher than most of the other moons, which means it has a much higher percentage of rock. Its interior layers are thought to be comprised of a large rock and metal core, comprising over 60% of the moon's mass. Covering the core is a mantle, which may contain liquid water. The source of the heat necessary to melt the ice could be the radioactive decay of materials in the moon's core. The crust of Triton is composed of a combination of ~55% frozen nitrogen, ~25% water ice, and ~15% frozen carbon dioxide. For Triton to have so much solid nitrogen is only possible because of Triton being one of the coldest objects in our solar system.

The liquid water mantle may be the driving force behind the geologic activity responsible for Triton having such a young, relatively crater-free surface. Ice lava, composed of water and ammonia ice, is thought to flow across the surface, creating the high plains found in Triton's eastern hemisphere. Other regions show crisscross patterns similar to those seen on Jupiter's moon Europa, which are due to the ice experiencing freeze-thaw cycles that crack and refreeze the ices. Unique to Triton are features dubbed "cantaloupe terrain," which exhibit a series of curved cracks 30-40 km in depth that resemble the pattern seen in the skin of a cantaloupe. One hypothesis for their formation involves pockets of less dense material, just below the surface, rising through a region of higher density, creating stress fractures.

Triton is also one of the few objects in our solar system observed to have active eruptions. In the case of Triton, its eruptions are in the form of nitrogen geysers. With all of the observed eruptions having occurred in the region that receives the most sunlight, they are thought to be powered through solar heating. A process dubbed the "solid greenhouse effect" has been proposed, which consists of a transparent layer of frozen nitrogen allowing sunlight to reach a darker, lower region. The darker region absorbs the solar energy and warms. The heat then slowly vaporizes the bottom of the frozen nitrogen layer, building up enough gas pressure to eventually erupt with enough force to create plumes as high as 8 km (almost 5 miles). The combination of the erupted nitrogen, along with sublimation from the surface ice, produces a very tenuous nitrogen atmosphere, with an atmospheric pressure less than 1/70,000th of Earth's atmospheric pressure.

Because of the possibility of liquid water, many have proposed sending a spacecraft to orbit Neptune, equipped with a lander destined for Triton. However, to date, no such mission has been accepted for development. Meanwhile, we can do our own study of this world. With Neptune currently in Aquarius, it is well placed for early evening observing during the month of October. See if you can spot this unusual moon for yourself, and think of William Lassell's first view, and of all the unusual characteristics associated with this amazing moon called Triton.

References

Triton (moon) - Wikipedia
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William Lassell (1799-1880) and the discovery of Triton, 1846
by Allan Chapman
http://www.mikeoates.org/lassell/lassell_by_a_chapman.htm

Neptune's Moon Triton - Explore the Cosmos | The Planetary Society
http://planetary.org/explore/topics/neptune/triton.html

Solar System Exploration: Planets: Neptune: Moons: Triton
http://solarsystem.nasa.gov/planets/profile.cfm?Object=Triton

(Editor's Note: This article was originally intended to run in the October newsletter. However, the article for November was included in errord.)

Board Meeting Minutes – October 6, 2011

Bob Rice, Secretary

The board of directors of the Barnard-Seyfert Astronomical Society (BSAS) met in regular session at the Cumberland Valley Girl Scout Council Building in Nashville, Tennessee on October 6, 2011. A sign-in sheet was passed around in lieu of a roll call. Board members Dr. Spencer Buckner, Steve Cobb, Bill Griswold, Dr. Donna Hummell, Kris McCall, Bob Norling, Curt Porter, Dr. Terry Reeves, Bob Rice, and Theo Wellington were present. Board members Jana Ruth Ford and Santos Lopez, who has moved out of town, were absent. BSAS members Drew Gilmore and John Harrington were present as guests. A quorum being present, President Dr. Spencer Buckner called the meeting to order at 7:35 P.M.

Treasurer Bob Norling reported that the BSAS had $2,108.48 in its regular checking account and $430.00 in its equipment account. Dr. Spencer Buckner announced these upcoming star parties:

- Oct 08 – Public "International Observe the Moon Night" star party at the Adventure Science Center with laser shows until 10:30 P.M.
- Oct 29 – Private star party at Natchez Trace parkway mile marker 412 from dusk to whenever.
- Nov 05 – Public star party at the Warner Parks from 7:30 P.M. to 9:30 P.M.

Dr. Donna Hummell stated that the upcoming November 5, 2011 star party at the Warner Parks was not mentioned on their website. Dr. Spencer Buckner announced that the board of directors meeting originally scheduled for 7:30 P.M. on Thursday evening, November 3, 2011, will instead take place at the same time on Wednesday evening, November 2, 2011, due to a timing conflict with the Cumberland Valley Girl Scout Council. Dr. Buckner additionally noted that the December 1, 2011 board meeting will revert back to Thursday evening and then starting in January 2012 the board will meet on the first Wednesday of each month. He also told the board that BSAS members Dr. Terry Reeves and Steve Wheeler will present "What's Up in the Fall Sky?" as the October 19, 2011 public membership meeting program. In addition, Dr. Buckner suggested that board members continue to consider other places for the BSAS to meet so that this issue can be brought before the new officers and directors who will be elected at the November 16, 2011 membership meeting.

Curt Porter, Chairman of the Nominating Committee, announced these recommended candidates to serve as officers and board members during 2012: President – John Harrington; Vice President – Joe Boyd; Treasurer – Bob Norling; Secretary – Bob Rice; Board Members at Large – Kris McCall and Melissa Lanz. Curt Porter, whose current board position will expire at the end of 2011, was nominated to complete the remaining year of board member Santos Lopez's term for 2012 since Mr. Lopez has moved away. The Committee will announce these recommendations at the October public membership meeting with the election to take place at the following November meeting. Members may also nominate candidates from the floor at the November election. All newly elected officers and directors will be introduced at the December meeting and assume their duties at the January 2012 meeting. Dr. Spencer Buckner asked the board to consider if a deposit should be required to purchase the 2012 editions of publications that are made available to BSAS members at a discount during the fall of each year – these include Guy Ottewell's Astronomical Calendar, the RASC's Observers Handbook, and Kalmbach Publishing's Deep Space Mysteries Calendar. Following a brief discussion, Curt Porter moved that a $5.00 deposit be required to purchase any of the three and Bob Norling seconded his motion that was passed by a subsequent unanimous voice vote.

Webmaster Drew Gilmore informed the board that paying for website hosting services annually rather than our current practice of paying monthly could save the Society money in addition to being more convenient. Mr. Gilmore suggested that changing to Blue Host, a well known hosting service vendor that he has used with good results, would be both less expensive and allow the BSAS website to be more easily changed. The board discussed this issue and agreed with Mr. Gilmore's suggestion. Bob Norling moved that the BSAS change its web hosting service to an annual payment contract with Blue Host starting on January 1, 2012. Dr. Terry Reeves seconded this motion that was subsequently passed by a unanimous voice vote. Following the vote Bob Rice thanked Mr. Gilmore for his fine work as the BSAS Webmaster and was immediately joined by all the other board members in expressing this sentiment.

Steve Cobb suggested that the board of directors meeting dates be added to the BSAS website; all of the board members agreed. Bill Griswold gave Dr. Spencer Buckner a copy of the Cumberland Valley Girl Scout Council's schedule of events. Curt Porter asked the other board members if they were aware of any problems that attendees may have had in locating our new meeting site last month; no one knew of any. Curt Porter suggested that BSAS procure directional signs with arrows to be used at star parties. The board agreed and during the ensuing discussion decided that such signs should be simple, reflective, inexpensive, and initially procured in a lot of one or two dozen. Mr. Porter said that he would check on pricing from various sources. The board expressed the desire to possibly have these available for the upcoming public star party at the Warner Parks on November 5, 2011.

Steve Cobb commented that the November 2011 issue of Sky and Telescope magazine featured an outstanding astro-image of Jupiter captured by Nashville amateur astronomer Brad Hill. None of the board members knew Mr. Hill but several suggested that we should attempt to contact him to offer a membership in the BSAS. Dr. Donna Hummell suggested that the BSAS should obtain an updated inventory listing of the club's loaner telescopes. John Harrington said that he would contact BSAS member Lonnie Putterbaugh, who has these telescopes and other loaner equipment, about this. The board also asked if there was a form that could be used for receiving and acknowledging donations of telescopes or other equipment to the BSAS; Bob Rice said that he would check the club's records for such a document. Theo Wellington suggested that having a simple informational business card to hand out at star parties would be a good idea and offered to develop and email a mock-up design for such a card to the board.

Since there was no further business to discuss, President Dr. Spencer Buckner declared the meeting to be adjourned at 8:38 P.M.

Monthly Meeting Minutes – October 19, 2011

Bob Rice, Secretary

President Dr. Spencer Buckner called the meeting to order at 7:36 P.M. in the Cumberland Valley Girl Scout Center and welcomed members and visitors. Treasurer Bob Norling reported that the BSAS had $2,208.93 in its regular bank account and $457.39 in its equipment account. Dr. Buckner announced these upcoming star parties:

- Oct 29 – Private star party at mile marker 412 on the Natchez Trace Parkway.
- Oct 29 – CAS' Tennessee Fall Star Party At Fall Creek Falls State Park.
- Nov 05 – Public star Party at Edwin Warner Park's model airplane field from 7:30 – 9:30 P.M.

Dr. Spencer Buckner reported that he would again deliver his popular "All I Want for Christmas Are Astronomy Toys" presentation for the November 16, 2011 public membership meeting program. He asked board members to encourage anyone they knew who might be considering the purchase of a telescope or other astronomical equipment to attend. Dr. Buckner also announced that the annual election of BSAS officers and directors for 2012 would be held at this same meeting and related these Nominating Committee recommendations: President – John Harrington; Vice-President – Joe Boyd; Secretary – Bob Rice; Treasurer – Bob Norling; and Board Members at Large: – Kris McCall, Melissa Lanz, and Curt Porter, whose current board position will expire at the end of 2011, to complete the remaining year of board member Santos Lopez's term for 2012 since Mr. Lopez has moved out of town. Dr. Buckner further stated that nominations would also be solicited from the floor at the election.

Dr. Spencer Buckner announced that members could order copies of the Royal Astronomical Society of Canada's 2012 Observer's Guide, Guy Ottewell's 2012 Astronomical Calendar, and Kalmbach Publishing Company's 2012 Deep Space Mysteries Calendar from Treasurer Bob Norling at a discount from the published price. Dr. Buckner noted that all orders would require a $5.00 deposit.

Dr. Spencer Buckner introduced BSAS members Dr. Terry Reeves and Steve Wheeler who presented the evening's program on "What's Up in the Fall Sky." Steve Wheeler opened his part of the program on fall binocular objects by first offering some cold weather observing tips. These included dressing in layers; avoiding wearing cotton or polyester items next to the skin; wearing insulated shoes, boots, and hats; using hunter's gloves with fold-down flaps so you can use your fingers; setting up out of the wind; using chemical hand & feet warmers; taking breaks; drinking warm beverages without caffeine; and to keep moving around. Next, he displayed "star-hopping" finder charts and descriptions of suggested binocular objects that included the Moon, the galaxy M31 in Andromeda, the Double Cluster in Perseus (NGC 869 & NGC 884), Kimble's Cascade asterism in Camelopardalis; and the open cluster M34 in Perseus.

Dr. Terry Reeves continued the program with a session on selected telescopic objects that included: the galaxy M33 in Triangulum (near M31 in Andromeda); the galaxy M74 in Pisces; the globular cluster M15 in Pegasus; the open cluster NGC 457 (the "OWL", a.k.a. "E.T.") in Cassiopeia; the spiral galaxy NGC 7331 in Pegasus (with Stephan's Quintet only .5 degree to the west); the Saturn Nebula NGC 7009 in Aquarius; Herschel's Garnet Star (Mu Cephei); the double star Almach (Gamma Andromadae); the double star Mesarthim (Gamma Arietis); and the well-known variable star Mira (Omicron Ceti). He closed his session with suggestions for observing Jupiter and the crater Copernicus on the Moon. Both Dr. Reeves and Mr. Wheeler then graciously answered questions from the audience.

Since was no additional business to discuss, Dr. Spencer Buckner declared the membership meeting to be adjourned at 9:08 P.M.

BSAS Affiliations

The Astronomical League
http://www.astroleague.org/

The Night Sky Network
http://nightsky.jpl.nasa.gov/

International Dark Sky Association
http://www.darksky.org/

The Adventure Science Center
http://www.adventuresci.com

The Gray Cubicle You Want to Work In

Space Place Partners Article October 2011
By Dr. Tony Phillips

It's another day at the office. You're sitting in a gray cubicle, tap-tap-taping away on your keyboard, when suddenly your neighbor lets out a whoop of delight. Over the top of the carpeted divider you see a star exploding on the computer screen. An unauthorized video game? No, this explosion is real. A massive star just went supernova in the Whirlpool Galaxy, and the first images from Hubble are popping up on your office-mate's screen.
It's another day at the office ... at NASA.

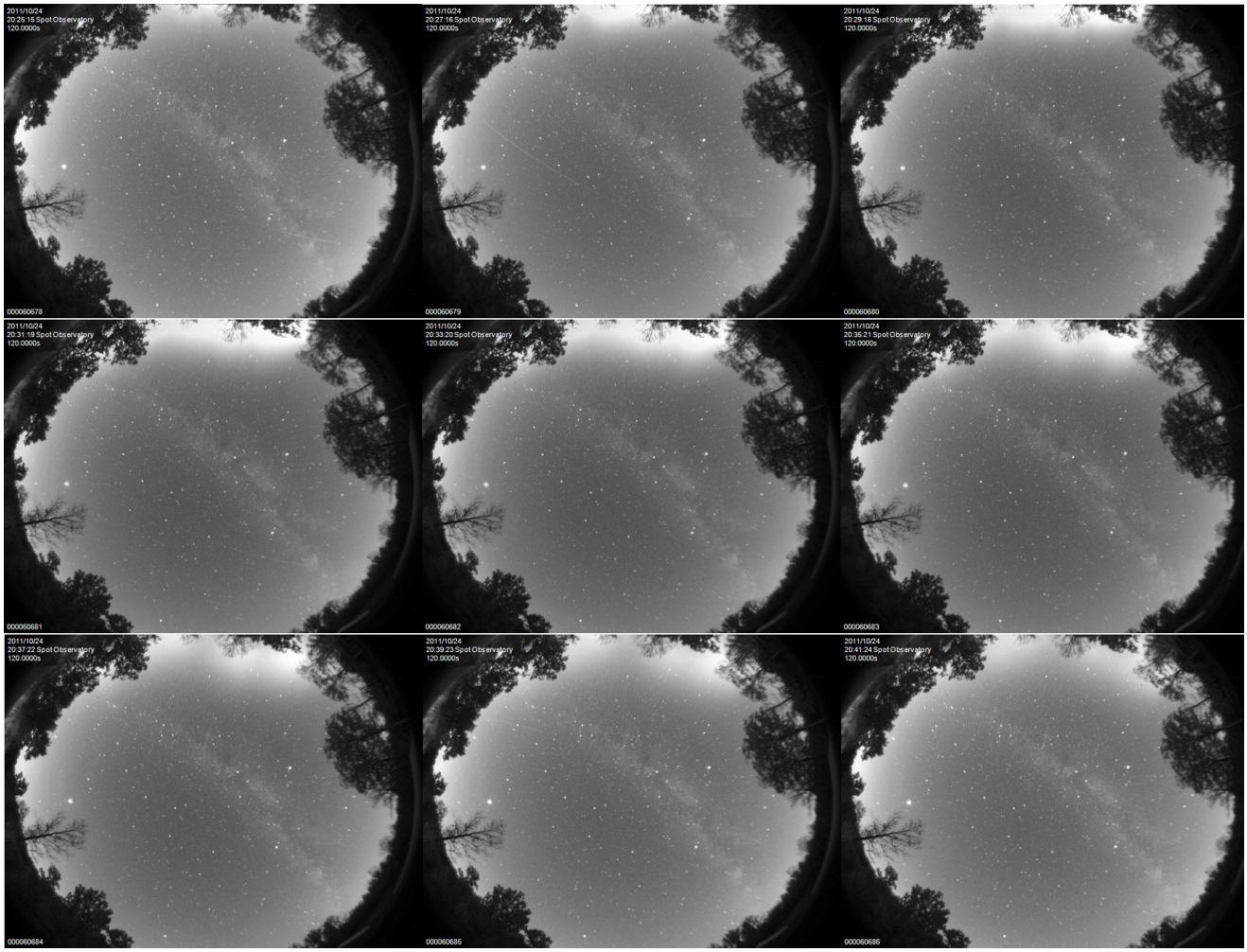
Just down the hall, another office-mate is analyzing global temperature trends. On the floor below, a team of engineers gathers to decode signals from a spaceship that entered "safe mode" when it was hit by a solar flare. And three floors above, a financial analyst snaps her pencil-tip as she tries to figure out how to afford just one more sensor for a new robotic spacecraft. These are just a few of the things going on every day at NASA headquarters in Washington DC and more than a dozen other NASA centers scattered around the country. The variety of NASA research and, moreover, the variety of NASA people required to carry it out often comes as a surprise.

Consider the following: NASA's Science Mission Directorate (SMD) supports research in four main areas: Earth Science, Heliophysics, Astrophysics, and Planetary Science. Read that list one more time. It includes everything in the cosmos from the ground beneath our feet to the Sun in the sky to the most distant galaxies at the edge of the Universe. Walking among the cubicles in NASA's science offices, you are likely to meet people working on climate change, extraterrestrial life, Earth-threatening asteroids, black holes or a hundred other things guaranteed to give a curious-minded person goose bumps. Truly, no other government agency has a bigger job description.

And it's not just scientists doing the work. NASA needs engineers to design its observatories and build its spacecraft, mathematicians to analyze orbits and decipher signals, and financial wizards to manage the accounts and figure out how to pay for everything NASA dreamers want to do. Even writers and artists have a place in the NASA scheme of things. Someone has to explain it all to the general public.

Clearly, some cubicles are more interesting than others. For more information about the Science Mission Directorate, visit science.nasa.gov. And for another way to reach the Space Place, go to http://science.nasa.gov/kids.

Some of the employees of NASA's Science Mission Directorate may work in gray cubicles, but their jobs are anything but dull. They get to study Earth, the Sun, the Solar System, and the Universe!



Aurora at Spot Observatory
October 24, 2011

Image by Mark Manner

Mark writes:

"A brilliant Aurora Borealis was captured on the allsky camera at Spot Observatory, beginning at 7:15pm local time and lasting almost 3 hours. The brightest period was from 8:25pm to 8:45pm."

Become a Member of the BSAS!

Download and print the Application for membership from www.bsasnashville.com (Adobe® Acrobat Reader® required).

Then fill it out and bring it to the next monthly meeting or mail it along with your first year's membership dues to:

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

Annual dues, which include membership in the BSAS and Astronomical League, and subscriptions to their newsletters, are:

$20 Individual
$30 Family
$15 Senior (+65)
$25 Senior Family (+65)
$12 Student*

* To qualify, you must be enrolled full time in an accredited institution or home schooled.

All memberships have a vote in BSAS elections and other membership votes,

Also included are subscriptions to the BSAS and Astronomical League newsletters.

IMPORTANT DUES INFORMATION

To find the expiration date for your current membership, visit our web site at http://www.bsasnashville.com and click the Renewals link.

There will be a two month grace period before any member's name is removed from the current distribution list.

We're on the Web!
See us at:
www.bsasnashville.com

About Our Organization

Organized in 1928, the Barnard-Seyfert Astronomical Society is an association of amateur and professional astronomers who have joined to share our knowledge and our love of the sky.

The BSAS meets on the third Wednesday of each month at the Cumberland Valley Girl Scout Council Building in Nashville. Experienced members or guest speakers talk about some aspect of astronomy or observing. Subjects range from how the universe first formed to how to build your own telescope. The meetings are informal and time is allotted for fellowship. You do not have to be a member to attend the meetings.

Membership entitles you to subscriptions to Astronomy and Sky & Telescope at reduced rates; the club's newsletter, the *Eclipse*, is sent to members monthly. BSAS members also receive membership in the Astronomical League, receiving their quarterly newsletter, the *Reflector*, discounts on all astronomical books, and many other benefits.

In addition to the meetings, BSAS also sponsors many public events, such as star parties and Astronomy Day; we go into the schools on occasion to hold star parties for the children and their parents. Often the public star parties are centered on a special astronomical event, such as a lunar eclipse or a planetary opposition.

Most information about BSAS and our activities may be found at www.bsasnashville.com. If you need more information, write to us at info@bsasnashville.com or call Dr. Spencer Buckner at (931) 221-6241.

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