

CONSTELLATION

The Official Publication of the Bucks-Mont Astronomical Association, Inc.

VOLUME 21, Issue No. 4.	October/November/December 2006	Chris Sommers and Scott Petersen, Editors
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Stella Della Valley XX October 20-22, 2006

➤ *By Dwight Dulsky, BMAA*

The law of averages had to be with us. With almost all major 2006 StarParties in Pennsylvania hampered by rainy weather, Stella Della just had to be clear. At 1:30 PM Friday afternoon a fierce squall blew in across the region, I thought, "Oh well, here we go again another washed out StarParty." I arrived at Camp Onas with a thick coating of mud from Sheep Hole Road all over the car and trailer. This weekend was not getting off to a good start.

But, the rain was over within an hour, and as promised the wind really picked up and started to blow the clouds out (along with a few tents and signs!). Wind gusts up to 40 MPH dried things off throughout the afternoon. As night fell the winds gradually subsided enough for most folks to bring out their scopes and take in the evening sky. By 11:00 PM the winds had calmed and observers had a fairly good night considering the auspicious start that afternoon. The peak of the Orionid meteor shower added some excitement to our evening as some rather bright meteors streaked across our skies.



BMAA Gophers

Position	Name
President	Bernie Kosher
Vice President	Dwight Dulsky
Treasurer	Ed Radomski
Secretary	Herb Borteck
Star Watch Coordinator	George Reagan
Constellation Editors	Chris Sommers and Scott Petersen
Webmaster	Jim Moyer

For More Information About BMAA Go to www.bma2.org.

Saturday morning began with gallons of hot coffee and Danish. A warm fire was rekindled in the fireplace making a cozy meeting place for old and new friends. The Pro-Am Swap meet got underway with several vendors and many attendees. Lots of folks walked away with good buys of used and new equipment. After lunch at 1:00 PM our speakers program began with Roger Gordon talking about observing tips for Jupiter. Later at 2:00 PM, Alan Daroff presented tips and techniques and equipment for solar observing. Finally at 3:00PM, Rob Teeter of *Teeter's Telescopes* spoke about his experiences running his own telescope company. There was nice attendance at all three presentations.



At 6:00 PM the pizzas arrived and the feasting began. After everyone had their fill of pizza we began pulling names for door prizes donated by various vendors and individuals (a list of door prize winners follows this article). We had quite an extensive list of excellent door prizes for Stella Della Valley this year. Thank you so much to those involved with the industry donating merchandise for our events. Finally, we celebrated our 20th anniversary of Stella Della with two huge cakes beautifully decorated with astronomical themes. Then we adjourned to the night sky above Camp Onas for observation.

The late October evening was cool and clear. Gradually as the night progressed our familiar winter constellations slowly rose in the East. It's always nice to catch a glimpse of the Orion Nebula at Stella Della in the early morning. One of the highlights of the evening was the unexpected arrival of a really great fireball meteor streaking almost horizon to horizon. A collective gasp was heard all over the observing field as the fireball blasted through the atmosphere. Then, spontaneous applause erupted for this rare sight. Talk about being in "the right place at the right time". The dew heaters were working overtime as the night wore on. Casualties to the dew wandered down to the dining hall to warm up by the fire and have some coffee and hot chocolate. There were even a few Smore's downed, bringing back some good childhood memories.



Again, Danish and coffee were offered Sunday morning to our guests and members. Most folks broke camp and headed for home by 11:00 AM. The 20th annual Stella Della Valley enters the books as another success for the Bucks-Mont Astronomical Association.

A heartfelt thank you to all of our guests and vendors who attended Stella Della, we hope to see you all again next year. Also, thank you to all the BMAA members who pitched in all weekend long from set up to clean up – you're the best!

2006 Stella Della Valley Door Prize Winners

Thanks to the following vendors and producers of fine astronomical products for their donations of door prizes to SDV. We ask that you consider them first when you are in the market for astronomical products and services.

(alphabetical order)

<p>Astronomical League http://www.astroleague.org/index.html The Astronomers Journal Linda Van der Spek – Winner</p> <p>Astrozap http://www.astrozap.com (2) \$50.00 Gift Certificates Paul Dellechiaie – Winner Joe Holm – Winner</p> <p>Bucks-Mont Astronomical Association sponsored prizes http://www.bma2.org (2) Meteorites from Gary's Gem Garden http://www.garysgemgarden.com Steve McFadden – Winner Dwight Dulsky – Winner</p> <p>Edmund Astroscan Wide Field Telescope Jeff Gordon – Winner</p> <p>Celestron International http://www.celestron.com NexStar 114 GT Computerized Telescope Wayne Adams - Winner</p> <p>Jim's Mobile, Inc. (JMI) http://www.jimsmobile.com Two \$25/\$50 JMI Door Prize Certificates Robert Starr – Winner Vincent Petaccio - Winner</p> <p>Highpoint Scientific https://www.highpointscientific.com/ 2" Crayford Focuser Robert Starr - Winner</p> <p>Lumicon http://www.lumicon.com/ (2) \$25.00 Gift Certificates Ellen Shay – Winner (She won both!)</p>	<p>Meade Instruments Corporation http://www.meade.com Deep Sky Imager Pro I + Color Filter Set Bernie Kosher - Winner</p> <p>Orion Telescopes and Binoculars http://www.telescope.com/ (1) Astronomer's VersaTool Joe Holm - Winner (1) Waist Case Accessory Holder Susie Vargas - Winner</p> <p>Owl Services http://www.owlservices.com/cart/index.html 11mm 80° Ultra-wide FOV eyepiece Rick Lentz – Winner</p> <p>Questar http://www.questarcorporation.com/ 50th Anniversary Miniature Telescope (value \$195.00) 10% Off gift Certificate Jody Hochberg – Winner</p> <p>Skies Unlimited http://www.skiesunlimited.net \$200.00 & \$25.00 Gift Certificates Bill Work – \$200.00 Winner Mike Bowdren - \$25.00 Winner</p> <p>Software Bisque http://www.bisque.com The Sky6 Serious Astronomer Edition CD Rom Steve Mattan – winner</p> <p>The Zula Patrol http://www.zula.com 8 children's DVD's of the PBS hit – The Zula Patrol Given away to all children in attendance!</p>
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The NASA Space Place

The NASA Space Place: Staggering Distance.

➤ *By Dr. Tony Phillips*

Tonight, when the sun sets and the twilight fades to black, go outside and look southwest. There's mighty Jupiter, gleaming brightly. It looks so nearby, yet Jupiter is 830 million km away. Light from the sun takes 43 minutes to reach the giant planet, and for Earth's fastest spaceship, New Horizons, it's a trip of 13 months.

That's nothing.

Not far to the left of Jupiter is Pluto. Oh, you won't be able to see it. Tiny Pluto is almost 5 billion km away. Sunlight takes more than 4 hours to get there, and New Horizons 9 years. From Pluto, the sun is merely the brightest star in a cold, jet-black sky.

That's nothing.

A smidgen to the right of Pluto, among the stars of the constellation Ophiuchus, is Voyager 1. Launched from Florida 29 years ago, the spacecraft is a staggering 15 billion km away. It has traveled beyond all the known planets, beyond the warmth of the sun, almost beyond the edge of the solar system itself.

Now that's something.

“On August 15, 2006, Voyager 1 reached the 100 AU mark—in other words, it is 100 times farther from the Sun than Earth,” says Ed Stone, Voyager project scientist and the former director of NASA's Jet Propulsion Laboratory. “This is an important milestone in our exploration of the Solar System. No other spacecraft has gone so far.”

At 100 AU (astronomical units), Voyager 1 is in a strange realm called “the heliosheath.”

As Stone explains, our entire solar system—planets and all—sits inside a giant bubble of gas called the heliosphere. The sun is responsible; it blows the bubble by means of the solar wind. Voyager 1 has traveled all the way from the bubble's heart to its outer edge, a gassy membrane dividing the solar system from interstellar space. This “membrane” is the heliosheath.

Before Voyager 1 reached its present location, researchers had calculated what the heliosheath might be like. “Many of our predictions were wrong,” says Stone. In situ, Voyager 1 has encountered unexpected magnetic anomalies and a surprising increase in low-energy cosmic rays, among other things. It's all very strange—“and we're not even out of the Solar System yet.”

To report new developments, Voyager radios Earth almost every day. At the speed of light, the messages take 14 hours to arrive. Says Stone, “it's worth the wait.”

Keep up with the Voyager mission at voyager.jpl.nasa.gov. To learn the language of Voyager's messages, kids (of all ages) can check out spaceplace.nasa.gov/en/kids/vgr_fact1.shtml.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

A Letter from Mr. Bob Crelin Author of “There Once Was a Sky Full of Stars”

To the BMAA readership... We are typically very careful about any type of commercialism in the *Constellation*. However, given the clear educational nature of the children’s book that Mr. Crelin has written, and given the fact that it has been published by Sky Publishing, and can be ordered from multiple retailers, we have made the following (edited) letter available to the BMAA membership. Promotion of Astronomy and Dark Skies is a good thing.

Dear Friends of Dark Skies,

As you may know, I’ve been very involved in dark sky efforts for the past twelve years. I’ve dedicated most of my efforts to dreaming up the best tools that help bring light pollution awareness/action into mainstream society. Here's some news on one of those tools...

After selling out of a short paperback run, my children's book 'There Once Was a Sky Full of Stars' (Sky Publ.), has been re-introduced as a beautiful, large format hardcover. This book is the first, lyrical children's book that teaches kids about the stars AND fixing light pollution. The story's environmental message is simple, educational and unforgettable for young readers (listeners and parents, too!)

This hardcover release now has expanded distribution, which means that There Once Was a Sky Full of Stars is available through many book stores.

Sincerely,

Bob Crelin, author
bob@bobcrelin.com
<http://bobcrelin.com/author.html>

'There Once Was a Sky Full of Stars' by Bob Crelin, Sky Publishing Corp. ISBN# 1931559376

"Bob Crelin's enchanting, educational tale explains how light pollution steals the stars and how children can lead the way to restore the nighttime sky for the enrichment of future generations."

-Robert F. Kennedy, Jr., President, Waterkeeper Alliance

"What a beautiful job of communicating the dark sky issue to the next generation. I enjoyed reading it myself, and very much appreciated the tone of voice. It's such a lovely telling that I think it will have a wide appeal."

**-Award-winning & NY Times Best Selling Author
Dava Sobel of Longitude, Galileo's Daughter**

The NASA Space Place

Martian Devils

➤ *by Dr. Tony Phillips*

Admit it. Whenever you see a new picture of Mars beamed back by Spirit or Opportunity, you scan the rocks to check for things peeking out of the shadows. A pair of quivering green antennas, perhaps, or a little furry creature crouched on five legs...? Looking for Martians is such a guilty pleasure.

Well, you can imagine the thrill in 2004 when scientists were checking some of those pictures and they *did* see something leap out. It skittered across the rocky floor of Gusev Crater and quickly disappeared. But it wasn't a Martian; Spirit had photographed a dust devil!

Dust devils are tornadoes of dust. On a planet like Mars which is literally covered with dust, and where it never rains, dust devils are an important form of weather. Some Martian dust devils grow almost as tall as Mt. Everest, and researchers suspect they're crackling with static electricity—a form of "Martian lightning."

NASA is keen to learn more. How strong are the winds? Do dust devils carry a charge? When does "devil season" begin—and end? Astronauts are going to want to know the answers before they set foot on the red planet.

The problem is, these dusty twisters can be devilishly difficult to catch. Most images of Martian dust devils have been taken by accident, while the rovers were looking for other things. This catch-as-catch-can approach limits what researchers can learn.

No more! The two rovers have just gotten a boost of artificial intelligence to help them recognize and photograph dust devils. It comes in the form of new software, uploaded in July and activated in September 2006.

"This software is based on techniques developed and tested as part of the NASA New Millennium Program's Space Technology 6 project. Testing was done in Earth orbit onboard the EO-1 (Earth Observing-1) satellite," says Steve Chien, supervisor of JPL's Artificial Intelligence Group. Scientists using EO-1 data were especially interested in dynamic events such as volcanoes erupting or sea ice breaking apart. So Chien and colleagues programmed the satellite to notice change. It worked beautifully: "We measured a 100-fold increase in science results for transient events."

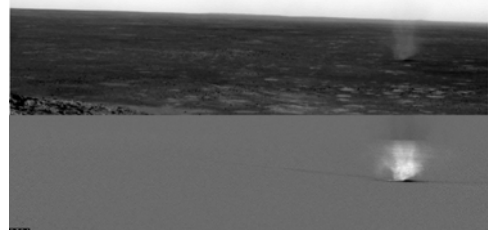
Now that the techniques have been tested in Earth orbit, they are ready to help Spirit and Opportunity catch dust devils—or anything else that moves—on Mars.

"If we saw Martians, that would be great," laughs Chien. Even scientists have their guilty pleasures.

Find out more about the Space Technology 6 "Autonomous Sciencecraft" technology experiment at nmp.nasa.gov/st6/TECHNOLOGY/sciencecraft_tech.html, and the use of the technology on the Mars Rovers at nmp.nasa.gov/TECHNOLOGY/infusion.html. Kids can visit spaceplace.nasa.gov/en/kids/nmp_action.shtml and do a New Millennium Program-like test at home to see if a familiar material would work well in space

Caption:

The top half of this image is part of a series of images of a passing dust devil on Mars caught by Spirit. In the bottom half, the image has been filtered to remove everything that did not change from one image to the other. Notice the faint track left by the dust devil. Credit NASA/JPL/Mark T. Lemmon, Univ. of Arizona Lunar and Planetary Laboratory.



This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

A Beginners AstroImaging With The Meade DSI Pro II.

➤ *By Chris Sommers, BMAA.*

I have been thinking about getting into astrophotography for some time now, but have been reluctant to do so. While my photography skills are what I would call adequate, film photography can be somewhat intimidating, and development costs can be high. I went digital a number of years ago, like most people, for that reason. I have an adapter that fits an eyepiece to my digital camera and have obtained minimally acceptable photographs of Saturn, Mars, and Jupiter, but nothing I would dance with joy about. However, my camera is not really suitable for imaging deep sky objects. I had no desire to spend a great deal of money on both an autoguider and a high end CCD camera. Last year Meade came out with the Lunar Planetary Imager and then the Deep Sky Imager, both of which are computer driven products. So, I have watched and waited, read reviews, saved my pennies, and purchased a laptop last month. Of course, this was only an excuse to purchase a Meade Deep Sky Imager (DSI). Little did my wife know.....

There are now multiple Meade DSI products on the market, ranging from the original DSI (\$299) to the DSI Pro II (\$699). The DSI Pro II (right) has larger more sensitive chip (748 x 577 pixels), which is what I purchased. It is black and white, but comes with Red, Blue and Green filters that screw into a two-piece slide. The IR filter fits into the nose-piece of the camera. It comes with a USB 2.0 cable, RS232, 6 pin and 4 pin cables to hook the camera to the computer and also use the camera simultaneously as an autoguider. You WILL need a longer USB 2.0 cable, as the one supplied is ridiculously short. For \$699 Meade could have at least included a longer cable. The manual is included installation CD, and there is an instructional video on the Meade website. The software installation was fast and easy.



Specifications for the Meade DSI Pro II.

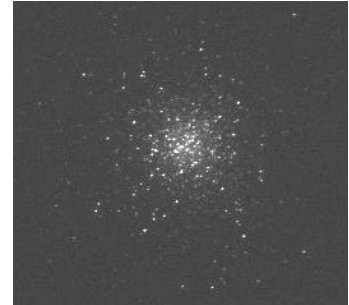
CCD Sensor:	High Sensitivity Monochrome Sony EXview HADT CCD Sensor (ICX429ALL)
Chip Dimensions:	5.59mm (w) x 4.68mm (h); 8mm diagonal (type 1/2) ; 752 x 582 pixels (437,664 pixels)
Pixel Size:	8.3 microns (w) x 8.6 microns (h)
A/D Conversion:	16-bit (greater image depth and contrast)
Exposure Time:	1/10,000 of a second to one hour
Housing:	Anodized die-cast aluminum
USB Compatibility:	High Speed 2.0 and 1.1
Product Dimensions:	3.25" x 3.25" x 1.25"/ 10 oz.

As seen at SDV XX the set up I used was the DSI Pro II coupled with my Vixen 80FL (640mm/f8) which has a flip mirror system on a LXD55 Mount. The Vixen has a very smooth focuser and I could get pinpoint stars on the computer screen. My SC8 is out of collimation after some railroad tracks and a few potholes, and I could not get good focus with it. I also tried my old AR5 refractor but there were vibration problems on the LXD75 mount and also focus problems as the focuser that comes with the scope is pretty cheap. This reveals two critical items: (1) you need a good focuser; and (2) you will need a good steady mount to control vibrations. My dog Itchy walking across the deck is not the friend of the DSI Pro II. As was the case at SDV, wind can be a significant problem. A few of you who watched me take a few images on the SDV Friday night could see the problems the wind caused.

It took me about an hour to read through the manual and set up the telescope with the laptop and DSI Pro II attached to the flip mirror diagonal. After setting the system up open the Autostar Suite and DSI software. Then: (1) Select the file type (JPEG or bmp recommended); (2) Select auto for exposure conditions; (3)



Select "live" to see the image as it is autostacked; (4) Take dark frames; (5) Take images. It will take about 10 minutes to take dark frames. When using your laptop at night you will definitely need some red cellophane, as the night vision option for the Meade Autosuite is not very effective for the DSI Imaging portion of the software. You can also save individual images, which I do not, as I tend to save only the autostacked image. I got decent images the first night out, from my light-pollution capital of Montgomeryville. When I sent a few images to BMAA members some did not believe that basic images of the Ring Nebula (M57) (upper right) could be captures with 1-2 second exposures, until they saw the system in use at SDV XX. The image of M57 is 10 x 1.0 second exposures. The software has a zoom function that I have not used as of yet. I was able to use exposure times of up to 30 seconds at SDV, but had to delete many of them due to wind-induced blurred images. On the right is a 30 second image of the Orion Nebula (M42). The image of M31 is from a 30 second exposure. I was also able to get a few images of M1 (30 second exposures), and also M27 (30 second exposures). I have yet to try any filters on the nebulas or galaxies.



I have also obtained images of various open clusters including M36, M37 and M38 in Auriga and the Double Cluster in Perseus. Globular clusters I have images for include M13 (right), M92, M2, M5, and M15. I have been able to get decent images of globular and open clusters with 10 x 1.0 second exposures. They are, however, black and white. Use of color filters does require refocusing, which I am too lazy to bother with at this point. Maybe that will change as I get more ambitious.

I am NOT an expert photographer or imager, and probably do not even qualify as a gifted amateur. What I did was clearly amateur hour by most standards, but considering that the images of M57 and M13 I have included were taken on the first night out, it is not too shabby. I am computer literate, but not what I would call savvy in comparison to many other BMAA members. I have no experience with hardware or software incompatibility issues since I used the DSI Pro II on my Gateway laptop that runs MS Windows XP, and it worked like a charm the first time out. I cannot comment on your computer or operating system, so you might want to do some homework before making a purchase. I also cannot comment on your telescope, focuser, mount, or any other equipment you may possess. A rather obtuse disclaimer that needs to be included in this article. All I know is what has worked, or not worked, for me.

I still have a lot to learn about the system, including the use of the autoguider functions, filters, and how to use the image processing software that is included. One thing to note is that no instructions for the use of the Meade Image Processing Software were included on the CD, or available as a download, which is one thing that Meade will definitely have to remedy.

What Meade has done with the DSI series is to bring astroimaging to the masses. They really deserve kudos for what they have done with this product. If you want to see the full potential of the system, as opposed to my crude first attempts, go to the Meade Photo Gallery at <http://www.meade.com/photogallery/index.html>. They have it broken down by telescope type, which includes other images obtained using 80mm refractors, most of which were enhanced using software such as Adobe's Photoshop. My personal preference is to leave images as they would be seen through my 3 inch telescope.

PS: I have no financial interest in, or other arrangements with, Meade or Skies Unlimited, where I purchased the DSI Pro II.

The NASA Space Place

The NASA Space Place: The Planet in the Machine.

➤ *By Diane K. Fisher and Tony Phillips*

The story goes that a butterfly flapping its wings in Brazil can, over time, cause a tornado in Kansas. The “butterfly effect” is a common term to evoke the complexity of interdependent variables affecting weather around the globe. It alludes to the notion that small changes in initial conditions can cause wildly varying outcomes.

Now imagine millions of butterflies flapping their wings. And flies and crickets and birds. Now you understand why weather is so complex.

All kidding aside, insects are not in control. The real “butterfly effect” is driven by, for example, global winds and ocean currents, polar ice (melting *and* freezing), clouds and rain, and blowing desert dust. All these things interact with one another in bewilderingly complicated ways.

And then there’s the human race. If a butterfly can cause a tornado, what can humans cause with their boundlessly reckless disturbances of initial conditions?

Understanding how it all fits together is a relatively new field called Earth system science. Earth system scientists work on building and fine-tuning mathematical models (computer programs) that describe the complex inter-relationships of Earth’s carbon, water, energy, and trace gases as they are exchanged between the terrestrial biosphere and the atmosphere. Ultimately, they hope to understand Earth as an integrated system, and model changes in climate over the next 50-100 years. The better the models, the more accurate and detailed will be the image in the crystal ball.

NASA’s Earth System Science program provides real-world data for these models via a swarm of Earth-observing satellites. The satellites, which go by names like Terra and Aqua, keep an eye on Earth’s land, biosphere, atmosphere, clouds, ice, and oceans. The data they collect are crucial to the modeling efforts.

Some models aim to predict short-term effects—in other words, weather. They may become part of severe weather warning systems and actually save lives. Other models aim to predict long-term effects—or climate. But, long-term predictions are much more difficult and much less likely to be believed by the general population, since only time can actually prove or disprove their validity. After all, small errors become large errors as the model is left to run into the future. However, as the models are further validated with near- and longer-term data, and as different models converge on a common scenario, they become more and more trustworthy to show us the future while we can still do something about it—we hope.

For a listing and more information on each of NASA’s (and their partners’) Earth data-gathering missions, visit science.hq.nasa.gov/missions/earth.html. Kids can get an easy introduction to Earth system science and play Earthy word games at spaceplace.nasa.gov/en/kids/earth/wordfind.

Caption:

CloudSat is one of the Earth observing satellites collecting data that will help develop and refine atmospheric circulation models and other types of weather and climate models. CloudSat’s unique radar system reads the vertical structure of clouds, including liquid water and ice content, and how clouds affect the distribution of the Sun’s energy in the atmosphere. See animation of this data simulation at www.nasa.gov/mission_pages/calipso/multimedia/cloud_calip_mm.html.



This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Meeting Minutes

**Bucks-Mont Astronomical Association, Inc.
General Meeting Minutes
Peace Valley Nature Center, Doylestown PA
October 4, 2006**

Officers Present: Bernie Kosher, President; Dwight Dulsky, Vice President; Herb Borteck, Ed Radomski, Treasurer; Herb Borteck, Secretary; George Reagan, Star Watch Chairman; Chris Sommers, Constellation, Attendance: 24. members [and an unexpected guest]. President called the meeting to order at 8:10 pm.

There were present two new persons, Rick Williamson and Stan Prajzner. I hope we will be seeing them again. And also present was an unidentified snake. That is to say it did not reveal its name but it was identified to be a Dekay's Brown Snake.

Treasurers Report: Ed Radomski. Observatory Accounts \$ XXXX.XX; Club Only \$XXXX.XX; Total Assets \$XX,XXX.XX. There are 64 members for 2006, 3 members for 2007.

Dwight Dulsky stated that all bases were covered and Stella Della was ready to go.

George Reagan went through the list of jobs and checked that the members present were ready. A few changes were made and we are now all set for a great time. [Let us all wish for Clear Skies and PLEASE don't buy any more scopes before the star watch.;-) .

Chris Sommers told us that the new issue of the Constellation was on-line and he brought several copies with him.

There was a discussion about the use of binoculars, and how they were helpful in revealing the sky. I usually have a pair with me, but they are 10x50 and I must steady myself when viewing. No doubt 8x50 is much better unless you have a "stand."

Regretfully, the speaker who was to talk about the making of refractors, was not present. Chris Sommers stepped up to the plate with a resounding and interesting discussion about asteroids and planets and how they were named. He presented a short history and it is now available by e-mail. He also discussed the various orbits of the planets and how Uranus got its name. Then Bernie Kosher discussed the history of Sir William Herschel and his sister Caroline Lucretia Herschel. All of which based on much of the material that Chris had presented and we continued the examination of the various planet orbits. As usual, it was a most interesting meeting.

On the third Wednesday there will be the usual executive meeting at the Churchville nature center. Everyone is most welcome to attend this meeting where we will finalize the upcoming Stella Della.

The meeting ended at 9:30 PM.

Respectfully submitted,
Herb Borteck, Secretary.

NOT Edited by Frank Schubert
[And if there are errors, blame Herb.]

Bucks-Mont astronomical Association, Inc.
Executive Meeting Minutes
Churchville Nature Center
October 18, 2006

Present at the Executive meeting: Bernie Kosher, President; Dwight Dulsky, Vice President; Ed Radomski, Treasurer; George Reagan, Star Watch Chairman; Herb Borteck, Secretary; Chris Sommers, Constellation; Frank Schubert. The meeting started at 7:40pm.

It immediately began with many discussions about Friday's Steller Deller. Dwight went through the various subjects making sure about many items of interest; Coffee maker, Microwave, ice, sodas, etc. Bernie Kosher showed us the meteorites that will be given as door prizes. I can assure you that they were beauties.

After these discussions, we discussed the POLC [Pennsylvania Outdoor Lighting Council.] They would like a representative of BMAA to be present at their meetings. We then had a round table discussion on light pollution, the saving of energy and its problems.

Ed Radomski gave us his treasurer's report. Observatory Accounts \$5,011.94; Club Only 5,858.03; Total Assets \$10,869.97

Stella Della Accounts: Mailing \$ -209.26; Onas \$ -200.00; Pizza \$550.00; Registration \$2,175.00; Supplies \$-160.41; Total SDV \$2,155.30. Ed said that there will be at least 66 adults and 12 children at the Steller Deller.

Even though there will be rain, Friday morning, it is expected to clear up and there is a good possibility of fair skies that night. And we do expect a good Saturday for viewing. Frank Schubert and Herb will have their scopes set up for viewing the Sun, weather permitting.

At the Next meeting, we are asking for nominations. Please bring us your nominations, and if there is any particular Office you personally wish to occupy, PLEASE say so. [Please, Please!] At the following meeting we will all vote. HEY! No matter what, we couldn't do worse! ☺

24 Tue. 7:30pm Star-Watch, Gwynedd Wildlife Preserve, Upper Gwynedd, PA
27 Fri 7:30pm Star-Watch, Tamanend Park, Upper Southampton, PA

It was an excellent meeting which ended at 8:30 PM. Be seeing you at the great Steller Deller

Respectfully submitted,
Herb Borteck, Secretary

Bucks-Mont Astronomical Association, Inc.
General Meeting Minutes
Peace Valley Nature Center, Doylestown PA
November 1, 2006

13 members present including officers, Pres. B. Kosher, V.P. D. Dulsky, Treasurer, Ed Radomski, Constellation, C. Sommers, Meeting called to order at 8:06 P.M.

Treasurers report: Observatory Accounts \$XXXX.XX; Club Only \$X,XXX.XX; Total Assets \$X,XXX.XX

SDV Report: 87 adults, 14 kids 18 day visitors, total-119. Proceeds \$730.91 (clear) Complaints - Insufficient road signs and poor directions to the Texas bldg., all correctable.

The Presentation on "Refractors" will be rescheduled to the January meeting. The December meeting will be our regular Members Night"

Discussions were held on a variety of items; SDV will be 2 weeks earlier next year due to the New Moon date; NASA will schedule a repair Mission to Update the "Hubble" Scope; Herb and Frank S have scheduled a Mercury Transit Viewing at Buckingham Springs. Weather permitting; Everybody else seems to have their own plans; The visible comets were discussed.

No further nominations have been received for any officers except incumbents. All are willing to serve another year, so the vote will be by acclamation.

Pres . Bernie had an interesting "show and tell," pictures taken by him at Cherry Springs. Almost too many stars to pick constellations or asterisms. Thoroughly enjoyed by all.

Orders were taken for the Observers Handbook, and the Secretary will order about a dozen of Guy Ottwells' calendars

Meeting adjourned at 9:35 P.M.

Submitted by F. Schubert in absence of the elected Secretary!!!

[Thanks Frank, Herb]

**Bucks-Mont astronomical Association, Inc.
Executive Meeting Minutes
Churchville Nature Center
November 15, 2006**

Meeting cancelled due to lack of issues following SDV.

**Bucks-Mont Astronomical Association, Inc.
General Meeting Minutes
Peace Valley Nature Center, Doylestown PA
December 6, 2006**

Holiday Party

**Bucks-Mont astronomical Association, Inc.
Executive Meeting Minutes
Churchville Nature Center
December 20, 2006**

Meeting cancelled due to lack of issues following SDV.

BMAA 2007 Calendar of Events **(Check for Updates at www.bma2.org)**

Instructions to Authors

You need to be a BMAA member to submit an article. Articles are typically ½ to 2 pages in length. They can vary in topic from reviews of books, star parties, observing, equipment, issues of general astronomical interest, etc. Go to the BMAA website and take a look at CONSTELLATION back issues and you will get the idea. Another good example for articles is on the Cloudy Nights web site (<http://www.cloudynights.com>).

As to the format for articles, please adhere to the following:

Word Processor: MS Word.

Font: Times New Roman

Margins: 1 inch all sides.

Title Font Size: 14 pt

Text Font Size: 10 pt

Spacing: Single Space

Original Figures: Gray scale or color, jpeg format, and please save the file as the size as it would appear in the article (about 2" x 3"). The figures should be original due to copyright issues.

The Editors will modify the article as needed to fit the format.

Email articles to: constellation@bma2.org

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