ECLIPSE

The Newsletter of the Barnard-Seyfert Astronomical Society

Celebrating our 75th Year in 2003 **July 2003**

FROM THE PRESIDENT

Joseph M. Boyd, Jr.

The most important task facing the BSAS at this time is the Astronomical League national convention which we are hosting at the Embassy Suites, Airport, Hotel the week of 6 July. We now have less than two weeks to finalize our plans and complete all of our preparations for this event. In view of the overwhelming vote by our membership to be the sponsor, it behooves every member of the BSAS to take an active part in making it a success. The ALCON 03 Committee has been meeting regularly every Wednesday night for several weeks now, and the members have put in many hours to make the convention a success and to insure its financial solvency. Mike Benson and Jill Thompson have worked very hard to see that we are organized and are on track. But they and the committee cannot do it alone. **We are now to the point where every member of the BSAS is needed to prepare for the convention and to actually carry it out.** Therefore, if you have not been called for help, call Jill at 880-4268 at work and 361-9983 at home and volunteer your services. Don't wait to be asked, for calling takes time and time is a scarce commodity now. Programs must be assembled, arrangements for tables must be made, extension cords must be brought on loan, and exhibits must be set up. During the convention we need people to staff the registration desk every day, to help the speakers set up their equipment, and to make sure the meeting signs are in place.

Also, please go on line and see what a great program we have in store. There are several speakers who are nationally known and are truly the experts in their respective fields. This is an opportunity that you will not have again in this area any time soon, so I know you will want to take advantage of it and hear some truly outstanding speeches and workshops.

On a lighter note, I am happy to report that several new members have signed up, and almost every one of them has expressed the desire to be able to make a contribution to the work of the BSAS. They are being appointed to committees or given specific tasks, and they are performing very enthusiastically. Some of them are new to astronomy, so it is imperative that we get our mentoring program set up as soon as possible, as well as complete work on our new member kits.

We still have some committees which have not had any meetings. I ask EVERY committee chair whose committee has not met to call a meeting right away. I am already getting inquiries from some committee members wanting to know why they have never been called for a meeting. Committee chairs, **please** follow through on this. The committees which are holding regular meetings are accomplishing a lot.

During this month I have met with the Warner Park personnel to discuss our participation in their programs as part of our outreach. We have already agreed to help on Saturday, 8 November, with their family program which is designed to inspire families, using technology, diverse media, and hands-on activities, to get outside and enjoy the night sky. In addition to that program, we have been asked to participate in their "Heavenly Bodies" program on Wednesday, 6 August. This will highlight Mars, but will discuss other planets and the solar system. One of our plans for that day is an Astronomy Walk, to show the relative distances of the various planets from our sun. I hope you will support this program, and although it is on a Wednesday when many of you will be working, we need to have enough members available to fully staff the morning and afternoon programs that day.

The Mars spectacular is only two months from its peak. We are planning some appropriate activities, so watch for announcements and plan to participate.

ALCON 2003

by Jill Thompson

Yes, it's almost here - the 2003 Astronomical League Convention. While we are wrapping things up, there are still many things that we can use help completing. We still need quite a few people to be present during the days of the convention to take care of registration, hospitality, ushering, and wrangling. We have slots open on every day, but we especially need help on Friday and Saturday. In addition, we need several people to take charge of the door prizes and have them ready when Joe Boyd and Lonnie Puterbaugh announce them. Even if you can only be present part of the time, we would still be glad to have your help. The biggest item still pending is the need to find sponsors for the hospitality room to donate refreshments in exchange for advertising at the convention. I know

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July meeting of the B.S.A.S.

The July meeting of the BSAS is to be on July 17 at Dyer Observatory at 7:30 pm. The subject of the meeting is not known at press time but with the past history of fine and interesting programs, we can be assured that the program will be interesting and informative.

Make your plans to come!!

THANKS FROM SUDEKUM PLANETARIUM

Kris McCall, Director of the Sudekum Planetarium of the Adventure Science Center, has sent her thanks to "ALL of BSAS" for the help of the BSAS volunteers at the annual Astronomy Day 2003. Here are some excerpts from her report on the events:

"Two members of BSAS set up a large booth and display of astronomical images and information for visitors. Two telescopes were also set up for solar observation. Had the weather looked more promising, we might have had five or more telescopes available. As it was, they spent time scrutinizing the big buildings of the Nashville skyline.

"Chuck Schlemm, a member of BSAS and the National Space Society, who brought his extensive solar system and spacecraft displays, provided some of the busiest tables. Next time, we will need to give him more room to better accommodate everyone who was interested.

"Volunteers from BSAS and Hume-Fogg High School took turns staffing an 'Astronomy for Everyone' table with a display of common astronomy resources for beginners, including star charts, binoculars, and red flashlights.

"Members of BSAS participated in a variety of ways. As detailed above, their assistance was crucial and ranged from bringing displays and solar telescopes to staffing tables and teaching visitors about astronomy. We cannot say enough about how their presence serves to flesh out our Astronomy Day offerings.

"The night before Astronomy Day, BSAS members were planning to assist with the star party at nearby Edwin Warner Park. Unfortunately, the weather was not cooperative. BSAS is always an integral part of any star party because they bring their tremendous arsenal of telescopes and infectious enthusiasm.

"BSAS has 110 members. Of Those, about 35 participated in Astronomy Day, including those who would have gone to the star parties had the weather cooperated. Many of the members who helped at the Science Center are regular star party volunteers."

In a special note to the BSAS, Kris stated, "We could not have done it without ALL of your help. Please express our appreciation to the entire membership."

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: $29.95
ASTRONOMY: $29.00
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 are $20.00 per year for Regular and Family memberships and $15.00 per year for Seniors (over 60 years of age), and $10.00 for students (under 22 years of age). Please call President, Joe Boyd, (615) 386-3134 if you have questions. Dues can be sent to:

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

THE ECLIPSE NEWSLETTER
Editor: Bill Griswold
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Many, Many, Great Astronomy Links

There are many thousands of astronomy related sites on the web. An amateur astronomer in Virginia has spent several months assembling a free collection of exceptional sites. Whether you are a beginner, or an advanced observer, Clark Thomas' "Astronomy Links" will provide information and inspiration.

You will find sections on "the best of the best," "for beginners and everybody else," "space flight and ETs," "miscellaneous," "organizations and gatherings," "solar system observing," "deep sky observing," "space images," "amateur CCD astronomy," "product sources and reviews," and even "links with many links."

Clark is constantly upgrading this collection. If you would like to recommend an excellent site, let him know. Meanwhile, enjoy the many links; and tell a friend. Your friend does not need to be experienced, as there are several links to beginner sites.

Here's the web address:
http://members.cox.net/clarkt7/astronomylinks

Hot Flash

By Jerry Lappin

Astronomy is supposed to be about the stars, planets. moons, nebulae and other such distant objects but writing about these members of the universal zoo is getting either confusing or boring. There are now so many planets and moons, mostly distant and useless, that writing about them is boring. Stars and nebulas, not to mention black holes, are just too confusing for this old brain. So, what's left? The earth, of course. Like it or not the earth is part of the universe so writing about it is fair game. Have you heard about the really big experiment to explore the earth's core? Well, some geologist (a geologist is an astronomer without a telescope) has proposed a way to send an instrument package to the core without digging a 4000 mile deep shaft. He proposes to dig a trench only a few thousand feet deep and then pour into this trench a huge amount of molten iron. The heat of the iron would melt the underlying mantle and gravity would move the mass at ever increasing velocity to the molten iron core. He has a few problems to work out. The amount of molten iron would be about one day's production of all the world's iron works. Although buying so much iron would be expensive its cost would not be as large as that of some major physics experiments. The problem would be to keep it all molten until it was delivered to wherever he decided to dig the trench. Molten iron has, for many years, been transported for modest distances in insulated tank cars but shipping from Japan or Germany might be a little difficult. As a suggestion he might determine whether it would be feasible to move our vast store of defunct cars to the trench and then somehow melt them in one big batch. When that problem is solved, and I'm sure it will be, the question arises as to what kind of instrument package would survive to arrive at its goal. When that problem is solved the project will probably go ahead. However, there are some serious risks involved. As every high school physics student knows, if you bored a hole straight down through the center of the earth and continued on to emerge at the antipode and then dropped something heavy down the hole it would, barring friction, speed through the center and rise to the surface on the other side of the earth. What would this mass of molten iron do? It just might do the same, creating a big problem someone who might be hoeing his garden over there. It might, instead, merge with the core, thus expanding it. This expansion could cause the mantle to crack leading to monstrous earthquakes. Perhaps the worst effect would be that the molten iron might spread sideways and cut the earth into two parts. This might not be an unmitigated disaster. If the split occurred between two warring societies peace might suddenly arrive. A location between Israel and Palestine or Northern and Southern Ireland might be considered. A second, non-political, benefit might also result. The space between the two halves would be an excellent place to dump all the garbage and trash that is now so hard to dispose of. Gravity would hold it in place and out of sight and over a period of centuries the earth might be made whole again. All these questions should be debated by the UN before permission is give to carry out this daring experiment.

ALCON 2003, continued from Page 1

there must be several club members who would be great at persuading local restaurants and stores to take advantage of this offer. An alternative to this would be to have club members provide baked goods instead. Are you an astronomy-minded Betty Crocker or Martha Stewart just waiting to show your stuff? Wait no longer! Contact me now (Saintmartha1@aol.com or 615-361-9983) to volunteer your time and talents to show the other members of the Astronomical League what the Barnard-Seyfert Astronomical Society can do!

Happy Birthday Viking 1 Lander

by Robin Byrne

This month we look back at a milestone in the exploration of our solar system. Viking 1 launched on August 20, 1975. It entered into orbit around Mars on June 19, 1976, and the lander reached the surface of Mars on July 20, 1976, becoming the first spacecraft to successfully land on that planet.

The Viking 1 Lander set down in a region called Chryse Planitia.. Twenty-five seconds later, it began sending back images of the surface. In the first three months, during the primary mission, over 700 images were sent back to Earth from this landing site. This was followed by images taken periodically to show the surface changes as Mars experienced its different seasons. The lander also provided images during different weather phenomena, such as the occasional dust storms.

The Viking 1 Lander was designed to perform a variety of experiments and to gather many different types of data. Some of the most intriguing onboard experiments were to test for signs of life in the Martian soil. Three different detectors were used to determine if any life existed. One experiment tested to see if any photosynthesis occurred by measuring carbon dioxide to see if it had been absorbed by anything within the soil. A second experiment sampled the gases around the soil to look for signs of respiration, if any organism were breathing the air. The third experiment involved "feeding" the soil nutrients to see if anything was "eaten." Although some of the experiments did return positive results, the consensus was that no life was detected, rather that some chemical reactions occurred to produce the same result.

In addition to the biology experiments, Viking also had instruments onboard to gather meteorological data about the weather on Mars. Located on the end of a boom extending out away from the lander were temperature and wind sensors. Also onboard was a device for measuring the atmospheric pressure. For the first three months, measurements were made continuously. After that, periodic measurements were made to monitor changes due to the changing seasons. During the Martian summer, typical weather included temperatures averaging around -72 degrees Fahrenheit and winds up to 40 miles per hour. Much of the weather data was used for comparison with the measurements made by Mars Pathfinder many years later.

The lander also gave us our first opportunity to directly measure the composition of Mars' surface and atmosphere. Analysis of the soil samples at the landing sites of both Viking 1 and 2 showed that the composition was almost identical in both places. Both sites had soil composed primarily of silicon and iron. There was also an unexpected amount of sulfur. There was evidence that at least some of the soil is composed of magnetic particles, which were seen to cling to the magnets on the sampling arm. Analysis of the atmosphere showed less argon than expected, which implies that the formation of Mars' atmosphere was not the same as the way Earth's initial atmosphere developed.

Other experiments were not directly related to Mars' surface, but made use of the radio signals sent from Mars to Earth. Both experiments were made as Mars passed behind the Sun. Analysis of the signal allowed the science team to determine the distance to Mars to within an accuracy of 5 feet. That same signal was used to perform a different experiment. According to Einstein's theory of Relativity, as light (which would include radio signals) passes near a strong source of gravity (such as the Sun), its behavior will change. Relativity predicted that the signal would be delayed by 0.0002 seconds, and that is exactly what was measured.

The Viking 1 Lander continued to send information back to Earth until November 13, 1982, when a faulty command caused contact to be lost. This summer, a new fleet of spacecraft are headed for Mars, each with a lander. Mars Express will carry onboard the Beagle 2 Lander, which will follow in Viking's footsteps to search for signs of life. Meanwhile, the two Mars Exploration Rovers will build upon the experiences of Pathfinder to rove across the surface of Mars, providing scientists the opportunity to learn even more about a planet that captures everyone's imagination.

As Mars approaches the most favorable opposition in thousands of years, we will all undoubtedly be gazing at that red orb through our telescopes. What we already know about this planet helps to enhance the pleasure we take as we view the ice caps and continents. We have Viking 1 to thank for both helping us to better understand Mars, and for blazing the trail for future explorers of our neighbor world.

References

NSSDC Master Catalog: Spacecraft Web Page http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1975-075C

NSSDC Master Catalog: Experiment Web Page http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1975-075C&ex=3

Mars - Viking Lab - Exploring the Planets Web Page http://www.nasm.edu/ceps/etp/mars/viking_lab.html

Regular Meeting of the Barnard-Seyfert Astronomical Society Board of Directors on June 5, 2003

The meeting was called to order by President Joe Boyd at 7:12 PM on Thursday June 5, 2003 at the Jefferson Square Clubhouse. A quorum was present consisting of board members Joe Boyd, Mike Benson, Bill Griswold, Powell Howell, Kris McCall, Jill Thompson and Evelyn Wright. Board Members A.G. Kasselberg and John Harrington arrived later. Board member Bill Collins and JanaRuth Ford were absent. Greg Selah, Larry Southerland, and Dennis Williams attended as guests. The minutes of the May board meeting were approved as published in the June issue of "The Eclipse" newsletter.

Kris McCall described the teaser that the public relations committee had composed for TNSP 2003 to be sent to local media.

Jill Thompson detailed current monies received and headcounts. Volunteers are needed to bring door prizes to door prize announcers. Greg Selah is working on registration packets and displayed prototypes for name tags. Chuck Schlemm, Judy Luna and Kris McCall are ready to send out ALCON 2003 information to the local media. Restaurants to sponsor food for the hospitality room are still being sought. Mike Benson noted that the remaining rooms in the reserved block must be released very soon, else ALCON 2003 must pay for any rooms not reserved/ released. Mike Benson and Joe Boyd will meet with the Embassy Suites Hotel to resolve recent difficulties with potential attendees being told there were no reduced rate rooms available for ALCON 2003. Jill noted that BSAS volunteers are still needed for unfilled BSAS volunteer slots during the event, and unfinished items such as the group photo, T-shirts and stuffing registration packets. Jill distributed copies of the mini-poster, an ALCON 2003 write-up, and flyers for board members to place in strategic places.

Treasurer A.G. Kasselberg reported that the club account has $4998.68, $259 of which was donated to the equipment committee.

Joe Boyd announced that Bill Collins has resigned as a member of the board of directors. John Harrington reported that the nominating committee nominated Greg Selah's to fill out Bill's term. Bill Griswold moved to close nominations. Mike Benson seconded the motion which passed. Powell moved that Greg Selah be elected by acclamation. Bill Griswold seconded the motion which passed.

Powell Hall distributed his dark-sky committee report which described the recent meeting with International Dark-Sky Association's i(IDA) Scott Davis. BSAS volunteers will be needed to staff the IDA exhibit at ALCON 2003. Also, there seems to be some interest in starting a Nashville section of the International Dark-Sky Association. Joe Boyd described Scott Davis' meeting with the Illuminating Engineering Society of North America at Vanderbilt University that he, Jill Thompson, and Roy Miles attended. Another attendee was associated with the Ensworth School being built near Warner Park, and noted that full cut-off lighting will be utilized, but the football stadium lighting would be problematic due to the reflection from the grass back into the night sky. Joe also mentioned that the IDA has finished a city ordinance code that a small city can use to model its outdoor lighting code. A version is still being prepared for large cities.

Greg Selah noted that Tom Murdic related that some dark-sky acreage might be available near a golf course near Tom, and that the board should contact Tom about it.

Powell Hall has acquired 25 copies of the "Edmund Mag 5 Star Atlas" that he would be willing to sell, either to BSAS members, or to the BSAS to use for new members. Greg Selah noted that the BSAS does not have a good track record helping beginners get started in astronomy, leaving them to fend for themselves. Joe Boyd recommended turning the matter over to the membership committee rather than reimbursing Powell at this time. It was suggested that the booklets could be checked out with loaner scopes.

A.G. Kasselberg reported that Lloyd Watkins has advanced his own money to buy telescopes and binoculars for TNSP 2003 which Lloyd now has in hand. Lloyd would like reimbursement as soon as it is convenient for the club. A decision was delayed until the secretary can research past minutes to find out if anything was decided on when reimbursement should occur.

Mike Benson moved that Brock Schippers be appointed webmaster to replace Bill Collins. Greg Selah seconded the motion which passed.

Joe Boyd noted that Heather Gallagher of Warner Park would like for the BSAS to help out with a daytime program at 10:00 AM on Saturday, November 8 that would describe what would be visible in the sky that night. Greg Selah moved that the club participate in the program. Bill Griswold seconded the motion which passed. Joe Boyd will arrange who will represent the BSAS.

With no objection, Joe Boyd declared the meeting adjourned at 8:24 PM.

Respectfully submitted,
Evelyn Wright, Secretary

Minutes of Regular Monthly Membership Meeting of Barnard-Seyfert Astronomical Society on June 19, 2003

The meeting was called to order at 7:38 PM on Thursday, 19 June 2003 by President Joe Boyd in the library of Dyer Observatory. About 21 members and visitors were present for the start of the meeting, with approximately 15 others arriving later. Joe Boyd welcomed new members and visitors.

The minutes of the May meeting as published in the June issue of "The Eclipse" newsletter were approved.

Joe Boyd announced that the BSAS has agreed to help Warner Park with its daytime program on November 8 whose purpose is to introduce adults and young people to the night sky. The plan is to have a model of the inner planets set up in the available 1/4 mile area, and set up telescopes for solar viewing.

Since the treasurer was absent, there was no treasurer's report. A signup sheet for the public night on Friday, June 27 was sent around. Another Warner Park program on Mars will need volunteers at 10 AM and 1 PM on August 6.

Jill Thompson and Mike Benson discussed ALCON 2003 which still needs volunteers to help out during the July 9-12 convention. Those who plan to attend should go ahead and register because the registration fee increases on the day the convention starts. Those wanting to help stuff registration packets should attend the ALCON planning meeting at 7:30 PM on Wednesday, July 25 at the Jefferson Square clubhouse. Jill mentioned door prizes such as a 6" Dobsonian telescope and a Telrad. Lonnie Puterbaugh went through the schedule, pointing out the impressive speakers, and Mike Benson noted some speaker and topic changes. Jill also requested that anyone contact her regarding the following: baked goods, finger foods, etc. for the hospitality room, a white board, a cork board for messages, and extension cords. Volunteers will get T-shirts at the below-cost price of $5. Joe Boyd asked that anyone able to videotape the speakers contact him. The videos would be added to the BSAS library.

Lonnie Puterbaugh unveiled the new BSAS banner designed by Warren Kirbo, noting that it would be attached to poles and red-lit at night events. He also called an emergency meeting immediately following the current meeting to discuss the telescope to be acquired for the John Bradford memorial.

Joe Boyd related that Powell Hall reported that an organizational meeting for a middle Tennessee chapter of the IDA has been scheduled on the Friday morning of ALCON 2003, July 11 at 8 AM. He also mentioned the IDA's recently completed "model code" for small cities to use to establish a light pollution prevention ordinance. IDA will be completing a version for larger cities possibly in November.

Mike Benson related that the ballot received by him from the Astronomical League required the BSAS to vote for the offices of secretary and treasurer, and described the candidates. Bill Griswold moved that Mike be authorized to vote for Joanne Hailey for AL treasurer. John Green seconded the motion which passed. John Green moved that Mike Benson be authorized by the club to vote for Marion Bachtell for AL secretary. Bill Griswold seconded the motion which passed. Mike Benson described the benefits of being a member society of the Astronomical League, including the newsletter "The Reflector" and the various observer programs. Greg Selah moved that the BSAS continue to be a member of AL until further notice, and authorize the BSAS treasurer to pay the AL membership fee annually. Bill Griswold seconded the motion which passed.

Joe Boyd turned the floor over to John Harrington who began the night's program on how to choose the right telescope. John described the design / advantages / disadvantages of refractors (lens at front of tube plus eyepiece at rear / crisp image, best for planetary observing, relatively compact / expensive, false color). John did the same for reflectors (primary mirror at rear of tube plus secondary mirror at front plus eyepiece at front / cheapest light gatherer - good for dim deep-sky objects, no color aberration / not as sharp an image, requires collimation, tracking not normally part of the package). Mike Benson then discussed the medium-priced Schmidt-Cassegrain telescope (collector plate at front, primary mirror at rear, secondary mirror at front, eyepiece at rear / shorter tube for same power, tracking-enabled, flat field works well with cameras / requires collimation, subject to dew collection - dew heater a must). Dudley Pitts then described Roland Christian's planetary refractors, noting that they were made using an especially good batch of fluorite. While they are very expensive, they also give the sharpest image, the highest contrast, and the highest resolution. John Harrington summarized by saying that a 6" - 8" Dobsonian provided a good compromise for a beginner, giving the best light gathering power for a few hundred dollars. John answered questions from the audience and concluded the presentation to a round of applause for all participants.

With no objections, Joe Boyd declared the meeting adjourned at 9:37 PM.

Respectfully submitted,
Evelyn Wright, Secretary

NASA's Space Place

Lunar Terminology

Novice moonwatchers find it reasonably easy to learn the Latin terms and plurals for lunar features: mare and maria, mons and montes, palus and paludes, vallis and valles. And titles like Serenitatis, Tranquilitatis, Nectaris and Foecunditats are close enough to their English equivalents to be not too difficult to learn.

But then comes learning the craters. In addition to encountering common and easily remembered names like Adams, Brown, Franklin, Miller, Scott, and Robinson, all of which identify lunar features, the novice bumps into monickers that are a real challenge to the memory: Anaxagoras, Anaximander, Anaximenes, Archytas, and Arzachel. Some names not in frequent use, like Faraday and Fahrenheit, are nonetheless likely to be familiar to everyone, but ones like Lamech and Lamont are likely to be unknown even to astronomers.

Astronomers do have a special advantage learning lunar names because they already know names the general poulation might not recognize. For example, of two prominent, naked eye features on the moon, although Copernicus is a rather uncommon name it is nonetheless known to most folk, but the name Tycho is likely to be familiar only to astronomers. Similarly, crater names like Bailley, Bode, Cassini, Fraunhofer, Messier, Olbers, and Ramsden, although unfamiliar to the general public, probably strike responsive chords in the memories of amateur astronomers: Bailley's beads appear during a solar eclipse; Bode's law of planetary distances prompted the conjecture that a planet should be between Mars and Jupiter where the asteroid belt was later found; Cassini's divisions appear in the rings of Saturn; Fraunhofer lines are part of spectra that identify stellar elements or measure red shift; Messier's list is a basic starting point for many observers; Olbers proposed a paradox about the night sky's darkness; Ramsden's name distinguishes a type of eyepiece.

Has Einstein made it to the moon? Yes, but because of libration his namesake crater is well seen on only one or two nights of the year. Appropriately for one who explored new dimensions of the physical world, Einstein lies between Balboa, an explorer, and Bohr, a physicist, and next to Vasco DeGama, another explorer. Marco Polo is up there too, but in another quadrant. Fair enough. Balboa and deGama sailed west, Marco Polo traveled east.

Ancient astronomers are represented on the moon by Aristarchus, who in the third century BCE calculated the size and distance of the sun and moon, and by Hipparchus, who in the second century BCE was the first known to have used trigonometry and who discovered equinoctial precession.

Since cosmology was a frequent theme of ancient philosophers, Plato and Aristotle are naturally mentioned, but their craters are on opposite sides of the Alpine Valley, a reminder of the division separating their schools of thought. Next to Aristotle lies Eudoxus, a mathematician who was first to construct a mathematical model of concentric spheres to explain stellar and planetary motion. Near to Plato are two disciples whose names are titles of two of his cosmological dialogues: Timaeus, probably a fictional character, and Theaetetus, a real mathematician quoted a century later by Euclid. Other ancient philosophers include Seneca and the neoplatonist Proclus, but not Plotinus or Porphyry. Among more recent philosophers Descartes and Kant have become selenographic eponyms.

Ancient poets often did more than simply make a passing reference to the moon or a star; they did whole works on astronomy. Both a crater and a rima are named for Hesiod, with Homer the oldest Greek poet, whose Theogony has an account of the creation of the world and whose Astronomia is quoted by later writers but does not survive entire. With him on the moon are Aratus, who did a versification of an astronomical treatise by Eudoxus quoted by St. Paul in Acts 17:28, and Manilius, whose five book interweaving in dactylic hexameter of sound astronomy and fanciful astrology was edited by A. E. Housman, a professor of classics better known as the poet of A Shropshire Lad in which appears the anthology favorite, "To an Athlete Dying Young".

Julius Caesar's appearance on the moon, that soldier and statesman, may at first seem strange until it's recalled that he introduced the Julian calendar. The other calendar reformer, Pope Gregory, didn't make the cut. Julius' successor, Caesar Augustus himself isn't named, but his right hand man, Agrippa, is as the author of a geographical commentary on a large map of the known world set up in Rome. Two other ancient writers on geography lending their names to craters are Strabo and Plutarch, better known for his entertaining though often inaccurate biographies.

Besides for philosophers and poets, lunar landmarks are named for the Greek historian Herodotus, both a mountain and a crater, and the Roman historian Tacitus, but the Greek historian Thucydides and the Roman historian Livy have not been similarly honored.

Among all the moon's bewildering variety of names my own favorite is the one applied to a crater on the northeast limb: Endymion. He is one of only a few mythical figures named on the moon. Perhaps more about him, and them, at a later date.

Activities & Events

July 1 – July 31, 2003

7/2 Conj., Moon & Jupiter
7/3 BSAS Board at Jefferson Square Condos, 7 p.m.
7/4 Independence Day; Sun at aphelion
7/5 Mercury in superior conj.; Private Star Party, Natchez Trace site
7/6 FIRST QUARTER
7/8-12 ALCON 2003 at Embassy Suites Hotel
7/8 Conj. Venus & Saturn
7/13 FULL MOON
7/15 Conj., Neptune & Moon
7/16 Conj., Uranus & Moon
7/17 BSAS MEETING, 7:30 p. m. at Dyer Observatory,; Conj. Moon & Mars
7/21 LAST QUARTER
7/25 Conj., Mercury & Jupiter
7/26 Conj. Moon & Saturn. Private Star Party, Natchez Trace site
7/29 NEW MOON; Delta Aquarid Meteors
7/30 Conj.; Mercury & Regulus; Moon & Jupiter; Moon & Mercury

August 1 – August 31, 2003

8/5 FIRST QUARTER
8/7 BSAS Board at Jefferson Square Condos, 7 p.m.
8/11 FULL MOON, Perseids meteors
8/12 Conj. Moon & Uranus
8/13 Conj. Moon & Mars
8/14 Greatest e. elongation of Mercury; Public night at Dyer Observatory 8 p.m.
8/18 Venus in superior conjunction
8/19 LAST QUARTER
8/21 BSAS MEETING, 7:30 p.m. at Dyer Observatory
8/22 Conj. Jupiter & Sun; Public Night at Dyer Observatory, 8 p.m.
8/23 Conj. Moon & Saturn; Summer Star Party at Warner Park, 8 p.m.
8/27 NEW MOON; Earth & Mars nearest.
8/28 Conj. Moon & Mercury; Mars at opposition; Scout Night at Dyer Observatory, 7 p.m.
8/30 Private Star Party, Natchez Trace site

BSAS c/o Dyer Observatory
1000 Oman Drive
Brentwood, TN 37027