

The Spectrum



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Newton In Conflict

Rowland Rupp

One day, needing something to read during a vacation, I picked a book off the library shelf that I thought might be entertaining and informative. Its subject was Isaac Newton, the renowned alchemist, by mathematician and physicist. **Isaac Newton - The Last Sorcerer** was written by Michael White and is dated 1997. I thought about writing a book review, but decided instead to concentrate on the **combative nature of Newton's personality.**

Perhaps a review of some sort is in order just for the record. I recommend the book to anyone interested in Newton, but I had two problems with it. For some reason I can't entirely explain, I occasionally got lost and had to re-read a page or so to get re-organized. I'm not sure who is at fault for that. The other is that there is no science in the book at all; it is written as a biography, not as a tutorial on alchemy, mathematics or physics. That's not really a criticism - the book does not purport to be otherwise.

Newton was a peculiar fellow as I suppose someone searching for the transformation of ordinary metal into gold, inventing calculus and establishing the laws of gravity and motion might be. But he was also secretive, reclusive, demanding, arrogant, intolerant, and unforgiving. One might imagine this could lead to confrontation, and indeed it did. Here are the **three principle conflicts**, though there were others, in which he engaged. In each instance his adversary was intelligent, famous and the contention was bitter and protracted. *(continued on page 6)*

Board Of Directors Challenges BAA Members

Gus Cenkner

Which member can create the best photographic or CCD image of the International Space Station, as it orbits overhead?

Rules:

- (1) Current members only.
- (2) Must use personal or BAA observatory telescope. No professional telescopes allowed.
- (3) Must submit photograph, with negative or electronic image to prove you took it, and information about how it was taken. Submit to Gus Cenkner before February Friday meeting.
- (4) No entry fee.
- (5) Winner to be chosen at the regular February Friday night meeting by a secret vote of the attending members. Photographs will be given letters, to keep the vote from turning into a popularity contest. Prior notice will be given in the Spectrum.
- (6) Interested members should register with Gus Cenkner (jandgir2@aol.com or 625-8343).

Prizes:

- (1) Two free dinner tickets to the BAA March Dinner Meeting. Winner will be recognized at dinner meeting.
- (2) Winning image to be published on the front page of the Spectrum.
- (3) Winner has option of submitting it to the Astronomy magazine, or elsewhere, if it's good enough.

| BAA Officials | |
|---|---|
| <p><u>BAA OFFICERS</u> President – Peter Proulx 731-2808 Vice President – Ted Bistany 885-0003 Secretary – Joe Orzechowski 632-7091 Treasurer – Bev Orzechowski 632-7091</p> <p><u>AT LARGE DIRECTORS</u> Janice Gardner Tom Bakowski Alan Friedman</p> <p><u>COLLEGE OF FELLOWS</u> Rowland Rupp 839-1842</p> <p><u>OBSERVATORY DIRECTORS</u> Bill Aquino 731-9366 Paul Tabor 434-7148</p> | <p><u>MEMBERSHIP DIRECTORS</u> Tristan Dilapo 941-5613 Alan Friedman 881-4310</p> <p><u>ROBOTIC SCOPE PROJECT</u> Anthony Gardner</p> <p><u>STAR PARTIES</u> Bill Smith</p> <p><u>SPEAKERS</u> Dr. Jack Mack</p> <p><u>SPECTRUM STAFF</u> Editor: Gus Cenkner Jr. 625-8343 jandjr2@aol.com Labels: Alan Friedman Columns: Edith Geiger Joe Orzechowski Rowland Rupp Paul Tabor Articles: various authors</p> |

| BAA Web Site | | | | | | |
|--|------------------------------------|------------------------------------|-----------------------------------|------------------|------------------|--------------------------------|
| www.upstateastro.org/stars/index.html | | | | | | |
| Location /Time Of Meetings | | | | | | |
| BAA meetings are held on the 2nd Friday of the month from September to June in the New Science Building on Buffalo State College Campus . Meetings start at 7:30 PM . See above web site for a map of the location. Nonmembers are encouraged to attend. | | | | | | |
| Spectrum Deadline | | | | | | |
| Articles for the next Spectrum will be due by: October 16, 2004 | | | | | | |
| Managers Of BAA Computer Sites | | | | | | |
| <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;"><u>BAA Web Site</u></td> <td style="text-align: center; border-bottom: 1px solid black;"><u>E-Spectrum Web Site*</u></td> <td style="text-align: center; border-bottom: 1px solid black;"><u>YAHOO E-Mail Group*</u></td> </tr> <tr> <td style="text-align: center;">Timothy Finucane</td> <td style="text-align: center;">Timothy Finucane</td> <td style="text-align: center;">Dennis Hohman Mike O'Connor</td> </tr> </table> <p style="text-align: right;">* members only</p> | <u>BAA Web Site</u> | <u>E-Spectrum Web Site*</u> | <u>YAHOO E-Mail Group*</u> | Timothy Finucane | Timothy Finucane | Dennis Hohman Mike O'Connor |
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| Timothy Finucane | Timothy Finucane | Dennis Hohman Mike O'Connor | | | | |

Message From the Former President

Joe Orzechowski

It's hard to believe that my two years as president of the BAA is over. I can still remember the first time that I stepped out in front of the people/room to preside over the September 2002 meeting.

I can't claim to have accomplished any great things during my term as president but I think I did do what I said I would in my very first President's Message column: continue to let the BAA be guided by the capable members of the board of directors. Of course, after two years changes are inevitable. (1) Phase I of the **new robot scope at Beaver Meadow** is now essentially complete. Members interested in doing CCD imaging now have access to all the hardware and software they need; no need to shell out the big bucks to buy your own setup. (2) Our **relationship with the Buffalo Museum of Science** (as an affiliate organization) has developed into something much more dynamic in the last couple of years. We are holding joint public events at the museum, giving us a great venue for promoting the BAA. The museum events centering on the lunar eclipse late last year and the Venus transit this past June stand out in my mind. (3) The **Spectrum** is the BAA's primary instrument for keeping the membership informed of significant developments so the position of editor is an important one. But this position is notoriously difficult to fill because it entails a significant amount of work. So, when circumstances required that Jamie Seibert step down as editor, I was worried about maintaining the continuity of the Spectrum's publication. Fortunately, our appeal for a new Spectrum editor was answered by Gus Cenkner. Based on the last couple of issues put out by Gus, the Spectrum is again in good hands. (4) I have served on the board of directors in one capacity or another for several years and it seems that it's always the same small core group of members that are involved in managing the BAA's affairs and participating in our public activities. But, at my last board meeting as president, I was suddenly struck by the new faces on the board. And when I took the time to really think about the people that are helping out at public nights at Beaver Meadow, helping out at the museum and working on the robot scope project, I must admit that there are **new faces in all these places**. Rather than sporadic wholesale upheavals we have undergone gradual and less noticeable changes over time. And that is probably a good thing.

In closing, **I'd like to thank my fellow officers** Dr. Jack Mack (vice president), Peter Proulx (secretary) and Bev Orzechowski (treasurer) for all their hard work these past two years. I would also like **to thank all of the other board members (past and present)** who served with me and who helped keep the BAA on the right track. (I wonder how I would make out in a right track / wrong track poll. Would I do better or worse than GW?) Most of the officers will be back for another two years of service but, in keeping with the doctrine of incremental change, Dr. Mack will be stepping off the board and Ted Bistany (the new vice president) will be joining the board for the first time. I look forward to working with the board for another two years, this time as secretary.

Meteor Showers For September - October

- Sept 23** Alpha Aurigids: Radiant-- near Capella. 12 per hour, fast with trails.
Oct 7 Piscids: Radiant--near Aries. 15 per hour at 28 kps.
Oct 9 Draconids: Raidiant--near Hercules. Spectacular when comet Giacobinni-Zinner passes near Earth. 200 per hour when comet is close is not uncommon, 1000 per hour sometimes.
Oct 20 Orionids: Radiant--near Taurus. 30 per hour, fast (67 kps) often in colors with long tails. Duration--8 days.

Flawed Batch Of Pentax Lenses Made Its Way To The USA

Tom Bakowski

Earlier this year I heard that Pentax was discontinuing the XL lens line with a new line called XW. I owned a 10.5 XL 65* AFOV for a few years and thought it was a very sharp contrasting lens. I bought a 30, 14, 10, 7, 5 XW. I essentially replaced my whole high power lens set with the new line of XWs because I felt the XWs are the best high power lenses on the market today -- fantastic, adjustable eye relief, contrast (associated with Pentax's Super Multi-coatings), as well as sharpness across the 70* AFOV. The reason I am writing about this, is to warn people about **flawed batch of Pentax lenses** that has made its way to the USA. **Dealers are now trying to sell them at reduced prices** -- ex \$279-\$309. Retail for the 1.25" are \$339 each. The flaws include internal scratches that show up as scattered light while viewing the sun in H-Alpha or viewing a bright planet like Jupiter. I have found a good test of lens quality is trying the lens through an H-Alpha scope. If it passes, it should not have any scattered light! 6 Months ago when I purchased the lens I was sent some bad ones. I had problems with my 14XW, 10XW and 5XW, all of which were replaced by the dealers and reimbursed return shipment. I did not have any problems with the 30XW nor the 7XW.

Be a smart shopper and **inspect all new lens**, including internal elements, in bright daylight with one cap on and vice-versa. Penatx has fixed this quality control problem and this should not happen again, but there still might be some floating around. Except for the defective lenses, a good one will show you contrasting views of planets/deep sky objects, unlike competitive brands.

SPACE SHIP ANDROMEDA

Galaxy Champs **EARTH OR BUST** **Beat The Bills**


They aren't very talkative.

Look. They only have four legs!

It's all over the universe. With Rob Johnson at quarterback, the "Buffalo" Bills have won ten world championships!

We challenge you. 2005 world champion "Buffalo" Bills, to a galactic championship game.

I told you before, you need a helmet on your second head!



??

WE'RE FROM THE ANDROMEDA GALAXY

by August Cenker Jr.

Observing Programs At The Buffalo Museum Of Science

Presented in collaboration with the Buffalo Astronomical Association

Billions and Billions **SEP** **Friday**

View double stars, variable stars - even distant galaxies.
Explore the two distant planets hiding amongst the stars - Neptune and Uranus.

24

7:30-10:30 pm

Wednesday
8:00 pm-12:00 am

OCT
27

Total Lunar Eclipse

The last total eclipse to occur before 2007. Gain insight into the science, mythology and beauty of our closest celestial neighbor.

5 YEARS AGO -"BAA Receives \$5500 Grant" was the headline on the front page of the September-October 1999 *SPECTRUM*. The award was made by the Foundation for Greater Buffalo for hardware and computer upgrades for the observatory to further our work in astronomy education for the general public. A dozen or so BAA members were thanked for their contributions to the grant application which Beverly Orzechowski organized and presented. Our September meeting featured our activities during the past summer, an open forum not only on what we did, but also on where we went and what we saw. I found nothing in *THE SPECTRUM* about the October meeting. Who recalls what it featured? Bill Smith wrote an article on how to observe Venus in the daytime with hints to enhance one's chance of success. Our new observatory director, Mark Swiderski, had just taken over his duties, and we also had new *SPECTRUM* editor, Mark Reville.

10 YEARS AGO -We opened our 1994-1995 season with a talk on Cepheid variable stars given by Dr. Don Femie from the Dunlop Observatory at the University of Toronto. Our own Joel Stuckey spoke in October on his construction of our CCD camera and how to use it. Training sessions on the camera were scheduled at BMO. The camera has had a lot of use since. It's an odd camera in a way -most people use cameras in the daytime -we don't! New officers for the coming two years were: Terry Farrell - President, Bob Hughes -Vice-President, Lynn Sigurdson - Secretary, and Steve Kramer -Treasurer. Steve Kramer wrote the first installment of a two part article on "David Rittenhouse, Colonial America's Astronomer". Steve had performed surgery on Rittenhouse's famous orrery before he located in Buffalo. Darwin Christy wrote on ancient astronomers and ancient constellations, both part of his on-going series. Bill Smith submitted the lone observation report; it was on his observations of impacts of the fragments of Comet Shoemaker-Levy 9 on Jupiter.

15 YEARS AGO -"Selecting the Ideal Telescope" was the topic for September 1989. Mike Jefferson from the Hamilton Centre RASC was the speaker. Wouldn't it be interesting to hear that talk again in light of all the changes in telescopes that have occurred in these past fifteen years? Another Canadian speaker, Eric Clinton from London Centre RASC, spoke in October. His topic was "Observatories of California and Arizona". President Doris Koestler noted that Diane Borowski would serve as membership director, Joe Provato would be refreshment host and Darwin Christy would continue as *SPECTRUM* editor for the coming year. Carl Milazzo was appointed to head a committee to study procuring a new telescope and perhaps a new viewing site. Edith Geiger wrote a profile for *THE SPECTRUM* on Bob Hughes, highlighting his many interests and accomplishments. Darwin Christy reported on his observations of the total lunar eclipse of August 16. He set up a sensing system to record the variation in light during the event. Marilou Bebak reported on activities at Kellogg Observatory.

25 YEARS AGO -The 1979 September-October *Spectrum* is the first edited by Darwin Christy, who took over from Larry Carlino. Darwin continued in that post for the next sixteen years. In September we heard from Ed and Olga Lindberg who spoke on "The Story of Time". I suspect their many photographs of sundials were featured. Emil Pallos from the Broome County Astronomical Society spoke in October, but his topic was not yet known when *THE SPECTRUM* was printed. President Fred Price welcomed Bob Mayer, Darwin Christy and Al Kolodziejczak to the Board of Directors. The Niagara Frontier Council of Amateur Astronomical Associations held a meeting in Hamilton, Ontario, where Darwin Christy and his son Orrin spoke on "Micrometeorites and the Japanese Astronomers" and "A Maintenance-free Observatory", respectively. *THE SPECTRUM* had a report of a visit by about twelve of our members to the Dunlop Observatory in Toronto where a 74-inch telescope was housed. Edith Geiger's profile was on Joe Provato.

35 YEARS AGO -Richard Karlson from the Rochester club spoke on "Stonehenge" to open our 1969-1970 season. For October, Orrin Christy talked about "Amateur Radio Astronomy". Orrin had his own radio telescope in his back yard for a time. Kurt Erland wrote an article on "How to Build an Astronomy Library When You Really Don't Have Much Money". Several of his selections were translated from French or German. Fred Price wrote on the lunar crater Atlas, and included one of his detailed sketches. Fred hailed from the days when observers relied on their own sketches instead of photography or CCD images. Some still do, as evidenced by recent articles in *Sky & Telescope* telling one how to do it.

On July 9, **Carl Milazzo** paid a visit to the Tuscarora Indian Reservation in Niagara County. This was an outdoor festival where about 500 people gathered. Carl showed the constellations and Jupiter with a 6" Dobsonian. The festival is also called Fireball Day. A game in which a ball is set on fire and even the goal post is ablaze. On July 16, Carl showed the constellations and Jupiter to the campers at 4 mile Creek State Park. About 100 people were there, and looked through the telescope at distant Toronto.

Bob Tritan is a teacher and is enjoying his summer vacation. Laurie is a mechanical engineer. After a hard day's work she can hardly wait to have her dinner all ready when she gets home.

A number of members attended **Jack and Jayne Mack's Star Party** in a surrounding of magnificent flowers and plants in a spectacular setting.

Carl Klingenschmitt and **Sue Fay Allen** lead an enriched life. They are on two orchestra boards: the Clarence Concert Association and Amherst Symphony Orchestra. The Clarence Summer Orchestra plays four Sunday concerts in the Town Park. The Amherst Symphony plays four winter concerts, plus a summer concert in August. This year's concert is at the Amherst Museum. Sue Fay is a vocalist who taught music at Amherst Middle School.

Jeff Gardner and his bike are in service to mankind. He rode for the fundraising of the Roswell Park Cancer Drive. He rode 65 miles, starting at UB to the Amherst Campus, raising \$279.00. He rode the Tour de Cure to raise money for the Diabetes Association. He rode 65 miles and raised \$372.00. Jeff enjoys the Finger Lakes region and rode his bike around Seneca Lake with 2 bicycle riding friends. **Janice** works at an animal shelter and is especially interested in those animals that deserve a second chance. With the help of the animal shelter and adoption service, there is a place for animals to live until they are well-adjusted and suitable for adoption, to a good home. Janice also works for Shea's Theater, where she is manager of the food department. Jeff and Janice are going to the Black Forest Star Party in September. Enjoy!

Mr. & Mrs. Anthony Davoli are the happy parents of Anthony Vincent Jr. He was born on July 20, the anniversary of the arrival of the first men on the moon.

Past BAA Meetings



Steve Kramer tries to walk off with the Auditorium seat.



Something appears to be growing out of Darwin Christy's head. I hope it's nothing serious.

Chief among them was Robert Hooke, seven years Newton's senior, a man of considerable capability, but neither Newton's match intellectually nor ethically. The son of a clergyman, Hooke was born in 1635, attended Oxford (Newton attended Cambridge), was Curator of Experiments for the prestigious Royal Society at the time Newton joined it, and later became its secretary, to Newton's dismay. He was something of an intellectual gadfly, seldom concentrating on problems for long. Unlike Newton, who claimed to think continuously on a question until he arrived at a solution, Hooke switched interests without tidying up his last endeavor. They differed also in personality. Where Newton was introverted and tended to retreat petulantly into a shell when faced with criticism, which was always anathema to him, Hooke was gregarious and reacted aggressively when confronted with controversy.

Two clashes occurred in the early 1670s. The first was a dispute over the priority of inventing the reflector telescope, which Newton had demonstrated to the Royal Society in late 1671. Hooke claimed he had invented the device himself some seven years earlier but, for one reason or another, had not exploited his discovery. He claimed that the length of his tube was only one inch, but that its performance exceeded that of the 50 foot long refractors that were in use at the time. Known for unsubstantiated claims, Hooke's assertion was given little credence among his peers, especially since he provided no evidence in theory or in practice that supported his priority.

Shortly later another conflict arose over a paper presented by Newton to the Royal Society on "Theory of Light and Col ours" , in which, among other points, he contended that light was corpuscular in nature. However, Newton had failed to prove this claim, and Hooke attacked him on the basis that Newton had previously deplored asserting as true, concepts not yet proven. True to form, Hooke claimed that he had performed the same experiments described in the paper in "many hundreds of trials", but did not conclude that it showed light to be corpuscular. For Hooke, light was a wave.

Newton, who had grown up in a remote village in Lincolnshire, had never been exposed to anyone approaching his equal intellectually and so was ill prepared to handle an attack from formidable opponents, such as Hooke. Later, when other critics commented unfavorably on his theories of light, Newton replied caustically and, thanks to Hooke making an issue of Newton's indiscretion, was admonished for discourtesy by the secretary of the Royal Society, Henry Oldenberg.

For a time Newton isolated himself from the society, thus avoiding controversy, but in 1675 he again exposed himself to dreaded criticism by submitting two more papers on light, one on theory, the second on his experiments. Once more Hooke claimed that Newton had obtained the idea from his own earlier work "Micrographia". Subtly, Hooke wrote a seemingly polite letter to Newton congratulating him on expanding on his own ideas. It was in Newton's equally courteous letter of response that he wrote the often quoted declaration, "If I have seen further it is by standing on ye shoulders of Giants" .

This statement is often cited by his admirers as evidence of Newton's sense of humility, but another interpretation may be more appropriate. Hooke was deformed, badly stooped -it was said he resembled a dwarf. He was anything but a "Giant" .

Surely Newton was clever and vitriolic enough to use a phrase of double meaning. Was Newton referring to Hooke's accomplishments placing him among the Giants, was he referring to Hooke's and his own celebrated predecessors, or was he referring to Hooke's physical misfortune?

There is an often told tale of how Edmund Halley obtained from Newton proof of Kepler's hypothesis that the planets travel in elliptical paths with the sun at one focus. It began when Halley, Hooke and Christopher Wren were discussing the problem and Hooke claimed to have solved it long before, but had withheld the solution so that others who worked on it and failed would appreciate his achievement.

Wren was doubtful of the claim, and offered a book as a reward to the first person to present the solution. Halley asked Newton about it and was told that he had already solved it, but claimed to be unable to find his notes. In time, Newton repeated his solution, which impressed Halley to the extent that he encouraged the ever cautious Newton to publish what was to become his most famous work, "Principia Mathematica".

Here again Newton ran afoul of Hooke. A brief portion of Newton's work while in progress was read at a Royal Society meeting. Hooke became incensed because no mention was made of his own work on gravity of a couple of decades earlier. When Halley, by now a trusted friend of Newton, reported Hooke's latest umbrage, Newton methodically went through his entire manuscript purging all references to Hooke. Following publication of Newton's great work, Hooke continued to criticize "Principia", sometimes in private conversation, and sometimes, it is speculated, in journals where unfavorable reviews appeared by unidentified authors who wrote in Hooke's style.

Leibniz, who had become more incensed as the dispute dragged on, responded to this latest affront by asserting that while Newton may have known of fluxions, he was not acquainted with the calculus until after he, Leibniz! had published his paper of 1684. Newton got even. When he published the third edition of "Principia " Leibniz's name was everywhere removed. Apparently, the ultimate triumph for Newton was to eradicate his adversaries' names from his publications. Out of sight! out of mind!

(continued on page 8)

The Public Night of **June 19** was well attended by Club members. Bill Aquino, Tom Brokowski, Gary Flagg, Alan Freidman, Pat Lannon, Tim McIntyre, Mark Morgis, Rick Pason, and Paul Tabor were all there to aid the public that also came out. The weather was fairly good for a change, clear and pleasantly warm. Alan gave the presentation on the subject of the Transit of Venus.

Our next Public night, **July 3**, was very iffy when it came to viewing as there were some clouds. Joe Orzechowski gave the presentation. Other club members there that night were Bill Aquino, Rick Fusani, Rick Pason and Paul Tabor.

July 17, was a washout, Bill Aquino and Paul Tabor did go out to the Observatory, but only one person showed up, a former club member who is thinking of rejoining, and even he left early.

August 7 proved to be a typical public night, at least for this year so far, it was mostly cloudy. Alan Freidman did attempt some observing through holes in the clouds, but even he had to give up when it started to rain. Other members that were there were Bill Aquino, Gus and Judy Cenkner, Pat Lannon, Glen Spencer and Paul Tabor. Gus gave a fine presentation on Saturn.

The remaining Public Nights are as follows: We **still** have **two openings for speakers**. If you are able to give a presentation on either of the two remaining dates please contact Paul Tabor at 716 434 7148 or e-mail ptat1957@yahoo.com

Public Night Speaker

| | |
|--------------|---------------------------------|
| August 21 | Ted Bistany |
| September 4 | |
| September 18 | Roland Rupp |
| October 2 | Tom Bakowski -- Light Pollution |
| October 16 | |

21 August 2004

| | |
|-----------------------|------------|
| Sunset | 8:08 P.M. |
| End of civil twilight | 8:38 P.M. |
| Moonset | 10:48 P.M. |

Phase of the Moon on 21 August 2004; waxing crescent with 31% of the Moon's visible disk illuminated

4 September 2004

| | |
|-----------------------|------------|
| Sunset | 7:44 P.M. |
| End of civil twilight | 8:13 P.M. |
| Moonset | 12:48 P.M. |
| Moonrise | 10:26 P.M. |

Phase of the Moon on 6 September 2004; waning gibbous with 69% of the Moon's visible disk illuminated

18 September 2004

| | |
|-----------------------|------------|
| Sunset | 7:19 P.M. |
| End of civil twilight | 7:47 P.M. |
| Moonrise | 11:31 A.M. |
| Moonset | 9:20 P.M. |

Phase of the Moon on 18 September 2004; waxing crescent with 18% of the Moon's visible disk illuminated

2 October 2004

| | |
|-----------------------|------------|
| Sunset | 6:54 P.M. |
| End of civil twilight | 7:22 P.M. |
| Moonset | 11:39 A.M. |
| Moonrise | 8:55 P.M. |

Phase of the Moon on 6 October 2004; waning gibbous with 83% of the Moon's visible disk illuminated

16 October 2004

| | |
|-----------------------|-----------|
| Sunset | 6:31 P.M. |
| End of civil twilight | 6:59 P.M. |
| Moonset | 7:54 P.M. |

Phase of the Moon on 16 October 2004; waxing crescent with 8% of the Moon's visible disk illuminated

Seeking Committee Members

Bill Aquino

At the last Board of Directors meeting we discussed starting an **observing program within the BAA to encourage members to observe more and to develop their observing skills**. The program would need to be structured to include everyone in the club from the experienced observer to the novice and should also incorporate as many aspects of observing as possible such as keeping a logbook, planning an observing session, collimating your telescope, use of filters, etc. We thought the program could be broken down into levels of achievement such as novice, beginner, intermediate, advanced, etc. The club would provide official recognition of achievement with awards certificates. Specialized categories could be set-up past the advanced level for photographic, CCD, etc. We would like to run the program from April to October of next year (2005) so we need to start getting it organized now. If you are interested in serving on the committee for this program contact Bill Aquino at 731-9366 (billaquino@adelphia.net). Without a good committee in place to set up and manage the millions of details we will not be able to run the program.

(continued from page 6 - Newton In Conflict)

Leibniz, who had become more incensed as the dispute dragged on, responded to this latest affront by asserting that while Newton may have known of fluxions, he was not acquainted with the calculus until after he, Leibniz! had published his paper of 1684. Newton got even. When he published the third edition of "Principia" ! Leibniz's name was everywhere removed. Apparently the ultimate triumph for Newton was to eradicate his adversaries' names from his publications. Out of sight! out of mind!

Leibniz died in 1716; eleven years later Newton joined him still vehement in his certainty that the deceased German had tried to rob him of what was rightfully his. Curiously! the nomenclature of the calculus in use today is that formulated by Leibniz, though Sir Isaac is more often credited with the discovery. Historians long ago divided credit equally between the combatants.

John Flamsteed, England's first Astronomer Royal, was like Leibniz, born four years after Newton and, also like Leibniz incurred the wrath of the more famous Lucasian Professor of Mathematics. Flamsteed attended Cambridge starting in 1670 and was appointed the first Astronomer Royal in 1675. In this capacity he set out on a long-term observing program with the intention of producing a highly accurate catalog of the heavens.

In 1685 Newton, knowing of Flamsteed's exacting work! requested star and planet positions that would enable him to establish accurately the path of the comet of 1680, which was critical to his gravitational theory now being finalized for publication in "Principia". When that was supplied! Newton expanded his request to obtain data on the positions of Jupiter and Saturn as they approached conjunction. Flamsteed, unaware of gravity in the sense that Newton was formulating it! and thinking the sun's influence on the planets was magnetic and so they could not possibly interact with one another! was bewildered by the request but! nonetheless! complied. The secretive Newton declined to explain the purpose of his inquiries.

In 1694 Newton again requested data from the Astronomer Royal! this time pertaining to positions of the moon that Newton intended to use to confirm his theory of lunar motion for the second edition of "Principia". Flamsteed, although somewhat miffed that scant credit was given for the positional contributions made at Greenwich Observatory when Newton's first edition was published, once again supplied the crucial sightings. Unfortunately, some of the material he sent contained mistakes. Newton, having no tolerance for technical inadequacies and having minimal diplomacy as well, chastised the astronomer. Flamsteed was peeved! Newton was contemptuous! and their relationship sank accordingly.

Hoping to recoup some of his lost prestige with Newton! Flamsteed next sent to him reduced data instead of raw data! but botched the calculations hopelessly! confirming Newton's view that Flamsteed bordered on incompetence. Essentially, Newton told the unfortunate astronomer, in relatively polite terms as was the style of the time, to just send the observations and stop trying to figure them out.

Still needing lunar data from the now reluctant Astronomer Royal for his second edition, Newton elicited the aid of Prince George, husband of reigning Queen Anne. He convinced the prince to commission a catalog of the heavens to be supplied by Flamsteed, an offer the latter could not refuse. With royal patronage the material essential to Newton's studies would soon be in his hands, at least so he thought. To facilitate that outcome Newton, as President of the Royal Society, saw to it that that organization would oversee the project.

Flamsteed dragged his feet, partly because he didn't have as much observational data as he needed for a complete catalog, and partly because of his distaste for Newton. He contended that Newton and his committee were hindering rather than advancing publication. When Prince George died, Newton turned to the queen, convincing her not only to commission the catalog in George's stead, but also to place Newton's Royal Society in a supervisory role in the affairs of Flamsteed's Greenwich Observatory.

The battle continued for years, Flamsteed even resorted to suing Newton for books he had lent him that were not returned. Finally, an unauthorized version of the stellar catalog, published with the aid of Edmund Halley, Newton's ally and Flamsteed's despised enemy, appeared in 1712: "Historia Coelestis". Newton, now armed with precise positions, proved his lunar theory, and the second edition of "Principia" appeared the following year. As one might expect, nearly every reference to Flamsteed was omitted from it.

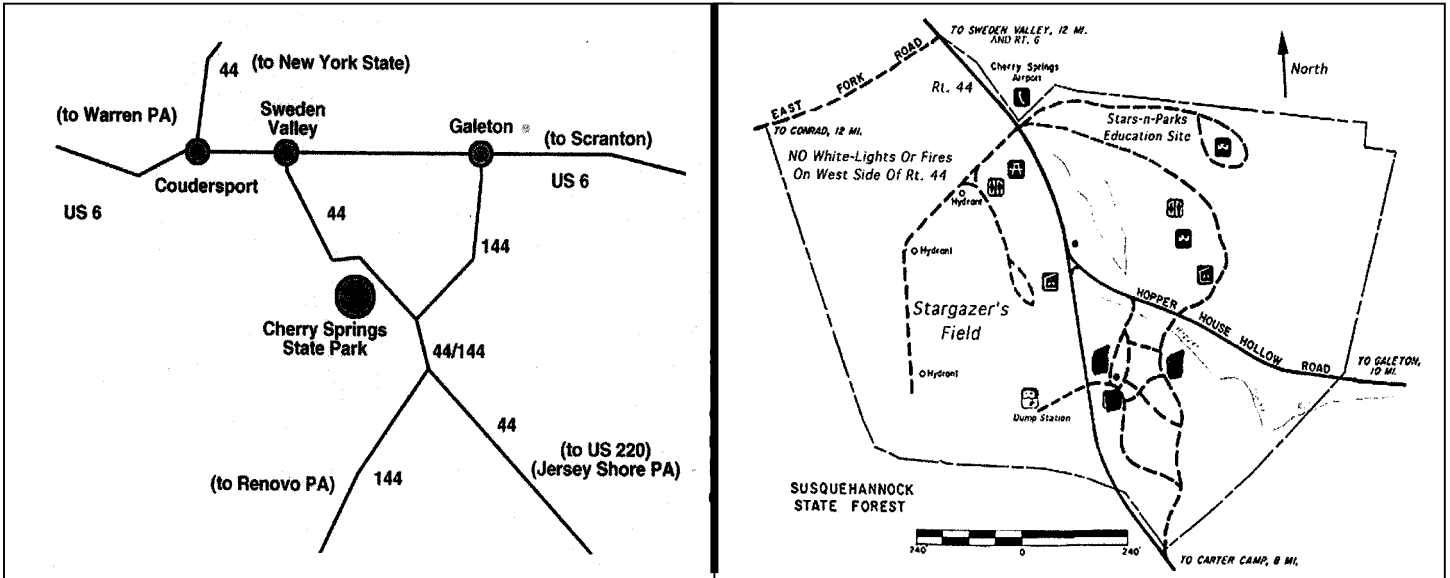
Flamsteed complained that the "Co-elestis" was flawed, and was in the process of completing his own version at the time of his death in 1719. He wrote a preface condemning Newton, Halley and others for their complicity, but when the catalog finally appeared in 1725 the preface did not; Newton again had the last word.

(end - Newton In Conflict)

CHERRY SPRINGS STATE PARK, Pa

This is the nearest/best dark-sky site and it caters to astronomers.

Where is Cherry Springs State Park? Cherry Springs is located 15 miles southeast of Cou- dersport, PA. on PA. Rt. 44. The park is deep in the midst of the susquehannock State For- est just 11 miles south of U.S. Rt. 6/ PA. Rt. 44 junction at Sweden Valley. When looking at a map of the whole state Cherry Springs is located just about at the center (along the east/west axis) of the state, about 30 miles south of the NY/PAborderline.



There's always folks there on clear weekends. Stars n' Parks runs events on last quarter & new Moon weekends all summer. Free camping on-site. See the BAA website [www .upstateastro.org/stars/baa.html](http://www.upstateastro.org/stars/baa.html) for more details and www.upstateastro.org/stars/cssp.html.

Spectrum Articles From Past 25 Years*

obtained from Rowland A. Rupp

A Furry Tail

A Space man landed
in my back yard
and handed me his
ID card
I looked at it
with fear and awe
The ID card
was a furry paw.
My dog ran out
with a knowing bark
and told the Space man
where to park.
Interpreters
at times like these
can solve the worst
emergencies!

Esther L. Goetz

Our Moon

Our moon seems happier
than before
the astronauts banged
on her door.
She keeps her craters
close at hand
to greet new space ships
as they land,
for she has rendezvoused
with men
and knows full well
she will again.
While Jupiters moons
sleep unaware
Our moon is having
an affair!

Esther L. Goetz

From her SORRY ABOUT THAT collection

* originally published: Spectrum, March/April 1980

When you see refractors listed on Astromart, they are often advertised with the comment that the glass has never been touched - as if cleaning a refractor objective is a dangerous or shameful activity. You certainly want to clean a lens only when necessary, and use caution. Frequent cleaning and vigorous rubbing can scratch coatings or even glass if done carelessly or excessively. But if you observe from dewy locations like Beaver Meadow, your front lens element or SCT corrector is, over time, going to gather lots of spots and streaks from airborne stuff that is deposited as dew evaporates.

I have cleaned the lenses on each of my refractors with good results. This is the technique I use. These steps are recommended by Roland Christen of Astro-Physics for care of their refractor lenses. This technique is **NOT recommended for cleaning aluminized mirrors on Newtonian reflectors**. These coatings are very soft and are generally washed without wiping. The exception is diagonal mirrors which use dielectric coatings (ie: Televue Everbrite, AIP Max bright). These mirrors use multi-layer coatings that are similar to anti-reflection coatings on lens surfaces. They are very durable and may be cleaned using this method.

Supplies:

facial tissue -untreated, unsoftened, unscented -Kleenex works fine -I also use lint free tissue called Kimwipes manufactured by Kimberly Clark. Some use surgical cotton. A bowl of warm water with one drop of dishwashing liquid dissolved in it.

Isopropyl Alcohol -97-99% available from pharmacies (you might need to ask the pharmacist to special order it -Target did this for me.)

Acetone -also available from pharmacies in small glass bottles -then refill from quart cans available at the hardware store.

Compressed air or very soft camel hair brush to remove dust (a make-up brush is a nice cheap alternative to a fancy watercolor brush).

Steps:

1. Although it is often possible to remove the lens cell from a refractor and replace it without affecting the collimation of the lens, I usually clean only the front element with the cell attached to the tube. The rear element is usually clean. I put a big towel or rug on the kitchen table and place the scope on it securing it so that it will not roll around.
2. Blow any dust off the lens with compressed air or with very gentle swipes with the soft brush. Dust particles can be very hard and will cause scratching if dragged across the lens.
3. Wet the tissue with the detergent mixture and, using it unfolded or with a single fold, drag the tissue across the lens working in straight paths from the inside outward. The key here is to hold the tissue far back and allow only the weight of the tissue as the application force. No Pressing! No Rubbing! I prefer tissue over surgical cotton swabs or balls because I find it easier to press too hard using cotton. Change tissue frequently. This pass will remove water soluble gunk. You can use a dry tissue at the end to blot excess water that has beaded up.
4. Wet a tissue with Isopropyl and use the same floating technique with a single layer of tissue. This will evaporate water and help remove sticky organic gunk like tree sap. Some streaks will remain.
5. Wet a tissue with Acetone and use the same technique. Do not pour the acetone onto the lens. **ACETONE CAN SOFTEN PAINT AND SOME PLASTICS**. It is also flammable. Use caution. Acetone will not harm anodized aluminum or lens coatings. You will need to rewet a few wipes as acetone evaporates very quickly. Because it evaporates quickly it is very easy to control and will not seep or spread beyond the tissue applicator. This will remove almost all streaks left from the Isopropyl and leave a beautiful clean and static free surface.
6. Admire your clean lens! Do not worry if a tiny streak remains -it will not affect the view in any way. Resist the temptation to overdo it. And do not attempt to polish with one of those nice soft cloths that come with eyeglasses! ! Airborn dust is always present and it is very hard. Rubbing this stuff against the lens will cause many fine scratches which can affect the image.

I find that I need to clean objective lenses once or twice a year at most. Crud on optical surfaces near to the focal plane is more bothersome to the image. Eyepieces (especially if you observe with children) will need more frequent attention. Don't be afraid to clean carefully. Your telescope will reward you for the job well done.

News From BAA YAHOO E-Group

Gus Cenker

Anthony Davoli: I have great news for everyone. **Lisa and I delivered Anthony Jr. Tuesday morning at 5:22 a.m. ~ 4lbs.** I was amazed to find out he was born on the same day man walked on the moon 35 years ago. Even though he was born two months early he is doing fantastic. We have had nothing but glowing reports on him from the day he was born. Lisa returned home yesterday from her 55 day stay in a hospital bed and is coming around slowly. It was an emergency "C" section but her leg and back muscles are giving her more trouble than anything. It is tough leaving your child in the hospital but we know is getting the best care. If he continues to improve at his present rate we should be bringing him home in the next week or two. Thank you all for you thoughts and prayers. If you want to see the best image I have ever taken please check out the following link.
<http://www.astro.premcom.com/ADM/Anthony%20Jr..htm>

Tom Bakowski: Alan (Freidman) has won 3rd place in Cloudy Nights Jupiter contest!!! Check it out. <http://www.cloudynights.com/contest/>
Dennis Hohman: I'd put Alan's as number 1 too! Better color, detail and composition. Glad to see your work is getting deserved recognition however!(A number of other BAA members expressed the same opinion -- editor)

Mike Israel: If anyone is interested, I have a *nice Celestron alt-az mount with a wood tripod for sale*. The mount has slow motion controls on both axes and a 1/4-20 mounting bolt, making it perfect for a Short Tube 80. It can also be used with rings. Contact me at the above e-mail address for price and pictures, if interested. I can also be reached at 689-2481.

Jim: Sat Jun 26, 2004 11:06 pm Did anyone see the **meteor or space debris** west to east about 10:50 pm Sat. night? My neighbor's guest from W. Va. yelled out and came over and asked if that was why I had my telescope out... I had shown them the moon and Copernicus' debris field near the terminator earlier and then went down to Hamburg town Pk after that to see if there were a bunch of people to show as well, but only one couple, who enjoyed the moon immensely at about 300x. (kind of windy by the lake tho'). I was just putting things away when the guy yelled out and then came over to check it out and see what I thought. Broke up into 3 or 4 parts on it's way east. I had been in the shed stowing my gear, naturally. Any other sightings about 10:45-50?

Mike: Turns out this was a Russian rocket motor as the following confirms. Kind of weird when you think about it - the Russians and the Chinese putting on light shows over the skies of North America - 30 years ago it might have had a whole different meaning... others' opinions. Gotta love skygazing!

Welcome to **S&T's Weekly News Bulletin**: Scientists, engineers, and space enthusiasts alike had much to celebrate this week: the Cassini orbiter, with its Huygens probe riding piggyback, is safely orbiting Saturn. In the process, the craft's cameras captured the closest-ever look at the planet's icy rings. The procedure went just as planned, says Cassini flight director Julie Webster (Jet Propulsion Laboratory). **The spacecraft "couldn't have performed any better."** The first 61 pictures relayed by the Cassini-Huygens spacecraft after reaching Saturn show that there is much scientists don't understand about the planet's dazzling rings. But no less surprising were early returns from Saturn's vast magnetosphere, the invisible bubble of magnetic fields, electric currents, and trapped radiation far larger than the ringed planet itself.

Group Attending Black Forest Star Party:

| | | |
|----------------------------------|------------------------------|-----------------------------------|
| Peter Proulx (BAA) | Doug O'Neal (ORAS) | Marcy Kupiec (STARS) |
| Dave Hecei (STARS) | Thom & Kat Bemus (STARS/BAA) | Tom Hoeh & Kristy (ORAS) |
| Jeff & Janice Gardner | Bill Henry Family (GCAS) | John O'Hara (ORAS/STARS) |
| Peter Smitka (Mag-1 Instruments) | Gary Marriott (London, Engl | Tom Hoeh & Kristy (ORAS) |
| Dave Wymer & Mary (STARS) | Rick Payson (BAA) | Scott Smith, Rachel & Sarah (BAA) |

Ted Jackson: Last week I dropped off my large roll of **Baader Solar filter material at the BMO**, it is in the locked cabinet by the 12". If anyone needs some of the material feel free to cut yourself a square, just please handle with care, don't get fingerprints on it and please use good judgement on where you cut your square to avoid a lot of waste. I paid roughly 11 cents/ square inch, you can pay me whenever you happen to see me, just email me if you take some so I know who has used it and who owes me what.

Ted Jackson: I just got back from the museum (I finally made it a point to take some pictures so I can put together a website) and I am now terribly upset. **Someone left the scope on** for what must have been at least a couple of days with the tracking motor running, there is no safety shutoff and it spun around a few times. The wires are all ripped out for the locking and pointing motors, the worm gear is bent, and the motor arm finally ripped itself apart to stop the thing from turning. All this activity also managed to overload the electrical relays and fried a couple of them so they are stuck in the "on" position.

To add insult to injury when I went up there someone had **left about 5 eyepieces just sitting out on a table**, some cheapo ones but also a nagler and a TV powermate, no cover or boxes, just sitting out on a table. I've put the word out to the museum staff that nobody is allowed in the dome for any reason other than putting out a fire. I'm going to get together with Torry and John and figure out how to regulate staff access to the dome and equipment.

Funny, Funny, Funny (?????)

First Spaceman: I'm hungry.Second Spaceman: So am I, it must be launch time!

What do you call a loony spaceman? An astronaut!

What do you call a space magician? A flying sorcerer!

Membership Corner

Alan and Tristan Friedman

Greetings! Somewhere in that pile of mail that greeted you on your return from summer vacation will be an envelope from the BAA. It is **September and dues season again**. As always, your prompt response is much appreciated by the membership office. If you've moved or changed your email address remember to share the news with us. You can get membership info at our new website: www.buffaloastronomy.com or email questions directly to info@buffaloastronomy.com.

We have a **bunch of new members to welcome**: Derek LaGraff, Alicia and Paul Lisak, Nathan Billings, Marlene Baumgartner, John Glavin, Louis Saad, Michael Widzinski, Barry Webber, Joseph Gervase and Alan Spencer. We look forward to getting to know you better as we resume our regular meetings in September.

Clear skies!

Upcoming Meetings

Joe Orzechowski

September 10 – “Universe Acceleration Predictions Using New Dark Energy Explanation” -- Dr. Gus Cenkner

In 1998, by studying the emission spectra from galaxies in the outer reaches of the universe, two independent teams of astronomers concluded that these galaxies have actually accelerated; they are moving at higher, rather than the anticipated lower velocities. Classical thought is that gravitational attraction, between celestial objects, should actually slow them down instead of speeding them up. They have attributed this unexpected behavior to some mysterious repulsive force that apparently permeates the universe; it has been labeled dark-energy. The nature of this dark-energy is presently unknown. In addition, there are other currently unexplained phenomena like revolving star/dark body groups, superclusters, voids, walls, and nebula vortex. These phenomena will also be discussed and related to dark-energy. A classical explanation is then given for dark-energy.

October 8 -- "Observing the Planets" -- Alan Friedman

Alan will share with us some tips on getting the most out of our visual observations and also explain what it takes to create great digital images of the planets.

Buffalo Astronomical Association Newsletter

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