



Newsletter of the LACKAWANNA ASTRONOMICAL SOCIETY, Scranton, Pennsylvania

LAS OFFICERS AND BOARD MEMBERS FOR 1987

President - John D. Sabia
 Secretary - Glenn Jacobs
 Junior Vice President - Tom Holeva
 At-Large Members - Esther Friedmann/Steve Gedrich/Ed Sidorski

Vice President - Jo-Ann Kamichitis
 Treasurer - Diane Musewicz

LAS CALENDAR

| <u>DATE</u> | <u>ACTIVITY</u> | <u>PLACE</u> | <u>TIME</u> |
|----------------------|-------------------------------|--|---------------------|
| March 3 Tuesday | Regular monthly meeting | Junior Achievement Bdg. 1007 Capouse Ave., Scr. | 7:30 PM |
| March 7 Saturday | Official club observing night | LAS/KJCO, Fleetville | 9:00 PM if clear |
| March 10 Tuesday | Board of Directors Meeting | home of J.D. Sabia | 8:00 PM |
| April 7 Tuesday | Regular monthly meeting | KJC Observatory Fleetville, PA | 7:30 PM |
| April 11 Saturday | Official club observing night | LAS/KJCO, Fleetville | 9:00 PM if clear |
| April 14 Tuesday | Board of Directors Meeting | home of J.D. Sabia | 8:00 PM |

Any special observing sessions will be announced at the meetings.
 Keystone Junior College Observatory public nights will resume on Wednesdays
 some time in March. Check the newspapers for information.

On all clear official club nights, a keyholder to KJC/LASO will be present (either John Sabia or Jo-Ann Kamichitis.) Even on club nights, if you must travel any great distance to get to KJCO, please call J. Kamichitis to be certain of the sky conditions and availability of a keyholder. Also, if the weather is at all iffy, call first to make the arrangements definite. On other clear weekend nights, contact J. Kamichitis (343-4006) to see if the place will be unlocked or whether you will have to bring your own 'scopes and warm up in your car. KJC Observatory's phone number is 945-3665, but people are not always near to hear it, KJC/LASO is at the intersection of Route 107 and Hack Road. Take either Exit 61 or 62 of I81, and head towards Fleetville.

PRESIDENT'S REPORT

Since I missed the deadline for the January-February issue of the "Ecliptic", there have been many updates to write. First, a warm welcome to Esther Friedmann, Steve Gedrich and Glenn Jacobs to the society's offices and board. It's always refreshing to have new faces and new ideas presented at the board meetings. (Not that I don't appreciate the efforts of our long time workers and officers.)

At the first board meeting, Esther suggested that we put more emphasis on educating the society members in astronomy, especially since many of our members are novices in astronomy, and they feel a need for more guidance. The resultant discussion led to a decision to add programs on astronomy basics to our meetings. These will be geared to familiarize the novice with the terms, equipment and types of objects discussed in the other programs. To help plan these programs, the board decided to purchase "Guideposts to the Stars" from Edmund Scientific and to subscribe, for one year at least, to the "Observers Guide" from Astro Cards. These materials could also be used at the telescopes and could serve as references for members volunteering to present a "Konstellation Klose-Up" at the meetings. Our next "Klose-Up" will be by Steve Gedrich at our March meeting.

The board has also appointed Tom Holeva, our Junior Vice President, as assistant historian. He will be helping Jo-Ann Kamichitis up date and organize the archives of the LAS. There's quite a few items, newspaper clippings, slides, photos, minutes, treasurers reports, back issues of the newsletter, other publications -- to be rummaged through and arranged in some semblance of order. If any one has anything they'd like to contribute to the files, please send them to Jo-Ann or bring them to one of the meetings.

The loaner telescope's new Dobsonian mount is completed. Again -- thanks are in order. This time to Joe Kamichitis for donating his time and skills. Don't forget any member can borrow the 6" for a month at a time. Just contact me.

John D. Sabia
President

DUE\$ DUE\$ DUE\$!

If our records show that you have not paid your 1987 dues, there should be a dues form included with your "Ecliptic". Now that all the officers have finally paid up, we hope you will too.

Please renew as soon as possible so that we may publish a complete membership list in the next "Ecliptic". Dues are \$8.00 adults, \$5.00 junior members, \$12.00 family members, \$20.00 contributing members.

This year make the most of your dues, attend the meetings, borrow the 6", take out some of our library books, join us for observing sessions, public nights, and special events. Really get your money's worth from our society!

The Dues Notice is on last page of "The Ecliptic".

YOUR article or cartoon could have been here.

The "Ecliptic" needs you!



OBSERVER'S CAGE

Reprinted from the October 1986 National newsletter of RASC. The article is by David Levy who's just discovered another comet on January 5 (1987a).

Astronomers are poets, Leslie Peltier once said to Walter Scott Houston. Poetry in astronomy is not a new concept. When Copernicus first proposed his theory, the greatest poets reacted. Wanting to write an epic for all time, Milton hedged his bets in "Paradise Lost," making sure that the angels did not commit themselves on a geocentric or a heliocentric universe.

One can travel either way on the road that joins astronomy with poetry. Gerard Manley Hopkins, one of the best known poets of the 19th century, began his writing career from a carefully structured view of nature. In 1864, he observed Comet Tempel-Respighi, an object that became moderately bright for a short time as it passed near the earth. What seemed to move Hopkins more than the comet, however was its position in the sky on August 4, its head near Iota Aurigae and its tail near Beta Tauri. That observation found expression in a poem he wrote soon after the sighting: "I am like a Slip of Comet," he wrote,

"Scarce worth Discovery,
Bridging the slender difference of two stars."

In this remarkable poem Hopkins describes a comet in human terms.

"It grows and sizes,
While her central star
Shakes its cocooning mists."

Comets know poetry. With each rotation, the nucleus of a major comet turns its more active side to the sun. Because Halley shedded its "cocoon-mists" in the form of major jet eruptions every 2.2 days, these were successfully predicted by the International Halley Watch Near Nucleus Studies net in time for use during the Vega and Giotto encounters. If Hopkins could have been here to see this he may not have been astonished. He probably suspected that the regular emanations of "cocooning mists" from the nucleus were an important clue to the nature of comets, a clue so important that it became part of a poem.

One need not discover the poetry that is so rich in astronomy only through observing. Through the lenses he grounds, John Brashear knew the joy of turning a piece of raw glass into a magic window to the heavens. On the graves of John and Emily Brashear are words that are also in the minds of many of us: "We have loved the stars too fondly to be fearful of the night."

We astronomers do not take life lightly, for our fondness for the stars has touched our souls. We all share the feeling of discovery, whether the object we have found is new to all or new only to us. The thrill penetrates our being. It can't be described in words how our souls have been changed by the universe sharing a secret with us. It is a feeling that observers get. Leslie Peltier shared it with Walter Scott Houston, and years later Houston would share it with us. "Last night I looked up," he said during a recent speech, "and saw the Milky Way from a dark Texas sky. And it looked better than it ever could from my home. And I felt so good. I always feel good when I look up at the stars."

COLD WEATHER OBSERVING
BY
Dick Suiter



Reprinted from the "Newsletter of the Astronmmy Club of Bay County" (Panama City, FL), February 1986 via "The Observers Digest".

Astronomy is a cold hobby. Very often, when it is warm enough to be comfortable, it's also cloudy or humid enough to make the sky look muddy. Consequently, even in Florida we often do the majority of our observing under chilly conditions (3 out of 4 nights, I'd say). It's not as bad as observing in Canada, but it's surprisingly cool. Our observing group in Ohio went out any time of the year so we naturally developed a set of rules

for (at least) tolerable dressing. Here they are with some explanations.

1) Dress for conditions 30 to 40 degrees F below the daytime high and dress in layers. The seemingly excessive temperature range is to compensate for observing being an essentially sedentary activity. People who estimate the clothing they need from their Colorado skiing expeditions ("I only needed a thin jumpsuit to take 10 degrees.") are neglecting that they were engaged in an athletic activity. I specify layers because the vast drop in temperatures during the night requires that more clothing be added. Also, the insulating qualities of the dead air spaces between many loose layers is well known.

2) Keep your head covered. It is said that you can lose half your body heat through your head, but that is only one side of the coin. Your body will sacrifice anything to keep the brain warm, including heat in the extremities. If your feet are cold, maybe you're not wearing an adequate hat. Choose a big floppy hat in preference to a tight one. A knit stocking cap (as long as it doesn't have too loose a weave) that also covers the ears is ideal. A hood over the cap doesn't hurt.

3) Do not, under any circumstances, sweat. Strip enough layers off that when you have to do something like set up a large telescope, you run no risk of perspiration. Temporarily freeze your tail off if you have to, but don't sweat.

4) Keep your feet warm by using dry, padded shoes with a fresh change of socks. Observers up North use as observing shoes a type of boot referred to as "snowmobilers boots" but they call them "Moon boots." I do almost as well with a pair of bone-dry padded shoes that I reserve only for observing. Your day-to-day shoes, even if they are very warm, are saturated with the moisture coming from your feet. You need a pair of shoes that have been arefully dried. Change your socks before you leave: they need to be dry too.

5) Don't neglect accessories. You need gloves, a scarf to protect your under-chin, and pay attention to special areas like the wrists, legs, and ankles that may represent chinks in your armor. Do not try to observe with mittens. Even though they are warmer than gloves, you'll be tempted too often to remove them to do something like turn a page or adjust an eye-piece. A friend of mine uses glove liners. These are a pair of thin gloves with a metallic material that reflects body heat. He wears them inside of his regular gloves and can even remove the outer gloves briefly. Often, wearing your biggest pair of pants and a set of thermal underwear makes the difference between being toasty warm and freezing. The legs are an especially strong source of heat loss because of their high surface area to volume ratio. Tall or thin people should be particularly conscious of this (naturally I needn't worry, on both accounts). People who bring children should be aware that children have a high surface area to volume ratio, too, so they require more bundling. (This reason also explains why small warm-blooded animals need to have metabolisms that run at blazing speed.) One person I know saved his evening when his legs got cold by wrapping his legs with a blanket and cinching it around his waist. He may have looked weird wearing what amounted to an ankle-length dress, but he was warm. It's no accident that the Russian people prefer coats that extend to the knees, if not farther.

6) WOMEN: Do not try to dress fashionably. No one can see you in the dark, so don't even try. Dress warmly, even if it makes you look frumpy. Some ladies "winter wear" is almost worthless in this regard. Generally, women freeze out before men. This is not because of any constitutional lack of toughness, but because they're not dressed for warmth. Several female observers I know can hang in there with the men because they've learned to dress for conditions.

7) MEN: Leave your machismo at home. Some men insist that they are warm wearing only a thin jacket at any temperature. They think that dressing warm is a concession to weakness. One character I know in Ohio was this way. He always was making up excuses to go inside or ran around trying to pump some heat into his limbs. He was obviously frozen to the core and he didn't fool anyone.

Still, even with fastidious preparations, be careful. I know someone

who once got a mild case of frostbite in one hand during an exceptional night during which it got to -5 degrees F. (It was also the best night I've ever observed, but that's another story.) He was dressed extremely well, but made the mistake of continually taking off his glove to change bitterly cold eyepieces or screw on equally cold nebula filters. It's better to not observe than to hurt yourself. Take along a supply of hot chocolate or coffee (even though the benefits of such beverages are mostly psychological). Do anything to keep warm.

During late August or September in Ohio, temperature swings can get violent. Sometimes, our observing group would go into a restaurant to get some breakfast after a chilly night of observing. We were dressed for High Winter when it had already begun to warm up to a daytime high over 70. We got some strange looks from patrons and the waitresses, but at least we had stayed warm!

LESLIE PELTIER'S GUIDE TO THE STARS

What?! Another beginners guide to astronomy?! Ah, but this one is written by Leslie Peltier, "the world's greatest non-professional astronomer". Or is it? AstroMedia published the book in 1986, Peltier died in 1980. In the chapter on comets, the author "writes" that Comet Halley was recovered photographically in 1982, brightened to magnitude 8 in October 1985, gave a relatively poor performance, and was observed by European and Soviet space probes. Results from the Voyager spacecraft are also mentioned and most of this came after the author's death. This guide was probably put together from Peltier's extensive notes or incomplete manuscript and filled in by someone else. Filled in to what extent -- who knows?

About half of the book is blank space. 4" wide margins are the rule with 4" of text pushed toward the spine. The margins are sometimes used for drawings or diagrams. A puzzling statement on page 34 says "... Pollux is a faint 1st magnitude star, while Castor is a bright 2nd magnitude."

The 185 page book concentrates on naked-eye and binocular observing. Constellations are discussed by season with north and south facing maps. There are chapters on variable stars (of course) and solar system objects, and plans for a revolving observing chair.

The book is conversational in tone, not merely another simplified textbook. It's simple enough for beginners, but technical enough to keep the seasoned observer from getting bored. There's just enough mythology to keep the tradition going.

I would recommend Peltier's Guide to the Stars to someone who's interest in astronomy is just building and who needs a gentle overview of the subject to provide a little direction.

Joe Kamichitis

OBSERVATORY ASIDES

The January-February issue of the newsletter was unique because the editor missed her own deadline. Probably only my most loyal readers noticed that "Observatory Asides" was missing, but since this is based on my notes to myself for the last issue you haven't really missed a thing.

#1 "Complain about the weather." That was valid after enduring the extremely cloudy though mild weather of December, but how can I gripe now, after two such beautifully clear weeks in February. To be sure January brought a total of about 30 inches of snow, but the snow is down now and the driveway to the observatory has been plowed twice so only the drift by the gate is a slight nuisance. But when have we ever seen days and days of wonderfully deep blue skies followed by crystal clear nights? Most of them during the waning moon! We even got to see Mercury from our yard at a good elevation above the horizon. Traditionally such chances are clouded out.

True, I could probably settle for whining about my sleep deficit from

spending too many late nights up at the observatory over the weekend, but who would take that complaint seriously. We had a wonderful time viewing the winter clusters and nebulae and the spring galaxies. The first night up there we could hardly decide where to look first. Once again I was amazed at how much is visible through binoculars and telescopes.

#2 "Suggest the club round up \$700,000.00 to buy the 200 acres over by KJCO." It's too late for this one. The place has been sold. It's been getting me nervous the way that land has been advertised as a "commercial; and industrial" opportunity. The area is zoned "residential-agricultural" as we learned while fighting that proposed airport. Maybe we'd better all get up there and observe before the new owners decide to put up a mall or industrial park.

#3 "Thank everyone who contributed time and effort to the club last year." Better late than never. Last year we had 80 paid members with the usual meeting attendance being 26. 17 of these attendees gave programs, or brought up goodies, or showed up to help out at public Halley watches or Promised Land State Park star parties. Three cheers for them all! Let's hope even more people participate this year.

#4 "encourage people to come up and observe." This is always a priority with me! We have telescopes and binoculars you can use, maps you can use, and no admission requirement except LAS membership and an interest in the stars. Bring your own 'scope or binoculars so you can learn how to use them, or just see how they perform away from city skies.

No one snickers because you're just learning the constellations. Even people who know their stuff may have problems picking the patterns out from all the extra stars a dark sky offers. There are no quizzes or tests, and we promise not to force you to read anything with such titles as "Is the Distribution of Binary Mass Ratios Really Bimodal?" (Fact is, we barely glance at them either.)

Spring is coming, so comfortable viewing cannot be far behind! Before you know it, daylight savings will be on us! (I recommend Leslie Peltier's autobiographical "Starlight Nights" to while away the time until it gets dark.)

Jo-Ann Kamichitis

LATE NEWS FLASH!

In the March 1987 issue of "Sky & Telescope" our own Walter Bennett has an article and photos featuring the Marlboro College Observatory in Vermont, included in the "Gleanings for ATM's" (page 327).

The "Ecliptic" is the bimonthly newsletter of the Lackawanna Astronomical Society. A subscription to the "Ecliptic" is one of the benefits of membership in the LAS. No permission is needed for nonprofit use of any material published in the "Ecliptic" provided it is properly credited.

Articles, cartoons, news items, may be sent to:

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Dues may be paid in person at the regular meeting or by mail. Checks should be made out to the LACKAWANNA ASTRONOMICAL SOCIETY and sent, along with this form, to: Diane Musewicz, 431 Palm Street, Scranton, PA 18505

Name _____ Phone _____
Address _____ Zip _____
Amount _____