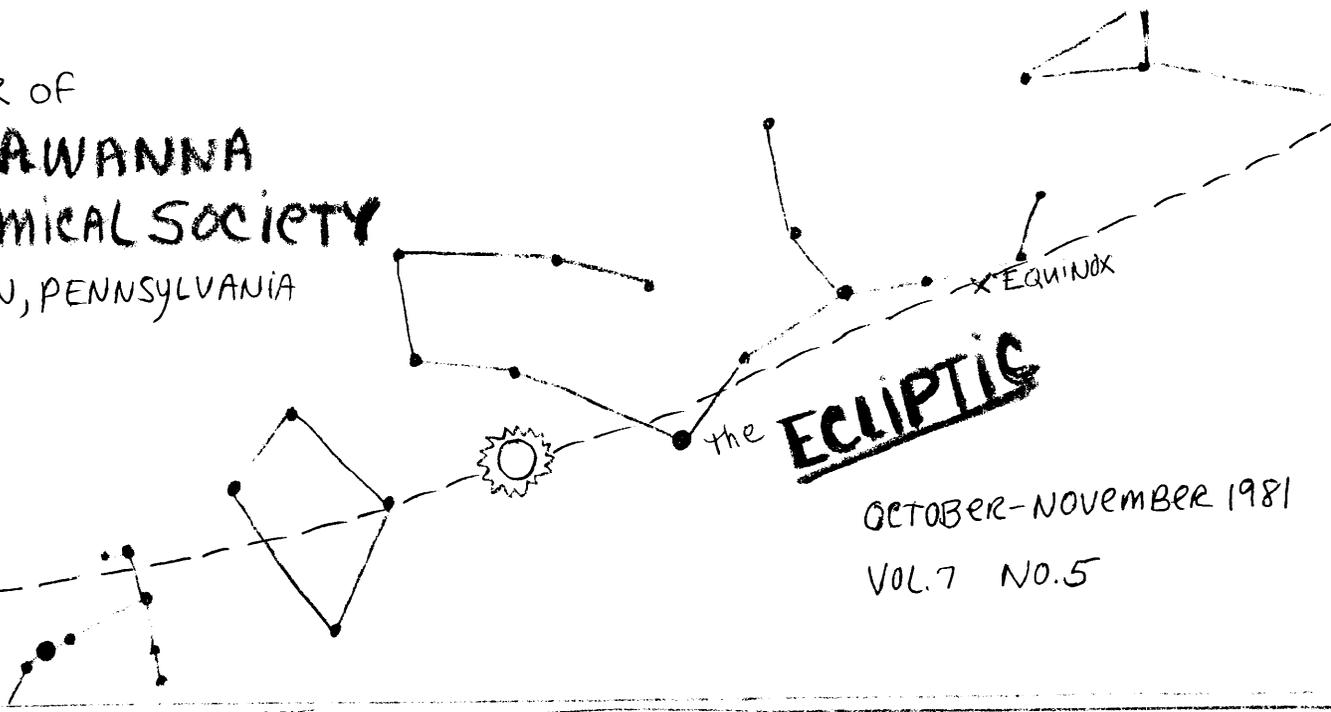


NEWSLETTER OF
 the **LACKAWANNA**
ASTRONOMICAL SOCIETY
 SCRANTON, PENNSYLVANIA



OCTOBER-NOVEMBER 1981
 VOL. 7 NO. 5

LAS OFFICERS AND BOARD MEMBERS

President - Joe Kamichitis Vice Pres/Historian - Jo-Ann Pluciennik
 Secretary - Mary Ellen Granville Treasurer - John D. Sabia
 Jr. Vice Presidents - Jill Adelstein/John Koshinski
 Members at Large - Joe Bartos/Debbie Holmes/Bill Mecca

CALENDAR OF EARLY WINTER ACTIVITIES

Regular Meetings - 7:30 pm at the Everhart Museum, Scranton, PA.

Board of Directors' Meetings - 8:00 pm at the home of Jo-Ann Pluciennik. Any interested member may attend. Contact Jo-Ann to be sure of date and directions.

Club Nights - Contact John Sabia (586-0789), Jo-Ann Pluciennik (346-3268) or Joe Kamichitis (346-4562) to see about the availability of equipment and facilities on any clear Friday or Saturday night. Scheduled dates are the weekend after the meeting at KJCO/LASO, Fleetville, PA.

Public Nights - Until early December, Wednesdays at KJCO from 7:30 pm on. Clear Mondays at Riverside High School from 8:00 pm til 10:00 pm.

Month	Regular Meetings	Club Nights	Board Meetings
Nov	10	13 & 14	24
Dec	1	4 & 5	15
Jan	5	8 & 9	19

NOVEMBER PROGRAM



On November 10, we'll be entertained and informed by Bill Speare's slide talk about another of his successful pursuits of the moon's shadow. This time Bill, acting director of the Everhart Museum, will share his experiences in the Soviet Union. We'll see the Pulkovo Observatory and Leningrad, Moscow and the Cosmos Pavilion, the Moscow planetarium (oldest and biggest in the world), Kiev, Yalta and, of course, Bratsk, Siberia at its best, while under a totally eclipsed sun.

As a comparison, see how other observers have fared in the past (taken from a flyer from "Voyages to Darkness" eclipse cruises 1978.)

2137 B. C. - The earliest written record of a total solar eclipse comes from China. Two royal astronomers, Hi and Ho, knew that an eclipse was due. According to legend, on the day of the eclipse, Hi and Ho were too drunk to perform the eclipse rites of chanting, beating drums and shooting

arrows at the dragon that was devouring the sun. The emperor ordered them beheaded for their sins.

585 B.C. - The most famous solar eclipse of classical times occurred in the midst of a battle between the Medes and the Lydians. Both sides regarded it as an omen and immediately ceased hostilities thereby ending a six year war.

840 A.D. - Louis of Bavaria, son of Charlemagne, and head of a vast empire, supposedly died of fright during an eclipse. His three sons immediately fought over succession, resulting in the division of the empire into what is today France, Germany and Italy.

1560 - The announcement of a forthcoming eclipse in France caused many Frenchmen to panic. They fought one another so that they could be next in line for the confessional. One beleaguered parish priest tried to calm the populace down by announcing that since there were so many waiting to confess, a decision had been made to postpone the eclipse for two weeks.

1780 - During the Revolutionary War, the first American eclipse expedition was organized and sent out from Harvard College. A special immunity agreement was negotiated with the British so that the scientists could work unharmed. The Harvard expedition, after all their efforts, didn't see the eclipse because they chose a site outside the path of totality.

1878 - Thomas A. Edison set up his instruments in a Wyoming chicken coop to view this total solar eclipse. When the sun dimmed the chickens came in to roost. The great scientist spent so much time fighting chickens that he had only a few seconds of the more than three minutes of totality to observe anything. This is one of the world's great chicken stories.

1925 - Those above 96th Street in Manhattan saw a total eclipse, while those below 96th Street saw a partial eclipse. Another typical day in New York.

"GO FOR THE GUSTO!"
(LAS STYLE)

Also on November 10, you'll be able to determine the future direction of our society. Yes, it's election time again. So far the nominees are -- President - Joe Kanichitis; Vice President - Jo-Ann Pluciennik; treasurer - John D. Sabia; Secretary - Diane Musewicz; Junior Vice President - Jill Adelstein, Bob Bolock, and Rob Feld ; members at large - Scott Bailey, Debbie Holmes, Bob Maleninsky and Bill Mecca.

You may have noted a certain lack of competition for most of these offices. Control your own destiny! Get more from your membership in the LAS! Put your name in for one of the offices by contacting John Sabia (586-0789) before the meeting.

OTHER PROGRAM NOTES

December Christmas Party Meeting - Look through your recipes now, so when a volunteer calls you and asks you to bring something to the December 2 Party (as everyone does) you'll be all set.

Tentatively scheduled for the December meeting is a slide/tape program about the universe courtesy of Bob Bolock, a junior member, and a "Konstellation Klose-up" about Perseus and one or two neighboring constellations by Jo-Ann Pluciennik.

Thank you Debbie Holmes - for your interesting program featuring Kitt Peak Observatory in October. A slide-talk for anyone other than your next-of-kin, takes a lot of planning and thought, and we all appreciated it. We were lucky to get Debbie as a speaker, as she's now all tied up with Physics classes at the U of S night school.

Editor's Note: Anyone wanting to follow in the footsteps of Debbie or Joe Mazzarella, our September speaker, contact any of the officers about the pro-

gram you'd like to give. We'll even help you dig up visual aids, too.

DUES CHANGE FOR 1982?

The Board of Directors is proposing a change in the dues structure of the LAS, and this being 1981, a change means an increase. Tentative basic rates would go from \$3.00 to \$5.00 for Jr. members, from \$5.00 to \$8.00 for individual Senior members, and from \$7.50 to \$12.00 for couples. This is the first time in five or six years that membership dues would be raised. While that by itself is not a valid reason for an increase, I do want to point out that we are not as bad as the U. S. Post Office.

Like most clubs, we depend to some extent on the generosity of our members for donations of time, materials, equipment, and money, and the LAS is fortunate in having many members who are especially generous. This is the way things should be, but, I believe we should find a dues structure that would make us financially independent if the need arose and, especially, free us from having to appeal to the public for funding any future major projects.

Let's consider just two of our existing expenses.

The ECLIPTIC is one of the finest club newsletters around. A newsletter is important because it gives a sense of belonging to the club and it is something to which everyone can easily contribute. Mailing costs alone are nearly \$100 for a year and will, of course, continually go up. Printing costs right now are zero but there is no guarantee that they will always be so. If we had to pay for printing, the cost of our newsletter would easily double.

The LAS Observatory will have at the very least ongoing maintenance expenses. Major expenditures, though, could decrease after this year or next since the building is nearing completion and parts for renovating the 12½" were ordered from this year's budget. Lack of funds was the major reason why it has taken so long to get the observatory to this stage and lack of funds will again prevent us from furthering its development into a serious, well-equipped, working observatory, one which we could be proud to call our own. One tentative suggestion for a long-range project is to construct a small additional building to use as an office/storage/warm-up room. Another telescope could be a possible consideration. A list of lesser items needed for the observatory (eyepieces, star charts, etc.) would be endless.

Future projects already discussed include repair and renovation of the club's "loaner" telescope, the purchase or construction of a second telescope for member loan, and the development of a new-member packet to hold and encourage the interest of people joining the club.

A dues change is, of course, a club approved measure and we will be voting on this in December. (No intent to spoil the Christmas party.) Give the matter your serious consideration. Comments and discussion are always welcome.

Joe Kamichitis
President

OBSERVERS NOTES THE ADVANTAGES OF RECORD KEEPING

If you read the "Observing Notes" section in the August-September 1981 issue of the Ecliptic, I stated "you never know what you may catch on your negative." The following story is a perfect example of this.

During our monthly Konstellation Kloseup at the regular meeting in August, Joe Kamichitis reported on a variable star, U Sagitta. U Sagitta is an "Algol type" eclipsing binary with a 2.8 drop in magnitude; from a maximum brightness of 6.4 to minimum light at 9.2. An easy object for binoculars with a noticeable difference of magnitude, it is also easily located, partly because of its proximity to the "Coathanger" cluster. The period is a short three day 9^h 08^m 05^s, but the minimum lasts only a scant 1^h 40^m.

What a challenge! Most of my observing would see it at maximum light; it would only be by chance that I would get to see it at minimum.

For the next few weeks I occasionally gazed at U Sagitta during a scan of the Milky Way -- always at maximum light! While discussing with Joe, my follow-up of U Sagitta, he stated he'd never caught it at minimum on any recent photos either. Like a brick it hit me! I might have at least 10 frames of the region over a years span of time -- photos taken for "meteor photography" in 1974, with a 35 mm camera on clock driven mounts. Even though no meteors were caught on film, I never-the-less, labelled, recorded, and stored the negatives for future reference.

Yes! I photographed the region on eight different days but on July 13, 1974, at approximately 3^h UT U Sagitta is not a 6.4 mag star, but at a dim 9th mag!

By keeping records and not discarding what may look like useless meteor photo "attempts," I captured a variable in its "act." (For those interested, the time in Julian dating is about 2442242.6250.)

I am able to show this picture, because I followed a standard procedure.

- a. recorded film type and development used
- b. exposure time
- c. date and time (in universal time)
- d. object photographed
- e. method of photography (equipment used -- camera, lens type, etc.)
- f. after development, labeled film with a code and stored it away

I use a numerical sequence code for each roll of film (example JSØ1, JSØ2, JSØ3, etc.) initials and sequence number. A log book records detailed information. An alternate method is by object code, such as moon Ø 1, moon Ø2, Jupiter Ø1, Jupiter Ø2, etc., but this can start to be difficult when there's more than one object on one roll of film. It involves duplicate record keeping. Whatever you choose, keep it clearly written.

For further reference read "Skys shooting - Photography for Amateur Astronomers" by R. Newton Mayall and Margaret Mayall, Ch. 16 "Record keeping". It was after reading this book that I got into the record keeping habit.

John D. Sabia

OBSERVATORY WORK MARCHES ON

Progress on the LAS Observatory continues in leaps and bounds of various heights and distances. We are not yet independently electrified and, unless underground hookups can be done in winter, we may not be until next spring. Before the end of this year, though, the LAS reflector should have a new look. By then, the 12½" mirror should be held by a Novak mirror mount inside a Parks fiberglass tube and directing its light through a badly needed new focuser.

The bare cinder block inside walls of the observatory were recently painted with waterproof basement paint. This will go a long way to keeping the inside drier and it's easier on the eyes. Thanks here go to John and Delores Sabia, Jo-Ann Pluciennik, and Brian Thomas. I helped out too. The color, by the way, is Bali blue. Why Bali blue? you may ask. Is this the President's favorite color? ...does it go well with his observing wardrobe? Good guesses both, but no. Was this color chosen after weeks of deliberation regarding its appearance in daylight and its usefulness under red-light conditions? Well...no. Was Bali blue used because we picked up five gallons of the stuff real cheap? You got it.

BULLETIN*BULLETIN*BULLETIN

As this issue "goes to press," personnel at Keystone Jr. College may have completed the electrical hookups at their side of the line and we will have power at the proverbial "flick of the switch."

Joe Kamichitis

FROM THE OBSERVATORY NOTEBOOK
AN UNUSUAL SIGHTING

It appears to me that ever since Jill Adelstein received her 8" Dynamax, the skies have been cloudy. Now twenty-one days of gloom and drizzle is enough. Let's have some clear skies! Maybe we're lucky she's still awaiting the arrival of her star diagonal; when that arrives, we'll probably face blizzards, tornadoes and flash floods.

Since observing has been nil, I've been looking over my notes and found an interesting account which has not yet been published in the Ecliptic. So here's another unforgettable moment in observing. (Isn't that one of the things we ask for in our membership application survey?)

"It was one of those beautiful dark summer nights in June 1975, the 11th. Jim Filipski and I were relaxing in lawn chairs scanning the Milky Way with 7 x 50 binoculars. Suddenly a -2.0 meteor flashed out of Lyra, medium to slow speed, starting off as a greenish hue, then at termination, a very bright blue. Only 2° in length, it left an impression on our eyes. A bright train was left behind, which persisted. Binoculars showed a long nebulous patch tapering off towards the termination point.

We thought this would disappear rapidly, but, after minutes had passed, we could still view it easily. We then both rushed to set up Tom Cupillari's 5" f/5 refractor (17 x 2.5° field of view). Neither of us had ever witnessed anything like this before!!

The 5" f/5 showed the train, south of the star Kappa Lyrae by $\frac{1}{2}^\circ$, beginning to form into an "S" pattern, as we watched (2:42 UT). Two minutes later, the train moved much closer to Kappa Lyrae and now appeared as a "U" shape, about 1° in length. Another three minutes passed and it was now a circular 1° patch, moving towards the east, 2° south of Kappa. It remained this shape the rest of the night. We continued every now and then to sight it with the scope as it travelled eastward. The last time I observed the train was at approximately 5^h00^m UT."

Ever since this event, I keep binoculars handy during the major meteor showers.

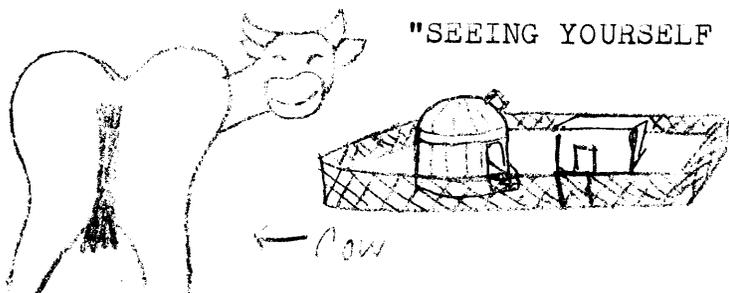
John D. Sabia

OBSERVATORY ASIDES

Every fall brings mixed emotions. The bright crisp days of colorful tree-covered vistas are too few around here, compared to days of sodden leaden skies. The heightened pace of public night activity, is countered by the melancholy fact that I have to go back to work and face a lot of reluctant 9th grade Earth & Space scientists. Longer nights and shorter twilights also mean "Gads! Can it be so cold already?" And that uniquely autumnal aggravation, the nocturnal deer spotters. (I keep telling Joe not to wear his antler-decorated hat, but does he listen?)

Still there's nothing like astronomy to give you a sense of time and timelessness. So you've lost your view of the galactic center with only Fomalhaut to replace it! The Andromeda galaxy and M15 are riding high, and soon the Orion and Perseus spiral arms will rise to do their best to displace it and Cygnus in your affection. And if you go in for all night observing sessions, you'll be seeing Scorpius rising before you know it.

Speaking of school, as I was earlier, last year I really pushed the idea of visiting KJC Observatory in my 9th grade classes. What follows are some excerpts of their reports.



"SEEING YOURSELF AS OTHERS SEE YOU"

"On our trip up to the KJC Observatory we first started out getting lost and asking for directions. Finally we got up there and then noticed the cows."

"The observatory was not isolated and therefore very easy to find considering

the many roads leading everywhere. I expected to see a few cows ... but not such enormous amounts."

"We waited in the van for about 20 minutes until a yellow car pulled in the road. A woman stepped out and opened the gate, while a man got out and walked ahead to get the cows off the road. Then the yellow car led a caravan of vehicles up the road leading to a small tan building and a white structure with a domed top next to it."

"I was shocked when we drove up a dirt road and saw a silo and a little brick building. I was expecting to see a big million-dollar college planetarium with many huge telescopes."

"[We] arrived at the Keystone Observatory at 7 pm (est) EDST on May 27, 1981. At first we thought we were in the wrong place, thanks to false information from Mr. K___, that the dome was a huge thing. We also noted the fact that the place was completely and utterly deserted (How were we to know that nobody came until dark?) The gate was locked so Mr. L___ got the idea to climb under the fence. To the best of my recollection, these were his exact words. "Ah!! My back!! I got shocked! The fence is electrified!" Naturally yours truly did not believe him and I advanced boldly onto the fence, reached out and grabbed it. I will not use my exact words when I found out that Mr. L___ was not lying."

"The building alongside the large telescope is white cinder block. Inside there are many chairs for the surprising number of guests."

"There was a "ladies" room which was a spider's delight. Also present was a very ugly, black bug which attacked my friend who lived to tell about it. All in all it was a nice place although surrounded by cows and bugs."

"We did not spend much time in the little cinder block building initially, but were led into the observatory building by your co-worker. He then gave us much information about the telescope and we scribbled furiously at our note pads to keep up."

"Now because the sky conditions were cloudy (that'll teach us to wait until the last minute hah?) we didn't get to see anything, but were treated to a lecture and slide show by our beloved teacher (applause). This particular lecture had to do with solar eclipses and your adventures in the quest for the above."

"Also observed is that many of Miss Pluciennik's family members like to pose for pictures which were in the slide show."

"I have only one comment and that is that you get a heater put into the observatory so that people will not have to run back to their cars to get warmed up. Otherwise the trip was very much worth it."

"On our trip home we had a crowded car. As we whizzed down the long highway, we struck a hole. The tire went flat and as a boy changed the tire, all of us looked for the lost hubcap. It was a very interesting and exciting trip."

"We took a pleasant drive out to the country. This ride was not only for pleasure, but also to take us on an adventure. As we approached the KJC Observatory, we were feeling forced into going and we were looking forward to the end of this project."

"We entered the observatory and peered through a large refractor telescope. First the assistant pointed out Jupiter ... We circled the inside of the observatory until it was our turn again to look at Saturn. Saturn came into view as if it were a picture."

"Again we circled the observatory and this time we met a couple of boys -- nothing to get excited about though. What gave us a big kick was that they came to the observatory without being forced."

"Being it was a clear night and we were away from the city lights, my companions and I chose to seek out constellations for another Science project due shortly after our visit."

"On our way home our opinions of the adventure began to change. We were

somewhat glad we were made to go, just as one is glad his mother made him stand up straight with his shoulders back, when he was younger. And then we realized that it wasn't so funny that the boys we met came on their own, and we agreed to visit the observatory again."

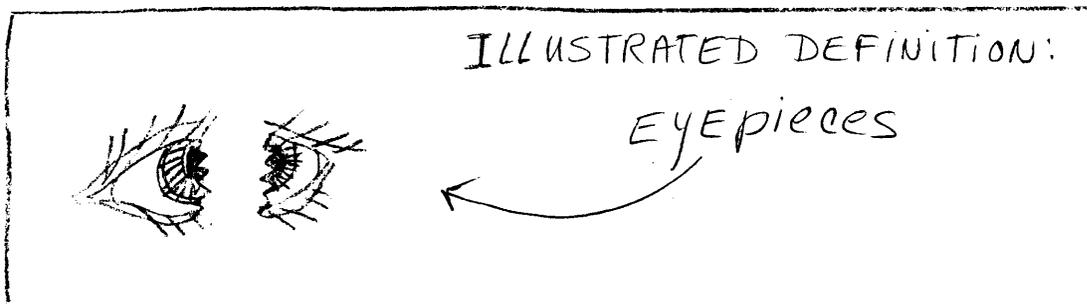
Jo-Ann Pluciennik

NEW MEMBER

Dave Zahorsky, 501 W. Atherton Street, Taylor, PA 18517 562-2837

KOSMIC KOMICS

by KOSEK



DID YOU KNOW?

Venus is the only evening planet of the five classical planets, achieving greatest elongation in November and greatest brilliancy in December?

One of your best chances to see Mercury for a while will be in the morning in early November?

Mars, Jupiter and Saturn are all morning planets with Mars in Leo, and Jupiter and Saturn in Virgo?

Fifteen years ago (November 17, 1966) the Leonid meteor shower gave its latest

great show over Arizona? (2,300 meteors per minute for 20 minutes)

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