

MARCH-APRIL 1983  
VOL. 9 NO. 2

the  
"ECLIPTIC"

MARCH  
EQUINOX

NEWSLETTER OF  
the LACKAWANNA  
ASTRONOMICAL SOCIETY  
SCRANTON, PENNSYLVANIA

LAS OFFICERS AND BOARD MEMBERS FOR 1983

President - Jo-Ann Pluciennik  
Treasurer - Joe Kamichitis  
Junior Vice President - Scott Bailey  
At-Large Members - Jill Adelstein/Bob Bolock/Bill Mecca  
Vice President - John D. Sabia  
Secretary - Bob Maleninsky

LAS CALENDAR

<u>DATE</u>	<u>ACTIVITY</u>	<u>PLACE</u>	<u>TIME</u>
March 1 Tuesday	regular meeting	Everhart Museum	7:30 PM
March 5 Saturday	club observing night	KJC/LASO, Fleetville, PA	Usually after 9 PM contact J. Sabia 586-0789 or J. Pluciennik 346-3268
March 15 Tuesday	Board of Direc- tors meeting	home of J Pluciennik call to be sure there's no change	8:00 PM
April 5 Tuesday	regular meeting	Everhart Museum	7:30 PM
April 9 Saturday	club observing night	KJC/LASO, Fleetville, PA	contact J. D. Sabia or J. Pluciennik
April 19 Tuesday	Board of Direc- tors meeting	home of J. Pluciennik	8:00 PM
April 23 Saturday	"Astronomy Day" Display/Star Party	to be announced	
May 3 Tuesday	Joint Meeting with Riverside Astronomy Club	Riverside Observatory at High School, Taylor	7:30 PM
May 7 Saturday	club observing night	KJC/LASO Fleetville, PA	contact J. D. Sabia or J. Pluciennik
May 17 Tuesday	Board of Direc- tors meeting	home of J. Pluciennik	8:00 pm
May 21 Saturday	Bus Trip American Mu- seum of Nat. History/Hayden Planetarium	Viewmont Mall	7:30 AM

## SPRING MEETINGS

Since "Punxatawney Phil", the well-known weather forecaster, did not see his shadow on February 2, the Board of Directors felt it was safe to gear up the LAS for the faster pace that comes with the warmer weather.

We've tried to provide a variety of programs at the meetings. In March we've scheduled the movie "Observatories," the most recent of the Kitt Peak films. (This film was mentioned in "Sky & Telescope.") In April we have a slide/talk on the "Moons of Jupiter." In addition, there will be "Upcoming Events" talks and possibly one "Konstellation Klose-up."

In May we'll have a joint meeting with the Riverside Astronomy Club. The program will partly be on the early days of Riverside High School Observatory. The rest is still in the planning stages. Who knows what the mind of an art teacher-observatory director will come up with. Afterwards there will be observing through the school's 3" Unitron and 14" Celestron.

Come to the meetings. Let us know what you like, what you do not like, and, particularly, what improvements you would suggest. We're also looking for input about our Astronomy Day activities in April.

Be warned! At the last few meetings attendance has been a little light even though the weather has been good. If things don't improve, we may have to go for some of the more "lunatic fringe" suggestions for programs by our board members. One has been overheard muttering to himself about volunteering to put on a juggling display featuring oculars or small finderscopes. We hope we don't have to resort to that!

See you all at the meetings.

Jo-Ann Pluciennik  
President

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### TEN BEST EXCUSES - ANONYMOUS

1. I don't like to go to meetings.
2. I haven't helped out before, I wouldn't know what to do.
3. I've helped out before. It's someone else's turn.
4. I put in a lot of time on school work after hours.
5. I'm taking a graduate course one night every week.
6. I'm going to be taking a graduate course soon.
7. I pay my dues. Isn't that enough?
8. I'm new. I don't want to upset "them" right off the bat.
9. I've been here for a long time. I don't want to upset "them" now.
10. I'd like to, but my spouse won't let me.

The following are the carefully thought out answers to the above excuses. They may be used in any order.

- a. AAAAWWW.
- b. You've got to be kidding.
- c. Who does?
- d. No.
- e. Who doesn't?
- f. Whom do you suggest?
- g. Give it a chance.
- h. That's nice.
- i. Get serious.
- j. That's worse than "my dog chewed it up."

Remember the club is only as good as you make it.

### JUPITER'S SATELLITES REMEMBERED

Everyone knows the proper names of Jupiter's major satellites, but many times they are referred to by their Roman numerals I, II, III, and IV in order of increasing distance from the planet. It's not always easy to remember that satellite I is Io, II is Europa, III is Ganymede, and IV is Callisto, but I have a suggestion to help you remember.

The first letters of I, II, III, and IV are IEGC. If these letters formed an easily remembered word like NATO, NASA, or ARCO there would be no problem. But try to pronounce IEGC and your tongue careens off the roof of your mouth and gets jammed in the back of your throat leaving you short of breath for five or ten seconds. A better solution is in order and here it is. Use the first letters of the satellites to form an easily remembered sentence. Precedents include Every Good Boy Does Fine for EGBDF (musical notes) and Roy G. Biv for the colors of the rainbow.

To remember that satellites I, II, III, and IV are Io, Europa, Ganymede, and Callisto I present the following -- I'm sure you can think of others.

If Everything Goes Crazy.  
I Eat Graham Crackers.  
Icing Envelopes Good Cakes.  
If Europe Goes Communist.  
Increasing Efficiency Gets Credit.  
Insufficient Effort = Government Concern.  
Infusing Energy Goes Critical.  
Increasing Energy Gets Costly.  
Internal Envy = Green Complexion.  
In Effect, Greed Corrupts.

Joe Kamichitis

Editors note: We've extracted a promise from Mr. Kamichitis that he will not carry on this way at the April meeting.

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### OBSERVER'S PAGE "An Eclipsing Binary"

Last year in this column I mentioned the variable star U Sagittae, an eclipsing binary with an appreciable difference of magnitude. A catalog of eclipsing binaries gave me the time of minimum, and the period, and I was able (with the help of a pocket calculator) to determine the times of the next group of favorable minima.

Now that we were all set to compare the calculated times with the actual eclipse, Joe Kamichitis, Jo-Ann Pluciennik and I kept tabs on the weather until finally one evening the conditions were right. For two hours we watched U Sagittae fade to minimum and then resurge back to maximum. It was an interesting phenomenon to watch.

Since then Joe has called my attention to another star of similar behavior, U Cephei. This star, located in Cepheus, very near to the North Celestial Pole, is visible every night of the year, providing us with many opportunities to observe its minimum.

The position on the Celestial Sphere of U Cephei is  $0^{\text{h}} 57^{\text{m}}$ ,  $81^{\circ} 37'$  north. Its normal magnitude is 6.8 mag., while during totality the light dims down to 9.2 mag. This fall toward minimum requires four hours, while the eclipse itself lasts two hours. The eclipse repeats every 2.49 days.

The predicted times of minimum are listed in Greenwich Mean Astronomical Time, as a decimal of a day. This accounting of time eliminates the change of day at midnight, by having zero hours beginning at noon Greenwich time.

For the Eastern Standard Time Zone .5 is at 5:49 PM, .6 is at 8:12 PM, .7 is at 10:57 PM, .8 is at 1:00 AM the next day.

When attempting to observe minimum, begin at least two hours before predicted minimum.

<u>DATE</u>	<u>GMAT</u>	<u>EST</u>
March 2	.729	11:19 PM
7	.710	10:52 PM
12	.701	10:37 PM
16	.687	10:17 PM
22	.673	9:57 PM
27	.66	9:39 PM
April 1	.646	9:18 PM
6	.632	8:59 PM
11	.618	8:38 PM
16	.604	8:18 PM

Let me know if you catch any of these minima.

John D. Sabia

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OBSERVER'S REPORT

On the night of January 6, 1983, while walking northwest, I noticed a bright meteor fly into my line of sight. This happened at 9:00-9:15 PM. The meteor was bright blue changing to bright green then to yellow just before burning up. At the time of its demise it increased 0.5 magnitude to reach a peak brightness of -4.5. The meteor died out about 20° above the N-NW horizon, which is the direction in which it was headed.

Scott Bailey

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BRING BACK LOOSE-LEAF BURNHAMS

Robert Burnham's Celestial Handbook has, of course, become one of the most-read, oft-quoted, and trusted companions of amateur astronomers everywhere even though it does not have the words "Don't Panic" written on its front cover. When I was President, I thought of beginning each meeting with a reading of a particularly fashionable passage from one of its 2,138 pages. I was deposed shortly afterward.

As good as the Handbook is, it does have some drawbacks. Have you ever wanted to use it in the field for information on three or four constellations only to find that you needed to carry all three volumes? Ever try eating your Fruit Loops and reading about Crux at the same time over breakfast? Definitely a two-hand operation.

The Handbook was first published in a loose-leaf format and a while ago I took a giant step backward and converted my Dover paperback edition into that convenient style. I removed the bound edge in a matter of seconds using a professional paper cutter and with an industrial model paper drill I punched three holes in each volume to fit into standard 6 x 9½ binders. A local printing shop should have the necessary equipment. These binders are not thick enough to hold a complete volume but five binders hold around 400 pages each chosen so as to not divide any of the constellations. Now the pages lie flat to within a quarter wave, I can lean a binder against the wall and it stays put, and I can pop out any section I need and take it to the telescope for an in-depth observing session.

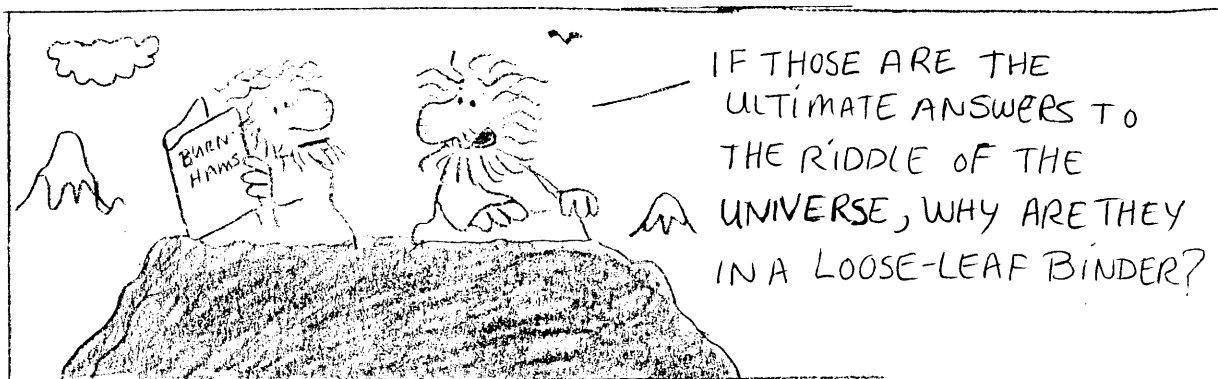
Joe Kamichitis

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A QUICK BURNHAM'S QUIZ

See if you can decode these notations without consulting 2 or 3 friends,  
vmsbM                      pLpFlC                      eEbN  
Rrrr                              SBri

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### LUNAR ECLIPSE 1982

When the July 1982 total lunar eclipse was over, it was hailed as the darkest eclipse since that of December 1963, even though the moon was always visible with a definite reddish hue on one hemisphere. However, as I compare it to the December 1982 total lunar eclipse, I must say it was not all that dark.

I began my observing of the December eclipse well after first contact, since the eclipse was on a weeknight and I needed plenty of rest for the next day's work. All appearances were similar to July's event. Just before totality, the northern hemisphere took on a slight bluish tint near the "illuminated cusp." This was seen easily with 10 x 50 binoculars. This color faded at totality, as the southern hemisphere showed a slight trace of a reddish hue as seen with the binoculars.

The moon was some  $10^\circ$  from the local horizon in morning twilight. With the unaided eye, I found all the stars of Gemini around the moon, but I was unable to see the eclipsed moon! Only with binoculars was the outline of the globe seen.

Certainly twilight had some part to play in this, but I'm still content that this eclipse was the darkest I've witnessed in the past 14 years. Can you imagine, Halley's comet will have come and gone before the next total lunar eclipse is viewed in the skies of northeastern Pennsylvania.

John D. Sabia

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### ECLIPSE CONTROVERSY

The recent total lunar eclipse in December could safely be called great by all those who viewed it. It is not very often that you get an event such as an eclipse that amateur astronomers do not find exciting. After viewing such an event it's hard to keep your observations a secret. Once you start describing how totality appeared to you, you can usually count on hearing five or ten other reports. For the most part, everything about the observations is pretty uniform. Sure, things like whether "brick red" is closer to orange or brown are often debated about, but that's to be expected.

After trading observations with some area astronomers, I have found that "two" eclipses were seen. One was basically very dark at the north limb requiring some type of optical device to view it at totality. This "same" moon had a slight dim red cast to the southern limb that was faint to the naked eye. In fact, if it wasn't for the slight brightening of the southern limb the moon would have been very difficult or impossible to see at totality. This is what I and several other observers in the Fleetville area saw. Bill Speare said it was the second darkest lunar eclipse he had seen with the darkest one being the famed total eclipse of December 30, 1963.

The other common description of the eclipse which I have heard from observers in the Taylor-Moosic area and also Madison township area is that the red-orange color of the southern limb was very noticeable and that the entire limb area of the moon could be seen except for a tiny dark spot in the northern hemisphere.

These are two strikingly different views of the same event. The only things that come to mind for a difference like this are atmosphere and observers. Believe it or not the atmosphere can change drastically within a

10-20 mile area. Any good observer (including variable star people and photometrists) will tell you this. Maybe the atmosphere was "playing games" on the morning of December 30, 1982 over our area? Different observers, unless well trained, can also give strikingly different reports of the same event. Organizations such as the AAVSO, IOTA, IAPPP and ALPO always take this into account with their data because no two people see the exact same thing the same way.

Whatever the reason for our "Tale of two Eclipses," all I can safely say is that with the two total eclipses we have been treated to this year, six years is too long to wait for another.

Scott Bailey

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MEMBERS' NEWS

Junior members have been busy. Kenny Czyzyk had four drawings on display at the Everhart Museum in the Scranton School District's annual art competition. Kenny's won several awards (ribbons, keys, etc.) in previous exhibits too.

At the Regional Meeting of the Penna. Junior Academy of Science. These LAS'ers did well -- Tim Ball, computer science, a second award; and Paul Percival, environmental science, a second award.

Former member, Tom Kasuba, did best of all -- a first award in Botany, a \$500 U of Scranton scholarship award, and being in the honors group of the Westinghouse Science Talent Search.

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1982 REVISITED

As was noted before, our January meeting had a light turnout. To compensate those members who missed that meeting we now present one of the highlights -- the 1982 fiscal report by John D. Sabia.

Income	\$472.00		
Interest	16.78		
	<u>\$488.78</u>		
Disbursements	<u>406.63</u>		
Net gain	\$ 82.15		
		DISBURSEMENTS	
		Dues notice stamps	\$ 6.20
		Bulletin Board	5.00
		250 Star Charts	25.00
		Light dimmer	7.00
		8½ x 11 envelopes	10.00
		Bulk roll Panatomic-X	17.00
		Secretary Expenses	6.00
		<u>Ecliptic</u> postage	48.00
		Film Developing Kit	7.00
		Postage - member package	13.50
		Projector extension cord	10.00
		2 Films	24.00
		Meeting Hall	24.00
		Paper for <u>Ecliptic</u>	49.00
		RASC Handbook	7.00
		Tirion Atlas	13.48
		Mag 5 Atlas	7.00
		Oculars (Meade's)	82.50
		Ocular Case	8.95
		Money Order	1.00
		Donation to Independent Space Research Group for the Amateur Space Telescope	35.00
			<u>\$406.63</u>

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DUES DUES DUES

Some of you may have noticed a yellow dues notice included with your "Ecliptic". This is being sent to all 1982 members who have yet to renew for 1983. Please pay your dues as soon as possible if you wish to renew. Checks should be made payable to the "Lackawanna Astronomical Society" and be mailed to the treasurer -- Joe Kamichitis, 1066 W. Market St., Scranton, PA 18508.

If there is a mistake and you have already paid, but received a yellow slip anyway, contact Joe, too.

A membership list will be published in the May-June 1983 issue of the newsletter. We would like this to be as complete (and as long) as possible. If your dues are not paid by May, you will not be listed, and this will be the last "Ecliptic" mailing you will receive.

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#### OBSERVATORY ASIDES

This winter has been very quiet; not really bitter cold; not many snow storms; what snow there's been, melting quickly or drifting in such a way that we've hadn't had to walk in at all. The only problem with mild night temperatures is that they're due to cloud cover trapping radiation from the ground.

Last month we had a really nice club night. Some one new actually showed up and we were given the chance to introduce them to the constellations, the use of good sky charts and small telescopes. That made a sky streaked with high, patchy and streaky cirrus, fun.

December was mild in other places besides here. A friend of mine from Fairbanks, Alaska reports that temperatures were in the 20's and 30's above zero when they observed the lunar eclipse. It sounds like she too saw a lot more red on the moon than I did.

There were seven of us up here for the eclipse, including one non-member. The moon looked like a grey putty ball with no detail on it (except for hints of the darker maria) sitting on black velvet set with, if not diamonds, then a myriad rhinestones. This was the most I've ever noticed the stars around an eclipsed moon. As twilight brightened, the moon couldn't even be seen in the 5" f/5 refractor. It was startling to see how bright the uncovered sliver of moon was, once it popped out from the shadow.

The 'drive home was an experience too. Besides being "up" because of a successful session of seeing the eclipse, the dawn was one of those mornings where (if you're fully awake) you feel the world has just been remade and is all in mint condition.

Jo-Ann Pluciennik

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#### THE BIG BUS TRIP 1983

The LAS is sponsoring a bus trip to New York City to go to the Hayden Planetarium and the adjacent American Museum of Natural History. The Hayden is well known for the quality of its planetarium presentations, while the Natural History Museum has something to please anyone with a taste for the outdoors. Here is a list of some of the attractions.

Astronomy - besides the planetarium, there is the new Hall of Meteorites which has just opened up in the past year or two.

Rocks and Minerals - The museum houses one of the most extensive and beautiful (as well as beautifully organized) mineral and gemstone displays.

Fossils - an absolutely huge and amazing display of fossils, especially well known are the dinosaur skeleton displays.

Wildlife - The dioramas of wildlife put you right in the wilderness with them (plus any stars shown are placed correctly) and don't forget sealife hall with the great Blue Whale suspended above it.

Anthropology - They have a huge collection of Amerindian and Eskimo artifacts and art.

The museum is fabulous and would take you days to thoroughly go through it.

This trip is open to LAS members and their guests, and (because of our historical problem with filling buses) Mineralogical Society of Northeastern Penna. members and guests. Make your reservations early to assure yourself

of a seat on our small 41-passenger bus.

Time and Date - We'll be leaving from the Viewmont Mall parking lot at 7:30 AM EST, not GMAT, on Saturday, May 21. We'll be leaving the Natural History Museum around 5:00 PM.

Costs - The bus ride costs \$11.00 per person. Young junior members must be accompanied by an adult. Payment should be included when you make your reservations.

All other costs are extra. Museum entry - a donation is requested. Hayden Planetarium - \$3.25 for adults, \$1.50 for children from 2 to 12 years old. Naturmax Theater - (a multistory movie theater) \$3.00 adults, \$1.50 for children

Food - I would recommend you take snacks with you for on the bus. We will not be stopping on the way back. There is a cafeteria in the basement of the museum (hot dogs, etc.). They do not allow box lunches. There are few restaurants in the surrounding area.

Sign up for the trip now! Or at least soon! Not only will you make the trip a success, but both you and your guests will have a great time.

Reservations should be accompanied by payment. Make checks payable to the "Lackawanna Astronomical Society". Sign up at the meetings or send your reservations and checks to : Diane Musewicz  
952 N. Webster Ave.  
Scranton, PA 18510  
961-1264

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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."

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