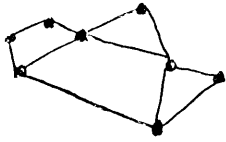


# the "ECLIPTIC"

NOV-DEC. 1983  
VOL. 9 NO. 6



SOLSTICE



NEWSLETTER OF  
the LACKAWANNA  
ASTRONOMICAL SOCIETY  
SCRANTON, PENNSYLVANIA

## LAS OFFICERS AND BOARD MEMBERS FOR 1983

President - Jo-Ann Pluciennik  
Secretary - Bob Maleninsky  
Junior Vice President - Scott Bailey  
At-Large Members - Jill Adelstein/Bob Bolock/Bill Mecca

Vice President - John Sabia  
Treasurer - Joe Kamichitis

## LAS CALENDAR

<u>DATE</u>	<u>ACTIVITY</u>	<u>PLACE</u>	<u>TIME</u>
Nov. 1 Tuesday	Regular meeting ( <u>not</u> postponed this year)	Everhart Museum	7:30 PM
Nov. 5 Saturday	Official club observing night	KJC/LASO, Fleetville	9 PM & on
Nov. 15 Tuesday	Board Meeting	home of J. Pluciennik	8:00 PM
Nov. 16 Wednesday	Last public night	KJCO, Fleetville, PA	7:30 PM
Dec. 6 Tuesday	Regular meeting/ Christmas Party	Everhart Museum	7:30 PM
Dec. 10 Saturday	Official club observing night	KJC/LASO, Fleetville	9 PM & on
Dec. 13 Tuesday	Board meeting	home of J. Pluciennik	8:00 PM
Jan. 3 Tuesday	Regular meeting	Community Room Viewmont Mall	7:30 PM
Jan. 7 Saturday	Official club observing night	KJC/LASO, Fleetville	9 PM & on
Jan. 17 Tuesday	Board meeting	home of J. Pluciennik	8:00 PM

On all official club nights, a keyholder to KJC/LASO will be present (either John Sabia or Jo-Ann Pluciennik.) On other clear weekend nights, contact J. Pluciennik (346-3268) to see if the place will be unlocked or will you 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 the phone to hear it. KJC/LASO is on Route 107, about halfway from Exit 61 of I 81, as you head to Fleetville Corners. You take a left on Hack Road. The gate is right there.

## EARLY WINTER MEETINGS

The next two meetings promise to have even more-than-usual interest. November 1 is the usual election excitement. The nominations committee has made the following recommendations, however, they'll be eager to take any nominations from the floor. The nominees so far are: Jo-Ann Pluciennik, president; John D. Sabia, vice president; J. Michael Schirra, secretary; Joe Kamichitis, treasurer; and Bob Bolock, junior vice president. (This last one should scotch rumors that only people whose first name begins with "J" are allowed to hold office.) Nominees for three "at-large" members are Lu Ann Naughton, Frank Maros and Debbie Holmes. Remember, you can still add your name to this list.

To relieve the tension of the elections, our program features Bill Speare this time showing us "The Far East and the Java Solar Eclipse." Bill's travelogues are always interesting and his extensive eclipse experience gives us a chance to hear first hand comparisons of this particular phenomenon to others he's seen.

Please note that our meeting is not postponed by a conflict with the general election this year. We will meet on November 1, while election day is November 8.

December 6 will be our usual gala Christmas Party; you can expect to hear from the party committee soon, asking you to come and to contribute to the festivities. The Christmas Party is usually the best attended of our meetings. This year we'll have John Sabia talking about the "International Halley Watch"'s plans for the up-coming Halley's Comet apparition. John's a member of the "ALPO" comet section and has had his comet photos and observations published. He has also edited the report on Comet Kohler published in "The Strolling Astronomer". John's enthusiasm for Comet Halley is quite contagious and will suit the party mood. Where else can you both learn to take advantage of the chance-of-your-lifetime to observe that most famous comet, and have a great meal besides?

Jo-Ann Pluciennik

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## OBSERVATORY UPDATE

Coming to KJC/LASO will bring some surprises. The classroom building has been repaired and repainted inside and out. (Thankfully in a creamy color rather than that old glaring white.) In addition, at LASO, my 4" f15 refractor has been attached to the 12 $\frac{1}{2}$ " to be used as a guide scope for astrophotography. You'll have to wait to use it though, since the finder has not yet been reattached and the clock drive has given out. This most recent problem has been traced to a bad motor. Since we have the clock drive dismantled, an improved drive system is being considered. Information on commercially made drives has been requested and is expected to arrive any day now.

The 12 $\frac{1}{2}$ " is still available for visual use, however. If you don't care for sighting along the tube to find things, use the 10" instead. For visual observing, the Dobsonian is a true pleasure to use. Simple to operate and with enough aperture to make many NGC objects nearly as obvious as M81 and M82.

The college is also awaiting delivery of a Meade equatorial mount and a guiding eyepiece with an illuminated reticle. The clock-driven mount will be placed on the tall white pier at the observatory. When polar alignment is completed, it shall serve as an excellent base for guided astrophotography with small telescopes for piggy-back photography. Any ambitious society member can make a platform to attach to this mount for your own scopes or cameras.

John D. Sabia

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HELPFUL HINTS  
(or Teaching an Old Barlow New Tricks)

After four years of intensive astronomy on top of a quarter century (gulp!) of off and on interest I've come upon some ideas and equipment applications which might prove helpful to other telescope users.

Fumbling around in the cold and dark with allen set-screws and allen wrenches is a losing proposition. Many equatorial mounts have these all over the place -- they are in the top of the pier, in counterweights, locking rings, in setting circles, and at the junction of the cradle and declination axis. Most are the usual  $\frac{1}{4}$  x 20 (around which, I'm told, the world revolves) or  $\frac{5}{16}$  x 18 and I replace them early on with hex-head bolts. In some places the bolts can be hand-tightened so a wrench is not needed and the combination of the larger bolts and a regular open-end wrench gives a much tighter connection in places where play must be eliminated.

Wing nuts are also a pet peeve of mine. They are bad enough to maneuver once they're on a bolt but getting them started in tight corners or when your fingers are frozen can be very frustrating. Those I have most trouble with are used to attach the legs to the pier. I'm replacing these with homemade knobs of  $\frac{1}{4}$ " aluminum about  $1\frac{1}{2}$ " in diameter drilled and tapped to fit the bolts I'm using. These are similar to the knobs used to fasten cradle rings to a cradle and may be available in hardware stores but I haven't seen them.

Speaking of cradle rings, an unused ring may be given a new life by using it as a tube counterweight. Simply strap it onto the mirror or eyepiece end of the tube and slide it back and forth to make fine adjustments in balance. Compensate for the slight asymmetry by positioning the heavier side in the plane of the tube and declination axis or make use of it to help counterbalance any off-axis weight caused by the eyepiece and finder area.

Astrophotographers using a Meade eyepiece projection unit and the Research Grade eyepieces try this: unscrew the barrel of the eyepiece and thread the head directly into the prime focus adapter, then insert the assembly back into the body of the projection unit. This makes for a more stable set-up than using the set-screw to hold the entire eyepiece and since only the head is used and sits deeper in the unit the projection distance is increased giving greater magnification. Other eyepieces may be used providing the head is removeable, the threads mesh at least to some extent, and the diameter of the head is small enough to fit into the body of the projection unit.

Barlow lenses have always been one of my favorite pieces of equipment. They rank right up there, for instance, with my "I Saw Linda Sensening at Kutztown" button. I think they're great with 20mm Erfles even though I've read that this combination is not technically compatible and I really believe they can sometimes improve performance since I've split close double stars with a barlow and a medium power eyepiece when I couldn't split the same star with a short focal length eyepiece giving nearly equal magnification. Recently, though, my Meade model 122 has been put into some unusual service. When I put together my 6" f/10 I saved \$40 by making my low profile focuser from a 3" square x  $\frac{3}{4}$ " block of wood. At first I used a Novak extension tube for a focusing tube but the limited travel prevented some eyepieces from focusing and the barlow from being used at all. My barlow, of course, accepted  $1\frac{1}{4}$  eyepieces so by unscrewing the eyepiece half and enlarging the hole in the focuser I came up with a convenient focusing unit. Since only the lens assembly of the barlow exists, using it requires some ingenuity. In a spurt of inspiration (inspiration always comes in spurts) I found that taping the head of the eyepiece to the barlow lens assembly gave me a 1.4761904 power barlow. Improving on this somewhat inconvenient set-up, I now more or less permanently tape one parfocal ring to the barlow and simply screw in any eyepiece head I choose to use. All of my eyepieces fortunately come apart. Just by chance (I suppose) the barlow has very nearly the same thread as the prime focus adapter on my projection unit so the lens can be attached directly to a camera body for barlow projection photography with the camera much closer to the tube than it normally would be. With one adaptation leading to another I found that by attaching the barlow to the base of the eyepiece projection unit and then placing an eyepiece in the top I came up with a variable power barlow lens!

When I make a more refined focuser I'll probably do it with a hole just large enough to accept the eyepiece directly and with the image just an inch

or so outside the tube. Then my trusty barlow will be put back together and be used normally, but until then its entertainment value has been considerably increased.

Joe Kamichitis

CHRISTMAS SHOPPING IDEAS

Need something to suit that special amateur astronomer on your shopping list? Besides Barlow lenses, consider one of these bargains. Don't forget a good telescope is forever.

60mm (2.4) J. C. Penney f/16 refractor-equatorially mounted with slow-motion controls; eyepieces and accessories included. Only \$75.00. Contact George Horvath, 615 Ferdinand St., Scranton 344-2397

6" Newtonian reflector, f/10, home built, with Criterion RV-6 equatorial mount and drive, rotating rings, Only \$235.00 Contact Joe Arbacheski, 210 Swetland St. Duryea 457-4193

8" Newtonian reflector f/6 by Meade; includes Meade equatorial mount, electrical clock drive, eyepieces and accessories. Only \$525.00 Contact Scott Bailey, 211 West Grove St., Taylor 562-1224

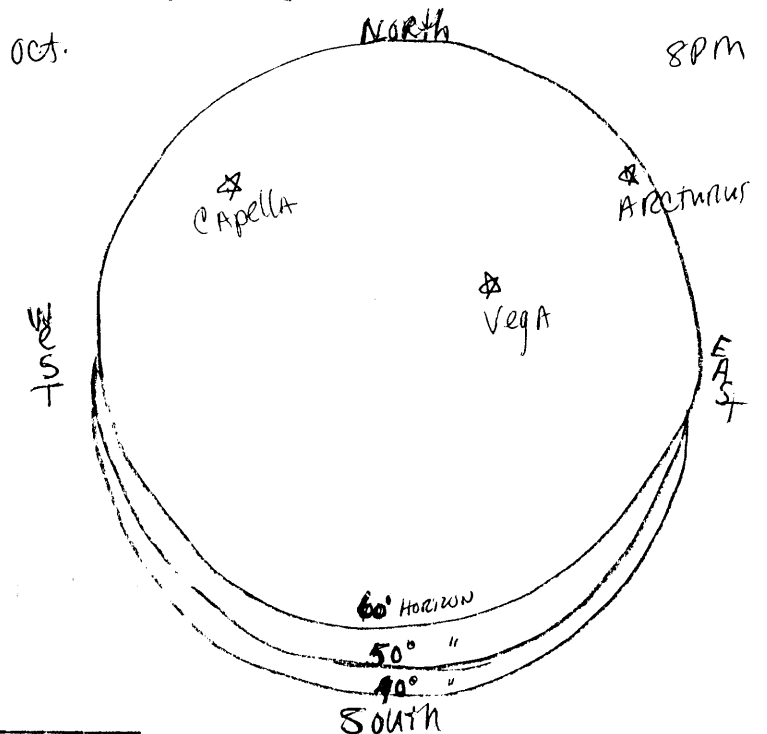
CITY DWELLERS STAR ATLAS  
(Still another gift idea)

(From the Ventura County (California) Astronomical Society's newsletter, "Celestial Horizons.")

Now that there isn't much gasoline to allow escape from light pollution, but still plenty of light pollution, in order to assist backyard-bound observers caught in the nightmare of less and less gasoline concurrent with more and more lights, the UN-SIRIUS ASTRONOMERS submit the following MAG-O-STAR atlas.

A major problem for newcomers to observational astronomy in large cities is the confusion resulting from published star charts. Typically, these charts show far more objects than can be observed by naked eye, thereby serving to confuse rather than aid the viewer. In order to remedy this situation, we introduce in this column a new sky guide especially suited to the observing conditions in your area. The traditional "quality of seeing" scale from 1 to 10 has been reduced from 1 to 4 because of your specialized conditions:

- 4 - Superb - Vega visible to unaided eye.
- 3 - Good - Quarter moon visible using averted vision. Vega & Arcturus are good objects for a 4" aperture.
- 2 - Fair - Full moon visible with binoculars or small telescope.
- 1 - Poor - Sun twinkles rapidly. Street light is a good binocular object. The Public Health Bureau advises against strenuous activities such as observing.





#### OBSERVATORY ASIDES

This month I've got to get rid of the myriad notes to myself that I find in my purse and cluttering up my desk drawer. For example, there were errors in the last issue of the "Ecliptic." Walter Scott Houston's apogee scope is a 5", not a 4"; John Sabia's binoculars are 10 x 50's, not 10 x 80's. Also, I inadvertently omitted Ed Sidorski from our list of Promised Land participants.

We've had some recent aurora sightings in the area. The one of 9:30 PM August 6, 1983 (Sunday night) was seen from Lake Ariel by Louie Durkin, Bob Sallavanti, Ed Kasuba and Joe Kuranda. This display was also reported as visible from Factoryville by Tom Cupillari. The aurora exhibited arcs and rays, lasting about an hour, hour and a half. (Too bad I was still on I 80 on my way back from Stellafane, since I'm trying to accumulate all the aurora memories I can.)

The second and very odd aurora was visible from about 11 PM to 5AM on the night of September 9-10, 1983. Joe Kamichitis and Jo-Ann Pluciennik observed this from Fleetville. At first it looked like very distant heat lighting or flashes from fireworks displays, but there was no accompanying noise and no thunderstorms had been predicted to the north of us. Eventually the activity moved up from the horizon and proved its auroral character. Before, I've seen patches of aurora that would pulsate slowly in brightness. This was the first time I've seen such sudden sharp brightening like ghostly electronic flashes. At times it also moved sideways, but mainly, although the area where the flashes started never got much higher than 35° or 40°, the aurora was out bursts that wiped out the northern sky stars over about 90° of the horizon, centered on Polaris. You felt that you should hear something but the lights exploded in silence.

If you want diversity, the US is the place for you. "Discover", the science news magazine, reports in its October issue on IRAS detecting "a ring of rocky fragments perhaps an incipient solar system, encircling that bright star [Vega]." Meanwhile in a much more widely read periodical "The Globe", one of those supermarket tabloids, this same story is distorted into "the discovery of a planet identical to Earth on the other side of the universe..." "Astronomers discovered the planet while studying data beamed from the Infra-red Astronomical Satellite (IRAS)." "They also learned that Vega is the center of an entire solar system that's a mirror image of ours."

It's funny how what is still up for debate by scientists (is the ring going to become planets or not) is so definitely interpreted by the media. No wonder kids find school so dull since we teachers can't, in conscience, make such fascinating tales out of what facts we know.

Another quote from the October "Discover" magazine, this time by Carl Sagan writing about San Diego's decision not to use the type of lights the Mt. Palomar astronomers had campaigned for.

"We are faced with the remarkable spectacle of the city council of a major modern metropolis, in possession of all the facts, deciding to hobble the largest productive telescope on earth so they can illuminate smaller areas at night and pay a larger electricity bill. What can they be thinking of? San Diego city councilman William Mitchell, who has championed the fight against low

"pressure sodium, is quite explicit: "The low pressure lights make people look like cadavers," he says in a Los Angeles Times interview. "Their pukey yellow cast depresses a lot of people. It's going to turn our technicolor city into black and white so they can play with the stars ... I don't want those damn things in San Diego, ever. Not for any reason.""

It's interesting to see the values that some of us have. There is such a thing as putting too much concern into "looking good."

Jo-Ann Pluciennik

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Editor's note: We were sorry to hear that Ken Mason's father died in August. Ken isn't a member of the LAS any more, having moved to the San Jose area of California, maybe seven years ago, but he had been president of the club. Ken was also one of those who worked closely on the selection of a site for KJCO, on the plans for LASO and the LAS's incorporation, as well as being one of the original night assistants at KJCO.

Thinking of Ken reminded me of the bunch that hung out at KJCO when it was first built; a group now split up by marriage, family responsibilities, and out-of-state job offers. Those memories are what made receiving this article, from one of the guy's still in the area, feel so good.

#### RETURNING HOME

It may have been the call of a cool, crisp evening sky, the longing for old friends and familiar places, or maybe just an aching in my maturing bones which brought me back to fond memories that clear evening of September 3rd.

I arrived about 9:30 PM. I was wondering who I would meet first. I found driving up to the observatory complex with only my parking lights on a little difficult at first. (How strange, when I remember when I could make the approach blind-folded.) As the dim lights shone on the building I realized I was the only one there. I had arrived too early.

I wasted no time in re-introducing myself to the sky, which was magnificent. I had brought along an old M17 elbow telescope which I promptly set up and started scanning the heavens. Instantly, I realized what I had been missing. The sights I remembered from many years ago were all there ... in the eyepiece. It had not been a dream.

A while later Joe and Jo-Ann arrived and were probably shocked to see me, of all people, waiting patiently for the gate to be opened. After unpacking their car we began to set up telescopes. Out came a 6" richfield reflector, a 5" richfield refractor, and a 10" Dobsonian. Then came the opening of the building of the 9.4" Clark. Soon after some more LAS members arrived and set up their equipment. I started observing with the 6" Newtonian richfield. The views were spectacular! From there, it was a short walk to the 10" to compare views. Terrific!

Just about 10:00 PM I noticed something in the southwest. After bringing Jo-Ann's attention to it, I picked it up in the elbow telescope. What I saw was what appeared to be a relatively bright star immersed in a haze, elongated away from the horizon; a star in a cloud, I thought; but very near were stars showing quite clearly. It could be seen with the naked eye giving the impression of M44. Within ten minutes it had faded to the point where it was quite hard to see in the elbow telescope. What was it? I know I have not been active in astronomy for a number of years, but I feel my eye is trained enough not to be easily fooled. I have worked with optics the better part of my life, so I know flare and coma quite well. That was not what I had seen. Interesting!

Now, let's get back to asthetics. The atmosphere that evening was extremely transparent. I was looking for fairly dim objects and found them on the first try. Jo-Ann put the 10" on the Veil Nebula and the nearby Loop. Wow! I saw them for the first time and I didn't even have to try hard. One thing that makes modern amateur astronomy exciting is the manufacture of great new eyepieces. I can't believe what an improvement there has been over the past eight to ten years. I remember only widefield Kellners, and orthoscopies; Plossles and research-grade Erfles were nearly unheard of.

I finally had a chance to go out to the 12 $\frac{1}{2}$ " telescope building, which was a real treat. I remember helping with the plans and early construction. That was when it was only a dream...now it is a reality. It is a beautiful home for the LAS's 12 $\frac{1}{2}$ " Newtonian. All members should be proud; I know I was. While John was checking the drive system, Joe put the scope on M13. I never had seen it this way except for pictures.

Towards the middle of the night clouds started to roll in, the observing stopped and I packed up for home. As I started my car and began travelling out the road, a strong memory of home came back to me. Not of the home where I was returning...but of an old home; where between 1973 and 1976 I had lived, worked and played and of friends who did the same; who spent every weekend, clear or not, at this place off a little road in Fleetville, PA, in an environment of science and solitude, "at the eyepiece of the universe."

I was truly home.

Jim Filipski

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