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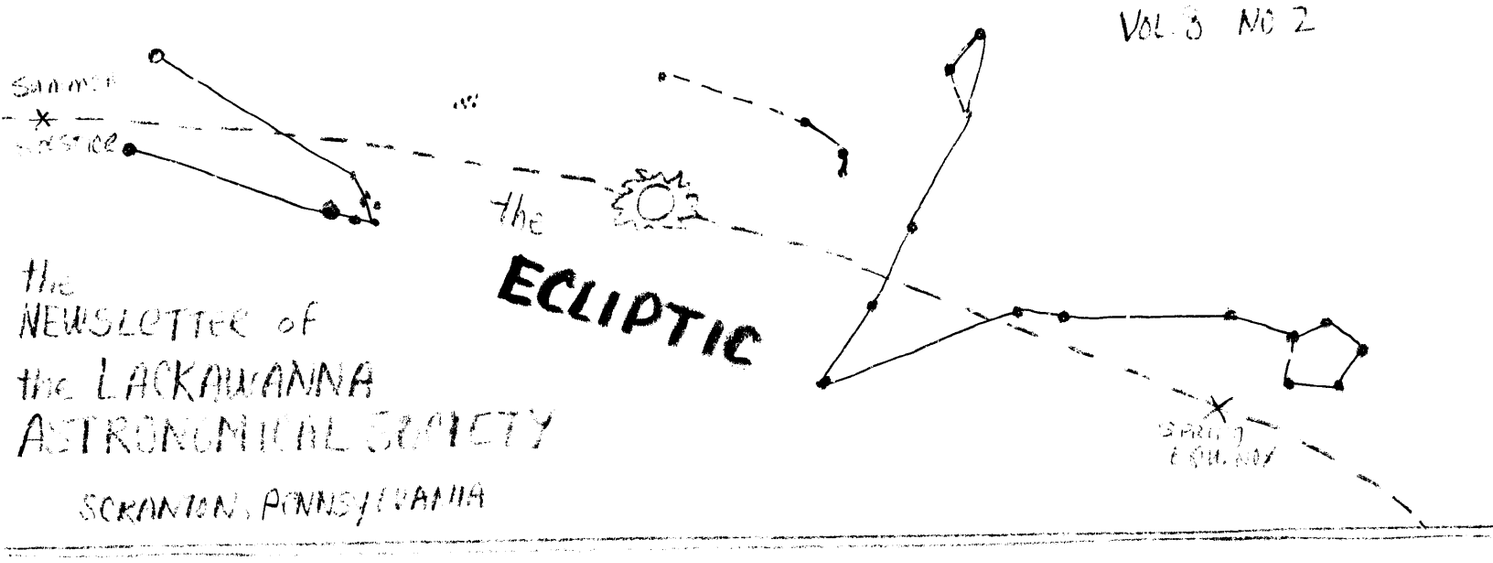


the NEWSLETTER of the LACKAWANNA ASTRONOMICAL SOCIETY
SCRANTON, PENNSYLVANIA

LAS OFFICERS AND BOARD MEMBERS FOR 1982

President - Joe Kamichitis
Vice President/Historian - Jo-Ann Pluciennik
Secretary - Diane Musewicz
Treasurer - John D. Sabia
Members-at-large - Scott Bailey/Bob Maleninsky/Bill Mecca

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## MEETING LOCATION CHANGED FOR WARM WEATHER SEASON

In response to suggestions by Board members and to the interest shown by the membership, the LAS will be holding its next several regular meetings at the Keystone Jr. College Observatory instead of at the Everhart Museum.

The next meeting, then, will be on Saturday, May 8, at 8 PM EDT. Tentative date for the next five meetings are: June 5, July 10, August 7, September 11, and October 9. The meetings in July and August will be our usual day-long, picnic-style, fun-time, get-togethers; the others are the dead-serious regular meetings. The November and following meetings will be back at the museum. Any changes in the schedule and more details will be published in future editions of the ECLIPTIC.

All the meetings at the Observatory will, of course, be followed by observing sessions and members are welcome to bring their own equipment or to view through the 9" refractor or the LAS 12½" reflector. Most of the meetings there fall between full moon and last quarter so we should have dark sky viewing early on followed by some lunar observing. Mars, Saturn and Jupiter will provide major interest for most of the observatory meetings.

I hope to see everyone there.

Joe Kamichitis
President

P. S. - One cautionary note: The fence around the field and along the road to the parking lot may be electrified by May so don't touch it.

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## ASTRONOMY DAY ACTIVITIES

National Astronomy Day is this Saturday, May 1st, and the LAS will have an exhibit and telescope viewing as we did last year. Activities will again be at the pavilion or picnic area at McDade Park off Keyser Avenue near Taylor.

We will begin set-up around 3 PM and offer for the public solar viewing at this time as well as an astrophoto exhibit and a general slide program.

Around dusk, late, unfortunately, because of the infamous daylight savings time, we will have good views of the post first quarter moon (always a big attraction) and later we'll see Mars and Saturn and perhaps Jupiter if we're there late.

All LAS members are asked to participate. If you can bring a telescope, so much the better. We would like to have 5 or 6 set up for viewing and it will be even more interesting if we can have several types of instruments available. No one is expected to be there for the full 6 or 8 hours but if you can come for a couple hours in the afternoon or 3 or 4 hours after dinner, that's fine. If the weather is good, there may be a lot of people attending so we would like to have at least 10 or 15 members around to assist with the viewing and to keep an eye on the equipment. So brush up on your lunar, Martian, Saturnian, and Jovian terminology and we'll see you at the park May 1st.

Joe Kamichitis

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## A NEW AMATEUR ASTRONOMY SOCIETY

From "Astronotes" - Ottawa Centre newsletter RASC July 1978

### AEOS

Why AEOS you may ask. Well, these days, as you well know, there are groups who observe everything under the sun -- get it? But seriously, there are deep sky observers, meteor observers, lunar and planetary observers, asteroid, aurora, satellite and comet observers.

We're a concerned group of individuals who are sick and tired of the same old stuff. There are already too many people in the above fields to let anyone really make a big name for themselves. So we at AEOS have turned to the only unobserved area in astronomy -- the earth!

Why the earth? I've already explained it. If you were reading with the comprehension of a tree you should not have to ask that question.

Yes, the earth. Good idea, eh? Yet it was so inobvious up until now, hiding right there under our noses -- get it?

How do we do it? Now that's a fair question, my friend. Like everything in astronomy, optical instruments are an absolute must, starting with your eyes, and including binos, telescopes (both kinds) and radios, radar, etc.

Our latest programs, which include the use of our newest, state-of-the-art top-of-the-line best-in-the-whole-world equipment are listed below:

STO - Surface Terrain Observation. Naked eye up to the biggest scopes available. Observe and crefully record (draw if possible) any features or landscape phenomena which are visible during moments of good seeing. Even better, keep a record of observed life. Send in your observations to AEOS each month, where the best will be published in our journal. We regret that all submissions cannot be returned. They may be picked up in person at our Anchorage office up to the first of each month.

HABO - High Altitude Balloon Observation. Using sensitive equipment carried aloft, we can get better ideas of just what is happening down there, in terms of cosmic ray detection, H II regions and mapping of the same, as well as plotting radio sources.

OEO - Pioneer O, of Orbiting Earth Observatory. This satellite is clear of atmospheric interference and absorption, making it the perfectionist's paradise. Out in space we can monitor the weak or blocked effects, such as the earth's electromagnetic field, perform 3-colour photometry, microwave detection, and take general close-up glossy photographs. All this and more from the OEO.

I hope that I have stirred up the frontier observer in you so you will now rush out and join the American Earth Observer's Society.

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## HISTORY OF THE LAS
### PART 2 Becoming a group and not just a class

When the LAS formed officially, in the winter of '59, it was able to meet twice a month and keep up that pace because of the high level of excitement of the times. For the first time ever, man-made objects were circling the earth, and there was no doubt that man himself would be venturing into space soon!

Another factor was the caliber of the members, for example, A. L. Rockefeller. Mr. Rockefeller gained some notariety in 1936 as a major amateur telescope maker by writing an article for the book Unveiling the Universe, (published and distributed by the Research Publishers of Scranton, PA). This book can still be found on the shelves of the Scranton Public Library. Also on the official stationary of the society of 1959 are the names of persons who are still very much active in astronomy and who still attend LAS meetings to this day.

Chris Ray, the Everhart's science curator, left that post in 1960. He was replaced by Bill Speare, another LAS supporter. Mr. Speare continued the activities and meetings, and encouraged new ideas.

In 1960-61, the president was John Klien. During his term in office, members of the society began to write informative papers dealing with all phases of astronomy. There were nine papers, each one devoted to one of the planets. Also, one on the Milky Way; one on how to use your telescope; and others on such topics as meteors, comets and observing the sun. One of the most interesting papers dealt with "Life Beyond the Earth," describing the life supporting possibilities on the other planets in our solar system. Fred Mitchell, Ray Strohl and Joe Srebro wrote most of these papers.

About this time the first "Bulletin of the Lackawanna Astronomical Society" appeared. The first issue was Jan 1961. A 5 page, mimeographed newsletter, it contained articles on lunar observing, telescope testing, an astronomical quiz, and a constellation-of-the-month section. The second bulletin was issued in March 1961, with the same general format.

For some unknown reason the society ceased to exist as an active, involved group in the years 1962 through 1965. There were few, if any meetings held. No information is available from that time span.

To be continued (?)...

John D. Sabia

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## IN PRAISE OF THE HOOKER

From June 1981 National Newsletter supplement to the Journal of the Royal Astronomical Society of Canada, by Roy L. Bishop, Halifax Centre.

The history of science has been, in part, the history of man's attempt to strengthen and quantify his feeble senses with precision instruments. The prototype of scientific instruments is the telescope. The telescope appeared early in the scientific revolution and today still has a major role in the advance of knowledge.

Of all the telescopes that have been raised to the heavens, two can be singled out for their pivotal contributions to astronomy. The first is the crude refractor that Galileo turned on the Moon in the autumn of 1609. Within a few months Aristotle's concept of the unblemished perfection of the heavens, together with the Ptolemaic universe, lay in ruins. Earth had been wrenched from the center of creation and the plurality of worlds was more than forbidden speculation.

The other telescope deserving of special praise is the 100 inch reflector on Mt. Wilson above Los Angeles. John D. Hooker, a business man of that city, provided the funds for its mirror in 1906. By the end of the First World War it was complete, a precise symphony of girders, and rivets, and glass. Here, for the first time, a professional telescope exceeded the aperture of that of an amateur. It was larger than that giant of the Irish mists, the 72 inch Leviathan of the Earl of Rosse.

Within a decade a new universe was revealed in the mirror of the Hooker reflector. Through cepheids in M31, M33, and NGC6822, the telescope enabled Edwin Hubble to confirm that the Milky Way was not the universe, but only one of countless galaxies. After a few more orbits of the Sun, the instrument provided Hubble with unequivocal evidence for the expansion of the universe, a prediction made earlier by Albert Einstein with his general theory of relativity, but a prediction so staggering that even Einstein could not accept it prior to Hubble's data. In the Hooker mirror, man had seen himself in an obscure corner of an immense universe, a dynamic universe with a finite, violent past and an uncertain future.

Today the glow of man's energy waste has degraded the skies over Mt. Wilson, but no newer instruments have yet equalled the accomplishments of the Hooker. Larger telescopes, and telescopes probing other regions of the spectrum have brought confirmation and extension, but no comparable revolution.

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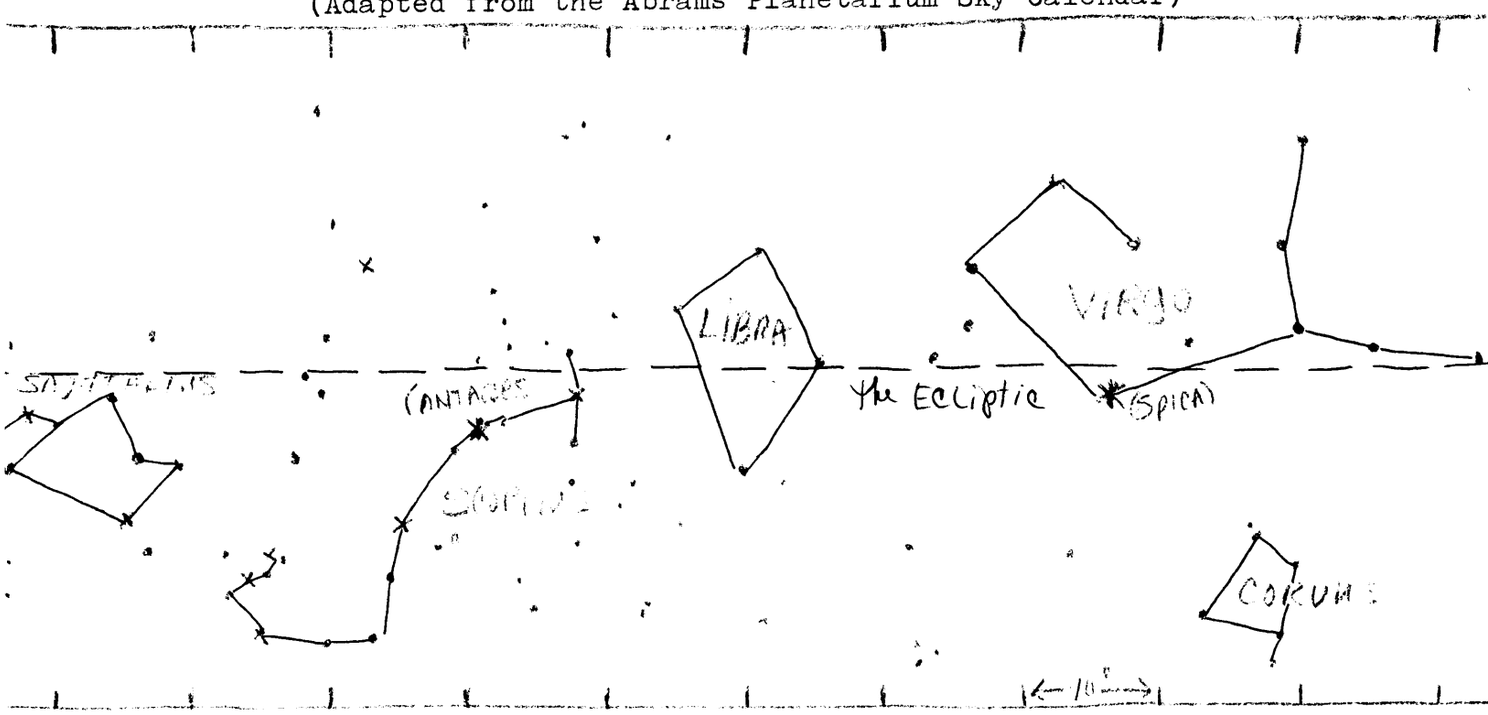
PLANET WATCHING
(Adapted from the Abrams Planetarium "Sky Calendar")




You don't need a 9" Clark refractor to enjoy observing the planets. Doing these projects just requires the naked eye or binoculars, or at most, a 35 mm camera with a "bulb" setting. Once you finish these projects, you'll really know why the ancients called the planets the "wanderers." You must pay attention to their positions among the stars to really be aware of the planets' motion.

Using Binoculars or the Naked Eye Note the position of the planets in the sky. Plot the planet positions on the above chart and mark each position with the planet's name and the date.

Jupiter stays in this region until December 1984. Saturn will remain in this area until 1990 so two plots per month will be often enough for those two.

Mars will be in this region until November 1982 and returns to it from November 1983 until October 1984. When Mars is in this sector you should plot its position about once a week, in order to catch its swifter motion.

Binoculars are particularly recommended as the planets move into the clusters and nebulae of Scorpius and Sagittarius. You'll have fun brousing.

Using Photography to Observe Take a series of photographs. Use fast film, say Tri-X (for prints) or Ektachrome 200 (for slides), a 15 to 30 second exposure, and a wide open fast lens such as a 50mm f 1.2 to f 2.8, and a tripod or steady support. Wait for the sky to become dark and don't choose bright moonlit nights, unless you want to show lunar motion and glare. Until September 1982, the planets and Spica will fit within the usual field of view

of a 35mm camera with a "normal" 50mm lens. In July and August, you can even catch Mars passing Saturn, Spica and Jupiter over a 33-evening time span.

Jo-Ann Pluciennik

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## MEMBER NEWS

As the result of sending out the dues notices, I got a chance to hear from one of our more distant members, Frank Adams Jr., who's going to college at the Citadel in Charleston, S. C. Frank has been in the LAS for 7 or 8 years, serving as Junior Vice President and as Librarian.

> "Am currently working for one of my professors, Cpt. Saul Asleman on a work/study program doing some calculations off of stellar spectrum for his models of stellar atmosphere. Pretty interesting work. We currently formed an amateur astronomical society in Charleston here. Had approximately 30 people at the three meetings. Looks promising so far. Hope we (they) will be an active society. The school has 2 Celestron 8's and a C-14. Have been doing a little astrophotography when I have spare time using the school's darkroom. So am pretty well off here -- astronomically speaking.
>
> Give my best regards to the rest of the LAS membership. Will see y'all over the summer."

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## OBSERVATORY ASIDES

If it weren't for daylight savings time delaying the onset of darkness, May would be the ideal month for observing. Nights are still reasonably long but warmer than before. You can check out the tag-end of the winter skies, the galaxies of spring, and then get in your long-awaited summer Milky-Way viewing well before sunrise, catching Andromeda just above the horizon as you pack up.

This hobby makes you very aware of the slower tempos of the universe, rather than the hours, minutes and seconds that count so much during the workday. Noting the nightly and seasonal shift of the sky, you realize that the seasons are more than an excuse to change the colors in your wardrobe. Now however, I'm becoming aware of the slower patterns too. I mean, can Jupiter be approaching the Scorpio and Sagittarus regions already! Now I know I've been observing a long time!! At least it isn't Saturn that I find returning to its old spots. When I start becoming acutely aware of the precession of the equinoxes, I'll know I've become obsessed!!

For the first time in years, I've started to observe with my RV-6 dynascope. At home it's been too much trouble to lug it up the steps to my backyard; the front has too many lights; and at the observatory I use my 5" refractor for deep sky and the Clark for the planets. Now that I use it again, I find that a 6" f8 is a pretty good 'scope, much better than I remembered. This is probably due to the fact that I used it under much poorer sky conditions. On an excellent night at my house, you can almost tell the Milky Way runs through Cygnus.

At the observatory last week, we were able to see two pretty nice auroras! The one on Wednesday, April 21, (a public night, too) featured a low glow and rapidly growing sharp rays, pale but better than most of the ten or so auroras we've seen this year. The Saturday, April 24, aurora was much brighter, but less active, and flared up two or three times, lasting most of the night. It started as a bright greenish glow to the north with occassional broad, slowly changing rays. It may seem I'm obsessed with northern lights too, but I hadn't seen any at all in 1979 and '80.

Jo-Ann Pluciennik

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Evidence points to the presence of a mini-black hole in my house. How else can you explain the disappearence of various items just when they're most needed? The most recent object to reach the event horizon seems to have been Brian Thomas's latest word search puzzle (sorry Brian!). Please send all articles, cartoons, or news items to me at the address below. I'll try to keep all contributions away from my cosmic vacuum cleaner.

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