

JOURNAL OF THE LACKAWANNA ASTRONOMICAL SOCIETY  
KJC OBSERVATORY, FLEETVILLE, PA. EVERHART MUSEUM, SCRANTON, PA.

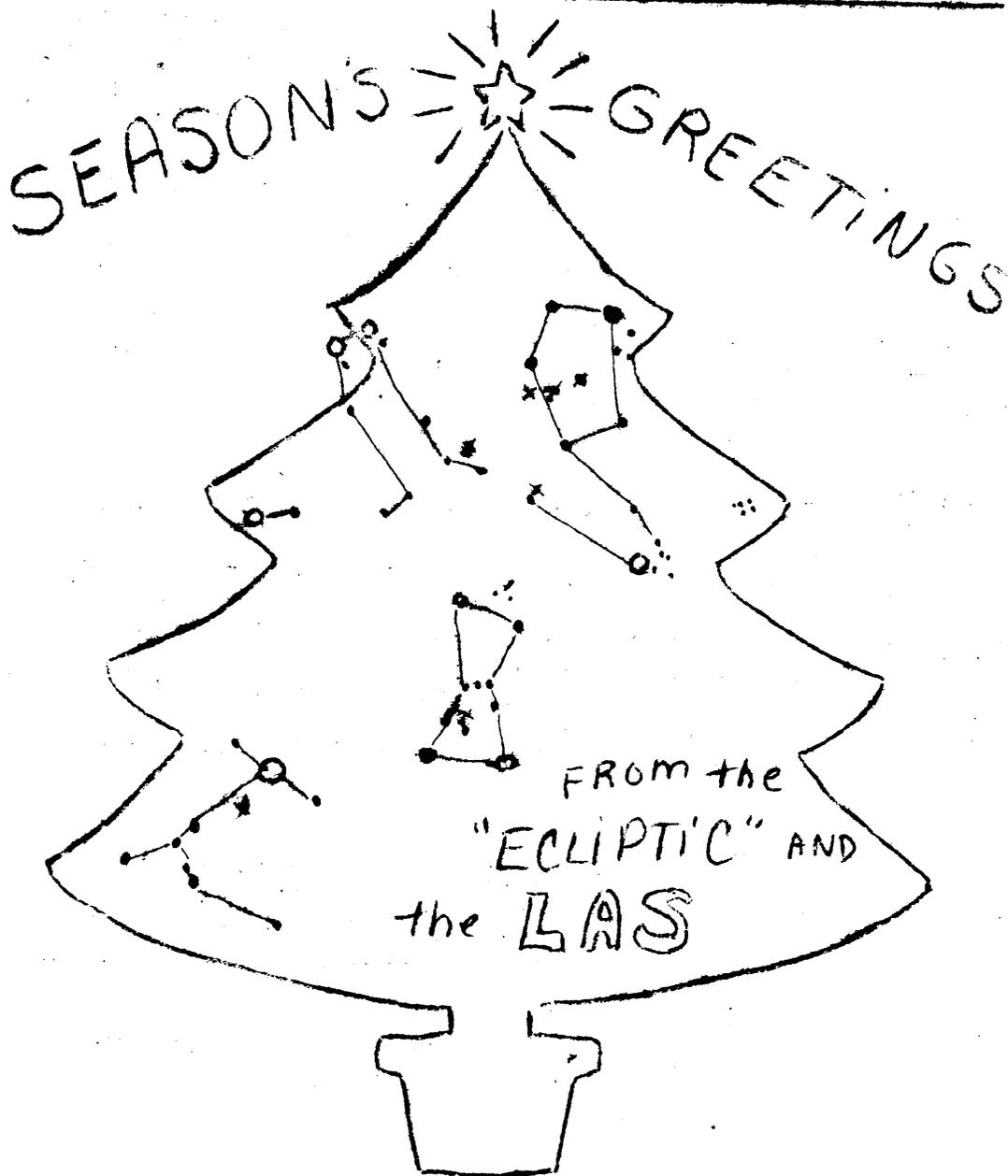
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WINTER SOLSTICE ISSUE

December 1975

THE GEMINIDS ARE COMING! THE GEMINIDS ARE COMING!

That bicentennial note is meant to remind all hardy souls to join Jim Filipski and a few other eccentrics in observing sessions scheduled for late on the nights of Friday December 12, Saturday December 13, and if the weather has been rotten the other two nights, Sunday, December 14. The lateness is emphasized since the moon will be past first quarter phase. The Geminids average 50 meteors/hours and feature bright, slow fireballs. Prepare for comfort and the cold! Bring lawn chairs, cushions, and sleeping bags; dress warm. Coffee will be available and, although no promises are made as to its quality, it will be hot!



## NEW OFFICERS FOR 1976

The December meeting marked the installation of the officers for 1976. Serving as president again will be John Sabia. Jerry Zawislak is the new vice president. Diane Pluciennik is collecting dues again as treasurer, while her sister, Jo-Ann, is the new secretary. Bobby Nicolais was elected as the junior vice president. These are the people to contact for information, volunteering or complaints in the coming year.

The out-going officers -- Merton Ruth, vice president; Mildred Ruth, secretary; Mike Babcock and Rich Hogg, junior vice presidents-- are commended for a job well done last year.

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## WORK PROGRAM AND COMMITTEES OF 1975-76

- I Observatory Construction Committee  
Construction of a permanent shelter for the 12½" Newtonian reflector of the LAS. Method of construction and design from committee heads. Agreement between LAS and Keystone Jr. College.  
Committee Heads - Bill Mecca - construction  
Charles Lonaberger - agreement, construction
- II Telescope Maintenance Committee  
To design and construct an equatorial mount for the 12½" telescope  
Committee Heads - Jim Filipski - Design  
Joe Serra - Draftsman
- III Incorporation of LAS  
To incorporate and register the LAS as an official non-profit organization with the Federal Government.  
Committee Head - Charles Lonaberger
- IV Public Activity Programs  
To inform the public of the existence of the LAS through various educational means.
1. Astrophotography Display - Program Heads- Mrs. Janet Hogg  
John Sabia
  2. Public Lecture Series - tentative program to be developed by the executive committee.
  3. Telescope and Equipment Exhibit - tentative program to be developed by the Executive Committee.
- Anyone who has ideas or can be of assistance, please contact the officers of the Society.
- V Membership Aids Program  
To supply literature and information to all members of the Society in order to increase their knowledge of Astronomy.
1. The Ecliptic Newsletter - Editor - Jo-Ann Pluciennik
  2. Lease of the 6" Reflector Telescope to members  
Program heads- Bill Speare, John Sabia
  3. Learning Aids
    - a. List of books on observation methods and procedures
    - b. list of reputable telescope manufacturers and accessory equipment. Program head - John Sabia
- VI Program Committee  
A new informal standing committee to put forth suggestions and take action on programs for regular monthly meetings.

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## 1975-76 BUDGET

The following is a budget plan set forth by the newly elected officers. The aim is to regulate and control the amount of money spent by a committee or program. The first four items are based on previous spending and reflect the new increase in postage to come. The last three items are conservative allotments and limits. Any of these that exceed the allotment shall report to the Board of elected officers before further spending. The treasurer shall record all spending by the committees and report to the officers at regular business meetings.

Treasurer's Dues Notices	\$10.00
Secretary's News Service Notices	15.00
Ecliptic Newsletter	40.00
Astronomical League Dues	20.00
Observatory Construction Committee	150.00
Telescope Revision Committee	50.00
Program Committee	50.00
	<u>\$335.00</u>

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ASTROPHOTOGRAPHY FOR THE AMATEUR  
Part III

As I was saying last time, there are two main types of astrophotography -- that with camera alone, and that using camera and telescope in combination. This installment will cover the first class.

If you are going to try to do photography with only a camera and its normal lens, it need not be a single lens reflex (SLR), but the camera must be adjustable in focus, f/ratio or aperture, and have a "time" setting. This on a sturdy tripod and some fast film will be all you need for a beginning. But you will still use this type of setup even after you've been around astrophotography a long time. The reason for this is that it is one of the best ways to photograph certain sky objects, or other phenomenon such as nature's beautiful geomagnetic storms (aurora). It is used in some extent in meteor photography, although a motorized equatorial mount is better.

The usual beginning is star trails, but we are going into meteors, skipping the star trails, since the same principles are employed. I start out with my camera loaded with a fast black and white film, usually Tri-X. The camera lens (being a SLR camera, I usually change lenses to one with a wide field) is set on infinity and the f/stop is opened wide, usually anywhere from 3.5 to 1.4. The camera is placed on a tripod or other support. It is aimed at a spot where you think best and with the camera set on B-bulb setting, open the shutter with a cable release and lock it in the open position. My exposures are usually about ten minutes in duration. Any longer on an undriven mount and the star trails get confusingly long. When I use a clock driven mount, my exposures are about twenty minutes long depending on sky conditions. When a meteor passes through the field of the lens, I usually terminate the exposure. Do not expect all meteors that pass through the camera's field to record on film. It usually takes quite a bright one, about second magnitude or brighter.

When I develop my film, I usually extend the development about 100% to increase contrast and speed the film's ASA up a bit. I also use color slide film high speed ektachrome, and when I send it away to be processed, I have the speed pushed to ASA 400 by requesting E3P processing.

Tracing the path of a bright satellite across the sky can be done in the same manner. For aurora a camera with a fast lens, fast film and a tripod are needed. With aurora my usual exposures are about five seconds to two minutes in duration depending on the brightness of the display -- you will have to use your own judgement -- but the longer exposures record more light. Although on a swiftly moving display of arcs, rays and pillars, their motion blurs on film giving you no well defined parts of the display, only a mass of light. Best films are Tri-X black and white, and high speed ektachrome color slides.

Comets when photographed with a stationary camera, fast lens, and fast film, can sometimes give very beautiful results, especially on a bright comet. Exposures are anywhere up to a minute on a stationary mount and as long as you want on a motorized equatorial mount.

The normal camera lens is usually used because of its fast speed and and fairly good image size. With some comets, such as Comet Bennett of 1970, my exposures were 30 seconds to one minute with a lens of only f3.5 aperature. The prints were very nice for display. Not only did they show a long curving dust tail type 2, but also the type 1 gas tail streaming out straight back from the head. I have also used this method on Comets Kohoutek and Bradfield of 1974 with success.

The only other type of photography that I would use the camera alone would be eclipses of the moon, sun, and occultations, but I would use a lens of considerable focal length to gain image size.

by Jim Filipski

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#### DO YOU BELIEVE?

- AQUARIUS** (Jan. 20-Feb.18) You have an inventive mind and are inclined to be progressive. You are a clever person. On the other hand you are inclined to be careless and impractical causing you to make the same mistake over and over again. People think you are stupid.
- PISCES** (Feb. 19-Mar.20) You have a vivid imagination and often think you are being followed by the CIA or the FBI. You have minor influence over your associates and people resent you for flaunting your power. You lack confidence and are generally a coward. Pisces people do terrible things to small animals.
- ARIES** (Mar. 21 - Apr. 19) You are the pioneer type and hold most people in contempt. You are quick tempered, impatient and scornfull of advice. You are not very nice. Before you are 19, you will be divorced or dead.
- TAURUS** (Apr. 20 - May 20) You are practical and persistent. You have a dogged determination and work like hell. Most people think you are stubborn and bull-headed. You are a communist.
- GEMINI**(May 21-Jun. 21) You are quick and intelligent but you expect too much for too little. This means you are cheap. Geminis are known to commit incest.
- CANCER** (Jun. 22 - Jul. 22) You are sympathetic and understanding. Other people think you are a sucker. You put things off. You will never make anything of yourself. Most horse players and college freshman are Cancer people.
- LEO**(Jul 23 - Aug. 22) You consider yourself a born leader. Others think you are pushy. You are vain and dislike criticism. Your arrogance is disgusting. Leo people are known thieves.
- VIRGO** (Aug 23 - Sept. 22) You are logical and hate disorder. This nit-picking is sickening to your friends. You are cold and unemotional, and sometimes fall asleep while making love. Virgos make good bus drivers.
- LIBRA** (Sept 23 - Oct. 22) You are artistic and have a difficult time with reality. If you are a man, you are probably wierd. Chances for monetary gain and employment are excellent. Most Libra women are good shills. All Libras die of culture shock.
- SCORPIO** (Oct. 23 - Nov. 21) You are shrewd and cannot be trusted. You will achieve success because of your total lack of ethics. Most Scorpio people are murdered.
- SAGITTARIUS** (Nov. 22 - Dec 21) You are optimistic and enthusiastic. You have a reckless tendency to rely on luck since you lack talent. The majority of Sagittarians are drunks or dope fiends. People laugh at you a great deal.
- CAPRICORN** (Dec. 22 - Jan 19) You are conservative and afraid of taking risks. You don't do much of anything and are lazy. There has never been a Capricorn of any importance. Capricorns should avoid standing still as they tend to take root and become trees.

OR DO YOU AGREE WITH THE 186 SCIENTISTS WHO CAME OUT AND CONDEMNED ASTROLOGY AS A FRAUD?

Reference: New York Daily News, 10-28-75

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## LOCAL OBSERVATION OF NOVA CYGNI 1975

At the September 2 meeting, Mr. Thomas Santoski, a visitor to our society, reported seeing a strange star in Cygnus a few days earlier and inquired about any other observations locally. Although no one else in the group saw it, Mr. Santoski's observation was verified by hundreds of others world-wide, as being the unusually bright Nova Cygni 1975. The nova went from lower than 21st magnitude to a peak of 1.79 on August 29. By the time of the meeting, it was down a few magnitudes from that. It just proves that the skies are full of surprises, provided you take the time to look up.

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### SOME GOOD PUBLICITY

The LAS wishes to thank Jerome D. Leeson for the fine coverage he gave the LAS and Keystone Observatory in his page one article in the September 17, 1975 issue of the "Miner Gazette." Jerry has been a member of the LAS for a number of years.

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### A NIGHT TO REMEMBER

October 11, 1975 will be a day KJC Observatory and the LAS will long remember. It was the day two hundred twenty five Boy Scouts and counselors, in three busloads, came to see a show. As luck would have it, it was a lousy night for observing, but John Sabia kept them entertained with a slide show and lecture (Richard Brakefield and Bobby Nicolais manned the slide and movie projectures), while Chuck Lonaberger and Jerry Zawislak handled the tours of the dome along with a history of the scope and its manufacturer. Also on hand to field questions and offer suggestions were Ed Sidorski, Debbie Holmes, Jo-Ann Pluciennik and Diane Pluciennik. The highlight of the evening occurred when Chuck almost got knocked off the ladder by the telescope, because one Scout decided to turn a wheel on the mount. You can be sure Chuck saw stars that night.

by Diane Pluciennik

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### R.S.V.P.

A reminder, you are cordially invited to attend observing sessions each clear Saturday at KJC Observatory, Fleetville, Pa. Since the Saturday after the LAS meeting is our observing open house, come on up -- cloudy or clear -- on these nights. Bring your telescopes, or cameras, or use the scopes available up here.

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### EDITOR'S NOTE

Christmas is a time for giving ... articles to the Ecliptic. Next deadline - February 10, 1976. Send all news items, cartoons, and articles to:

Jo-Ann Pluciennik, editor  
313 East Elm Street  
Scranton, Penna. 18505