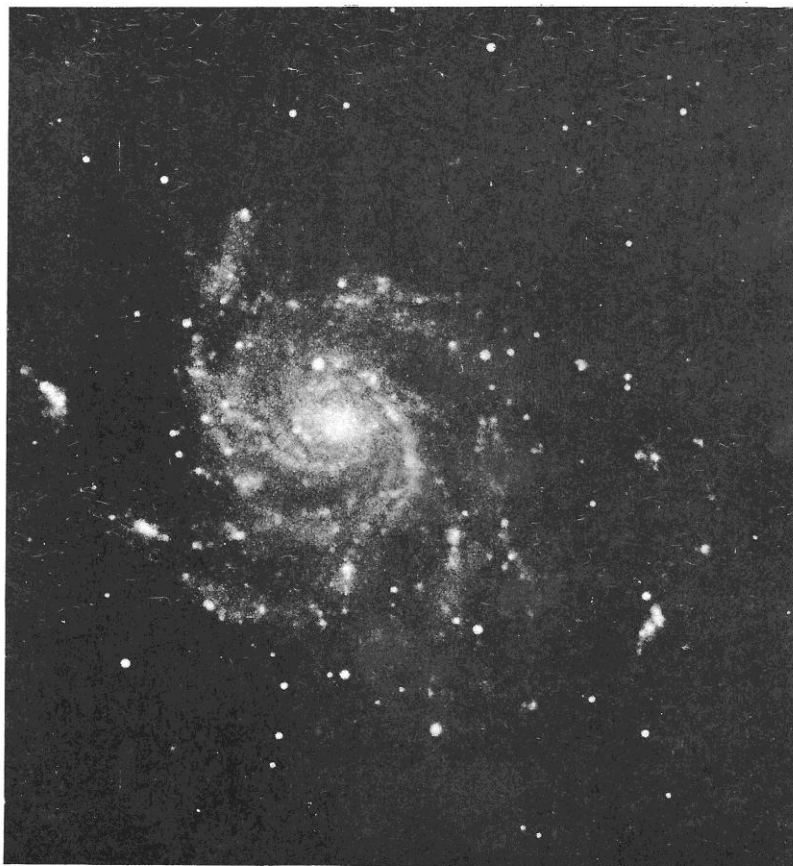


VESPA

Latin, for WASP



No.2
Vol.1



M-101-Ursa Major

THE JOURNAL OF THE WARREN
ASTRONOMICAL SOCIETY



FEBRUARY 1977

The Warren Astronomical Society (W.A.S.) is a local nonprofit organization of amateur astronomers. Membership is open, to all interested persons. Annual dues are as follows: Students, K-12 \$9.00- College \$11.00, Senior Citizen \$13.50, Individual \$16.00, Family \$21.00, the membership fees listed here include a one year subscription to Sky & Telescope Magazine.

Meetings are held on the first Thursday at Cranbrook, and the third Thursday of each month at Macomb County Comm. College, in the student union bldg.

Subscriptions and advertisements are free of charge to all members. Non-member subscriptions and advertisements are available upon arrangement with the Editor of VESPA.

Contributions of any kind are always welcome and should be submitted to the Editor before the second Thursday of the month.

THE EDITOR: Roger A. Civic 776-8735
26335 Beaconsfield
Roseville, Michigan 48066

Editor Note: The old WASP has been changed again. The usual features have been condensed or omitted to make room for a new format. Many members have some very fine photos. It is now possible to reproduce these from B&W prints, color prints or slides.

Next month's Vespa needs some photographs.

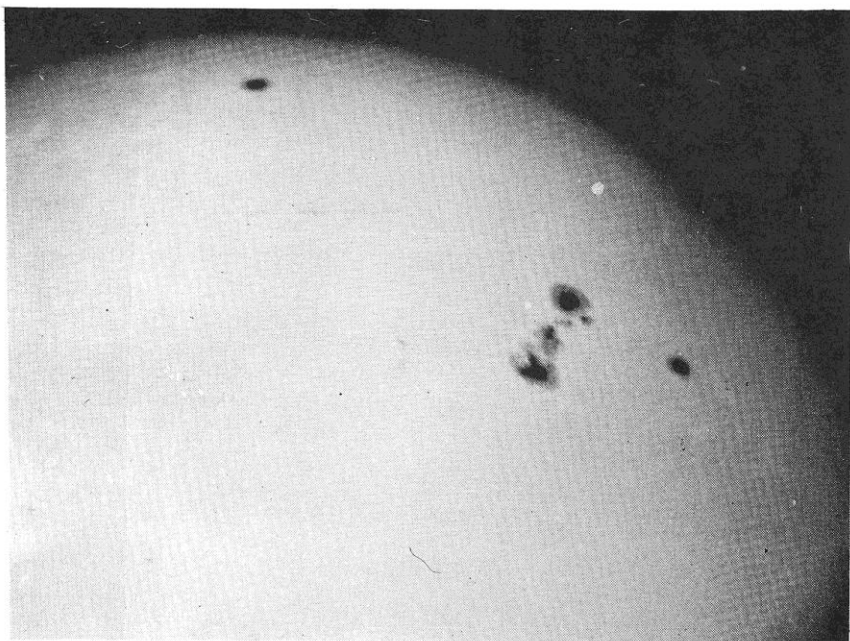
Send them to me by mail, Roger A. Civic

OBSERVATORY SCHEDULE

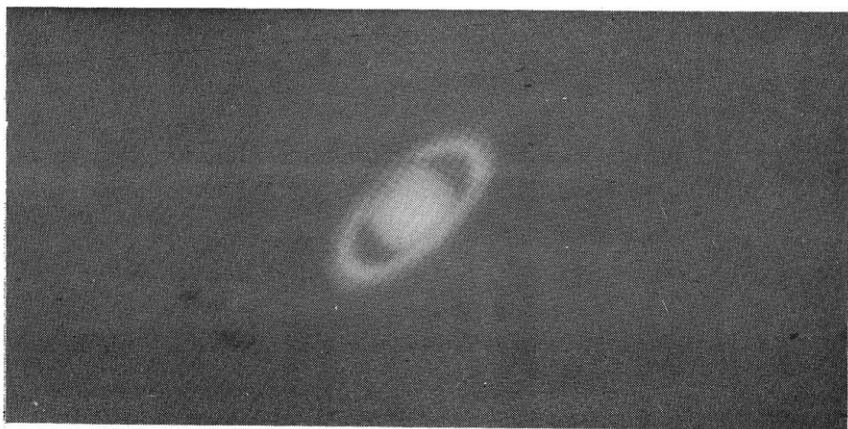
Lectures for the coming month are listed below.

Feb. 4/5 Dave Harrington879-6765
Feb. 11/12 Cary White 652-0043
Feb. 18/19..... Pete Kwentus 771-3283
Feb. 25/26 Don Misson776-0424

The lecturer may select either the Friday or Saturday depending on the weather and their personal schedule. If the Lecturer wishes, they may call upon the four new assistant lecturers. They are Bob Dennington 779-6395, Dave Locke 335-8429, Doug Holmes 776-8797, and Joe Tocco 573-8547. If you want help, call.



Large Sunspot groups, taken in 1971 with a 3" f:15 refractor, on plus-X. This print was made of 2 negs.mounted together. Taken by Roger Civic.



The planet Saturn ,Feb,4 1973, 9:45 p.m.,Temp.10° F., Wind, 10 to 15 mph. 9mm eyepiece,+2X barlow= 450X. tri-X B&W film,at the Harrington 14 $\frac{1}{4}$ " reflector
Photo taken by Roger Civic.

REFLECTIONS

by cary white

One of the few advantages of getting older (I'm now 30), is the ability to look back into one's own past. I would like to share with you some of those memories as they pertain to "Amateur Astronomy".

Way back in Jr. High School (1962?) I attended an Astronomy class, and became acquainted with Tom Trott a fellow student. He invited me to go with him and his father (Clarence Trott founder of the Warren Astronomical Society) to a weekly meeting of the Detroit Astronomical Society, at that time, at the Elmwood Center.

The name "Society" didn't fit me and I was, to say the least, skeptical, as I am sure many other people were. That feeling soon passed that first Friday nite.

The D.A.S. had the entire top floor of an old recreation building in a rundown section of town scheduled for "Urban Renewal". Not a permanent home for the club but a home none the less.

The first thing a guest would see is the lounge area furnished with; a sofa, easy chairs, and on the walls, poster sized photographs of galaxies, and nebulae. There was also a snack bar with pop, chips, candy bars, and ice cream. A guided tour of the ATM facilities included three separate grinding rooms for the various stages of grinding the amateur "discus". Then on to the large polishing room where the pitch was more often than not, simmering away on an electric hot plate. The old fashioned "Cloak Room" made a perfect Focalt testing room, and the equipment the envy of any club.

Chuck Brisley of the Star-Liner Co. (now located in Tucson, Ariz. for obvious reasons) was there almost every week to sell his wares, and to help us grind, polish, and figure our mirrors.

Then there was a large lecture/projection room where as you might expect lectures, and movies were presented. Nothing can be as boring to the novice amateur astronomer as a "Business

Meeting" so the monthly business meeting was held at the U. of D., as they are today. Something for almost everyone. "Sit and talk", "Watch a movie", "Listen to a lecture", "Make a telescope", "Help a friend", Boredom Zero. Are these days lost forever? I think not.

They are vivid in my mind and will always be. We can build upon those memories if you think it worth the trouble. Our club could be great, and we could do many of the things we only read about in S&T.

To do this we need new members, and what do we offer new members? Nowadays, not much. When Clarence Trott started this club he molded it after the D.A.S., and it grew fast, and I was one of the first members.

Mr. Trott did an excellent job, but made one mistake. He knew what was necessary for a successful astronomy club, but didn't put it into a "constitution" for succeeding club officials to follow. That foundation over the years has been lost. Shall we try to find it??????

Cary M. White 652-0043
1489 Walton Blvd.
Rochester, Mich., 48063

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The L.F.K. Astrophotographic Guide. Special price to club members--- \$1.00 Contact Larry Kalinowski.

DO IT YOURSELF, DRIVE CORRECTOR. DC or AC operation. Build it with my circuit board. Instructions and parts list included, \$5.00. See Jan. S&T '75 pg. 50 for more details. Larry Kalinowski, 776-9720.

Tasco 2.4" f.13 refractor. Alt-azimuth head, three eyepieces, erector lens, star prism, wooden case. Metal 3 leg tripod. Good Condition. Only \$65.00. Contact Mike Grellman, 264-0745.

10" f.7 Newtonian telescope. Factory mirror, yoke equatorial mount, portable, 70 power eyepiece. \$300, also a 40mm Polaris finder telescope 12X, \$25., 18mm Kellner eyepiece, \$18. All good condition. Call Doug Tracy, 882-4499.

SOME NEW FILMS FOR ASTROPHOTOGRAPHY????

Sometime early in 1977 several new films will become available, and some old films will begin to disappear. The new films have been tested by two of the leading photographic magazines; and the results indicate, as far as astrophotographers are concerned, that there is some good news, some bad news, and some terrible news. We'll see more about this later. The tests (those done by Modern and Popular Photography magazines) were primarily designed to determine how the films would work in "normal" picture taking situations--not astro-photographic situations. But by analyzing the test results carefully it is possible to get some idea of how these films will behave when used for astrophotography.

E-6 Ektachromes

Kodak is really going to stick it to us this time by doing away with several old standard films, including High Speed Ektachrome. In their place Kodak will give us the E-6 Ektachrome films with E-6 processing.

There will be two different "families" of E-6 films, one made for the professional and the other made for the amateur. The new E-6 professional* films are currently available, and must be stored at 55 F or lower until used. Once the film is exposed it must be processed within 24 hours. These precautions are necessary in order to avoid color shift.

The amateur E-6 films, which will become available in the spring, will have better latent image keeping qualities. Because of this they will not require refrigeration and quick processing.

Obviously, the professional films will have better color control while the amateur films will provide more leeway in storage and use.

* Professional does not mean that you cannot buy these films. At this writing Peper's Camera has the E-6 processing kits and will order the films upon request. Both the professional and amateur (regular) E-6 films will require the new E-6 processing. It is faster and somewhat less involved than the old E-3 and E-4 processes. Processing time for the Ektachrome films has been reduced from 47 minutes to 32 1/4 minutes.

All of the new E-6 Ektachrome films have their ASA rating given in the name of the film. Caution: this is not the true film speed. Before using any of the E-6 films consult the instruction sheet for the actual rating of that particular batch of film. For example, Ektachrome 64 may actually be rated anywhere between ASA 40 and ASA 80. When using these new films, be sure to read the instruction sheet for the correct ASA rating.

Since astrophotographers are primarily interested in daylight balanced films, I'll limit this discussion to these types of films in the professional "family".

Kodak Ektachrome 64 Daylight will replace Ektachrome-X. This film will be available in sheet, 120, and 35mm (36 exposures only) sizes. Comparison test shots taken with the old and new films reveal the following: Resolution is about double with the new film. This is due primarily to smaller grain size as well as a tighter grain pattern. Highlight and shadow details were more pronounced in the E-6 Ektachrome 64 slides, but the Ektachrome-X slides had better contrast. The colors red and orange look better in the new film; while yellow and green appear to be underexposed, and both white and blue take on a magenta cast. Overall, on short exposures, Ektachrome-X reproduces the original colors most faithfully.

How does the new Ektachrome 64 hold up on long exposures? Well, not too bad. In the tests conducted on the old and the new films a 1/30 sec. exposure and a 4 sec. exposure of the same scene was made with each film. Now a 4 second exposure is nowhere near a 15 minute exposure; however, a 4 second exposure will begin to show reciprocity failure and/or color shift trends. On the 4 sec. exposure the E-6 Ektachrome 64 slide, became a tiny bit more pinkish in color and was only slightly underexposed. The Ektachrome-X slide developed a slight greenish cast and was definitely underexposed by a good two stops (gross reciprocity failure which Ektachrome-X is noted for).

All of the test results indicate that E-6 Ektachrome 64 should produce excellent astrophotographs, whether they are short exposure planetary shots or long exposure star field shots.

Kodak Ektachrome 200 Daylight will replace High Speed Ektachrome. The new film will only be available in 120 and 35mm (36 exposures) film sizes. Comparison short exposure test slides taken with the two films show the Ektachrome 200 to have better all around color reproduction while High Speed Ektachrome has a slightly blue cast. The colors look snappier, contrast is better, and yet highlight and shadow details seem more pronounced in the Ektachrome 200 slides. The new film has much finer grain than the old and comes close to the new Ektachrome 64 film in resolving power.

Long exposure (4 second) test slides show H.S. Ektachrome as the definite winner. H.S. Ektachrome is virtually unchanged after a 4 second exposure; while the new Ektachrome 200 shows some reciprocity failure and a horrible greenish cast. Since this film will replace H.S. Ektachrome, this is the terrible news I mentioned earlier.

The new Ektachrome 200 will be great for short exposure planetary and lunar photographs, but H.S. Ektachrome is still best for long exposures.

Perhaps we should stock up on H.S. Ektachrome and E-4 processing kits. And then perhaps not. Kodak plans to discontinue all E-3 films and chemistry in 1977, but there are still no definite plans for the E-4 films (one of which is H.S. Ektachrome) and the E-4 chemistry.

Pushing, or force developing, the new E-6 films is possible, but the results seem to be inconclusive--depending on who you listen to. If you would like to try pushing with the E-6 chemicals, increasing the first development from six to eight minutes will double the film's effective speed and going eleven minutes will quadruple the speed of the film. There is some talk that Kodak plans to introduce an E-6 Ektachrome 400 film. If and when they do, let's hope its long exposure color shift is not as bad as the Ektachrome 200.

For more information on the E-6 Ektachromes refer to the following publications:

Popular Photography, November 1976

Modern Photography, Nov. and Dec. 1976

Ilford HP5

Ilford of England has announced that in the Spring of 1977 they will introduce in the United States a new black-and-white film, HP5. Their new film will have an ASA rating of 400, the same as their HP4 film and Kodak's Tri-X. You might ask why Ilford would introduce HP5 when it already has an ASA 400 film, HP4? The answer is that HP4 is close to Tri-X in resolution and HP5 is supposed to be better than HP4. Then if that's the case, is HP5 better than Tri-X? The answer, according to Modern Photography's tests (Christmas Issue, 1976), is an emphatic yes!

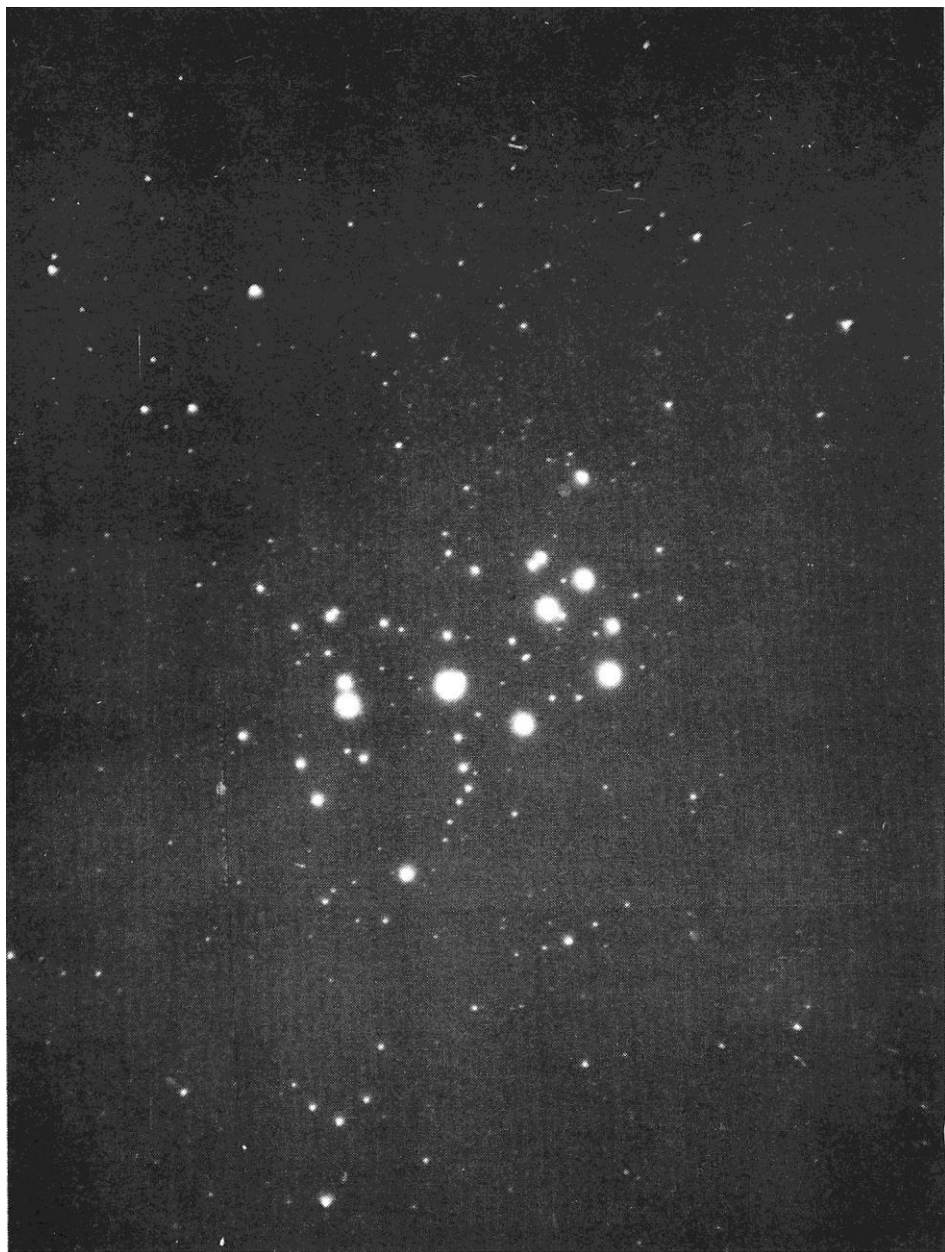
The testing was done on Tri-X, HP4, and HP5; and all test exposures were made at the film's nominal speed of 400 using the same camera-lens combination. The results were impressive. Ilford HP4 came in last, Tri-X was second, and Ilford HP5 was definitely first. Under 20X magnification HP4 looks soft and grainy. Tri-X under the same magnification is sharper but it is still grainy. Tri-X is however more contrasty than either of the two Ilford films. HP5 under 20X magnification is almost impossible to believe for an ASA 400 film. Resolution is extremely high. Graininess is almost undetectable and contrast is excellent. Overall sharpness is almost equal to that of Kodachrome 25 film. (If you wish to see for yourself, refer to Modern Photography April 1976 pg. 85 and Christmas Issue 1976 pg. 89.)

For the first time, if severe reciprocity failure does not occur, astrophotographers will have a high speed, fine grain B&W film at their disposal.

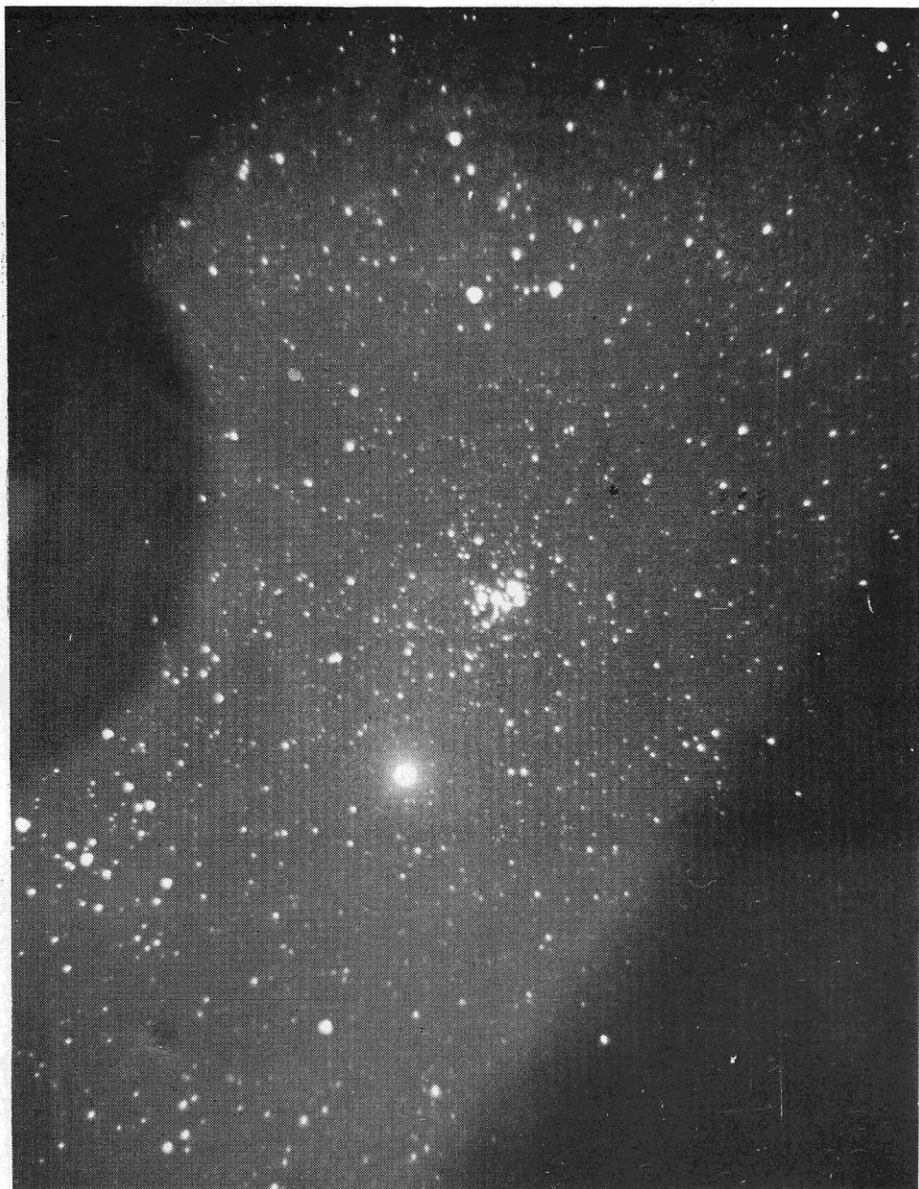
Ilford HP5 uses Ilford ID-11 developer. This developer is identical to Kodak's D-76, which is used for Tri-X. All three films may be developed in Microdol X for 12 minutes at 68°F.

It should be kept in mind that all of the previously mentioned film testing is by no means conclusive. One test of one emulsion batch is just too small of a sample to get a really good idea of how a new film will perform. As far as astrophotography is concerned, we can only make some broad assumptions from what we already know as to how these new films will behave when working at the extreme limits of photography. Now it is up to you to go out and take some photographs with these films, and find out what they really can do.

Dennis Jozwik



Photograph of the Pleiades (Seven Sisters), M-45. Exposure of 5 minutes on plus-X, 125 ASA. Taken with a 3" f:3.9 telephoto lens, by Roger Civic Aug., 1976.



Photograph of (from top to bottom) California Nebula (NGC-1499 in Perseus) and the Pleades (M-45 in Taurus) star cluster and apparent bright star at bottom is the planet Jupiter taken with a 50mm, f:18 lense on fuji-chrome film - 15 min. exposure. Observatory tube on left and slit on right.



Photograph of Pleiades (M45) 15 min. exposure on Focal 100 film with a 3" f:4 lense system. Note Merope Nebula around the star Merope.

Both shots taken September 1976. Both are good objects for the observer and photographer to challenge in January.

Photos taken by Frank McCullough