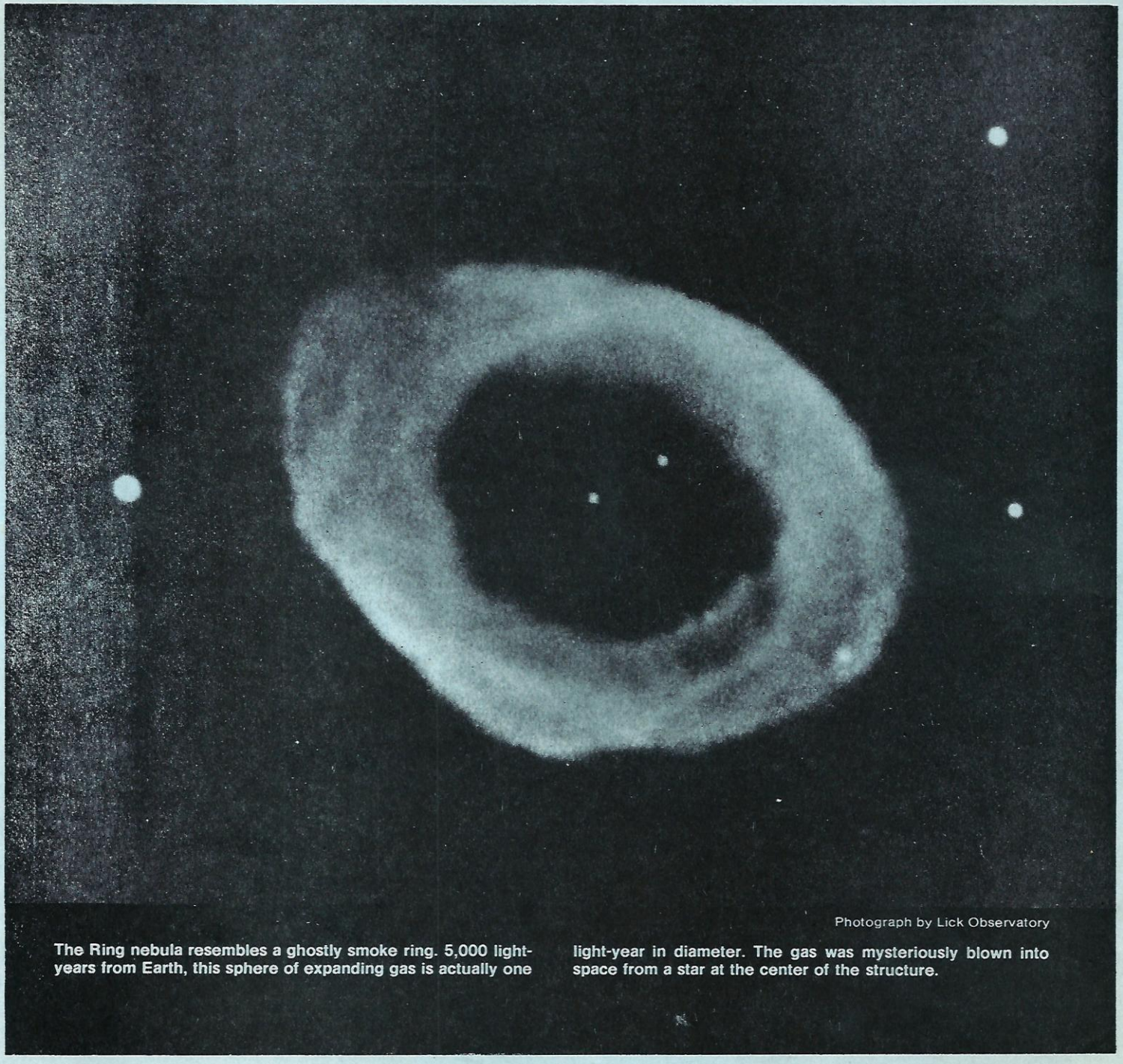
THE WASP

THE JOURNAL OF THE WARREN ASTRONOMICAL SOCIETY



Photograph by Lick Observatory

The Ring nebula resembles a ghostly smoke ring. 5,000 light-years from Earth, this sphere of expanding gas is actually one light-year in diameter. The gas was mysteriously blown into space from a star at the center of the structure.

JULY 1978

The Warren Astronomical Society
P.O. Box 474
East Detroit, Michigan 48021

Club News

The Warren Astronomical Society (W.A.S.) is a nonprofit organization of Amateur Astronomers. Membership is open to all interested persons. Annual dues are as follows; Student- $11.00, College- $13.00, Senior Citizen- $15.50, Individual- $18.00, Family- $23.00, the membership fees listed here include a one year subscription to Sky & Telescope Magazine.

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

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

OBSERVATORY SCHEDULE Dennis Jozwik..Chairman · 754-2037

Lectures for the coming month are listed below.

July 7/8 ...No Scouts ..Paint and fix up Stargate . Messier Contest
July. 14/15 No Scouts ..
July. 21/22 Don Misson 721-9083
July. 28/29 Jon Root 464-7980

The lecturer may select either the Friday or Saturday, depending on the Weather and their personal schedule. NOTE..If you cannot lecture on your scheduled weekend, please call for a replacement as early as possible. If you wish to use Stargate, please call by 9 pm on the evening you plan to go out.

•buy – sell – trade•

FOR SALE...Projector Table, brand new..$30.00.- 30”X40” wood drawing table, $15.00.- Folk Guitar w/pick, 6 string, $10.00. - TI-50 Scientific calculator, rechargeable .. $30.00. Call Larry Kalinowski 776-9720.

FOR SALE...Celestron 8 with: wedge, tripod, 3 eyepieces, aluminum dewcap, counterweights, prism diagonal, piggyback camera mount, off axis guider, illuminated eyepiece, telecompressor, teleextender, and ‘T’ mount and ring for Cannon body. New cost-$1571.00, selling for-$1150.00. Write Richard Hill, 3932 Todd, Midland, Mich. 48640 Or call 1-517-835-5548.

For sale...Tasco 60 mm telescope (tube only) 2 eye pieces and a 24 mm finder ..$25.00. Also, Jagers 4½” reflector (tube only)with a 10X30 mm finder. Contact Joe Munau, 681-2006.

For Sale...10” f/6 reflector with Optic Craft mount (pipe), asking $300.00 Also, Celestron photographic accessories- A.C.-D.C. drive corrector and off axis guiding assembly. F. B. Bruner, 643 Washington, Hope In. 47246

For Sale...8” f/6 reflector, with 2.14 diagonal, mounted in 10” tube-50” long no eyepiece focusing mount. $125.00. Also 4” O.D.-24” long, black iron stand that is ready to accept 3 legs and Equatorial head (Pacific) $15.00. plus, a 22½ lb. counter weight with 1” hole & screw clamp. $15.00 Contact Roger Civic, 776-8735.

MINUTES OF THE MAY, 18, 1978 MEETING OF THE WARREN ASTRONOMICAL SOCIETY:

The meeting was opened by President Lou Faix at 8:15 p.m. at Macomb Community College. Since the treasurer was not present Lou estimated the bank balance at about $187. Dennis Jozwik, Observatory chairman, rose to give his report. He told members that John Root has been working on the 3-inch finder and that it is now in good working order. Doug Bock received an honorary citation on his Messier Certificate for observing all 107 objects. John Searles explained the details of the University of Toledo Astronomical Symposium which will be held on the week-end of May 19. Lou Faix asked all members to bring their telescopes to the Great Lakes Convention in July. Ray Bullock made requests for volunteers to help Thursday October 19 at Cranbrook. Featured will be the observance of their 20th anniversary and a meeting of the Great Lakes Planetarium Association. He also invited members to a Saturday night lecture on Graphic Laser methods. Time would be 8:00 p.m. and the tab is set at $3.50 for non-members and $2.50 for members.

Rick Hill gave a further explanation of his graphs which appear in the June issue of the WASP. Pete Kwentus took the floor to appeal to all to make early reservations for the Eclipse Expedition on February 26, 1979 in the city of Brandon in Canada. Cost would be just under $300. Loretta Caulley brought attention to an article written by Lou Faix which appears in the May issue of Sky & Telescope. Entitled, “Correcting Periodic Error in a Clock Drive”, pg. 439, it includes pictures taken in the course of his successful experiments. Lou concluded that two years had elapsed since he submitted the article for publication.

The annual election of officers then took place. Lou read the duties of the posts and Pete Kwentus conducted the proceedings. Those nominated were: for president, Dave Harrington and Doug Bock; for 1st vice president, Jeff Stanek, Ken Kelly and Doug Bock; for 2nd vice president, Bob Dennington, Dennis Jozwik, Jeff Stoner and Ken Kelly; for Secretary, Loretta Caulley; for treasurer, Robin Bock and Ken Kelly.

The following were elected: Dave Harrington, president; Doug Bock, first vice president; Dennis Jozwik, second vice president; Loretta Caulley, secretary; and, Robin Bock, treasurer. Lou then thanked Pete for all of his many services to the Society.

June 2nd is the date of the Warren Woods High School telescope night. Members were asked to volunteer their services to Larry Kalinowski, who is in charge of the project. Lou told all of Frank McCullough’s serious accident in which he sustained internal injuries. He has been in intensive care in a Mt. Clemens Hospital. Ginger Kwentus took donations for a gift for Frank, who has served this society well for many years.

Gary Morin asked to close his books. He revealed a balance of $351.47 in the treasury. Ray Bullock gave an illustrated talk on Soviet Space feats which will be on public display at a Toronto, Canada Exhibition. The Cranbrook trip has been set for June 23rd.

After intermission at 10:00 p.m., Rick Hill gave an excellent presentation entitled “Cratering”. Using our moon, the Earth and other planets, Rick’s graphics and words taught us about impact, Volcanism and collapse in understanding craters. His scholarly, researched and talented delivery was well received.

The meeting closed at 11:00 p.m.

Respectfully Submitted,

Loretta

Loretta D. Caulley, secretary

STARGATE OBSERVATORY CODE OF CONDUCT

Use of the Stargate Observatory is a privilege of membership in the Warren Astronomical Society. We enjoy this privilege because the W.A.S. continues to meet the commitment of providing lecturers each weekend to Camp Rotary. As a result of meeting our commitment, we may use the observatory on almost any clear night of the year. Also, because our observatory is located on the Camp Rotary grounds, it is unique in that someone watches over it on a 24 hour basis, 7 days a week, and at no cost. Because the use of the Observatory is a privilege and not a right, and the camp ranger is watching over the observatory; we must observe certain rules of conduct when we wish to make use of Stargate Observatory facilities.

1. Any current club members wishing to use the Observatory must call the Observatory Chairman, or the W.A.S. President, or the W.A.S. 1st Vice President, or the last 3 presidents (in that order) before 8 PM on the evening they are going out to the camp. (Lecturers are exempt from this requirement on their scheduled dates only.) When you call you must provide:

   A. Your arrival time prior to 11 PM.
   B. The names of all persons coming out with you. (You may bring nonmember guests if you have prior approval.)
   C. A description of the car(s) you will be arriving in.
   D. What facilities you plan to use at the observatory.

   Notify a club officer in the order given on page 4 and only in that order. The contacted club officer in turn will notify the camp ranger. If you cannot reach one of the club officers, <u>do not go out and do not call the ranger direct</u>. Being a lecturer or a club officer does not grant you the right to go out to the observatory unannounced.

The only people authorized to come out unannounced are the club President and the Observatory Chairman.

2. Use of the observatory will be allocated on a first come first served basis and only to those who have been trained in its operation. If you should happen to be the second or third to request use of the observatory on a given night, you will be asked to contact the person who called first and obtain their permission to come out and share the observatory. (Some people may not want company.) The first person to call is the individual responsible for the observatory on that night-- unless he or she has made prior arrangements with the contacted club officer. If you wish to bring out your own equipment, and not use the Observatory telescope, you may come out even though the observatory is in use. However, you must still contact a club officer before going out to the camp.

3. If you need a key to the Observatory you will be loaned a key. The only individuals who are authorized to loan out keys are the club officers listed on page 4. Loaner keys must be returned within 24 hours, so that they are available for others to use. The only individuals authorized to have keys in their possession are the club officers and the active lecturers. Lecturers' keys are not to be loaned out. If they do loan out their key they will end up losing it—so don't ask them, People not having a key will not be loaned one by the ranger.

4. When you go out to Stargate have your W.A.S. membership card with you. Even though the camp ranger has been notified you are coming out, he may still ask you to show your card to him.

5. Lecturers are obligated to show up on one clear evening during their scheduled weekend or find a replacement lecturer for that night. When a replacement has been found, the Observatory Chairman must be notified of the change. If you can't find a replacement notify the Observatory Chairman as early as possible.

6. If you should come out to the observatory without prior notification you will be challenged by the camp ranger. Your membership card will do you no good in this situation. For security reasons the ranger has been authorized to ask you to leave the camp grounds. If you do not leave immediately, he may have you arrested. (It should be noted that the camp ranger is often armed when approaching strangers at night.)

7. When you are in the camp drive slowly (less than 10 MPH). Remember, there are frequently many small children in the camp.

8. When at Stargate, stay in the immediate vicinity (within 100 feet) of the observatory. You are not allowed to visit the camps or cabins unless you have been invited by the adult leaders. The lecturers however, are allowed to notify the various camp groups that the observatory is open. No one is allowed to roam around the camp grounds or set up their telescope in any location other than the observatory without the permission of the camp ranger.

9. While at the observatory keep all noise to a minimum--especially after 11 PM and during the warmer months. Be careful of loud talking or yelling, slamming car doors, and loud radios. Remember, sound travels easily in the damp still night air.

10. Upon first entering the observatory sign in on the log book. State the date, your arrival time, and who is with you. When you are closing up the observatory for the night, list the time.

11. When you leave the camp ground you leave for the night. Coming and going in the middle of the night will not be tolerated. And don't wake the ranger up to tell him you are leaving.

12. When you are ready to leave for the night, it is your responsibility to make sure:

    A. All litter has been picked up and disposed of both inside and outside of the observatory.
    B. The dome opening has been fully closed and is pointing South.
    C. All electrical items have been unplugged from the power outlets and all lights are out.
    D. The telescope is in a horizontal position on the East or West side of the polar axis. Insure that no one will hit their head on the telescope or the counter weight.
    E. The telescope's covers have been put back on.
    F. Both observatory doors are locked.
    G. The mercury vapor lamp has been turned back on.

13. If any problems are encountered while at Stargate, contact the Observatory Chairman on the following day or as soon as possible.

FAILURE TO OBSERVE THIS CODE OF CONDUCT CAN RESULT IN THE SUSPENSION OF YOUR OBSERVATORY PRIVILEGES.

Observatory Chairman	Dennis Jozwik	754-2037
President	Dave Harrington	879-6765
1st Vice President	Doug Bock	533-0898
Past President	Pete Kwentus	771- 3283
Past President	Louis Faix	781-3338
Past President	Frank McCullough	725-4736

ANNOUNCING

A

MESSIER CONTEST

AT

STARGATE OBSERVATORY

ON

SAT. JULY 8, 1978

IF CLOUDY

SAT. JULY 15, 1978

SO DON'T FORGET TO BRING YOUR SCOPE WHEN YOU COME OUT TO CLEAN UP & PAINT THE OBSERVATORY.

NIGHT WATCH

Occultations are very useful events for the amateur astronomer to observe and report on. The equipment requirements are modest ani the results are quite rewarding.

All you need to observe these is a telescope of any reasonable aperture; say 2.4" for refractors and 3" for reflectors. Even a good sized pair of binoculars can be used for many of the brighter occultations. Next you will need availability of very accurate time signals. The best are those of the short wave stations WWV or WWVH in Hawaii, or CHU in Canada. WWV is most commonly found at 2.5 5, 10, 15 MHz. There are some other frequencies but they often change with the budget. CHU broadcasts on three frequencies or: 3.35, 7.35, 14.65 MHz. CHU has the nasty tendency to fade out at the most necessary moments, so I recommend WWV.

Now how do you apply your time signals to your observations? This can be done with tape deck or stop watch. With tape deck, you should have some way of recording your time signals and your observations simultaneously. Your observation of disappearance or reappearance of the star can be a voice call, some noise recorded by microphone, or an electronic signal. If you have a stereo deck then you can record the time on one track and your observation on the other.

With stop watches you can time by starting the watch at the moment of the event and comparing it to accurate time signals as soon as possible after the event, or you can start it by signals before and stop it at the moment of the event. Some people even use both and compare the two. At any rate, for your observations to be of use to the professional community: TIMING ACCURACY MUST BE TO THE NEAREST 0.1 SECCOND! This is easy for those with the tape decks because they can mark the tape on the signals on either side of the event, then mark the event, and compare the measurement of same. The stopwatch method gives the necessary accuracy directly.

An effort should be made to determine your delay time. Usually this can be 'felt' to some degree. The very fastest a person can usually react is 0.1 sec. A more normal reaction time is 0.2 sec. A slow reaction is usually 0.5 sec. Anything over this is hard to judge and not very useful. Apply what you feel is the correct amount to your observation. To get a good feel of what these amounts of time are like open the back of your camera (provided it has adjustable shutter speeds) and set it for a tenth of a sec. Then try ¼ sec and ½ sec. After a short while I think you will be able to 'feel' the difference.

Also take notice of how the light disappears. Was the event instantaneous, did it fade in stages, did it brighten before fading, or did it slowly fade? These and other such observations can tell much about the star being occulted. For example, slow fading denotes a large diameter star, fading in steps denotes a multiple system, and so on. To see these things you will need good conditions.

These are just the barest of facts in occultation observing. For more details I recommend consulting: Observational Astronomy for Amateurs by Sidgwick, Astronomy, a Handbook by G. D. Roth and the Graze Observers Handbook by E. R. Povenmire.

Now for some upcoming events worth getting out and testing these methods on.

The most interesting of all the events for the next several months is the total occultation of M23. This will occur on July 17-18 at 3:31 am. The moon will be low in the west and that may require larger apertures. The object has such a diameter 0.25 arc min. that it will take 54 minutes to occult!

On July 1-2 the moon will be passing through the Hyades with an occultation of Aldebaran occurring for other locations on our planet.

Then on July 14 at 0116 am the 6.7 mag. star ZC1997 will disappear behind the first quarter moon.

On July 25 at 0540 ZC109 will reappear from behind the nearly third quarter moon. It is a 6.5 mag. star and even though this will occur in the dawn sky it should be visible in even small scopes.

Then on July 29 again the moon will be moving through the Hyades again but again it will be during the daylight hours. It is not impossible to observe occultations in the daytime but a good sized instrument is needed. At least a 3" rfr will be needed for Aldebaran and in April I found it difficult in my 8" Celestron.

Other occultations can be found in the Royal Astronomical Society of Canada Handbook for 1978, or you can contact me (517-835-5548) for I have predictions that go several magnitudes fainter than the handbook.

RIK HILL

AMATEUR BRIEFS

ANNUAL ASTRONOMY AWARDS FOR 1978

Robert Cox Harrington

The “Don Quixote” award for perseverance goes to Doug Bock for his untiring vigil in watching for aurora displays during the last two sunspot minimums. Now taking a well deserved break, Doug will no doubt be back at his post during 1984-85 for the next minimum. When queried about the importance of this project to the scientific community, Doug chased this reporter down the hall, shouting, “Someone has to do it; there is no shortage of thankless jobs in science!”

The “Divide-By-Zero” award for applied mathematics goes to Doug Smith, who has finally put his computational method for determining orbits to the test. On the evening of May 23, he made three closely-spaced observations of an objects position. Next, he spent four hours at the calculator in order to obtain the five orbital elements of the object. To his surprise, the results showed that the descending node was at Detroit’s Metro Airport. It seems that Doug had observed a 747 on a landing approach. “I thought the proper motion looked a little large”, he said with a puzzled look.

The “Flat-Earth Society” research award for the year goes to Jeff Stanek for his discovery of “ozone holes” in the Earth’s atmosphere. After studying numerous photographs of meteor trails, Jeff noticed that they all pass through a single point in the sky. He then postulated that the ozone layer must repel all meteors except where an “ozone hole” exists. It is at this point that all of the meteors enter. When asked by this reporter why meteor counts have been on the increase, Jeff replied, “It must be due to all those deodorant cans creating more ozone holes”.

The: “Giordano Bruno” award for being in the wrong place at the wrong time goes to Frank McCullough, who was recently released from the hospital following an automobile accident on 23 Mile Road. It seems that Frank had a special, neutral-density #5 windshield installed in his car so that he could observe the sun on his way to work. However, this made it rather difficult to see oncoming traffic. “I now realize that I should have compromised at neutral-density #4”, said Frank, waving his crutch for emphasis; “That would have been better for photography anyway”.

The “Rube Goldberg” award for innovation goes to Dave Harrington, who recently acquired contact lenses. After several sessions of telescope viewing with these lenses in place, Dave hit upon the brilliant idea of eliminating the eyepiece by wearing orthoscopic contacts. This has worked amazingly well according to Dave, who told this reporter, “Why introduce another optical element if you don’t need it”? He is now scheduled for plastic surgery in order to have a 1¼” adapter installed in his eye socket.

The “Cerro Tololo” award for deep-sky observing goes to Tim Skonieczny. Tim recently viewed the final two objects needed to complete the Kwentus Catalog of 1st Magnitude Objects. By viewing K-8 and K-14 (Arcturus and Polaris), Tim becomes eligible for the coveted Urban Observers Certificate. Commenting on the many months spent searching for these objects, Tim said, “Thanks to good seeing” K-1 and K-2 (the sun and moon) were fairly easy, and I got them both on the same day from Six Mile and Woodward. After that they got pretty tough”. Tim informed this reporter that he spent many an hour at higher elevations (the bar on top of the Renaissance Center) searching for K-6 and K-7 (Sirius and Vega). “It doesn’t become astronomically dark until about last call” he said, popping an Alka Seltzer into his mouth. After a futile search from Eight Mile and Gratiot for that difficult double, Mizar and Alcor, Tim launched an expedition to the more favorable skies of downtown Lansing. It was here that he was first able to split this double star, in between flashes of a Kentucky Fried Chicken sign.

The “George Pierrot” award for the club member who has logged the most consecutive days without moving from his armchair goes to Gary Morin. Gary holds the current club record of 284 days and 6 hours without observing a single astronomical object. “I almost got caught by the rising last-quarter moon when I was driving home from my girl friend’s house last week”, said Gary, “But I ducked down behind the dashboard and drove home with averted vision”. According to Gary, maintaining the status of Armchair Astronomer is not as easy as it sounds. “You must spend hours every day watching the weather maps, in order to know when it’s going to be overcast, so you can sneak out of the house to get needed groceries. The weather fronts are the most dangerous”, stated Gary, “because a sudden clearing could form while you are making a quick dash for toothpaste, and you might inadvertently catch a glimpse of the Big Dipper”. When questioned as to his current projects in amateur astronomy, Gary informed this reporter that he does a lot of reading and thinking about the universe. “I’m also getting ready for the next transit of Venus in 2008”, he said. “A person should learn to restrict himself to a reasonable number of observing projects, and not spread himself too thin.”

NEWS NOTES

EX-PRESIDENT JAILED

It is with deep regret that we announce the untimely departure of David Harrington from the ranks of the Warren Astronomical Society. Dr. Harrington, accomplished amateur astronomer and chemical engineer, began serving his 20 year sentence for defamation of character in the Jackson State Prison last week.

Dave is best remembered for his fight to construct an amateur astronomical observatory in the Detroit suburb of Troy. After a lengthy court battle, he was allowed to complete his observatory even though he was found guilty of interfering with his neighbor's television reception. Applying his professional talents to the project, the observatory was outfitted with a lunar energy collector to provide energy for his clock drive. "After all," said Dave, "lunar energy is the coming thing and I do use the observatory primarily at night." Although functional, the collectors also serve as a moondial and coffee maker.

During his career as an amateur, Dave acquired the nickname "Hard-luck Harrington" for his eclipse expedition disasters. Although he spent a considerable amount of time and money studying satellite cloud photos prior to each eclipse, he always managed to find the cloudiest viewing sites. His luck changed after the 1972 eclipse when someone pointed out that he was mistaken in his analysis of cloud patterns. It seems Dave studied infrared photographs which indicated cloudy areas as dark instead of white as normally shown. "They really fooled me on that one," he commented later.

Dave's career as a chemical engineer spanned both the aerospace and automotive industries. After 10 diligent years, he received his Ph.D. from the Michigan State University Extension Service in Ann Arbor. Soon he began work for General Motors at the Technical Center in Warren. His work in fluid dynamics led to many awards and recognitions. Unfortunately, his career took a sudden turn for the worse the first year he was elected president of the Warren Astronomical Society. After driving in a fellow club member's Toyota Celica, he sold his newly acquired Delta 88 and purchased one for himself. The next day, he stormed into a design meeting and demanded an explanation why General Motors couldn't design a car that had as much quality and efficiency as the Celica. Soon after receiving his pink slip, he quipped "I asked for it, and I got it!" When asked about his future, he replied "Plumbing and air conditioner repair are highly related fields. You can't complain about the wages either."

Ironically, it was the same court that granted his lifelong dream of owning his own observatory that also put an end to his freedom. In the landmark case "The Defamed of the Warren Astronomical Society vs. Dave Harrington," 11 members of the club who had been subjects of one of Dave's numerous satires successfully sued him for his observatory and had him put away. The "Defamed 11" as they became known received much legal advice from lawyers representing Faitus Enterprises, the now billion-dollar corporation once satirized by Dave. At the end of the trial, Dave shouted "I was only joking!" So were they.

CYGNUS-The Swan

By Rich Carter

In Greek mythology, Cygnus is the swan that Zeus took the form of to seduce Leda, a mortal woman. This is quite a common occurrence in Greek myths, and Zeus had hundreds of children born of mortal women. Taurus, in fact is the bull in whose form Zeus carried Europa from her home to a far-distant island. Zeus was not ugly-- it was just that any mortal who saw his true form would burn up from the radiance of the god.

Interestingly enough, Cygnus was classified by many ancient people as a bird, though not necessarily a swan. In medieval writings, Cygnus is variously mentioned as an eagle, a pigeon, a partridge, and a hen. The ancient Babylonians regarded Cygnus as a sort of star-bird, the Urakhga. This is possibly the myth that led to the Rukh, or Roc of Arabic legend.

In Western legend, Cygnus is known as the Northern Cross. The legend is enhanced by the fact that, at Christmastime, it is vertical on the Northwest horizon shortly after sunset. The following is from James Lowell's New Year's Eve, 1844:

> "The Lyre whose strings give music audible
> To holy ears, and countless splendors more,
> Crowned by the blazing Cross high-hung o'er all;"

> Deneb, the Tail, is the brightest star in the constellation, and one of the brightest in the sky. Its name comes from Al Dhanab al Dajajah, Arabic for "The Tail of the Hen". Older names were Denebadigege and later, Deneb Adige, which was shortened to the modern. Another nearly-archaic name for Deneb is Arided, which comes from Al ridf, "The Mindmost".

Actually, several constellations have Denebs, when the need arises to name a star representing a tail. Equuleus the Colt has one, and Denebola and Deneb Kaitos are the tails of Leo, the Lion and Cetus, the Whale respectively.

The other named stars in Cygnus are Albireo, from Al Minhar al Dajajah or "the Hen's Beak", Sadr from Al-Sadr al Dajajah, "The Hen's Breast", and Gienah, derived from Al-jinah, the wing.