

THE WASP

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



JULY 79

THE WARREN ASTRONOMICAL SOCIETY
PUBLICATION

Editor – Jeff Stanek
751-1673

Assistant Editor – Brad Vincent
751-8506

SOCIETY INFORMATION

The Warren Astronomical Society (W.A.S.) is a local, nonprofit organization of amateur astronomers. The Society holds meetings on the first and third Thursdays of each month. The two meeting locations are listed below:

1 st Thurs.	Cranbrook Institute Of Science 500 Lone Pine Road Bloomfield Hills, MI	3 rd Thurs.	Macomb County Community College – South Campus K Building 14500 Twelve Mile Road Warren, MI
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Membership is open to those interested in astronomy and its related fields. Dues are as follows and includes a year subscription to Sky & Telescope Magazine:

Student - \$11.00	College - \$13.00	Senior Citizen - \$15.50
Individual - \$18.00	Family - \$23.00	

STARGATE LECTURE SCHEDULE

Chairman- Frank McCullough-725-4736

Lectures are given at Stargate Observatory each weekend. The lecture will be either Friday or Saturday night, depending on the weather and the lecturers' personal schedules. If you cannot lecture on your scheduled weekend, please call the Chairman as early as possible so he may arrange for a replacement. Those wishing to use Stargate must call by 9:00 p.m. on the evening they plan to go out. The lecturers for the coming month are as follows:

July 6/7Bob Dennington, 779-6354
July 13/14Lou Faix, 1-781-3338
July 20/21Dave Harrington, 879-6765
July 27/28Pete Kwentus, 771-3283

WAS Exchange

FOR SALE. . . 3" refractor in very- good condition. Completely equipped with the following: equatorial mounting with setting circles, three eyepieces, star diag., 2x Barlow, 6 x 30 finder, erecting prism, sun screen proj., and accessory tray. Price - \$250. Contact Jeff Stanek, 751-1673.

FOR SALE. . . Cave 12½" transportable mounting with: slow motion on dec. (dec. motor needs replacement). Price - \$400.

10" f/4.9 mirror (needs final figuring) with: diag. (Coulter), tube & homemade cell. Price - \$75.

6" f/10 finished mirror. Price - \$20.

Fork for equatorial mount, laminated birch plywood, some holes. Price - \$15. Call Rik Hill, day 517-799-9390, nite 517-35-5548; or write 4503 E. Patrick, Midland, MI 48640.

FOR SALE. . . 3¼" f/11 refractor tube assembly, makes excellent guide scope. Price - \$175 or best offer. Unitron Unihex, will fit above. Price - \$44 or best offer. Call Bob Shannon, 885-4283.

REACH THE RIGHT PEOPLE.

ADVERTISE IN THE WAS EXCHANGE.

THE FOLLOWING ARE THE MINUTES OF THE MAY, 17, 1979 MEETING OF THE
WARREN ASTRONOMICAL SOCIETY:

The meeting was opened at 8:30 p.m. by President Dave Harrington and was followed by a sign-in of the membership book. The evening's agenda would feature the annual elections. Robin Bock, treasurer, reported a \$280.93 balance in the bank. She also thanked all, and especially John Searles, for gifts to the Library. The forthcoming Toledo Symposium was discussed by Rick and Delores Hill. Jim Loudon would be their guest speaker and members were reminded that there was still time to register and come.

Lou Faix and Dr. Paul Strong, who were the nominations chairpeople, then conducted the business of the evening by explaining the duties of each office. Procedures were outlined and ballots distributed. The Following were elected: President, Dave Harrington; First-Vice president, Judy Strong; Second Vice President, Frank McCullough; Secretary; Loretta Caulley and; Treasurer, Robin Bock.

Frank McCullough then began his presentation on Auroras. In layman's language, Frank told how Auroras were usually located in the stratosphere or ionosphere. His personal observations plus slides with stellar backgrounds were instructive and provocative. Afterwards, he answered questions from the floor. Members learned of an international organization for gathering data on Auroras.

After intermission, at 9:40, a very special speaker from Kenya, who had been recruited by Dave Harrington, gave first hand information on one of the countries which will be in the path of totality for the Solar Eclipse, Feb , 16, 1980. CALEB NAKHABALA, an exchange student and journalism major attending Wayne County Community College, took the floor and spoke about his country and its customs. He is a member of the Kikuyo Luo Abaluhya tribe in Kenya. He cautioned travelers on being shrewd when shopping for artifacts and native goods. His talk covered climate, history, languages, price structure and money conversion. Lou Faix enquired about public transportation. Kim Dyer asked about merchant customs, game reserves and national parks. Members learned that tourism is boosting Kenyan economy. Questions about exotic wild-life, the political situation, restaurants and water supply were expertly fielded by Mr. Nakhabala. The presentations ended with slides and a promise to return.

The meeting was adjourned at 11:00 p.m. by Mr. Harrington. All were invited to continue informal discussion at Denny's Restaurant on Groesbeck Highway.

Respectfully submitted,



Loretta D. Caulley, Secretary


EDITORIAL

Here it is, summer again. Everybody has something to do, either it be with the spouse, family, or the house. Every summer and spring you can notice a considerable decline in WASP articles. You can already notice the shortage of articles the past few months in the WASP. This year, I would like to make it different by more people writing articles for the WASP. This editorial this month is directed toward the people who show up at just about every meeting like the officers of the club. The reason I say this is because the articles you see in the WASP are 2 out of 3 times done by a person who regularly writes articles in the WASP. These people are like myself, my assistant editor Brad Vincent, Lou Faix, Frank McCullough, Rik Hill, I apologize for anyone I left out. One young man who has been coming to the meetings quite frequently is Mark Bientek. You don't have to be a genius to write an article, all you have to do take some time out one weeknight and come out with a masterpiece. Your subject of your article can be as varied as how many subjects there are in Astronomy,

Or, if you are like some people who don't like giving talks, the next best thing is to write an article. Since the WASP goes to many other clubs around the country, the article you write will be read by many other people other than people in the Warren club. And, on many instances, editors from other clubs call me on the telephone asking me if they could reprint some person's article that appeared in the WASP. The same could happen to your article.

So, all I am asking is if you have any spare time at all, please consider writing an article for your club newspaper, especially you people out there who haven't written an article yet. If you have any questions about writing an article, you can reach me at 751-1673.

Jeff Stanek



Editor-WASP

Summer Problems
by Brad Vincent

The season is upon us when the telescope will now get a lot of use. The stern astronomer has been observing all year, while those whose allergy is to the cold do most of our observing in the warm summer months. For those bringing the scope out of mothballs, now is the time to clean the mirror and check how the coating is holding up. Better to get it done during the cloudy months then wait and lose part of the nice weather later on.

It's also time to check the grease on those drives and gears to see that they aren't crudded up. Care now will prevent disaster later on. One major problem on those humid summer nights is dewing. Some try to race against nature to see the heavens before the dew sets in to only miss something at the wrong time. For people with Celestron or Questar (and their close relations), a heated dewcap is excellent if you wish to buy one. A few individuals will raid their bathroom cabinets for the family hair dryer/ blower and bring it along. While it cleans off the dew, it also raises the temperature of the corrector plate and can throw off the secondary alignment. It makes no difference for visual, but any photography might suffer.

Those with a standard Newtonian can put a cover over the bottom of the tube to prevent any air currents from carrying moist air to the primary. This delay will afford longer observing time. Once it does get dewed, however, you're stuck.

Then again, a summer cloud front can move in at any time and really "dew" things up. Your best bet is to check the sky before leaving. Look for some jet trails just after sunset if the sky is clear. If they take more than a half hour to start fading, there is little air motion up above. This tells you that the chances of any clouds blowing in in the next several hours are slim. So go out and enjoy the weather and the stars.

NIGHT WATCH

On Saturday April 21 I received a call from Janet Mattei (director of the AAVSO). The first thing she said was that there were two supernovae in progress. Immediately I had visions of a sky studded with the crescent moon and several -8 mag stars along with the ten first mag. stars already in the spring sky. Like something on the side of a van or on the cover of a pulp sci. fi. novel. Then she lowered the boom. They were not in our galaxy, one was in M100 and was confirmed and the other was supposed to be in M101 and not confirmed. She was calling to see if I could help in confirmation of the second. As luck would have it I had cloudy skies on that day and they would remain so throughout the night. I alerted the other AAVSO observers in our area and then told Lou Faix, it seemed like the kind of thing that he would be interested in. Then I sat back and waited for the skies.

During that night, the skies broke some and by morning it was clear. I took a nap that afternoon in anticipation of a long night. As the sun set all looked good. The twelve inch takes about two hours to fully come to temperature so we took it out just before it got totally dark. About one and a half hours after sunset I was ready to go.

I started out with several clusters in Coma Ber. M53 is very much like a small version of M13. It has about the same star density and concentration in the center. However, it is farther away and therefore was harder to resolve. At any rate, it was not much problem for the twelve. But to the south of it is another, listed in Burnham's, and plotted on the Skalnate as NGC 5053. I could not have found this globular without photos to guide me. There is a 9th mag. star south several minutes but it was of little help. The cluster is only slightly smaller than M53 but it consists of fewer stars of a fainter mag. I would guess that M53 has stars of 12 mag. and NGC 5053 has stars of 14th mag. I saw it only as a dull, very dull glow.

I next began mu trek to the supernova. The one in M101 was out of the question. First of all, the galaxy is difficult to observe in the twelve due to the very low surface brightness of this face on spiral. Also in the starry background of UMa I would be hard pressed to figure out which was the supernova without accurate charts. All the photos I had of the galaxy were too overexposed. So I decided to leave this one until later when I had a better position, and charts.

On to M100. Starting with the star 11Com. I looked at M85 and its companion as well as NGC 4293 all to the north of 11Com. Slipping south I caught sight of NGC 4450 and 4350 plus two smaller ones nearby. So far, the scope was catching every one of the galaxies listed in the Skalnate. This all made me quite happy as you can well imagine. Next I moved just a bit farther south.

There it was, M100. It was a lot less bright than I had expected. But then that's a face on spiral for you, they're always tough especially in the slight haze I was fighting by that time. I wanted to be sure I had the right galaxy, it is easy to be confused here in the Coma-Virgo cluster, the wonderful 'Realm of the Galaxies.' M100 is supposed to be the largest spiral in the cluster about 35 million l.y. away. It is just a bit smaller than our galaxy by some sources but about twice as thick.

I am sure that most of those who see this article know what a supernova is, the obliteration of the outer layers of a star and rapid compression of the rest. During this process, it is said that the star emits more energy than its parent galaxy, but for an obviously shorter period of time. Therefore, it is substantially

bright enough so we amateur astronomers can observe a star in another galaxy. In fact, in many cases it will be brighter than the galaxy itself. On photos it does not appear so because a point source will stop accumulating image on emulsion before the diffuse galaxy. Therefore, what happens on the photo is that the supernova appears to be quite fainter than the galaxy.

Keeping this in mind I looked where Janet had told me. There about $2\frac{1}{2}$ min. to the SE was a star of mag. 11 or so. As I saw this star I thought of the immense distance between us, between the event and me, the observer. By now the star, or rather the pulsar created by the supernova event, has wound down and is no longer pulsating. The nebula formed by the scattered remnants of the outer layers of the old star has dispersed and probably no longer is traceable. As far as Alpha Centauri is concerned, the star has yet to go supernova and it will not for several more years! Here was an event that I was observing that if it had occurred within 100 l.y. of the earth would annihilate all living things with the outpouring of radiation. Without regard to our events, politics, or future plans it would sterilize the entire planet. Yet, against the backdrop of the universe it was a meaningless little puff when it happened over 35 million years ago.

- Rik

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From the AAVSO Circular...

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M-100 (NGC 4321)



SKY CALENDAR JULY 1979

Information for helping teachers and students observe the sky

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>Regulus Evening: 1 Mercury 5.6° from Jupiter. 19°</p> <p>Jupiter * Mercury * WNW</p> <p>Saturn Sunday evening: 8 Mercury 2.0° below Jupiter. They appear closest tonight. * Regulus</p> <p>Jupiter * Mercury * W</p>	<p>Evening: SW Moon tomorrow * Spica</p> <p>Monday, July 9, morning: Mars passes 5.4° N of Aldebaran. Evening: See box below. Venus (behind tree) ... ENE</p>	<p>Tues eve: 3 Mercury at greatest elongation, 26° E of sun and 4.0° W (lower right) of Jupiter. * Jupiter * Mercury * W</p> <p>Tuesday evening: 10 Mercury 2.2° from Jupiter. 2.4° apart. * Saturn * Regulus</p> <p>Wednesday evening: 11 Mercury 2.7° from Jupiter. 11° apart. * Saturn * Regulus</p>	<p>Thurs July 5, Pleiades morning: Mars * ... Aldebaran</p> <p>Venus ENE</p> <p>Thursday evening: 12 Mercury 2.7° from Jupiter. 11° apart. * Saturn * Regulus</p>	<p>Fri evening: 6 Moon tonight * Antares</p> <p>Moon tomorrow * Venus</p>	<p>Saturn evening: 7 Mercury 2.1° from Jupiter. * Regulus</p> <p>Jupiter * Mercury * W</p>	<p>Saturn rises after end of evening twilight, allowing a brief interval of very dark skies for seeing the Milky Way. Next two weeks are excellent for clusters plotted on this month's evening map.</p>
<p>Sunday evening: 15 Binoculars will help you find Jupiter. * Saturn</p> <p>Regulus * Jupiter * W</p>	<p>Monday Full Moon rises just before sunset and is visible all night. * Jupiter</p> <p>Monday morning Jul 16 Last Quarter (half moon, 90° or 1/2 circle west of sun in morning sky) * Jupiter</p>	<p>Sun will cross 17 from Gemini into Cancer July 20. Orion and Gemini become visible in eastern morning sky by month's end. See July 19-22, 31. When will you first see Orion's belt?</p> <p>Tues 24 hour after sunset tomorrow, look for moon very low, 12° N of W. Tomorrow's box shows sky 20 min later.</p> <p>Tuesday, July 31, morning: Orion and Gemini are back! * Betelgeuse * Orion's belt * Rigel</p>	<p>Wed 11 Can you still locate Jupiter? * Saturn 11° Regulus 15°</p> <p>Wed 25 evening: Saturn 12° Regulus 15°</p> <p>Wednesday, July 31, morning: Orion and Gemini are back! * Betelgeuse * Orion's belt * Rigel</p>	<p>Thurs morning: 19 Moon * Aldebaran * Mars</p> <p>Bellatrix * Betelgeuse * E</p> <p>Evening: 26 Moon * Saturn * Regulus</p>	<p>Friday morning: 20 Moon * Aldebaran * Mars</p> <p>Bellatrix * Betelgeuse * E</p> <p>Evening: 27 Moon * Saturn * Regulus</p>	<p>Sat morning: 21 Moon * Aldebaran * Mars</p> <p>Bellatrix * Betelgeuse * E</p> <p>Evening: 28 Spica 24° upper left of moon (moon will pass it in two nights). Saturn 18° lower right of moon. Can you still see Regulus 13° lower right of Saturn?</p>
<p>Sunday morning, July 22: Can you see Orion? * Mars</p> <p>Moon very low in ENE (20 min later, see diagram below). * Betelgeuse * Orion's belt * Rigel</p>	<p>Monday July 22, 1/2 hr before sunup: With binoculars, look for Venus 10° to moon's lower left. * Venus * Moon</p> <p>Monday July 30, evening: SW Moon * Spica</p> <p>Moon at First Quarter tomorrow night. * Venus * ENE</p>	<p>Monday July 30, evening: SW Moon * Spica</p> <p>Moon at First Quarter tomorrow night. * Venus * ENE</p>	<p>Monday July 30, evening: SW Moon * Spica</p> <p>Moon at First Quarter tomorrow night. * Venus * ENE</p>	<p>Monday July 30, evening: SW Moon * Spica</p> <p>Moon at First Quarter tomorrow night. * Venus * ENE</p>	<p>Monday July 30, evening: SW Moon * Spica</p> <p>Moon at First Quarter tomorrow night. * Venus * ENE</p>	<p>Monday July 30, evening: SW Moon * Spica</p> <p>Moon at First Quarter tomorrow night. * Venus * ENE</p>

Magnitudes of the Planets: Venus -3.3 to -3.4; Jupiter -1.3; Saturn +1.1; Mars +1.5. Mercury: July 1 +0.6; July 5 +0.8; July 10 +1.1; July 15 +1.4. Motions during July: Jupiter, in Cancer, moves eastward (closer to Regulus) by 0.2° per day. On July 1 it is 19° west of Regulus; on the 16th, in strong twilight, about 3° closer. Saturn, in Leo, is 10° E of Regulus July 1, and 13° E on July 31. (But you may not be able to see Regulus on the 31st, particularly from northern states.) Mercury closes to 2.0° from Jupiter on July 8, then curves southward, away from it. Venus closes from 15° to only 7° west of sun. Mars goes 21° eastward in Taurus; see July 9. Uranus is 2.4° to 2.1° ESE of Alpha Librae.