



# *The WASP*



*The official symbol of  
The Warren Astronomical Society*

*SEPTEMBER 1972*

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The Warren Astronomical Society holds correspondence (sometimes intermittently) with the following organizations. Others are invited to join this list:

THE ASTRONOMICAL LEAGUE  
THE DETROIT ASTRONOMICAL SOCIETY  
THE DETROIT OBSERVATIONAL AND ASTRONOMICAL ASSOCIATION  
THE JACKSON (MISS.) ASTRONOMICAL SOCIETY  
THE KALAMAZOO ASTRONOMICAL SOCIETY  
THE LANSING ASTRONOMICAL SOCIETY  
THE MIAMI VALLEY ASTRONOMICAL SOCIETY  
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

The characters in this paper are fictitious. Any similarity between them and any persons living or dead is purely coincidental. The Surgeon General also warns that reading this paper may be hazardous to your health.

## CLUB NEWS

By  
Ken Wilson

We would like to welcome Dave Harrington and his 16 inch reflector...er, I mean his wife to the W.A.S. Like many others, Mr. Harrington was also clouded out on the Gaspé Peninsula during the July 10<sup>th</sup> Solar Eclipse.

We would also like to welcome Ron Smolka as a new member. Mr. Smolka is the lucky owner of a 4" Unitron refractor.

Arrangements are currently being made to have W.A.S. exhibits at the Macomb and Oakland Malls. Star Parties may also be held in conjunction with these exhibits. If you have photographs that you would like to display or, more importantly, if you would like to volunteer to man the exhibit or the star party, please call one of the following: Ken Wilson, 268-9337 or Frank McCullough, 791-8752.

The postponed Messier Contest will be held on Friday evening August 18th.

A new set of four rollers has been installed on the dome at Stargate Observatory. Many thanks to Mr. Alyea, Mr. Kalinowski, and Mr. Dyer for their recent work on the Observatory.

Many good photographs were taken by W.A.S. members of the recent partial lunar eclipse. On hand at Stargate Observatory for the event were: Kim Dyer, Frank McCullough, Tim Skonieczny, Pete and Ron Kwentus, Roger Civic, and yours truly. Unfortunately clouds moved in during the maximum part of the eclipse. These clouds soon left and pictures of the moon entering and leaving the earth's shadow were obtained.

Clouds unfortunately interfered with local observation of the maximum of the Perseid meteor shower.

An open house is planned at Stargate Observatory in the near future.

Mr. Pete Kwentus has made some collimating eyepieces to be sold for \$1.00 a piece. The \$1.00 will go into the club treasury. Thanks to Mr. Kwentus, our treasure will grow a little fatter. So, if you want the most economical collimating eyepiece on the market, buy one from the W.A.S. and contribute to the club at the same time.

The screen with the new club symbol on it is now complete. So, if you have any t-shirts, sweatshirts, etc. that you want the club symbol printed on, contact Roger Civic at 775-6634.

P.S.: T.S. & F.M., watch out for stalemates.

## NEWS ITEMS

By

Kenneth Wilson

### SOLAR THUNDER?

Allen Stein, 22, a Caltech graduate student in physics and English has discovered thunder-like waveforms on the sun. These gigantic waves were discovered by Stein when he examined a recently taken movie of the solar surface. The waves radiate in expanding rings from sunspots and behave just like sound waves. The waves are 1,600 miles from crest to crest and travel at 18,000 to 25,000 miles per hour, 270 seconds apart. The velocities of these waves are constant as sound waves under the same conditions would be. The waves are visible on the sun only under exceptional seeing conditions, which explains why they haven't been noticed before.

Even if one was close enough to hear them, these solar thunder waves would be inaudible because they are approximately 10,000 times slower in pitch than the human ear can detect.

Oh, well... Anyone for solar lightning?

### SOMETHING NEW

A new class of astronomical objects has been discovered by P. A. Strittmatter, K. Serkowski and R. Carswell of the University of Arizona, W. A. Stein of the University of California at San Diego and the University of Minnesota and K. N. Merrill and C. M. Burbidge of the San Diego campus. These new objects are characterized by: rapid variations in the intensity of the output at radio, infrared and visual wavelength; concentrations of most of their energies emitted in the infrared; absence of discrete lines in the spectra, and strong and rapidly varying polarization at radio and visual wavelengths. This new class of objects may be related to quasars.

B.L Lacertae, O J 287, O N 231, O N 325, and P K S 1514-24 are five of these new objects that have been extensively studied. Although the distances of these objects are unknown, due to their lack of spectral lines, O J 287 may be one of the most luminous objects in the universe if it is at the same distance as the quasars are.

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## Comet

Did you see the comet  
passing motionlessly by?  
Bride of the sky  
subtly romantic  
full of mystery  
bold yet demure.

A child's chalked comment  
on the blackboard of the night,  
signifying something  
for someone somewhere,  
nothing for no one everywhere.  
Stark gentle signal  
unexpected yet waited for.

Catch on to the tail of a comet  
and spin out of sight  
just for tonight,  
with soft cold winds  
smoothing night clothes,  
and the leafless branch  
of the elm tree  
cobwebbing the light.

-Theodora Kissell

THE  
POETS

CORNER

conducted by: ken  
wilson

## OPERATION ECLIPSE: 1972

By Timothy Skonieczny

By far the greatest excursion I have ever taken part in was not the longest, nor was it the costliest. It was a trip not intended for relaxation, but was expected to cause much worry and helpless waiting. The trip was to see the July 10<sup>th</sup> solar eclipse, and the destination was within 1,000 miles of Cap Chat, Quebec.

The eclipse expedition I planned for over two years consisted of my parents and me. I hoped that my brother Bob would come also, but he decided a trip to the Bahamas was more feasible. We left on July 2, eight days before the eclipse. We knew the trip would only take 4 days, but the other 4 days could be valuable if we decided Cap Chat was to have the same fate as Perry, Florida did in 1970.

Our first stop was at McLaughlin Planetarium in Toronto, a sky theater that provided an excellent showing that had no plot and excellent displays each describing some fact relating to astronomy. About 15 miles from the planetarium, we stopped at the David Dunlap Observatory to photograph the telescopes, only to hear a British accented old astronomer say, "I can't let you do that, no I can't." So it goes.

On Wednesday, July 5<sup>th</sup>, we arrived at Cap Chat, or whatever town was buried under the rubble of road construction. The only sign of the nearing eclipse was a N.A.S.A. physicist taking light readings and an eclipse souvenir store. That night I went about 5 miles east of St. Ann des Monts to see M17 with the naked eye and one of Canada's famous aurora-less aurora.

Since the eclipse was 5 days away, we began touring the Gaspé Peninsula. On the other side of the peninsula, in a small town called Bonaventure, I acquired something I hadn't seen since we left Detroit, a newspaper weather map. The forecast read: Extended outlook: Cloudy, chance of rain. It was then and there that I decided to change my mind. Head to Halifax, and observe the eclipse in Nova Scotia.

On our way to Halifax, we stopped at Moneton, New Brunswick. There we saw a river, which eventually led to the Bay of Fundy, empty of water. Minutes later, waves of water began covering its bottom until it no longer looked like a Martian "canal". It was quite amazing to see a wide and deep river be dry in the evening and full in the morning.

At Halifax, a newspaper ran a full page on the upcoming eclipse and Simon Newcomb. The article described the eclipse and where many are going to observe it. So the next morning, we headed to the Cap Chat of Nova Scotia, Antigonish. When we enthusiastically arrived there Sunday morning, we were quite surprised to get a motel room both for Sunday and Monday nights. This, we later found out, was a treasure since motel rooms eclipse day were about as hard to find as the sun 24 hours before the eclipse.

Sunday afternoon, I discovered something unfortunate about the local weather. On clear days, such as that, high clouds generated over the Northumberland Strait inland in early afternoon and leave at sunset. The eclipse would occur at 5:38, and at 5:38 Sunday afternoon, the clouds were thick, though the sun shone through a small gap for about 2½ minutes.

I awoke eclipse morning with a smile, since there was not one cloud in the sky. We packed up and rode out to find a suitable observing site. About 12 miles northwest of Antigonish, we spotted a picturesque site at Arisaig, a town of about four houses and 1 cathedral. At 11:00 a.m., we set up on a small rocky hill that overlooked the bay. By eclipse time, the population of the town went from about 20 to 200.

At first contact, conditions for totality looked excellent. However, as the sun dimmed, the sky was being covered with a high haze and a fog bank several miles out was approaching us. It seemed evident that during totality we would either be watching the sun through the obscuring haze or through a fog that would make a Bald Mountain fog look like thin air.

About 6 minutes before totality, a large black cloud passed in front of the sun so that it could not even be seen through a telescope. The large crowd gave out a loud AWWwww. The tenseness and despair could be felt in the air. Then just seconds before totality, the cloud passed away from the sun and a perfect clearing drifted into the sun. I checked my camera settings and saw the beautiful diamond ring through my camera viewfinder. I snapped a picture, and then 13 more before mid-totality. I noticed that my mother, who was using the telescope, lost the sun, so I went over to relocate it. I looked at my Dad, and saw him cranking away so fast I'm surprised the movie camera didn't explode. I stared for a while at the twilight sky, and noticed the orange clouds hover over the eerie water. The light in the town of Arisaig were all on. I looked at the eclipse in my binoculars and was amazed at the coronal structure. I saw the second diamond ring and rushed to my camera to photograph it. Just as the crescent sun came, so did the clouds. The 2 minutes and 8 seconds of totality seemed incredible short, and indeed were the shortest of my life.

During the last phases of the eclipse, we slowly packed up the equipment noticing that most of the other viewers were already on their way home as if they kept their cars' motors running during totality to make a quick escape. Few people paid attention to the brightening sun since it was mostly obscured until sunset.

The trip back home consisted of a stop at Kodak's facilities at Rochester and Strasenburgh Planetarium. While passing through Detroit, I had the satisfaction of knowing I was one of the few people who witnessed darkness that was not caused by overcast skies.

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## ASTRONOMY IN COLOR

### A STELLAR BEST SELLER

Astronomy in Color, by Peter Lancaster Brown, is an "introduction to astronomy" book that goes far beyond the simple terms and ideas used in most such books. The book begins with a short lesson in the history of astronomy and ends with useful tables and a glossary of commonly used astronomical words. In 263 pages, it covers just about everything from absolute magnitude to the Zodiacal light.

One section of the book that is usually looked at first is an eighty page color section located in the center of the book that includes several fascinating photographs, such as a photo of the 1968 Siberian total solar eclipse that shows the sun, the sky, the horizon, and people in action all in one.

The cost of the book is \$4.95 and it can be bought at Hudson's book department and at several other book stores. Due to its recent copyright date, 1972, it is a worthwhile addition to any amateur's book collection.

Timothy Skonieczny



## ECLIPSE REPORT

by

Dave Harrington

### GASPE PENINSULA

Cap Chat: Cloudy sky, but some views of the corona were obtained through the holes in the clouds. Some reasonably good photos were obtained.

STE ANNE DES MONTS: Clouded out 45 to 15 minutes before totality. No view or corona, and no totality photos obtained.

New Carlisle: No Reports

Gaspésie Park: Clouded out before totality. No photos obtained.

Matane: Clouded out 10 minutes before totality. No good photos obtained.

### NOVA SCOTIA

Antigonish: Partly cloudy, but a clearing allowed a good view of the corona for nearly all of totality. Some excellent photos were obtained showing Baily's Beads, the Diamond Ring, 4 to 9 solar flares around the disk, and the coronal streamers.

### NORTH SHORE of ST. LAWRENCE: NO REPORTS

PRINCE EDWARD ISLAND: Partly cloudy, but fair to good photos were obtained, showing flares, beads, and only a small extension of the corona due to cloudiness.

### PARTIAL LIST of MICHIGAN ATTENDEES

Mark Bender (Adrian)	Mr. -Mrs. Robert Blush
Mark Boyd (Grand Rapids) (G.R.A.A.A.)	(Grand Rapids) (G.R.A.A.A.)
David Harrington (WARREN) (W.A.S.)	J.D. Marche
Tim Griffin (Grand Rapids) (G.R.A.A.A.)	(Muskegon) (Great. Mus. Ast. Cl.)
Mike Potter (Richland) (K.A.S.)	Dave Wojcznski
Bob Ross (Kalamazoo) (K.A.S.)	(Grand Rapids) (G.R.A.A.A.)
Eric Schurer (Kalamazoo) (K.A.S.)	Mr. -Mrs. Tom Strach
Jack McCarthy (Grand Rapids) (G.R.A.A.A.)	(Grand Rapids) (G.R.A.A.A.)
Mr. -Mrs. Frank McCullough (Fraser) (W.A.S.)	Terry Ryder
Kenneth Wilson (Sterling Heights) (W.A.S.)	(Grand Rapids) (G.R.A.A.A.)
Peter Kwentus (East Detroit) (W.A.S.)	
Ron Kwentus (East Detroit) (W.A.S.)	
Roger Civic (East Detroit) (W.A.S.)	
Mr. -Mrs. Paul Strong (Fraser) (W.A.S.)	
Timothy Skonieczny (Warren) (W.A.S.)	
Gary Boyd (Detroit) (W.A.S.) (D.A.S.)	
David De Bruyn (Grand Rapids) (G.R.A.A.A.)	

## Milestones on the Long Road to Jupiter

### FAR OUT PIONEER

Late next week, a modest, spindly looking spacecraft will pass a major milestone on a journey farther out into space than any manmade object has ever gone. After crossing the orbit of Mars, roughly the previous outer limit, Pioneer 10 will plunge on through the asteroid belt, making observations there and all the while hurtling toward its main target: the planet Jupiter.

With its multicolored bands and mysterious Great Red Spot, Jupiter is in many ways the most puzzling of all the planets. It is the largest planet in the solar system, 300 times the mass of the Earth. It is circled by 12 moons, two of them larger than our own moon. It seems to have its own internal energy source; emitting heat and powerful radio waves. Its hydrogen, methane and ammonia clouds may harbor some forms of primitive life. Beginning 19 months from now, Pioneer 10 will collect information on Jupiter's energy output, its intense magnetic field and its radiation belt. Pioneer 10 will also send back, over 500 million miles of space, the first close-up pictures of the planet's swirling clouds.

Once past Jupiter, the spacecraft will look for the boundary of the solar wind as it continues to move away from the sun, past the outer planets, Saturn, Uranus and Neptune. Fifteen years from now, in January 1987, it will cross the orbit of the planet Pluto and, sometime thereafter, escape the Sun's gravity and leave the solar system forever. The tiny craft, by then too far out to communicate with Earth, will head out into the vastness of our Milky Way Galaxy, where it will cruise about between the stars, probably until the end of time.

(Taken from LIFE)

Rewritten by  
Frank McCullough

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### OBSERVATIONAL ASTRONOMY

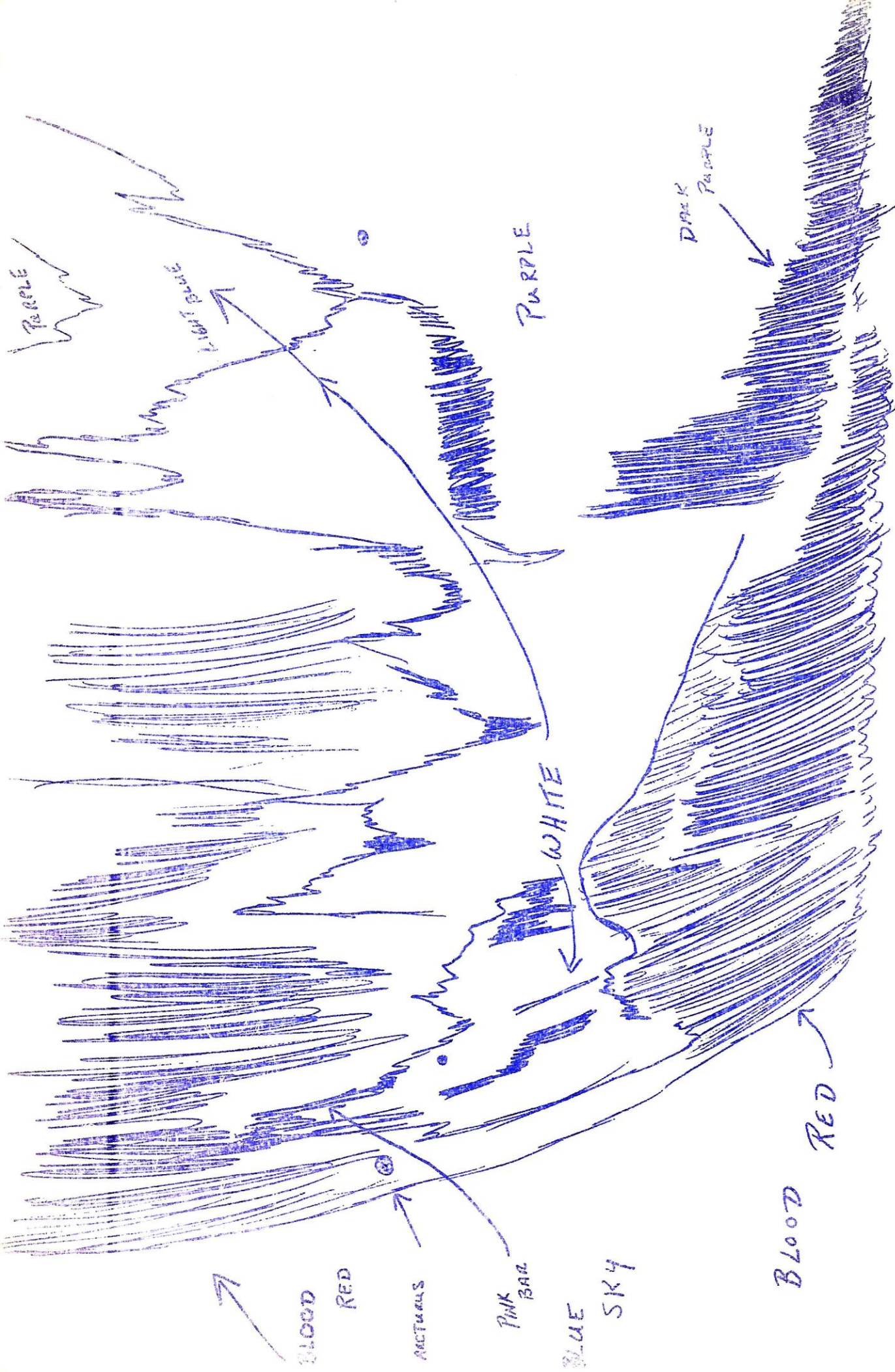
by  
Frank McCullough

One evening after work, Tim and I drove frantically down 16 Mile Road to try and reach some dark sky so we could photograph the Northern Lights. As we were driving, we saw the arch start to move southward, coming at a tremendous rate of speed. At 11:10p.m. it burst into a beautiful blood red, so red in fact it was hard to keep my eyes on the road because of its beauty. At 11:20, Tim and I agreed we would be very stupid if we didn't pull over and try to shoot it from the road, so we did. With all of that, Tim happened to only have black and white film in his camera. I'm just glad I'm a color freak!

We eventually made it to Stony Creek where we spent the rest of our night and morning. At 11:45 a thick red bar hung in the northwest. At that time a circlet formed to the east of Albireo in Cygnus.

At 12:45a.m. Tim's camera and tripod crashed to the ground causing me to hear language you would never expect to hear from an amateur astronomer such as Tim. It turned out his camera was O.K.

At 1:05a.m. the aurora got going real good, dancing and flashing all over the sky. Solid white corona formed high above which now situated itself in Perseus and adding to the glamour was the moon and the Pleiades rising in the flame of the aurora. The aurora changed many times, but the rest is pretty much repetitious. At 2:45 a.m. we called it a morn, only to find the next three to four nights filled with aurora.



VERY SWIFT MOVEMENT + SOUTHWARD

DRAWING FROM SLIDE TAKEN BY MYSELF

10:35 PM DETROIT, MICH

LOOKING WEST

S ← N



W



## CONSTELLATION of the MONTH

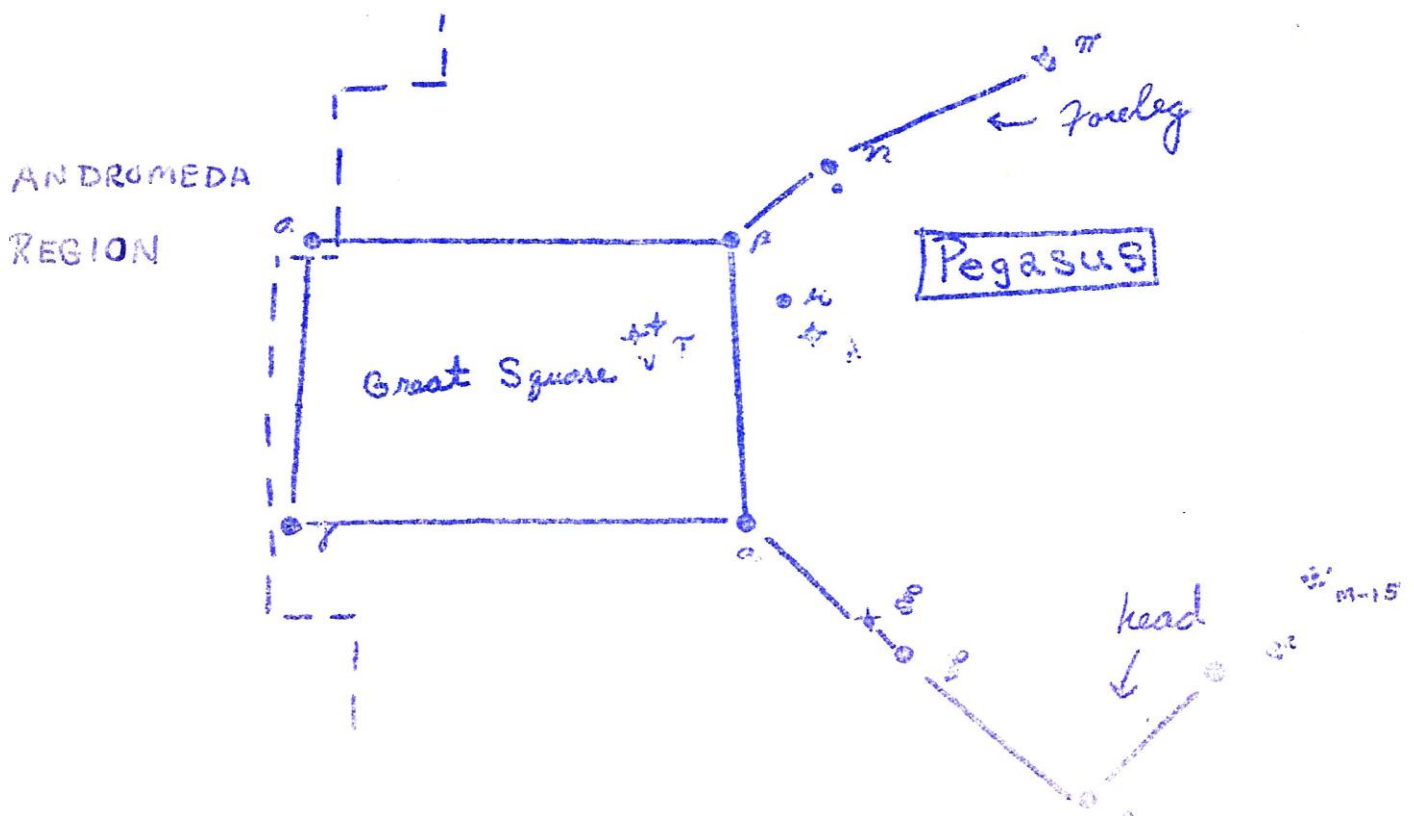
By  
Frank McCullough



### PEGASUS: the Flying Horse

As autumn approaches, we see the summer constellations either on or close to the celestial meridian in the early evening, but as the evening progresses our chillier friends of the fall come sneaking over the horizon. One that has to do no sneaking this time of the year is the constellation Pegasus. Pegasus is in the east as the sky gets dark and is the first of the fall constellations to tell us that there is a change coming.

It is a winged horse upon which Perseus rode on his way back from his successful Gorgon slaying expedition. It was then he saw Andromeda chained to the rock, and swooped down to rescue her. Later Pegasus was given to another hero, Bellerophon, to help in conquering the Chimera, a hideous three-headed, fire breathing monster. Having dealt faithfully with Chimera, Bellerophon decided to ride up to Mount Olympus; but Jupiter, angered at his coolness, sent a gadfly to sting Pegasus and make him dismount his rider. Pegasus himself continued the upward journey and was duly placed among the stars.



## A PROPOSAL

The recent activity has demonstrated the possible need of a communication system within the W.A.S. to spread the news of such unpredictable events.

This system would function as follows: A list will be made of all participants and their phone numbers. Each person on the list would receive a copy of the list. Anyone sighting an aurora would call the person listed after himself. If that person cannot be reached, the name succeeding would be called. This chain will continue until each person on the list has been notified. Periodic revisions of the list would be made.

In the above manner, anyone interested in observing or photographing an aurora would be quickly notified. And, the system would only require each participant to make one or possibly two phone calls.

This system could easily be expanded to include comets or novae that are spotted, so that one can observe them before they fade from view (Which is about when "Sky & Telescope" gets around to reporting them.)

If you are interested in participating, please write or call:

Kenneth Wilson

11157 Granada

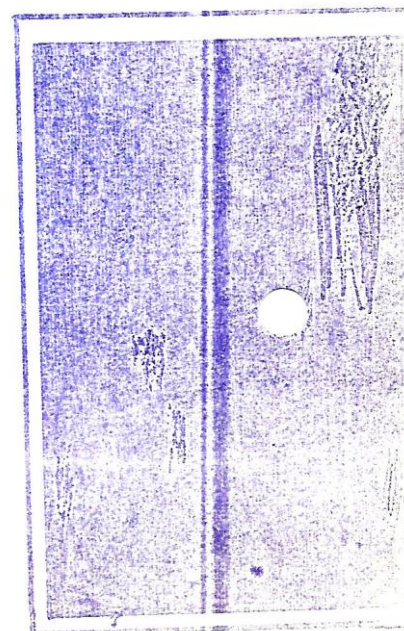
Sterling Heights, Michigan

268-9337

48077

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A BLACK HOLE IS A STAR THAT HAS  
EXPENDED ALL ITS ENERGY AND  
COLLAPSED INTO A BODY WITH SUCH  
INTENSE GRAVITATIONAL FIELD  
THAT NO LIGHT OR ANY OTHER  
ENERGY CAN ESCAPE. (Thanks to  
many anonymous contacts and much  
hard work, the WASP has uncovered the  
only known photograph of a Black Hole  
made at the little known Stargate  
Observatory. This photograph is  
reproduced at the right.)





## ASTRO-ALMANAC

By

Ken Wilson

MOONS OF SEPT. / JUPITER <sup>1</sup> /		EVENT
1	32104	Mercury at perihelion, Saturn 5° S. of Moon at 04hrs
2	30214	Venus 9° S. of Pollux at 08hrs., Pallas in conjunction at 16hrs.
3	31024	Moon 2° N. of Venus at 18hrs.
4	24013	Mercury 1.1° N. of Regulus at 18hrs.
5	4203#	
6	41023	
7	4013D	Mars in conjunction at 006 hrs., New Moon at 12 hrs 28 mins, beginning of ε Perseid meteor shower thru 15 <sup>th</sup> (radiant:040436) Very fast meteors.
8	42310	
9	43021	
10	43102	Moon 6° S. of Uranus at 06hrs.
11	4201#	Greatest N. hel. lat. Of Mercury
12	24103	
13	0423D	Lunar apogee (251,000mi.) at 5hrs., Moon 6° S. of Neptune at 23hrs.
14	01234	Jupiter at descending node, Antares 1.0° S. of Moon at 10hrs.
15	23104	First Quarter at 14hrs 13min, Mercury at 111806 23, Venus at 083817 07 (-3.8 mag.), Mars at 112405, Jupiter at 175623 27 (-1.9 mag.), Saturn at 051821 30 (+0.3 mag.), Uranus at 130406 08, Neptune at 160419 08
16	30214	Moon 2° S. of Jupiter at 3hrs.
17	31024	Twilight begins: 3:09-ends: 20:56 L.M.T.
18	23014	
19	21034	Mercury in superior conjunction at 15hrs.
20	01423	
21	4023#	
22	42130	Autumnal Equinox (autumn begins) at 17hrs33mins, Full (Harvest) Moon at 23hrs07mins.
23	4301#	
24	43102	Pluto in conjunction at 16hrs.
25	43201	Lunar perigee (225,350 mi.) at 2hrs.
26	42103	
27	40123	Twilight begins: 3:27-ends: 20:33 L.M.T.
28	4023#	Moon 4° N. of Saturn at 11hrs.
29	2140D	Last Quarter Moon at 14hrs16mins.
30	32014	

(All the above listed times, are in 24 hour E.S.T., unless otherwise noted.)

<sup>1</sup>“O” represents the disc of Jupiter, “D” means the moon is on Jupiter’s disc, # means the moon is in shadow or behind the disc. The configurations are for the inverting telescope at 5h E.S.T.

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## ASTROPHOTOGRAPHERS

Save time and film. Twenty-page booklet (8½ by 11 in.) contains exposure data for the sun, moon and planets, and has a recently expanded eclipse section for the sun and moon. Seventeen exposure guides list shutter speeds for all films (4 to 2000 ASA) and f ratios (1.4 to 256.0). Includes instructions for first focus, afocal, negative and positive projection telescope photography. Send \$2.00 to Larry F. Kalinowski, 15674 Flanagan Ave., Roseville, Mich. 48066. Phone (313)-776-9720. SPECIAL OFFER: \$1.00 off regular price of \$2.00 for all Warren Astronomical Society Members.

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## SEPTEMBER MEETINGS

1 <sup>st</sup> Thursday:	Messier Meeting	Contact: Frank McCullough, 791-8752
2 <sup>nd</sup> Thursday:	Astrophotography Meeting	Contact: Larry Kalinowski, 776-9720
3 <sup>rd</sup> Thursday:	General Meeting	Contact: Frank McCullough, 791-8752