

The



WASP

March
1970

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MARCH

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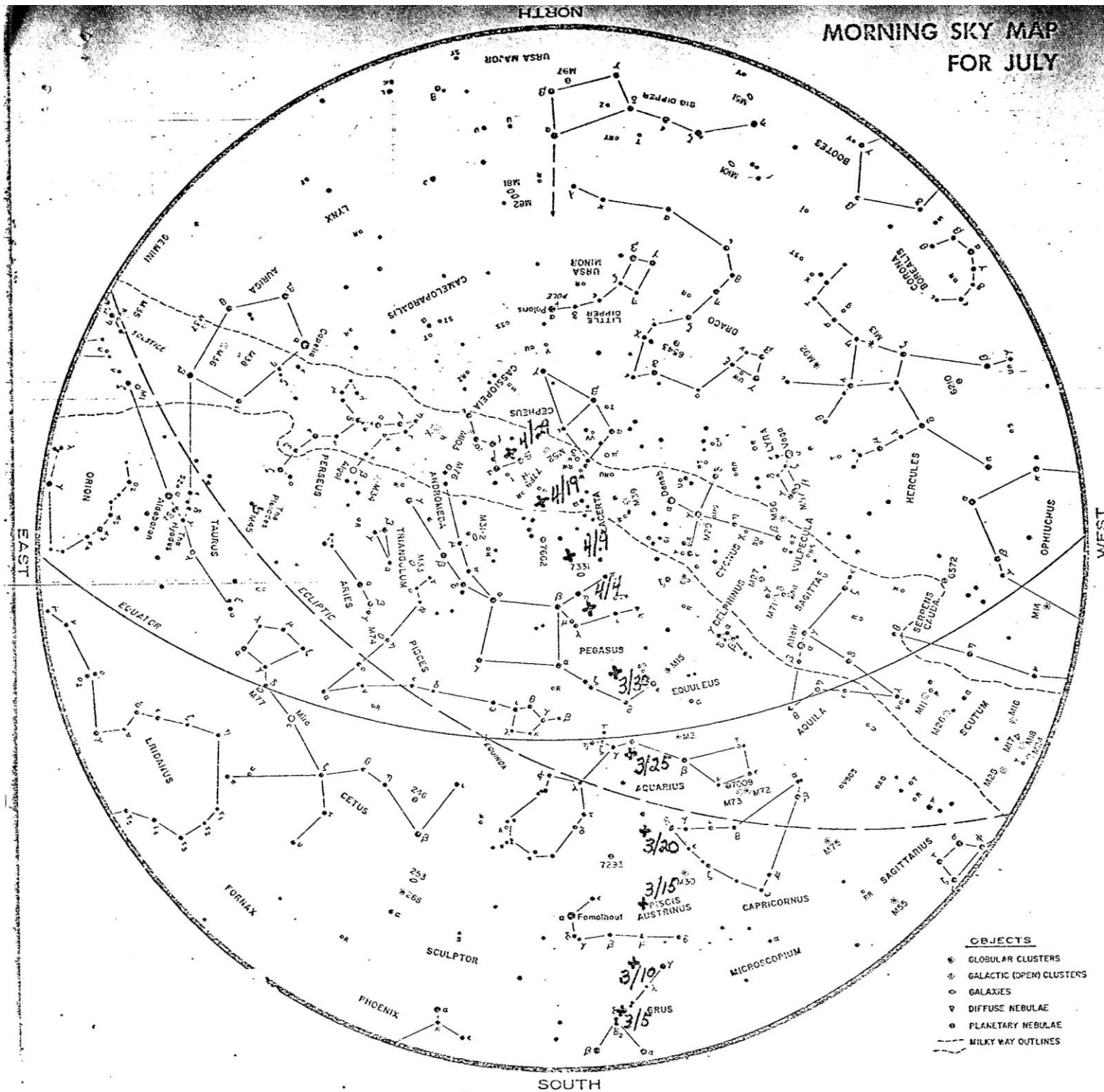
SUN	MON	TUE	WED	THUR	FRI	SAT
1	2	3	4 MESSIER STUDY GROUP	5	6 MOON AT PERIGEE	7 SOLAR ECLIPSE N.M.
8	9	10 MARS 4° SOUTH of MOON	11 ASTROPHOTOGRAPHY AND PRESENTATIONS	12	13	14 F.O.
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22 F.M.	23 URANUS 3° NORTH of MOON MEETING IN SUP. CONJUNCTION	24	25 W.A.S. GENERAL MEETING JUPITER 6° N. of MOON	26	27 NEPTUNE 7° NORTH of MOON	28 ANTARES 0.7° NORTH of MOON
29	30	31 L.O.				

A-ASTROPHOTO & PRESENTATIONS - LARRY KALINOWSKI, 776-9720 or DAVE TWEA 777-1857

M-MESSIER STUDY GROUP - FRANK MCGULLOUGH, 772-2011

O-OPTICS & TELESCOPE MAKING - GERALD ALYEA, SL4-2134

S-SOLAR OBSERVING - JIM TROMBLY, 772-5635 or GENE FRANCIS, 751-2836



DATE 1970	R.A.	DEC	RISE TIME	MAGNITUDE
3/15/70	22h07.65m	-28°54.1'	0600	2.0
3/20/70	22 03.94	-17 19.4	0430	
3/25/70	22 06.06	- 2 50.0	0345	1.6
3/30/70	22 14.61	+12 36.7	0300	
4/ 4/70	22 28.91	+26 27.9	0130	2.4
4/ 9/70	22 47.66	+37 25.7	0000	
4/19/70	23 33.00	+51 31.7	CIRCUMPOLAR	4.4
SOURCE: AAVSO				
COURTESY OF: D.J., D.A.S.				

THE FIRST TWO MESSIER CLUB OUTINGS

The Messier Club has had two outings-the first was at Stoney Creek Park on January 31st.

Our expedition of Dave Ther, Don Mission, Diane Bargiel, and myself, set out that night around sunset. I just want to tell you a little bit about our journey there. My view was partially obstructed by my trunk, which is in the front, with my mounting extending out of it. I was whipping along at 75 when I began to lose sight of Don and Dave, whom I was following. They finally slowed up and allowed me to gain sight of them. With my trunk partially opened in the front, it was a bit difficult for me to handle my car on the expressway. Yet you might know, Dave Ther got in a playful mood and started strobing me, (If you don't know what that means, it's when an individual temporarily blinds you with a series of illuminating beacons from his flash attachment.) This did cause a minor visual problem, but I waited for the fog to clear from my eyes and tried desperately not to look toward their car until I felt the little devil was done goofing around.

My third worry was when I started out with a quarter of a tank of gas but saw it dwindle rapidly as a family from the D.A.S. and myself followed Don and Dave around, and around, and around the park. We finally found a spot that we had found 40 minutes earlier, but we had an enjoyable evening all the way around.

The second outing was made up of the same group of people minus Diane Bargiel. There was nearly a full moon up that night and it was cold that night and early morning, in matter of fact, it got down to 6 below zero. If you took your gloves off, your fingers froze almost instantly. That night I wore three pairs of pants, three pairs of socks, three sweatshirts, a jacket, and a pair of mittens. Dave Ther was unrecognizable with his outfit.

We were a bit confused about what to look for, so Dave decided to observe open clusters. That night, although it was a bitter cold, we somehow adapted to it with coffee and warming breaks in between. With the help of the Norton's Atlas, we knocked off open clusters as if it were nothing. We were all pretty proud of what we accomplished that night. That night and morning, we found seven open clusters, the double cluster in Perseus, the Great Nebula in Orion, Jupiter and Saturn.

We never had to worry about being alone. We were right off the road outside of the park at Stoney Creek where we had couples out to look through the scopes, and others were parked farther behind us participating in events other than astronomy.

In two outings we have at least found twelve objects, most of which we have never seen before. Now with spring coming up, the Messier Club will be going out for the swarms of galaxies in the Coma-Virgo region, and in Leo. This will be a good challenge and one in which a lot more members and outsiders should get involved in, because of the warming weather.

by Gene L. Francis

The ideas developed last month will now be applied directly to the Michelson-Morley experimental set-up, which is illustrated in Figure 1.

(Figure 1)

Using last month's analogy for comparative purposes, a pair of light beams replaces the boats, and the hypothetical ether "current" replaces the river's velocity. One light beam travels along a path perpendicular to the ether "current", the other beam along a path parallel to it. The optical set-up is arranged so that both beams return to the same viewing screen. The purpose of the clear glass plate, (A), is to insure that both light beams pass through the same thickness of air and glass.

Now, if the path lengths of the two beams are exactly the same, the beams will arrive at the screen in phase and constructively interfere to yield a bright field of view. In actuality, this is impossible to achieve, 1.) the consequence being that the viewing screen will be crossed with a series of light and dark interference fringes. 2.) By varying the length of either optical path, the fringes appear to move across the screen as reinforcements and cancellations of the light waves occur.

The stationary apparatus, therefore, tells us nothing. If, however, the assembly is rotated through 90, the bend formerly requiring the time t_A to travel its respective distance will now require time t_B and vice versa, and if t_A and t_B are not equal, the difference would manifest itself as a shift in the interference fringe.

For their experimental assembly, Michelson and Morley calculated that the theoretical fringe shift should be 0.4 fringe, a shift readily observable. Because of the magnitude of the shift, Michelson and Morley looked forward to directly establishing the existence of the ether.

To the surprise of everyone, no fringe shift whatever was observed. This startling conclusion, which has been verified many times since the original experiment, had two consequences. First, it rendered untenable the ether hypothesis by demonstrating the lack of any measurable properties of it, and second, it suggested a new physical principle: that the speed of light in free space is constant regardless of any motion of source or observer.

1.) Because the optical paths are not perfectly perpendicular.

2.) From differences in optical path length between adjacent light waves.

(Next month - Discussion: Einstein's postulates

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Dubieties and Queries, continued.

Q. I believe that I have made a startling astronomical discovery! After observing the planet Mars through my three-inch refractor and examining charts of it, I turned my scope towards the full moon. It seems that, at about 45-power, when I move the eyepiece out of focus either way (the lunar features that make up the face of the Man in the Moon also move to resemble exactly the features of the Martian surface!

This has led me to conclude that: a.) The moon and Mars were formed exactly the same way and that the only reason Mars looks red is because its light must travel through much more of the interplanetary atmosphere to reach Earth, or, b.) That the invasion and subsequent contamination of the lunar atmosphere by man have caused obscure lunar vibrations transforming the moon's surface to look like its sister planet's.

Please verify the facts for me.

K.D.

Detroit

A. Dear Mr. K.D., being a rather loyal and patriotic citizen, I have forwarded copies of your letters to NASA, the Jet Propulsion Laboratory, the FBI, and the U.N. Security Council. I think it is only fair to remind you, however, of your civil rights and they probably won't be able to get to you in Sweden, Red China or Antarctica. Happy New Year, Mr. D.

Q. I've been hearing a lot about the national amateur astronomical organization, the Astronomical League and its local affiliate, the Great Lakes Region/ Can you go in to some detail on the organization and activities these groups and how they can serve our club?

Mr. Paul Isdead

Winthrop Junction, Mich.

A. The history of the Astronomical League dates from the late 1940's when it was organized in Chicago by one of America's largest "families" under the patronship of Zigmont (Ziggy) Provenzanellini as part of a plan to bring all the country's amateur astronomical societies into the "brotherhood" to keep the members from "authoritarian harassment". The League continues to hold annual conventions in cities that have been known to give the league the largest percentage of its profits. Strangely enough, however, these are the same clubs that have the most equipment, facilities, and membership service. The convention has been held in Chicago ten different years.

To expand its influences and enforce its decisions, nine regional organizations were established, and although the League "officers" try hard to keep a rein on their regional bosses and the flow of funds into

More of the Same

their hands, things may sometimes get somewhat out of order, but are corrected with quick and simple solutions--such is the genius of our men in Chicago. A case in point:

When it was noticed that the treasury of the Great Lakes Region had quite suddenly been lowered by the tidy sum of \$800 last fall, the regional treasurer and his boys staked out regional president, Ray (the shark) Larson's home and fixed his telephone lines. After they had found that our good president had merely "borrowed" the money to pay off his wife's alimony, they quite promptly made a phone call to Chicago.

It is said, however, that you can get in contact with The Shark by writing in care of the Alaskan State Rest Home, Lake Iliamna, Alaska where he was quite unwittingly sighted by some family members from Cleveland last fall.

connected to the receiver circuit. In the power record of the output of the receiver the cosine fringes of the signal amplitude become cosine gringes in intensity. By measuring the amplitude of these fringes relative to that of the unmodulated output they may derive a function which expresses their visibility at all contrasts and separations. Thus, enabling them to compute the distribution of brightness of the sun.

This basically simple experiment is designed to prove either or both a.) That Rhode Island Reds can detect shadow bands from a solar eclipse reflected off Francis' grass better than football field turf, and, b.) Can I get this printed with less than half of it being censored by the editor?

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The characters and situations referred to in these letters may not be entirely fictional and any such resemblances are not necessarily coincidental.

So sue me.

Chris Edsall

Addendum - de - dum - de - dum

As this scandal-sheet goes to press, the word has just come in over my news ticker from the APIA (Astronomical Phenomena Information Agency) that a rare display of inter-discipline cooperation is in its planning stages within the ranks of our own membership.

During the total eclipse of the sun next March 7th, (which will be only. partial here) a white, Rhode Island Red Chicken --type O.C. smith will be left to run free in Gene Francis' backyard. While, 1600 miles to the south, in the football stadium of Perry High School in Perry, Florida, Jim Trombley will supervise the ravings of an identical bird on the Detroit Astronomical Society's eclipse expedition.

The heartbeat rate of each of these chickens will be monitored by separate electrocardiographs and recorded on paper. Then after the eclipse, the two signals will be integrated in an interferometer setup and calibrated with a noise diode

OBSERVATIONAL ASTRONOMY

(M-79 and M-35)

The two I have chosen to write about this month are M-79 and M35.

I viewed M-79 on the first Messier Club outing on Jan. 31st. M-79 is a globular cluster in Lepus the Hair, a small constellation south of Orion. It is one of the few globulars in the winter sky.

M-79 is listed as magnitude 8, R.A. 5 hours 22 minutes, DEC. -24 degrees 34 minutes.

It was a pretty bright sky at Stoney Creek and the southern portion of the sky was well lit up. When I found the globular, it was smaller than most I've seen and was camouflaged very well with the bright sky encircling it. I used a 6" reflector at 67x to find it. Because of the bright sky I used the 4 ½" reflector for only 3 or 4 minutes in an attempt to find it again, but because of the bright sky and a few illuminated clouds in that area I was unsuccessful.

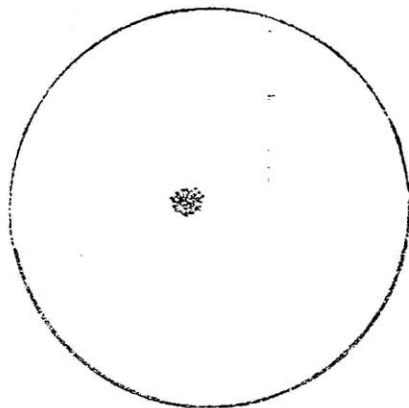
I felt pleased in the sense I found it, but it is not spectacular in the skies we have to find it in.

On the Messier Club's second outing at Stoney Creek, one of the open clusters we observed was M-35 in Gemini. M-35 is an open cluster that covers a large area of the sky. The co-ordinates for M-35 are R.A. 6 hours 6 minutes, Dec. +24 degrees 20 minutes, and is a 5th Mag. object.

This is a beautiful spray of stars streaming out in space. I viewed the object on February 13th, with the 6" reflector at 67x. On Feb. 22nd, I viewed M-35 through 7x35 binoculars and it is amazing the area of sky it covers. In these dying days of winter it is worth the trouble to go out and find the open clusters in the Auriga, Gemini, and Canis Major regions. Binoculars also make a splendid, if not better impression on the observer who views the clusters this way.

(CONTINUED ON NEXT PAGE—Maps and the Objects.)

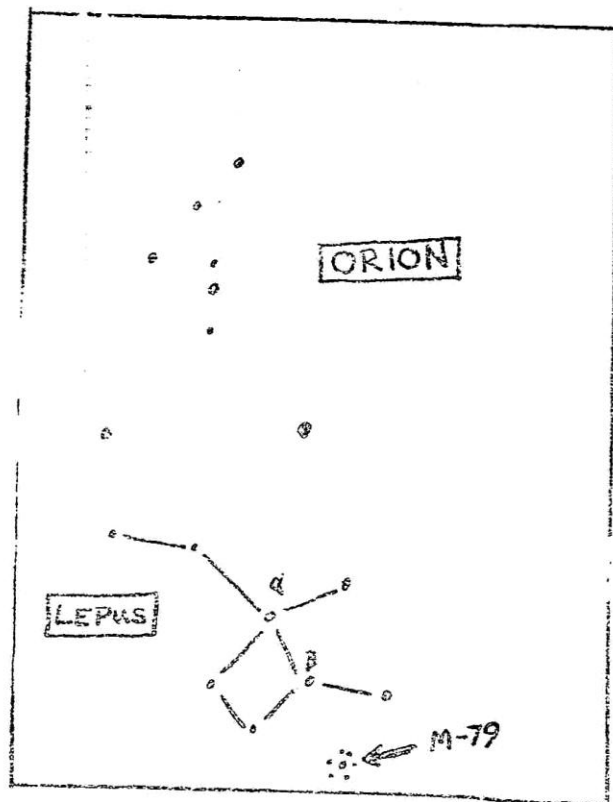
M-79



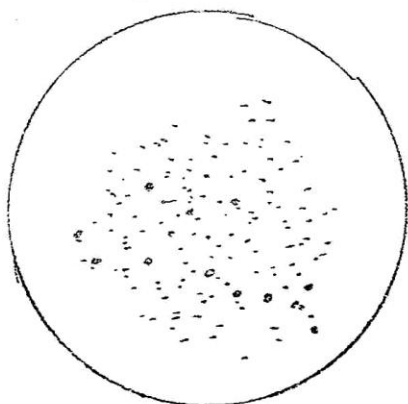
6" REFLECTOR 67x

To find M-79 draw a line from Alpha to Beta and extend it a little bit farther than the distance between the two stars and you should have located the globular.

(Alpha and Beta are around 2nd and 3rd Mag.)

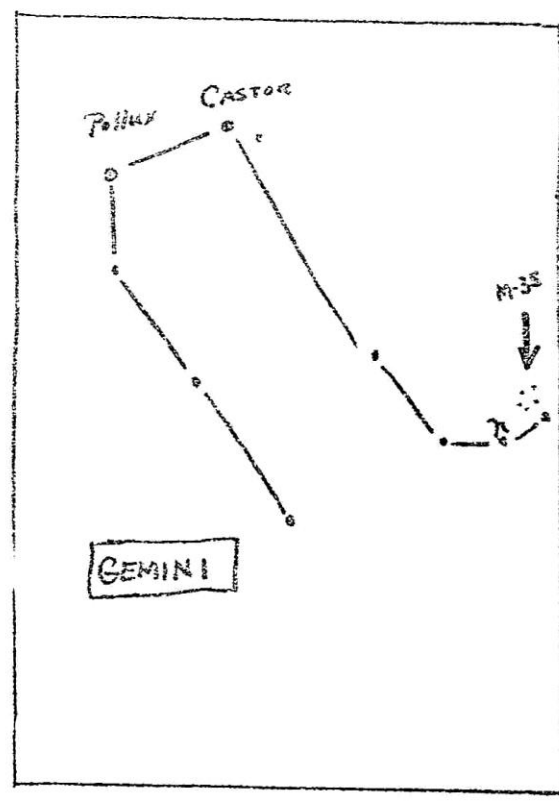


M-35



6" REFLECTOR 67x

To find M-35 look north and a little west of Eta.



Frank McCullough