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The
W.A.S.P.

Warren Astronomical Society Publication



Warren Astronomical Society Meeting Guide

MARCH

1973

FEBRUARY
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APRIL
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| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|------------------------------------|---------|-----------------|--|---|----------------------|
| | | | | 1 MESSIER CLUB MEETING 791-8752 INFORM. | 2 KALAMAZOO MEETING DETROIT MEETING | 3 |
| 4 MESSIER CONTEST IF NOT HELD ON 9th | 5 | 6 | 7 Ash Wednesday | 8 ASTRO PHOTO MEETING 776-9720 INFORM. | 9 DETROIT MEETING MESSIER CONTEST | 10 |
| 11 | 12 | 13 | 14 | 15 W.A.S. GENERAL MEETING INFORM. 791-8752 AT MACOMB COLLEGE | 16 DETROIT MEETING GRAND RAPIDS GEN. MEETING | 17 St. Patrick's Day |
| 18 | 19 | 20 | 21 | 22 OPTICS CLUB CALL FOR APPOINTMENT OR CONSULTATION 751-4115 | 23 DETROIT MEETING | 24 |
| 25 | 26 OAKLAND UNIV. ASTRONOMY MEETING | 27 | 28 | 29 | 30 DETROIT MEETING | 31 |

MARCH

CONSTELLATIONS

by

Frank McCullough

For thousands of years men have looked at the stars and have seen shapes and patterns. One group of stars reminded them of a hunter; another suggested the outline of a lion, these constellations we know as Orion and Leo. Soon stories or myths were connected to these constellations.

Some of the people that should be given credit for the special names of the constellations were the Chinese, Arabs, and Egyptians who used them as guides when travelling either by sea or land. The Ancient Greeks knew of 48 constellations which they named after their heroes and gods. It was the Roman astronomers who gave the constellations the Latin names by which we know them today.

The most well known of the constellations is most likely to be Ursa Major, the Great Bear, which has seven major stars to form what we know as the Big Dipper. Two stars away from the handle are the Pointer Stars because a line drawn through them points to Polaris or the North Star in the handle of Ursa Minor, known as the Little Dipper. This star is close to directly over the earth's North Pole, which makes stars appear to revolve around it.

Today astronomers know of 88 constellations. The 23 constellations in the far south of the southern hemisphere were first named by astronomers in the 18th century.

There are many myths about the constellations, one being a story containing six constellations and a star cluster. This story concerns a King Cepheus and Queen Cassiopeia, who had a beautiful daughter, Andromeda. Cassiopeia foolishly boasted that her daughter was more beautiful than the Nereids, or sea nymphs. The Nereids complained to their father, the sea god Neptune, who sent the monster Cetus (the whale) to terrorize the land of the boastful Queen. Wise men told King Cepheus and his Queen that the only way to save their people was to sacrifice their daughter to Cetus. Reluctantly, they chained Andromeda to a rock on the sea and left her to await the monster.

Meanwhile, the hero, Perseus, was returning home with the head of the wicked Gorgon, Medusa. Medusa, who had snakes in place of hair, had been able to turn any living creature into stone with a single glance. As Perseus flew over the place where Andromeda was chained, he saw the monster approaching. He then swooped down on the back of his winged horse, Pegasus. He pointed Medusa's head at the monster which promptly turned to stone. All of the figures in this legend can be found in the night sky.

My favorite is how Orion and Scorpius ended up being placed in the sky. Orion, the Hunter, boasted of how great he was and how nothing could match his strength. Orion had completed slaying mighty Taurus the bull to add to his confidence. The gods, offended by his arrogance, sent a Scorpion to bite Orion on the foot. The poison soon killed Orion and he could boast no more. To honor Orion the gods placed Orion and Scorpius on the other side of the sky so their paths would never cross again.

CONSTELLATION of the MONTH
by
Frank McCullough

CANIS MAJOR and CANIS MINOR

This month we will look at two of Orion's hunting dogs, Canis Major and Canis Minor, the Big and Little Dog. Each constellation has a major star. Canis Major has the brightest star in the night sky known as Sirius, the Dog Star. It has a visual magnitude of -1.43 and is over 300 times brighter than the faintest visible stars. Sirius is 8.8 light years away only twice as far as our closest star Alpha Centari Proxima, which is 4.3 light years away.

Canis Minor, the Little Dog, has only two visible stars. The brightest is Procyon of magnitude +0.4. To find, the belt of Orion points eastward and a little south to Sirius. An eastward line from Betelgeuse in Orion takes you to Procyon.

OBSERVATIONAL ASTRONOMY

by
Frank McCullough

M-41*M-46*M-47*M-93

Canis Major holds one of the most striking open clusters to be found in the winter sky. M-41 is a 5th magnitude cluster, R.A. 6h 45m. Dec. -20° 42'. M-46 is 6th magnitude, R.A. 7h 40m, Dec. -14° 42'. M-47 is 5th magnitude, R.A. 7h 34m, Dec. -14° 22'. M-93 is of 6th magnitude, R.A. 7h 42m, Dec. -23° 45'. The last three are found in Puppis.

M-41 can be seen with the naked eye on a good night and is a beautiful spray of stars in a 6" telescope. Look for a red star near the center of the cluster. To find, look about 4° south of Sirius.

M-46 is in Puppis and is an object you can use a lot of power on. A thing to keep an eye out for is a planetary nebula found in the cluster. I would like to hear from anyone who has seen it. Look about 15° east and a little north of Sirius or a little over least of M-47.

M-47 is a good bright cluster and is more spread out than M-46. M-47 is one of the missing Messier objects which have become identified. Norton's Atlas lists it as H VIII 38.

M-93 is a nice cluster, but can be easily out done by the other objects. Look for xi Puppis and look 2° North West.

"ONE MORE MONTH WARREN TILL MESSIER CONTEST"

*March 9th or 11th
(What date happens to be clear)*

ASTRO-ALMANAC

By

Ken Wilson

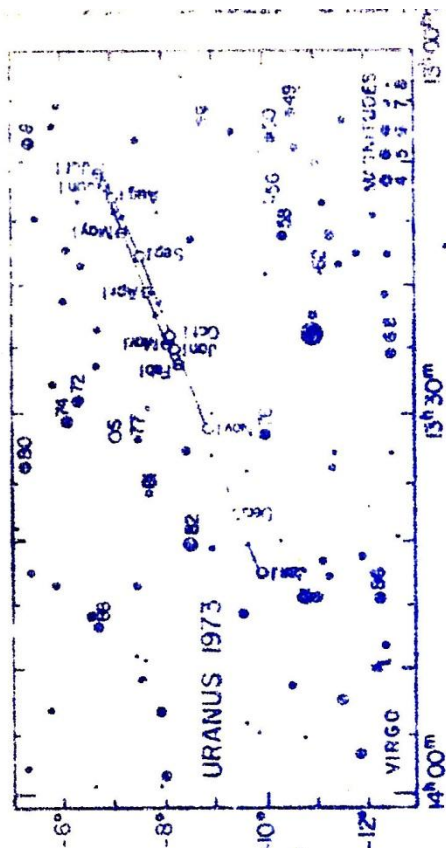
| <u>Mar. /</u> | <u>EVENT</u> |
|---------------|--|
| 1 | Moon 2° N. of Jupiter at 1300, Twilight-begins: 5:02, ends: 19:25 L.M.T. |
| 2 | |
| 3 | Mercury stationary at 19:00 |
| 4 | New Moon at 19:07 |
| 5 | Moon 2°N. of Mercury at 21:00 |
| 6 | Mercury at greatest hel. lat. N |
| 7 | Uranus 3°N. of Spica at 4:00 |
| 8 | |
| 9 | Neptune stationary at 16:00 |
| 10 | Lunar Perigee (229,700mi.) at 3:00, ζ Boötis Meteor Shower begins (thru 12 th), radiant: 143212; Fast w. persistent trails. |
| 11 | Moon 4°N. of Saturn at 5:00, First Quarter Moon at 16:26, Twilight begins: 4:44, ends: 19:38 L.M.T. |
| 12 | |
| 13 | Mercury in inferior conjunction at 15:00 |
| 14 | |
| 15 | W.A.S. General Meeting at 8:00 p.m. E.S.T. Mercury at 232500 04, Venus at 221112 34 (-3.4mag.), Mars at 193422 26 (+1.2mag.), Jupiter at 202519 34 (-1.6mag.), Saturn at 045321 (+0.3mag.) |
| 16 | |
| 17 | |
| 18 | Full Moon at 18:33 |
| 19 | Venus at greatest hel. lat. S., pallas stationary at 10:00 |
| 20 | Vernal Equinox (Spring begins) at 13:13, Uranus 6°N. of Moon at 19:00, max of Virginit Meteor Shower (Minor). |
| 21 | Twilight begins: 4:25, ends: 19:52 L.M.T. |
| 22 | |
| 23 | Pluto at opposition at 06:00 |
| 24 | Moon 5° S. of Neptune at 10:00 |
| 25 | Lunar apogee (251,300mi.) at 04:00 |
| 26 | Mercury stationary at 01:00, Last Quarter Moon at 18:46 |
| 27 | |
| 28 | Moon 3° N. of Mars at 23:00 |
| 29 | Mercury at descending node, Moon 3°N. of Jupiter at 08:00 |
| 30 | |
| 31 | Twilight begins: 4:04, ends: 20:08 L.M.T. |

NOTE: All times are in 24-hour E.S.T., unless otherwise noted.

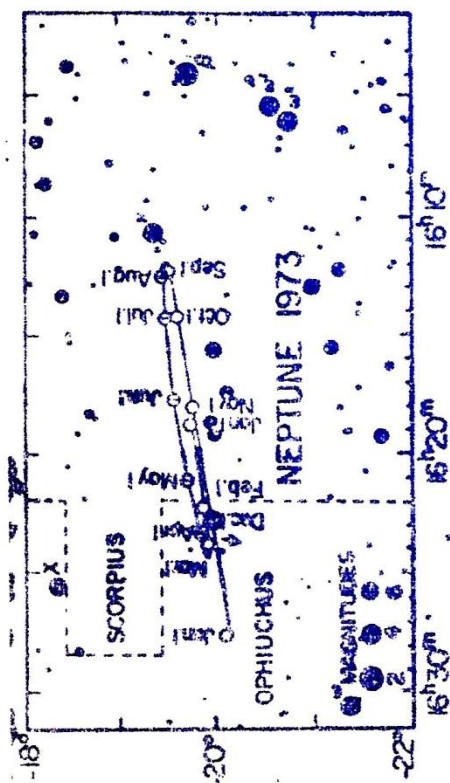
Configurations for Jupiter's satellites are on the next page along with the positions
of Uranus and Neptune for 1973.

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.



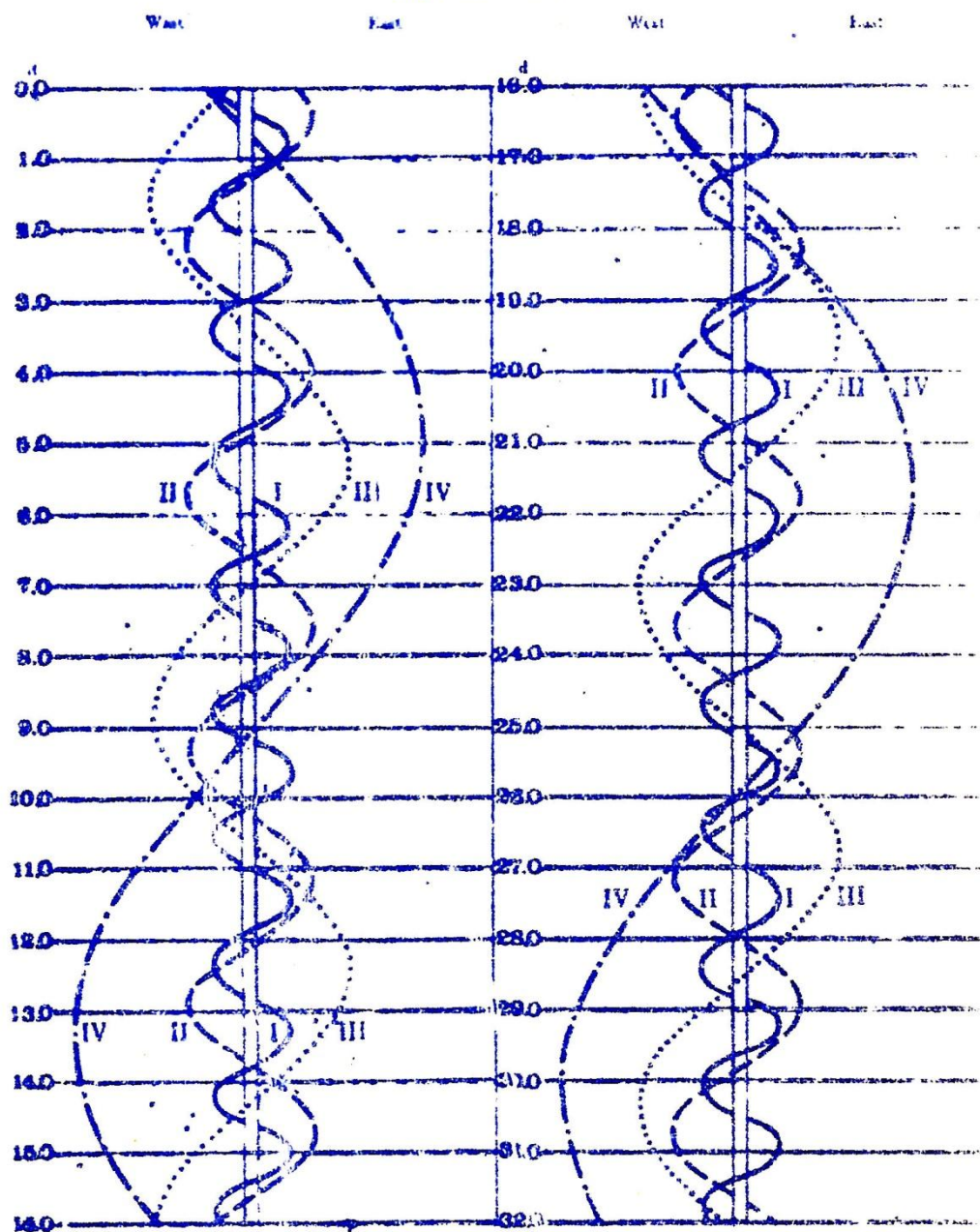
URANUS 1973



NEPTUNE 1973

SATELLITES OF JUPITER, 1973 CONFIGURATIONS OF SATELLITES I-IV FOR MARCH UNIVERSAL TIME

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PHASES OF THE ECLIPSES

