



**THE**

**WASP**



**Astrophotography**

**1973**

**FEBRUARY**

## NEWS ITEMS

by

Kenneth Wilson

### STRANGE ORANGE SOIL?

Remember the orange soil that the Apollo 17 astronauts found on the moon? Well, some of it's back on earth now, under close scrutiny by earth scientists.

When the soil samples were first examined, they didn't appear quite as orange as they had on the moon. This was due to mixing with other, less colorful soil in the sample cases on the way back to earth.

The origin of the orange dust, discovered near Shorty crater on the second E.V.A., is still undetermined. It was first thought that the soil might have been the result of recent volcanic activity, perhaps steam escaping from the lunar crust. However, when Dr. Wallace C. Phinney (chief of the geologic branch of the manned spacecraft center) examined the soil, he found no distinct evidence alteration; such as steam or sulphur gas venting. "As to what caused the orange coloration, we must wait until we have more chemistry," said Phinney.

Personally, I think that one of the astronauts just got careless and spilled an open jar of Tang and won't admit it.

### NEW MARTIAN DATA

Among the photos sent back by Mariner 9 were some indicating that Mars once had rivers, streams, and glaciers. There is also new data that indicates Mars may be just coming alive, geologically.

Dr. Harold Masursky of the U.S. Geological Survey told the American Association for the Advancement of Science that there were certain Martian features that could only be formed by running water. All of these features ran downhill and some had primary and secondary tributaries. All of these "rivers" were within 20 degrees of the the Martian equator, where temperatures are such that water could exist in a liquid state. Many of these "rivers" were near a gigantic equatorial canyon 45 miles across, 3½ miles deep and 3,000 miles (the distance from Delaware to California) long.

Masursky also said that there was evidence of glaciation around the polar caps. This consisted of long parallel gouges in the Martian surface and levels of apparent glacial deposits. This glaciation may be due to the 50,000 year precession of the Martian poles.

Dr. C. Leovy of the University of Washington also found that Martian weather activity is of much more extreme variety than that on earth, often with 200 M.P.H. plus winds. Martian weather, however, consists of storms and weather fronts just as the earth's does. Mars even has earthlike clouds (carbon dioxide rather than water-vapor like the earth). According to Leovy, some traces of water vapor were found in the Martian atmosphere and at least part of the Martian polar caps are made of water ice.

Mariner 9 has also shown that there is considerable volcanic activity on Mars, particularly in mountains such as 15 to 16 mile high Nix Olympica. Dr. Bruce Murray of the California Institute of Technology says that Mars may be just coming alive. According to Murray, the decay of radioactive material has started a boiling process within Mars which causes the observed volcanic activity and fracturing of the crust. This process may also be producing carbon dioxide and water for the Martian atmosphere in much the same way as volcanic activity produced the earth's atmosphere many millions of years ago.

OBSERVATIONAL ASTRONOMY and CONSTELLATION  
OF  
THE  
MONTH

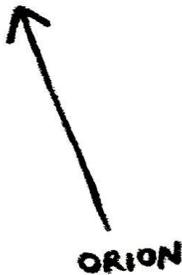
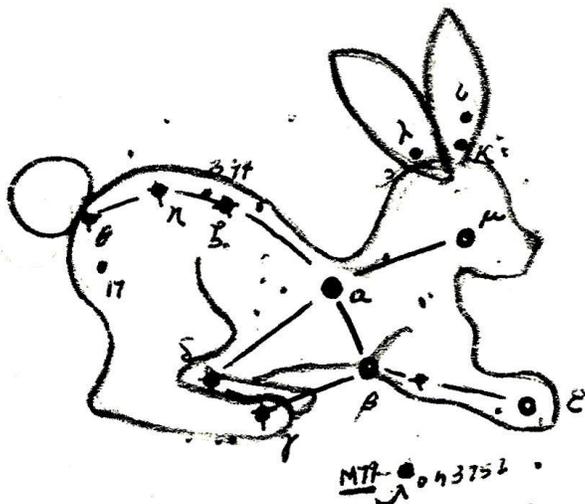
by  
Frank McCullough

LEPUS, The HARE

One cannot help but notice mighty Orion in the winter sky, but what about a few minor ones below his feet? One to make note of is Lepus, which has four readily seen stars of 3rd and 4th magnitude. Lepus is the hare Orion is chasing along with his hunting dogs Canis Major and Canis Minor. Lepus does not offer much but a single globular cluster which is a rarity in the winter sky, which is mostly composed of open clusters and diffuse nebulae.

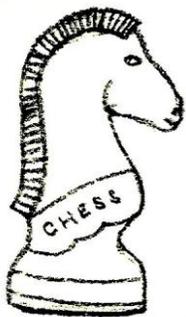
I have seen M-79 and it is a small tightly compact globular. It is very easy to find and is composed of 7th and 8th magnitude stars. M-79 lies at R.A.5hr. 22.2 min., Dec.  $-24^{\circ} 34'$ . Its angular size is  $8'$  of magnitude 8.

To find M-79, locate  $\alpha$  and  $\beta$  Lepus and extend a line through them their distance south and in an area where the third star equally spaced should be, you will find M-79. In your finder scope a star will be in your field, this is h3752, if you have this you are in the right area.



OBSERVATIONAL  
MAP

Lepus



## WARREN ASTRONOMICAL SOCIETY

### CHESS TOURNAMENT

The W.A.S. held its first chess tournament and Ken Wilson finished first with Frank McCullough finishing a very close second, Tim Skonieczny finished third. Ken played six games with Frank with Ken winning 3 losing 2 and 1 draw. Ken against Tim won 4 and lost 2. Frank and Tim only played five games, since the last game would not have changed the final position. With Tim, Frank had 3 wins 1 loss and 1 draw.

The interesting thing was Frank who lost his first three games against Ken came back with a draw and one the last two out of their six games. Tim hurt Ken by beating him twice allowing Frank to have to win only two out of three games left with Tim for at least a share of first place. Tim surprised a couple of guys by playing spoiler by beating Frank the 4th game of the twos set. This was the first win for Tim against Frank who had beaten him the first three games in a row. The fifth game ended all chances for Frank to get a piece of the first place finish. It turned out a draw and the best Frank could finish with a win against Tim is 7 points to Ken's 7½.

	KEN WILSON -----7½ out of 12
FINAL	Frank McCullough -6 out of 11
	Tim Skonieczny ---3½ out of 11

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### SECOND CHESS TOURNAMENT TAKES ON INTEREST

Ken Wilson, defending champ, found not two but four opponents. This will be the best of '16 games, 4 with each player. After the early goings the new leader is Donald Mission who has only been beaten once. He has at this stage of the tournament 5 out of 6 points, Frank and Ken are tied for second, Frank and Ken both have 4 out of 6 points, Tim Skonieczny has 2 out of 6 games, while Walter Roudebush is 0 for 6, but has come close on a couple of occasions to winning.

	Don Mission -----5 out of 6	Tim Skon.-2out of 6
AFTER 6 GAMES	Frank McCullough -4 out of 6	Walt Roud.Oout of 6
	Ken Wilson -----4 out of 6	

ASTRO-ALMANAC

By

Ken Wilson

<u>Feb. /</u>	<u>EVENT</u>
1	Upper Transit of Polaris at 19:21:16, Moon 1° N. of Jupiter (OCC'N visible in N.W. U.S.)
2	Moon 1° N. of Venus at 0 hrs.
3	New Moon at 3:09
4	
5	Beginning of Alpha Aquarid Meteor Shower (radiant: 050041) V. slow.
6	
7	
8	
9	
10	First Quarter Moon at 10:14
11	
12	Moon 4°N. of Saturn at 04hrs.
13	Lunar Perigee at 11hrs., Saturn stationary at 19hrs.
14	
15	W.A.S. General Meeting at 8:00 p.m. E.S.T. Mercury at <u>224508 53</u> (mag.-1.0), Venus at <u>210217 52</u> (mag.-3.4), Mars at <u>180823 43</u> (mag.-1.4), Jupiter at <u>200120 46</u> (mag.-1.5), Saturn at <u>045021</u> (mag. +0.2), Uranus at <u>132608 19</u> , Neptune at <u>162320</u>
16	
17	Full Moon at 10:07
18	
19	Mercury at ascending node
20	
21	Moon 6°S. of Uranus at 17hrs.
22	
23	
24	Mercury at perihelion
25	Lunar apogee at 13hrs., Mercury at greatest E. elong. (18°) at 25:20, Venus at aphelion, Moon 5°S. of Neptune at 7hrs, Last Quarter Moon at 3:10.
26	
27	
28	Moon 0°.1N. of Mars at 01hrs. (Occultation not visible in U.S.)

NOTE: All times are in 24-hour Greenwich Mean Time (or U.T.), unless otherwise noted,

Configurations for Jupiter's satellites are on the next page and start with February 24<sup>th</sup> because Jupiter is too close to the sun for observation until then.

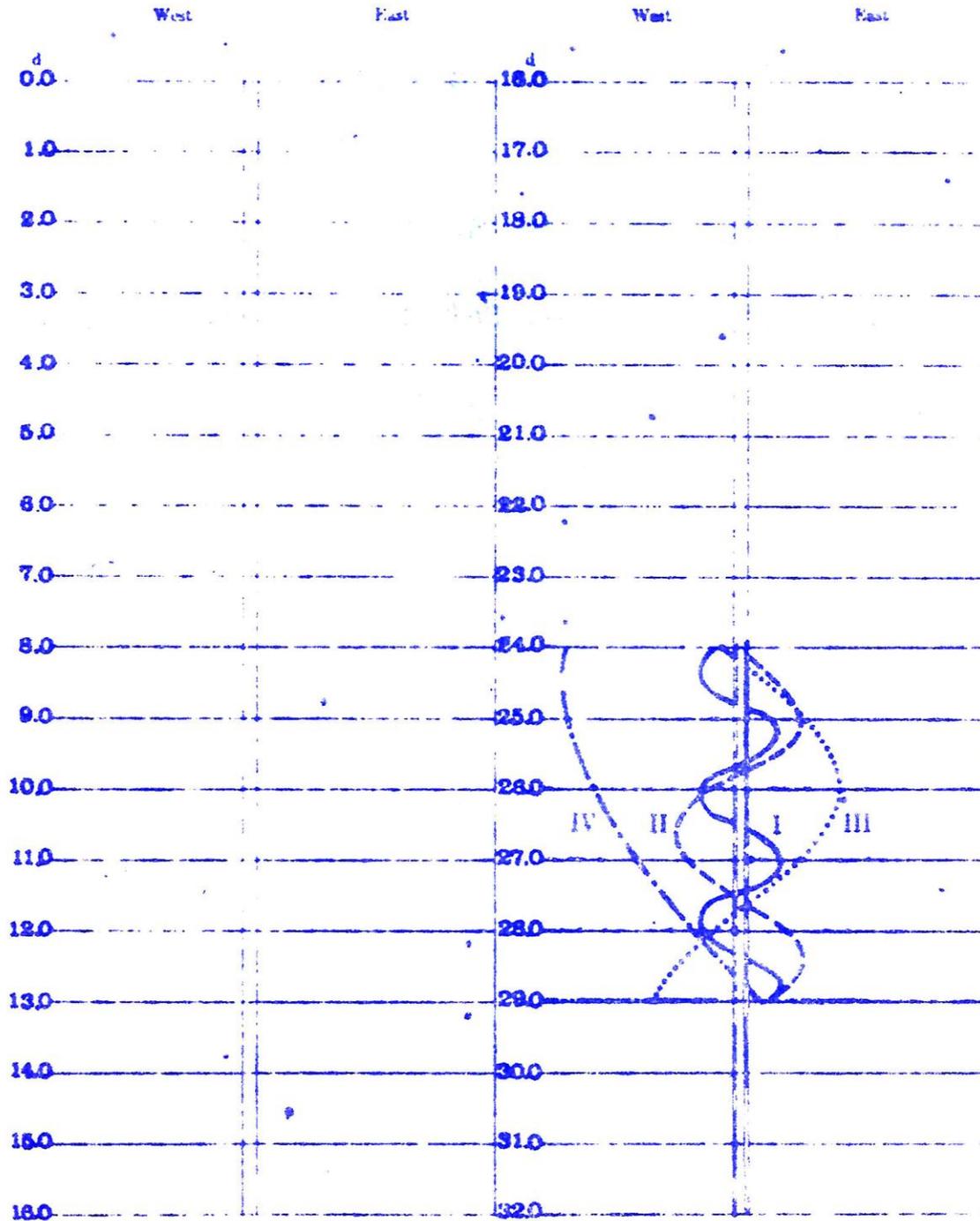
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ASTROPHOTOGRAPHERS

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.

CONFIGURATIONS OF SATELLITES I-IV FOR FEBRUARY

UNIVERSAL TIME



PHASES OF THE ECLIPSES

I	W		III	W		E
II	W		IV	W		E