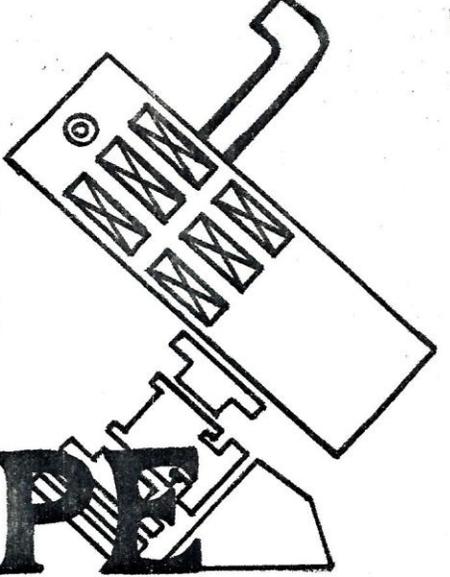


# Starry and PERISCOPE




Unruly mob who did not get their Warren Astronomical Society Publication

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FREE

## SKY AND PERISCOPE NEWS FOR JULY

Your roving reporter, Dave Harrington, has been making the rounds, and has interviewed many of the club members as to their current interests and projects.

Faitus Enterprises (Lou Faix and Pete Kwentus) has been very active of late. Their latest development is a "hot camera", which is designed to make the film less sensitive to light, thus making guiding errors much less noticeable. Their first model utilized outdated Kodachrome II in an Instamatic camera with a hot-water bottle taped to the back. A second-generation model utilized a hot water reservoir on the back of a Polaroid camera, but this idea was scrapped when Bill Whitney came along and dropped a tea bag in it. Lou and Pete now claim to have a third generation model with a portable butane torch which directs a flame on the film plane. "It also makes a great hand warmer on cold nights" says Pete. Another Faitus project is the design of a unique on-axis guiding system for astrophotography. This utilizes a half-silvered primary mirror and a peephole in the mirror cell. With this system, the observer merely sits behind the telescope and looks through the mirror. Lou is quite enthused about this project, and says, "It's great for aligning the telescope on the pole too". Lots of luck with these innovations boys.

Doug Bock has been diligently working on the development of a computer program to predict the positions of all the planets. After working for over a year to complete the program, Doug couldn't figure out why his computer predictions didn't agree with observations. Then another club member pointed out that Doug had assumed that the Earth was the center of the universe. When confronted with this, Doug said, "but I see the sun going around the Earth every day". Oh well, it's back to the old drawing board for Doug. Doug is also working on cleaning the mirror on his square-tube telescope. It was temporarily out of service anyway, due to problems with an oversize diagonal mirror. (It seems the diagonal was larger than the primary mirror). At any rate, it seems he had his telescope standing up in the kitchen, and his mother thought it was a trash-compactor, so she dropped a bag of garbage in it. As of this date, Doug has most of the garbage cleaned out, but commented, "boy; those potato peelings are tough to get".

Frank McCullough has been busy on numerous projects during the last two months. One of his main projects is to memorize Robert's Rules of Order. I tried to ask him how he was doing, but he kept shouting, "You're out of order, you're out of order". Whenever Diane managed to get him calmed down, he would jump up again and shout, "There's a motion on the floor, there's a motion on the floor". Another McCullough project is the preparation of the 1974 Christmas slide show. "You can't put these things off until the last minute", Frank commented. This reporter questioned Frank, as well as Ken Wilson, about the status of their search for all of the Messier objects. Ken stated that both he and Frank have found M-45 and M-42 so far. "They get a little tougher after that", said Ken, "but we only have a hundred or so to go." Good hunting guys.

Roger Civic has been experimenting with the advantages and disadvantages of using filters for observation and photography. After observing the sun with a 0.5 neutral density filter, Roger told this reporter, "I could have sworn the box said 5.0 neutral density." It was not wasted effort however, since Roger claims, "just for an instant, I saw the first yellow-clearing". With his one remaining eye, Roger has been actively investigating the photography of star clusters, using a hydrogen alpha filter. After analyzing hundreds of photos, Roger stated (while adjusting his patch), "I think I have proven beyond a shadow of a doubt that there is a lot of hydrogen in these stars." He is now actively investigating, the use of full-aperture haze filters for observing on cloudy nights. He is also interested in trading his binoculars for a monocular. "There is no sense in having wasted light-gathering power", quipped Roger.

### SKY AND PERISCOPE NEWS (continued)

Jerry Persha is expanding his business again. With his Mark IV oscillator selling like hotcakes, he has decided to branch out into other areas. In a personal interview, Jerry explained a few of his latest endeavors. One of these is the design of a new "Persha telescope mount". When questioned by this reporter, Jerry admitted that the mount was alt-azimuth, however he is planning to ship them to the north pole, where they will be sold as pre-aligned equatorial mountings. Another hot project is the design of a Mark V oscillator, which will have separate tracking rates for Neptune and Pluto. "That should certainly be a big seller", stated Jerry.

Larry Kalinowski has been working closely with Jerry, and has expanded the LFK exposure guide to include Neptune and Pluto. "Planet X will also be included", said Larry, "as soon as Jerry discovers it." For those of us who have been overexposing Pluto for years, this new exposure guide will be most welcome. Larry is also working on the correct exposures for that new film, 103 bo, which has an ASA that increases with exposure time. "You might say that this film has a reciprocity success," quipped Larry, "and the trick here is to cut off the exposure before the ASA gets too large."

Bits and Pieces  
by  
Kenneth Wilson

As some of you may know the 1974 National Convention of the Astronomical League will be held at Michigan State University in East Lansing, Michigan August 14-18. It will be co-hosted(?) by the Warren Astronomical Society and the Kalamazoo Astronomical Society. The convention will include trips to the Abrams Planetarium, MSU Observatory, U of M Peach Mountain Observatory, and last (but definitely not least) A NITE AT BIG JACKS.

There is already a full program of papers, but exceptionally good ones might still be squeezed in. contact Louis Faix, 6088 Robin Hill, Washington, Mich. 48094, 781-3338.

Advance registrations may be arranged with Larry Kalinowski, 15614 Flanagan, Roseville, Mich. 48066, 776-9720. Advance registration forms will soon be available ("avec la grâce à Dieu").

Time is growing short and there is still much to be done. WE NEED YOUR HELP. Call Frank McCullough at 791-8752.

PS: There will also be a telescope fair at the convention, so bring your 'scope.

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Congratulations to Peter Kwentus who walked away with two awards for his telescopes at the Apollo Rendezvous. He was the only one to win two awards.

Tim Skonieczny also won a 40mm Kellner that was offered as a door prize.

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On our way to the Apollo Rendezvous in Dayton, Tim Skonieczny and I stopped off in Delphos, Ohio to find Leslie Peltier's observatory. Mr. Peltier is probably the most famous amateur astronomer in this country. Since his early youth he has discovered 6 novae, 12 comets and made more observations of variable stars than anyone, living or dead. Well into his seventies, Mr. Peltier still makes observations on every clear night.

Not knowing where in Delphos he lived, we stopped at a gas station and asked directions. They knew who we wanted right away and we found his home and large lot at the end of a small residential street.

Peltier came to the door and came out to open up his two observatories for us to see and photograph. One houses a twelve-inch Clark refractor with a four-inch Clark guide scope. The whole observatory lock, stock and telescope was given to him by Miami University. The other building is on wheels and houses a 6-inch Fitz comet-seeker mounted so that the observer need only turn two wheels to point the telescope and observatory at any part of the Sky while moving his head only in altitude angle.

Mr. Peltier's autobiography Starlight Nights makes fascinating reading. It's available in the main Warren Public Library.

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Volunteers are still needed for Stargate observatory. Contact Peter Kwentus at 771-32830

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Writers are needed for the W.A.S.P. Call Frank-791-8752 or Ken-268-9337.

## DELPHINUS, THE DOLPHIN,

is Dauphin in France, Delfino in Italy, and Delphin in Germany: transcribed by the Latins as Delphis and Delphin. This last continued current through the 17th century, and in our day was resumed by Proctor for his reformed list. Chaucer, in the "Hous of Fame", had Delphyn, and later than he it was Dolphyne.

It now is one of the smallest constellations, but originally may have included the stars that Hipparchos set off to form the new Equuleus, and in all astronomical literature has borne its present title and shape, with many and varied stories attached, for its namesake was always regarded as the most remarkable of marine creatures.

In Greece it also was the Sacred Fish, the creature being of as much religious significance there as a fish afterwards became among the early Christians; and it was the sky emblem of philanthropy, not only from the classical stories connected with its prototype, but also from the latter's devotion to its young. It should be remembered that our stellar Dolphin is figured as the common cetacean, Delphinus delphis, of Atlantic and Mediterranean waters, not the tropical Coryphaena that Dorado represents.

Ovid, designating it as clarum sidus, personified it as Amphirite, the goddess of the sea, because the dolphin induced her to become the wife of Neptune, and for this service, Manilius said, was "rais'd from Seas" to be

The Glory of the Floud and of the Stars.

From this story the constellation was known as Persuasor Amphirites, as well as Neptunus and Triton.

With Cicero it appeared as Curvus, an adjective that appropriately has been applied to the creature's apparent form in all ages<sup>1</sup> down to the "bended dolphins" in Milton's picture of the Creation. Bayer's Curvus merely is Cicero's work with a typographical error, for he explained it, Cicceroni ob gibbum in dorso; but he also had Smon nautis, and Riccioli Smon barbaris, which seems to be the Simon, Flat-nosed, of old-time mariners, quoted by Pliny for the animal.

Another favorite title was Vector Arionis, from the Greek fable that attributed to the dolphin the rescue of Arion on his voyage from Tarentum to Corinth—a variation of the very much earlier myth of the sun-god Baal Hamon. Hence comes Henry Kirke White's

lock'd in silence o'er Arion's star,  
The slumbering night rolls on her velvet car.

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<sup>1</sup>Huet, in his notes on Manilius, quoted many examples of the use of this term by the Latins, and said Perpetuam hoc Delphinum Epitheton.

In continuation of the Greek story of Arion and his Lyre appears the Musicum signum of the Latins; or this may come from the fact mentioned in Ovid's Fasti that the constellation was supposed to contain nine stars, the number of the Muses, although Ptolemy prosaically catalogued 10; Argelander, 20; and Heis, 31.

Riccioli and La Lande cited Hermippus for Delphinus, and Acetes after the pirate-pilot who protected Bacchus on his voyage to Naxos and Ariadne; while to others it represented Apollo returning to Crissa or piloting Castilius from Crete.

The Hindus, from whom the Greeks are said to have borrowed it,—although the reverse of this may have been the case,—knew it as Shī-shu-māra, or Sim-shu-māra, changed in later days to Zizumara, a Porpoise, also ascribed to Draco. And they located here the 22d nakshatra, Çravishtha, Most Favorable, also called Dhanishtha, Richest; the Vasus, Bright or Good Ones, being the regents of this asterism, which was figured as a Drum or Tabor; marking the junction with Catabishaj.

Brown thinks that it may have been the Euphratean Makhar, although Capricorn also claimed this.

Al Biruni, giving the Arabic title Al Kaūd, the Riding Camel, said that the early Christians—the Melkite<sup>1</sup> and Nestorian sects—considered it the Cross of Jesus transferred to the skies after his crucifixion; but in Kazwini's day the learned of Arabia called Al Ukūd, the Pearls or Precious stones adorning Al Salīb, by which title the common people knew this Cross. But the Arabian astronomers adopted the Greek figure as their Dulfīm, which one of their chroniclers described as "a marine animal friendly to man, attendant upon ships to save the drowning sailors."

The Alfonsine Tables of 1545 said of Delphinus, a generally puzzling expression, but common in the 1551 translation of the Tetrabiblos, where it signifies stars supposed to be cognizant of human births and influential over human character,—naturam. Ptolemy, as is shown in these Four Books, was a believer in the genethliacal influence of certain stars and constellations, of which this seems to have been one specially noted in that respect.

Delphinus lies east of Aquila, on the edge of the Milky Way, occupying, with the adjoining aqueous figures, the portion of the sky that Aratos called the Water. It culminates about the 15th of September.

Caesius placed here the Leviathan of the 104th Psalm; Novidius, the Great Fish that swallowed Jonah; but Julius Schiller knew some of its stars as the Water-pots of Cana. Popularly it now is Job's Coffin, although the date and name of the inventor of this title I have not been able to learn.

The Chinese called the four chief stars and Kwa Chaou, a Gourd.

The strange names Sualocin and Rotanev first appeared for these stars in the Palermo Catalogue of 1814, and long were a mystery to all, and seemingly a great puzzle to Smyth, which

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<sup>1</sup>These Melkites, or Royalists as the name indicates, were of the Greek Church, whose spiritual head now is the Czar, the royal head of Russia, and successor of the Byzantine Patriarch.

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he perhaps never solved, although he was very intimate with the staff of the Palermo Observatory. Webb, however, discovered their origin by reversing the component letters, and so reading Nicolaus Venator, the Latinized form of Niccolo Cacciatore, the name of the assistant and successor of Piazzzi. But Miss Rolleston, in her singular book Hazzaroth, considered in some quarters as of authority,

Arabic Scalooin, swift (as the flow of water);  
and  $\beta$  from the  
Syriac and Chaldee Rotaneb, or Rotaneu, swiftly running  
(as water in the trough).

For no part of this scholarly (!) statement does there seem to be the least foundation. Burritt gave these titles as Scalovin and Rotanen.

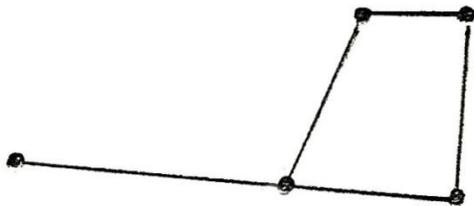
$\alpha$  may be variable to the extent of half a magnitude in fourteen days.

$\beta$  is a very close pair, 0" .68 apart in 1897, at a position angle of  $357^\circ$ , with the rapid orbital period of about twenty-six years. Another companion, purple in color and of the 11<sup>th</sup> magnitude, 6" away, has lately been discovered by See, and so  $\beta$  may be ternary; while two other stars of the 10th and 13th magnitudes are about 30" away.

$\gamma$  is a beautiful double of 4th and 5th magnitudes, 11" apart, with a position angle of  $27^\circ$ ; but, if binary, their motion is extremely slow, The components are golden and bluish green, and a fine object for small glasses.

$\varepsilon$ , a 4th-magnitude, although lying near the dorsal fin of our present figure, bears the very common name Deneb, from Al Amūd al Dulfīm, the Dolphin's Tail. But in Arabia it also was Al Amūd al Salīb, as marking the Pillar of the Cross. In China it was Pae Chaou, the Rotten Melon.

The comparative brilliancy of  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\varepsilon$  has been variously estimated—a fact which the observations of Gould at Albany in 1858, and at Cordoba in 1871-74, prove to be occasioned by variability, within moderate limits, of all four.



A Symbolic Quiz

By  
Kenneth Wilson

Our specialized world is full of symbols of all kinds. Astronomers are no different from anyone else, so they too have their symbols. Below are some of these symbols. See how many you can recognize and correctly identify. The answers are below the Astro-Almanac.

1.)  $\alpha$  \_\_\_\_\_

11.)  \_\_\_\_\_

2.)  $\eta$  \_\_\_\_\_

12.)  \_\_\_\_\_

3.)  $\beta$  \_\_\_\_\_

13.)  \_\_\_\_\_

4.)  $\♂$  \_\_\_\_\_

14.)  $\lambda$  \_\_\_\_\_

5.)  $\♂$  \_\_\_\_\_

15.)  $\emptyset$  \_\_\_\_\_

6.)  $\mu$  \_\_\_\_\_

16.)  \_\_\_\_\_

7.)  \_\_\_\_\_

17.)  $\mathcal{A}$  \_\_\_\_\_

8.)  $\Upsilon$  \_\_\_\_\_

18.)  $\Omega$  \_\_\_\_\_

9.)  $\epsilon$  \_\_\_\_\_

19.)  $\ominus$  \_\_\_\_\_

10.)  $\pi$  \_\_\_\_\_

20.)  $\rho$  \_\_\_\_\_

ASTRO-ALMANAC

By  
Kenneth Wilson

JULY /

EVENT

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- 1 Moon 3° S. of Neptune at 12:00.  
2 Uranus stationary at 2:00.  
3  
4 Venus 4° N. of Aldebaran at 6:00, Full Moon at 7:40, Earth at aphelion 21:00  
5 Mars at aphelion.  
6 Lunar apogee (252,320 mi.) at 16:00.  
7  
8 Jupiter stationary at 3:00.  
9 Twilight begins: 2:38-ends: 21:31 L.M.T.  
10 Moon 7° N. of Jupiter at 2:00.  
11 Mercury Stationary at 20:00  
12 Last Quarter at 10:28.  
13 Mercury at great. hel. lat. South.  
14  
15 Mercury at 662019 25, Venus at 052822 10 (mag. -3.4), Mars at 094015 14, Jupiter at 231706 (mag. -2.3), Saturn at 064422 29, Uranus at 132908 41, Neptune at 162319 55.  
16 Ceres stationary at 10:00  
17 Moon 0.4° N. of Venus (occultation) at 6:00, Moon 2° N. of Mercury at 23:00.  
18 Moon 1.4° S. of Saturn at 11:00, W.A.S. General Meeting at 8:00 p.m. E.D.T.  
19 New Moon at 23:56, Lunar Perigee (222,150 mi.) at 17:00, Twilight begins: 2:50-ends: 21:21 L.M.T.  
20  
21 Moon 6° S. of Mars at 10:00.  
22 Mercury greatest elongation west (20°) at 4:00.  
23  
24 Mercury 1.2° S. of Saturn at 11:00, Pallas at opposition at 12:00, Juno stationary at 20:00.  
25 Moon 5° S. of Uranus at 10:00, First Quarter at 22:51  
26 Mars 0.7° N. of Regulus at 4:00.  
27  
28 Moon 3° S. of Neptune.  
29 Maximum of  $\delta$  Aquarid meteor shower at 8:00, Twilight begins: 3:03-ends: 22:07 L.M.T.  
30  
31 Venus 0.2° N. of Saturn at 4:00.

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

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Answers to symbol quiz

1.) Right ascension 2.) Saturn 3.) Celestial latitude 4.) conjunction 5.) declination 6) proper motion 7.) Uranus 8.) Vernal equinox or Aries 9.) obliquity of the ecliptic 10.) parallax in seconds of arc 11.) New Moon 12.) quadrature 13.) comet 14.) celestial longitude 15.) sidereal time 16.) opposition 17.) Jupiter 18.) ascending node 19.) earth 20) distance in seconds of arc

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FOR SALE: 15-60X60 mm zoom spotting scope with tabletop tripod with slow motion in azimuth, \$20.00. Call Ken 268-9337.