

# The Shoreline Observer



Newsletter for the

## Shoreline Amateur Astronomical Association

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**June 1996**

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### **June Meeting**

The June meeting of SAAA will be held on Thursday June 20th at 7:00 PM in the West Ottawa Middle School Planetarium.

- Business Meeting.
- Sandy will give a tour of the June night sky.
- Video Time.
- Mark will be bringing refreshments.
- Everyone should show up because this is the last meeting until Sept., and we need to tell you the summer plans.

### **Treasurers Report**

As of May 9, 1996: \$244.52

### **This Month's Observations**

As reported the last several months, Venus completed its domination of the evening sky in early June and is now rising before the sun, preceding it by 30 min. on June 18, by 1½ hour on June 30, and by 3 hours on July 31. Also, as reported earlier, conditions are still favorable for observing the planet's crescent phase. Just remember to observe Venus in a bright sky, around sunrise or even in daylight, and use 7 - power or better binoculars. (If you use binoculars, I suggest you support them on a tripod, fence post, car door, or tree trunk.)

On June 30, notice the "Blue Moon", the second full moon of the month, and you will see Jupiter right below it. By month's end Jupiter rises just after sunset, making it well placed for observing all summer.

Mars and Mercury may also be found in the eastern, pre-dawn sky near Venus. On June 23, Mercury and Venus are only 1.6š apart with Mars about 5š above them. Use binoculars for the best view. Also visible before sunrise is Saturn, well up in the SE.

Uranus and Neptune are still located near Jupiter in Capricornus. See the finder chart in the May Sky Calendar.

For the more serious observer with access to a dark sky location (that's us) July promises to bring excitement as we attempt to

## Astronomers find vinegar in space

MADISON, Wisconsin (AP) -- In a stellar cloud 25,000 light years from Earth, researchers have found ordinary vinegar, an organic molecule that may have played a role in the formation of life.

Radio astronomers from the University of Illinois, Urbana-Champaign, found the faint traces of vinegar, also known as acetic acid, in a cloud of gas and dust named Sagittarius B2 North.

"Acetic acid could have been one of the first steps toward the chemicals of life," said Lewis E. Snyder, one of the University of Illinois team. "If you add a form of ammonia to it, you get glycine, the simplest, biologically important amino acid."

Amino acids are the basic building blocks of life. Proteins and DNA are made up of combinations of common amino acids, and proteins are in all living organisms. Ammonia was discovered in interstellar space more than 25 years ago. That makes it very plausible, Snyder said, that molecules of ammonia and acetic acid linked up to form the basic amino acid.

The vinegar molecules were found in a cloud similar to the cloud that astronomers believe formed the sun and the planets, including Earth, in the solar system, Snyder said.

Finding vinegar in such a cloud, so far away from Earth, suggests that the chemicals necessary for life were present in the solar system as it formed 4.5 billion years ago, he said.

"This is pretty much the same sort of stuff that rained down on the early Earth, and the same stuff that we may find in comets, asteroids and meteorites," said Snyder. "This shows that the environment was right for finding glycine."

A team led by David M. Mehringer reported on the discovery Monday at the national meeting of the American Astronomical Society at the University of Wisconsin.

Researchers also believe that comets and asteroids may contain biologically important molecules, Snyder said. One theory on the origin of life is that these chemicals were brought to the Earth by those bits of space debris.

It is also possible, he said, that the chemicals were present on Earth when it first formed.

Experiments performed in the early 50s, Snyder said, showed that some of the chemical molecules found routinely in interstellar space could be turned into complex biological molecules when subjected to heat and pressure. One of the molecules formed in those experiments, he said, was acetic acid.

Steven Federman, a University of Toledo astronomer who specializes in the study of interstellar matter, said the vinegar discovery "is an important step in confirming the existence of complex molecules that could be vital in biology."

The University of Illinois team is now searching for glycine, concentrating on the same area where the vinegar was found, Snyder said.

"This is a star formation region that is rich in chemistry," he said. "It looks like something you would study in introductory biology," because it contains many of the basic building blocks for life.

Astronomers can identify chemicals in distant structures by analyzing the wavelengths of light and radio signals from space.

Each chemical has a unique spectrographic signature. The University of Illinois team used measurements taken by a fine-scale array of radio telescopes at Hat Creek, California. A second array, at Bishop, California, confirmed the findings.

observe comet Hale-Bopp. Refer to the July Sky Calendar for detailed finder charts and explanations.

This is also a good time of the year to observe the Dragon's Head, the four stars at the end of Draco, the Dragon, found midway between the Little Dipper and Lyra. The Dragon's nose, Eltanin, the brightest star of the four, is a type-K5 giant with a subtle orange tint. Try defocusing your binoculars slightly to better see the color, then contrast this with Rastaban, or Beta Draconis, the second brightest of the four, which is a pale yellow-white G2 giant. A rich mythology surrounds Eltanin with a number of temples in Ancient Egypt oriented toward it. Also, in 1729, the discovery of the aberration of starlight was made by Bradley through observations of this star.

The 4th-magnitude Xi Draconis, or Grumium, "the dragon's lower jaw", is similar to Eltanin although not as bright. The faintest of the four stars, Nu Draconis, is a fine wide double star and is one of the easiest pairs in the sky for a small telescope or good binoculars. Both stars are type-A5 and each has a luminosity of about 11 suns. At a distance of about 120 LY, the apparent separation of 62<sup>2</sup> corresponds to an actual separation of 2300 AU, or about 60 times the distance from the sun to Pluto.

Peter Burkey

# QUIZ TIME

## What Star am I?

"What star am I?" is a new feature for our newsletter. Enigmatic clues as to the identity of a star currently placed in the sky are revealed. Who will solve the mystery?

*I am part of a group  
(but less apart than others)*

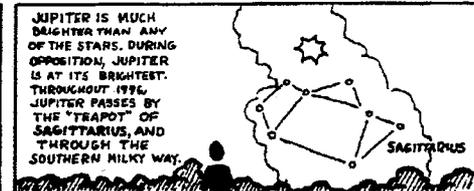
*I am near a pinwheel  
(and also near a whirlpool)*

*I recently was "tailed"  
(by a fast moving stranger)*

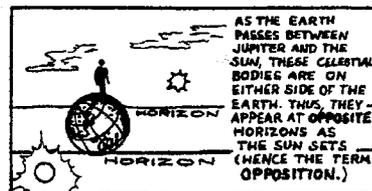
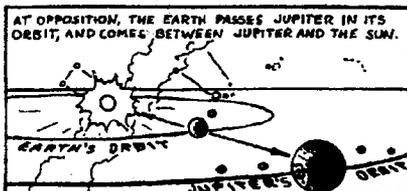
*What star am I?*

Keep looking up!

Mark



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