Richard Wend

# NORTHERN LIGHTS

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## ROAMING THE REGION

Joy was short lived for members of the Milwaukee Astronomical Society. The city has turned lights on the expressway back on and significantly increased light pollution in the area. Some members claim that while the lights were out, they saw naked eye objects that they had not seen in years.

Rockford, Illinois, will have a public observatory next year thanks to joint effort from the Rockford Park District and the Rockford Amateur Astronomers, Inc. Construction of the observatory building has already begun. RAA members are providing assistance in assembling the dome plus the 12.5", f/7 telescope to be housed in the new observatory.

## ASTROFEST 1980

by Richard Wend (Racine AS)

This first of what may be an annual series of Astrofests was held September 5th and 6th at the Modine-Bensted Observatory in Racine, Wisconsin. The event was co-sponsored by Racine Astronomical Society and Chicago Astronomical Society.

This year's event attracted approximately 150 persons. Camping space was provided and telescopes were set up in an area south of the main dome. A wide assortment of scopes up to 20" was displayed. Friday night viewing was fine until fog rolled in about 1:30 am.

After coffee and coffee cake Saturday morning, an official welcome took place in the main tent. The presidents of the two sponsoring societies were introduced and an outline of the program for the day was presented. John Allseits, a member of both societies, was Chairman for the event.

A number of papers on telescopes and telescope making were presented in a spirited session that also included suggestions on how to make useful observations with the equipment.

(cont. p.4)

## CAHOKIA MOUNDS

by Donald Hill (Peoria AS)

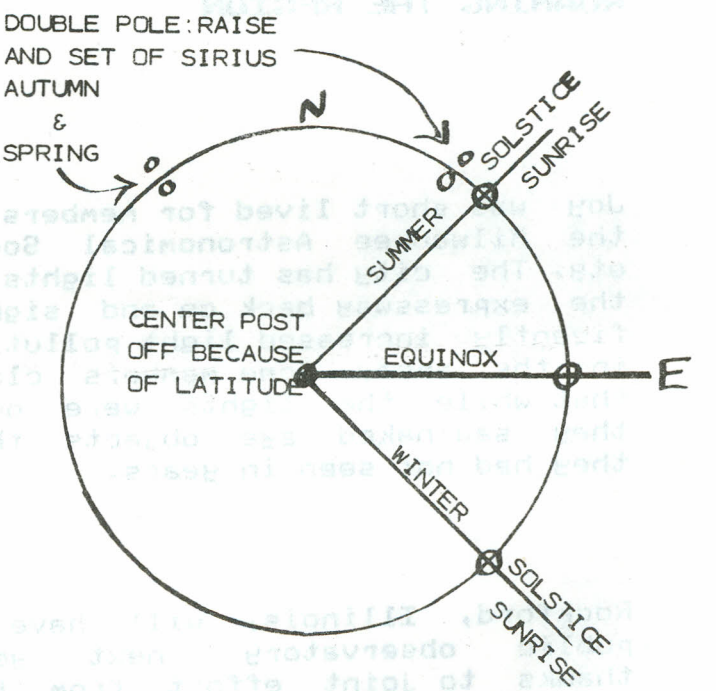
(Reprinted from "Starlite" of the Peoria AS, June, 1980)

Cahokia is about 3 miles east of East St. Louis. The state of Illinois maintains 3700 acres with 100 mounds known as Cahokia Mounds State Park. For a small charge, a tape recorder tour with a map is available. Rangers say this will take about one hour. I took three hours.

Within the vicinity of the museum are all three types of mounds, examples of Indian house, garden, stockade, a borrow pit and Woodhenge. In all, I saw 15 mounds. Most mounds in this area were not burial mounds. Indeed, Monk's Mound (3 stories high) is believed to have had a chief's hut on top. Most mounds are about one story high. The shapes vary from a raised flat top to a rounded, almost pyramidal, top to a long elliptical type. You can walk on some, like Monk's Mound, but you can not on others, like Twin Mounds. The 10,000 Indians who lived there disappeared around 1500 A.D.

Material for the mounds came from borrow pits. As a pit was made, it was used to catch rain water. To protect the inhabitants, a stockade was built around the center of the village. All stockades and huts were made of wood reinforced with mud. A strawlike plant found near the water was used for the roof.

I went there to see Woodhenge. Imagine 50 poles, 2 feet diameter and more than 10 feet high, in a circle 410 feet in diameter. This was used to tell summer or winter solstice, equinox and the star Sirius. Woodhenge was built fou different times. Park officials are thinking of remaking circle #2. Right now there are four telephone poles showing the Sun's alignments from the center pole.



## SKY GLOW SURVEYING

(reprinted from the LaCrosse Area Astronomical Society newsletter)

With a couple of month's work an astronomy club or even an individual astronomer can determine how bad light pollution is in the local area. The method described below will give a reasonably accurate picture of the sky glow that surrounds your locality.

To survey your sky glow, you will need a map of your area and a clear, moonless night. Go outside and visit several spots in your area. Wait until you become dark adapted, then rate the sky overhead using the scale below devised by Richard Berry. Take time to look around before deciding which rating to choose. If your choice falls between two ratings, use the intermediate one.

For each site that you rate, write your rating choice over its location on the map. Use your judgement and carefully connect similar numbers with a line. Finally, shade each rating area with its own color and you have a sky glow map of your area.

LIGHT POLLUTION RATING SCALE

Rating 0:
The sky is crowded with thousands of stars to the horizon in all directions. No city glows can be seen anywhere. The stars look large and close, as if you could touch them. The Milky Way is brilliant and extends clear to the horizon. Clouds make jet black silhouettes against the sky. Limiting magnitude may be well below 6.

Rating 2:
A few faint city glows can be seen. Clouds make dark silhouettes against the sky except near the city glows. Stars look large and close; the Milky Way is easy to see.

Rating 4:
The Milky Way is brilliant overhead, but cannot be seen low near the brightened horizon. Any clouds in the sky have a grayish glow and appear bright if near one or more city glows. Limiting magnitude is about 6, naked eye.

Rating 6:
Stars no longer appear large and brilliant, but there are still many in the sky. The Milky Way is fairly visible high in the sky, but can't be seen near the horizon. Clouds appear bright against the sky. Large areas of the horizon have city glows. Limiting magnitude is about 5.5, naked eye. To a city dweller, this sky looks magnificent.

Rating 8:
The Milky Way is just barely visible if you know where to look for it. The sky is bright and discolored (usually green) in the direction of nearby cities. At the zenith, the sky looks dull gray. Limiting magnitude is about 5, naked eye.

Rating 10:
Stars are weak and washed out; only a few hundred are visible in the sky. The sky is discolored (usually green or yellow) everywhere. Limiting magnitude is about 4, naked eye.

## ASTROFEST (cont.)

There were two guest speakers. Richard Berry, editor of Astronomy and Telescope Making, answered the question "Is telescope making dead in America?" in the negative and gave examples to support his argument. Dr. Dick Carrigan of Fermilab described a proposal to create a facility at Fermilab for study of information sent back by satellites.

Orville Brettman, President of the Astronomical League, spoke briefly and answered questions. For awhile it was like a League business meeting.

Films and video tapes were presented during the afternoon and evening, mostly science fiction classics. A buffet supper was served followed by lots of watermellon. Some of the watermelons carried over into the door prizes!

Late in the afternoon, high clouds rolled in. Hopes were high that there would be no rain, but later in the evening thunder and lightning told us otherwise. There was no observing on the hill that night.

FEBRUARY 28 IS DEADLINE

FOR DECEMBER ISSUE

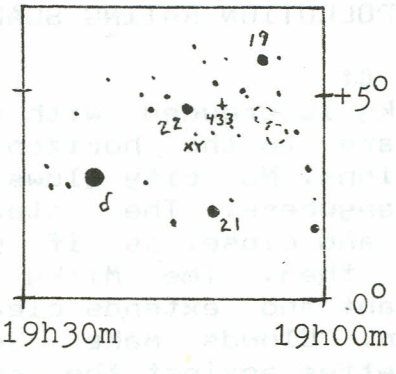
## SS-433 OBSERVING PROJECT

Dr. Roger S. Kolman of the Racine Astronomical Society presented a paper at last spring's NCRAL convention in which he requested observations of the peculiar object SS-433. The spectrum of this strange object contain emission lines that are red shifted, blue shifted and stationary! Refer to the December, 1979, issue of Sky and Telescope for a complete discussion of SS-433.

The brightness of SS-433 varies over about one magnitude in a period of 164 days. The average magnitude is about 14. Its total energy output is some 500,000 times that of the Crab Nebula.

Dr. Kolman is asking for photographic observations taken once or twice per week. Located at 19h09.4m and +4° 53.9', SS-433 is about a degree away from both 22 Aquilae and XY Aquilae. Wide field photographs that include the XY Aquilae field are desired to allow estimation of magnitude of SS-433. A finder chart, based on the Atlas of the Heavans, field edition, is included below to aid in locating SS-433.

Send any observations to Dr. Roger S. Kolman, 3229 N. Orange Ave., Chicago, IL 60634.




Finder chart for SS-433. The two open clusters indicated are NGC-6756 and NGC-6755.