



Light Pollution - The Minnesota Law

by Mike Picard

Light pollution is a problem that plagues all amateur astronomers. Visually, we can cope with this problem by seeking observing sites further away from the sources of light pollution and photographically by using special filters. I wonder though if we aren't approaching our limits of adaptability as light pollution continues to increase. Can we deal directly with the sources of light pollution?

With this question in mind I decided to check on the status of Minnesota statute 116H.12 which was mentioned in the February, 1978, *Sky and Telescope* (pg 137).

I went to the library and obtained a copy of the statute. Also, I found out that it was amended in 1976. Part of the amendment, subdivision 1b, sets a definite time by which the director of the Energy Agency must "... develop proposed rules...by October 1, 1977, setting standards covering permissible hours of operation, quantity and efficiency of outdoor display lighting and define outdoor display lighting."

I called the Energy Agency to find out what rules have been developed. Although the amendment specified October 1, 1977 as the date by which the proposed rules should have been done, the agency is still working on them.

The agency sent me a copy of the proposed rules and briefly, the rules restrict the use of or set standards for the following:

1. Billboards can not be illuminated between midnight and 6am.
2. Business signs must be turned off at night 1 hour after the business closes.
3. The rules limit the quantity of light fixtures that can be used for security lighting by limiting to "... .05 watts per square foot or .2 foot-candles..." the amount of light permissible in the area.

The Energy Agency also told me that in May there will be a hearing on the proposed rules. Individuals are invited to comment on the rules prior to the hearing. These comments were to have been into Richard Wallen's office by March 15, 1979. I called Mr Wallen's office to see if he would consider any comments sent after this date and his secretary told me that he would.

Event of the Month

by Bill Larson

Mercury is hidden by the Moon on April 24

Just before sunrise on Tuesday the 24th, Mercury will be occulted by the moon. It will be almost due east and only 3° above the horizon. At magnitude +0.5 it will disappear on the bright limb of the 6% sunlit moon at position angle 82° at 4:49 a.m., taking 14 seconds to do so. The sun will be 4° below the horizon.

Mercury will reappear one hour and two minutes later at position angle 230° from the dark limb of the moon. The moon will then be 14° above the horizon and the sun will be 6° up.

Due to the bright sky conditions binoculars will be needed to see this event. Using a clock driven telescope to track the moon will give your best chance of seeing reappearance. Watch *Sky and Telescope* for more details.

So, at this time, the members of the TCAC still have a chance to help shape the rules that will directly affect our viewing.

If you would like a copy of the proposed rules, call me before the next meeting at 722-3948. Possibly we can come up with some proposals of our own before May.

MINUTES

The March meeting of the Twin City Astronomy Club was held at 7:30 p.m. Tuesday, March 6, 1979, in the auditorium of the Science Museum of Minnesota.

The program for the evening was the showing of color slides and motion pictures taken of the February 26, 1979, total eclipse of the sun and of the expedition from the Science Museum of Minnesota to Minot, N. Dak., to view the eclipse. Seventy-five persons signed the roster and perhaps twice that many attended the meeting.

Approximately 250 color slides and two reels of motion picture film were shown. The quality of the slides varied with the sophistica-

tion of the equipment and the skill and good fortune of the photographer. The phenomena varied with the exposure time, the filtering (if any), the type of film and the focal ratio.

Equipment varied from 55mm lenses to telescope/converter combinations yielding effective focal lengths of 4,000mm. The image of the sun ranged in size from discernible to four times the diameter of the slide's width (allowing only one-fourth of the disc to appear). Some spectacular photographs of alterations in the outer corona and prominences were obtained.

A tape of observers' reactions just prior to and during totality was played.

Some of the best photographs are being assembled into a catalogue by the Science Museum so reprints can be ordered.

news¬es

The next meeting of the TCAC will be held April 3, 1979, at the Science Museum, 30 E. 10th St., St. Paul, MN. at 7:30 PM. Jim Fox will present a talk on the use of microcomputers in amateur astronomy.

Copies of the proposed Minnesota statute on light pollution will be available at the meeting along with copies of a study on light pollution published by ENFO. Those who would like copies of either must contact Mike Picard at 722-3948 by April 2. Individuals willing to help develop a

club position to present at upcoming public hearings on the proposed statute should let Mike know.

Dates for public observing sessions at the Metcalf site for 1979 are (alternate):
April 27 (28) August 24 (25)
May 25 (26) September 21 (22)
June 22 (23) October 19 (20)
July 20 (21) (ORIONIDS)
August 11 (early AM) November 16 (17)

If conditions appear uncertain, call Lauren Nelson, 644-1254 or Bill Larson, 331-6124.

This year a sign will be placed on the gate instructing "Lites Out" for all vehicles coming up the hill after dark. Observance of the "lites out" notice would be appreciated by all.

Elections for club officers will be held in April with new terms commencing at the May meeting. Anyone wishing to be nominated for an office (President, V. President, Secretary or Treasurer) should contact nominations chairperson, Andy Fraser at 690-5902 by April 10, 1979. Nominations will be called from the floor at the April meeting.

Jim Fox is proceeding with the assembly of the club's six inch Cassegrainian reflector. The instrument could be available to loan to members later this spring. Guidelines governing the loan procedure have been discussed by the executive board and will be published in the next issue of Gemini.

GEMINI

Editor. Alan Ominsky

Gemini is issued monthly by the Twin City Astronomy Club (TCAC), an affiliate of the Science Museum of Minnesota, St. Paul, Minn.

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