

# THE PRAIRIE ASTRONOMER

Volume 17, Number 9

August 30, 1977

## ABOUT SIX WEEKS AWAY FROM A SOLAR-HEATED HYDE MEMORIAL OBSERVATORY!

It appears that the Hyde Memorial Observatory will be completed by the first week in October, if things continue as they have, according to Observatory Committee Chairman Carroll Moore. The big news is that the contract with NASA was signed on August 23, providing for the solar heating system. Bid price for the system minus the heat storage pit which was funded as a part of the observatory, was approximately \$14,000. With any kind of luck, the solar collector panels should be delivered during the first week in September.

More good news: The Garden Club of Lincoln has agreed to do the landscaping around the observatory. The result should be a much more pleasing surrounding for the building than might have been possible if landscaping were limited to the remaining budget and what it might have bought in commercial services.

Carroll reports that the drywall is in, septic tank in, wiring completed, and the outside of the building is now painted.

One project which members of the Prairie Astronomy Club might want to participate in still remains. As you may recall, the hillside next to the observatory made an especially inviting place for terracing. These terraces, which are spaced and sized to make for pleasant seating, will be oriented parallel to the building's

east wall, which can be used for slide shows, or the entire area for lectures under the evening skies. The committee will need some help--perhaps five or six able-bodied types to help on a Saturday in placing the rocks for the terraces. One or two civic clubs are also scheduled to participate. Volunteers at the August PAC meeting will be appreciated.

We are now aiming for a dedication of the building during the first or second week in October, and a grand opening public demonstration night (hopefully) during the first quarter moon, around the 19th of October. We may be hindered by unexpected construction delays, but one thing is certain: Hyde Observatory is very close to becoming a reality, and one we can be very proud of.

### AUGUST MEETING SCHEDULED FOR OLIN HALL ON THE 30TH

*The regular August meeting of the Prairie Astronomy Club will be held at Olin Hall of Science, Nebraska Wesleyan University, Tuesday, August 30, at 7:30 p.m.*

*This meeting will include the latest reports on Hyde Memorial Observatory, which is nearing completion, on our telescope project for the observatory (with some finished and near-finished pieces of workmanship on view), and nominat-*

*(CONTINUED ON PAGE 6)*

PRESIDENT'S REPORT:

## BOULDER CONVENTION, OBSERVATORY PLANNING, AND CLUB ELECTIONS

Summer is almost over and it is time to start back to school, and elect new officers for the club. We will nominate candidates for the five club offices at the next meeting. Give some thought to this, because next year the club's officers will have more responsibilities than in some past years.

We had a fine convention in Boulder, and the club was well represented. Five individual members and two families from Lincoln were present. A report on the convention will be part of this month's program.

Progress is being made on the eight inch telescope. The parts for the tube assembly are virtually finished and we are working on the fork mounting. The mirror is ready for aluminizing. Also, the pedestal for the 14-inch telescope is now ready. We still need volunteers for some sanding, painting, and assembly work.

At the meeting we will also be discussing plans for the grand opening of the Hyde Memorial Observatory, which apparently is not far off. I will know more about this after the committee meeting on Friday, so come to the club meeting and share the good news.

--Larry Stepp

QUOTE WITHOUT COMMENT...

--From STELLA, publication of the Omaha Astronomical Society, describing motions made and passed at a recent meeting:

"Resolve to increase the O.A.S. membership dues for regular adults to \$25 annually and family dues to \$30 annually, for the purpose of establishing additional funds.

"The dues increase came about when discussions were made concerning

the need to purchase property outright and build an observatory on that property. Such land would not come cheap and is hard to find outside the city lights. Farm land is hard to purchase because they are not willing to give up high accessible ground. When the farmer would go to sell his land, he would have to point out our little section to the

(Continued on Page 8.)

THE PRAIRIE ASTRONOMER is published monthly by the Prairie Astronomy Club, and is free to club members. Yearly subscription without club membership is \$4.00. Regular membership (includes one-year subscription to Sky & Telescope, club newsletter, and four quarterly issues of the Astronomical League newsletter), is \$10.00. Family membership is \$12.00. Newsletter editor, Leo Thomas (489-3855). Articles and news for publication must be submitted no later than the Monday of the week prior to club meetings.

## PRAIRIE ASTRONOMY CLUB MEMBERSHIP ROSTER -- Effective August 15, 1977

1.	Eugene Alt	3831 So. 57th Street	Lincoln, NE 68506
2.	Donn Baker	2616 No. 59th Street	Lincoln, NE 68507
3.	Lynn Baker	2616 No. 59th Street	Lincoln, NE 68507
4.	Walter Baumann	2305 Marilyn Avenue	Lincoln, NE 68502
5.	Tom Beardsley	5400 N Street	Lincoln, NE 68510
6.	Michael G. Benes	722 Hill Street	Lincoln, NE 68502
7.	Bill Besch	7420 Garland Street	Lincoln, NE 68505
8.	Roger Besch	1030 No. 78th Street	Lincoln, NE 68505
9.	Brad Binder	415 Lyncrest Drive	Lincoln, NE 68510
10.	Rex Brinton	1315 Plum Street	Lincoln, NE 68502
11.	Felix Cavosie	911 Division Street	Hurley, WI 54534
12.	Sekhar Chivukula	7801 South Street	Lincoln, NE 68520
13.	Dr. John Clothier	355 South Cotner Blvd.	Lincoln, NE 68510
14.	Brian Cooper	5930 LaSalle Dr.	Lincoln, NE 68516
15.	Russell Copple	Rt. #1	Alvo, NE 68304
16.	Geoff Crooks	2816 No. 63rd Street	Lincoln, NE 68507
17.	David Daiker	P.O. Box 629	Waverly, NE 68462
18.	Allan Daubendick	1821 Jackson Street	Beatrice, NE 68310
19.	Jack Dunn	5514 Briarwood Ave.	Lincoln, NE 68516
20.	Rollin Ellis	Rt. #1, P.O. Box 152	Roca NE 68430
21.	Harlan Franey	1734 So. Cotner Blvd.	Lincoln, NE 68506
22.	Norman D. Frerichs	1423 Lincoln Street	Beatrice, NE 68310
23.	Clark Fuller	2811 S Street	Lincoln, NE 68503
24.	Joe Hamersky	3748 So. 40th Street	Lincoln, NE 68506
25.	Dick Hartley	320 Wedgewood Drive	Lincoln, NE 68510
26.	Duane Hutchinson	3445 Touzalin Avenue	Lincoln, NE 68507
27.	Clifford Johnson	P.O. Box 133	Trenton, NE 69044
28.	Richard Johnson	1860 Pawnee Street	Lincoln, NE 68502
29.	Steve Kell	R.F.D. #8	Lincoln, NE 68506
30.	Werner Klammer	1648 No. Columbia St.	Seward, NE 68434
31.	David Knisely	1616 No. 14th Street	Beatrice, NE 68310
32.	Ken Kopta	1544 Crestline Drive	Lincoln, NE 68506
33.	John Kubicek	6927 Lexington Avenue	Lincoln, NE 68505
34.	Allan Logan	1235 No. 16th Street	Lincoln, NE 68508
35.	Marian McIntyre	2342 21st St., Box 516	Waverly, NE 68462

(Continued on Page 6)

# SKY CALENDAR

Information for help

SUNDAY	MONDAY	TUESDAY
<p><i>Planets This Month</i> (all in morning sky): Venus rises 2 to 3 hrs before sunup. An hour before sunrise, this brightest planet is 15° to 20° up in east. Use Venus as a guide to Saturn, Mercury, and Regulus. See diagrams.</p>	<p><i>Jupiter</i>, next in brilliance after Venus, rises 5 1/2 to 7 1/2 hrs before sunup. An hour before sunrise, it is 33°-64° to upper right of Venus, and 50°-70° up in SE. Use Jupiter as guide to Mars, Pollux, and Castor. See diagrams.</p>	<p><i>Saturn</i> rises 1.4 hrs before sun Sept 1, and 3.4 hrs before sun Sept 30. On Sept 1 Saturn is 18° lower left of Venus. On Sept 18 Saturn is 0.4° N of Venus. On Sept 30 Saturn is 13° upper right of Venus. Note Regulus below Saturn.</p>
<p>One hour before sunrise: 4</p> <p style="text-align: center;"> </p> <p>Closest this morning, 0.5° apart.</p> <p style="text-align: center;">• Castor</p> <p style="text-align: center;">* Pollux</p>	<p>One hour before sunrise: 5</p> <p style="text-align: center;"> </p> <p>Moon at Last Quarter</p> <p style="text-align: center;">☾ * Aldebaran</p>	<p>One hour before sunrise: Planets 0.9° apart. 6</p> <p style="text-align: center;"> </p> <p style="text-align: center;">* Betelgeuse</p>
<p>One hour before sunrise: 11</p> <p style="text-align: center;">* Venus</p> <p style="text-align: center;">* Saturn</p> <p>Regulus * Moon</p>	<p>40 min before sunrise: 12</p> <p style="text-align: center;">* Venus</p> <p style="text-align: center;">* Saturn</p> <p style="text-align: center;">* Regulus</p> <p>Use binoculars for Mercury.</p> <p style="text-align: center;">*</p>	<p>New Moon— 13 not visible.</p> <p>45 min before sunrise: Jupiter * 4° apart</p> <p style="text-align: center;"> </p> <p>• Castor ← 4.5° apart</p> <p style="text-align: center;">* Pollux</p>
<p>45 min before sunrise: 18</p> <p style="text-align: center;"> </p> <p>Saturn &amp; Venus closest, 0.4° apart.</p> <p style="text-align: center;">* Regulus</p> <p style="text-align: center;">* Mercury</p>	<p style="text-align: center;">D</p> <p>19</p> <p>First Quarter (evening half moon). As you face setting sun tonight, note moon is 90° to left, or in the south. Binoculars show good detail on moon's terminator.</p>	<p>45 min before sunrise: 20</p> <p style="text-align: center;">* Saturn</p> <p style="text-align: center;">* Venus</p> <p style="text-align: center;">* Regulus</p> <p style="text-align: center;">* Mercury</p>
<p>This week 45 min before sunup: Venus 18° up in E. Mercury 12°-14° LL of Venus. Saturn 8°-14° UR of Venus. Don't confuse Saturn with Regulus which is 3°-4° lower. Jupiter 70° up in SE. Mars 10°-12° LL of Jupiter. 25</p>	<p style="text-align: center;"> </p> <p>26</p> <p>Full Moon rises shortly before sunset. Penumbral eclipse late tonight. See Sept 27. Harvest Moon: Next few evenings, moon rises about 1/2 hr later each night, much less than the average.</p>	<p>Early this morning, the moon passes through the barely detectable outer portion (penumbra) of the earth shadow. Greatest darkening occurs at 4:29 a.m. EDT, with moon's southern portion getting dusky. 27</p>

*Magnitudes of the Planets:* Venus -3.4; Jupiter -1.7 to -1.9; Saturn +0.7 to +0.8; Mars +1.0 to +0.8; Mercury: Sept 14, +1.0; Sept 20, 0.0; Oct 1, -1.0. *Motions during September:* Venus 36°, Mars 17°, Saturn 3.5°, Jupiter 3.4° (all eastward). Venus goes from Cancer into Leo and passes Beehive, Saturn, and Regulus. Mars, in Gemini, passes Jupiter Sept 4. Jupiter passes about 1/2° N of the stars Eta and Mu Geminorum on Sept 10 and 27, respectively. Saturn, in Leo, approaches to within 3.3° of Regulus Sept 30.

# SEPTEMBER 1977

g teachers and students observe the sky

WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>Reddish 1st magnitude Mars is very close to Jupiter in early Sept and is 12° to lower left of Jupiter by Sept 30. Mercury's best morning appearance in 1977 is last half of Sept. See Sept 14, 16, 18, 20-22, 24-25, 29.</p>	<p>Moon rises about 1 2 hrs after sunset tonight, allowing 1/2 hr of dark skies. Use last month's star map 3/4 hr after sunset, and this month's 2 3/4 hr after sunset. As twilight ends; look for Milky Way and Andromeda Galaxy.</p>	<p>One hour before sunrise: Watch Mars, pass Jupiter in next few days. They are 1.3° apart this morning.</p>	<p>1 hr before sunrise: 3</p> <p>* Venus</p> <p>Binoculars show Beehive 1.6° upper left of Venus.</p> <p>* Saturn</p>
<p>One hour before sunrise: Planets 1.3° apart.</p> <p>Jupiter *</p> <p>Mars *</p> <p>Moon *</p> <p>Betelgeuse *</p>	<p>One hour before sunrise: Jupiter 8 Planets 1.8° apart.</p> <p>Mars *</p> <p>Castor *</p> <p>Pollux *</p> <p>Moon *</p>	<p>* Pollux 9</p> <p>One hour before sunrise: Procyon *</p> <p>Moon *</p> <p>* Venus</p>	<p>One hour before sunrise: 10</p> <p>Venus *</p> <p>Moon *</p> <p>* Saturn</p> <p>* Regulus</p>
<p>5 planets visible 14 45 min before sunup. First find 2 brightest, Venus 20° up in E, and Jupiter 60° up in ESE. Then find Saturn, Regulus and Mercury 4°, 9°, and 17° lower left of Venus respectively. Mars 4.5° lower left of Jupiter.</p>	<p>45 minutes after sunset: Use binoculars to locate Spica in WSW.</p> <p>Moon tomorrow *</p> <p>Moon tonight *</p> <p>Spica *</p>	<p>45 min before sunrise: 16</p> <p>Watch Venus, Saturn pass Saturn and Regulus next week.</p> <p>* Venus *</p> <p>* Saturn *</p> <p>* Regulus *</p> <p>* Mercury *</p>	<p>17</p> <p>Moon tomorrow *</p> <p>* Antares *</p> <p>Moon tonight *</p> <p>(Face SW one hour after sunset.)</p>
<p>Mercury at greatest elongation, 18° west of sun in morning sky. 45 min before sunrise, look 7°-8° above eastern horizon. From September 20-27 it is 12° lower left of Venus. Equinox tomorrow; autumn begins in N. hemisphere.</p>	<p>Saturn * 22</p> <p>Venus *</p> <p>45 min before sunrise: Regulus &amp; Venus closest, 0.5° apart.</p> <p>* Mercury</p>	<p>45 min before sunrise: 23</p> <p>Jupiter *</p> <p>Castor *</p> <p>* Mars *</p> <p>* Pollux (Mars-Jupiter now 9° apart)</p>	<p>Saturn * 24</p> <p>Regulus *</p> <p>Venus *</p> <p>45 min before sunrise: * Mercury</p>
<p>45 min before sunrise: 28</p> <p>Jupiter *</p> <p>Castor *</p> <p>* Mars *</p> <p>Pollux (Mars-Jupiter now 11° apart)</p>	<p>45 min before sunrise: 29</p> <p>Mercury 13° lower left of Venus. *</p> <p>Look also for Venus. Regulus and Saturn 9° and 12° upper rt of Venus. *</p> <p>Mercury *</p>	<p>Moon again rises 30 about 2 hrs after sunset, allowing a brief interval of dark skies, as on Sept 1. This month's star map shows sky as twilight ends. Again, look for Milky Way and the Andromeda Galaxy.</p>	<p>When will planets become visible in evening sky? Jupiter rises 2 hrs after sunset in late Nov, Mars in early Jan, and Saturn in late Jan. Mercury in twilight around Dec 1, again in Mar '78. Venus is evening "star" by Mar '78.</p>

Sunrise/Sunset East Lansing: Sept 1 7:03 a.m./8:12 p.m.; Sept 16 7:19 a.m./7:46 p.m.; Sept 30 7:34 a.m./7:21 p.m. (EDT)

## CLUB MEMBERSHIP ROSTER, August 15, 1977 (Continued from Page 3)

36.	Jeff Mallatt	2731 Anderson Drive	Lincoln, NE 68506
37.	Dr. Robert Manthey	Gateway Shopping Center	Lincoln, NE 68505
38.	Karl Miller	1149 So. 17th Street	Lincoln, NE 68502
39.	Carroll Moore	1140 No. 79th Street	Lincoln, NE 68505
40.	Earl Moser		Hickman, NE 68372
41.	William F. Norris	2832 Manse Avenue	Lincoln, NE 68502
42.	Tom Peterson	6161 So. 70th Street	Lincoln, NE 68516
43.	Philo Prell	4425 Randolph Street	Lincoln, NE 68510
44.	Carroll Reinert	3395 Sheridan Blvd.	Lincoln, NE 68506
45.	Curtis Roelle	6831 Bethany Park Dr.	Lincoln, NE 68505
46.	Joe & Jennie St. Lucas	4827 Judson Street	Lincoln, NE 68504
47.	John Schroeder	3760 So. 40th Street	Lincoln, NE 68506
48.	Mildred Seacrest	56th & R Street	Lincoln, NE 68505
49.	Merton Sprengel	4522 Hillside Street	Lincoln, NE 68506
50.	Larry Stepp	4200 So. 32nd Street	Lincoln, NE 68502
51.	Matt Sweet	3630 So. 27th Street	Lincoln, NE 68502
52.	L. Lee Thomas	1025 No. 63rd, Apt. B107--	Lincoln, NE 68505
53.	Ronald B. Veys	5400 Salt Valley View, Apt #10	Lincoln, NE 68512
54.	Jess Williams	7844 So. Sycamore	Lincoln, NE 68520
55.	Mr. & Mrs. Ed Woerner	4828 Meredith Street, Apt. 306	Lincoln, NE 68506

(Membership roster is published twice yearly, in January and July. This list includes persons whose memberships were paid and in force at the date shown. The date of termination on your current membership is printed on the address label of this newsletter. Memberships may be renewed for a period of one year only.)

## AUGUST MEETING NOTICE...

(Continued from Page 1)

ions for officers in preparation for our annual elections which will be held at the September meeting.

The meeting program will consist of a report on the NAA Convention, which was attended by Larry Stepp, Donn Baker, Ron Veys, Roger Besch,

Earl Moser and his wife, Merton Sprengel and his family, and Lee Thomas. Also at the August meeting, Norman Frerichs will talk about the solid state drive corrector he recently completed. Most everyone who attended the club's picnic and star party August 6 got to see the unit in operation--now we'll hear how!

## WHAT WOULD HAPPEN IF...

the Prairie Astronomy Club had, as its next project, the development of a multi-media slide-tape program for presentation at both the Community Observatory and before various civic and educational groups?

At the NAA Convention in Boulder, we saw a generally excellent presentation by the Detroit amateur astronomy club, which utilized slides of an astronomical and setting nature, to give something of an idea of what it is to be an amateur astronomer. While that presentation made use of a single screen and a stereo sound-track, it might be a challenge--and quite effective-- to use more than one screen with three tracks of a 4-channel tape for sound, and the fourth channel as a control track.

Most of the facilities for accomplishing the task are relatively near at hand, assuming that we can obtain a suitable number of astrophotography slides of which copies could be made, from our club members.

The public relations value of a presentation like this is incalculable. Done right, it builds good will for the club, attracts new members, and disseminates information about astronomy to the public in a dramatic and entertaining manner.

If this sounds like something you might be interested in helping with, check with me at the August meeting.

-- Ke --Lee Thomas

## ELECTIONS OF CLUB OFFICERS SLATED FOR SEPTEMBER MEETING

The annual election of officers for the Prairie Astronomy Club will be coming up at the September meeting. (New officers take up their duties on November 1, 1977 for a term of one year.)

In preparation for the election, nominations will be accepted at the August meeting. A slate of candidates will, as usual, be offered by the Nominating Committee to assure that at least one interested, qualified individual runs for each office. But we are most interested in getting nominations "from the floor." If you are interested in an office get a fellow club member to place your name in nomination. Or, if you know of someone you think would be a good officer, try to persuade him to run. The club is no better than its leaders, and electing good ones is an important job for every member.

## LASERWORKS VISITS PLANETARIUM

In recent years man has found a new tool for industry, medicine, and communication. The Laser (Light Amplification by Stimulated Emission of Radiation) was born in 1958. Coherent light emitted by the laser travels in only one precise direction. Now the laser has been harnessed as a painter of images. Laser light shows have become some of the

(Continued to Page 8)

## LASERWORKS (Continued from Page 7)

most popular attractions at major planetariums in the last four years. The hemispherical dome such as in a planetarium has been found to be the ideal surface for such projections. Light sculptor Lawrence Goodridge brings his program "Laserworks" to the Ralph Mueller Planetarium for performances October 7th, 8th and 9th. The premier performances Friday October 7th will benefit the Nebraska Art Association.

Goodridge's program features laser light choreographed to a wide range of music. The presentation includes music by Strauss, Tomita, Chick Corea, and Mussorgsky. Tickets

will be \$2.50 per person (\$2.00 for students). Tickets will be sold in advance of the presentations only. Sales of tickets will be announced in about two weeks.

## QUOTE WITHOUT COMMENT (From Page 2)

prospective buyer and that would be an eyecore to some.

"The additional funds were, however, not specifically earmarked for the sole purpose of purchasing land so that these funds would not necessarily be tied up for any length of time in waiting for such a proposal!"

(Editor's Note: The Omaha club has been forced to move its observatory from the Gretna site to the site mentioned above, which is near Louisville.)

THE PRAIRIE ASTRONOMER  
Prairie Astronomy Club  
P.O. Box 80553  
Lincoln, Nebraska 68501

**FIRST CLASS MAIL**



Mr. Earl Moser  
Hickman,  
Nebraska 68372

9/77