UPCOMING EVENTS

APRIL

4-24 Saturday: Star Party at Twining Observatory (call 293-7994 to verify)
4-29 Thursday: First Quarter Moon

MAY

5-1 Saturday: Monthly Meeting of the Society-7:00 p.m. at Regener Hall on the UNM campus.
(See map on back of newsletter)
5-8 Saturday: Astronomy Day Activities-Wyoming Hall 10:00 a.m.-6:00 p.m.—contact Blair Johanson @ 296-9320
5-12 Wednesday: Mars in Beehive Cluster (good photo opportunity)
5-13 Thursday: Board of Directors Meeting-7:00 p.m.
Last Quarter Moon
5-15 Saturday: Star Party at Twining Observatory (call 293-7994 to verify)
5-21 Friday: Partial Solar Eclipse at Sunrise
New Moon
5-22 Saturday: Dark Sky Night at Twining Observatory (call 293-7994 to verify)
5-28 Friday: Last Quarter Moon

JUNE

6-4 Friday: Full Moon
6-5 Saturday: Monthly Meeting of the Society (7:00 p.m.)
6-10 Thursday: Board of Directors Meeting-7:00 p.m.
6-12 Saturday: Family Night Star Party at Twining Observatory (call 293-7994 to verify)
6-19 Saturday: New Moon
Dark Sky Night at Twining Observatory (call 293-7994 to verify)

CO-PRESIDENTS’ MESSAGE
FOR MAY NEWSLETTER

Our April meeting was well attended. Dr. Douglas Wood of the National Radio Astronomy Observatory in Socorro gave a fascinating illustrated talk about the chemical evolution of the universe, with special emphasis upon the fact that the heavier elements are produced in supernovas, and the fact that elements are used and reused as stars are formed, evolve and die. Dave Finley introduced Dr. Wood, and also gave details of the new supernova in M81. He brought along flyers complete with a photograph and coordinates to help interested observers find it.

Astronomy Day is now just around the corner on Saturday, May 8th. We'll be setting up a multifaceted display in the Wyoming Mall at Wyoming and Menaul. The viewing hours will be from 10 a.m. to 6 p.m. Manning the various exhibits is an easy and fun job that allows you to share your enthusiasm for astronomy with the general public. If you haven't already signed up for a shift, please call Blair Johanson at 296-9320 to volunteer your help.

Bill and Wynne Wood, Co-Presidents

THE MAY MEETING

You won't want to miss next month's meeting. We will be featuring, as guest speaker, Jim Fowler, Computer Operations Manager at Apache Point Observatory near Cloudcroft, New Mexico. Apache Point Observatory, a stone's throw from Sunspot Solar Observatory, is developing into a very prestigious jewel in New Mexico's astronomical crown and Jim has exciting news about a new telescope located there.

In addition to the 3.5 meter telescope already located at Apache Point, a new 2.5 meter telescope will be conducting the Sloan Digital Sky Survey, a project to map one million galaxies. Jim's talk will focus on the development of this telescope and the work it is expected to do.

Jim holds a Masters degree in Astronomy from the University of Chicago and served as Site Manager at Apache Point Observatory during its construction and initial check-out. He has not only spoken to our group before, but has generously served as tour-guide for previous Society-sponsored field trips to Apache Point and Sunspot Solar Observatories.

The meeting will be held at Regener Hall (see map on back of newsletter) on the UNM campus at 7:00 p.m., May 1, 1993. Bring your friends and neighbors and, if you like, favorite cookies for the social hour following the meeting.

SUMMARY OF THE THURSDAY, APRIL 8, 1993 BOARD MEETING

After Bill Wood called the meeting to order...
Star Hill Inn
an astronomers' retreat
in the rockies
Phil and Blair Mahon
supello • new mexico, 87743 • 505-423-5603

at 7:01 p.m., Doug Ray gave a
guest speaker status report for the
upcoming meeting. Bruce Levin
followed with a membership update.
Society correspondence, and
Astronomy Day handouts available
from Sky Publishing Corporation.

Bob Stetz reported $1625.90 and
$399.56 respectively in the
Observatory and General funds.
Bob also discussed tax issues with
the IRS with respect to the Society's
status as a non-profit organization.
Doug Ray reiterated the subject of
archiving Society documents into
the Southwest Research Institute's
archive library. This will provide
better access by the public to
historical information about our
Society.

Bill Wood brought up a discussion
he had with George Dulleck about
tying up loose ends in completing
punch list items for the Observatory.
Mac Morgan got information back
from Jim Burr about JMI's encoder
mount configuration with our
Society's observatory telescope.
Mac summarized topics of
discussion from the Observatory
committee meeting held at his
house. The committee reviewed
several encoder positioning systems
and favored the JMI NGC-MAX
system. Mac moved that the
Society purchase the JMI NGC-MAX
system (published price of $769.00).
The motion was seconded by Doug
Ray. Issues of system compatibility
and guarantees were discussed.
The motion passed by a majority
vote.

Mac presented a note that was
taped to the General Nathan
Twining Observatory door from a
cconcerned citizen inquiring about
when the observatory will be open.
The board is hereby soliciting
wording to be placed on a plaque
from Society members informing the
general public, at the observatory
site, about the observatory. In town
observing locations and events were
also discussed.

Blair Johanson then presented
various items about Astronomy Day.
Logistics of displays, invoking the
phone tree to solicit membership
involvement, and an upcoming
workday to prepare display boards
and other items were discussed.

Finally, newsletter articles were
assigned and the meeting adjourned
at 9:32 p.m.

SCIENF FARE
Science and Natural History
Educational Toys and Supplies

HELEN ZEYEN
(505) 299-3420
8246 Menaul Blvd. N.E.
Albuquerque, NM 87110

INTERNATIONAL TIMES
IMPORTANT NOTICES

TAAS ARCHIVES
The Albuquerque Astronomical Society Board of Directors wishes to preserve
the history of our venerable Society and hereby requests the help of its members
in this effort. The Center for Southwest Research, a non-profit archive
library dedicated to preserving the history of organizations such as ours, has
generously agreed to compile and preserve an archive of this Society's official
documents and correspondence. They feel, as do the Board of Directors, that
it is important to preserve the records of institutions such as ours to better
define and illustrate the cultural environment of the Southwest. The Center is
particularly interested in preserving the affairs of science and education-based
organizations such as TAAS.

How can you help? Most of us who have been members for a while have
consoles full of TAAS-related documents, i.e., newsletters, newspaper clippings,
minutes of meetings, financial records, and the like. This is a golden
opportunity to clean out that closet. Please bring any and all such paper to the
next monthly meeting of the Society (May 1, 1993, 7:00 p.m. at Regener
Hall—see map on the back of this newsletter). The Board of Directors will
then sort through this assemblage and provide the library with a complete
master-set. At your request, copies will be made of any documentation you
do not want to lose and the originals will be returned to you. Access to our
literature will also be granted to us by the library, so nothing will be lost.
There is no fee for this service. Please mark your documents for identification
if you wish them returned to you.

Please help in this endeavor. Not only is this an opportunity to preserve the
history of this organization, but it will also provide a central storage location
for all of the Society's documents. If you have any questions about this effort
please call Doug Ray at 892-1596.

Doug Ray, Vice President

IDEAS FOR OBSERVATORY INFORMATION PLAQUE SOUGHT
As stated in the minutes, the board is seeking ideas from the membership on
brief wording to be engraved on a plaque to inform the general public about
access to the Society observatory. The plaque will be placed on a concrete
foot stone adjacent to the General Nathan Twining Observatory for anyone
that happens to be out at the site.

An interesting note was left on the observatory door by a concerned citizen
who was interested in visiting our observatory. Please bring ideas and/or
wording for the plaque at the next Society meeting (May 1) at Regener Hall.

Bruce Levin, Secretary

Sidereal Times/May, 1993
OCCULTATION UPDATE

Note: The key to this format and a discussion of what this is all about has been provided in a double sided page in your Membership Packet—to avoid excessive repetition in this newsletter. **Note #2:** Times given are "Universal Time." For MST, subtract 7 hours; for MDT, subtract 6 hours. (Be alert for change of DAY when UT is less than the number of hours you need to subtract.)

1. Selected Total Lunar Occultations. (There are others at less convenient times. Ask about them if you wish.)

<table>
<thead>
<tr>
<th>MONTH Day/Date Time</th>
<th>P</th>
<th>USNO</th>
<th>H</th>
<th>M</th>
<th>S</th>
<th>REF</th>
<th>NO</th>
<th>V</th>
<th>MAX</th>
<th>PCT</th>
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<th>MN</th>
<th>MN</th>
<th>CA</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>(ABC coefficients may be requested by members living beyond the Albuquerque metropolitan area.)</th>
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<tr>
<td>a. Your Own Observation Site</td>
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<td>b. Gen. Twining Observatory Site</td>
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</tbody>
</table>

2. Selected Grazing Occultations [Please note: Only the expedition leader need make any calculations beforehand. The observing sites are determined and assigned by him.]

<table>
<thead>
<tr>
<th>MONTH Day/Date U.T.</th>
<th>Nearest Town</th>
<th>SAO#</th>
<th>Mag. Alt.</th>
<th>Az.</th>
<th>PSnlt.</th>
<th>Cusp Angle</th>
<th>Rating</th>
<th>Leader</th>
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<tr>
<td>MAY MON/10 07:19:07</td>
<td>SAN LUIS, CO</td>
<td>187504</td>
<td>3.6</td>
<td>14</td>
<td>131</td>
<td>80-</td>
<td>1.15</td>
<td>Favorable Morgan</td>
</tr>
<tr>
<td>FRI/28 03:00:42</td>
<td>BELEN</td>
<td>117977</td>
<td>8.4</td>
<td>47</td>
<td>238</td>
<td>42+</td>
<td>1IN</td>
<td>Marginal Morgan</td>
</tr>
</tbody>
</table>

3. Occultations by Planets or Minor Planets

JUN 11 @ 09:32 UT MERCURY occults 0.5 mag; SAO 78997 for 131 seconds @ 1.9 deg. Alt. @ 299 deg. Az. [11 mag due to atm. extinc]

17 @ 10h46m55s 13 mag. PALES occults 9.4 mag SAO 109157 for 6.1 sec. @ 17.4 deg. Alt. & 113 deg. Az. or RA O6214-131s, DEC -5d14m30.7s

Finder charts are available for the latter.

Mac Morgan 296-3983

IN MEMORIAM

The Albuquerque Astronomical Society mourns the passing of its member Jerome W. Janis. Jerry left us March 26, 1993 in the 65th year of the days of his pilgrimage here. Jerry was a giver of himself. We remember when he set aside his illnesses and helped this Society operate the audio/video equipment for the meeting of the American Astronomical Society a few years back. We remember that the outgoing president of that professional Society declared that the audio/video support provided by us was the best the professionals had ever received. Jerry was that kind.

Mac Morgan

IS THE NGC-MAX COMING?

Many of us can find our way around the night sky when we're out in the open. But inside the dome we're almost lost, and it has proved embarrassing when we have invited benefactors to the Twining Observatory to see the glories, and the minutes have ticked away while we searched.

We hope those days are about to end. A committee appointed by the Board of Directors has evaluated the merits of three brands of electronic finders/sky catalogs, has recommended the NGC-MAX by JMI, and the Board has adopted the recommendation—provided modifications that we and JMI will need to make are successful—we, to the telescope and JMI to their encoders. It looks very promising.

The NGC-MAX has:

* a right ascension and declination catalog of 12,000 celestial objects and provisions for adding many more of our own;
* its "guide" mode would enable us to steer the scope to a selection from the data-bank;
* its "star fix" mode would identify for us the data-bank object that the scope has acquired;
* its "identify" mode would identify for us the nearest data-bank object to the aim point of the scope and inform how to acquire

---

METEOR CALENDAR

<table>
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<tr>
<th>Shower</th>
<th>Activity UT</th>
<th>Maximum UT</th>
<th>Radiant a</th>
<th>d</th>
<th>ZHR</th>
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<tbody>
<tr>
<td>Alpha Sco/Scop</td>
<td>Mar 26 - May 12</td>
<td>May 03</td>
<td>240 -27</td>
<td>10</td>
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<tr>
<td>Sco / Sagittarids</td>
<td>Apr 15 - Jul 25</td>
<td>several</td>
<td>260 -30</td>
<td>10</td>
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<tr>
<td>Lyrids</td>
<td>Apr 16 - Apr 25</td>
<td>Apr 22</td>
<td>271 +34</td>
<td>90</td>
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<tr>
<td>Pi Puppids</td>
<td>Apr 15 - Apr 28</td>
<td>Apr 23</td>
<td>110 -45</td>
<td>40</td>
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<tr>
<td>Alpha Bootids</td>
<td>Apr 14 - May 12</td>
<td>Apr 26</td>
<td>238 +19</td>
<td>30</td>
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<tr>
<td>Eta Aquarids</td>
<td>Apr 19 - May 26</td>
<td>May 03</td>
<td>336 +02</td>
<td>50</td>
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<tr>
<td>Ophiuchids N</td>
<td>Apr 25 - May 31</td>
<td>May 10</td>
<td>249 -14</td>
<td>50</td>
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<td>Beta Coronae Australids</td>
<td>Apr 23 - May 10</td>
<td>May 15</td>
<td>284 -40</td>
<td>40</td>
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<tr>
<td>Kappa ScoScop</td>
<td>Apr</td>
<td>May 04 - May 27</td>
<td>May 19</td>
<td>267 -39</td>
<td>50</td>
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<tr>
<td>Ophiuchids S</td>
<td>May 13 - May 26</td>
<td>May 20</td>
<td>258 -24</td>
<td>40</td>
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<tr>
<td>Omega ScoScop</td>
<td>May 23 - Jun 15</td>
<td>Jun 04</td>
<td>243 -22</td>
<td>30</td>
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<tr>
<td>Chi ScoScop</td>
<td>May 24 - Jun 20</td>
<td>Jun 05</td>
<td>248 -14</td>
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<tr>
<td>Gamma Sagittarids</td>
<td>May 22 - Jun 13</td>
<td>Jun 06</td>
<td>272 -28</td>
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<tr>
<td>Theta Ophiuchids</td>
<td>Jun 04 - Jul 15</td>
<td>Jun 13</td>
<td>267 -20</td>
<td>50</td>
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</tbody>
</table>

Note: a (Right Ascension) and d (Declination) are in degrees

ZHR: Zenith Hourly Rate - maximum meteors per hour at zenith
that object;
Rub its “align” mode would enable its
built-in small computer to compensate
for any mis-polar-alignment of
our scope through our use of any
pair of stars in a 30-star list;
and has an RS-232 port for coupling
with a computer and slewing
motors, later.

The biggest problem turned out to be that our Cave-16 is not the model
which is virtually identical in structure
to the Meade DS-16 for which
JMI already has built encoders. We have
provided snapshots with
dimensions, and descriptions that
we anticipate JMI will need, and
we’re checking the mail daily.

(This being tax-season, don’t forget
that contributions to the observatory
fund of the Society are deductible;
and there is a need.)

Mac Morgan

ARMCHAIR ASTRONOMER

Names

I was recently asked,
“What’s with all this
Greco-Roman stuff?
What does mythology
have to do with
astronomy anyway?” Well, I sup-
pose strictly speaking, nothing. But,
if I may be allowed to editorialize for
a moment, there’s a point I’d like to
make.

The largest planet in our solar sys-
tem is Jupiter, named after the
roman king of the gods. I suppose
it could have been just as accurately
named “Biggest Planet,” but how
boring! We could have begun with
Mercury and named it “Planet One,”
named Venus “Planet Two,” etc.
Wouldn’t that have been swell?

Someone once said, “A name. A
name. What’s in a name? A rose
by any other name would smell as
sweet.” I don’t agree. An errant star
may someday whiz by and eject
Jupiter out of the Solar System. The
planet would be gone, but the name
would remain. Names are important
not only because they’re colorful,
but because they convey an image
or concept of the object they iden-
tify.

Naming objects in our solar system
after Greco-Roman characters was
a stroke of genius. Long after
Jupiter had been discovered and
named, Galileo discovered four of its
moons. Thanks to Greco-Roman
mythology, the appropriate names
for these moons were almost auto-
matic. Jupiter (Zeus to the Greeks)
was notorious for his romantic escap-
ades and forever in trouble with his
wife as a result. His list of con-
quests was long and illustrious.
Ganymede, Io, Europa, and Callisto
were four of his lovers. Now they
remain in orbit around him, close
enough to see, far enough away to
not be touchable, and forever to
circle as reminders. How appro-
priate.

Doug Ray, Vice President

SUNSET METEOR SHOWER
RESULTS

Jack Drummond, currently at Phillips
Labs on Kirtland, was organizing an
observing project in 1991 pertaining
to sunset meteors. The project in-
cluded naked-eye searches near
sunset for showers that should be
associated with four “streams” of
near-Earth asteroids.

I decided to assist in this project and
observed whenever the weather
permitted, since 1991 was a very
wet year. I sent the results of my
observations to Mr. Drummond, who
analyzed it. He responded that four
meteors I had observed “from July 5
and 6 appear to point to a radiant
that may be associated with hyper-
bolical comet 1919V. The meteor
stream has been defined by only
three photographed meteors and it
is very interesting to see that per-
haps you have visual confirmation
of this weak shower.” I was delighted
to learn that my observations
provided some useful information.
There are many other projects in
which amateur astronomers can
participate in assisting professional
astronomers.

Wilfred Pedroncelli

MARCH OBSERVING NIGHTS
HELD AT TWO ELEMENTARY
SCHOOLS

The Albuquerque Astronomical Society
helped with two observing
sessions on the evening of March 25th.
Members brought the universe
closer to Zia Elementary School and
Mitchell Elementary School. Roger
Flegel, Kenneth Grant, Bruce Levin,
Wilfred Pedroncelli, Doug Ray, and
Wayne Trott set their telescopes up
at Zia for their Astronomy Night.
Thomas Obenauf and Patrick Knupp
made their scopes available for
viewing at Mitchell for their Science
Night. The skies were generally
clear and everyone present enjoyed
the wonderous views of the Orion
Nebula, the moon, Jupiter and
numerous other celestial objects.

In the future, the Society will be
coordinating fewer school observing
events. A limited number of larger
public in-town events will be or-
ganized that are well publicized.
Of course this can only be done with
the participation of many willing
Society members. We have had
many successful observing events
with the schools, which would not
have been possible without the help
and time of our members. Those
that have helped will probably agree
that it is very satisfying and fun to
share the wonders of our universe
with children of all ages regardless
of your knowledge and experience.

Bruce Levin, Secretary

ASTRONOMICAL CLASSIFIEDS

Pen-pal sought: If anyone is interested
in corresponding with a fully bearded 56
year young poet-artist and incurable
dump punster who enjoys music, writing,
star gazing, travel, camping, metaphysics
as it relates to current particle
physics and astrophysics, then drop a
letter to Richard D. Danner, R.D.2,
Box 215, Northfield, Vermont 05663.

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National Radio Astronomy Observatory
Very Large Array

Colloquia for April, 1993

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
<th>Date and Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gibor Basri</td>
<td>U.C. Berkley</td>
<td>T-Tau Stars</td>
<td>April 23, 11:00 MST</td>
</tr>
<tr>
<td>Jeff Kuhn</td>
<td>National Solar Observatory</td>
<td>Solar Oscillations</td>
<td>April 30, 11:00 MST</td>
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</table>

All Colloquia will be held in the Auditorium at the Array Operations Center

Sidereal Times/May, 1993
### May 1993 Lunar Almanac

<table>
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<tr>
<th>Sunday</th>
<th>Monday</th>
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<td>1</td>
<td>121</td>
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<td>132</td>
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<td>MS 01:11</td>
<td>MS 01:06</td>
<td>MS 01:35</td>
<td>MS 01:21</td>
<td>MS 01:15</td>
<td>MS 01:20</td>
</tr>
</tbody>
</table>

**Albuquerque, NM**

**Time Zone:** MDT  
**Latitude:** 35.08  
**Longitude:** 106.65  

- **MR** = Moonrise, upper limb on horizon.  
- **TN** = Transit, moon is due south and also highest in the sky.  
- **MS** = Moonset, upper limb on horizon.  
- **Times are rounded to nearest minute.**

- **RA** = Azimuth of rising moon.  
- **TA** = Altitude of moon at transit.  
- **SA** = Azimuth of setting moon.  

Moon phase is shown each day at 12:00 noon in the time zone indicated.

Calendar by Roy Sterner  
Johns Hopkins Applied Physics Lab.  
Laurel, MD 20707

### May 1993 Solar Almanac

<table>
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<th>Sunday</th>
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<th>Tuesday / Wednesday</th>
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<th>Saturday</th>
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<td>MS 01:11</td>
<td>MS 01:06</td>
<td>MS 01:35</td>
<td>MS 01:21</td>
<td>MS 01:15</td>
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**Albuquerque, NM**

**Time Zone:** MDT  
**Latitude:** 35.08  
**Longitude:** 106.65  

- **MA** = Morning astronomical twilight, sun is at ~18 degrees altitude.  
- **MN** = Morning nautical twilight, sun is at ~12 degrees altitude.  
- **MC** = Morning civil twilight, sun is at ~6 degrees altitude.  
- **SR** = Sunrise, upper limb on horizon.  
- **TR** = Transit, sun is due south and also highest in the sky.  
- **SS** = Sunset, upper limb on horizon.  
- **EC** = Evening civil twilight, sun is at ~12 degrees altitude.  
- **EA** = Evening astronomical twilight, sun is at ~18 degrees altitude.  

Times are rounded to nearest minute.

Calendar by Roy Sterner  
Johns Hopkins Applied Physics Lab.  
Laurel, MD 20707

May 1993
DUES: Please note the expiration date on your mailing label. If you are due for membership renewal, you may send your dues by mail to our newsletter return address with your check written out to The Albuquerque Astronomical Society or give your check to the Treasurer at the next meeting. Please include the membership application that is sent with your newsletter when it is time to renew. Discount subscriptions to Sky and Telescope ($20/12 issues), Astronomy ($16/12 issues) and Odyssey ($16.95/12 issues) magazines, and books through Sky Publishing Corporation are available at a reduced cost when purchased by The Albuquerque Astronomical Society members through our Society. Include any of the above magazine renewal mailers and subscription payment as part of your renewal check. Membership dues are $20.00 per year and $3.00 per additional family member. Membership Packets cost $1.75 each for new members or renewing members without the Packet. Contact the Treasurer for more information.

NEWSLETTER ARTICLES: Personal astronomical classified advertisements and articles can be submitted within 5 days after the latest Society meeting in order to make it into the next newsletter. Business card size advertisements for businesses related to astronomy are accepted with the same deadline as articles and personal classified advertisements. Rates for business card size ads are $10/ad per issue of the Sidereal Times, $7/ad per issue for six continuous issues, and $5/ad per issue for twelve continuous issues. The Newsletter Editor reserves the right to include and/or edit any article or personal classified or business card size advertisement. Computer files in ASCII format are preferred. Contact the Newsletter Editor for more information. Since August, 1989, the Sidereal Times has been typeset on an Atari Mega ST4 and an Atari SL804 postscript-compatible laser printer, using Pagestream and UltraScript.

CHANGE OF ADDRESS: Note that the Sidereal Times is mailed out at non-profit bulk rate. The newsletter will not be forwarded to your new address if you move! Please provide the Secretary with your new mailing address to insure that you receive your newsletter.

The Albuquerque Astronomical Society
P.O. Box 54072
Albuquerque, NM 87153
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