NOVEMBER 1989

UPCOMING EVENTS

11-6  Monday:  First Quarter Moon
11-11 Saturday:  Monthly meeting of the Society
11-12 Sunday:  Saturn and Neptune approach within 0.5 degree
11-13 Monday:  Full Moon
11-16 Thursday: Society Board of Directors meeting, 7:00 p.m.
11-17 Friday: Leonid meteor shower: Radiant at 10h 8m, +22 deg.--
Max. at 9 a.m. MST
11-20 Monday:  100th Birthday of Edwin Powell Hubble
11-21 Tuesday: Last Quarter Moon
11-25 Saturday: Star Party at Twinning Observatory site
11-28 Tuesday: New Moon
12-2 Saturday:  Dark Sky Night at Gran Quivira
12-6 Wednesday: First Quarter Moon
12-8 Friday: Society Potluck Dinner

THIS MONTH'S MEETING

This month, our meeting will feature a program on Buying a Telescope. The meeting will be on Saturday, November 11, at 7:30 p.m., in Regener Hall on the UNM campus. This program, at the beginning of the holiday shopping season, is particularly aimed at our newer members and the public, but could bring some helpful information to all of us.

Each year, thousands of telescopes are purchased as gifts, many in the hope that a young person's interest in science may be intensified. Unfortunately, a large number of these gifts are poorly designed, cheaply built, and overpriced, and their shoddy performance serves as a deterrent, rather than an encouragement, to further interest in science.

Among our Society's more than 200 members, there is a wealth of experience in evaluating and using astronomical telescopes. With this special program, we will make this expertise available to everyone. A number of our experienced members will participate in the event, and the advice will range from very basic to more advanced. Our aim is to provide the information necessary to choose a quality, reasonably-priced instrument that will give its recipient a rewarding introduction to the Universe.

Whether you're a newcomer to astronomy or an old-timer looking for new equipment, our program on Buying a Telescope should provide you with some helpful hints. If you have non-astronomer or potential-astronomer friends who are considering buying a telescope, either for someone else or for themselves, we encourage you to invite them to attend this meeting. Remind them that, like all our meetings, it's open to the public and FREE.

LAST MONTH'S MEETING

Our Society president, Dave Finley, gave an excellent presentation on Edwin P. Hubble: Astronomer of the Century. Among the myths about Hubble that were dispelled by Dave, was the myth that Hubble was predominantly a non-observer. From Dave's talk, we found that just the opposite was the case. In the process of educating us about Hubble's contributions to our perception of the universe, Dave also informed us about other astronomers before and during Hubble's time. We thank Dave for his informative and enlightening biographical sketch of Edwin P. Hubble.

DANCE PERFORMANCE TO BENEFIT TWINING OBSERVATORY FUND

Our fundraising efforts for The General Nathan Twinning Observatory are getting a big boost, as noted Thai performer Charin Yuthasasatkrosol has volunteered her services for "A One-Woman Show," with all proceeds to go toward building our observatory structure. This exciting event will provide the opportunity for many of our members to help in an extremely important part of our observatory drive.
Charin Yuthasasrtkosol has done benefit performances throughout the U.S., including a recent event in Washington, D.C. She also has performed in her native Thailand. A veteran performer, she began dancing at age 50 after a successful career as a concert pianist. Her shows usually feature a blend of ballet and other popular dance styles.

The benefit performance here will be at the Kimo Theatre, on Sunday, January 21, 1990, at 2:00 p.m. Mr. Nathan Twining, who donated the land for our observatory, generously is paying for the theatre rental and other expenses.

This event potentially can provide the final infusion of cash we need to complete the first phase of our observatory. How close we come to that goal depends on the efforts put forth by all of us to make this event a resounding success. There are two major areas where we need help from ALL of you:

**Ticket Sales And Publicity:** There are 750 seats in the Kimo -- we need to sell all of them. The tickets already are printed and ready. They cost $10 each. We are, however, reserving the best 150 seats for those who pay $50 per ticket. In order to sell out, we need to get the word about this event, particularly to the performing-arts and dance communities. Please help us by buying tickets yourselves and selling as many as you can. Also, let us know if there is a way we can reach other potential audiences. To obtain tickets, or for more information, call Lauren Finley at 291-0402.

**Event Staffing:** We must provide the staff for this event. That means we need volunteers to take tickets, sell drinks, serve as stagehands, clean the theatre after the show, and do a number of other tasks. Let us know if you're willing to help in this way.

This event will come one year to the day following our Society's formal beginning of the observatory fundraising drive. It would be fitting -- and very satisfying -- to observe the anniversary of that exciting evening last January by raising the last dollars needed to build our first-phase structure and turn our dream of The General Nathan Twining Observatory into the reality of a functioning research and teaching resource for ourselves and our community.

Dave Finley, President

**SUMMARY OF THE OCTOBER 19TH, 1989 BOARD MEETING**

The board meeting was called to order at 7:05 p.m. by Vice President George Dulleck. Mac Morgan read the treasury report provided by our Society Treasurer, Leo Wellner. The balance of funds as of October 19th is $4,676.93 for the Observatory Fund and $533.15 for the General Fund.

The issue of a dues increase was discussed by the board. Mac Morgan moved to have three types of members at the following annual rates: Regular member at $13.00, Student member at $12.00, and Family member at $3.00. Cal Currier proposed to divide the motion into its parts at which Mac Morgan was in agreement. After lengthy discussions, the student part was defeated unanimously, the regular member part passed 5 for and 1 against, and the family member part passed 5 for and 1 against. The new membership dues increase of $13.00 per year for Regular members and $3.00 per year for each Family member will be initiated on January 1, 1990. One year renewals made prior to the new year will be honored at our present membership rates.

Progress on the construction of our Society's (General Twining) Observatory was the next item on the agenda. Items discussed were the exact site description for the location of the Observatory, legal interpretation for the type of building that an observatory is (i.e., commercial), variances, permit costs, foundation preparation costs, and the ground breaking start date. Additional funds will be raised for this project with the help of a benefit being organized by Mr. Nathan Twining. The internationally famous Thai dancer, Charin Yuthasasrtkosol will be putting on an artistic dance show on the afternoon of Sunday, January 21, 1990.

**OBERVERS' NOTEBOOK**

**Daytime Graze**

Society members may have given up on those of us who have been attempting timings of grazing occultations. But now we can report a glorious success. On Sept. 7th we caught a graze in which the star disappeared and reappeared three times, -- and we recorded good times for all six events. Furthermore, these were daytime events! The Sun was yet 3.4° above the horizon! But the star was of Mag. 2.9. -- BRIGHT! The "quest" itself was interesting since at first we had planned to catch the graze near Soccoro, but weather was a problem.
Consulting with Robin Marshment, our smart KGGM-TV weathercaster, it appeared that there was a good possibility that the weather would push on through and let us catch the graze near Apache Creek, -- a little more distant than the Socorro site but in a westerly direction instead of south. Then too, the new calculated site did not look easy to find and the latest USGS map of the area was 24 years old. But the map did show a small cemetery nearby and, by snooping around, we were able to find it and thereby identify the site we needed. Then there was the matter of the weather. We went ahead with setting up, between showers, covering the telescope with a large garbage bag. Well, just as Robin predicted, the last drizzle stopped and the clouds dissipated a few minutes before the graze was predicted to start. And it was simply beautiful the way that brilliant jewel popped in and out among the mountains of Moon!! Thrilling!!

Mac Morgan

Jupiter

This apparition of Jupiter promises to be one of the most unusual. As many of you know, the South Equatorial Belt has become very faint. On first inspection Jupiter appears to have only one belt. Under good conditions, when Jupiter is high and seeing is "steady" (generally after 1:00 A.M. local time in November), many features can be observed. I have been using an 8" reflector at 270 power with several color filters. Filters are important in that they increase contrast between belts and zones. (Green #58 & Blue 80A for belts, Red 25A & Orange #21 for zones) They also help steady the image some at the eyepiece. The Red Spot appears to be surrounded by the South Tropical Zone and looked pale orange to me. The North Equatorial Belt is wide with large dark knots and many faint festoons and garlands extending north and south from it.

Cal Currier

![Original drawings by Cal Currier.](image)

WE NEED 8" SCT's AT TWINING SITE 11/25/89!!!

By evaluating individual ability to resolve double stars ranging in separation from 4 to 1 arc-second at different observing positions at the Twinning Observatory site, we expect to select the better position for locating the observatory building. Your help is needed. Star finder-charts will be provided. See the June newsletter for a map to the site. Call Mac at 296-3983 and volunteer!
OCCULTATION UPDATE

Selected Total Lunar Occultations:

Day Time-UT P USNO O Max Pct SN MN MN CA A B C H M S Ref No V Mag Snit AL AL AZ

Your Own Observing Site *

October
31/20 30 20/ D 2287 96 3.0 5+ 35 29 182 10N -4.8 4.3 4.4 These two will be beautiful daytime sights!
31/20 58 45/ R 2287 96 3.0 5+ 32 28 189 -25N -0.8 -3.3 -3.1
November
2/00 48 37/D X2284 86 8.4 10- 8 10 225 30N -0.4 0.3 1.8
12/06 21 22/D 0311 95 6.5 56+ 71 206 15N -0.8 3.2 5.6
13/00 31 48/D 0440 97 4.6 100 -6 11 72 39N 0.1 1.1 1.7
18/17 26 59/D 1310 84 4.2 65- 32 17 281- 11S 1.2-3.6-1.5 These two should be beautiful,
18/17 48 15/R 1310 84 4.2 65- 34 13 284 34S -0.9 0.4 2.4 unless Moon is too bright! Try.
19/08 19 20/R 1385 87 6.5 58- 30 92 37S -0.8 3.8-0.8
25/13 10 00/R 1993 98 6.8 7- 8 18 127 76N -0.8 0.3-1.1

* Time correction in minutes = A(your longitude-106°4932)+B(your latitude-35°072)+C/60(your elevation in kilometers-1.75km). There are 3.048 x 10^4 km per foot. CAREFUL! All dates and times are UT, now. So that Oct. 31/20 30 20 UT is Oct. 31/13 30 20 MST and Nov. 2/00 48 37 UT is Nov. 1/17 48 37 MST.

Gran Quivira

November
18/12 18 58/R 1282 67 6.6 67- 74 206 72S

Key:

P = Phenomenon; D = Disappearance; R = Reappearance. Ref No = USNO Reference Number. V = scientific Value of the observation; 9 is highest. O = Observability of the event; 9 is easiest. Events for which the sum of V + O < 13 were not selected. Mag = maximum visual Magnitude of the star. Snit = % of Moon Sunlit. "+" = waxing Moon (increasing % sunlit); "+" = waning (decreasing % sunlit) Moon. SN = SuN. AL = ALitude. MN = Moon. AZ = Azimuth. CA = Cusp Angle of the event in degrees. This is the angle from the lunar cusp nearest to the star, identified as the North (N) or South (S) cusp. CA is positive when contact with Moon is made on the dark limb, negative on the bright limb. A, B, & C are the constants to use in the formula, above, for correcting the times given for total occultations from those given by USNO for Mac's site to your site.

Selected Grazing Occultations:

Day/Date MST Nearest Town Star Magnitude Moon Altitude Moon Azimuth Percent Sunlit Cusp Angle Graze Rating

Tue 10/31 1345 Taos 3.0 27 degrees 187 degrees 5%, waxing -8.5 deg. N Favorable
Thu 11/30 1733 Truth or Con. 7.8 12 " 226 " 6%, waxing 23.5 " S "
Mon 12/4 1957 Socorro 7.0 32 " 227 " 39%, waxing 17.5 " S "

Mac Morgan

ASTRONOMICAL CLASSIFIEDS

Televue Nagler 13 mm eyepiece, $125; Equatorial mount from Meade DS10 Newtonian, 1" shafts, clock drive, tangent arm, setting circles, accessory tray, $150; Portable strip chart recorder, Molytek Model 212, 2-pen, 110Vac or 12Vdc; 4" wide chart, $100; Jim Van Den Ayre, 898-6474.

FOR SALE
### December 1989 Lunar Almanac

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### December 1989 Solar Almanac

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### Albuquerque, NM

- **Time Zone:** MST
- **Latitude:** 35.08
- **Longitude:** 106.65

- **MR** = Moonrise, upper limb on horizon
- **TR** = 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
- **Altitudes and azimuths are in degrees.**

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

**Calendar by Roy Stermer**

Johns Hopkins Applied Physics Lab.

Laurel, MD 20707

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### December 1989

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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, Astronomy, Odyssey, Deep Sky, and Telescope Making magazines, and books through Sky Publishing Corporation are available at a reduced cost when purchased by 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 $10.00 per year and $2.00 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.

SOCIETY COMPUTER BULLETIN BOARD SERVICE: An Astronomy BBS is available for Albuquerque Astronomical Society members for discussion, announcements, and transfer of files and newsletter articles in our software library. The BBS is available 24 hours a day at 255-3623. Set your computer's modem to 8 N 1 (8 data bits, no parity, and 1 stop bit). Contact the Software Coordinator for more information.

NEWSLETTER ARTICLES: Personal astronomical classified advertisements and articles can be submitted within 12 days after the latest Society meeting in order to make it into the next newsletter. The Newsletter Editor reserves the right to include and/or edit any article or personal classified advertisement. Computer files in ASCII format (WordStar non-document mode) are preferred. Contact the Newsletter Editor for more information.

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.

- Society Staff -

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