UPCOMING EVENTS:
7-13 Wednesday: New Moon
7-16 Saturday: Picnic & Dark Sky Night at Gran Quivira
7-23 Saturday: Monthly meeting of the Society
7-29 Friday: Full Moon
8-12 Friday: New Moon

FAMILY PICNIC AND DARK SKY NIGHT AT GRAN QUIVIRA:
Don't miss this star-studded event! The date is Saturday July 16th, and the picnic officially starts at 2pm, but you can come later. If you have not seen the ruins, it is suggested that you come early. There will be a guided tour of the ruins at Gran Quivira, time to be announced upon arrival.
Provided: Cabin, modern restrooms, barbecue grills, picnic tables, and electricity.
Not provided: Food, charcoal, wood, T.V., video games, maid service, and last but not least trash bags to carry away your garbage.
For more information and the map to Gran Quivira, read your membership packet.
Example trip list: Camera, binoculars, red flashlight, telescope, sleeping bag, food, charcoal, matches, toiletries.

There will also be an occultation of Regulus on July 16th at sundown and Gran Q. will be a great place to observe it from. For those of you who have never been to Gran Quivira, you are in for a dark sky that is beyond belief! If you don't have a scope or even binoculars, don't even think of not coming, you're still in for a treat! The rest of us like to show off ours. The skies over Gran Q. are what observing in New Mexico is all about. We'll see a lot of wonderful things on this night, hope you're one of them.

JUNE MEETING:
The June meeting of the Albuquerque Astronomical Society, will be held in the Physics and Astronomy Building on the UNM campus at 7:30pm on July 23rd. There will be a very important discussion concerning the public Mars party planned for September 17th at Coronado State Monument (see "Calling All Scopes"). Tee-shirts and puzzles (see article below) will be available.

The guest speaker will be Phil Mahone, the owner of Starhill Inn, a retreat for those interested in Astronomy, located in northern New Mexico. His talk will include a slide presentation on Starhill Inn and astrophotography. His discussion will include tips on improving your night vision. See you at the meeting.

CALLING ALL SCOPES TO MARS MADNESS:
This year's program of events has been a very ambitious one! The year is not quite over yet and there are still lots of surprises left. Among them are an interstate star party being planned for somewhere east of Albuquerque, a color poster, a trip out of state, the acquisition of some land for an observatory, the ground work for a possible international observance of Astronomy Day, and more! Thanks for your help and support, these things are possible...and many of them will become a reality.
The focal point of all this has been to share the universe with as many people as possible. The hunger for knowledge has been heightened by such events as the apparition of Halley's Comet, the photos sent back to Earth by Voyager, the possibility of a joint venture to Mars by the Soviets and the United States, and the collective imagination of the young and young at heart.

With all this, there is still nothing more inviting than the opportunity to see a planet in real time through a telescope.

To this end, we, the board of directors, have planned a very special program for the people of Albuquerque and anyone else, who would like to attend. The event called "Mars Madness" will be an opportunity for everyone to see Mars at its best a few days before the close opposition this fall.

On September 17th at Coronado Monument State Park, there will be a very special event. With the help of the news media and all of you, the occasion will be a memorable one for all those who participate.

For members, this occasion will be prefaced by a special guest speaker at our August meeting (tentative date: August 27th) who will give a talk on Mars. On September 17th all members are asked to participate in the public "Mars Party" by bringing their scopes, binoculars, and special knowledge to Coronado State Park.

At our September meeting we will have another guest speaker (tentative date: September 24) who will give a talk on Mars from a different point of view than our August speaker. The opposition will occur on September 28th. If you have never seen Mars through a telescope before, this season will be truly the opportunity of a lifetime...for those of you who have seen Mars at opposition before, this one will be the best.

George Pellegrino,
President

FIELD TRIP TO GEODESS:

Since Sputnik, the heavens have become increasingly crowded. Today there are approximately 7,100 known objects in orbit around Earth. Some of these objects are functioning satellites and some are "space junk" such as astronaut gloves and vehicle debris.

The responsibility for keeping track of all these objects in orbit belongs to the U.S. Space Command Space Surveillance Center, located deep within Cheyenne mountain in Colorado Springs, Co. The Ground-based Electro-Optical Deep Space Surveillance (GEODSS) sites assigned to the 1st Space Wing, Air Force Space Command, play a vital role in tracking these objects, particularly in "deep space." Some 1,500 objects, including geostationary communication satellites, are in deep space, 3,000 miles and beyond.

There are currently four operational GEODSS sites. They are Detachment 1 at Socorro; Detachment 2 at Choe Jong-San, Korea; Detachment 3 at Maui, Hawaii; and Detachment 4 in Diego Garcia, British Indian Ocean Territories. A fifth site is planned for the eastern Atlantic Ocean region.

Each site has three telescopes, two "mains" and an "auxiliary," with the exception of Diego Garcia, which has three "mains." The main telescopes have 40-inch apertures, and two degree field of view. The auxiliary has a 15-inch aperture and six degree field of view. The system only operates at night when the telescopes are able to detect objects 10,000 times dimmer than the human eye can detect. GEODSS could detect a basketball more than 20,000 miles into space.

Jim Palmer, the member who has planned several trips, is planning a trip to GEODSS in late August or early September to the Socorro GEODSS site. Since the location outside of Socorro is fairly close to Gran Quivira, it would make a good weekend trip. Unfortunately, only 15 people can visit GEODSS at once, but if there is the demand a second trip can easily be arranged. If you are interested in going to GEODSS, please call Jim to reserve a spot and help determine a solid date. Look for more information and a solid date in the next newsletter.

TEE-SHIRTS AND PUZZLES:

The new Albuquerque Astronomical Society tee-shirts featuring a drawing by member Roger Fiegel are now available at $8 per shirt for all sizes. This shirt will be the first of a series, but this will be the only one without a date.

There are still a few "Sagittarius Star Cloud" puzzles left. They are selling for $12.50.

Half of the $8 for a tee-shirt and all of the $12.50 for puzzles goes to the club's Observatory Fund.
REQUEST FOR ASSISTANCE:

Amateurs are being requested by elements of the scientific community to photograph Upsilon Pegasid meteor showers July 22nd and August 12th and 19th. Details on cameras, films, and simple techniques are available from Mac Morgan (296-3983).

JULY OCCULTATIONS:

Of the 22 "total" occultations in July, the most exciting appears to be that of Regulus (in Leo, of course) 1.3 magnitude! (See July Sky & Tel p.62.) It is predicted to disappear the 16th at 10:19:49pm MDT (observing from my house) or 10:22:05pm MDT (from Gran Quivira) and to reappear at 11:05:28pm MDT (my house) or 11:06:11pm MDT (Gran Quivira). For the others, please see the large table in the May newsletter.

I have just now received the predictions for "grazes," but haven't had time to work them up. There will be an occultation by 9.5 magnitude asteroid (Pallas) of a 13.5 mag. star on 8/24 4:59-70 Universal Time. My scope would just barely see that on a perfect night. Those of you with larger aperture scopes might enjoy "doing" that one.

Mac Morgan

RADIO FOR RECEIVING WAVES FOR OCCULTATION TIMING AND WORLD-WIDE SHORT WAVE:

With Radio Shack having discontinued distribution of their "Time-Cube," would-be newcomers to occultation timing have been faced with the prospect of having to buy an expensive short-wave receiver. No longer! DAK has a ten-band shortwave receiver for $49.90 ($3 P&H) that IOTA advises works very well and is the least expensive found to date. DAK Industries, Inc.; E200 Remmet Ave.; Canoga Park, CA 91304 or 1-800-325-0800. Order no. 4839.

Mac Morgan

THANK YOU:

On behalf of the Department of Physics and Astronomy of the University of New Mexico, I would like to express our great appreciation of the efforts of the Albuquerque Astronomical Society in providing docents for the Campus Observatory this past semester. Dave Finley's publicity campaign increased our typical Friday night attendance by roughly 500%, and without the help of the docents, very few of these people would have been able to hear and see REAL astronomy. On a personal level, I am also grateful for the patience and enthusiasm shown by your members at the Observatory -- which made my job much, much easier. I hope we will be able to continue what has proven to be a mutually productive relationship in the future.

Dr. Bel Campbell

MEMBERSHIP UPDATE:

The club presently has 146 general members, 40 family members, and 4 honorary members. There have been 8 renewals this month. Thank you to those of you who renewed. The following new members joined this month:

Welcome Marjorie D. Stowers  Welcome Gary Kasper
Welcome Jeffrey P. Burmeister  Welcome Roland Gary Sleeper
Welcome Stephen L. Stein  Welcome Paul Zoltowski
Welcome Prakash Bhakta  Welcome David O. Eisman
Welcome Kevin & Laura Harris  Welcome Darlene, Dean, Diane & Joanne Lawry
WORLD RENOWNED ASTRONOMER VISITS ALBUQUERQUE:

On Friday evening of June 24th, 1988, the Albuquerque Astronomical Society sponsored a lecture for the general public by world renowned astronomer, Dr. Clyde Tombaugh. An enthusiastic crowd completely filled Regener Hall to hear Dr. Tombaugh talk about his discovery of the elusive ninth planet, Pluto. Dr. Jack Burns, professor of astronomy in the Physics and Astronomy Department at the University of New Mexico, welcomed the packed house to the lecture. George Pellegrino, our society president, told everyone about his start in astronomy and his boyhood dream of meeting the man who discovered the planet Pluto and then introduced Dr. Clyde Tombaugh.

Dr. Tombaugh talked about his youth and how he got hired at Lowell Observatory in Flagstaff, Arizona. He described the scientific method he developed that enabled him to discover the planet a year later. With the lights turned down, the attentive group feasted their eyes upon slides of Dr. Tombaugh’s early sketches of planetary objects, his homemade telescope making experiences, research equipment used in making the famous discovery, the negative photographic plates showing Pluto’s parallactic movement, the regions of the heavens of his thorough search during his many years at Lowell Observatory, and much more.

After the talk, Dr. Tombaugh entertained numerous interesting questions from the audience. Many people waited in a long line to purchase personalized autographed posters of Dr. Tombaugh’s “Discovery of Planet Pluto” and a chance to meet and talk with Dr. Tombaugh which followed the question and answer period.

The proceeds from the event are tax deductible and have been given to the Tombaugh Scholars’ Endowment. Thanks are given to Dr. Bernie McNabara, Chairman of the Astronomy Department at New Mexico State University, for helping us arrange Dr. Tombaugh’s and his family’s visit. Thanks are given to Bruce Levin for organizing this event and to all those helped with all the other details to help make this the successful event it was. The media helped provide us with the necessary publicity. The Albuquerque Journal’s article in the “Happenings” section of their Sunday newspaper helped inform the public about this event, and KOB-TV-13 had Dr. Tombaugh on their “5-O’clock Live” news broadcast on the evening of his talk. Special thanks are also given to the University of New Mexico and its Physics and Astronomy Department and Arts and Sciences Department for providing us with Regener Hall, without which this event would not have been possible.

TEACHING POSITION AT UNM:

If you or anyone you know is qualified and interested in teaching introductory university astronomy on a part-time basis, please contact Dr. Bel Campbell at UNM, 277-5148.

FOR SALE:

Orion 10x70 binoculars. Mint Condition. 5-degree field of view. 7mm exit pupil. Hard case, carrying straps, and lens caps. Original packaging and warranty. Asking $140. Call Brian at 765-4410(W) or 292-5975(H).

Meade photographic tripod. Spring-loaded, 3-way pan head. Geared elevating center column. Extends to 63” maximum height. Orion sells this tripod under the Celestron brand name for $119. Perfect condition. Asking $70. Call Brian at 765-4410(W) or 292-5975(H).

32mm eyepiece /focus. Asking $35. Call Lee at 292-1249(H).

24mm eyepiece, University Konig multi-coated. Asking $35. Call Lee at 292-1249(H).

WANTED:

Used telescope $300-$500. E.W. Harris; 900 Hallett Circle; Farmington, NM 87401. (325-6776)
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:
P.O. Box 54072
Alb., NM 87153

or give them to the treasurer at the next meeting. Include
your Sky & Telescope renewal mailer. Membership dues are
$10.00 per year and $2.00 per additional family member.
The discount subscription to Sky & Telescope is $16.00.

AAS-BBS: Up 22:00-8:00 at 268-4885, 300/1200 baud, 8N1.

ARTICLES: If you would like to submit an article for the
Sidereal Times contact Michael Fisk (see above for number).
All articles must be submitted or uploaded on to AAS-BBS
by the second Saturday before the meeting. Computer files
are preferred, but must be in ASCII or Wordstar format.

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