



Desert Skies

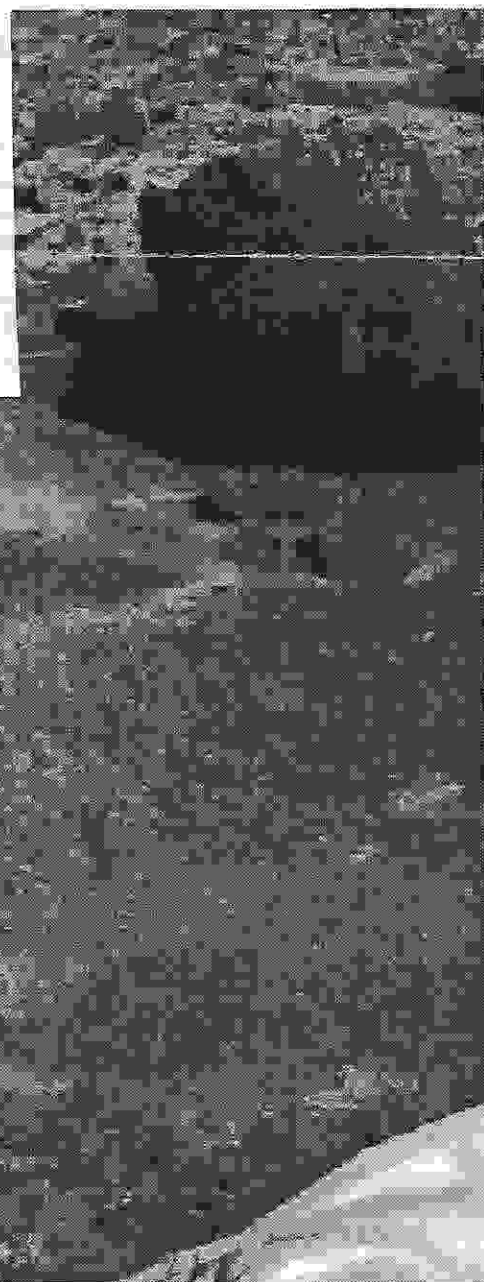
Tucson Amateur Astronomy Association

Volume XLIII, Number 8

August, 1997



SAGAN MEMORIAL STATION ON MARS



Calendar of Events

BEGINNERS LECTURE-August 1, 6:30 pm at the Steward Observatory Auditorium - room N210. This month's speaker is Michael Smith.

GENERAL MEETING -August 1, 7:30 pm at the Steward Observatory Auditorium -room N210. Topic is **Variable Stars: Doing Good Science from Your Backyard** by Michael Smith.

BOARD OF DIRECTORS MEETING -August 7, 7:00 pm at the Conference Room at Flandrau Science Center.

STAR PARTIES & EVENTS:

August 2, Empire Ranch

August 8, Randolph Center

August 8, Pima County Parking Lot

August 30, Empire Ranch

Newsletter Schedule: Deadline for articles: Monday, August 18. Printing: Monday, August 25. Folding Party: Tuesday, August 26. Mailing: August 27. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

Cover: Two images from Mars. Photographs courtesy of JPL Homepage (<http://mars.sgi.com>). Top photo taken on Sol 6 (July 9) by Sojourner's camera. Bottom photo taken on Sol 3 (July 6) by the IMP camera on Mars Pathfinder.

TAAA Home Page: <http://www.primenet.com/~lwilson/taaa/taaa.html>

Office	Name	Phone	Email
President	Terri Lappin	579-0185	tlappin@as.arizona.edu
Vice-President	John Kalas	620-6502	
Secretary	Dave Harvey	797-2512	dave@astro.as.arizona.edu
Treasurer	Larry Wilson	299-6608	lwilson@primenet.com
Member-at-Large	Bob Gent	721-5060	rlgent@aol.com
Member-at-Large	Bob Goff	790-1452	goffaxe@azstarnet.com
Member-at-Large	Dave Reynolds	579-7337	
Past President	Dean Ketelsen	293-2855	ketelsen@astro.as.arizona.edu
Chief Observer	Gil Esquerdo	290-0168	esquerdo@psi.edu
ALCorrespondent	Bob Gent	721-5060	rlgent@aol.com
Newsletter Editors	Nancy Wagner & Nina Lehman	579-1382 579-1382	nlwagner@aol.com ninalehman@aol.com
Star Parties	Karen Allen	749-5744	
Deep Sky Astro-photography SIG	Ray Wallace	294-1197	

TAAA Mission Statement

We are a source for anyone interested in astronomy. It is our mission to nurture a person's natural curiosity about the night sky. By giving people a knowledge and understanding of astronomy, we enhance their enjoyment of the sun, moon, and stars. Through our public activities and school evening observing sessions, we bring astronomy to persons of all ages. Our regular meetings and observing sessions offer members a forum to meet others with similar interests and experiences and to learn from one another.

Membership in the TAAA

Regular membership	\$ 23
Senior (over 60) membership	\$ 21
Add for Family membership	\$ 5
Add for Astronomical League	\$ 3
Add for Sky & Telescope	\$ 27
Add for Astronomy Magazine	\$ 20

Rates for membership are given above. Family Membership includes two adults plus minor children. Members may subscribe to Sky & Telescope or Astronomy Magazine (or both) at the time of membership renewal, saving substantially over the regular subscription rates. To assure we understand what you are paying for, please identify which class of membership and what options you want. Send one check made payable to TAAA to cover both membership and magazine subscription(s) to:

Tucson Amateur Astronomy Association
Attn: Renewals
P.O. BOX 41254
Tucson, AZ 85717

4 Easy Steps to Membership Renewal

1. Pay your dues 2-3 months early. Your month of membership expiration is listed on your newsletter mailing label.
2. Find your membership class and its rate. Add the Family Membership rate to this if applicable.
3. If you desire membership in the Astronomical League or magazine subscription(s), add the appropriate amounts to your membership rate. If this is a renewal, include the renewal notice if possible. Be sure to identify which options you are paying for.
4. Write one check, payable to TAAA, and send it to the address given above.

Call the Treasurer if you have any problems.

Send Address Changes to:

TAAA
Attention: "ADDRESS CHANGE"
P.O. Box 41254
Tucson, AZ 85717

Desert Skies Publishing Guidelines

All articles, announcements, news, etc. must be submitted by the newsletter deadline listed above. Materials received after that date will appear in the next issue. All submissions are retained by the editor unless prior arrangements are made. Partial page article submissions should be submitted on Wordperfect compatible files on a floppy. Full page articles, artwork, and photos should be camera ready. We will not publish slanderous or libelous material! Send articles, announcements, etc. to:

TAAA - Desert Skies
PO Box 91316
Tucson, AZ 85752-1316

OR email: ninalehman@aol.com or nlwagner@aol.com

Desert Skies is published monthly by the Tucson
Amateur Astronomy Association, PO Box 41254, Tucson,
Arizona 85717

President's Message

President's Message

We have scheduled two star parties at Empire this month. If it's clear, then we will be observing. If the monsoons do us in and we have clouds, maybe we should have a back up plan. Would anyone like to get together anyway for dinner? If there's enough interest at the meeting, then we will decide then where to go.

We have two star parties on August 8. We will be paid \$100 for a star party tentatively set for the Pima Canyon trailhead parking lot. The other one is for the Randolph Recreation Center. Since we have two star parties to cover on the same night, I'm asking for your special consideration of these star parties. The paid star party is on the NW side of town, the Randolph Center one is centrally located. If you can make it to one of them, please sign up for it so we will know you will be there.

Thanks to the efforts of Bob Gent, the Western Region of the Astronomical League is finally being organized and is growing in number. The first regional meeting of the region, the "Starry Nights Festival", will be held this October 24-26. Some activities will take place in the town of Yucca Valley and observing will be

at the Joshua Tree National Park. I've heard this area has dark skies. Read Bob's article in the newsletter about this upcoming event.

I received several comments regarding the content of the last Member's Night since last month's newsletter went out. In fact, most board members heard from members about this subject. We discussed meeting content at our board of director's meeting and it was decided that more screening of our presenters is needed. It was also decided that direct sales pitches should not be allowed. These new guidelines will be enforced at all future meetings. I ask for your cooperation in enforcing these guidelines. I hope we can smooth over some ruffled feathers and can all enjoy the upcoming meetings.

I am now lining up featured speakers for the next 6 months. I will be contacting someone at LPL about hearing the results of the Martian rover, Sojourner. I am open to other topics. If you have a request or wish to present a featured lecture be sure to contact me.

See you under clear skies!
Terri

*

Meeting News

Beginner's Lecture

This month's beginning lecture is to be given by Michael Smith. Topic of the lecture is unavailable as of this printing.

Featured Speaker: Michael Smith

VARIABLE STARS: DOING GOOD SCIENCE FROM YOUR BACKYARD

Michael Smith is a hospital and nursing home medical director who dabbles in variable star observing in his spare time. While most of us see the same stars from night to night, variable star observers see profound changes in certain stars and monitor them closely. He will discuss types, naming, and observing techniques, both visual and photometrically.

Variable star observing is one clear way amateurs can contribute to science.

Dr. Smith has been a member of the TAAAS since 1983, the American Association of Variable Star Observers, the International Amateur-Professional Photoelectric Photometry, and the International Occultation Timing Association. He created "Under Dark Skies" for the Arizona Daily Star in 1984 and has written nearly 500 columns since then. He has received the AAVSO award for more than 1000 photoelectric observations and is co-author (about 12th, he says) on three papers on variable stars. He and his wife have seen four total and two annular eclipses, including the one in Siberia last March. *

Club News

Member News

We welcome the most recent members who have joined the TAAA: Charles Schroll, Thomas Simmons, Terry Tidmore, Stephen McClain, Andrew and Deborah Cooper, Patricia Fairchild, Charles and Cathleen Feld, Freeman Taber, Pennie Schultzt, Bill and Mary Lofquist, Michael and Ellen Duperret, Michael and Mary Turner, James and Joyce Charboneau, Duane Hendricks, Shaun Dixon. Hope to see you under clear skies or at a meeting.

Bill and Mary Loffquist, listed above, attended their first dark sky star party at Empire Ranch last month. They recently also purchased a new telescope. Yep, they've been bitten by the astronomy bug for sure!

(This featured section of the newsletter is meant not for gossip but to let everyone know what is going on with each of us. If you have something to contribute (new job, new baby, new telescope, special recognition, etc.), send it to Terri and it will be incorporated into this section. *

From the Mailbag

Here are some things that recently landed in our PO Box. If you want anything, call Terri at 579-0185 and she will get it to you.

* Reports Minutes from the recent meeting of the Sonoita Valley Planning Partnership. This includes the discussions regarding the mine that is being proposed on the east end of the Santa Rita mountains not far from our current observing site.

* Announcements Enchanted Skies Star Party in Socorro, NM set for October 2-5.

Postcard from Novagraphics-specials, new location-few doors down from old place

* Trips Many companies have sent us information for several future solar eclipses

* Catalogs We always have a selection of catalogs including Meade, ASP Conference Series, Novagraphics, Edmund Scientific, Swift Binoculars, Orion, Sky Publishing, Kalmbach Publishing, Cobblestone Publishing. There are many others.

* Newsletters The Woman Astronomer, International Dark-Sky Association, Saguaro Astronomy Club (PHX), East Valley Astronomy Club (PHX), Astronomy Club of Sun City West (PHX), Albuquerque Astronomical Society (NM), Salt Lake Astronomical Society (UT), Denver Astronomical Society (CO), Von Braun Astronomical Society (Huntsville, AL), Peoria Astronomical Society

(IL), Warren Astronomical Society (MI), The Universe in the Classroom (ASP). *

Gene Shoemaker Killed in Accident

The editors just received notice that Gene Shoemaker, co-discoverer of the comet Shoemaker-Levy 9 was killed in a car accident in Ellis Springs, Australia. The message said that Carolyn is in stable condition at the Ellis springs Hospital. No further news is available at this time. *

Deep Sky Astrophotography (SIG)

The Deep Sky Astrophotography SIG plans to have meetings during the coming months of this year on the following dates: August 2, 9, 30. September 6, 7, October 4, 25. November 1, 20, 29. December 20, 27, 1997, - And January 3, 1998. For time and places, call Ray Wallace, 294-1197. *

TUCSON'S COMPLETE ASTRONOMY SHOP

- New and Used Equipment
- Meteorite and Meteorite Jewelry
- Books, Posters, Maps & Star-Charts
- Custom work-Machine & Wood Shop Work Available
- Observatory Construction & Repair
- Observing site and tour guides available.
- Rental equipment available - call for details.
- Repair work-Telescope Cleaning & Collimating
- Knowledgeable Professional Staff

Stellar-Vision & Astronomy Shop
1835 S. Alvernon #206
Tucson, AZ 85711
(602) 571-0877

Credit Cards Accepted. 90 Days same as Cash

Dark Skies for August

DARK SKIES (no twilight, no moonlight) for Tucson in 24-hour MST: 18=6pm, 20=8pm, 22=10pm, 0=12am
RISE, SET, VISIBILITY for sun and bright planets: rise for morning object, set for evening object

Th/Fr 31/ 1	20:54 - 4:06	Su/Mo 10/11	23:30 - 4:16	Th/Fr 21/22	20:28 - 21:31
Fr/Sa 1/ 2	20:53 - 4:07	Mo/Tu 11/12	0:11 - 4:17	Fr/Sa 22/23	20:27 - 22:13
Sa/Su 2/ 3	20:52 - 4:08	Tu/We 12/13	0:57 - 4:18	Sa/Su 23/24	20:25 - 22:57
		We/Th 13/14	1:48 - 4:19		
Su/Mo 3/ 4	20:51 - 4:09	Th/Fr 14/15	2:45 - 4:20	Su/Mo 24/25	20:24 - 23:42
Mo/Tu 4/ 5	20:50 - 4:10	Fr/Sa 15/16	3:47 - 4:20	Mo/Tu 25/26	20:22 - 0:29
Tu/We 5/ 6	20:49 - 4:11	Sa/Su 16/17	- - -	Tu/We 26/27	20:21 - 1:19
We/Th 6/ 7	21:14 - 4:12			We/Th 27/28	20:19 - 2:10
Th/Fr 7/ 8	21:46 - 4:13	Su/Mo 17/18	Full Moon	Th/Fr 28/29	20:18 - 3:02
Fr/Sa 8/ 9	22:19 - 4:14	Mo/Tu 18/19	- - -	Fr/Sa 29/30	20:17 - 3:55
Sa/Su 9/10	22:53 - 4:15	Tu/We 19/20	- - -	Sa/Su 30/31	20:15 - 4:34
		We/Th 20/21	20:29 - 20:49		

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	Vi=Visibility
Sa/Su	Set	Rise	Set Vi	Set Vi	Set Vi	Rise Vi	Rise Vi	
2/ 3	19:18	5:38	20:33 5	20:56 -1	22:39 1	19:37 -3	22:37 1	-3 brilliant
9/10	19:12	5:43	20:16 6	20:51 -1	22:23 1	Set -3	22:09 1	0 conspicuous
16/17	19:05	5:48	19:50 8	20:44 -2	22:07 1	5:12 -3	21:42 0	3 moderate
23/24	18:57	5:52	19:15 -	20:37 -2	21:52 2	4:40 -3	21:14 0	6 naked eye limit
30/31	18:48	5:57	18:40 -	20:31 -2	21:38 2	4:09 -3	20:45 0	9 binoculars limit

By Erich Karkoschka

Star Parties & Events

Empire Ranch Aug. 2 and Aug 30

There will be two regular star parties at Empire Ranch this month. Remember we are observing from a different location as the "old" place was being overused. Arrive shortly after sunset to give yourself time to set up your telescope. The new site is better in the sense that headlights from the highway are not a problem and the lights of Sonoita are not visible. A map to the new location is in the newsletter. (If these star parties are clouded out we may arrange to have a get together at someone's house or dinner someplace in town. Decision will be made at the Aug 1 meeting.) *

Randolph Center August 8

Randolph Center is located at 200 S. Alvernon (south of Broadway). Raindate (should it be needed) will be 22 August. Set up will be at 7:00 pm. We need 2 or 3 scopes and a speaker. Audience will be children from 6 - 13 years of age. Please call Terri at 579-0185 for sign up or information. *

Pima Canyon Parking Lot August 8

Observers are needed for a star party which will tentatively be held at the Pima Canyon Trailhead parking lot. This is located east of Oracle Road on Magee Road. We will be observing with about 15-20 kids whose parents are attending an evening event at the La Paloma resort. KidsWest, a for-profit organization providing activities for kids during conventions, has requested this star party. KidsWest has an excellent adult-to-kid ratio, so the group will be well supervised. The TAAA will receive \$100 for this event.

KidsWest will arrive with the kids at 8:30pm. Observers are asked to be ready for observing at that time. A short orientation with the kids will be conducted by Terri to familiarize them with telescopes and the night sky. The observing will begin after this short orientation. There will be a sign up sheet at the August meeting for this star party. Those on the sign up sheet will be notified of the observing place if it is not the trailhead parking lot. Those wanting to attend but not on the sign up sheet can call Terri at 579-0185 for information. *

1997 Starry Nights Festival October 24 - 25

Thanks to an invitation from the Town of Yucca Valley, California, we will hold the first Western Region, Astronomical League (WRAL) star party, this fall. This festival is planned for October 24-26, 1997, so please mark your calendars for a fantastic astronomical event! For great dark sky observing, we received permission to use the nearby Blackrock Canyon Campground in the Joshua Tree National Park.

For programs, vendors, and speakers, we'll be using the Yucca Valley Community Services Center, again, thanks to the generosity of the town council. Jim Schooler, the Yucca Valley Community Services Director and I have agreed to serve as co-chairs of the festival. We will be holding a WRAL business meeting to elect new officers for the coming year. Nominations are now being accepted.

Among other activities, David Levy, noted astronomer and comet discoverer, and Richard Berry, former Editor-in-Chief of Astronomy magazine, have both agreed to be guest speakers. We will also hold workshops for supernovae searching, astronomy education for local teachers, a dark-sky update, and other topics. Hope to see you there! Contact: Tim Robertson, SNF Registrar, 2110 Hillgate Way, #L, Simi Valley, CA 93065, e-mail: trobert@earthlink.net, phone (805) 584-6706. *

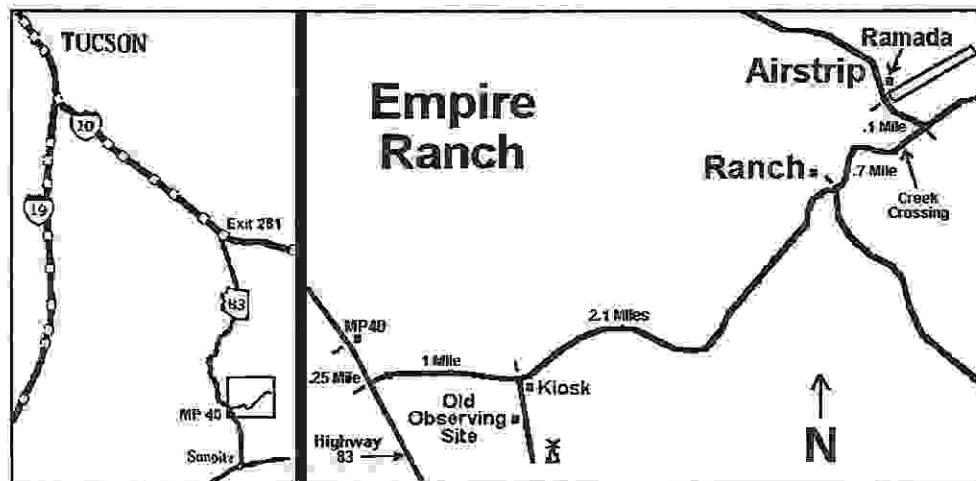
Maps



STARIZONA

ADVENTURES IN ASTRONOMY & NATURE

Dean Koenig
 5201 North Oracle Road
 Tucson, AZ 85704
 520-292-5010



TAAA Survey Results

TAAA Member Survey Results from 59 surveys returned as of April 97:

Information about you

I have been a TAAA member for:

- 6 mos to 1 yr - 4
- 1 to 2 years - 11
- 2 to 5 years - 14
- over 5 years - 6
- over 10 years - 12
- no response - 1

How active do you consider yourself to be:

- very active - 12
- somewhat active - 32
- not very active - 15
- no response - 1

I have been interested in Astronomy:

- less than 1 year - 3
- for many years - 25
- for most of my life - 31
- no response - 0

When it comes to Astronomy, I consider myself:

- very knowledgeable - 18
- somewhat knowledgeable - 25
- just a beginner - 15
- no response - 1

Astronomy is:

- my main interest/hobby - 25
- my profession - 5
- one of my hobbies - 32
- a passing interest - 0
- no response - 2
- (5 multiple responses)

Interests:

- Messier objects - 34
- deep sky - 33
- observing (general) - 31
- planets - 31
- general astronomy - 30
- astrophotography - 29
- lectures - 29
- comets - 24
- binocular viewing - 21
- CCD's - 21
- constellation identification - 20
- public education - 19
- reading - 19
- amateur research - 18
- cosmology - 18
- optics - 18
- solar eclipses - 18
- computers - 17
- light pollution issues - 16
- lunar eclipses - 16
- lunar observing - 16
- telescope making (non optics) - 16
- history - 14
- meteors - 14
- asteroids - 13
- electronics - 12
- binary stars - 11
- solar observing - 11
- meteorites - 10
- stars - 10

- variable stars - 10
- radio astronomy - 9
- theoretical astrophysics - 9
- occultations - 8
- SETI - 8
- supernova search - 4
- others: New Physics,

Archeoastronomy, Planetary Exploration,
Caldwell Objects

Meetings

The meetings are usually:

- interesting - 46
- boring - 3
- no response - 10

The length of the meeting is:

- just right - 38
- too short - 2
- too long - 10
- no response - 9
- suggested lengths: <1, 1.5(3), 2(2), 8

hours

The beginner's lectures are:

- helpful - 28
- too simplified - 1
- too advanced - 5
- I don't attend - 18
- no response - 7

The featured lecture is usually:

- too advanced/technical - 9
- about right - 43
- too simple - 0
- no response - 8

I prefer hearing lectures by:

- professional astronomers - 12
- amateur astronomers - 7
- no preference - 34
- no response - 6

The frequency of Members Nights are:

- just right - 38
- too many - 2
- too few - 5
- no response - 14
- suggested number of members

nights/year:

- 1-2, 2,
- 4 - 2
- 6-3

Meeting Format

I have the following comments regarding meeting format:

- Breaks for socializing are good. Often, it's the only time I see many TAAA members
- Draw for door prizes at end of 1st half
- Have observers report before break
- Have only been to one meeting so can't comment

- Keep announcements short and quick. Forget door prizes - a time waster, makes meetings too long
- Keep breaks. When we try to finish early, we go long anyway.
- Keep it moving
- Lecture first
- Meeting on a weekday night rather than Friday would be useful for attendance.
- Meetings are sometimes interesting, sometimes boring. Too technical
- More amateur participation even in 1st half.
- More member presentations of astro projects they are working on
- No more out-of-date book sales.
- Not on Friday evening
- One reason I stopped going was of no timekeeping. Everyone went over. I work 11 - 12 hr days and long Friday evenings which makes it difficult.
- Only been to one meeting
- People tend to leave after the break. Discontinue the second half
- Horter meeting. Often leave at break.

Topics & Speakers

I have the following suggestions for topics or speakers:

- Can you get George KSmoot? He was a sellout at TCU in '93
- Dark Matter, Age of the Universe, Stellar Composition, Spectroscopy.
- Do the best you can. There's no way to bat 1,000 in choosing speakers.
- Don't attend.
- Foreign professional astronomers, Russians, Germans
- Great comets, binary stars, quasars.
- Have more amateur observations.
- I haven't been to a meeting yet, but will soon.
- More and longer reports from Chief observer.
- More hands-on amateur projects and other neat things club members are doing.
- More information on planetary probes when available.
- More pre-packaged material such as movies or slide-shows.
- Quality of speakers presentation skills is important.
- Science that amateurs can do: asteroid occultations, binary star differential photometry, other small telescope astronomy.
- Space-Time, Gravitational Lensing, Archeoastronomy.

More survey results will be published in future issues of Desert Skies.

Notes From Other Organizations

Euroclipse '99 Update

Greetings from San Francisco. Here is the long awaited lowdown on our little field trip. Bear in mind that this itinerary is subject to change. Don't buy any non-refundable tickets just yet. If you are seriously considering join in us on our expedition, I suggest you start a Euroclipse savings account now. A month on tour with us will likely cost you a few grand; so start fattening that piggy-bank up for the kill early. You may decide if you want to opt for an abbreviated version of the tour. Still, it will not be a cheap vacation by any means.

This is not your typical Eclipse Tour !! We are a public service organization, not a travel agency or concierge service. You'll be responsible for your own tickets, reservations and travel plans. I'll tell you where we plan to be, how we plan to get there, and where we will be staying. It's up to you to make similar, or if you wish separate plans for all members of your party. If some of you want to link up for group discounts, please indicate if you want your name put on a list for that purpose. In order to join us you must be of sound mind and body; able to travel lightly but lift heavily, and be willing to help with and participate in our public events, even at the risk of denying your personal agenda at times. We plan to bring telescopes along for public use, and so should you. We don't guarantee that you'll always be comfortable, but rest assured, this will not be some kind of European Death March. We plan to travel by air, train, car, and ferry. You'll need a valid Passport, a Eurail Pass, and very little luggage. I'm planning to live out of a small backpack and the only luggage I will be checking in for the plane trip will be my telescope. Don't tell me this can't be done, both my wife and I spent 3 weeks in Europe with nothing but a single carry on bag for each of us. She has vowed never to check another big suitcase again. traveling light is the only way to go, they sell anything you might run out of in Europe. If this sounds like the type of adventure for you, read further and get out the travel atlas. Pull down on the yellow safety bar, remember to keep your hands inside the car at all times, and thank you for riding our Eurocoaster!

Euroclipse '99 Itinerary

Aug 8 - Rendezvous in Frankfurt, Germany. Overnight stop.

Aug 9 - Eurail bus ride on the "Romantische Strasse" to Munich. *Possible overnight stop in Rothenburg to unwind in the Rhineland.

Aug 10 - Munich. Assemble Euroclipse base camp. Sightseeing day.

Aug 11 - Total solar eclipse, 10:40 UT duration 2m20s. We are planning to observe totality with the good citizens of Munich.

Aug 12 - Free day in Munich, night train to Geneva, Switzerland.

Aug 13 - Sightseeing day in Geneva, star party at festival.

Aug 14 - Depart for Interlaken. Alpine hiking and star parties.

Aug 15 - Sightseeing and possible tour of Gornergrat Observatory.

Aug 16 - ???

Aug 17 - Night train to Paris, France. First quarter moon in the Latin Quarter. Telescopes on the Champs Elysses, maybe? Spend 2 full days in the City of Lights. Your days are your own, but we own your nights.

Aug 18 - 19 - Parisian whirlwind tour. Are we having fun yet?

Aug 20 - A.M. Train to Amsterdam, Netherlands. What astronomer could find fault with a town that has a special red-light district? Should prove conducive to night vision. Star parties in Dam Square.

Aug 21 - 22 - Sightseeing in and around Amsterdam.

Aug 23 - A.M. Flight to London, England. We'll be in her Majesty's stellar service. Day trip to Stonehenge, Day Trippers to Abbey road.

Aug 24 - 25 - Sightseeing in and around London. Star parties at night.

Aug 26 - A.M. train to Edinburgh, Scotland. Full moon over the Castle, star party on Prince's St. Join in Annual Edinburgh Festival.

Aug 27 - Sightseeing day. Haven't "kilt" you yet, have I?

Aug 28 - A.M. flight to Dublin, Ireland. A star party in the vibrant Temple Bar district. Tour the haunts of James Joyce, see Book of Kells.

Aug 29 - Relax, tour Glendalough, Co. Wicklow. Ireland's pretty much closed on Sundays. Tomorrow we rent cars for the last leg of the journey.

Aug 30 - Pick up cars and drive to the "North", stopping at Newgrange for tour of magalithic tomb of Celtic sun-worshippers. Star party with I.A.S. @ Armagh Planetarium. BE UNAFRAID; BE VERY UNAFRAID !!

Aug 31 - Drive to Donegal via Giant's Causeway. Sleep in a castle.

Sep 1 - Sightseeing on Inishowen Peninsula. Star party in Carndonagh.

Sep 2 - Visit Glenveagh National Park, drive to Co. Sligo.

Sep 3 - Drive to Co. Clare, visit Cliffs of Moher and the Burren.

Sep 4 - Drive to Shannon Airport, hit the duty free shops and say our farewells. "Twizzle-twazzle, twazzle-thwhoa. Time for this one to go home." It's been a long strange trip, gang. Safe home to all of you.

If you wish to join us, write back with names of all in your party and enclose another SASE (Self Addressed Stamped Envelope) to receive future mailings and updates. Thanks. Euroclipse '99, 1775 42nd Avenue, San Francisco, CA 94122-4005. *

Observing Reports

A DWARF BINARY SYSTEM

This month as we look into the crowded downtown section of the galactic center we see dense starclouds and dark nebulae abound along with globular star clusters. Near the Scorpius-Ophiuchus border just slightly east of Messier 19, a compact globular star cluster lies the fine 4th magnitude binary system of 36 Ophiuchi.

36 Ophiuchi is one of our solar neighbors at a distance of only 17 light years. Like many of the Sun's nearby companions this is a pair of dwarf stars. Other dwarf binary systems close to us are 70 Ophiuchi at 17 light years also, Xi Bootis at 22 light years, and 61 Cygni at a mere 11 light years. 36 Ophiuchi consists of two K-type stars with spectra of K0V and K2V. Both stars have an identical magnitude of 5.1, and the total luminosity of this system is about half our Sun's. These two stars have a diameter each of about 60% of the Sun. Temperatures of these two stars would be in the range of 5,000°K to 4,800°K.

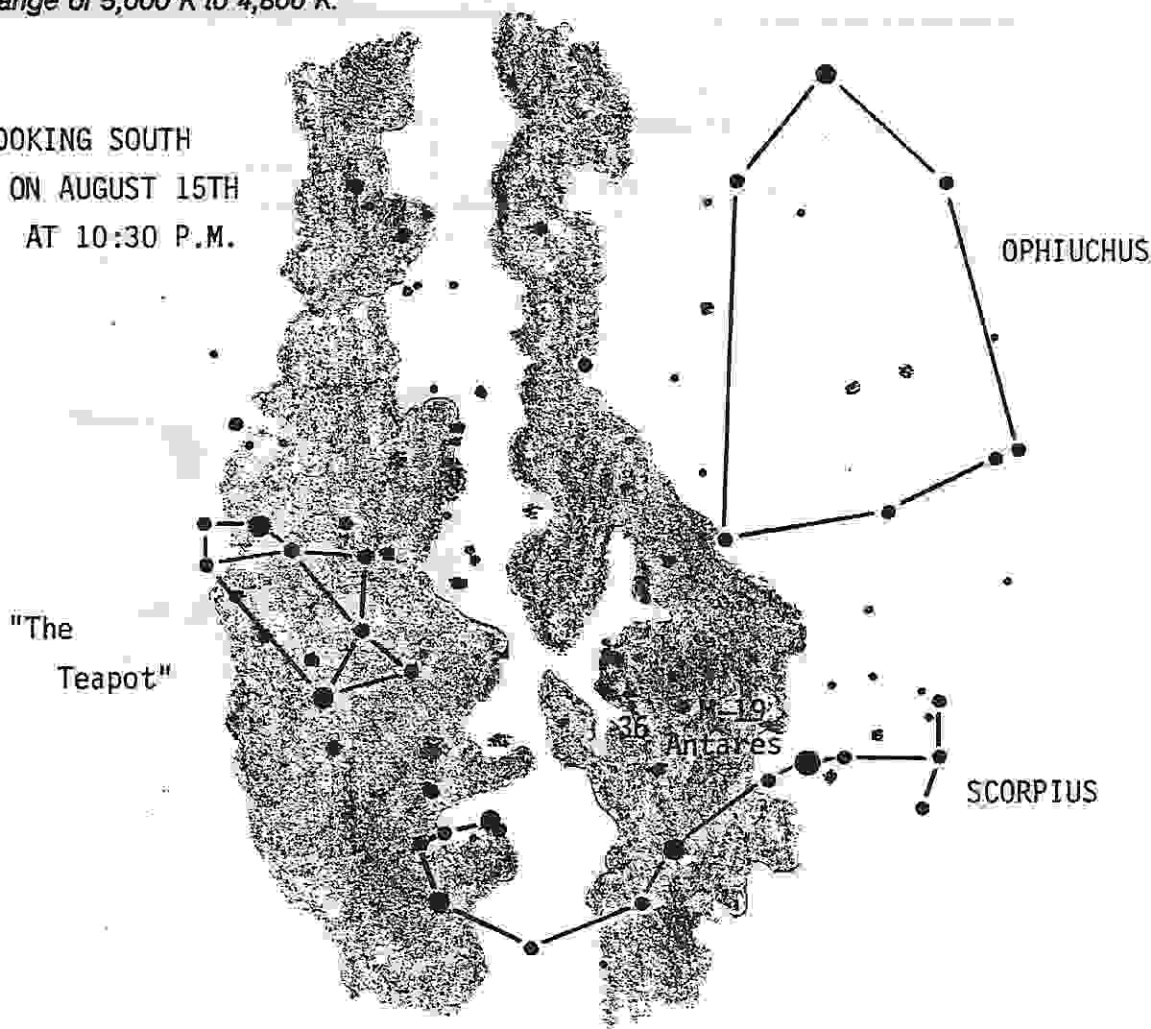
In 1822 Friedrich Georg Wilhelm von Struve was the first to measure this pair. Since that time the separation has increased to 4.9" and the P.A. has decreased to 147°. This duo has a period of 549 years. This pair resolves nicely with my 60mm telescope at 75x. I see two evenly matched golden yellow suns set against the Milky Way background.

To find this binary pair I like to start at Antares, Alpha (α) Scorpii and then proceed eastward 8° to M-19, between the Scorpion's back and the legs of Ophiuchus the Giant. Then if you just scan 2½° east of M-19 you'll locate 36 Ophiuchi.

This month when the Monsoon thunderstorms abate and the atmosphere clears and stabilizes, why not try to observe this near solar neighbor in Ophiuchus.

By Jeff Brydges

LOOKING SOUTH
ON AUGUST 15TH
AT 10:30 P.M.



Greetings to all from Laramie, Wyoming

The past month here has been marked with frequent cloud cover and rain, making observing difficult. I hope that you have had much better conditions, though rumor has it that the monsoon is starting up. Regardless, August has numerous events that warrant getting out and observing.

On the third, the recently visited Mars will be a mere three degrees from Spica early in the evening, low in the Western sky. As you gaze at this close pairing, think of the little pieces of Earth, Mars Pathfinder and Mars Global Surveyor.

In the early part of the month, Mars will be joined by Mercury and brilliant Venus in the evening. Mercury is ending a mediocre elongation, and will become invisible again shortly after the early part of the month.

On the 9th of the month, Jupiter reaches opposition. This is being touted as one of the best Jupiter oppositions in some time, as the planet will span a mighty 48 arcseconds. Look for intricate cloud features as well as the dance of the Galilean satellites.

Saturn can be seen late in the evening, rising around 11 P.M.. Now that the ring plane crossing is well over, the planets shining halo can once again be seen with ease, as well as some of its moons.

For those wanting to spy the outer reaches of the solar system, Pluto is well positioned for those viewers with medium to large telescopes. The 14th magnitude iceball will be getting harder to spot as it is slowly creeping up on the summer Milky Way. Look in Sky and Telescope or Astronomy magazines for Pluto finder charts.

For a real treat, on the morning of the 25th, there will be a daytime occultation of the bright star Aldebaran by the third quarter moon. Observers should be able to spot the moon with no problems in daylight. The star will disappear on the lit side of the moon at about 10:20 local time, and reappear on the dark side of the moon an hour and ten minutes later.

And of course, the warm summer nights give rise to the Perseid meteor shower. Peaking on the 11th, a number of meteors can be seen for a few days either side of this.

Finally, with the summer Milky Way high overhead once it is dark, be sure to enjoy the splendors our galaxy provides.

See you all at the September meeting. Gil Esquerdo *

Absolutely the Last Grand Canyon Report

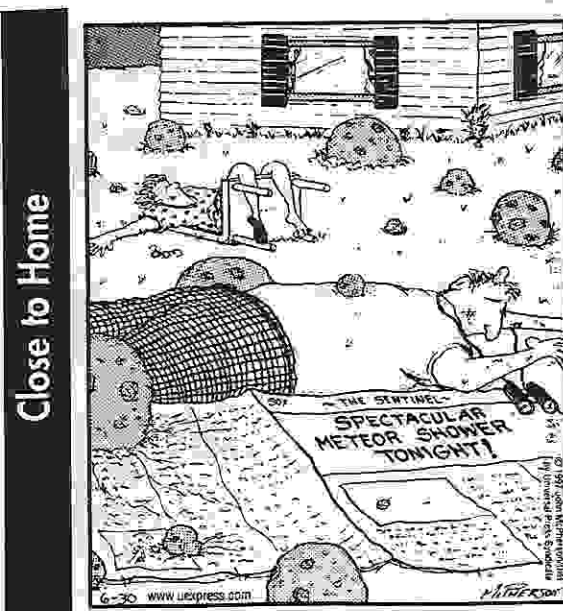
BY DEAN KETELSEN

In last month's report of the Grand Canyon Star Party '97, I neglected to mention a few of the astronomers' physical exploits. Of course I encourage all of those participating to do a little canyon hiking, and many took my advice taking short day hikes. Even John Dobson took an 8 mile round trip to Indian Gardens and back. But a few showed the macho side of the attendees.

Bernie Sanden from the Phoenix area has made an annual pilgrimage down to the Colorado River and back the last few years, no mean feat which includes a minimum of 15 miles of hiking with a full mile of elevation gain. And of course he sets up to observe when he finishes!

Similarly Erich Karkoschka took what he thought would be a leisurely hike on a cloudy afternoon (great hiking conditions as it doesn't get so hot) when he saw clearing to the southwest. He hiked out in a shorter period that it took him to go down so that he would be back in time to set up his scope. Later in the week he also made a solo hike down the Hermit trail and took a night off to camp near the Colorado.

But, the study astronomer of the year award goes to Dennis Young who hiked from the South Rim to the North, packing a telescope so that he could observe when he got there. The total hike was something like 20 miles, with some extra elevation gain as the North Rim is about 1000 feet higher than the South. He was the only one of the attendees to qualify for all three of the star party buttons that Margie Williams made - South Rim, North Rim, and Phantom Ranch. True, he did ride back in my van as I moved back to the SR, but it is a laudable feat nonetheless. Congratulations Dennis! *



TAAA Board of Directors Meeting - July 7, 1996

Minutes of the TAAA Board of Directors Meeting 7/10/97

Location: Flandrau Planetarium Conference Room, University of Arizona

Officers/members in attendance: Teresa Lappin, Larry Wilson, Gary Rosenbaum, Dave Harvey, Ingrid Saber, John Kalas, Dave Reynolds, Bob Gent

Call to Order: 7:05 p.m.

Agenda: Events/meetings:

Star Parties: August 2 - Empire Ranch, Kitt Peak
August 8 - Randolph Center
August 8 - Pima Canyon Parking lot
August 30 - Empire Ranch

Meetings: August 1 - General Membership - Michael Smith
Photometry
August 1 - Beginners Lecture - Michael Smith
September 5 - General Membership - OPEN
Beginners Lecture - OPEN
October 3 - General Membership - Members Night

Member-at-Large Opening: With the resignation of Chris Koenig, elected member at large, Teresa made a motion that Dave Reynolds be appointed to replace. Seconded by Larry Wilson, unanimously approved.

Board Meeting Location:

In September, the Flandrau Planetarium will not be open Thursday nights. The TAAA BOD meetings will be held in Steward Observatory room N305. A radio operated door-bell will be set-up to accommodate late comers.

Goals this year:

Teresa set the Board Goals for this year as follows:

Completion of the 30 design.
TIMPA Site decision - "can we build an observatory at the TIMPA site." Dave Harvey will call the TIMPA president to find out about whether county or city approval is needed to put a building on the site.

Set up Quarterly Public star parties at Old Tucson/ Desert Museum.

Telescope Workshop: Teresa discussed the possibility of having a Project ASTRO Teacher's workshop in October or November to help teachers become familiar with how to use a telescope.

Astronomical League Report: Bob Gent reported that an unsuccessful bid was made to amend the AL's by-laws that would allow club's to join the AL with less than 100% membership. Instead a policy of "Don't Ask - Don't Tell" was unofficially adopted by the AL board for those club's currently practicing this unsanctioned policy.

Metro. Tucson Convention & Visitor's Bureau meeting - August 7th. Teresa discussed sending a Board member to the TCVB meeting on how to approach meeting planner's to incorporate local businesses into their meeting events.

Old Business:

Handbook - no progress.

Insurance - Larry Wilson will look into cheaper club liability insurance.

TAAA T-shirts and Pins - Dave Reynolds will contact

Action Custom Embroidery about the cost of baseball caps and Golf shirts for participating TAAA members to wear at official club sponsored star parties.

Meeting Adjourned at 9:15 p.m.

Desert Skies Classified

FOR SALE: Photographic dark room equipment. Just about everything you need for developing film, including a Biseler Enlarger. best offer or trade (For Taaa members only) Terry 579-9048 (08-97)

NEEDED: **Bed and Breakfast** - Jack Klugmann (TAAA member from Germany) will visit Tucson in mid-July this year for about two weeks and he is looking for a bed and breakfast accommodation. It would be great to stay with a TAAA member and not alone in a hotel. Call Jack at 011-49-5224-978006 (ring back) or email to klugman@teuto.de. (08-97)

FOR SALE: Telescope, Schmidt-Celestron, 8" reflector, \$850.00. Call 299-1212 and ask for Fred. (08-97)

FOR SALE: Criterion "Dynascope" 6" f/8 reflector, 25-30 years old (remirrored about 5 yrs ago), 3 eyepieces, good condition and checked when I bought it by Bob Goff who found the mirror to be a nominal 1/4 wave. I would like \$300 for it. Contact -Lary Beck at 579-7739 or beck@azstarnet.com (08-97)

FOR SALE: Meade Starfinder 8" Dobsonian, 2" f/1.25 focuser, 6x30 viewfinder, 25 mm eyepiece, cover, nylon carrying bag. 4 mos. Old. Like new. \$400. Call Jim Norine at 751-9486 or e-mail jnorine@azstarnet.com. (08-97)

FOR SALE: Meade 8" f/6 Starfinder Equatorial Telescope, complete with mount and 3 eyepieces, exec. Cond., \$695. Meade Dobsonian mount for 8" Starfinder telescope, new, \$25. 8" f/10 optical tube assembly with optics, tube, focuser, telrad and 2 eyepieces, \$450 obo. Sky Atlas 2000 field edition (white stars on black), \$20 obo. Astro Cards: Messier, NGC 1-2 with index box, \$15 obo. Call Mike at 743-9687, evenings. (09-97)

FOR SALE: Film hypersensitizing equipment. LUMICON Model 1200 with hand vacuum pump. Large capacity: 3-35 mm, 2-6x6 cm rolls. Also 6-4x5" sheet film. Can do 9-35 mm in cassettes with optional temperature control. \$400. Jim Jondrow, 529-0933. (10-97)

FOR SALE: 2" Helical low profile focuser with 2" long extension tube \$20; 10.5mm Tele Vue Plossl Eyepiece \$50; 7.4mm Tele Vue Plossl Eyepiece \$50. Eyepieces come with dust caps for bottom. Call Terri 579-0185 (before 9pm). (10-97)

For Sale: Telescope making components: primary and diagonal mirror holders, spiders; primary and diagonal mirrors; 16" diameter fiberglass tube 100" long; Telrad; copy lens; 2" focuser; drawtubes etc. Most items unused, like new condition. I will have a list at the TAAA meeting. Call Gary Rosenbaum 579-0185 (before 9pm). (10-97)

FOR SALE: Astrographic camera, manufactured by J. W. Fecker, 1931.11 inch entrance aperture lens, 2 element lenses. Asking \$3000. Contact Hal Halbedel at 520-318-8614 or e-mail halbedel@noao.edu. (11-97)

Your ad will run for 4 months unless specified. Month and year of last appearance is last item of ad. For additions or changes to this list, call Nancy or Nina at 579-1382 or email to nlwagner@aol.com or ninalehman@aol.com.