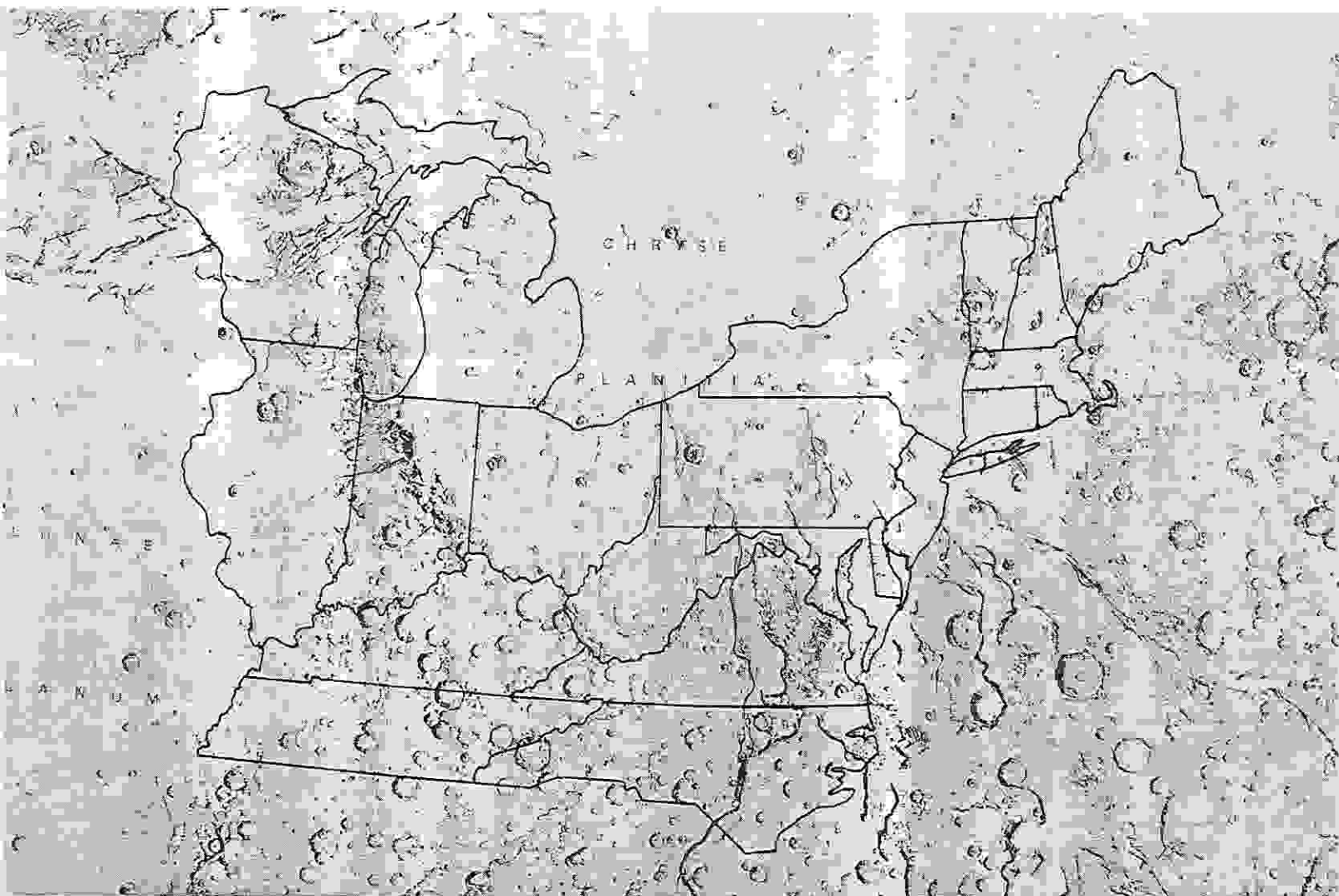


Desert Skies

James Loppin

SEPTEMBER 1990



Mars Viking 1 Chryse Planitia Region-NE U.S. Comparison

MEETINGS

GENERAL MEETING - FRIDAY, September 7, 7:30 P.M. at Steward Obs. lecture room.
Roger Angel will present a talk entitled "Mirror-spinning and Big Astronomy"

FRIDAY, October 5, 7:30 P.M. at Steward Obs. lecture room.
A talk on Astronomical Clocks will be given by Ewn Whitaker.

STAR PARTY - SATURDAY, SEPTEMBER 15 Special Star Party at Tombstone

FRI. & SAT., SEPTEMBER 21 & 22 ALL AZ STAR PARTY at Empire Ranch

EXECUTIVE MEETING - THURSDAY, SEPTEMBER 13, 7:30 P.M. at Flandrau Planetarium

TAAA EXECUTIVE

President	Tim Hunter	299-2972
Vice-President	Dean Ketelson	293-2855
Executive Sec.	Dick West	1-762-5831
Recording Sec.	Sharon Niehaus	299-7328
Treasurer	Debbie Smith	296-4780
Member-at-Large	Bob Goff	790-1452
Chief Observer	Terri Lappin	790-5053
Membership coordinator	Terri Lappin	790-5053
Past President	Duane Niehaus	299-7328
Desert Skies ed.	Dolores Hill	325-9820
Asst. ed.	Rik Hill	

Desert Skies Publishing Guidelines

- *All articles, announcements, news etc. must be submitted by the 20th of the month. Materials received after that date will appear in the NEXT issue.
- *All submissions are retained by the editor unless prior arrangements are made.
- *Articles, artwork, and photos should be camera ready. Photos should be screened.
- *We will not publish slanderous or libelous material!

Send articles, announcements etc. to Desert Skies c/o Dolores Hill 4632 E. 14th St., Tucson, AZ 85711 (phone: 325-9820) OR Lunar & Planetary Lab, U of A (621-6951).

MEMBERSHIP IN THE TAAA

Individual Membership	\$20.00
Family Membership	\$25.00
Senior Citizen (over 60)	\$18.00
Sky & Telescope subscription (optional)	\$16.00

Rates for membership in the TAAA are given above. Members can subscribe to Sky & Telescope at the time of membership renewal, saving over 25% off the cost of a regular subscription. The subscription term must match your membership period. Send one check, made payable to Tucson Amateur Astronomy Association, to cover both membership and subscription to: TAAA, P.O.Box 41254, Tucson, AZ 85717. It is best to pay your dues 2-3 months before your membership actually expires.

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. a) Decide if you want Sky & Telescope, then add \$16 to your membership rate.
b) Include Sky & Telescope's renewal notice, if possible.
3. Write one check, payable to TAAA.
4. Send it to TAAA, P.O.Box 41254, Tucson, AZ 85717.

Call the Treasurer if you have any problems.

 *
 * *** AUCTION OF HISTORIC PLUG FROM TAAA'S 30" MIRROR! ***
 * The central plug from the club's 30" will be auctioned off at the Sept. 7
 * meeting. It has the same curve as the primary, has been completely polished
 * on both sides and the edges are finely beveled. A beautiful wooden box and
 * plaque have been made to hold this superb creation. Own a beautiful piece
 * of glass and a piece of history at the same time! For more technical
 * information contact Bob Goff (the "creator") at 790-1452.
 *



FOR SALE: 9 1/2" Meade Fibrelite tube, 48" long, with endrings, brand new....\$95
 Call Andrew Meyer 883-2193 (please not after 10 P.M.- leave a message on the
 machine)



FOR SALE:
 Yashica 35mm SLR camera/50mm lens.....\$150. Contact Patrick Craig at 750-8046.



FOR SALE.....6" Parks Dobsonian telescope-
 includes 25mm Kellner eyepiece, 6 x 30 finderscope, Novak curved spider...\$300

Astroscan 4", f/4 from Edmund Scientific/ 28mm RKE eyepiece....\$100
 50mm Parks Kellner eyepiece.....\$20
 2" Parks rack & pinion focuser.....\$20
 1.3" Diagonal holder (no mirror) & spider for 6" scope.....\$10
 7" Parks Tube for 6" scope, 37" long.....\$20

Call Jeff Bridges at 293-8976 if interested.



FOR SALE: Celestron 8" with 7 x 50 finder, several eyepieces, light pollution
 filter, sturdy tripod base - in excellent condition....\$975/ best offer..
 Call Len Schess 628-8700 (day) or 299-6460 (night).



MIRRORS TESTED by Bob Goff.....

STEEL SHAFTS for your next telescope...SAE 1026 carbon steel 2"OD 1/4"wall.
 Cut your own. I'll supply the saw....\$10.00/foot. Call Bob Goff at 790-1452.



FOR SALE: Heavy 8" diameter steel column on a triangular steel base with a
 rising heavy tube by rack & pinion. Min height 5 ft. and max. height 7 ft.
 It was a NASA tooling stand- would be good for a large refractor etc....\$500.
 Will trade 3 1/2" Alvan Clark refractor on tripod mount for Mac II computer.
 Call Mr. Sevrilli at 327-0665 (450 S. Rosemount Ave., Tucson 85711)



FOR SALE: Cave 6" F/4 Rich-Field Newtonian reflector with 28mm eyepiece,
 personally refigured primary mirror, on Edmund Scientific equatorial mount
 with electric clock drive, 1" R.A. and Dec. shafts, \$350.
 Call Duane Niehaus 299-7328.



OBSERVER'S REPORT

STAR PARTIES..... Sept. 21 & 22 All AZ Star Party & Potluck Dinner, Empire Ranch
Sept. 15 Special Star Party - see below

The All-Arizona Star Party & Potluck Dinner is scheduled for September 21st and 22nd at Empire Ranch. An announcement giving all details can be found elsewhere in Desert Skies.

The Executive and Land Search Committees have scheduled a star party at a site near Tombstone, AZ, southeast of Tucson, on September 15th. All members are invited to attend but, due to limited parking area we need to limit the size of the group. For that reason, if you wish to attend call TAAA president Tim Hunter, 299-2972 for details- like where it will be held. This site is a possible TAAA observing site and home for our 16" and 30" telescopes. The committees are interested in opinions about the site so please consider contacting Tim if you would like to give your input.

Welucked out with some good weather for the August 18th Empire Ranch Star Party. The Guest of honor was Comet Levy (1990c), of course. It was an easy naked eye object- if you know the sky and where to look - shining at about 4th magnitude. The comet was just about opposite from the sun so we were looking down the tail- making our view of the tail poor. The tail looked very broad and diffuse, but the coma was very stellar. The comet was very near M15 that night and astrophotographers were busy clicking shutters. I hope to see the results at a future meeting. The comet should be visible during the first half of September in the evening sky. Last month's Desert Skies had a finder chart.

Some members have been participating in the Star Watch Program. The Star Watch Program involves looking at stars near Vega to determine the faintest star visible. From hearing others talking, the faintest observations from Tucson are around 8 to 9th magnitude with binoculars. At Empire Ranch I could see to 10.3 with 10x70 binoculars through high cirrus. Others could see to 11th magnitude from Empire Ranch. See you at the All AZ StarParty.

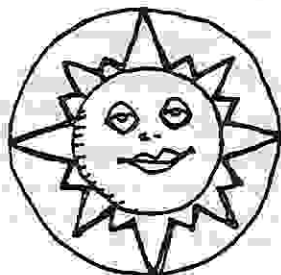
Terri Lappin, Chief Observer (790-5053)

The following submission is from Pat Trueblood... The excerpt is from the book Coming of Age in the Milky Way by Timothy Ferris.



Some astronomers have a gift for making lovely, sharp photographs of galaxies with large telescopes. Hubble was not one of them, though he was adept at extracting essential data from the generally flawed plates he did obtain. Nor was he especially skillful at taking spectra, but in this he was soon aided by one Milton Humason, a resourceful young man with an inquiring mind who started out on Mount Wilson as a muleteer and observatory janitor, began assisting the astronomers in their work at the telescope, and eventually became an expert observational astronomer in his own right.

FOR SALE...



Twin Oaks Solar Observatory on 5 acres of former National Forest land at 6500 feet elevation, 4 miles south of Show Low, Arizona. The land is premium forest land, with large Ponderosa pines, oaks and junipers, under the pristine northern Arizona skies of the White Mountains. A comfortable 12x60 foot, 1972 Freeman Mobile Home provides living quarters (partially furnished) with a 12x18 foot deck on the south side. The solar research facility is housed in a building nearby. This building houses a photographic laboratory, study, office (with built in desk and shelving) as well as the telescope housing, all in 740 square feet. There are two telescopes within: an equatorially pointed 10 inch diameter refractor capable of doing white light imaging, working as a coronagraph or feeding a 3-meter, vertically mounted Littrow spectrograph, spectroheliograph/scope, and an H-alpha interference filter. Another telescope is a 4 1/4 inch diameter red glass objective for use with the H-alpha filter. These both deliver images to the interior study for year around comfort.

Along with these is a portable, red lens, H-alpha telescope of six inch aperture.

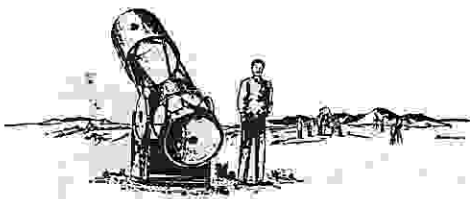
These properties may be sold separately or as a unit upon negotiation with the seller.

For more information contact Mrs. A. Parmenter, Show Low, Arizona, 85901-0814, or call (602) 537-2144 (evenings only).

TUCSON AMATEUR ASTRONOMY ASSOCIATION
EXECUTIVE MEETING - AUGUST 9, 1990

- Members present: Debbie Smith, Derald Nye, Patrick Craig, Tim Hunter, Bob Goff, Duane and Sharon Niehaus, John Zajac, Brad Becker, Terri Lappin, Dean Ketelsen, Andy Meyers, Ray Walker, Nelson Wilt.
1. Upcoming speakers: September - Roger Angel. The plug for the 30 inch will be auctioned also. The club's president is attempting to get a letter signed by Roger Angel and Peter Wangress to go along with the plug.
October - Ewen Whitaker.
 2. Refreshments: September - Tim Hunter
October - Patrick Craig
November - Duane and Sharon Niehaus
As we all know, the refreshments add a nice touch to the general meetings. The executive thanks those members who have brought refreshments in the past. If any member desires to help, please sign up at the general meeting.
 3. Skywatch: For those members who have the summer sky forms, please try to obtain your observations and send them to IDA. Hopefully, the weather will cooperate. If any member does not have a form, please see a member of the executive. This is a practice run for the winter session to be held early next year.
 4. 30 inch mirror: The machine to be used to complete the mirror is now finished. A meeting of the telescope committee was scheduled for August 18, 1990.
 5. Land sites: The thirty-seven acre site north of Tombstone was discussed. The executive decided to meet there on September 15 to further evaluate the site. There has been some discussion with MMT concerning the possibility of leasing land near Astronomy Vista. This will require more negotiations. There is also a mine site near Mt. Hopkins which could be a possible site. The letter sent to the board of regents was received by that office on July 17, 1990. However, it is uncertain what happened to the letter after that. The regents have approved the sale of the site. They do not, however, want to get involved in how that land will be sold. Thus, the Gold Mine site is in limbo at this time. A ranch 2 miles north of the Empire Ranch is for sale. It will be divided up into 20 acre plots. The problem with this site would be the price.
 6. Debbie Smith gave the Treasurer's report.
 7. Terri Lappin discussed upcoming star parties.
 8. An order for club T-shirts will be placed.
 9. The general meetings will be held at Steward Observatory - Room 202.
 10. Dean brought up the suggestion of having a star party at the Grand Canyon next Spring.
 11. A list of the glass that the club owns will be made available to members.

Dick West - Executive Secretary



Update on the 30" Project

The telescope planning committee recently met at the home of Bob Goff, and one of the decisions was to keep the membership more closely informed on progress. Hopefully, this will become a more regular report. Unfortunately, short of the primary mirror, little hardware exists, but we are closing in on a design plan.

A bit of a review may be in order. To this point, Steward Observatory Mirror Lab donated the 30.5" primary to the club, and it was generated, ground and polished by club members Bob Goff and Dean Ketelsen courtesy of the Optical Sciences Center, who provided equipment and materials. Schott Glass Corporation has also donated zero-expansion mirror blanks of 8" and 6" diameter for cassegrain secondaries. Total cash outlay to the club to this point has been \$25 for plaster in making grinding and polishing tools, and a 6" minor axis secondary for the newtonian focus was bought for \$150 (a very low price for the high quality flat we obtained).

The decision to make the primary f/ratio f/3.8 was a compromise between those who wanted to make a faster Ritchie-Cretien system to have a shorter tube (but no newtonian focus), and those who wanted an f/5 or longer to have reasonable image quality at newtonian focus. The plan was to have a system which could be convertible from newtonian focus to the f/15 or f/30 cassegrain focii.

Those were the optical design specifications which were decided several years ago. In the meantime, the primary has been finished to about the quarter wave level before losing access to the OSC optics facility. It has been generally agreed that more work needs to be done to improve the overall smoothness before it is declared finished. Current options for testing involve construction of a Ross null lens or star testing, since a full aperture flat is no longer available. In the meantime, it was decided that as much of the optical tube assembly be designed and built as possible. Until a permanent site is located, a temporary Dobsonian mount should be pressed into service, but we would attempt to build the final truss tube assembly and mirror cell which will eventually be installed in the equatorial mounting. We are to the point where we can estimate primary and secondary cell masses, so we can proceed with the Serrier truss design, which I will cover at length in next month's report. It will not be long until we get to the point where we can look for materials and start construction.

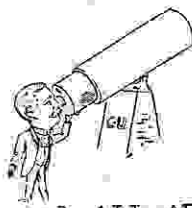
The club has access to a surprising amount of technical expertise and shop equipment. However, as the time to spend money nears, we can always use contacts that members may have developed with suppliers of steel and aluminum that could be utilized to search for tax-deductible donations of material, since our budget for this is effectively nothing. If you can help in locating material or want to take part in the project, let me know or come to our next meeting, tentatively scheduled for 9 September, 2:00 pm, at the home of Bob Goff.

-Dean Ketelsen
293-2855

Third Annual Chiricahua National Monument Campout

Even though we were rained out last year, we are going to try it again. The Chiricahua National Monument is a very scenic, very dark location for a campout/starparty. There are an abundance of hiking trails and wildlife, and is only just over two hours away from Tucson. Vivian Lewis has taken the initiative this year and has scheduled the group campsite for the weekend of 13 October. It will be cool, especially at the 7000 foot level of Massai Point, but it is among the darkest locations in southern Arizona. We have had lots of fun and even gotten a few new members from this activity, so I encourage you to attend. There will be more information on this event on next month's newsletter.





ALL ARIZONA STAR PARTY

The ninth annual ALL ARIZONA STAR PARTY will be held September 21 and 22 at the Empire Ranch.

The format will be as it was the last couple of years. There will be an observing session starting at sundown on Friday the 21st.

Saturday's session will begin with a potluck at 5 P.M. Members whose name start with A-M are asked to bring a side dish and/or dessert. Members whose name start with N-Z are asked to bring a main dish. Members who have folding tables are asked to bring them if possible. The observing session will start at sundown.

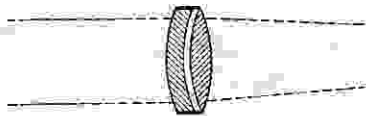
I am attempting to get several club members to spend all day Saturday at the ranch so that telescopes do not have to be taken down from Friday's session and then set back up on Saturday. Volunteers are needed. If interested in staying, please see a member of the executive at September's general meeting.

Late comers are asked to park at the top of the hill so as not to disturb observers and photographers. Please remember that smoking is not permitted. It is acceptable to spend the night there but no camp fires are allowed.

Last year's event was a tremendous success. The potluck was a time for good food, and the chance to socialize with other club members. There was a variety of telescopes, the weather was great, and the observing top notch. If possible, try to attend both sessions.

Dick West
Executive Secretary

ANNOUNCEMENT: The club owns a variety of odd pieces of glass. In order to raise money for our land and 30 inch telescope fund the club executive committee has decided to offer the following pieces of glass for sale. If you wish to examine and/or make a bid on any of this glass, contact Duane Niehaus at 299-7328.



- 1 Sk 1 610-565 19.5" x 3.25" clear glass, edged and polished; in crate
- 1 11.5" x 2" Sk 4 613-586 "Flat" polished
- 1 16.5" x 3.625" CF 1 Flat polished; minor edge chips
- 4 12" x 4.3" 605-380 Generated flat
- 1 10.375" x 4.875" 657-044
- 1 12" x .75" Plate type; yellow
- 1 11.7" x 4.4" FL5 606-370 Clear; polished both sides
- 1 Glob 11" x 1.5" DBC 2 611-572
- 2 10.5" x .75" DBC 3 Polished faces
- 1 7.875" x 2.25" DF 2 Polished edges; bad chips



The results of the observing site survey taken at the July general meeting were as follows. Thirty-two surveys were returned but every question was not answered on all surveys.

I [30] think the TAAA should have a permanent observing site.
[1] don't think the TAAA should have a permanent observing site.

In the past year I have attended [10] all clear star parties
[9] about half the star parties.
[7] less than 5 star parties.
[5] no star parties.

I have been a member for [4] less than 6 months.
[2] 6 months to a year.
[7] 1 to 2 years.
[3] 2 to 5 years.
[15] over 5 years.

The most important criteria for a permanent observing site is

[23] a dark sky.
[4] easy access.
[2] distance from University of AZ.
[3] site characteristics (horizon, vegetation, elevation).

Reasonable access means [1] no dirt roads.
[4] less than 1 mile dirt road.
[8] 1 - 3 miles dirt road.
[8] 3 - 5 miles dirt road.
[9] number of miles not important.

Reasonable distance from UofA means [0] within city limits.
[0] no more than 30 minutes.
[11] within one hours drive.
[13] within 90 minutes.
[7] time driving not important.

True or False--first number is how many responded with true and the second is how many responded with false.

32,0 I am aware of the TAAA efforts to have a permanent site.

28,2 I am interested in the selection of a permanent site for the TAAA.

27,4 I am interested in helping to develop a permanent site.

13,18 I would be interested in renting a "pad" at the permanent site where I could put up a small observatory of my own.

6,25 I know of a piece of land for sale which may be of interest to us. (If true, where? S of Green Valley, S of Vail, St. David, Arivaca, Mt Hopkins areas.)

HOT DEALS ON MAGAZINE SUBSCRIPTIONS!!!

Once again it is time to renew your subscriptions to Astronomy, Telescope Making, Deep Sky, and Odyssey magazines. These are super deals compared to news stand prices or regular subscription rates.

Astronomy \$14 for one year (12 issues) (regular rate \$)

Deep Sky \$8 for one year (4 issues) (regular rate \$)

Telescope Making \$8 for one year (4 issues) (regular rate \$)

Odyssey \$12.50 for 1 yr. (12 issues) (regular rate \$)

Any TAAA member is eligible to subscribe at these special rates. Samples of all magazines will be at the September general meeting. Odyssey is geared for younger people. Deep Sky is aimed at observing and some astrophotography. Telescope Making brings you articles concerning mirror making as well as building a telescope. General astronomy is covered by Astronomy magazine.

The following members have current subscriptions that need to be renewed.

Ed Breyere Astronomy

Gary Hall Telescope Making

Alfred Mikesell Telescope Making

Gary Rosenbaum Deep Sky

Ron Standage Astronomy/Deep Sky/Telescope Making

Sigmund Stone Astronomy

Dick West Deep Sky

Willie Westmoreland Astronomy

Nelson Wilt Astronomy/Deep Sky

John Zajac Telescope Making

Please pay the above rates if you want to renew your subscription. Please make out one check payable to the TAAA and give it to Terri Lappin at the September meeting or send it to our PO Box (return address on the newsletter). September 23rd is the deadline for getting money to me. Terri





GO AHEAD, MAKE MY DAY... BUMP ME!

by

Richard Hill

For many months now you have been subjected to my idle rantings on these pages. Some of you have enjoyed a few of the articles and for this I am delighted. However, some of you feel that I have an a priori right to this space. Nothing could be further from the truth!

In Dec., 1982, I became the first Editor of Desert Skies. I took the position because I felt strongly that an astronomy club with as many members as we had (and we have more now) sitting in the astronomy capitol of the United States it was very important to have a publication that could act as a medium for the exchange of ideas and studies done by our amateur astronomers. Fortunately, the President of the TAAA, then David Levy, agreed with me and the result has been a fine newsletter now under its third editorship. As I stated in my first Editorial: "Now you will have a forum for publishing your activities. That will be my goal to give you a place to publish papers about your projects, observations, and experiences." This is still the goal of this newsletter. It is not my newsletter, it is not Dolores' newsletter. It is YOUR newsletter. We want to have your input in the form of articles. What you do in amateur astronomy IS interesting! Others want to hear about it. What you think about various astronomical topics IS interesting and other club members think so too. Sure, I have an article in nearly every issue. But Dolores and I have a policy that my scribbling only goes in if there is room. I have been bumped several times, but I would like to be bumped more often than that! I would like something fresh and different to read too.

A good example of what I mean happened when Jim & Karen Oliver were the Editors. One TAAA member, Gary J. Bivin, (now in Colorado I believe) wrote many interesting articles the best of which, I think, he had in the Dec., '87 issue entitled "A Siderial Time Calculator". (We will forgive the spelling for the moment!) The device described therein was of his own invention. It was delightful! It really works!! One could determine siderial time by a number of means using this simple device.

Earlier in the evolution of DESERT SKIES, Pierre Schwarz wrote a number of articles. They were interesting and informative about his personal experiences in astronomy, not just a recitation of something read. This is the kind of thing we need.

So here's your chance. Write up what you are doing. Don't assume that no one will be interested or care. If there is some interesting event coming up that you know something about, let us know. If you're sick of my articles...bump me!

YOU SAY THAT STEPHAN'S QUINTET ISN'T REAL OBVIOUS IN YOUR C-8?

Well--how would you like to see it through the TAAA 30" telescope someday? You will be able to and it may be sooner than you think.

It is going to take some \$\$\$\$ to make it happen. You can help out by making a donation to the TAAA 30" Telescope & Land Fund.

But let's be honest--most of us can't afford to make large sized donations. But maybe you can afford \$5 a month? That becomes \$60 in a year. That's \$60 closer to seeing Stephan's Quintet through the 30"!

Donate what you feel comfortable with and we'll keep a record. At the end of the year you'll get a receipt showing your total donation. Drop a check in the mail or bring it to the meetings each month. Please use the form below to make bookkeeping a little easier. Make checks payable to TAAA. Send to PO Box 41254, Tucson, AZ 85717.

I WANT TO HELP OUT!!

I want to help out with a donation of \$_____ to the
TAAA 30" Telescope & Land Fund.

NAME _____ PHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

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