



Desert Skies

Tucson Amateur Astronomy Association

Volume XLIII, Number 4

April, 1997

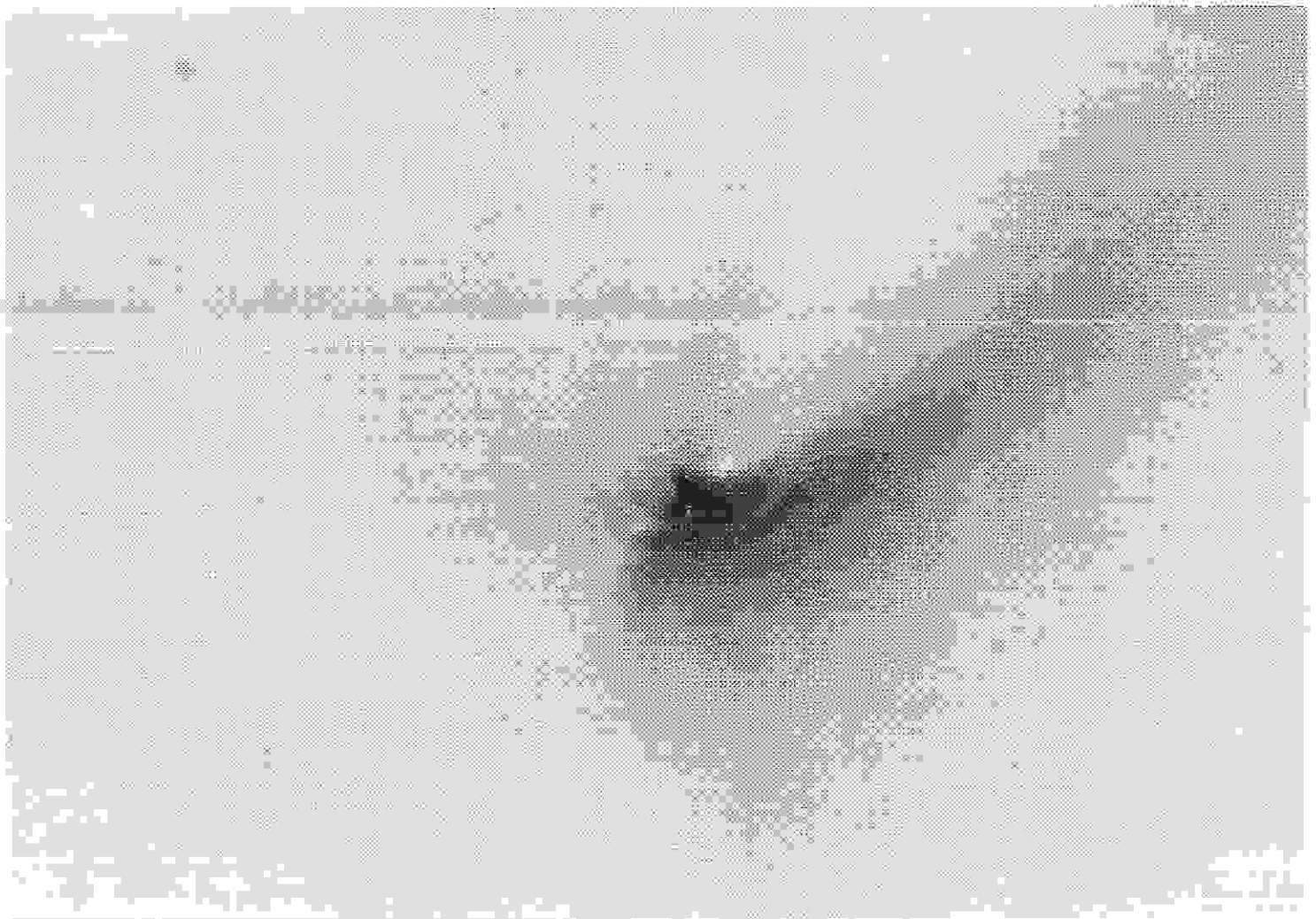


Photo of Comet Hale-Bopp supplied by Dave Harvey

Calendar of Events

BEGINNERS LECTURE- April 4, 6:30 pm at the Steward Observatory Auditorium - room N210. This month's topic is *Tour of the Spring Constellations* by Terri Lappin.

GENERAL MEETING- April 4, 7:30 pm at the Steward Observatory Auditorium - room N210. Topic is *Remote Sensing from the Space Shuttle and Space Station* by Dr. Lyle Broadfoot.

BOARD OF DIRECTORS MEETING- April 10, 7:00 pm at the Conference Room at Flandrau Science Center.

STAR PARTIES & EVENTS:

April 5 Smithsonian

April 2 Marana High

April 5 Desert Museum

April 9 Booth Fickett

April 10 Drexel Elementary

April 12 TIMPA

April 14 Davis Bilingual

May 3 Kitt Peak Picnic

May 3 Project ASTRO

May 8 Agua Caliente

May 9 Valencia Middle School

May 10 Spring Picnic

Newsletter Schedule: Deadline for articles: Monday, April 14. Printing: Monday, April 21. Folding Party: Tuesday, April 22. Mailing: April 23. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

Cover:

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	Larry Wilson	299-6608	lwilson@primenet.com
Secretary	Dave Harvey	797-2512	dave@astro.as.arizona.edu
Treasurer	Gary Rosenbaum	579-0185	garyr@astro.as.arizona.edu
Member-at-Large	John Kalas	620-6502	
Member-at-Large	Steve Kristman	795-9332	
Member-at-Large	John Polachek	544-8152	jpolachek@mem.po.com
Past President	Dean Ketelsen	293-2855	ketelsen@astro.as.arizona.edu
Chief Observer	Gil Esquerdo	290-0168	esquerdo@psi.edu
AL Correspondent	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	

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	\$ 2
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
PO Box 41254
Tucson, AZ 85717

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

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.

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

President's Message

Comet Hale-Bopp has moved into the evening sky and it looks spectacular, especially through a telescope. I have heard many reports from seasoned observers commenting on how active this comet is. If you haven't seen it through a telescope and with some magnification, then get out and do it! It is truly a neat site!

We have a few more school star parties this month. Please look over them and attend those that you can. I wish to thank all members who helped with March star parties, although as I write this many have yet to be held. A special "thank you" goes to Karen Allen who has been busy calling members to fill in the thin spots.

We have a regular star party scheduled at the Tucson International Modelplex Park Association (TIMPA) site on April 12th. I do hope members can make it on that night. We will soon need to make a decision about sub-leasing land there and everyone needs an informed opinion. From the recent surveys, general interest in the site is high but few members have seen it. I am sure this is due to poor weather back in February. Please attend the April 12th star party so you will know what the site is like. A map is in this newsletter.

We will have our annual elections at our May meeting. All positions are open for election. Almost all offices have at least one member running. It is my understanding that there is still an opening for a Member-at-Large. So far no office is running opposed. It's been difficult for the nominating committee to find people to run for office this year. That's too bad because this could be an exciting year, especially with a little 30" activity and possible activity at the TIMPA site. If running for an office interests you, contact one of the nominating committee members: Bob Gent, Bob Goff, or Jim Kessel. Write in nominations can come from the floor at the May meeting.

Also this month's Desert Skies includes some constitutional amendments. These items were discussed at the March board of directors meeting and approved at the same meeting. None of these changes are major and most are to bring our language in line with Robert's Rules of Order which is our book of governing rules. We are sure to have the most complete constitution of any amateur astronomy association in the country. This is thanks to John Zajac who has become something of an unofficial parliamentarian for us. We will vote on accepting these amendments at the May meeting.

Clear skies! And get out and see that comet! Terri

*

Meeting News

Beginner's Lecture

The seasons are changing and different constellations are now appearing in the eastern sky. This month's Beginner's Lecture will be a tour of the spring constellations. Terri will talk about the rather faint constellation of Cancer, some objects in and around the Big Dipper, and one of the nicest areas for galaxy hunting—Leo. Most objects will be on the Messier list and should be visible in small (6" - 8") telescopes. A few more challenging NGC objects will also be mentioned. Give them all a try. Typical small telescope these days have better optics than the telescope that Messier used so you shouldn't have too much problem with any of the objects discussed at this lecture. *

April's Speaker: Dr. Lyle Broadfoot

"Remote Sensing from the Space Shuttle and Space Station"

Dr. Lyle Broadfoot is a senior research scientist at the University of Arizona Lunar and Planetary Lab specializing in planetary atmospheres. He has had experiments on five space shuttle flights. These experiments consist of telescopes and ultraviolet spectrographs used to study the atmosphere's of the Earth and Jupiter. Dr. Broadfoot is particularly interested in the Io plasma torus around Jupiter. It is large and can be viewed as a single entity from Earth. The Io torus observations complement Galileo's observations, which views only portions of the torus at one time. The Earth atmosphere data gathered by Dr. Broadfoot's experiments are used to make global comparison of observed atmospheric conditions with global models which have been developed by several theoretical groups. Dr. Broadfoot feels that the attributes of the shuttle and space station should be re-examined by the segment of the scientific community that uses

remote sensing instrumentation as a research tool. Most of his research is funded by the US Air Force.

Dr. Broadfoot received his Ph. D. from the University of Saskatchewan in 1963. He joined Kitt Peak in 1963 and was there for 17 years doing airglow studies of planetary atmospheres. He was involved in the Mariner 10 mission to Mercury and Venus and a Principal Investigator for the Voyager mission. In July of this year, three of Dr. Broadfoot's experiments will fly on the Discovery space shuttle. Dr. Broadfoot will discuss his space shuttle experiments and what he has learned at our next meeting. His lecture is titled "Remote Sensing from the Space Shuttle and Space Station." *

Public Evening Series Lectures

The remaining lectures for this semester will be held at Steward Observatory on Monday nights at 7:30 pm in room N210. All of the lectures and the use of the telescopes are free of charge and open to the general public. *

April 14, Dr. Rainer Mauersberger - Submillimeter Astronomy with the Heinrich Hertz Telescope.

April 28, Dr. Peter Strittmatter - Astronomy in Arizona.

Constitutional Amendment

The Board of Directors made changes to the Constitution in order to make the Bylaws more consistent with standard bylaws' language and practices suggested in the T.A.A.A.'s adopted parliamentary authority, Robert's Rules of Order, Newly Revised.

Enclosed is a copy of the proposed amendments which will be voted on at the May meeting. *

PROPOSED AMENDMENT TO THE CONSTITUTION
AND BYLAWS OF THE T.A.A.A.
APPROVED BY THE BOARD OF DIRECTORS, MARCH 13, 1997

NOTE: Language that the Amendment removes is lined out. Language that the Amendment adds is written in **bold**. Only those parts of the Constitution and Bylaws that are affected are printed below.

ARTICLE III, Section 1., Board of Directors: The Board of Directors shall consist of a President, Vice President, Secretary, Treasurer, Member(s) at Large, and the Immediate Past President who ~~may~~ **shall** be an ex-officio member for ~~the one term that follows immediately~~ after his term of office expires. There shall be one Member at Large for every complete unit of 100 Association members ~~General Memberships~~, and one for any remainder between 1 and 99. With the exception of the Immediate Past President, the General Membership of the Association shall elect the members of the Board of Directors. Elected and ex-officio Board members shall hold office for a term of one year beginning on June first **and until their successors are elected or qualified**. The Board of Directors shall meet at least annually, and only the President or a majority of Board members may call a Board of Directors Meeting.

ARTICLE III, Section 5., General Elections: The Board of Directors shall be elected annually at the May General Meeting. Nominees' names shall be published in the Association Newsletter at least thirty days prior to the election meeting. Nominations for elective offices must be submitted prior to the publishing deadline to be officially included on the ballot; however, nominations for write-in candidates shall be accepted from the floor at the May General Meeting. Any member who has been a member for one year, and is a member in good standing, may be nominated for office. All members of the Board of Directors must be at least 18 years of age. No member shall simultaneously hold two or more **elected** positions on the Board of Directors, **and no member of the Board shall have more than one vote**. Newly elected members of the Board of Directors shall take office on the first day of June following their election at the May General Meeting. At the General Meeting in June, the newly elected Board Members shall be introduced to the General Membership.

ARTICLE III, Section 6., Vacancies on the Board of Directors: In the event an elective office is not filled or is vacated, the remaining Board of Directors shall appoint by majority vote a member in good standing to fill that office until the next June first **and until his successor is elected by the General Membership**. If by reason of death, resignation, or otherwise, the Association has no Directors in office, any member may call a special meeting of the General Membership for the purpose of electing the Board of Directors who shall then hold office until the next June first **and until their successors are elected by the General Membership**.

ARTICLE III, Section 7., Removal of Members and Officers: B. Removal of Members: By a vote of all the Board of Directors minus one, any member may be removed from General Membership in the Association. Before the Board of Directors takes a final vote to remove a member, **the Board shall follow the guidelines set up in the Disciplinary Procedures chapter(s) of the latest edition of Robert's Rules of Order, Newly Revised**, and the Board shall send a written letter announcing the vote to the member in question at least ten days prior to the final vote.

ARTICLE IV, Section 2., Rules: The latest edition of Robert's Rules of Order, Newly Revised shall be the governing parliamentary law **at all meetings in all matters in which it applies**, except as provided in these Bylaws and any Special Rules of Order of the Association.

NOTE: THIS AMENDMENT WILL BE VOTED ON AT THE MAY 1997 MEETING!

Club News

April Meeting Parking Alert

The April 4th General Meeting coincides with the annual University of Arizona Spring Fling. Please get there early for parking. *

Project Astro

By Terri Lappin

Project ASTRO will be getting back into full swing again and is looking for more TAAA members to join the project. TAAA's participation last year in Project ASTRO was very successful. Nine members (Andy Keefer, Dave Reynolds, Kathryn Johnson, Morry Holland, John Kalas, Bob Gent, Gary Sowinski, Richard Lesnewski, and Terri Lappin) were paired with teachers and have done a number of projects in the classroom. If you have a general interest in astronomy education but aren't sure of what type of project to do or just how to go about doing it, don't worry! Project ASTRO participants get a HUGE book full of great projects which step you through general background information, the materials you need, and how best to present the subject. There's also a guide to help you know which projects are best suited for the grade level that you are teaching. Since you are partnered with an experienced teacher, you have the expert help of that teacher who knows what works and what doesn't work with his or her students. You are never left alone with the classroom of kids. It is a true partnership.

There is a mandatory two-day Project ASTRO workshop on September 19 and 20 for all participants including those who have been through Project ASTRO already. This workshop gives you a chance to become acquainted with your partner and plan out your astronomy projects. The workshop is well worth the time. Applications for Project ASTRO will be at the April meeting or can be obtained from the NOAO Educational Outreach Office at 318-8535. The deadline for getting your applications in is April 15th. *

TAAA Officer Elections

By Bob Gent

At the February meeting, Bob Goff, Jim Kessel, and I were elected to the TAAA nominating committee. Since the elections for new TAAA officers will be held in May, the names of nominees are usually published in this, the April issue, of the Desert Skies.

After making quite a few phone calls and personal contacts at the last two meetings, we have volunteers to run for all TAAA officer positions. We have spoken at least once with all the people (see list below) who have volunteered to serve as TAAA board members in the respective positions. Many people who were nominated declined to run for office. This is the list of nominees for the 1997 elections:

President:	Terri Lappin
Vice President:	John Kalas
Treasurer:	Larry Wilson
Secretary:	Dave Harvey
MAL:	Kris Koenig
MAL:	Bob Goff
MAL:	Bob Gent

If there is anyone else who would like to serve on the board of directors, please contact us at the April or May meeting. We are still accepting nominations.

We would like to thank the volunteers who have agreed to serve as officers, and we thank all the members of TAAA for the vote of confidence and electing us to your nominating committee. *

Got a Special Interest?

START A SPECIAL GROUP!

Every once in a while I get into a conversation or hear a rumor about how the TAAA is not living up to someone's expectations as an Astronomy club. Trying to please all the people all the time is impossible to start with, but with 250 members it's a job just to keep some people happy some of the time. Those of us who are on the Board of Directors do what we can, but it seems that most of our time gets spent paying the bills and putting out fires. What is the job of the TAAA anyway? Is it passive entertainment like Television, or is it to be an active social and service organization in support of a Membership that gets busy?

As I look over the surveys that we have collected over the last few months (thank you to those who sent theirs in), it is clear that this club represents a tremendous diversity of interest, experience, motivation, and hardware capability. Right now, much of that power is just meandering downstream undirected and untapped. Well, maybe its time we start to build a few lakes, turn some generators, and irrigate a few deserts.

What part of Astronomy do you like best? I'll bet there is at least one other person in the club with the same interest. Instead of getting mad at the TAAA for not taking your interest seriously and starting a new club with you as its president and only member, please think about organizing a Special Interest Group (SIG). Computer clubs have had SIGs for years, and they do a marvelous job. They give beginners a place to get advice, experts a place to show what they can do, and a bit of extra fun during the month. It's probably no accident that the TAAA's first SIG was the "Computers and Electronics in astronomy" group.

There are lots of possibilities for SIGs. How about a Lunar Observing SIG, or an Eclipse/Occultation SIG, or a Deep-Sky Observers SIG. They don't have to be limited to observing either. Are you unhappy with the way that the meetings are organized? Well how about a SIG that prepares presentations for the meetings, your way. Maybe you would like to be captain of a SIG that does fund raising, become Chief reporter for the Newsletter SIG, or be the Head Librarian for the Library SIG. I guess the point of all this is that in order to get what you want from the TAAA, someone has to take the initiative to provide it. Since we all have different priorities, that someone might have to be YOU.

Once you decide to start a SIG, all you have to do is to let a Board member know about it. We will be happy to provide you with reasonable support from the club's resources, such as newsletter space or access to club equipment. After that you call the shots as the SIG Leader (within the limits of the club Constitution). You decide when and where the SIG meets. You decide the agenda and the ground rules and fight it out with your members from then on. Once in a while you might send a report in to the Newsletter or put on a presentation at the General Meeting to let the rest of us know how much fun you're having. What could be easier.

Good luck with your new empire.
Larry Wilson *

Sympathies

Our sympathies go to the wife and family of John Mulder who recently passed away. John was a member of the TAAA for a few years. He did a fine job serving on last year's nominating committee and was a very enthusiastic member. He will be missed. *

Dark Skies for April

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

Mo/Tu 31/ 1	20:06 - 1:49	Fr/Sa 11/12	23:25 - 4:34	Mo/Tu 21/22	- - -
Tu/We 1/ 2	20:07 - 2:40	Sa/Su 12/13	0:16 - 4:32	Tu/We 22/23	Full Moon
We/Th 2/ 3	20:08 - 3:27			We/Th 23/24	- - -
Th/Fr 3/ 4	20:09 - 4:12	Su/Mo 13/14	1:03 - 4:31	Th/Fr 24/25	20:28 - 20:59
Fr/Sa 4/ 5	20:10 - 4:44	Mo/Tu 14/15	1:45 - 4:29	Fr/Sa 25/26	20:29 - 21:56
Sa/Su 5/ 6	20:11 - 4:42	Tu/We 15/16	2:24 - 4:28	Sa/Su 26/27	20:30 - 22:52
		We/Th 16/17	3:00 - 4:27		
Su/Mo 6/ 7	20:12 - 4:41	Th/Fr 17/18	3:34 - 4:25	Su/Mo 27/28	20:31 - 23:46
Mo/Tu 7/ 8	20:12 - 4:39	Fr/Sa 18/19	4:07 - 4:24	Mo/Tu 28/29	20:32 - 0:37
Tu/We 8/ 9	20:27 - 4:38	Sa/Su 19/20	- - -	Tu/We 29/30	20:33 - 1:24
We/Th 9/10	21:30 - 4:37			We/Th 30/ 1	20:34 - 2:09
Th/Fr 10/11	22:30 - 4:35	Su/Mo 20/21	- - -	Th/Fr 1/ 2	20:35 - 2:51

Weekend Sa/Su	Sun Set	Sun Rise	Mercury		Venus		Mars		Jupiter		COMET HALE-BOPP		Vi=Visibility
			Set	Vi	Set	Vi	Set	Vi	Rise	Vi	Set	Vi	
5/ 6	18:45	6:04	20:17	3	18:47	-	5:10	-1	3:18	-1	22:21	-1	-3 brilliant
12/13	18:50	5:55	20:10	6	19:00	-	4:37	-1	2:54	-2	22:21	-1	0 conspicuous
19/20	18:54	5:47	19:36	-	19:14	9	4:05	-1	2:30	-2	22:09	0	3 moderate
26/27	18:59	5:40	Rise	-	19:28	7	3:36	0	2:05	-2	21:53	0	6 naked eye limit
3/ 4	19:04	5:33	4:58	-	19:42	5	3:08	0	1:40	-2	21:35	2	9 binoculars limit

By Erich Karkoschka

Star Parties & Events

Whipple Observatory Open House and Star Party April 5

See Comet Hale-Bopp
 See The Stars And Planets Through A Telescope
 Free and open to the public

Smithsonian Institution's Fred Lawrence Whipple Observatory Offices near Amado, Arizona Visitor's Center opens at 3:00 pm. Observing begins (in parking area next to building) at 7:30 pm. On view: Comet Hale-Bopp, Mercury, Mars, galaxies, star clusters, double stars, and more.

Dress for cool evening temperatures. Small flashlights and binoculars are useful to bring.

Please cooperate with staff directing parking when you arrive. The parking spaces nearest the building are reserved for TAAAS members and their telescopes. Visitors should park along the driveway or in the parking area outside the gate or along the road as directed. (Please note: Visitors will be allowed to park cars next to the building in the space usually reserved for telescopes until 5 p.m. At that time, visitors will have to move their cars to other parking spaces so that telescopes may be set up.)

For more information call 670-5707. In case of threatening weather, call 670-5707 after 3 p.m. on the 5th for information about star party cancellation.

The Fred Lawrence Whipple Observatory and Tucson Amateur Astronomy Association present this opportunity to see the stars under dark Southern Arizona skies. *

Empire Ranch

There will be no planned activity at Empire Ranch this month. *

Marana High School April 2

This party is part of the Project ASTRO partnership. We expect about 200 visitors and need 10 to 15 scopes. This school is located at 12000 W. Enigh Rd in Avra Valley. Sign up sheets will be available at the April meeting. There will be food, music, from 7:00 to 9:30 pm. From I-10 take Avra Valley Rd west to Sandario Rd. Take Sandario Rd south to Enigh. School is on the NW corner of Enigh and Sandario. Power will be available for scopes. Call Karen Allen for more details at 749-5744. *

Desert Museum April 5

The Arizona Sonoran Desert Museum is organizing a campout for about 25 people and need at least a couple telescopes. At last word they had moved this event back to the main museum grounds on Kinney Road. This is a great site to observe Hale Bopp in the western sky, so why not join Bob Gent, who is organizing this event. Call him at 721-5060 to see if scopes are needed. *

Booth Fickett April 9

This school is located at 450 S. Montego Drive in Tucson. It is off Kolb Road between Broadway and 22nd Street. We need about 6 scopes to make this yearly event a success. Start time is 6:30pm and we are usually finished by 9:00 pm. Call Karen Allen to sign up at 749-5744. *

Drexel Elementary April 10

John Kalas' Project ASTRO class at Drexel Elementary is having a star party on April 10th. He is looking for one telescope to assist him in this star party. If you can help him, give him a phone call (620-6502). *

TIMPA Star Party April 12

The Tucson International Modelplex Park Association (TIMPA) has offered a location 6 miles west of the Desert Museum for TAAA use. See map in this article. Call Terri at 579-0185 for details. *

Davis Bilingual April 14

This is a raindate of the star party originally scheduled for February 11. The Center is located at 500 W. St Mary's Rd. Set up will be at 6:00 pm to start at 6:30 pm. We need 4 to 5 scopes for 1st and second graders. See Ken Pryor for more details. *

Kitt Peak Picnic and Star Party May 3

We have again gotten permission to hold another picnic and observing session at the Kitt Peak picnic area on Saturday, 3 May. There will be a sign up sheet at the April meeting for the first 50 people who would like to attend. Since we need the sign up a month in advance, be sure to sign up even if we get over 50 people, as invariably folks will have something come up which prevent them from attending. I will unfortunately have to miss the April meeting, but feel free to call if you have any questions. Look for info in the next newsletter. *

Project ASTRO Kitt Peak May 3

Details will be available at the April 4th General Meeting. *

Agua Caliente School May 8

This school is hosting another star party this year. We need 8 or 9 telescopes. Come early, Pizza will be served. We expect approximately 600 people. Call Karen Allen for more details. *

Valencia Middle School Science Sleepover May 9

Air out your sleeping bags.. Valencia Middle School at 4400 W. Irvington Rd is having a science sleepover for honor students. They need 5 scopes. Call Karen Allen for more details. *

Spring Picnic - Vega Bray May 10

The date of 10 May has been selected for this year's picnic - again to be hosted by Eduardo Vega at his observatory in Benson. All are invited, and it will be a great time. As usual there will be an afternoon cookout followed by evening observing with the observatory telescopes, or you can bring your own. Look for more info in the May newsletter. *

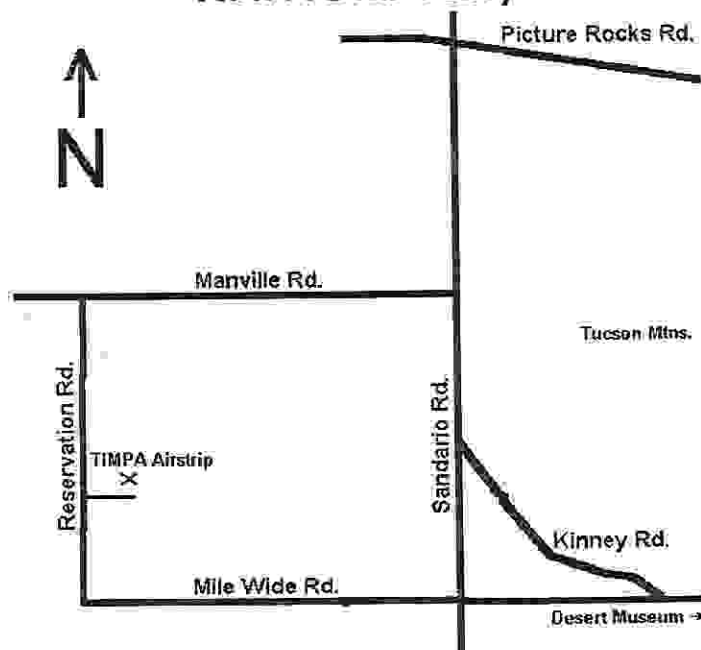
Grand Canyon Star Party 7-14 June

I am currently taking names for people who want complimentary campsites if they are staying the full week. The Park Service will be supplying 20 sites if we can use them, and it looks like we will have plenty. For those staying less than the full week, give me a call after 15 April and I'll try to schedule you in.

The latest word has John Dobson joining us for the last 3 days, as he heads to a workshop in Texas. Overall, we are getting a good response from around the country, though California seems to be a very close second to Arizona. Let me know if your summer plans include us at the North or South Rim! Dean - 293-2855. *

Maps

TIMPA Star Party

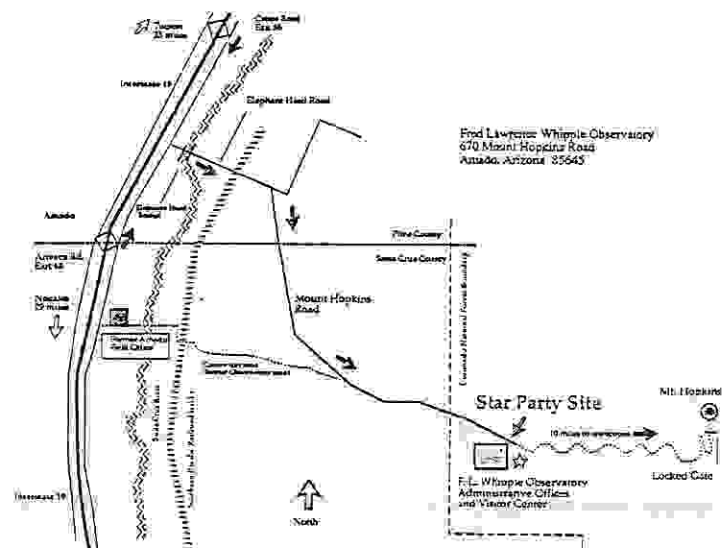


How To Find The Observatory Offices

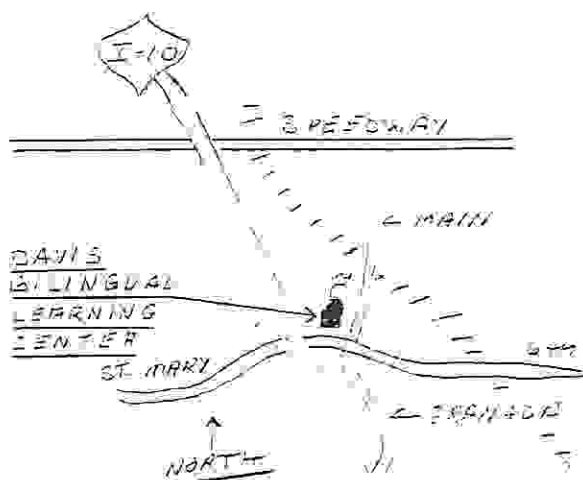
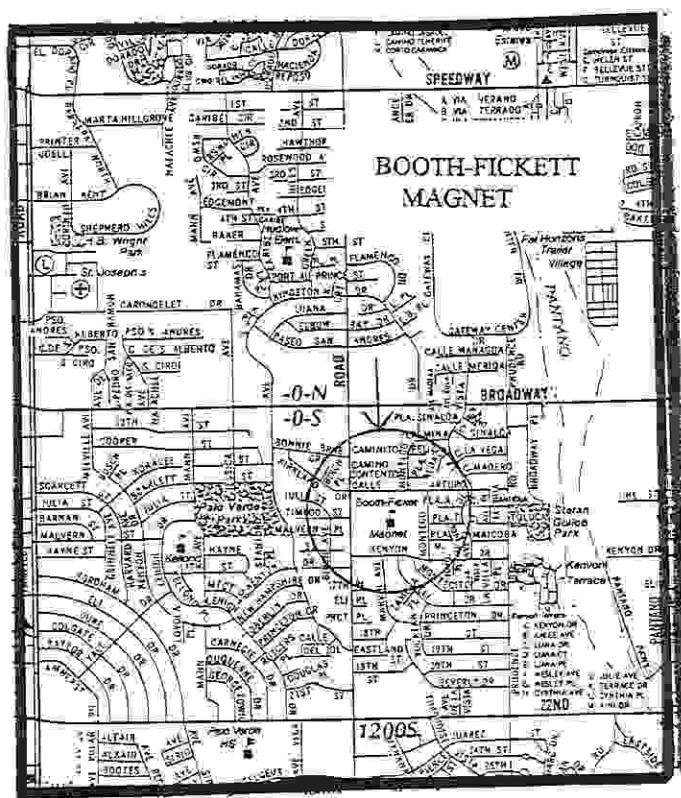
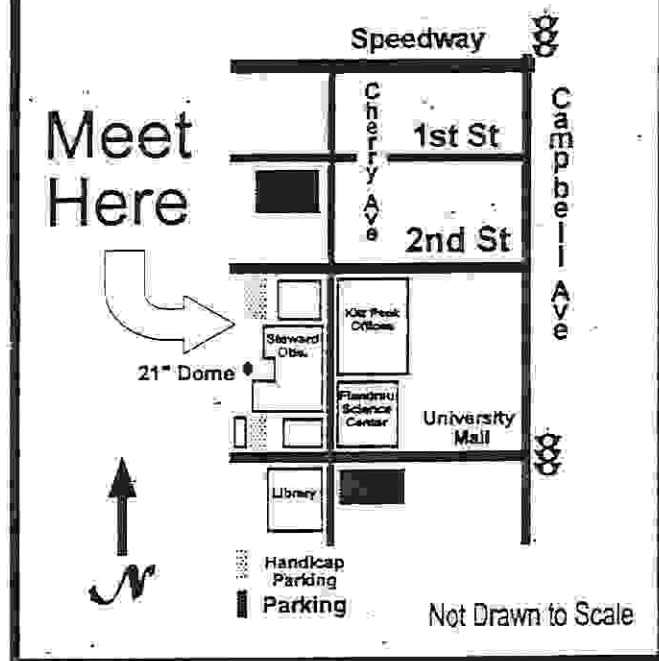
The new administrative complex for the Fred Lawrence Whipple Observatory is 43 road miles south of Tucson and 38 road miles north of Nogales, Arizona.

From Tucson, drive south on Interstate 19 to exit 56 (Canoa). At the bottom of the exit ramp, turn left and drive under the freeway to the frontage road on the east side. Turn right and drive south three miles to Elephant Head Road. Turn left and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).

From Nogales, drive north on Interstate 19 to exit 48 (Amado/Anivaca Junction). At the end of the exit ramp, turn right and then left onto the frontage road. Drive north for about two miles to Elephant Head Road. Turn right and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).



Map to Meeting Location



Notes From Other Clubs

Project ASTRO News

By SUZANNE JACOBY

Activities for Year One Project ASTRO participants continue while recruitment is underway for our second year. One Tucson classroom recently measured the circumference of the Earth by measuring the length of shadows. This activity combined the method of Eratosthenes with the Internet, which was used to access similar measurements taken by students in other parts of the world.

About 50 guests, including Comet Hale-Bopp, took part in the Project ASTRO Star Party at the Desert Museum held on March 14th. We'd like to thank those TAAA members who came with telescopes: John Kalas, Terri Lappin, Jeff Brydges, Bill Ball, Bob Gent, Andy Keefer, and Ed & Peggy Rowe. The next ASTRO event takes place May 3rd, when participants will enjoy a night of stargazing and dinner as guests of the Kitt Peak Nightly Observing Program.

Applications from both teachers and astronomers interested in participating in next year's program must be returned by April 15th. Applications will be available at the April TAAA meeting or by contacting Ginny Beal at 318-8535. We expect to show a short video produced by the National Project ASTRO staff. The video does a good job of describing the commitment, value, and fun that comes from participating in Project ASTRO.

Suzanne Jacoby
Director, Project ASTRO-Tucson

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Greetings from the WRAL!

(Western Region, Astronomical League)

The Board of Directors for the Riverside Telescope Maker's Conference has voted to join the Astronomical League. This is fantastic news, and we look forward to having RTMC as part of the League. With the recent addition of the Prescott Astronomy Club and the Phoenix Astronomical Society, this gives us three new WRAL organizations in the past three months!

We're making great progress with the planning for the Starry Nights Festival (October 24-26, 1997). Yesterday, I received a letter from the Joshua Tree National Park superintendent granting us permission for early reservations and exclusive use of the Blackrock Canyon Campground. Also, Jim Schooler and I have signed our letters of agreement as co-chairs of the festival. Among other activities, David Levy and Richard Berry have both agreed to be guest speakers.

A couple weeks ago, I drove from Tucson to California. I had a very productive meeting with Jim Schooler, the Community Services Director of Yucca Valley, and the co-chair of SNF. Also, I spoke at meeting of the Orange County Astronomers and received a very warm reception. Many OCA members were interested in supporting the League, so I'm looking forward to seeing new members in that area.

The 50th anniversary convention of the Astronomical League is scheduled to be held July 1-6, 1997 at the Copper Mountain Resort in the Colorado Rockies. In addition to field trips to the highest observatory in the world, we'll have many star parties, great speakers, and a 40-inch scope set-up for your viewing pleasure. For additional information, see page 10-11 of the February 1997 issue of "The Reflector" or visit the web page at: <http://www.du.edu/~pryan/alcon97.html>

Comet Hale-Bopp has become a brilliant object in the morning skies. This morning, under the city lights of Tucson, it was an easy naked-eye target displaying a several degree tail. It already rivals the brilliant star, Vega, in intensity. Don't miss a chance to see this wonder of the solar system. It will be thousands of years before it returns again.

Wishing you all clear skies and sending warm regards, Bob Gent,
your WRAL Representative

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Member's Forum

Life on Mars?

By JULIAN GRAJEWSKI

One could say that the putative discovery of ancient life on Mars is redundant because we have already discovered life right here on Earth. Really, we should be talking about the discovery of life in our solar system.

The geometry, spacing, combination of small rocky planets and giant gaseous ones, our own fortuitous moon, protect earth from impacts, maintain its proper tilt, regularizes its rotation and orbital velocity, all essential in nurturing life. I suspect that every other astronomical body in our system contributes, in as yet unknown ways, to the creation, maintenance, and evolution of life. Mars could have been part of a complex "seeding" process; and I wish that J. Kelly Beatty would go beyond trumpeting the "evidence."

Discovery of life on Mars does not imply life on other stellar systems unless such systems are able to replicate our own. It is ironic that the first planets were found orbiting a death dealing pulsar.

I vote for the barrenness of the rest of the universe. Upon observing (through a 17 inch telescope on a dark Arizona site) the immensity of the galaxy M-87, with its thousands of globular clusters, and trillions of stars, and unknown number of planets, my skepticism was challenged. Could nature be so profligate?

My limitation of mortality is that M-87 and billions of like galaxies are vacant, waiting for the human species to fill them with varieties of living things; that is, assuming that our exponentially accelerating technological progress continues unabated. Propelling near infinite numbers of sentient beings at superluminary speeds across the universe. I would not be quick to label this notation "anthropocentric."

GALAXIES IN THE BEAR'S EARS

As the winter stars slowly fall beyond the western horizon this month, they are replaced by the stars of spring. One of the principle constellations of spring is Ursa Major the Great Polar Bear, which appears high overhead during these April evenings. The Milky Way with its gaseous and dusty clouds also moves out of the way so we can peer into deep space to see other Milky Way's. The region of Virgo, Coma, Leo and Ursa Major is full of clusters of galaxies which can be seen with small telescopes.

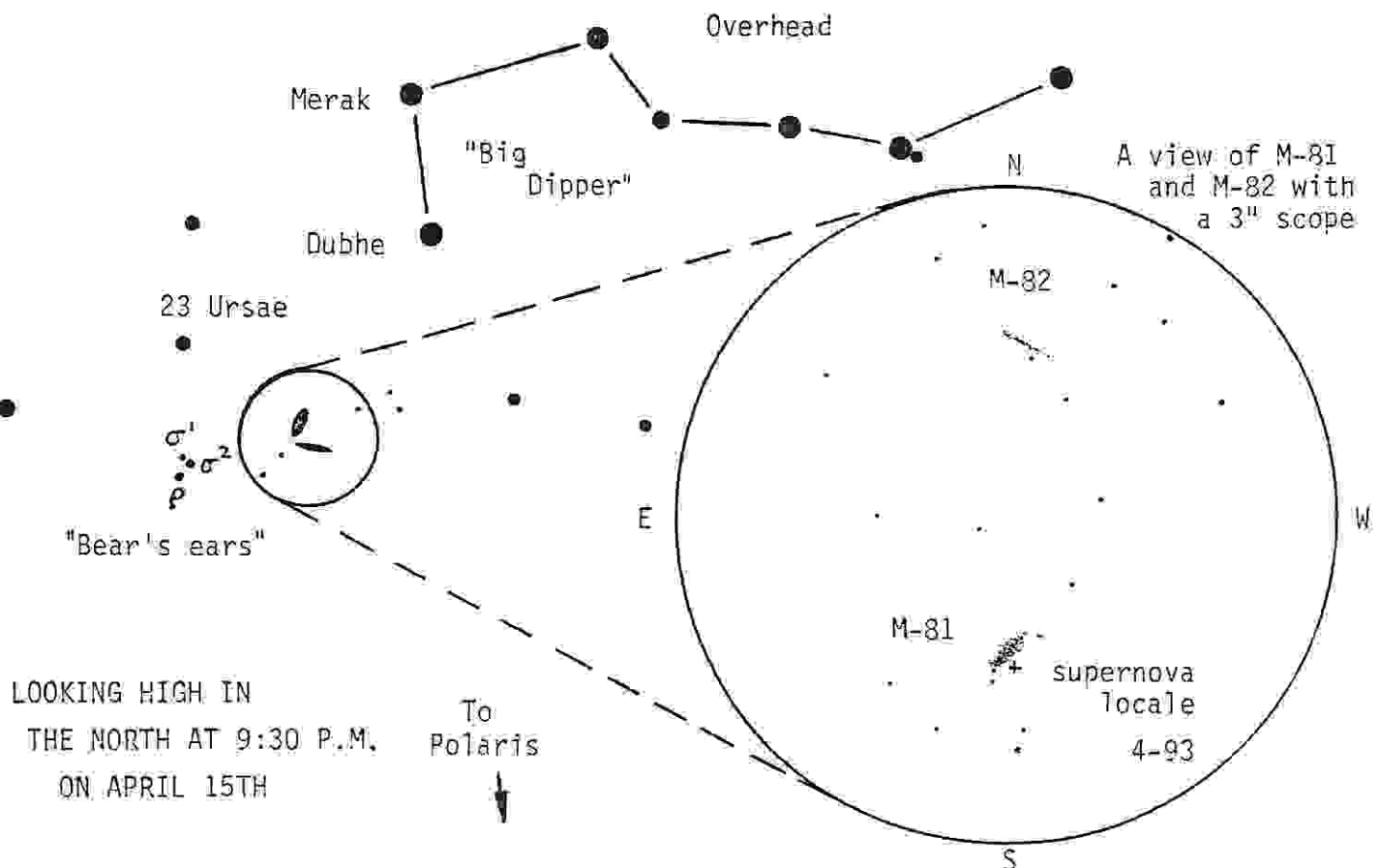
One of these galaxy clusters is the Ursa Major group anchored by Messier 81 and 82. This group contains about a dozen galaxies and is located about 11 million light years from us. Messier 81 is the largest most massive member of this cluster. Messier 81 is a spiral galaxy about 50,000 light years in diameter. In the spring of 1993 this galaxy became the target of attention of earthbound telescopes. During March of that year a supernova exploded and became visible even with small amateur telescopes, flaring up to about 10½ magnitude by late April. I was able to see it for about a week with my 3" telescope. Messier 82 is the other easily visible galaxy of this cluster.

It is located 38' north of M81, making it visible in the same low power telescopic field. M82 is quite different from its neighbor, its an exploding galaxy with some form of cosmic catastrophe occurring in its core. About 5 million solar masses of material is fleeing its central regions.

Both of these galaxies are fairly bright being between 7th and 8th magnitude. They are easily seen in small telescopes, but without much detail. A telescope of at least 10" aperture is needed to see detail in either of these galaxies. Spiral arms become apparent in M81, and patchy structure is visible in M82. To find these galaxies, start at Dubhe, Alpha (α) Ursae, then move westward 10° to 4th magnitude 23 Ursae. Now turn north and go 7° to the small triangle the of stars Rho (ρ), and Sigma^{1,2} (σ) Ursae. From this triangle move 4° east, M81 and M82 should now be visible in your finder telescope if its 6x30mm or larger.

Spring is a good time to peer into the deep black void and search out other star systems that resemble our own Milky Way Galaxy.

By JEFF BRYDGES



TAAA Board of Directors Meeting - March 13, 1997

TAAA Board Meeting Minutes for 13 March 1997:

Members in attendance: Terri Lappin, Gary Rosenbaum, John Kalas, Larry Wilson, John Polacheck, John Zajac.

Call to Order at 7pm

Agenda:

Events/Meetings:

Star Parties

April 2 Marana High School

April 5 Whipple Obs / Smithsonian / Desert Museum remote site

April 9 Booth-Fickett

April 11 Erickson Elem.

April 12 TIMPA

April 14 Davis Bilingual

April Beginner's Lecture: OPEN

April Main Lecture: Lyle Broadfoot

Treasurer's Report for February:

Cash Assets 42,338.11

Fixed Assets 35,734.00

Total Assets 78,072.11

Income 1,164.77

Expenses 556.57

Net Income 608.20

Terri found that the original Land Fund was renamed to the Land and Telescope Fund in 1988 according to a newsletter of the time. There was \$6,598.79 in the fund at that time. Since it is a certainty that we will be spending more on land than was ever donated to just the Land Fund, the board has decided to consider the question of how much is in Land or Telescope to be settled.

Insurance rates are going up, but they didn't say how much (\$428 last year). Motion was made by Polacheck to pay if increase is 20% or less. Seconded by Lappin. Passed unanimously. The Board decided not to host the IDA meeting coffee break this year. Board approved spending \$154 for printing new membership brochures.

March 29 Star Party at Old Tucson: Discussion of details such as parking, crowd control, and getting lights turned off. Terri will meet with OT staff for final arrangements.

Nominating Committee: The committee members are Bob Goff, Bob Cent, and Jim Kessel. The committee is still looking for candidates, especially at least one more for Member-at-Large. Present slate is: Terri Lappin - President, John Kalas - Vice Prez., Dave Harvey - Secretary, Larry Wilson - Treasurer, Bob Goff & Kris Koenig - Members-at-Large.

Summer Star Parties: Pima Library's Summer Program for kids wants to put on 3 star parties this summer. They would also like to have speakers for some talks. We will try to support this request. The Arizona Sonora Desert Museum has also requested dates for star parties.

Constitution: John Zajac proposed several minor wording changes to the TAAA Constitution. A discussion and vote on each was taken. The results will be presented to the membership prior to a ratification vote this spring.

Old Business: The TIMPA site for a near town observatory was discussed. We are trying to answer the questions of power, roads, insurance and flooding problems, and to get a cost estimate before making a formal proposal to the members. We will try to set up a meeting between the two Boards. The recent survey indicated strong support for continuing the effort on this project, but the issue of funding from the Land and Telescope Fund is less clear.

Desert Skies Classified

TRADE: Pro Optic 32mm Plossl eyepiece (1.25" dia) for any similar Plossl eyepiece in the 15mm to 22mm range. Call Frank at (520) 825-5540 or E-mail at fcathell@aol.com for details or questions. (04-97)

FOR SALE: Professional electronic flash, Honeywell 770, very powerful, a guide number for film speed of 25, F80, and flash duration down to 1/50,000 at 18-inches, automatic flash. \$200. Call Gil Friedman at 571-1662. (05-97)

HELP WANTED: Amateur astronomer with interest (and experience if possible) in radio astronomy, to put together and run (at the Vega-Bray Observatory near Benson) a radio telescope. Already have a 10 foot dish, computer and software. Please contact Ed Vega (721-3815 or 747-9323) or Dick West (721-3811 or 762-5972). (07-97)

FOR SALE:

- Coulter 13.1 inch telescope. Dobsonian mount; 2 inch/1 1/4 inch rack and pinion focuser; 2 inch finder. Good optics. \$600.
- Eyepieces - 10.5mm ortho, \$40. 7/8 inch fil. Brandon, \$60. 4mm ortho, University optics, \$40. All in excellent condition.
- Celestron 4" refractor; fluorite objective lens, star diagonal included. Heavy duty mounting. Excellent condition, \$1,500.
- Barlow lens, 2x, \$40.
- Celestron filter set, threaded for celestron 1 1/4 inch eyepieces. Purple, blue, green, lt-yellow, orange, neutral density, \$40.
- 2 inch refractor; 24 inch focal length; can be mounted on camera tripod or used as a guide scope with cross-hair eyepiece. Gives excellent images. Uses .96 inch or 1 1/4 inch eyepieces, \$50. Can supply celestron 11.5mm illuminated cross-hair eyepiece, 1 1/4 o.b. for additional \$25.

Call or contact Duane Niehaus to see or for more information at 797-4189. (7-97)

Your ad will run for 4 months unless otherwise 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.