



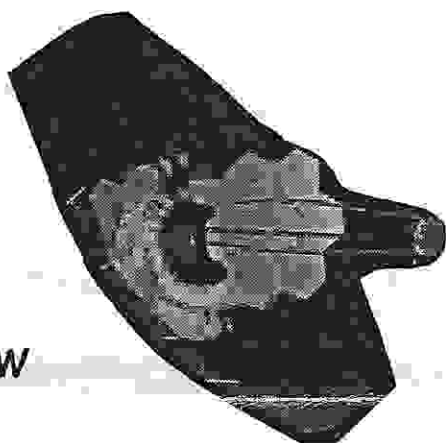
# *Desert Skies*

*Tucson Amateur Astronomy Association*

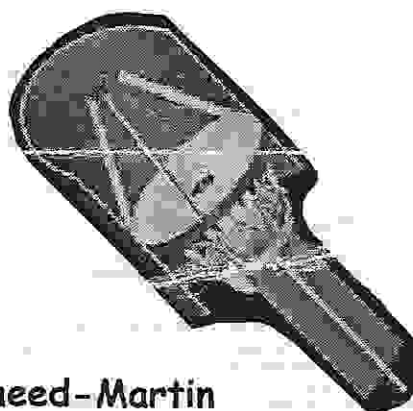
Volume XLIV, Number 4

April, 1998

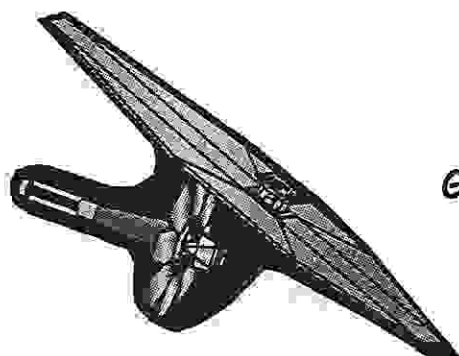
## Three Design Concepts for the Next Generation Space Telescope



TRW



Lockheed-Martin



Goddard Space Flight Center

## Calendar of Events

**BEGINNERS LECTURE:** None this month because it would conflict with the Aaronson Memorial Lecture (see General Meeting below).

**GENERAL MEETING:** Friday, April 3, Refreshments 6:30 pm, Lecture 7:00 pm at the Steward Observatory Auditorium - room N210 in conjunction with the Aaronson Memorial Lecture. The speaker will be Dr. John Mather and the topic will be "Observing the Cosmic Dark Ages with the Next Generation Space Telescope". (see the article "Parking at the April Meeting" under Meeting Information)

**BOARD OF DIRECTORS MEETING:** Thursday, April 9, 7:00 pm at room N305 of Steward Observatory.

### STAR PARTIES & EVENTS:

April 2 - Amphi Middle School

April 4 - Project ASTRO, Desert Museum

April 18 - Annual Picnic/Potluck, Vega-Bray Observatory

April 21 - Boy Scout Troop, Oro Valley

April 23 - Lulu Walker Elementary School

April 25 - Empire Ranch

April 30 - Aqua Caliente Elementary School

**Newsletter Schedule:** Deadline for articles: Monday, April 13. Printing: Tuesday, April 21. Folding Party: Wednesday, April 22. Mailing: Thursday, April 23. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

**Cover:** Design concepts for the Next Generation Space Telescope taken from web site: <http://ngst.gsfc.nasa.gov/>

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

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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.

Send Address Changes to:  
TAAA  
Attention: "ADDRESS CHANGE"  
P.O. Box 41254  
Tucson, AZ 85717

### 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	\$ 24

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

### 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 Word 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  
c/o John Kalas  
3470 W. Red Bird Court  
Tucson, AZ 85745

OR email: [jckalas@aol.com](mailto:jckalas@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. Call the Treasurer if you have any problems.

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

### President's Message

We've had an overwhelming amount of support for our display at the 4th Avenue Street Fair! Lots of members have agreed to help with our booth. So many volunteers have come forward that we are limiting the number of members at our booth. This has a lot to do with the small space the booth occupies.

The March meeting did not go exactly as planned and this was unfortunate. The swap meet activities kind of over shadowed the eyepiece demo. With all the swap meet stuff going on we had a bit of a space problem and ended up not having much area for eyepieces. I thank the four or so members who brought in their eyepieces. We did learn that an occasional swap meet is a good thing but not to schedule other activities at the same time. We'll try the eyepiece demo at another time and will probably have a swap meet more regularly.

This month's lecture is a special occasion. Each year Steward Observatory presents the Marc Aaronson Memorial Award to a deserving professional astronomer. This year's awardee will be giving our April lecture. This event is being organized by Steward Observatory so the start times are a little different. Our meeting will be preempted by the Aaronson Lecture, but at the end of the lecture we will continue the TAAA meeting. Since several members saw the February 26 solar eclipse, we hope

they will bring their best photos of that spectacular event to the April meeting for all of us to see. See the article about our meeting for information about the speaker and the changes in start times for the April 3rd meeting.

You may remember a proposal the TAAA made to Steward Observatory regarding our 30" mirror. About a year ago we asked if we could install our 30" optics into the Steward 40" telescope on Mt. Lemmon. After a delay of about a year, Steward Observatory has asked us to pursue our proposal and come up with a design for the project. I've appointed Gary Rosenbaum to chair this project. Gary works in the Steward Observatory Mountain Operations department and is the best person for the job at hand. He'll be contacting a few people to form a working group to look at the feasibility of this and to do some preliminary design work. There is an article in this newsletter about the proposal.

The nominating committee has been contacting members to find those wanting to hold office. The list of nominees is in this issue. Nominations remain open until the evening of the May election. There's still time to be nominated if you're interested.

See you under clear skies!  
Terri

### Meeting Information

#### Featured Speaker

This month we will have a special lecture! Dr. John Mather, Senior Astrophysicist and Goddard Fellow, from the NASA Goddard Space Flight Center will be presenting a lecture titled "Observing the Cosmic Dark Ages with the Next Generation Space Telescope". The Next Generation Space Telescope is planned as a successor to the Hubble Space Telescope and scheduled for launch in 2007. It would be two to three times as large as the Hubble, but with only a quarter of the mass and cost, and would be optimized for observations of infrared light from the distant universe. Because the expansion of the universe causes the light from distant galaxies to be redshifted from ultraviolet wavelengths into the infrared range, the telescope must also be cooled to a temperature of only 30 to 60 Kelvin (about -400F). Dr. Mather will describe the scientific goals and the technical challenges of building this new observatory. The mission is only possible because of rapid progress in making new lightweight telescope mirrors, including work at the University of Arizona. The mirror will have to be very thin, will have to be segmented and deployed to achieve large aperture, and will have to be

adjusted after it is launched. The telescope will be placed in a distant orbit where it can cool to the required temperature without refrigeration, but will be too far away to be repaired in case of trouble.

We have the Steward Observatory to thank for this special speaker. Steward Observatory presents the Marc Aaronson Memorial Award each year in memory of Marc Aaronson, a professor of Astronomy at the University of Arizona, who died in 1987 while observing at Kitt Peak. The award and accompanying cash prize is presented on a regular basis to an individual or an individual on behalf of a group who, by their passion for research and dedication to excellence, has produced a BODY OF WORK in the PAST TEN YEARS in OBSERVATIONAL astronomy which has resulted in a significant deepening of our understanding of the universe. The lectureship is endowed by donations from Marc's family, friends, colleagues, and the general public.

Dr. Mather is being cited for being a conceiver, organizer, developer and project scientist of the COBE spacecraft, and as principle investigator of the Far Infrared Spectrometer (FIRAS) on COBE. The results of

### Meeting Information (cont.)

FIRAS are that the background radiation is exactly a blackbody, with measured deviations of less than 50 parts-per-million. This is the strongest evidence to date for the hot Big Bang model of the expansion of the Universe. We recognize his exquisite care in the design and understanding of the errors of instruments and observational projects. He is also one of the leaders of the work on the Next Generation Space Telescope.

Dr. Mather is also a member of the National Academy of Sciences, a winner of the Danny Heinemann Prize of the AAS, and a fellow of the American Physical Society. He is the author of a popular-level book about COBE, called "The Very First Light."

### Parking at the April Meeting

Be prepared! The April 3rd meeting takes place during Spring Fling! Parking will be a problem, so arrive early and plan to walk a little. The farther you park from the area around the planetarium, the better your chances are of finding a space. Also, University Mall and part of Cherry Ave will most likely be closed to traffic. The powers that be at Steward Observatory tried unsuccessfully to arrange special parking privileges. They recommend you park north of Steward Observatory where parking is supposed to be free. Parking at the Administration Parking Garage, located on 2nd Street east of Mountain, will cost \$1.

### Club News

#### 4th Avenue Street Fair

by John Kalas

A RESOUNDING SUCCESS!!! The TAAA booth in the 4<sup>th</sup> Ave. Street Fair held Friday, 3/20, through Sunday, 3/22,

was a great activity. Many members volunteered their time to support the effort. Terri Lappin did a fantastic job in setting up the TAAA's three-section display board with "The Sun", "TAAA Activities" and "Light Pollution" as the three topics. The display board was mounted on an 8' long table which was covered with a red tablecloth and matching skirt. TAAA membership brochures and a newsletter sign-up pad were placed on the table. For convenience, we used my old C-8 telescope fitted with a mylar solar filter for viewing the sun. Our fundraiser photos were on display in a poster frame on an easel with the TAAA banner draped from the crossbar. The booth looked very professional. Add a couple of chairs and our 10' x 10' booth was full.

Our booth location could not have been more perfect for solar observing. Despite being only six months past minimum sunspot activity, there were several neat sunspot clusters to observe. The fairgoers who looked through our telescope were thoroughly impressed with the view.

As part of the "deal" for a non-profit organization to get a free booth in the fair, the organization must supply eighteen hours (nine 2 hr. shifts) to help the 4<sup>th</sup> Ave. Merchants Association provide "boothsitters" to relieve the artists or merchants who have commercial booths in the fair. Our "boothsitters" were Ginny Beal, Terri Lappin, Chris Lancaster, Ingrid Saber, Stephenie Albert, Andy Keefer (2 shifts!) and Liz and John Kalas.

The booth was staffed three shifts a day for all three days by member volunteers. Volunteers included; Michael Turner and Liz Kalas who set-up and decorated the booth on Friday morning, David Lunt (2 shifts!), Jim and Joyce Charboneau, Andy Cooper, Glenn Nishimoto, Douglas Smith, Hazel Lawler, Chris Lancaster, Pete Lowe, Terri Lappin (5 shifts!), Chuck Schroll (3 shifts!), Randy Quiroz and Gary Rosenbaum. Randy brought a prominence filter on Sunday afternoon, compliments of Stellar Vision, but the high clouds made it impossible to see the faint, wispy flares on the edge of the sun.

The weather was generally very good with some heavier clouds interfering with solar viewing only slightly on Friday afternoon. Thank goodness for 30 SPF sunblock! Photo sales were a little less than we had hoped for but, everything considered, the event was a resounding success. The TAAA will surely gain many new members from participation in the fair. As activity chairperson, I would like to express my appreciation to all who volunteered and made this activity a great team success. Many people who did not know the TAAA even existed are now aware of our quality organization.

### Nominations

A formal report from the Nominating Committee was not received as of press time. The following people have volunteered to run for office so far:

President - John Kalas  
 Vice Pres. - Andy Cooper  
 Treasurer - Terri Lappin  
 Secretary - Ingrid Saber  
 Member-at-Large - Dave Reynolds  
                                     John Zajac  
                                     Bill Lofquist

**Club News (cont.)****30" Mirror Update**

by Gary Rosenbaum

The proposal, which Terri and I submitted to Steward Observatory on behalf of the TAAA, to install the 30" optics in the Mt. Lemmon 40" telescope has been accepted by Steward and the TAAA has been asked to proceed. The TAAA has been given an opportunity to put our 30" optics to use.

The 40" telescope is located at the U of A Mt. Lemmon Observatory in the Santa Catalina mountains at an elevation of 9200 feet. The observatory complex is fenced and the Mt. Lemmon supervisor lives on the site providing security. The 40" optics were designed for infrared use and are not of the high quality required for optical use. Don McCarthy's Astronomy Camp is the primary user of the 40" and is using the telescope with the primary mirror stopped down to an aperture of 30" to improve the optical quality. The TAAA would share time on the telescope with the Camp and other possible users.

The 40" telescope has a cross axis mount so we will probably be using the 30" in a classical Cassegrain design. Some work will be involved to design and fabricate a mirror cell for the 30" primary, finish the optical figuring of the primary, make a cassegrain secondary mirror and holder, make adapters to attach our mirror cells to the 40" tube, make spacers for the secondary ring assembly, counterbalance the tube etc. For a minimum expenditure of time and money, TAAA members will have access to using a 30" telescope while giving the club the time necessary to raise the funds needed to purchase land, develop a site, build an observatory and telescope. Most of the parts required for this project will be useable in the 30" telescope at our future TAAA site.

**Vote on Financial Committee Recommendations**

A vote of the general membership is planned for the May meeting to decide how to invest money currently in the TAAA Land and Telescope Fund. As of this writing the TAAA Board of Directors has not taken a final vote on recommendations from the Financial Committee so details can not be given here, but the board hopes to make a decision at the April Board meeting regarding this issue. We should have details in the May issue of Desert Skies and there will be a short presentation and opportunity for questions at the May meeting prior to taking the vote. We hope to make this as painless as possible considering how remotely connected to astronomy the issue is. If you have concerns you wish to voice, you are encouraged to attend the April Board of Directors meeting on April 9th in the Steward Observatory meeting room N305, beginning at 7pm.

**Solar Eclipse Photos**

If you saw the eclipse last February please bring your photos for all to see. You can show both slides and prints. We are planning an eclipse review at the April 3rd meeting following the Aaronson Lecture.

**Grand Canyon Star Party****13-20 June, 1998****North and South Rims**

I hope you are finalizing your plans for attending this, the ninth Grand Canyon Star Party. As usual, the Park Service is providing us with 16 campsites, for which I have been taking names since March 1 for those who will be joining us for the full week. There are still a few spots left and if you want one, but can't stay the entire time, I will take names starting April 15th for partial week stays. Of course, you can also make your own reservations by calling DESTINET at 1-800-365-2267, also after April 15th. If you are not up to camping, time is running very short for a motel reservation, but call me and I can provide you with some numbers. Call also if you have any questions about the star party at all. Dean - 293-2855.

**Telescope Needs a Mount**

The TAAA has a 6" f/8 Newtonian telescope Duane Niehaus assembled some time ago. We're looking for someone to build a mount for it. A basic Dobsonian mount would be just fine. This telescope could be loaned to a member or it could be used by the Project ASTRO partners as a teaching tool. If someone would like to help us out, let Terri know. The cost of materials will be reimbursed.

**TAAA Library**

We have recently been given a few books and videos to add to our library. The library is located at Steward Observatory. With a little notice we can get into the room and open the library up for members to look through the books. If you wish to see what's in the library, talk to Terri a few days before the meeting and arrangements can be made to get the proper keys. We are still looking for someone to catalog our books and set up a proper check out procedure. Talk to a board member if you want to donate books (recent publications please) or a little time to organizing the library.

### Club News (cont.)

#### From the Mailbag

Here are some things that recently landed in our PO Box. These items will be at the next meeting, so ask Terri about anything that catches your eye. Mention of an item does not indicate an endorsement by the TAAA.

#### \* Trips

- Riverside Telescope Makers Conference information
- Texas Star Party

#### \* Miscellaneous

- Greeting cards with astronomical paintings

#### \* Reports

- Minutes from the recent meeting of the Sonoita Valley Planning Partnership.

#### \* Catalogs

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

#### \* Newsletters

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

### Dark Skies for April 1998

**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

Tu/We 31/ 1	23:00 - 4:50	Sa/Su 11/12	Full Moon	Tu/We 21/22	20:25 - 3:16
We/Th 1/ 2	0:00 - 4:48	Su/Mo 12/13	- - -	We/Th 22/23	20:26 - 3:58
Th/Fr 2/ 3	0:56 - 4:47	Mo/Tu 13/14	20:18 - 20:37	Th/Fr 23/24	20:27 - 4:17
Fr/Sa 3/ 4	1:47 - 4:45	Tu/We 14/15	20:18 - 21:31	Fr/Sa 24/25	20:28 - 4:16
Sa/Su 4/ 5	2:33 - 4:44	We/Th 15/16	20:19 - 22:24	Sa/Su 25/26	20:29 - 4:15
Su/Mo 5/ 6	3:14 - 4:43	Th/Fr 16/17	20:20 - 23:17	Su/Mo 26/27	20:30 - 4:14
Mo/Tu 6/ 7	3:51 - 4:41	Fr/Sa 17/18	20:21 - 0:09	Mo/Tu 27/28	20:40 - 4:12
Tu/We 7/ 8	4:26 - 4:40	Sa/Su 18/19	20:22 - 0:59	Tu/We 28/29	21:45 - 4:11
We/Th 8/ 9	- - -	Su/Mo 19/20	20:23 - 1:47	We/Th 29/30	22:45 - 4:10
Th/Fr 9/10	- - -	Mo/Tu 20/21	20:24 - 2:32	Th/Fr 30/ 1	23:40 - 4:08
Fr/Sa 10/11	- - -			Fr/Sa 1/ 2	0:29 - 4:07

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Rise Vi	Rise Vi	Set Vi	Rise Vi	Set Vi	Vi=Visibility
4/ 5	18:44	6:05	6:00 -	3:58 -3	19:24 -	4:46 1	19:14 -	-3 brilliant
11/12	18:49	5:57	5:26 -	3:54 -3	19:22 -	4:23 1	18:51 -	0 conspicuous
18/19	18:54	5:48	4:59 9	3:49 -3	19:19 -	4:00 0	Rise -	3 moderate
25/26	18:59	5:41	4:41 6	3:44 -3	19:16 -	3:36 -1	5:19 -	6 naked eye limit
2/ 3	19:04	5:34	4:30 6	3:39 -2	19:13 -	3:12 -1	4:54 9	9 binoculars limit

By Erich Karkoschka

### Star Parties & Events

#### Amphi Middle School April 2 (Thursday)

About fifty 8<sup>th</sup> graders and their families will be attending this star party. Six (6) scopes will be required. The school is located at 315 E. Prince Rd. (corner of 1<sup>st</sup> Ave. and Prince). Set-up at 6:30 pm, viewing at 7:00 pm.

#### Project ASTRO Star Party, Desert Museum April 4 (Saturday)

About six to eight scopes will be needed for this end-of-year celebration for Project ASTRO. A pot luck dinner will be served at 6:00 pm at the Desert Museum's Education building followed by a slide presentation and then observing.

**Star Parties & Events (cont.)****TAAA Annual Picnic/Pot Luck,  
Vega-Bray Observatory  
April 18 (Saturday)**

Ed and Pat Vega have again graciously offered Vega-Bray Observatory and the Skywatchers Inn for our big annual TAAA family outing. Vega-Bray Observatory is located in Benson, AZ just a short drive south of the interstate. A map is in this newsletter.

Ed and Pat are providing the drinks and the BBQ grills. Bring your own item for grilling and something to share. Bring all your own utensils. Bring a camping table or card table and chairs if you have them. Don't forget the telescope! There are many telescopes at the observatory for us to look through. There are also indoor things for scientifically inquisitive kids to do; including a big screen TV and educational videos about science to watch. If you have not been to the Vega-Bray Observatory you're in for a surprise! Its fantastic!

Arrive as early as 4pm. There's plenty to do before it gets dark. There's fishing at the pond (catch and release only). Its close to the San Pedro River (bring some bug repellent) which is an excellent place to go birdwatching.

Ed asks us to park below the observatory in the large cleared area. Those needing to, can drive up the hill and unload, but then move your vehicle to the lower parking area. There used to be lots of room on the hill but with all the expansion going on at the Inn, space is at a premium!

**Boy Scout Troop  
Oro Valley  
April 21 (Tuesday)**

This is a reschedule from February. We need 2 telescopes for about 20 boy scouts. We also need a SPEAKER for this star party. The star party will take place at Resurrection Lutheran Church. This is located at 11575 N. 1st Ave. in Oro Valley. The star party will be held at the parking lot behind the church. Set up time is at 7:00pm, the talk is at 7:30pm, and observing starts at 8:00pm.

**Lulu Walker Elementary School  
April 23 (Thursday)**

Three or four telescopes are needed for this star party. Walker Elementary is located at 1750 W. Rollercoaster Road, between La Cholla and La Canada. Rollercoaster is just north of River Rd. Set up is at 7pm and observing is at 7:30pm. This is for a 3rd grade class. We've been to this school almost yearly since we began star parties at schools and its always a great one!

**Empire Ranch  
April 25 (Saturday)**

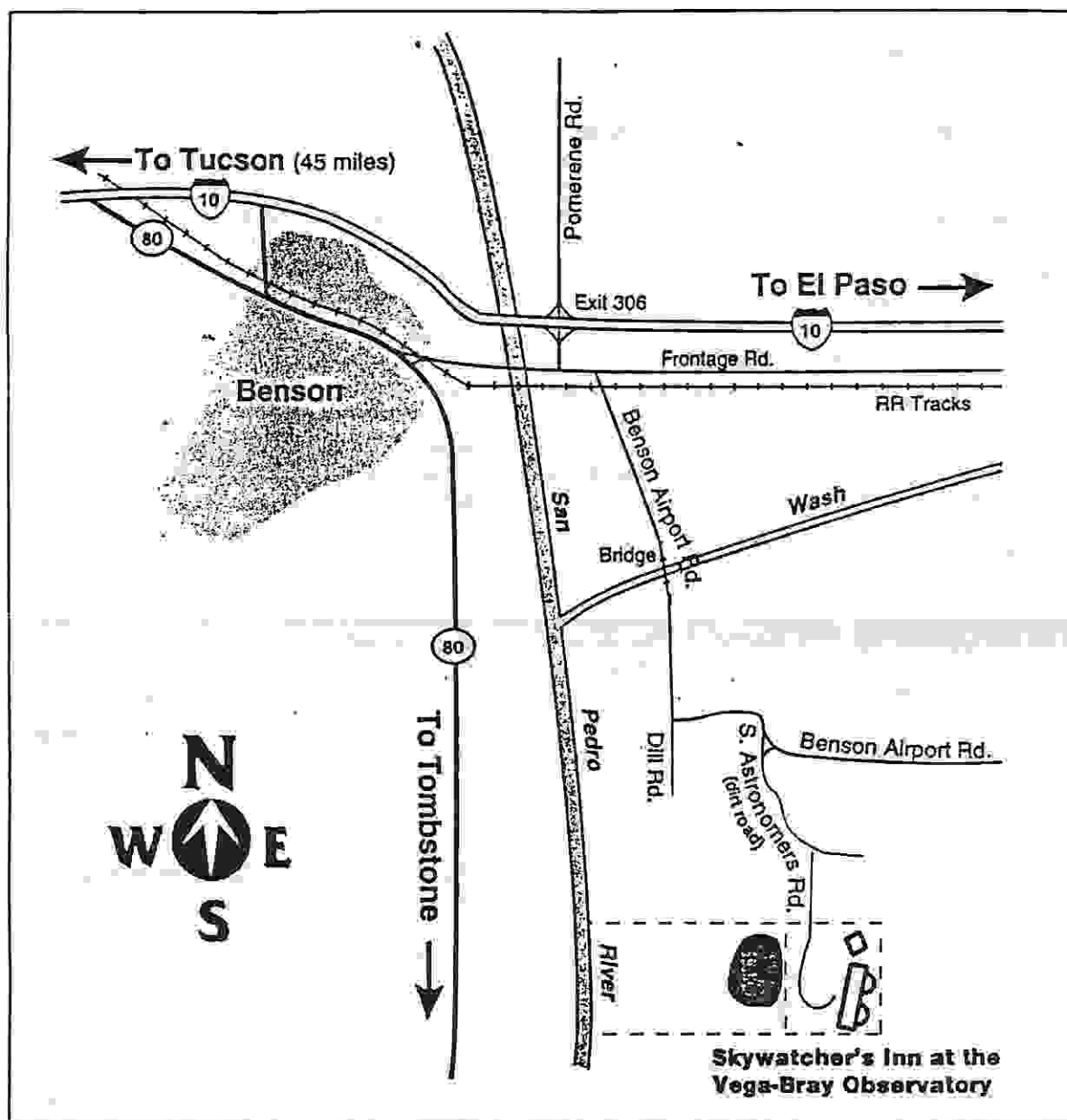
The Empire Ranch has been our normal observing site for quite a number of years. Empire Ranch is at about 4000 feet, so dress warmly and arrive soon after sunset. Stay as long as you like, but let everyone know when you ready to leave. Someone may be taking astrophotos. Bring a telescope if you have one, but you don't have to have one to attend. Most of us are friendly and will let you look through our telescope if you ask. There are no facilities at the site, so be prepared. One nice advantage of belonging to the TAAA is the opportunity to observe among friends. Help in finding an object, or sharing of equipment always goes on at our star parties. If you haven't attend a star party yet, you're missing the best part of belonging to the TAAA. You may remember some recent concerns regarding a mine that was planned for this scenic area. Those plans have been dropped by the Asarco Company so we should continue to have pretty dark skies in the area. Yeah!

**Aqua Caliente Elementary School  
April 30 (Thursday)**

PIZZA! PIZZA! PIZZA! This is a big star party for 200+ kids and parents. They always serve pizza to us so come hungry! We need about 7 telescopes. Set up and the feeding frenzy begins around 6:30pm with observing to begin around 7pm. Aqua Caliente is located at 11420 E. Limberlost which is near Prince Road and the Catalina Highway.

## Maps

## Directions to Skywatcher's Inn and the Vega-Bray Observatory

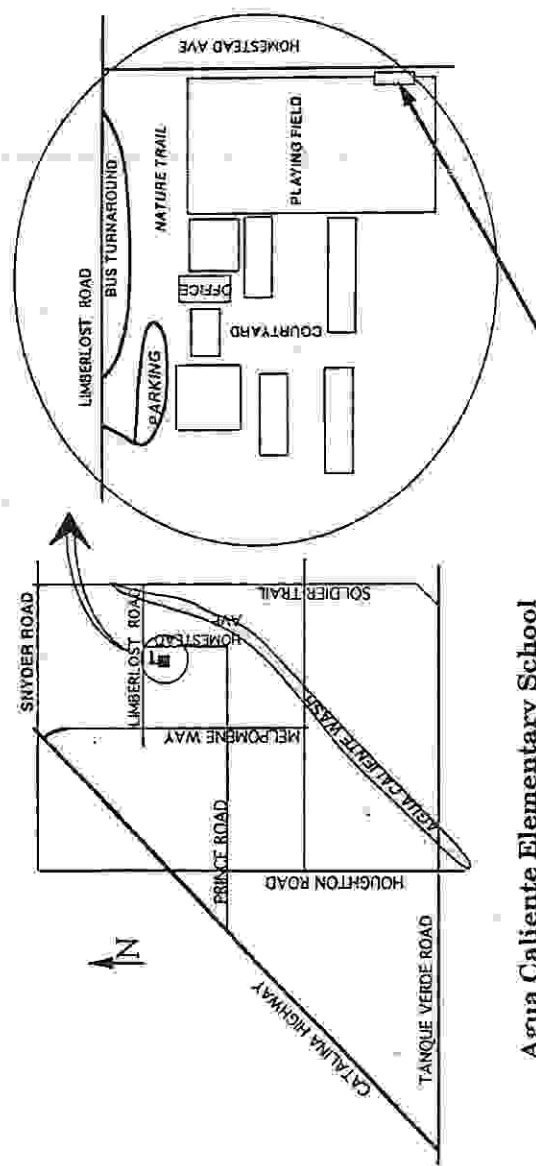
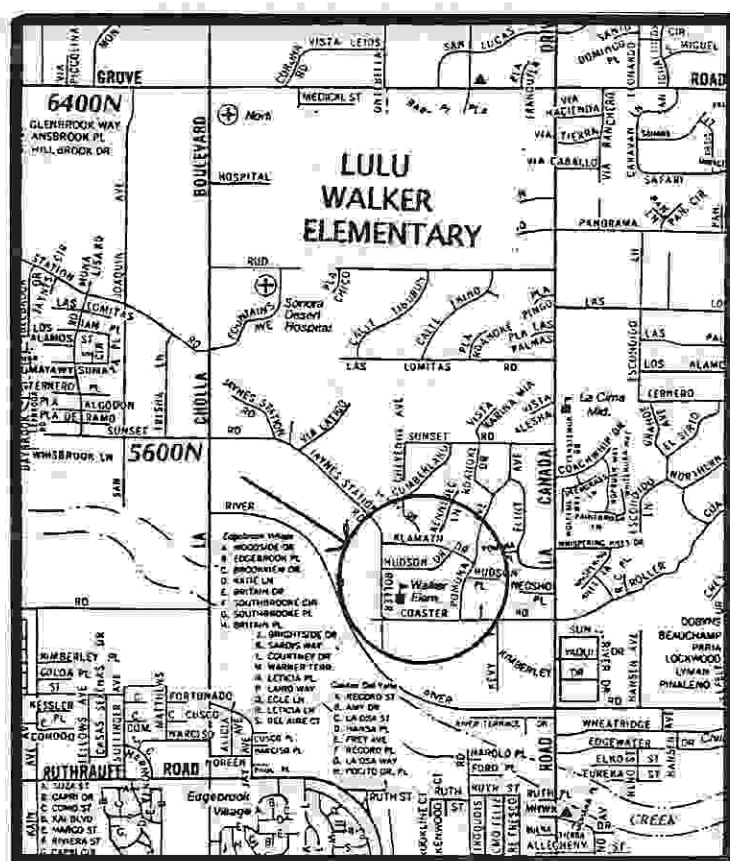
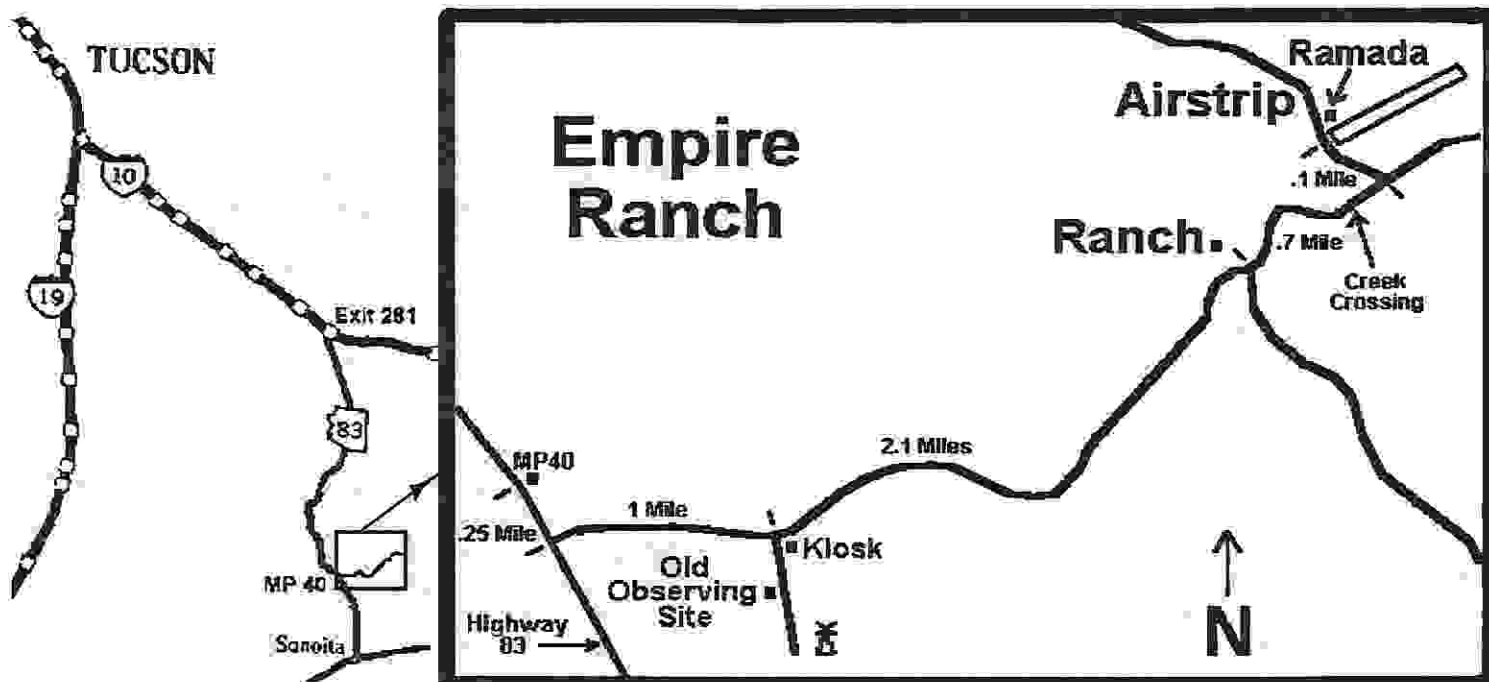


Map not drawn to scale

### From Tucson

Take I-10 east 45 miles to Exit 306, Pomerene Road.  
 South on Pomerene Road to Frontage Road.  
 East on Frontage Road to Benson Airport Road  
 South on Benson Airport Road to South Astronomer's Road.  
 It is 2.2 miles from I-10 to Skywatcher's Inn.

## Empire Ranch



GATE WILL BE UNLOCKED AND OPEN.  
GUESTS WITH TELESCOPES WILL BE  
ALLOWED TO DRIVE ONTO THE FIELD  
TO SET UP.

**Agua Caliente Elementary School  
Star Party**

## Items of Interest

### Steward Observatory Public Evening Series

Steward Observatory has been hosting public evening lectures in astronomy for 70 years. The lectures for the Spring '98 semester will be held on Monday nights at 7:30pm in room N210 of Steward Observatory. Following the talks, there will be opportunities for viewing the night sky (weather permitting) with the use of the 21-inch telescope at the Campus Station of the Observatory operated by undergraduate majors in astronomy and related sciences. All of the lectures and the use of the telescope are free of charge and open to the general public.

- |          |  |
|----------|--|
| April 6  | Dr. William Tifft<br>Galaxies and Three-Dimensional Time   |
| April 20 | Dr. Michael Lesser<br>Digital Imaging for Science and Home |
| May 4    | Dr. Peter Strittmatter<br>A New Golden Age of Astronomy    |

### Project ASTRO Star Party

Project ASTRO partners and their families will head out to the Arizona Sonora Desert Museum for an end-of-year star party Saturday, April 4. A pot luck dinner and slide presentation, followed by observing in the parking lot will make for a full and enjoyable evening. TAA members who participate in the Project ASTRO program or who are supplying telescopes are especially welcomed because of their much appreciated support of Project ASTRO, as well as help with star parties at the Desert Museum. Admission to the Museum will be free from 5 -6 PM to Project ASTRO folks. We will then meet at the Education Building at 6 PM for a pot luck dinner. There will be plenty of food so if you can't bring a dish, come anyway. Please plan to be there for all or part of the evening.

### Summer 1998 Job Opportunity

Assistant Observer at Heron Cove Observatory Heron Cove is a private observatory on Orcas Island in the scenic San Juan Islands (48 deg 36 min N, 122 deg 57 min W). Telescope and instrumentation are more completely described at web site: [www.oitar.com/heroncove](http://www.oitar.com/heroncove). In brief, it has a 21-inch, f/10, Ritchey Chretien telescope in a 12 foot Ash dome. Instrumentation is ST-8 CCD camera (or Photometrics Star-1, or ST-6) and SEIR, K-band, infrared camera built around a Rockwell 256x256, HgCdTe, "PICNIC" array. The telescope, dome and cameras are controlled by four computers from an adjacent control room.

The program is astrometry on recently discovered asteroids and comets using Hubble Guide Star

Catalog; and photometry and infrared radiometry on a variety of objects.

Dr. John A. Jamieson desires assistance mid-May to mid-September in: preparation for observation (planning, collimation and alignment, maintenance, etc.); observation (open and close dome, operation of cameras, real time logging, liquid nitrogen replenishment, etc.); data reduction (determination of plate scales, validation of calibration, application to image sequences, etc.). Experience in 1997 was 44 nights observing in May through September.

He offers transportation (airfare, limousine and ferry) to Orcas and return; room and board; modest stipend (about \$5.00/hr. when working, i.e. about half the time); and the experience which others have found interesting. The San Juans offer kayaking, bicycling, sailing in renowned vacation area to occupy the other half time, or chaise lounge time, if preferred.

Necessary qualifications: a serious interest in astronomy; enthusiasm; congenial nature; willingness to follow procedures conscientiously and patiently and to document results; readiness to go cheerfully up and down stairs to the dome when it is necessary; willingness to live the life (awake all night on clear nights, sleep in the morning and nap in the late afternoon). Desirable qualifications: skill with application of computers and software; moderate mathematics (spherical trigonometry, vector analysis, differential equations), moderate physics (optical and infrared).

Call (520) 326-7747 or FAX (520) 881-1996 or e-mail: [jamiesonse@aol.com](mailto:jamiesonse@aol.com)

### SOUTHERN ARIZONA SECTION OF THE INTERNATIONAL DARK SKIES ASSOCIATION (SA-IDA)

We meet the second Wednesday of each month at the offices of IDA (3225 N. First Avenue, west side of the street, just south of the Map and Flag store). The office is inside the courtyard. Park in the back. If you are interested in local light pollution issues, please attend our meetings. You do not need to be a formal member to attend or participate. The next meetings of SA-IDA are on April 8th, May 13th and June 10th, at 5.30 PM.

SOS!! (Save Our Skies!!); ONLY WITH YOUR HELP, YOUR INPUT AND IDEAS AND THE ACTIVE PARTICIPATION OF MANY OF YOU CAN WE HOPE TO PUT A LID ON LIGHT POLLUTION !!

For more information call Ed Vega at 745-2390 (or during working hours at 721-3815).

**TAAA Board of Directors Meeting - March 12, 1998**

The TAAA Board of Directors met March 12, 1998 at 7:00 p.m.

Officers/Members in Attendance: Terri Lappin, Gary Rosenbaum, John Kalas, Larry Wilson, Dave Reynolds, Bob Goff, Ingrid Saber, Bob Schwartz and Karen Davenport (A.G. Edwards)

A.G. Edwards representative, Karen Davenport, gave a presentation on investment options, at the request of the Financial Committee. EDITOR'S NOTE: A follow-up meeting has been called for March 26, 1998 at Bob Goff's business, AXE at 7:00 p.m.

The Fourth Avenue Street Fair plans were firmed up, with the exception of having a telescope with sun filter still an outstanding issue.

Larry Wilson presented the Treasurer's report. Also discussed was access to the Treasurer's records in the Treasurer's absence, primarily fund balances and the TAAA checkbook. This will be addressed in the TAAA handbook, currently in development.

Terri Lappin announced that Steward Observatory at Mount Lemmon has accepted the TAAA proposal to install our 30-inch mirror in the 40-inch telescope. Gary Rosenbaum is the TAAA contact for this project, as he is the Steward Observatory contact also. Gary wants to visit the 40-inch telescope soon, accompanied by the 30-inch design crew to verify the feasibility of the job and outline the tasks at hand. This task to retrofit our mirror into the 40-inch telescope is expected to take about one year to complete.

The Empire Ranch Star Party for April will be April 25. Hope to see you there!!!

The TAAA still needs a librarian. The library needs to be inventoried and a book check-out system needs to be established.

The meeting was adjourned at 9:30 p.m.

Respectfully submitted,  
Dave Reynolds  
Member-at-Large

**Desert Skies Classified**

**FOR SALE:** Classical 6 inch dia. f8 newtonian reflector, excellent optics, dobsonian mount. \$500. with mount. If interested, will consider selling tube assembly separately. Call Duane Niehaus at 797-4189. (5/98)

**FOR SALE:** New 3 inch dia. Unitron refractor with alt-azimuth mount, tripod, leg brace, 8x30mm finder, three 1-1/4 in. eyepieces (40mm = 30 power, 18mm = 67 power and 9mm = 133 power) and 1-1/4 in. star diagonal. Call Jeff Brydges at 888-0591. (5/98)

**FOR SALE:** Meade 90mm refractor, alt-azimuth mount, aluminum tripod, 10mm Orion Explorer II eyepiece. \$425. Call Chris Lancaster at 750-9463 or e-mail: [clancaster1@compuserve.com](mailto:clancaster1@compuserve.com) (6/98)

**WANTED:** 6mm or 7mm .965" dia. eyepiece. Call Gilbert Friedman at 571-1662. (6/98)

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 John Kalas at 620-6502 or email at [jckalas@aol.com](mailto:jckalas@aol.com).