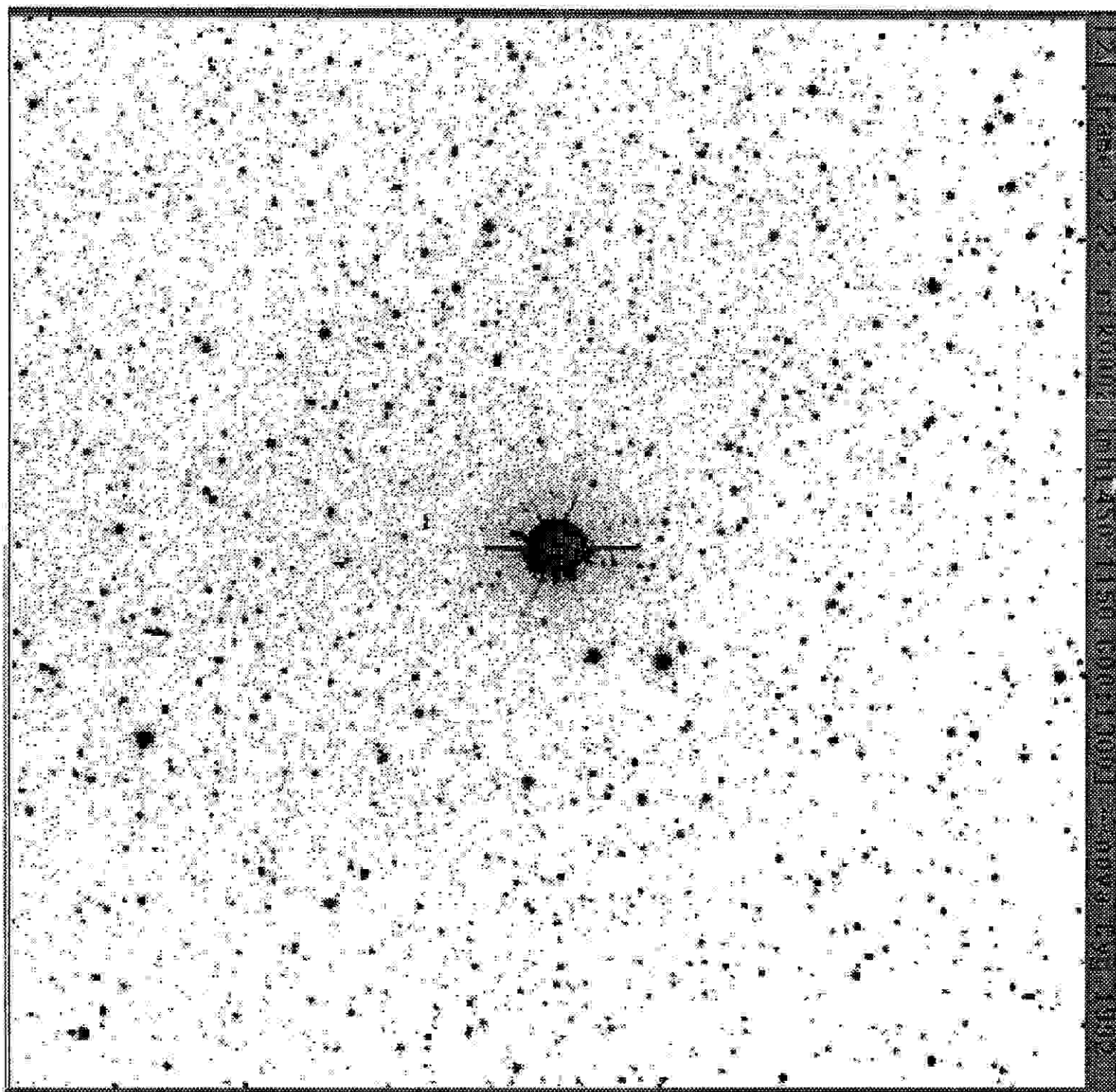


# Desert Skies

MARCH 1992

Nova Cygni (Rik Hill)





**GENERAL MEETING** - Friday, March 6, 7:30 P.M. - Dean Ketelsen, of UA Optical Sciences Dept. and TAAA president, will present a talk on News at the UA Mirror Lab.

**EXECUTIVE MEETING** -Thursday, March 12, 7:30 P.M. at Flandrau Planetarium.

**30" TELESCOPE DESIGN, LAND AND FUNDRAISING MEETING** - Wednesday, March 18, 7:30 P.M. at the home of Duane and Sharon Niehaus\*.

**STAR PARTIES** - Saturday, March 21 - Arivaca Star Party at new site\*

Saturday, March 28 - Star Party at the home of Vivian Lewis\*

Saturday, April 4 - Star Party with Sagauo Astronomy Club at Sentinel, Arizona (For more information call Terri Lappin)

\* see map inside this newsletter

#### UPCOMING MEETINGS !

April: Steve Larson of Lunar & Planetary Lab. will be the speaker.

\* Best wishes to Bob Goff who is going in for surgery Wed., March 4.  
GET WELL SOON!!!

#### TAAA EXECUTIVE

|                   |                |          |
|-------------------|----------------|----------|
| President         | Dean Ketelson  | 293-2855 |
| Vice-President    | Terri Lappin   | 579-0185 |
| Executive Sec.    | Dick West      | 574-0830 |
| Recording Sec.    | Sharon Niehaus | 299-7328 |
| Treasurer         | Sharon Niehaus | 299-7328 |
| Member-at-Large   | Bob Goff       | 790-1452 |
| Member-at-Large   | Ed Vega        | 747-9323 |
| Chief Observer    | Andy Meyer     | 742-4549 |
| Membership Coord. | Terri Lappin   | 579-0185 |
| Past President    | Tim Hunter     | 299-2972 |
| Desert Skies ed.  | Dolores Hill   | 325-9820 |
| Asst. ed.         | Rik Hill       | 325-9820 |

#### 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:

Dolores Hill, Desert Skies

4632 E. 14th St., Tucson, AZ 85711

or Lunar & Planetary Lab, UA campus mail

Send **ADDRESS CHANGES** to:

TAAA

Attention: "address change"

P.O.Box 41254

Tucson, AZ 85717

#### MEMBERSHIP IN THE TAAA

|                          |         |
|--------------------------|---------|
| Individual Membership    | \$20.00 |
| Family Membership        | \$25.00 |
| Senior Citizen (over 60) | \$18.00 |

Sky & Telescope subscription (optional) \$18.00

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 \$18 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.

**\* All articles, announcements, news etc. must be submitted by the 20th of the month.**

\*\*\*\*\*  
**ITEMS WANTED OR FOR SALE**..... If YOU have placed an ad and sell the item(s) or no longer wish to run it, please call Dolores or Rik Hill at 325-9820 (home) or 621-6951(work). Otherwise the ad will continue to appear. Thanks. -ed.

**FOR SALE:** Celestron C-8 tripod, wedge, and fork with aftermarket 7" alloy worm gear and two declination drives, one belt and one direct drive...\$150.00. Call Dan Knauss at 881-2639.

**FOR SALE:** Estey (Vermont) antique pump organ, 11 stops, all notes work fine, delightful sound... \$995. Contact Stephen B. Smith at (602) 456-9440 or Box 5056, Huachuca City, AZ. 85616.

**FOR SALE:** Small diagonal for Newtonian telescope; 20th wave, 7/8" minor axis, custom made; OR WILL TRADE FOR 1 1/4" diameter eyepiece with 16-18mm focal length. Call Gilbert Friedman at 571-1662.

**SERVICE:** Newtonian telescope mirrors tested FREE for club members by Bob Goff (call 790-1452).

**NEEDED:** Donations of astronomy magazines to give away at star parties along with the TAAA brochure.

**FOR SALE:** CELESTRON binocular viewer (mint condition, like new, used only once); TELEVUE 2" star diagonal (excellent condition) with 1 1/4" adapter and Schmidt-Cass. adapter. Call John Zajac at 299-3203 (answering machine is always on).

**WILL TRADE:** 4.8mm NAGLER eyepiece (excellent condition) and additional cash for 7mm Nagler eyepiece. Call John Zajac at 299-3203 (answering machine is always on).

**FOR SALE:** 6" Dynamax without tripod- legs screw in, 2 diagonals, 1 porro prism, 9mm, 13mm, 30mm eyepieces, camera adapter....\$500. Contact Robert L. Smith 14025 Penny Lane, Casa Grande, AZ. 85222.

**FOR SALE:** 65mm refractor with equatorial mount (no motor), manual slow motion controls, carry case, 4 eyepieces, approx. 30 yrs. old.....good for beginner.\$65. Call Virginia Breckenridge at 298-3586.

**FOR SALE:** NEW (never used) 13mm Plossl TeleVue eyepiece...\$80; two Celestron polarizing filters, 67mm dia. @ \$10.00; 10 rolls of Ektapress print film, 1600 ASA, hi-contrast...\$6/roll or \$25/Propack (5 rolls). (This is the film Mike used for the award-winning photo in the September issue of ASTRONOMY); calymenina trilobites from Morocco...\$10 ea. Call Mike Terenzoni at 577-6857.

**FOR SALE:** ASTRONOMY magazine 1974-1990; missing 7 early issues; 14 yrs. complete, in good condition...\$150. 8 inch Edmund mirror kit...\$40.00. CAVE drive, 1 1/2 inch shaft with housing, only 40 hrs. running time...\$80.00. Call Mike Sweetman evenings at 297-2781.

**FOR SALE:** 2" Rack & pinion Novak focuser with 1 1/4" adapter- mint condition (never used).....\$90.00. Call Ray Wallace at 294-1197.

**FOR SALE:** Yashica 35mm SLR camera/50MM lens...\$150. Call Patrick Craig at 792-4980 (new phone#).

Time Warps



Flying Saucers



Space Stations



Space Dust

Nose Cones

Cosmic Rays

Falling Stars

Lunar Colonies

Moon Landings

Zero Gravity

Meteor Showers

Uncharted Planets

Light Years

Asteroid Belts

Elliptical Orbits



## OBSERVERS REPORT

Star Parties

Regular:

March 21

New Arivaca site  
see map

March 28

Huachuca City Star  
Party, see map

As you may be aware by now there's a nova in northwestern Cygnus, Nova Cygni 1992 (R.A. 20:30:32, Dec. 52° 37'53"). As of February 21 it was magnitude 4.6.

As novae are variable stars of the cataclysmic variety, I thought I'd ask if any of you are interested in learning how to make visual variable star observations? If so, the club is lucky to count a number of dedicated variable star observers among it's ranks. In fact Rik Hill, husband to the editor of this fine periodical, has just been appointed to a chair on the board of the American Association of Variable Star Observers (AAVSO). Congrats Richard! Anyway, I've been in touch with these variable observers and will coordinate an effort to set up a (series of) lecture(s) and observation session(s) for a group of interested club members. The lectures would take place as part of the regular monthly meeting, with the observational "labs" taking place at regularly scheduled star parties. Please call or corner me at the upcoming general meeting so that I can get a feeling for the degree of interest in the club. Who knows, this might be the beginning of a series of "hands-on" topics including astrophotography, photometry, occultations, lunar, planetary & solar observing, comet hunting, sketching at the eyepiece, etc.

Well, its that time of year again; Vivian Lewis has invited all of us to join her family for a night of observing from the dark skies of Huachuca City, the evening of March 28. If you wish you can bring a pot-luck goodie to share but its not absolutely necessary. You might bring a chair however; and definitely bring your scopes. See the map elsewhere in this edition.

Until next month, may transparency and good seeing prevail!

Andrew J. Meyer

### From Bob Goff's Optics Shop...

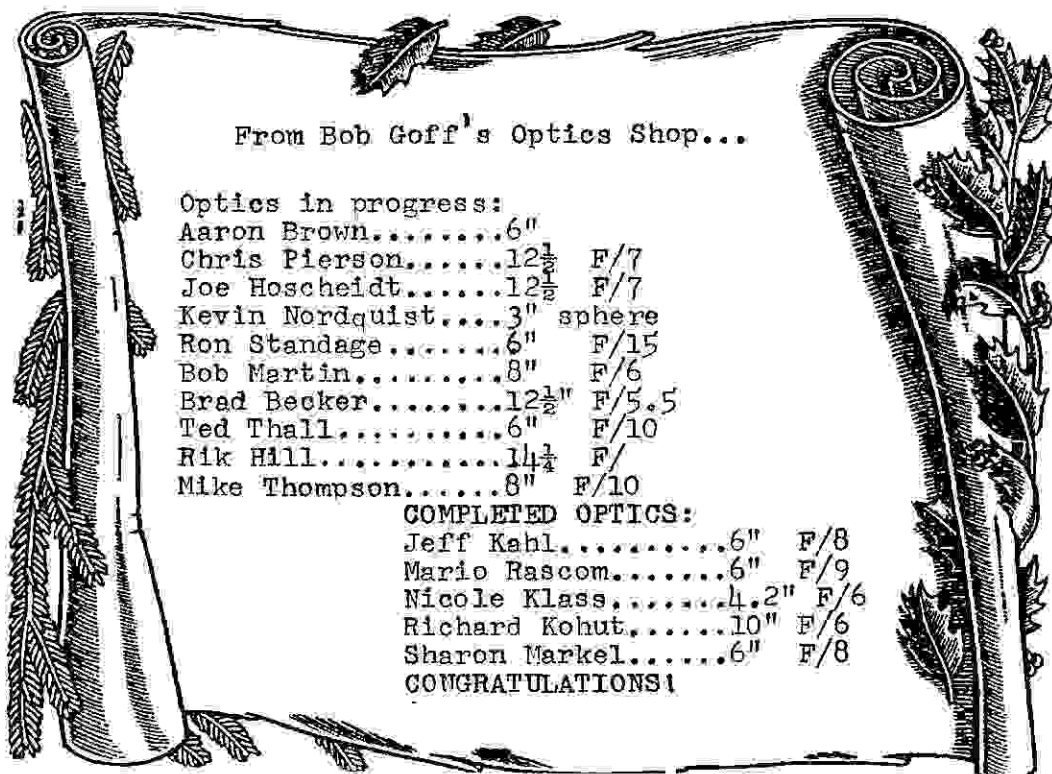
#### Optics in progress:

|                     |                    |        |
|---------------------|--------------------|--------|
| Aaron Brown.....    | 6"                 |        |
| Chris Pierson.....  | 12 $\frac{1}{2}$ " | F/7    |
| Joe Hoscheidt.....  | 12 $\frac{1}{2}$ " | F/7    |
| Kevin Nordquist.... | 3"                 | sphere |
| Ron Standage.....   | 6"                 | F/15   |
| Bob Martin.....     | 8"                 | F/6    |
| Brad Becker.....    | 12 $\frac{1}{2}$ " | F/5.5  |
| Ted Thall.....      | 6"                 | F/10   |
| Rik Hill.....       | 14 $\frac{1}{4}$ " | F/     |
| Mike Thompson.....  | 8"                 | F/10   |

#### COMPLETED OPTICS:

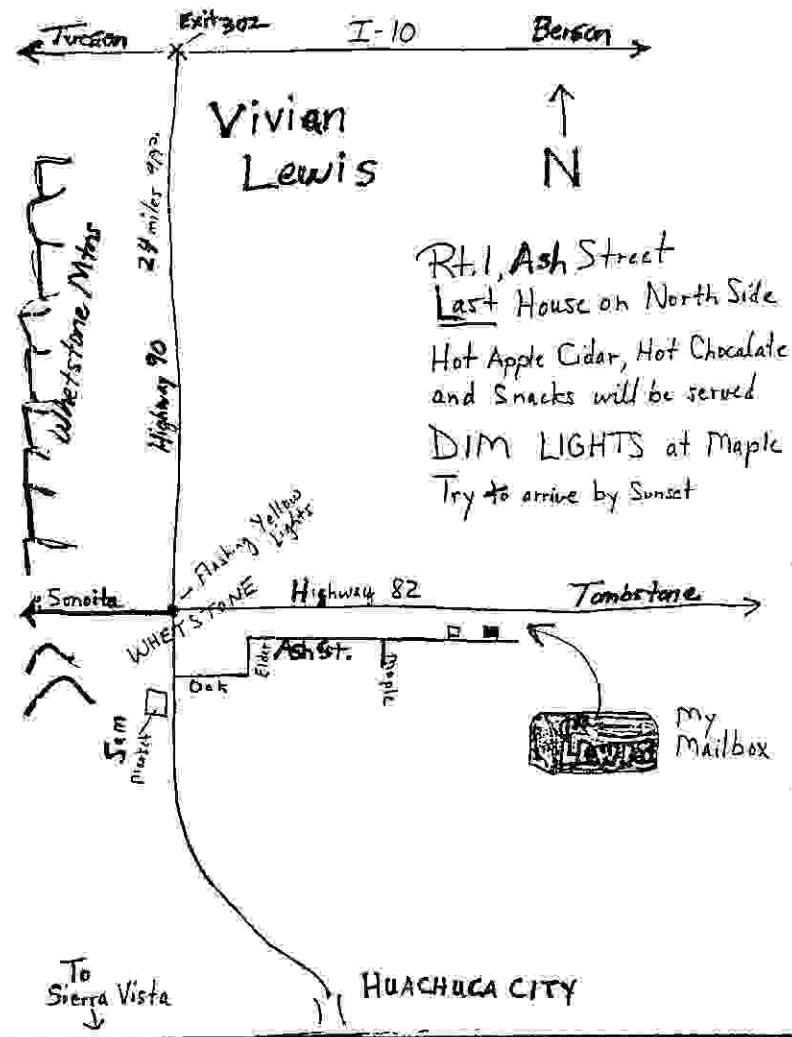
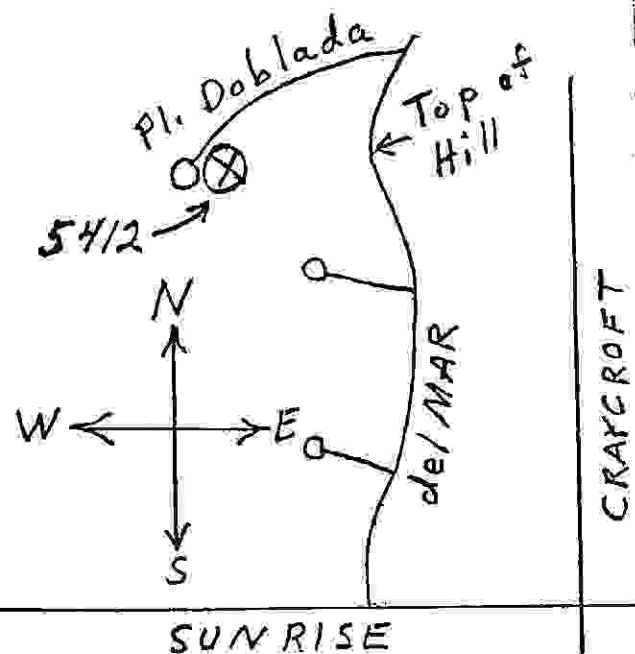
|                    |      |     |
|--------------------|------|-----|
| Jeff Kahl.....     | 6"   | F/8 |
| Mario Rascom.....  | 6"   | F/9 |
| Nicole Klass.....  | 4.2" | F/6 |
| Richard Kohut..... | 10"  | F/6 |
| Sharon Markel..... | 6"   | F/8 |

CONGRATULATIONS!

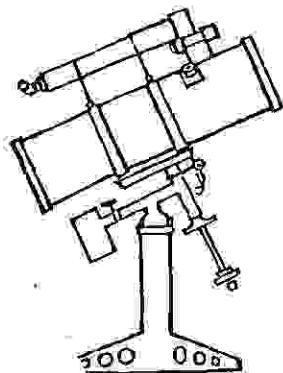
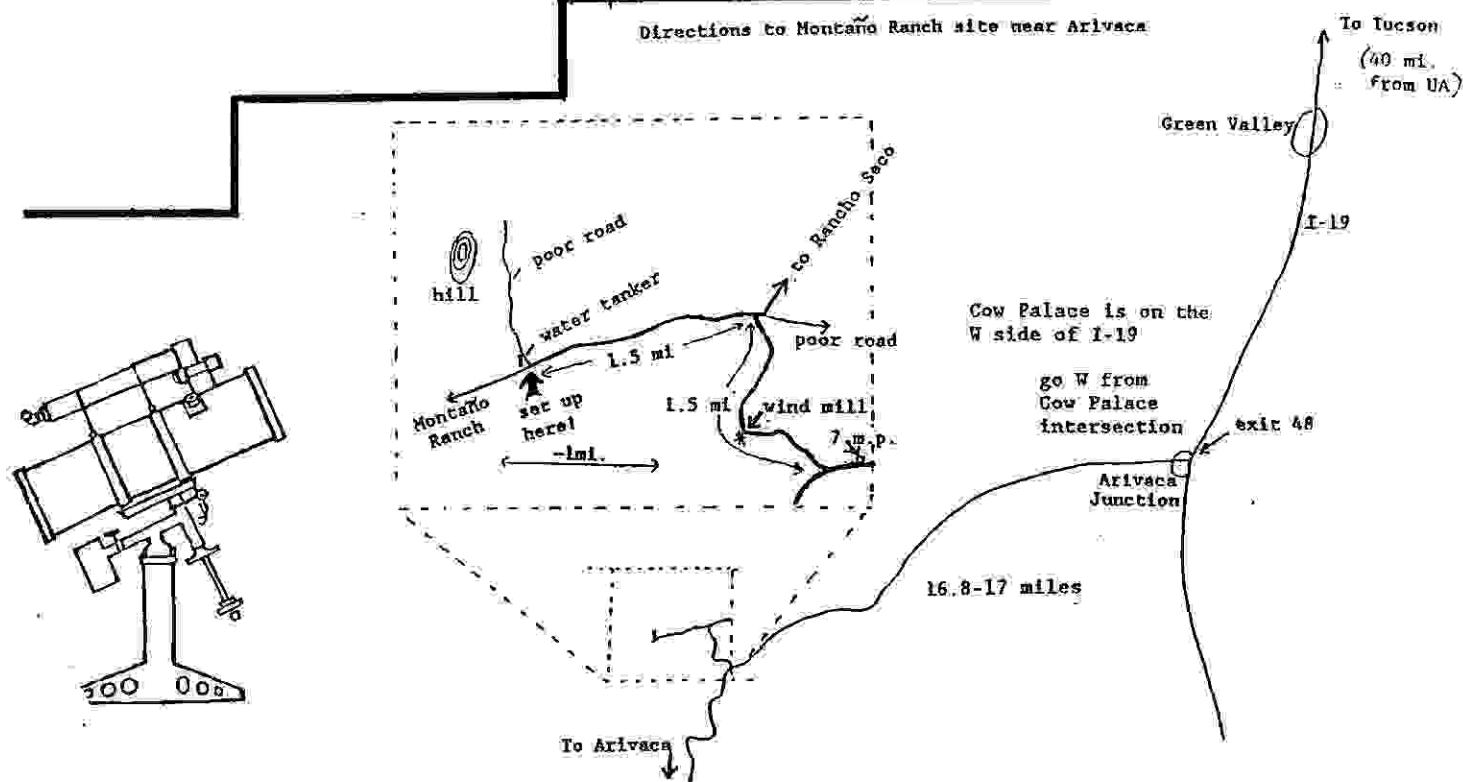


# MAPS

Sharon + Duane  
 Niehaus



Directions to Montano Ranch site near Arivaca





# DARK SKIES for March 1992 (in MST):

Feb 20 11:48 1992 iau.5454 Page 1

|     |      |       |           |         |
|-----|------|-------|-----------|---------|
| S/M | Mar. | 1/2   | 7:43pm -  | 5:28am  |
| M/T | Mar. | 2/3   | 7:44pm -  | 5:26am  |
| T/W | Mar. | 3/4   | 7:45pm -  | 5:25am  |
| W/T | Mar. | 4/5   | 7:46pm -  | 5:24am  |
| T/F | Mar. | 5/6   | 7:47pm -  | 5:23am  |
| F/S | Mar. | 6/7   | 8:45pm -  | 5:22am  |
| S/S | Mar. | 7/8   | 9:44pm -  | 5:20am  |
| S/M | Mar. | 8/9   | 10:46pm - | 5:19am  |
| M/T | Mar. | 9/10  | 11:48pm - | 5:18am  |
| T/W | Mar. | 10/11 | 12:50am - | 5:17am  |
| W/T | Mar. | 11/12 | 1:49am -  | 5:15am  |
| T/F | Mar. | 12/13 | 2:43am -  | 5:14am  |
| F/S | Mar. | 13/14 | 3:31am -  | 5:13am  |
| S/S | Mar. | 14/15 | 4:15am -  | 5:11am  |
| S/M | Mar. | 15/16 | 4:54am -  | 5:10am  |
| M/T | Mar. | 16/17 | none      |         |
| T/W | Mar. | 17/18 | none      |         |
| W/T | Mar. | 18/19 | none      |         |
| T/F | Mar. | 19/20 | 7:57pm -  | 8:02pm  |
| F/S | Mar. | 20/21 | 7:58pm -  | 9:08pm  |
| S/S | Mar. | 21/22 | 7:58pm -  | 10:12pm |
| S/M | Mar. | 22/23 | 7:59pm -  | 11:14pm |
| M/T | Mar. | 23/24 | 8:00pm -  | 12:10am |
| T/W | Mar. | 24/25 | 8:01pm -  | 1:02am  |
| W/T | Mar. | 25/26 | 8:02pm -  | 1:48am  |
| T/F | Mar. | 26/27 | 8:02pm -  | 2:28am  |
| F/S | Mar. | 27/28 | 8:03pm -  | 3:04am  |
| S/S | Mar. | 28/29 | 8:04pm -  | 3:36am  |
| S/M | Mar. | 29/30 | 8:05pm -  | 4:06am  |
| M/T | Mar. | 30/31 | 8:06pm -  | 4:35am  |
| T/W | Mar. | 31/1  | 8:06pm -  | 4:48am  |
| W/T | Apr. | 1/2   | 8:07pm -  | 4:46am  |
| T/F | Apr. | 2/3   | 8:08pm -  | 4:45am  |
| F/S | Apr. | 3/4   | 8:09pm -  | 4:44am  |
| S/S | Apr. | 4/5   | 8:38pm -  | 4:42am  |

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Circular No. 5454

## NOVA CYGNI 1992

Peter Collins, Boulder, CO, reports his visual discovery of an apparent nova. B. A. Skiff, Lowell Observatory, provides the following precise position measured from a plate taken by S. J. Bus with the 0.33-m astrograph on Feb. 20.094 UT, upon which images were slightly trailed and the star's magnitude was estimated as  $B \approx 5.5$ ; R.A. = 20h30m31s.76, Decl. = +52°17'52".9 (equinox 2000.0). Visual magnitude estimates, communicated in part by J. Mattei, AAVSO, and G. M. Hurst, Basingstoke, England: Feb. 19.07, 6.8; (Collins); 19.54, 6.0; (Collins); 20.07, 5.5; (Collins); 20.19, 5.3 (D. Moore, Dublin, Ireland); 20.42, 5.0 (J. E. Bortle, Stormville, NY); 20.43, 5.0 (C. Scovill, Stamford, CT); 20.44, 5.3 (P. Sventek, Houston, TX); 20.51, 5.0 (Collins); 20.53, 5.2 (D. Levy, Tucson, AZ).

Feb 21 07:21 1992 iau.5455 Page 1

Circular No. 5455

## NOVA CYGNI 1992

H. Kosai, National Astronomical Observatory, Tokyo, forwards the following report from O. Ohshima (note correction to spelling on IAU C 5234), Kurashiki, Japan: "Nova Cyg 1992 was observed by N. Ohkura, Senoo, Okayama, using a 0.18-m refractor with a photon-counting system, resulting in the following photometry and probable errors on Feb. 20.85 UT:  $V = 4.63 \pm 0.01$ ,  $B-V = +0.34 \pm 0.02$ ,  $U-B = -0.39 \pm 0.04$ ."

Visual magnitude estimates (cf. IAU 5454): Feb. 20.753 UT, 4.3 (P. Schmeer, Bischmisheim, Germany); 20.77, 4.5 (M. Taylor, Wakefield, England); 20.83, 4.7 (Y. and R. Kushida, Yatsugatake South Base Observatory, Japan); 21.267, 4.3 (G. Hurst, Basingstoke, England); 21.44, 4.6 (P. Sventek, Houston, TX).

Times listed are for Tucson, Arizona when:

- (1) Moon is below the horizon
- (2) Sun is  $>18^\circ$  below the horizon (astronomical twilight)

Andrew J. Meyer

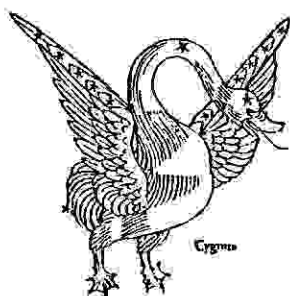
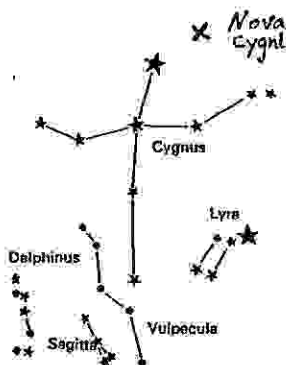
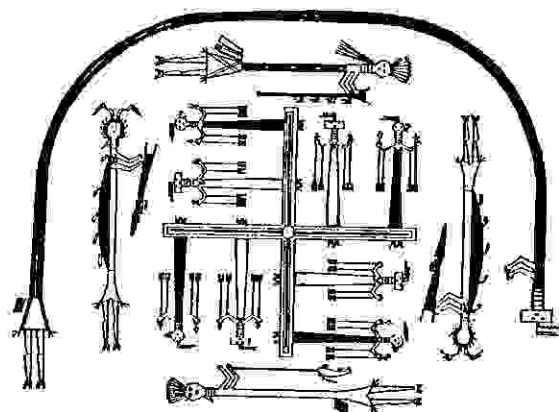
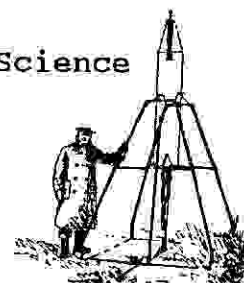


Figure of Cygnus, from Hyginus' Fable of Astronomicon, Venice, 1482



**CELESTIAL CALENDAR for March 1992 (all times are in MST):**

- S Mar. 1 11am, Moon passes  $3.9^{\circ}$  N of Mars.  
M Mar. 2 12am, Moon passes  $4.0^{\circ}$  N of Venus.  
T Mar. 3 Pioneer 4, 1st U.S. spacecraft to fly by Moon, launched 1959.  
W Mar. 4 6:23am, **NEW MOON**.  
T Mar. 5 11am, Mercury at perihelion, 0.3075 a.u. from Sol.  
F Mar. 6 7:30pm, **TAAA General Membership Meeting**, Steward Obs. 1st floor auditorium,  
  
S Mar. 7 John Herschel, English astronomer, born 1792  
S Mar. 8 9pm, Asteroid Vesta at opposition.  
M Mar. 9 2pm, **Mercury at greatest elongation east**,  $18.3^{\circ}$  from Sun, look for it in the evening sky!  
T Mar. 10 4am, Moon passes  $1.0^{\circ}$  S of the Pleiades.  
W Mar. 11 7:35pm, **FIRST QUARTER MOON**.  
T Mar. 12 7:30pm, **TAAA Executive Meeting**, Flandrau Science Center conference room.  
F Mar. 13 Discovery of Pluto announced, 1930  
S Mar. 14 3am, Moon passes  $8.4^{\circ}$  S of Pollux.  
S Mar. 15 Et tu Brutus?  
M Mar. 16 Corona Australid meteors, ZHR <7.  
T Mar. 17 5am, Moon passes  $6.3^{\circ}$  S of Jupiter.  
W Mar. 18 11:17am, **FULL MOON**.  
7:30pm, **30" Telescope Design, Land and Fundraising Meeting at Duane Niehaus'**, see map elsewhere.  
T Mar. 19 Wilhelm von Biela, German astronomer, born 1782.  
F Mar. 20 1:48am, **vernal equinox**.  
S Mar. 21 **TAAA Star Party**, Arivaca site, see map elsewhere.  
S Mar. 22 Camelopardalid (March Geminid) meteors, ZHR >35, bright Moon this morning interferes.  
M Mar. 23 1am, Venus at aphelion, 0.7282 a.u. from the Sun.  
T Mar. 24 Owen Gingerich, American astronomer, born 1930.  
W Mar. 25 7:30pm, **LAST QUARTER MOON**.  
T Mar. 26 8am, Mercury at inferior conjunction.  
F Mar. 27 M101 discovered by Mechain, 1781  
S Mar. 28 **Huachuca City Star Party**, at Vivian Lewis' place, see map elsewhere.  
S Mar. 29 7am, Moon passes  $4.3^{\circ}$  N of Saturn.  
M Mar. 30 6pm, Moon passes  $6.0^{\circ}$  N of Mars.  
T Mar. 31



Andrew J. Meyer

Navaho Indian cosmos, showing the compass cross, the swastika of sky revolution, and the gods of rivers, mountains and rain

Join Us for the Second Annual



# Grand Canyon Star Party

In the tradition of John Dobson and the San Francisco Sidewalk Astronomers, who showed the wonders of the sky to hundreds of thousands of Grand Canyon visitors in the '70s and '80s, the Tucson Amateur Astronomy Association (TAAA) announces the second annual Grand Canyon Star Party, to be held **May 30 thru June 7, 1992**. It is the perfect spot for such an event - spectacular scenery by day and wonderfully dark sky by night. Geared towards showing the sky to the visiting novice, many of which have never been under a dark sky before, the excitement, joy and gratitude expressed by the mostly international crowd is very gratifying. And when the hour grows late and the crowds thin, you are left to explore the limits of your telescope in some of the darkest skies in the United States. We guarantee you will make lots of friends and retain a car load of pleasant memories with which to return home.

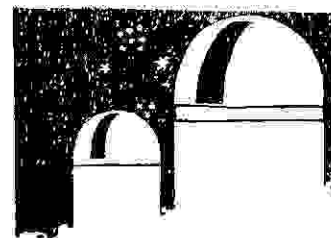
We will be setting up on the South Rim near the Yavapai Museum parking lot. Unfortunately, National Park regulations prevent us from being able to camp out where we set up, so the observing grounds need to be cleared after every observing session. Also, in late Spring, parking spots are very difficult to obtain, and a permit system will be enforced to allow access to the observing area. Although we are not charging for registration, to monitor attendance and provide parking permits, we are requiring a cursory registration with the approximate dates of your stay and where you will be staying while at the Canyon.

Housing is also critical at this time of the year. There are no special arrangements available for Star Party attendees, except for a few provided campsites, which will go fast, certainly by April 1. To make reservations for campsites at the regular rates (\$10 per night), call MISTIX at 1-800-365-2267, no more than 8 weeks ahead. For reservations at Trailer Village (camping trailers) or any of the motels or lodges at the South Rim (room rates start at about \$75 per night), call Fred Harvey Inc. at (602) 638-2401, **as soon as you make your plans**, as availability is very tight. Expect long telephone waits while making your reservations.

To register and receive parking permits, please send a long self-addressed stamped envelope to TAAA - Grand Canyon, 1122 E. Greenlee Pl. Tucson, AZ 85719. For questions, please call (602) 293-2855 between 8 and 10pm MST. Come for one night or for all nine, but be prepared for a lack of sleep, with the Canyon calling for you by day, and the wonderful skies by night!



# Kitt Peak Picnic and Star Party!



**What:** Cookout and observing at the Kitt Peak Picnic area.

**When:** 28 March, 1992, 4pm til midnight.

**Conditions:** **Limited to 30 people**, cooking fires out at sunset, off the Mountaintop by 4pm.

By the good graces of the Kitt Peak National Observatory, we are being allowed the use of the picnic area for a TAAA cookout and star party. We are being granted only after hours use of the picnic area - no special tours or arrangements have been made. We will not be allowed above the picnic area after the regular closing time of 4pm, and you must display the supplied identification card on your vehicle to be allowed to remain after that time. For this first time event, we will be limited to 30 attendees. If we behave ourselves and cause no complaints, we may be welcomed back with increased attendance.

The picnic area is located about a mile and a half below the Observatory on highway 386, but is still about 6200 ft in elevation - be certain to dress accordingly. The actual mountaintop shields the direct lights of Tucson, so the skies will be very dark. There are rest rooms and drinking water at the site as well as many picnic tables and sites for your own private observing sessions, but I recommend we all set up at the large clearing near the pavilion. If you desire to have a tour of the Observatory, please plan on attending the regular public tour at 1:30 at the Visitor's Center and Museum. Because of the concern of headlights, please arrive at the picnic area well before sunset (about 6:30), and when leaving the site, please use parking lights only until you reach the main mountain road (the Observatory of the University of Michigan is only a couple hundred yards and the same elevation as the picnic area).

To sign up, I will have a list at the March 6 meeting (at the break), and only the first 30 people (total group size) will be allowed. Please sign up only if you are sure you will attend. I will take a short list of alternates in case of cancellations, but I expect the list to fill quickly. If you are unable to attend the meeting but want to be considered for this event, or if you have any questions, please call me at the number below. If you are unable to make the list this time, be patient and hopefully we can do it again soon. If we are clouded out - it should still be a fun cookout with some spectacular panoramic landscape views.

## **Gab Fest at the Home of Duane and Sharon Niehaus!**

March 14th has been chosen for the first Gab Fest our club has had in a while. Hosted by Duane and Sharon Niehaus, bring slides, videos or photos you want to show, or telescopes or accessories you want to learn how to use. It should be a fun evening of education, munchies and comraderie. Contributions accepted for refreshments or bring your own. Events start about 6pm - be there or be square.

## **Upcoming Events You Won't Want to Miss!**

Mark the following events on your calendar - don't be left out!

Grand Canyon Star Party - South Rim, Yavapai Pt. May 30 - June 7.

TAAA Annual Picnic - Vega-Bray Observatory, Benson June 27.

Chiricahua National Monument Star Party (tentative), 17 October.

All Arizona Star Party - site TBD, October 23, 24.

## **T-Shirt Design Contest Deadline is Here!**

Bring all entries to the March meeting to be voted on during the break. The Grand Prize is a year's membership with Sky and Telescope and a \$40 gift certificate to Stellar Vision Astronomy Shop.

SATELLITES FOR MARCH  
by Brad Becker

This should be an interesting month as the Gamma Ray Observatory and Hubble Space Telescope, traveling in a southwest to southeast trajectory, closely pass some of the best known objects in the evening sky.

The space station Mir makes a favorable pass the evening of March 3rd, rising in the southwest at an azimuth of 233 degrees at 7:28 p.m., rising to an altitude of 56 degrees to the northwest, and setting in the northeast at 7:38 p.m.

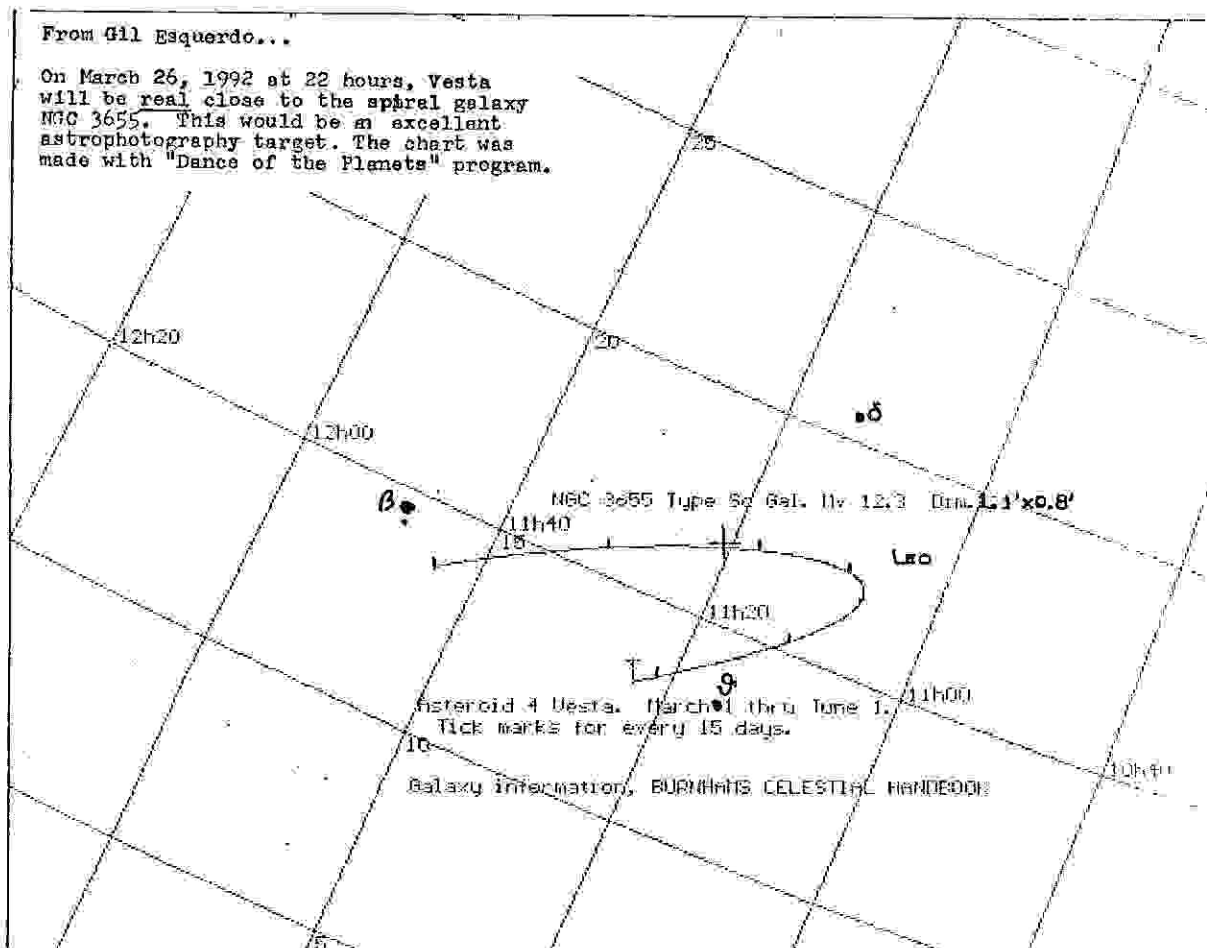
| DATE | SATELLITE | TIME OF<br>CLOSEST APPROACH | OBJECT                               |
|------|-----------|-----------------------------|--------------------------------------|
| 3-11 | Gamma Ray | 7:46 p.m.                   | North of Sirius *                    |
| 3-18 | Gamma Ray | 7:37 p.m.                   | South of Sirius *                    |
| 3-27 | Hubble    | 7:49 p.m.                   | North of Delta Canis Majoris (Wezen) |
| 3-28 | Hubble    | 7:57 p.m.                   | North of Sirius                      |
| 3-29 | Hubble    | 8:04 p.m.                   | South of Rigel                       |
| 3-30 | Hubble    | 8:12 p.m.                   | North of M42                         |

\* moonlight may require use of binoculars to see event

A CLOSE ENCOUNTER WITH M105  
by Brad Becker

M105 is a 2' x 2' elliptical galaxy in Leo. 2000 coordinates place it at RA 10:47.8 and DEC 12:35. From March 8th through 11th minor planets 138 Tolosa (Mag 12.7) and 159 Aemilia (Mag 12.2) will be very close to this galaxy and should be well worth watching or photographing. Here's the coordinates, epoch 2000, for 11 p.m. each evening and separations from M105.

| DATE | MINOR<br>PLANET | RA      | DEC     | ARC-MINUTE<br>SEPARATION |
|------|-----------------|---------|---------|--------------------------|
| 3-8  | Tolosa          | 10 49.6 | 12 35.2 | 26.21                    |
| 3-8  | Aemilia         | 10 49.1 | 12 16.0 | 27.01                    |
| 3-9  | Tolosa          | 10 48.6 | 12 40.1 | 13.46                    |
| 3-9  | Aemilia         | 10 48.4 | 12 21.9 | 16.70                    |
| 3-10 | Tolosa          | 10 47.7 | 12 45.0 | 10.01                    |
| 3-10 | Aemilia         | 10 47.7 | 12 27.7 | 7.52                     |
| 3-11 | Tolosa          | 10 46.8 | 12 49.7 | 20.62                    |
| 3-11 | Aemilia         | 10 47.0 | 12 33.4 | 12.12                    |





## KITT PEAK MUSEUM

### Volunteer Program

### SHARE YOUR INTEREST IN ASTRONOMY BECOME A VOLUNTEER WITH THE KITT PEAK MUSEUM

Each year, over 100,000 people visit the Observatories. As a volunteer, you can help communicate to our visitors the excitement of scientific research and the wonders of the Universe.

Our volunteer educators (docents) will meet professional astronomers from around the world and see firsthand the tools of modern astronomy.

This is an extraordinary opportunity for anyone interested in astronomy or science in general. Kitt Peak volunteers will acquire work experience in an unique environment while, at the same time, helping the Observatory fulfill its mission to the public.

We are looking for Volunteers of all ages, from all walks of life, and all backgrounds. We do not require prior knowledge of Astronomy. All we are looking for is a willingness to learn. Transportation to the Observatories is provided from Tucson.

Call or write to : Kitt Peak Museum  
Volunteer Program  
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