

# Saguaro Astronomy Club



# Sacnews

Volume 26 Issue 6

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## Profiles Matt Luttinen



Hometown: Detroit, Michigan (GO Wings)  
Telescope: 120mm f 8 "home-brewed" refractor  
Astronomical interests: telescope making, deep-sky observing (I just began working on the Herschel 400). I am also interested in the history of astronomy and have recently read books such as Parallax by Alan Hirshfeld and The Perfect Machine (Building the Palomar Telescope) by Ronald Florence.  
Other interests: Hockey (GO Wings) (ed note-PFFFFT!); music (classic rock and 70's & 80's heavy metal); literature, particularly science-fiction (Asimov, Clarke, Bradbury, Heinlein); history (military and political).  
When it's cloudy I: surf the Web for news of the world and telescope ideas from fellow ATM-ers; build telescopes using volunteered/purloined ideas; record music on my PC (gotta love the digital age!) with a high school buddy (latest song, Moby Dick, from the timeless second album by Led Zeppelin); dabble in creative fiction writing.  
Telescope money comes from: my sales job at Sears, but I am attempting a career change into the computer/IT field.  
Family members who put up with my astronomy: my mother, who along with my dad (of course), gave me my first telescope in 1972 (a 4 1/4" Edmund reflector, the "Palomar Junior," see attached file); my aunt; and my brother and his family. All know that my holiday gift list is limited to things astronomical, and they are OK with that. They are wonderfully supportive of my compulsion.  
Quote I live by: Two things inspire me to awe: the starry heavens above and the moral universe within. (Albert Einstein) Old Al was a wise individual!

## Reflections

### Images of the June 10th Eclipse

Here are some images of the recent eclipse by Rick Tejera & Paul Dickson. Rick's images were his first attempt at shooting through the lens of the Meade ETX 60-AC. Paul tried a little scientific experimentation in one of his images. Enjoy.



Just after Max Eclipse. aken with a Pentax A3000 through with the ETX 60-AC (350mm at f/5.8) at Thunderbird Park. A 1 Second exposure. I'm not sure if it was over exposed or out of focus.

Photo By Rick Tejera



Moments before last contact. Also through the ETX 60-AC with the Pentax A-3000.

Photo By Rick Tejera



Lindsay Tejera enjoys the eclipse through her dad's 7x35 bino's with Baader solar filters on each lens. I'm proud to say that Lindsay not only enjoyed watching the eclipse progress, but she understood what was happening. It was nice to turn this eclipse into a family event (my wife Susan also came). We were also able to share it with a few passers-by.



18 minutes after First Contact of the partial eclipse on June 10th. The sunspot groups are (left to right), 9992, 9991 (darkest and most obvious on the left), 9987 (a long group, already half covered by the moon), and 9993.

Taken with a Coolpix 990 at 2x attached to a 27mm Panoptic on a Televue Pronto.

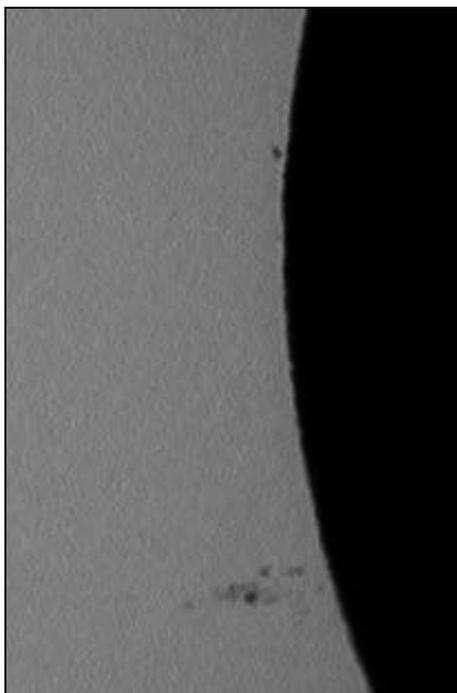
Photo By Paul Dickson



This is an image showing the shadow effects here on earth. This is a composite image showing my left hand on the left with the fingers pointed north and my right hand fingers pointed south. This is a composite image because I needed the other hand to hold the camera while I took each image.

The fingers of my right hand have eclipses imaged between the fingers because the moon was midway through the eclipse and was offset south of the sun's center. Compared that with my left hand, which shows no eclipse shadows.

Photo By Paul Dickson



A close-up, from the larger image, of the sunspots as they disappear. Group 9993 is in the upper part and 9987 is in the lower.

Photo by Paul Dickson

# Fuzzy Spot, Hercules

By Ken Reeves

This month we are looking at one of the great heroes in the sky, Hercules. The star pattern is very distinctive, although I always seem to have a hard time initially finding it in the sky. I look for the pattern of Pi, Eta, Zeta, Beta, Delta, and Epsilon, which, at least to me, looks like a stick figure of a butterfly.

There are a few bright objects in Hercules, specifically the Great Globular Cluster M-13. Beyond these few showpieces, most of what remains are faint galaxies. We'll take a look at the star objects plus a few of the fainter ones. Unless specified, all observations are in the 10" scope.

NGC 6058 (16 04.4 +40 41): This planetary nebula is pretty faint, pretty small, round, and is sitting in the middle of a triangle of stars. It responds somewhat to the UHC filter. There possibly is a star involved on the E, and I suspected a central star with a dark area around it. Using averted vision helps a little.

NGC 6166 (16 28.7 +39 34): In the 10" scope, this galaxy is a very faint spot situated in a small half-circle of stars. I couldn't make out any detail, and almost lost it completely at higher magnification. In the 20" scope it is a little bright, little large, and elongated 1.5:1 E/W. The middle is slightly brighter. What makes this object interesting (and the reason I included it here) is the many faint companions seen using averted vision. I was able to see 6 companions including MCG+7-34-76, MCG+7-34-65, MCG+7-34-65, MCG+7-34-54, MCG+7-34-48, and the last one unidentified (ed note: these galaxies are part of Abell 2199). As a note, this object is not listed in Sky Atlas 2000.

NGC 6205 (16 41.7 +36 28): M-13 is the Great Globular Cluster in Hercules, and is the first globular cluster that most people observe. It is very bright, very large, with 5 strings of stars noticed. There are many, many stars observed, I estimated 100 stars seen with direct vision,

using averted vision brings out tons more. The background haze is even and round, brightening up quite a bit to the middle.

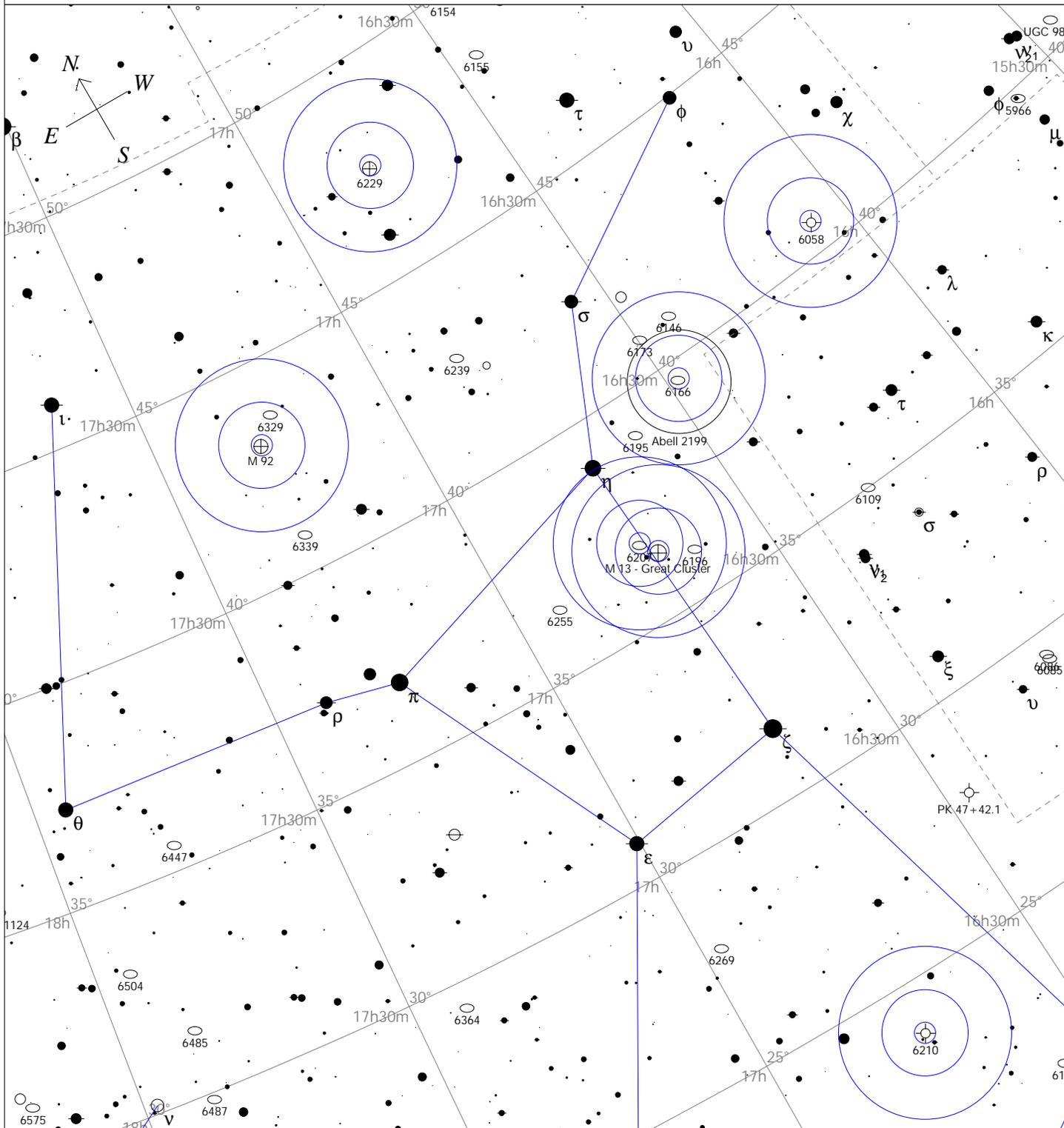
NGC 6207 (16 43.1 +36 50): This galaxy is next to M-13 and is somewhat overshadowed by its brighter partner. Next to M-13, it is real small but easy to find. As a galaxy (ignoring M-13), it is pretty large, elongated, and much brighter in the middle. There are 4 brighter stars around it and 4 fainter stars just E of galaxy. If you want a real toughie roughly half way between this object and M-13 is IC 4617. I have been barely able to detect it in the 20" scope sitting next to two faint stars, which are part of parallelogram of stars.

NGC 6210 (16 44.5 +23 49): In the 10" scope, this planetary nebula is pretty small, pretty bright, and elongated E/W. The halo is subtle at best, with the UHC filter bringing it out only slightly. There is a very definite blue tinge to it. No central star or other details were noticed. In the 20" scope, it is very bright, pretty small, and round. There is a very slight halo (not sure what I meant by that), which is much fainter. The central star was suspected with averted vision.

NGC 6229 (16 47.0 +47 32): This globular cluster is the 3rd best one in Hercules (behind the two Messier objects). It makes a nice triangle with 2 bright stars. The cluster is somewhat small, fairly bright, round, and brighter towards middle. I couldn't resolve any stars, but the texture of the haze is grainy.

NGC 6341 (17 17.1 +43 08): Our last object, M-92, is the second great cluster in Hercules. Had this object been in any other constellation and a little easier to find, it would rate as a top-notch object, and is indeed one of my favorite globular clusters. It is pretty large and pretty bright, with 5 nice strings of stars. Unusual for a globular cluster, it has a slight elongation N/S. The halo gradually brightens up to a bright middle. Many stars were resolved over both halo and middle; I estimated 100 stars seen with direct vision.

# Fuzzy Spot Hercules



## STARS

- <math><3</math> >math>8</math>
- 4
- 5
- 6
- 7

## SYMBOLS

- Multiple star
- Variable star
- ☄ Comet
- Galaxy
- Bright nebula
- ◻ Dark nebula
- ⊕ Globular cluster
- Open cluster
- ⊙ Planetary nebula
- ⊗ Quasar
- △ Radio source
- × X-ray source
- Other object

Herschel 400 Objects: 6207, 6229  
 SAC's 110 Best of the NGC Objects:  
 6207, 6210

# Seeing Double

## First Light

By Thad Robboson

Distractions...everybody experiences them, everybody deals with them. The past several months have been full of distractions for me. Selling an old home, buying a new one, business matters, a traffic accident, sick pets, landscaping, the list can go on and on if I stop and think about it. But sometimes, distractions can actually be welcome and accepted. I happen to have a good example of one this month.

I managed to get most of the Twin Points Observatory done before it got too hot. The roof is done, the insulation and drywall is in place and painted, and I even managed to get some landscaping around the building done before the first of June. The things that are left to do are minor, "nice to have" type things. The heat, serving as a strong incentive to not be outside anytime between 9am and 7pm, has slowed me up a bit. I manage to do little bits here and there after I get home from work in the evening. But, the last two weeks, my efforts have been directed to my recent acquisition of a brand new 15" Discovery truss design telescope. My wife was more than happy for the distraction of heading to Oceanside, California to pick this new toy up from the manufacturer. It was a fun weekend with a relaxing drive, and a few hours laying on the beach working on our "raccoon" faces. Of course the real highlight was taking possession of the new toy. If I hadn't been so tired by the time we got home at 10:30 pm, I would've set it up on the driveway that night. But I was able to get my fill of playing with it the next weekend, and now I'm busy with the smaller projects for that toy. Things like making wheelbarrow handles and a ramp to assist in the loading/unloading, the addition of a cooling fan and light baffle for the bottom end.

One thing I'm happy that I didn't get too distracted to do was to get some more doubles rounded up. I had some targets in Virgo, and managed to make first light for the Twin Points with them. Here's the report for that night last month.....

After spending most of my brainpower and energy trying to recover from the great hard drive crash of '02, a weekend under the stars was sounding mighty soothing. Normally around the time of last quarter and new moon, I'm packing the pickup truck and heading out with others to dark skies. But having finished my

most recent deep-sky program, and with the wife out of town, I had decided to not take this time for granted and work almost exclusively on Twin Points. As of Saturday evening, I had the concrete pier, the floor, and 4 wall frames. I still had to run an extension cord, and I couldn't just leave everything laying out, but I was not swayed from placing the equatorial mount and tube on the pier, "Just to try it out". I left the GPS unit average while I set up the 'scope in the late day sun. The GPS gave me the coordinates of 33° 26.725 N and 112° 18.902 W after I had spent 20 minutes setting up and collimating the 'scope.

As darkness fell, it was easy to make out the planetary alignment. All 5 were easily witnessed without having to move around, and no climbing on jungle gyms was necessary. At this time, it is a pleasant 70°F and 25% RH with just the slightest of breezes. Leo is soaring overhead, and Spica is just a short while away from being at the meridian. I make some minor adjustments to the alignment of the Eq head without spending much time at it. I'll save the drift alignment for when I actually don't have to tear everything down. That being done, I plug in the drive corrector and take aim at Jupiter, the first light for the Twin Points Observatory! With the 22 Panoptic in place, it is easy to see the 2 EQ bands and all 4 moons. Bumping up to the 15mm Vixen, I can easily see the smaller EQ band above the NEB. The 10mm Vixen gives up more detail in the banding in the form of uneven coloration. The seeing, while not rock steady is decent, so I put in the 5mm Radian. This does the trick! The seeing is the slow wavy kind, but with several moments of good viewing. At this point, I can see with certainty the GRS, which as we currently call it in our club, the Great Pale Spot. Not much to see except that the GRS is only notable for its darker outline, which shows it separate from the rest of the planet. Streaks and swirls are caught in fleeting moments on the bands. The NEB is considerably more rust colored than the SEB. I stand back a bit and determine a LM of around 4~4.5 and a seeing of 7/10 based on my Jove observation. For grins, I train the 'scope on ζ Cancer. I am not disappointed. All 3 show up easily for at least 2/3 the time observed. They appear to be in a perfectly straight line.

Next month: the twin points from the Twin Points!

# July 2002

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## Schedule of Events for July 2002

July 2nd	Moon at Last Quarter 1719mst
July 4th	Mars Pathfinder "bounced" its way onto Mars in 1997. The lander & the Sojourner rover return many pictures and Much Scientific data. The mission is the most successful to Mars to date.
July 6th	SAC Star Party at Flat Iron. Sunset 1945 Ast Twilight 2127, Moonrise 0258
July 10th	Moon is new at 1026mst
July 10th	The Giotto Space probe passes within 130 miles of comet Grigg-Skellerup in 1992
July 17th	Moon at First Quarter at 0447mst
July 24th	Moon is Full at 0907mst
July 26th	SAC General Meeting at Grand Canyon University at 1930, Speaker Bob Millis, Director of the Lowell Observatory, will talk on "The Kupier Belt-Our Solar Systems Last Frontier"

## Future Planning

August 31st	The To Hell with the Monsoon Star Party at Cherry Rd. (Dependent on Fire Restrictions)
Sept-TBA	Northern Arizona Star Party at Mingus Mountain
May 1-3 2003	Desert Sunset Star Party, Kartchner Cavern State Park. See <a href="http://chartmarker.tripod.com">http://chartmarker.tripod.com</a> for more information

## The Thunderbird Public Star Party

On Saturday May 18th, SAC held our annual Public Star Party at Thunderbird Park in Northern Glendale. The event is co-Sponsored with the City of Glendale, so it is usually well attended. With this years not so common planetary alignment and Comet Icke Zhang having been in the local press, we were not disappointed. An informal count had over 300 people show up to take in the view through about 10 scopes. All five naked-eye planets were visible, although Saturn was a challenge

low in the twilight. Those who saw it said it was worth the effort to find it. Comet Icke-Zhang was also a crowd pleaser. Although no longer naked-eye, it was still very bright in the telescope and showed enough of a it's tail to make an impression on those who looked.

Below and on the next page are some images of the SAC members who helped make this event a success. Thanks to all.



SAC President Dave Fredericksen and his 12" Dob.  
Photo by Susan V Pritchard



Top: Steve Coe and his 10" f /5.6  
Above: Jack Jones and the 13" Schwarzschild on it's Bigfoot mount  
Left: The crowd begins to gather as twilight draws near.



Top photos by Susan V. Pritchard  
Photo at left by Rick Tejera



Above: Susan "The Walking Star Atlas" V. Pritchard.

Top Left: Matt Luttinen with any Red Wings regalia.

Center Left: Joe Goss (at eyepiece) readies his 10" SCT for some eager observers.

Bottom Left: Rich Walker and the business end of his 14" with it's off axis solar filter.

All Photos Courtesy of Susan V. Pritchard.



## Bits & Pisces

### Minutes of the May 17th General Meeting

By A.J Crayon

David Fredericksen, our president, opened the sparsely attended meeting that included about 20 people. The call for visitors and new members went unanswered.

Paul Dickson, treasurer, said there were \$1361 in the checking account and \$2353 in the savings account. There were eight membership renewals in the last month. The account for Grants and Scholarships was opened with \$1003.

A club roster has been completed that includes all members, addresses, phone numbers and e-mail addresses. If you want information on this list removed please contact Paul Dickson.

Two constitution changes were also discussed by Paul and joined in by many members. Essentially one was passed and one voted down. The change for members 65 and over was passed. The change for spending limit and procedure for change needs to be reworked. It will include a spending limit on monies approved by the board.

Steve Coe spoke about Curt Taylor's Memorial Service and showed some of his pictures and drawings. Curt enjoyed viewing the moon and planets and public viewing sessions.

AJ Crayon presented Rick Tejera with his Messier Catalog plate and Thad Robosson with his 110 Best NGC plate. Nice jobs!

Rick Tejera indicated the combined April and May newsletters were sent-out and that the SAC-announce email list would be used for notifying members of its availability. The address, for April 2002 issue, is <http://www.saguaroastro.org/sacnews/sn0402.pdf> and note the month and year usage for the file name.

Rick invited members to join him to view the June eclipse at Thunderbird Park. If interested please contact him for more information.

Adam Sunshine reminded us of the public star part at Thunderbird Park on the evening following our meeting.

He then displayed some T-Ring adapters for 1 1/4" eyepieces he purchased on-line from <http://www.scopetronix.com> that let him attach a digital camera to the telescope for lunar and planetary photography.

Thad Robosson announced that Lumicon would sell their items at a 10% reduction if they were ordered on SAC stationary and purchased with SAC check. There was no indication of quantity purchases.

AJ Crayon showed his Crimping Tool used to strip and cut cable in order to attach modular phone line plugs, especially if they are used to attach electronic equipment to the telescope. If club members need to repair this kind of equipment AJ is more than willing to assist.

Gene Lucas talked about the Astronomy Day at the Arizona Science Center; there were big crowds, great talks and good views of the sun, moon and planets.

After the break, David Fredericksen, introduced the evening's speaker: Peter Wehinger. The topic of his talk centered around his work at Steward Observatory, University of Arizona; but he has taught and observed all over the world.

After his talk there were many interesting questions.



## A Story Over Your Heads

### Ophiuchus

By Mark Klosinski

This is probably one of the lesser-known constellations of the summer sky. Yet it occupies quite a bit of the sky. Ophiuchus stands on top of Scorpius and goes head to head with Hercules. To the west is Bootes and to the east is Aquila the eagle. Ophiuchus is wrapped up in the constellation of Serpens, which is the only constellation that is divided into two parts, Serpens Caput, the head and Serpens Cauda, the tail.

Ophiuchus is notable for being the thirteenth constellation of the zodiac. The original zodiacal constellations were formed about 2600 years ago. Due to the effect called precession of the equinox and the establishment of the official constellation boundaries by the International Astronomical Union in the early 1920's, Ophiuchus became the thirteenth constellation of the zodiac. So if you were born between November 30 and December 17 your astronomical sign is Ophiuchus.

Ophiuchus is the Greek name for Serpent Bearer, but the Greeks thought that he represented Asclepius. Apollo found Asclepius as a baby. Apollo entrusted Asclepius to the centaur Chiron for his education and upbringing. As part of his education Asclepius

became proficient in the skills as a surgeon and also became an expert on poisons and medicines.

One day Asclepius killed a snake. A second snake came by with some special herbs and revived the first snake. From this encounter, Asclepius learned the power of reviving people from the dead. Hades, king of the underworld complained to Zeus about this newly acquired skill of Asclepius. Hades was worried that Asclepius could put him out of business. So Zeus struck down Asclepius with one of his signature lightning bolts. But to honor the special skills that Asclepius had acquired, he placed him in the heavens as the constellation Ophiuchus.

References: The Glorious Constellations by Giuseppe Maria Sesti

Star Myths by Theony Condos

National Audubon Society Field Guide to the Night Sky

By Mark Klosinski

Reprinted with permission of the author.

## Star Party Site Update

Due to the current drought conditions, our usual Summer observing spot at Cherry Rd, has been placed off limits due to forest closures. Given that Flat Iron is pretty hot this time of year, it looks like the location of our monthly star parties are going to have to be decided on at the last minute. Please keep an eye on the AZ-Observing mailing list for the latest updates on who is going where. If you don't have access to the internet, contact one of the officers or someone else you know who plans on going and ask them to keep you

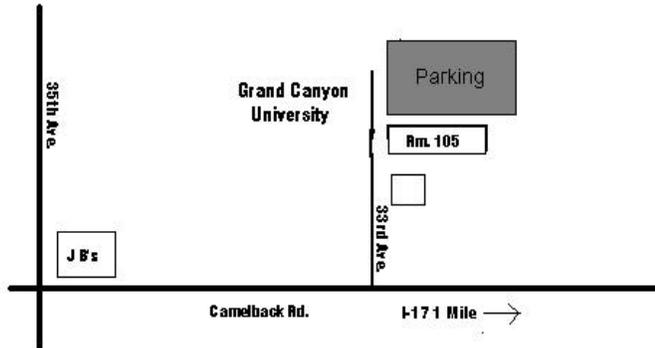
informed. Hopefully we'll get some rain soon and the PNF will open up for us again, but it is looking like a long dry summer. Please keep in perspective that our not having our regular site to observe from is not the biggest problem right now. Our forest's are bone dry and a bad fire could cost us the site for more than a summer. Here's hoping for rain (never thought I'd say that!)

Rick

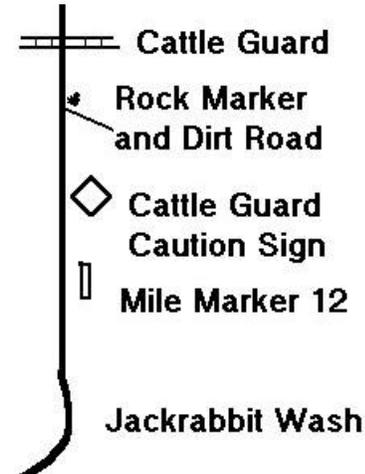
## SAC Meeting and Observing Sites

### General Meetings

7:30 p.m. at Grand Canyon University, Fleming Building, Room 105: 1 mile west of I-17 on Camelback Rd., North on 33rd Ave., Second building on the right.



### Flatiron Star Parties



Head west on I10 to the 339th Ave exit (exit 103). Turn North (right) and go two miles to Indian School Rd. Turn West (left) on Indian School and go 1 mile to 355th Ave. Turn North (right). This will turn into Wickenburg Rd. Follow this road for about 12 miles. Just after mile marker 23 you will go through Jackrabbit wash and pass a cattle guard sign. There is a dirt road just after the sign, marked by white painted rocks. Turn on to this road and follow it about .9 miles. Just after you pass through a wash, you'll see the field on your left. If you hit the cattle guard, or the dirt road your on is next to a fence, you've missed the correct road. Go back and look for the white rocks.

## Such A Deal

FOR IMMEDIATE RELEASE  
PRE-PUBLICATION ANNOUNCEMENT - NEW ASTRONOMY FIELDBOOK

"OBJECTS IN THE HEAVENS" is a new deep-sky fieldbook/notebook for amateur astronomers that contains descriptions and locations of 588 objects of all types, viewable with small scopes and binoculars. All object listings are magnitude 10 or brighter; 129 entries are specially highlighted for use with average binoculars. Generous space is provided for personal observation comments.

O\*I\*T\*H is designed to encourage those who have not spent much time searching for deep space objects with their small instrument by making the information readily available for use "at the scope." Data has been assembled from 27 astronomical catalogs and includes 148 other-than-Messier or NGC objects of all types. It's a "second-level" interactive reference book, which brings together "just the facts and then some" regardless from which catalog or category type they may be, to be a complete, useful and entertaining viewing companion.

## SAC Membership Services

Membership- Memberships are for the calendar year and are pro-rated for new members as follows: Jan- Mar: 100%; Apr- Jun: 75%; Jul-Sep: 50%; Oct-Dec; 25%.

- \$28.00 Individual Membership
- \$42.00 Family Membership
- \$14.00 Newsletter Membership
- \$ 7.50 Nametag for members  
(will be mailed to address below)

### Magazine Subscription Services

The following magazines are available at a discount to club members. Check the magazines you wish to subscribe to or renew, and pay the club treasurer. Please allow 3-4 months for the order to be processed.

- Sky & Telescope \$30.00/yr
- Astronomy \$29.00/yr

Please Print

Make Check Payable to : SAC

Name: \_\_\_\_\_

Bring completed form to a meeting or mail it with your remittance to:

Address: \_\_\_\_\_

City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

SAC Treasurer  
c/o Paul Dickson  
7714 N 36th Ave  
Phoenix, AZ 85051-6401

Phone: \_\_\_\_\_

E-Mail:  
\_\_\_\_\_

### Sac on the Internet

SAC has several E-mail mailing lists. If you check the boxes below, the E-mail address above will be subscribed to that list.

- SAC-Announce@freelists.org: SAC-Announce is a mailing list for just club announcements, Typically 3-5 messages per month.
- SAC-Forum@freelists.org: SAC-Forum is a general discussion mailing list. Topics should be related to Astronomy or SAC
- SAC-Board@freelists.org: SAC-Board is a mailing list for discussions of club business. If you'd like to see how the club is run (or not run), or have a question about the club, this is the list to read. Typically month to month matters are discussed.
- AZ-Observing@freelists.org: AZ-Observing while not a Sac list , is well attended by SAC members. This is the list to with observing places around Arizona. Find out where people are going and what they saw.

### E-mailed Newsletter

Sac can save a lot of money if you download the PDF version of the newsletter. PDF files are readable by both PC's and Macs. When the newsletter is published, a message will be sent to the address indicated above with the URL of the newsletter. Check the box below if you don't have access to the internet or if your prefer a printed copy.

- Please send me a hard Copy of the newsletter

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July 2002

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Videmus Stellae



## SAC Schedule of Events 2002

REVISED

### SAC Meetings

Jan. 25th, 2002	July 26th 2002
Feb. 22nd 2002	Aug. 23rd 2002
Mar. 29th 2002	Sep. 20th 2002
Apr. 26th 2002	Oct. 18th 2002
<b>May 17th 2002</b>	Nov. 15th 2002
June 21st 2002	Dec. 20th 2002 (Holiday Party)

### SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise
Jan 5th	1737	1906	0049
Feb 2nd	1803	1929	2346
Mar 2nd	1829	1951	2238
Apr 6th	1856	2021	0355
May 4th	1917	2050	0230
June 1st	1937	2118	0102
July 6th	1945	2127	0258
Aug 3rd	1930	2104	0132
Aug 31st	1858	2024	0009
Sep 28th	1820	1942	2250
Oct 26th	1745	1909	2136
Nov 30th	1723	1851	0410
Dec 28th	1731	1900	0305

### Deep Sky Group Meetings

Feb. 28th 2002	Aug. 29th 2002
May 2nd, 2002	Oct. 24th 2002
June 27th, 2002	Dec. 26th 2002