



# Desert Skies

Tucson Amateur Astronomy Association

Volume LVII, Number 8

August 2011



Companionship among amateur astronomers at the Grand Canyon Star Party 2011

General Meeting August 5th

Steward Observatory Lecture Hall, Room N210

6:30pm Astronomy Essentials Lecture—Seasonal Objects, Dr Mary Turner

7:30pm Invited Lecture—Mapping the Heavens, Ken Graun



Cover Photo: Photo of TAAA members at the Grand Canyon Star Party (GCSP), held June 18—25. Photo supplied by Jim O'Connor, GCSP South Rim Coordinator. Jim has provided highlights and more pictures of the GCSP which can be found on page 10 and 11.

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**Membership in the TAAA**

**Annual Fees**

Individual membership..... \$25.00  
 Family (includes two adults plus minor children)..... \$30.00  
 Youth under 18 years must join as a family upon parental or guardian acknowledgement of participation in TAAA events. Ask the Treasurer for the required form.

**Discounts (one discount allowed, subtract from above rates)**

Seniors (over 60 years) ..... \$2.00  
 College Students, Teachers (K - 12)..... \$8.00  
 Youth under 18 yrs. (form required, contact the treasurer)..... \$13.00

**Options (add to above membership rates)**

Astronomical League (AL) fees..... \$7.50  
 Sky & Telescope Magazine 1 year (12 issues, group rate)..... \$32.95  
 Astronomy Magazine 1 year (12 issues, group rate)..... \$34.00  
 ..... 2 years (24 issues, group rate)..... \$60.00  
 Postage for New Member Pack..... \$4.95

**Donations** are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, Chiricahua Astronomy Complex, and General/Undesignated.

**Renewal Information**

You'll get an email reminder when it's time to renew.  
 TAAA members may join the Astronomical League (AL) at the time they join or renew.  
 Discounted Sky & Telescope or Astronomy magazine subscriptions are available to members and can be started or renewed at anytime. Allow 3 months for processing.

New subscriptions must be sent through the TAAA treasurer. Renewals can be paid online through magazine websites. To change an individual subscription to the group rate, pay the group rate to the TAAA treasurer. Include your magazine renewal notice. Include a note about what you're paying for. Credit cards are not accepted. Write one check or money order for dues plus any options or donations. Make it payable to TAAA and send to: Tucson Amateur Astronomy Association; PO BOX 41254; Tucson, AZ 85717

**Mailing Address or Email Changes**

Mail changes to address above, email them to the treasurer, or make them yourself online through Night Sky Network login account at <http://nightsky.jpl.nasa.gov/login.cfm>.

**TAAA Mission Statement**

The mission of the Tucson Amateur Astronomy Association is to provide opportunities for members and the public to share the joy and excitement of astronomy through observing, education and fun.

**Desert Skies Publishing Guidelines**

Send submissions to [taaa-newsletter\[at\]tucsonastronomy.org](mailto:taaa-newsletter[at]tucsonastronomy.org) by the newsletter deadline. Materials received after that date will appear in the next issue. The editor retains all submissions unless prior arrangements are made. Submissions should be Word compatible files sent by e-mail or on recordable media. All copyrights retained by Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material!

**Join the TAAA Forum on Yahoo Groups**—general astronomy discussion, member posting allowed, ~75messages/month; go to <http://tinyurl.com/hwoau> and click on "Join this Group"

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

## TAAA Meeting Friday, August 5

Steward Observatory Lecture Hall, Room N210



### 6:30pm Astronomy Essentials Lecture

Title: Seasonal Objects

Speaker: Dr Mary Turner

Dr Mary Turner will present objects that are visible in the night sky. She'll toss in a bit of interesting mythology, too. Come enjoy a romp around the night sky.

### 7:30pm Invited Lecture

Title: Mapping the Heavens

Speaker: Ken Graun

When did charting the night sky begin? What do all the symbols on star charts mean? Get answers to these questions and learn more about the history of "mapping" the night sky to understand why chart symbolism is so confusing and incomplete.

After the lecture, Ken will have some of his books for sale. Cash and checks only.

Ken Graun, born in Milwaukee, Wisconsin, is an author of beginning astronomy books and star charts for children and adults. These books include *What's Out Tonight* and *The Next Step: Finding and Viewing Messier's Objects*. He has received several awards at the Riverside Telescope Making Conference for making telescopes, including reproductions of Galileo's three existing telescopes. Ken has been living in Tucson for over 20 years.



Author Ken Graun will speak at our August 5th meeting.

### Note from the Editor

We thank Cathy Anderson for serving as our newsletter editor since January. She's done a great job getting it out on a timely schedule. We wish her the best of luck with her doctoral work in education – a worthy endeavor requiring her full devotion. Good luck to the future Dr Cathy!

I have accepted a temporary appointment as editor of Desert Skies. It is a daunting task because the TAAA has so much going on – all signs that we are a healthy non-profit organization at a time when many are struggling. The board is considering changes to our newsletter format. We'll see how that develops over the next couple months. In the meantime, I'll serve as your editor.

Our president was unable to send his message, so I'll use this space to direct your attention to the following items in this issue.

- A tour of the Chiricahua Astronomy Complex has been set for August 13th. This is a daytime trip to give our members a chance to see the Phase 2 progress. The tour will finish up with lunch at a nearby restaurant.
- Our speaker schedule is full through the end of the year, so take note of the wonderful speakers and topics coming up.
- The AFSIG has announced the next 3-day long Fundamentals of Astronomy Course. It will take place over three Saturdays this October. It is a free class to TAAA members.
- The AFSIG is also taking on the challenge to get kids turned onto astronomy. The Young Astronomers Program will get underway this fall. If you have or know any kids between 7 and 17, interested in astronomy, let them know about this new program.

*Terri Lappin*

### Support Our Sponsors



### This Month in Brief

Event Contact Person	Date Location	Time	See Page
Astro-Imagers SIG Meeting Larry Phillips	Aug 1 (Mon) Coco's Restaurant 6095 East Broadway Blvd	7 pm	6
General Meeting	Aug 5 (Fri) Steward Observatory Room N210 933 North Cherry Ave	6:30pm	3
Board Meeting Keith Schlottman	Aug 10 (Wed) Steward Observatory Room N305	6:30pm	13
Astronomy Fundamentals Meeting Ben Bailey	Aug 11 (Thurs) U.S.G.S. Building - room 253 520 North Park Avenue	6:30 pm	7
CAC Daytime Tour John Kalas	Aug 13 (Sat)	Morning	12
SMSIG Meeting	August 15 (Mon) Beyond Bread Restaurant 3026 North Campbell Ave	6:30pm	6
TIMPA/AFSIG Star Party Bob Gilroy	Aug 20 (Sat) TIMPA Site	6:30pm	5
Solar Observing Dennis Dawson	Aug 20 (Sat) Ft Lowell Park	9am	4
CAC Star Party John Kalas	Aug 27 (Sat) Chiricahua Astronomy Complex		5
Monsoon Mondays @ Tucson Children's Museum Terri Lappin	Aug 29 (Mon) 200 S 6th Ave	6 pm	8

### Future Dates

Sept 2	TAAA September Meeting—Dr Josh Eisner talks about protoplanetary disks
Sept 21	Lunar & Planetary Lab Lecture—Dr Robert Strom talks about Mercury and Messenger
Sept 22	Space Exploration SIG Meeting/Lecture
Sept 24	Fall Kitt Peak Star B-Que
Oct 1, 8, 22	AFSIG Fundamentals of Astronomy Class

### TAAA Apparel

Looking for a special gift or a way to make that fashion statement? Try on something from our fine line of club apparel. We have hats, T-shirts, denim shirts, and patches. We take cash and checks. Available at most monthly meetings. Coordinated by Mae Smith, see page 2 for her contact information.

### Newsletter Deadline

The deadline for the September issue is Wed, Aug 17. Desert Skies is published at least one week before the General Meeting. Publishing guidelines are on page 2.

### Solar Observing

Aug 20 (Sat) 9AM  
Ft Lowell Park

Join the Solar Observers on August 20th from 9 am until 11 am at Fort Lowell Park (Craycroft @ Glenn) for solar viewing. The group will meet near the southeast corner of the park. Just look for the telescopes. Bring your kids. Bring water and something to nibble on. You don't need to have a telescope; others will have them if you don't. Everyone is invited to join us.



Contact Information: Dennis Dawson, [dennisldawson\[at\]gmail.com](mailto:dennisldawson[at]gmail.com), 520-319-7724

### Desert Dwellers!

Be alert for rattlesnakes! Rattlesnakes are generally aggressive only if disturbed. If you see one, keep a safe distance and DO NOT try to interact with it in any way. Snakes are much faster than our reflexes, and should be handled only by professionals. Wear boots and long jeans. For more information, go to



<http://www.friendsofsaguaro.org/rattlesnakes.html>.

Along with rattlesnakes, other desert critters, such as gophers and ground squirrels, make their home wherever they want. These residents can leave holes and other potential tripping hazards. Be careful when walking, especially at night.

### Las Cienegas Observing Site

The TAAA no longer schedules monthly star parties at the Las Cienegas Conservation Area. This is on BLM land, so it is accessible by the general public. Members wanting to organize a group observing session at Las Cienegas should do so via the TAAA Forum Yahoo Group.

Las Cienegas is at 4000 feet in elevation, so be prepared for cold temperatures. Observers usually set up near the restroom facilities on the abandoned air strip. Directions to this location can be found on the TAAA website.

## Member's Star Parties



### TAAA Star Party at TIMPA

Aug 20 (Saturday) Gate opens at 6:30pm  
Contact Person: Ben Bailey (see page 2)

Come on out and enjoy the summer skies! If the monsoon is kind to us, it should be a good observing night for everyone. TIMPA star parties are great for both beginners and experienced observers. The various AFSIG Observing Clubs will be active. There will be another chance to complete the AFSIG Summer Messier Marathon. The Gila Monster Observatory on Mons Heloderma with the 14" Meade Schmidt-Cassegrain telescope will be open for your observing pleasure. Guests are welcome, accompanied by a TAAA member.

Come and join one of our activities, or observe on your own. The TIMPA site features a large parking area, and full restroom facilities. Be prepared for cool temperatures after sunset. Insect repellent is a good idea.

#### TIMPA Site Notice

A gate card is required for TIMPA access. Please **DO NOT** ask the caretakers for entry to the TIMPA SITE. On scheduled TIMPA star party nights, a designated TAAA representative will provide access to the site. At other times, a gate card is available from the TIMPA Gate Card Controller (see page 2).

#### Directions to TIMPA Site

GPS coordinates: 32 deg 15.868' N, 111 deg 16.390' W

The TIMPA site is about 25 minutes from Speedway & I-10, about 7 miles west of the Arizona-Sonora Desert Museum.

From the North:

1. Take Ina Road west about three miles past I-10.
2. Turn south (left) onto Wade Rd. Wade Rd becomes Picture Rocks Rd as the road turns to the west (right).
3. Take Picture Rocks Rd west to Sandario Rd.
4. Turn south (left) onto Sandario Rd. Go to Manville Rd.
5. Turn west (right) onto Manville Rd. Go to Reservation Rd.
6. Turn south (left) onto Reservation Rd (a dirt road) and go about two miles. The TIMPA entrance is on the left.

From the East:

1. Take Speedway Blvd west. It turns into Gates Pass Rd.
2. Go over Gates Pass and continue west to Kinney Rd.
3. Turn north (right) onto Kinney Rd and continue past the Arizona-Sonora Desert Museum.
4. At the entrance to Saguaro National Park West, go towards the left onto Mile Wide Rd. (This is easy to miss so watch for the park entrance sign.)
5. Take Mile Wide Rd west about five miles to Reservation Rd. Mile Wide Rd ends at Reservation Rd and you must turn north (right) onto Reservation Rd.
6. Take Reservation Rd north about one mile. The entrance to TIMPA will be on the right.



### Chiricahua Astronomy Complex

Aug 27 (Saturday)  
Contact Person/RSVP to: John Kalas (see page 2)

The Chiricahua Astronomy Complex (CAC) is the club's newest observing site. Located in Cochise County approximately 100 miles from the center of Tucson, the site includes a full bathroom facility. At an elevation of 4800 feet, be prepared for cooler temperatures. Try to arrive before sunset. Unlike the TIMPA site, the CAC site requires our members to make reservations for both monthly club star parties and private member use. We are restricted by a 60 person/30 vehicle maximum limitation. If you would like to attend, you must contact CAC Director John Kalas (see page 2). Reservations will be on a first come - first serve basis. Depending on the number of members interested in attending, guests may not be allowed.

#### CAC Site Notice

*Reservations are required at all times including scheduled star parties.* You will be sent away if you do not have reservations. On scheduled CAC star party nights, a TAAA designated representative will unlock the gate. At other times, access can be granted by the CAC Director (see page 2).

#### Directions to Chiricahua Astronomy Complex Site

GPS coordinates: 31 deg 52.07' N, 109 deg 30.9' W

The Chiricahua Astronomy Complex is about 90 miles and a 1½ hour drive from the TTT Truck stop at Craycroft Road and Interstate 10.

1. Take I-10 east from Tucson past Benson.
2. Exit I-10 at Dragoon Road (Exit #318). Turn right onto Dragoon Road at bottom of exit ramp.
3. Travel 13.5 miles southeast to the intersection with Route 191. Turn south (right) onto Route 191.
4. Travel 17.9 miles south (past Sunsites and Margie's Corner Café at High St on the right, and the Border Patrol checkpoint) to the intersection with Route 181 at Sunizona.
5. Turn east (left) onto Route 191 and travel 10.9 miles east to the intersection with South Price Ranch Road. Turn south (right) onto South Price Ranch Rd. This is a dirt road just before you reach mile post 49 (cluster of mailboxes on right side of Route 181).
6. Travel ½ mile south on South Price Ranch Rd to the intersection with East Perseus Way. This is a wide dirt road marked with a street sign on left. Turn east (left) onto East Perseus Way.
7. Travel east on East Perseus Way slightly more than ¼ mile to the entrance of the Chiricahua Astronomy Complex on the right. The address is 9315. It is marked with a TAAA sign and twin brown gates flanked by white rail fences set back 50 feet from road.

## Astro-Imaging Special Interest Group (AISIG)



**New Location!**

### Astro Imaging Special Interest Group

**August 1 (Monday) 7pm**  
 Coco's Restaurant on Broadway between Wilmot & Craycroft  
 Contact: Larry Phillips (see page 2)

The TAAA Astro Imaging SIG meetings continue on the first Monday of every month except when there is a holiday. However, due to the closing of the China Rose Restaurant where we have been meeting for years, we had to find a new location. We will now meet at Coco's Restaurant on east Broadway. It is located between Craycroft and Wilmot. The time continues to be 7 PM for the meeting. Come early, anytime after 6 PM and enjoy dinner before the meeting. We will meet in the banquet room which is to the far left after you enter the restaurant proper.

Our August meeting will be on the 1st (Monday). Meetings in October, November, and December will be the normal date on the first Monday of the month. But as a note for your calendars, our meetings in September and January will be on the second Monday of the month due to the proximity to holidays.

Our program consists of members sharing their images, setups, problems, or suggestions. Time permitting we will view a processing tutorials presented by one of the more experienced astrophotographers. Meetings will end no later than 9 PM.



Starry Messengers SIG - Opening Minds to the Universe



Network toolkit usage and I'll give an overview of the newest toolkit "*Life in the Universe—Are we alone?*". Also up for discussion is the development of outreach activities that use technology in a star party setting.

### Starry Messengers SIG (SMSIG) Meeting

**August 15 (Monday) 6:30pm**  
 Beyond Bread on Campbell between Ft Lowell & Glenn  
 Contact: Terri Lappin (see page 2)

We will discuss the status of our outreach projects at a meeting this month. Beyond Bread on Campbell has worked well for our meetings, so we'll meet there again. It's your choice to eat or not. We'll review our Kid Friendly Telescope project and discuss how best to survey the membership's outreach abilities. We'll look at Night Sky

The Starry Messenger SIG provides an environment in which TAAA members can enhance their knowledge and understanding of astronomy and related concepts, all with an emphasis on conveying that information to people of all ages. Any TAAA member involved in astronomy outreach can consider themselves a member of the Starry Messenger Special Interest Group. If you have never attended a SMSIG workshop or meeting but are participating in TAAA outreach activities, you are supporting the goals of the Starry Messenger SIG. We value your contribution.

## Space Exploration Special Interest Group (SESIG)

### Space Exploration Special Interest Group (SESIG)

**Sept 22, Oct 20, and Nov 17 6:45pm**  
 Woods Memorial Branch Library  
 Contact: Al Anzaldua (see page 2)

SESIG on September 22 has the pleasure of sponsoring Raytheon space engineer Phil Eklund. Mr. Eklund will give a slide presentation titled, *The High Frontier: Utilizing Solar System Resources*. Mr. Eklund's presentation will take place promptly at 6:45 pm in the large conference room at the Woods Memorial Branch Library, 3555 N 1st Ave, just south of Prince Road.

On October 20 at the above place and time, Lane Patterson, UA bio-systems specialist and manager of the NASA-

funded Controlled Environment Agricultural Center (CEAC) will give a slide presentation on CEAC's lunar greenhouse and its South Pole food-growth chamber.

On November 17 at the above place and time, SESIG coordinator Al Anzaldua will give a slide presentation on the economic impact of space exploration and development titled, *Space: Boon or Boondoggle?* This talk will place special emphasis on private space companies such as Space X and Virgin Galactic.

Sign-up sheets for SESIG talks will be provided at the general membership meetings or RSVP to Al.

## The Visible Planets this Month

By Erich Karkoschka

Weekend	Sun		Mercury		Venus		Mars		Jupiter		Saturn		Visibility (Vi)	
	Sa/Su	Set	Rise	Rise	Vi	Set	Vi	Set	Vi	Set	Vi	Rise	Vi	Code
30/31		19:21	5:36	20:19	7	5:15	8	2:31	2	23:39	-2	22:33	1	-3 brilliant
07-Jun		19:15	5:41	19:46	-	5:29	-	2:24	2	23:13	-2	22:07	2	0 conspicuous
13/14		19:08	5:45	19:04	-	Set	-	2:17	2	22:47	-3	21:41	2	3 moderate
20/21		19:01	5:50	Rise	-	19:09	-	2:10	2	22:20	-3	21:15	2	6 naked eye limit
27/28		18:53	5:54	4:42	6	19:06	-	2:03	2	21:53	-3	20:49	3	9 binoculars limit

## Astronomy Fundamentals SIG (AFSIG)



### AFSIG Monthly Meeting

**August 11 (Thurs)**

**6:30 pm**

520 North Park Avenue (U.S.G.S. Building – Room 253)

Contact: Ben Bailey (see page 2)

On Thursday, August 11, we will hold our regular monthly meeting. Chuck Dugan will speak to us about Project Astro and how AFSIG might assist in the development of young astronomers. Remember, we are successful only if you participate. I am hoping to see you there.

### AFSIG Observing Clubs

AFSIG Observing Clubs are open to all members of TAAA at no charge. They are guided programs which means that at the scheduled observing sessions, there is someone there to guide you in finding the objects/features needed for successful completion of the program. You can join the programs at any time and can either attend the guided sessions or work on your own. A certificate is awarded at the completion of all the requirements. All observing programs are patterned after those of the Astronomical League, so you can continue on to complete the additional requirements and get your AL certificate.

**Solar Observing Club** meets on the 3rd Saturday of every month from 9 am until noon at Fort Lowell Park (Craycroft at Glenn) near the southeast corner. The purpose of this club is to observe the activity that is occurring on the Sun and record those observations – like sunspots, solar flares and other interesting features. The beauty of this observing program is that our Sun offers great flexibility in observing and recording the different features – you don't have to be concerned about light pollution, night vision, or traveling great distances to find dark skies. If you are interested in participating in the Solar Observing Program or if you just want to be added to our email list to keep posted about our activities and solar news email Dennis Dawson at [dennisldawson@gmail.com](mailto:dennisldawson@gmail.com).

**Lunar Observing Club** meets sporadically depending on schedule compatibility and the moon cycle. The purpose of this club is to identify and log 30 specified lunar features – some of which are easy while others are more

difficult. This is a great club in which to participate as it is ideal for observing from your back yard or patio. Dark skies are not really necessary and some features are even visible through light clouds. If you are interested in participating in the Lunar Observing Club or if you just want to be added to our email list to keep posted about our activities email Robert Gilroy at [bobgilroy@tucsonastronomy.org](mailto:bobgilroy@tucsonastronomy.org).

**Constellation Observing Club** meets monthly on our regularly scheduled TIMPA night. The purpose of this club is to identify and log 20 constellations, their brightest stars and deep sky objects. This is a great way to learn your way around the night sky. If you are interested in participating in the Constellation Observing Club or if you just want to be added to our email list to keep posted about our activities email Paul and Cathy Anderson at [paulanderson@tucsonastronomy.org](mailto:paulanderson@tucsonastronomy.org)

**Solar System Observing Club** meets monthly on our regularly scheduled TIMPA night. The purpose of this club is to observe and log the different features and actions of the planets and their moons and other interesting solar system objects. If you are interested in participating in the Solar System Observing Club or if you just want to be added to our email list to keep posted about our activities email Mike Finerty at [mfinerty1@msn.com](mailto:mfinerty1@msn.com).

**Double Star Observing Club** meets monthly on our regularly scheduled TIMPA night. The dark night sky is filled with millions and millions of stars. Some are close by (relatively speaking) but most are far away. Some are single stars (like our sun) but others are multiple star systems. Of these multiple star systems, we can detect and split many double stars with our equipment. The purpose of this club is to observe and log the different types and colors of double stars. If you are interested in participating in the Double Star Observing Club or if you just want to be added to our email list to keep posted about our activities email Tom Watson at [watson1987@cox.net](mailto:watson1987@cox.net).

## Young Astronomers Program

Contact Person: Robert Gilroy, [bobgilroy@tucsonastronomy.org](mailto:bobgilroy@tucsonastronomy.org)

AFSIG is looking for families with children 7 to 17 to participate in our Young Astronomers Program. Because of the different maturity levels, The Young Astronomers Program consists of two different programs or clubs.

**Astronomer Cadet** – for children 7 to 10 years old  
There are a lot of other objects in the sky besides stars: galaxies, star clusters, globular and open clusters. There are planets and moons and asteroids and comets – just to mention a few. The Astronomer Cadet program is designed to capture the interest and to motivate the younger child.

**Detective Astronomer** – for older children and young adults  
All is not what it seems out there in the universe. Is the sky really moving? Why are there two north poles? There are planets and even some moons that have an atmosphere.

## New Program!

Some planets have rings...some don't. Some stars are large while others are small and then there are stars that change their brightness. The Detective Astronomer program goes into greater depth to encourage and motivate older children and young adults.

This program will use hands-on projects to discover the wonderful world of Observational Astronomy. They will solve puzzles, play games, use binoculars, operate telescopes and, most of all, have fun. No equipment is needed but will probably be desired. Binoculars and telescopes will be available for use. Spread the word to family, friends and associates to come and join us. Parents and all adults will enjoy this as well. Let us enjoy this hobby as a family. We are going to be launching this program this Fall – probably in September.

## Community and Educational Events

All members are asked to support our outreach events listed below. TAAA either sponsors or co-sponsors these events. These are great opportunities for beginners, as you only need to know a few objects in the sky. Even without a telescope, you can be valuable in other capacities. Sign up sheets for many events can be found at the meeting or contact a TAAA officer.

### Tucson Children's Museum

**August 29 (Mon)**

General Area: Downtown

**6pm**

1 scope



Hands-on demonstrations will be presented by the Starry Messengers SIG. Weather permitting, the museum would appreciate a telescope set up for observing until 8pm when the museum closes. Contact Terri Lappin (see page 2) for details.

## Upcoming Lectures

Here is our upcoming lecture schedule. Lectures are arranged by Terri Lappin. She's always open to suggestions (see page 2 for contact information).

2-Sep	<i>Astronomy Essentials</i>	TAAA Status Presentations
	<i>Invited</i>	Josh Eisner, Steward Obs. Protoplanetary disks
7-Oct	<i>Astronomy Essentials</i>	Mary Turner Seasonal Objects
	<i>Invited</i>	Dr Marcia Neugebauer, LPL; Solar Wind
4-Nov	<i>Astronomy Essentials</i>	Members Night Tentative Theme:
	<i>Invited</i>	Astronomy in the Arts
2-Dec	<i>Astronomy Essentials</i>	Terri Lappin (Tentative) The Search for Life Toolkit
	<i>Invited</i>	Bill Gates, TAAA Member

## Fundamentals of Astronomy Class

October 1, 8, and 22

Contact: Ben Bailey (see page 2)

AFSIG is putting on its popular Fundamentals of Astronomy class this October. This class is aimed at giving the beginning amateur astronomer a good start in the hobby including the basics of the night sky, equipment used, and observing techniques.

October 1st

We will cover Astronomy Basics, including celestial motion, the celestial coordinate system, and types of celestial objects.

October 8th

The subject will be Equipment Basics, including telescopes, mounts, eyepieces, filters, and other observing accessories.

October 22nd

We will discuss Observing Basics, including locating objects, seeing conditions, and hints and tips on observing various types of objects.

The classes will be held at the regular AFSIG meeting location: Room 253 in the USGS building at 6th and Park on the UA campus. Each day will consist of several presentations, with frequent breaks and a break for lunch. We expect the class to run from 9:00 AM until mid-afternoon on each day. After the October 22<sup>nd</sup> class, a Potluck Supper and Star Party will be held at TIMPA.

The class is free to TAAA members and there is plenty of room on the roster. If you are interested, send an e-mail to [fundamentals\[at\]tucsonastronomy.org](mailto:fundamentals[at]tucsonastronomy.org) or contact one of the AFSIG Committee members.

### Dark Skies and Galileoscope Workshops for Educators

Saturday, August 6th 9 -5pm

Sponsored by National Optical Astronomy Observatory  
Education & Public Outreach  
10 per workshop or \$15 for both

Go to: [http://www.noao.edu/education/files/DS+Gal\\_Flyer\\_Aug2011wkshp.doc](http://www.noao.edu/education/files/DS+Gal_Flyer_Aug2011wkshp.doc)

Contact Connie Walker  
[cwalker\[at\]noao.edu](mailto:cwalker[at]noao.edu) or call 520-318-8535



**Free service**



**Only for Members**

### Don't own a telescope?

#### Our Telescope Loaner Program is your answer!

Beginners, here's your chance to learn and observe the sky before buying any equipment. The Loaner Program is available to any current member after meeting requirements detailed in the TAAA Loan Policy. These telescopes are in the program:

Sears 60mm f/15 on equatorial mount

Unitron 62mm f/14.5 on equatorial mount

Meade 90mm ETX

Coulter Odyssey8 8" f/4.5 Dobson

Meade 10" f/4.5 on equatorial mount

Meade 10" LX200 GPS (requires training session)

Contact the Equipment Loan Coordinator (see page 2) or any club officer for details about these telescopes.

## Night Sky Network Toolkits

NASA, through sponsorship of the Night Sky Network, recognizes the essential role amateur astronomers play in public astronomical education. Under contract with NASA, the Night Sky Network team at the Astronomical Society of the Pacific has developed a series of toolkits for amateur astronomers to use in informal settings such as star parties and other outreach events. Below is a list of our Outreach Toolkits. If your scope is not well-suited for public events, or if you want a change of pace, consider bringing a toolkit to a community event. Toolkits are also great backups for cloudy nights. Each themed toolkit contains several projects; you pick and choose what you want to use. Toolkits are self-contained with nearly all the materials needed for these hands-on projects. You may need to provide fresh batteries, scissors, or a bag of flour, depending on what project you select. A Resources CD and a Training DVD are included. Individual training in their use is available upon request. Please make arrangements with Terri Lappin (smsig[at]tucsonastronomy.org) to borrow these toolkits. Normally, you can keep a toolkit for a month at a time.



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## Dark Skies for August 2011

By Erich Karkoschka

No twilight, No moonlight  
for Tucson in 24-hour MST  
18hrs=6pm, 20hrs=8pm  
22hrs=10pm, 0hrs=midnight

Day	Date	Dark Time
Su/Mo	31/01	20:55 - 4:06
Mo/Tu	01/02	20:54 - 4:07
Tu/We	02/03	21:08 - 4:08
We/Th	03/04	21:45 - 4:09
Th/Fr	04/05	22:24 - 4:10
Fr/Sa	05/06	23:06 - 4:11
Sa/Su	06/07	23:53 - 4:12
Su/Mo	07/08	0:45 - 4:13
Mo/Tu	08/09	1:42 - 4:14
Tu/We	09/10	2:42 - 4:14
We/Th	10/11	3:42 - 4:15
Th/Fr	11/12	- - -
Fr/Sa	12/13	FULL MOON
Sa/Su	13/14	- - -
Su/Mo	14/15	- - -
Mo/Tu	15/16	- - -
Tu/We	16/17	- - -
We/Th	17/18	20:34 - 20:59
Th/Fr	18/19	20:33 - 21:30
Fr/Sa	19/20	20:31 - 22:04
Sa/Su	20/21	20:30 - 22:42
Su/Mo	21/22	20:29 - 23:26
Mo/Tu	22/23	20:27 - 0:14
Tu/We	23/24	20:26 - 1:09
We/Th	24/25	20:24 - 2:09
Th/Fr	25/26	20:23 - 3:12
Fr/Sa	26/27	20:21 - 4:19
Sa/Su	27/28	20:20 - 4:31
Su/Mo	28/29	20:19 - 4:32
Mo/Tu	29/30	20:17 - 4:33
Tu/We	30/31	20:16 - 4:33
We/Th	31/01	20:22 - 4:34

Our Night Sky Network Toolkits	Telescopes - Eyes on the Universe:
<b>Just Arrived!</b> <i>Life in the Universe—Are we alone?:</i> origin of and search for life	basic principles of optics, the human eye, and observing
<i>Space Rocks - Asteroids, Comets, and Meteorites:</i> meteorite samples, asteroid detection	<i>PlanetQuest:</i> demonstrate planet detection techniques
<i>Exploring the Solar System:</i> scale model of solar system	<i>Other Outreach Resources</i>
<i>Our Galaxy, Our Universe:</i> scale model of the Milky Way galaxy and the Universe	SolarScope: provides a white light image of the sun suitable for small group viewing.
<i>Shadows and Silhouettes:</i> lunar phases, eclipses, and transits	Dark Skies Education Kit: light pollution principles, includes a Sky Quality Meter
<i>Black Hole Survival Kit:</i> gravity concepts	Comet Chef: an apron (with a comet on it) and chef's hat to wear when mixing up comets
<i>Supernova!:</i> life cycle of massive stars, earth's protective atmosphere	Moon Globe: 12" diameter with stand
<i>Mirrors and Glass - An inside look at telescopes:</i> how telescopes work	DVDs: <i>A Private Universe; Cosmic Collisions</i>

## TAAA Classifieds

For Sale	<p>①Meade LX 200GPS 12" with field tripod, Meade super wedge, 3D counterweight system, Losmondy mounting plate system. \$1000.00 ②Meade Starfinder 16" with equatorial mount and Magellan II controller. \$1500.00 ③Anssen technologies Alhena equatorial mount with drive Motors and shaft encoders \$1500.00 ④Technical Innovations Pro Dome 10' dome with two wall rings and motorized shutter \$3000.00 ⑤Sirius 5.0m College Model \$2000.00 ⑥LeSueur pier with wedge for LX 200 \$500.00 ⑦SBIG ST 7XME astro camera with CFW8 filter wheel, RGB filter set, and AO7 adaptive optics attachment \$1500.00 ⑧Schuler UVBRI photometric filter set \$500.00 ⑨ Spare CFW8 filter holder \$50.00 ⑩SBIG ST 237A astro camera with RGB filter wheel \$500.00</p> <p>Cash Only. Some prices negotiable, most not. No shipping, you come and get, domes require disassembly. All sales final. All equipment sold as is. Call Jim Charboneau @ 520-705-7482 (Ad expires Nov 2011)</p>
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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 or e-mail the newsletter editor.

## Grand Canyon Star Party—2011

### Highlights of the 2011 Grand Canyon Star Party

The 21st Annual Grand Canyon Star Party turned out to be quite a successful event. I'm getting several emails a week from visitors who took the effort to look up the contact information for the event and thank us all for the experience. We've made a whole lot of people happy, and once again touched a lot of people's lives.

Although the first few nights were a bit chilly, and winds up to 50 MPH on Night 1 kept some of the bigger instruments under wraps, we were still able to put in 8 clear nights. The first few nights we suffered a bit from growing pains and learning curves, but we just kept getting better and better at the task, finishing quite strongly!

A very special event of the week was our celebration of Valerie Vance-Goff's involvement in all of our lives with a quiet remembrance and scattering of some of her ashes where her late husband Bob's were scattered after his passing. She and Bob will be present whenever we hang the new Grand Canyon Star Party banner. Special thanks to all of you who provided thoughts and inspiration to get the banner done.

Dean Ketelsen, the founder of the current GCSP and the coordinator for the first 18 years, has made a time lapse video of June 20, 2011, at the site. To see our typical sky each night, check out the following:

<http://www.youtube.com/watch?v=OE09xkuir5s>

We all owe a huge ovation to Interpretive Ranger Marker Marshall, our contact for the NPS and GCNP, and all that she did to manage the complex coordination and setup following our move from Yavapai Point, as well as a significant grant from the Grand Canyon Association to cover the costs of signs, lights, and other new equipment. At some locations within the park there were two-page press release handouts to visitors, and the web presence with podcasts and advice for attending the event as well as the announcement on 1610AM radio every 10 minutes

through the week all show a focused effort by NPS to bring what we offer to the visitors as a Must Do event.

Here are Marker Marshall's favorite comments this year:

- Mary Turner heard a kid saying 'This has been the best night of my life!'
- A Visitor Comment form came in to the Park Headquarters calling the sight of the supernova in the Whirlpool galaxy in Paul Lorenz's scope 'life-changing.'
- Jim O'Connor received this great note from a visitor:
 

"We just returned from a trip to Arizona, and while there, visited The Grand Canyon. We were lucky enough to end up there during your Star Party Week. After hearing my three girls (14, 17 & 19) talk about this for days, I decided to hunt down some sort of contact info just so I could express our gratitude to your group for such a wonderful opportunity. After seeing Saturn, my 14 year old said " I can cross that off my bucket list now ".

All three have been telling their friends all about this and I'm sure will remember this trip always because of this one night. On our first night back to our friend's house in Phoenix, we all reclined on the pool chairs and I heard "there's Vega... I see the North Star.... I see The Scorpion.... Saturn is over there...etc." Please extend a Thank you to your volunteers from the Smith Family, Bowling Green, Kentucky."

I'm including some pictures I have of the event; there are probably hundreds more out there!

GCSP 2012 will be June 16–23, 2012, and will feature a New Moon on June 19, meaning some interesting canyon photo ops at morning moonrise early in the week, and early evening moonset late in the week.

*Jim O'Connor*  
GCSP South Rim Coordinator

### Stats from Marker Marshall for GCSP 2011

- 43,697 nighttime and 7,666 daytime contacts reported by astronomers, totaling 51,363 (vs. 42,635 in 2010)
- Estimated 6,015 nighttime attendance and 5,111 daytime attendance (vs. 4618 nighttime and 4,055 daytime in 2010)
- Average visitor looked through 8 scopes during the night and 1.5 scopes during the day
- 2,285 attended the slide shows (up 58% from 1,445 in 2010)
- 314 attended Constellation Tours (new this year)
- 109 registered volunteer astronomers provided 1,976 volunteer hours to the program
- 35–51 scopes set up each night



Solar Sharing, Day 1—Jim O'Connor and Bruce and Betty LaFrance  
All photos this page and next supplied by Jim O'Connor.

*More Photos on Next Page*



The new indoor theatre for evening talks. (Dean and Melinda Ketelsen in the audience).



TAAA Members Jim and Sue Knoll



Left: 17 Year Old Jessica O'Connor, "Queen of Albireo", with Scopozilla



Right: 14 Year Old Karina O'Connor with 18" Planetary Nebula Hunter



Pizza Party on Day 2



Last Day Pot Luck: Robert Lofquist, Dr. Alan Delman, Ginger Applegarth, Michael Turner, Mary Lofquist, Erich Karkoshka, Marker Marshall, et. al.

Grand Canyon Star Party 2011



Steve Ratts With Early Visitors



Paul Lorenz

Plan to attend Grand Canyon Star Party 2012 June 16—23

Grand Canyon Annular Lunar Eclipse, May 20, 2012

Contact Jim O'Connor, GCSP Coordinator (see page 2)

On Sunday, May 20, 2012, there will be an annular eclipse passing from California through Arizona and New Mexico, ending in Texas. For us here in Arizona, it will be in the late afternoon through sunset. The center of the best visibility path passes through Grand Canyon National Park, and Marker Marshall, our Interpretive Ranger coordinator for the Grand Canyon Star Party, is trying to get a feeling for interest in the astronomy community in performing some daytime public outreach followed by some evening observing. The venue would be the same as the Grand Canyon Star Party, with daytime solar in the front area of the Visitor Center, and, perhaps, nighttime observing out back in the reserved parking area.

If there is interest among astronomers, some free campsites could be arranged just as we are provided for

GCSP. There are many variables at work here, with this being a Sunday late afternoon event, a single day/night opportunity, and often quite chilly at that time for the Grand Canyon. There are four or five of us who have tentatively committed to setting up for the solar part of the show (I would go up for the whole weekend, due to the driving distance), but it is difficult to gauge how best to approach this for announcement to the visitors without a feeling for how many astronomers would be interested. Several hundred visitors and five telescopes would be a sporty event. So, for now, this is just an attempt to test the water and see what we might do. I would guess that for that new moon Sunday we might have some CAC responsibilities as a club as well.

Let me know by email (see page 2) if you have any thoughts; as I said, just checking, and there are quite a few clubs a lot closer to GCNP who could also support.

## TIMPA Observing Site News

### Gila Monster Observatory Reopens on Mons Heloderma

Ben Bailey, AFSIG Chairperson

On Saturday, July 9, several members of AFSIG gathered at TIMPA at around 4:00 AM to complete the work on the Gila Monster Observatory. The TAAA Board authorized us to build a sloping earthen mound around the raised concrete pad that had been identified as a safety issue.

Rakes and shovels in hand, we got started as soon as it was light enough to see. By 8:30 AM we had finished our task and the 14" telescope is available once again for TIMPA Star Parties. Many thanks to Hunter Bailey, Don Cain, Roy Fahlberg, Chuck Hendricks, Dennis McMacken, J.D. Metzger, Jim Schrode, and Howard Weatherhead, And special thanks to Bob Gilroy and John Croft who did all of the set up and a good bit of the work as well. Pictures of our morning at hard labor are available in the Photos section at the TAAA Forum Yahoo Group.

AFSIG had a contest and named our handiwork "Mons Heloderma". Heloderma is the genus that contains the species Gila Monster. So we can loosely think of "Gila Monster Observatory on Poison Lizard Mountain".

## Chiricahua Astronomy Complex Site News

### Phase 2 Construction Update

John Kalas, Construction Coordinator/CAC Site Director

Phase 2 construction of the "public area" has been completed. All ten concrete telescope pads have electric service as does the amphitheater area. The hold-down latch system has been installed in the roll-off roof observatory. Additional telescope equipment has been loaded into the storage containers.

The steel transition plate for the concrete pier in the observatory was installed with Astro-Physics mount adapter plate and everything fit and worked properly. The steel transition plate requires painting before permanent installation. All interior and exterior lighting fixtures have been installed in the observatory.

We are currently waiting for notification from the Cochise County Permit Dept. to allow use of the "public area". There is a chance that the county may require us to cover the dirt in the Phase 2 "public area" for dust abatement. I have already started investigating the cheapest solution, if the requirement is imposed.

### CAC Events

With the completion of the Phase 2 "public area" construction project, it would be appropriate for the club to organize a trip to the site for TAAA Members to review the improvements. I would like to schedule this trip on Saturday, 8/13. As we did with the Phase 1 review trip, we could meet at the TTT Truckstop at I-10 and Craycroft, consolidate into the fewest number of vehicles and convoy down to the site in the morning. We could spend several hours at the site and then head to a local restaurant for lunch. After lunch, we would return to the TTT Truckstop. An e-mail notice will be sent to all members with the details.



Gila Monster Observatory atop "Mons Heloderma". The Meade 16" Schmidt-Cassegrain is housed in the observatory



The dedicated TIMPA crew: Hunter Bailey, Don Cain, Roy Fahlberg, Chuck Hendricks, Dennis McMacken, J.D. Metzger, Jim Schrode, and Howard Weatherhead



Completed roll-off roof observatory at CAC



CAC's ten telescope pads with electricity

The August CAC Star Party is scheduled for 8/27. The monsoon season has been very active at the CAC Site recently, so we will have to watch the weather conditions carefully as the star party approaches.

## TAAA Board of Directors Meeting

13 July 2011

**Attending:** Board members present (6): Teresa Bippert-Plymate, John Croft, John Kalas, Claude Plymate, Keith Schlottman and Michael Turner. Members present (7): Paul and Cathy Anderson, Ben Bailey, Bob Gilroy, Liz Kalas, Terri Lappin and Roger Schuelke.

**Call to Order:** The President called the meeting to order at 6:36 pm.

**Minutes:** Minutes from the June 2011 Board meeting were approved unanimously.

### Member Feedback

The Treasurer has received inquiries from members regarding on-line dues paying. As of yet, magazines may be renewed on-line through the Night Sky Network, but member dues are not yet payable on-line.

### Upcoming Meetings

An August main speaker has yet to be confirmed. Mary Turner will give the Beginner's Lecture. The Board suggested many speakers and has formulated a back-up plan in the event a speaker cannot be procured.

Only the September main lecture slot is unfilled at this time (Corrected: December was erroneously stated at meeting.)

### Treasurer's Report

The club has \$24,309.44 in checking. The Treasurer presented a detailed Fiscal Summary for the July 2010-June 2011 period, which is complete except for a cross-checking of some of the Club's assets (i.e. telescopes and equipment).

### Special Interest Group Status Reports

Astronomy Fundamentals (Ben Bailey):

- The step-up trip hazard to the Gila Monster Observatory has been alleviated; a work party of 11 volunteers met Sat 7/9 and built a smooth dirt ramp all the way around. Thank You!
- The AFSIG is gauging the interest level of members to see if there are folks who would like to attend a fall Astronomy Class.

Astronomical League (Paul Anderson):

- Paul and Cathy Anderson gave a brief report about Alcon 2011, which they just attended. The AL has instituted 3 new observing clubs, and the convention will be held in Chicago next year.

- Paul has completed the requirements for the Lunar II club. Congrats Paul!

Starry Messenger (Terri Lappin):

- A new Night Sky Network toolkit has arrived, Looking for Life. See Terri Lappin for details.

### Website Update

Terri Lappin reported that the website is up-to-date.

### Web Site Working Group

Roger Schuelke reported that our website contractor has basically finished converting our web pages. Roger is reviewing the pages, and will send the Board a link so that they may review the pages. There will likely be a 2-3 hour time period when the TAAA website is down when the website is changed to the new format; but an email will be sent out to warn members when this occurs.

### Chiricahua Astronomy Complex

John Kalas reported that Phase 2 construction is essentially finished. The latches for the roll-off roof are installed. The county has requested that we install a securing mechanism for the roof when it is open.

Telescopes are now stored in the storage containers at CAC.

We are now waiting for county signoff on the improvements, and issuance our occupancy permit for Phase 2.

### Other

The Board moved to authorize Bob Gilroy to solicit donations of educational materials and supplies from local businesses through the end of this year. The Treasurer will provide oversight, and the Board will approve written solicitations. The motion was approved unanimously.

Terri Lappin has volunteered to do the August and September Newsletter. The Board is considering a change in the Newsletter format, to be discussed at the next Board meeting. The Board is also looking for a volunteer to take over production of the Newsletter.

Claude Plymate has volunteered to take over monitoring of the Club voicemail for John Kalas starting 7/14, as John could use to lighten his tasks list with all of the CAC activities he has been overseeing.

Meeting adjourned at 8:25 pm.

Respectfully submitted,  
Teresa Bippert-Plymate/TAAA Secretary

## Member News

We welcome these members who recently joined the TAAA: Christopher Cokinos, Larry Ismbery, and Philip & Romona Yehle. Glad to have you join! Hope you'll attend star parties and meetings so we can meet you.

Members packs can be picked up at a meeting or mailed for the cost of postage. Updated membership lists are available at our website after logging in.

## Next Board of Director's Meeting

Wednesday, August 10th, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305. The front doors will be locked. Contact the president (see page 2) to have your topic added to the agenda. Be there by 6:30pm or be sure to have a cell phone number of someone you know is at the meeting and they can let you in.



## Chris Lancaster's Constellation of the Month

### Corona Australis

#### The Southern Crown

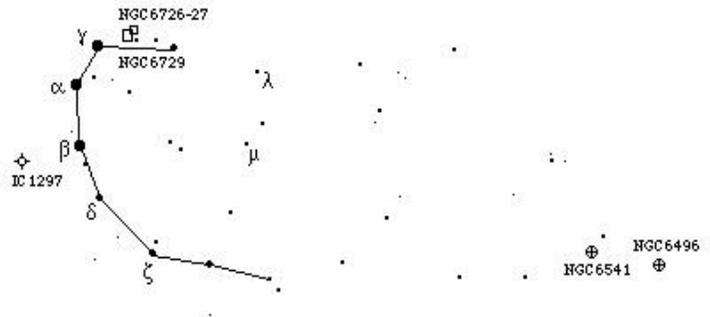
Corona Australis is one of the original 48 constellations envisioned by the second century astronomer Ptolemy. It is a half circle of 4th magnitude and dimmer stars under the teapot asterism of Sagittarius and east of the lower curve of the tail of Scorpius. Most depictions of Corona Australis show it as a laurel wreath, and it is considered to be the crown of Chiron, the centaur, or a duplicate of Corona Borealis (the constellation known as the northern crown), which is the crown of Ariadne, the daughter of the king of Crete, Minos.

Corona Australis lies near the heart of the summer Milky Way, so the deep sky objects that we expect to see are star clusters and nebulosity. We can start with NGC6541, which is a bright globular cluster in the southwest corner of the constellation. One way to find this bright, 6.6 magnitude cluster is to star hop from some bright stars in the tail of neighboring constellation Scorpius. Start with Lambda Scorpii (the tip of Scorpius's tail) and move southeast through the tail stars of Kappa and Iota. Keep going in this same direction two and a half degrees to a 4.9 magnitude star, then repeat this step two and a half degrees to another 4.9 magnitude star. NGC6541 is then less than half of a degree southeast of this last star. You can also use your setting circles or computerized telescope and dial up RA 18h 8m Dec -43d 42'. Here is a fine globular cluster, which you may or may not be able to resolve depending on the size of your telescope and atmospheric conditions. Its overall magnitude of 6.6 means it is easy to spot, and the size of 13' makes a good view at moderate power.

Nearby at 1.7 degrees west-southwest of NGC6541 (or RA 17h 59m Dec -44d 16') is another globular cluster, NGC6496, which straddles the boundary between Corona Australis and Scorpius. Here we have a more subdued cluster glowing at magnitude 9.2 and having about half the size of NGC6541, but it is still well worth a look. This cluster appears as a loose ball of stars.

For experienced observers, there is an elusive planetary nebula at the opposite side of the constellation at RA 19h 17m 24s, Dec -39d 37' 00", or 1.5 degrees east of Beta Coronae Australis. This is IC1297, a small nebula measuring a mere 0.1 arc minutes across. At high power, you should be able to distinguish this as a diffuse circle; otherwise it will be difficult to see it as anything different than the surrounding stars.

A diffuse area of reflection and dark nebulosity is found in the northeastern section of Corona Australis. Here we have a collection of nebular bodies composed of NGC6729, NGC6726, and NGC6727. Although it sounds complex, they occupy a fairly small area of sky measuring about 5 arc minutes. One of these nebulae, NGC6729, is illuminated by the variable star R Coronae Australis, so the responding nebula also varies. This star is an irregular variable, which fluctuates between magnitude 9.7 and 12, and lights up the small, comet shaped nebula. So active is this star that it has been observed changing by as much as



2 magnitudes in a few days time. NGC6726 and 6727 are side by side, more or less in contact with each other, and forming a double lobed structure of about 2 arc minutes in the longer dimension. Find this group by centering your scope near 19h 1m 50s Dec -36d 55', or just less than 1 degree west of magnitude 4.2 Gamma Coronae Australis.

After finding some of these elusive objects, we can relax a little and go after an easy double star. It's one of the brighter stars in this constellation but, nevertheless, is just within naked eye limit in dark skies. The star is Lambda Coronae Australis, which is just to the west of the brightest arc of stars forming the most apparent structure of the constellation. Lambda is a pair of magnitude 5 and magnitude 9 stars separated by a wide 29 arc seconds, so it can be separated by the smallest of telescopes at very low power.

Often we forget about Corona Australis because it is adjacent to the wonderful offerings of Sagittarius and Scorpius, but sliding your scope a little more to the south will bring you into its environs, which offer some wonders of its own.

Get all the Constellation of the Month  
articles in one book!

**Under Dark Skies**

**A Guide to the Constellations**

By Chris Lancaster

<http://www.trafford.com/Bookstore/BookDetail.aspx?BookId=SKU-000158114> for \$14.99

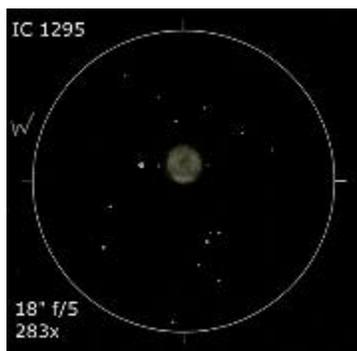
or get it directly from Chris at  
ctlancaster[at]msn.com at the discounted price of \$10  
(while supplies last)

## Chris Weis' Planetary Nebulae of the Month

### IC 1295 and PK 36-1.1

Planetary nebulae (PN) are fascinating objects that come in numerous forms of appearances. Besides the well known grand four Messiers (M27, M57, M76 and M97), there are hundreds more to explore. This article suggests two PNs, a pretty bright and easy-to-observe one and a harder one for the more ambitious observer who is equipped with a bigger scope.

Sometimes, PNs do not only impress the observer by their own appearance but also by their environment. IC 1295 is one of them. Lying in Scutum, this nebula was discovered by the American astronomer Truman Safford in 1919 at the age of 83. With a size of  $1'7 \times 1'4$  and a magnitude of 11m7, one should be able to see it with a 5" telescope. What makes this PN so special is its proximity to the globular cluster NGC 6712 (8m2). At small magnifications, both objects appear in the same FOV. Try a UHC or OIII-filter, it will attenuate the globular but enhance the PN's contrast. I observed IC 1295 on June 26<sup>th</sup>, 2011 with my 18" Dobsonian. My description reads: At 94x, the GC NGC 6712 is in the same FOV (spectacular!), no central star, diffuse, easily visible without any filter, reacts strongly to UHC and [OIII], nice star field, subtle structures, a little brighter to the north and dimmer in the center; 283x, fst 6m4 (Lyr)



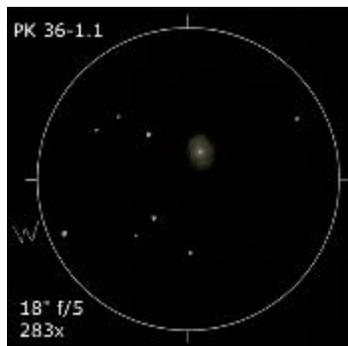
**IC 1295**  
 RA: 18h 54.6 min  
 Dec: -8° 50'  
 Constellation: Scutum  
 Brightness: 11m7  
 Central star: 16m9  
 Size: 100x90 arcsec  
 Distance: 4200ly

### Perseid Meteor Shower



The Perseid Meteor Shower peaks on August 12th. As with all meteor showers, predawn is the best to watch. Unfortunately, a nearly full moon will wash out all but the brightest meteors. The shower begins a couple weeks before, so don't be surprised if you see a few bright meteors within a day or so of this peak. How do you know if it's a Perseid Meteor? Follow the meteor streak backwards and see if it traces back to the constellation Perseus. Particles in this meteor shower originate from the icy comet Swift-Tuttle.

Editor's Note—Rik Hill's *Websites: Trips On The Internet Super-Skyway* will return soon. Rik is taking a break as he heals from knee replacement surgery. Rik, we wish you fast healing.



**PK 36-1.1**  
 RA: 19 h 2.0 min  
 Dec: 2° 9'  
 Constellation: Aquila  
 Brightness: 12m3  
 Central star: 13m8  
 Size: 124' x 75'  
 Distance: 2600 ly

PK 36-1.1 lies in Aquila and was discovered by Steward Sharpless in 1959. It has approximately the same size as IC 1295 but is a mere 13m2 bright. In a bigger telescope, you should be able to see at least its elongation and the central star, which has an apparent magnitude of 13m7. On July 6<sup>th</sup>, 2011, I observed this PN with my 18" Newtonian and noted:

Central star easily visible, found at 94x and [OIII], but also visible without filter when exact position is known, nebula is relatively easy, a little elongated in north-south, diffuse, shaped like a gibbous moon.

Want better observing?

Join the group that's keeping the sky dark

**International Dark Sky Association**

**Southern Arizona section**

We get people to use better lighting, so we'll have a dark sky

**Monthly meetings**

2nd Wednesday, 5:30 – 7 pm.

3225 N. First Ave

Some of the things we do:

- Talks to schools and organizations
- Demonstrations at Desert Museum
- PowerPoint presentations on CD
- Work with government agencies
- Identify non-compliant lighting in Southern Arizona

Contact: Joe Frannea: sky[at]sa-ida.org

www.sa-ida.org

To preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting

Tucson Amateur Astronomy Association  
P.O. Box 41254  
Tucson, AZ 85717

Address Service Requested

Please renew your membership on time. Renewal month and dollar amount appears on your mailing address label. Magazine subscriptions are not included. Astronomical League is included if you are currently a member of AL.

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