



# The Bulletin

**Due to the fact that the reconstruction at the Link Observatory is still going on, the June general meeting will be at the Holcomb Observatory.**

**The June General Meeting, June 5, 2010  
7:00 PM  
Holcomb Observatory  
Butler University**

## **Solar Dynamics Observatory: The Variable Sun Mission**

**Daniel Cervantes  
NASA Solar System Ambassador**

We live in the extended atmosphere of a magnetic variable star. Our Sun varies in every way we can observe it. The Sun gives off light in the infrared, visible, ultraviolet, and at x-ray energies. The Sun generates the solar wind and energetic particles moving up to nearly the speed of light, and all of these emissions vary.

Our planet is immersed in this seemingly invisible yet exotic and inherently dangerous environment. Above the protective cocoon of Earth's lower atmosphere is a plasma soup composed of electrified and magnetized matter entwined with penetrating radiation and energetic particles.

Modern society depends heavily on a variety of technologies that are susceptible to the extremes of space weather -- severe disturbances of the upper atmosphere and of the near-Earth space environment that are driven by the magnetic activity of the Sun. The variable Sun can disrupt electrical power grids on the Earth, disrupt modern navigation systems and threaten the life of astronauts in space.

The recently launched Solar Dynamics Observatory (SDO) is designed to understand the causes of solar variability and its impacts on Earth.

Daniel is currently a physicist with Crane Division, Naval Surface Warfare Center in Crane, Indiana. He has a Masters Degree in Physics from Purdue University and previously taught Physics and Astronomy at IUPUI. Daniel is a NASA/JPL Solar System Ambassador and a member of the Stonebelt Stargazers and the Indiana Astronomical Society.

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## IAS New Website and List Serve

As you all know by now Gary Schoppenhorst has quit the Society. Doug Sanguinetti has been appointed as the new webmaster. The website is now under the control of the Society. Schoppy's other websites were intertwined in the IASIndy.org site and we could not get the pass codes. However, in the changes that have taken place, we will not be able to use the list serve as we have in the past. We have chosen to establish a Yahoo group called IAS-Indy Indiana Astronomical Society. where we can communicate among ourselves via e-mail as we have been doing. You can get to it at [ias-indy@yahoogroups.com](mailto:ias-indy@yahoogroups.com) after you have signed up. It will be a secure site and only for Members of the Society. Same rules for its use will apply. All Society members will be invited to join the group and membership will be limited to members only. You will have to be a member of Yahoo which is free. An email will go out to all the membership explaining what one has to do to join the group. The yahoo group can be used for many different things. I think you will like it.

Last year, Greg McCauley had been working on a revision for the webpage that would make it alive and very modern somewhat like the new virtual library he developed for the Society last year. A sub-committee of the Board and Gary had been working on a revision. Upon Gary's resignation, Greg graciously donated his prototype to the IAS and Doug Sanguinetti is busy converting everything to the new website. It looks fantastic and our plans are to go live with both the new website and group about June 1st. I think you are going to like it.

Some of the features:

1. The site is under the control of the IAS.
2. The new site can be kept up to date easily.
3. Much of the latest astronomy news is available by pressing a button that will go directly to RSS feeds from NASA, JPL and many others.
4. The weather has been expanded to include all the previous information but also jet stream data. Multiple clear sky clocks are included with a map showing what part of the state the clock represents.
5. The new webpage will incorporate the new social networking tools of Facebook and Twitter. We hope to have a YouTube channel where one could put a video in that you have just taken.
6. There are two calendars: 1) An IAS calendar with our monthly activities on Google Calendar which is an interactive calendar. 2) There is a new celestial calendar for what is going on in a specific month.

There are many more innovations as well.

We hope to go live with it at our next meeting where we will demonstrate the new parts of the webpage. Not everything will be working but we hope that most of it will be. Thanks to all who have helped build this site and especially a great thanks to Doug for stepping in right at a busy time.

## **IAS Calendar of Events for June**

June 8 – Board Meeting

June 5– General Meeting at Link Observatory

June 19 – NAG at McCloud

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### **Activities for June:**

#### **Link Observatory**

None scheduled The Link is still being remodeled.

#### **McCloud Activities–**

NAG – June 19

We are able to go to the Link, Prairie Grass Observatories, and McCloud Nature Park at non scheduled times if they do not conflict with reserved activities:

For those interested in going to The Link Observatories for observing call John Shepherd at 1 317-862-3442.

For those interested in going to McCloud to observe, please call the park office 765 676 5437 before 4PM on the day you want to go out. They will give you permission to be there at night and make arrangements to cut off the lights.

For those interested in going to Prairie Grass Observatories for observing call Hoppe at 1-765-296-2753.

### **Other Observing Activities**

The Kirkwood Observatory Solar Telescope is open on the "First Saturday" of each month from 1-3 PM. Viewers may even be able to see a solar prominence or two weather permitting. Updated weather conditions and closings will be posted at the Kirkwood Observatory Hotline at (812) 855-7736, and at the Observatory webpage, <http://www.astro.indiana.edu/kirkwood.shtml>.

Monthly openings of the solar telescope are planned for the first Saturday of each monthly during our 2010 observing season. And if you want to follow the Sun in between our monthly Solar Telescope openings, the website [www.spaceweather.com](http://www.spaceweather.com) provides daily updates.

### **IU Kirkwood Observatory**

Kirkwood Observatory on the IU campus will be open each Wednesday evening through the summer, weather permitting! Join us for a night of observing the night sky with the Kirkwood 12" refractor. Please visit our schedule at <http://www.astro.indiana.edu/kirkwood.shtml>, for a list of dates and times. For updated weather conditions and closings, please call the Kirkwood Observatory Hotline at (812) 855-7736.

The IU Astronomy Department has an electronic bulletin to let people know about local astronomy activities and events. If you would like to subscribe, send an email to

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[astdept@indiana.edu](mailto:astdept@indiana.edu) and we'll put you on the distribution list. Information about activities and events to be included in the e-bulletin should be sent to [catyp@astro.indiana.edu](mailto:catyp@astro.indiana.edu).

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**New Astronomer's Group Meeting  
McCloud Nature Park  
Saturday June 19, 8:00 PM**

It's spring again and time for the second monthly meeting of the Indiana Astronomical Society's New Astronomers Group for 2010. We will be meeting on Saturday June 19 at McCloud Nature Park starting at 7:30 pm.

**THE NAG MEETING WILL BE HELD - RAIN OR SHINE.**

The next monthly meeting of the Indiana Astronomical Society's **New Astronomers Group** for 2010 will be held on **Saturday, June 19 at McCloud Nature Park starting at 8 pm**. Weather permitting, there will be an observing session using IAS member's telescopes and binoculars following the meeting.

**THE NAG MEETING WILL BE HELD - RAIN OR SHINE.**

Orientation for the new observer will be the theme for June:

- Acquiring knowledge of the sky
  - Mentor, club functions, personal study
- Observing Aids
  - Charts, Planisphere, Reference material, Red Light
- Equipment
  - Binoculars, Telescopes, mounts
- Weather forecasting and effects of the Jet Stream
- Lunar cycle – Advantages of each phase
- What's up there & what can you expect to see
  - Sun & Moon
  - Planets & Asteroids
  - Comets
  - Bright Nebula
  - Star Clusters – Globular & Open
  - Meteors
  - Galaxies
- Observing Field Etiquette
- Question and Answer Session

The purpose and intent of the NAG is to introduce newcomers to the wonders of the night sky. All types of observing will be discussed including naked eye, binocular and telescope.

If the weather cooperates, IAS members will have telescopes set up and attendees will have an opportunity to view some of the night sky objects following the meeting.

The night sky can be an intimidating place. With a little help everyone can enjoy the celestial beauty that we have all taken for granted our whole lives. From the constellations to the deep sky; with the naked eye or with a telescope, there is something for everyone to enjoy.

We need IAS members to be ambassadors and meet the public and show our hobby. Pray for good weather.

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### **John Shepherd Accepts Position of Observatory Manager.**

John Shepherd has taken over the responsibility of Observatory Manager for the Link observatory. We have plans to develop use of the 36" more and training of our members will begin shortly. If you have an interest in using the 36" contact Shep for training.

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### **The Bulletin**

There has been some questions recently if we could retune the Bulletin with a flashier name and Logo. Apparently the monthly newsletter has been called the "Bulletin" almost from the beginning of the Society. Some think that a more astronomical name might catch one's eye. The newsletter of the Astronomical Society of Kansas City for example is "Cosmic Messenger". What do you think? Maybe we could have a contest for a new name.

Let me know what you think. Send me an e-mail at [KB9SRB@hotmail.com](mailto:KB9SRB@hotmail.com)

The Editor

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### **ALCor Observations Bill Conner**

## **ALCON 2010**

The Tucson Amateur Astronomy Association, the International Dark-Sky Association, and the Astronomical League will be jointly hosting the annual convention of the Astronomical League on June 25 and 26, 2010 at the Tucson Hilton East in Southern Arizona.

The League will be holding its annual awards banquet, and it will present major national awards during the conference. Among others prestigious awards, the National Young Astronomer Award will be presented. The featured speaker will be Dr. Roger Angel, Director of the Steward Observatory Mirror Lab.

In addition, astronomy vendors from across the USA will display their latest products. Leaders in IDA's dark sky movement are expected to participate. Keith Schlottman, VP of TAAA, and Bob Gent, past president of the Astronomical League, are the event co-chairs. Please mark your calendars and stay tuned for additional updates.

## **IDA's 2010 AGM**

The International Dark-Sky Association's Annual General meeting will be on Sunday, 27 June 2010

## **TUCSON**

Tucson is a very interesting place to visit, particularly for amateur astronomers. Close by is the Kitt Peak National Observatory that you may tour during the day and, by appointment, observe at night. In town, the Steward Observatory Mirror Lab is an awesome place. Located under the University of Arizona football stadium, the lab's huge rotating furnace can spin cast mirrors up to 8.4 meters across. Tours may be arranged on Tuesdays and Fridays. Also nearby is the old Tucson movie set that is now an entertainment venue with a full array of old west dramas, saloon musicals, trail rides and fun for the whole family. In addition, the Arizona-Sonora Desert museum, a world renowned zoo, natural history museum and botanical garden, and the Saguaro National Park are nearby. I've been there many times and I suggest that you plan to stay for at least a week.

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### **UP Coming Star Parties**

**Apollo Rendezvous** – Dayton, Ohio June 11 - 12

<http://mvas.org>

**Two Rivers Spring Star Party** May 13-16

[www.freewebs.com/tworiversstarparty](http://www.freewebs.com/tworiversstarparty)

**JEPC Star Gazing Event** IL June 10-13

<http://www.mikewolford.com/IEPC%20Event.htm>

**Cherry Springs Star Party** Cherry Springs State Park, PA June 10-13

<http://www.astrohbg.org/cssp/information>

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**Nebraska Star Party** – August 8th - 13th, 2010 - North Central Nebraska - This is a premier dark site and has fantastic observing. However, the weather can be brutal. Temperatures can reach 105-110 degrees. However you can cool off in the shade of the tree. All activities will be at the Snake Creek Campground at Merritt Reservoir. <http://www.nebraskastarparty.org/>

**Indiana Family Star Party** Camp Cullum, Frankfort, IN August 5-8, 2010  
<http://jmmahony.home.insightbb.com/pgo/starparty/>

**Astrofest** Kankakee IL Date To be announced  
[www.chicagoastro.org](http://www.chicagoastro.org)

**Black Forest Star Party** PA September 10-12  
<http://www.bfsp.org/starparty/>

**Okie-Tex Star Party** – October 2-10 This is reported as one of the darkest sites in the US. It is a great deep sky event.

**Twin Lakes Star Party** October 2-10 This is a great party very close to home  
[www.wkaa.net](http://www.wkaa.net)

If you know of events coming up let me know and I will get them in the Bulletin

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## NASA Space Place

# Ancient Supernova Riddle, Solved

By Dr. Tony Phillips

*Australopithecus* squinted at the blue African sky. He had never seen a star in broad daylight before, but he could see one today. Was it dangerous? He stared for a long time, puzzled, but nothing happened, and after a while he strode across the savanna unconcerned.

Millions of years later, we know better.

That star was a supernova, one of many that exploded in our corner of the Milky Way around the Pliocene era of pre-humans. *Australopithecus* left no records; we know the explosions happened because their debris is still around. The Solar System and everything else within about 300 light-years is surrounded by supernova exhaust—a haze of million-degree gas that permeates all of local space.

Supernovas are dangerous things, and when one appears in the daytime sky, it is cause for alarm. How did Earth survive? Modern astronomers believe the blasts were too far away (albeit not by much) to zap our planet with lethal amounts of radiation. Also, the sun's magnetic field has done a good job holding the hot gas at bay. In other words, we lucked out.

The debris from those old explosions has the compelling power of a train wreck; astronomers have trouble tearing their eyes away. Over the years, they've thoroughly surveyed the wreckage

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and therein found a mystery--clouds of hydrogen and helium apparently too fragile to have survived the blasts. One of them, whimsically called “the Local Fluff,” is on the doorstep of the Solar System.

“The observed temperature and density of the Fluff do not provide enough pressure to resist the crushing action of the hot supernova gas around it,” says astronomer Merav Opher of George Mason University. “It makes us wonder, how can such a cloud exist?”

NASA’s Voyager spacecraft may have found the answer.

NASA's two Voyager probes have been racing out of the solar system for more than 30 years. They are now beyond the orbit of Pluto and on the verge of entering interstellar space. "The Voyagers are not actually inside the Local Fluff," explains Opher. "But they are getting close and can sense what the cloud is like as they approach it."

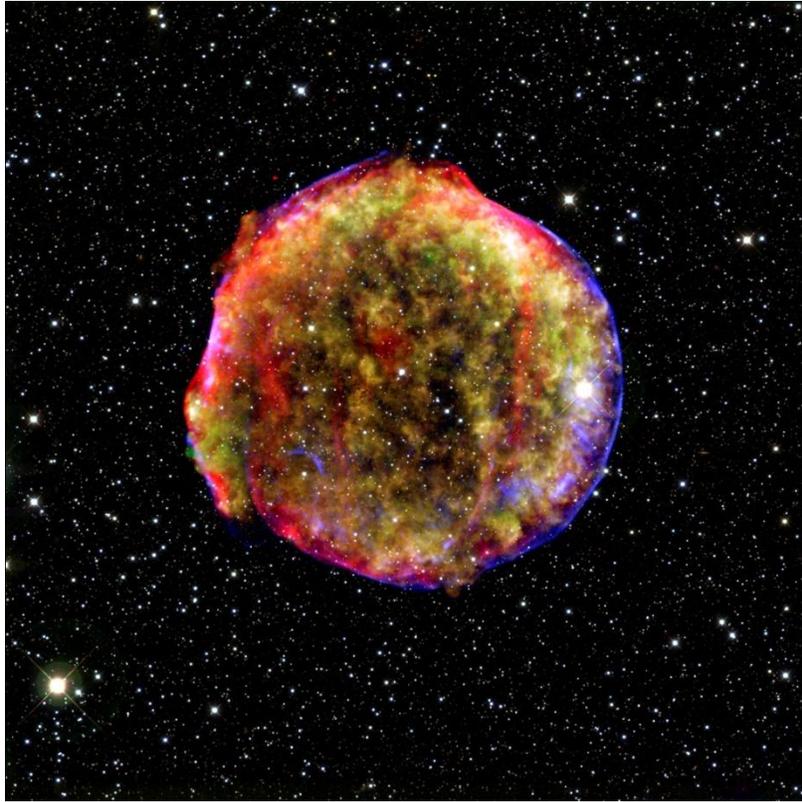
And the answer is....

“Magnetism,” says Opher. "Voyager data show that the Fluff is strongly magnetized with a field strength between 4 and 5 microgauss. This magnetic field can provide the pressure required to resist destruction."

If fluffy clouds of hydrogen can survive a supernova blast, maybe it’s not so surprising that we did, too. “Indeed, this is helping us understand how supernovas interact with their environment—and how destructive the blasts actually are,” says Opher.

Maybe *Australopithecus* was on to something after all.

Opher’s original research describing Voyager’s discovery of the magnetic field in the Local Fluff may be found in *Nature*, **462**, 1036-1038 (24 December 2009). The Space Place has a new Amazing Fact page about the Voyagers’ Golden, with sample images and sounds of Earth. After all, just in case one of the Voyager’s ever meets up with ET, we will want to introduce ourselves. Visit <http://spaceplace.nasa.gov/en/kids/voyager>.



*Left-over cloud from the Tycho supernova, witnessed by Tycho Brahe and other astronomers over 400 years ago. This image combines infrared light captured by the Spitzer Space Telescope with x-rays captured by the Chandra X-ray Observatory, plus visible light from the Calar Alto Observatory in Spain.*

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## **Membership Status**

**The following changes in membership took place in May: Total Membership: 149**

**Renewals: 3**

**New student members: 0**

**New Member:**

Kevin Puzio - Indianapolis  
Steve Haines – Greenwood

**Inactive status:**

John Bush - Bargersville  
Robert Kaiser – Greenwood

**Renewed from Inactive status**

Chuck Devine – Indianapolis  
Joseph Petersen - Paragon

### **IAS LIBRARY:**

The complete list can be found (<http://www.iasindy.org/memonly/iasfiles.php>, which is password protected). We have a new additions for the library. There is now a link on our website page for our new Multi-Media Library. Greg has built this library of a multitude of videos that are on the web. The only problem is that you will have to have high speed internet to observe these video streams. We think it will be a great addition to our library for both novices and experienced observers. Greg has many more sources to go through so the library will continue to grow. If you have comments or questions about the library please contact Greg McCauley at 317 663-3289 or [greg@ultrasoundconsulting.net](mailto:greg@ultrasoundconsulting.net).

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### **Easy Listening:**

Weekly pod casts are available at <http://www.astronomycast.com/> for those who love astronomy and want to learn, yet have no time (or desire) to do extra reading. They cover a variety of topics, and feature a different topic each week, so you can choose your flavor. The cast includes Fraser Cain, the publisher of Universe Today (<http://www.universetoday.com/>), and Dr. Pamela Gay, an assistant professor of physics at Southern Illinois University Edwardsville. You do not need an iPod or portable device to enjoy these.

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### **Do you have a question or need?**

We are establishing a list of members who would be willing to receive calls for help on specific objects. If you have a specific skill and would be willing to help others please contact Jeff Patterson [KB9SRB@hotmail.com](mailto:KB9SRB@hotmail.com).

Based upon the responses we received to your intro question recently, perhaps we should add a section to the bulletin naming those members who would be willing to receive calls for help on specific subjects.

William Conner ([wmtconner@att.net](mailto:wmtconner@att.net)) - for CCD imaging and film photography.  
Jeff Patterson ([KB9SRB@Hotmail.com](mailto:KB9SRB@Hotmail.com)) – Observatory design and construction  
Eric Allen ([ericandroberta@sbcglobal.net](mailto:ericandroberta@sbcglobal.net)) - Telescope making and mirror grinding

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### **Public Outreach Programs – If you want to schedule a program at the Link Observatory or at your site, please contact the following people:**

**Gerald Venne is our Public Events Coordinator.** He will be responsible for coordinating Public Events for the IAS. To schedule a public event contact Gerald Venne 1 317 826-2680. He needs your help. Let Gerald know if you would like to show the public our sky. We need people to help at Link and elsewhere. It is actually a lot of fun.

If you would like to schedule the Goethe Link Observatory, please contact John Shepherd at 317-862-3442 or at [jshepherd25@comcast.net](mailto:jshepherd25@comcast.net)

### **Astro Ads**

Are you changing or upgrading your equipment? Do you have or are you looking for astronomical materials and equipment? The Indiana Astronomical Society as a service to its members, will publish non-commercial ads at no charge. The ad will stay in the Bulletin for 4 months and may be renewed at the owner's request.

#### **To place an ad, contact:**

Bulletin Editor  
Jeff Patterson  
1780 S. Morgantown Rd.  
Greenwood, IN 46143  
(317) 300-0449  
E-Mail: [KB9SRB@Hotmail.com](mailto:KB9SRB@Hotmail.com)

#### **For Sale:**

2 eyepieces for sale:  
3mm Televue Radian  
7mm Pentax SMC  
Both for \$300

Jim Zdobyak  
zobe1@aol.com  
317-862-4715

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### **Equipment Loaner Program**

The Loan Program has been helpful to those new to the hobby and others in need of observing equipment. We consider offers of equipment you may not have need for any longer.

Did you know you could borrow a scope or piece of astronomy equipment from the Society and take it for a test drive? The Society has a program where members who are trying to determine what kind of equipment to buy can borrow one of the Society's scopes for a month or two and see how they like it. Philip Dimpelfeld is the chairman of the program and can arrange for your pickup and training on the use of the particular instrument. This is a great way to see what telescope you want to purchase. We have several scopes, eyepieces and binoculars to loan. Philip Dimpelfeld [philip.dimpelfeld@comcast.net](mailto:philip.dimpelfeld@comcast.net) 812-764-0620

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### **Board Meeting – Board Meeting June 8, 2010**

The IAS Board Meeting is being held at 430 Massachusetts Avenue in downtown Indianapolis. The building is at the point of convergence of Mass. Ave., Vermont and Alabama Streets. There is a Starbucks located in the frontage of the building. The coffee shop stays open late into the evening. Try to park as close to Starbucks as possible, preferably in a metered space. On-street parking is free after 5pm. Handicapped parking is directly in front of Starbucks entrance. The entrance to the building is to the left of Starbucks around on the side. We meet in the basement. Ride the elevator (around the corner to your left) to the basement. Turn right as you exit the elevator and go through the first door on your right. This is the conference/meeting room. If you need further assistance, please contact Brian P. Murphy on his cell phone 716-8124 or Jeff Patterson 317 506-0325.

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## 2010 Calendar of Meetings

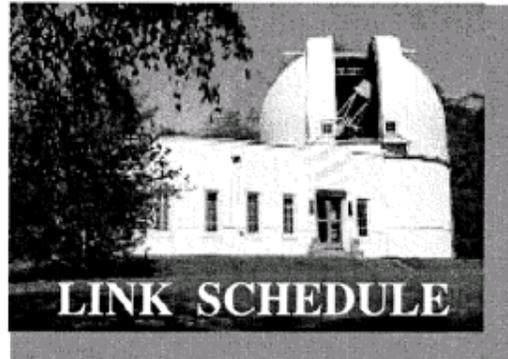
	<b>NAG</b>	<b>General</b>	<b>Board</b>
January		9-Jan	12-Jan
February		6-Feb	2-Feb
March		13-Mar	9-Mar
April	24-Apr	10-Apr	13-Apr
May	22-May	8-May	4-May
June	19-Jun	5-Jun	8-Jun
July	24-Jul	10-Jul	13-Jul
August	21-Aug	14-Aug	17-Aug
September	18-Sep	11-Sep	14-Sep
October		16-Oct	19-Oct
November		13-Nov	16-Nov
December		18-Dec	

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### Goethe Link Observatory Observatory Address

**Goethe Link Observatory  
8403 N. Observatory Lane  
Martinsville, IN 46151**

**Observatory 's Phone:  
(317) 831-0668**



This schedule is being published to assure proper access to the Link Observatory for programs that are designed as observational, general education, astronomy conferences or amateur research projects. Training programs are tentatively scheduled for Saturday evenings only. Although other requests can over-ride these sessions. It is the purpose of this listing to prevent activity conflicts.

If you need to acquire use of the 36-inch telescope: remember two important IAS guidelines: 1) *There has to be two or more IAS members present.....*2) *contact the Observatory Manager: John Shepherd a 1 317-862-3442. DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.*

### **Bulletin Stats**

#### Accessing the Bulletin

The current bulletin can be found on the website [www.iasindy.org](http://www.iasindy.org)

#### **Bulletin deadline on the 20th of every month**

The monthly newsletter welcomes articles of local astronomical interest information and want ads:

Please submit to

The Indiana Astronomical Society, Inc

The Bulletin – The monthly publication of the Indiana Astronomical Society

Jeff Patterson, editor  
1780 S. Morgantown Rd  
Greenwood, IN 46143  
Phone: (317) 300-0449  
[KB9SRB@hotmail.com](mailto:KB9SRB@hotmail.com)

**Membership information**

Contact any IAS officer or the Treasurer John Shepherd (317) 862-3442 or Vicki Switzer  
[vswitzer42@verizon.net](mailto:vswitzer42@verizon.net) 1 812-835-2251

**Link Observatory**

Latitude: 39 degrees, 33 minutes north  
Longitude: 86 degrees, 24 minutes west  
Phone: (317) 831-0668  
IAS Internet address  
<http://www.iasindy.org>

**Executive Officers**

President: Jeff Patterson (317) 300-0449  
Vice-President and Program Director: Doug Brown (317) 872-4050  
Secretary: Betsy Brown 1-317-872-4050  
Treasurer: John Shepherd (317) 862-3442

**Board of Directors**

Tom Borlik (2010)	John Molt (2011)
John Switzer (2010)	Bill Conner(2012)
Ron Burgess (2010)	Gerald Venne (2012)
Greg McCauley (2011)	

**Webmaster**

Doug Sangunetti - [drsanqun@gmail.com](mailto:drsanqun@gmail.com) 317-758-6156

**Observatory Manager**

John Shepherd [jshepherd25@comcast.net](mailto:jshepherd25@comcast.net) 317-862-3442

**Public Event Coordinator**

Gerald Venne [gvenne@iquest.net](mailto:gvenne@iquest.net) 317 826-2680

**Equipment Loan Program Coordinator**

Philip Dimpelfeld [philip.dimpelfeld@comcast.net](mailto:philip.dimpelfeld@comcast.net) 812-764-0620

**Library Committee Coordinator**

Greg McCauley [greg@ultrasoundconsulting.net](mailto:greg@ultrasoundconsulting.net)

**Astronomical League Coordinator**

Bill Conner [wmtconner@att.net](mailto:wmtconner@att.net) 812 828-0449

**Membership Coordinator**

Vicki Switzer [vswitzer42@verizon.net](mailto:vswitzer42@verizon.net) 812-835-2251

### June Calendar, 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4 3rd QTR ☾	5 General Meeting
6	7	8 Board Meeting	9	10	11	12 New Moon ●
13	14	15	16	17	18 1 <sup>st</sup> QTR ☽	19 NAG
20	21	22	23	24	25	26 Full Moon ○
27	28	29	30			

## Membership Application to the IAS

### Benefits:

Use of the Goethe Link Observatory  
Formal monthly programs with guest speakers  
Local and regional astronomical functions  
Discounted Astronomy publications  
New Moon observing activities  
Access to IAS member experts and problem solving  
The Bulletin monthly newsletter  
Membership in the Astronomical League  
Free admission to the Holcomb planetarium  
Star party events and observing sessions

Please mark whether this is a new or renewal application

New

Renewal

Note: Magazine subscription renewals forms and payment must be submitted to the Treasurer in order to maintain publisher's club discount.

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

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

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Telephone: ( ) \_\_\_\_\_

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

For the "membership only" section you need to provide a user name and a password:

User name: \_\_\_\_\_ Password \_\_\_\_\_

IAS-Indy @yahoo.com - This service is our main communication tool. IAS-Indy The Indiana Astronomical Society is accessible only by IAS members and only for IAS related business. It is controlled very carefully to prevent spam. Upon receipt of your membership application, you will receive an invitation to join the group.. You must have a Yahoo account which is free.

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How do you want to receive the IAS monthly newsletter?

Downloadable from Website  Hard Copy\*

\* Please note that hard copy costs the Society about \$1.50 per issue. Please consider this when selecting mode of receiving the newsletter.

Annual Regular Membership (\$30.00)	
Annual Student Membership (\$10.00)	
Astronomy Magazine Renewal (\$34.00)	
Sky and Telescope Magazine (\$33.00) (New Subscription)	
Total Enclosed	

Make checks payable to: The Indiana Astronomical Society, Inc

Please complete Member Profile and include with the application

Mail Application to:

Vicki Switzer Membership Coordinator  
2115 N. Private Rd 50 E  
Centerpoint, IN 47840

Member Profile

Spouse's Name: \_\_\_\_\_

Children's names and ages: \_\_\_\_\_

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Note: Profile information is not a requirement for membership to the Society.