

January, 2010  
Volume 77, Issue 1  
www.iasindy.org



# The Bulletin

**Happy New Year**

**The January General Meeting, January 9, 2009 7:00 PM  
Holcomb Observatory**

**"October 4th, 1957, Dawn of the Space Age"  
Bill Conner**

Bill's presentation has, as its basis, the establishment of the International Geophysical Year (IGY) for the period July 1, 1957 to December 31 1958. The scientific community knew that the sun's solar activity would be at a high point then. In October 1954 the council adopted a resolution calling for artificial satellites to be launched during the IGY. The IGY encompassed eleven Earth sciences: aurora and airglow, cosmic rays, geomagnetism, gravity, ionospheric physics, precise longitude and latitude determinations, meteorology, oceanography, seismology and solar activity.

In July 1955, President Eisenhower announced US plans to launch an Earth-orbiting scientific satellite for the IGY and proposals were solicited. In September 1955, the Naval Research Laboratory's Vanguard proposal was chosen over an Army Redstone proposal that would use a proven launch vehicle (think modified German V2 rocket) because use of a military rocket would be considered a threat by our current adversaries and Vanguard had a more efficient design and more elaborate scientific payload.

Bill will review the events surrounding the launch of the first artificial earth orbiting satellites and the hidden political and military agenda ordered by President Eisenhower. Following a brief introduction, a video of these events, some kept secret until now, will be shown.

Bill was a student at the School of Electrical Engineering at Purdue University at this time. He was somewhat disappointed with the electrical circuits curricula currently in place at Purdue since it focused on 1910 era vacuum tube technology instead of transistors that had been invented at Bell Telephone Laboratories in 1947 some 10 years earlier. As a radio amateur, he built his own transmitting and receiving equipment and had experimented with transistors while in High School. The old, tenured professors at the school of electrical engineering discounted the transistor as a viable replacement for the vacuum tube. The events in the Fall of 1957 would lead to a major upheaval in the subject matter that electrical engineering students were taught at Purdue and the retirement of the old guard professors. Transistor and computer technology programs were finally in place at Purdue

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in the year he graduated. Bill received a significantly better engineering education as a result of these events.

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## **Election Night Results**

The following candidates were elected to office at our general election Saturday night.  
President - Jeff Patterson

Vice President and Program Chairman - Doug Brown

Treasurer:- John Shepherd

Secretary:-Betsy Brown

Board of Directors Bill Conner and Gerald Venne

Thanks to all that ran.

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## **Gary Schoppenhorst Leaves the IAS Board**

After many years of service on the Board, Gary decided this year to not run for office. We need to give him a special thanks for his efforts over the years and service to the Society. Next time you see him, let him know your appreciation. Thanks Gary!!

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## **Christmas Party a great Success**

Thanks to all the members who made the party a great success. Thanks to Angie Molt for the Turkey and green beans. Thanks to everyone else who brought the goodies. It is great for us to all get together and just chat.



Dawn and Angie sample some of the goodies.

The election went well. We made \$150 with the raffle. Quite a successful night.

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## **IAS Calendar of Events for January**

January 9 – General Meeting at Holcomb Observatory

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## A Winter Blast of Fun!

By Tom Koonce

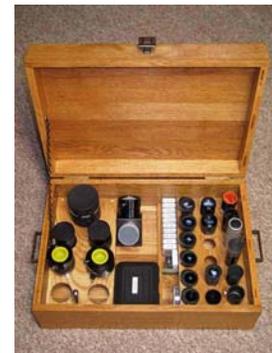
Antelope Valley Astronomy Club, Inc.

Lancaster, California

The weather is often keeping us inside at this time of year. The only stars we get to see are those as we are dashing from the car to the house in the evenings. For a few seconds we may glance up at Orion's Belt or perhaps a bright planet through bitterly cold, but alluringly steady, clear skies. You might briefly think about going inside and grabbing your telescope and coming back out for a few minutes of observing, but then the choice between the bitter cold and the Siren's song of the warmth of the house becomes clear as you retreat inside. It's frustrating, surely, but while amateur astronomy is a hobby that teaches patience and perseverance we don't want to sit idly by all winter.

Perhaps we should treat the winter months as an "opportunity". We could use these few months to explore our creativity, get our equipment finely tuned and ready, or even expand our horizons online by conducting real science for professional astronomers. With that in mind, here are a few ideas for the winter months. Maybe you'll like to try a few. These could count as New Year's Resolutions. All count as fun!

- Clean all of your eyepieces  
(<http://www.televue.com/engine/page.asp?ID=143>)
- Clean your telescope ([http://www.ehow.com/how\\_10336\\_care-telescope.html](http://www.ehow.com/how_10336_care-telescope.html) ,  
[http://sctscopes.net/SCT\\_Tips/Maintenance/Cleaning\\_Your\\_Optics/cleaning\\_your\\_optics.html](http://sctscopes.net/SCT_Tips/Maintenance/Cleaning_Your_Optics/cleaning_your_optics.html))
- Change the batteries in your Telrad, red light flashlights and other powered accessories.
- Inventory all of your astronomy gear. Take pictures of all of it for insurance purposes.
- Organize your eyepiece case and / or make a new eyepiece case  
([http://www.cloudynights.com/item.php?item\\_id=1090](http://www.cloudynights.com/item.php?item_id=1090))
- Image process all of those great shots that you've been meaning to get to  
([http://www.spacetelescope.org/projects/fits\\_liberator/improc.html](http://www.spacetelescope.org/projects/fits_liberator/improc.html))
- Accomplish real science on your home computer – help scientists classify galaxy types: (<http://www.galaxyzoo.org/>)
- Build a model of the Cassini Spacecraft (or many others!)  
(<http://www.jpl.nasa.gov/scalemodels/>)
- Establish an "astronomy fun fund" for yourself and put \$5/week into it
- Write a few letters to your town in favor of lighting control  
(<http://www.darksky.org/>)
- Review the Astronomical League list of observing clubs. There are a few new ones you might like try.  
(<http://www.astroleague.org/observing.html>)
- Repaint your old telescope with a cool pattern  
(<http://www.cloudynights.com/ubbthreads/showflat.php/Ca>)



- [t/0/Board/classics/Number/2294472/page/0/view/collapsed/sb/5/o/o/fpart/all](http://www.iaa.org/Board/classics/Number/2294472/page/0/view/collapsed/sb/5/o/o/fpart/all))
- Update your GoTo software on-line to the latest version
  - Build your own dobsonian telescope (<http://www.backyardvoyager.com/dobplans.html>)
  - Create a list of community outreach activities that you think your club might be able to do this year.
  - Sketch out what your backyard observatory will look like one day (<http://obs.nineplanets.org/obs/obslist.html>)



- Survey your club members about what was their best astronomy-related experience this past year. Try to have more of those this next year.
- Make a glare shield for your telescope from black foam craft sheet ([http://www.atoztelescopes.com/products/dew\\_shield.asp](http://www.atoztelescopes.com/products/dew_shield.asp))
- Listen to an astronomy related podcast on your computer (<http://www.astronomycast.com/>)
- Write a letter to your state congressmen and senators in favor of the space program
- Explore Google Moon and Google Mars
- Make a cover for your telescope when not in use



I hope that you find this short list inspirational on the cold, dark, days of winter and that it prepares you for the upcoming warmer weather and “Messier Marathon” in March.

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## Sunglasses for a Solar Observatory

By Patrick Barry

In December 2006, an enormous solar flare erupted on the Sun’s surface. The blast hurled a billion-ton cloud of gas (a coronal mass ejection, or CME) toward Earth and sparked days of intense geomagnetic activity with Northern Lights appearing across much of the United States.

While sky watchers enjoyed the show from Earth's surface, something ironic was happening in Earth orbit.

At the onset of the storm, the solar flare unleashed an intense pulse of X-rays. The flash blinded the Solar X-Ray Imager (SXI) on NOAA's GOES-13 satellite, damaging several

rows of pixels. SXI was designed to monitor solar flares, but it must also be able to protect itself in extreme cases.

That's why NASA engineers gave the newest Geostationary Operational Environmental Satellite a new set of sophisticated "sunglasses." The new GOES-14 launched June 27 and reached geosynchronous orbit July 8.

Its "sunglasses" are a new flight-software package that will enable the SXI sensor to observe even intense solar flares safely. Radiation from these largest flares can endanger military and civilian communications satellites, threaten astronauts in orbit, and even knock out cities' power grids. SXI serves as an early warning system for these flares and helps scientists better understand what causes them.

"We wanted to protect the sensor from overexposure, but we didn't want to shield it so much that it couldn't gather data when a flare is occurring," says Cynthia Tanner, SXI instrument systems manager for the GOES-NOP series at NASA's Goddard Space Flight Center in Greenbelt, Maryland. (GOES-14 was called GOES-O before achieving orbit).

Shielding the sensor from X-rays also reduces the amount of data it can gather about the flare. It's like stargazing with dark sunglasses on. So NASA engineers must strike a balance between protecting the sensor and gathering useful data.

When a dangerous flare occurs, the new SXI sensor can protect itself with five levels of gradually "darker" sunglasses. Each level is a combination of filters and exposure times carefully calibrated to control the sensor's exposure to harmful high-energy X-rays.

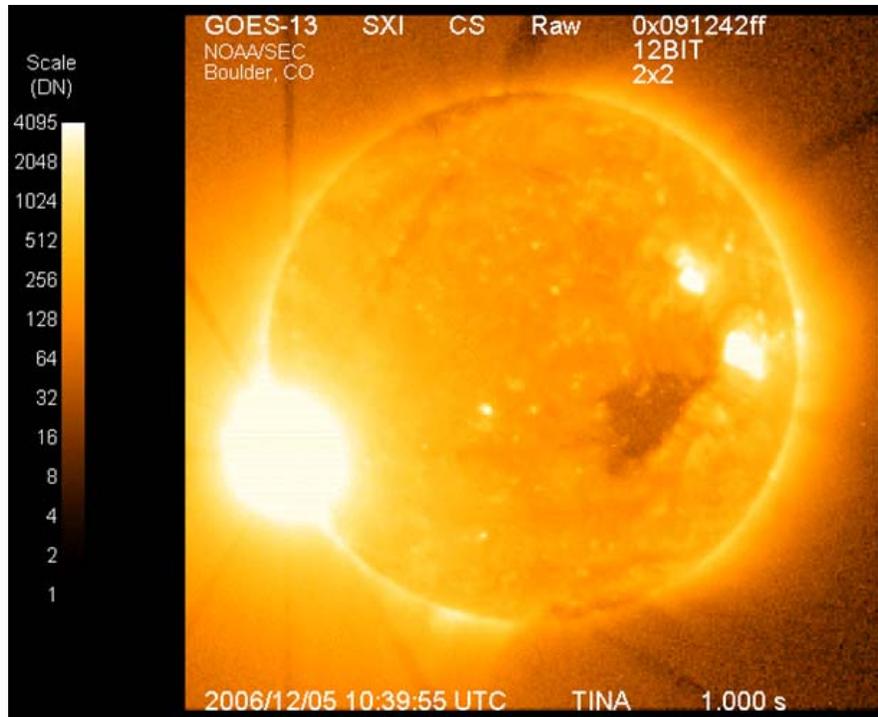
As the blast of X-rays from a major solar flare swells, GOES-14 can step up the protection for SXI through these five levels. The damaged sensor on GOES-13 had only two levels of protection—low and high. Rather than gradually increasing the amount of protection, the older sensor would remain at the low level of protection, switching to the high level only when the X-ray dose was very high.

"You can collect more science while you're going up through the levels of protection," Tanner says. "We've really fine-tuned it."

Forecasters anticipate a new solar maximum in 2012-2013, with plenty of sunspots and even more solar flares. "GOES-14 is ready," says Tanner.

For a great kid-level explanation of solar "indigestion" and space weather, check out [spaceplace.nasa.gov/en/kids/goes/spaceweather](http://spaceplace.nasa.gov/en/kids/goes/spaceweather).

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



*X-9 class solar flare December 6, 2006, as seen by GOES-13's Solar X-ray Imager. It was one of the strongest flares in the past 30 years.*

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## UP Coming Star Parties

**Winter Star Party** – February 8-14, 2010- Registration is currently going on. Check [www.scas.org](http://www.scas.org) or call the registrar at 386-362-5995. This party is always sold out and you need to get a ticket early. This is a premium party and the weather is generally fantastic in the Florida Keys in February.

**Mid-South Stargaze** April 14-18 Mississippi The Observatory is one mile southeast of the Natchez Trace Parkway at French Camp. French Camp is about half-way between Jackson and Tupelo, Mississippi, at Natchez Trace mile marker 181.  
<http://www.rainwaterobservatory.org/stargaze>

**Tennessee Spring Star Party 2010** - Fall Creek Falls State Park TBD  
<http://personal.bna.bellsouth.net/s/p/spsmith/default.htm>

**Indiana Astronomy Day** (IAS/PGO) - TBD  
<http://jmmahony.home.insightbb.com/pgo/schedule.html>

**Apollo Rendezvous** – Dayton, Ohio TBD  
<http://mvas.org>

**Texas Star Party** West Texas May 9-16, 2010. This is a premier party with very dark skies and a great site. Just a long way. Online registration will open November 15.  
[www.texasstarparty.org](http://www.texasstarparty.org)

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**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>

**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 again this year. (I wonder why they call it Snake Creek).

<http://www.nebraskastarparty.org/>

**Earth Wind and Sky Star Party** August 5-8

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

**Indiana Family Star Party** Camp Cullum, Frankfort, IN August 5-8, 2010

<http://jmmahony.home.insightbb.com/pgo/starparty/>

**Astrofest** TBD Kankakee IL

[www.chicagoastro.org](http://www.chicagoastro.org)

**Black Forest Star Party** PA Date To be announced

<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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## Link Activities for January:

None Scheduled

## McCloud Activities–

None Scheduled –

## 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

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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 month during our 2009 observing season, in celebration of the International Year of Astronomy. 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.

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 Gary Schoppenhorst 1 317 297-1405.

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.

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## Membership Status

**The following changes in membership took place in January:**

Loren Lawhorn – Indianapolis

Michael J. Blackburn - Indianapolis

Joe Wambo – Fountain City

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## 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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## IU Kirkwood Observatory

SEE JUPITER AT KIRKWOOD OBSERVATORY THIS FALL

Kirkwood Observatory on the IU campus will be open each Wednesday evening through the fall, 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 [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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### 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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### Mentor Program

We are reinstating the mentor program, which will provide the new member with lots of information and help them assimilate into the Society. Thad Hatchett has volunteered to lead this program. We need your help. If you are interested in becoming a mentor please contact me at Jeff Patterson [KB9SRB@hotmail.com](mailto:KB9SRB@hotmail.com) or Thad Hatchett at [astronomynut@comcast.net](mailto:astronomynut@comcast.net). We will put your name on the list and assign a new person to you. Our goal is to retain people and make this hobby a lot more fun.

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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

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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 Link, please contact Gary Schoppenhorst at 1-317-297-1405 or at [schoppy@att.net](mailto:schoppy@att.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: - Astro-Physics 400 German Equatorial Mount**

Near new condition. Used less than a dozen times.

**9 lb. Stainless Steel Counterweight**

**6 lb. Stainless Steel Counterweight**

Wood AP case

AP Encoders and cables

NGC-MAX DSC Computer

**\$1700**

Contact: Jim Rinehart 317-881-3475

### **For Sale:**

Pentax SMC XL7 eyepiece

\$150 obo

Jim Zdobyak

zobel@aol.com

317-862-4715

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## **Onions and Orchids**

I would like to thank the Board and the coordinators who have worked diligently this year to make 2009 an even better year. With support like this, my job is very easy.

Thanks Guys!!!!

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## The Equipment Loan 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. John Molt 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.

John Molt ([lstargazer@indy.rr.com](mailto:lstargazer@indy.rr.com)) or (317) 989-1875

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## Board Meeting – Board Meeting January 12, 2008

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.

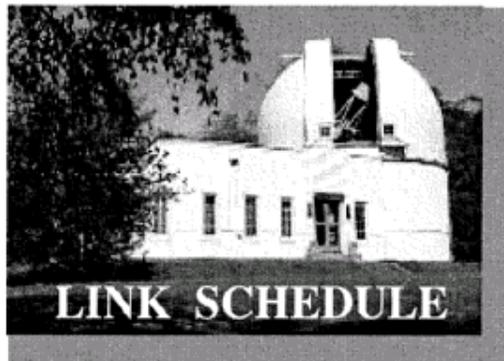
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## Goethe Link Observatory

### 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: Gary Schoppenhorst (317)297-1405. 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 - 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

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 Switzer (2010)

Ron Burgess (2010)

Greg McCauley (2011)

John Molt (2011)

Bill Conner(2012)

Gerald Venne (2012)

### **Public Event Coordinator**

Gerald Venne [gvenne@iquest.net](mailto:gvenne@iquest.net) 1 317 826-2680

### **Library Committee Coordinator**

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

### **Astronomical League Coordinator**

Bill Conner [wmtconner@att.net](mailto:wmtconner@att.net) 1-812 828-0449

**Membership Coordinator**

Vicki Switzer [vswitzer42@verizon.net](mailto:vswitzer42@verizon.net) 1 812-835-2251

January Calendar, 2010						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			Full Moon ○		1	2
3	4	5	6	7 3rd QTR ☾	8	9 General Meeting
10	11	12	13	14	15 New Moon ●	16
17	18	19	20	21	22	23 1 <sup>st</sup> QTR ☽
24	25	26	27	28	29	30 Full Moon ○
31						

## 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 \_\_\_\_\_

List Server - This service is our main communication tool. The list server is accessible only by IAS members and only for IAS related business. It is controlled very carefully to prevent spam. Unless you opt out for the List server, you will automatically have access to it when you are approved for the “members only” section.

I do **not** want to receive IAS communications via the List Server

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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.