

The Bulletin – The monthly publication of the Indiana Astronomical Society

January 2009
Volume 7, Issue 1
www.iasindy.org



The Bulletin

Happy New Year

**The January General Meeting, January 17, 2008 7:00 PM
Holcomb Observatory**

Europa: The Ocean Moon

Daniel Cervantes
NASA Solar System Ambassador

Europa is the sixth moon of the planet Jupiter. Europa was discovered in 1610 by Galileo Galilei. At just over 3000 km in diameter, Europa is slightly smaller than Earth's Moon. Its surface is composed of ice and is covered with cracks, dark spots, yet has a conspicuous lack of craters. The apparent youth of the surface have led to the hypothesis that a water ocean exists beneath it, which may be hospitable to extraterrestrial life. Heat energy from tidal flexing ensures that the ocean remains liquid and drives geological activity.

Currently, there are competing models estimating the ice shell thickness. According to the "thick ice" model, the outer shell of solid ice is approximately 10–30 km thick, isolating the ocean from the surface. On the other hand, the "thin ice" model allows regular contact of the liquid interior with the surface.

Dan will present some of the images returned from the *Galileo* orbiter and discuss the competing European models currently being hotly debated within the astronomical community.

Daniel is currently a physicist with the Software Systems Integration Branch at 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, Vice-President of the *Stonebelt Stargazers*, and a member and the *Indiana Astronomical Society*.

General Elections

The results of our general election are:

President – Jeff Patterson

Vice President and Program Chairman – Doug Brown

Secretary – Betsy Brown

Treasurer – John Shepherd

Board – John Molt

Greg McCauley

Christmas Party a Great Success

We had a great time at the party last night. The food bar was outstanding and the desserts were super. Thanks to all who came and to those that helped. We had a hard time to folks to stop long enough to vote for officers.

2008 The Pres Reminisces

We all have to admit that 2008 was a strange year and may your 2009 be brighter. I have spent the last week in the hospital waiting on gall bladder surgery. Finally got it done Friday and they released me Saturday. Needless to say I am not running any races but am on the mend. But for the Society we had an excellent year. It was our 75th Anniversary and we had a super celebration. The hog roast was a hit again. We had a great season of NAG. We gained a lot of new faces. The Link has been refurbished and it is ready to go. We even had good weather for the IFSP. We are making plans for new and better things for this year. One is a weekend star party at the Link. We want to make it more accessible. We will do another Camp Cullom event.

Anniversary Lapel Pins

If you did not receive your Anniversary pin please contact Vicki Switzer. If want another, you can buy one from Vicki for \$5.

Observatory Construction 101



OK Tom, I hope this hole is deep enough for the foundation to support your big, heavy pier. Bill

Dr. Frank Edmondson Dies

Long-time IU astronomy professor, Dr. Frank Edmondson, died recently at the age of 96. He was chairman of the IU Astronomy Dept. from 1944 to 1978. There will be a memorial service on Saturday, January 24. More information can be found at: <http://www.astro.indiana.edu/fke-mem.shtml>.

IAS Calendar of Events for January

January 17 - General meeting at Holcomb Observatory

[Small but Mighty: KPD 0005+5106, the 200,000K White Dwarf](#)

By Ian O'Neil, Astroengine

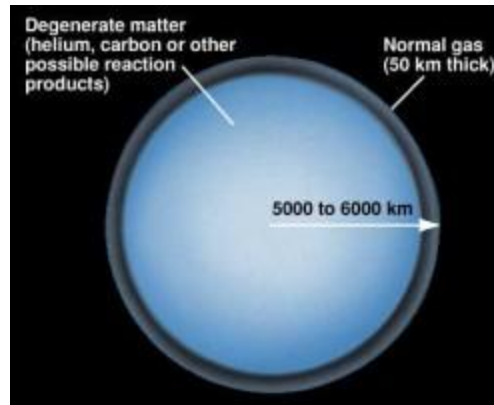


A white dwarf called KPD 0005+5106 has been identified as the hottest star observed, ever. KPD 0005+5106 lives in the globular cluster M4, 7,200 light years away, and astronomers have always been intrigued by this stellar lightweight as its emissions have previously hinted it was quite toasty. Now, astronomers using data from the defunct NASA Far-Ultraviolet Spectroscopic Explorer (FUSE), have studied the white dwarf in more detail. KPD 0005+5106 emits radiation in the far-ultraviolet, indicating that its surface has a temperature of **200,000K**. This is an unprecedented discovery, far-ultraviolet emissions are usually reserved for superheated stellar coronae. *It may be small, but it's a record-breaker...*

Our Sun has a surface temperature of around 6000K. As you track the temperature of solar plasma as it exits the Sun, coronal heating processes will heat the tenuous gas very rapidly to over 1 million Kelvin. Our Sun only starts to emit strong ultraviolet emissions in the solar corona, just above a point called the “transition region”; ultraviolet emissions simply are not attainable at the surface as the solar plasma is too cool.

So it may be a surprise that another stellar object, a white dwarf, is generating temperatures *on its surface* capable of producing emissions usually associated with the temperatures of stellar atmospheres.

White dwarfs are known as being very hot, and temperatures of around 100,000K are not uncommon, but this dwarf star is outshining all the competition. KPD 0005+5106 is the hottest white dwarf, and the hottest star observed to date with this degree of precision. Perhaps even more interesting is the fact that white dwarfs are very small, of Earth-sized proportions, after evolving from a larger star of 1-8 solar masses.



Composition of a white dwarf

The white dwarf is what remains of a star after fusion has ceased in the parent star's core, and in the case of our Sun, a white dwarf will be left over after the Sun has puffed up into a red giant and blown apart into a [planetary nebula](#). It is like the pearl left behind after breaking an oyster shell apart; a tiny, shiny sphere. White dwarfs are not maintained by nuclear fusion either; all the fuel has been spent, it is maintained by a balance between degenerate matter and gravity. Gravitational pressure compresses the stellar matter to such an extent, the quantum Pauli Exclusion Principle takes over, disallowing electrons to occupy the same energy levels. The matter therefore becomes degenerate, preventing the matter from being compressed any further.

For a short time after formation, white dwarfs are expected to be very hot. Although the white dwarf phase of stellar evolution is very stable (it can last for billions of years), astronomers will be very lucky to observe this hot period as, statistically speaking, young white dwarfs are rare. In the case of KPD 0005+5106, it would appear that it is a very young white dwarf with a very hot surface.

Fortunately for the astronomers who made this discovery, the [FUSE observatory](#) had a lot of data on KPD 0005+5106 as the object was used as a calibration target to track the telescope's performance. This is archived spectroscopic data as FUSE was decommissioned in 2007 after eight years in space. However, the data was put to good use.

Spectroscopic data of the far-ultraviolet wavelength range, in particular the emissions from a calcium ion, revealed just how extreme the white dwarf's temperature was. CaX, or nine-times ionized calcium (nine electrons stripped from the calcium nuclei), was detected, indicative of the 200,000K stellar environment.

My love for spectroscopic observatories just got stronger...

Upcoming Star Parties and Registrations

Winter Star Party – February 21-28, 2008- The party is sold out. Tickets are available on Astromart and elsewhere.. Check 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.

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Smokey Mountain Stargaze 2009 - Just outside Smokey Mountain National Park - TBD. This is a new party. Should be pretty that time of year.

<http://www.smokymtstargaze.com/index.php>

Tennessee Spring Star Party 2009 - Fall Creek Falls State Park April 24-26

<http://personal.bna.bellsouth.net/s/p/spsmith/default.htm>

Mid-South Stargaze TBD

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. Mississippi <http://www.rainwaterobservatory.org/stargaze/index.htm>

Indiana Astronomy Day (IAS/PGO) - TBD

<http://jmmahony.home.insightbb.com/pgo/schedule.html>

Apollo Rendezvous – Dayton, Ohio June 12-13,2009

<http://mvas.org>

Texas Star Party West Texas April 19-26, 2009. 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

Tennessee Spring Star Party – April 24-26, 2009

Cherry Springs Star Party Cherry Springs State Park, PA June 18-21, 2009

<http://www.astrohbg.org/s4>

Nebraska Star Party – July 19-24, 2009- North Central Nebraska - This is a premier dark site and has fantastic observing. However, the weather is 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). No activities will be at the resort. <http://www.nebraskastarparty.org/>

EPOCH 2009 - The 21st Century Midwest Star Party July 21-26, 2009

Beaver City, Indiana. This is a new star party put on by 20-20 Telescopes.

<http://www.2020telescopes.com/EPOCH2007.html>

JEPC Star Gazing Event IL Date To be announced

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

Indiana Family Star Party Camp Cullum, Frankfort, IN July 23-26, 2009

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

Black Forest Star Party PA Date To be announced

<http://www.bfsp.org/starparty/>

Okie-Tex Star Party – **September 12-20**. This is reported as one of the darkest sites in the US. It is a great deep sky event.

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Prairie Skies Star Party – September 19-20 Kankakee, IL

Heart of America Star Party MO October 15-18, 2009

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

Twin Lakes Star Party – October 15-18, 2009

This is an excellent star party located in western Kentucky. One not to miss
If you know of events coming up let me know and I will get them in the Bulletin

ALCor Observations by Bill Conner

Galileo Club

The International Year of Astronomy, “IYA”, marking the 400th year since Galileo first observed the heavens through a telescope will be celebrated in 2009. The Astronomical League has created the Galileo Club to provide members with an award for duplicating the observations made by this remarkable man.

There are 13 observations or sequences of which two are optional due to their unpredictability or geographic requirements. You will be asked to make the observations and sketches as Galileo did in 1609.

The rules and regulations are as follows:

1. All observations must be made at magnifications between 10 and 20 power. Either binoculars or a telescope may be used. The instrument should be mounted to provide adequate stability. Go-to equipment is allowed.
2. You must complete all of the requirements except those that are labeled “Optional.” The optional ones should be accomplished if the opportunity arises. By their nature it is expected that many observers may not be able to do them.
3. You must be a member of the Astronomical League – IAS Members are.
4. You should document the requirement number, the date and time of your observation, the equipment used and its magnification, and indicate the seeing and transparency.

Repeat Galileo’s Observations of the heavens. The following are brief descriptions. I recommend that you download the full details from the Astronomical League website so that you will know the purpose of each of the following observations and see examples of Galileo’s work:

1. Supernova (optional): Observe a naked-eye supernova in the Milky Way galaxy. Make a sketch of the sky during the supernova and one after the supernova has faded below the level of visibility. Estimate its maximum brightness. Last one 1609.
2. The Moon: Observe and sketch the moon. It may be done at any phase where enough detail can be seen to show that there are mountains and valleys on the moon.

3. Jupiter's Moons: Observe and sketch Jupiter and its moon daily through at least one cycle of their orbits. This will be a minimum of 17 days. From these sketches, note the dates and times of their greatest distance from Jupiter, and calculate the orbital periods of the four Galilean moons: Io, Europa, Ganymede, and Callisto.
4. Jupiter's moons in eclipse: Observe and sketch, noting the timing, one of Jupiter's moons during an ingress or egress with Jupiter's shadow. Callisto or Ganymede are the most dramatic. Two observations should be done. One close to opposition and the second when Jupiter is at quadrature (90 degrees from the Sun). Note how close to the planet the moon is when the events occur.
5. Orion's Head Nebula: Observe and sketch the region at the head of Orion (the star is named Meissa or lambda Orionis). You will note that what looks like 1 star naked eye is actually 3 bright stars and many lesser ones. Sketch what you see.
6. Praesepe Nebula: Observe and sketch the area of M44 in Cancer.
7. Pleiades Nebula: Observe and sketch the area of M45 in Taurus.
8. Saturn's Ears: Observe and sketch Saturn. The sketch should show that the image of Saturn does not appear as a perfect sphere but has "ears" at 20 power. This may be a challenge this year as the rings are near edge-on.
9. Venus phases: Observe and sketch Venus monthly, through at least a half cycle of phases. Do this from the time it first appears in the morning or evening sky until the last time it is visible. Calculate the length of the cycle and be sure to capture the relative size at each observation.
10. Sunspots: Observe one large spot that completes one rotation of the sun. Full-face sketches should be made about once per week. Sunspots measured should be fairly close to the solar equator and measurements should be done from meridian crossing to meridian crossing. What is the rotational period for the sun near its equator? This one will be challenging during this low sunspot year.
11. Comets: Make at least three observations of a comet and plot its progress among the stars.
12. Neptune: Observe Neptune and sketch what you see in your field of view.
13. Aurora: (Optional) Observe and sketch either the Aurora Borealis or the Aurora Australis.

Submit your observations to the AL Awards Coordinator to receive your pin and certificate.

Observer's Corner

Link Activities for January:

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None planned

McCloud Activities for January–

None planned

Observing Activities

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 Prairie Grass Observatories for observing call Hoppe at 1-765-296-2753.

For those interested in going to McCloud to observe, please call the park caretaker, Jim Holtsclaw, at the park office 765 676 5490 before 4PM on the day you want to go out. He will give you permission to be there at night and cut off the lights.

Recent New Members

Seek out these new members and welcome them and see if there is anything they need.

Conrad, Zack
Chander, Meera
Marty Lien

IAS LIBRARY:

We are still in need of a librarian. Contact Jeff Patterson KB9SRB@Hotmail.com
Our complete list can be found (<http://www.iasindy.org/memonly/iasfiles.php>, which is password protected).

IU Kirkwood Observatory

The Observatory has closed for the Winter. Please visit our schedule at http://www.astro.indiana.edu/kirk_sch.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 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.

Easy Listening:

Weekly podcasts 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.

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 or Thad Hatchett at astronomynut@sbcglobal.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.

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.

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@sbcglobal.net) - for CCD imaging and film photography.

Public Outreach Programs

Gerald Venne is our Public Events Coordinator. He will be responsible for coordinating Public Events for the IAS. 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.

To schedule a public event contact Gerald Venne 1 317 826-2680 or Jeff Patterson at 1-317 882-8055.

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

For Sale - TSA 102 Excellent condition with both 2" and 1 1/4" visual back. Includes two 2.7-inch focuser extension tubes. Optics are perfect. 1 small scratch on the dew shield that does not go through the paint. (new price \$2695.00)

Wood box (hand made) for the TSA 102. (approximate value \$100.00)

Camera Angle Adjuster (new price \$214.00)

1 set of 114mm scope rings from Parallax instruments (new price \$125.00)

1 set of 114mm scope rings from Astronomy Technologies (new price \$99.95)

FeatherTouch Micro focuser for the TSA 102 (new price \$249.00)

Thousand Oaks Type 2+ solar filter (new price \$99.00)

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Takahashi Focal Reducer for Astrophotography - slightly damaged threads - optics are perfect (new price \$339.00)

Adapter to attach focal reducer to t-thread camera (SBIG CCD Camera) (custom made cost \$75.00)

BT Technologies Quick Release Finder Bracket Adapter (\$59.00)

Total New = \$4054.95 Asking \$3000.00

Go to <http://www.dougsastro.net/equipment/ForSaleTakahashiTSA102.htm> for pictures and details

Contact me at drsanqun@gmail.com if you are interested.

For Sale – Celestron 102mm F/5 acromat OTA. I purchased this scope to use as a finder but really do not use it. It would make a great first scope. \$175 Jeff Patterson kb9srb@hotmail.com or 317 506-0325.

For Sale –

Items for sale, let's talk about the price!

John Molt 1stargazer@indy.rr.com (317-989-1875)

(2) Orion 'Ultrascope' 15 mm

(2) Orion Plossls 9 mm

(2) Vixen LV 15 mm

(2) Unitron 'Monochro' 40 mm

(2) ER ? 35 mm (probably cheap off brand)

Vixen 30 mm (2 inch)

Tele Vue 20 mm Nagler (2 inch)

Tele Vue 40 mm Wide Field (2 inch)

Vixen BT 80 Binocular Telescope

Vixen Custom D mount/tripod (alt/az)

Numerous 1 1/4" diagonals

(2) camera tripods

For Sale - Lots of astronomy equipment

14" LX-200 GPS-SMT w/UHTC ,Peterson EZ Clutch & Buck's Gears.

Meade 14" Superwedge 07007

Meade DC Cord ETX/LXD/GPS 07043

14" AstroZap Dewcap

Meade 12mm MA rect w/cord 07065

Meade Giant Tripod, black 42-0100-03

Meade f3.3 CCD reducer 07567

Orion O-III Filter 1.25" 05581

Meade E/P, SP 26mm 1.25" Eyecup 07175-02

Meade 930: 2" Diagonal mirror UHTC 07223

Meade V/F, #554 8X50, Blue 8/10SC

Meade Focuser, Zero Image Shift 37-7280-00

Meade LPI, AutoStar Suite

Meade DSI, AutoStar Suite

2 ea. Meade DSI-Pro-II AutoStar Suite w/RGB Filters

Astronomical Image Processing Tutorials by Donald Waid

A Beginner's Guide to the Meade LX200GPS by Astrodeude

Moon Atlas CD

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Edmund Scientific Astroscan Telescope 4 1/4" Dia., 4 1/8" (105mm) f/4.2, 17 1/2" (445mm) F.L. parabolic, 1/8 wave, borosilicate, aluminized and overcoated

Edmund Scientific 28mm 1.25" Eye Piece

Note: AutoStar Suite Version 3.0 w/Drizzle is available on LPI, DSI & DSI Pro-II.

If interested call Bob Westwater at 317.332.9471

Onions and Orchids

Thanks to Marion Haakes for his support of the Society as your Board member. Thanks to our Board and officers

The Loaner Program

The Loaner 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 can 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 (1stargazer@indy.rr.com) or (317) 989-1875

List Server Online - Don't be left in the cold - Sign up!

This service is our main communication tool. The list server is accessible only by IAS members.

Being a member does **not** mean you are automatically entered into the "Members Only" section. If you are a new member, please go to the "Members Only" section and fill out an application. The webmaster will set you up and notify you that you can get into the system. Make sure we have your correct e-mail and you will have access for late updates to events and functions. Unless you opt out for the List server, you will automatically have access to it when you are approved for the "members only" section.

Note: The list server is for use of Society business. It can only be used according to the rules as outlined previously. Basically it is used to communicate astronomical information to the general Society that would be unique. Please do not send out information from websites that we all generally subscribe to. Also please note: Do not add the list server address to your general address lists. Our problems have generally come from this when a member sends out mail to all their addressees. Members abusing the service will be eliminated from the service.

Board Meeting – Board Meeting January 19, 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

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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.

General Meeting Dates 2008 and 2009

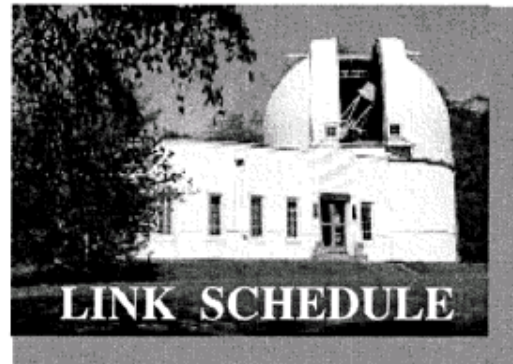
December 20 Christmas Party at Holcomb Observatory

	NAG	General	Board
January		17-Jan	19-Jan
February		14-Feb	17-Feb
March		14-Mar	17-Mar
April		18-Apr	21-Apr
May	2-May 30- May	16-May	19-May
June	27-Jun	13-Jun	16-Jun
July	25-Jul	11-Jul	14-Jul
August	22-Aug	8-Aug	11-Aug
September	26-Sep	12-Sep	15-Sep
October		10-Oct	13-Oct
November		7-Nov	10-Nov
December		12-Dec	15-Dec

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:*

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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

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

Membership information

Contact any IAS officer or the Treasurer

John Shepherd (317) 862-3442

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

Gary Schoppenhorst (2009)

Gerald Venne (2009)

Tom Borlik (2010)

John Switzer (2010)

Ron Burgess (2010)

Greg McCauley (2011)

John Molt (2011)

Public Event Coordinator

Gerald Venne gvenne@iquest.net 1 317 826-2680

Library Committee Coordinator

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Currently vacant

Astronomical League Coordinator

Bill Conner wmtconner@sbcglobal.net 1-812 828-0449

Membership Coordinator

Vicki Switzer vswitzer42@verizon.net 1 812-835-2251

January Calendar, 2008

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

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.

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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

Spouses Name: _____

Children's names and ages: _____

Education: _____

Occupation: _____

How many years associated with Astronomy? _____

Special astronomical interests or projects: _____

-

Equipment: _____

What can the Society do for you? _____

What can you do for the Society? _____

Note: Profile information is not a requirement for membership to the Society. This information is entered into the IAS database and is not given nor sold for solicitation purposes. It does provide for a brief welcoming article for new members and may be used by the society to match people with similar interests.