

The IAS News & Views – The monthly publication of the Indiana Astronomical Society

October, 2010
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The IAS News & Views



**The October General Meeting, October 16, 2010
5:00 PM
Goethe Link Observatory**

**Please Note the Hog Roast is at 5:00 PM
There is no general meeting. But observing is available weather
permitting.**

Come one come all to our annual hog roast. There will be beef, pork, chicken, and hot dogs for the kids. It is free to all members and their families. We will eat indoors. Come eat and socialize.

The Society will furnish meat, drinks (coffee, soft drinks and bottled water), buns, chips, eating utensils, plates, napkins, condiments etc.

Members whose last names begin with A through J are asked to bring a covered dish OR salad

Members whose last names begin with K through Z are asked bring a dessert?

IAS NEWS

Nominations Committee

The Board has appointed Jeff Patterson (KB9SRB@Comcast.net), John Molt (1stargazer@indy.rr.com), and Doug Brown (ddbrown4565@comcast.net) to act as the nominations committee for this year's elections. Please contact them if you are interested in running for office this year or if you know someone who would be a good candidate.

The Pres

Elections are Coming

It is time to begin thinking about elections again in earnest. Our elections will be held in December. There will be two Board members up for election as well as the four officers. I urge you to consider running for office. In addition the coordinator's positions will be open for appointment. If you would like to be a part of the governing body of the Society and help steer the direction of the Society please see one of the members of the Nominations committee. This looks like it may be another exciting year in our history. If you would like to act as one of the appointed coordinators please let us know as well.

Nominations committee

John Molt

Jeff Patterson

Doug Brown

Duties of the Officers:

- (1) Except as provided by these bylaws or required by law, the entire control of the Society and its affairs shall be vested in the Board of Directors.
- (2) The Board of Directors shall consist of seven (7) members elected from and by the membership at large. In addition, each Executive Officer shall be a voting member of the Board during their terms of office. In the event of a tie vote upon any matter, the President of the Society shall cast a second vote to break the tie.
- (3) The age requirement for members of the Board of Directors and Executive Officers shall be 18 years or older.
- (4) A member of the Board of Directors or an Executive Officer may be re-elected after their term of office expires.
- (5) If a vacancy occurs in any office for any reason, including failure to attend meetings, the Board of Directors shall elect a member of the Society to fill the unexpired term of the vacant office. Failure by a Director to attend six (6) meetings of the Board of Directors during any twelve (12) month period may constitute a vacancy at the discretion of the Board.
- (6) At each December meeting, here designated as the "Annual Meeting," the Directors shall be elected by the membership to succeed those whose terms expire.
- (7) The Executive Officers of the Society shall be President, Vice President, Secretary, and Treasurer, all of whom shall be elected by written ballot or voice vote at the Annual Meeting. The term of office for the executive officers will be for one year starting January 1st of the next year.
- (8) No person shall hold more than one Executive Office at a time.
- (9) Members of the Board of Directors shall hold office for three years. Their terms shall be staggered so that two directors are elected at each annual meeting, with the exception of a year in which a third director is to be elected.

(10) The President shall preside at all meetings of the members and ensure that the purposes of the meeting are accomplished. The President shall annually nominate the Editor of the monthly newsletter (*The Bulletin*), the Web Supervisor of the official website, the Associate Web Supervisor, the Observatory Manager, the Equipment Loan Program Coordinator, the Public Events Coordinator, the Librarian, the Membership Coordinator, and the Astronomical League Correspondent. The nominations will be ratified by the Board of Directors. The President will be responsible for communication with Indiana University. The President is responsible for filing all corporation and tax returns as required by the State of Indiana.

(11) The Vice President shall preside in the absence of the President and shall act as Program Coordinator. The Vice president's principal responsibility is to obtain speakers or to develop a specific program for each of the general meetings.

(12) The Board of Directors shall compile and approve an annual inventory report showing the whole amount of real and personal property owned by the Society. The report shall be presented to the President at the January Board meeting. The Secretary shall file the report with the Society's records.

(13) The Secretary shall keep minutes of all Business/Board meetings, initiate such Society correspondence as shall be directed to the Secretary, and ensure that records of the Society's business are maintained in permanent form.

(14) The Treasurer shall be responsible for all monies belonging to the Society. The Treasurer shall keep accurate records of all transactions and hold Society funds ready for disbursement at the order of the Board of Directors. The Treasurer shall also maintain insurance documents and prepare and submit all required state and federal tax returns.

(15) The Board of Directors and Executive Officers shall establish official Standard Operating Procedures (SOPS) for operation of the Link Observatory, to clarify the requirements of these bylaws, detail agreements between the Society and other parties and to comply with any city, state, or federal rules or regulations. These procedures may be altered by the Board of Directors without a general members' vote. Such operating procedures shall be filed with the Society's records and shall be posted where deemed appropriate.

(16) The Observatory Manager shall be responsible for routine management of the Link Observatory. The Observatory Manager shall maintain an inventory of the IAS property at the observatory and schedule the use of the Link Observatory facilities. It is the Observatory Manager's responsibility to notify the President of any situation at the Link Observatory that requires the attention of Indiana University. The Observatory Manager is responsible for the security of the keys he holds for the Society, accounting for all keys issued to the Society, reporting of the status of the keys to the Board and issuance of keys in accordance with the directions of the Board.

(17) The Editor of *The Bulletin* shall be responsible for publishing the monthly newsletter. The electronic copy is to be transferred to the Web Supervisor for placement on the website. The Editor of *The Bulletin* shall be responsible for printing and mailing copies of *The Bulletin* to members who have designated that they prefer "hard copies" and to Friends of the Society. It is the Editor's responsibility to maintain a high level of excellence in *The Bulletin*.

(18) The Web Supervisor shall be responsible for the operation and maintenance of the IAS website at the highest level of excellence. The Associate Web Supervisor shall assist the Web-Supervisor in their duties and know the system well enough to act as Web-Supervisor if needed.

(19) The Librarian shall be responsible for the Society's library including the maintenance of an inventory of all media, and check in/out records for the Society. The Librarian shall be responsible for recommendations to the Board for additional media.

(20) The Equipment Loan Program Coordinator shall be responsible for maintaining the loaner equipment and overseeing loan activities.

(21) The Public Events Coordinator is responsible for evaluating, scheduling and coordinating events requested by public and private institutions and individuals.

(22) The Astronomical League Correspondent (ALCor) shall serve as the Society's contact person for Astronomical League matters. The ALCor will coordinate with the Membership Coordinator to ensure that membership rosters are sent to the League in accordance with Astronomical League procedures. The ALCor is also responsible for communicating League benefits and programs to the Society's members.

As a collateral duty, the ALCor shall serve as the Society's Awards Coordinator (AC) for the League. The Awards Coordinator will carry out these duties in accordance with directives from the Astronomical League National Observation Program Coordinator.

(23) The Membership Coordinator shall collect dues from the members, keep accurate records of all transactions and transfer these funds to the Treasurer. The Membership Coordinator shall update and maintain Membership, Inactive membership and IAS Astronomical League databases. Each month the Membership Coordinator will send Notices of Pending Membership Expiration and Notices of Membership Expiration. In addition, the Membership Coordinator will send letters of welcome and introduction to all new members upon receipt of the application and dues.

IAS Calendar of Events for October

October 16 - Hog Roast at Link Observatory
October 19- Board Meeting

Observing Activities

NAG completes another year

We have completed another year at McCloud Nature Park. Thanks to everyone, we had another successful season. If you have ideas of how to improve the sessions or other things to do please contact me.

John Molt

Activities for October:

Link Observatory

October 16 Hog roast and observing weather permitting..

McCloud Activities–

NAG –There is no NAG. See you next May.

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 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 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.

UP Coming Star Parties

Prairie Skies Star Party Kankakee Illinois September 30-Oct 3
<http://www.prairieskies.org/>

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

Chiefland Fall Star Party November 1-7

If you know of events coming up let me know and I will get them in the Bulletin
<http://www.chiefland.com/chieflandastronomyvillage.php>

Party News

Heart of America Star Party

We traveled to the Heart of America Star Party hosted by the Kansas City Astronomical Society. This was my first time but not last I can assure you. They have a great observing site which they own for about 250 enthusiasts. According to the sky meter the skies were about 6.0. M13 and M31 were naked eye visible. We had two magnificent nights and then the wind showed up and a few clouds. We met up with several friends and members of the IAS and had a good time. This is a nice party about 500 miles away. See you there next year.

Jeff

Stargazer

A Sky Full of Satellites

In this column we usually talk about night sky objects well beyond our home planet, but a reader in Dublin, TX, asked me to "do something about the orbits of satellites and their speed and how high they are and how many." So here goes, but to put things in perspective, let's start by looking closer to home.

The deepest part of Earth's oceans, called the Challenger Deep within the Pacific Ocean's Mariana Trench, is a staggering 35,840 feet -- nearly 7 miles -- below sea level. The world's tallest building, Dubai's Burj Khalifa, extends 2,717 feet -- about 1/2 mile -- into the sky. Earth's tallest mountain, Mt. Everest, tops out at 29,035 feet -- 5 1/2 miles. High-flying commercial airplanes usually fly 5-7 miles above Earth.

Now let's go to another level. While there is no definite boundary between Earth's atmosphere and outer space, the atmosphere's effect becomes noticeable to reentering spacecraft at about 75 miles above Earth's surface. That's also where many meteoroids begin to burn, turning into those breathtaking meteors we call "shooting stars."

Now for satellites. Most of the ones we see are in low Earth orbit a few hundred miles above Earth. Some examples: the International Space Station orbits at around 270 miles; the Hubble Space Telescope orbits at about 350 miles; Landsat 7, which provides images for mapping services as well as for Google Earth, orbits at some 440 miles; weather satellites orbit at about 530 miles. These satellites speed along at around 17,000 miles per hour.

Navigation devices in our vehicles receive signals from 30 Global Positioning System (GPS) satellites orbiting in medium Earth orbit at 12,550 miles.

The most distant satellites are in geosynchronous orbit 22,240 miles above Earth, the distance at which satellites orbiting over Earth's equator travel at the same speed as the Earth rotates. Satellites in geosynchronous orbit (also called geostationary orbit) always hover over the same location on Earth, making them good for communication and other purposes.

The U.S. Space Surveillance Network currently tracks over 8,000 orbiting objects, only about 560 of which are operational satellites. Thus most of the satellites we see on any given night are space debris -- inactive satellites and spent rocket parts.

The Web site www.heavens-above.com is a good site for finding out about visible orbiting satellites, including exactly when and where to see them. It's free, but you'll need to register the first time to enter your viewing location.

Next Two Weeks. Avg. sunrise: 7:19 a.m.; avg. sunset: 7:21 p.m. (exact for Waco, TX)

- * Uranus is still less than two moonwidths above Jupiter, but seeing faint Uranus requires binoculars.
- * Wed. is autumn equinox, the beginning of fall in the northern hemisphere when night and day are of equal length.
- * And Wed. Jupiter and the Moon travel across the sky together all night.
- * Thursday's full Moon, being the full Moon nearest the fall equinox, is the Harvest Moon.
- * The Moon is at 3rd quarter Sep. 30.

Naked-eye Planets. "Evening star" *Venus*, low in the west southwest at dusk, is at its brightest for the year and looks like a tiny crescent Moon in telescopes and larger binoculars. Fainter *Mars* is to its upper right. *Jupiter*, rising in the east at sunset, is on the opposite side of Earth from the Sun (called opposition) and appears brightest and largest for the year; by morning it dominates the western sky. *Mercury* makes a brief appearance low in the east at dawn.

Comet Code: Understanding How Comets are Named

Two hundred years ago, the discoverer of a prominent comet usually had their name incorporated into the official name of the object, but not always. The first named comet was Halley's Comet, named after Sir Edmund Halley who had calculated its orbit and made the discovery that it was a regular visible visitor to the inner solar system. The comet is now officially known as Comet Halley. The name credit for the comet 2P/Encke, discovered in 1786 by Pierre Méchain, was given to the man who calculated its orbit, Johann Franz Encke. If the comet was exceptionally bright and non-periodic, they were known as "The Great Comet of..." followed by the year in which they were observed.

The naming of comets became standardized in the early twentieth century, retaining the names of up to the first three independent discoverers. Comet White-Ortiz-Bolelli (formal designation C/1970 K1) was named for its discoverers amateur astronomer Graeme White, Air France Pilot Emilio Ortiz, and professional astronomer Carlos Bolelli. More recently, comets have been discovered by robotic space-borne instruments, and the instrument's name is included like Comet IRAS-Araki-Alcock (C/1983 H1), discovered by a team of scientists using the Infrared Astronomical Satellite (IRAS), and two amateur astronomers, George Alcock and Genichi Araki.

The "Old Style" of naming comets gave them a provisional designation of the year of their discovery followed by a lower case letter indicating its order of discovery in that year. Comet Bennett is designated Comet 1969i, the 9th comet discovered in 1969. This worked well until 1987 when more than 26 comets were discovered in a single year. The alphabet was used again with a "1" subscript (Comet Skorichenko-George, 1989e1). In 1989, the count got as high as 1989h1 with 34 comets discovered that year. Once the orbit had been established, the comet was given a permanent designation in order of time of closest approach to the Sun, consisting of the year followed by a Roman numeral. For example, Comet Bennett (1969i) became 1970 II.

More and more comets began to be discovered and the naming procedure became unwieldy, so in 1994 the International Astronomical Union (IAU) approved a new naming system called the "New Style". Using the New Style, comets are designated by the year of their discovery followed by a letter indicating the half-month of the discovery. "A" denotes the first half of January, "B" denotes the second half of January, "C" denotes the first half of February, "D" denotes the

second half of February, etc., and a number indicating the order of discovery. As an example, the third comet discovered in the second half of October 2010 would be designated 2010 U3. "I" and "Z" are not used when describing the half of a particular month the comet was discovered because they can be easily confused as the numbers 1 and 2 respectively.

Prefixes are also added to indicate the nature of the comet, with "P" indicating a periodic comet, "C" indicating a non-periodic comet, "X" indicating a comet for which no reliable orbit could be calculated (typically comets described in historical chronicles), "D" indicating a comet which has broken up or been lost, and "A" indicating an object at first thought to be a comet but later reclassified as an asteroid. Periodic comets also have a number indicating the order of their discovery. Thus Halley's Comet, the first comet to be identified as periodic, has the systematic name 1P/1682 Q1. Comet Shoemaker-Levy 9 was the ninth periodic comet jointly discovered by Carolyn and Eugene Shoemaker, and David Levy but its systematic name is D/1993 F2. It was discovered in 1993 and the prefix "D/" is applied, since it was observed to break up and crash into Jupiter. (Ref. http://wopedia.mobi/en/Astronomical_naming_conventions?t=8.)

Now you can decode the name designations of comets. Stars are another story altogether... For example, Betelgeuse = Alpha Orionis = HR 2061 = BD +7 1055 = HD 39801 = SAO 113271 = PPM 149643, whose coordinates in the sky are RA 05:55:10.306, Dec +07:24:25.35 (2000.0), the bright red supergiant in Orion. There is a system determined by the IAU for naming all astronomical objects. It just takes some time and study to make sense of it.

October, 2010

By Tom Koonce

Membership Status

The following changes in membership took place in September: 153

Current Membership Total: Renewals: 9

New Members:

Dan Beeker – Bloomington

Frank Hunter – Mooresville

James E. Detwiler – Zionsville

Inactive status: 0

Matthew Houppert -Martinsville

George Ostheimer - Martinsville

IAS 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. 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. (Contact Greg via the webpage iasindy.org under the contact us section

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

Jeff Patterson (Contact Jeff via the webpage iasindy.org under the contact us section) –
Observatory design and construction

Eric Allen (ericandroberta@sbcglobal.net) - Telescope making and mirror grinding

Public Outreach Programs – If you want to schedule a program at the Link Observatory or at you 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 (Contact Gerald via the webpage iasindy.org under the contact us section).

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. Contact John via the webpage iasindy.org under the contact us section)

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

Celestron Celestar 8" with tripod mount, Dec. motor & hand controller, & instruction manual.

Also included in the package...

Counter balance weight system, Celestron 25mm SMA 1-1/4 eyepiece, Orion Dew Zapper 20w 12v, 8" glare shroud, Full scope astrosystem's weather cover, Antares right angle finder scope, Celestron Star Diagonal 1-1/4" , Stellarvue Red-dot unity finder, Celestron (Pelican style) Hard Case for scope. \$750.

Contact Thad Hatchett at astronomynut@comcast.net or give me a call at home at 812-375-0192.

For Sale:

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

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

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. 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 **Contact via the webpage iasindy.org under the contact us section**

Board Meeting –October 19, 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 Jeff Patterson via the webpage iasindy.org under the contact us section

2010 Calendar of Meetings

	NAG	General	Board
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	

Goethe Link Observatory **Observatory Address**

Goethe Link Observatory
8403 N. Observatory Lane
Martinsville, IN 46151
Latitude: 39 degrees, 33 minutes north
Longitude: 86 degrees, 24 minutes west
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* **Contact via the webpage iasindy.org under the contact us section.** DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.

IAS News & Views Stats

Accessing the IAS News & Views

The current bulletin can be found on the website www.iasindy.org

IAS News & Views 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 via the webpage iasindy.org under the contact us section

Contact any IAS officer or the Treasurer John Shepherd or Vicki Switzer

Observatory Manager

John Shepherd **Contact via the webpage iasindy.org under the contact us section**

Public Event Coordinator

Gerald Venne **Contact via the webpage iasindy.org under the contact us section**

Equipment Loan Program Coordinator

Philip Dimpelfeld **Contact Phil via the webpage iasindy.org under the contact us section**

Membership Coordinator

Vicki Switzer **Contact Vicki via the webpage iasindy.org under the contact us section**

October Calendar, 2010

For a more detailed Calendar of Events see the webpage www.iasindy.org

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