

The Bulletin – The monthly publication of the Indiana Astronomical Society

June, 2008
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The Bulletin



The June General Meeting, June 28, 2008 7:00 PM Goethe Link Observatory

"The Amazing Omega Centauri"

Globular clusters are among the oldest objects in the Milky Way, and were the key to understanding the process of stellar evolution in the 1950's. The biggest globular cluster in our galaxy, Omega Centauri, visible in the southern hemisphere with the naked eye, may not be a globular cluster at all - it may be the nucleus of a captured and disrupted galaxy. Dr. Caty Pilachowski will discuss the many interesting facets of this amazing star cluster.

Professor Catherine A. Pilachowski holds the Daniel Kirkwood Chair in Astronomy at Indiana University Bloomington and incoming Chair of the Astronomy Department. Prior to coming to Indiana University in 2001, she served as a member of the tenured scientific staff at the National Optical Astronomy Observatory in Tucson, Arizona, for 22 years. While at NOAO, she served as Project Scientist for the design and construction of the 3.5-meter WIYN Telescope, a telescope at which the IUB Astronomy Department owns a 17% share. Caty received a B.S. in Physics from Harvey Mudd College in California, and a M.S. and Ph.D. from the University of Hawaii, where she observed at the Mauna Kea Observatory on the Big Island of Hawaii. She investigates the evolution of stars and the chemical history of the Milky Way Galaxy from studies of chemical composition of stars and star clusters. In addition to her astronomical research, Caty has been active in the areas of astronomical instrumentation, large telescope design and construction, and electronic publications. She has served on numerous national and international boards and committees. She recently served as President of the American Astronomical Society, and has served more than 20 years as a Lecturer in the Society's popular Harlow Shapley Public Lecture Program.

IAS Calendar of Events for June

June 28 – General meeting and observing at the Link

Use of the listserve

While I was on vacation I noted that there were some problems with the list serve. The Listserver is for use of the IAS members to communicate Society information and

interesting astronomical information not readily available to the Society in general. In other words it should not be used to pass on something out of “Space weather” for example. It is never appropriate to use it for personal messages! It is set up to eliminate spam and can only go to members who have signed up. One way to create a problem is to save the listserv address as one of your normal addresses in your mail. Then if you send a message to all your saved addressees the members will also get it. Please make sure this does not occur. Schoppy works hard to keep from having hackers get in to the system. We never share that list with anyone.

In addition, you have to request to be on the listserv. Go to the member’s only section and fill out an application. You fill in your email address and submit a password. If for some reason you change your email or you forget your password there is no way to retrieve it and you have to fill out another application.

The Pres

NAG Dates for 2008

Please mark your calendars for the NAG dates this year

Saturday July 12, 2008

Saturday August 9, 2008

Saturday September 6, 2008

Star Party News

Texas Star Party

Well Carolyn and I took about the most round about way to get to West Texas for the annual TSP that one could choose. We left Indy on April 16 to go to California for the wedding of one of her nephews. We then went to San Diego and headed into Arizona for Organ Pipe National Monument and Saguaro National parks. After a short stop at Las Vegas, we headed on to the Grand Canyon for a little hiking. We could not go to the North rim as it did not open until May 15 so we headed to Zion, Bryce, Canyon Lands and Arches national parks in southern Utah. If you have never been there put it on the list. They are fun and each is very different. We then headed to Silverton, Colorado for a stay in the old mining town. They were still digging out as they had over 30 feet of snow this winter. Then we headed back to Arizona for the north rim of the Grande Canyon. It snowed on us for two days at the end of May. Then on to Lake Powell and then started heading to the star party. We stopped by Alamogordo, New Mexico. I had a chance to visit Sun Spot which is part of the National Solar Observatories. Nice visitor center. The University of New Mexico had an observatory called Apache Point there as well. They have a 3.9M telescope but it is not open to the public.

We finally arrived in West Texas May 30 and settled in the Fort Davis State Park as we had our dog and they are not allowed at the star party. This year they moved the party to June for some reason. It is hot in Texas in June folks! 100+ every day. But the nights are cool with the average temperature probably around 60 degrees. The people in tents were pretty bedraggled by the end of the week. Ft Davis has had 0.2 inch of rain in the

last 8 months and is a little dry needless to say. The party started on Sunday with registration and set up. This year the IAS was represented by Cris Dietz and myself. I had fun visiting some of our old friends, Omega Centauri, alpha Centauri and other southern objects. I did three all nighters in a row before I crashed and burned on Wednesday and took the night off. On Wednesday we noticed a large plume of smoke to the south of us. A welder on the railroad had started a grass fire and the winds were about 40 mph in our direction. It got within 5 miles of the ranch. Luckily for us it turned east and went by us. About 50000 acres were burned before they got it under control. Thursday night we started in again and did two more all nighters. Saturday night was a bust. We sat and watched a huge Thunderstorm with lots of lightening. NO Rain though!! The Brisket Burritos were as good as ever and the food stand was busy every night. Floyd the skunk was back again this year and enjoyed the burritos Man I was dead by the end of the week! One interesting respite was that there is an amateur astronomer who just had OMI and others to construct a 48" Dobsonian for him. He had an open house up on the hill for us to visit. It is a monster at F-4 and 20 ft tall. They said that images were unbelievable. I worked most of the time on John Waggoner's challenge lists which I will post in the next newsletter. They were mostly globuliers in the southern sky around Sag and Scorpio. Attendance for the party was down somewhat at about 485. Imagine it was a combination of the heat and the price of gas. Cris did win a book in the great Texas giveaway. This continues to be a premiere party with lots of opportunities to observe under really dark conditions. Next year the party will begin April 19 which will make it much more comfortable. I hope to see you there.

Jeff

Apollo Rendezvous 2008

It appears that only one IAS member participated in the Apollo Rendezvous that occurred on June 13 and 14. The Miami Valley Astronomical Society also celebrated their 90th anniversary this year. The guest speakers were: Dr. Dale Partin, who spoke on the Hubble constant; Tom Trusock from cloudyNights.com, who spoke on the latest and greatest astronomical tools (and quite expensive); Terry Mann (The Astronomical League president), who spoke on the International Year of Astronomy 2009; and Scott Ireland who gave workshops on Digital SLR Image Processing.

The weather was really decent that day that brought on clear skies for observing at the John Bryan State Park -- an annual event following the convention hosted by the MVAS. Before the observing, the MVAS hosted their annual BBQ dinner with a large birthday cake for the club. This year I was unable to stay for the BBQ, but I will say that I was there in the past. They lease a former military building with all the comforts included -- however last year the USAF went back using a part of the building for their own undisclosed purposes. But, the MVAS can still use most of the building which houses a 50cm telescope, and an adjacent recently built building next to the observatory also houses five telescopes -- an 8" Newtonian; an 8" and 12" Schmidt-Newtonian; a 10" Cassigrain; and a 5.5" refractor.

The number of participants appeared to be smaller than normal this year. There was the usual door prizes that included telescopes, binoculars, and meteorites. Unfortunately, I was not one of the winners.

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The convention is held at the Boonshoft Museum of Discovery. For those who have yet to attend this convention, the admission to the Museum is included in the registration for the convention (\$30 per individual/ \$40 for a family of four). The museum offers a small indoor zoo, a walk-in tree house, a large discovery area for children, and this year an exhibit of dinosaurs from China.

Another highly recommended place to visit if you decide to go to the convention next year is the USAF National Museum less than thirty minutes away. This is a FREE museum, that takes you through the history of the USAF and have exhibits of aircraft and weapons dating back to WWI. Including some GIGANTIC prototype bombers, and several WWII German and ally aircraft. However, be advised you need at least a day to visit this particular museum .. its that big.

So, plan to go next year. On a tank of gas and a weekend you can enter two museums free of charge, have a free meal during a very nice BBQ, and maybe ... just maybe win a nice door prize. I hope to see you next year, as it appears they may have something going for the International year of Astronomy.

Marion Hakes

Indiana Family Star Party/GREATCon 2008

July 31 – August 3

The IAS is, once again, co-sponsoring the Indiana Family Star Party. This is held at the Prairie Grass Observatory on the grounds of Camp Cullom just outside of Frankfort, Indiana. We are again responsible (with help from the Muncie Astronomy Club), for the check-in/registration booth and we need volunteers to help run that booth. We will check in pre-registered attendees and collect fees for at-gate registrants and walk-ins.

For Friday and Saturday I will set up two-hour time slots and plan to have at least two people in the booth at all times. The booth will be open for Registration on Friday from 4:00pm to 10:00pm and on Saturday from 10:00am to 12:00pm. There are other registration times that the booth will be closed but others will take care of registering during these times at the Information Office.

If you are interested in helping just e-mail me with your name and phone number and if you have a time preference. I will do my best to accommodate these preferences. Information about this event can be found at <http://home.comcast.net/~jmmahony1/PGO/starparty/index.html>, including the registration form. Note that pre-registration is discounted but the deadline is postmark by July 21.

Gerald Venne
IAS Public Events Coordinator
gvenne@iquest.net

ALCOR OBSERVATIONS

EYEPIECE BASICS

Eyepiece (EP) choices these days are daunting. From no-name cheapos to "Uncle" Al Nagler's creations, the quality variations and price ranges are a challenge to sort out. Inexpensive eyepieces work well with long focal length telescopes. More complex eyepieces are required to obtain the best performance from short focal length scopes due to the broad cone of light coming from the objective.

The primary eyepiece parameters to consider are: EP focal length, parfocal, eye relief, apparent field of view, actual field of view and exit pupil when coupled with your telescope, the number of elements in the EPs optical train, non-reflecting coatings and quality. Let's take a quick look at each of these areas plus the limitations imposed by your eyes.

Focal Length: While aperture defines the light gathering capacity of a telescope, its focal length divided by the focal length of the EP defines magnification. In practice, we will need several different EPs to get the most enjoyment out of our telescope. Long focal length EPs, of 30 to 50mm, producing magnifications of 20x to 50x, are excellent for acquiring objects and for wide field views. Moderate focal length EPs of 10 to 25mm, producing powers of, 100x to 200x, are used for teasing out more detail. High power, short focal length EPs, of 2 to 8mm, producing powers of 300x and up, are used for observing tiny objects such as planets. There is a tradeoff, however, between magnification and light transmission, primarily due to a diminished exit pupil that transmits light into your eye.

Parfocal: Parfocal means that the focus position is the same or nearly the same for each eyepiece in a series. The main advantage is convenience. You can switch back and forth from low to high power as you proceed through an observing session without a lot of focusing hassle. If one eyepiece doesn't match, which frequently occurs with the transition between 1¼" and 2" EPs in a series, you can use stop rings on the barrels of the odd-balls to match them up.

Eye relief defines how close your eye has to be to the eyepiece to see the whole field of view. Some designs require to you literally "glue" your eye to the eyepiece. This is fine if you don't need glasses to compensate for astigmatism. Astigmatism is a non-symmetrical blurring that cannot be compensated for by a telescope's focuser. There are reasonably priced EPs made with lanthanum or "ED" glass that provide 15 to 20mm of eye relief for observers who need or appreciate this quality.

Apparent field of view is the light cone angle that the eyepiece delivers to your eye. Most simple designs, like the Plossl have apparent fields of around 50 degrees, while Al Nagler's new Ethos line has a whopping 100 degree apparent field of view. The visual effect of the Ethos eyepiece is truly amazing. I had the privilege of observing the Orion Nebula through a 25" dob equipped with a bino-viewer and two 8mm Ethos eyepieces. It was like going to an IMAX theater. There is one hitch however. Your eyeball has to make large angular motions to look at the periphery of the field. When you move your eye, say to the right, your pupil moves out of the EPs exit pupil so you have to move your head to the left. To use Al's example, it is like looking through a porthole on a ship. You have to move your head around to see the extremes of the view.

The actual or "true" field of sky that we see is calculated by dividing the apparent field by the magnification created by the telescope/eyepiece combination. For example, an 8mm Plossl,

sporting a 50 degree field of view on the 8" dob above yields 150 power and a true field of view of .33 degrees or 20 minutes-of-arc. Installing Al's 8mm Ethos on the same scope yields 150 power and a true field of .67 degrees or 40 minutes-of-arc. Remember that the sky is passing overhead at the rate of 15 degrees per hour or .25 minutes-of-arc per second. Before you buy a high power EP for your manually positioned telescope, take the actual field of view in minutes-of-arc and multiply it by 4. This will tell you how many seconds it will take for an object to transit the width of your field of view. For example, the 8mm EP above has a 20 minutes-of-arc field. This means that an object will transit the field of view in 80 seconds.

Exit pupil is defined as the diameter of that beam of light that shines out of the eyepiece. It can be calculated by taking the diameter of the objective lens or mirror in mm and dividing it by the magnification or power created by the eyepiece. A 200mm reflector with a focal length of 1200mm (a typical 8" f/6 dob) and a 25mm eyepiece gives us 48 magnification and an exit pupil of 4.17mm. This EP could be used to initially find an object. On the other hand, the same telescope with a 10mm eyepiece gives us 120 power and an exit pupil of 1.67mm. This EP could be used to examine an object in more detail. Discounting the attenuation due to the glass lenses in the EP, and using the geometric formula for the area of a circle, an extended object like a planet will be 2.5 times larger in diameter in the 10mm EP. However, it will appear only 16% as bright when compared to the view with the 25mm EP. This is due to the same amount of light being spread over an area that is 6.25 times larger. Buying an EP that, in combination with your telescope, produces an exit pupil of 1mm or less approaches a practical limit. These higher powers put greater demands on the quality of the optical system. A 1mm exit pupil corresponds to a magnification of 25 per inch of aperture and, even in a perfect optical system, we start to see some softening of the image due to diffraction effects at the objective of our telescope.

Optical Train: The primary objective lens or mirror of a telescope focuses a cone of light at a spot where the eyepiece also comes to focus. Long focal length telescopes, of f/9 or longer, project a very narrow cone of light that can be accommodated by simple 2 to 5 element EPs with good results. Per Al Nagler, a "fast" scope with short focal lengths of say, f/6 and down, a well designed EP with at least six elements is required to display the wide cone of light.

Antireflective Coatings: These coatings are often magnesium fluoride. They improve the light throughput of all eyepieces by causing the reflected light waves from the glass and the coating to cancel each other. This causes more of the light to be transmitted through the eyepiece. We can judge the effectiveness of coatings by seeing how faint the reflections from the eyepiece are when we hold it under a light. Better quality EPs are "fully" multicoated, meaning that every lens has one or more coatings on both sides.

Quality: Only money and patience can acquire quality. You have to do your research, talk to fellow astronomers and look through the eyepieces. There is more and more competition for your eyepiece dollar and more inflated claims of performance, so be careful. Many nice eyepieces become available on "Astromart" at more reasonable prices. There are forums on "Astromart" as well as eyepiece reviews on www.cloudynights.com. Televue eyepieces are the gold standard as are APM and Ziess, and you will pay a premium for the names. Pentax and Vixen make eyepieces that are very comfortable to use. Meade, Celestron and Orion have huge collections. Every eyepiece is a compromise in some form so look for ones that work with your scope.

Your eyes: The dark adapted eye of a young person under 30 years old has a pupil diameter of no more than 7mm. If the exit pupil of the eyepiece is greater than 7mm, then some of the light is wasted since not all of the light will get into the eye. This is usually not a problem with telescopes but it does play a major role with binoculars. As we grow older, our iris is less responsive and

may only open 2 to 4 mm by the time we retire. At this point in life, the pupil of our eye may be the limiting factor.

SUMMARY: In summary, simple, quality, short focal length eyepieces can be effectively used on long focal length, "planetary," telescopes. They produce high magnification and contrast. Apparent field of view and peripheral defects are of minor concern since we concentrate on the object that is placed in the center of the field. For short focal length, wide field telescopes, buy the best quality EPs that you can afford. 65 degree apparent fields of views are nice to have, 80 to 100 degree apparent fields have a neat effect if your financial situation and eyes allow. Calculate the exit pupil for each EP / Telescope combination you are considering and be aware of the physical limits of your telescope if it is below 1mm. Larger aperture is the only way to improve exit pupil.

Observer's Corner

STARGAZER #481 for June 14, 2008

Tunguska Event

A hundred years ago, on June 17, 1908, an event occurred over a remote part of Russia, the likes of which had not been seen before or since. Something exploded 3-6 miles in the air with far more power than the atomic bomb dropped over Hiroshima in 1945.

A little after 7 a.m. near the Podkamennaya Tunguska River in Siberian Russia, the sky blazed with light, the ground shook like an earthquake, thunder-like explosions were heard and blasts of hot wind blew people off their feet. Many who witnessed--and survived--the event feared the world was coming to an end.

The result was the virtual devastation of a forest area some 30 miles in diameter where an estimated 80 million trees were felled with their bark and branches stripped off. Surely any animals and humans in the ground-zero area would have been killed.

Fortunately the explosion happened over a largely uninhabited area, but it has been calculated that if it had occurred 5 hours later, it would have exploded over St. Petersburg. Given the devastation of Hiroshima with a much less powerful bomb, one shudders to think of the effects of this event over a large city.

So what was it? Since it happened years before the creation of nuclear bombs and when human flight was still in its infancy, it was almost certainly of natural rather than human origin.

A number of hypotheses have been put forth, including a few rather wild ones. Some have suggested that Earth was impacted by a black hole or antimatter; others have postulated that an alien spacecraft exploded while trying to land on Earth.

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While none of these ideas can be unequivocally disproved, all lack the supporting evidence to be taken seriously. Most scientists think a comet or meteoroid several 10's of meters in diameter exploded shortly before impacting Earth's surface--a hypothesis backed by good, although not conclusive, evidence.

So what's the prospect of a repeat? No one can predict for sure, but the late Gene Shoemaker, an impact expert, estimated that these events might be expected once every 300 or so years.

Next Two Weeks. Avg. sunrise: 6:24 a.m.; avg. sunset: 8:37 p.m. (for Waco, TX)

* Wednesday's full Moon is called Rose Moon, Flower Moon, and Strawberry Moon.

* Friday is the summer solstice, the longest day of the year, marking the beginning of summer.

* After rising around 10:30 p.m. the evening of June 19, the Moon and Jupiter travel across the sky together all night.

* The Moon is at 3rd quarter June 26.

Naked-eye Planets. (*The Sun, Moon and planets rise in the east and set in the west due to Earth's west-to-east rotation.*)

Evening: As darkness falls *Mars* and *Saturn* are setting in the west.

Morning: Brilliant *Jupiter*, rising soon after 10 p.m. is seen in the southwest by morning while *Mercury* begins its morning stint low in the east.

Stargazer appears every other week in the *Waco Tribune-Herald* and other Texas newspapers. Paul Derrick is an amateur astronomer who lives in Waco. Write him at 918 N. 30th St., Waco, TX 76707, call or fax at (254) 753-6920, or e-mail at paulderrickwaco@aol.com.

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**** See the Stargazer Web site at <http://www.stargazerpaul.com>. ****

IAS LIBRARY:

The IAS library is available at the Link Observatory.

Our complete list can be found (<http://www.iasindy.org/memonly/iasfiles.php>, which is password protected).

Larry A. Marcus

IU Kirkwood Observatory

Kirkwood Observatory on the IU campus is now open! The Observatory will be open every Wednesday night, weather permitting, until November, 2008. 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.

Gadgets and Gizmos

I found a good website for LEDs called Superbrightleds.com. One of the guys had a led that plugged into the light sockets in his camper for illumination. I have tried everything including engine paint with not much luck. They also have red lamps for dome lights.

Jeff

Meet Our New Members

The Society wants to welcome each of you and if you have any questions do not hesitate to ask.

Mike Barnes Zionsville

Michael Coons Indianapolis

David Cox Danville

William Holland Mooresville

Chris Mendoza Avon

Luke Reese Indianapolis

David Sharknas Indianapolis

Therin Showalter Lebanon

Jerry Vessels Indianapolis

Seek out new members out and see if you can help them out.

The Pres

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.

Upcoming Star Parties and Registrations

Heart of America Star Party MO June 26-June 29 (Possibly stay until July 5th)

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

Nebraska Star Party – July 27-August 1 - North Central Nebraska - 950 miles 18 hour drive. 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 2007 The 21st Century Midwest Star Party Jul 29 - Aug 3
Beaver City, Indiana This is a new star party put on by 20-20 Telescopes.
<http://www.2020telescopes.com/EPOCH2007.html>

Indiana Family Star Party Camp Cullum, Frankfort, IN Jul 31 - Aug 3
<http://jmmahony.home.insightbb.com/pgo/starparty/>

Black Forest Star Party PA Date To be announced
<http://www.bfsp.org/starparty/>

Astrofest Kankakee, IL September 5-7th, 2008
<http://www.chicagastro.org/>

Prairie Skies Star Party – Kankakee IL – September 25-28, 2008
<http://www.prairieskies.org/>

Illinois Dark Skies Jim Edgar Panther Creek State Fish and Wildlife Area II.
September 25-28 <http://www.sas-sky.org/>

Twin Lakes Star Party Pennyville State Park, Western KY Sep 27 - Oct 5
<http://www.wkaa.net/>

Okie-Tex Star Party Camp Billy Joe, OK Sep 27 - Oct 5
<http://www.okie-tex.com/>

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

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: 2 Televue eyepieces
4.8mm Nagler
17mm Type 4 Nagler
(The 17mm Nagler is a 2" eyepiece)
Both for \$250 obo
Contact: Jim Zdobyak 317-862-4715 or zobel@aol.com

For Sale - Astronomy photographic prints for sale. The prints are displayed at <http://www.dougsastro.net>. 12" X 18" prints are \$25.00 and 8" X 12" are \$15.00. All of the images were taken by Doug Sanquetti. Most were taken locally near Cicero, IN but a few were taken at Star Parties. Any print on the web site may be ordered by contacting Doug at drsanqun@gmail.com

Onions and Orchids

I would like to thank everyone who helped out in my absence. We had a great trip and looks like things went pretty well with the Society. I am glad to be back.

The Pres

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 in the "Members Only" section of the site and is accessible only by IAS members. Make sure we have your correct e-mail and you will have access for late updates to events and functions.

Being a member does **not** mean you are automatically entered into the "Members Only" section and the have the List Serve available. 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.

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 July 17, 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 main entrance to the building is to the right of Starbucks, but it will be locked. To get into the building, go to the shop Silver in the City. Tell them you are here for the astronomy meeting and go through the back door of the shop into the office building. 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, IAS Vice-President on his cell phone 716-8124.

General Meeting Dates 2008

The Board has made a major decision for the Society. In years past there have been major conflicts with star parties and other events and the General meeting which is held the second Saturday of the month. The Board has decided to "float" the date of the general meeting each year based on the phase of the moon. Basically the general meeting will be held close to third

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quarter moon. The dates of the general meetings will be published at the beginning of each year. We think this change will provide the following benefits:

1. Allow us to schedule NAG (New Astronomer's Group) meetings at McCloud on Saturday nights good for observing with the public.
2. Prevent conflicts with star parties that generally occur around the new moon which is early in the month in 2008.
3. Still provide observing opportunities at the Link during the Summer months.
4. We will continue to float the Observer's meeting at the Link to provide the best observing possible.

January through March - will stay on the 2nd Saturday at Butler

June 28 at Link

July 26 at Link

August 23 at Link

September 20 at Link

October 18 at Link (Hog Roast)

November 15 at Butler

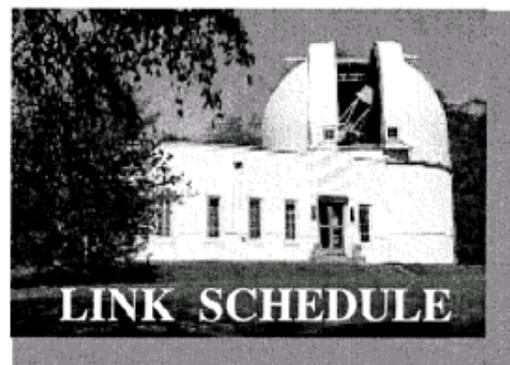
December floats for the Christmas Party at Butler

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.*

Link Activities for June:

General Meeting June 28

McCloud activities for June –

NAG June 14

NAG July 12

The Bulletin – The monthly publication of the Indiana Astronomical Society

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.

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

The Bulletin – The monthly publication of the Indiana Astronomical Society

Board of Directors

Gary Schoppenhorst (2009)
Gerald Venne (2009)
Tom Borlik (2010)
John Switzer (2010)

Ron Burgess (2010)
Marion Hakes (2008)
John Molt (2008)

Public Event Coordinator

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

Library Committee Coordinator

Larry Marcus marcus@mwmacoustics.com 317 842-6658

Astronomical League Coordinator

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

June Calendar, 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 ●	4	5	6	7
8	9	10 ☾	11	12	13	14 NAG at McCloud
15	16	17	18 ○	19	20	21
22	23	24	25	26 ☾	27	28 General Meeting at Link General Observing
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: _____

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.

The Bulletin – The monthly publication of the Indiana Astronomical Society

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: John Shepherd, Treasurer

4609 Callahan St.

Indianapolis, IN 46239

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.