



# The IAS News & Views

Volume 80, Issue 4

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

## **Indiana Astronomical Society/Holcomb Observatory Public Lecture**

**April 6, 2013**

**7:00 PM**

**Holcomb Observatory**

**Beware of the Infective Disease of Star Partying**

**Jeff Patterson**

Jeff will explore the hobby of star partying. We will discuss the pros and cons of attending a star party and the planning required to make an enjoyable event. We will discuss star party etiquette. Examples of various parties will be presented.

Bio: Jeff graduated as a biochemist at the University of Texas at Austin and worked for Eli Lilly and Company for 39 years as a pharmaceutical chemist. He has been an avid observer for the past 15 years and loves to travel to a really dark site to observe galaxy clusters.

## ***IAS NEWS***

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### **From the President's Desk**

Spring is here and more reasonable observing weather will be along soon. Our April 6th General meeting will still be at Holcomb Observatory. On May 4<sup>th</sup> we will meet at Link Observatory and enjoy observing after the meeting. May will be a great time for our new observers to bring their scopes and get help with locating objects in the spring sky.

Astronomy day at McCloud Nature Park will be on April 20<sup>th</sup>. Please plan to support Mike Newberg with his "Public Stargaze" presentation by attending and by bringing your scope for observing.

Star Party season also starts in April. Our first opportunity is close by at Camp Cullom near Frankfort, Indiana, just an hour's drive from Indy, where we will hold our annual Wabash Valley Astronomical Society/Indiana Astronomical Society joint campout on Friday & Saturday, April 12<sup>th</sup> & 13<sup>th</sup>. This will give us an opportunity to check out our gear and meet with friends. It will be a clear sky/reasonable weather event, so check the weather forecast before venturing out.

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For those attending star parties this spring and summer, please take pictures and submit a short write-up to our Newsletter editor so we can all enjoy your experiences.

Doug Brown will preside over our April meeting as I will be out of town. Please advise him of anything that would be of interest to our members.

William Conner

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### **American Astronomical Society will meet in Indy**

American Astronomical Society will meet in Indy the first week of June, 2013. There will likely be sessions of interest to IAS members, and I think everyone will enjoy the exhibit hall. Registration is pretty pricey, though they usually have special arrangements for teachers and workshop attendees. Members of the press are also welcome.

Apparently, if you volunteer to help at the convention, you can get in free. Contact the coordinator to volunteer at:

<http://aas.org/meetings/aas222/volunteer>

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### **Recent Events for the IAS**

#### **Observing at McCloud**

I made an attempt on the March list at McCloud. The skies started out clear. I decided to get out one of the 8-inch dobs and see how I did before dragging Big Blue out of the car. Since I haven't used dobs much I wanted to get used to them before the Stargazes start up again next month.

I started in the Orion and Taurus region, getting a final look at all that is there, especially final viewings of M42 and the Pleiades for the season (will still try to get a look at them at the first Stargaze on April 20). I was quite impressed with how things looked in the dobs.

I then started on the list. Using star tracking I was able to get the first two open clusters. Monoceros was not very visible so I was having some issues there. Puppis was also giving me issues. The atmosphere was just too soupy to track anything. I did find NGC2985 with the dob but that was it. Clouds were rolling in from the East; Leo was getting covered up and, despite the cold, was in need of an ice-cold beer.

I did get out the LX, mostly to confirm that I had found what I was looking for. I did find a couple more but decided to pack it in. Will try again, hopefully before the moon gets too big. Steve, did you any better at Link?

That's all. See you tonight at the meeting if you're going.

Mike Newberg

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## Upcoming Public Events

### **IAS/Holcomb Observatory Program Planning Meeting--7:00 PM, April 2, 2013**

The IAS Board Meeting is being held Holcomb Observatory on the Butler Campus at 7:00PM. If you need further assistance, please contact Bill Conner via the webpage [iasindy.org](http://iasindy.org) under the contact us section.

### **IAS/Holcomb Observatory General Meeting and Public Lecture – 7:00 PM At Holcomb Observatory.**

### **Joint IAS/WVAS Observing Event April 12-14**

It is time for us to think about observing again. Our annual IAS/WVAS joint campout and observing event is scheduled to begin at 4pm on April 12 at Prairie Grass Observatories and goes through Sunday Morning. Come one come all. This is a very informal gathering. If you do not have a scope you can use the scopes at the observatories. Be prepared for cold weather. A warm bedroll is appropriate.

### **McCloud Monthly Star Gaze April 20, 2013**

The McCloud Stargaze kicks off the 2013 season on April 20 at 8pm. We will meet in the nature center where I will give a short "what's out tonight" presentation to give attendees a better idea of what they will be observing.

About a week in advance I will also post a "cheat sheet" for each upcoming stargaze. It will include general information (size, distance, etc.) on specific objects, planetary and deep sky, that are visible at the time. I hope this will be useful to less-experienced members and encourage them to come out. I will post this both in the Yahoo group and the Facebook page.

Future dates are posted on the events calendar on the website. If you have any questions please let me know.

Mike Newberg

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## **NEW ASTRONOMERS GROUP**

**April 6, 2013**

**Assessing Sky Conditions**

**Bruce Bowman**

Weather in Indiana -- or anywhere, for that matter -- plays a major role in our ability to enjoy amateur astronomy. In addition, the requirements of most Astronomical League viewing projects is a sky conditions assessment for every viewing session. The next NAG presentation will be a short presentation on how to do this. We'll talk about both transparency and "seeing" and attempt to provide some objective definitions for these terms. Are tonight's sky conditions optimal for viewing deep-sky objects, or should we instead be viewing the planets and the Moon? Come to the meeting and find out!

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## Observing Activities

**Activities for April:**

**Link Observatory -**

Impromptu observing as sky conditions allow. Check Yahoo site for information.

## **Prairie Grass Observatory Activities–**

IAS/WVAS Joint Observing Event April 12-14

## **McCloud Activities–**

McCloud Monthly Star Gaze April 20

Impromptu observing as sky conditions allow. Check Yahoo site for information.

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## **Dark Sky Observing Site Information**

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:

The Link Observatory is open for observing during IAS functions held there from early Spring to late Fall. See our calendar of events on the website [www.iasindy.org](http://www.iasindy.org). Observing opportunities at non scheduled times are announced on the IAS Yahoo group and are generally scheduled by our telescope operators as weather permits.

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 Observatory for observing call Hoppe at 1-765-296-2753.

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## **The April Deep-Sky Challenge**

Below please find a list of ten (10) objects to view this month. Those who complete the primary objects will receive a certificate via email and be recognized in the News and Views. We're also providing a challenge object to help push the limits of your observing skills. It's not necessary to successfully view the challenge object to receive the certificate; we only ask that you try.

Please complete the following list to receive the April certificate:

- M95 (face-on barred spiral in Leo)
- M96 (regular spiral in Leo)
- M105 (elliptical galaxy in Leo)
- NGC3384 (elongated elliptical in Leo)
- M65 (spiral galaxy in Leo)
- M66 (spiral galaxy in Leo, pair with M65)
- NGC3628 (nice spiral with dust lane in Leo)
- M108 (mottled spiral in Ursa Major)
- M97 (planetary nebula in Ursa Major)
- M109 (bright barred spiral in Ursa Major)

Challenge object for April 2013: NGC2805 in Ursa Major

The above objects are located between 10 and 12 hours of right ascension and so are well-placed for evening viewing this month.

As the heart of the Virgo Cluster climbs ever higher in the evening sky, April is definitely galaxy season. Many of the brighter galaxies are Messier objects, and a nice collection of these can be found

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huddled up in western Leo. M95 is bright as galaxies go; a fairly large face-on spiral. In large optics, look for a prominent central bar oriented east-west. About 45 arc-minutes further east is M96, a slightly brighter, regular spiral nearly 8' in extent of which only the central 4' is likely to be detected. Panning about the same distance north, one soon encounters M105, a nearly spherical galaxy with a very bright core. NGC3384 is another elliptical galaxy located a few arc-minutes to the northeast of M105. This object, much elongated northeast-southwest, is about 1-1/2 magnitudes fainter; but should be detectable in an 8" scope. Those having larger instruments may also stumble across the much smaller and fainter NGC3389, located just 5' to the south-southeast of NGC3384.

Ten degrees further east in Leo lies another prominent collection of galaxies. M65 is magnitude 9.6 and displays hints of spiral structure in large apertures. M66 is a similar object, but a half-magnitude brighter and with arms that aren't as tightly wound. Although M66 is probably the more impressive of the two, both galaxies can be seen in the same field of view at low power. Half a degree north of the pair lies NGC3628, another spiral oriented edge-on. Although a magnitude fainter, this galaxy is bigger than either of its Messier neighbors. Look for a prominent dust lane in larger telescopes under good conditions.

Although there's plenty more to be seen in Leo, we'll leave the remainder for next year and proceed north into Ursa Major. M108 is another prominent galaxy located about two degrees southeast of Merak (beta UMa). Look for a bright, elongated disk with hints of mottling and fine structure. Continuing another degree in roughly the same direction, one encounters M97. The Owl Nebula has a reputation for being elusive, but is easily visible in a 6" telescope under a dark sky. At over 3' in diameter, it is large for a planetary. Hints of the two dark "eyes" responsible for its common name may be glimpsed in apertures of 12" or higher; however, the 16th-magnitude central star is unlikely to be seen in amateur instruments. Returning to our galaxy theme, M109 can be found about 40' southeast of Phecda (gamma UMa). Its 10th-magnitude disk is elongated southwest-northeast, displaying a bright core with a diffuse halo. Our challenge object this month -- NGC2805 -- is nearly 11th magnitude; but with its face-on orientation and tenuous spiral arms, only the core region is likely to be visible from Indiana. Low power on a moonless night should provide the best view.

If you complete this list prior to the end of April, contact Bruce Bowman to ensure you receive recognition. At this time only IAS members are eligible. Congratulations to the following ten (10) IAS members for completing the February list: Eric Allen, Roberta Allen, Mike Birch, Phil Dimpelfeld, Fred Keller, Laura Keller, Steve McSpadden, Wayne McSpadden, John Molt, and Terry Steadham. Several of these folks also successfully detected the challenge object NGC2359 using either the 36" telescope at Link or by viewing from the Winter Star Party in Florida.

## Q&A ABOUT THE IAS DEEP-SKY CHALLENGE

Q1: Do I have to use my own equipment?

A: No...Although bringing and using your own telescope is strongly encouraged. Also keep in mind that the IAS has an equipment loan program.

Q2: Do I need to find the objects myself?

A: No. You need only make the observations. Conceptually, if we had 10 telescopes set up -- each trained on a different object -- you could just go from one to the other and become eligible.

Q3: What do I need to submit to you to receive the award?

A: Just contact me and let me know that you completed the requirements for the month.

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## April Novice/Urban Observing Challenge

Comet PANSTARRS (if you observed PANSTARRS in March, your observation will still count)

The "Sailboat", asterism in Leo Minor, 10h 14m, 31d 30', mag = 7, size = 45'

Gamma Leonis, "Algieba", Double Star in Leo, 10h 20.0m, +19° 51', mag = 2.2, 3.5, sep = 4.4"

NGC 3242, the "Ghost of Jupiter", Planetary Nebula in Hydra, 10h 24.8m, -18° 38', mag = 7.8, size = 45" x 36"

The "Broken Engagement Ring", asterism in Ursa Major, 10h 51m, 56d 09', mag = 7, size = 20'

54 Leonis, Double Star in Leo, 10h 55.6m, +24° 45', mag = 4.5, 6.3, sep = 6.5"

83 Leonis, Double Star in Leo, 11h 26.8m, +03d 01', mag = 6.6, 7.5, sep = 28 (Note – Tau Leonis is in the same field of view with a low power eyepiece.)

Tau Leonis, Double Star in Leo, 11h 27.9m, +02d 51', mag = 5.1, 7.5, sep = 91" (Note – 83 Leonis is in the same field of view with a low power eyepiece.)

Macrobius, crater, first quarter Moon

Aristarchus, crater, last quarter Moon

### Challenge Object:

N Hydrae, Double Star in Hydra, 11h 32m.3, -29° 16', mag = 5.8, 5.9, sep = 9.2"

### Notes:

This month we introduce two asterisms. Asterisms are a pattern of stars that make a recognizable object. The Astronomical League has a new Asterism Observing List (<http://www.astroleague.org>). For reference, the following site is also useful:

<http://www.deep-sky.co.uk/asterisms.htm>

To qualify for the Novice/Urban Observing List, you must observe at least 6 of the objects. Members are encouraged to find these objects without the use of GoTo so that they become more familiar with the night sky.

If you successfully observe at least 6 of the objects, please contact Phil Dimpelfeld ([philip.dimpelfeld@yahoo.com](mailto:philip.dimpelfeld@yahoo.com)). Let Phil know how many of the objects you were able to observe. You will be e-mailed a certificate recognizing your accomplishment.

The Novice/Urban Observing List will include objects on the Moon. Users should look for a map of the moon to use to identify future features. The "Sky & Telescope Field Map of the Moon" is a good investment ([shopatsky.com](http://shopatsky.com)).

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## **AI/Cor Observations**

**By Chris Cordell**

Sky Puppy Program Introduction

### **Introduction**

While the vast majority of the observing programs are geared to beginning and advanced adult observers, the Sky Puppies Program is designed just for the younger observer. The astronomical League encourages young observers to hone their skills early since most hobbies and vocational interests begin at an early age.

The purpose of the Sky Puppies Program is to familiarize young observers with the night sky and whet their appetite to eventually graduate from a Sky Puppy to a Sky Hound. This process is usually begun when a parent takes their child along on observing trips. Unfortunately, many of the observing programs are somewhat too abstract, even esoteric, to hold the attention of the younger observer. In addition many observing parents can't justify the expense of a second telescope necessary for the child to use when both parent and child are observing together. The Sky Puppies Program was created to fill just that gap. To fulfill the goals of this program and receive the Sky Puppies pin and certificate, the young observer must use only their eyes, a pair of inexpensive binoculars, pencil & paper, and charts or a planisphere. A Sky Puppy will learn the rudiments of observing, how to read a chart or planisphere, how to find and identify constellations, stars, and deep-sky objects.

In addition, a Sky Puppy will learn that the night sky is not just about dots and fuzzy blobs, but about history, culture, and stories. Their goal will be to draw, identify, and describe 15 IAU constellations. Know the difference between an asterism and a constellation. Be able to tell at least two traditional stories implied by the constellations (stories may originate from any documented cultural tradition.) And, be able to use a pair of binoculars to locate 5 deep-space objects and identify what they are.

### **Membership Requirements**

To qualify for membership in the Sky Puppies Program, the observer must be 10 years of age or younger. Either they or their parent must be an Astronomical League member through either an affiliated club or as a Member-at-large. They must complete all of the Sky Puppy Projects with each project's completion substantiated through log notes, drawings, or other appropriate documentation. To receive the Sky Puppy pin and certificate, copies of all documentation must be signed by a parent and submitted with a letter stating the date-of-birth of the candidate to the Sky Puppies Program chair OR reviewed by a society officer who must then forward a letter stating that the observations have been properly completed and that the candidate meets the age requirement. The young observer must complete all projects prior to his/her 11th birthday and must submit their club membership request no later than their 12th birthday. The young observer should also state in their membership request whether the pin and certificate should be sent directly to him/her, or to his society officer for formal presentation (please provide address.)

### **Sky Puppy Manual**

Each Sky Puppy candidate is encouraged to purchase the Sky Puppy Manual. The special edition manual includes a variety of projects tailored specifically for the Sky Puppy. The workbook style enhances learning through hands-on projects, matching word exercises, coloring, word games, and includes a make-your-own planisphere project. Included with the manual is an audio cd-rom with a variety of constellation stories artfully re-told. Order the Sky Puppy Manual from Astronomy League Sales.

### **Sky Puppy Projects**

Must draw by freehand 15 constellation patterns (with or without stick-figures and not necessarily from memory)

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Without aids or assistance, must be able to positively identify in the night sky the same 15 constellations

Must be able to identify and briefly describe any major stars or naked-eye objects in each constellation (i.e. "Betelgeuse is a red super-giant star", or, "that fuzzy patch is the Andromeda galaxy")

Must be able to tell 2 different traditional constellation stories from a cultural tradition of the child's choice.

Must be able to use binoculars to locate and identify 5 deep-space objects from this list suited to binocular observing.

- M42, the Orion nebula
- M31, the Andromeda galaxy
- Albireo, a double star in Cygnus
- The large and/or small Magellanic Clouds
- The Pleiades
- The Hyades
- Globular cluster
- The Beehive

Must be able to identify and describe the Milky Way

Must be able to find the North Star (or the Southern Cross)

Must keep a log of all observations. Each entry must provide object, date, naked-eye or binocular, and notes.

Must draw a rough sketch of one of the following:

- Jupiter with as many of the 4 Galilean moons as you can see
- The sun with sunspots
- A crater on the moon

### Useful Observing tools for an aspiring Sky Puppy

Necessary, but not required (borrow a friend's):

- Planisphere (DIY kit in the Sky Puppy Manual)
- red flashlight
- binoculars (preferably 7x50, though a 4-power will suffice)

Nice, but not necessary:

- Log sheets as found in the Sky Puppy Manual
- Charts or observing software
- Observing chair (foldable lounge chair)

Reference List:

- The New Patterns in the Sky (Myths and Legends in the Stars): by Julius D. W. Staal
- The Night Sky Planisphere: by David Chandler
- Sky Atlas for Small Telescopes and Binoculars: By David Chandler
- NightWatch: A Practical Guide to Viewing the Universe, 3rd: by Dickinson
- The Stars: A New Way to See Them: by Hans Augusto Rey
- Find the Constellations: by Hans Augusto Rey
- Turn Left at Orion: by Guy Consolmagno

Web Sites:

- <http://www.astroleague.org/>
- <http://www.skypub.com/>
- <http://www.astronomy.com/>
- <http://www.telescope.com/>
- <http://www.space.com/>
- <http://nineplanets.org/>

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## **IU Kirkwood Observatory Bloomington**

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 month during our 2013 observing seasons. And if you want to follow the Sun in between our monthly Solar Telescope openings, the website [www.spaceweather.com](http://www.spaceweather.com) provides daily updates.

Kirkwood Observatory on the IU campus is open each Wednesday evening from spring break until mid-November, 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.

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## **NASA Space Place**

### **Your Daily Dose of Astonishment**

By Diane K. Fisher

As a person vitally interested in astronomy, you probably have the Astronomy Picture of the Day website at [apod.nasa.gov](http://apod.nasa.gov) set as favorite link. APOD has been around since practically the beginning of the web. The first APOD appeared unannounced on June 16, 1995. It got 15 hits. The next picture appeared June 20, 1995, and the site has not taken a day off since. Now daily traffic is more like one million hits.

Obviously, someone is responsible for picking, posting, and writing the detailed descriptions for these images. Is it a whole team of people? No. Surprisingly, it is only two men, the same ones who started it and have been doing it ever since.

Robert Nemiroff and Jerry Bonnell shared an office at NASA's Goddard Space Flight Center in the early-90s, when the term "World Wide Web" was unknown, but a software program called Mosaic could connect to and display specially coded content on other computers. The office mates thought "we should do something with this."

Thus was conceived the Astronomy Picture of the Day. Now, in addition to the wildly popular English version, over 25 mirror websites in other languages are maintained independently by volunteers. (See [http://apod.nasa.gov/apod/lib/about\\_apod.html](http://apod.nasa.gov/apod/lib/about_apod.html) for links). An archive of every APOD ever published is at <http://apod.nasa.gov/apod/archivepix.html>. Dr. Nemiroff also maintains a discussion website at <http://asterisk.apod.com/>.

But how does it get done? Do these guys even have day jobs?

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Dr. Nemiroff has since moved to Michigan Technological University in Houghton, Michigan, where he is professor of astrophysics, both teaching and doing research. Dr. Bonnell is still with NASA, an astrophysicist with the Compton Gamma Ray Observatory Science Support Center at Goddard. APOD is only a very small part of their responsibilities. They do not collaborate, but rather divide up the calendar, and each picks the image, writes the description, and includes the links for the days on his own list. The files are queued up for posting by a “robot” each day.

They use the same tools they used at the beginning: Raw HTML code written using the vi text editor in Linux. This simple format has now become such a part of the brand that they would upset all the people and websites and mobile apps that link to their feed if they were to change anything at this point.

Where do they find the images? Candidates are volunteered from large and small observatories, space telescopes (like the Hubble and Spitzer), and independent astronomers and astro-photographers. The good doctors receive ten images for every one they publish on APOD. But, as Dr. Nemiroff emphasizes, being picked or not picked is no reflection on the value of the image. Some of the selections are picked for their quirkiness. Some are videos instead of images. Some have nothing to do with astronomy at all, like the astonishing August 21, 2012, video of a replicating DNA molecule.

Among the many mobile apps taking advantage of the APOD feed is Space Place Prime, a NASA magazine that updates daily with the best of NASA. It’s available free (in iOS only at this time) at the Apple Store.

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



*The January 20, 2013, Astronomy Picture of the Day is one that might fall into the “quirky” category. The object was found at the bottom of the sea aboard a Greek ship that sank in 80 BCE. It is an Antikythera mechanism, a mechanical computer of an accuracy thought impossible for that era. Its wheels and gears create a portable orrery of the sky that predicts star and planet locations as well as lunar and solar eclipses.*

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### **Do You Have a Question or Need?**

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

William Conner ([wmtconner@att.net](mailto:wmtconner@att.net)) - for CCD imaging and film photography.

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

Brian Murphy ([bmurphy@monumentcompanies.com](mailto:bmurphy@monumentcompanies.com)) - "telescope construction and collimation".

Eric Allen ([ericandroberta@sbcglobal.net](mailto:ericandroberta@sbcglobal.net)) - Telescope making and mirror grinding

Fritz Kleinhans ([starman@iupui.edu](mailto:starman@iupui.edu)) Color CCD and DSL Camera astrophotography

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

**Gerald Venne is our Public Events Coordinator.** He is responsible for coordinating Public Events for the IAS. To schedule a public event contact Gerald Venne (Contact Gerald via the webpage [iasindy.org](http://iasindy.org) under the contact us section).

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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](http://iasindy.org) under the contact us section)

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### **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 Newsletter for 4 months and may be renewed at the owner's request.

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

Newsletter Editor

Jeff Patterson

1780 S. Morgantown Rd.

Greenwood, IN 46143

(317) 300-0449

E-Mail: [KB9SRB@Hotmail.com](mailto:KB9SRB@Hotmail.com)

**For Sale:** TAL 100RS, dew shield, finder scope, rings, scope accepts either 1.25 or 2" diagonals, very small blemish on the lens coating. Make Offer. Jay Simmons [jamesmichael55@hotmail.com](mailto:jamesmichael55@hotmail.com)

**For Sale:** Kenneth Novak 4-vane spider assembly for telescope tubes of 15.5-16" O.D.. The hub is 1.75" in length and sized for a 3/8" stud. Asking \$20 or will trade for other Dobsonian construction materials. Contact Bruce Bowman 317-539-2753

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### **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.

We will consider offers of equipment that you feel to this program and you no longer need.

Philip Dimpelfeld at [equipment@iasindy.org](mailto:equipment@iasindy.org)

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### 2013 Calendar of Monthly Meetings

Month	Board	General	NAG	McCloud
January	8	12	12	
February	5	9	9	
March	5	9	9	
April	2	6	6	20
May	28	June 1	June 1	18
June	25	29	1	15
July	23	27	27	13
August	27	31	31	17
September	24	28	28	14
October	22	26	26	12
November	19	23	23	
December	None	TBA		

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### Membership Status Report

The following is the March 2013 status of membership as of 3/29/13:

**Total Membership: 154**

**Renewals: 10**

**New Member: 1**

**John Lasley- Indianapolis, IN**

**Inactive Status: 2**

**Alan Boucher**

**Joseph Manley**

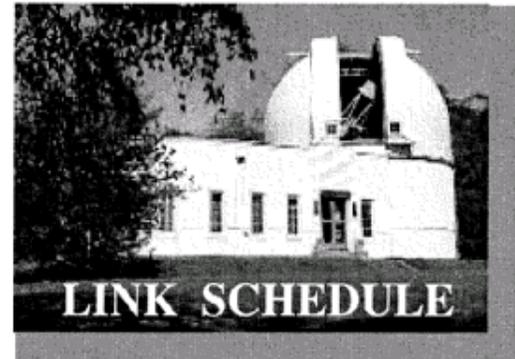
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### Goethe Link Observatory

**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.

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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 must be a telescope operator and assistant available* 2) *contact the Observatory Manager: John Shepherd for scheduling* **Contact via the webpage [iasindy.org](http://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 Monthly Newsletter for the IAS

### Accessing the IAS News & Views

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

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

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

### **Membership information Contact via the webpage [iasindy.org](http://iasindy.org) under the contact us section**

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

#### **Pay Your Dues by PayPal**

We can now pay dues on our website using paypal. There is a cart system where you can pay dues, order magazines, or donate to the Society. Thanks to John Shepherd and Doug Sangunetti for getting it done. It was not as easy as it seemed. The cart is found in the Join the Society section of the website. You will have to establish a PayPal account for yourself to make the transactions.

### **Observatory Manager**

John Shepherd **Contact via the webpage [iasindy.org](http://iasindy.org) under the contact us section**

### **Public Event Coordinator**

Gerald Venne **Contact via the webpage [iasindy.org](http://iasindy.org) under the contact us section**

### **Equipment Loan Program Coordinator**

Philip Dimpelfeld **Contact Phil at [equipment@iasindy.org](mailto:equipment@iasindy.org)**

### **Membership Coordinator**

Roberta Allen **Contact Berta via the webpage [iasindy.org](http://iasindy.org) under the contact us section**

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## **Logo Clothing**

The Board has developed a new supply of logo ware with our new logo using Mid Central Trophy in Kokomo, IN. Typically T shirts, sweatshirts, polo shirts, and caps are available. Now we are even making it easier for you. We have changed our method of order so that you can have better service. Call Linda, tell her this is an order for the IAS logo ware, discuss what you want and give her the size. She can determine the cost and shipping and mail the order to your home directly.

Linda  
Mid-Central Trophy

IAS News and Views

422 Arnold Ct  
Kokomo, IN 46902  
765-453-5494

All Major credit cards are accepted.  
Hours 9-5 EST

### April Calendar, 2013

**For a more detailed Calendar of Events see the webpage [www.iasindy.org](http://www.iasindy.org)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 Board Meeting 7PM	3 3rd QTR ☾	4	5	6 Public Lecture 7 PM Holcomb Observatory
7	8	9	10 New Moon ●	11	12 IAS/WVA S Joint Event at Prairie Grass	13 IAS/WVAS Joint Event at Prairie Grass
14	15	16	17	18 1st Qtr ☾	19	20 McCloud Star Gaze
21	22	23	24	25 Full Moon ○	26	27
28	29	30	27	28	29	30
31						