

April, 2006  
Volume 73, Issue 4  
www.iasindy.org



# The Bulletin

## The April General Meeting, April 8, 7:00 PM Butler Holcomb Observatory

### "Evidence for Life Beyond Earth" George Nickas

George will speak on the subject of astronomical evidence for living organisms in the universe beyond Earth. The talk will basically present arguments that while there is no evidence for living things at the level of human beings--that is ETI ala Steven Spielberg--there is growing evidence that interstellar space may actually contain micro-organisms that have affected and even influenced the progress of life on Earth.

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### Messier Marathon

Man what a night!!! Pitch black and perfect. Three people got all 110 of the Messier objects. We observed all night going after faint galaxies in between Messier objects. Congrats on your first MM! Nobody got 110, but the night before someone got 109. The high-point for Saturday was 108 by two people who observed together, both having 31 Naglers, both missing M74 and M110. There were 3 at 107, 4 at 106, and 5 at 105, with 24 having 100 or more. Don Machholz was in attendance, and he got 102, using no charts, just from memory. **Wait a second!** That was Gary Meyer's report from Arizona and the SAC group in Arizona. What did we have in Indiana? Rain, snow, sleet, and sucker holes. Man I wish I lived where there was some sky! Just once in a while would be nice. Schoppy said that two people showed up at the Link to observe and they went home by 9PM. Oh. Well. Typical Indiana weather. We will try again next Saturday. Gates will open at 6PM. Come out and we will get some of those objects.

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### Link Cleanup

There will be a cleanup at the Link Observatory on April 22. We need to sweep, clean and remove the brush that grew last year. Bring rakes, clippers, chainsaws and trimmers for outdoor work. We also need folks to clean and get rid of the ton of ladybugs that we always have. We need your help to get it ready for the observing season.

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### Daffodils are Coming

Tom Borlik has reported that the Link fields have been cleaned up and there will probably be a bloom again this year. We were not sure since last year was the first year without a caretaker and the property was badly overgrown. This is an annual event that draws lots of people to the property. Last year we had almost 1000 people sign the registry in the observatory. The IAS typically opens the observatory on the weekends for the public to tour the facilities. This is an added attraction for

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those who come to see the flowers. The bloom will be somewhere around Easter. Tom will keep a watchful eye and then designate particular dates. We will need help leading tours of the facilities. Tom generally sets up two to four hour assignments for volunteers. If you can help contact Tom Borlik at [TomBorlik@aol.com](mailto:TomBorlik@aol.com).

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### **Mentor Program**

The board has been studying retention of members. Of the 50 or so members that do not renew their membership each year over half are first year members. So we want to do some things to reduce that exodus. We are reinstating the mentor program which will provide the new member with lots of information and help them assimilate into the Society. Thad Hatchett has volunteered to lead this program. We need your help. If you are interested in becoming a mentor please contact me at Jeff Patterson [KB9SRB@hotmail.com](mailto:KB9SRB@hotmail.com) or Thad Hatchett at [astronomynut@sbcglobal.net](mailto: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.

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### **Observer's Corner**

#### **A Messier Hop Through the Virgo Group – Sandy Wolford**

Apologies in advance for the complexity of this project. Ordinarily I would have prepared beginners with a little more background and a few easier star hops. However, with the start of Messier Marathon and spring galaxy seasons, I wanted this out for people to try. So grab a star map or your computer charting program and dive in!

The Coma/Virgo area can be intimidating to beginners and has been called the “Heartbreak Hill” of the Messier Marathoner. The problem is not finding a galaxy. The Virgo Group of galaxies contains at least 3000 members, over 300 of which were observed by Wm Herschel and over 30 of which are visible using an 8” telescope. The difficulty is to avoid getting lost and identifying which particular galaxy you have found. This solution is a variation of the traditional “star hopping” with a finderscope. We are going GALAXY hopping with the eyepiece. The steps below have worked well for me in the past to track down Messier galaxies without using digital setting circles or computerized GoTo (the Messier Certificate is one of the few that the Astronomical League requires manual only searches to earn). This approach is a variation of that found in Messier's Nebulae & Star Clusters by Kenneth Glyn Jones which I like because it directs you to a few brighter galaxies first.

It is important that you know the size of your eyepiece field of view and which directions are N-S-E-W as viewed through your eyepiece so you can “step” over the sky for the correct distance in the right direction as you view through the telescope. It can also be helpful (and also occupy a rainy night) to do a practice run on a printed detail chart of the area. Using a piece of clear acetate, draw a circle of such a size that its diameter covers about 1 degree on the printed chart (this is a common low power eyepiece field of view) then slide it around as you read through the steps.

Start on the eastern arm of the Virgo “Y” at 3rd mag  $\epsilon$  (epsilon) Virgo and move 5° W to pick up 5th mag  $\rho$  (rho) VIR with 6th mag 27 VIR close to the NW.

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1) From  $\rho$  VIR, move  $1\frac{1}{2}^\circ$  N to pick up M59 and M60 lying E-W approximately  $\frac{1}{2}^\circ$  from each other. M59 is the faint, slightly oval patch to the W. M60 should appear perfectly round; look for a very faint glow on its NW side: NGC 4647.

2) From M59 move  $1^\circ$  W to M58 which is the brightest of the Virgo galaxies. Placing M58 at the NE edge of your view will reveal NGC 4567 and NGC 4568 in the SW quadrant, an interacting 11th mag galaxy pair known as the "Siamese twins".

**IF ANY TROUBLE IS ENCOUNTERED FINDING M59, M60, AND M58 THEN THE SEARCH SHOULD BE CALLED OFF TO AWAIT A MORE FAVORABLE NIGHT SINCE IT IS UNLIKELY THAT ANY OF THE FAINTER OBJECTS WILL BE FOUND.**

3) From M58, move  $1^\circ$  N and slightly W to pick up M89 and M90 lying just over  $\frac{1}{2}^\circ$  from each other with M90 to the NE. M89 will appear small, bright, and round. M90 is larger and elongated NE-SW.

4) From spindle-shaped M90, move  $1^\circ$  W and  $1\frac{1}{2}^\circ$  N to M88 which may appear elongated NW-SE; you may also see 2 stars close by its SE edge and another star close by its NW edge. The faint formless glow of M91 can be found by moving  $1^\circ$  E from M88. Verify its location by moving a little more than  $1^\circ$  S to land on M90 again.

5) From M90, drop  $\frac{1}{2}^\circ$  SW back to M89 and then move  $1\frac{1}{4}^\circ$  W to M87 which should appear round and bright. The 11th mag galaxy NGC 4478 is located just  $10'$  to the SW but is rather small and may appear star-like.

6) From M87 move another  $1\frac{1}{2}^\circ$  W and  $\frac{1}{2}^\circ$  N to M84 and M86 which will appear as two round glows approximately  $\frac{1}{2}^\circ$  from each other. M84 is the one to the W. While I have spotted up to 9 galaxies in this one eyepiece field in my 12-in telescope, a one degree field here discloses no less than five galaxies which can be seen in a 6-in telescope on a good night: The attractive edge-on galaxy NGC 4388 forms an equilateral triangle on the SE with M86 and M84. NGC 4438 and NGC 4435, only  $7'$  apart, are located about  $20'$  ENE of M86, on the opposite from M84.

7) The next step is a longer one. From M84 move  $\frac{1}{2}^\circ$  W then  $3^\circ$  N to circular M100. Use your finderscope and star map to do a quick position check: you should be positioned approximately  $\frac{1}{3}$  of the distance along a line about  $6^\circ$  long drawn from star 6 COM (Coma Berenices) to star 24 COM; we will be coming back here in just a moment.

8) From M100 move  $\frac{1}{2}^\circ$  W and  $2^\circ$  N to 5th mag star 11 COM. From this star move  $\frac{1}{2}^\circ$  N and just over  $1^\circ$  E to M85; M85 is rather small and may require a higher magnification to see well. While in the area, make a side trip to the pretty double star 24 COM a little over  $2^\circ$  E of M85. A fainter version of the famed Alberio with yellow/blue stars of mag 5.2 and 6.7 separated by  $20''$ .

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9) Backtrack  $2^{\circ}$  W to M85 then  $\frac{1}{2}^{\circ}$  S and  $1^{\circ}$  W to star 11 COM. From 11 COM move  $3^{\circ}$  S and  $1\frac{1}{2}^{\circ}$  W to star 6 COM. M98 is  $\frac{1}{2}^{\circ}$  due W of 6 COM and M99 is  $\frac{3}{4}^{\circ}$  SE of star 6 COM. Both galaxies are large but somewhat faint.

THIS TOUR COVERS 14 OF THE 16 MESSIER OBJECTS IN THIS REGION. TO PICK UP THE REMAINING TWO RETURN TO THE STARTING POINT OF THE TWO STARS P AND 27 VIRGO.

10) From  $\rho$  VIR move  $2\frac{1}{4}^{\circ}$  S and  $3^{\circ}$  W to M49 which should be a bright round glow.

11) From M49, move  $3\frac{1}{2}^{\circ}$  S and  $2^{\circ}$  W. M61 is a round glow positioned midway between the 5th mag 16 VIR and 6th mag 17 VIR. Verify that you have the correct stars by taking a closer look at 17 VIR about  $1^{\circ}$  to the NNE of M61. 17 VIR is a double star of mags 6.6 and 9.4 separated by  $20''$ .

*Article by Sandy Wolford*

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## **New Astronomer's Group Meeting at McCloud**

New Astronomers Group Meeting  
McCloud Nature Center  
7:30 pm - April 7, 2006

It's spring again and time for the first monthly meeting of the IAS New Astronomers Group for 2006. We will be meeting on April 7 at McCloud Nature Center starting at 7:30 pm, just prior to the monthly McCloud Friday Night Observing session. *Note that we have changed the night to the Friday closest to the 1<sup>st</sup> Quarter Moon and the start time is now 7:30.*

### **THE NAG MEETING WILL BE HELD - RAIN OR SHINE.**

Topics for this month:

- Observing the April Evening Sky
  1. Dabbling among the Dippers
  2. The Spring Pointer Stars and Constellations
  3. Solar System
  4. Our The Deep Sky
    1. M42 – The Great Orion Nebula
    2. M44 – The Beehive Cluster
    3. M45 – The Pleiades Open Star Cluster
    4. M81 – Bodes Galaxy
    5. M82 – The Cigar Galaxy
- Binoculars, telescopes and other observing aids
  1. Some simple what's, why's and how's
- Question and answer session

The purpose and intent of the NAG is to introduce new astronomers to observing the night sky. All types of observing will be discussed including naked eye, binocular and telescope.

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If the weather cooperates, following the meeting, IAS members will have telescopes set up and attendees will have an opportunity to view some of the night sky objects discussed during the meeting.

The night sky can be an intimidating place. With a little help everyone can enjoy the celestial beauty that we have all taken for granted our whole lives. From the constellations to the deep sky; with the naked eye or with a telescope, there is something for everyone to enjoy.

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### **The Astrograph at Link**

Have you ever wondered about the astrograph sitting in the roll-off observatory at the Link? I received a note about it from John Ventre of the Cincinnati Observatory. "In Popular Astronomy, Feb. 1906, page 123, there was an article that indicated that the Cincinnati Observatory recently placed an order with T. Cooke & Sons, England, for a triple Astro-Photographic objective of 9-1/2 inch aperture. The focal length will be as nearly as possible to 67.7 inches, so that one millimeter on the photographic plate may equal two minutes of arc. The scale of the plates will thus be one-half that of the International Astrographic negatives.

Cooke & Sons state that the objective will give good definition over a field fully 15 degrees in diameter. The ratio of aperture to focal length being about 1:7. They hope to do very satisfactory work in photographing comets, nebulae and asteroids. Such plates are expected to give valuable assistance in micrometric work with the 16-inch Clark Equatorial.

The plan is to attach this new photographic camera to the tube of the old 11-inch refractor (1845 Merz & Mahler), now mounted in the Mitchel Memorial Building."

John wrote, "I also found a newspaper article, the Cincinnati Enquirer, February, 11, 1951, titled: "UC Lens Used In Search For Lost Solar Asteroids." Prof. Frank Edmonson, head of the Indiana University astronomy department, is shown at the telescope-camera, which uses a 10-inch lens owned by the University of Cincinnati, at Indiana's Goethe Link Observatory. The project is a research program on "lost" asteroids in the solar system.

*Concerning the book donated to the Cincinnati Observatory by the IAS:* The date of publication of the Ormsby MacKnight Michel's book "The Planetary and Stellar Worlds: A Popular Exposition of the Great Discoveries and Theories of Modern Astronomy" that you very generously donated to the Cincinnati Observatory Center, is not stated in the O.M.M. bibliography. There were at least five books with an almost identical title. Of these five titles there were at least 32 total editions. Your book was listed as the Scientific Series that was published by W.L. Allison in New York. I do not know why a date was not listed. Other publication dates ranged from 1851 to 1892. Mitchel died in 1862 in the Civil War.

John Ventre

## IAS Clothing

The IAS has a considerable inventory of Logo clothing. At our first general meeting at the Link on May 13, we will have the inventory there for your perusal and purchase. This is really nice clothing that is distinctively IAS. See the list of inventory on hand below.

### IAS Clothing Inventory

Description	Quantity	Unit Price
<b>T-Shirt</b>		
Blue - Small	2	\$5.00
Navy - Small	2	\$5.00
Navy - Medium	3	\$10.00
Navy - Large	1	\$10.00
Navy - XLarge	3	\$10.00
<b>Golf Shirt (Pocket)</b>		
Blue - Medium	0	\$15.00
Blue - XLarge	0	\$15.00
Blue - 2XLarge	0	\$15.00
<b>Sweat Shirt - Small Logo</b>		
Blue - Large	1	\$30.00
Blue - XLarge	1	\$30.00
Blue - 2XLarge	1	\$30.00
<b>Sweat Shirt - Large Logo</b>		
Blue - Medium	5	\$20.00
Blue - Large	10	\$20.00
Blue - XLarge	6	\$20.00
Blue - 2XLarge	4	\$20.00
Gray - Medium	7	\$20.00
Gray - Large	3	\$20.00
Gray - XLarge	1	\$20.00
<b>Hooded Sweat Shirt - Small Logo</b>		
Navy - Medium	1	\$30.00
Navy - Large	0	\$30.00
Navy - 2XLarge	1	\$30.00
<b>Lined Jacket - Small Logo</b>		
Blue - Medium	0	\$32.00
Blue - Large	3	\$32.00
Blue - 2XLarge	1	\$32.00
Blue - 3XLarge	3	\$32.00
<b>Baseball Cap</b>		
Blue	6	\$8.00
White	0	\$4.00



## Planets in Strange Places

By Trudy E. Bell

Red star, blue star, big star, small star—planets may form around virtually any type or size of star throughout the universe, not just around mid-sized middle-aged yellow stars like the Sun. That’s the surprising implication of two recent discoveries from the 0.85-meter-diameter Spitzer Space Telescope, which is exploring the universe from orbit at infrared (heat) wavelengths blocked by the Earth’s atmosphere.

At one extreme are two blazing, blue “hypergiant” stars 180,000 light-years away in the Large Magellanic Cloud, one of the two companion galaxies to our Milky Way. The stars, called R 66 and R 126, are respectively 30 and 70 times the mass of the Sun, “about as massive as stars can get,” said Joel Kastner, professor of imaging science at the Rochester Institute of Technology in New York. R 126 is so luminous that if it were placed 10 parsecs (32.6 light-years) away—a distance at which the Sun would be one of the dimmest stars visible in the sky—the hypergiant would be as bright as the full moon, “definitely a daytime object,” Kastner remarked.

Such hot stars have fierce solar winds, so Kastner and his team are mystified why any dust in the neighborhood hasn’t long since been blown away. But there it is: an unmistakable spectral signature that both hypergiants are surrounded by mammoth disks of what might be planet-forming dust and even sand.

At the other extreme is a tiny brown dwarf star called Cha 110913-773444, relatively nearby (500 light-years) in the Milky Way. One of the smallest brown dwarfs known, it has less than 1 percent the mass of the Sun. It’s not even massive enough to kindle thermonuclear reactions for fusing hydrogen into helium. Yet this miniature “failed star,” as brown dwarfs are often called, is also surrounded by a flat disk of dust that may eventually clump into planets. (Note: This brown dwarf discovery was made by a group led by Kevin Luhman of Pennsylvania State University.)

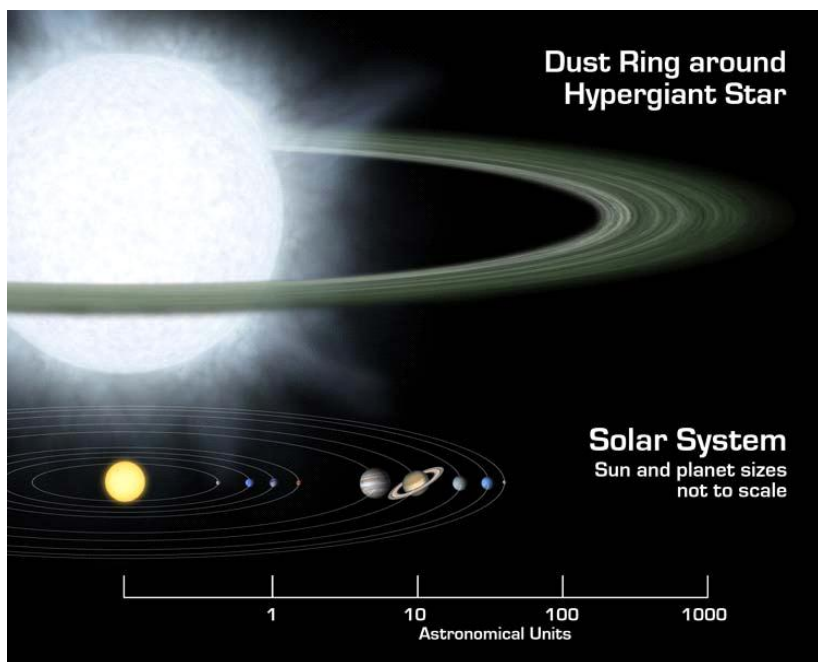
Although actual planets have not been detected (in part because of the stars’ great distances), the spectra of the hypergiants show that their dust is composed of forsterite, olivine, aromatic hydrocarbons, and other geological substances found on Earth.

These newfound disks represent “extremes of the environments in which planets might form,” Kastner said. “Not what you’d expect if you think our solar system is the rule.”

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Hypergiants and dwarfs? The Milky Way could be crowded with worlds circling every kind of star imaginable—very strange, indeed.

Keep up with the latest findings from the Spitzer at [www.spitzer.caltech.edu/](http://www.spitzer.caltech.edu/). For kids, the Infrared Photo Album at The Space Place ([spaceplace.nasa.gov/en/kids/sirtf1/sirtf\\_action.shtml](http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml)) introduces the electromagnetic spectrum and compares the appearance of common scenes in visible versus infrared light. This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Artist's rendering compares size of a hypothetical hypergiant star and its surrounding dusty disk to that of our solar system.

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### 2006 McCloud Schedule

The New Astronomers Group held from April thru September is designed with the beginning amateur astronomer in mind. Meetings start at 7:00 pm on the Friday closest to the 1st Quarter Moon (see schedule below). Emphasis is on actual observing to help beginners find their way around the night sky and, in particular, how to find those faint but interesting objects such as planets, galaxies and nebulae of all kinds. In addition to discussing the night sky for the current month, a selected topic of interest to the beginning astronomer will be covered. The currently scheduled selected topics for 2006 are:

April 7 Telescopes, binoculars and other viewing aids

May 5 Resources on Internet for the beginning astronomer

June 2 Our closest neighbor, the Moon

June 30 The Beginners Year around Observing Planner The Messier List



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July 28 Celestial Fireworks Meteor Showers

September 1 Autumns Finest Double Stars

September 29 To Be Determined

All sessions are taught by experienced IAS members. If weather conditions permit, observing through IAS members telescopes and binoculars will be available for attendees following the meeting.

*John Switzer*

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### **McCloud Nature Park**

We have now built 6-8'X8' concrete pads at McCloud and each pad has 2 110 volt electrical outlets. One pad has been optimized for the 6" F/15 refractor that was donated to the club. Our plan is to build a pier and install the pier and mount to the pad. Then when we want to observe, all we have to do is attach the scope and off we go. The pads are done and all that remains is landscaping and reseeding.

**Final workday is April 1 to finish landscaping. We need volunteers.  
Work will begin at 9A.M.**



The Society really wants to thank those who worked hard on this project: We especially give thanks to Mike Kirsch who provided the backhoe and the Bobcat to do the work. Without his support we would still be digging. His friend here did most of the work though.



### **Orchids and Onions**

There are a few people in the Society that will always step up to the plate when needed. They are generally quiet and go unnoticed but when help is needed they are there. Mike Kirsch is one of those members. He brought equipment to clean the little dome at Link; He has provided the Bar-B-Que for our fall hog roast for several years. And he did it again at McCloud. A bouquet of orchids goes to Mike. Thanks Mike. When you see him next time thank him personally.

The Society greatly appreciates the help from the members working at McCloud:

- Bill Conner
- David Hollinberger
- Chris Dietz
- Mike Wolford
- Thad Hatchett
- Mike Kirsch
- Jeff Patterson
- Ken Reynolds
- John Molt
- Terry Steadham
- Rob Stokes
- Ed Otto
- Richard Phlum
- Doug Brown

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### **McCloud Nature Park Project Fund**

In an effort to fund the project the IAS Board has created a "McCloud Fund". All donations to the Fund will go directly towards funding the improvement project which will include the storage building and warming room and six electrified concrete pads.

If you would like to make a cash donation to the McCloud Fund, please send it to:

John Shepherd, Treasurer  
4609 Callahan St.  
Indianapolis, IN 46239

The IAS is a Not-For-Profit 501 C-3 corporation. Your donation may be tax deductible. Consult your tax advisor.

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### **Observer's Meeting at Link to Float to be near New Moon**

The Board has decided to float the date of the Observer's Meeting to be closer to the new moon. So you will have to watch the Bulletin. This month the meeting will be on the 29<sup>th</sup>. This should facilitate observing at the Link.

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### **Upcoming Star Parties and Registrations**

**Niagfest** Near Warsaw, IN **CANCELLED!!!** This was a good party and it will be missed.

**Texas Star Party** West Texas April 23 – 30 (1500 miles) Camping sites is still available for this year's party. This is a premier party with very dark skies and a great site. Just a long way. There are several of us registered already. [www.texasstarparty.org](http://www.texasstarparty.org)

**Starfest** May 20-21, 2006 - New Event - at Vanna's Farm (Not Astrofest), Kankakee, IL.  
[www.chicagoastro.org](http://www.chicagoastro.org)

**Apollo Rendezvous** Dayton Ohio, June 16 - 17. Boonshoft Museum of Discovery Dayton, Ohio. Speakers include Al Nader, David Eicher (Astronomy Magazine), Terry Mann, and Tom Trusock.  
[www.mvas.org](http://www.mvas.org), Star party is at John Byran State Park Observatory in Yellow Springs, OH

**Heart of America** MO Jun 22-25 - 530 miles 9 hour drive  
<http://www.askconline.org/dsstarparty.pdf>

**Cherry Springs Star Party**, June 22-26, Cherry Springs State Park near Caudersport, Pa.  
[www.cherrysprings.org](http://www.cherrysprings.org)

**Nebraska Star Party** North Central Nebraska Jul 23-28 - 950 miles 18 hour drive  
<http://www.nebraskastarparty.org/>

**Black Forest Star Party** PA Aug 25-27 600 miles 11 hour drive <http://www.bfsp.org/starparty/>

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**Indiana Family Star Party** – Camp Cullum near Frankfort August 18-20 – 50 miles  
<http://jmmahony.home.insightbb.com/pgo/starparty/>

**Okie-Tex Star Party** Western Oklahoma September 16th - September 24th , 2006  
<http://www.okie-tex.com>

**Illinois Dark Skies** IL Sep 21-23 225 miles 5 hour drive <http://www.sas-sky.org/main.htm>

**Astrofest** Sept 21-24 Kankakee , IL 4 hour drive <http://www.chicagoastro.org/> In the past this has been a premier party with lots of vendors. Lately they have had some organizational problems and last year many vendors did not come.

**Prairie Skies Star Party** Kankakee, IL Sep 28-30 175 miles 4 hour drive  
<http://www.prairieskies.org/>

**Twin Lakes Star Party** KY Oct 14-21 225 miles 5 hour drive <http://www.wkaa.net/>

**McCloud Under The Stars** (MUTS) will happen one weekend of September.

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

Thanks to Mike Wolford for this information.

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### **Local School Events and Star Parties**

Gerald Venne is our Public Program Chairman. 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.

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

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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 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) 882-8055  
E-Mail: KB9SRB@Hotmail.com

## **Loaner Equipment Program**

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. Contact John Molt at

1stargazer@indy.rr.com.

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## **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.

Note: The list server is for use of Society business. It can only be used according to the rules as outlined previously. Members abusing the service will be eliminated from the service.

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## **Board Meeting – April 13, 2006 - 7:00 PM**

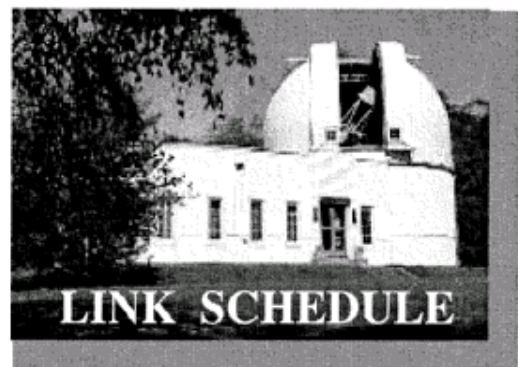
The IAS Board Meeting is being held at 430 Massachusetts Avenue in downtown Indianapolis. The building is at the point of convergence of Mass. Ave., Vermont and Alabama Streets. There is a Starbucks located in the frontage of the building. The coffee shop stays open late into the evening. Try to park 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, walk around the building to the left as you are facing Starbucks. You will cross Starbucks outdoor patio seating area and you will come to the double door entry into the building (this is the south building façade). These doors will be unlocked. Enter the lobby and ride the elevator (to your right) 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

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## **Goethe Link Observatory Observatory Address**

**Goethe Link Observatory  
8403 N. Observatory Lane  
Martinsville, IN 46151**

**Observatory 's Phone:  
(317) 831-0668**



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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.*

## **Designated Link Observatory Key Holders**

Jeff Patterson: 882-8055  
Tom Borlik: 849-4113  
Gary Schoppenhorst: 297-1405

Brian Murphy: 841-8511  
Dave Williams: 769-7430  
Gerald Venne: 826-2680

## **Link Activities for April:**

Messier Marathon – April 1  
Observer's Meeting – April 29  
Link Training – April 29

## **McCloud Activities for April:**

Beginners Astronomy April 7  
Public observing April 7

## **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 caretaker Cecil Rich at 765 366-3235 before 5PM on the day you want to go out.

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## **Bulletin Stats**

All personal and professional opinions presented herein do not, in any way, represent the opinion or policy of JPL or NASA.

## **Accessing the Bulletin**

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

## **Bulletin - Bulletin deadline on the 20th of every month**

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

**The Bulletin The monthly publication of the Indiana Astronomical Society**

Please submit to  
The Indiana Astronomical Society, Inc  
Jeff Patterson, editor  
1780 S. Morgantown Rd  
Greenwood, IN 46143  
Phone: (317) 882-8055  
[KB9SRB@hotmail.com](mailto:KB9SRB@hotmail.com)



The Bulletin – The monthly publication of the Indiana Astronomical Society

### **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**

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Vice-President and Program Director: Brian Murphy (317) 841-8511  
Secretary: Betsy Brown 1-317-872-4050  
Treasurer: John Shepherd (317) 862-3442

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### **Public Event Chairman**

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

### **Library Committee Chairman**

Ed Otto [ecottol@comcast.net](mailto:ecottol@comcast.net)

### April Calendar, 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 McCloud Work Day Messier Marathon at Link
2	3	4	5 First Qtr Moon	6	7 McCloud NAG Observing at McCloud	8 General Meeting Butler
9	10	11	12	13 Board Meeting Full Moon	14	15
16	17	18	19	20 Last Qtr Moon	21	22
23	24	25	26	27 New Moon	28	29 New Moon Meeting Link Observers Meeting Link
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
- 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: \_\_\_\_\_

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How do you want to receive the IAS monthly newsletter?

Downloadable from Website  Hard Copy\*

\* Please note that hard copy costs the Society about \$1.50 per issue. Please consider this when selecting mode of receiving the newsletter.

Annual Regular Membership (\$25.00)	
Annual Student Membership (\$10.00)	

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Astronomy Magazine Renewal (\$34.00)	
Sky and Telescope Magazine (\$33.00)	
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

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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.