

Monthly Publication of the Indiana Astronomical Society

April, 2004  
Volume 71, Issue 4  
www.iasindy.org



# The Bulletin

**April General Meeting - April 10 7:00PM at the Holcomb Observatory**

**Cosmic Rays, Meteorites, and Accelerators: The Complicated Transport of Meteorites to Earth**

**Professor Marc Cafee**

**Abstract: Meteorites have been exposed to the energetic particle environment of the solar system. From this exposure much can be discerned regarding the evolutionary history of these objects.**

**Dr. Cafee received his Ph. D. from Washington University, (St. Louis) in 1986. He worked at Lawrence Livermore National Laboratory from 1986-2001. His research emphasis was on the application of cosmic-ray-produced nuclides to terrestrial chronology. He is currently an associate Professor of Physics at Purdue. Research interests are the same.**

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## **Work Day At the Link - April 3 - All Hands Needed!**

The Board has designated Saturday April 3 as cleanup day for the Link. We need help in getting the Observatory ready for our use this coming year. Work begins at 10 a.m. Bring tools, ladders, trimmers, chainsaws, weed eaters, and a lot of elbow grease. We plan to complete work on the little dome and the shed as well as a lot of trimming of the limbs and brush that grew up this last year. We also plan to install new gates on the north end so that we do not have to access the back area from the front yard. There will be a lot of cleaning in the observatory itself if you are not inclined to the outside work. We really need as many as possible to help out.

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## **Challenger Center Opens April 16**

The Challenger Space Center is an exciting, hands-on facility where students and educators work in teams to solve real-life mathematics, science, and technology problems during a space flight simulation. The Center's simulator is comprised of two distinct environments. The "Space Station"

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gives students a simulated experience of working in space as a team of scientists and engineers. "Mission Control," modeled after Mission Control at NASA's Johnson Space Center in Houston, Texas, plugs the students into decision-making roles crucial to the completion of the mission. The Challenger Learning Center presents tasks and poses realistic dilemmas to develop problem-solving and communications skills. The experience involves up to thirty-six active participants (students or adults) in a 2-1/2 hour mission. The mission we will begin running is called Rendezvous with a Comet. It takes place in the year 2061. It is the goal of the mission to target Comet Encke, determine a rendezvous point and launch a scientific probe into its tail. This is the chance of a lifetime!

**Events:**

First of all Friday is Staff/Corporate Day for the grand opening. We will have events and missions going on throughout the day which will end at 4:00. The evening looks like this:

6-9:30 Decatur High School Jazz dinner at Panther Racing

7-9:30 Star Party at Challenger Center IAS will provide telescopes

Book signing by Grace Corrigan

Drinks and desserts by Starbucks

Tours of the Challenger Center

We have a lot going on at one time, but hopefully that will give everyone something to do and no one will have to wait in line long. We expect at least 300 people.

The CLC is located in the Ameriplex complex just north of Genesis Bagels and south (across the parking lot) of Panther Racing. Therefore, we will be setting up the telescopes in the rear parking lot of Panther Racing. You will be able to pull in and unload right where we will be viewing. I will be able to have all lights off, but we will have a building within 50 to 75 yards. It is not going to be the greatest viewing, but the atmosphere you all will add to our grand opening and the interest you will develop with our kids will be outstanding.

I am making luminaries to light the way for people to come see you. We are blocking off traffic with the luminaries as well.

We need to get out and support this event. With 300 expected attendees we need as many scopes as possible.

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**Meet Astronaut Jerry Ross! April 15<sup>th</sup> 6:00 - 8:00 p.m.**  
**J. I. Holcomb Observatory and Planetarium**

**An Out-of-this-World Evening with Jerry and Karen Ross**  
**A Reception Celebrating the Centennial of Indiana 4-H**

The Indiana 4-H Foundation cordially invites you to a 4-H Centennial reception honoring retired Air Force colonel and U.S. astronaut Jerry Ross and Karen Pearson Ross, space food scientist, who are both Indiana 4-H alumni. Join fellow 4-H supporters for an evening among the stars at Butler University's J.I. Holcomb Observatory and Planetarium, featuring the largest telescope in Indiana.

**PROGRAM:** Light refreshments and guided tours of the Observatory and Planetarium throughout the evening

7:00 p.m. Presentation of the Indiana 4-H Centennial Distinguished Alumni

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Awards to the Rosses followed by their remarks.

Additional comments from Roger Tormoehlen, Ph. D., head, 4-H youth department, Purdue University.

**COST:** \$50 per person or \$85 per couple

**RSVP:** By April 8, 2004. Space is limited.

Please send your check, payable to Indiana 4-H Foundation, to: Indiana 4-H Foundation, 225 South East St., Suite 760, Indianapolis, IN 46202

**Questions?** Contact Mark Eutsler, Indiana 4-H Foundation Director of Development, at 317-692-7044. To receive your personal invitation to this event please contact the Indiana 4-H Foundation office at 225 S. East St., Suite 760, Indianapolis, IN 46202, call 317-692-7408, e-mail [mark@4h.org](mailto:mark@4h.org), or visit [www.4h.org](http://www.4h.org) for periodic updates about this event.

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## New Members

Ray & Sandi Pockalny Carmel, IN  
Kurt Volle Avon, IN

You old members seek out these guys and show them the ropes. Get them involved.

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## Telescope Survey

"Thank you for your responses to the Telescope Survey. Responses will still be accepted up to the April General Meeting. At that meeting, two names will be drawn from the respondents to each receive a pair of movie tickets.

*Jim Brown"*

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## Upcoming Star Parties and Registrations

**NIAGfest/GreatCon** - April 23-24 Warsaw IN  
<http://clubs.kconline.com/was/niag.htm>

This is a great small, close star party focusing on speakers on Saturday. Generally observing is available on Friday and Saturday nights. Camping is \$5 and a warm cabin is \$10. Not a bad deal for a couple of days. I strongly recommend it.

**Apollo Rendezvous** - June 11-12 Dayton Ohio

Please keep checking back for the registration forms and for additional activities and speakers as plans are being made. Send an email to: [rendezvous@mvas.org](mailto:rendezvous@mvas.org) with your name and mailing address, to have a registration flyer sent when it becomes available.

**Green Bank Star Quest** - July 8-11 in W. Virginia  
[caacwy.org](http://caacwy.org) or [KVAS.org](http://KVAS.org)

**Indiana Family Star Party** - August 13-15

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WVAS has set the date for the annual star party at Prairie Grass Observatories. The IAS will be asked to help out again this year. More to come later.

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

Jeff

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## Public Events

*Article by Jeff Patterson*

One of more fun opportunities as a member of the IAS is to go to various public events and share our hobby with the public. More and more schools are asking for our help to participate in their astronomy events. We need you!! You don't have to be an expert; just willing to take time and show someone the wonders of the heavens. If you have interest, please contact Bill Conner or me.

We had a great event at Lakeside with 7 telescopes and about 300 kids. The kids and parents were very interested. You don't have to be an expert. Come out to our next event at Fishback Creek Academy on the west side.

### Upcoming events

Sunnyside Star Party Lawrence SP	April 15
Decatur Central High School Challenger Center	April 16
McCloud Nature Park	April 16
Franklin Library	April 29

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## Messier Marathon Results

We had a good night on Saturday except for the wind. It was clear as a bell until about 12:30. However the thirty mile per hour wind made seeing faint and fuzzies really difficult. The second Saturday was pretty cloudy so not many objects were reported.

Results:

### **Binoculars**

David Williams Binoculars and the Wilkens - 17 with Binoculars and 4 with the Wilkens  
Dan O'Brien 12x36 IS Binoculars - 17 objects  
John Kramer Celestron 10x50 binoculars - 9 objects  
Fritz Kleinhaus 6x30 IS Binoculars - 5 objects  
Jeff Patterson RB6x6 Binocular with setting circles - 30 objects

### **Telescopes**

36" 23 objects and 3 planets  
Bernadette de Leon  
John and Vicky Switzer  
Bret Hanson  
Gary Schoppenhorst  
John Shepherd  
Thad Hatchett 8" Meade 31 objects  
Richard Pflum 8" Celestron Computer operated telescope - 13 objects

Well looks like Thad has won the overall number of objects again for the second straight year. Great job Thad. It is good to see folks interested in using binoculars. If there were others please let me know. Awards for various categories will be presented at the April general meeting.

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*Article by Jeff Patterson*

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## Observer's Corner

*Article by Jeff Patterson*

I still haven't had time to look for the Comet but it is time

Comet C/2002 T7 (LINEAR) is approaching Earth and brightening every day. It's not yet a naked-eye object, but the 7th-magnitude fuzzball is easy to see through backyard telescopes. The comet lies not far from brilliant Venus in the western sky after sunset.

For the next three months, the comet will continue to brighten as it nears Earth. May 19th is the date of closest approach (0.27 AU). At that time C/2002 T7 might glow brighter than a 1st magnitude star--easily seen with the unaided eye. (Note: there is considerable uncertainty about how bright this object will become.) In May you'll have to be in the southern hemisphere to see it easily. Now is the best time for northern hemisphere observers to look, before the comet plunges south.

Visit [Spaceweather.com](http://Spaceweather.com) for more information and images.

*Article copied from Spaceweather.com*

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## Small Refractors and Finder Scopes

*Article by Simon Auclair*

Large aperture finders rule! I am convinced they would be more common if observers had more experience with them. With finders as small as 50mm you stand a good chance of being able to clearly see the clusters and nebulae you are searching for—along with 5 degrees of sky. With a 55-66 degree field of view low power eyepiece (8-15X) in the 80mm described below, you will enjoy a 5-7 degree field and enough light that objects pop out. I find I am constantly running across clusters I wasn't aware of and having to look them up. There are only two classes of objects that they are not helpful in finding—dim stars and small planetary nebulae that appear as stars at low power. The later may be detected by holding a small wedge prism over the eyepiece the stars will appear as short linear spectra, but due to the narrow emission lines of the nebulae, they will appear stellar. A thin aperture prism may be used as well and both methods can reveal the spectra of all the stars in a cluster simultaneously. This can be pretty and interesting especially in clusters containing a mixture of young and evolved stars.

Commercial 80mm rich field or finder scopes are \$200.00. Orion sells a 80mm long focus OTA (with focuser) for \$119. However, a 80mm f5 rich field refractor/finder scope as well as a 80mm f11.25 scope or a 70mm f11.4 may be easily and cheaply constructed from surplus achromatic objectives and sturdy schedule 40 plastic water pipe fittings.

The 80mm objectives may be had for \$29.00 and the 70 for 19.00. In both cases, the fittings and pipe should be had for less than \$10.00 or may be scrounged.

Referring to the diagram, the bottom is cut from a metal 10 oz coffee can with lid for use as a dew shield. This is friction fit over the end of the objective cell by wrapping the cell in several layers of plastic tape. The cell (B) has three longitudinal ribs which are filed back about 1/2' as shown. Take care to remove exactly the same length from each rib, so the cell will fit squarely in the coupling E. This is critical if you wish to have your scope collimated without adding brackets and springs as shown in the diagram.

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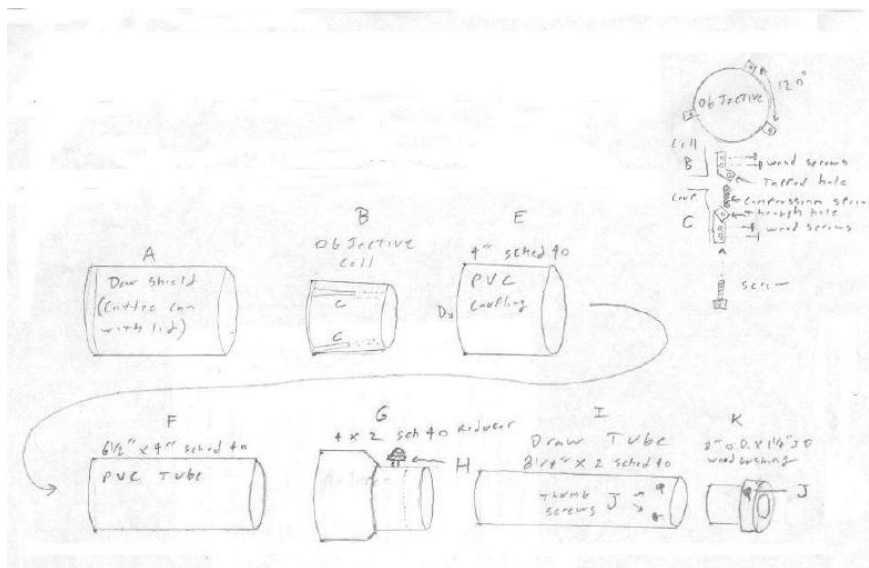
Next, the interior of coupling E is wallowed out at one end with a rasp to a depth of about  $\frac{1}{2}$ " so the cell may slip into it until the ribs C contact the end of E. This may be temporarily secured with tape and later with screws. E is fitted to one end of a 6  $\frac{1}{2}$ " tube, F. The other end of this tube is fitted to a 4"-2" modified reducer, G.

G has a thumb screw H, threaded into the 2" end as a focus lock for the draw tube, I. Threading of holes in PVC may be accomplished without a tap, by drilling a hole a little smaller than the screw and simply screwing it into the plastic. If I will not push through G, you will have to rasp out an internal ridge at the junction of the 2 and 4-inch sections. You need to sand the exterior of I and the interior of G to get a fit that while not sloppy, allows smooth movement of I. It may be helpful to wax I or to cement half of a 2" union onto G as shown by the dotted line. This provides additional support to I and lessens the tendency to wobble.

Note1: For the 400mm fl, I was able to get adequate collimation simply by being careful to mount the lens squarely. For higher f ratios and powers, you may need to include spring brackets as shown in the diagram.

Note2: I originally planned to construct a helical focuser by filing a spiral groove in I and using H to hold a small captive ball bearing in the tube. This proved unneeded at least for the low power 400mm fl length scope., as the drawtube provided adequate focusing. For higher powers and f ratios, finer focusing may be desired.

This could be accomplished either by using a commercial focuser or by placing a PVC 2" pipe thread adapter on the end of I and threading a 2" coupling into it. This would act as a helical focuser with about  $\frac{1}{2}$ " of travel and allow you to fine focus after using H & I for coarse focusing.



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## McCloud Nature Park - A Dark Site for Observing

**McCloud Park Observing For April - weather permitting -April 16, 2004**

I had my first opportunity to go to McCloud this month. It was great. There are minimal lights and you can see all the stars of the little dipper. Can't do that at the Link. Come on out. It is fairly easy to get to and the caretakers are great. We had fifteen scopes out this month.

McCloud Nature Park is located in Hendricks County. It is 230 acres of Nature!!! The interpretive naturalist has requested that we come out for new moon and show the sky to the public.

It's only 30 miles from the intersection of I-465 and I-74 Off of SR-75. Curious? Come and join us on New Moon Friday.

Call, or e-mail Mike Wolford for further information. 317 445-2173 e-mail: [mwolford@crrtc.com](mailto:mwolford@crrtc.com)

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## New Astronomers Group "Star Hopping Techniques"

**This Months Program will be held April 17 at 7PM at the Link. Note if weather is bad (Cold) call John May to confirm the program will be presented.**

*Article submitted by J. Philip May*

The New Astronomers Group (NAG) is a program designed to teach the novice amateur astronomer and even for those experienced astronomers who may want a refresher course in the basics of astronomy. The NAG meets in the early evening of the 4th Saturday of every month at the Goethe Link Observatory. The classes start at 7pm in the Link auditorium. During the winter months, if the snow is deep and/or the temperatures have dropped considerably below freezing, the event will be canceled. To confirm program schedules please contact J. Philip May, the NAG program coordinator, at [motordrive@msn.com](mailto:motordrive@msn.com) or 317-831-8387. If any IAS member or new IAS member has a suggestion for a meeting topic, please contact Mr. May. Also, experienced IAS members are encouraged to participate as an instructor for any choice of the following NAG programs - please volunteer your time and expertise. This should be a fun event as well as being instructive for the novice astronomer.

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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.

To place an ad contact:

Bulletin Editor

Jeff Patterson

1780 S. Morgantown Rd.

Greenwood, IN 46143

317 882-8055

e-Mail: [JMPSR@Iquest.net](mailto:JMPSR@Iquest.net)

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For Sale: Criterion RV-6 f/8.1 six inch Newtonian with equatorial mount. Includes original eyepieces, telestar, as well additional motor drive. \$375 or will also consider trade for a equal price GOTO telescope. Marion Hakes at vhorani@yahoo.com.

For Sale: Celestron C-5 with tripod, astromaster(installed), power pack/inverter, cases, filter, eyepieces, and lots more. \$1500 Call: Paul at 317 888-1605

For Sale: Orion 120st refractor with mount and tripod, dual axis drive. Less than a year old. Contact: Jerry Vessels at [jvessels@iquest.net](mailto:jvessels@iquest.net)

For Sale: Celestron 8" Dobsonian, metal tube \$400 Contact Jeff Patterson [JMPSR@Iquest.net](mailto:JMPSR@Iquest.net)

For Sale **Price Reduced:** 5" f5 refractor, Jaegers Objective. Orion Skyview Deluxe EQ with Accutrack SVD DC Motor Drive (New) 17mm and 12.5mm Plossl eyepieces plus Barlow 3X \$600.00 (OBO) Jerry Barnett (317) 888-8945

For Sale: **Price Reduced** Giro GR-2 Alt/Az mount. Capacity of 25 lbs. on each side. Like new condition. Mount comes with 4kg. counterweight, SS counterweight shaft, and carrying case. \$250 Contact: Jim Rinehart 317-881-3475 -- [jrine@iquest.net](mailto:jrine@iquest.net)

For sale: Starlight Express MX7C one-shot color CCD camera, STAR2000 self-guider, and AstroArt software. \$1300. [srussell@iquest.net](mailto:srussell@iquest.net)

For Sale: Meade LX200 Schmidt-Cassegrain (non GPS), 10" f/6.3. Equatorial Superwedge, Custom Steel Pedestal, Pictor CCD, and many lenses. Sell whole Package for \$5,482, or portions. Contact: Mike Smith, 317-823-8171 for further details."

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## Loaner Scope Program

Did you know you can borrow a scope 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 scope 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 to loan. Contact John Molt at [johnmolt@iquest.net](mailto:johnmolt@iquest.net)

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## List Server Now 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 e-mail and you 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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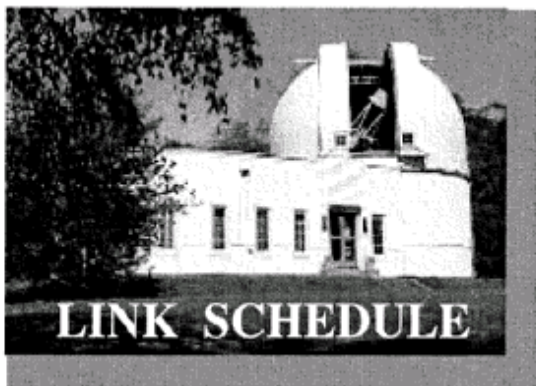
## April Board Meeting - Moved – April 22, 2004 - 7:00 PM

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



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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 assistance, please contact Brian P. Murphy, IAS Vice-President on his cell phone 716-8124.



**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: J. Philip May (317)831-8387. 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

J. Philip May: 831-8387

Tom Borlik: 849-4113

Gary Schoppenhorst: 297-1405

Brian Murphy: 841-8511

Dave Williams: 769-7430

**Link Activities for April:**

New Moon Group Meeting April 17

Observer's Meeting April 24

Link Training April 24

New Astronomers April 24

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## **Bulletin Stats**

### **Accessing the Bulletin**

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

### **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: 317-882-8055

[JMPSR@Iquest.net](mailto:JMPSR@Iquest.net)

### **Membership information**

Contact any IAS officer or the membership chairman

Larry Phillips

9413 South PR Black Hawk Hills Dr.

Edinburgh, In 46124

[llpastro@lightbound.com](mailto:llpastro@lightbound.com)

### **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 317 882-8055

Vice-President and Program Director Brian Murphy 317 841-8511

Secretary: Larry Phillips 317 729-2447

Treasurer: Dave Timmerman 317844-9431

### **Board of Directors**

Gary Schoppenhorst (2006)

Gerald Venne (2006)

Thad Hatchett (2004)

Doug Brown (2004)

Bill Conner (2004)

Marion Hakes (2005)

John Molt (2005)

**April Calendar, 2004**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3 Full Moon
4	5 Full Moon	6	7	8	9	10 Gen. Mtg 7:00PM Last Qtr Moon
11 Last Qtr	12	13	14	15 Sunnyside Star Party	16 McCloud SP Decatur Central Star Party	17 New Moon GP
18	19 New Moon	20	21	22 Board Meeting 7:00	23 NIAG	24 NIAG NAG Meeting Observer's Mtg Link Training General Observing
25	26	27 First QTR Moon	28	29 Franklin Lib	30	

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## 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: \_\_\_\_\_

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.

Annual Regular Membership (\$20.00)	
Annual Student Membership (\$10.00)	
Astronomy Magazine Renewal (\$29.00)	
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: Dave Timmerman, Treasurer  
786 Woodview North Drive  
Carmel, IN 46032

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 articles for new members and may be used by the society to match people with similar interests.