The Bulletin – The monthly publication of the Indiana Astronomical Society

August, 2006
Volume 73, Issue 8
www.iasindy.org

The Bulletin

The August General Meeting, August 12, 7:00 PM Goethe Link Observatory

August Telescope Clinic.

Do you suffer from telecopesis? Telescopesis is a condition that afflicts telescopes and their owners. Indications are:

A telescope that won't point to an object of interest

A telescope that shows stars as blobs or other strange shapes

A telescope owner who suffers from headaches and back pain caused by an uncooperative telescope

Don't rely on unproven home remedies! Come to the August IAS Telescope Clinic where experts can apply proven methods. Our staff has also successfully treated several binoculars that are now leading healthy, productive lives.

Beginners and experienced observers are encouraged to bring your equipment on August 12th for Q & A, and "hands-on" help.

Brian Murphy

Raffle at the General Meeting

We will be raffling a pair of 14x70 lightweight binoculars with BAK-4 prisms at our general meeting. Come out and maybe win a new observing tool.

It is time for MUTS!!

It is time for our annual MUTS (McCloud Under the Stars event). The date has been set for August 25-27 beginning with the McCloud New Moon event. Members of the Society are invited to observe the night and spend the weekend at the park. There will be

opportunities for solar observing on Saturday and two nights of observing. The park will allow members of the Society to camp in a designated area (back in the trees) from Friday night to Sunday noon. Please note that there is limited space and will be designated for tents and small campers. There is low clearance and grass entrance that will eliminate large RVs. Park rules will govern; so no campfires will be allowed.

Don't Forget Our First New Moon Event at McCloud

Our first new moon event at McCloud is this Friday July 21. Come on out and enjoy the summer sky.

New Astronomer's Group Meeting at McCloud

New Astronomers Group Meeting
McCloud Nature Center
7:30 pm – July 28, 2006

A second meeting of the Indiana Astronomical Society's **N**ew **A**stronomers **G**roup for 2006 will be held on Friday July 28 at McCloud Nature Center starting at 7:30 pm, just prior to the monthly McCloud Friday Night Observing session.

THE NAG MEETING WILL BE HELD, RAIN OR SHINE.

Topics for this month:

- Observing the August evening sky
  - Reading a Star Chart
  - The Summer Pointer Stars and The Summer Triangle
- Our Solar System
- The Deep Sky – Sagittarius (The Tea Pot)
  - M8 – Lagoon Nebula
  - M17 – Omega Nebula
  - M20 – Trifid Nebula
  - M21 – Open Cluster
  - M22 – Globular Cluster
  - M23 – Open Cluster
  - M25 - Open Cluster
  - M55 – Globular Cluster
- Celestial Fireworks – Meteor Showers
- A Beginners Introduction to the Telescope
- 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.

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.

McCloud

Paul Miner of the McCloud Park Board has requested that we observe the posted **15mph speed limit** on the property road going into the park. As the summer goes on there will be significant dust issues and there is a lot of wildlife and driving slow may save the life of one of their animals.

In addition, if you have only a small amount of equipment, the park is asking that we **not park on the grass unless necessary.** If possible, deliver your equipment to the site and then pull onto the gravel to park. Let's minimize the damage to the grass.

McCloud New Moon Events

We have added an additional observing night each month at McCloud. We will be meeting on the Friday closest to the new moon. There will be no NAG type presentation but the public is also invited. Come out and enjoy our dark site. These are the dates for McCloud New Moon Under the Skies:

McCloud New Moon Schedules

NAG*	McCloud New Moon
	June 23
June 30	
July 28	July 21
Sept 1	Aug 25
Sept 29	Sept 22

- Already scheduled

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:

July 21 McCloud New moon

***July 28 Celestial Fireworks Meteor Showers**

August 25 McCloud New Moon

August 25-27 – MUTS

***September 1 Autumns Finest Double Stars**

September 23 McCloud New Moon

***September 29 To Be Determined**
*** Denotes NAG meetings**

All NAG 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. As this is first quarter time the moon will set early and members can do deep sky observing the remainder of the night.

John Switzer

Eyepieces

Do you have an old eyepiece laying around that you never use anymore? The Society is in need of eyepieces for our loaner scopes. If you have something to donate, please contact John Molt 1stargazer@indy.rr.com.

Logo Clothing

We still have IAS logo hats, t shirts, polo shirts, sweat shirts and insulated jackets. Please contact Gerald Venne at the next general meeting.

Field Trip to Morgan/Monroe

Dr. Caty Pilachowski and Dr. Kent Honeycutt have invited the IAS to tour their observatory facility in Morgan Monroe State Forest on October 14th as a continuation of Caty's program **FHiRE**. Plans are for us to meet at the Link Observatory for the annual Hog Roast at 5:00 PM and then caravan to the observatory site for the tour and hopefully to see the telescopes in operation.

There will be no general meeting speaker for October. If you like you can stay at Link and observe if the weather permits.

Observer's Corner

Dragon Hunting!

By Sandy Wolford

The constellation Draco is a large winding string of stars that covers much of the northern sky between Cygnus and Ursa Major, almost surrounding the Little Dipper of Ursa Minor. Draco is a very ancient constellation and has been associated with the biblical snake that tempted Eve and a great dragon worshipped by the Babylonians. He is also the dragon fought by Hercules when he sought the golden apples of Hesperides and in some old star charts, Hercules is depicted with his foot on the head of the dragon. Draco has been featured in several popular movies and its meandering star pattern has appeared prominently in some of them including Braveheart and the Harry Potter movies. Children in particular seem always excited when they can find the actual "dragon" in the sky.

Any good tale (tail?) starts at the beginning and, likewise, the stars that form the dragon are easiest to trace by starting at its head. Get your bearings by first locating the bright star Vega (almost directly overhead in late July evenings or August) and gamma UMi (the star marking the outside of the "pan" of the Little Dipper). Almost exactly between them you will find a 4-sided asterism, approximately 4° across in size, which resembles the "keystone" of Hercules. This is the head of Draco, our dragon. Beginners can sometimes confuse the dragon's head with the similar asterism in Hercules which is located about 2 fist-widths to the south and is almost twice as large. From the dragon's head, use your star chart to assist in tracing a meandering line of stars north toward Cepheus where it takes a sharp turn at epsilon Draco to head back south and then northwest, curving around the Little Dipper then extending between the Big and Little Dippers.

Aside from its pattern being popular for movie scenery, Draco has a place in the history books as the home of Thuban (alpha Dra) which marked the location of the north celestial pole approximately 5000 years ago and during the period when many Egyptian pyramids were being constructed The Great Pyramid of Gizeh, known for the mathematical and astronomical alignment of its various sections, was constructed in such a way that one shaft is aligned precisely to Thuban on or about 2830 BCE. The precision of this alignment of a very narrow and extremely long shaft with what was then the Pole Star is remarkable. Due to a phenomenon called "precession", the position of the "north star" changes over the centuries. Actually, the "fixed stars" stay for the most part right where we know them to be today but the Earth itself tilts to point its north and south poles to a slightly different point in the sky like a wobbling toy top, tracing a circle in the sky over a period of about 26,000 years. Interestingly, in "only" 15,000 more years, this precession will have continued until the brightest possible "north star" ever will be located near the celestial pole -- the brilliant white Vega in the constellation Lyra. To locate Thuban look for the brightest star half way between the bowl of the Little Dipper (use the star Pherkad, or gamma UMI, which the one furthest from Polaris) and the famous double Mizar/Alcor at the bend of the handle of the Big Dipper.

For deep sky observers, Draco has a wealth of my two favorite types of observing targets: double stars and galaxies. In addition, it is home of a bright and popular planetary nebula. A sampler for your observing pleasure follows.

The dimmer star at the NW corner of the dragon's head, nu (24/25) Dra is a wide pair that can be split using an 8x50 finderscope or binoculars. About 4° WSW from nu, mu (21) Dra is a nice matching double but requires at least 150x to split. Another 4° WSW from mu, 16/17 Dra is a nice triple star. The distance between star 16 and 17 is 1.5', easily split into two stars using only binoculars; 17 Dra also has a close companion 3.4" away. About midway between the dragon's head and the bowl of the Little Dipper is the mag 3 star zeta (22) Dra; its only importance is that it helps to locate the next doubles on our list <g>. Struve 2155 is an easily split pair of yellow and blue star found just over 5° due S of zeta, approximately halfway between zeta and 24/25 Dra. To the SW of Struve 2155 and in the same field of view is the orange variable W Dra which makes an attractive color contrast to the double. Omicron (28) Dra can be found 4° NE of zeta. Easily split at low power in any telescope, this pair has been reported as orange/green but I would call it yellow and blue. Heading northward, psi-1 (31) Dra can be found slightly over 3° N of omicron or 3° W of the mag 3.6 star chi (44) Dra. This is a pretty yellow/yellow pair easily split using lower powers. About halfway between psi-1 Dra and Polaris, 40/41 Dra are another easily resolvable pair.

NGC 6543, the "cat's eye" nebula, is the showpiece deep sky object in Draco. Look for it 5° S of 34 Dra which forms part of a naked eye triangle between Polaris and the head of the dragon. This

planetary nebula is very bright but small. Be careful if you are searching with low power because you might breeze past it as a "bright star" if not aware. Its "slightly out of focus star" appearance and slight bluish color gives it away as our target. In a 6-in or 8-in telescope at high power it shows a classic annular planetary nebula shape which reminds me somewhat of the Ring Nebula -- but twice as bright and only 1/20th the size!

The original M102 was admitted by Mr. Messier's assistant Mechain to be a duplicate observation of number 101 on his list. NGC 5866 has been suggested by any observers a worth object to fill this "missing" spot in the catalog. Located 3° SW of epsilon Dra, this is one of the fainter Messier objects and can be a challenge in a small telescope. My 8-in telescope shows a small oval galaxy forming a triangle with two stars to its NW and SW. the 12-in telescope more easily shows a bright lens shape.

NGC 5907 (mislabeled as NGC 5906 in some references) is my favorite type of deep sky object: a bright , extremely edge-on galaxy. You can find it 3° from iota (12) Dra toward Bootes, about 1.5° NE of M102. While beautiful in a 12-in telescope this is not extremely bright in an 8-in telescope. However, you should have no trouble seeing this large lens-shaped galaxy as a dim needle of light stretching almost entirely across your eyepiece field of view.

NGC 5982 is a small roundish galaxy located sl N of the midpoint between iota and theta Dra. The brightest in an E-W galaxy row it forms with NGC 5981 6' to its W and NGC 5985 7' to its east; the two fainter galaxies usually require dark skies and at least an 8-in telescope for easy visibility. NGC 5982 itself shows up in my 8-in telescope as a small round faint nebulosity gradually brightening to a sl brighter condensed core. I had difficulty finding NGC 5981 in an 8-in telescope under semi-rural skies but NGC 5985 was visible as an oval nebulosity just E of 5982 in the same field of view. It is almost 3x larger but only half as bright as 5982 so may be a challenge in smaller telescopes or more urban skies.

NGC 3147 is an almost face-on mag 11 galaxy located most easily by moving 4° NE of bright galaxy M82 in UMa; it lies less than 1/2° N of a bright mag 6 field star (SAO 7098). Look for a small slightly oval glow that might be faint in small (4 to 6-in) telescopes but moderately bright in anything larger.

Technical Stuff

Object	Type	RA	DEC	Mag	Size/Sep	Notes
NGC 3147	Gal	10h 17m	73° 39'	10.7	3' x 2.3'	
NGC 5866	Gal	15h 07m	55° 45'	10.0	5.2' x 2.3'	M102
NGC 5907	Gal	15h 16m	56° 19'	10.2	12.3' x 1.8'	
NGC 5982	Gal	15h 39m	59° 21'	11.1	1.2' x 0.8'	
NGC 5985	Gal	15h 40	59° 20'	11.0	5.5' x 3.2'	
16/17 Dra	DS	16h 36	52° 55'	5.4/5.5	90.0"	PA 194
17 Dra	DS	16h 36m	52° 55'	5.4/6.4	3.4"	PA 108
Mu (21) Dra	DS	17h 05m	54° 28'	5.7/5.7	2.0"	PA 42
Struve 2155	DS	17h 16m	60° 43'	6.8/10.1	9.8"	PA 114
Nu (24/25) Dra	DS	17h 32m	54° 11'	4.9/4.9	62.0"	PA 312
Omicron (28) Dra	DS	17h 27m	68° 45'	4.6/7.6	34"	PA 335
Psi-1 (31) Dra	DS	17h 42m	72° 09'	4.9/6.1	30.3"	PA 15
NGC 6503	Gal	17h 49m	70° 09'	10.2	6.2' x 2.3'	
NGC 6543	PN	17h 59m	66° 38'	8.1	22" x 16"	Cat's Eye
40/41 Dra	DS	18h 00m	80° 00'	5.7/6.1	19.3"	PA 232

For those working on varied observing projects: NGC 5866 is on the Messier list. NGC 5907 is on the Universe Club list. Stars 16/17, 17, mu, nu, psi-1, and 40/41 are on the AL Double Star list NGC3147, 5866, 5907, and 5982 are on the Herschel 400 list.

Heart of America Star Party

IAS members Thad Hatchett, Doug Sanqunetti, Terry Steadham, Mike Woolford, Vicki Switzer and myself (and also our friend, Danny Mitchell from Illinois) attended the 1st annual Heart of America Star Party on June 22-25. We all considered it a huge success and well worth the trip. It was held at the Astronomy Society of Kansas City's 39 acre dark sky site about 75-80 miles south of Kansas City. For many of us, the site was one of the darkest, if not the darkest, that we have ever seen. The ASKC is currently looking to purchase an additional 40 acres adjacent to the current site.

The weather was quite good, even though there was a pretty intense rain shower that showed up early on Saturday evening. We all had to "relearn" the sky because there were so many new stars that we had just never seen here in Indiana. We were able to view all three nights, with Saturday (following the rain) providing some of the steadiest skies that I have ever seen. I was able to push my 15" Obsession to over 400X before the viewing started to break down. Just like in Indiana, there was a fair amount of humidity and the fog had a tendency to "roll in" during the early morning hours, but that did not distract from our having a great time.

We received the "Royal Treatment" from the members of the ASKC. The food provided was absolutely excellent. There was absolutely no reason to go away hungry. The Carbon Star Café, open from 10:00pm-2:00am, was a great place to go for snacks and relax and trade stories.

I think everyone who attended would highly recommend this star party to all members of the IAS. It is within an easy, one day drive with excellent roads up to the last couple of miles into the site.

It was estimated that there were just over 100 attendees this year. Not bad for an unknown and 1st time star party. The original guesstimate for the number of attendees was 40-50. I predict that this star party may become one of the premier regional events in the Midwest.

The consensus of all of us who attended is that we cannot wait until next year.

John Switzer

Indiana (and one Illini) Row

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 reinstituting the mentor program which will provide the new member with lots of information and help them assimilate into the Society. Thad Hatchett has volunteered to lead this program. We need your help. If you are interested in becoming a mentor please contact me at Jeff Patterson KB9SRB@hotmail.com or Thad Hatchett at astronomynut@sbcglobal.net. We will put your name on the list and assign a new person to you. Our goal is to retain people and make this hobby a lot more fun.

Upcoming Star Parties and Registrations

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

McCloud Under The Stars (MUTS) August 25-27

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

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/

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.

Indiana Family Star Party

The Indiana Family Star Party is scheduled for August 18-20 beginning at 2 PM on the 18th. This is a fun party in which we partner with our neighbors the WVAS and hold a star party at Camp Cullum near Frankfort. The IAS has agreed to run the registration booth for the event again this year. We have done this in the past and really helps the WVAS out. Again we need volunteers. If you would like to help, contact Gerald Venne, 1 317 826-2680, gvenne@iquest.net.

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.

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.

John Molt (1stargazer@indy.rr.com) or 317-844-1799)

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.

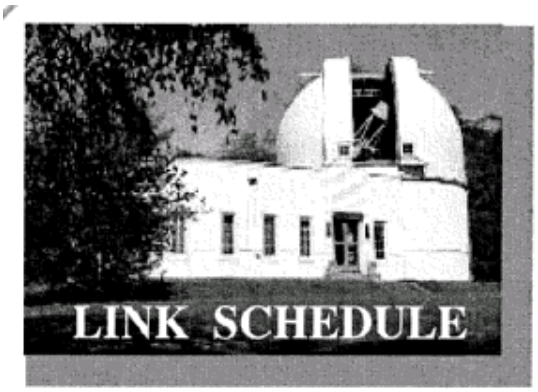
Board Meeting – August 17, 2006 - 7:00 PM

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

Goethe Link Observatory
Observatory Address

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

Observatory 's Phone:
(317) 831-0668



This schedule is being published to assure proper access to the Link Observatory for programs that are designed as observational, general education, astronomy conferences or amateur research projects. Training programs are tentatively scheduled for Saturday evenings only. Although other requests can over-ride these sessions. It is the purpose of this listing to prevent activity conflicts.
If you need to acquire use of the 36-inch telescope: remember two important IAS guidelines: 1)*There has to be two or more IAS members present.....*2)*contact the Observatory Manager: Gary Schoppenhorst (317)297-1405.* DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.

Link Activities for August:
General Meeting – August 12
Observer's Meeting – August 26
Link Training – August 26
New Moon – August 26

McCloud Activities for August September:
Beginners Astronomy – September 1
MUTS August 25-27
New Moon – July 21 and August 25

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 Paul Miner at the park office 765 676 5490 before 5PM on the day you want to go out. As a last resort you can reach him on his cell phone at 317-371-8222 before 5 pm.

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

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
KB9SRB@hotmail.com

Membership information

Contact any IAS officer or the Treasurer
John Shepherd (317) 862-3442

Link Observatory

Latitude: 39 degrees, 33 minutes North
Longitude: 86 degrees, 24 minutes West
Phone: (317) 831-0668
IAS Internet address
http://www.iasindy.org

Executive Officers

President: Jeff Patterson (317) 882-8055
Vice-President and Program Director: Brian Murphy (317) 841-8511
Secretary: Betsy Brown 1-317-872-4050
Treasurer: John Shepherd (317) 862-3442

Board of Directors

Gary Schoppenhorst (2006)
Gerald Venne (2006)
Thad Hatchett (2007)
Doug Brown (2007)
Bill Conner (2007)
Marion Hakes (2008)
John Molt (2008)

Public Event Chairman

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

Library Committee Chairman

Ed Otto ecotto1@comcast.net

August Calendar, 2006						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
		1	**2** **First Qtr Moon**	**3**	**4**	**5**
6	7	**8**	**9** **Full Moon**	**10**	11	12 General Meeting Link
13	**14**	**15** **Last Qtr Moon**	**16**	**17** Board Meeting	18	**19**
20	**21**	**22**	**23** **New Moon**	**24**	**25** New Moon Meeting at McCloud MUTS Begins	**26** New Moon Meeting at Link Observers Meeting at Link MUTS
27 MUTS ends	**28**	**29**	**30**	**31**	**1** **NAG at McCloud**	

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 ($25.00)	
Annual Student Membership ($10.00)	

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 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.