

February, 2006
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The Bulletin

The February General Meeting, February 11, 7:00 PM Butler Holcomb Observatory

Our February speaker is JPL Solar System Ambassador David Dick. David has taught Earth/Space Science for the last 14 years. For the last four years he has taught astronomy at Lawrence North High School and runs the school's planetarium. He is interested in sharing the knowledge of space with the public.

David will bring us up to date on some of NASA's recent Solar System missions and provide information about planned missions.

2006 Observer's Handbooks

The new handbooks are in. John Shepherd has them for \$18.00. They are chocked full of celestial information and are really handy.

See John if you want one.

Observer's Corner – Tracking Unicorns - Sandy Wolford

When you scan the skies between Orion, Canis Major and Canis Minor, you see a region unremarkable to the naked eye but here lies the turf of Monoceros, the Unicorn. Unicorns are mythical beasts and, fittingly, all but impossible to spot in the skies. With few bright stars, the outline of Monoceros is difficult to trace out but our unicorn prances along one of the brightest sections of the Winter Milky Way. The invisible beast has perhaps not left hoof prints but HAS cantered past many pretty double stars, easy open clusters and complex regions of nebulosity.

The Unicorn hosts one Messier object. The bright open cluster M-50 (NGC 2323) can be swept up in binoculars as a fuzzy patch about 1/3 of the way along a line drawn from Sirius to Procyon. M50 contains 80 stars in an area spanning 16' and has a combined magnitude of 5.9. My 3-in refractor at low power shows about 20 stars while my 8-in reveals at least 50 stars in an irregular grouping across an area about 2/3 the size of the full moon.

2½° SE of M50, NGC 2343 is easily swept up in my 12.5-inch at low power, even when close to the horizon as it was when I logged it on a mid-April evening. It would probably be much nicer higher

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up. The cluster contains 20 stars, the brightest mag 8.0, in less than 10'. To me, the eight brightest stars seemed to form a butterfly shape.

NGC 2353 contains 30 stars with a combined magnitude of 7.1 and can be found $1\frac{1}{2}^\circ$ E of NGC 2343. Low power (70x) in my 12.5" shows 20+ stars covering about $1/3^\circ$. The cluster seems to have two sections with a circular area to S and another broad band arcing around on N side.

One of the better triple stars visible in smaller telescopes, Beta Monoceros lies a little over $1/3$ of the way from Sirius to Betelgeuse. This all bluish-white triplet consists of a mag 4.7 primary, with a mag 5.2 secondary 7.3" away at position angle 132° and another mag 7.1 companion 10.0" away at p.a. 124° . I see no colors here.

North of Beta by 12° (or 3° S and 7° E of reddish Betelgeuse) lies another nice double star visible in any size telescope, even from urban locations. Epsilon (8) Mon is a mag 4.4 star with a mag 6.5 secondary 13.4" away at position angle 127° . It has been reported as yellow/yellow but my notes record a pretty yellow/blue pair easily separated at 60x.

About 2° E of epsilon is one of the more easily recognizable star clusters in Monoceros. With a total magnitude of 4.8, even small binoculars will show NGC 2244 as a fuzzy "star". My notes record at least a dozen stars in the cluster with the six brightest stars paired in 2 N-S lines to make a rectangle about 20' long. A 12-in telescope can show up to 50 stars clustered in a 25' area. The bright star at the SE side of the cluster (12 Mon, mag 5.8) has a nice yellow color but is actually a foreground star and not involved in the cluster.

A very low power eyepiece along with dark skies or a narrow band filter (UHC or OIII) will be needed to search for the faint glow of the Rosette Nebula encircling NGC 2244. Don't be surprised if you don't notice it while examining the cluster with high power. The Rosette Nebula is *big* - over twice the size of the full moon - and the star cluster formed in its interior has literally blown a hole in its middle. The nebula is so large that it was discovered in several sections and has earned four NGC numbers: 2237, 2238, 2239, and 2246. As with many large sky objects with a low surface brightness (the Triangulum galaxy, the Helix nebula, the North America nebula), the Rosette is sometimes easier to locate with a small rich-field telescope than with a larger scope. Unless you are blessed with very dark and transparent skies, use a narrow band filter and try sweeping back and forth across the edges to detect the contrast between the nebula and the background skies.

5° NNE of the Rosette (or 4° E and 5° N of epsilon Mon), lies the 4th mag open cluster NGC 2264, often referred to as the "Christmas Tree Cluster" for its triangular shape. My 8-inch shows at least 40 stars in large, loose open cluster almost 40' across. Many see the 10 or so brighter ones outlining a fir tree with the cluster's brightest star, 5th magnitude S Monocerotis, at the base. I see 3 main lines of stars forming an "acorn" with the cap to the north. An interesting star in its own right, S Mon (aka 15 Mon) is an irregularly variable star between magnitudes 4.2 and 4.8 as well as being a visual double star with a mag 7.5 companion 2.8" away at position angle 213° .

A large area of nebulosity, fainter than the Rosette, covers the area of S Mon and the star cluster. I can't usually spot the nebula in my 12-in telescope under typical midwestern rural skies but a narrow band filter (UHC or OIII) increases the chances of finding the nebula in your eyepiece. The brightest portion carries the same NGC designation as the cluster (2264) and measures 60' x 30'. If you find nebula and wish for a challenge or have a larger telescopes (again, with a narrow band filter), search just beyond the "tree top" end of the cluster to find one of the sky's finest examples of a dark nebula - the Cone Nebula. Floating in front of the NGC 2264 nebulosity about 40' south of the star cluster,

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it will be visible as a 5' long black smear against the gray background.

As a last challenge for the evening, travel 1° S and slightly W from the NGC 2244 cluster to find Hubble's Variable Nebula (NGC 2261), a peculiar emission and reflection nebula enveloping the variable star R Monocerotis (mag 11.0-13.8). This tiny nebula can vary slightly in size as well as shape over a period as short as a couple of weeks. An 8-in scope will show a small, bright cone shaped glow with a star-like point at its southern end. As a point of interest Hubble's Variable Nebula was the first object photographed by the 200" Hale Telescope at Mt. Palomar in 1949.

OBJECT	TYPE*	RA	DEC	MAG	SIZE/SEP	NOTES
Epsilon (8) Mon	DS	0624	0436	4.5/6.5	13.4"	pa 27°
Beta (11) Mon	DS	0629	-0702	4.7/5.2/6.1	7.3"/2.8"	pa 132°/24°
NGC 2237	EN	0630	0503	8.9	80' X 60'	Rosette Nebula
NGC 2244	OC	0632	0452	4.8	24'	in Rosette Neb
NGC 2261 Nebula	EN/RN	0639	0844	--	2' x 1'	Hubble's Variable
NGC 2264	OC/EN	0641	0963	3.9	20'	Christmas Tree Cluster
NGC 2323	OC	0703	-0820	5.9	15' x20'	M50
NGC 2343	OC	0708	-1039	6.7	7'	CR 128
NGC 2353	OC	0715	-1018	7.1	20'	CR 130

*DS double star, EN emission nebula, RN reflection nebula

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

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.

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John Switzer

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.

Upcoming Star Parties and Registrations

Star Party Dreaming by Mike Wolford

Winter Star Party FL Keys Feb 20-25 SOLD OUT <http://www.scas.org/wsp.html>

Niagfest IN April ??? 215 miles 4 hour drive <http://clubs.kconline.com/was/index.html>

Cave Man Star Gaze MO Jun 22-25 - 530 miles 9 hour drive
<http://www.askconline.org/dsstarparty.pdf>

Nebraska (110° in the shade!) NE 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/>

Indiana Family Star Party - August 18-20 – 50 miles <http://www.stargazing.net/wvas/>

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

Prairie Skies Star Party 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.

I tried to keep the events within a reasonable distance --- (1000 miles), so some of the favorites like Texas and Okie-Tex did not make the cut.

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Mike

Additional Parties:

Apollo Rendezvous Dayton Ohio, June 16 @ 17. Speakers include Al Nader, David Eicher (Astronomy Magazine), Terry Mann, and Tom Trusock. www.mvas.org

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

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: JMPSR@Iquest.net

For Sale –Celestron 20x80 mm binoculars and case. Excellent condition \$250. Jeff Patterson 317 882=8055 (2/06)

For Sale –Obsession 18” with ServoCat guidance. Galaxy F/4.5 premium primary. Many accessories. Outstanding images. Excellent condition \$6500. Jeff Patterson 317 882=8055 (2/06)

For Sale –Starlight XPress MX916 CCD Camera with fast parallel interface module and USB 1.0 interface module with cables. Pentax screw thread to t-mount adapter for use with Televue focal reducers. 12V Cigarette lighter adapter, and a storage case. I'll spend an evening at the Link to help with the first image. Asking \$2000.00 or \$3000.00 for the MX916 and the Filter Wheel. Doug Sangunetti [sanqunetti@direcway.com](mailto:sangunetti@direcway.com)

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For Sale –IFW Filter Wheel - Automatic 2" Filter Selector System, 5-Position Filter Wheel for 50mm diameter filters, Meade/Celestron Mount for 2" Rear Cell Thread, Meade Telescope Mount for 3" rear Cell Thread, 2" Barrel Mount (male) for any 2" focuser, 2" Barrel Mount (female) for any 2" Camera/Accessory, PC Serial Port Converter, DB9 to RJ-12, 12-foot RJ-12 Reverse Cable / use with serial port cnvrt, 12-foot Control Cable, Hand Controller to IFW, Optec RGB-IR Tri-Color filter set, Optec Luminance filter with IR blocking, Case and 12 Volt cigarette lighter adapter. You can control the filter wheel from either the included handset or a PC running windows. Asking \$1300.00 or \$3000.00 for the filter wheel and the MX916.

Doug Sangunetti [sanqunetti@direcway.com](mailto:sangunetti@direcway.com)

For Sale –Bausch & Lomb military spec 4" f/6 astrographic lens has at least four elements and all glass is in excellent condition but need a good cleaning. This unit was removed from a reconnaissance plane and has unusually nice glass. They make very good astrographs. Heavy duty cell. Asking \$165.00

Doug Sangunetti [sanqunetti@direcway.com](mailto:sangunetti@direcway.com)

For Sale –1 set of RGB and Clear 1 1/4" dichroic interference filters for CCD imaging. These filters originally came with an SBIG ST-10XME and CFW8. I believe they are the "Custom Scientific" brand. Asking \$250.00

Doug Sangunetti [sanqunetti@direcway.com](mailto:sangunetti@direcway.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 1star-gazer@earthlink.net.

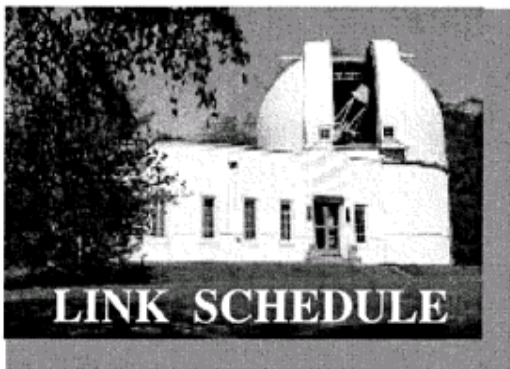
List Server Online - Don't be left in the cold - Sign up!

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 – February 16, 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 assistance, please contact Brian P. Murphy, IAS Vice-President on his cell phone 716-8124.



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.*

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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 February:

Observer's Meeting – February 25

Link Training – None this month

McCloud Activities:

New Moon Group – None this month.

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.

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

JMPSR@Iquest.net

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Membership information

Contact any IAS officer or the membership chairman
Larry Phillips
9413 South PR Black Hawk Hills Dr.
Edinburgh, In 46124
lpastro@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: John Shepherd (317) 862-3442

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

Library Committee Chairman

Ed Otto ecotto1@comcast.net

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February Calendar, 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4 First Qtr Moon
5	6	7	8	9	10	11 General Meeting Butler
12 Full Moon	13	14	15	16	17	18
19	20	21 Last Qtr Moon	22	23	24	25 Observers Meeting
26	27 New Moon	28				

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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 (\$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

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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.