

The IAS News & Views



www.iasindy.org

Volume 79, Issue 8

**IAS General Meeting August 11, 2012
8:00 PM
Goethe Link Observatory**

**Formation and Evolution of Galaxies
Nathalie Haurberg**

I am investigating a sample of low-mass galaxies to better understand the formation and evolution of galaxies over time. The galaxies I will be discussing are 12 dwarf irregulars that were chosen from the Arecibo Dual Beam Survey (ADBS). These galaxies belong to a unique and understudied population of gas-rich galaxies. This population is often overlooked due to its faint nature, but is important to many cosmological questions. Low-mass star-forming galaxies represent the smallest building blocks of more massive galaxies such as the Milky Way and also may hold many clues concerning the nature of dark matter and formation of the first galaxies.

I have used a technique called long-slit spectroscopy to determine the chemical abundances for these galaxies and study the relationship between abundance and luminosity for these galaxies compared to those from other samples.

Bio:

Nathalie Haurberg is a PhD candidate studying astronomy at Indiana University with John Salzer. She received a B.A. in Physics with a second concentration in Comparative Politics from Knox College in 2006 and a M.A. in astronomy from Indiana University in 2008. Her current work focuses on star formation and chemical enrichment in low-mass galaxies.

IAS NEWS

NASA Returns to Mars

Sunday Night August 5 or early Monday morning "Curiosity" is scheduled to land on Mars. This is the most sophisticated landing vehicle and probe that we have sent to the planet. Be sure to tune in to NASA and JPL sites to watch the event live

July McCloud Monthly Star Gaze

We had a decent turnout, some 30 people or so, some of which were doing the nature tour. The Ranger brought out 4 of McCloud's Dobs and placed them near the Nature Center.

Thin clouds obscured the stars until about 10:00 PM, then we were able to observe M13, M57, Saturn, Mizar, Alcor and Alberio until the clouds came back around 11 PM

We observed a veiled Moon and answered the crowd's questions while waiting. Everyone briefed the crowd about their telescopes and what we were looking at.

John introduced the Society and invited the crowd to view what we could see.

Society Participants included:

John & daughter with his 8" Meade SCT & binoculars

Steve McFadden with his 12 inch Dob

Fred & Laura with a refractor & binoculars

Mike Newberg with his 12 inch SCT

Bill & 18" Dob - not set up due to the clouds





McCloud Monthly Stargaze

August 25

McCloud Nature Park

Meet the Guests 8:00

Observing 8:30

This month, we will be looking at the Moon, and Saturn as planetary objects. . Cygnus will be directly overhead so we should be able to see some galaxies. We need lots of IAS members there to talk to the public about our hobby.

This event is dependent on the weather. We will call it due to inclement weather about 4PM on the yahoo group.

We need as many scopes as we can supply for the event. The park has four telescopes that can be manned by IAS members. So if you do not have a telescope, you still can come and share the universe.

NEW ASTRONOMERS GROUP

Link Observatory

August 11, 2012

"Choices of Astronomical proportions - Selection of Telescopes and Eyepieces"

William Conner

I'll briefly review Bruce's discussion on types of telescopes and their best purposes, then outline why the choice of eyepieces is important. I'll have handouts for those attending on "Eyepiece Basics."

Link Campout for Members and Guests August 17-19

There will be a campout at Link August 17-19 for those who would like a couple of days. The gates will open at 7 on Friday and the observatory will be open until Sunday. Come out and enjoy the sky. Please note if the weather is bad or the ground wet the event may be called. The 36" will be in operation.

IAS History

This a photo from past of president Joe Goss(Arizona) and Paul Routh (Oklahoma) taken in Mooresville commemorating the 25th anniversary of the first landing on the moon.



Astronomers observe moon walk anniversary

Joe Goss (left) and Paul Routh (right) set up telescopes on the grounds of the Mooresville Public Library for a "moon watchers" workshop on July 12. Viewing followed a slide program by J. Philip May of Mooresville. The library sponsored the workshop to commemorate the 25th anniversary of the first moon landing.

An Offer You Can't Refuse

Enter the International Dark-Sky Association's Darksky Giveaway for an astronomically grand prize— a set of eight TeleVue Ethos eyepieces valued at \$5,665, generously donated by TeleVue Optics.

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To enter the IDA's Darksky Giveaway, you must be an IDA member before the entry closeout date of August 31, 2012. If you are not a member, joining is easy and the cost of a one-year membership is only \$35.00. To join or renew your membership, visit www.darksky.org and select the "Join" tab at the top of the webpage. You can also join by calling the IDA office at (520) 293-3198. Entering to win is also a breeze. Visit darksky.org/giveaway where you can fill out the entry form online and read the official rules.

Individual memberships help IDA perform its mission in stopping light pollution and helps to support its many programs. Through the International Dark Sky Places program, IDA and its partners certify locations with exceptional nightscapes as International Dark Sky Communities, International Dark Sky Parks, and International Dark Sky Reserves. The Dark Sky Parks and Protected Area Program currently works with national parks to help them utilize quality outdoor lighting. IDA's new Suburban Outreach Sites project partners with astronomy clubs to establish accessible programs for kids and their parents. These programs help IDA to engage communities and to raise awareness and ultimately "to preserve and protect the nighttime environment and our heritage of dark skies through environmentally responsible outdoor lighting."

IDA members make a big difference in their communities and around the world, which is why IDA is thrilled to offer its members such a premium giveaway from Televue Optics. Make sure you enter the DarkSky Giveaway by the deadline and good luck!

To learn more, visit www.darksky.org.

The winner will be announced at the Pacific Astronomy and Telescope Show in September 2012, but does not need to attend PATS to win.

Membership Status

The following changes in membership took place in July: 144

Total Membership:

Renewals: 7

New student members:

Brandon Cook - Indianapolis

Gene Dunlap - Whiteland

New Members:

Scott Ritter

Inactive Status:

Kevin Puzio - Indianapolis

Luis Villarruel - Indianapolis

Onions and Orchids

Orchids to Bruce Bowman for accepting the position of NAG Coordinator. Orchids to John Shepherd for accelerating the training procedure for use of the 36". Thanks guys. Thanks to everyone who helped Gerald with the Indiana Family Star Party and registration.

IAS Calendar of Events for August

August 6 Curiosity lands on Mars
August 11 General Meeting 8PM Goethe Link Observatory
August 11 NAG at Link
August 7 Board Meeting
August 17-19 Link Campout
August 25 McCloud Star Gaze

We really need scopes at public events, please contact Gerald Venne at events-coordinator@iasindy.org

Observing Activities

Activities for August:

Link Observatory -

August 11 NAG after general meeting

August 17-19 Link Campout

Prairie Grass Observatory 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 John Shepherd at 1 317-862-3442.

For those interested in going to McCloud to observe, please call the park office 765 676 5437 before 4PM on the day you want to go out. They will give you permission to be there at night and make arrangements to cut off the lights.

For those interested in going to Prairie Grass Observatory for observing call Hoppe at 1-765-296-2753.

Al/Cor Observations by Wm. Conner

CONSTELLATION HUNTER CLUB

The Constellation Hunter Club has certificates and pins for Northern and Southern Skies.

No equipment is needed other than a reference work to help you identify the extent of each constellation. This can be as simple as a planisphere, but I recommend the "Constellation Guidebook" by Antonin Rukl or a good star chart. The guidebook can be had used for just a few dollars. It contains a wealth of information on each constellation and the objects you are likely to see within its boundaries.

A pair of binoculars will help you enjoy the brighter objects within each constellation.

To qualify for this award, you only need observe and sketch the constellations on the checklists. For us northern observers that's 39 constellations.

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For each constellation, you need to provide the following:

- Local date and time of your observation
- Latitude and Longitude of your observing site
- Sky conditions: transparency and seeing
- Name of the Constellation
- A sketch of all stars that are visible to the unaided eye out to the limits of the constellation boundary
- Named stars should be identified on the sketch
- The sketch should include other objects that are visible within the boundaries, including but not limited to: galaxies, star clusters and nebulas. You may embellish the list of objects by using a pair of binoculars.

Submit your sketches to the Society's Awards Coordinator, that's me for now, and I'll process your entry for the award.

IU Kirkwood Observatory Bloomington

The Kirkwood Observatory Solar Telescope is open on the "First Saturday" of each month from 1-3 PM. Viewers may even be able to see a solar prominence or two weather permitting. Updated weather conditions and closings will be posted at the Kirkwood Observatory Hotline at (812) 855-7736, and at the Observatory webpage, <http://www.astro.indiana.edu/kirkwood.shtml>.

Monthly openings of the solar telescope are planned for the first Saturday of each month during our 2011 and 2012 observing seasons. And if you want to follow the Sun in between our monthly Solar Telescope openings, the website www.spaceweather.com provides daily updates.

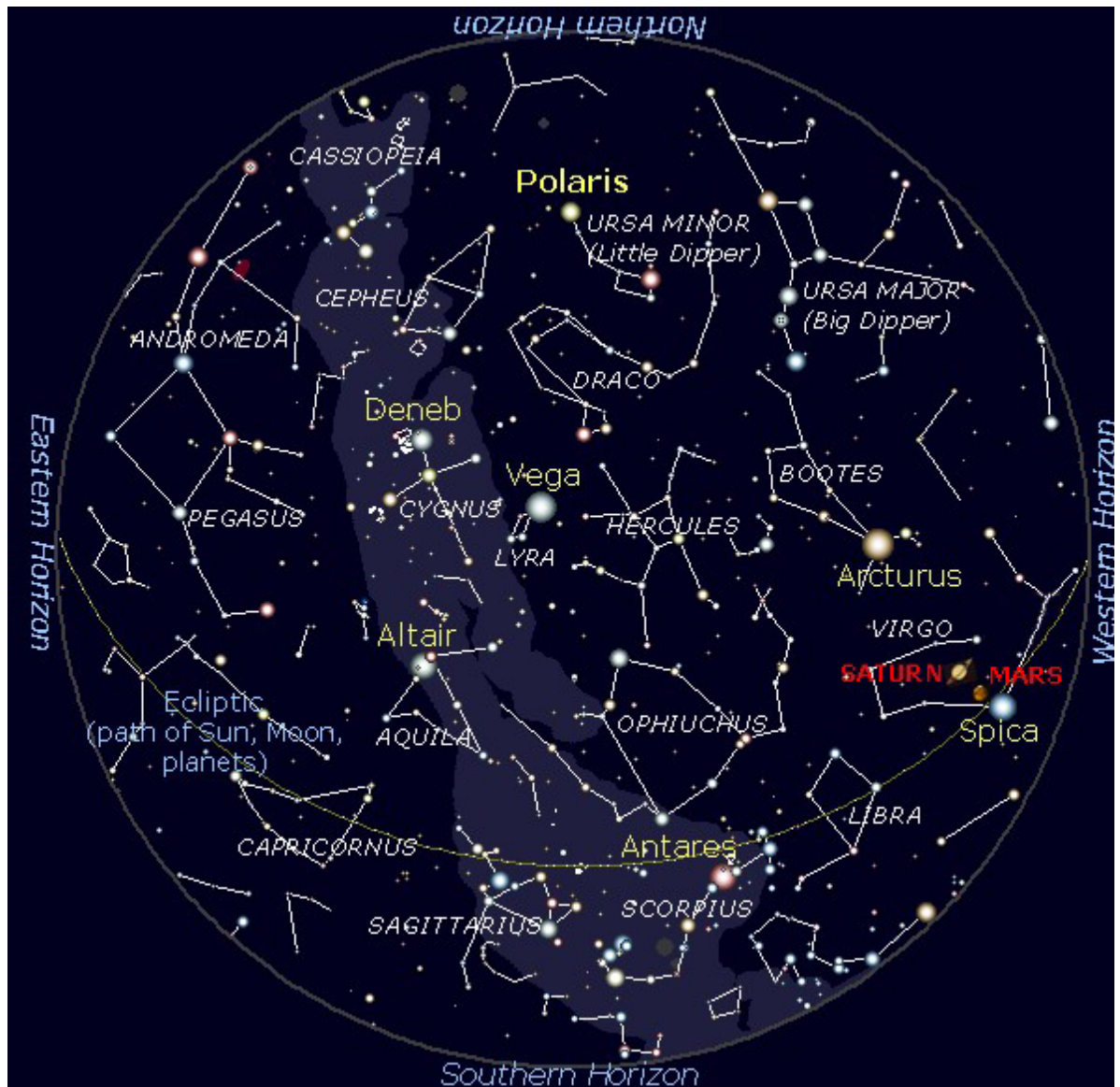
Kirkwood Observatory on the IU campus is open each Wednesday evening from spring break until mid-November, weather permitting! Join us for a night of observing the night sky with the Kirkwood 12" refractor. Please visit our schedule at <http://www.astro.indiana.edu/kirkwood.shtml>, for a list of dates and times. For updated weather conditions and closings, please call the Kirkwood Observatory Hotline at (812) 855-7736.

Stargazer

July 27, 2012

Stargazer #585

August 2012



Your guide to the stars: You can use the chart as a guide when looking at the night sky. The chart shows the sky as it will be at 11 p.m. early in the month, 10 p.m. at mid-month, and 9 p.m. late in the month.

Hold the chart so the direction you are facing is at the bottom. For example, if you are facing north, turn the chart around so the "N" representing north is at the bottom as you hold it out in

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front of you. The center of the chart represents the portion of the sky you see if you look straight up.

To keep your eyes adjusted to the darkness as you look at the night sky, use a red-light flashlight to view the chart. You can make your own by putting red cellophane over the light or by coloring the lens of the flashlight with a red marker pen.

- **Sun**
August 1 - Sunrise: 6:45 a.m.; Sunset: 8:25 p.m. / August 15 - Sunrise: 6:54 a.m.; Sunset: 8:12 p.m. / August 31 - Sunrise: 6:04 a.m.; Sunset: 7:54 p.m. [Times exact for Waco, TX]
- **Moon**
August 1: Full / August 9: 3rd Quarter / August 17: New / August 24: 1st Quarter / August 31: Full
- **Night Sky Events** *Held at arm's length, the width of your fist is 10° and the width of your index finger is 1°. The width of a full Moon is 1/2°. ** = don't miss events.*

1 Wed.: Lammas, a cross-quarter day celebrating the middle of summer.

1 Wed.: The full Moon is called the Grain Moon and Green Corn Moon.

7 Tue. evening: Slow-moving Saturn, spending the entire month less than 5° above Virgo's alpha star Spica, passes closest tonight.

9 Thu. morning: The Moon is at 3rd quarter.

10 Fri. morning: The waning gibbous Moon passes within 4° to the upper right of the Pleiades star cluster although its glare will rather overpower the lovely cluster.

11 Sat. morning: The Moon has now moved just above Jupiter, Aldebaran and the Hyades star cluster.

**** 11 Sat. all night:** The Perseid meteor shower peaks with no Moon interference until after midnight.

13 Mon. morning: The waning crescent Moon is 4° above Venus low in the east before dawn - and is 8° below the "morning star" the next morning.

**** 13 Mon. evening:** Spica (bottom), Mars (middle), and Saturn align low in the west southwest; they are nearly equal in brightness and will fit within the same field of view of most binoculars.

14 Tue. evening: Reddish Mars passes within 3° of creamy Saturn.

15 Wed. morning: Venus is at greatest elongation 46° west of the rising Sun.

15 Wed. morning: The thin waning crescent Moon is 8° to the upper right of Mercury low in the east as dawn begins to break.

16 Thu. morning: Mercury is at greatest elongation 19° from the rising Sun with an ever-thin crescent Moon to its lower right.

17 Fri.: The Moon is new.

18 Sat. morning: Mercury passes 2° to the right of the Beehive star cluster near the east northeastern horizon about an hour before sunrise; binoculars will help with the lovely but faint star cluster.

**** 21 Tue. early evening:** The waxing crescent Moon, the star Spica (lower right), Saturn (upper right), and Mars (upper left) form a tight lumpy-jawed square very low in the west southwest at dusk; all four will be seen within the same field of view of most binoculars and should be pretty awesome.

24 Fri.: Neptune is at opposition - on the opposite side of Earth from the Sun.

24 Fri. evening: The Moon is at 1st quarter.

31 Fri.: The full Moon, being the second for the month, is called a Blue Moon although the name has nothing to do with its color.

Note: August and September are the best months to see the zodiacal light in the morning an hour before dawn begins to break; under very dark skies, look for a triangular-shaped cosmic cloudiness rising 30° or more from the eastern horizon.

- **Naked-eye Planets** *The Sun, Moon and planets rise in the east and set in the west due to Earth's west-to-east rotation on its axis.*

Evenings: Mars, Saturn

Morning: Mercury, Venus, Jupiter

* **Mercury** starts the month in the glare of the rising Sun, quickly emerges low in the east, reaches it best by mid-month, and begins dipping back into the Sun's glare by month's end.

* **Venus**, the brilliant "morning star," is at its highest above the rising Sun in latter August.

* **Mars**, low in the west southwest in the early evening, now sets before midnight.

* **Jupiter**, rising in the wee hours, is well up in the east by morning, and further above the much brighter Venus.

* **Saturn**, in the west southwest in the evening, sets before midnight early in the month and soon after sunset by month's end; it is nearing the end of its 2012 evening appearance.

- **Perseid Meteor Shower**

The Perseid meteor shower is predicted to peak in the early morning of Aug. 12, thus there might be increased meteor activity either or both of two nights - Aug. 11/12 and 12/13. The best viewing will likely be from dark until the Moon rises an hour or two after midnight. Meteors are best seen with naked eyes from less light-polluted rural areas. In a reclined position, slowly pan the entire sky while focusing attention on the darkest part which is usually overhead.

- **Total Solar Eclipse Early Notice**

It is now only 5 years until Aug. 21, 2017, when a 70-mile wide shadow of a total solar eclipse passes across the middle of the U.S. from Oregon to South Carolina. Start making your travel plans.

- **Sagittarius' Tea Party Region**

This night sky region has nothing to do with current "tea party" politics, but it does involve shameless deceit involving the two signature constellations of summer - Sagittarius and Scorpius.

You're probably familiar with the story of the Trojan Horse in which the Greeks used a gift horse to entice the city of Troy to lower its defenses, making it vulnerable to a sneak attack.



Image: Trojan Horse from Greek mythology (19th century painting)

Here the trickster is Sagittarius the Centaur-archer who disguises himself as a cosmic teapot in to entice his neighbors, Scorpius the Scorpion and Lupus the Wolf, into a deadly trap. Inviting them over for a neighborly cup of tea, he intends to shoot them with his bow and arrow when they get within range. Not only does he dislike having these guys for neighbors, the nearby Corona Australis the Southern Crown suggests this is also a territorial fracas to determine who rules this area of the sky.

The drama occurs far to the south with its players visible in the early evenings of summer. The story ends like another classic - the one about the lady or the tiger. We are left to wonder if the scorpion and wolf will be deceived by Sagittarius' disguise, or perhaps they've also heard the Trojan Horse story.

Sagittarius looks more like a teapot than an archer, and Scorpius, with some imagination, does resemble a scorpion with his hooked tail to the lower left, pincers to the upper right, and the bright reddish star Antares as his head. Lupus, partly below the horizon, doesn't look like much of anything, and Corona Australis is so faint and near the horizon as to be nearly unnoticeable.

The heart of the Milky Way galaxy runs through Scorpius and Sagittarius, making it one of the richest areas of the night sky, full of star clusters and nebulae. When viewed from beyond city lights, the brightest part of the Milky Way looks like steam arising from the spout of the Sagittarius' teapot.

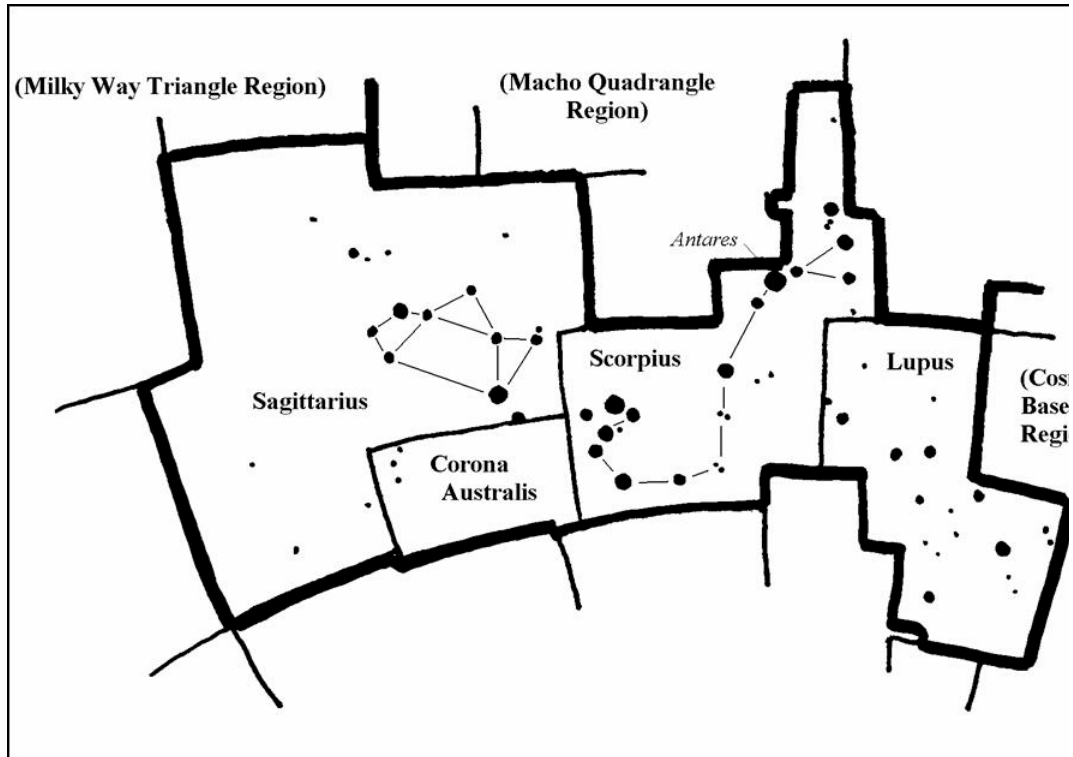


Image: Facing south, Sagittarius' Tea Party Region is prominent in the evenings of late summer

- **Astro Milestones**

August 1 is the birthday of Maria Mitchell (1818-1889), America's first woman astronomer.

• *****

Paul Derrick, PhD

918 N. 30th St. * Waco, TX 76707
254-753-6920 (home) * 254-723-6346 (cell)

See my Stargazer website at:

**** stargazerpaul.com ****

Do you have a question or need?

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

Based upon the responses we received to your intro question recently, perhaps we should add a section to the bulletin naming those members who would be willing to receive calls for help on **specific subjects**.

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

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

Eric Allen (ericandroberta@sbcglobal.net) - Telescope making and mirror grinding

Brian Murphy (bmurphy@monumentcompanies.com) - "telescope construction and collimation".

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

Gerald Venne is our Public Events Coordinator. He will be responsible for coordinating Public Events for the IAS. To schedule a public event contact Gerald Venne (Contact Gerald via the webpage iasindy.org under the contact us section).

He needs your help. Let Gerald know if you would like to show the public our sky. We need people to help at Link and elsewhere. It is actually a lot of fun.

If you would like to schedule the Goethe Link Observatory, please contact

John Shepherd. Contact John via the webpage iasindy.org under the contact us section)

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) 300-0449

E-Mail: KB9SRB@Hotmail.com

For sale: Celestron C-8 on a motorized fork and field tripod. Black tube, coated optics Older model but works great. 1 1/4 diagonal and dew shield included.

Jeff Patterson KB9SRB@ comcast.net \$500.00

For Sale: MEADE 8" F/4.5 NEWTONIAN

Includes German Equatorial Mount with three counterweights, felt-lined mounting rings, RA and Dec slow motion controls, accessory tray and 6x30 finder scope. Eyepieces include 25mm MA and 9mm Ortho. All instruction manuals are included.

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Additional Accessories:

- * Quartz RA motor drive incl battery pack
- * Polar alignment viewfinder
- * 12.5mm illuminated reticle eyepiece
- * Meade 60mm guidescope with mounting rings and 1.25" diagonal
- * 1.25" camera adapter
- * Piggyback camera bracket

Aluminized mirror has been cleaned and collimated. Optics are excellent, like new.

Telescope is in very good condition. A complete package for wide-field astrophotography and deep sky observation.

Asking \$450.00 – Call Bill at 892-2036 or e-mail at bwilhite@tds.net.

Equipment Loan Program

The Loan Program has been helpful to those new to the hobby and others in need of observing equipment. We consider offers of equipment you may not have need for any longer.

Did you know you could borrow a scope or piece of astronomy equipment from the Society and take it for a test drive? The Society has a program where members who are trying to determine what kind of equipment to buy can borrow one of the Society's scopes for a month or two and see how they like it. Philip Dimpelfeld is the chairman of the program and can arrange for your pickup and training on the use of the particular instrument. This is a great way to see what telescope you want to purchase. We have several scopes, eyepieces and binoculars to loan. Philip Dimpelfeld at equipment@iasindy.org

Board Meeting –August 7, 2012

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 9pm. Some meter sites are still free after 6PM but are hard to find. . Handicapped parking is directly in front of Starbucks entrance. The entrance to the building is to the left of Starbucks around on the side. We meet in the basement. Ride the elevator (around the corner to your left) 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 Jeff Patterson via the webpage iasindy.org under the contact us section

2012 Calendar of Meetings

	General	Board	NAG	McCloud Stargaze
January	14	17		
February	11	14		
March	10	6		
April	14	10		28
May	12	8	12	26
June	9	12	9	none
July	14	10	14	28
August	11	7	11	25

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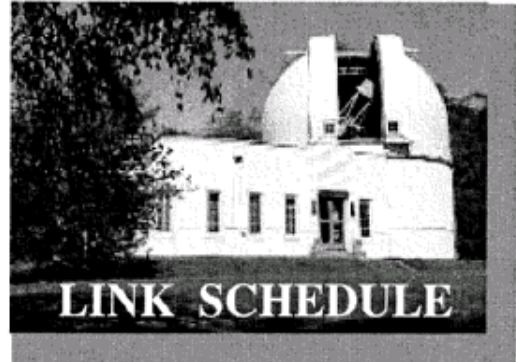
September	8	4	8	22
October	13	9	13	20
November	10	6		
December	15	15		

Goethe Link Observatory

Observatory Address

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

Latitude: 39 degrees, 33 minutes north
Longitude: 86 degrees, 24 minutes west
Phone: (317) 831-0668



This schedule is being published to assure proper access to the Link Observatory for programs that are designed as observational, general education, astronomy conferences, or amateur research projects. 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: John Shepherd* **Contact via the webpage iasindy.org under the contact us section. DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.**

IAS News & Views Monthly Newsletter for the IAS

Accessing the IAS News & Views

The current bulletin can be found on the website www.iasindy.org

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

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

Membership information Contact via the webpage iasindy.org under the contact us section

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

Pay Your Dues by PayPal

We can now pay dues on our website using paypal. There is a cart system where you can pay dues, order magazines, or donate to the Society. Thanks to John Shepherd and Doug

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Sangunetti for getting it done. It was not as easy as it seemed. The cart is found in the Join the Society section of the website. You will have to establish a PayPal account for yourself to make the transactions.

Observatory Manager

John Shepherd **Contact via the webpage iasindy.org under the contact us section**

Public Event Coordinator

Gerald Venne **Contact via the webpage iasindy.org under the contact us section**

Equipment Loan Program Coordinator

Philip Dimpelfeld **Contact Phil at equipment@iasindy.org**

Membership Coordinator

Vicki Switzer **Contact Vicki via the webpage iasindy.org under the contact us section**

Logo Clothing

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

Linda

Mid-Central Trophy

422 Arnold Ct

Kokomo, IN 46902

765-453-5494

All Major credit cards are accepted.

Hours 9-5 EST

August Calendar, 2012

For a more detailed Calendar of Events see the webpage www.iasindy.org

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Full Moon ○	2	3	4
5	6 Curiosity Lands	7 Board Meeting 7PM	8	9 3rd QTR ☾	10	11 General Meeting Goethe Link Observatory 8PM
12	13	14	15	16	17 New Moon ● Link Campout	18 Link Campout
19	20	21	22	23	24 1st Qtr ☾	25 McCloud Star Gaze
26	27	28	29	30	31 Full Moon ○	