

August, 2005
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The Bulletin

The August General Meeting, August 13, 7:00 PM Goethe Link Observatory

"The Good Old Days - Amateur Astronomy: 1950-1965"

Ron Ravneburg

Ron will be presenting "The Good Old Days - Amateur Astronomy: 1950-1965", a look back at the times before CCDs, GoTo telescopes, digital setting circles, large Dobsonians, and many of the other conveniences today's amateurs take for granted. For some, the presentation will be a walk down memory lane; for others, it may provide some insight into what inspired some of the old-timers (the speaker included) to get started in amateur astronomy and what resources were available to them at the time. Ron's presentation will pack over 300 images of telescopes, publications, old advertisements and other miscellany into a look back at those "thrilling days of yesteryear."

Ron Ravneburg is an amateur astronomer, telescope maker and long-time member of the Columbus (Ohio) Astronomical Society. An amateur astronomer since the 1950s, he is a past president of both the Seattle and Columbus astronomical societies. While he can't spell CCD, he does know into which end of the telescope you look, and spends his astro-time enjoying the quiet pleasures of the night sky.

Indiana Family Star Party

The IAS is once again co-sponsoring the Indiana Family Star Party at Prairie Grass Observatory/Camp Cullom to be held August 5 - 7, 2005. We will be manning the registration/check-in table as we have done in the past and I am looking for volunteers to assist in this. We need at least two people for each time slot of two hours each. These time slots will be from 12:00 noon to 10:00 PM on Friday and Saturday. If you can help out and did not have an opportunity to sign-up at the July General Meeting then please e-mail me your name, phone number and whether you have a time preference for helping. I will try to accommodate as many specific time requests as I can. I currently have about half of what I need, so if you can help, it would be greatly appreciated. Thank you.

As a lot of members will be at the Nebraska Star Party, we need your help. Contact Gerald if you can help.

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



Newest Weather Sentry Takes Up Watch

by Patrick L. Barry

NOAA-18, the newest in a long line of weather and environmental satellites, launched May 20, 2005.

Today, we've become accustomed to seeing images of the Earth's swirling atmosphere from space every night on the evening news. Before 1960, no one had ever seen such images. The first-ever weather satellite was launched that year, kicking off a long line of weather satellites that have kept a continuous watch on our planet's fickle atmosphere 45 years and counting! The high-quality, extended weather forecasts that these satellites make possible have become an indispensable part of our modern society, helping commercial aircraft, recreational boaters, and even military operations avoid unnecessary risk from hazardous weather. But satellites don't last forever. Parts wear out, radiation takes its toll, and atmospheric drag slowly pulls the satellite out of orbit. Many weather satellites have a design life of only 2 years, though often they can last 5 or 10 years, or more. A steady schedule of new satellite launches is needed to keep the weather report on the news each night. In May 2005, NASA successfully launched the latest in this long line of weather satellites. Dubbed NOAA-N at launch and renamed NOAA-18 once it reached orbit, this satellite will take over for the older satellite NOAA-16, which was launched in September 2000. NOAA always keeps at least two satellites in low-Earth orbit, circling the poles 14 times each day, explains Wilfred E. Mazur, Polar Satellite Acquisition Manager, NOAA/NESDIS. As Earth rotates, these satellites end up covering Earth's entire surface each day. In fact, with two satellites in orbit, NOAA covers each spot on the Earth four times each day, twice during the day and twice at night, Mazur says.

By orbiting close to Earth (NOAA-18 is only 870 km above the ground), these low-Earth orbit satellites provide a detailed view of the weather. The other type of weather satellite, geosynchronous, orbits much farther out at 35,786 km. At that altitude, geosynchronous satellites can keep a constant watch on whole continents, but without the kind of detail that NOAA-18 can provide. In particular, low-Earth orbiting satellites have the ability to use microwave radiometers to measure temperature and moisture in the atmosphere two key measurements used for weather prediction that, for technical reasons, cannot be sensed by distant geosynchronous satellites. With NOAA-18 successfully placed in orbit, the 45-year legacy of high-tech weather forecasts that we're accustomed to will go on.

Find out more about NOAA-18 and the history of polar-orbiting weather satellites at <http://goespoes.gsfc.nasa.gov/poes>. For kids and anyone else curious about the concept, the difference between polar and geosynchronous orbits is explained at http://spaceplace.nasa.gov/en/kids/goes/goes_poes_orbits.shtml.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Cassiopeia A: Dead but not quiet

By Michael Schirber, SPACE.com

An echo has been detected around a star that died 325 years ago. The reverberation-emanating out in light, not sound waves-implies that the stellar remnant let out a burst of energy some 50 years ago.

The dead star in question is Cassiopeia A, whose explosion or supernova was witnessed by Tycho Brahe in 1572. Situated 10,000 light years away, astronomers believe a dense neutron star is all that is left of the original star.

This neutron star remnant was thought to be resting in peace, that is, until this recent discovery of a light echo in infrared images taken by NASA's Spitzer Space Telescope.

"We had thought the stellar remains inside Cassiopeia A were just fading away," said Oliver Krause of the University of Arizona. "Spitzer came along and showed us this exploded star, one of the most intensively studied objects in the sky, is still undergoing death throes before heading to its final grave."

The evidence for this postmortem activity first came in a Spitzer test image that showed glowing dust features around the dead star. Later observations found that the tangled features had moved outward-apparently at the speed of light.

In actuality, the dust hadn't moved, but instead the light waves that were exciting the dust had spread out further. This light echo is the largest one ever observed and the first to be seen around a long-dead star.

By tracing the echo's light waves backwards, the researchers inferred that some sort of bang occurred on the neutron star back in 1953.

This recent activity may mean that Cassiopeia A is an exotic type of neutron star, called a magnetar. These strange objects have surfaces that rupture and quake, letting loose tremendous amounts of high-energy gamma rays.

"Magnetars are very rare and hard to study, especially if they are no longer associated with their place of origin," said George Rieke of the University of Arizona. "If we have indeed uncovered one, then it will be just about the only one for which we know what kind of star it came from and when."

Further observations with Spitzer may reveal more about Cassiopeia A's life after death. Rieke and Krause were two of the authors on a paper describing the observations in this week's issue of the journal Science.

"We had no idea that Spitzer would ever see light echoes," Rieke said. "Sometimes you just trip over the biggest discoveries."

McCloud Nature Park and the Indiana Astronomical Society Formalize Plans

McCloud Nature Park, a sprawling 230-acre property at the Hendricks County's northwest edge, is both wooded nature park and wildlife habitat. McCloud is a natural complement to the area's rural character, and it's the perfect hiking and picnicking getaway in fast-growing metropolitan Hendricks County. Best of all, it enjoys DARK SKIES!

The Hendricks County Park and Recreation Board and the IAS have finalized plans to install permanent observing facilities to make nighttime stargazing a safer and more comfortable pastime.

The IAS has been informally hosting Star Parties at McCloud for the past two years. The turnout for the events has been so overwhelming that the decision was made to install permanent concrete equipment pads, safety lighting, and a warming room. These improvements will offer IAS members, and the public, a safer and, more comfortable experience.

"We need to pour six small concrete pads to give our telescopes, and the viewer, a stable, dry surface. In addition we'll run conduit to each pad for safe lighting, and other equipment. Lastly, we plan to place a small warming shed" says IAS President, Jeff Patterson. The project is expected to cost approximately \$3000. The Board approved a motion last meeting to go ahead and fund the project out of the treasury and to reimburse the treasury by donations and raffles. The IAS will contribute volunteer labor.

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. To kick off the fund the IAS is giving away a 5", f5 Orion refractor! Here are the details: Winning ticket gets you a new 120mm, f5 Orion achromatic refractor with 2" focuser (Orion item #09836). For each \$25 that you donate you will receive one ticket in the drawing. Your money must be received before the drawing. The drawing will take place at the September 10th general meeting. You need not be present to win. You can buy tickets at the meeting or mail a check to:

Brian P. Murphy
430 Massachusetts Ave
Suite 104
Indianapolis, IN 46204

Make your check payable to the Indiana Astronomical Society. Be sure to include your address and telephone number.

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.

New Astronomer's Group - McCloud Nature Center - 7:00 pm – August 5

THE NAG MEETING WILL BE HELD, RAIN OR SHINE.

The next monthly meeting of the IAS New Astronomers Group for 2005 will be held on Friday August 5 at McCloud Nature Center starting at 7:00 pm, just prior to the monthly McCloud Friday Night Observing session.

Topics for this month:

What's up in the August evening sky?

The Pointer Stars and The Summer Triangle

The Visible Planets

The Best of the Best – 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

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.

Due to some conflicting star parties on this weekend, some of our regular attendees will not be available to bring their scopes. We

need other members to step up; if you can, please bring your scopes for the viewing session.

By John Switzer

McCloud Public Night and Observing Session – August 5

The McCloud Public night and observing session will be held at McCloud Nature Park beginning about 8PM. This is a fun monthly event and is our New Moon Meeting as well. Come on out and show others “our stars”. After the public leaves, you can observe the rest of the night. This event will be canceled in case of inclement weather.

Observers Corner – Mars is coming

There has been a hoax circulating that Mars and Earth are approaching each other and that in August Mars will be the size of a full Moon and closer than ever in recorded history. Naah!!

Here are the facts: Earth and Mars are converging for a close encounter this year on October 30th at 0319 Universal Time. Distance: 69 million kilometers. To the unaided eye, Mars will look like a bright red star, a pinprick of light, certainly not as wide as the full Moon.

Disappointed? Don't be. If Mars did come close enough to rival the Moon, its gravity would alter Earth's orbit and raise terrible tides.

Sixty-nine million km is good. At that distance, Mars shines brighter than anything else in the sky except the Sun, the Moon and Venus. The visual magnitude of Mars on Oct. 30, 2005, will be -2.3. Even inattentive sky watchers will notice it, rising at sundown and soaring overhead at midnight.

You might remember another encounter with Mars, about two years ago, on August 27, 2003. That was the closest in recorded history, by a whisker, and millions of people watched as the distance between Mars and Earth shrunk to 56 million km. This October's encounter, at 69 million km, is similar. To casual observers, Mars will seem about as bright and beautiful in 2005 as it was in 2003.

Although closest approach is still months away, Mars is already conspicuous in the early morning. Before the sun comes up, it's the brightest object in the eastern sky, really eye-catching. If you have a telescope, even a small one, point it at Mars. You can see the bright icy South Polar Cap and strange dark markings on the planet's surface.

One day, people will walk among those dark markings, exploring and prospecting, possibly mining ice from the polar caps to supply their settlements. It's a key goal of NASA's Vision for Space Exploration: to return to the Moon, to visit Mars and to go beyond.

Every day the view improves. Mars is coming--and that's no hoax.

Upcoming Star Parties and Registrations

Indiana Family Star Party - August 5-7 Held at Prairie Grass Observatories

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Astrofest - September 8-11 – Kankakee, Il. This is a good four day party and has a great flea market. It is located at a new location (new last year) called Vana's Farms. It is about the same distance out of Kankakee as the old site but in a different direction. Registrations are due before August so register now.

McCloud Under the Skies - September 2-5 McCloud Nature Preserve This is the IAS' own party and is open to the McCloud public as well.

"Hidden Hollow" Star Party - September 30 - October 2 at Warren Rupp Observatory in Mansfield, Ohio. <http://www.wro.org/hiddenhollow2005.htm>

Prairie Skies Star Party - September 29 through October 02, 2005. Kankakee, Illinois
www.prairieskies.org

Twin Lakes Star Party – October 1-9, 2005 Pennyrile State Park, Kentucky,
<http://www.wkaa.net/article.php?articleid=56&cat=SE&ret=index.php> This is an outstanding dark site as well.

Illinois Dark Skies Star Party – October 6-9 2005 is the fourth year for the Illinois Dark Skies Star party (Oct. 6-9) at one of the finest state park facilities in the heart of the Land of Lincoln. We'd like for the Indiana Astronomical Society to be a part of what is turning out to be a great "observer's" event. Regular registration is \$45 per person, but for this year we are making a registration discount available for select astro groups. The IAS is one of those. Although we have had attendees from all over the country, we've never had anyone from your group to share our dark skies, good stories, tips, talent and information. This year, we are lowering registration fees for your members to \$35 per person for a group of five or more. We are lining up interesting speakers, have a great food menu to pick from and nice attendance prizes. This year, SmartAstronomy (www.smartastronomy.com) will be our star party vendor. Other events planned are "The Knowledge Bowl," an astronomy trivia contest with great prizes and a swap meet where you just might find that missing accessory you've been searching for or maybe a great deal on a second scope.

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 has accepted the position of Public Program Chairman. He will be responsible for coordinating Public Events for the IAS. Thanks Gerald.

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

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Astro Ads

Are you changing or upgrading your equipment? Do you have or are you looking for astronomical materials and equipment? The Indiana Astronomical Society as a service to its members, will publish non-commercial ads at no charge. The ad will stay in the Bulletin for 4 months and then 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 - Meade ETX-90EC astro telescope , it has the manual controller and the autostar computer controller, the worm gear has been replaced (Good as new). I have upgraded the finder to a 45 degree. Extras, 1 Meade super plossl 26mm eyepiece, 1 Sirius plossl 10mm eyepiece, 1 Orion illuminated ke12mm, 1meade 2x-3x variable barlow, 1 mead camera adapter (fits into eye piece hole), 1 Meade ETX camera adapter (fits onto back of ETX, 1 camera ring, 1 35mm Yashica camera, 1 remote camera switch, 1 Meade Series 4000 lunar filter, 1 45 degree prism adapter, 1#883 deluxe field tripod, 1 nice metal carrying case for the extras, am letting go also several star chart books ,the Norton 2000.0 sky atlas. \$700 obo thank you for your time. day time phone (317) 359 0229 John Miller (12/05)

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.

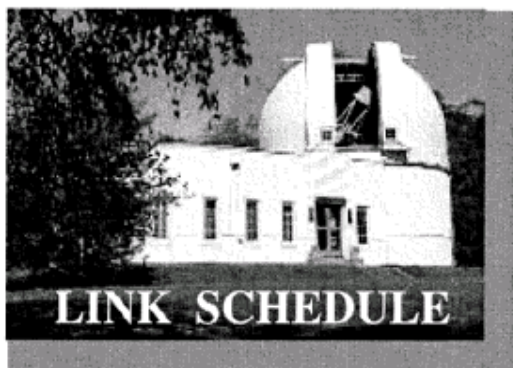
List Server Online - Don't be left in the cold - Sign up!

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.

August Board Meeting – August 18, 2005 - 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.*

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 August:

Observing sessions - Aug 13 and Aug 27
Observer's Meeting – August 27

Link Training – August 27
General Meeting August 13

McCloud Activities for August:

New Moon Group – August 5

New Astronomer's Group (NAG) – August 5

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

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

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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Thad Hatchett (2007)

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John Molt (2005)

Public Event Chairman

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

Library Committee Chairman

Ed Otto ecottol@comcast.net

August Calendar, 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4 New Moon	5 McCloud NAG	6
7	8	9	10	11	12 First Qtr Moon	13 General Meeting General Observing
14	15	16	17	18 Board Meeting 7:00	19 Full Moon	20
21	22	23	24	25	26 Last Qtr Moon	27 General Observing Observer's Mtg Link Training
28	29	30	31			

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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 (\$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: 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.