

The Bulletin – The monthly publication of the Indiana Astronomical Society

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The Bulletin

2009 International Year of Astronomy

The VERITAS Project: Viewing the Universe in the Highest Energy Photons

**Prof. John Finley
Dept. of Physics
Purdue University**

The VERITAS (Very Energetic Radiation Imaging Telescope Array System) project is an array of four 12-meter diameter telescopes designed to image gamma rays in the 100 GeV to 10 TeV energy band. The array has been operating successfully at the Fred Lawrence Whipple Observatory in southern Arizona for the past 2 years. I will provide an update on the project since my last visit to the IAS and discuss some of the interesting results that we have discovered over the past 2 years.

Professor Finley joined the faculty at Purdue University in 1993. His research areas include: the physics and astronomy of compact objects; X-ray and gamma-ray astronomy; the physics of active galactic nuclei; and the origin of cosmic rays. He has published numerous articles in his areas of study. Since 2007, he has been serving as chair of the VERITAS Executive Committee. He has also served on several review panels including the NASA Senior Review Panel in 2004, 2006, 2008.

IAS Calendar of Events for September

September 12 – General Meeting
September 15– Board Meeting
September 26 – NAG at McCloud

**New Astronomers Group Meeting
McCloud Nature Park
7:30 pm – September 26, 2009**

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The last meeting of the Indiana Astronomical Society's New Astronomers Group for 2009 will be held on Saturday, **September 26 at McCloud Nature Park starting at 7:30 pm.** Weather permitting there will be an observing session using IAS member's telescopes and binoculars following the meeting.

THE NAG MEETING WILL BE HELD - RAIN OR SHINE.

Topics for this month:

- Observing the September evening sky
- o Reading a Star Chart
- o The Autumn Pointer Stars
- o The Summer Triangle
- o The Great Square of Pegasus
- o Our Solar System
- o The Deep Sky
 - _ M15 - Globular Cluster in Pegasus
 - _ M31 - Andromeda Galaxy in Andromeda
 - _ Alpha Persei Cluster in Perseus
 - _ NGC 869 and NGC 884 – The Double Cluster in Perseus
 - _ NGC 457 – Owl Cluster in Cassiopeia
- The Size of Our World
- 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.

Observing at the Link

The campout at Link was a great success. The back yard of the Link was full of folks.



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We need to do more of these and utilize the Link more. There will be observing after the September and October general meetings weather permitting.

NAG at McCloud

We are still in need of a coordinator who would oversee the NAG activities at McCloud for 2010. This program has been a great asset for the Society since its inception by Mike Wolford and later by the Switzers. We have gained several new members from the activity. We have also made this into a major outreach program for the Society in which we educate the public about the sky and astronomy. The responsibility of the position is to determine the dates for the six events scheduled from May through September and to provide the program. John Switzer has developed a format for the programs which works very well. The new coordinator could use that format or could come up with new programs. We need someone who loves to meet new people and bring the hobby to the novice. There are several of us who would help as well. If you have interest in this position contact me Jeff Patterson at KB9SRB@Comcast.net or 317 506-0325.

The Pres

UP Coming Star Parties

Black Forest Star Party PA September 18-20, 2009
<http://www.bfsp.org/starparty/>

Okie-Tex Star Party – September 12-20. This is reported as one of the darkest sites in the US. It is a great deep sky event.

Prairie Skies Star Party – September 19-20 Kankakee, IL

Astrofest - Astrofest 2009 will be held September 25-26, 2009 at Vana's near Kankakee, Illinois. Join us for a weekend of solar observation, lectures, and workshops during the day and night observing through a variety of telescopes and binoculars. Vana's is a 20 acre field with plenty of camping space; there is no extra charge for parking or camping. To register click on www.chicagoastro.org/node/33. Note that you may register by mail, with check or money order, or by telephone with a credit/debit card. Currently, we do not have PayPal set up on our website; we hope to have that option available shortly.

If you have any questions, please contact Jim Cuca at jamescuca@comcast.net.

Heart of America Star Party MO October 15-18, 2009 <http://www.hoasp.org/>

Twin Lakes Star Party – October 10-18, 2009
This is an excellent star party located in western Kentucky. One not to miss

Nova Sedis Chiefland Fall Star Party – November 9-15, 2009
This is a new star party located in Chiefland Astronomy Village, Florida. Nice time in the year to be in Florida.

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

ALCor Observations by Bill Conner

The Astronomical League Double Star Club

Introduction

The purpose of the Double Star Club is to introduce observers to 100 of the finest double and multiple stars in the heavens. You don't need a large, expensive apochromatic refractor to view the objects on this list since a small refractor, Newtonian reflector, or Schmidt-Cassegrain will do just fine. All objects on this list were originally observed with a three-inch refractor using between 75X and 150X. Again, this program is meant to allow you to enjoy a different aspect of our wonderful hobby, and not to test your equipment.

Double star observing can be very forgiving. You don't need the darkest skies, the clearest skies, or even a moonless night to observe many of these objects. Some can be observed from your backyard under moderate light pollution, some can be observed under less than transparent skies, and some can even be observed with the moon up. However, as usual in astronomy, the best results can be obtained under optimum conditions. The point is, always try for the best conditions, but if you don't have them, don't worry about it. You can still enjoy this program.

Rules

To qualify for the AL's Double Star Certificate and pin, you need only to observe the 100 selected objects on the included list. Any telescope may be used, but one with an objective 60mm in diameter or larger is recommended. It is preferred that the stars be found by star hopping, although you may use setting circles or go-to if sky conditions, like partly cloudy skies here in Indiana make star hopping difficult.

You are encouraged to look at the stars with varying powers as some of these doubles are very close and require substantial power to get a clean separation of the stars. (Gamma Virginis, for instance, is currently separated by less than an arc second and not everyone will be able to split it. Just do the best you can and report what you see.)

To record your observations, you may use the [log sheet](#) provided on the AL site, or one with similar information. If you use your own log sheets, they should include: object, date, time, power, seeing, instrument, and a drawing of the double or multiple system. The drawing should show the two with the size of the dot indicating magnitude, and the distance between the dots representing separation. **Please show North and either East or West in your drawing.** A part of this exercise is to teach celestial directions so the position angles of the stars will be judged by your denotation of the directions. You must be a member of the Astronomical League to receive this certificate.

To receive your Double Star Certificate and [award pin](#), simply submit a copy of your observations to the Awards Coordinator or an officer of the Society who will forward the log to the Double Star Observing Club Chairman for review.

The 2010 Astronomical Calendar: specially priced for League members

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The Astronomical League is pleased to announce a special offer for our members from the Universal Workshop, the producers of Guy Ottewell's popular Astronomical Calendar. They are making the 2010 edition of the Calendar available at a discounted price.

There are plenty of good reasons why it has been published for over thirty years. The 2010 edition will not disappoint! Packed throughout the Astronomical Calendar's 84 pages are monthly sky charts; daily celestial highlights; charts, tables, and explanations of planetary movements; eclipse times and paths; and lunar occultation specifics. There are extensive descriptions of the year's meteor showers and periodic comets, as well. This calendar tells, in clear language, what events occur and when they happen.

League members can order this incredible compilation of the year's celestial events for \$19.95, shipping included. (It is normally priced at \$24.95 with another \$7 added for shipping.) Volume discounts (a minimum of 15 copies) for clubs are available. But, to take advantage of the free shipping offer, you must order by Friday October 31, and either use the special website, www.Universalworkshop.com/clubs.htm, or call 800-533-5083. The League's special low price of \$19.95 expires on December 31, 2009. Universalworkshop.com accepts Mastercard, Visa, Discover, American Express and PayPal.

Link Activities for September:

General Meeting September 12

McCloud Activities for September–

NAG September 26

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 McCloud to observe, please call the park naturalist, Haley Samuelson-Couchman, at the park office 765 676 5437 before 4PM on the day you want to go out. As an alternative you can e-mail Haley at McCloudNP@HCParks.net . She will give you permission to be there at night and cut off the lights.

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

Membership Status

The following changes in membership took place in Aug:
Current Membership Total: 154

Renewals: 10

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August New student members:
Ryan Wesley Tobin - Muncie

August New Members:
Alexander “Sandy” Turner, Indianapolis
Michael Amstadt, Plainfield
Jeff Wikle, Greenwood
Richard Wells, Indianapolis - Inactive to active status (Welcome Back!)
Dan Rogers, Crawfordsville

Inactive status:
Jerry Vessels - moved to Springville, IN (near Michigan City).
Mike Barnes, Zionsville
Kent Obenchain, Brownsburg
William Bray – moved to Missouri

IAS LIBRARY:

The complete list can be found (<http://www.iasindy.org/memonly/iasfiles.php>, which is password protected). We have a new additions for the library. There is now a link on our website page for our new Multi-Media Library. Greg has built this library of a multitude of videos that are on the web. The only problem is that you will have to have high speed internet to observe these video streams. We think it will be a great addition to our library for both novices and experienced observers. Greg has many more sources to go through so the library will continue to grow. If you have comments or questions about the library please contact Greg McCauley at 317 663-3289 or greg@ultrasoundconsulting.net .

IU Kirkwood Observatory

The Observatory has reopened for the summer. Please visit our schedule at http://www.astro.indiana.edu/kirk_sch.shtml, for a list of dates and times. For updated weather conditions and closings, please call the Kirkwood Observatory Hotline at (812) 855-7736.

The IU Astronomy Department has an electronic bulletin to let people know about local astronomy activities and events. If you would like to subscribe, send an email to astdept@indiana.edu and we'll put you on the distribution list. Information about activities and events to be included in the e-bulletin should be sent to catyp@astro.indiana.edu.

Easy Listening:

Weekly pod casts are available at <http://www.astronomycast.com/> for those who love astronomy and want to learn, yet have no time (or desire) to do extra reading. They cover a variety of topics, and feature a different topic each week, so you can choose your flavor. The cast includes Fraser Cain, the publisher of Universe Today (<http://www.universetoday.com/>), and Dr. Pamela Gay, an assistant professor of physics at Southern Illinois University Edwardsville. You do not need an iPod or portable device to enjoy these.

Mentor Program

We are reinstating 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@comcast.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.

Do you have a question or need?

We are establishing 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 (KB9SRB@Hotmail.com) – Observatory design and construction

Public Outreach Programs

Gerald Venne is our Public Events Coordinator. 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.

We need people to help at Link and elsewhere. It is actually a lot of fun.

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

75th Anniversary Lapel Pins

If you did not receive your Anniversary pin last year, please contact Vicki Switzer. If you want another, you can buy one from Vicki for \$5. If you want a pin mailed to you, contact Vicki and send her a check for \$7 made out to the Indiana Astronomical Society. If you were a member last year and still want your original pin please send Vickie a check made out to the IAS for \$2.00

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

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E-Mail: KB9SRB@Hotmail.com

For Sale: - Astro-Physics 400 German Equatorial Mount

Near new condition. Used less than a dozen times.

9 lb. Stainless Steel Counterweight

6 lb. Stainless Steel Counterweight

Wood AP case

AP Encoders and cables

NGC-MAX DSC Computer

\$1700

Contact: Jim Rinehart 317-881-3475

For Sale – Takahashi FS-128 F/8.1 apochromatic refractor, Serial No: 01065. Excellent condition! I am the original owner, purchased 3/20/2002. The OTA has an upgraded Takahashi 10-to-1 Micro Edge Focuser and comes with a custom Scopeguard case (silver). \$3200.

If interested, I also have the following FS-128 accessories (not included with the OTA);

TAK Tube Holder

Takahashi 7x50 Finder Bracket

BT-Tak Quick Release

Takahashi 1.25" Diagonal

Kendricks (P-6010-A, Baader) Solar Filter (photographic)

Kendricks (6010, Baader) Solar Filter (visual)

Takahashi 2" Compression Ring Adapter

Takahashi 2" Threaded extension

Daniel Cervantes muddy@bluemarble.net or (812) 361-7746,

For Sale – Sony 21" Model G520 Graphics CRT. Excellent condition, manual, all cables, for \$15. Contact Fritz Kleinhans, Starman@iupui.edu or 317-290-1689 (cell).

Free astrophotography film to good home (or bad). I have dozens of rolls of Kodacolor Royal Gold 400 (red sensitive version) and LE 400 (red sensitive) color negative film. This film has been in the freezer since about 2001 and has expiration dates of about 2002-2003. Contact Fritz Kleinhans, Starman@iupui.edu or 317-290-1689 (cell).

Onions and Orchids

Thanks to Gerald Venne for working the exhibit at the State Fair.

A bouquet of orchids for those that cleaned up the Link after the campout. Thanks to all.

The 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. 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 (lstargazer@indy.rr.com) or (317) 989-1875

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

This service is our main communication tool. The list server is accessible only by IAS members. Being a member does **not** mean you are automatically entered into the "Members Only" section. If you are a new member, please go to the "Members Only" section and fill out an application. The Webmaster will set you up and notify you that you can get into the system. Make sure we have your correct e-mail and you will have access for late updates to events and functions. Unless you opt out for the List server, you will automatically have access to it when you are approved for the "members only" section.

Note: The list server is for use of Society business. It can only be used according to the rules as outlined previously. Basically it is used to communicate astronomical information to the general Society that would be unique. Please do not send out information from websites that we all generally subscribe to. Also please note: Do not add the list server address to your general address lists. Our problems have generally come from this when a member sends out mail to all their addressees. Members abusing the service will be eliminated from the service.

Board Meeting – Board Meeting September 15, 2008

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 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 Brian P. Murphy on his cell phone 716-8124 or Jeff Patterson 317 506-0325.

General Meeting Dates 2009

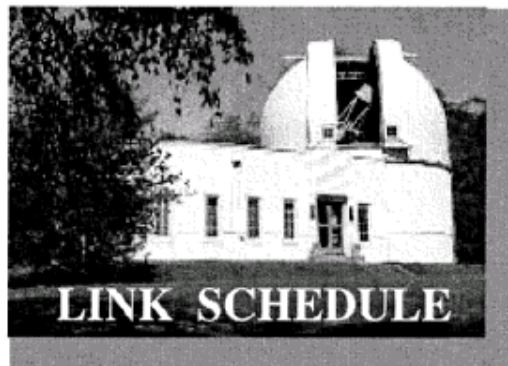
| | NAG | General | Board |
|-----------|---------------------|----------------|--------------|
| January | | 17-Jan | 19-Jan |
| February | | 14-Feb | 17-Feb |
| March | | 14-Mar | 17-Mar |
| April | | 18-Apr | 21-Apr |
| May | 2-May 30- May | 16-May | 19-May |
| June | 27-Jun | 13-Jun | 16-Jun |
| July | 18-Jul | 11-Jul | 14-Jul |
| August | 22-Aug | 8-Aug | 11-Aug |
| September | 26-Sep | 12-Sep | 15-Sep |
| October | | 10-Oct | 13-Oct |
| November | | 7-Nov | 10-Nov |
| December | | 19-Dec | |

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.*

Bulletin Stats

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 Bulletin – The monthly publication of the Indiana Astronomical Society

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

vswitzer42@verizon.net 1 812-835-2251

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) 300-0449

Vice-President and Program Director: Doug Brown (317) 872-4050

Secretary: Betsy Brown 1-317-872-4050

Treasurer: John Shepherd (317) 862-3442

Board of Directors

Gary Schoppenhorst (2009)

Gerald Venne (2009)

Tom Borlik (2010)

John Switzer (2010)

Ron Burgess (2010)

Greg McCauley (2011)

John Molt (2011)

Public Event Coordinator

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

Library Committee Coordinator

Greg McCauley greg@ultrasoundconsulting.net

Astronomical League Coordinator

Bill Conner wmtconner@att.net 1-812 828-0449

Membership Coordinator

Vicki Switzer vswitzer42@verizon.net 1 812-835-2251

September Calendar, 2009

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|---------------------|-----------|----------|---------------------|--|
| | | 1 | 2 | 3 | 4 Full Moon ○ | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 3rd QTR ☾ | 12 General Meeting at Link |
| 13 | 14 | 15 Board Meeting | 16 | 17 | 18 New Moon ● | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 NAG at McCloud 1 st QTR ☾ |
| 27 | 28 | 29 | 30 | | | |

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
- Membership in the Astronomical League
- 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: _____

For the “membership only” section you need to provide a user name and a password:

User name: _____ Password _____

List Server - This service is our main communication tool. The list server is accessible only by IAS members and only for IAS related business. It is controlled very carefully to prevent spam. Unless you opt out for the List server, you will automatically have access to it when you are approved for the “members only” section.

I do **not** want to receive IAS communications via the List Server

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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 (\$30.00) | |
| Annual Student Membership (\$10.00) | |
| Astronomy Magazine Renewal (\$34.00) | |
| Sky and Telescope Magazine (\$33.00) (New Subscription) | |
| Total Enclosed | |

Make checks payable to: The Indiana Astronomical Society, Inc

Please complete Member Profile and include with the application

Mail Application to:

Vicki Switzer Membership Coordinator
2115 N. Private Rd 50 E
Centerpoint, IN 47840

Member Profile

Spouse's Name: _____

Children's names and ages: _____

Note: Profile information is not a requirement for membership to the Society.