



The Bulletin

The March General Meeting, March 8, 2008 7:00 PM Holcomb Observatory on the Butler Campus

Stellar Proper Motions: The Fixed Stars Come Unglued

David Williams

Discovering the fact that comets orbit the sun and return at predictable intervals wasn't Edmund Halley's only contribution to astronomy. In 1718, he announced that the "fixed stars" aren't fixed at all. By comparing the positions of stars in his time with the positions in Claudius Ptolemy's star catalog of 150 A.D., Halley discovered that the first-magnitude stars Arcturus, Sirius, and Procyon had moved by as much as half a degree (about the moon's diameter) during the previous 1,500 years. This movement of stars across our line of sight is called proper motion, and it tells us a lot about stars, star clusters, and the structure of our galaxy. Proper motions have revealed our own Sun's motion through space (stars ahead of us spread apart, stars behind us move back together). Proper motions indicate that most of the stars in the Big Dipper belong to a common star stream. We can also measure the motions of stars in galactic clusters to determine cluster masses and dynamical evolution. Stellar proper motions, when combined with radial velocities (motion straight toward or away from us, measured by spectroscopy), give us each star's true space motion and reveal a three-dimensional universe. Until recently, determining stellar proper motions was considered old-fashioned astronomy. But amazing new observational techniques, deployed in orbiting satellites, are introducing a new age of high-precision measurements. The Gaea satellite, now being prepared by the European Space Agency, will measure the changing positions of millions of stars and give us a remarkable new picture of our place in the universe.

David Williams has been an IAS member since 1989 or thereabouts. He began his amateur astronomy career in 1957 when he plotted the Perseid meteor shower. Since then he has done all the usual things, with emphasis on observations that produce a useful scientific result. In 1961 he began observing variable stars. He has contributed more than 26,000 magnitude measurements to the American Association of Variable Star Observers and recently completed a two-year stint as AAVSO President. In the 1990s he used the 10-inch photographic refractor and blink comparator at Goethe Link Observatory to discover several new variable stars. He has also been a visiting researcher at Harvard Observatory, using the gigantic Harvard photographic plate collection to investigate neglected variable stars in cooperation with the variable star catalog team in Russia (he is included as a co-author of the latest electronic version of the official General Catalog of Variable Stars). He became interested in proper motions while identifying variable stars on Harvard plates used originally for the great Bruce Proper Motion Survey of the southern hemisphere in the 1930s

Winter Star Party

Well we have our first star party of 2008 under our belts.



Note the February observing attire. This is nice guys. 80-85 degrees during the day and in the 70's at night. Eight of us from the IAS braved the icy roads in Indiana and Kentucky and the Atlanta traffic to sojourn to West Summerland Key just east of Key West for the annual Winter Star Party. Carolyn and I left two days early to beat the weather. We arrived at Fiesta Key near Marathon and settled down to a couple of days of sun and seafood. There is a place where you can eat all the shrimp and crab you want and we try to make it each year. I got to watch the Super Bowl and watch Manning's little brother do a good job on the Patriots.

Monday broke as a beautiful sunny morning and we broke camp and motored on down to the party. We arrived at 10:30 and noted that the line waiting to get in was strung on down the road as far as I could see. We have a motor home and have set times to get in so we drove right on in and found our

assigned spot. The rest of the attendees and turned loose at noon to find their respective spots. Bill set up with us and John and Terry decided to set up on the berm right next to the beach. We had great weather throughout the week with a little wind at night and a few clouds. But the seeing was excellent and very steady. Real estate is a prime commodity as you can see from the following picture.



Sometimes you need to improvise about the use of space.



This guy had a good idea for the days. All in all things went well and we all had a ball. John Molt and Angela Dietz won door prizes. We arrived back in Indy on the edge of another ice storm. If you ever get a chance this is a premier party and you would really enjoy it.

IAS LIBRARY AVAILABILITY DURING THE WINTER AT BUTLER:

Because of the size of the IAS library and the difficulty in transporting it, only a reduced selection of it (about 25%) will be available during the general meetings at Butler's Holcomb Observatory. If you have a particular book you want to be brought to Butler, examine the complete list (<http://www.iasindy.org/memonly/iasfiles.php>, which is password protected) and send a message to the librarian (marcus@mwmacoustics.com) and he will bring it to the meeting.

Larry A. Marcus

ALCOR OBSERVATIONS

MARCH MADNESS, otherwise known as the MESSIER MARATHON

Yes, the time of year when all 110 of the Messier objects can be observed in a single night is fast approaching. This feat is possible provided that the skies are clear and the moon is new. For 2008 the best time to try this test of your ability to stay up all night while maintaining your sanity will be a few days either side of March 7th. On this day there are 10 hours of darkness that can be used for observing. That's 11 observations per hour folks! If we wait until the April 5th new moon, there are only 9 hours of darkness and some of the Messier objects set before they can be observed.

A list of Messier objects, in the order that they should be observed for the marathon, may be downloaded from the "Members Only" section of our website.

This year the weather will also be a challenge. Coming so early, it is bound to be chilly if not downright cold. This generally discourages all but the most hardy and well insulated observers. I must admit that as a "skinny" guy, I don't take the cold very well and the old feet and fingers are first to complain. The only way I can halfway participate is by repetitively sprinting through several observations then retreating to a warm-up room.

One item that I have come to appreciate for serious observing is a small digital voice recorder. I can dictate my observations while studying the object, then get on with finding the next object without having to write everything down on a dew soaked piece of paper. This is only half of the problem, however, since trying to interpret my night time scribbles at a later date may be equally daunting. At least I can talk coherently most of the night.

Good luck to all challengers!

Bill Conner AlCor

Observer's Corner

The Lunar eclipse was fantastic. I would not have given a plugged nickel for the chance to see it earlier in the afternoon. We were totally clouded over until about 6PM and then everything began to clear. By 8 pm it was cold but clear. I kept running in and out to look at the progress. We don't get many chances like that here in Indiana. I hope you all watched it.

Help With Sky Atlas 2000

Ever struggled with disorientation using your Sky Atlas? I'm using a black fine tip Sharpie and a ruler to line asterisms with the help of reference books from our Library. I

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look for the named stars and place lines between them being careful to not mark over possible targets. Now when I open the Atlas to the desired chart it saves time and helps locate objects. This is a work in progress and hope next to use an ultra-fine Sharpie and draw some items of myth and lore into the Atlas if it doesn't get too perplexing.

John Molt

IU Astro e- Bulletin

The IU Astronomy Department has started a new 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.

Gadgets and Gizmos

At WSP I was able to observe with a fellow from Florida, Mike Harvey, who had a new video cam by Jack Mallin to use with his 28" Starstructure Dobsonian. Man what a scope! It was a dream to use and the new Mallincam Hyper color camera was outstanding. We were looking at M87 with a 54 second exposure and actually could see the jet in real time! This is a newly designed camera and is going to revolutionize video imaging. I actually used it several nights and can see where it would be outstanding at public events.

Meet Our New Members

The Society wants to welcome each of you and if you have any questions do not hesitate to ask.

Seek out new members out and see if you can help them out.

The Pres

Mentor Program

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

Upcoming Star Parties and Registrations

Smokey Mountain Stargaze Just outside Smokey Mountain National Park - March 28-April 6.
This is a new party. Should be pretty that time of year.
<http://www.smokymtstargaze.com/index.php>

Tennessee Spring Star Party - Fall Creek Falls State Park Apr 4 - 6
<http://www.personal.bna.bellsouth.net/s/p/spsmith/default.htm>

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Mid-South Stargaze Apr 4 – 6

The Observatory is one mile southeast of the Natchez Trace Parkway at French Camp. French Camp is about half-way between Jackson and Tupelo, Mississippi, at Natchez Trace mile marker 181. Mississippi <http://www.rainwaterobservatory.org/stargaze/index.htm>

Indiana Astronomy Day (IAS/PGO) - May 2 - 4

<http://jmmahony.home.insightbb.com/pgo/schedule.html>

Hidden Hollow Star Party – Mansfield, Ohio May 2-4 www.wro.org

JEPC Star Gazing Event IL May 29-June 1

<http://www.mikewolford.com/IEPC%20Event.htm>

Apollo Rendezvous – Dayton, Ohio June 13-14, 2008

<http://mvas.org>

Cherry Springs Star Party Cherry Springs State Park, PA May 29- June 1

<http://www.astrohbg.org/s4>

Texas Star Party West Texas June 1-8,2008. This is a premier party with very dark skies and a great site. Just a long way. Online registration will open November 15. www.texasstarparty.org

Heart of America Star Party MO June 26-June 29 (Possibly stay until July 5th)

<http://www.hoasp.org/>

Nebraska Star Party – July 27-August 1 - North Central Nebraska - 950 miles 18 hour drive.

This is a premier dark site and has fantastic observing. However, the weather is brutal. Temperatures can reach 105-110 degrees. However you can cool off in the shade of the tree. All activities will be at the Snake Creek Campground again this year. (I wonder why they call it Snake Creek). No activities will be at the resort. <http://www.nebraskastarparty.org/>

EPOCH 2007 The 21st Century Midwest Star Party Jul 29 - Aug 3

Beaver City, Indiana This is a new star party put on by 20-20 Telescopes.

<http://www.2020telescopes.com/EPOCH2007.html>

Indiana Family Star Party Camp Cullum, Frankfort, IN Jul 31 - Aug 3

<http://jmmahony.home.insightbb.com/pgo/starparty/>

Black Forest Star Party PA Date To be announced

<http://www.bfsp.org/starparty/>

Astrofest

Kankakee, IL September 5-7th, 2008

<http://www.chicagoastro.org/>

Prairie Skies Star Party – Kankakee IL – September 25-28, 2008

<http://www.prairieskies.org/>

Illinois Dark Skies Jim Edgar Panther Creek State Fish and Wildlife Area IL.

September 25-28 <http://www.sas-sky.org/>

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Twin Lakes Star Party Pennyville State Park, Western KY Sep 27 - Oct 5

<http://www.wkaa.net/>

Okie-Tex Star Party

Camp Billy Joe, OK Sep 27 - Oct 5

<http://www.okie-tex.com/>

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

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.

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: 2 Televue eyepieces

4.8mm Nagler

17mm Type 4 Nagler

(The 17mm Nagler is a 2" eyepiece)

Both for \$350 obo

Contact: Jim Zdobyak 317-862-4715 or zobel@aol.com

For Sale – I have two Meade DSI II Pro Monochrome cameras with CCD Filters (RGLB) for sale. These are brand new and have never been used. (I am upgrading to the DSI III). I will be willing to let them go for \$570.00 each. (They list for \$699.00 each).

They come with the Drizzle and Envisage software in the Autostar Suite.

You can check out pictures taken with the Color and Meade DSI II Pro Monochrome cameras on my telescope at: <http://n9bk.org/2006-08-09-Astro-LX200-GPS-14/>

and see my observatory at <http://n9bk.org/2006-08-23-N9BK-Observatory/>

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You don't need to have a Meade telescope to use these camera.
E-mail me at n9bk@yahoo.com or call 317.332.9471

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
Wooden AP case
Encoders
NGC-MAX DSC Computer

\$1995

Contact: Jim Rinehart 317-881-3475 or jrine33@comcast.net

For Sale - Astronomy photographic prints for sale. The prints are displayed at <http://www.dougsastro.net>. 12" X 18" prints are \$25.00 and 8" X 12" are \$15.00. All of the images were taken by Doug Sanquetti. Most were taken locally near Cicero, IN but a few were taken at Star Parties. Any print on the web site may be ordered by contacting Doug at drsanqun@gmail.com

For Sale The Sky 6 “Professional” software (opened) - \$125
(This may have been installed already . Not sure if it's been registered
US Naval Observatory Double Star CD 2006.5 (unopened) - \$50
GSO Plossl 32 mm (unopened) - \$20
Quantum International tripod used, about 50" high (for camera) - \$20
Ambico tripod used, about 50" high (for camera) - \$10
New #15 HP (black) printer cartridge (purchased new printer - past 'returnable' date) - \$15
John Molt (email or 317-989-1875)

Onions and Orchids

The Pres

The Loaner Program

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

John Molt (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 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.

Being a member does **not** mean you are automatically entered into the “Members Only” section and the have the List Serve available. 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.

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 – Board Meeting March 13, 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 main entrance to the building is to the right of Starbucks, but it will be locked. To get into the building, go to the shop Silver in the City. Tell them you are here for the astronomy meeting and go through the back door of the shop into the office building. 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, IAS Vice-President on his cell phone 716-8124.

General Meeting Dates 2008

The Board has made a major decision for the Society. In years past there have been major conflicts with star parties and other events and the General meeting which is held the second Saturday of the month. The Board has decided to “float” the date of the general meeting each year based on the phase of the moon. Basically the general meeting will be held close to third quarter moon. The dates of the general meetings will be published at the beginning of each year. We think this change will provide the following benefits:

1. Allow us to schedule NAG (New Astronomer’s Group) meetings at McCloud on Saturday nights good for observing with the public.
2. Prevent conflicts with star parties that generally occur around the new moon which is early in the month in 2008.
3. Still provide observing opportunities at the Link during the Summer months.
4. We will continue to float the Observer’s meeting at the Link to provide the best observing possible.

January through March - will stay on the 2nd Saturday at Butler

April 26 at Butler

May 31 at Link

June 28 at Link

July 26 at Link

August 23 at Link

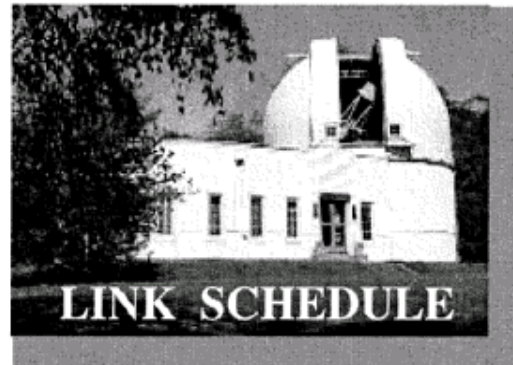
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September 20 at Link
October 18 at Link (Hog Roast)
November 15 at Butler
December floats for the Christmas Party at Butler

Goethe Link Observatory Observatory Address

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

**Observatory 's Phone:
(317) 831-0668**



This schedule is being published to assure proper access to the Link Observatory for programs that are designed as observational, general education, astronomy conferences or amateur research projects. Training programs are tentatively scheduled for Saturday evenings only. Although other requests can over-ride these sessions. It is the purpose of this listing to prevent activity conflicts.

If you need to acquire use of the 36-inch telescope: remember two important IAS guidelines:
1) *There has to be two or more IAS members present.....* 2) *contact the Observatory Manager: Gary Schoppenhorst (317)297-1405. DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.*

Link Activities for March:

None planned for the month

No Planned activities at McCloud –

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.

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For those interested in going to McCloud to observe, please call the park caretaker, Jim Holtsclaw, at the park office 765 676 5490 before 4PM on the day you want to go out. He will give you permission to be there at night and cut off the lights.

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 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

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)
Marion Hakes (2008)
John Molt (2008)

Public Event Coordinator

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

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Library Committee Coordinator

Larry Marcus marcus@mwmacoustics.com 317 842-6658

Astronomical League Coordinator

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

March Calendar, 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			2			1
2	3	4	5 ●	6	7	8 General meeting at Butler
9	10	11	12 ☾	13	14	15
16	17	18	19 ○	20	21	22
23	24	25	26	27 ☾	28	29
30	31					

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: _____

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.

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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: John Shepherd, Treasurer

4609 Callahan St.

Indianapolis, IN 46239

Member Profile

Spouses Name: _____

Children's names and ages: _____

Education: _____

Occupation: _____

How many years associated with Astronomy? _____

Special astronomical interests or projects: _____

-

Equipment: _____

What can the Society do for you? _____

What can you do for the Society? _____

Note: Profile information is not a requirement for membership to the Society. This information is entered into the IAS database and is not given nor sold for solicitation purposes. It does provide for a brief welcoming article for new members and may be used by the society to match people with similar interests.