

February, 2005
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www.iasindy.org



The Bulletin

**The February General Meeting, February 12, 7:00 PM Butler's
Holcomb Observatory**

Extrasolar Planet detections by Amateur Astronomers Dan Kaiser

Nearly 150 extrasolar planets have been discovered orbiting nearby solar-like stars. I will give a brief history of the search for planets outside our solar system and the recent planet discoveries. This will be followed by a discussion of amateur astronomers observations of extra-solar planets (exoplanets), the equipment required and observational techniques. Then we will have a short pictorial tour of my observatory. Finally I present the results of my observations of the exoplanet TrES-1.

Dan is a long time member of the IAS and an avid variable star observer. He is past president of the American Association of Variable Star Observers.

Watch That Laser

On January 4, 2005, a New Jersey man was arrested after allegedly shining a laser at a small passenger jet on approach to a nearby airport. The suspect claims he had been showing his daughter around the night sky, using his laser pointer to direct her gaze at particular stars and planets. Now he faces a possible jail term and six-figure fine. There have now been about a dozen instances recently where airline pilots have reported green lasers striking their aircraft. This is a handy tool for many of us to show people the sky. I urge you to use appropriate safety practices:

1. Never shine the laser at an aircraft or a vehicle

2. Never shine the laser at a person
3. I suggest you not let a youngster borrow it to try it out. It is a tool and not a toy.
4. At a star party do not use a green laser when other astronomers are imaging. You could ruin an hour of hard work in a split second.

Hopefully the authorities won't ban the use of green lasers. They are a useful tool. A new note has just arisen. The Southern Cross Astronomical Society (WSP) has just announced a ban of the use of green laser pointers at any of their events. My guess is that this is a trend we will begin to see at the various star parties.

IAS Sponsored Explorer Post

I have the privilege assisting Eli Lilly and Company sponsor seven career Explorer Posts (A branch of the Boy Scouts of America) and working with the Central Scout Headquarters for the past 11 years. One of the tasks I performed was managing the 30,000+ name database of Central Indiana students from the ages of 14 to 18 years who have career interests from A to Z. The object of the database is to select students who have career interests in specific areas and offer them an invitation to become affiliated with one of the career-focused Explorer Posts. It is the hope that through practical experience the students can learn and make an educated decision a particular career path is right for them before they pursued that career path in College.

It has been a focus for the Indiana Astronomical Society to provide a learning environment or an educational outreach for schools, organizations as well as individuals it comes in contact. I did a search of those students who had an interest in Astronomy or Space just for curiosity. I was pleasantly surprised to find a list of 70 names. I began a discussion with the Scout Headquarters to see if there was an Explorer Post who focused on astronomy. Again to my surprise there were no Posts with that emphasis. At the McCloud Star Party I asked if I could have some time at one of the Board's meeting to discuss the possibility of the Society sponsoring an Astronomy Explorer Post.

At the October Board Meeting representatives from the Indiana Central Scout Headquarters and I presented the concept of the Society sponsoring an Astronomy Post for future consideration and discussion. After subsequent discussions and review of responsibilities the Board has granted permission to pursue the needed resources to begin an Astronomy Post sponsored by the Society.

Resource. We are looking for individuals who would be interested in assisting with this effort. Deep astronomy knowledge is not required just the willingness to share the truly amazing facts and sights above. There will be some training provided by Scout Headquarters for those who wish to assist. If you are interested in assisting and wish to find out more please contact me at jshepherd25@comcast.net or give me a call at 317-997-3904.

Article by John Shepherd

What's the Time and Are You Still Polar Aligned?

How the Earthquake affected Earth



The Dec. 26th Indonesian megathrust earthquake quickened Earth's rotation and changed our planet's shape.

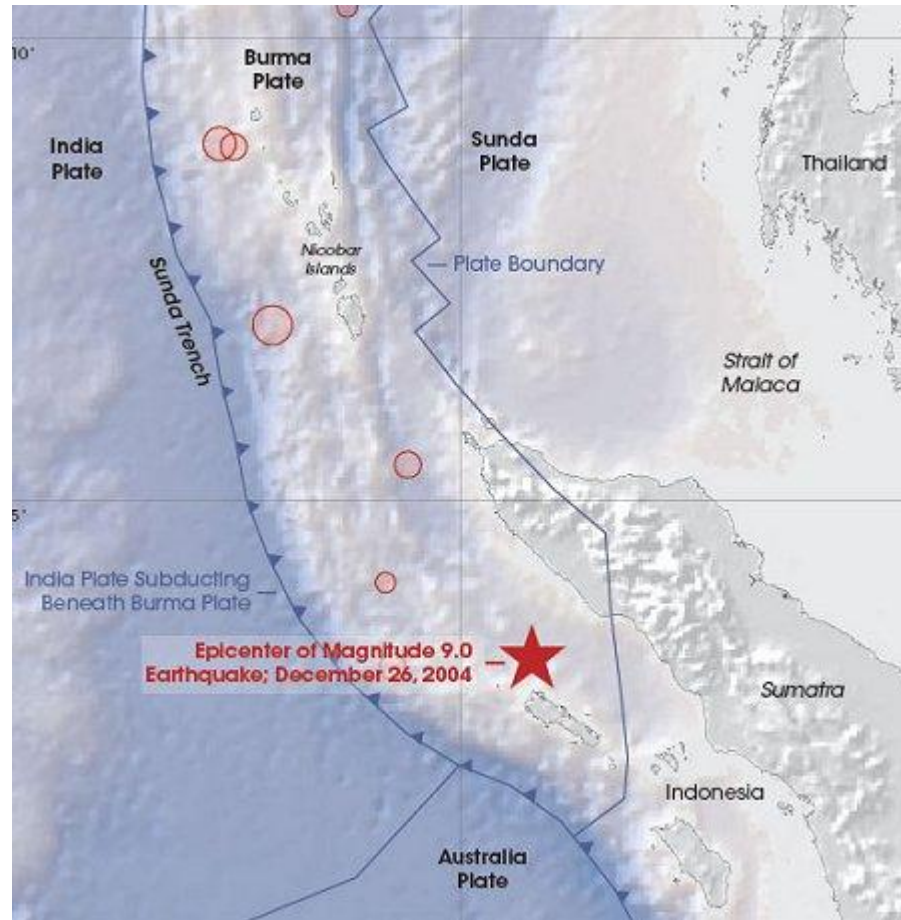
January 10, 2005: NASA scientists studying the Indonesian earthquake of Dec. 26, 2004, have calculated that it slightly changed our planet's shape, shaved almost 3 microseconds from the length of the day, and shifted the North Pole by centimeters.

Dr. Benjamin Fong Chao of NASA's Goddard Space Flight Center and Dr. Richard Gross of NASA's Jet Propulsion Laboratory said all earthquakes have some effect on Earth's

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rotation. It's just that the effects are, usually, barely noticeable.

This one was not usual: The devastating megathrust earthquake registered nine on the new "moment" scale (modified Richter scale), making it the fourth largest 'quake in one hundred years.



Above: Geography of the Dec. 26th Indonesian earthquake. [\[More\]](#)

Chao and Gross routinely calculate earthquakes' effects on Earth's shape and rotation. They also study changes in polar motion--that is, the shifting of the North Pole.

According to their latest calculations, the Dec. 26th earthquake shifted Earth's "mean North Pole" by about 2.5 centimeters (1 inch) in the direction of 145 degrees east longitude, more or less toward Guam in the Pacific Ocean. This shift is continuing a long-term seismic trend identified in previous studies.

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The quake also affected Earth's shape. Chao and Gross calculated that Earth's oblateness (flattening on the top and bulging at the equator) decreased by a small amount--about one part in 10 billion. This continues the trend of earthquakes making Earth less oblate. Less oblate means more round.

They also found the earthquake decreased the length of the day by 2.68 microseconds. (A microsecond is one millionth of a second.) In other words, Earth spins a little faster than it did before. This change in spin is related to the change in oblateness. It's like a spinning skater drawing arms closer to the body resulting in a faster spin.

None of these changes have yet been measured--only calculated. But Chao and Gross hope to detect the changes when Earth rotation data from ground based and space-borne sensors are reviewed.

Article courtesy of NASA

The Pres



KENTUCKIANA STAR GAZE AND MESSIER MARATHON PARTY

**March 10-13, 2005 Taylorsville Lake State Park
Taylorsville, Kentucky**

The **Louisville Astronomical Society** will be hosting the **Kentuckiana Star Gaze and Messier Marathon Party** at Taylorsville Lake State Park just 30 minutes from Louisville March 10-13, 2005. This first-ever star party for the society is located only minutes away from Kentucky's finest attractions and sight-seeing.

Taylorsville Lake State Park is a small Kentucky State Park around a 3,050 acre lake and we will have the park and its facilities all to ourselves. The park manager has worked with our friends in the Western Kentucky Amateur Astronomers at Pennyriple State Park, so he is enthusiastic about having a star party at the park. Park management will turn off all the campground security lights at night to give us a view of the dark Kentucky skies above.

We will have the normal star party events, speakers, and door prizes plus a few added luxuries including **Campsites with electricity** - 40+ campsites near the observing fields offer RV/tent camping with electricity. Tent camping is also available in the observing fields. Showers, rest rooms and laundry facilities are located in a central service building.

Daytime activities – There are 16 miles of hiking trails and an excellent marina if you would like to fish or go boating during the day. Informative daytime programs -presented by LAS members and regional amateur astronomers. A warming tent with coffee and other treats will be available. Restaurants with local flavor are available in Taylorsville and Louisville is just 30 minutes away.

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Kentuckiana Star Gaze and Messier Marathon Party registration costs are only \$15 for individuals and \$20 for families. Camping at the sites with electricity is \$10.00 per site per night camping fee for an unlimited amount of persons per site. Basic campsites are \$3.00 per night. All Camping fees are payable directly to the park. T-shirts will be available at a cost of \$18/shirt.

Keep in mind that **our site is reserved** and the **park will not be open to the public**. This will give us an excellent chance to view the skies without any public involved. We all have sidewalk astronomy and public outreach events and it is rare to get together with other amateur astronomers and do what we love most – observe and socialize. **PLUS- there will be an entire viewing field set aside for those wishing to attempt the Messier Marathon without being disturbed.**

Like all star parties, we will have door prizes. Each registration gets you one ticket (two for family registrations) and extra tickets will be available for \$5.00. Also, you will be just one hour from **StarQuest**, LAS member Bill Longazel's new scope store in Louisville with Meade, Televue, Celestron and Orion scopes plus plenty of ep's and accessories.

The members of the **Louisville Astronomical Society** are looking forward to hosting you. Pat Peak, a survivor of many star parties, will be chairing the event with many of our club members helping. So, ya'll come! Our skies are yours and we have a great site and facilities. Now all we need is you! See you at the **First Annual Kentuckiana Star Gaze and Messier Marathon Party March 10-13, 2005.**

Article by the LAS

Upcoming Star Parties and Registrations

Winter Star Party – February 7-13. Registration is over but you can still buy a ticket from individuals. Watch Astromart. See the Southern Sky Astronomical Society's website. (Note see the ad for tickets in the ads section of this Bulletin)

KENTUCKIANA STAR GAZE AND MESSIER MARATHON PARTY - March 10-13, 2005
Taylorsville Lake State Park Taylorsville, Kentucky See the web page for registration information. Also information at <http://www.Louisville-astro.org>

Niagfest GreatCon 2005 – April 22-23 – This is a great two day event for those who want to try a close party. See the Warsaw Astronomical Society Webpage for details.
<http://clubs.kconline.com/was/>

Apollo Rendezvous & Telescope Fair - June ? To be announced Dayton, Ohio

Nebraska Star Party - The 12th Annual Nebraska Star Party will be held the week of July 31st to August 5th, 2005 at Merritt Reservoir, 27 miles south of Valentine, Nebraska. This is an excellent dark sky party. It is approximately 900 miles. <http://www.nebraskastarparty.org/>

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

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

Observer's Corner - Comet Macholz.

Well I still have not been able to observe it but let's keep trying. My understanding it is already beginning to dim. As the moon begins to be a little less bright go out and locate the new wanderer that we have in the heavens. In a dark sky (No Moon) the comet at 4th magnitude should be easily visible to the naked eye and very pretty in binoculars. Check out daily location in Sky and Tel's website and charts. All of the above is true except one other factor must be taken into consideration; The weather in Indiana. We haven't seen the sky for weeks. I hope to observe it at WSP.

Article by Jeff Patterson

Local School Events and Star Parties

Fishback Creek Elementary - It's that time of year again to start thinking about our Trimester 2 Sleepover event for the Job Corps workers at Fishback Creek. The kids were bitterly disappointed when it was cloudy last year, and they have been asking already if your team will be here! I figured I needed to get on the ball and see if you and some of your friends can join us!

The event is Thursday, March 3 from 7:30--11:00 PM.

Set this date into your calendar as we will need as many scopes as possible.

New Astronomers Group In the Planning Stages

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The New Astronomer's Group has been suspended for the winter but John Switzer has agreed to organize and lead this program this coming year. John is planning to hold the sessions at McCloud when we have our dark sky events. His plans are for hands on observing rather than lectures. Plans are to start the program in April as the weather improves. If you have ideas or want to help, contact John.

Jeff Patterson

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: Celestron Nexstar 11 Brand New with 6 eyepieces, barlow, and 7 filters in Celestron case; dew cap; original boxes \$2,899.00 L.D. Reuter 812-988-7571(06/05)

For Sale: Star Chaser AG 70 Guide/Finder Scope made by BC&F Astro Engineering. 70mm Achromatic Doublet with 700mm focal length. Focuser has large knobs and includes 1.25 " diagonal. Excellent for autoguiding use or as a finder for large scope. I also have 5 1/2" standard mounting rings for this scope. Asking \$275 for scope and rings. Call Don Craig, 317-849-9688. 04/05

For Sale - Giro 2 alt-az mount. Not a mark on it. Comes with SS counter weight shaft, 8.8 lb. counter weight and carrying case. **\$220** Contact: Jim Rinehart at 317-881-3475
jrine33@comcast.net 03/05

Trade - Telrad with mount for a Rigel with mount. Marion Hakes at vhorani@yahoo.com. (317-370-4425).(01/05)

For Sale – Celestron 20X80 Binoculars and Bill Blaho mount (no tripod) - \$450. Jeff Patterson
JMPSR@Iquest.net. (2/05)

For Sale – Celestron 8" Dobsonian – Excellent condition. Includes 26mm eyepiece. \$350. Jeff Patterson JMPSR@Iquest.net. (2/05)

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For Sale - 2 tickets (with camping) to the Winter Star Party, February 7 - 12 2005. This can be 1 of the most enjoyable astronomical experiences, although it's crowded, weather isn't always good and is a long trip, some consider it a pilgrimage. The price is \$123 per ticket, will sell them separately. John Molt 1star-gazer@earthlink.net 317-989-1875

Loaner Scope Program

Did you know you can borrow a scope 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 scope 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 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 e-mail and you 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.

February Board Meeting – February 17, 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**

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**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 February:

Observing sessions - February 26
New Moon Group – None this month*

Observer's Meeting – February 26
Link Training – February 26

Bulletin Stats

Accessing the Bulletin

The current bulletin can be found on the website www.iasindy.org in the "Upcoming Events" section.

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
lpastro@lightbound.com

Link Observatory

Latitude: 39 degrees, 33 minutes North
Longitude: 86 degrees, 24 minutes west

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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

Board of Directors

Gary Schoppenhorst (2006)

Gerald Venne (2006)

Thad Hatchett (2007)

Doug Brown (2007)

Bill Conner (2007)

Marion Hakes (2005)

John Molt (2005)

February Calendar, 2005

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

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Membership Application to the IAS

Benefits:

- Use of the Goethe Link Observatory
- Formal monthly programs with guest speakers
- Local and regional astronomical functions
- Discounted Astronomy publications
- New Moon observing activities
- Access to IAS member experts and problem solving
- The Bulletin monthly newsletter
- Free admission to the Holcomb planetarium
- Star party events and observing sessions

Please mark whether this is a new or renewal application

New

Renewal

Note: Magazine subscription renewals forms and payment must be submitted to the Treasurer in order to maintain publisher's club discount.

Name: _____

Address: _____

City: _____ State: _____ ZIP: _____

Telephone: () _____

E-Mail Address: _____

How do you want to receive the IAS monthly newsletter?

Downloadable from Website Hard Copy*

* Please note that hard copy costs the Society about \$1.50 per issue. Please consider this when selecting mode of receiving the newsletter.

Annual Regular Membership (\$20.00)	
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 articles for new members and may be used by the society to match people with similar interests.