

The IAS News & Views



Volume 79, Issue 11

www.iasindy.org

Remember: We Move to Butler for our winter meetings

**IAS General Meeting November 10, 2012
7:00 PM
Holcomb Observatory
Butler University**

Mars Science Laboratory Mission Update

**Greg McCauley NASA/JPL Solar
System Ambassador**



The Mars Science Laboratory Mission Update

The Mars Science Laboratory (MSL) is part of NASA's Mars Exploration Program, a long-term effort of robotic exploration of the red planet. The MSL rover "Curiosity" landed at Gale Crater on August 6, 2012 and is currently assessing whether Mars ever was, or is still today, an environment able to support microbial life. It is the most ambitious and one of the most important missions to the red planet to date. The rover 'Curiosity' carries the biggest, most advanced suite of instruments for scientific studies ever sent to the Martian surface. The rover's onboard laboratory is currently studying rocks, soils, and the local geologic setting in order to detect chemical building blocks of life on Mars.

Finding life or the fossilized remains of past life outside planet Earth will be one of the most important discoveries in human history, and the Mars Science Lab may be the mission that accomplishes just that. Come and participate in this entertaining, full multimedia presentation that

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includes images of the space craft, discussions of the individual scientific instruments, and computer-animated videos of the mission currently in action on the Martian surface. You will also receive specific information on reference materials that will allow you to follow the development of this historic mission.

About the Speaker

Greg is a member of the Indiana Astronomical Society. In the early 1970's, Greg worked as a NASA contractor at the Manned Spacecraft Center (now Johnson Space Center) in Houston Texas in the Mission Planning and Analysis Division for the lunar missions of Apollo 15 and 16, and was a member of the Lunar Launch Team for Apollo 17.

Greg is currently a Solar System Ambassador for NASA/JPL. The Solar System Ambassadors Program is sponsored by the Jet Propulsion Laboratory in Pasadena, CA, an operating division of the California Institute of Technology (Caltech) and a lead research and development center for the National Aeronautics and Space Administration (NASA). The Solar System Ambassadors Program is a public outreach designed to work with trained volunteers across the nation. These volunteers communicate the excitement of JPL's space exploration missions and information about recent discoveries to people in their local communities.

Nominations Committee

The Board has appointed Jeff Patterson (KB9SRB@Comcast.net), John Molt (Johnmolt99@gmail.com), and Doug Brown (ddbrown4565@comcast.net) to act as the nominations committee for this year's elections. Please contact them if you are interested in running for office this year or if you know someone who would be a good candidate.

I urge you to consider running for office. Several of the officers have served for many years and would also like to see a change. I personally have told the Board that I will not run for president this year. Due to health reasons, I have to step down. We need some people to step forward. The only requirement is that you are 18 years old and a member in good standing in the Society.

If you would like to be a part of the governing body of the Society and help steer the direction of the Society, please see one of the members of the Nominations committee.

The Pres

Elections are Coming

It is time to begin thinking about elections again in earnest. Our elections will be held in December. There will be two Board members up for election as well as the four officers. In addition the coordinator's positions will be open for appointment after the new year. If you would like to act as one of the appointed coordinators please let us know as well. Nominations committee

John Molt

Jeff Patterson

Doug Brown

Duties of the Officers:

- (1) Except as provided by these bylaws or required by law, the entire control of the Society and its affairs shall be vested in the Board of Directors.
- (2) The Board of Directors shall consist of seven (7) members elected from and by the membership at large. In addition, each Executive Officer shall be a voting member of the Board during their terms of office. In the event of a tie vote upon any matter, the President of the Society shall cast a second vote to break the tie.
- (3) The age requirement for members of the Board of Directors and Executive Officers shall be 18 years or older.
- (4) A member of the Board of Directors or an Executive Officer may be re-elected after their term of office expires.
- (5) If a vacancy occurs in any office for any reason, including failure to attend meetings, the Board of Directors shall elect a member of the Society to fill the unexpired term of the vacant office. Failure by a Director to attend six (6) meetings of the Board of Directors during any twelve (12) month period may constitute a vacancy at the discretion of the Board.
- (6) At each December meeting, here designated as the "Annual Meeting," the Directors shall be elected by the membership to succeed those whose terms expire.
- (7) The Executive Officers of the Society shall be President, Vice President, Secretary, and Treasurer, all of whom shall be elected by written ballot or voice vote at the Annual Meeting. The term of office for the executive officers will be for one year starting January 1st of the next year.
- (8) No person shall hold more than one Executive Office at a time.
- (9) Members of the Board of Directors shall hold office for three years. Their terms shall be staggered so that two directors are elected at each annual meeting, with the exception of a year in which a third director is to be elected.
- (10) The **President** shall preside at all meetings of the members and ensure that the purposes of the meeting are accomplished. The President shall annually nominate the Editor of the monthly newsletter (*The IAS News and Views*), the Web Supervisor of the official website, the Associate Web Supervisor, the Observatory Manager, the Equipment Loan Program Coordinator, the Public Events Coordinator, the Librarian, the Membership Coordinator, and the Astronomical League Correspondent. The nominations will be ratified by the Board of Directors. The President will be responsible for communication with Indiana University. The President is responsible for filing all corporation and tax returns as required by the State of Indiana.
- (11) The **Vice President** shall preside in the absence of the President and shall act as Program Coordinator. The Vice president's principal responsibility is to obtain speakers or to develop a specific program for each of the general meetings.
- (12) The **Board of Directors** shall compile and approve an annual inventory report showing the whole amount of real and personal property owned by the Society. The report shall be presented

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to the President at the January Board meeting. The Secretary shall file the report with the Society's records.

(13) The **Secretary** shall keep minutes of all Business/Board meetings, initiate such Society correspondence as shall be directed to the Secretary, and ensure that records of the Society's business are maintained in permanent form.

(14) The **Treasurer** shall be responsible for all monies belonging to the Society. The Treasurer shall keep accurate records of all transactions and hold Society funds ready for disbursement at the order of the Board of Directors. The Treasurer shall also maintain insurance documents and prepare and submit all required state and federal tax returns.

(15) The Board of Directors and Executive Officers shall establish official Standard Operating Procedures (SOPS) for operation of the Link Observatory, to clarify the requirements of these bylaws, detail agreements between the Society and other parties and to comply with any city, state, or federal rules or regulations. These procedures may be altered by the Board of Directors without a general members' vote. Such operating procedures shall be filed with the Society's records and shall be posted where deemed appropriate.

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McCloud Monthly Stargaze

October 20

McCloud Nature Park

We had a great night at McCloud tonight. As I pulled in around 5:45 to set up it will still mostly cloudy and I was thinking it might not happen. I had prepared a Powerpoint presentation to discuss some of the objects we were going to observe. By the time the presentation was over, the skies had started to clear and we got several objects in tonight, included spying a few Orionid meteors. There were about 20 people out there; a good crowd.

Thanks to Steve McSpadden, Bill Conner, Tom Hubbard, John Kramer, plus a couple new guys, Steve and Adam, for coming out!

Mike Newberg

Link Campout for Members and Guests October 12-14

Steve and Wayne McSpadden, Tom Hubbard (along with his son Steve), and I all went to the Link last night. We all accomplished the October Challenge List with the notable exception of the Helix Nebula; none of us had an OIII filter handy. NGC 7507 was a beast because it's low on the horizon and the atmosphere was pretty soupy but Wayne did get it in his scope (at least he got something that was faint and fuzzy). Steve had to tap the eyepiece on his scope just to see if that was it. Even though the four of us banded together on this, we pretty much got all the observable objects in our own scopes as well.

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We also saw a good flyover of the ISS and saw Comet Hergenrother. Steve even managed to get Jupiter in his scope through a tiny break in the treeline! By the time Jupiter was above it clouds were increasing and we were all ready to pack it in. But a good time was had by all.

Saturday was a bust.

Mike Newberg

Upcoming Events

NEW ASTRONOMERS GROUP November 10 Holcomb Observatory" Eyepiece Filters for Contrast Enhancement" Bruce Bowman

This group is designed for the beginning amateur astronomer and is open to members and non-members of the Society. Emphasis is on actual observing to help beginners find their way around the night sky and, in particular, how to find those faint but interesting objects. Other topics may include discussions of types of equipment used and the advantages and disadvantages of each. The sessions are taught by experienced IAS members. The topics for each session are announced on the website and in the newsletter, IAS News and Views, along with times.

Meetings start right after the General Meeting. In addition to discussing the night sky for the current month, a selected topic of interest to the beginning astronomer will be covered. This month Bruce Bowman will provide an overview of which eyepiece filters work best for visual contrast enhancement on various types of objects. Color (Wratten) filters, light-pollution filters and neutral density filters will all be discussed. A summary hand-out will be available.

Filters used for solar observing and CCD photography will be covered in a future NAG topic.

THE NOVEMBER OBSERVING LIST

Below please find a list of ten (10) showpiece objects to view this month. Those who complete the list will receive a certificate at the following general meeting. We're also providing a challenge object to help push the limits of your observing skills. It's not necessary to successfully view the challenge object to receive the certificate; we only ask that you try.

Please complete the following list to receive the November certificate:

Gamma Arietis (Double star)
Uranus (The Planet)
M31 (The Great Galaxy in Andromeda)
M32 (A bright elliptical galaxy and satellite of M31)
NGC253 (The equally famous Sculptor galaxy)

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NGC404 (The Ghost of Mirach)
NGC457 (The Owl Cluster in Cassiopeia)
M103 (A fan-shaped cluster near delta Cassiopeiae)
M33 (The Pinwheel Galaxy in Triangulum)
NGC663 (A bright, large open cluster in Cassiopeia)

Challenge object for November 2012: NGC1 in Pegasus (find a dark site for this one!)

The above objects are all located between 0 and 2 hours of right ascension and so are well-placed for evening viewing this month.

There are plenty of great targets in the fall sky. Mirach's Ghost may be the most difficult to see; but it's also the easiest to find, just a few arc-minutes northwest of beta Andromedae. Move the bright star out of the field and this small elliptical galaxy should be visible in a 5" scope. Small apertures will show the Pinwheel Galaxy M33 under dark skies. If you find it easy, try to also view the associated nebula NGC604. Daily coordinates for Uranus are available from <http://astropixels.com/ephemeris/planets/uranus2012.html>. Look for an oddly bluish, 6th-magnitude "star" in the field before switching to high power to examine its 4-arcsecond disk.

If you complete this list prior to the end of November, contact Bruce Bowman to ensure you receive recognition. Winners are asked to pick up their certificates at the following general meeting. At this time only IAS members are eligible.

Congratulations for the following IAS members for successfully completing the September list: Eric Allen, Roberta Allen, Phil Dimpelfeld, and Mike Newberg.

Q&A ABOUT THE IAS MONTHLY OBSERVING AWARD

Q1: Do I have to use my own equipment?

A: No...although bringing and using your own telescope is strongly encouraged. Also keep in mind that the IAS has an equipment loaner program.

Q2: Do I need to find the objects myself?

A: No. You need only make the observations. Conceptually, if we had 10 telescopes set up -- each trained on a different object -- you could just go from one to the other and become eligible.

Q3: What do I need to submit to you to receive the award?

A: Just contact me and let me know that you completed the requirements for the month.

Membership Status

Membership Report for October:

Total Membership: 152

Renewals:

New student members:

New Members:

Reactivated from Inactive status:

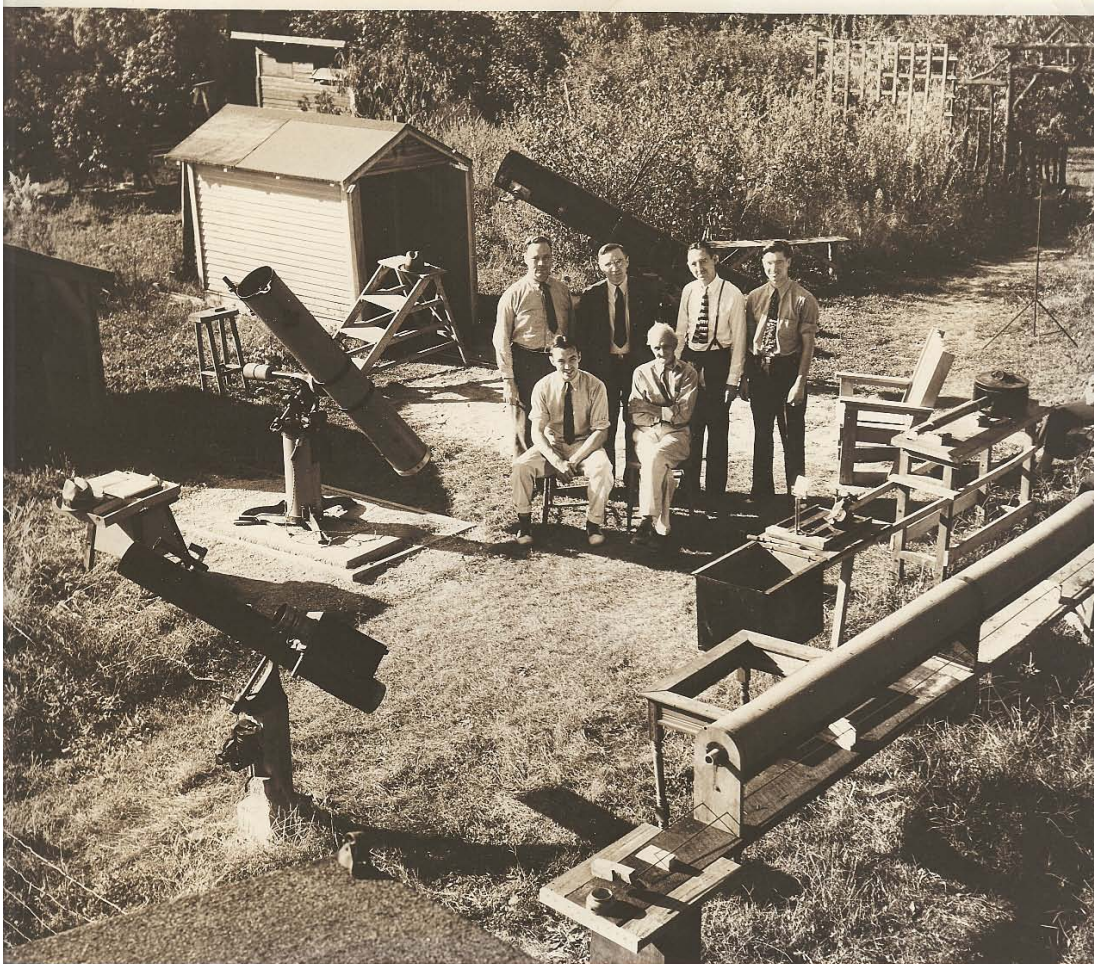
Inactive Status:

Krista Hefner - Indianapolis

Onions and Orchids

Thanks to Mike Newberg for taking over and spearheading the McCloud event this past month. Congratulations to Bruce Bowman for completing the Globular Cluster Observing list for the Astronomical League

IAS History



From information taken from the back of the photo (taken in the mid 1930's?) – by Ernest P. Maier, Vic Maier's brother – "Observation Headquarters for members of the **Indianapolis Amateur Astronomers Association**. Members pictured left to right seated are V. E. Maier (Secretary), S. S. Waters (President). Standing are Carl Turner, Clark Hicks (Vice-President), Harold Richter and Charles Herman (Treasurer). There are 3 large telescopes in operation, also a spectroscope, built by Mr. Waters shown at the lower right. This site is located on the premises of Mr. Waters, on the South(?) edge of the city.

NOTE: Vic Maier was the construction engineer for the Link Observatory project while Carl Turner and Charles Herman were the mechanical & optical engineers.

IAS Calendar of Events for November

November 6 Board Meeting

November 10 General Meeting and NAG

Observing Activities

Activities for November:

Link Observatory -

None Planned

Prairie Grass Observatory Activities—

We are able to go to the Link, Prairie Grass Observatories, and McCloud Nature Park at non scheduled times if they do not conflict with reserved activities:

For those interested in going to The Link Observatories for observing call John Shepherd at 1 317-862-3442.

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

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

Al/Cor Observations by Wm. Conner

THE ASTRONOMICAL LEAGUE'S PLANETARY OBSERVERS CLUB

The Planetary Observers Club involves a list of twenty-seven selected projects designed to introduce you to the pleasures of planetary observing. Dark skies and moonless nights are not an impediment for any of the listed projects. You may want to consider joining the Association of Lunar and Planetary Observers, if you are intrigued by the listed projects. ALPO members regularly observe solar system objects and have contributed significantly to science.

Briefly, the projects are as follows:

SUN: Sunrise, Sunset, Azimuth Position, Solar Eclipse, Sunspots

MOON: Maria, Highlands, Crater Ages, Scarps and Occultations

MERCURY: Locate and observe once in the morning and once in the evening.

VENUS: Low Power Crescent, Daytime Observation, Phases

MARS: Sketch Features, Retrograde Motion

CERES: Locating, sketch star field

ASTEROIDS: Course Plotting, Measuring their movement

COMET: Locate and sketch

JUPITER: The Great Red Spot, The Galilean Satellites, The Cloud Belts, Satellite Discovery, Satellite Shadow Transits, Satellite Transits, Satellite Occultations/Eclipses

SATURN: The Rings, Cassini Division, Disk Markings, The Satellites (6 of the brightest)

URANUS: Locating

NEPTUNE: Locating

PLUTO: Locating

To qualify for the AL's Planetary Observers Club Certificate and Pin, you need to complete 25 of the 27 suggested projects. Record your observations on copies of Astro Note 3 – Observing Data Sheet and turn them in to the AL Awards Coordinator or an officer of the Society for review. Project details may be downloaded from the Astronomical League's web site at: www.astroleague.org I will be happy to provide hard copies to those who do not have web access.

TELESCOPES FOR ENJOYABLE VISUAL OBSERVING

by Bill Conner

Over the past 20 years, amateur telescope electronics has revolutionized what used to be a basically mechanical system. Some of the capabilities we see in the new products of today were

not even thought of 5 years ago. We now have systems complete with GPS receivers to set your location and time, and automated alignment programs that only require you to flip a switch then stand back and let it do its thing. For us clear sky poor souls here in Indiana, these systems can help us make best use of an infrequent clear night. Punch in an object's number and either "push-to" or "go-to" it right away, saving precious time for enjoying the object. Also, most of these systems will take you on a "What's up tonight tour." Yes, it helps to know the constellations and your way around the sky via star hopping and we encourage that endeavor. Your society has a mentor program to help newcomers find their way around, but we cannot be everywhere on a clear night.

I'm going to review some sample telescopes for enjoyable visual observing in three price ranges. I'm being mindful of our current economic situation that has impacted many families, so we will start with a current state of the art Dobsonian mounted reflector and go up from there. An 8 inch/200mm aperture telescope not only lets you view the bright objects in the sky like the Moon, planets and bright nebula, but it also has sufficient light grasp to view distant galaxies. There are many manufacturers and vendors with similar products. I will cover a sample in this article. You can scale the aperture down for children or up for those of you who have more resources and can lift heavier equipment.

For the newcomer with limited funds an 8 inch f/6 "Dob" is a great way to start. Set-up time is less than five minutes. You just haul it out and set it down in the yard. A chair or multi-step stool is needed for comfortable observing as the eyepiece can be anywhere from 1.5 feet to 4.5 feet off the ground. Some find it handy to set the scope on a sturdy, short, say 1.5 to 2 foot high table to raise the eyepiece height and give you a surface to lay out your charts. The optical tube and base each weigh about 20 pounds so it is easy to move around.

Good examples of this type of telescope are the Orion SkyQuest XT8 Classic \$360 w free shipping @ www.telescope.com or Zuhmell Z8 Dob \$399 with a 2 speed Crayford focuser, laser collimator & free shipping @ www.telescopes.com. Orion's comes with a 25mm eyepiece for low power (48x) viewing. You will need to add a quality 12mm eyepiece for high definition viewing at 100x. Zuhmell's comes with a 30mm-2" eyepiece (40x) and a 9mm 1 ¼ eyepiece (130x). I strongly suggest that you read the reviews on-line.

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For \$629 you can have the Orion XT8i computerized intelliscope with 25mm & 10mm eyepieces and Starry Night software included. A small computer tells you the direction you need to “push” the scope to center a designated object. With “push-to” systems, you keep the object in the field of view by manually moving the scope. Add about 10 minutes to your set-up time. A telescope is worthless unless you know where to point it, so the computer offers a real advantage. Used scopes like these frequently show up on Astromart (www.astromart.com) at very reasonable prices.

The next step up is a compact motorized “go-to” telescope. The most reasonable new 8 inch scope at this moment is a Celestron NexStar SE priced at \$1,199 (www.celestron.com). This telescope is an updated version of the original orange Schmidt-Cassegrain telescope developed by Celestron in the 70s and reintroduced for the International Year of Astronomy. The advantage of this type of scope is that the eyepiece is always at a comfortable viewing height. The optical tube clamps to a single tine fork mount atop a reasonably sturdy tripod. This arrangement allows you to use the mount for other small telescopes such as an 80mm refractor. You will need to buy several eyepieces to make best use of this scope. Set-up time is about 20 minutes since you have to assemble the mount.

To make the next step up the cost doubles to the \$2,000 range. For this amount of money you get better optics, GPS, full automation, a heavier, dual tine fork mount and an astrophotography/autoguiding capability. One word of caution, the fork mount is not the best option for serious astrophotography. I highly recommend that you talk with our resident astrophotographers if your goal is serious astrophotography.

Meade (www.meade.com) has beefed up the LX90-ACF telescope to the point it rivals their most expensive LX200 model. ACF stands for an Advanced Coma-Free optical train that significantly reduces coma, an optical defect inherent in Schmidt-Cassegrain telescopes that causes star images to become increasingly fan shaped away from the center of the optical axis. Meade corrects for this problem with a “full aperture aspheric corrector plate” in front of the primary mirror.

Celestron, Meade’s competitor, offers the CPC 800 GPS Schmidt-Cassegrain for visual observing (\$2,400) and the CGEM 800 Edge HD for photography (\$2,500). The latter uses a German Equatorial Mount that permits easy balancing of heavy photography accessories mounted on the back of the optical tube. “Edge HD” refers to an improvement in the optical train via field flattening lenses. Edge HD eliminates coma in the field of view of large format CCD and digital cameras. Set-up time can be as short as 20 minutes for visual observing and an hour for photographic purposes. Both manufacturers offer heavier, upscale mounts and optical tubes. Let your purpose and wallet be your guides.

IU Kirkwood Observatory Bloomington

The Kirkwood Observatory Solar Telescope is open on the "First Saturday" of each month from 1-3 PM. Viewers may even be able to see a solar prominence or two weather permitting. Updated weather conditions and closings will be posted at the Kirkwood

Observatory Hotline at (812) 855-7736, and at the Observatory webpage, <http://www.astro.indiana.edu/kirkwood.shtml>.

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

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

NASA Space Place

A Cosmic Tease:

Trials of the Herschel Space Telescope Science Teams

By Dr. Marc J. Kuchner

Vast fields of marble-sized chunks of ice and rock spun slowly in the darkness this week, and I sat in the back of a grey conference room with white plastic tables spread with papers and laptops. I was sitting in on a meeting of an international team of astronomers gathered to analyze data from the Herschel Infrared Observatory. This telescope, sometimes just called Herschel, orbits the Sun about a million miles from the Earth.

The meeting began with dinner at Karl's house. Karl charred chorizo on the backyard grill while the airplanes dribbled into Dulles airport. Our colleagues arrived, jetlagged and yawning, from Germany, Sweden, and Spain, and we sat on Karl's couches catching up on the latest gossip. The unemployment level in Spain is about twenty percent, so research funding there is hard to come by these days. That's not nice to hear. But it cheered us up to be with old friends.

The meeting commenced the next morning, as the vast fields of ice and rock continued to spin—shards glinting in the starlight. Or maybe they didn't. Maybe they didn't exist at all.

You see, this team is looking at a series of images of stars taken by a device called a bolometer that is blind to ordinary starlight. Instead, the bolometer inside Herschel senses infrared light, a kind of light that we would probably refer to as heat if we could feel it. But the idea of pointing the bolometer at the stars was not to collect ordinary starlight. It was to measure heat coming from the vicinity of these stars, like an infrared security camera, in case there was something else to be found lurking nearby.

And lo and behold, for a handful of stars, the bolometer measurements were off the charts! Maybe something was orbiting these stars. From the details of the bolometer readings—which channels lit up and so on—you would guess that this stuff took the form of majestic fields or

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rings of icy and rocky particles. It would be a new kind of disk, a discovery worth writing home to Madrid about.

There are several teams of astronomers analyzing data from the Herschel Space Telescope. They call themselves by oddly inappropriate sounding acronyms: GASPS, DUNES, DEBRIS. For the time being, the scientists on these teams are the only ones with access to the Herschel data. But in January, all the data these teams are working on will suddenly be released to the public. So they are all under pressure to finish their work by then. The team whose meeting I was sitting in on would like to publish a paper about the new disks by then.

But it's not so simple. The stars that this team had measured were relatively nearby as stars go, less than a few hundred light years. But the universe is big, and full of galaxies of all kinds—a sea of galaxies starting from maybe a hundred thousand light years away, and stretching on and on. Maybe one of those background galaxies was lined up with each of the stars that had lit up the bolometer—fooling us into thinking they were seeing disks around these stars.

The team argued and paced, and then broke for lunch. We marched to the cafeteria through the rain. Meanwhile, vast fields of marble-sized chunks of ice and rock spun slowly in the darkness. Or maybe they didn't.

What else did Herschel recently uncover? Find out at <http://spaceplace.nasa.gov/comet-ocean>.

Dr. Marc J. Kuchner is an astrophysicist at the Exoplanets and Stellar Astrophysics Laboratory at NASA's Goddard Space Flight Center. NASA's Astrophysics Division works on big questions about the origin and evolution of the universe, galaxies, and planetary systems. Explore more at <http://www.science.nasa.gov/astrophysics/>.



Samuel Pierpont Langley, who developed the bolometer in 1878. His instrument detects a broad range of infrared wavelengths, sensitive to differences in temperature of one hundred-thousandth

of a degree Celsius (0.00001 C). In 1961, Frank Low developed the germanium bolometer, which is hundreds of times more sensitive than previous detectors and capable of detecting far-infrared radiation.

Do you have a question or need?

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

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

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

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

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

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

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

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

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

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

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

Astro Ads

Are you changing or upgrading your equipment? Do you have or are you looking for astronomical materials and equipment? The Indiana Astronomical Society as a service to its members, will publish non-commercial ads at no charge. The ad will stay in the Bulletin for 4 months and may be renewed at the owner's request.

To place an ad, contact:

Bulletin Editor

Jeff Patterson

1780 S. Morgantown Rd.

Greenwood, IN 46143

(317) 300-0449

E-Mail: KB9SRB@Hotmail.com

For Sale Telescopes Rose Hulman University

Surplus Equipment Sale

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October 15, 2012 to November 30, 2012

Telescope 1: 11-inch Schmidt-Cassegrain telescope made by Celestron on a Losmandy tripod and mount. This is a clock drive mount, but not “go-to.” Telescope comes with documentation, star diagonal, eyepiece, solar filter, padded storage box and power supply. Minimum bid: \$300.



Telescope 2: 11-inch Schmidt-Cassegrain telescope made by Celestron on a CG mount. This mount is a “go-to” mount. Telescope comes with documentation, star diagonal, eyepiece, solar filter, padded storage box and power supply and battery. Minimum bid: \$600.



Telescope 3: 12-inch Schmidt-Cassegrain telescope made by Meade on LX-200 “go-to” mount. Telescope comes with documentation, star diagonal, eyepiece, solar filter, dew shield, padded storage box and power supply. Minimum bid: \$600.

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Telescope 4: 12-inch Schmidt-Cassegrain telescope made by Meade on LX-200 “go-to” mount. Telescope comes with documentation, star diagonal, eyepiece, solar filter, dew shield, padded storage box and power supply. Minimum bid: \$600.



The telescope sale is finally on. I have attached a description of the telescopes. If anyone is interested in bidding on any of these telescopes they should go to

<http://www.publicsurplus.com/sms/browse/home?tm=m>

and search for "telescopes"

Rick Ditteon

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For Sale: Kenneth Novak 4-vane spider assembly for telescope tubes of 15.5-16" O.D.. The hub is 1.75" in length and sized for a 3/8" stud. Asking \$20 or will trade for other Dobsonian construction materials. Contact Bruce Bowman 317-539-2753

For Sale: Books for Sale

Three Volume Millennium Star Atlas, first edition, hard bound; virtually brand new. \$49. (original cost ~ \$200)

Observational Astronomy for Amateurs by J.B. Sidgwick \$1.

Amateur Astronomer's Handbook by JB Sidgwick \$1.

Physics of the Planet Mars by Gerard de Vaucoulerus (late 50's \$1

Photographic Atlas for Supernova Search, Vol II by Manuel Lopez Alvarez \$1

Vol III \$1

Atlas of the Andromeda Galaxy by Paul Hodge (new) \$5

The Cambridge Double Star Atlas by Mullaney and Tirion (new) \$4

Fundamental Astronomy, Second Ed, Karttunen, Kroger, Oja, et al \$1

The Magnificent Universe by Ken Crowell \$1; free to a good home (or bad)

Splendors of the Universe; A Practical Guide to Photographing the Night Sky by Dickinson and Newton (1997) \$1 ; fee to a good home (or bad)

contact Fritz Kleinhans
317-290-1689
starman@iupui.edu

For Sale: MEADE 8" F/4.5 NEWTONIAN

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

Additional Accessories:

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

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

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

Asking \$400.00 – Call Bill at 892-2036 or e-mail at bwilHITE@tds.net.

Equipment Loan Program

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

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

Board Meeting –November 6, 2012

The IAS Board Meeting is being held at 430 Massachusetts Avenue in downtown Indianapolis. The building is at the point of convergence of Mass. Ave., Vermont and Alabama Streets. There is a Starbucks located in the frontage of the building. The coffee shop stays open late into the evening. Try to park as close to Starbucks as possible, preferably in a metered space. On-street parking is free after 9pm. Some meter sites are still free after 6PM but are hard to find. . Handicapped parking is directly in front of Starbucks entrance. The entrance to the building is to the left of Starbucks around on the side. We meet in the basement. Ride the elevator (around the corner to your left) to the basement. Turn right as you exit the elevator and go through the first door on your right. This is the conference/meeting room. If you need further assistance, please contact Jeff Patterson via the webpage iasindy.org under the contact us section

2012 Calendar of Meetings

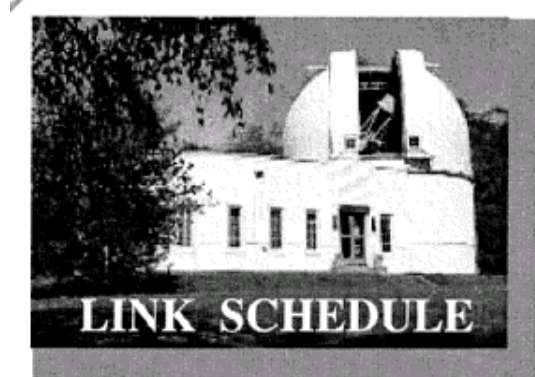
	General	Board	NAG	McCloud Stargaze
January	14	17		
February	11	14		
March	10	6		
April	14	10		28
May	12	8	12	26
June	9	12	9	none
July	14	10	14	28
August	11	7	11	25
September	8	4	8	22
October	13	9	13	20
November	10	6		
December	15	15		

Goethe Link Observatory

Observatory Address

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

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



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

If you need to acquire use of the 36-inch telescope: remember two important IAS guidelines: 1) *There has to be two or more IAS members present.....*2) *contact the Observatory Manager: John Shepherd* **Contact via the webpage iasindy.org under the contact us section.** **DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.**

IAS News & Views Monthly Newsletter for the IAS

Accessing the IAS News & Views

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

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

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

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

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

Pay Your Dues by PayPal

We can now pay dues on our website using paypal. There is a cart system where you can pay dues, order magazines, or donate to the Society. Thanks to John Shepherd and Doug Sanguinetti for getting it done. It was not as easy as it seemed. The cart is found in the Join the Society section of the website. You will have to establish a PayPal account for yourself to make the transactions.

Observatory Manager

IAS News and Views

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

Public Event Coordinator

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

Equipment Loan Program Coordinator

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

Membership Coordinator

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

Logo Clothing

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

Linda

Mid-Central Trophy

422 Arnold Ct

Kokomo, IN 46902

765-453-5494

All Major credit cards are accepted.

Hours 9-5 EST

November Calendar, 2012

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

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