Geometry of an annular eclipse.

An annular eclipse of the sun. Bright spots are sunlight streaming through lunar valleys.

Mixed annular and total eclipse.

This month's meeting at Cranbrook features a talk on the upcoming '84 annular eclipse by Tim Skonieczny.
The Warren Astronomical Society is a local, non-profit organization of amateur astronomers. The Society holds meetings on the first and third Thursdays of each month. The meeting locations are as follows:

1st Thursday – Cranbrook Institute of Science
500 Lone Pine Road
Bloomfield Hills, MI

3rd Thursday – Macomb County Community College – South Campus
K Building (Student Activities), 14500 Twelve Mile Rd., Warren, MI

Membership is open to those interested in astronomy and its related fields. Dues are as follows and include a year's subscription to Sky and Telescope.

Student .................. $21.00  College .................. $25.00  Senior Citizen .................. $25.00
Individual .................. $30.00  Family .................. $35.00

Stargate Observatory is owned and operated by the Warren Astronomical Society in conjunction with Rotary International. Located on the grounds of Camp Rotary, Stargate features a 12½" club-built Cassegrainian telescope under an aluminum dome. The observatory is open to all club members in accordance with the "Stargate Observatory Code of Conduct".

Lectures are given at Stargate Observatory each weekend. The lecture will be either Friday or Saturday night, depending on the weather and the lecturer's personal schedule. If you cannot lecture on your scheduled weekend, please call the Chairman as early as possible or contact an alternative lecturer. Those wishing to use Stargate must call by 7:00 p.m. on the evening of the observing session. The lecturers for the coming month are:

Sept 30/Oct 1. Ken Strom ................... 977-9489  Nov. 4/5 ...... Alan Rothenberg .......... 355-5844
Oct 7/8 .......... John Root .................... 464-7908  Mar 11/12 ... Doug Bock ................. 533-0898
Oct 14/15 ...... Stephen Franks .............. 255-7215  Mar 18/19 .... Ken Strom ................. 977-9489
Warren Astronomical Society’s Coming Events

October 6 - Meeting at Cranbrook begins at 7:30. Tonight’s talk will be given by Tim Skonieczny on the 1984 Annular Eclipse. The movie “Space Shuttle Flight #7” will also be shown.

October 8 – Campout for the weekend at a location near Pigeon River State Park just a few miles south of Onaway. For more details see Roger Tanner.

October 20 – Meeting at Macomb County Community College. Reports to be given on the Oct. 8-10 campout.

October 15 - Deep Sky Star party and Messier contest to be held at Stargate Observatory at 8:00 pm. If cloudy plan on meeting at Frank McCullough’s.

October 29 - Executive meeting at Frank McCullough’s at 7:00pm. All members are welcome to attend.

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“In case you forget”

Bob Lennox is continuously collecting money for the eyepiece fund. The money he collects is only going towards the purchase of eyepieces for the observatory telescope. Any small contributions would be appreciated very much.

T-shirts are still for sale. Get your favorite color while they last!

Also W.A.S. stickers for sale!

Needed

Anybody interested in donating just a little time each month to further enhance the quality of our monthly newsletter, “The WASP”.

See Judy Butcher.
1983 REGISTRATION INFORMATION

Thank you for your interest in our event. Please read and complete the enclosed form, and return it with the proper registration fee by September 16th. Registrations received after September 16th must include a late fee of $2.00 per adult. Lunch and dinner on Saturday will not be available to those registering at the door.

ABOUT OUR SITE

Camp Shaw-waw-nas-see is a 4H camp near Kankakee, Illinois. It is situated on 130 acres of pleasantly balanced park-like and wooded terrain. The camp facilities include rustic dormitory style cabins, each housing 14 people, restrooms with outdoor showers and flush toilets, a 300 seat dining hall with fireplace, a large open air recreation dining hall, plus a winterized lodge with meeting room & fireplace. The camp is bisected by Rock Creek, which flows through a scenic limestone canyon with sheer rock walls, unique in northern Illinois.

PRELIMINARY ASTROFEST PROGRAM

The schedule listed below is subject to change.

Fri., Sept. 30-
   6:00 PM: Registration desk opens. All night observing session, weather permitting, and a science fiction film will be shown. No food will be provided on site this evening.

Sat., Oct. 1-
   8:00 AM: Registration desk opens.
   9:00 AM: Coffee and donuts will be available in the Dining Hall for all registrants.
9:45 AM: Opening ceremony in Dining Hall.
10:00 AM: Morning talks and presentations.
ALL DAY: Amateur Telescope Display, Astro-Swap Flea Market, commercial exhibits.
12 NOON: Lunch is served in the Dining Hall.
2:00 PM: Afternoon talks, presentations, and telescope judging.
5:00 PM: Dinner is served in the Dining Hall.
       After meal - Featured speaker.
       Announcement of Awards for “Craftsmanship” & “Design Merit”.
       Drawing for Door Prizes.
8:00 PM: All night observing and testing of telescopes for “Optical Performance” awards, weather permitting.
         A science fiction film will be shown and free popcorn will be available.

Sun., Oct. 2-
No organized activities. All visitors must leave by 12 NOON.

**AMATEUR TELESCOPE DISPLAY**

The display will be all day Saturday, with informal Friday and Saturday nights. There will be three classes of non-competitive judging: “Craftsmanship”, “Design Merit”, and “Optical Performance”. All entries must be displayed by 1:00 PM on observing on Saturday.

**CAMPING & ACCOMODATIONS**

Camp Shaw-waw-nas-see has indoor sleeping for 240, in the cabins described earlier. However, since these are dormitory style, some people may still prefer to camp. We ask that you so indicate on your registration form. In the event of rain, campers will be welcome to change their minds and use any of the remaining bunk space that might be available.

Although mattresses are available in the cabins, the camp does not provide linens or pillows for the bunks. Therefore, you should bring these and a blanket or sleeping bag, as the cabins are not heated. RV's are welcome, but there are no hookups.

Since the outdoor lighting is on the same circuits as the indoor lighting, the cabins and washrooms will have no electrical power on Friday or Saturday night if it is clear. No open fires or outside camp lanterns will be permitted if it is clear Friday or Saturday night. It is suggested that you bring your own flashlight with a red filter over the light.

We ask that once you park your car, you try not to move it during the night. In this way you will not risk running over someone else's property.
The Father of Science
by
Brian Johnston

Galileo Galilei was born in Pisa, Italy in 1564. He was the son of Vencenzo Galilei, a composer. Galileo began studying for a medical career, but his true interests were mathematics, physics and astronomy.

When Galileo was 17 he was standing in the cathedral of Pisa. Above him he saw a lamp swinging back and forth. He noticed that no matter whether the weight swung in a wide arc or a small one, the time it took to go from one side to the other and back remained about the same. Watching it swing got him interested in the pendulum. This led to the making of the first good clocks.

In 1609 when Galileo heard of the invention of the telescope in Holland, he got some lenses and made one for himself. After that he made many more. Galileo's most powerful telescope was only 30 power. With his telescope he made many discoveries. Some of them are: Venus seems to go through phases like our own moon, Jupiter has moons that move around it, the glow in the sky called the Milky Way is from millions of stars, and the sun has sunspots on it. His discoveries about Jupiter and Venus helped prove Copernicus' theory about our Solar System was right and that the Earth is not the center of the universe.

There is a legend that Galileo went to the top of the Leaning Tower of Pisa. He dropped two balls of different weight and they hit the ground at the same time. This helped demonstrate his theory that all bodies fall the same speed. He also studied the properties of bodies rolling down inclined planes and falling freely.
He wrote many books about ideas he had. He convinced the authorities that he should be allowed to write a book of theories. In 1610 Galileo published a book “Message from the Stars”, in which he shared his discoveries with his readers. This book made many people mad in the church. Six years later his enemies forced him to go to the Inquisition. The Inquisition told him to “abstain altogether from teaching or defending this opinion or doctrine and even from discussing it”. Galileo gave in, but did not forget his ideas. In 1623 when Galileo’s old friend Cardinal Barberini was elected pope, Galileo thought that he could get away with writing another book so he began writing “Dialogue on the Great World Systems”.

The “Dialogue” is a pretend conversation between three people who have different ideas on life. Salviati, through whom Galileo expresses his own views; Sagredo, who begins by believing in the Ptolemaic system, but is won over by Salviati's brilliant arguments; and Simplicio, who is so old fashioned, he doesn't know what Sagredo and Salviati are talking about. In all, the “Dialogue” is a wonderful argument for Copernican astronomy.

After he wrote the “Dialogue”, he had to go before the Inquisition again. He was accused of believing the opposite of the Bible's teachings. He was found guilty and was imprisoned in his own home for the rest of his life. He was nearly seventy when this happened. After he was imprisoned he wrote his last book, “Two New Sciences” under two handicaps: The need for secrecy and he was almost blind. His friends smuggled the copies over to Holland, where it was published in 1638. Four years later, “The Father of Science” died. Later in that year, Isaac Newton was born.
Canadian-American Observing Session
*** Saturday, October 8, 1983 ***

The Observing Session location is located at the Wheatley Provincial park just past the Town Of Wheatley, which is approximately 10-12 mile from Leamington, this is about a one hour drive from the Ambassador Bridge. Once you cross the Bridge and you are in Windsor take highway 401 to the London-Leamington exit, turn on to the Leamington exit (route 3) to Wheatley. Canadian organizations planning to attend are the: Windsor Centre of the RASC, Chatham-Kent Astronomy Club and the Sarnia Centre of the RASC. Astronomical organizations in the South-East Michigan area that have been contacted are: Detroit Astronomical Society, Astronomy Club of Livonia, University Lowbrow Astronomers-Ann Arbor and the Warren Astronomical Society.

The park has a grassy plain overlooking Lake Erie that means obstruction free observing from Nadir to Lake Erie, of the “Southern Sky”.

What time you arrive is up to the individual, the Sun sets at 7:00 PM. the Moon sets at 8:30 Pm. Both times are Approximate. Mercury, Venus and Mars are morning planets. Jupiter, Saturn are Evening planets/that set one hour after dusk. Some club members are planning to car pool, you will be allowed to stay all night; but you cannot erect any tents for overnight camping, there are picnic tables and fire pits.
MEALS

Your registration fee includes coffee and donuts for breakfast. Those desiring a lunch or dinner must pre-register by September 16th, as we cannot provide these options to those registering at the door.

There will be no food available at the site on Friday night or Sunday morning, and there are no nearby restaurants.

PRESENTATIONS

If you plan to give a presentation, please provide a synopsis by September 16th. Try to limit your talk to 15 minutes. Bring all your slides in a Kodak type tray to avoid delays. We will have available a 16mm sound movie projector, blackboard, and a Kodak Carousel slide projector.

ASTRO-SWAP FLEA MARKET

There will be a flea market for telescope and astronomy related materials and books on Saturday. Buy and sell! Trade! What have you got? What do you need? It is suggested that you bring your own table as tables may or may not be available depending on how many are required for the meals. (Second-hand, homemade, or factory seconds only! Companies wishing to display new merchandise should write for exhibit information.)

KEYNOTE SPEAKER

This year's after dinner speaker will be Rollin P. Van Zandt, of the Peoria Astronomical Society. His talk will be on “Large Optical Telescopes of the Future”.

Mr. Van Zandt has been interested in astronomy for almost 40 years and is a past president of both the Astronomical League and the Peoria Astronomical Society. He was instrumental in acquiring a fine telescope for the Peoria Academy of Science and its observatory at North Moor golf course in Peoria, dedicated in 1955. Mr. Van Zandt was instrumental in the building of a planetarium in Peoria in the early 1960’s, and more recently he has been a major contributor to the design and construction of the Peoria Astronomical Society’s Jubilee Observatory, which houses a 24" reflector.

WORKSHOPS

We will be having three special workshops conducted by individuals noted in their fields.
Telescope Mountings will be conducted by Richard Berry, editor of "Astronomy" and "Telescope Making" magazines.


Telescope Optics will be conducted by Robert E. Cox, associate editor of "Telescope Making" magazine and former "Gleanings" editor of "Sky & Telescope". In addition, Mr. Cox will head up our Telescope Evaluating Teams, which will be giving awards for "Craftsmanship", "Design Merit" and (weather permitting) "Optical Performance".

CAMP REGULATIONS

Camp Shaw-waw-nas-see prohibits alcoholic beverages, firearms, fireworks, open fires, or pets on the camp grounds.

"IRAS" AND CHARLES DOUGLAS ARE STARS AGAIN

On August 10, 1983, Radio and TV news programs aired the new discovery by one of the new breed of explorers in this century. IRAS - the Infrared Astronomical Satellite (recall the discovery of comet IRAS-Araki-Alcock last May). This little robot has done it again by discovering swarms of large particles around the star Vega, in the constellation Lyra, now almost overhead as soon as it gets dark.

“The discovery provides the first direct evidence that solid objects of substantial size exist around a star other than the sun,” said a statement on August 9 from the Jet Propulsion Laboratory in Pasadena, Calif.

The find was due to serendipity, an accidental fortunate discovery, rather than a planned search for planets around Vega. Scientists at JPL just happened to choose Vega to calibrate the telescope and noticed it was “much brighter and larger in infrared light”. when compared to a similar star, strongly suggesting there were large particles in orbit around Vega.

The bodies around Vega showed a temperature of 300 degrees below zero Fahrenheit, far above the temperature of interstellar space. IRAS does not “see” the particles, but can only sense their temperature. All it sees is a ring of particles, anywhere from objects the size of meteors to asteroids or planets.

Vega is a young star, only 1 billion years old (the Earth’s sun is almost 5 billion years old). It is possible that this new “solar system” may be going through the same evolutionary process that our sun and its planets went through 4 billion years ago.

KMBC-TV, channel 9, of course picked up the story and invited someone from the Society to do a “live” report about the new “solar system” on the 10:00 news. Charles Douglas, on very short notice, volunteered to set up his telescope for the interview, and did an admirable job of answering questions about the historic discovery.

-Reprinted from the August issue of “Cosmic Messenger”, newsletter of the Kansas City Astronomical Society.