Six club members went up to East Lansing on Saturday, May 19, to attend the first Astroganza. This is a new convention sponsored by the Capital Area Astronomy Club. It was held at Abrams Planetarium on the M.S.U. campus—a fine facility, as anyone who’s been there knows.

As this was the first time Astroganza had been held, attendance was not large; I would estimate around thirty-five people were there. What numbers may have lacked was compensated by enthusiasm. The Capital Area folks were very welcoming, and gave us a good time.

The first event was a swap meet where the club obtained a new eyepiece (a Plossl) for Stargate. Marty Kunz picked up a pair of Polaroid cameras that were exceedingly cheap. They could provide very interesting results when attached to a scope. Dealers University Optics and Great Lakes Instruments also put in an appearance.

The main event the club was interested in was Starbowl. For those not familiar with this, it follows a format similar to the old College Bowl TV show, in which teams vie to see who can answer the most trivia questions. Our team was made up of yours truly as captain, and fellow members Jeff Bondono, Ken Kelly, and Alan Rothenberg. Marty Kunz and Nancy Rowe offered moral support from the bleachers...er, planetarium seats. Our opposition came from the Capital Area club, and a combination team from the Sunset and Genesee Astronomical Societies (they called themselves "Sas 'n' Gas").

There were three rounds of questions, so all teams could compete with each other. We were somewhat worried at the end of the second round, when Capital Area did a good job on the Sas 'n' Gas team. We were left to worry even more while the featured speaker, Dr. Horace Smith, spoke about his experience while on sabbatical at Dominion Observatory in British Columbia studying RR Lyrae variables. The Dominion Observatory sounds like an interesting facility for anyone who gets out that way.

After Dr. Smith's speech, the final round got started, and the Warren team showed its true strength. Although the Capital Area team gave it a good try, after the dust had cleared the final ranking was Sas 'n' Gas—160 points, Capital Area 300 points, and Warren—460 points. The Warren club received a year's subscription to the Sky Calendar, and each team member got a gift certificate from either Parks Optical or Scope City. Besides these prizes, three Warren members won door prizes: Marty got an Erfle, I received a Meade Barlow, and Jeff won some NASA documents.

I think I can speak for our team when I found this to be a very enjoyable event. I think the Capital Area club was wise to start out modestly in getting their feet wet, and they carried off their first convention well. They deserve particular commendation for reviving Starbowl, which has been dormant for several years. I hope more clubs throughout the state will attend the next convention they sponsor. It's a great way to get to know each other. I know I'll be looking forward to next year's Astroganza.
The Warren Astronomical Society, Inc., is a local, non-profit organization of amateur astronomers. The Society holds meetings on the first and third Thursdays of each month, starting at 7:30 PM.

General Meeting on 1st Thursday:
Cranbrook Institute of Science
500 Lone Pine Road
Bloomfield Hills, MI

Business meeting on 3rd Thursday:
Macomb Community College
South Campus, Building B, Room 216
14500 Twelve Mile Road
Warren, MI

Membership in the Society is open to all. Annual Dues are:
Student: $10
Senior Citizen: $15
Individual: $20

The Wasp is the official publication of the Society. Each new issue of the WASP is made available at the Macomb meeting on the third Thursday. Non-members will be charged $1 for each new issue. Back issues, when available, are free. Requests by other clubs to receive the WASP and other correspondence should be addressed to the editor. Articles for inclusion in the WASP are strongly encouraged and should be submitted to an editor on or before the first Thursday of each month.

Editor: Nancy Rowe
2005 Hyland
Ferndale, MI 48220
Tom MacLaney
Mike O'Dowd
Ken Kelly

Along the many benefits of membership are:
- Discount magazine subscriptions:
  - Sky and Telescope: $16.00 (12 monthly issues)
  - Astronomy: $14.00 (12 monthly issues)
  - Deepsky: $8.00 (4 quarterly issues)
  - Telescope Making: $8.00 (4 quarterly issues)
  - Odyssey: $12.50 (12 monthly issues)
- Free copy of each WASP newsletter.
- Free use of Stargate Observatory.
- Special interest subgroups.
- Call list - don't miss unexpected events.
- Free membership in Astronomical league.
- Free Reflector (Astronomical League Newsletter)
- Free use of W.A.S. Library. (see librarian)
- Rental telescopes (see observatory chairperson)

Stargate Observatory is owned and operated by the Society in conjunction with Rotary International. Located on the grounds of Camp Rotary on 29 Mile Road, 1.8 miles east of Romeo Plank Road, Stargate features a 12.5 inch F17 club-built Cassegrainian telescope under a steel dome. The observatory is open to all club members in accordance to the 'Stargate Observatory Rules.' Those wishing to use the observatory must call the Observatory Chairman by 7:00 PM on the evening of the session. The Observatory Chairman is: Robert Halsall 781-6784

The Society maintains a library of astronomy-related books and periodicals at the Macomb County Community College meeting room. See the Librarian for library rules or to checkout a book.

The Call List is a list of people who wish to be informed of spectacular and unexpected astronomical events. Anyone who notices such an event calls the next person on the call list, who informs the next person, etc. A call list member can specify that he or she not be called at certain times. Any Society member is welcome to join the call list and can do so by notifying Jeff Bondono, 731-4706.

Lectures are given at Stargate Observatory each weekend. The lecture will be either Friday or Saturday evening, depending on the weather and the lecturer's personal schedule. Lecturers should check with the ranger at Camp Rotary early in the week to determine whether scouts will be at the camp, and to inform the ranger of the day and time of the lecture. If you cannot lecture on your scheduled weekend, please lake arrangements to switch weekends with another lecturer, or call the chairman as soon as possible. Upcoming lecturers are:

- Jeff Bondono 7-20/21
- Francis Stabler 7-27/28
- Riyad Matti 8-3/4
- Scott Jorgenson 8-10/11
- Frank McCullough 8-17/18
- Dan Kwietniewicz 8-24/25

Subgroups exist for those interested in specialized areas. Those interested should contact the chairperson, listed below:

- Solar: Ed Cressman 645-1837
- Lunar/Planetary: Alan Rothenberg 624-9329
- Cosmology: Mike O'Dowd 268-7125
- Deep Sky: Doug Bock 750-9369
- Computer: Larry Kalinowski 446-9720

The WASP Volume 22 Number 6 August, 1990


[Image: The WASP]

[Image: The Wasp]
CALENDAR OF EVENTS

Saturday, July 21
Star Party at Camp Rotary starts around 7:00 p.m.
Bring your own food and drinks.

Thursday, July 26  7:30
Computer Group Meeting. Larry Kalinowski has details.

Saturday, July 28
Stellefane

Thursday, August 2  7:30
WAS Meeting at Cranbrook.

Thursday, August 16  7:30
WAS Meeting at Macomb Community College.

Saturday, August 18 early morning
Jupiter Occultation.

Eagle Point Camping
And Observing Weekend

EWAKS Astronomy Club of Ontario has
invited us to observe with them on the
weekend of September 21 and 22.

You can bring your own tent or stay in one of the
cabins. More information will appear in the next
issue of W.A.S.P.

UPCOMING SPEAKER
John Dobson

Wednesday, August 29, 1990
7:00 P.M.
Sponsor: RASC - Windsor Centre
Exact location in Windsor will appear in
next W.A.S.P.

Thursday, August 30, 1990
7:30 P.M.
Detroit Science Center
5020 John R.
Phone: 577-8400

Friday, August 31, 1990
7:30 P.M.
Sponsor: University Lowbrow
Astronomers
Detroit Observatory
Corner of Observatory Rd. and Ann Street
Ann Arbor

IF YOU KNOW OF ANY UPCOMING EVENTS OR SPEAKERS, THAT YOU
WOULD LIKE TO SHARE WITH OTHER CLUB MEMBERS, OR HAVE
AN ARTICLE TO SUBMIT, PLEASE CALL: NANCY ROWE 544-9081.

SMURFS
Southern Michigan Universal Regional
Festival of Stargazers

When:  Aug. 17 through Aug. 19
Where:  River Valley Campground, a
private campground just
north of Loomis off of the
Loomis exit from US 10, near
Clare.
What:  Informal talks, open to all.
Observing, either in the
campground or in the field
on top of the hill.

There is a block of six campsites
reserved -- 8 people to a campsite --
$14.00 per campsite per night.

For more information call: Richard
Walker, Genessee Astronomical
Society, 313-239-6769.
CRANBROOK -- MAY 3, 1990

The meeting began at 7:45 p.m.

There was a discussion of Astronomy Day. There was a low turnout.

The Summer Solstice Party will be at Doug Bock's, Sat. 23 of June.

There will be Saturday observing at Kingswood Court, Milford. The Paver Station site no longer be available. Steve Franks will check with Edison.

Jeff Bondono is putting together a club roster with members and their interests. This will be available in a few weeks.

The magazine "baha" now includes a monthly article on astronomy in Baha.

A new observing site on the west side may be at Camp Dearborn on 96 off GM Road. More information will be available at future meetings.

Several members have now seen Comet Austin. It is probably now at its brightest and can be seen about hour before dawn in the southeastern sky.

The Computer club will meet the fourth Thursday of May. ec.e.t orbits will be available to copy.

The sun spot activity is high now. watch for Aurora.

Ken Kelly gave a talk on the Ephemeris Charts that he is publishing in the WASP.

Jeff Bondono gave a talk on his backyard observatory.

Due to illness in the family, our guest speaker, Conrad Sands, was unable to be at the meeting.

Bradford Smith came in and spoke briefly to the group. He entertained questions (and there were many) from the floor.

The meeting adjourned at 10:20 p.m.

Elizabeth Stabler, Secretary

CRANBROOK -- JUNE 7, 1990

The meeting started at 8:02 p.m. with details of the last board meeting. Marty Kunz talked about the club's showing at Astroganza '90 in East Lansing, where our team beat the local club and a team from the Flint/Tri-Cities area.

Jeff Bondono expressed his need for someone to take over the WASP, as he has plenty to do as treasurer. Nancy Rowe later agreed to accept this duty. Thanks to both of them for their service.

Marty also mentioned the upcoming Solstice Party, which is scheduled for June 23rd. Everyone should plan to attend, and we'll have the usual good time. Down in Ohio, the Apollo Rendezvous is on this weekend (June 9-11).

Two public observing sessions were brought up. Students from Speiser Elementary School were shown the skies at Camp Tamarack, and Jeff needed people on the 16th for a session with Girl Scouts in the 34 Mile and Gratiot area.

Two items were available for this meeting's Show & Tell. Tom MacLaney brought a shower curtain which displayed the spring constellations and Jeff showed an adjustable observing chair he had made himself, which attracted a fair amount of attention.

For the evening's talk, Ken Strom related some information he had gathered in conversation with Bradford Smith, last month's 'surprise' guest. Mr. Smith seems like quite an interesting person--it's good to find out that he still observes just like the rest of us. This was followed by an excellent videotape containing a number of short NASA animations of Voyager at Neptune.

Lastly, Frank McCullough and Marty showed their slides were still interesting for those of us who aren't as determined as the two of them. After this, the meeting adjourned around 10:00 p.m.

Elizabeth Stabler, Secretary

MACOMB -- MAY 17, 1990

The meeting began at 7:40 p.m.

Tom MacLaney gave a list of the new books in the club library.

Ed Love spoke about the trips available for the 1991 eclipse. Star Parties will be available in Hawaii for anyone interested in attending while they are there. Anyone wishing to rent a car in Hawaii should act now. There are few available and are going fast.

The next board meeting will be Thursday, May 24, 1990 at Jeff Bondono's home.

A new observing site on the west side may be at Camp Dearborn on 96 off GM Road. More information will be available at future meetings.

Several members have now seen Comet Austin. It is probably now at its brightest and can be seen about hour before dawn in the southeastern sky.

The Computer club will meet the fourth Thursday of May. ec.e.t orbits will be available to copy.

The sun spot activity is high now. watch for Aurora.

Ken Kelly gave a talk on the Ephemeris Charts that he is publishing in the WASP.

Jeff Bondono gave a talk on his backyard observation site.

Due to illness in the family, our guest speaker, Conrad Sands, was unable to be at the meeting.

Bradford Smith came in and spoke briefly to the group. he entertained questions (and there were many) from the floor.

The meeting adjourned at 10:20 p.m.

Elizabeth Stabler, Secretary

MACOMB -- JUNE 21, 1990

The meeting began at 7:55 p.m. Marty Kunz reminded everyone of the clean-up at Star Gate. Bring a picnic supper and your telescopes.

Ken Kelly told the group of the new 1990 C Comet. It will be at its closest point in November. watch for more information as it gets closer.

The Astro League will hold a conference in St. Louis July 31 - August 4.

W.A.S. took first place in the Star Bowl in May. Great Job!

The West Side group will be meeting in Kingswood Court every clear weekend.

Be sure to check the W.A.S. library for new books. There is also a new multi outlet extension cord for public outings.

Nancy Rowe is our new WASP editor. Welcome Nancy.

The Summer Solstice party will be at Doug Bock's Saturday at 2:00 p.m. His address is 6383 Heartland Road.

The Computer group had an excellent turn out for their last meeting. The next meeting will be Thursday, June 28.

The cosmology group will not meet during the summer. The next meeting will be in September.

A telescope making group will be forming if enough people are interested.

Alan R. discussed building a scotch mount for photography. Jeff B. completed his slides on backyard observatory building. Marty K. had a video on "Rocky Road to Jupiter".

After taking care of some Astronomical League business the meeting ended at 10:05 p.m.
Delta Cephei

By R. Stephen Franks

The bottom left corner of Cepheus is actually marked by a group of three stars - one of which is Delta, an unusual pulsating double. This object's fluctuation from 3.8 to 4.5 magnitude over a period of 5.4 days can easily be followed with the unaided eye by making frequent comparisons with surrounding stars of constant light such as Zeta and Epsilon (magnitudes 3.6 and 4.2, respectively).

Delta is the prototype of a famous and important family of variable stars known as the Cepheids. Found in many remote clusters and galaxies, these objects serve as reliable distance indicators due to a distinct relationship between their periods of pulsation and their intrinsic or real luminosity. Much of our knowledge of the distance scale of the universe has been derived from stars like Delta, which is itself relatively nearby at "only" 650 light-years.

In addition to being an important variable, Delta is also a very attractive double star for small telescope users (resembling famous Albireo in Cygnus). The pale orange primary has a 7.5 magnitude blue companion at a distance of 41 seconds of arc, providing a find "field glass double" as William Tyler Olcott refers to it. The pair is striking in a 2.4-inch refractor at just 30 power: much more magnification on any scope spoils the effect by separating the components unduly.

Rev. Thomas Webb describes Delta as very yellow and blue, adding "especially fine pair, somewhat like Beta Cygni." A fainter, nearly equal white pair of stars lies close to Delta, adding to the beauty of the scene. Barns, using his 10-inch homemade reflector in clear California skies, mentions "two softly radiant clusters in field." These apparently are simply concentrations in the rich Milky Way background rather than actual physical groupings.

The Dobsonian Telescope

And

The Astronomer John Dobson

By Nancy Rowe

Most of you have heard of the Dobsonian telescope. Some of you own a manufacturer's model, others have built a copy, and others, like myself, have had the good fortune of having John Dobson help us build our own "true" Dobsonian. The whole process, from grinding the six inch mirror to finish, took about 20 hours (I had a turned down edge on my mirror which John took 4 hours to correct). I ended up with what John refers to as a "toy" (he's noted for a much larger objective) and a "disgustingly shiny mirror."

Although I have taken astronomy, physics, and chemistry courses I was not prepared for John's class, "Astronomy For Children Under Eighty." He asked some very difficult questions and was quick to point out what the textbooks say and where they are wrong. In three short days, John was able to fill some gaps with ideas and concepts that I may have never learned in college. For John is truly a heuristic cosmologist.

The following is a letter written by John to J. A. Wheeler. John will be in the Detroit area as listed in the Calendar of Events. Come and hear this dynamic and knowledgeable man.
Creation Ex Nihilo or from Wheeler’s 'Pregeometry'?

John L. Dobson © January 1989
Sidewalk Astronomers
1801 Golden Gate Ave., San Francisco CA 94115 | (415) 567-2063

Must we assume that in the absence of particles and fields, and in the absence of space and time, there would be nothing? Or can we, without so rash an assumption, find clues to the nature of what Wheeler and Patton refer to as 'pregeometry'? (...something deeper than geometry, that underlies both geometry and particles: And which they suggest .....must provide the Universe with a way to come into being:)

The other night at the telescopes, when we had them out on the sidewalk for public use, a young man approached me wishing to talk cosmology, and finding me not very enthusiastic that the observational evidence strongly supports the Big Bang, he demanded to know how I solved the problem of 'creation ex nihilo' for the Steady State (as if there were no such problem for the Big Bang ). I asked why he took the creation to be ex nihilo (out of nothing). I suggested that he might be jumping the gun, that it might be an unwarranted assumption. I reminded him that in the absence of time we would have the absence of change, but not necessarily nothing, and that in the absence of space we would have the absence of dividedness and the absence of smallness. "And the absence of largeness," he added. "Yes," I said, "but not necessarily nothing." (Size, whether large or small, would be finite, and in the absence of the finite we have the possibility of the infinite.) I said that to get the Universe out of the changeless, the infinite, the undivided was a very different problem from getting it out of nothing. He didn't seem to see that. He seemed to take the infinite as equivalent to nothing. Then I reminded him that ex nihilo was an expression of the Roman Catholic philosophers but that even they didn't get the Universe out of nothing. God was there. At that point the young man accusingly asked me if I believed in God. I replied that that was not our problem. Our problem was whether the Universe comes out of the changeless, the infinite, the undivided or ex nihilo. And I reminded him that we were not concerned with beliefs but with evidence.

The real question, as I see it, is not whether we live in a Big Bang or Steady State Universe, but whether the Universe arises ex nihilo or from Wheeler's 'pregeometry' In a 1975 article entitled Is Physics Legislated by Cosmogony? J. A. Wheeler and C. M. Patton use the term pregeometry to refer to "...something deeper than geometry, that underlies both geometry and particles." And they suggest that "For ultimately revealing this structure no perspective seems more promising than the view that it must provide the Universe with a way to come into being." Most modern cosmologists, whether proponents of the Big Bang or Steady State models, seem to assume that in the absence of particles and fields, and in the absence of space and time, there would be nothing. But if we go with so rash an assumption we are left without a pregeometry which could 'provide the Universe with a way to come into being'. We are back to creation ex nihilo. If, on the other hand, We take a more cautious approach and assume only that in the absence of time there might be the changeless and that in the absence of space there might be the infinite, the
undivided, then we are left with the possibility of a pregeometry to provide the Universe with a way to come into being.

We came to this terminology only by asking what could not exist in the absence of space and time, that is, in the absence of the geometry. And the terminology is entirely negative; it makes no supposition as to what might exist, only what might not exist in the absence of the geometry. But if changelessness, infinitude and undividedness may be taken as clues to the nature of our pregeometry, then the question is: How could such a pregeometry provide the Universe with a way to come into being?

The problem arises because the changeless cannot be changed nor the infinite be made small nor the undivided be divided. So the problem is how to get from the one to the other. And the only way that I can see to get from the changeless to the changing without changing the changeless is by mistaking the one for the other. But if that is the solution to this problem, then our physics must be participatory and associated with uncertainty, just as when one mistakes a rope for a snake the snake is participatory and associated with uncertainty. Its existence is not independent of the observer and one cannot find out what kind of snake it is. If we have mistaken our pregeometry, which is not in space and time, for the measurements of our physics, which are in space in time, then the measurements of our physics must be participatory and associated with uncertainty.

Arguing from illustration, I think we can show a plausible way that such a pregeometry could provide the Universe with a way to come into being, and also provide a basis for the physics which we see. Just as when a rope is mistaken for a snake, the existence of the snake is nothing but the existence of the rope seen as something else, just so here the existence of the Universe might be nothing but the existence of the pregeometry seen in space and time as something else (as changing, finite, and divided). But just as the characteristics of the rope must show up in the snake for which it is mistaken, just so here the characteristics of our pregeometry should show up in our physics. My suggestion is that the changelessness shows up as inertia, the infinitude as the electrical charge, and the undividedness as gravity.

The Universe as we see it consists of an enormous amount of energy, yet no process known to our physics gives rise to any such energy. But if we have come from this suggested pregeometry by such a process of apparition, then the existence of the energy falls out quite naturally. If the undividedness must show up in the appearance of division, the result will be the gravitational wind up. And if the infinitude must show up in the appearance of the small, the result will be the electrical wind up. I see no other explanation for the existence of the energy which we see.

If there is anything to this suggestion (and it's certainly counter intuitive), then it would seem to me that in order to avoid representing any change in the changeless the Universe must arise as pairs of opposites so that the total linear momentum, the total angular momentum and the total charge of the observable Universe should be zero. If it could be shown that there is an overall residual momentum or electrical charge, I should deem this suggestion to have failed. And if, as this suggestion seems to imply, hydrogen is the primordial apparition, then neither the proton nor the electron should decay. If it arises by apparition, how could it decay by transformation within that apparition? If it can be shown that the proton does indeed decay, then I should deem this suggestion to have failed.