The Astronews

HUI KILOLANI

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The Comology Quest

by Alex Dailey

Did the universe really begin with an explosion in space from a single point billions of years ago? ***Universe—The Cosmology Quest*** illuminates that question and explores the theoretical and observational inconsistencies with the Big Bang theory, while proposing alternate ways of understanding the nature of the universe.

The film, produced, directed, written, and narrated by Randall Meyers, who also provided an original score, premiered in San Francisco's Randall Museum, March 6, 2004, for the two hundred or so in attendance, including myself. John Dobson was there, launching his flyer, "Watchers of the Skies," as were Dr. Halton Arp and Dr. Eric Lerner. All were stars in the feature presentation.

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Inside this issue:

Upcoming Star Parties

Club Party	**May 15**	**Dillingham**
Public Party	**May 22**	**Dillingham**
Public Party	**May 29**	**Kahala/Waikele**
Club Party	**Jun 12**	**Dillingham**
Public Party	**Jun 19**	**Dillingham**
Public Party	**Jun 26**	**Kahala/Waikele**

Upcoming Events:

- The next meeting is at 7:30 p.m. on Tue. May 4th at the Bishop Museum. Speaker: Nancy Lyttle: ***The Future of Astronomy***
- **Sam Rhoads** next Planetarium show on Mon. May 3rd.

President's Message

Those of us who participated in the start parties on March 27th were fortunate to see a phenomenon that won't be repeated for 32 years. Three of Jupiter's moons simultaneously cast shadows on the giant planet's atmosphere. When I got my telescope set up at Kahala Community Park, one shadow was already present. The night sky was cooperating that night: the air was clear and fairly steady, and clouds didn't interfere too much. As the night progressed, a second shadow appeared, then finally a third.

Some of the lucky people who showed up having never looked through a telescope before probably didn't fully appreciated what a rare event they were observing. Saturn was looking particularly three dimensional with the prominent shadows cast by the planet and its rings on each other, and the Moon at high magnification is always dramatic for those seeing it that way for the first time. Those are the memories some first timers will keep of that night. However, if you have been observing long, you know the frustration of losing the opportunity to witness a rare event to bad weather or bad placement in the sky at your observing location. Those experiences make it that much more satisfying when everything works out.

Comets are not so rare, but they are usually very unpredictable. May provides an opportunity, if the comets behave themselves (i.e., do what WE want them to do), to see two bright (perhaps second magnitude) comets in the same month. That IS fairly rare. While the southern hemisphere has a better view of both comets, Hawaii is at least better placed than the U.S. mainland.

Comet LINEAR (C/2002 T7) is a morning object in early May and passes into the

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Observer's Notebook—May 2004

by Jay Wrathall

Planets Close to the Moon

Times are Hawaii Standard Time

May 10, 15h, M 5.2° SSE of Neptune
(95° from sun in morning sky)
May 12, 05h, M 4.0° SSE of Uranus
(76° from sun in morning sky)
May 16, 11h, M 2.3° NNW of Mercury
(26° from sun in morning sky)
May 21, 02h, M 0.33° N of Venus
(25° from sun in evening sky)
May 22, 06h, M 3.2° N of Mars
(38° from sun in evening sky)
May 22, 09h, M 4.9° N of Saturn
(37° from sun in evening sky)
May 27, 05h, M 3.3° NNE of Jupiter
(93° from sun in evening sky)

Other Events of Interest

Times are Hawaii Standard Time

May 2, 18h, Venus Brightest, Mag. -4.5
May 4, 10:34h, Full Moon
May 12, 05h, M 0.99° SSE of Vesta
(71° from sun in morning sky)
May 14, 10h, Mercury at greatest elongation
(26° West of the sun in morning sky)
May 18, 28:53h, New Moon
May 22, 09h, Moon, Mars, and Saturn close together
(Within a circle of diameter 4.88°)
May 24, 20h, Mars 1.6° N of Saturn
(37° from sun in evening sky)

The Planets in May

Mercury
Mercury is visible before sunrise in the morning sky during the middle of May.

Venus
Venus is very bright in the west after sunset, but rapidly loses altitude in May.

Mars
Mars is mag. 1.7, about as dim as it gets, above Venus in the evening sky.

Jupiter
Jupiter is near the meridian at sunset and shines brightly in the evening sky.

Saturn
This will be the last good month for evening viewing of Saturn until late fall. Mag. 0.0.

Uranus
Uranus rises about three hours before sunrise and can be viewed in the east just before dawn..

Neptune
Neptune rises before Uranus but will be better placed for viewing later in the year.

Pluto
Pluto can be viewed late in the evening, but is very dim and difficult to find.

President's Message *(Continued from page 2)*
evening sky later in the month. Comet NEAT (C/2001 Q4) should climb far enough above our southwest horizon to be visible at dusk by the time of its predicted peak brightness on May 6th. It will be easy to hunt for since it will be near the brightest star in the sky, Sirius. LINEAR sets before the Sun on its day of predicted peak brightness but will be much higher at sunset in succeeding days. In late May, both comets might be visible to the unaided eye at the same time, with NEAT high above LINEAR. At any rate, binoculars and telescopes will bring the comets within view even if they don't brighten as much as predicted, so happy hunting.

Chris

Meeting Minutes

H.A.S. Secretary

The meeting was called to order at 7:35 p.m. by President Chris Peterson. There were thirty-one members and nine visitors in attendance. Our visitors were greeted by Chris and they were asked to introduce themselves.

Ultimate Star Party Rain Check: After being rained Friday evening March 26th, participating members with scopes helped out Bishop Museum on Monday, April 5th. Good skies enabled over two hundred Bishop Museum visitors to view four of the five planets in the evening sky. With the transits of two Galilean moons on Jupiter and fairly clear seeing of the four planets and other objects, visitors left well satisfied.

Lecture: Chris informed the members of the April 7th lecture at 7:30 p.m., by Dr. Don Brownlee, on the Stardust Mission to be held at the NASA Pacific Regional Planetary Data Center, POST Building, 5th Floor, Room 544.

Upcoming Activities: Chris asked for help with two upcoming events. If interested call Gretchen West.

I.F.A. Open House: April 18, 2004 - 11:00 am to 4:00 pm - We will have table to inform public about hands-on astronomical opportunities afforded by H.A.S.

National ASTRONOMY DAY - Saturday, April 24. 1:00 pm to 5:00 pm. We will be greeting the public and having solar and moon viewing outside Barnes & Noble, on the second floor parking deck at Kahala Mall. That evening, we will have our monthly urban star parties at Kahala Regional Community Park behind Kahala Elementary School and at Waikele Regional Park. We urge all with scopes to join us on that evening. There are sign-ups for the two events.

School Star Parties: Forrest Luke reports that there are six(6) school star parties scheduled for April and on May 1.

New Business: Jim MacDonald read the preliminary text for a state proclamation for Astronomy Day.

Member Passing - William "Bill" Boyken passed away this past month. A long time member he will be remembered fondly by many members. We all send our condolences to Mr. Boyken¹s family.

John Gallagher reported on the Night Sky Network.

Carl Miller is donating a VHS Video Series, Understanding the Universe featuring Alex Filippenko Ph. D., for use as a club resource. A list of titles from the series will be forthcoming in the Astronews. A portion of Lesson 17, ***Distant Suns***, was viewed.

Asterism Contest extended until May- (Asterism= any recognizable grouping of stars) All HAS members are challenged to find, document , and pinpoint a new asterism. Asterisms should be visible east of Taurus in the springtime sky. Be sure to identify the probable star magnitude.

The meeting was adjourned at 8:47 p.m. and a short Planetarium Sky Tonight show was available for interested members at 9:00 p.m.

Respectfully Submitted,
Gretchen West, HAS Secretary

Meteor Log—May 2004

by Mike Morrow

Increasing twilight in the northern hemisphere hampers observations. The month's major shower, the Eta Aquarids, is wrecked by the full Moon—where is Xena?

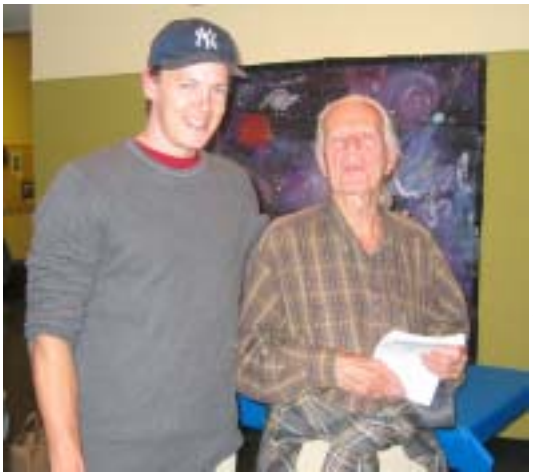
Wednesday the 5th, the ***Eta Aquarids***. (Radiant 22h 32m -01 deg.)
Rates may be from about 30 to 50 an hour and at times a few more or somewhat less. The problem with this shower is the radiant rises in twilight only an hour or two before dawn for mid-northern latitudes and only a bit before that for Hawaii. This shower is associated with Comet Halley.

Sadly, the full Moon on the 4th will really prevent much being seen at all this time, even from favorable sites.

If you are interested in observing meteors
contact Tom Giguere on Oahu at 672-6677 or write to:
Mike Morrow, P.O. Box 6692, Ocean View, Hawaii 96737

Cosmology *(Continued from page 1)*

John Dobson assured us that he was "more controversial than anyone who had been burned at the stake," but "they can't burn you at the stake anymore" and that was a "good thing" and could anyone give him a ride to the airport in the morning. He also declared that he "wasn't responsible for anything in the film." Then Randall Meyers took the stage and prefaced his film with a short introduction about himself. Meyers, a composer, has a house in Germany, he explained, and three years ago sought out an acquaintance with Dr. Arp, who also lives in Germany (doing work at the Max Planck Institute for Physics and Astrophysics). Thus began the friendship which inspired Universe, the film.



According to the film's flyer, "Universe is the story of the personal and scientific endeavor of a number of leading cosmologists to present different, if not more validated explanations of the [non-Big Bang] universe in which we all live, and to do so in a language both appealing and excitingly easy to understand."

The film is a compilation of many interviews, presented thematically to create a narrative in two chapters, each about fifty minutes long. Part 1, "Quasars and the Discordant Red shift Problem," avails itself of Arp's "peculiar galaxies," by asking the viewer to consider objects like NGC 4319, a galaxy paired with a quasar (see http://www.electric-cosmos.org/arp.htm). This website puts it quite well:

Arp discovered, by taking photographs through the big telescopes, that many pairs of quasars ("quasi-stellar objects") which have extremely high redshift z values (and are therefore thought to be receding from us very rapidly—and thus must be located at a great distance from us) are physically associated with galaxies that have low red shift and are known to be relatively close by. Arp has photographs of many pairs of high red shift quasars that are symmetrically located on either side of what he suggests are their parent, low red shift galaxies. These pairings occur much more often than the probabilities of random placement would allow. Mainstream astrophysicists try to explain away Arp's observations of connected galaxies and quasars as being "illusions" or "coincidences of apparent location." But, the large number of physically associated quasars and low red shift galaxies that he has photographed and cataloged defies that evasion. It simply happens too often. Because of Arp's photos, the assump-

Treasurer's Report

by Jim MacDonald

HAS Financial Report as of April 15, 2004

Initial Balance:	$5,540.66
Receipts:	
Astronomy Payment	58.00
Dues Received	219.00
Polo Shirt Deposit	55.15
S&T Payment	131.80
T-Shirt Sales	45.00
Telescope Fee	40.00
Total Income:	$548.95
Expenses:	
Astronews	76.75
Awards - Science Fair	50.00
Magazine Subscription	194.28
Postage	39.67
Refreshments	5.21
Total Expenses:	$556.01
Final Balance	$5533.60

We had five new members join the club this month. They are **John** and **Linda Oszajca**, **Frank Pino**, **Thomas Elam** and **Mary Ann Kadooka**. In addition, memberships were granted to **Jenna Dionisio** and **Philip Mocz**, winners in the astronomy category in the 2004, Hawaii State Science and Engineering Fair. Clear skies to all!

Cosmology *(Continued from page 6)*

tion that high red shift objects have to be very far away—on which the "Big Bang" theory and all of "accepted cosmology" is based—is proven to be wrong! The Big Bang theory is therefore falsified.

Arp's book, ***Quasars, Red shifts and Controversies*** is the definitive exposition of his work, though just about any internet search will yield a wealth of information (as usual—use discretion when assessing website content). Arp's work has had consequences. Why, since he published his controversial work, has he been sidelined and silenced by NASA and other mainstream astronomers? Do his observations threaten prevailing theories? What do career Big Bang theoreticians (or their predecessors, like Albert Einstein) have at stake in light of data that doesn't fit with their theories? What are the theological implications of the Big Bang?

Universe is dedicated to Sir Fred Hoyle, who passed away in 2001, and was the coiner of "Big Bang," a term he used pejoratively. He was well-known in scientific spheres as a progenitor of the steady-state theory, in

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Cosmology *(Continued from page 7)*
which the universe has always existed and will always continue to exist in many permutations.

In Part 2, "The Theoretical Weakness in Big Bang Cosmology and Insights into the Plasma Universe," the film continues with a plethora of scientific personalities, who circle around the Big Bang, knocking bricks from its foundation while issuing theoretical cries of their own. For example, Geoffrey and Margaret Burbidge are the distinguished proponents of Arp's red shift observations. Jayant Narlikar reveals that to get the Big Bang equations to work, theoreticians have introduced a fudge factor on the order of 10^108. Jack Sulentic describes humorously the peer pressure to conform and the social stigma that comes with proposing alternative explanations of the universe. Eric Lerner presents us with a detailed account of the plasma universe, and points out—quite embarrassingly to Big Bangers—that their predictions and numbers simply don't add up (unless they posit more theoretical devices—not based on empirical data). His peroration is woven into a nice interlude on the history of plasma research, with an explanation of the Aurora Borealis. Another astronomer explains that his suspicions about the Big Bang theory began when he discovered that Pope Pius XII was an avid fan of that cosmology. And Nobel Laureate Kary Mullis informs us humans that we are all fools to think we can devise any complete explanation of the universe in the hundred or so years we have been really attempting to do so.

Universe is a bit overly dramatic sometimes, due to Meyer's original score which plays in the background, announcing each scientific revelation with leitmotif. The high-end 3D animations are illustrative, but at times the metaphors get corny. The Ptolemaic system, which represented the universe as circles within circles around the earth, failed to fit hard astronomical facts and it wasn't until the system was abandoned that observed planetary elliptical orbits made sense. This is represented in the film by a crystalline sphere centered within a mini-Parthenon structure with a header, "Big Bang," which crumbles to destruction by the end of Part 2. Nevertheless, the music and animation are welcome counterpoints to the subjects of cosmology and plasma theory, and the net effect is a sort of B-grade NOVA production visually, with A-grade content.

If the film could be distilled, the one message reiterated over and over again would be that the Big Bang theory, as the world's predominant cosmology, is accepted de facto, like holy writ. And the film asks you, the viewer, if nothing else, to seriously reconsider your own assumptions about the Big Bang.

After the film I was elated with new cosmological possibilities. As the audience dispersed into the night, I looked up pensively to the full moon above, remembering red shifts, plasma, human beings competing to make order of the Big Bang, until finally I raised my hand in the air and thought, "Hmm, just three-fingers away from Jupiter."

For more info and/or ordering details, please visit:
http://www.whiteoaks.com/pipermail/dobson2000/2004-March/000739.html

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IC-2118 The "Witchhead" Nebula—Stephen Pitt