



Gemini's Scott Fisher to speak at Sept. Meeting

Mauna Kea and Me: *The Story of an Astronomer and a Mountain*

Scott's talk will be centered on a discussion of Mauna Kea, one of the most highly regarded astronomical sites on Earth.

He will describe why Mauna Kea is such a good site for astronomy, discuss the collection of telescopes on the summit, and present some of the latest and greatest results to come from the Gemini Observatory.

Upcoming Star Parties

Club Party	Sep 8	Dillingham
Public Party	Aug 15	Dillingham
Public Party	Aug 22	Kahala/Waikele
Club Party	Oct 6	Dillingham
Public Party	Oct 13	Dillingham
Public Party	Oct 20	Kahala/Waikele
Club Party	Nov 3	Dillingham

Inside this issue:

Club Information	2
President's Message	2
Observer's Notebook	3
Minutes	4
Meteor Log	7
Treasurer's Report	7

Upcoming Events:

- The next meeting is at 7:30 p.m. on **Tuesday, Sept 4th** at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is Friday, **Aug 3rd** at 7:00 pm.

President's Message

Google Earth has come out with a new product called "Sky". As with most planetarium programs, you can look around the entire sky and make some choices about how it appears. For example, you can choose whether or not to show lines depicting the constellations or their names. You can also choose whether to display icons for Messier objects, NGC entries, Hubble Space Telescope images, and the like.

The main benefit of Google Sky, though, is the inclusion of many images embedded at their proper scales. If you have used Google Earth, you are familiar with the way one can zoom in or out to change the level of detail visible. This allows for very useful interactive exploration activities.

Although the scale of an image in a book, for example, might be given, it can be difficult to get a good feel for how big that object is in the sky or how it compares to other objects. With Google Sky, it's possible to zoom in and out at will.

One thing that impressed me was the miniscule areal extent of most Hubble images. The Hubble images are usually so small that they disappear from notice at a normal browsing scale. Many of them are embedded in smaller-scale images taken by ground-based telescopes. It can be fascinating to watch as a nondescript tiny patch of sky grows and blossoms into a now-familiar Hubble image, then shrinks back to obscurity as you zoom back out.

This is not going to replace the planetarium programs that many of us use, at least in its present form. It's likely, however, that improvements will be made to this brand new program. For now, it seems that its major strength is the way it allows you to explore the sky and see images at different scales to gain a better feel for what's out there and how big it appears in the sky.

Chris

<<http://earth.google.com>>

**Hawaiian Astronomical
Society**
P.O. Box 17671
Honolulu, Hawaii 96817

President

Chris Peterson

956-3131

chrisp@higp.hawaii.edu

Vice President

Barry Peckham

524-2450

barry@litebox-telescopes.com

Secretary

Gretchen West

737-4742

gwest002@hawaii.rr.com

Treasurer

Jim MacDonald

261-2162

jim.macd@hawaiiintel.net

Board Members-at-Large

John Gallagher 683-0118

gallaghej002@hawaii.rr.com

Sue Girard 680-7256

sue@kilolani.net

The **Astronomer Editor**

Paul Lawler

395-8121

paul@kilolani.net

HAS Webmaster

Peter Besenbruch

prb@lava.net

The Astronomer is the monthly newsletter of the Hawaiian Astronomical Society. Some of the contents may be copyrighted. We request that authors and artists be given credit for their work. Contributions are welcome. Send them to the Editor via e-mail. The deadline is the 15th of each month. We are not responsible for unsolicited artwork.

Planets Close To the Moon

Times are Hawaii Standard Time

Other Events of Interest

Times are Hawaii Standard Time

- Sep 4, 03h, M 5.9° N of Mars
(84° from sun in morning sky)
- Sep 8, 15h, M 8.7° NNE of Venus
(29° from sun in morning sky)
- Sep 9, 16h, M 0.76° SW of Saturn
(16° from sun in morning sky)
- Sep 13, 01h, M 2.2° SW of Mercury
(22° from sun in evening sky)
- Sep 18, 04h, M 5.6° S of Jupiter
(77° from sun in evening sky)
- Sep 23, 10h, M 1.3° SSE of Neptune
(139° from sun in morning sky)
- Sep 25, 06h, M 1.6° NNW of Uranus
(164° from sun in evening sky)

- Sep 2, 11h, 2 Pallas at Opposition
- Sep 9, 09h, Uranus at Opposition
- Sep 11, 02:44h, Moon New
- Sep 21, 23h, Mercury 0.10° N of Spica
(25° from sun in evening sky.)
(Closest conjunction of a planet with a 1st magnitude star this year.)
- Sep 22, 19h, Venus brightest; mag. -4.6
- Sep 22, 23:54h, Autumn Equinox
- Sep 26, 09:46h, Moon Full
- Sep 29, 06h, Mercury at greatest elongation
(26° East of the Sun)

Planets in September

<p> Mercury has an evening apparition visible most of the month. Look for it very near Spica on 21 Sept just after sunset.</p>	<p> Venus shoots up quickly in the morning sky this month, reaching it's brightest magnitude (-4.6) on Sept 22.</p>	<p> Mars rises in late evening in Sept. By the end of the month it will have a diameter of 10" and a magnitude of 0.0.</p>
<p> Jupiter is in the southwest at dusk and sets about 3 hours after the sun.</p>	<p> Saturn is visible in the morning sky and by the end of the month rises about 3 hours before the sun.</p>	<p> Uranus reaches opposition this month and is visible all night. Best observed near midnight.</p>
<p> Neptune reached opposition last month so is still well placed for evening viewing.</p>	<p> Dwarf Planet Pluto is still pretty well placed for viewing in the Sagittarius during the early evening.</p>	<p> Dwarf Planet Ceres rises about 10:00 pm and can be viewed after midnight in Taurus. At magnitude 7.3 it should be fairly easy to find.</p>

President Chris Peterson called the August 7, 2007 meeting of the Hawaiian Astronomical Society to order at 7:37 p.m. The meeting was held at the Atherton Halau of the Bishop Museum. In attendance were thirty-one members and five visitors.

Hawaii Space Lecture Series- This month, the Hawaii Space Lecture Series will take place on August 28, 2007 at 7:30 p.m., at the NASA Pacific Regional Planetary Data Center, room 544 of the POST Bldg, at the University of Hawaii. Planetary scientist Dr. Luke Flynn, HIGP, Director of the Hawaii Space Grant Consortium and Director of the Hawaii Space Flight Laboratory will lecture on “The Hawaii Space Flight Laboratory.” For further information you can go to <http://www.higp.hawaii.edu/prpdc>.

Guest Speaker for September Meeting – Scott Fisher has tentatively been slated as our guest speaker for the September general membership meeting. He has indicated that he will speak about observatories and the advantages that Mauna Kea offers as an observing location.

Summer Workshop – The Institute of Astronomy is holding the First Annual Friends Summer Astronomy Workshop on the Big Island of Hawaii from 17-19 August. The workshop will offer tours of IFA Hilo facilities, lectures by IFA astronomers, summit tours and a two-hour visual observing experience utilizing the UH 88” and 24” telescopes. The event is open to Friends of the IFA.

Upcoming Events – The Perseid meteor showers will have the greatest concentration of meteors should take place late evening on August 12th

into the early morning of August 13th. We have no scheduled group viewing. Dark skies and a good chair should be a must for comfortable viewing.

There will be a lunar eclipse on the evening of Monday, August 27th into the morning of Tuesday, August 28th. There will be an event scheduled for that evening at the Bishop Museum. If you are an astronomer and wish to help out at the event, contact Forrest Luke. The festivities from 9:30 p.m. through 1:30 a.m. on the grounds of the Bishop Museum will include telescopes for viewing as well as three lecturers.

Star Party Report – There are no school star parties scheduled until October 2007.

Newcomers – Chris Peterson welcomed the father and son duo of Dan Fullenwider, Sr. and Dan Fullenwider, Jr.. Joining us for the first time were also Larry Fenton and Kenny Tung.

General Information- H.A.S. President, Chris Peterson gave a brief explanation of the Saros Cycle, an eighteen-year solar cycle.

Lift-off - The Phoenix Mission to Mars has taken off. This new mission takes up where the late, lamented Mars Polar Lander was to have gone. With new technology the Phoenix Mission will search for “water ice”. Chris Peterson discussed the steps of the mission and its mode of operation.

Super Bolide - Chris Peterson also informed the membership of the July 25, 2007 daytime visual sighting of a super bolide, mag. -20, in the skies over Bologna, Italy.

(Continued on page 5)

While it's true that 58% of the audience at a recent taping of the French version of the show, "Who Wants to be a Millionaire" thought that the Sun revolves around the Earth <<http://urltea.com/1cdq>>, on Monday, August 27th, stargazers in Hawaii were treated to a clear demonstration that it is, in fact, the Moon which revolves around the Earth.

The HAS participated in an event on (what's left of) the great lawn at Bishop Museum. The night started out "partly cloudy" but provided intermittent views of the moon, Jupiter and various other celestial treats. As the umbra started to "bite" into the Moon, the lines at the telescope began to grow longer.

By 11:30 the bulk of the Moon had taken on that distinctive coppery color that is distinctive to a lunar eclipse. Why does it turn red anyway? Well, you can credit the Earth's atmosphere. Red light "bends" more than blue light, which is scattered by the atmosphere. This is the same rea-

son that sunrises and sunsets appear reddish. If we had no atmosphere, then the shadow would be black, and at totality the moon would be invisible. So essentially you are seeing all of the



Earth's sunrises and sunsets reflecting off of the Moon... but I digress.

Totality was achieved at 11:52 p.m. and lasted for nearly an hour and a half. Shortly after totality the clouds rolled in and the sky went from "partly cloudy" to "mostly cloudy"... including a period of extremely damp "mostly cloudy" but the Moon was still there, off and on.

It was interesting to watch the bright limb as it circled around the edge of the Moon, and Barry Peckham pointed out that at the edge of the bright limb the complementary colors of red (bluish/greenish) appeared in a thin band.

Since the totality lasted so long the crowds had pretty much disbursed by 12:30, but many of us hung around until 1:30, just to make sure the Moon actually returned.



Seeing in the Dark

A film by Timothy Ferris

America's Writer Laureate of astronomy invites millions of viewers to enjoy the wonders of the night sky in a spectacular HDTV special on PBS Stargazing is the subject of Seeing in the Dark, a 60-minute, state-of-the-art, high-definition (HDTV) documentary by Timothy Ferris that premieres September 19, 2007 at 8:00 p.m. on PBS (check local listings). The film, Ferris' third, is based on his book, Seeing in the Dark (2002), named by The New York Times as one of the ten best books of the year.

"Seeing in the Dark is meant to alter, inspire and illuminate the lives of millions," said Ferris. "It introduces viewers to the rewards of first-person, hands-on astronomy — from kids learning the constellations to amateur astronomers doing professional-grade research in discovering planets and exploding stars. I hope it will encourage many viewers to make stargazing

part of their lives, and a few to get into serious amateur astronomy."

To capture the beauty and wonder of the night sky, Ferris assembled a world class team. The film features memorable deep-space images by some of the world's most respected astrophotographers, and an original musical score by Mark Knopfler and Guy Fletcher of Dire Straits fame. Like the book, the film is in part a personal account of Ferris' life-long devotion to stargazing, beginning with his introduction to the night sky as teenager in Florida in the '50s. "Back then we had big skies and small telescopes," Ferris says in the film. "We couldn't observe much beyond the Moon, the planets, and a few bright star clusters, but we had a lot of fun, and we came to cherish the telescope as an instrument of deliverance, the keys to a vast and spectacular kingdom."

Minutes (Continued from page 4)

New Equipment – H.A.S. member Steve Chun provided everyone a look at his new Meade 500 scope. The 80-mm/ 3.2 in. scope has a focal ratio of f6. The economical scope with a triplet lens is easy on the pocketbook, at \$599. Gretchen West provided a few pictures taken at the eyepiece utilizing a hand-held Sony Cyber-shot 7.2. She got some surprisingly clear views of Jupiter and the moon.

Book Talk – Gretchen spoke briefly about a new book find, Serge Brunier's "The Concise Atlas of the STARS" with constellation photography by celebrated amateur astrophotographer, Akira Fujii. This is a compact

and condensed guide to the night sky, utilizing superb astrophotography with acetate overlays, which map out areas of interest. A good student interest book. Night Sky Network – Should you be interested in any of the NASA Night Sky Network teleconferences please contact John.

There was a short discussion of how members might participate at star parties and we can all share the wealth of information our members possess.

The meeting was adjourned at 9:06 p.m. and refreshments were served.

Respectfully Submitted,
Gretchen West

HAS Financial Report as of August 15, 2007

Initial Balance:	\$4,380.59
Receipts:	
Dues Received	98.00
Telescope Fees	20.00
Total Income:	\$118.00
Expenses:	
None	
Total Expenses:	\$0.00
Ending Balance:	\$4,498.59

This month our membership increased by seven. They included **Tim and Scilla Smith; William Mosa; Kenny Tung; Colleen, Jeremy, and Jesse Soares**. Thanks those members renewing their membership this month. Clear skies to all!

Meteor Log—September 2007

by Mike Morrow

The year's best sporadic rates are on show this month, along with several mysterious minor showers. September is Augusts' poor relation.

Saturday the 1st the **Alpha Aurigids**. Radiant 05h36m +42 deg. The radiant is above the horizon after 11PM local time and the Moon will be a mess then also. However, an outburst has been predicted for about 1:37AM (11h37m UT) with rates perhaps in the tens to hundreds, possibly higher.

Other shower are minor and the Moon will mess most of them up..

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

Join the **Friends of the Institute for Astronomy (FIa)**

As a "Friend" you can be directly involved in the mission of the University of Hawaii's Institute for Astronomy. You will be invited to meet with IfA and visiting scientists, attend star parties and other activities. You will also receive quarterly newsletters and invitations to special events at the IfA. For more information and an application form go to

www.ifa.hawaii.edu/friends

**H.A.S.
P.O. Box 17671
Honolulu, HI 96817**

Place stamp
here. Post
Office will not
deliver mail
without proper
postage



taken on LX200r w/ 6.3 FR & Canon XTi - ISO 100, 15 sec.
(Photo by club member Stephen Chun)