

## Imiloa Astronomy Center

Barry Peckham

If the sun is out, your first impression of Hilo's new tribute to tropical peaks will be a blinding glare. 3 cones, shingled with stainless steel, rise above a substantial concrete façade and shout to the visiting public that this place is all about the high ground. The parking lot in front of the building is newly landscaped and a tour passed me on the way to the entry. Their leader took pains to explain each native Hawaiian planting. It seemed doubtful that the group would be "peaking" inside the center: too much additional expense.

Inside the building, no expense was spared in the interest of...? Well, there's the rub. What I want to tell you about this place is un-astronomical. My contention, based upon what I saw, is that

*(Continued on page 5)*

## Inside this issue:

Club Information	2
President's Message	2
Observer's Notebook	3
Minutes	4
Meteor Log	6
Treasurer's Report	7

## Upcoming Star Parties

<b>Public Party</b>	<b>Sep 2</b>	<b>Kahala/Waikele</b>
<b>Club Party</b>	<b>Sep 16</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Sep 23</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Sep 30</b>	<b>Kahala/Waikele</b>
<b>Public Party</b>	<b>Oct 14</b>	<b>Dillingham</b>
<b>Club Party</b>	<b>Oct 21</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Oct 28</b>	<b>Kahala/Waikele</b>



## Upcoming Events:

- The next meeting is at 7:30 p.m. on Tuesday, Sept. 5<sup>th</sup> at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is Friday, Sept. 1st at 7:00 pm.

## President's Message

And then there were 12. By the time the issue of Astronews is printed, the International Astronomical Union (IAU) will probably have adopted their executive committee's resolution that for the first time formally defines what a planet is. It states that a planet is any body that is not a star but orbits a star, doesn't orbit another body, and is massive enough for its own gravity to form it into a nearly spherical shape. This definition keeps Pluto, adds 2003 UB313 (currently nicknamed *Xena*), and Ceres, the first-discovered asteroid that was considered a planet when it was initially found. The subsequent discovery of giant Neptune and numerous other smaller asteroids dislodged Ceres from the planet club in most people's reckoning.

Rounding out the 12 planets is Charon, formerly known as the largest satellite of Pluto. Now Pluto and Charon will be classified as a double planet because they orbit around a center of mass (*barycenter*) that is between the two. The Earth and Moon are the next closest pair to being a double planet, but the barycenter is still well inside the Earth, so the Moon remains a moon.

The European SMART-1 spacecraft will end its mission by crashing into the Moon. Fortunately, this is scheduled to happen during our September Kahala and Waialeale star parties, at 7:41 p.m. HST on September 2nd. The impact will occur at a speed of only 2 kilometers per second, much slower than most cosmic impacts, and only a small crater will be created. However, Project Scientist Bernard Foing suggests that even small amateur instruments might be able to detect the plume of dust thrown up by the impact if it reaches high enough to be illuminated by the Sun.

*(Continued on page 7)*

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**Planets Close To the Moon**

Times are Hawaii Standard Time

- Sep 6, 12h, M 1.6° SSW of Jupiter  
(35° from sun in evening sky)
- Sep 6, 20h, M 0.60° SW of Venus  
(40° from sun in evening sky)
- Sep 15, 00h, M 4.3° SSE of Neptune  
(141° from sun in evening sky)
- Sep 16, 13h, M 2.2° SSE of Uranus  
(164° from sun in evening sky)
- Sep 18, 17h, M 5.8° NNW of Mars  
(127° from sun in morning sky)
- Sep 28, 22h, M 4.5° NNE of Saturn  
(57° from sun in morning sky)









Mercury is closer than 15° from the sun when near the moon in September.

**Other Events of Interest**

Times are Hawaii Standard Time

- Sep 1, 22:00h, Venus 1.2° SSW of Jupiter  
(39° from sun in evening sky)
- Sep 3, 08:45h, Moon New
- Sep 6, 17:00h, Moon, Venus, Jupiter close together  
(Within 4.2° circle, 38° from sun in evening sky)
- Sep 14, 03:00h, Moon 1.2° from Beehive Cluster  
(45° from the sun in morning sky)
- Sep 17, 16:00h, Mercury at superior conj. with sun  
(Passes into evening sky.)
- Sep 17, 16:01h, Moon Full
- Sep 22, 12:23h, Fall or Autumn equinox

**Planets in September**

<p> <b>Mercury</b></p> <p>Mercury will be visible in the morning twilight during the first week of September.</p>	<p> <b>Venus</b></p> <p>Shines very brightly near Jupiter in the west after sunset. They are a little over 1° apart on Sep 1.</p>	<p> <b>Mars</b></p> <p>Rises about 10 pm, brightens to -1.7 magnitude, and will be 18" in diameter by month's end.</p>
<p> <b>Jupiter</b></p> <p>Passes below Venus in evening sky – they are very close together at the start of the month..</p>	<p> <b>Saturn</b></p> <p>Appears in the morning sky before sunrise, but still too close to the horizon for good viewing.</p>	<p> <b>Uranus</b></p> <p>Is well placed for viewing late in the evening in Aquarius. Mag +5.8.</p>
<p> <b>Neptune</b></p> <p>Near Uranus in the late evening sky in the constellation of Capricornus. Mag +7.9.</p>		<p> The <i>former</i> planet <b>Pluto</b></p> <p>Can still be viewed in the early evening in the constellation Serpens Cauda.</p>

The August 1, 2006 meeting of the Hawaiian Astronomical Society was called to order at 7:40 p.m, with 28 members and 3 visitors (Dave Plaskitt, and father and son, Douglas and Doug Chowning) in attendance.

### OLD BUSINESS

Chris Peterson reviewed current astronomy news items, including the possible reissue of Apollo 11 clips, the discovery of the largest known structure in the universe, visible and infrared views of Jupiter's Red Spot and Red Jr. and the Smart I European Spacecraft impact on the Moon Sept.2, 2006.

### NEW BUSINESS

*Swap Meet* - An H.A.S. Swap Meet will take place during the November 2006 meeting. Those interested in participating will be able to view and sell items during the latter half of that month's meeting.

*The Waimea Valley Audubon Center* has asked for two astronomers to help out at the center the evening of August 25th.

*Images from Saturn's satellite* - Members viewed a NASA video of the January 14, 2005 Cassini probe descent to the surface of Titan

*NASA Night Sky Network Update* - At-Large Member, John Gallagher presented information about the latest *Night Sky Network* teleconference.

Interested individuals should contact John for further information.

*News from Dillingham Field* - Vice President, Barry Peckham spoke briefly about the Abrams Planetarium and about conjunctions of the planets Venus and Mercury. Barry reminded all members and friends, who travel

out to Dillingham Field for public and club star parties, that the gates are being locked around 6:30 pm. If you find yourself outside the locked gate, please call H.A.S. Board members you believe will be inside to let you in (try 292-2523)! **DO NOT CALL THE PHONE NUMBER POSTED ON THE GATE.** The security guard phone numbers are only to be used in case of dire emergency.

*Less Light Pollution Lottery* - Barry Peckham has begun a lottery that asks members to identify and take pictures of businesses and buildings that have installed and promote practices that reduce light pollution. Submit the name, address, and jpeg image of the area by e-mail or in person to Barry Peckham. We will send certificates of appreciation for good lighting practices to these entities, and identify them to the City and County of Honolulu.

*Rental Scopes* - Members are encouraged to rent our 6" and 8" scopes, which rent for \$20 per month. Bing Fu has a 10" scope for sale.

*Chi Cygni* - Paul Lawler reminded all members that Chi Cygni, a variable star, in the neck of the swan is very bright for the next month or so and won't be this bright in the night sky again for a few decades.

The meeting was adjourned at 9:02 p.m. and refreshments were served. A few members congregated at the Planetarium get an overview of the night sky from Joanne Bogan.

Submitted by H.A.S. Secretary,  
Gretchen West

**Imiloa** (Continued from page 1)

the Imiloa Center's message is un-astronomical. Whoever paid for this place has more pressing needs than the need to share astronomical milestones with you and me.

painted PVC pipes and stroll through a forest of posters and display screens. The text is 50% English and 50% Hawaiian. In other words: every written and spoken bit of information is translated into Hawaiian for all those native



A grand mosaic graces the round lobby floor. It features the ocean with a double-hull canoe sailing toward a white-capped mountain: the focus of the feud. Surely you must have heard about it. Native Hawaiians and research astronomers have been duking it out for squatting rights at the summit. Native Hawaiians were either ignored or else tricked in the recent past, but more recently have blocked additional development by the astronomers on Mauna Kea. Imiloa is a glaring reaction to those defeats.

Admission to the exhibit hall and planetarium is a bit pricey, like a day pass to the Bishop Museum. With ticket in hand, one can then wind one's way through a thicket of camo-

speakers who are unfamiliar with the English language. One poster, in the curled shape of a Polynesian sail, features my primary mentor and Hilo resident, Peter Michaud, with a quote relating to how he loves getting folks jazzed about the night sky. Even this sentiment is translated into Hawaiian.

The posters and videos in this area all point to the same conclusion: Mauna Kea is sacred to Hawaiians. Mauna Kea is special to astronomers. Hawaiians and astronomers should be sharing the white mountain because of its value to both groups. See how the astronomy community respects Hawaiians by throwing so much money at this problem of sharing the summit.

*(Continued on page 6)*

This month has about the best sporadic rates for the northern hemisphere, but the minor showers are at best very poor and a bit mysterious. No shower this month has more than about 4 meteors at best. Just for fun here are the dates and coordinates for the radiants. Good Luck!

Friday the 1st the **Alpha Aurigids**. Radiant 05h36m +42 deg. The Moon helps one see what one can for this drizzle.

Saturday the 9th, the **Delta Aurigids**. Radiant 04h00m +47 deg. The few meteors from this shower are swift and quite faint.

Wednesday the 20th, the **Piscids**. Radiant 00h20m -01 deg. The new Moon helps but the few meteors are typically faint and slow-moving.

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

## *Imiloa (Continued from page 5)*

The Imiloa planetarium is larger than the one we are used to. It's show was about Mauna Kea and how Hawaiians held it sacred, how great astronomy was being done on the summit and how the summit must be shared. There were cool spinning-and-zooming graphics of the "classic" 9 planets, and there was a dizzying laser show for the last 10 minutes. There were no presentations of the night sky except in projected graphics shot by Peter Michaud. A few seconds worth of background starfields indicated that this planetarium projector shows stars as little round balls, similar to what we are used to in Honolulu.

The show is tailored to the visiting



(Continued on page 7)

**HAS Financial Report as of August 15, 2006**

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Initial Balance:.....	<b>\$4,226.85</b>
Receipts:	
Donations .....	36.10
Dues Received.....	166.00
S&T Payments.....	65.90
Astronomy Payments .....	68.00
T-Shirt Sales .....	28.00
Telescope Fee.....	40.00
Total Income: .....	<b>\$404.00</b>
Expenses:	
Astronews.....	69.69
Magazine Subscriptions .....	113.39
Postage .....	2.31
Excise Tax.....	15.00
Refreshments.....	4.80
Total Expenses: .....	<b>\$382.62</b>
Ending Balance:.....	<b>\$4,424.36</b>

This month the club welcomes nine new members. They are **Dave Plaskett, Eileen Helmstetter, Tate Plaskett; Doug and Douglas Chowning; Benjamin Detroy, Jose Jorge Ho Gallardo, Elina Ho-Detroy and Lipuvina Vejarano**. A special thank you to **Jeffrey Schmidt, Glenn Nanamori, Dave Plaskett, and Benjamin Detroy** for their donations and aloha to all of those renewing their membership this month. Clear skies to all!

**Imiloa** (Continued from page 6)  
 school kid crowd. Emphasis is on entertainment, and on resolving that pesky argument between the Hawaiians and the astronomers.  
 With 2 recent slap-downs in the news, Hilo's astronomy industry is in mea kulpā mode. The Imiloa Astronomy Center is how an astronomer says, "I'm sorry!"

**President** (Continued from page 2)  
 The impact should occur on the night side of the Moon near the morning terminator. A map of possible impact points can be found by following the links at <http://www.esa.int/SPECIALS/SMART-1/index.html>.  
 Chris

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***Alas poor Pluto... I knew it, Horatio.***

Pluto and its moon, Charon have become a binary dwarf planet