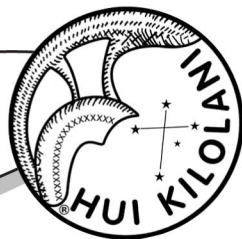


The Astronews



Volume 57, Issue 10

October 2009

www.hawastsoc.org

President's Message

by Chris Peterson

The LCROSS mission has selected its target crater: Cabeus A. The Centaur upper stage will impact the Moon at 1:30 a.m. October 9th, followed four minutes later by the shepherd-ing satellite that will be closely monitoring the Centaur impact. A plume of ejecta should rise into the sunlight between the two impacts and might be visible in amateur telescopes. Visibility will depend on several unknown factors, so it's difficult to say what the chances of seeing the plume are. For more information, see <http://lcross.arc.nasa.gov/index.htm> and follow links on that page. NASA TV will cover the impact live beginning an hour before impact. It's available on the internet at <http://www.nasa.gov/multimedia/nasatv/index.html>. Telescopes on Mauna Kea will be observing, trying to detect signs of water. Other ground-based observatories will also participate, as will the Hubble Space Telescope.

I'll set up my telescope in my driveway (assuming decent weather) and take my laptop out with me so I can follow the NASA TV coverage. There have been inquiries as to whether the club would hold a public event, but 1:30 a.m. is not a good time to do that, especially for an event that only one person per telescope would have much hope of seeing. Those without telescopes who want to enjoy the excitement of observing the event in real time will be best able to satisfy that urge online.

The Lunar Reconnaissance Orbiter will also observe the impacts from lunar orbit. It has recently entered its 50-km circular science orbit

(Continued on page 11)

Inside this issue:

President's Message	1
General Notices	2
Minutes	3
NASA Space Place	4
Observer's Notebook	6
Meteor Log	7
Calendar	8
School Star Parties	8
NSN News	9
Treasurer's Report	10

Upcoming Events:

☆ The next meeting is 7:30PM on **Tues., Oct. 7** at the Bishop Museum Planetarium.

☆ Bishop Museum's next planetarium show with **Barry Peckham** is Friday, **Oct. 3 & 17** at 7:00 p.m.

www.bishopmuseum.org/calendar

☆ The next Board Meeting is Sunday, **Oct. 5** at 3:30 p.m. at the POST building at UH.



I recently had the opportunity to attend a workshop sponsored by the Astronomical Society of the Pacific (ASP), based in the Bay Area. The ASP is a membership-based organization dedicated to promote the science of astronomy by supporting amateur groups as well as programs such as the Night Sky Network (which you should all be familiar with by now thanks to John Gallagher).

As with most workshops and/or conferences, one comes home with fresh perspectives and newly-energized ideas. One of the sessions I attended was on building *volunteering* within your club. <Maybe some of you have already figured out where I'm going with this...>

I have attended most meetings for a few years now and have noticed that while there is a strong "core" group of outreach members most of those attending the meetings have yet to venture into the world of interacting with the community. I suspect there are as many reasons for that as there are planet definitions, but maybe some of those reasons can be overcome.

The ASP has developed a great set of videos as training tools for people who might want to get involved but are not sure how to proceed. The videos can be viewed on your computer and is meant to address questions you might have about HOW to interact with the public, deal with difficult situations and "fit in" at a club event. You don't have to operate a telescope to help at a star party or to represent the HAS--check out the ASP website and videos or see me!

Carolyn 

<http://www.astrosociety.org/SharingTheUniverse/>

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The **Astronews** is a 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 email. The deadline is the 16th of each month. We are not responsible for unsolicited artwork.

President **Chris Peterson** called the Sept. 1, 2009 meeting of the Hawaiian Astronomical Society to order at 7:40 p.m. The meeting was held at the Planetarium on the grounds of the Bishop Museum. There were 33 members and two visitors in attendance.

Hawaii Space Lecture Series: Pres. **Chris Peterson** reports that Miriam Riner will speak at the September Hawaii Space Lecture Series lecture. She will be discussing “Mercury from Core to Crust.” In the month of October it is hoped that Dr. Henry Jacobs will present information on the former Apollo Program and the current LCROSS mission to the Moon. Should you be interested in any upcoming lectures or for information you can contact NASA PRPDC at 808-056-3132 or on the Web go to <http://www.higp.hawaii.edu/prpdc>.

Guest Speaker – This month club members heard from one of their own. **Travis Le**, sophomore at Punahou Academy and 2009 Third Place Winner at the Hawaii State Science and Engineering Fair, and winner of the Hawaiian Astronomical Society’s Agency Award at the same fair, spoke about the research that has been the focus of his year long work. Travis gave a power point presentation on his research “WASP 2B – Or Not 2B.” Travis gave a brief history of the search for extra-solar planets and why astronomers study extra-solar planets. He lead us through his research process with an explanation of his methods in photometry and how he timed the apparent transits of one or more planets orbiting WASP 2. Travis impressed all members present with his knowledge of his subject, and he fielded some very difficult questions from the audience.

FYI – President Chris Peterson caught members up with astronomical items in the news. Regarding the LCROSS mission, there appears to have been an anomaly in the spacecraft’s system. The spacecraft appears to have used more fuel than normal and ground commands have been made to conserve the remaining amounts of fuel.

The LRO will be in collaboration with the Chandrayan I to view polar craters to search for water ice.

The Mars “Spirit” rover has been stuck in a hole. NASA ground crews are running simulations back on Earth before they try to move the rover further. The Mars “Opportunity” rover has found a large nickel and iron rich meteorite nearby and is examining it.

Chris spoke briefly about Saturn and its equinox. He gave an explanation of the waxing and waning of the planet’s rings as seen from Earth. There was a general discussion of the physical structure of the rings. Chris promised to give a more comprehensive explanation at the next meeting.

Dillingham Airfield – The D.O.T. has informed H.A.S. that as of September 15th there will be a change in the manner of locking the gates at Dillingham Airfield. As a result of recent problems with vandalism on the airfield, the D.O.T. will be changing the locks on the gates. No keys will be distributed to users of the airfield, so nighttime access to the airfield will be regulated by the security detail on site.

H.A.S. monthly public and club star parties will continue as usual, but a few changes will have to be made. H.A.S. Board member, who has the responsibility for the gate each week, will work with the security guards to get members and the public on and off the property.

Visitors – There were two visitors to this month’s meeting. Alessandro Morico is an Italian grad student and friend of **Dr. John Sandor** and **Joanne Bogan**. He will be joining us at our next few star parties. A second visitor, Buzz, is an amateur astronomer. He has recently bought himself a new scope and will join us at some of our upcoming star parties.

School Star Party Report: **Forrest Luke** reported that there would be at least

(Continued on page 7)

Spitzer, the Sequel

The Spitzer Space Telescope is getting a second chance at life.

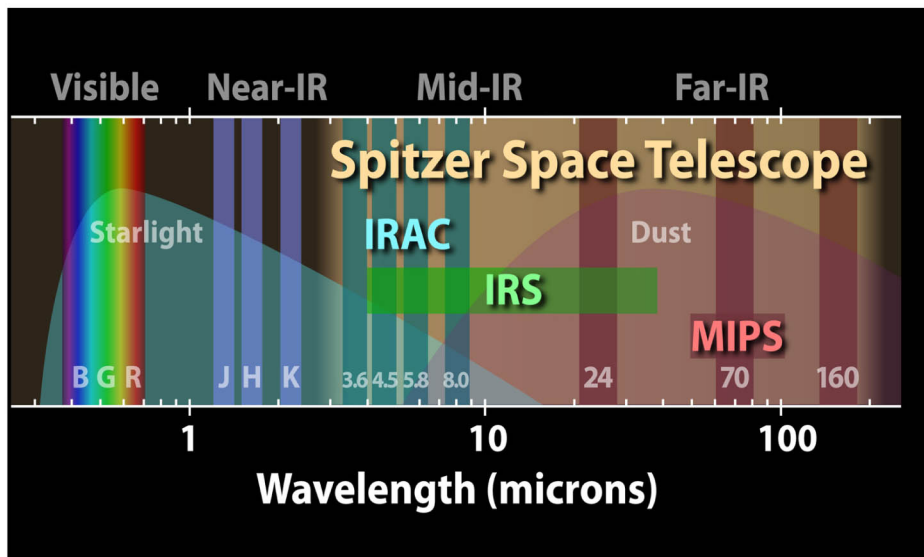
The liquid helium “lifeblood” that flows through the telescope has finally run out, bringing Spitzer’s primary mission to an end. But a new phase of this infrared telescope’s exploration of the universe is just beginning.

Even without liquid helium, which cooled the telescope to about 2 degrees above absolute zero (-271°C), Spitzer will continue to do important research—some of which couldn’t easily be done during its primary mission. For example, scientists will use Spitzer’s “second life” to explore the rate of expansion of the universe, study variable stars, and search for near-Earth asteroids that could pose a threat to our planet.

“We always knew that a ‘warm phase’ of the mission was a possibility, but it became ever more exciting scientifically as we started to plan for it seriously,” says JPL’s Michael Werner, Project Scientist for Spitzer. “Spitzer is just going on and on like the Energizer bunny.”

Launched in August 2003 as the last of NASA’s four Great Observatories, Spitzer specializes in observing infrared light, which is invisible to normal, optical telescopes. That gives Spitzer the power to see relatively dark, cool objects such as planet-forming discs or nearby asteroids. These objects are too cold to emit light at visible wavelengths, but they’re still warm enough to emit infrared light. In fact, all

(Continued on page 9)



The “warm mission” of the Spitzer Space Telescope will still be able to use two sensors in its Infrared Array Camera (IRAC) to continue its observations of the infrared universe.



FOR SALE

Telescope and Astronomy Books

8" f4.5 Truss Tube Dob telescope w/accessories
8" Meade LX200 f6.3 SCT w/accessories
Set of books

*Please call Dave at 623-9466 or e-mail:
twocajuns@mac.com for complete listing*

August in New England

by Barry Peckham

My 15 incher and I spent most of August in the 6 state area known as New England. I skipped Connecticut but dragged my scope through the other 5. The intent was to treat family and friends to their universe, to attend the Stellafane Telescope Maker's Convention in Vermont, and to try a session of Sidewalk Astronomy in Newport, RI, the "Waikiki" of my home state.

Before flying over there I'd heard about the cool, wet summer underway in the Northeast. I'd have 24 nights to work with and hoped that 6 of them would allow for telescoping. To get an 8 feet tall telescope over to the smallest state I mailed the truss poles and also my clothes, then checked-in 2 boxes of scope parts (\$32) and carried-on the primary mirror. All arrived without incident or damage.

That first night in my hometown saw me sitting on the beach while a nearly full, creamsicle-colored moon hugged the Atlantic horizon. Moonlight on the ocean lasts all night at 41 degrees north latitude in summer months. 2 nights later a waning gibbous moon and Jupiter attended opening night of the Newport Jazz Festival, wrapped in revealing strato-cumulus. It is always nice to see familiar faces in far-off places.

But a good night for telescoping did not arrive with the waning of moonlight. Instead, foggy nights were the norm. I pre-assembled my scope and waited patiently. A family gathering on my 5th night would have been ideal for stellar show-and-tell, but I could tell the stars would not show.

My second Saturday sent me to Stellafane, a 4 hour drive from the Rhode Island coast. Temps climbed inland: it was hot and sticky in ski country. I missed a turn near Breezy Hill and arrived at the entry booth after 3 PM, where I still had to pay the full \$40 admission fee. Low attendance gave a lack-luster feel to the telescope fields. There are 2 of them, spaced nearly ¼ mile apart: one for commercial and non-competitive scopes, the other for homemade scopes, seeking judgement.

HAS member **Marilyn Michalski** and her Delaware Valley clubmates set up on the judging field. Mirror maker Bob Midiri set his judge-able 10", f/7 near Marilyn's non-judgmental 14", f/5.5 LITEBOX. I assisted with assembly and collimation, but could not put my own scope with theirs because I wouldn't be able to retrieve it before dawn. Our daytime sky held unusual promise, but all our wishing came to naught as the sky darkened. The half dozen of us in this isolated corner of the Pink Clubhouse field enjoyed a few twilight sights, then stood around sighing, until 10, when I left and the sky slowly cleared.

(Continued on page 9)

Planets Close To the Moon

Times are Hawaii Standard Time

Oct 2, 12h, M 5.0° NNW of Uranus
(161° from sun in evening sky)

Oct 11, 15h, M 1.1° SSW of Mars
(81° from sun in morning sky)

Oct 15, 21h, M 6.4° SSW of Saturn
(25° from sun in morning sky)

Oct 16, 04h, M 6.1° SSW of Venus
(21° from sun in morning sky)

Oct 26, 20h, M 3.0° NNW of Jupiter
(103° from sun in evening sky)

Oct 27, 09h, M 2.9° NNW of Neptune
(109° from sun in evening sky)

Oct 29, 18h, M 5.1° NNW of Uranus
(136° from sun in evening sky)

Other Events of Interest

Times are Hawaii Standard Time

Oct 3, 20:11h, Moon Full

Oct 5, 15h, Mercury at greatest elongation
(17.9° west of the sun in morning sky)










Oct 7, 19h, Mercury 0.32° SW of Saturn
(18° from sun in morning sky)
(Closest planet-planet appulse this year)

Oct 13, 00h, Venus 0.52° SSW of Saturn
(22° from sun in morning sky)

Oct 17, 19:32h, Moon New

Oct 21, Orionid meteors
(Favorable year for this major shower)

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

 Mercury Makes a morning appearance during the first two weeks of October.	 Venus About 20° from the sun in the morning sky near Mercury and Saturn.	 Mars Rises before midnight then brightens to a magnitude of +0.5.
 Jupiter Still bright and well-placed for viewing near the zenith in the evening sky after sunset.	 Saturn Close to Mercury and Venus low in the east before sunrise.	 Uranus Reached opposition on Sept. 17 and still in the sky most of the night. Best observed in late evening.
 Neptune Near Jupiter and can be viewed all night.	 Dwarf Planet Pluto Low in the southwest in the early evening about 2° from M23.	 Asteroid 3 Juno Reached opposition on Sept. 20 and is in the sky most of the night.

(Minutes continued from page 3)

two school star parties in during the month of September.

September 25th – Mililani Uka Elementary & Kapunahala Elementary

Planetarium or Atherton Halau? – Some members expressed a wish to move meeting back to the Atherton Halau. A vote was taken 11 members voted to move meetings back to Atherton Halau, while 22 voted for keeping meeting in the Planetarium.

Starlight Reserve – No meetings of the state committee to review options for the starlight reserve have taken place as of Sept 1, 2009.

Night Sky Network – John Gallagher, At-Large member, reported on the most recent teleconference, LCROSS. He also indicated that the upcoming teleconference on September 29th would cover “the Future of the Universe.”

Book Review – Harry Zisko brought a new book he thought members might enjoy reading. The “Physics of the Impossible” by Dr. Michio Kaku, Harry reports, is an overall interesting read and offers much information to the knowledgeable and newcomer alike. He enjoyed it thoroughly.

Travels with Barry – Sojourning Vice President **Barry Peckham** reported on his recent trip to the East Coast where he attended Stellafane, the nation’s oldest and largest star party. The event, while smaller than in past years, was still well attended. It is a draw for amateur and professional telescope makers. Barry described some of the different scope designs seen at this years star party. Barry also described the crescent moon, spinnaker-like, dragging its horn on the horizon.

Science Café Resumes – Carolyn Kaichi, H.A.S. ASTRONEWS editor, reports that the Science Café will resume Sept. 22nd, Dr. Mike Motl, will speak on climate change. If interested contact Carolyn.

As there was no further business, the meeting was adjourned at 8:59 p.m.

Refreshments were served.

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



Meteor Log - October 2009

by Mike Morrow

The nights are a bit darker, but most showers are very minor. We could call them drizzles. Sporadic rates do improve.

The year’s best meteor quarter begins this month. A slow start is a bit messed up by the Moon. Where is Zena when she is needed. Sporadic rates remain good. Thursday the 8th thru Friday the 9th-the **Draconids**. Radiant 17h28m +54 deg. Rates range from none to storm. The Draconids are very slow-moving. The maximum might occur between 10h45m HST on the 8th to 3h30m HST on the 9th. The radiant is highest in the evening.

Wednesday the 21st, the **Orionids**. Radiant 06h20m +16 deg. Rates may be as high as 20 meteors per hour. Occasionally a comparable maximum happens about October 17-18 - most recently in 1993 and 1998. This year the new moon is ideal for observing the Orionids. Orionids are very fast, sometimes bright and often leave persistent trains.

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

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 40	27	28	29 3p Teleconference- Fate of the Universe	30	1	2	3
Week 41	4 Full Moon 4-10 World Space Week	5	6 7:30p HAS Meeting	7	8	9	10 Club Star Party - Dillingham
Week 42	11	12 Comet 88P/Howell Perihelion (1.363 AU) M 10.5	13	14	15	16	17 Dillingham- Public Star Party
Week 43	18 New Moon	19	20	21 15-29 Orionids Meteor Shower	22 6:30p Momilani Elementary School	23 6:30p Lehua Elementary School 6:30p Maryknoll Elementary School	24 Kahala/ Waialeale Star Party
Week 44	25 For more events look here.	26	27 3p Teleconference - The Lives of Stars	28	29	30 12p Charge your battery packs	31

Upcoming School Star Parties 2009

Thurs.	10/22	Momilani Elementary
Fri.	10/23	Lenua Elementary
Wed.	11/?	Honowai Elementary
Fri.	11/20	Pearl Harbor Elementary

HAS Yahoo Group

<http://tech.groups.yahoo.com/group/HawaiianAstronomicalSociety/>

(Spitzer continued from page 4)

warm objects “glow” with infrared light—even telescopes.

That’s why Spitzer had to be cooled with liquid helium to such a low temperature. Otherwise, it would be blinded by its own infrared glow. As the helium expires, Spitzer will warm to about 30 degrees above absolute zero (-243°C). At that temperature, the telescope will begin emitting long-wavelength infrared light, but two of its short-wavelength sensors will still work perfectly.

And with more telescope time available for the remaining sensors, mission managers can more easily schedule new research proposals designed for those sensors. For example, scientists have recently realized how to use infrared observations to improve our measurements of the rate of expansion of the universe. And interest in tracking near-Earth objects has grown in recent years—a task for which Spitzer is well suited.

“Science has progressed, and people always have new ideas,” Werner says. In its second life, Spitzer will help turn those ideas into new discoveries. For kids, The Space Place Web site has a fun typing game using Spitzer and infrared astronomy words.

Check it out at spaceplace.nasa.gov/en/kids/spitzer/signs. ☆



NIGHT SKY NETWORK NEWS

by John Gallagher

Mark your calendar for another IYA 2009 Teleconference on Tuesday, October 27th with the theme: The Birth of Stars and Planets with Dr. John Bally. Teleconferences begin at 3:00 pm. Contact Night Sky Network Coordinator, **John Gallagher**, 683-0118 for details. Details are also posted on the HAS Yahoo Group Calendar.

(New England continued from page 5)

I awoke to a foggy morning in central Vermont and drove 5 hours to Penobscot Bay, Maine. Temps were in the high 80s, as was the humidity percentage, so it felt hotter than Hawaii, and the air wasn’t moving. Nighttime skies were clear but bugs ruled, and my hosts bedded down just past sunset.

On the night after I returned to Rhode Island, skies were clear enough and I called a few of the locals over for some backyard telescoping. Seeing improved dramatically from 9 PM (twilight) to 10:30, but transparency was typical summer haze. Jupiter rides so low through the New England sky this year that my 80-yr-old dad had to get down on all 4s for his view of The Belted One. Vega runs through the zenith, not Arcturus. Hawaii’s happy star made some fun colors before dissolving in the western horizon’s haze. I showed the Swan nebula with an OIII filter, but the Andromeda Galaxy and most globular clusters were mere ghosts of their Hawaiian selves.

More cloudy and foggy nights followed. Hurricane Bill swept up the Eastern Seaboard and veered away from New England but made huge surf and kept humidity high. I hunted each night for the young moon and planned for Sidewalk Astronomy in Newport. A not-so-thin crescent, standing on one horn, swept across the southern horizon on August 24th. The next night I took my scope to Battery Park, which bulges into Newport Harbor. Astro-newbie Terry and I ran through the basic sights from this dark urban park, but the darkness discouraged passers-by from approaching the scope... and this, after all, was up-tight New England, not hang-loose Hawaii. A thick crescent moon turned golden, then salmon and finally a deep orange long before one horn hit the horizon. The moon visually dissolved into a red ghost before setting. Such is the scene on a summer night in Newport.



(see image for this story on back cover)

HAS Financial Report for the month ending as of Sept. 15, 2009

Initial Balance:	\$4,139.02
<i>Receipts:</i>	
Dues Received	100.00
Calendar Sales	91.00
Donations	5.00
Magazine Payment	66.95
T-Shirt Sales	15.00
Total Income:	\$277.95
<i>Expenses:</i>	
Astronews	153.90
Magazine Subscription	71.95
Refreshments	10.46
Total Expenses:	\$236.31
Final Balance	\$4,361.56

There are **6 new members** this month. They are *Dominique Vacca-Farley*, *Chris Farley*, Betsy and *Ronnie Vacca-Farley*; *Buzz Willauer* and *Cyn Deluca*. Thanks and clear skies to all renewing their membership during the month.

☆ Upcoming Star Parties ☆

Club Party-Dillingham **Oct. 10**

Public Party- Dillingham **Oct. 17**

Kahala/Waialele Party **Oct. 24**



HAS T-Shirts \$15!

(see Jim MacDonald)

- Light Blue

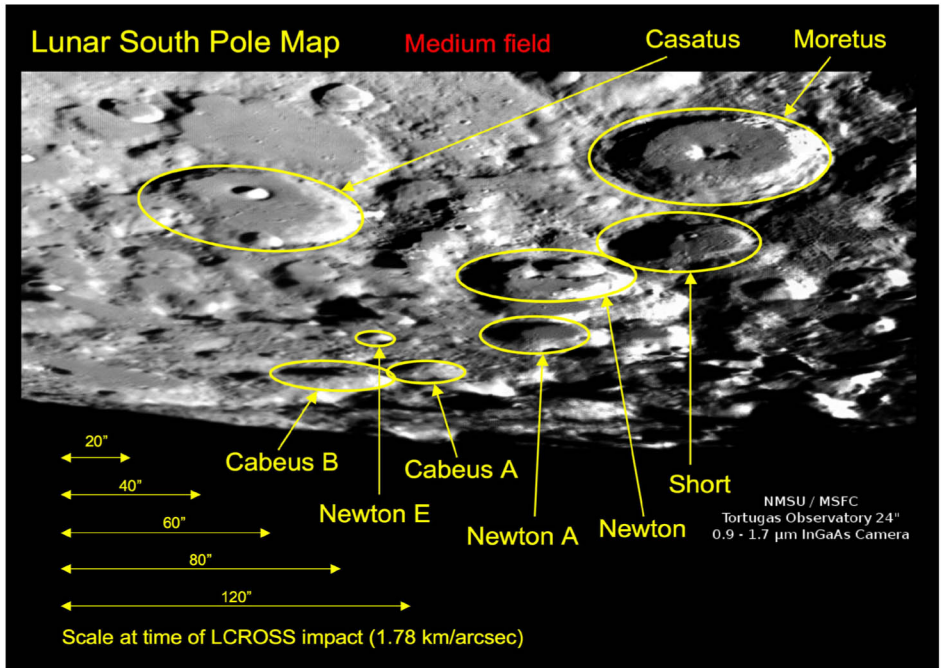
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(President continued from page 1)

after all its instruments were tested and checked out OK. We can expect a flood of data to begin flowing to Earth from that mission. It should greatly increase our understanding of the Moon.

If we get disappointed by an LCROSS impact that we aren't able to see, we can turn to the Orionid meteor shower several days later. Some predictions call for this to be a particularly good year, and the Moon will be out of the way at the peak on the morning of the 21st. Happy viewing!

Chris 



TRAVEL ADVISORY

Club member **John Sandor** has reported that on a recent trip to the mainland he was “questioned” about the green laser pointer he was carrying in his carry-on bag. Airport Security personnel took his name down and recorded that it was on the flight. Although it was not explained why he was questioned, John was allowed to board after the short encounter but he wanted to other members to be aware that this may be an issue if traveling with your pointers. Lasers are considered a “special item” and should be declared if carrying it onboard a flight, according to airport personnel. ☆

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Barry Peckham, Vice-President of the Hawaiian Astronomical Society at Steilafane (see article in this issue), August 2009. Pictured with Barry is club member Marilyn Michalski and a friend. Inset is an image of a creative telescope design seen at the event.

