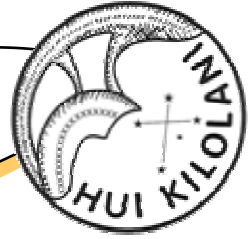


The Astronews



Volume 50, Issue 12

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December 2002

Lasers—Not just for Pointers by Don Tucker

Hello gang and Happy Star Trails to all. I just wanted to write a little something on this incredible world of technology we live in. As many of you at know, I underwent PRK (Photo Refractive Keratomy) eye surgery back in July of this year and I wish to share the experience and the pros and cons with you all. This is purely an elective surgery meaning that you subscribe freely to the procedure knowing the risks and complications that *may*, but not necessarily *will* occur.

I had heard about the procedure by several Army friends of mine and I elected to undergo the procedure. My eyesight before surgery was 20/80 and

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Upcoming Events:

- The next meeting is 7:30 on Dec. 3 at Bishop Museum
- Sam Rhodes next Planetarium show on Mon. Dec. 2nd. Hanauma Bay show will be on Dec. 9th. Gates will close at 6:30 pm.

Upcoming Star Parties

Club Party	Nov. 30	Dillingham
Public Party	Dec. 7	Dillingham
Public Party	Dec. 14	Kahala Park
Club Party	Dec. 28	Dillingham
Public Party	Jan. 4	Dillingham
Public Party	Jan. 25	Dillingham

President's Message

What are we all about? Why Astronomy? Why here and now? Two events made a few things more clear to me and made me happy that the Hawaiian Astronomical Society and its members exist.

Lacey Veach Day was celebrated on November 8, 2002 here in Hawaii. An event that was long overdue! Lacey Veach, born and raised here in Hawaii, always said that one day he would become an astronaut. You know how that goes, some kid gets an idea in his head. "Some day, I'll be a doctor." or "...a lawyer." But with Lacey it was always, "I'll be an astronaut!" He was always focused and committed to his dream! He fulfilled that dream and went on to go into space as an astronaut on the Space Shuttle. He left us all too soon! But his sister, Diana, at the recent celebration in his name at Punahou, related that he was always looking to the stars, even to the end. How wonderful to be able to satisfy your dreams like that!

We help to foster dreams such as this. Perhaps there are another one, two or even more Lacey Veaches waiting in the wings. Perhaps there are other kids out there whose imagination only needs the spark to ignite to fire of commitment to a dream such as Lacey Veach had.

One student who came to the last Kahala Star Party, came as a result of a class assignment but left with stardust in his eye. He came up to me a few days later with a book he had found at the library. He paged through it and pointed out items after items that he had observed or experienced at the Star Party. He was energized and motivated to know more. He passed on his enthusiasm to his classmates as he related by name the kinds of scopes different members

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Planets Close to the Moon

Times are Hawaii Standard Time

- Dec 1, 01h, M 3.4° NNE of Mars
(39° from sun in morning sky)
- Dec 1, 05h, M 4.6° NNE of Venus
(37° from sun in morning sky)
- Dec 8, 00h, M 4.6° SSE of Neptune
(53° from sun in evening sky)
- Dec 9, 07h, M 4.4° SSE of Uranus
(68° from sun in evening sky)
- Dec 19, 05h, M 2.8° N of Saturn
(177° from sun in midnight sky)
- Dec 23, 04h, M 4.1° NNE of Jupiter
(134° from sun in morning sky)
- Dec 29, 15h, M 1.1° NNE of Mars
(50° from sun in morning sky)
- Dec 29, 22h, M 2.2° SSW of Venus
(46° from sun in morning sky)









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

Other Events of Interest

Times are Hawaii Standard Time

- Dec 3, 22:35h, New Moon
(Total solar eclipse - Africa, Indian Ocean)
- Dec 4, 11h, Venus brightest, Mag. = -4.7
- Dec 6, 02h, Venus 1.5° ENE of Mars
(40° from sun in morning sky)
- Dec 9, 06h, Pluto at conjunction with sun, passes into morning sky.
- Dec 14, Geminid Meteors
- Dec 17, 07h, Saturn at opposition with sun.
- Dec 19, 09:11h, Full Moon
- Dec 21, 15:13h, Winter Solstice
- Dec 25, 20h, Mercury at Greatest Elongation
(19.9° East of the sun in evening sky)

The Planets in December

 Mercury Mercury is visible in the evening sky the last week of the month, low in the west after sunset.	 Venus Venus dominates the morning sky, reaching its brightest on Dec 4 at Mag. -4.7.	 Mars Mars is in the pre-dawn sky near Venus, but is still far from the earth and rather dim, Mag 1.6.
 Jupiter Jupiter is high in the east by mid-evening. Mag., -2.4, Diam, 42.2"	 Saturn Saturn is at opposition this month giving the best view in 30 years. Mag, -0.5. Diam, 20.6"	 Uranus Uranus is low in the western sky after sunset in Capricornus. Mag +5.7
 Neptune Neptune is near Uranus low in the western sky in early evening. Mag +7.8	 Pluto Pluto is at conjunction with the sun this month and cannot be observed.	

Meade 4501 Telescope for Sale

Meade 4.5" equatorial reflecting telescope model 4501 with 3 eyepieces, sturdy metal tripod and electronic motor drive. Little used, asking \$175. Contact R.W.Brust at 941-0145 or e-mail: <rwbrustjr@worldnet.att.com>

School Star Parties

It's that time of year again, and School Star Parties are being coordinated by Forrest Luke. If you are contacted for a school star party, please have the school contact Forrest directly at 623-9830 or <lukef003@hawaii.rr.com>.

As a reminder, upcoming scheduled school star parties are:

27 Nov 2002 Aliiolani School (1240 7th Avenue)
6 Dec 2002 Mauka Lani Elementary, Makakilo
9 Dec 2002 Campbell High School
6 Mar 2003 Helemano School (4th grade)
7 Mar 2003 Pearl Harbor Elementary

If you signed up and need help finding the school, or if you didn't sign up, but still want to participate, please contact Forrest.

On the Road with Aperture

by Barry Peckham

You and I have read way too many astro-tales put forward by folks who fret over taking the tiniest telescopes for a ride: "To the summit of Mauna Kea with... binoculars!" This is a different kind of tale. If the Johnny Appleseed of astro-consciousness can log a quarter million miles with scopes having 18" and 24" mirrors, the least I can do is to fly with a little 15 incher.

Missing the heat of summer but also the cool of Autumn, I boarded a plane in the 3rd week of September and made for Providence, RI.

My time on the mainland began wet and gray. The East Coast was in severe drought conditions, so I said that I had brought my rain maker telescope and that it would fix their problems. That first night in my home town saw Big Bang thunder and lightning... and 3" of rain. Well water down on the farm went black with mud. A day later I left for my sister's place in Maine, with parents on board. The scope wouldn't fit so it stayed behind, and the farther from it we drove, the sunnier it got. Maine was beautiful on the one full day we spent

there. The Great Square came up in the East tilted "like a diamond in the sky" and Vega cruised south of the zenith. Then we drove back south into the clouds and drizzle.

With dire weather predicted, I rented a spunky new Corolla and drove to Philadelphia on the 28th for a public star party on a mound of garbage 1000 feet tall, with a blue methane flame 10 feet tall coming out of a chimney near the top. Delaware Valley Amateur Astronomers president Marilyn Michalski (who won this years optical competition for 10" mirrors at Stellafane Telescope Maker's Convention) took me to dinner first and reintroduced me to her pals. I was the only one to set up a sizable scope on top of the heap-turned park. 50 or so attendees were gathered nearby for a tour of constellations by Philadelphia's answer to our Sam Rhoads: Bart Thorn who, unlike Sam, is an active club member. The sky was very clear and mag 5 stars could be seen despite the sprawl of small towns below. We were about 40 miles west of Philly.

(Continued on page 10)

Meeting Minutes

by Chris Trusty

The meeting was called to order by the president, Gretchen West at 7:35 p.m. There were 43 in attendance. Gretchen welcomed new visitors and reported on the star party held on October 29 at Wilson Elementary School.

Forest Luke talked about upcoming star parties. Jim MacDonald modeled our new polo shirts with the club logo embroidered on the front left breast. Members need to special order and pre pay \$25 for each shirt.

Chris Trusty talked about the First Lacy Veach Day of Discovery to be held November 9 by the Hawaii Science Teachers Ass. at Punahou School. HAS will have a table with club information and volunteers to

bring telescopes to view sun spots.

December will be elections. The nominating committee has proposed the following slate for officers: President: Chris Peterson, Vice President: Barry Peckham, Secretary: Gretchen West, Treasurer: Jim MacDonald, Astronews Editor: Paul Lawler, Member-at-large: Chris Trusty. The second Member-at-large position is still open. We need people to help. You don't have to be nominated, you may volunteer for any position. Please call Joanne Bogan if you are interested in volunteering or wish to nominate someone.

Mel Levin gave a review on and article in the September 2002 issue of

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Meteor Log—December 2002

by Mike Morrow

The month is a moderate one to end the year, however many of the showers produce less than three meteors an hour. Cheerful sporadic rates continue. The Geminids still may be seen even with a waxing Moon.

Phoenicids

Friday the 6th, the Phoenicids. Radiant 01h12m -53.

This shower on occasion may reach rates of 50 meteors per hour plus or minus some. It has been seen in Hawaii. The Moon is only about two days old. The radiant may be seen most of the night and is just northwest of the star Achernar, Alpha Eridani. Good Luck.

Geminids

Saturday the 14th, the Geminids. Radiant 07h28m +33.

The maximum is forecast for 10h UT (midnight Hawaii time). There

may be as many as 80 meteors an hour and telescopic meteors appear to max out the night before the visual ones. this shower is unique in its association with an Apollo asteroid, 3200 Phaethon.

Ursids

Sunday the 22, the Ursids. Radiant 14h28m +76.

Rates are variable but may reach near 50 an hour at times but expect about 10 per hour normally.

If you are interested in observing Meteors, or if you happen to observe a bolide (note date, time and direction) contact Tom Giguere on Oahu at 672-6677

or write to: Mike Morrow, Meteor Group Hawaii, P.O. Box 6692, Ocean View, HI 96737
<halehoku@yahoo.com>

One of the remarkable things about the Hawaiian Astronomical Society is that it has published a monthly newsletter almost every month for over 43 years. (I know—the cover of this month’s issue says that this is volume 50—but as you will see, that is not exactly right.)

The first issue was December of 1958. It was called the “Bulletin of the Hawaiian Astronomical Society” and was prepared by the club president, Dr. Earle G. Linsley. Dr Linsley continued to print the monthly newsletter (or bulletin) until he left the islands in September of 1962. During 1958 and 1959 Dr. Linsley was president and from 1960 to 1962 he was corresponding secretary, which was what they called the newsletter editor in those days. The early newsletters were numbered 1, 2, 3, etc. and did not have volume numbers. Dr. Linsley’s last newsletter—September of 1962 was Number 40.

After Dr. Linsley left Hawaii, Carl Simms became corresponding secretary—as well as treasurer—and continued writing the newsletter almost every month for more than 11 years, by far the longest tenure of

any of the newsletter editors. His last issue was January of 1974, which was number 168.

The early newsletters were all one page sheets printed on only one side. Occasionally two or three pages were needed. A typical random example from April of 1967 (Number 94, and the first newsletter named *the Astronews*) had (1) a detailed announce-

ment of the April meeting program (Mike Morrow, Bill Pelzer, and Walter Tokushige giving a panel presentation on “Meteors—Messengers from Space”); (2) a summary of the April sky—Planets, Moon, and a new nova; and (3) some miscellaneous announcements. In April of 1974 a new era in the newsletter began. Quoting from the April, 1974 *Astronews*, “The

society voted to include a greater variety of material in its monthly newsletter, and created the position of “Editor” to supervise the publication. After the business meeting President Ayer appointed Dennis Stone to the job. Stone is handling editorial responsibilities in Honolulu. He has in turn picked Jim Bediant to supervise production from Ewa Beach”. With that issue a graphic heading was first



used and the *Astronews* became more of a real newsletter, rather than a monthly bulletin.

Consecutive numbering continued until August of 1985 (#404). However, there were some goofs along the way. A few numbers were skipped and one or two were used twice. The biggest blunder was in 1978. The March issue that year was number 218. The April issue was

318, May 319, June 320, etc. 99 numbers added between March and April!

The *Astronews* secretaries/editors follow:

Dr. Earle G. Linsley	Jan 1958—Sep 1962
Carl Simms	Oct 1962—Jan 1974
Dennis Stone	Feb 1974—Jul 1977
Ruthi Moore & Barb Berto	Aug 1977—Dec 1978
Ray Fabrè	Jan 1979—Dec 1980
Will Sager	Jan 1981—Jul 1983
Milt Sher	Aug 1983—Dec 1983
Bob Carson	Jan 1984—Dec 1987
Jeff Komori	Feb 1988—Dec 1988
Ray Rippel	Jan 1989—Dec 1989
Jay Wrathall	Jan 1990—Dec 1993
Kevin Polk	Jan 1994—Dec 1994
Peter Besenbruch	Jan 1995—Dec 1996
Kevin Polk	Jan 1996—Aug 1996
Jim McDonald	Sep 1996—Dec 1998
Jim Bediant	Jan 1999—Dec 1999
Sean R. Keefe	Jan 2000—May 2000
Mark Rensch	Jun 2000—Dec 2001
Paul Lawler	Jan 2002 to present

When editor Bob Carson decided to go to the volume system in September of 1985 he divided the number for August (404) by 12 and got 33 plus a

fraction—so 1985 became volume 33— but because of those added numbers he was off by about 5 years. 1985 was actually the 28th year of publication of the *Astronews*.

The volume number has been 5 years too high ever since. The current book format and

graphical heading began with Ray Ripple in Jan., 1988.

Laser Surgery (Continued from page 1)

20/120 for each individual eye. I was the classical "shortsighted" patient, that, without corrective lenses, would be lucky to make out any letters on an eye chart after the big letter on the top. My eye was topographically mapped out with a special camera that glides about 5mm over the cornea of my eye, so that the laser knew exactly how much cornea to "disintegrate", right down to the molecule. The technology is incredible.

It was a painless procedure and immediately following the procedure I was allowed to sit up from the table and I could read the notes written down on a cart 5ft. away from me!

The next few days were very painful as you must realize that, basi-

cally, you have your corneas resculptured using a laser beam, so sore, sandy and gritty feelings are very normal to include severe sensitivity to light. You will be "blurry" for a week or so, since the epithelial cells are now regenerating over the cornea once again, and now must flatten out and smooth over the cornea to regain full function of passing light perfectly through them and into the cornea.

The main reason for this article is that, you will, for many months, (perhaps permanently) lose night vision sharpness. After almost 5 months only recently have my eyes began their long and very slow adaptation to small, bright points of light against a black, lightless backdrop (our beauti-

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2003 Star Party Dates

Meeting	Public Party	Club Party
Jan 7	Jan 4	12/28 ('02)
	Jan 25	
Feb 4	Feb 22	Feb 1
March 4		March 1
		March 29
April 1	April 5	April 26
May 6	May 3	May 24
	May 31	
June 3	June 21	June 28
July 1	July 19	July 26
Aug 5	Aug 30	Aug 23
Sep 2	Sep 27	Sep 20
Oct 7	Oct 18	Oct 25
Nov 4	Nov 15	Nov 22
Dec 2	Dec 13	Dec 20

Laser Surgery (Continued from page 7)
ful heavens). I have excellent depth perception including dusk and dawn, 20/10 vision with both eyes and 20/15 vision each eye.

This surgery has totally changed my quality of life, how I see things, the amazing beauty, snorkeling, the amazing colors of sunsets and so forth...but like all things in life...it comes at a price. I had to store my telescope away for a long time and it still may be a long time to regain what I once had, if ever at all. I see prominent halos around the moon (viewing naked eye) and horrible *starburst* sparkles around planets and the brightest

stars. I also have trouble seeing constellations. When I look through the telescope, I really have to look “dead on” or the stars will “coma” as I move my eye around the eyepiece.

I am 33 yrs old and I made the decision to go through with the procedure because I am still young and want to do many, many things with my life that do not include, glasses, prescription lenses and contacts. If I was 20 yrs older, I might have left well enough alone.

I would like to share 6 pro's and con's. The pro's are 1) better than most aviator's vision, 2) the crystal clarity of nature, 3) No more corneal abra-

sions and dealings with contact lenses, 4) The amazing views underwater with a mask and snorkel, 5) No more glasses and the costs accompanying them and 6) If shortsighted, no fear of bifocals when reading glasses are needed. The con's are 1) temporary and possible permanent loss, to a degree, of night vision sharpness, 2) Loss of contrast, 3) Pain and Infection if not treated well after surgery, 4) Not getting 20/20 vision...possibly 20/40 or 20/50 in some cases, 5) Permanent dry eye syndrome with constant tearing and 6)...letting your poor telescope gather more dust than light on it's primary mirror for many months!

I am glad I had my eyes corrected. I have zero loss of color, zero loss of contrast, zero loss of sharpness, 20/10 vision, perfect healing with zero scarring and zero complications during the whole ordeal.

My only drawbacks were severe pain for the first 72 hours and loss of night vision from what it was before...on a scale of 100%, before the

surgery I was running at 100% (with corrected lenses), after the surgery was 40%, 1 month after surgery was 120% *without* corrected lenses during day and 45% astronomy vision, and now 5 months after the surgery, I am still 120% day vision and about 60% astronomy vision.

As you can see, it is a very slow process to regain the use of the eye sucking every little photon of light traveling millions of light years. Vast amounts of light are easy to sharpen and contrast, but thinly scattered molecules in a black vacuum are more difficult.

I hope I shared something insightful for you all to consider if you chose to elect this surgery. It is the best thing I have ever done for myself, but unfortunately left me searching for a new hobby. They tell me it rains a lot in Washington State anyway...but I am an avid skier!

Clear Skies and Great Views to all,

Don

Minutes (Continued from page 5)
Smithsonian by Timothy Ferris.
"Astronomy's New Stars" demonstrated the contributions to astronomy being made by amateur astronomers.

Barry explained HAS has been told that if we require the lights off we are not welcome to use Kahala park. Unless this issue can be resolved, December will be our last star party at Kahala. Steve Huffman will work to help keep the park available to HAS.

Barry talked about the double stars visible in Pegasus. Jay Wrathall shared the history of HAS, that was founded in the 1950's by Dr. Linsley.

The meeting broke at 9:05 and reconvened in the planetarium.

Pres. Message (Continued from page 2)

had. "And we saw M31 and I got to find Vega by myself with Ms. West's scope, and... and... and..." Heady stuff.

What are we about? We are about helping others to look up at the night skies and seeing the possibilities!

Why astronomy? Astronomy opens up the universe to all who have eyes to see! Why here and now? What better time than the present. Thank you all for a great year! I look forward to working with you all in the years to come.

Gretchen

Treasurer's Report

by Jim MacDonald

HAS Financial Report as of November 15, 2002

Initial Balance:	\$5,823.54
Receipts:	
Dues Received.....	190.00
Magazine Payments.....	177.80
T-Shirt Sales.....	45.00
Other Income.....	20.80
Total Income:	\$529.65
Expenses:	
Astronews	161.21
Magazine Subscription Payment	266.70
Polo Shirt and set-up fee	83.20
Scope repairs (C-14).....	78.15
Total Expenses:	\$511.11
Final Balance.....	\$5,746.03

Since last month, we had six members join HAS. They are **Juanita Buckley, Cameron & Ann Voorhees, Renaud Savelle** and **Eric & Susan Salituro**. Welcome to the club and *Clear Skies* to all members renewing this month!

On the Road (Continued from page 4)

The finale was a flaming red waning gibbous moon rising out of a distant hill with Saturn as its sidekick. Pretty good viewing for a pile of garbage!

2 days after that I was at the Smithsonian looking at giant chunks of iron meteorites, plus the rocks and minerals and polished gems of the Natural History collection. That is my favorite place in D.C. Here is a caption that I found fascinating, in an understated way:

"This meteor's unbroken widmanstatten pattern [of streaks on its cut and polished face] shows that it once was part of a single, gigantic crystal. Found in an ancient Mexican temple, the meteorite [weighing several hundred pounds] was wrapped in cloth and buried alongside human remains."

2 days after that I arrived in the

Blueridge mountains of Virginia, at the home of avid amateur astronomer Elaine Osborne, on a wonderful 50 acre piece of rolling woodlot and hay-field. The 2 of us had our scopes out until midnight the first night and were joined by 8 others for more viewing the second night. Skies were a bit hazy and the dew was intense at 3000' elevation but seeing was surprisingly good and mag 5 stars were easily seen. Elaine has formed here own astronomy club among "neighbors" as far as 30 miles away. When I drove off for Chapel Hill, NC, she drove off to a star party in Tennessee. It would be hard for me to leave a place as nice as hers, if I called it home. That is how her husband feels too, so he stays put.

The drive east toward this college town took me down off the mountains

(Continued on page 11)

William Hershell wrote of Almach “This double star is one of the most beautiful objects in the heavens.” The name Almach is derived from the Arab word for a small predatory animal, similar to a badger.

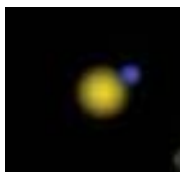
In the astronomy of China, this star with others in Andromeda and in Triangulum, was *Tien Ta Tseang*, Heaven’s Great General, and was astrologically honorable and eminent.

The primary (Mag 2.2) is large, yellow-orange. The secondary (Mag 5) is substantially smaller and quite blue (some would say turquoise). Its duplicity was discovered by Johann Mayer in 1778, and William Struve in 1842 found that the companion was closely double, less than 1" apart. A good resolution test for a larger (read >8") scope is to resolve the blue companion into two components of equal magnitude (I have been unable to do so with my 10" or my 12.5"). Some list the colors of the primary and binary companion as



orange, emerald and blue (hence the turquoise).

In his *Sky Spot Finder Charts of Select Double Stars*, Brent Watson says the blue star is actually a triple in itself. Under low power, I am just able to resolve the pair. Under high power, separation, size and color differences are pronounced (It’s turquoise, I tell you!)



©Darran Bushnall

On the Road (Continued from page 10) in a steep drop into heat and haze. One viewing night in Chapel Hill was lousy, with too many bugs, too much heat and light pollution, and the stench of a sewage treatment plant, but the other night was very nice: clear and dark, with a group of jamming fiddlers and banjo players and a woman bass player who let me develop a few blisters and camps on her instrument. They all got looks at 4 or 5 objects in my scope during their break.

The last night of celestial viewing

was at a beach in southeastern Massachusetts, with 15 paying customers and 8 freebie relatives. A nature center got the money. We all got a pretty clear, calm, dark location. And the next early morning my little travel-scope and I were flying back to Hawaii, having driven through 12 states and bussed through the District of Columbia. Yes, I did bring binoculars and they were a real asset on this trip, but you can’t raise much money for a nature center with a pair of 10x42s.

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