The Astronews

HUI KILOLANI

Volume 51, Issue 6

www.hawastsoc.org

June 2003

Minor Planet 22338 Janemojo = 1992 LE

by Jane Houston Jones

On the first day of January 1801, Giuseppe Piazzi discovered an object which he first thought was a new comet. But after its orbit was better determined it was clear that it was not a comet but more like a small planet. Piazzi named it Ceres, after the Sicilian goddess of grain. Three other small bodies were discovered in the next few years (Pallas, Vesta, and Juno). By the end of the 19th century there were several hundred.

Several hundred thousand asteroids have been discovered and given provisional designations so far. Thousands more are discovered each year. There are undoubtedly many more that are too small to be seen from the Earth.

(Continued on page 5)

Inside this issue:

Club Information	*2*
Observer's Notebook	*3*
Meeting Minutes	*4*
HAS Member Directory	*5*
School Star Parties	*9*
Equipment Report	*10*
Treasurer's Report	*11*

Upcoming Events:

- The next meeting is 7:30 on June 3rd at the Bishop Museum.
- **Sam Rhodes** next Planetarium show on Mon. June 2nd.

Upcoming Star Parties

Public Party	**May 31**	**Dillingham**
Public Party	**Jun. 7**	**Kahala Park**
Public Party	**Jun. 21**	**Dillingham**
Club Party	**Jun. 28**	**Dillingham**
Public Party	**July 5**	**Kahala Park**
Public Party	**July 19**	**Dillingham**

President's Message

The results of the HAS membership survey on meetings is in. Thanks to all who filled out a survey form. There were 25 survey sheets returned to me. Most people provided numerical answers totaling twelve meetings per year as I asked. If only check marks were indicated, I divided the twelve meetings equally among the choices indicated. A couple of people gave numbers that didn't add up to twelve meetings, so the totals don't either. I just divided the numbers in each category by the number of surveys returned.

Here are the average numbers of meetings per year requested by members:

3.08	Members reporting on subjects of general interest
2.08	Group discussion of a special topic
3.40	Speaker recruited by HAS leadership
2.36	Speaker on topic agreed on by members
0.72	All other suggestions (This category was led by swap meets.)

The average time suggested for speakers to talk was between 35 and 40 minutes.

This amounts to roughly five "home grown" meetings a year, six speakers, and one swap meet or other special meeting. Of course, these results are not the final word on our choice of meeting types, but they do indicate that members would like to hear an outside speaker about half the time and draw on our own members for the other half. This seems like a reasonable plan to me, and I am more than happy to help to make this happen.

Thanks also for the other suggestions for meetings. We can discuss this more at our June meeting.

Chris

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Planets Close to the Moon

Times are Hawaii Standard Time

June 1, 10h, M 3.5° N of Saturn
(19° from sun in evening sky)
June 4, 22h, M 4.3° NNE of Jupiter
(59° from sun in evening sky)
June 17, 13h, M 5.0° SSE of Neptune
(133° from sun in morning sky)
June 18, 21h, M 1.6° SSE of Mars
(117° from sun in morning sky)
June 19, 01h, M 4.5° SSE of Uranus
(115° from sun in morning sky)

Mercury and Venus are closer than 15° from the sun when closest to the moon in June.

Other Events of Interest

Times are Hawaii Standard Time

June 2, 20h, Mercury at greatest elongation
(24.4° west of the sun in morning sky)
June 9, 09h, Pluto at opposition.
June 14, 01:15h, Full Moon
June 20, 20h, Mercury 0.39° SSE of Venus
(16° from sun in morning sky)
June 21, 09:11h, Summer Solstice
June 24, 03h, Saturn in conjunction with the sun
(Passes into morning sky)
June 29, 08:38h, New Moon

The Planets in June

Mercury	**Venus**	**Mars**
Mercury is visible in the east near dawn during the first 3 weeks of June.	Venus is visible very low in the east near Mercury during the first 3 weeks of June	Mars rises near midnight and will brighten to -1.5 mag and reach a diam of 16" this month.
Jupiter	**Saturn**	**Uranus**
Jupiter is in the SE at sunset and well placed for viewing in the early evening.	Saturn is at conjunction with the sun on June 24. If may be viewed low in the west early in June.	Uranus is in the east in the pre-dawn hours. It will be better viewed later in the year.
Neptune	**Pluto**	
Neptune is near Mars, rising about midnight. Magnitude, +7.9	Pluto reaches opposition this month and will be in the sky all night - near the meridian at midnight.	

Meeting Minutes

by Gretchen West

The May 6, 2003 meeting was called to order by President Chris Peterson at 7:34 p.m. in the Atherton Halau, Bishop Museum, with thirty members and two visitors in attendance.

Old Business: President Chris Peterson asked members to fill out a meeting preference survey.

New Business: Scott Davis of the International Dark Sky Association will be speaking at IFA, at the University of Hawaii, Thursday May 8 at 3:30 pm. Interested members are urged to attend.

Astronews: Any member who wishes to receive the Astronews via e-mail, in lieu of a hard copy version, are asked to contact Paul Lawler.

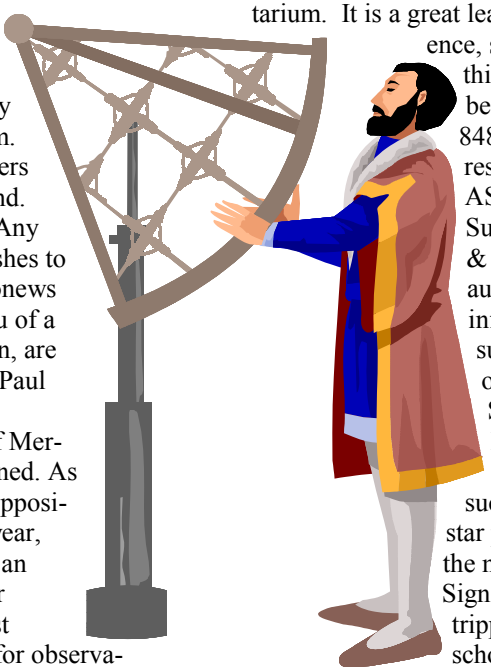
The transit of Mercury was mentioned. As Mars will be at opposition later in the year, members voiced an interest in further discussion of best month and time for observations. Members present suggested that either the July or August meeting might possibly be dedicated to discussion of astrophotography techniques and observation of the planet.

Ron Paul Smith displayed information and materials for binocular and stereoscopic viewing at our front table.

Good PR for the club came in the form of the recent Mid-Week article outlining events and activities at Kahala Community Park. Vice President Barry Peckham shared an article from the Baltimore Sun about amateur astronomers on the East Coast.

Don Tucker's surprise raffle ended up with another member receiving a treat.

Good Places to go for observer's information: The first Monday of each month is Sam Rhode's Hawaiian Skies show in the Bishop Museum's Planetarium. It is a great learning experience, so if you're thinking of going be sure to phone 848-4168 to make reservations, ASAP.



Sue French Sky & Tel contributing author has good information and suggestions for observers

School Star Parties: We had seven successful school star parties in the month of April. Sign-ups for star trippers to help with school star parties were needed for May:

May 7th- Maukalani Elementary in Makakilo - 6:40 pm

April 25 - Webling Elementary School on Halawa Heights - 6:40 pm.

If you know of school who wishes to have a special star party or some other astronomy related event, please contact Board members or Forrest Luke.

Astronomy Day- May 10, 2003 is

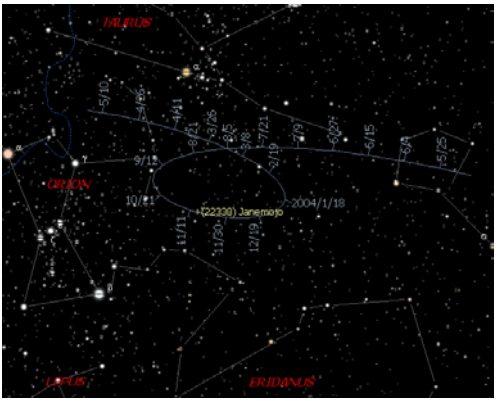
(Continued on page 6)

This space was occupied by the 2003 HAS roster. For privacy reasons we have elected not to put the roster in this on-line version of the Astronews.

Thank you for your understanding.

(Continued from page 1)

One of these little mountains in the sky, 5km 1992 LE was discovered by Carolyn Shoemaker and David Levy during a long successful observing night on June 3, 1992. They begun at 20:00 and continued until 04:30 the next morning, taking 40 pictures using the 18-inch Schmidt Camera atop Mt. Palomar in California. After several required observations to recapture the object and determine its orbit, minor planets are given a number and sometimes discoverers name them. Minor Planet 1992 LE has been designated 22338 Janemojo, for HAS members Jane and Morris (Mojo) Jones.



motion trail plot for 22338 Janemojo for the next twelve months, by Skytools <www.skyhound.com>

Additional information, orbital plots and a motion trail, plus pictures and the Minor Planet circular: http://www.whiteoaks.com/Janemojo.html

Notice: Camping at Dillingham

In recent discussions with the airport manager in charge of Dillingham Air Field, The club has been informed that overnight camping at the facility is not allowed. It seems that some individuals (not HAS related) have been spending the night at Dillingham and that items have turned up missing. As a result, camping will no longer be permitted.

School Star Parties

Thanks to all who participated in this year's school star parties. Unlike textbooks, school star parties introduce a lot of kids to astronomy as only a real telescope can. We'll see you all again in the fall.

We do have one summer request for a cub scout pack in Pearl City for July 5. Location to be determined.

Remember, if you know of a school that would like one, or are contacted for a school star party, please have the school contact Forrest Luke directly at 623-9830 or <lukef003@hawaii.rr.com>.

Minutes *(Continued from page 4)*

National Astronomy Day. Activities will take place at Barnes & Noble, Kahala Mall. Views of the daytime sky, moon tours and sunspot viewing will take place on the upper level outside of the bookstore. Interested participants are urged to join us about one p.m. The Public Star Party at Kahala Recreational Park later that evening will extend our activities to views of the moon, constellations, and brighter stellar objects.

Paul Lawler gave a short explanation of the current Planet X hoaxes making the rounds on the Internet. Apparently The Earth's planetary poles will shift drastically, and the Earth will stop spinning some time after May 17th (wink, wink, nudge, nudge). If you want to view the expanded version with a corresponding reality check, go on-line to www.badastronomy.com.

Mike Shannahan wanted to make us aware that on April 26th there was a restationing of the International space station by two new astronauts, a Russian and American Astronaut Ed Lu. Three experiments designed by Hawaii students went up with them. Mike also sadly related that two HAS friends and employees of the Planetarium; Larry Weiss and Cliff Jenkins were let go. HAS wishes them every kind of luck as they look for new positions. He also indicated that the Planetarium will be getting a bit of a face-lift. The very gracious and supportive Watamull Family has made a sizable donation for the refurbishment of the Planetarium. New seating and carpeting are will be installed in June 22 through June 28.

The meeting adjourned at 9:05 pm. for refreshment.

Respectfully submitted,
Gretchen West, Secretary, HAS

Night Vision

by Ron Paul Smith

Night Vision devices, also known as image intensifiers or *Starlights* in military parlance, are nothing new. Professional astronomers at the large observatories have used them for decades. I even had a military surplus 2nd generation NV intensifier tube 20 years ago.

Intensifiers work by electro-optically amplifying incoming photons to a high level. High enough to see a terrestrial landscape at night, like it was a daytime scene. The greater the level of amplification, (as in Gen I, II or III devices) the further the distance one can see, the greater the resolution (a monotonous greenish/white colored field is clarified into an almost black and white image), and the higher the cost. At present a Gen. III image intensifier eyepiece incorporating custom Nagler optics sells for around $2,500.

Most amateur astronomers don't have the wherewithal to purchase a NV eyepiece that costs as much as (or more than) an APO telescope, however, imported Gen I+ intensifiers imported from Russia are available for around $200-300. I purchased one with the intent of adapting it for use as an electro-optic eyepiece with my 80mm F5 "fast" rich-field telescope. I even wrote to the importer and manufacturer, suggesting that they produce eyepiece specific low cost NV scopes for the astronomical community.

The use of any grade of intensifier lets the observer see fainter magnitude stars than can be viewed with optical eyepieces. Also, since NV scopes work by cutting through the near infrared spectrum, stars that emit IR can be much more easily observed, as can blazing white blobs where you might hardly see the star in a regular eyepiece. One downside to the lower cost NV is the green cast to the field of view. This is caused by the type of phosphor applied to the intensifier tube. The reason green is used is that it is the color most easily seen by the human eye.* A red phosphor could be applied to preserve night vision of the observer, but it would drain power from the battery at about 100,000 times the rate of the green phosphor!

Use of an NV monocular wipes out about an hour's worth of normal optical viewing, so take a look at Aldebaran or Betelgeuse (or a faint magnitude star) in your "starlight," and then relax with a cup of hot cocoa for an hour… I do.

**Editor's Note: That's why you can see a low power green laser as a beam in the sky, but not a red one.*

Treasurer's Report

by Jim MacDonald

HAS Financial Report as of May 15, 2003

Initial Balance:	$5,748.27
Receipts:	
Astronomy Payment	58.00
Donations	20.00
Dues Received	104.00
S&T Payment	89.85
Telescope Fees	20.00
Deposit-Telescope	20.00
Total Income:	$311.85
Expenses:	
Astronews	155.27
Magazine Subscription Payment	175.90
Refreshments	10.53
Returned Check	42.00
Total Expenses:	$383.70
Final Balance	$5,676.42

During the last month we had two new members join the club. They are Darrell Kikuchi and Terry Roberts. Welcome to the club and many thanks to the members renewing their membership this month.

We would also like to thank Barbara Towle, a non-member, for her donation. At our last public star party, she stated that she is a teacher and after attending several of our events, felt that we are all teachers (of astronomy) and wanted to show her appreciation. Thank you Barbara and clear skies to all!

Astro Quotable:

"There is a theory which states that if ever anybody discovers exactly what the Universe is for and why it is here, it will instantly disappear and be replaced by something even more bizarre and inexplicable. There is another theory which states that this has already happened."

Douglas Adams, *English Author* (1952-2001)

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