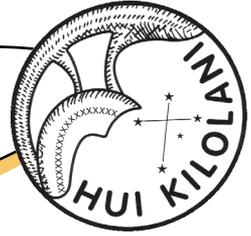


# The Astronews



Volume 54, Issue 11

[www.hawastsoc.org](http://www.hawastsoc.org)

November 2006

## Lecture: The Era of Precision Cosmology

Prof. **Andrew Liddle**

University of Sussex, U.K.

7:30 p.m. **Wed., Nov. 1, 2006,**

IfA Manoa Auditorium

(2680 Woodlawn Drive, Honolulu)

Open to the public

Free admission and parking

The Universe, created in a single cataclysmic explosion known as the Big Bang about 13.7 billion years ago, has been expanding ever since. Recent astronomical observations have led to precision measurements of several amazing properties of our Universe. One of these is that the expansion rate of the Universe is accelerating rather than slowing down. In his talk, Liddle will give an overview of our emerging understanding of the cosmological properties of the Universe, while explaining that much of the physics underpinning it has yet to be understood.

## Upcoming Star Parties

<b>Public Party</b>	<b>Nov 11</b>	<b>Dillingham</b>
<b>Club Party</b>	<b>Nov 18</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Nov 25</b>	<b>Kahala/Waikele</b>
<b>Club Party</b>	<b>Dec 16</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Dec 23</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Dec 30</b>	<b>Kahala/Waikele</b>

*2007 Schedule coming next month!*

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## Upcoming Events:

- The next meeting and **Swap Meet** is at 7:30 p.m. on **Tuesday, Nov. 7<sup>th</sup>** at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is **Friday, Nov. 3<sup>rd</sup>** at 7:00 p.m.

## President's Message

Some astronomical phenomena are over almost in the blink of an eye. Others unfold over days, weeks or months. On November 8th, a transit of Mercury across the face of the Sun lasts for a few hours.

We in Hawaii are well positioned to see this transit. The entire event will be visible from here. While not as rare as a transit of Venus, a transit of Mercury is not a frequent occurrence. It is this rarity, rather than any spectacular visual effect, that makes the process intriguing. The slow progress of the small dark silhouette of Mercury allows one ample time to reflect on the enormous size of the Sun, the extreme temperature contrast between the day and night sides of Mercury, or anything else that strikes one's fancy.

I well remember my first observation of a transit of Mercury, back in the early '90s. Joe Dellinger, who would later co-discover many asteroids and name one of them "Huikilolani" after our club, set up his telescope on the roof of the Hawaii Institute of Geophysics building at the University of Hawaii at Manoa. He used eyepiece projection to display the proceedings for the small crowd that had gathered. This occurred in the middle to late afternoon. As the Sun dropped lower and lower, Mercury drew a short chord across the Sun, never getting far from the Sun's limb.

After several minutes of watching this slow dance, my curiosity was satisfied, and I considered leaving. Just then, a pair of military jets flew through the field of view in formation. When they were halfway across the Sun, they turned in unison and sped off at a different angle. At least that's the way I remember it.

If you want to check the progress of the transit online, you can go to <http://>

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**Planets Close To the Moon**

Times are Hawaii Standard Time

- Nov 12, h, M 1.5° NNE of Saturn  
(86° from sun in morning sky)
- Nov 18, 22h, M 6.0° SSW of Mercury  
(18° from sun in morning sky)
- Nov 26, 13h, M 2.7° SSE of Neptune  
(73° from sun in evening sky)
- Nov 28, 22h, M 0.36° E of Uranus  
(95° from sun in evening sky)

Venus, Mars and Jupiter are closer than 15° from the sun when near the moon in September.

**Other Events of Interest**

Times are Hawaii Standard Time

- Oct 31, 22h, Mercury 3.2° SSW of Jupiter  
(16° from sun in evening sky)
- Nov 5, 00:58h, Moon Full
- Nov 8, 11h, Mercury at inferior conj. with sun  
(Passes into morning sky)
- Nov 8, Mercury transit visible from Hawaii
- Nov 14, 07h, 7 Iris at opposition
- Nov 17, Leonid meteors.
- Nov 20, 12:17h, Moon New
- Nov 21, 13 h, Jupiter at conjunction with sun  
(Passes into morning sky)
- Nov 25, 03h, Mercury at greatest elongation  
(19.9° west of the sun in morning sky)

**Planets in November**

<p> <b>Mercury</b></p> <p>visible the last night of Oct in the evening sky, then the last 2 weeks of Nov in the morning sky. Has a <i>transit</i> on Nov 8.</p>	<p> <b>Venus</b></p> <p>is still too close to the sun to view easily in November.</p>	<p> <b>Mars</b></p> <p>is also too close to the sun to be observed this month.</p>
<p> <b>Jupiter</b></p> <p>is at conjunction with the sun and cannot be viewed after the first day or two of Nov.</p>	<p> <b>Saturn</b></p> <p>is visible in the morning sky before sunrise.</p>	<p> <b>Uranus</b></p> <p>can be viewed in the southwest in the evening sky in Aquarius.</p>
<p> <b>Neptune</b></p> <p>rises a little earlier than Uranus and can also be viewed early in the evening in Capricornus.</p>	<p> Dwarf Planet <b>Pluto</b></p> <p>is getting too close to the sun for easy viewing and will reach conj. with the sun in mid-December.</p>	<p>Dwarf Planet <b>Eris (née Xena)</b></p> <p>is in Cetus and is in the sky most of the night (It was at opposition on Oct 14). At magnitude 18.7, it will be hard to find.</p>

The October 3, 2006 meeting of the Hawaiian Astronomical Society was called to order by President Chris Peterson at 7:32 p.m. The meeting was held at the Atherton Halau of the Bishop Museum. In attendance were twenty-five members. Visitors Ms. Yng Yng Chiu, Mr. Jeff Matthews, Mr. John Detroy and his father and mother-in-law, Mr. & Mrs. Jose Jorge Ho and fellow astronomer, Mr. Paul Leopold of a Cincinnati, Ohio joined us during this month's meeting.

## Old Business

Pres. Peterson reviewed current astronomy news items: the Cassini orbiter has discovered a new tenuous ring composed of fine particles around Saturn. The Mars rovers are coming up on Day 1,000 of their mission. The Mars Reconnaissance Orbiter is entering into its final synchronous orbit. The ground piercing radar onboard will be used to search for subterranean ice. Its high-resolution cameras will be able to view objects as small as one meter in diameter.

★In Pennsylvania, the Dark Sky Organization has achieved a first; the nation's first Dark Sky Park (at Cherry Springs), for the preservation of the dark skies of Pennsylvania.

★Hawaii Space Lecture Series - The Planetary Data Center will host Dr. David Swift from the Sociology Department of the UH Manoa. The subject of the lecture is *The Voyager Spacecraft Project: Reasons to Remember the Grand Tour*.

★Star Party Report - Forrest Luke reported on and thanked the astronomers who helped out at the recent star

party on September 29th at Momilani Elementary School.

★**Swap Meet** - The H.A.S. Swap Meet will take place during the November meeting. Those interested in participating will be able to buy and sell items during the latter half of the meeting.

## New Business

★New Comet Identified - Astronomer David Levi has beaten the odds and discovered a new comet near Jupiter. C2006-T1 is currently mag. 8.9.

★Bumper Stickers are in the works - Club bumper stickers are being finalized and should be available at the November meeting.

★Note from Kevin Polk - Former H.A.S. President, Kevin Polk recently corresponded with Gretchen West and reports that he has recently married Kimberly Wagner and they are living in Bloomington, Indiana. Kevin sends his regards to his friends at HAS.

★Liability Insurance Coverage - Treasurer, Jim MacDonald covered the issues regarding our joining the Astronomical League. Less expensive liability insurance is available if HAS joins the Astronomical League.

★A motion to increase annual dues and join the Astronomical League passed unanimously. At your next renewal, individual dues will increase to \$20 per year, students will increase to \$12 per year and remain at \$2 per year for family members.

★NASA Nite Sky Network Update - John Gallagher presented information about the latest Night-Sky Network teleconference and the latest Night-

(Continued on page 5)

This is a poor year for the Taurids, but a far better one for the Leonids. Sporadic rates are still good. Just in case you care to try:

☀ Sunday the 5th, the **Southern Taurids**. Radiant 03h20m +13 deg. Rates are less than 5 per hour.

☀ Sunday the 12th, the **Northern Taurids**. Radiant 03h52m +22 deg. Again rates are less than 5 per hour. The moon will make things a mess. Oh Xena where are you?

☀ Friday the 17th the **Leonids**. Radiant 10h12m +22 deg.

Rates can run from near 20 to near 100 an hour, but expect more like 10 to 15 an hour this time around. Hawaii is in a poor location for the maximum (Asia is the best location). Maximum about 21:00 UT which is about 11:00 HST.

☀ Tuesday the 21st, the **Alpha Monocerotids**. Radiant 07h48m +01 deg. The maximum about 11AM local time. The new Moon is great, but the Sun does not cooperate at all.

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

## *Minutes (Continued from page 4)*

Sky Tool Kit called Shadows and Silhouettes. Interested individuals should contact John for further information.

★ Transit of Mercury occurs on November 8, starting about 9:00 am. The Bishop Museum will host an event on the grass in front of the new Science Center. Forrest Luke is looking for astronomers with filtered telescopes to help out on that day. Please contact Forrest Luke at 623-9830 if you are able to help out during this upcoming daytime event.

★ **Less Light Pollution Lottery** - Vice President Barry Peckham urged individuals to send their jpeg images and address information about businesses and community entities that employ *good lighting* practices.

H.A.S. would like to recognize and commend these entities. Please send your entries to <barry@litebox-telescopes.com>.

★ Next Molokai Trip - January 2007 is the month for a possible trip to Molo-

kai Ranch for another Astronomy Weekend. Those interested contact Barry Peckham.

★ **Guest Speaker: Dr. Paul Coleman** of the Institute for Astronomy, UH Manoa came to speak to us about the Fawkes Telescope on Haleakala on the island of Maui. This privately owned telescope hosts viewing by school children in Hawaii and the United Kingdom. He pointed out the excitement of setting things up for the use of these young astronomers. He also discussed the challenges of constructing, implementing the technology, and maintaining the facility.

★ Elections in December - Annual elections will take place during the December 2006 meeting. Individuals interested in running for a seat on the Board, please contact Gretchen West to place a name in the list.

★ Rental Scopes - Members are encouraged to rent our 6 and 8 scopes, which rent for \$20 per month

★ The meeting was adjourned at 9:12 p.m. and refreshments were served.

**THE HAWAIIAN ASTRONOMICAL SOCIETY**  
**MEMBERSHIP APPLICATION**  
**2006/2007**

Name \_\_\_\_\_

Street or P.O. Box \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ (e-mail) \_\_\_\_\_

Family Members \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Dues \$20.00 \_\_\_\_\_

Dues (Full-time Student) \$12.00 \_\_\_\_\_

Additional family members. Each \$2.00 \_\_\_\_\_

*Sky and Telescope* Subscription \$32.95 \_\_\_\_\_

*Astronomy* Subscription \$34.00 \_\_\_\_\_

Donation \_\_\_\_\_

\_\_\_\_\_

Total \_\_\_\_\_

Fill out this form and send with your check to:  
**Hawaiian Astronomical Society**  
**P.O. Box 17671**  
**Honolulu, Hawaii 96817-0671**

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

Initial Balance:.....	<b>\$4,329.53</b>
Receipts:	
Donations .....	5.00
Dues Received.....	158.00
S&T Payments.....	32.95
Telescope Fee.....	60.00
Total Income: .....	<b>\$260.95</b>
Expenses:	
Astronews.....	155.79
Magazine Subscriptions .....	120.71
Refreshments & Postage .....	10.94
Total Expenses: .....	<b>\$287.44</b>
Ending Balance:.....	<b>\$4,303.04</b>

This month the club welcomes four new members. They are **Michael and Bud Reiter, Joshua Yadon, and Yng Yng Chiu**. A special thanks to all of those renewing their membership this month. Clear skies to all!

**President** (Continued from page 2)  
[astroday.net/merctransit06.html](http://astroday.net/merctransit06.html)  
 to see a variety of images and other material related to the transit organized by the Institute for Astronomy.

Chris



**General Membership Notice**

During our October 3 meeting, the membership voted to join the Astronomical League to take advantage of their various member benefits including their liability insurance offering. In connection with this change, regular membership dues increased to \$20 per year and \$12 for full-time students. Family members rates remain \$2 per person per year. This increase takes effect at your next renewal. One of the benefits of joining the Astronomical League is that members

will now be receiving a quarterly issue of **The Reflector**. To facilitate this, we will be providing the mailing addresses of our membership to the League. However, should you wish not to have your mailing address shared with the League, please notify Jim MacDonald ([jim.macd@hawaiiintel.net](mailto:jim.macd@hawaiiintel.net)) by e-mail, or by mail at the club's postal address as soon as possible, but no later than November 24, 2006.

**H.A.S.  
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Join the **Less Light-pollution Lottery** (see page 5)