



HCAS General Meeting, September 13, 2003

President Wayne French opened the meeting at 8:00PM.

Treasurer's report: \$2359.68

Old Business:

1. Mars Week Open Houses: Excellent turnout by members and public made the Mars Week public viewing event quite successful. Grace Wyatt mentioned how many folks had seen either the cable television story on the HCAS or the Edgewood Library display case, prompting them to come out and see Mars for themselves. With few exceptions, the public comments were very encouraging and all in all a "well done" to the HCAS members that took the time to support this activity.

2. Observatory Operations: New software from Astro-Physics has been obtained and Steve C. will load it into the controller. The membership present voted to purchase a 2in-1.5in adapter for the scope (Bill G. has already obtained the adapter, so we're ready to roll as of print time!). Astro-Physics said that the mount drives very well with some of the planetarium packages available. With the excellent computer donation marshaled by Larry Armstrong, we certainly have the capability to integrate that level of control with our system. Bill G. and Steve C. will work on that issue. **IF THE SOFTWARE FIX SENT BY ASTRO-PHYSICS WORKS AS EXPECTED, THE SCOPE WILL BE READY AND WE CAN START TRAINING SESSIONS. WE WILL ANNOUNCE THE TRAINING SCHEDULE BOTH ON THE HCAS WEBSITE AND ON THE EMAIL DISTRIBUTION LIST. IN ADDITION, WE WILL MAIL THE ANNOUNCEMENT TO THOSE MEMBERS NOT ON ELECTRONIC MEDIA.**

3. Astronomy Class Support: The fall schedule for Dr. George Thomson's class is listed below. HCAS has committed to supporting this so please take the effort and help to set up some scopes for his students. George breaks the class for observing at 9:30PM on the evenings listed. Members need to be set up by 9:00PM to ensure quick flow of the students. Of course, clear skies are desired...if there is any question about the conditions, you can reach Dr. Thomson in Aberdeen Hall, Harford Community College, Room 113.

Fall 2003 Observation Schedule

<i>September</i>		<i>October</i>	
Sept. 15, 2003	(moonless)	Oct. 6	(1 st quarter moon)
Sept. 22	(moonless)	Oct. 13	(Full Moon - no session)
Sept. 29	(moonless)	Oct. 20	(moonless)
		Oct. 27	(moonless)
<i>November</i>		<i>December</i>	
Nov. 3	(1st quarter)	Dec. 1	(1st quarter - optional - will hold only if prior 1st quarter sessions are clouded out)
Nov. 10	(Full moon - NO SESSION)		
Nov. 17	(moonless)	Dec. 8	(Full moon - NO SESSION)
			SEMESTER ENDS
Nov. 22	(4 a.m. session at the observatory)		
Nov. 23	(4 a.m. to be held only if preceding Morning's session is clouded out)		
Nov. 24	(moonless)		

Program: Dr. Harold Williams, Montgomery College Planetarium. **Astrolabes: History, Design, Use and Trivia.**

Dr. Williams gave a fascinating lecture about these ancient devices that allow one to calculate the positions of astronomical objects. The original astronomical computer, the astrolabe spawned the first instructive scientific text in the English language when Chaucer described its use in a text for his son Lewis (1387).



Long experience with astrolabe technology was well represented in his lecture as he explained the various methods of construction employed in design of the instrument. Interestingly, he impressed the relevance of this device by an example of a "linear astrolabe" that had been developed for the early U.S. space program!

Dr. Williams suggested the following site for reference. The site even has a working "electronic astrolabe" that you can manipulate and gain an even better understanding of this remarkable "old but new" instrument!

www.astrolabes.org

Harford County Astronomical Society Display at Edgewood Library



Grace Wyatt sent in the following report on our display case:

People who assisted included: Steve and Carol Channel, Larry and Fran Armstrong, Steve Krall, Phil Schmitz and Grace Wyatt helped with loaning objects and planning the display. Items for viewing included a meteorite display, a section on how to build your own telescope, books

and star charts for observing, posters and Hubble photos. Steve and Grace organized the objects in the case and removed them at the end of the month. It was on view the entire month of August at the Edgewood library. **Our club will be setting up a display at the Bel Air library in January.**

Regional Star Parties



23-28 September: Astroblast 2003. ASTROBLAST is an annual event, first held in June 1994, by the Oil Region Astronomical Society. Our organization is blessed with a remote "dark sky" site located far from the light pollution of large urban areas. The event is held in a large field surrounding our observatory in the Lockwood Campground at Venango County's Two Mile Run Park, near Franklin, Pennsylvania. <http://www.oras.org/>

24-28 September: No Frills Star Party. Hosted at Tuckahoe State Park on Maryland's eastern shore by the Delmarva Stargazers. <http://www.delmarvastargazers.org/>

24-26 October: Blackwater Falls Astronomy Weekend. The West Virginia Division of Parks and Tourism and the Kanawha Valley Astronomical Society is sponsoring the annual Astronomy Weekend at Blackwater Falls State Park. This time has been chosen to take advantage of dark skies that occur shortly after a new moon. Of course viewing is best with the darkest skies possible. Astronomy Weekend is "FREE". Everyone is welcome! <http://www.kvas.org/>

24-26 October: Stella Della Valley Star Party. Stella Della Valley is now in its seventeenth year, making it the oldest and longest-lived star party in the mid-Atlantic region. This event has always been held in September or October in order to take advantage of clear skies, an early sunset, and reasonably warm weather for camping. Stella Della Valley is traditionally the last Northeastern Star Party of the season. This year's event should combine the fall foliage of rural Bucks County with the planets Mars, Saturn and Jupiter all being well placed for observation.

<http://www.bma2.org/Sdv.html>



October EVENTS

4th. Public Open House. Harford Technical High School Parking lot; adjacent to the Observatory Grounds.

11th. General Meeting 7:30 p.m. **AT THE OBSERVATORY**

18th. * Star Party* >>Members_Only<< dusk at Broad Creek.

25th. *Star Party* >>Members_Only<< dusk at Broad Creek



(un)Fasten your Seatbelts

by Patrick Barry and Tony Phillips

The "fasten seatbelts" light turns off, and you get up to ask the stewardess for a pillow; it's going to be a long flight. Only a kilometer ahead in the cloudless sky, a downward draft of sheering winds looms. When the plane hits these winds, the "turbulence" will shake the cabin violently and you could be seriously hurt.

You don't know about those winds, of course, and neither does the pilot. Today's weather satellites can't see winds in clear skies: they rely on the motion of clouds to infer which way the winds are blowing.

their best
sheer right now is
aircraft that have
ahead of them," says
Langley Research

technology being
and NOAA could



"Believe it or not,
indication of wind
warnings from
gone through it
Bill Smith of NASA's
Center.

But a new satellite
pioneered by NASA
improve this shaky

situation. It's called GIFTS, short for Geosynchronous Imaging Fourier Transform Spectrometer. GIFTS is an infra-red sensor that can detect winds in cloudless skies by watching the motions of atmospheric water vapor. Water vapor is mostly invisible to the human eye, but it reveals itself to GIFTS by the infra-red radiation it absorbs.

Smith is the lead scientist for EO-3, a satellite designed to test out this new technology. Slated for launch in 2005 or 2006, EO-3 will carry GIFTS to Earth orbit where it can produce 3-dimensional movies of winds in the atmosphere below.

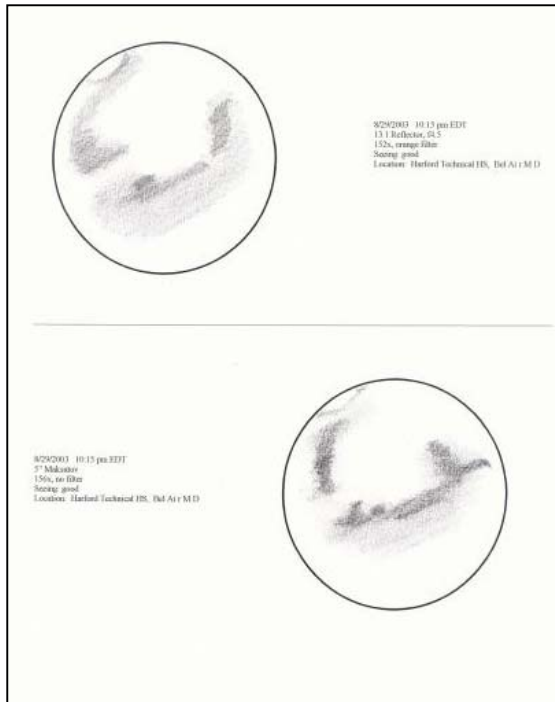
These wind data will not only improve safety, but also help the airlines save money. Knowing the winds along a flight route allows airlines to adjust the plane's fuel load accordingly, thus reducing the weight that the engines must lift. Saved fuel means saved money and less pollution.

GIFTS can help planes avoid another potentially lethal problem, too: Ice forming on their wings. If a cloud contains "supercooled" water droplets whose temperature is below freezing, those droplets will form ice on the wings of planes that pass through it. By looking at about 1700 different frequencies of the light coming from clouds, GIFTS can measure the temperature of the cloud top and determine whether it contains water droplets that could cause aircraft icing. With information from GIFTS in hand, pilots can simply avoid clouds that appear dangerous.

Once EO-3 demonstrates the accuracy of GIFTS, airlines will be able to capitalize on this potential to make flying a cheaper and safer experience.

Learn more about the GIFTS instrument and other advanced technologies being tested on the EO-3 mission at nmp.jpl.nasa.gov/eo3. Kids can go to The Space Place to play a data compression game related to EO-3 at spaceplace.nasa.gov/eo3_compression.htm .

Reminder: If you have AstroViews delivered to your EMAIL address, you get everything in **COLOR!!!!**



Mars sketches from Lucy Albert. There is still a lot to see out there!!

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