



Minutes of General Meeting, 15 March 2003

President Lucy called the meeting to order at 8:35 P.M. in Joppa Hall, Room J70.

Treasurer's report: \$1807.94

Old Business:

Educational Outreach: Bill G. offered the following report from the open house:

The evening started out with high haze and thin clouds but Jupiter, Saturn and a nice crescent moon were viewable.

Larry Hubble, Mark Kregal, Tom Rusek and I were there to represent the club. Larry and set up scopes and Mark assisted with the technical answers to many very good and philosophical questions. About 50 visitors came by as the evening progressed, lots of kids with lots of questions and enthusiasm. Tom set up one of his slide shows in Joppa Hall, which offered a good chance for cold people to warm up and see a good presentation on astronomy.

The sky got even cloudier until 9:30 when the wind came up and blew it all away.

We observed some very nice Saturn images, Jupiter detail and a shadow transit of Io.

Then it got too windy for the scopes and we called it quits.

President Lucy will be teaching, "Exploring the Night Sky" at HCC starting Tuesday, 18 March.

Star Parties:

MASON DIXON: 1st week in June, Codorus St. Pk,
PA, <http://masondixonstarparty.org/>

Del Marva Stargazers: 30 April - 4 May, Tuckahoe State Park;
www.delmarvastargazers.org

New Business:

Grace Wyatt is coordinating a HCAS display at the Harford Mall this month (April). We'll need members to sign up to attend the booth. The strategy is to advertise for the OPEN HOUSE at our new Public Viewing site near the observatory. We intend to hold that on Astronomy Day, 10 May and the Harford Mall event will allow us to announce and publicize that May event. Members should contact Grace to volunteer. The new public viewing site has been LONG ANTICIPATED by many of us and it is exciting to see the target date for its inaugural date so near!

Meeting Program:

Dr. Frank Sommers from Space Telescope presented: Simulation to Visualization: Astrophysics goes to Hollywood. His was an absolutely stunning lecture of multiple animations and multimedia simulations to demonstrate how those methods both enhance scientific understanding and increase public appreciation for the wonders of the sky. Most impressive, to this viewer, was his fly-through of a globular cluster.... those of you not attending simply missed a delightful presentation!

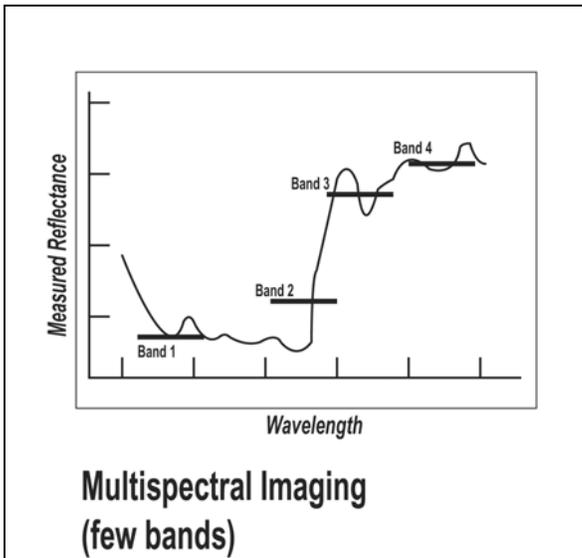


IN MEMORY

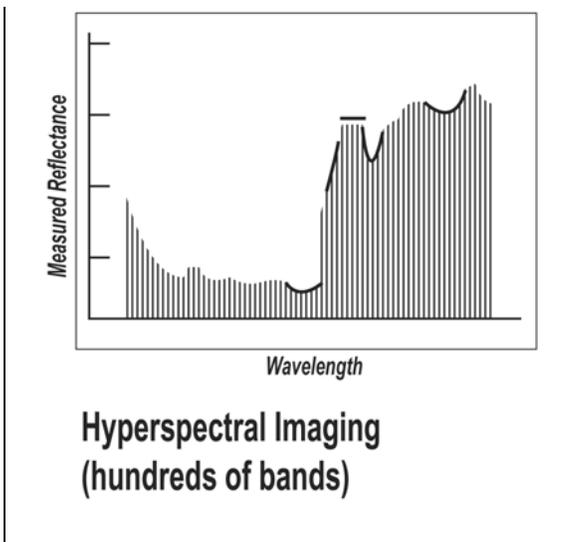
With deep loss, we note the passing of Warren Hoover, longtime member, mentor and friend. Warren will rest under the stars and in the hearts of many members. Our most sincere thoughts go to his family.

Musical Satellites

By Tony Phillips



Hyperion instrument distinguishes hundreds of wavelength bands, while current Landsat instrument images only a few.



If light were sound, then chemicals would play chords.

Water: C major. Cyanide: A minor. Chlorophyll: G diminished 7th. (Please note that the choice of chords here is only for the sake of illustration, and not meant to reflect the actual spectra of these chemicals.)

It's a loose metaphor, but an apt one. Musical chords are combinations of frequencies of sound (notes), while chemicals leave unique combinations of dips in the frequency spectrum of reflected light, like keys pressed on a piano. Spectrographs, machines that recognize chemicals from their "chords of light," are among the most powerful tools of modern chemistry.

Most earth-watching satellites, like the highly successful Landsat series, carry spectrographs onboard. These sensors measure the spectra of light reflected from forests, crops, cities, and lakes, yielding valuable information about our natural environment. Current satellites do this in a fairly limited way; their sensors can "hear" only a few meager notes amid the symphony of information emanating from the planet below.

EO-1 could change that. Short for "Earth Observing 1," EO-1 is an experimental NASA satellite in orbit since 2000. It's testing out a more advanced "spectrometer in the sky"-the Hyperion hyperspectral imager. How good is it? If Landsat were "chopsticks," EO-1 would be Gershwin's "Rhapsody in Blue."

The Hyperion sensor looks at 220 frequencies in the spectrum of visible and infrared light (0.4 to 2.5 microns) reflecting off Earth's surface. Landsat, in contrast, measures only 10. Bryant Cramer, who manages the EO-1 project at the Goddard Space Flight Center, puts these numbers in perspective. "If we flew

Landsat over the northeastern United States, it could readily identify a hardwood forest. But using hyperspectral techniques, you probably can . . . tell the oak trees from the maple trees."

Future earth-watching satellites may use Hyperion-like instruments to vastly improve the environmental data

they provide. EO-1 is paving the way for these future missions by taking on the risk of flight-testing the sensor for the first time.

For farmers, foresters, and many others, this new remote sensing technology will surely be music to the ears.

Read about EO1 at <http://eo1.gsfc.nasa.gov> . Budding young astronomers can learn more at http://spaceplace.nasa.gov/eo1_1.htm ..

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Harford County Messier Club

March Messier Objects — Between R.A. 07h 00m and 08h 59m

M50	R.A. 07 03	Dec. -08 21	Size 18'	Mag. 7.0	Open Cluster
Large, rich, and condensed cluster in Monoceros. More than 50 stars.					
M47	R.A. 07 37	Dec. -14 28	Size 25'	Mag. 5.0	Open Cluster
Very large and bright naked eye cluster in Puppis. More than 50 stars.					
M45	R.A. 07 42	Dec. -14 42	Size 27'	Mag. 7.0	Open Cluster
Very large, but not nearly as bright as nearby M47. In Puppis. Looks like a featureless cloud through binoculars. More than 50 stars. This cluster is a unique in that it contains a planetary nebula, NGC 2438. About 45" in diameter, it is near the fringe of the cluster. A Deep-Sky or UHC filter makes the nebula easier to find.					
M93	R.A. 07 46	Dec. -23 53	Size 18'	Mag. 6.0	Open Cluster
A nice cluster of more than 40 stars. Not quite circular. In Puppis.					
M48	R.A. 08 14	Dec. -05 48	Size 30'	Mag. 6.0	Open Cluster
A very large cluster in Hydra. About 20 brighter stars.					
M44	R.A. 08 40	Dec. +20 00	Size 90'	Mag. 4.0	Open Cluster
This is the famous "Beehive" cluster in Cancer, also known as the "Praesepe." A naked eye beauty. A telescope shows more than 50 brighter members.					
M67	R.A. 08 51	Dec. +11 48	Size 18'	Mag. 7.0	Open Cluster
Large and obvious in binoculars. A telescope shows more than 75 stars. In Cancer.					

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April



2003

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5 *Star Party*; Broad Creek and Observatory
6	7 Discussion night, ASTRONOMY CLASS Possible makeup	8	9 1st Quarter Moon	10	11	12 PUBLIC OPEN HOUSE; dusk
13	14 Discussion night Observatory	15	16 Full Moon	17	18	19 GENERAL MEETING, Joppa Hall, 7:30PM
20	21 Discussion night, ASTRONOMY CLASS 9:00PM	22	23 Last Quarter Moon	24	25	26 *Star Party*; Broad Creek and Observatory
27	28 Discussion night, ASTRONOMY CLASS 9:00PM	29	30			

Members will remember our commitment to help Dr. Thompson with his Astronomy Class students. Several members are necessary to set up scopes (some of the club scopes are available) on the evenings indicated. Please help us provide this valuable service to the students. It helps to build good will with the college and community!

HARFORD COUNTY ASTRONOMICAL SOCIETY
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FIRST CLASS
Address Correction Requested