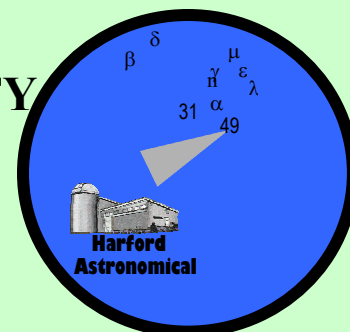


HARFORD COUNTY ASTRONOMICAL SOCIETY

AstroView



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November 2004

General Meeting Saturday, November 27, 2004

President Larry Armstrong opened the meeting at 7:30

Minutes accepted.

Treasurer's Report: \$2666.25 after paying our insurance premium of \$327.00.

Regular Agenda:

1. Public Star Party: Rain!!!

2. Observatory Operations: We held a certification class last Saturday. With that class, we now have 28 members that are certified to use the observatory. Those names are listed with HCC Security. There is increasing interest in working with the observatory scope and equipment and we encourage the membership to get certified, find a buddy (remember the safety "rule of two") and have fun! The phone has been reconnected to the observatory.

Old Business:

1. Warren Hoover Estate. This action is closed. Good effort to all (esp. Mark K, Leo H. and Larry A.) for follow-up to help complete the work!

2. Eden's Mill Outreach: We'll work on this after the holiday season. The folks at Eden Mill are very interested in a session and presentation that we've done to great success at other similar events. Stay Tuned!

3. Rocks State Park: Doris T. has contacted the officials and we are waiting on a key to be made. She'll let us know when that happens and we'll most likely keep it at Doris' home, which is quite close to the Rocks park site.

4. Astrophotography Class: Several members accompanied Larry Hubble and sorted out cables, computers and etc to take a quick shot of the Pleiades during an introductory astrophotography session.

New Business:

1. Answering Machine for Observatory: Now that we have re-established the phone line, we'll get that answering machine donated by Jim Garrett and have an active "public voice"!

2. Modification of the observatory scope: The interest in astrophotography is increasing and our main scope has the ability to be modified to the "Fastar" system best suited for that purpose. In the *Fastar* a CCD camera can be placed at prime focus of the main mirror to produce a f/2 optical system of much shorter focal length. It covers 25 times more sky than in standard f/10 mode and exposures are proportionally reduced. This is similar to the original Schmidt camera invented by Bernhard Schmidt in the 1930s designed to cover relatively wide portions of the sky. We have all the equipment to accomplish this modification, however it requires disassembly and reassembly of the scope. The membership voted on the motion as follows:

"Before any alterations are attempted on the main scope to use the Fastar system, we MUST have some expert instruction and demonstration by someone knowledgeable in making the modifications."

This is not a "read the manual and do it" kind of deal...there is significant hazard of damaging the collector lens or other parts of the scope. Those members interested in pursuing the Fastar must seek the expertise...there are numerous resources in the region that we could ask to assist us. This is an exciting opportunity for the club and we'll anticipate learning how to use the method safely.

3. Storage Room Organization Day: We'll hold a workday after the holidays to clean out and organize the storage room. We have lots of "stuff" in there, some of which should be sorted

out to be sold and benefit the club. Stay Tuned for the announcement of the day.

4. Storage Room Dehumidifier: There has been some EMAIL traffic about the need for a dehumidifier for the storage room. It is uncertain if there is an actual need for one, since there is no obvious evidence of mold/mildew and etc on the various boxes and etc that have been stored there for quite some time. However, the workday mentioned above will be the best opportunity to determine the need after which the membership can decide on the need to purchase and install a dehumidifier. Decision delayed until after the workday.

5. Remote Scope Control: As appealing as it may seem, the discussion to configure our scope and observatory for remote operation via the Internet was universally deemed simply infeasible in our present circumstances. Significant challenges and expenses, such as motorizing the come, linking dome/scope to computer and net, as well as the logistics of maintaining that equipment are well beyond the current level of finances and participation. Members interested in learning more about what goes into such an operation should visit the site: www.slooh.com This is a remote observatory in the Canary Islands (Carol belongs) at which you can schedule your own time for minimal expense.

6. Occultation of Jupiter: Wayne F. mentioned the upcoming lunar occultation of Jupiter (first part of December). Members that may be interested in taping the event using our equipment...contact [Wayne French at: 410-592-6143;](mailto:Wayne.French@bcpl.net)
wfrench@bcpl.net

7. Movie and social evening: After the holidays well gather for an "old movie and social" evening...perhaps would be a good time for the "what I got for Christmas" show and tell too!

DOOR PRIZE: Cathy Tingler won the book: "Echos of the Ancient Skies" by Dr. E.C. Krupp. (We'll expect a book report Cathy!)

MEETING ADJOURNED.

December

4th, 11th - Star Party (members only) at Steppingstone Museum
18th - Public Open House, tech school Parking Lot 7:30PM
25th - Christmas...NO General Meeting!

January

1st, 8th, 29th - Star Party (members only) at Steppingstone Museum
15th - Public Open House, tech school Parking Lot 7:30PM
22nd - General Meeting, 7:30 PM, Observatory



Galactic Surprise

by Patrick L. Barry and Dr. Tony Phillips

Open an old astronomy textbook. The basic sketch you'll find there of galaxy formation is fairly simple: a vast cloud of diffuse hydrogen and helium gas condenses under gravity, and dense spots in the cloud collapse to form stars. Voila! A galaxy.

But real galaxies are much more complex than that. A galaxy is a swirling "soup" of billions of stars and roaming black holes, scattered clouds of gas and dust, random flashes of star birth and exploding supernovas, and an unseen and mysterious substance called "dark matter." Over time, all these ingredients mix and interact—pulling and compressing and colliding—and somehow that interplay leads to the galaxies we see today. No wonder it's such a hard problem to solve!

Just over one year into its three-year mission, GALEX is already shedding some new light on the problem.

"Some of the discoveries GALEX has made will change our understanding of how galaxies develop and when, where, and why stars form in galaxies," says Peter Friedman, a researcher at Caltech and Project Scientist for GALEX.

This small space telescope, called the Galaxy Evolution Explorer (GALEX for short), makes its discoveries by taking pictures of millions of galaxies scattered over the whole sky. Some of these galaxies are close by (at least by astronomical standards of "close"), while others are as much as 10 billion light-years away. Because light takes time to travel through space, we see these distant galaxies as they appeared billions of years ago.

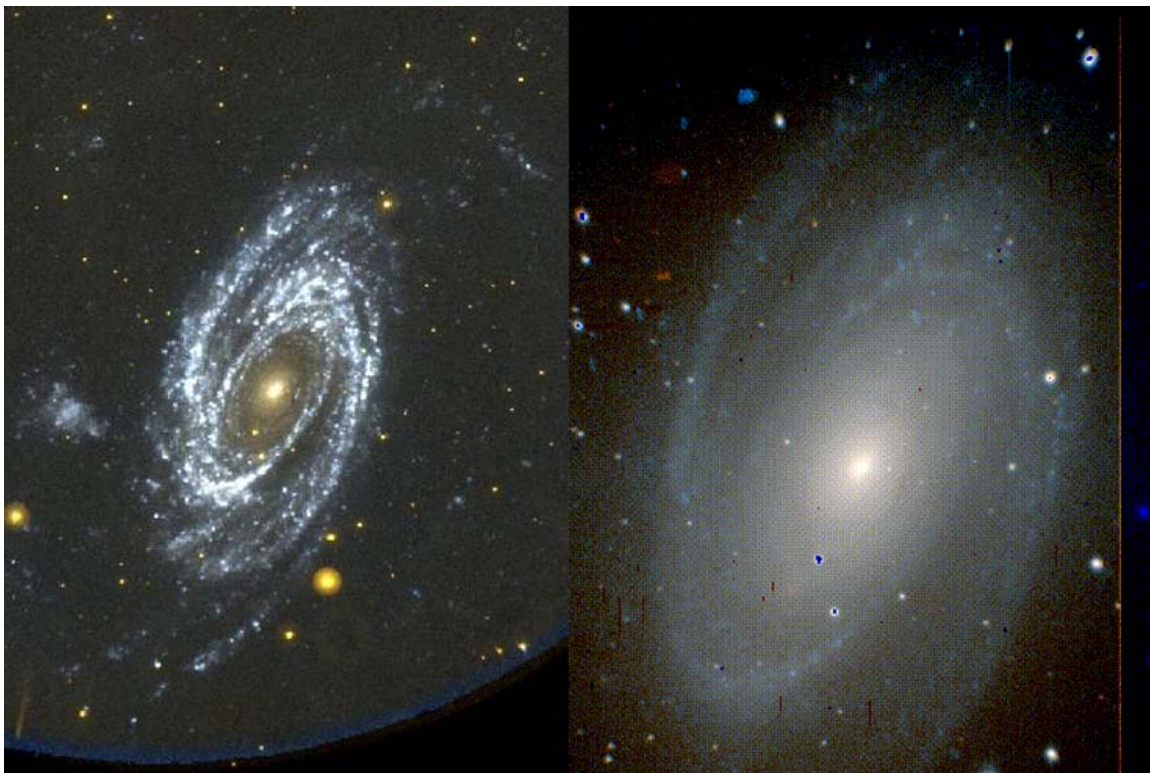
Comparing young galaxies from the distant past with older, modern galaxies will teach scientists about how galaxies change over time.

Looking at these pictures, scientists were surprised to find many newborn stars in the outer parts of old, mature galaxies. Scientists had assumed that as a galaxy ages, the clouds of gas needed to form new stars in these outer reaches either got used up or blown away. Finding so many new stars in these regions of old galaxies (such as Centaurus A, Messier 101, and Messier 81) shows that, apparently, they were wrong.

Friedman says that astronomers don't know yet how to explain these new findings. Rethinking and improving theories to explain unexpected discoveries has always been the way science makes progress—and GALEX is certainly making progress.

One thing is certain: It's time to re-write some old textbooks.

For more information, see <http://www.galex.caltech.edu/> . Kids can do a galaxy art project and learn more about galaxies and GALEX at <http://spaceplace.nasa.gov/en/kids/galex/art.shtml> .



Caption:

M81 is 10 million light years away. The image on the left was made from GALEX data and shows UV light from hot, new stars. These star forming regions are not detectable in the visible light image on the right (McGraw-Hill Observatory, Kitt Peak, Arizona, Greg Bothum, Univ. of Oregon.)

EDITOR'S NOTE: IT IS TIME FOR SOMEONE TO TAKE THE "OPPORTUNITY TO EXCELL" AND ASSUME THE EDITORSHIP OF THE NEWSLETTER. OUR PERSONAL OBLIGATIONS AND SITUATION MAKE IT INCREASINGLY MORE DIFFICULT TO CONSISTENTLY PRODUCE THE MONTHLY NEWSLETTER, AS HAS BEEN APPARENT IN THE LAST TWO MONTHS. I'VE ENJOYED PUTTING TOGETHER THE NEWSLETTER FOR SEVERAL YEARS NOW, AND WILL CONTINUE TO PROVIDE ARTICLES AND PHOTOS OF OUR LOCAL EVENTS. I HAVE ALL THE TEMPLATES AND LOGOS THAT WILL MAKE WHOMEVER STEPS UP TO THE TASK RIGHT AT HOME. ALL YO NEED IS A COMPUTER! PLEASE CONTACT ME DIRECTLY IF YOU ARE INTERESTED. I'LL PUT OUT A DECEMBER "Christmas Edition" as always!

Thanks, Steve

AstroViews is the official publication of the Harford County Astronomical Society, P.O. Box 906, Bel Air MD 21014. For the year 2002 any items for publication in any issue are due to the editor **by the 15th of the preceding month**. Please send all contributions (electronic format is STRONGLY encouraged) to Steve Channel at EMAIL: srcac2@comcast.net, regular mail at: 602 Roxburch Terrace, Bel Air, MD 21015. Permission is not necessary for non-profit use of this material, although proper acknowledgment is required. Address changes should be brought to the attention of the editor at the address given above.

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