STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

May 1999
Volume 8 Number 5

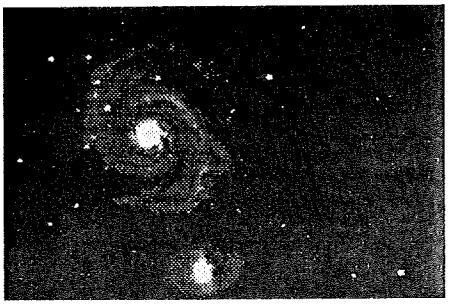
ASTRONOMY DAY MAY 22

IN THIS ISSUE...

GALAXIES

by Jack Kennedy

The night sky is full of interesting objects. There are globular clusters and open clusters of stars, nebula where stars are being born and supernova remnants. In addition there are multiple star systems, variable stars, young blue stars and old red stars. We have planets, comets, asteroids and of course the moon and sun. Most of these objects are within our own galaxy called the Milky Way. Also in the night sky are the faint fuzzy objects we have all seen: these are other galaxies. One in particular, the Andromeda galaxy (M31), is naked eye visible in a dark site. Because it is such a large object, we need a wide field eyepiece to really appreciate it. We can also get a great view of this massive object with a reasonable pair of binoculars. That is pretty amazing considering it is about 2.5 million light years away from us. This means that what we are seeing is what Andromeda looked like 2.5 million years ago. We are looking back in time. Think about this. What was happening on earth 2.5 million years ago?



This is the time of year to see galaxies. Almost any constellation in the sky has galaxies to show, but there are a few areas well known for the sheer numbers of objects to investigate. These are the spring constellations of Leo, Virgo and Coma Berenices. These constellations are so rich in galaxies that you can get lost. I first wandered into this region while chasing down the Messier objects. It is amazing to wander through this area at the eyepiece. You need to take a look if you have not been there before. My favorite galaxy, M51 is in Canes Venatici which is near Ursa Major (The Big Dipper).

There are different types of galaxies. We have spirals, barred spirals, lenticulars, irregulars, and elliptical types. There are galaxies interacting with other galaxies, and M51 happens to be the best known. We have just recently found out that the galaxy we live in is a barred spiral. I would love to have someone explain to me how they came to that conclusion.

The Milky Way is a member of a galaxy cluster called the Local Group. The center of this cluster is located between us and the galaxy Andromeda M31. Located within 1.5 parsecs of this center are about thirty galaxies. Membership in our local cluster is determined by whether the galaxy is moving with us or expanding outward with the other galaxies we see. The majority of mass within the Local Group is contained in the Milky Way and M31. Our own galaxy is so large that it has smaller companions that move with us as we travel though the universe. The Andromeda Galaxy has companions also and with care they can be observed from an amateur telescope. The best known of these, MGC 205 and M32, can be seen in a low power field of view with M31. These galaxies show the effects of the gravitational forces of their large host. Two dwarf galaxies that are detached from M31 are NGC 147 and NGC 185. These four are ellipticals.

Classifications of Galaxies -- Spirals are Sa Sb and Sc, with Sa having the largest central hub and least spiral arms

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Your submissions to STAR STUFF are welcome. Please write to the address above or contact the editor...

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Ford Amateur Astronomy Club

Officers:

President	Dan Kmiecik
Vice President	George Korody
Secretary	David Beard
Treasurer	Ray Fowler

General Meetings:
The Ford Amateur Astronomy Club holds regular general meetings on the fourth Thursday of each month (except the combined November/December meeting held the first Thursday of December) at 5:00 PM in conference room 1491 in the Ford Credit building in Dearborn, Michigan.

Observing:
The Ford Amateur Astronomy Club observes at Spring Mill Pond within the Island Lake State Recreation Area near Brighton, Michigan. The club maintains a permit for after-hours access. Weather permitting, the club observes on Friday nights, Saturday nights, and nights before holidays.

Hotline:
Observing schedules and additional club information is available by calling the Observing Hotline at (313) 390-5456.

Club Membership:
Membership in the Ford Amateur Astronomy Club is open to Ford employees and non-employees. Write or call for an application.

Annual -- new: $ 25 renewal: $ 20
Lifetime -- $ 100

Membership include a subscription to the STAR STUFF newsletter, discounts on ASTRONOMY and SKY & TELESCOPE magazines, after-hours access to the observing site, and discounts at selected area equipment retailers.

and Sc the smallest central hub with largest spiral arms. Barred Spirals are SBa, SBb, and SBc, with the same classification system as Spirals. Ellipticals are E0 to E7 with E0 being circular and E7 highly elliptical. Lenticulars are S0 and SB0, so called because of their lens shape. All this seems pretty organized until we find the irregulars and perculiars. These seem to not follow any classification system. There is a listing of peculiars called the Arp galaxies, so named by Halton C. Arp who compiled a list that can be found at http://users.aol.com/arpgalaxy/

More information on galaxies can be found in "Galaxies and the Universe" by David J. Eicher, "Burnhams Celestial Handbook" and various issues of Astronomy and Sky and Telescope magazines, to mention just a couple sources. If you can find the out of print book "Galaxies" by Timothy Ferris it is another great source. ☆

A COLLIMATION AID

by Dave Beard

I often get a little frustrated when performing that nightly ritual for us Newtonian scope owners, the mirror alignment, or collimation. Going back and forth from eyepiece to alignment screws can get to be a bit tedious. What I needed was a little chart to help me turn the screws in the right direction. So with a little bit of patience I made one up, and boy, has it saved me a whole lot of time when setting up the scope, even if the mirror only needs a tweak.

I began by looking at the back of the scope where I would turn the 3 alignment screws, and made a drawing of the screw location and labeled them as shown in figure 1.

L R

B

Fig. 1

Then, looking into the eyepiece, I drew a diagram of where the little square dot that is in the center of my primary goes when I turn the screws clockwise (CW) or counter clockwise (CCW) and labeled the directions with arrows, as seen in figure 2.

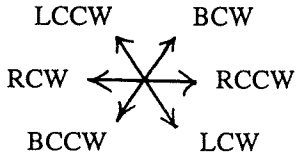

Fig.2

When I go to align my scope, I orient this diagram (which I have wisely colored red and laminated on a card that I keep by the focuser) the same as it was when I drew it, and I can now tell exactly which screw to turn which way to align my mirror. ☆

STUDENT SCIENCE

submitted by Bob MacFarland

The Planetary Society is looking for a student-created experiment to send on the JPL/NASA Mars Surveyor 2001 Lander mission. Could you help us announce this exciting opportunity to young people 18 or younger (pre- college only) in your state? We need to let young people know that they can create an experiment that may be incorporated in the mission's Mars Environmental Compatibility Assessment (MECA) experiment package.

If you know of anyone -- scientists, teachers or others -- who could help spread the word about this terrific opportunity, please let them know that all the information about this project, called the NanoExperiment Challenge, is available through our Web site at http://planetary.org/learn/nanoexp.html. Application forms can be printed from the website and need to be returned by July 31, 1999.

In addition, I'm compiling a list of contacts for future educational opportunities involving space exploration (another out-of-this-world project will be announced in May) so if you would like to be kept informed please contact Kathleen Garner, at tps.kg@planetary.org. For more information about the NanoExperiment Challenge contact Jeffrey Oslick at (262) 739-5100 or by email at tps.nanoexp@planetary.org.

The Planetary Society ☆

SETI

by Allen J. Gilbert

Have you ever wanted to participate in the Search for Extra-Terrestrial Intelligence (SETI) program or use the Arecibo radio telescope? Well here's your chance.

In April 99, SETI will launch a program called SETI@Home. This program will use hundreds of thousands of home and business PC's to crunch the data that is recorded by the Arecibo radio telescope in Puerto Rico. Go to the Web site "http://setiathome.ssl.berkeley.edu" and submit your E-mail address using the online submission form. When the software is ready they will send you E-mail for you to download it. The program will run as a screen saver or in the background. When you're not using your PC the program will crunch the data. For more in formation go to the above address.

This maybe a once in a life time opportunity for us to participate in such a far-reaching endeavor. Maybe you will be the one to make first contact? Hey, anything is possible, you just have to try. ☆

SPECIAL EVENT

by Doug Bock

16th Annual
Summer Solstice Star Party

Sponsored by:
Warren Astronomical Society
Ford Amateur Astronomy Club

What: The 16th Annual Summer Solstice Star Party
Where: Northern Cross Observatories
When: June 11-13, 1999, Friday through Sunday
Donations: $5.00 per person or $8.00 per family
Rules:
Enter at your own risk.
No Alcohol
No Pets
Bring your own food, we only provide the Barbeque grill.

Camping is allowed, but you must pack in/out everything. There are Motels nearby (5 miles) that you can make reservations at. NCO is located near Fenton, MI.
Activities that are planned:

Observing Friday and Saturday Night
Swap Meet 2:00 Saturday. Bring your Stuff to trade or sell.
Tour of the observatories
Cookout at 5:00pm Saturday. Bring your own food, and if you'd like, a dish to pass.
Breakfast Saturday and Sunday Morning (Pancake special) The cook (Blaine) is back.

E-mail us for directions:
dougbock@kode.net

Mail inquiries to:

Northern Cross Observatories (attn: Doug Bock)
6383 Hartland Rd
Fenton, MI 48430

Or Phone: Doug Bock @ 810 750 0273
Web Page:
http://bsd1.kode.net/~dougbock
E-Mail: dougbock@kode.net ☆

MEETING MINUTES - 4/22/99

by Dave Beard

The meeting was called to order by President Dan Kmiecik at 5:00 p.m. Members began with pizza & pop provided by George Korody and Bob Fitzgerald. Roundtable discussions followed. Member Al Bates mentioned that there are several publishing houses offering bogus subscriptions to Astronomy magazine. They offer discounts to attract your subscription, and no magazines are ever delivered. Members should subscribe directly to Astronomy magazine directly, to avoid any problems.

President Kmiecik discussed the activities for the upcoming Astronomy Day, he apologized for not responding to e-mail about the event, but due to an upgrade in computer equipment, he has been off the web for a while. The site for the event will be Ryder's Hobby Shop in Livonia, located on the south side of 5 Mile Road, 3 blocks east of Merriman Rd., Saturday, May 22nd. Volunteers are needed to help promote the event, bring a scope or just be there to answer questions, volunteers are asked to contact Dan Kmiecik if you plan to come to the event.

The Treasurers Report: currently in savings: $3083.41, checking: $617.07, scholarship fund: $980.89.

The last Great Lakes Association of Astronomy Clubs (G.L.A.A.C.) meeting was postponed due to inclement weather, they are now targeting the 16th of May at Kensington for their next meeting. The observing trial at Indian Springs Metropark was postponed to either the 13th or 14th of May.

There was a great deal of discussion about the future of the scholarship fund. Ballots were distributed and a motion was made by Greg Burnett to collect the votes and tally. The vote was as follows:
Continue the scholarship and expand to all years of college - 9
Continue the scholarship and offer to 1st year students (same as current) – 8

Discontinue the scholarship and transfer the funds to the general fund – 3
Discontinue the scholarship and use the funds as scholarship until exhausted – 2

As can be seen, the majority voted to continue the scholarship.

The group then watched a video courtesy of Mary Lee Mather, one of the Mysteries of Deep Space Series, titled "The Astronomers". ☆

HEARD ON THE NET

by Bob Lambeck

From the sci.astro.amateur newsgroup...

Meade ETX and Friendship -- I bought my old-style ETX last October, along with a couple of other toys (like a '99 Grand Prix GTP, and a Roland KC-500 keyboard amp) to celebrate my 40th birthday. I figured I'd get my midlife crisis out of the way and go right into my second childhood (much more fun)...
The car and the amp are subjects for other newsgroups <BG>. I have more than one hobby, and you should see what R/C stuff costs!
I never saw a Meade advertisement before I bought the scope. I had been drooling over scopes in the Edmund Scientific catalog for several years, and kept coming back to the ETX due to its price, and compact size. Wound up buying it from Natural Wonders so I could open it before accepting it, but got the tripod, etc from Edmund. I've added a MSII+, and a better finder, and more eyepieces than the scope is worth (love those TeleVues)...
I had always wanted a halfway decent telescope of my own. It's as simple as that. A clock drive was a requirement. Portability was another.
I'm an Engineer by profession, so I know a little about optics and so on. I realized from the beginning that *aperture* was a big factor in telescope performance. However, I also realized that a first scope doesn't necessarily have to be the *best* one...
When I took my first astronomy course in High School ('76) I was hugely impressed with the view through the 36" Schmidt-Cassegrain at Fernbank observatory here in Atlanta. Dr. Rick Willamon (who is still there after all these years) introduced us to the basics, and the class spent many happy, late, evenings at the eyepiece while he was conducting photometry. I took the class again a couple of years later for College credit...
Unfortunately, I did not have the time or the opportunity to take up Astronomy then (or I'd be a lot better at it now)...
Yes, the ETX has it's shortcomings. There's no question about it. I'd say it's on the low end of the middle range of *acceptable* scopes, but that is my opinion, and not necessarily based on experience with *better* scopes.
To put it in perspective: A good friend of mine is a talented musician, and barely makes a living at it. He's also very Scientific minded. The first night I took the ETX over to show it to him and his wife we set it up on their back deck (they have a good Southern view) and we were out there until 3:00 in the morning!
Later, his wife asked me how much the scope cost, as she wanted to get him one for Christmas. It would break your heart to see how her face fell when I told her what the ETX cost! I then mentioned that I had seen a Bushnell Voyager at Sam's for $200.00, and her reply was: "We can't afford that either"...
To make a very long story short, I bought the Voyager, and gave it to them for Christmas. You would have thought it was made of gold from their reaction when he ripped the paper off and saw there was a telescope in the box.
I've known them for nearly 20 years, and never saw him with tears in his eyes before...
Every clear night since then he drags that thing out on the deck and looks at whatever is visible. We've spent many nights with both scopes set up there just enjoying the view. Actually, the Voyager doesn't suck that badly, but needs 1.25" EPs and a clock drive...
We're also toying with the idea of building a *real* telescope one day (something in the order of a 10" Dob)...
My point is: those that can afford the LX200s and the Taks can't really appreciate the joy that ANY telescope brings to those that have NO telescope.

You have to start somewhere!
Phil G. ☆

AURORA ALERTS

by Chuck Boren

AURORA OBSERVING DIARY
Entry for 4-15-99 Location: at home
Rain, rain, rain, rain, rain, rain, rain, more rain.
Entry for 4-16-99 Location : at home
Rain, Rain, Rain, Aurora (visible from Boon Michigan), rain, too much rain

Entry for 4-17-99 Seriously thinking about selling my home and moving to a desert if I miss another Aurora display.

I guess that there are three things anyone must keep in mind when you want to view an aurora display. That being LOCATION, LOCATION, LOCATION. You have to be at the right place at the right time and have the weather cooperate too. I was thinking about attending the Doug_s star party at Boon but the whole week didn_t look very promising, I decide that staying home would be better. Why waste the gas to spend a weekend that was rainy and cloudy when I could be doing something else, like napping! I was watching the K values and certainly it look like there would be an aurora display but the weather was really looking like it wouldn_t break so that we could observe it. I decided not to go. There is something to be said for perseverance and determination on seeing one_s plans through regardless of what it looks like at the present. Lesson learned!

The following is part of a report published by the Space Environment center that tries to forecast solar activity for the next 27 days (one solar rotation). The forecast indicates that things will be normal (that is some what unpredictable) for most of the month. We shall see (pun intended)!

FORECAST OF SOLAR AND GEOMAGNETIC

ACTIVITY 21 APRIL - 17 MAY 1999

SOLAR ACTIVITY IS EXPECTED TO BE AT LOW TO MODERATE LEVELS. MOSTLY LOW ACTIVITY IS EXPECTED THROUGH 29 APRIL. AN INCREASING TREND IS EXPECTED TO BEGIN AROUND 30 APRIL WITH THE RETURN OF HISTORICALLY ACTIVE LONGITUDES.

NO SIGNIFICANT PROTON ENHANCEMENTS ARE EXPECTED AT GEO-SYNCHRONOUS ALTITUDE.

THE GREATER THAN 2 MEV ELECTRON FLUX AT GEO-SYNCHRONOUS ALTITUDE MAY REACH HIGH LEVELS AROUND 27 - 30 MAY. OTHERWISE, NORMAL TO MODERATE LEVELS ARE EXPECTED.

GEOMAGNETIC FIELD ACTIVITY MAY INCREASE TO ACTIVE TO MINOR STORM LEVELS DURING 21 APRIL IN RESPONSE TO THE PARTIAL-HALO CME OBSERVED ON 17 APRIL. ACTIVE TO MINOR STORM LEVELS ARE ALSO POSSIBLE DURING 25 - 28 APRIL DUE TO A RECURRENT CORONAL HOLE HIGH-SPEED WIND STREAM. QUIET TO UNSETTLED LEVELS ARE EXPECTED DURING THE REST OF THE PERIOD (BARRING ANY EARTH-DIRECTED CORONAL MASS EJECTIONS).

NEXT GENERAL MEETING

The next meeting of the Ford Amateur Astronomy Club will be held on Thursday, May 27, at 5:00PM in conference room 1491 in the Ford Credit building in Dearborn.

The program for the meeting has not yet been determined, but as always, pizza and pop will be provided.

The Ford Credit building is the low building immediately northeast of (but not attached to) Ford World Headquarters. The building is secured with a card entry system. The easiest way to enter for meetings is to park in the lot east of the building and enter thru the lower east or lower northeast doors. At 5:00p no one seems to have much trouble entering, because many people are leaving about that time. At the lower east door there is a manned security desk. Identify yourself, and say you are attending a Ford club meeting, and the guard will admit you. The meeting room is on the lower floor, on the east side of the building, about mid-way along the north-south corridor. Usually, signs will be posted to direct you to the room. ☆

1999 Ford Amateur Astronomy Club Calendar

May 9-15	Texas Star Party -- Fort Davis, TX
May 15	Lake Hudson Dark Sky Stargaze and Potluck Picnic With Jackson Club
May 16	GLACC Meeting -- Kensington Metropark
May 22	Astronomy Day 1999
May 27	FAAC General Membership Meeting
Jun 11-13	16th Annual NCO Summer Solstice Star Party
Jun 12	Lake Hudson Dark Sky Stargaze
Jun 24	FAAC General Membership Meeting
Jul 10	Lake Hudson Dark Sky Stargaze
Jul 22	FAAC General Membership Meeting
Aug 12-15	SMURFS Star Party
Aug 14	Lake Hudson Second Annual Public Stargaze
Aug 20-21	Kensington GLAAC Star Party
Aug 26	FAAC General Membership Meeting
Sep 11	NCO Planning Meeting @ 4:00 PM Followed by Autumnal Equinox Star Party
Sep 11	Lake Hudson Dark Sky Stargaze
Sep 18	Seventh Annual Island Lake Star Party
Sep 23	FAAC General Membership Meeting
Oct 6-10	NCO Wilderness Fall Star Party – Boon, MI (West of Cadillac)
Oct 9	Lake Hudson Dark Sky Stargaze
Oct 28	FAAC General Membership Meeting
Nov 6	Lake Hudson Dark Sky Stargaze
Dec 2	FAAC Joint November/December General Membership Meeting
Dec 11	Lake Hudson Dark Sky Stargaze

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