

STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club



Moving a Mountain of a Dish

by Patrick L. Barry

Your first reaction: "That's impossible!" How on earth could someone simply *pick up* one of NASA's giant Deep Space Network (DSN) antennas—a colossal steel dish 12 stories high and 112 feet across that weighs more than 800,000 pounds—move it about 80 yards, and delicately set it down again?

Yet that's exactly what NASA engineers recently did. One of the DSN dishes near Madrid, Spain, needed to be moved to a new pad. And it had to be done gingerly; the dish is a sensitive scientific instrument full of delicate electronics. Banging it around would not do.

"It was a heck of a challenge," says Benjamin Saldua, the structural engineer at JPL who was in charge of the move. "But thanks to some very careful planning, we pulled it off without a problem!"

The Deep Space Network enables NASA to communicate with probes exploring the solar system. Because Earth is constantly rotating, a single antenna on the ground can communicate with a probe for only part of the day, when the probe is overhead. By placing large dishes at three locations around the planet—Madrid, California, and Australia—NASA can maintain contact with spacecraft around the clock.

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STAR STUFF is available On-Line and in COLOR !!

Each month the Ford Amateur Astronomy Club spends over \$100 to publish and mail about 120 printed copies of STAR STUFF.

You can save your club some of this expense by downloading your copy of STAR STUFF from the web at <http://www.boonhill.net/faac>

Contact Gordon Hansen or the STAR STUFF Editor to cancel your hardcopy mailing. This will allow the club to allocate more \$\$\$ to other worthy causes, like star parties and the scholarship fund.

President's Corner

by Don Klaser, President, FAAC

On Saturday, June 4th, I attended the dedication of the Kiosk that informs (educates) the public about the park's designation as a dark-sky preserve, what that means and what we all stand to gain. Without this display, would the general public notice the difference between the nighttime view there from the one in their backyard in the city or suburbs? It seems to me that most folks don't even look up anymore—they've gotten so used to seeing next to nothing when they do look. I think it's vital that we don't take that chance!

Over the years our club has been active in public outreach—demonstrating and informing (educating) the young and

the not so young about the joys of astronomy and the wonders of the night sky. But have we done as good a job of educating them about what they can do to help reduce extraneous outdoor lighting, thereby reducing energy consumption and returning our nighttime heritage?

I think we can do more. By making a portion of every outreach event a presentation on how the night sky has been degraded, what we can do about it and what we all stand to gain by it. What I would like to see is a short program—10 to 15 minutes in length—created and produced by our membership that will be included as part of our digital presentation at every public outreach event we do.

The challenge is there—well can we do it? I'm sure we can!!

-- Don Klaser

Moving a Mountain...

...continued from page 1

To move the Madrid dish, NASA called in a company from the Netherlands named Mammoet, which specializes in moving massive objects. (Mammoet is the Dutch word for "mammoth.")

On a clear day (bad weather might blow the dish over!), they began to slowly lift the dish. Hydraulic jacks at all four corners gradually raised the entire dish to a height of about 4.5 feet. Then Mammoet engineers positioned specialized crawlers under each corner. Each crawler looks like a mix between a flatbed trailer and a centipede: a flat, load-bearing surface supported by 24 wheels on 12 independently rotating axes, giving each crawler a maximum load of 194 tons!

One engineer took the master joystick and steered the whole package in its slow crawl to the new pad, never



Giant Deep Space Network antenna in Madrid is moved using four 12-axle, 24-wheel crawlers.

exceeding the glacial speed of 3 feet per minute. The four crawlers automatically stayed aligned with each other, and their independently suspended wheels compensated for unevenness in the ground.

Placement on the new pad had to be perfect, and the alignment was tested with a laser. To position the dish, believe it or not, Mammoet engineers simply followed a length of string tied to the pad's center pivot where the dish was gently lowered.

It worked. So much for "impossible."

Find out more about the DSN at <http://deepspace.jpl.nasa.gov/dsn/>. Kids can learn about the amazing DSN antennas and make their own "Super Sound Cone" at The Space Place, <http://spaceplace.nasa.gov/en/kids/tmodact.shtml>.

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FORD AMATEUR ASTRONOMY CLUB
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Dearborn MI 48121-7527

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SECRETARY:	Dale Ochalek
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CLUB INFORMATION

The Ford Amateur Astronomy Club holds regular general meetings on the fourth Thursday of each month, except for the combined November/December meeting held on the first Thursday of December. Meetings are held in the Administrative Services and Conference Center building at Henry Ford Community College in Dearborn. Refer to our website for a map and directions.

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

Observing schedules and additional information are available by calling the FAAC Observing Hotline at 313-390-5456, on the Ford Intranet at www.be.ford.com/astro/faac.html, and on the public internet at www.boonhill.net/faac

Membership in the Ford Amateur Astronomy Club is open to anyone with an interest in amateur astronomy. The Ford Amateur Astronomy Club is an affiliate of the Ford Employees Recreation Association (F.E.R.A.).

Membership fees are as follows:

Annual – New Member:	\$30	(\$15 after July 1)
Annual – Renewal:	\$25	(\$30 after January 31)
Life Membership:	\$150	

Membership includes the *STAR STUFF* newsletter, discounts on *ASTRONOMY* and *SKY & TELESCOPE* magazines, discounts at selected area equipment retailers, and after-hours access to the Island Lake observing site.

MAGAZINE DISCOUNTS

Do not send money to the FAAC for *ASTRONOMY* or *SKY & TELESCOPE* magazine subscriptions. Obtain a discount form from the club secretary and send the form directly to the publisher with your subscription to receive a \$10 discount.

STAR STUFF NEWSLETTER SUBMISSIONS

Your submissions to *STAR STUFF* are more than welcome! Send all items to the editor at skyfog@comcast.net preferably in MS-Word format, but in-line email text is fine too. *STAR STUFF* will usually go to press the weekend prior to the week of each general meeting. Submissions received prior to that weekend will be included in that issue.

Lake Hudson Dedication

by Don Klaser

On Saturday, June 4th, a ceremonial dedication was held for the placement of the kiosk at Lake Hudson State Park. A number of FAAC members were in attendance, including George Korody, Clay & Jan Kessler, Jim Betzhold, Steve Harvath, Charlie Francis and Jan & I.

This display will inform and educate the public about the significance of the site, why it was founded and what we can all do to help preserve the night sky. Ron Robinson, President of the Amateur Astronomers of Jackson, was the MC; he gave a few remarks and then introduced the gentlemen responsible for making the preserve happen:



Ron Robinson, President of AAoJ, presents Certificates of Honor to (L to R) Jim Whitehouse, Wes Boyd, Bill Buckingham and Tim Bauer. Photo by Jim Betzhold.

Wes Boyd and Jim White house, who conceived of the idea, Bill Buckingham, who spent a great deal of time making sure that the legislation made it through Lansing, and Tim Bauer, Park Manager of Lake Hudson, who's help and support were invaluable.

This was truly a monumental event for astronomy not only in Michigan, but in the entire country as well. It demonstrates that with teamwork and perseverance, we can really make a difference in our society !

FOR SALE...

Meade 10" LXD55 Schmidt Newtonian telescope Autostar guided, German Equatorial mount, "T"- adapter, Super Plossl 26-mm eyepiece, 1.25" and 2" eyepiece holders, battery pack for 8 "D" cell batteries, 25ft. 110v. power cord.

Bought in 2002 for \$1200, will sell for \$1000, or possibly trade for another scope.

E-mail inquiries to: eddyelectro@talkamerica.net

Minutes of the FAAC General Meeting

Due to technical difficulties, the minutes from the May 26 meeting of the Ford Amateur Astronomy Club were not available at press time. -Ed.

CORRECTION: The minutes of the April meeting were submitted by Ed Halash. -Ed.

FOR SALE...

Meade 12" LX200 GPS SCT with UHTC

Only used six times! Includes: Kendrick Dew Removal System, two 12 volt battery power sources, dew shield, Baader film sun filter.

Over \$4000 of equipment! Best offer over \$3000

Contact Don Sommers at 248-553-7042

FOR SALE...

Right-Angle Viewfinder (8x25) for Meade ETX-90 telescope (Meade part # 825). Brand new. Sells at Scopetronix for \$50. My price \$25.

Jon Blum Derm1@aol.com 248-553-4944

FOR SALE...

Meade ETX Spotting Scope, 5 inch, Paragon Plus tripod, 26mm Super Plössl, 9.5mm Orion Epic, 13mm Orion Superwide Lanthanum.

Nearly new, must sell. Could sell individually.

Contact Jack Fournier at 248-219-6222

Volunteers Needed !!

by Don Klaser

On the week-end of August 19 - 21, the Archdiocese of Detroit will be holding an event called "Cologne at Home" for those young people who couldn't attend the 'World Youth Day' in Cologne, Germany. We have been invited to bring our telescopes on Friday, August 19th to give the attendees a view of the heavens. We have about 6 volunteers so far, but 10 would make for a more enjoyable experience (less waiting to view). The event is being held on a farm in Lapeer Co., near the village of North Branch. Please let me know by phone or e-mail - 586-596-9510 (cell) or dklaser4750@wowway.com as the organizers have to prepare event passes with our names on them and purchase 'Youth Day' T-shirts for us to wear (freebies !).

As an added incentive to participate, we are invited to come early and hear the guest speaker for the event, Brother Guy Consolmagno, author of "Turn Left at Orion" and "Brother Astronomer". He will be speaking at 6:30 p.m.

Directions to the site will be provided to those attending. Thanks !!!

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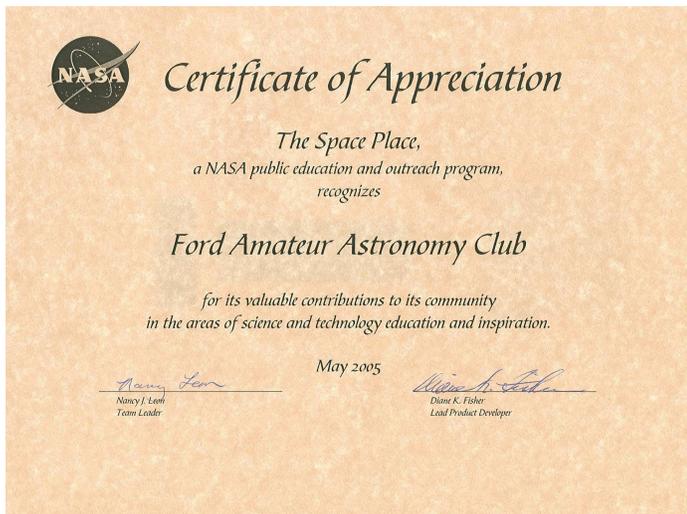
To the members of the Ford Amateur Astronomy Club,

We are pleased to award you and your club the enclosed certificate of appreciation. As an active NASA Space Place astronomy club partner and by carrying our NASA column in your club newsletter or on your web page (or both), you facilitate science and technology education among club members and throughout your community. Through your public events, you not only educate, but you also inspire your audiences, both young and old. Through your use of hands-on activities and experiences for children, you play a key part in developing tomorrow's scientists.

Please accept this certificate of appreciation with our gratitude.

Sincerely yours,

The Space Place Team



Astro – Poetry

June Nights

June nights... starry skies,
Twinkling fields of fireflies,

Warm southwest breezes,
How this lovely season pleases...

The pure sweetness drips straight into each
open heart.....

-- Anna Scott, FAAC

Welcome New Members!

The Ford Amateur Astronomy Club welcomes the following new members:

- **Jeffrey Wilkins (life member)**

We hope your membership will be rewarding and enjoyable. Let us know how we can help you enjoy amateur astronomy.

Astronomical Imaging S.I.G.

by Jim Frisbie

The July meeting of the Astro Imaging S.I.G. will be held, Thursday, July 14, 5:30 pm at Henry Ford Community College in Dearborn.

The topic for the meeting will be announced later. All Club members and their guests are invited.

We will meet in the Roseneau Conference Rooms at the Administrative Services and Conference Center. (Same room as the FAAC General Meeting). If you approach the Faculty parking lot gate with your car, it should open allowing you to park close to the building.

Astronomical Calendar

by Jim Frisbie

June

- 22 We Full Moon 12:14 am "Rose Moon"
- 24 Fr Saturn to the left of Venus-dusk
- 24 Fr Mercury to Venus's lower right-dusk
- 27 Mo Mercury and Venus conjunction-dusk
- 28 Tu Last Quarter Moon 2:23 pm
- 29 We Moon near Mars-am

July

- 5 Tu Earth at Aphelion: 94,512,016 miles from the Sun
- 6 We New Moon 8:02 am
- 8 Fr Mercury: Greatest Eastern Elongation (26 degrees) pm
- 8 Fr Mercury to lower left of Venus-dusk
- 8 Fr Crescent Moon above Venus-dusk
- 13 We Moon to the left of Jupiter-pm
- 14 Th First Quarter Moon 11:20 am
- 21 Th Full Moon 7:00 am "Buck Moon"
- 27 We Last Quarter Moon 11:19 pm
- 27 We Moon to the upper right of Mars-dawn
- 28 Th Moon to the left of Mars-dawn

All times in Eastern Daylight Time.

This information was obtained from the Henry J. Buhl, Jr. Planetarium in Pittsburg, PA.

50th Anniversary

by G. M. Ross

The Grand Rapids Astronomical Association was formed in 1955 by James C. Veen and others. In July of 1965 the first earth was turned for the Observatory already destined to bear his name. These events will be celebrated on 16 July at the Observatory in Lowell Township with a "Star-B-Que."

gmr@wmis.net or (616) TW-75713 for lurid and turbid details.

Job Opening: STAR STUFF Editor

by Greg Burnett

I will be going back to school this fall to continue training for my second career. Since I will still have my day job, there just won't be enough time to do all the things I'd like to do, including serving as editor of STAR STUFF.

If you would be interested in taking over that position, say about August, please contact me at skyfog@comcast.net.

Treasurer's Report - May 20, 2005

by Gordon Hansen

Bank Accounts	
Checking	\$ 428.61
Savings	\$ 2,704.83

TOTAL Bank Accounts	\$ 3,133.44
Cash Accounts	
Cash Account	\$ 25.50

TOTAL Cash Accounts	\$ 25.50
Asset Accounts	
FERA Ticket Sales	\$ -
GLAAC	\$ 795.00
Projector	\$ 413.97
Scholarship	\$ 256.60
Swap Meet	\$ -

TOTAL Asset Accounts	\$ 1,465.57

OVERALL TOTAL	\$ 4,624.51

FAAC Beginner's Night at Island Lake

**Saturday from 7:30pm to Midnight
July 16 and August 13**

Do you have a new telescope that you would like to learn to use? Do you want to see samples of what the night sky has to offer? You should consider coming out to Island Lake Recreation Area on Beginner's Night. These nights are dedicated to providing equipment and observing assistance to new astronomers.

(The event will take place on the date indicated regardless of sky conditions, cloudy or clear. If it is raining, the event will be cancelled.)

The exact location of the observing site is the "Spring Mill Pond" parking lot and picnic area, at the Island Lake State Recreation Area, on Kensington Road, south of I-96 between South Lyon and Brighton.

For more info or details on this event, send an E-mail message to riderslivonia@aol.com or check the club website at www.boonhill.net/faac

You may also contact John or Dan at Rider's Hobby Shop 734-425-9720

The Ford Amateur Astronomy Club observes at the Island Lake site on Friday and Saturday evenings year round, provided skies are clear. You are welcome to visit the observing site on any weekend, but you must be with a club member if you plan to observe after 10PM. Call 1-313-390-5456 to find out if anyone is going out on any particular night.

Ford Amateur Astronomy Club
Star Stuff Newsletter
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