



The Night Sky

The Newsletter of
The Astronomy Club of Akron
www.acaoh.org

Volume 36 Number 4

April 2014

Next Meeting: Friday - April 25, 2014 - 8:00 PM - Kiwanis

The President's Column

By Gary Smith

Elections 2014!

Congratulations to the ACA! Elections will be held at the upcoming April 25, 2014 general membership meeting held at Kiwanis Hall. The response in comparison to previous years is good! There is a run-off in three ACA offices. So for ACA Elections 2014, please pay your dues and cast your vote for the candidate of your choice! For ACA elections April 2014, Your Vote Does Matter!!

In other matters around the world, the Air Force is testing a quite unusual aircraft/spacecraft called the X-37B. The Air Force will admit that it was built by Boeing and is an unmanned reusable spacecraft. All other details are contested by whichever aeronautical expert you care to listen to. Gunter's Space Page describes it as a prototype of a reusable unmanned satellite with engine(s) designed for maneuver while in orbit. It believes the X-37B is a larger version of the Boeing X-40A Space Maneuver Vehicle described as a reusable launch vehicle.

The X-37B has been in orbit for nearly 500 days with no announcement as to when it will return to Earth. The secrecy surrounding the X-37B is worthy of any 007 movie. The details of its orbit can be obtained from www.Heavens-Above.com.

Astronomy Club of Akron
ELECTIONS
APRIL 25, 2014
AT
KIWANIS HALL
CURRENT MEMBERS MAY VOTE
SEE CANDIDATE LIST ON PAGE 5
REMEMBER ALSO THAT DUES RENEW IN THE MONTH OF MAY

Enceladus, the sixth largest moon of Saturn, is making astronomy headlines this month. Enceladus has a diameter of 313 miles and has a high degree of reflectivity to the light it receives from the sun. The common theory held by planetary scientists was that Enceladus was a completely frozen moon of Saturn. Frozen to the core. This theory started to unravel in 2005 when the Cassini spacecraft spotted a series of geysers near its south pole. The geysers were shooting water vapor and water-ice crystals hundreds of miles into space. This led

to a new theory that Enceladus is being stretched and squeezed by the powerful gravity of Saturn and that it even had a liquid sub-surface ocean beneath the frozen crust. This speculation of a sub-surface ocean cried out for proof. The headline news released this month is that analysis of data received from Cassini Spacecraft does give evidence for a subsurface liquid ocean beneath Enceladus' south pole. So what is this data and what instrument is providing it?

(Con't Page 5)

OFFICERS 2012 – 2014

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OTAA Representative

Lou Poda

March Treasurer's Report

By Glenn Cameron

3/1/2014 Through 3/31/2014

Checking Beginning Balance	\$2,291.79
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Income

Dues	110.25
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Donations	20.00
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50/50 Raffle	20.00
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Transfer from Savings	250.00
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Total Income	\$400.25
---------------------	-----------------

Expenses

State Farm	-425.00
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Total Expenses	-\$425.00
-----------------------	------------------

Income Less Expenses	\$-24.75
-----------------------------	-----------------

Checking Ending Balance	\$2,267.04
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Savings Beginning Balance	\$2,501.09
---------------------------	------------

Earned Interest	0.10
-----------------	------

Transfer to Checking	-250.00
----------------------	---------

Bank Fee	-9.99
----------	-------

Savings Ending Balance	\$2,241.20
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Petty Cash Beginning Balance	\$59.55
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	0.00
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Petty Cash Ending Balance	\$59.55
----------------------------------	----------------

Petty Cash	59.55
------------	-------

Savings	2,241.20
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Checking	2,267.04
----------	----------

Grand Total	\$4,567.79
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*Article by Glenn Cameron
ACA Treasurer.*

SWAP & SHOP



FOR SALE:

Meade LX80 mount, tripod, and one counterweight. Includes Autostar and battery box power supply. Also includes cigarette lighter power cable. Works fine. I'm selling because I upgraded to an LX80 mount. I don't want to ship this thing so local pickup is necessary.

Asking: \$400

Contact: Glenn R. Cameron

Phone: 330-737-1472

Email: glenn@cameronclan.org



FOR SALE:

15mm Ultra-Wide Angle Eyepiece

Asking: \$40

Contact: Lew Snodgrass

Phone: 330-819-4886

Phone: 330-867-4800 Ask for Lew.

Email: chrply@aol.com



FOR SALE:

Pentax XW 20mm Eyepiece

- Excellent condition.
- Small mark on 1.25" barrel.
- Always used in a compression clamp.

Asking: \$220 (cash)

Contact: Fred Fry

Email: riverfry@gmail.com



FOR SALE:

Televue Radian 12 mm Eyepiece

- Excellent condition.

Asking: \$180 (cash)

Contact: Fred Fry

Email: riverfry@gmail.com



FOR SALE:

22mm Orion Epic ED-2 ED Eyepiece

25mm Orion Epic ED-2 ED Eyepiece

Asking: \$35 each or \$65 for both

Contact: Glenn Cameron

Phone: 330-737-1472

Email: glenn@cameronclan.org



FOR SALE:

Televue Radian 18 mm Eyepiece

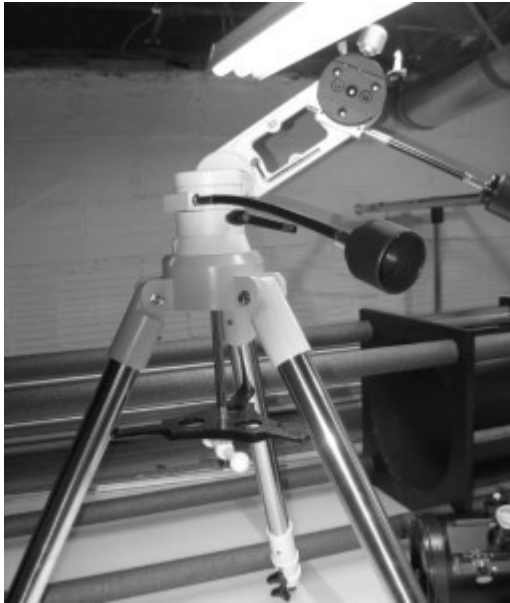
- Excellent condition.

Asking: \$180 (cash)

Contact: Fred Fry

Email: riverfry@gmail.com

SWAP & SHOP



FOR SALE:

Grab and Go Mount by Orion/Explorer Scientific 2

- Slow motion controls on both axes.

Asking
Contact
Phone
Email: truemartian@aol.com

SOLD!



FOR SALE:

Celestron 6" f5 Comet Catcher

- Made for Celestron by Vixen of Japan.
- Great optics!
- Famous Vixen sledge focuser.
- Mounting rings.
- New 1" filter.

Asking
Contact
Phone
Email: truemartian@aol.com

SOLD!

Advertise in the Swap n Shop!

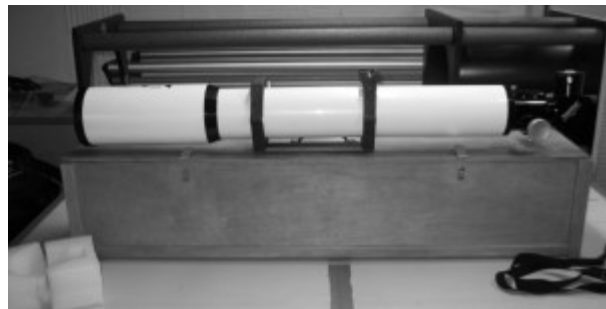
ACA members! Advertise your astronomy related item in the ACA's Night Sky Newsletter!

Ohio Turnpike Astronomers Association (OTAA) member clubs are also welcome to post their astronomy related items for sale in the ACA newsletter!

Not associated with a club but live in NE Ohio? That's cool too!

Send a picture of your astronomy related item and relevant information to the newsletter editor:

truemartian@aol.com



FOR SALE:

Refractor 102mm f11 Planet Killer

- Crayford focuser.
- Tube rings with Vixen style dovetail.
- Custom case, call for more.

Asking
Contact
Phone
Email: truemartian@aol.com

SOLD!

President's Column Con't

The Cassini Spacecraft was designed to use telemetry from the communications antennae and an S-band transmitter, along with a dual frequency Ka band system to measure gravity fields while it orbits Saturn. The gravimetric measuring system is sensitive enough to pick up variations in Enceladus' gravity field as Cassini makes close passes over the moon. For example, the Earth is an oblate spheroid which characteristically has two diameters. The long diameter measured at the Earth's Equator is 7926 miles. The short diameter measured at Earth's Poles is 7900 miles. This also means the force of gravity is stronger at the short diameter and weaker at the long diameter. But is this actually true? Do gravimetric instruments measure a difference in gravitational force from Earth's equator to Earth's pole. The answer is yes. It measures approximately 1/2 percent stronger gravity at the poles compared to the

equator. The sensitivity of gravimetric instruments measure this difference easily. The Cassini spacecraft measured subtle gravitational variations as it passed by Enceladus. These variations were recorded and then converted into a map. This is the evidence Enceladus researchers used to show that a sub-surface liquid ocean lies below the south pole of Enceladus.

Tuesday April 8, 2014 was Mars opposition. The day when the sun, Earth, and Mars form a straight line. This occurs every 778 days and is the day when the Earth-Mars distance is at minimum. The 2014 opposition gives a distance of 57.4 million miles in comparison to the March 2012 opposition distance of 62.7 million miles. The May 2016 opposition distance will be 46.8 million miles.

The astute sky watcher will notice the spectacular winter constellation of Orion moving steadily toward the western horizon. Our ability to see the

Famous Orion Nebula (M42) diminishes day by day. But not to worry as one of the most spectacular objects in the heavens is rotating into our view. Draw a line between Pollux (beta Geminorum) and Regulus. Halfway in between is the magnificent Messier 44, Praesepe, or Beehive Cluster. Messier 44 is a magnificent nearby open cluster in an otherwise unremarkable constellation Cancer. Under dark skies M44 looks like a nebulous object to the unaided eye. It is most easily observed when Cancer is high on the observers meridian. In our locality, this occurs during the evening from Feb. to May. The Beehive Cluster has a diameter of 1 1/2 degrees and is a superb target in binoculars or a telescope under low power with a wide field of view.

April 2014 is an exciting month for the amateur astronomer and space enthusiast!

*Article by Gary Smith,
ACA President.*

Observatory Report

By Ron Kalinoski



We had a fabulous time at our April 5th impromptu star party! The 16" observatory telescope performed flawlessly giving us stunning views of the Moon and Jupiter. The jet stream didn't cause too much trouble for us. To our advantage, the ecliptic was very high, with Jupiter and the Moon well placed in the sky. Observers saw incredible detail on each. The light of the Moon didn't take anything away from viewing open cluster M37 and galaxy M82, the host galaxy of a star that went supernova January 2014. The 16" observatory telescope provided a new view of Orion Nebula bringing out details within the cloud not seen with the 14" telescope. With only three days from opposition, holdout observers were able to see features on the surface of Mars and the Martian polar cap before we finally shut down the telescope around 11pm. Turnout

was very good from members and non-members.

On April 15th, a series of four consecutive total lunar eclipses within an 18 month period will begin. This series is called a tetrad and is quite unusual. A total lunar eclipse occurs on average about once every 1.5 years and now we have four total lunar eclipses occurring within that same period. Total lunar eclipses will occur on 4/15/14, 10/08/14, 04/04/15, and 09/28/15. Three of the four eclipses will be visible from Ohio and the

eclipse occurring on 09/28/2015 coincides with a supermoon. On 4/15, the Moon first enters the umbra at 1:57am EDT. This is a good opportunity to see a distinct curvature of Earth's shadow and indication of Earth's shape. Totality starts at 3:06am EDT and lasts 1 hour, 19 minutes. We have an exciting year ahead of us!

*Article by Ron Kalinoski,
ACA Observatory Director.*

Astronomy Club of Akron Candidates for Executive Board

President - Gary Smith & John Shulan

Vice President - Ann Ferrell

Secretary - Juan Contreras & Lew Snodgrass

Treasurer - Glenn Cameron

Publications Secretary - Jason Shinn

Assistant Secretary-Treasurer - Cathy Loboda & Marissa Fanady

ACA Members - Please come out to vote April 25th!
Thanks! Ron Kalinoski, Nomination Committee

The ACA wishes to welcome our newest members:

Jonathan Stone, Kevin Sabo, Michael Trunko & Family

We look forward to seeing you at all club functions!

UPCOMING OUTREACH EVENTS

Camp Ed Bear 2014 at Camp Carl

On Friday May 30, 2014 the ACA has volunteered its telescopes and telescope owners to travel to Camp Carl, 8054 Calvin Road, Ravenna, Ohio 44266. Camp Carl is hosting Camp Ed Bear (formerly Camp CHOPS) for Children's Hospital oncology patients and staff. As with all the ACA's planned observing activities, this event is totally dependent on having a clear sky. Please mark your calendars in anticipation of favorable conditions for this evening.

This is a chance for the ACA to participate in an astronomy outreach activity and allow many of the children their first view through a telescope. For additional information, including a Google map to the Camp Carl campsite, visit our webpage at: www.acao.org/CampCHOPS.htm This page will also be updated promptly if the event is cancelled due to weather.

MDA Summer Camp 2014 at Camp Cheerful

The Muscular Dystrophy Association of NE Ohio will host its 2014 MDA Summer Camp at Camp Cheerful 15000 Cheerful Lane, Strongsville, Ohio 44136 in mid-June of this year. The ACA has been asked for volunteers with telescopes to visit the MDA Summer Camp. This is another opportunity for the ACA to participate in astronomy outreach and to show many of the children their first view through a telescope.

The term "mid-June" deserves an explanation at this point. A four day block starting with Sunday June 15th through Wednesday June 18th has been approved by the MDA camp supervisor. I propose that the ACA host its event on the first clear night. For example, if Sunday June 15th is clear then the event will be held only on this day. ACA volunteers will arrive around sunset (approximately 9pm). The MDA Summer Camp is of special importance to ACA member Marissa Fanady who is assistant chairperson for this event.

I would like to ask anyone with an electronic eyepiece that connects to a monitor to please bring it or consider letting us borrow it for use at the MDA Summer Camp. More information will be supplied through ACA Website and ACA e-mail list as this event draws near. There will also be a daytime audio-visual presentation for the younger children. But volunteers with scopes will only be needed for the night event. If you would like further information, please contact me, Gary Smith, ACA President at rlphsmth8@gmail.com. I hope to see you in mid-June at Camp Cheerful for MDA Summer Camp 2014.

Minutes from General Meeting, Friday, March 28, 2014

Introduction

Gary Smith, our president, greeted members and several visitors including representatives from the Boy Scouts of America. Gary always begins our meeting with the latest findings in our field of Astronomy. Scientists have found a pink planet, 2012 VP-113 aka Biden, that travels farther from the sun than anything ever seen. Trace Watson of USA today wrote "Biden is a celestial bonbon a dainty, rose-colored ice ball far smaller than Pluto. Biden travels a cold remote path, coming no closer to the sun than 7.4 billion miles."

Program

"Einstein's Big Idea", a NOVA presentation, narrated by Jon Lithgow was our evening's program. It was entertaining as well as informative. The DVD was over an hour in length so we will need to conclude the program at a later meeting.

New Business

Mark Kochheiser introduced Tom Craig from Boy Scouts of America. This summer from July 20-26th is Space themed at camp. They would like ACA to host a star-party on Friday, July 25th at their facility, or depending on weather, have a space-themed presentation.

CAMP CHOPS

This year's date is Friday, May 30th at Camp Chops in Ravenna. REMEMBER how important this is to the Children and Staff as ALL are cancer patients or cancer survivors. Dave Jessie has all the information on the ACA website.

CAMP CHEERFUL

Located in Strongsville, Ohio, Camp Cheerful has asked ACA to participate in the MDA summer camp program sometime mid-June. Additional info will be posted to our website.

Old Business

Mark is still working on a grant from the State of Ohio in the hopes of obtaining funds for a Solar Scope and for Handicap access/accommodation availability at the observatory.

Nomination of Officers

The following members are on the ballot for 2014-2015 slate of officers:

President : Gary Smith, John Shulan

Vice President: Ann Ferrell

Treasurer: Glenn Cameron

Secretary: Juan Contreras, Lou Snodgrass

Asst. Secretary/ Treasurer: Marissa Fanady, Kathy LaBola

Publication Editor: Jason Shinn

We will elect a new slate of officers during our April meeting.

Treasurers Report

Remember that ACA dues renew next month. Please see Glenn Cameron, treasurer to renew your membership.

You can also mail your dues to Astronomy Club of Akron c/o Glenn Cameron 8019 Glendevan St NW Massillon, OH 44646

WebMasters' Report by Dave Jessie

Area 51 is no longer our web host as rates were raised from \$45 to \$57 a quarter. They have deleted the ACA memberlist. Our new web host will be JCSI at \$39 a quarter.

Welcome New Members: Mike Trunko –family membership, Jonathan Stone, Kevin Sabo (Marissa's uncle).

No Messier Marathon due to increment weather.

Meeting was adjourned at 10:40 p.m.

50/50 Raffle: \$40 was collected; Gary Smith donated \$20 to ACA. Thank you Mr. President!

Article by Ann Ferrell

ACA Assistant Secretary/Treasurer

Astronomical Journal

Date of Observation:

Start Time:

End Time:

Weather:

Seeing Conditions:

Equipment:





Meteor Count:

Satellite Count:

Targets:

In time we forget many of the observations we have made over the years. Keeping an astronomical journal is a way of holding on to memories of magnificent meteor sightings or moving first impressions of deep space. TIP: When recording targets include such information as the time you observed the object (in UT), the equipment used to observe it, any drawing you may sketch, written descriptions of the objects appearance, your impressions, and emotions at the time.

THE ASTRONOMY CLUB OF AKRON MAY 2014 ACTIVITIES CALENDAR

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AKRON, OH SUNRISE MAY 1 5:24AM EDT MAY 31 4:57AM EDT SUNSET MAY 1 7:23PM EDT MAY 31 7:51PM EDT						
4	5 ETA AQUARIIDS METEOR SHOWER PEAKS.	6 Moon at apogee (farthest) 10h UT.	7 First Quarter 3:15UT 	8	9 STOW ASTRONOMY PUBLIC EVENT (www.stowastronomy.org)	10 Saturn at opposition at 18h UT.
11	12	13 Full Moon 19:16UT 	14	15	16 STOW ASTRONOMY PUBLIC EVENT (www.stowastronomy.org)	17
18 Moon at perigee (closest) at 12h UT.	19	20	21 Last Quarter 12:59UT 	22	23 ACA General Membership Meeting at Kiwanis 8:00 PM EDT	24 ACA Observatory Public Event 9:00PM EDT
25 Mercury at greatest elongation in evening sky at 7h UT. (23°)	26	27	28 New Moon 18:40UT 	29	30 Camp Ed Bear (Camp CHOPS) Outreach Event. More info at www.acao.org	31 ACA Observatory Public Event 9:00PM EDT

The Night Sky

Newsletter of the Astronomy Club of Akron

c/o Jason Shinn, Editor
1025C Hemlock Hills Dr.
Akron, OH 44313

The Astronomy Club of Akron
c/o Glenn Cameron
8019 Glendevan St. NW
Massillon, OH 44646-9018

Yes! I want to become a member of the Astronomy Club of Akron

www.acaoh.org

(PLEASE PRINT)

NAME: _____ PHONE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

EMAIL ADDRESS: _____

Astronomy Club of Akron annual memberships renew in the month of May.

ADULT (ages 18 and older) ___\$30.00

JUNIOR (ages 12 to 17) _____ \$15.00

ADDITIONAL ADULT member ___\$15.00

FAMILY MEMBERSHIP _____ \$40.00

Visit us on the Web at www.acaoh.org,