



The Night Sky

The Newsletter of
The Astronomy Club of Akron

www.acaoh.org

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February 2014

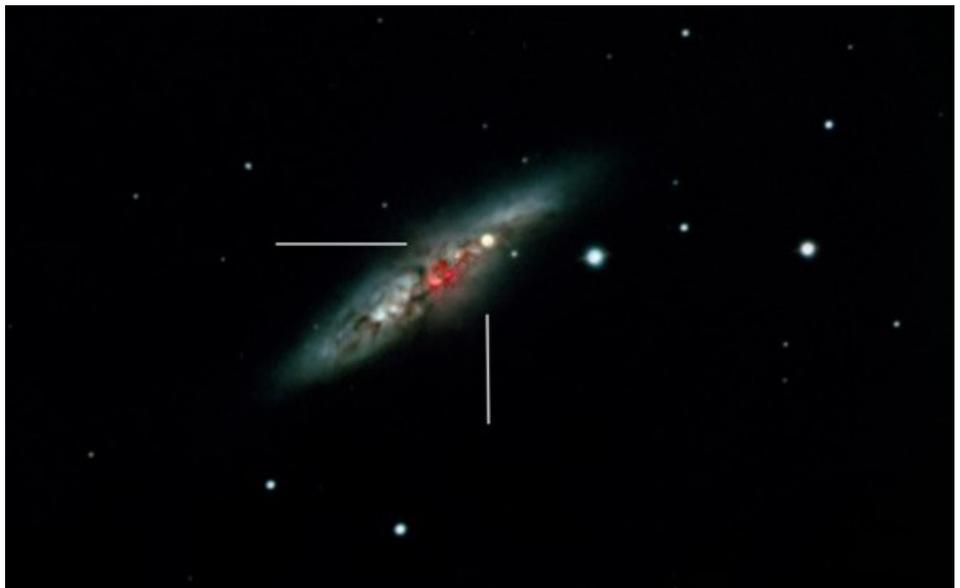
Next Meeting: Friday - February 28, 2014 - 8:00 PM - Kiwanis

Observatory Report

By Ron Kalinoski



The brightest and closest supernova since 1987 is in the sky tonight in the galaxy M82 (11 million light-years away). The supernova was discovered on January 22nd by college students Ben Cooke, Tom Wright, Matthew Wilde and Guy Pollack with help from their teacher Steve Fossey. ACA member Leonard Marek captured the supernova on January 30th from his backyard observatory (see inset photo). Leonard reported the outside temperature was 13F, so he connected remotely to his observatory computer from his house to operate the telescope. The results are impressive. On January 28th with clear skies, I observed the supernova with an 8" Dobsonian. The supernova was easily seen with an estimated brightness of 11th magnitude. The observation was quite exciting; but with an outside temperature of -3F, the observing session didn't last for long. Clear skies on February 3rd allowed another observation of the supernova. The supernova brightened to an estimated 10th magnitude. Based on type IA supernova curves, this is about as bright as this object will get.



The Cigar Galaxy (M82) and SN 2014J - January 30, 2014 by ACA Member Len Marek. Meade 14" LX850 ACF and SBIG ST8300M. 5X5min each LRGB.

John Dobson, inventor of the Dobsonian Telescope, died on January 15th. John Dobson was 98 years old. John's passion was to hold star parties to get as many people as possible to observe the night sky; "to see the universe with their own eyes, not just pictures of it." In order to maximize the number of people able to view the universe with their own eyes, John invented a telescope that could be easily built by amateurs. Furthermore, he taught people how to grind, polish, and correct their own telescope mirror. In the early 90's, I wanted to learn how to grind a telescope mirror. My reference was a book by Edmund Scientific titled *All About Telescopes*. About this time, I

learned that John Dobson just made a video titled *Telescope Building with John Dobson* (1992). I could hardly wait for the video to arrive in the mail. The video is a masterpiece featuring a master at his work; a video to watch over and over again without tiring, not just to learn about telescope building, but to see someone so dedicated and so focused on a mission. The one thing I couldn't believe about the video was John put his home phone number on the cassette case for anyone to call if they had a construction question. Can you believe that? I had to create a question just to call the number to see if I could talk to John Dobson.

(Con't Page 6)

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January Treasurer's Report

By Glenn Cameron

1/1/2014 Through 1/31/2014

Checking Beginning Balance	\$2,336.79
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Income

0.00

Total Income	\$0.00
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Expenses

Metisentry Web Hosting	-45.00
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Total Expenses	-\$45.00
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Income Less Expenses	-\$45.00
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Checking Ending Balance	\$2,291.79
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Savings Beginning Balance	\$2,500.88
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Earned Interest	0.11
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Savings Ending Balance	\$2,500.99
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Petty Cash Beginning Balance	\$59.55
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0.00

Petty Cash Ending Balance	\$59.55
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Petty Cash	59.55
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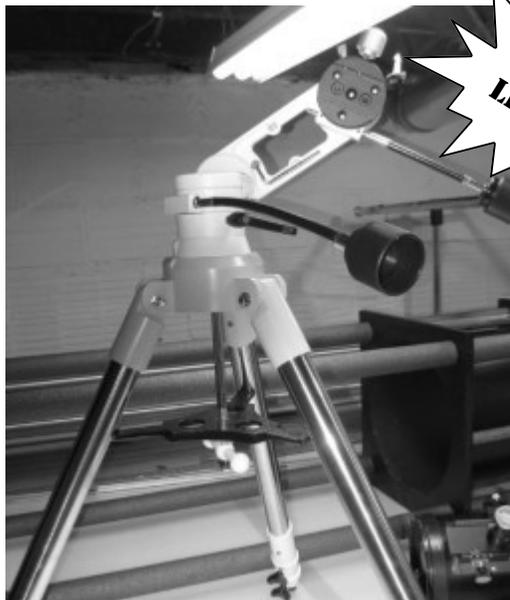
Savings	2,500.88
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Checking	2,291.79
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Grand Total	\$4,852.33
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Article by Glenn Cameron
ACA Treasurer.

SWAP & SHOP



FOR SALE:

Grab and Go Mount by Orion/Explorer Scientific 2

- Slow motion controls on both axes.

Asking: \$175

Contact: Freddy

Phone: 330 535 8009

Email: trusstube2@gmail.com



FOR SALE:

Celestron 6" f5 Comet Catcher

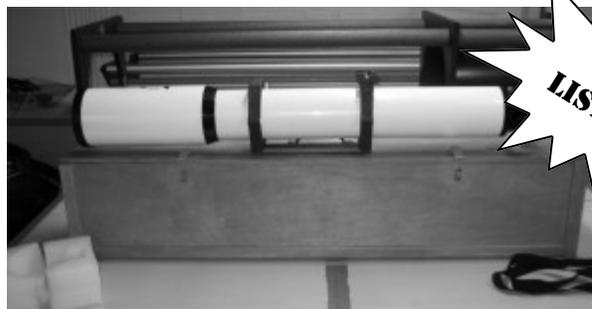
- Made for Celestron by Vixen of Japan.
- Great optics!
- Famous Vixen sledge focuser.
- Mounting rings.
- Dovetail and finder.

Asking: \$250

Contact: Freddy

Phone: 330 535 8009

Email: trusstube2@gmail.com



FOR SALE:

Refractor 102mm f11 Planet Killer

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

Asking: \$450

Contact: Freddy

Phone: 330 535 8009

Email: trusstube@gmail.com

Advertize in the Swap n Shop!

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

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

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

truemartian@aol.com

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

Meteorites 101

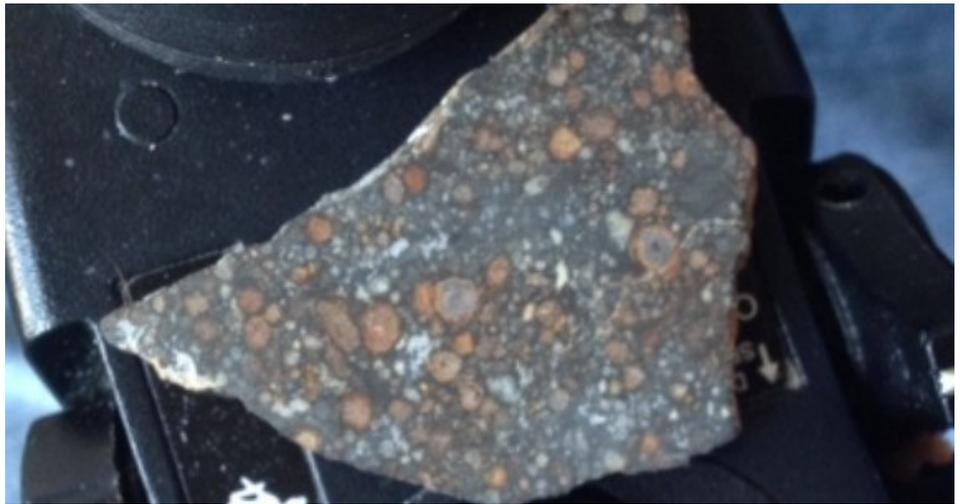
By Marissa Fanady



A year ago on February 15th, which also happens to be Galileo's birthday, the largest asteroid to hit the earth in over a hundred years fell over Chelyabinsk, Russia. Within

minutes after the event people were picking up small pieces of the meteor off the ground buried in fresh soft snow. The entire event was captured on cameras in the city and in cars by people's dashboard cameras. Even the crash landing of the main mass into lake Chebarkul was captured on film for the first time in history! To commemorate this historic event I am going to explain a little bit about meteorite types, their history, and classes.

There are three types of meteorites; stone, iron, and stony-iron. Stone meteorites are the most common type of meteorite making up 94% of observed meteorite falls and are composed of about 75-90% silicon based minerals and about 10-25% nickel-iron alloy. This is why metal detectors are used to hunt for meteorites, almost all meteorites have some nickel-iron inside making them unique and different from terrestrial

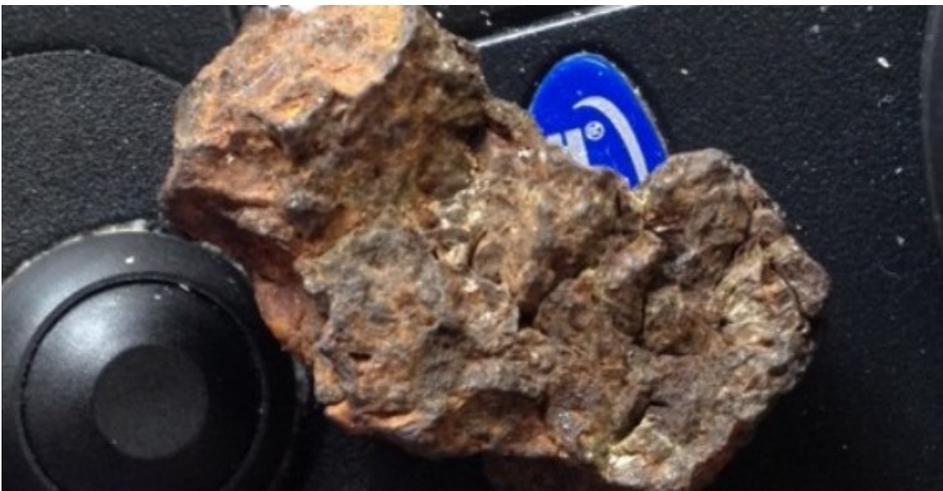


(Picture A) Specimen NWA 7678 found in Northwest Africa. This meteorite slice is known as a carbonaceous chondrite. Large millimeter sized, round chondrules of primordial material from the formation of the solar system can be seen. Part of ACA member Marissa Fanady's personal collection.

rocks. Although a rock attracting to a magnet does not necessarily mean you found a rock from space, the rock must have other characteristic like fusion crust or regmaglypts aka thumbprints and even then it would be wise to get the rock tested. Sometimes when you slice open a stone meteorite you will find grain like circles inside called chondrules. These chondrules are the oldest material known to man, they were some of the first matter to form from the solar nebula that encircled the sun. Their chemistry has not been changed by any outside force such as melting. Chondrites can also contain calcium-aluminum-rich particles. When these are present the meteorite is called a chondrite.

Chondrites are the most common meteorite known, accounting for about 86% of all recovered meteorites. Picture A is an example of a chondrite packed with many colorful chondrules. The specimen is called an NWA 7678 found in Northwest Africa and is classified as a CV3. That means that the meteorite is a carbonaceous chondrite with large millimeter sized chondrules and a low degree of aqueous alteration or low weathering. Personally I think stone meteorites with a high chondrule density are just stunning!

Iron meteorites are just about completely made up of nickel-iron alloy and likely originated in the cores of large asteroids. They only account for about 5% of observed falls and are more easily recognized than other meteorite types. Usually iron meteorites tend to look rusted due to oxidation from the earth's atmosphere working against the specimen. Meteor Crater in Arizona was created by a large iron meteorite now called Canyon Diablo. The crater was formed about 50,000 years ago, it's 2.4 miles in circumference, and more than 550 feet deep. The energy released upon impact was 20 million tons of TNT! If you plan to take a trip to Arizona make Meteor Crater a must on your list if things to visit!



(Picture B) A Vaca Muerta meteorite. This stony-iron specimen is known as a mesosiderite. Part of ACA member Marissa Fanady's personal meteorite collection.

The last meteorite type we have is stony-irons. These meteorites are very rare and yes that means very expensive, depending on the specimen and the size. Stony-irons contain about even amounts of silicates and nickel-iron alloys. Pallasites are a type of stony-iron with olivine crystals mixed in with nickel and iron. They are believed to have formed in the silicate mantel and molten iron core of asteroids, a very thin layer inside large asteroids. This is why Pallasites are very expensive but also extremely beautiful. Another type of stony-iron meteorites are mesosiderites which are believed to form when metal-rich and silicate-rich asteroids collide. Picture B is a mesosiderite called Vaca Muerta

found in Chile in 1861. The specimen is classified as a Mesosiderite-A1 meaning it is a brecciated meteorite with sub-equal silicate and metallic components. The silicates are dominantly made up of igneous rock fragments.

Meteorite collecting and science has exploded over the past ten years. Some friends of mine on Club Space Rock have said they used to hunt and enjoy meteorites all on their own thinking that there's nobody out there who shares the same love and enjoyment. If you are interested in learning more about these gems from space I highly recommend visiting this club online. (<http://meteorites.ning.com/>) The forum is

free and anyone who has an interest can join. You will find a wealth of information and friendly people who'll be happy to answer questions and recommend safe reliable dealers you can buy meteorites from! Remember never buy a meteorite on eBay unless you know the dealer! There are thousands of people selling terrestrial rocks claiming they are meteorites so buyer beware!

*Article by ACA member
Marissa Fanady.*

*Sources:
meteoriticalsociety.org
meteorcrater.com
meteorites.asu.edu*

Observatory Report Con't

Yes, no kidding, I called and talked to John Dobson about making a pitch lap. I'll never forget that call. He was one dedicated individual who went out of his way to help people and promote astronomy. That's rare today in a world where top science promoters demand ten's of thousands of dollars for public speaking engagements.

On January 28th, I stopped by the observatory and found two inches of snow on the observatory floor in some places. Snow came in through the roof ridge vent. The main crossbeam also had about two inches of snow covering it. The high winds we

experienced the previous two days blew snow under the vent and into the building. The telescope had snow on its cover; although limited because the telescope was turned perpendicular to the main crossbeam as a result of water getting in the observatory through a roof leak earlier in the month. The severe cold helped us out here as the snow stayed bone-dry and was easy to clean off the telescope and main crossbeam. The telescope looked fine, no issues. We need to install a barrier at the roof ridge and repair the roof leak this spring.

*Article by Ron Kalinoski,
ACA Observatory Director.*

FOLLOW THE LIGHT!

By Jason Shinn



Follow the light curve progression of SN 2014J through observations from the American Association of Variable Star Observers (AAVSO). Visit the AAVSO Light Curve Generator at <http://www.aavso.org/data/lcg> and

enter the designation SN 2014J into the form provided. You can specify the number of days to show or a start and end date. Click Plot Data to retrieve the chart. There are other parameters on the generator but you generally wont need to modify those. The chart displays data from observers around the world who are dedicated to following the progression of SN 2014J's magnitude as it peaks and wanes. The progression of a supernova explosion takes place over

SHARE YOUR EXPERTISE WITH YOUR FELLOW ASTRONOMERS!

The Night Sky Newsletter is looking for YOUR article to publish! Do you have something astronomy related that you wish to share with the club and the world? Send your astronomy related articles and photos to the Night Sky editor:

truemartian@aol.com

Deadlines are by the close of the 6th day of each month.

OTAA member clubs are invited to participate! Share with us your club's activities!

weeks and months so there is plenty of time to catch a glimpse if you haven't yet. You can use the magnitude data from the AAVSO site to monitor SN 2014J and plan your observing run. Don't wait too long because the supernova seems to have already peaked between magnitude 10 and 11 and will only grow dimmer!

*Article by Jason Shinn,
ACA Publications Secretary*

THE ASTRONOMY CLUB OF AKRON
MARCH 2014 ACTIVITIES CALENDAR

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AKRON, OH SUNRISE MAR 1 7:00AM EST MAR 31 7:11AM EST SUNSET MAR 1 6:17PM EST MAR 31 7:50PM EST						1 New Moon 08:00UT 
2	3	4	5	6	7	8 First Quarter 13:27UT 
9 EASTERN DAYLIGHT TIME (EDT) BEGINS AT 2:00AM. ADJUST CLOCKS FORWARD ONE HOUR.	10	11 Moon at apogee (farthest) 20h UT.	12	13	14 Mercury at greatest elongation (28°), morning sky at 7h UT.	15
16 Full Moon 17:08UT 	17	18	19	20 THE MARCH EQUINOX OCCURS AT 16:57 UT.	21	22 Venus at greatest elongation (47°), morning sky at 20h UT.
23	24 Last Quarter 1:46UT 	25	26	27 Moon at perigee (closest) at 19h UT.	28	29
30 New Moon 18:45UT 	31					

EST = UT - 5 hrs, EDT = UT - 4 hrs

The Night Sky

Newsletter of the Astronomy Club of Akron

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Massillon, OH 44646-9018

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

www.acaoh.org

(PLEASE PRINT)

NAME: _____ PHONE: _____

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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

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