The Night Sky

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

Volume 35 Number 3 **March 2013**

Next Meeting: Friday - March 22, 2013 - 8:00 PM - Kiwanis

The President's Column

By Gary Smith

Hello to all members of the Astronomy Club of Akron. The year of 2013 has started out with a boom, a bullet-burn, and a celestial firework. The boom occurred over the Russian city of Chelyabinsk on Feb.15,2013. It was determined to be a meteor strike that injured over a thousand people and shattered windows in hundreds of buildings. The meteor is estimated to be 55 feet in diameter with a weight of 10,000 metric tons. It struck the Earth at 40,000 miles per hour and broke apart at 12 to 15 miles above the surface.. It is very easy to compare the February 15th meteor strike to the Tunguska Event of 1908.

Venus - February 2012 with 8" Orion telescope and Kodak 710 Easy Share Camera. By ACA Member Ed Howe.

A bullet-burn occurred with asteroid 2012 DA_{14} on February 15, 2013 when it flew by the Earth with a close approach of 17,200 miles above the surface. The asteroid is estimated to be 98 feet in diameter and weighs 40,000 metric tons. The asteroid came inside the orbit of geosynchronous satellites which orbit 22,200 miles above although no satellites were damaged during the close pass. This is a record close approach for a known object of this size. This is only 7.2% the average distance from the Earth to the Moon.

The Celestial Firework is in our sky at this time. Our astrophotographer friends from below the equator have been treated to a field day. Star gazers with telescopes have been greatly rewarded. Amateur astronomers with binoculars were somewhat disappointed. Comet PanSTARRS made its closest approach to Earth on March 5th at a distance of 1.09 AU's from the planet. It may be possible to view Comet PanStarrs with the combination of a clear sky at Sunset and a vantage point with an unobstructed horizon to the west. From our location, the best days (if weather cooperates) will be approximately March 10 to March 15th. Pictures of Comet PanStarrs abound on the internet from mainly south of the equator at this time.

March's sky watcher is rewarded with the winner of the brightest star in the sky competition. The bright star Sirius will not wait for sunset to end. It is easily visible in mid-twilight and easily outshines every star in the sky except for the Sun. But what circumstances allowed Sirius to win this contest?

(con't page 5)

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Lou Poda

February Treasurer's Report

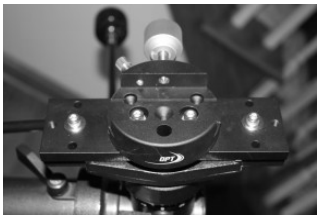
By Glenn Cameron

2/1/2013 Through 2/28/2013

Checking Beginning Balance	**$5,914.56**
Income	
Dues	30.00
Donations	28.00
50/50 Raffle	114.00
Other	20.00
Total Income	**$192.00**
Expenses	
	0.00
Total Expenses	**$0.00**
Income Less Expenses	**$192.00**
Checking Ending Balance	**$6,106.56**
Savings Beginning Balance	**$6,437.07**
Earned Interest	0.25
Savings Ending Balance	**$6,437.32**
Petty Cash Beginning Balance	**$46.66**
	0.00
Petty Cash Ending Balance	**$46.66**
Petty Cash	46.66
Savings	6,437.32
Checking	6,106.56
Grand Total	**$12,590.54**

Article by Glenn Cameron
ACA Treasurer.

SWAP & SHOP



For sale:

Orion SkyView Deluxe EQ Mount w/ RA Tracking Drive and Polar Finder Scope. This has been modified to accept a standard Vixen dovetail. It has also been modified for easy removal of the accessory tray for quick transport.

Items included and their original price:

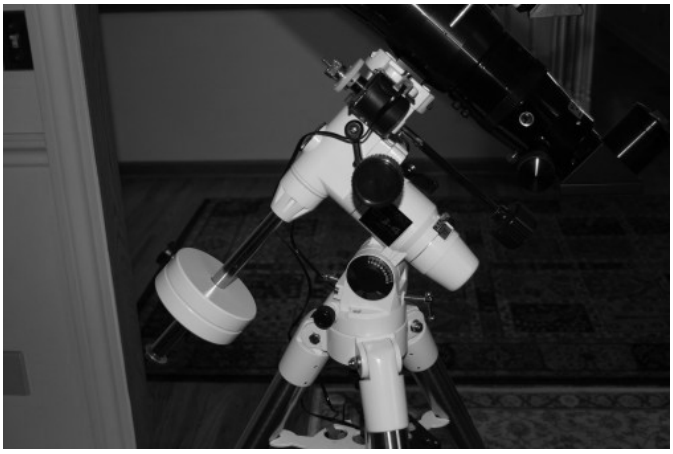
- Orion SkyView Deluxe EQ Mount $190.00
- Orion AccuTrack SVD RA Drive $50.00
- Polar Finder Scope $40.00
- Losmandy Adapter Plate $30.00
- OPT Vixen Style Dovetail Mount Adapter $40.00

Total original value of all items - $350.00

Asking: $150 for all

I prefer local sale and pickup. I don't want to ship this.

Contact: Glenn Cameron
Phone: 330-737-1472
Email: glenn@cameronclan.org



For Sale:

Celestron CG-4 EQ Mount including polar scope (with date circle and longitude scale). Includes 4 pound and 8 pound (not pictured) counter weights. Tripod has 1.75" steel legs. It is in great condition. Also included is Celestron dual axis motor drive. Tracks beautifully. Upgrading to LXD75 so this needs to go.

Note: Telescope in the picture is NOT included.

Items included and their original Price:

- Celestron CG-4 EQ Mount $699.00
- Celestron Motor Drive Dual Axis $129.00
- Celestron Polar Finder Scope $59.00

Total original value of all items - $887.00

Asking: $250.00 for all

I prefer local sale and pickup. I don't want to ship this.

Contact Glenn R. Cameron
glenn@cameronclan.org
Ph: 330-737-1472

Advertize in the Swap n Shop!

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

truemartian@aol.com

For Sale:

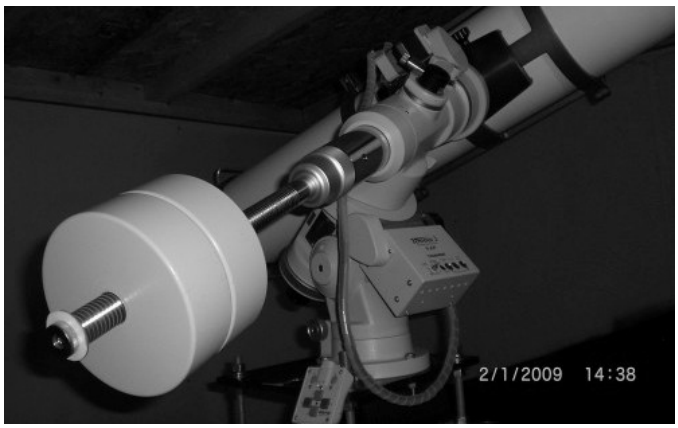
Pentax XW 20mm Eyepiece

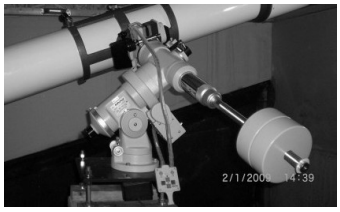
- Excellent condition.
- Small mark on 1.25” barrel.
- Always used in a compression clamp.

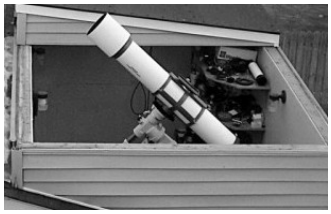
Asking: $220 (cash)

Contact: Fred Fry
Email: riverfry@gmail.com

SWAP & SHOP







For Sale: I believe I'm the second owner of this very clean **Takahashi NJP mount with Temma 2 goto**. I believe the specs are 5 arcsecond p-p PE (no PEC) and 60-65 pounds conservative capacity. I've never had it outside except in the observatory. It includes all standard accessories (three 14 pound painted counterweights, DC cable, PC cable, autoguider cable, 4 button handbox as in photo, fixed-height wood tripod) plus lots of purchased accessories - aftermarket Losmandy-compatible saddle, "beer can" counterweight bar extension, polar scope illuminator, Tak 24VDC power supply. I'll probably add items to the list as I think of them. This has been in the observatory for a few years and although it performs very well for me, it's time to stir things up in there and play with something different.

I will package VERY well and ship at buyer's expense (CON US only) but for the buyer who can and will travel to pick this up near Akron, Ohio I will throw in some more expensive accessories: a wheeled Scopeguard case and at least two more 14 pound counterweights. Between those bonus items and the shipping costs, that's a pretty good incentive! It's worth it to me to avoid the hassle of packaging and shipping. I won't ship the case under any circumstances but it'll be available for sale (pick up only) if it remains after the sale. Same for the extra counterweights.

Asking: $5200 plus shipping for everything in the first list if shipped (Paypal only, please!), $5200 and no shipping for both lists if picked up (Paypal or cash; $100 discount for cash). Any telescopes or cameras shown in photos are NOT included.

Contact: John Crilly
Phone: 330-730-6924
Email: John@johnrcrilly.com

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:

22mm Orion Epic ED-2 ED Eyepiece
25mm Orion Epic ED-2 ED Eyepiece

Asking: $40 each or $70 for both

Contact: Glenn Cameron
Phone: 330-737-1472
Email: glenn@cameronclan.org

For sale:

Televiev Radian 12 mm Eyepiece

- Excellent condition.

Asking: $180 (cash)

Contact: Fred Fry
Email: riverfry@gmail.com

For Sale:

Televiev Radian 18 mm Eyepiece

- Excellent condition.

Asking: $180 (cash)

Contact: Fred Fry
Email: riverfry@gmail.com

President's Column (con't)

Sirius is magnitude –1.46 and is nearly twice as bright as the second brightest star Canopus. Sirius is a binary star composed of Sirius A and Sirius B. Sirius B is a faint white dwarf star that contributes very little luminosity for this two star system. Sirius A gets all the glory in this description.

Sirius A is an intrinsically bright star. It is young (300 million years old) and spectral type A1V (which means hot and bright). It is about 2.2 times the mass of the Sun and approx. 25 times more luminous. These factors also mean a much shorter lifetime for Sirius compared to the Sun. Sirius A is one of our closest neighbors at 8.6 light years in distance. For observers in the mid-northern to northern latitudes, it is the closest star that is seen with the unaided eye.

There is a well known story behind the discovery of the companion to Sirius A, known as Sirius B. The famous American telescope maker, Alvan G Clark was polishing and figuring the 18.5 inch lens for the Dearborn Observatory in 1862, which was the largest refractor lens in the world at that time. Clark turned the telescope toward Sirius to test the 18.5 inch lens and saw a faint dot very close to the very bright Sirius A. Since Sirius B was unknown at this time, Clark thought there was a flaw in the lens and took steps to further test the 18.5inch diameter lens. And this is how the faint companion of Sirius A was discovered. In the following years to pass, astronomers noted that Sirius B was massive even though quite faint. After five decades of progress in astronomy, Sirius B was determined to be an entirely new class of star, a white dwarf star.

March is perhaps the best time to view the legendary winter constellation of Orion. The hope of warmer nights in March will lead you to look for the Great Orion Nebula (M42). M42 is a diffuse nebula located below Orion's Belt. It is one of the brightest nebula and is a naked eye object under good viewing conditions. M42 is the astrophotographers dream. Photos taken at higher magnification reveal more details and more spectacular structures. With telescopes of 24 inches or better, colors may be seen thru the eyepiece. Also among the more famous components of M42 is the trapezium, a very young open cluster of four stars that serve to illuminate the surrounding nebula.

The Horsehead Nebula is a dark nebula just to the south of Alnitak. The Horsehead is approx. 1500 light years from Earth and shows swirling clouds of dark dust and gas. The bright and energetic star Sigma Orionis radiates and ionizes the surrounding hydrogen to yield red or pinkish glowing regions that are part of the Horsehead Nebula. A spectacular nebula.

Orion has a number of other remarkable stars and nebula:

1. Betelgeuse is the 18th brightest star in the sky and is a red supergiant.
2. Rigel is the 6th brightest star in the sky and is a blue-white supergiant. It is hot and energetic and is 130,000 times more luminous than the Sun.
3. M78 is a bright diffuse reflection nebula that is readily seen even in small telescopes.
4. M43 (or DeMairan's Nebula) contains its own separate small cluster of stars. It is a fine target in medium and larger telescopes.
5. NGC 2024 (the flame nebula) is a famous emission nebula is a fine emission nebula that resembles its name.

The constellation of Gemini lies to the north and east of Orion. The Gemini twins are Castor and Pollux from Greek mythology. Gemini contains the following well known deep-sky objects:

1. The Eskimo Nebula (aka clownface nebula) is described as a bipolar double shell planetary nebula. It has the appearance of a persons head surrounded by a parka hood.
2. The Medusa Nebula is a large planetary nebula that lies on the border of Gemini and Canis Minor. The nebula shows braided serpentine filaments of glowing gas suggesting the serpent-like hair of Medusa found in Greek Mythology.
3. M35 is an open cluster discovered by de Cheseaux in 1745. The cluster consists of several hundred stars scattered over an area the size of a full moon. It is a nearly circular cluster with rather uniform stellar distribution. It is a splendid object under lower magnification and wide field of view.
4. Geminga is a neutron star approx 550 light years distant. It is theorized it was once a massive star that went supernova about 300,000 years. The remnant is the neutron star.
5. The Beehive Cluster (aka Praesepe) is an open cluster in the constellation Cancer the crab. It is one of the nearest open clusters to the solar system. It looks like a nebulous object to the unaided eye. The Beehive Cluster is best observed when Cancer is on the observers meridian. It is a fine target with binoculars or telescope with low power and wide field of view.

The March sky would not be complete without a bright Planet or two. The planet Jupiter is both bright and easily visible high in the west at sunset. The planet Saturn will rise at about Midnight or 1 AM to coincide with Jupiter setting on the western horizon. The March sky holds both mysteries and rewards for those who are willing to search.

Article by Gary Smith,
ACA President

Minutes of the February 22, 2013 General Membership Meeting

8:00PM Gary Smith, our president, greeted members and several visitors to our last meeting at the Portage Lakes Kiwanis Club. Visitors were: Nicole Dollwet, her son Noah Sterns, Michelle McNeal, Barb Leden, Monique Mason, Eric Schuring , Curtis Bower and John Gasser.

Program: Our presentation was part deux of the PBS special "Look to the Skies". We viewed part one last November about the Milky Way. PBS NOVA specials are very well done and quite interesting.

Business Meeting:

- A potential spring fund raiser at Wolfe Creek Winery: Wine, a few munchies, and the Night Sky. John Shulan will make arrangements with Wolfe Creek and we can decide on day and time later.
- Rick Burke attended an annual astroimaging Florida Keys extravaganza early February and has promised future photos as soon as he "polishes" the images.
- Look to the Sky! A Day of Astronomy and Weather will be held at the Main Library Auditoriumin Akron on Saturday, March 16, 2013. Kevin Manning, astrophysicist will discuss the latest inastronomy and at Noon, Dick Goddard will talk about the weather in northeast Ohio. The club will have a table set up with visuals, info about our club, star party schedule and other items for children. Glenn Cameron, Jason Shinn and Ann Ferrell will attend the presentations and represent the Club.
- Astronomy Day at the Cleveland Natural History Museum is Saturday, April 20th from 10 a.m. – 4 p.m. The club will have a table with our visuals and information. All members are encouraged to attend. *Also, we need new images for our posters.* Contact Jason Shinn

50/50 Raffle:

- Noah Sterns, 8 year old visitor won the 50/50 raffle. His mother Nicole Dollwet has asked that the winnings be used toward a family membership. Congratulations Noah!
- Last November, Jason Shinn brought in 7 raffle prizes: posters, small stick on banners and a Mattel Curiosity Rover. Thank you Jason.
- We need $$ for our new 14" telescope. Several members mentioned "When are we going to actually purchase the new telescope, after so much discussion last year?"

Our First 2013 Star Party will be Saturday, March 9th at the observatory, skies willing.

Article by Ann Ferrell,
ACA Assistant Secretary.

Astronoquiz

By Marissa Fanady

Looking at past and present newsletters I noticed that something was missing, people could read each others ideas, knowledge, and experiences but never truly interact with the monthly newsletter nor exercise their minds to recover or gain, for those just beginning, what are truly amazing, wonderful, and sometimes humorous facts about outer space. I started thinking about how this could be changed so people have more to look forward to and even get involved in if they wish to contribute. Currently taking an astronomy based class at Kent State University I started going over what I already knew and I began learning new facts about space I never knew. Then it hit me, I'll create an astronomy quiz for the newsletter and evoke people to use their minds and help beginners learn amazing facts. By contributing questions people can also get involved and help out the Astronoquiz to keep it fresh and entertaining. Sometimes I may add a bonus question if it relates to the original question. By submitting a quiz you can keep it anonymous or have your name submitted if you'd like to receive credit, the quiz can be a multiple choice question, name this planet or any object that you wish to describe, a famous astronomer or anything related to the field. The quiz can also be as simple or tough as you want it to be, in the next article I will reveal the answer and have a new quiz ready and possibly other facts about the object or person from the previous quiz. Those of you who'd like to submit a quiz to Astronoquiz or have new ideas or just want to make a comment whether good or bad to improve the quiz feel free to email me at speedymissy@yahoo.com. Well without further adue here's the first :

Astronoquiz!

"The names we use for the days of the week actually came from people long ago who watched the sky and observed seven bodies move among the still stars. They thought these bodies must be very powerful and therefore they must be gods, so in honor of them once a day they'd worship one of these bodies and name that day for the god they named the object after. What are these seven bodies and which day was named for the individual body? "

Bonus question: "Who were the people who invented this idea and named the days of the week?"

Stay tuned for the answers in the April edition of the Night Sky Newsletter!

Article by ACA member
Marissa Fanady.

PanSTARRS

By Dave Jessie

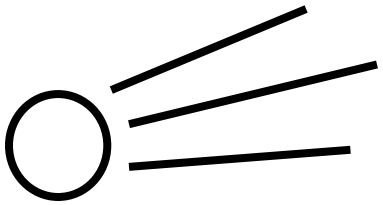
Two significant comets are scheduled to appear in 2013: P A N S T A R R S (C/2011 L4) and ISON (C/2012 S1) The first of them is PANSTARRS which has been putting on quite a show in the southern hemisphere. Unfortunately, here in the northern hemisphere, due to the orbit of the comet and the lengthening of the days heading for the Vernal Equinox on Wednesday morning March 20, 2013 at 7:02:23 EDT, the comet will never get higher than 18° while still a naked-eye object. It will be dimming by 2/10 magnitude each evening. These conditions most definitely will work against our seeing it without optical assistance. PANSTARRS is moving eastward and northward - and that's working to make the comet visible for us. You can visit the ACA's web site for star charts to see the comet's position relative to the Sun. Each chart is made at the exact moment of sunset for that date, which occurs a minute or so later each evening. The highest PANSTARRS is going to get for us is a mere 17.96° in altitude at sunset on Monday 3/25/2013 while it's still brighter than magnitude 4.5. It will be visible after that date, but each evening it will appear more dim although higher in altitude which will allow us to see it in binoculars or telescopes. We'll need clear skies and a clear western horizon to be able to see this icy visitor while it's still bright. Keep in mind that all predictions related to comet brightness are subject to an incredible number of factors. While the data predict the following magnitudes to the best of our ability, a great deal of variation can, and will, occur. Come November, as comet ISON arrives in our skies, this page will be updated with similar information.

All times listed below are local clock time from Akron, Ohio
(Longitude: W 81° 33' 39" Latitude: N 40° 58' 11")

Visit the ACA website (http://www.acaoh.org/Comet_Information.htm) for more information and star charts.

All information provided below and on web site are thanks to Guide9 software available from ProjectPluto.com

Article by ACA Member
Dave Jessie



PANSTARRS (C/2011 L4)			
Date	**Magnitude**	**Sunset**	**Comet Altitude at Sunset**
3/9/2013	0.5	18:29:28 EST	9.03°
3/10/2013	0.5	19:30:37 EDT	10.50°
3/11/2013	0.6	19:31:46 EDT	11.84°
3/12/2013	0.7	19:32:46 EDT	13.03°
3/13/2013	0.9	19:33:55 EDT	14.04°
3/14/2013	1.1	19:35:05 EDT	14.89°
3/15/2013	1.3	19:36:05 EDT	15.62°
3/16/2013	1.5	19:37:14 EDT	16.21°
3/17/2013	1.7	19:38:15 EDT	16.71°
3/18/2013	1.9	19:39:24 EDT	17.08°
3/19/2013	2.1	19:40:24 EDT	17.39°
3/20/2013	2.4	19:41:33 EDT	17.59°
3/21/2013	2.6	19:42:34 EDT	17.76°
3/22/2013	2.8	19:43:43 EDT	17.86°
3/23/2013	3.0	19:44:43 EDT	17.93°
3/24/2013	3.2	19:45:53 EDT	17.95°
3/25/2013	3.4	19:46:53 EDT	17.96°
3/26/2013	3.5	19:47:54 EDT	17.95°
3/27/2013	3.7	19:49:03 EDT	17.90°
3/28/2013	3.9	19:50:03 EDT	17.86°
3/29/2013	4.1	19:51:12 EDT	17.80°
3/30/2013	4.2	19:52:13 EDT	17.75°
3/31/2013	4.4	19:53:13 EDT	17.70°
4/1/2013	4.5	19:54:22 EDT	17.63°

Comets

T Z G J J U Y Z H A E K E Y K I T R F L
A O Q U E V V U S Y P C E P U Z E P I X
G M U E L L E R X Y A L E A W H M A K B
X V X S A U L N O L T K Q Q T L P N J K
R I V A L K R F I R I I U O A Q E S P N
P A J W D M E R A J W N R T K I L T I N
I W E A Z T K H Q T W N W F A R O A A M
H U G N S C A H F R E H T P S K K R J X
Y A Q M I Y M A C G O U X I N O I R V D
T L L R R L E C R L A H H I A T P S A H
H G L L L P O E M J W A K E T U O H O K
G N K E E R H E L V L F I L D O W E L M
U X E C R Y S I K E Y A Z H A N G K D M
A V Q A N R T I B L O C L A H V O C Z V
N E X O T E O O A Q T N O M M E L N F G
C B S G H I P B W I L D D L A Q S E H U
M I N W P P Z Y U K Y I I F S S H E K E
O Q N M Y X S X P G V L R D X E A W U W
I D T X L F O N X F M Z X N A I E P H L
N Z E V F O P H Y D S N W E W V V Q K N

BORRELLY
ENCKE
HALE-BOPP
HALLEY
HARTLEY
HERGENROTHER
HOLMES
HYAKUTAKI
IKEYA-ZHANG
ISON
KOHOUTEK
LEMMON
LINEAR
MCNAUGHT
MUELLER
NEAT
PANSTARRS
SHOEMAKER-LEVY
TEMPEL
WILD

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THE ASTRONOMY CLUB OF AKRON

MARCH 2013 ACTIVITIES CALENDAR

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	Last Quarter 21:54UT 4 	5	Moon at perigee (closest) at 23h UT. 6	7	8	9 ACA OBSERVATORY PUBLIC EVENT 7:00p
10 **BEGIN EASTERN DAYLIGHT TIME (EDT) AT 02:00 SET CLOCKS AHEAD ONE HOUR.**	New Moon 19:53UT 11 	12	13 11	14	15	16 OUTREACH EVENT AT SUMMIT PUBLIC LIBRARY 10a - 2p ACA OBSERVATORY PUBLIC EVENT 7:30p
17	18	Moon at apogee (farthest) at 11h UT. 19 First Quarter 17:26UT 	20 **VERNAL EQUINOX at 11:02 UT.**	21	22 ACA MEMBERSHIP MEETING (KIWANIS) 8:00p	23
24	25	26	Full Moon 8:29UT 27 	28	29	30
Moon at perigee (closest) at 4h UT. 31						

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

Celestial Event Source: www.skymaps.com

The Night Sky
Newsletter of the Astronomy Club of Akron
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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
ADDITIONAL ADULT member ___$15.00
JUNIOR (ages 12 to 17) _____$15.00
FAMILY MEMBERSHIP _____$40.00

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