



The Night Sky

The Newsletter of
The Astronomy Club of Akron

www.acaoh.org

Volume 34 Number 10

October 2012

Next Meeting: Friday - October 26, 2012 - 8:00 PM - Kiwanis

The President's Column

By Gary Smith

It is that time of year again when we have noticed a sharp drop in the temperature and wondered "what happened to Summer". Yes, I will admit summer is gone for the year 2012. But, who cares? The world of space exploration and star gazing is ablaze with activity of every kind. The big budget Mars Super Rover Curiosity has passed all of its preliminary tests of circuitry and component function with flying colors. Hats off to everyone at the Curiosity Design Team. The unmanned SpaceX Dragon remotely piloted cargo vessel has launched once again and appears to be functioning well. But what is happening up in the sky?

The world of amateur astronomy is constantly combing the skies, searching for the time tested landmarks and looking for new arrivals. Late Sept. said its farewell to the spectacular conjunction of three of the brightest objects in the sky; Saturn, Mars & Spica. The bright star Arcturus is making steady progress toward the western horizon. The

prominent Globular Cluster M-13 in Hercules is now west of zenith when late twilight fades into night. The also prominent Big Dipper stands out best on a clear dark moonless night in the observers Northeast.

I feel that one of the most "taken for granted" features of the night sky is now exerting its dominance now that it has spent all of the summer climbing out of the eastern horizon. The magnificent Summer Triangle is currently fully at our zenith. It hosts three of the twenty brightest stars in the sky. Veteran star gazers have noted its position only to start their task of finding something new. School children are making their introduction to this timeless landmark of the northern sky, a friendship meant to last a lifetime.

The world of star watching is a continuous cycle of bidding farewell to the stars & constellation of the last season while saying hello to the new arrivals that spring from the east. The month of October brings two of the most famous constellations of the entire sky. Greek mythology gave rise to the story of a winged horse, the offspring of the ill fated Medusa, and

the trident bearing Poseidon. This winged equine is the subject of many tales but one has become very famous throughout history. Perseus (the Hero) captures the winged horse (Pegasus). Perseus mounts Pegasus who flies them over the sea to slay the sea dragon (Cetus). They then rescue the beautiful Princess Andromeda who had been chained to a rock in the middle of the ocean.

The modern star gazer will notice a large diamond-shaped formation of four stars rising out of the east and east of the Summer Triangle. This resembles a large "baseball infield diamond" in the sky. This is the Great Square of Pegasus. The four stars are Markab, Scheat, Algenib, and Alpheratz (alpha Andromeda). The four stars appear to be equal in brightness and the "infield" inside their border seems to be empty of stars to the unaided eye. The artistic illustrations of Pegasus at its place among the stars are quite beautiful. One of the most important objects of the constellation Pegasus is 51 Pegasi. In Oct. 1995 Swiss Astronomers Mayor & Queloz announced the discovery of an exoplanet orbiting 51 Pegasi. (Con't Page 4)



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September Treasurer's Report

By Glenn Cameron

9/1/2012 Through 9/30/2012

Checking Beginning Balance	\$4,481.27
Income	
	0.00
Total Income	\$0.00
Expenses	
	0.00
Total Expenses	\$0.00
Income Less Expenses	\$0.00
Checking Ending Balance	\$4,481.27

Savings Beginning Balance	\$6,435.74
Earned Interest	0.26
Savings Ending Balance	\$6,436.00

Petty Cash Beginning Balance	\$48.91
	0.00
Petty Cash Ending Balance	\$48.91

Petty Cash	48.91
Savings	6,436.00
Checking	4,481.27
Grand Total	\$10,967.08

Article by Glenn Cameron
ACA Treasurer.

SWAP & SHOP



For Sale:
22mm Orion Epic ED-2 ED Eyepiece
25mm Orion Epic ED-2 ED Eyepiece
Asking: \$40 each or \$75 for both
Contact: Glenn 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

Observatory Report

By Ron Kalinoski

Despite the rainy weather we had during the month of September, ACA hosted four observing events: two public star parties, one impromptu star party, and one outreach event. The September 10th impromptu star party was particularly noteworthy as we had some of the best sky conditions in recent memory. Details within the Great Rift of the Milky Way were easily seen. On the morning of September 13th, Dave Jessie packed up his solar gear and headed out to Firestone Metro Park at Warner Road. With his 90 mm solar telescope set up, Dave showed employees of Firestone Polymers a very activity sun viewed at H-alpha wavelength during their annual picnic. The weather was perfect and one solar detail received special attention. A detached prominence appeared to



Dave Jessie explains the origin of the hydrogen-alpha photon at Firestone Polymers' annual picnic. Photo by ACA Member Amy Ciesielczyk.

float above the solar disk, slowly moving out into space during the course of the observing session. More impromptu star parties are planned this month. We have opened a discussion among ACA members about replacing the 14" observatory telescope. We hope to move toward a vote about this subject late October or early November. We received two

\$500 donations to help us fund the new telescope. One donation was from Firestone Polymers and the other was from an anonymous donor who is also a member of the Astronomy Club of Akron.

*Article by Ron Kalinoski,
ACA Observatory Director.*

ACA Membership Meeting

by Anthony Scarpitti

Friday October 26, 2012 8:00pm
Kiwanis Hall
725 Portage Lakes Drive
Portage Lakes, OH 44319
Guest Speaker: Ron Kalinoski
Topic: SETI

This month's talk will focus on one of the biggest questions facing humankind: Are We Alone? SETI projects have tried to answer this question and we'll look at how these projects have approached the technological challenge. We will also be performing real-time analysis of downloaded data from the Arecibo Radio Telescope. It's not likely, but it is just possible that during the

analysis, we may be the first to discover an extraterrestrial signal of intelligent origin. This would be one of the biggest discoveries ever made and change our view of the Universe forever. So come out and join the search!

*Article by Anthony Scarpitti,
ACA Vice President.*

President's Column (con't)

This was the 1st extra-solar planet found to orbit a Sun-Like star.

The other prominent October Constellation is Andromeda, located above (to the north) of Pegasus. By locating the Great Square of Pegasus, you have already located Alpha Andromeda which is the "3rd Base" of the diamond. Andromeda is a large constellation. It is 55% the size of Hydra, the largest constellation in the Sky. It boasts many notable objects.

1) Gamma Andromeda is the Star Almach which splits into a colored binary similar in appearance to Alberio. It consists of a bright golden yellow star paired with a dimmer indigo blue star separated by a respectable 10 arcseconds. A very telescopic binary indeed.

2) Beta Andromeda is the Star Mirach. Mirach is a fine red giant star that is similar to Arcturus, but much dimmer due to its greater distance. A fine target for binoculars and telescopes.

3) The next object in the constellation of Andromeda is one of the most remarkable objects of the entire sky. This is the famous Great Galaxy of Andromeda(M-31) or the Great Andromeda Nebula. A full sized color poster of the Great Galaxy of Andromeda is sure to be found in nearly all planetariums, and for many, this may have been their first experience at viewing a truly breathtaking galactic photograph.

The list of superlatives that describe M-31 is nearly endless. It is the most distant object that can be seen with the unaided eye. It is the nearest spiral galaxy to our own galaxy. It is the largest member of the local group of galaxies (of which the Milky Way belongs). The Persian astronomer "al-Sufi" in year 964 described M-31 as a "small cloud" in his book "Book of Fixed Stars". Charles Messier designated it as M-31 on his now famous Messier List. In 1785 William Herschel noted a faint

reddish hue at its core and believed it to be the nearest of all the great nebula. In 1885 a supernova was observed in M-31 which added to the confusion in the attempt to guess its true nature. The 1st photograph was taken in 1887 by Isaac Roberts and the long exposure showed the spiral structure for the first time. In 1920 the great debate between Harlow Shapley and Heber Curtis took place concerning the nature of the Milky Way and the dimensions of the universe. The M-31 Galaxy played a prominent role in this debate. In 1925 Edwin Hubble made one of his many famous discoveries when he identified Cepheid variable stars in M-31. This was an extremely important discovery that led to the abandonment of Shapley's Theory that the Milky Way was the entire universe, and that everything that could be seen resided INSIDE the Milky Way.

M-31 is about 2.5 million light years distant. One of the most fascinating discoveries is that this distance is getting SMALLER. Nearly

every spectra of any object in the Sky will show a Red Shift. The spectra of M-31 shows a Blue Shift. A popular theory is the Great Andromeda Galaxy and the Milky Way will collide in 3.75 Billion years eventually combining to form a very large elliptical galaxy. The apparent photographic width of M-31 is about 8 times that of the Moon. The number of images that populate the Internet of M-31 are nearly too many to count. The better images of the Andromeda Galaxy are some of the finest galactic images that I have ever seen. Truly spectacular. The study of the Great Galaxy of Andromeda has yielded a great number of results that have significantly advanced the science of Astronomy.

The nights of October are beckoning you to brave the chill in the air and view the majestic cosmos at its best. I'll see you at the ACA Observatory.

*Article by Gary Smith,
ACA President.*

NEW IMAGES

(page 5)

By Rick Burke

(top) The Pinwheel Galaxy (M33) a composite of over 6 hours of exposures taken with a QSI 583 camera mounted on a Tele Vue NP127is refractor telescope. It consists of 80 minutes of luminance images, 60 minutes each of red, green, and blue images and 120 minutes of hydrogen-alpha images. Guiding was performed off-axis using an SBIG STi camera and PHD software. It was captured with ImagesPlus and processed with ImagesPlus and Photoshop CS6.

(bottom) The Milky Way taken with a 50-250 zoom lens on a Canon EOS Rebel XS (1000D). The camera was piggybacked on a telescope that was being autoguided by PHD, via an SBIG STi guide camera. It is a stack of 10 6 minute exposures, captured with Backyard EOS and processed with ImagesPlus and Photoshop CS 6. The stars in Scutum are in the upper middle part of the image, but are overshadowed by the Milky Way. Several Messier objects are visible, including the Wild Duck Cluster, the Eagle Nebula, and the Omega (Swan) Nebula.

NEW IMAGES

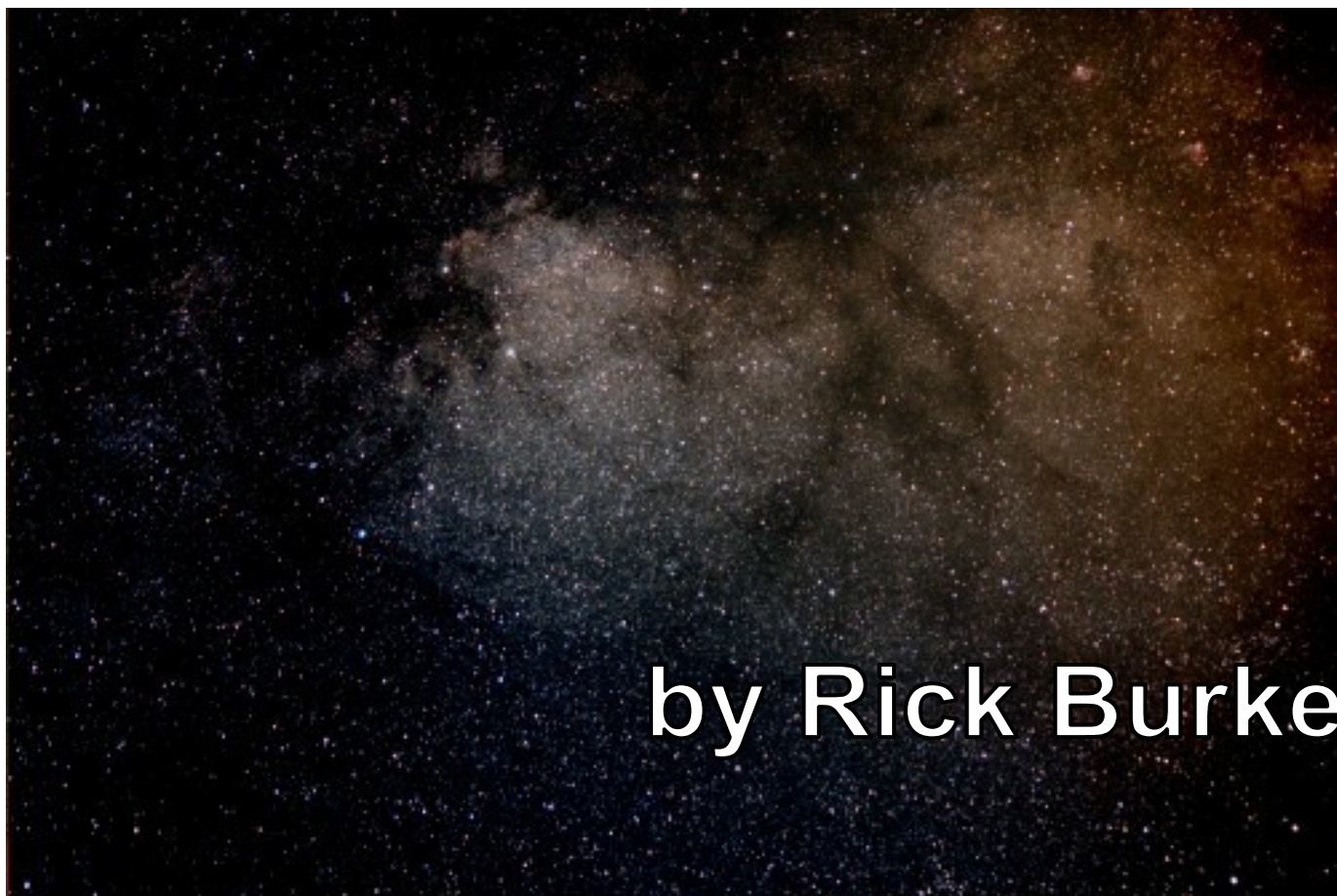
(page 6)

By Len Marek

(top) The Milky Way. I put a 18-55mm Canon IS lens and a 58mm Lumicon H-Alpha filter in front of the lens mounted on my SBIG ST8300M camera. I used a special adapter to mount the lens on one side and a T-mount threads on the other side. After tinkering to get the focus just right, I shot this! I took a 5 minute shot with the lens stopped down to f/5.6 to try to reduce the coma at the edges of the frames. The left side is actually one frame and the right side is the other. Using photomerge in Adobe Photoshop CS5, I selected auto anti-vignette and anti-distortion etc settings in there and it did a surprisingly good job merging the images together.

(bottom) NGC 7331 the large galaxy left of center is about 35 million light years distant whereas most of the members of Stephans Quintet to the right of center is about 280 million light years away. If you look closely at the picture, you can see several tiny galaxies in this region of the constellation Pegasus.

NEW IMAGES







by Rick Burke

NEW IMAGES



by Len Marek

THE ASTRONOMY CLUB OF AKRON
OCTOBER 2012 ACTIVITIES CALENDAR

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Moon at apogee (farthest) at 1h UT.	2	3	4	5 Moon at apogee (farthest) at 1h UT. STOW ASTRONOMY PUBLIC EVENT (www.stowastronomy.org)	6 ACA OBSERVATORY PUBLIC EVENT 7:30p
7	8 Last Quarter 7:33 UT 	9	10	11	12 STOW ASTRONOMY PUBLIC EVENT (www.stowastronomy.org)	13 ACA OBSERVATORY PUBLIC EVENT 7:00p
14	15 New Moon 12:02 UT 	16	17 Moon at perigee (closest) at 1h UT.	18	19 STOW ASTRONOMY PUBLIC EVENT (www.stowastronomy.org)	20
21 ORIONID METEOR SHOWER PEAKS DURING PREDAWN HOURS	22 First Quarter 3:33 UT 	23	24	25	26 ACA MEMBERSHIP MEETING (KIWANIS) 8:00p Mercury at greatest elongation. (evening)	27
28	29 Full Moon 19:49 UT 	30	31			

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Newsletter of the Astronomy Club of Akron

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1025C Hemlock Hills Dr.
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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

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