The Night Sky

Astronomy Club of Akron
Akron, OH USA
http://www.acaoh.org

APRIL 2004

Presidential Musings

By Gregg Crenshaw

On Sunday, March 28 a group of ACA members visited the Cleveland Museum of Natural History. Clyde Simpson, Coordinator of the Ralph Mueller Observatory at the museum took the group on a "behind the scenes" tour to places many of us didn't know existed. The group started out, naturally, in the observatory. Clyde pointed the 10.5" refractor at Venus. Everyone enjoyed Venus's crescent shape on a rare partly cloudy day. We also looked at a good size sunspot group as Clyde projected the solar image on a large white card. We then visited many laboratories including the Paleontology lab. Clyde showed the group the museum's large collection of animal and human bones. We also visited the "cold room," a large cooler where the museum stores stuffed animals that are used in exhibits. The group was warned to not touch anything due to some items being treated with arsenic. Hope everyone washed their hands before eating dinner. Everyone had an enjoyable afternoon. I emailed Clyde to thank him for the an interesting time. He emailed back a "Hi" to everyone and that he was looking forward to speaking to the group at the May meeting.

The speaker for the ACA April meeting, April 23, is Bernie Richards. Bernie is a professor of Physics at Kent State University, Stark Branch. Many ACA members may remember Bernie as he has spoken at meetings in the past. His talk will be entitled "Relativity, Is it Really Relative?

Come to the business meeting and vote for the person of your choice for ACA officers for the year.

NEXT MEETING

April 23
8:00 PM
Kiwanis Hall.

Speaker: Bernie Richards, professor of Physics at Kent State University, Stark Branch, will be giving a talk entitled "Relativity, Is it Really Relative?"

Also, elections will be held for the ACA officers.

Membership Renewal

Now is the time to renew your membership in the Astronomy Club of Akron.

Membership includes:

- A one year subscription to the club's monthly newsletter
- Discounts on subscriptions for Sky & Telescope or Astronomy magazines
- Use of loaner telescopes
- Access to the Portage Lakes State Park Observatory
- An open invitation to all club activities.

Dues are $20.00 a year for Adults (18 and over), $15.00 for Juniors (12 to 17). Added members (with an Adult Membership) $5.00. Family memberships $30.00.

Annual memberships renew in the month of May.

A one year subscription to Astronomy Magazine is $29.00 or a one year subscription to Sky & Telescope Magazine is $32.95.

These rates apply to those ACA Members who purchase their Subscriptions through the Treasurer of the ACA.

Contact Gary Smith, ACA Treasurer, to renew your membership and take advantage of the special subscription rates.

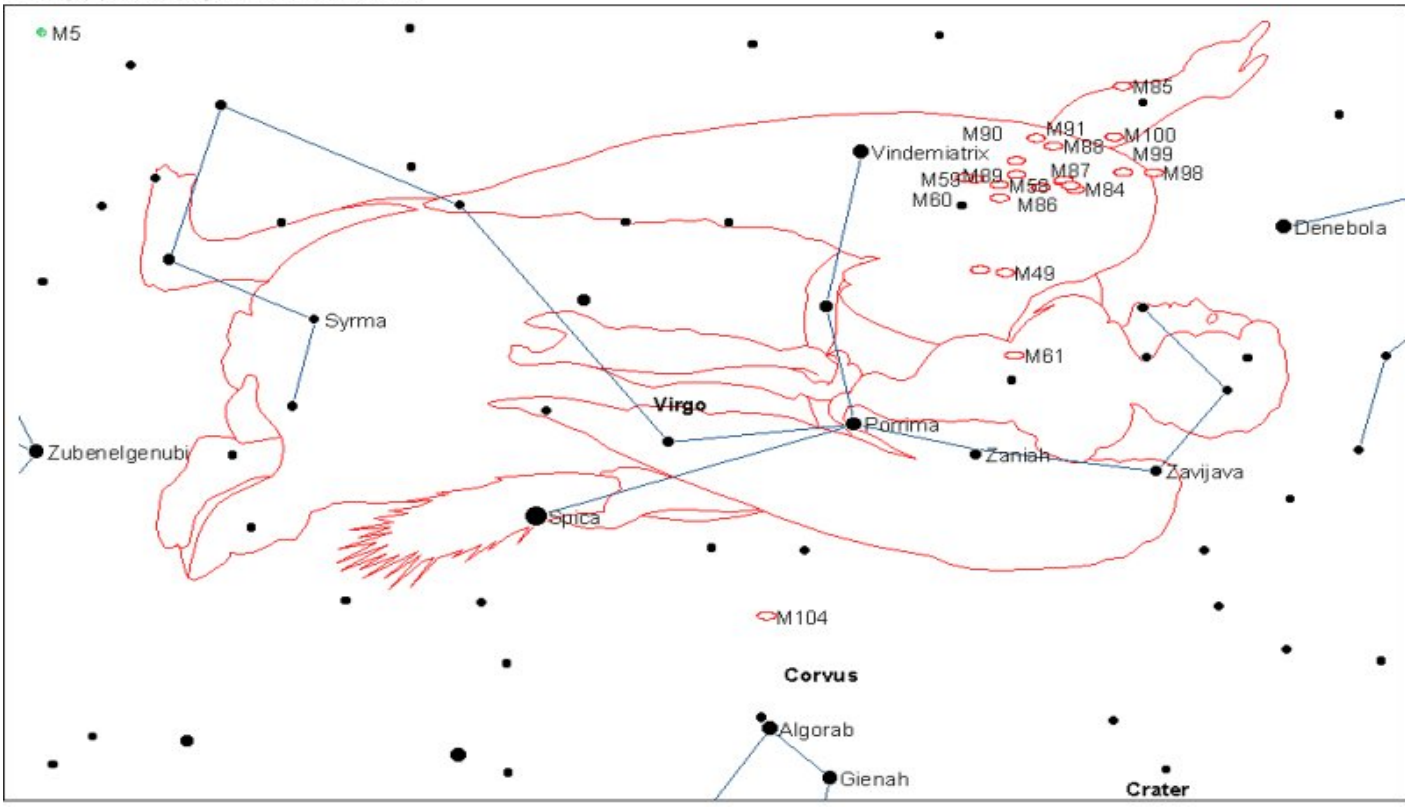
The Night Sky

Editor / Layout	Jeff Hudson
Contributors	Jay Svitko
	Gregg Crenshaw
	Jeff Hudson

The Night Sky is publish monthly and contains information on up-coming meetings, observing sessions, and articles by members.

Submission Deadline
May 14, 2004

TheSky (c) Astronomy Software-Bruce Dale



Virgo

Abbreviation: Vir
Genitive Form: Virginis
Description: The Maiden

Pronunciation: VUHR' goh
Genitive Pronunciation: VUHR' jih nis
Sky Database: Constellation Labels

An Astronomical Two-fer

By Glenn R. Cameron

Ohio weather being what it is, it's sometimes a shock when we have two nights in a row of clear skies.

The night of our February ACA business meeting, February 27th, was one of those nights. It was cold and clear. It's worth mentioning again that it was cold. It was about 34 degrees. I didn't actually get out my own telescope but I enjoyed some great views through a new ACA member's 10 inch Dobsonian. Joe and his son left the meeting a little early and were set up already when I got there at about 10:15 PM.

Joe was dressed in an insulated jumpsuit. I was jealous and only lasted about a half an hour in the frigid night air. Jupiter and Saturn were just a beautiful as I remembered them and I thanked Joe and son for braving the cold.

The next night was just as clear and the air was even steadier than the night before. The second clear night was my first two-fer for the evening. I got to the observatory at about 7:15 PM and set up my telescope. I was happy to see several other ACA members present.

Jupiter and Saturn dominated most of our eyepieces most of the night and I caught another two-fer. While observing Jupiter, I noticed a very sharp black dot on its surface. “Hey guys,” I said, “I think I see a shadow transit!” The shadow was almost directly over the equator and about 80 percent of the way across the face. We all watched it for a while, creeping its way toward the western limb, until it melted into the black background of space. I was tickled pink. I've read about shadow transits and seen pictures, but this was my first visual observation.

After the shadow passed, I noticed a whitish circle on the north equatorial belt. “Hey guys,” I said, “I think I see the moon that cast that shadow!” Sure enough, we watched the moon pass the last 20 percent or so of the Jovian face before it erupted from the western limb and became its own tiny disk.

The temperature that night was about 38 degrees and I lasted about three and a half hours before I had to pack it up and go home. I was kicking myself for not setting up my video camera on the telescope and capturing the transits on tape but then I wouldn't have seen them with my own eyes (well, eye).

Later on when I got home, I fired up my Starry Night Pro program and it told me that the moon I had been observing was the fleet little Io.

All in all, it was a terrific night and it helped me climb a little bit out of my Winter blahs. Come on Spring! I'm ready!

Astronomy Gatherings

The following is a list of up coming astronomy events.

They are all well worth a visit to. Attending any of these will increase your knowledge of astronomy and give you a chance to meet some very interesting speakers and attendees. Also the opportunity to look at some outstanding telescopes.

Go to the web sites for all the details.

April 23 and 24
18th Annual NIAGfest
North Webster, Indiana
http://clubs.kconline.com/was/niag.htm

June 14 thru June 20
Laurel Highlands Star Cruise
Hazelton, West Virginia
http://www.lhstarcruise.org/

June 11 and June 12
Apollo Rendezvous &Telescope Fair
Dayton, Ohio
http://www.mvas.org/

July 8 thru July 11
Green Bank Star Quest
Green Bank, West Virginia.
www.caacwv.org or www.KVAS.org

August 17 - 22
AstroBlast 2004
Oil City, Pennsylvania
http://www.oras.org

Local High School Teacher Honored for Academic Excellence

Lynn Laux is among 110 educators nationwide receiving cash awards from RadioShack Corporation

Fort Worth, Texas - April 12, 2004 - RadioShack Corporation has presented a 2004 RadioShack National Teacher Award to Lynn Laux, a science teacher at Midpark High School in Middleburg Heights, Ohio.

Laux is among 110 educators receiving RadioShack National Teacher Awards this year for demonstrating a commitment to academic excellence in mathematics, science or technology. She receives a $3,000 cash award.

"I am so excited about winning this award," said Laux. "It proves that teaching with technology has its advantages."

Laux, who has taught for 11 years, teaches physics, honors physics, chemistry, and earth/ space science.

"My classroom secret is to be open to new ideas -- especially technology -- and make students your partners in the learning process," said Laux.

Laux earned a bachelor of science degree in biology/chemistry in 1979 from Ohio State University, and a master of arts degree in education in 1993 from Baldwin Wallace College.

She is a member of the American Association of Physics Teachers, Astronomy Club of Akron and the Cuyahoga Astronomical Association.

Laux is one of two high school educators in Ohio who received a 2004 RadioShack National Teacher Award. The other honoree is Ann Brokaw, a science teacher at Rocky River High School in Rocky River. Brokaw also received a $3,000 cash award.

"The cash awards go directly to the teachers," said Laura Moore, senior vice president and chief communications officer of RadioShack Corporation. "This truly is a personal reward for a job well-done."

RadioShack has awarded cash and prizes to 1,550 individuals for their commitment, excellence and innovation in the classroom since the RadioShack National Teacher Awards program began in 1988.

"The RadioShack National Teacher Awards program is RadioShack's multi-year corporate citizenship effort to improve math, science and technology education," said Leonard Roberts, chairman and chief executive officer of RadioShack Corporation. "By investing in teachers, RadioShack is strengthening communities and ensuring that more American youth prosper. We are committed to rewarding and retaining quality teachers, which is essential to the continuing growth and prosperity of our nation."

The National Teacher Awards program is funded by RadioShack Corporation. The program is open to all accredited public and private high schools. Award recipients are selected from a nationwide competitive call for applications. The selection process includes judging applicants on their commitment to education and their implementation of innovative classroom teaching methods. A panel of distinguished educators selects the honorees.

For more information about the RadioShack National Teacher Awards, visit the program's Web site at http://education.RadioShack.com/TeacherAwards.

RadioShack Corporation is based in Fort Worth, Texas-based RadioShack Corporation (NYSE: RSH) and has retail locations all over the United States. For more information on the company, visit the RadioShack Corporation Web site at www.RadioShackCorporation.com.

The next time you see Lynn congratulate her on her well deserved award and the on-going commitment she has to teaching.

Sciencecraft

by Patrick L. Barry and Tony Phillips
Jet Propulsion Laboratory, California Institute of Technology

Probes that can distinguish between "interesting" things and "boring" things are vital for deep space exploration, say JPL scientists.

Along with his colleagues in NASA's Space Technology 6 Project (ST6), JPL's Steven Chien is working to develop an artificial intelligence technology that does just that. They call it the Autonomous Sciencecraft Experiment, and it's one of many next-generation satellite technologies emerging from NASA's New Millennium Program.

As humanity expands its exploration of the outer solar system-or even neighboring solar systems!-the probes we send suffer from two unavoidable handicaps. First, commands radioed by mission scientists on Earth take a long time to reach the probe: six hours for the planned New Horizons mission to Pluto, for example.

Second, the great distance also means that data beamed back by the probe trickles to Earth at a lower bandwidth-often much less than an old 28.8 kbps modem. Waiting for hundreds or thousands of multi-megabyte scientific images to download could take weeks. And often many of those images will be "boring," that is, they won't contain anything new or important for scientists to puzzle over. That's certainly not the most efficient way of using a multi-million dollar probe.

Even worse, what if one of those images showed something extremely "interesting"-a rare event like a volcanic eruption or an unexpected feature like glaciers of methane ice? By the time scientists see the images, hours or days would have passed, and it may be too late to tell the probe to take a closer look.

But how can a probe's computer brain possibly decide what's "interesting" to scientists and what's not?

"What you really want is a probe that can identify changes or unique features and focus on those things on its own, rather than just taking images indiscriminately," says Arthur Chmielewski, one of Chien's colleagues at JPL.

Indeed, that's what Chien's software does. It looks for things that change. A mission to Jupiter's icy moon Europa, for instance, might zero in on newly-formed cracks in the ice. Using artificial intelligence to set priorities, the probe could capture a complete movie of growing fractures rather than a single haphazard snapshot.

Until scientists can actually travel to deep space and explore distant worlds in person, they'll need spacecraft "out there" that can do some of the thinking for them. Sciencecraft is leading the way.

Learn more about Sciencecraft at nmp.nasa.gov/st6 .

Constellation of the Month

By Jay Svitko

Virgo is the second largest constellation (after #1 Hydra). As a member of the Zodiac, Virgo has a number of ancient myths and tales. The Sun passes through Virgo in mid-September, and is therefore the constellation that announces the harvest.

Virgo is often represented as a "maiden" (as its name indicates). In antiquity, she may have been Isis, the Egyptian protectress of the living and the dead and the principal mother goddess. She was also Ishtar of the Sumerian-Chaldean civilisations, or "Inanna", meaning Queen of Heaven. Inanna is described by Kramer (The Sumerians) as an ambitious, aggressive, and demanding goddess of love.

The Romans had simply adopted an earlier Greek goddess, Demeter. This goddess of agriculture was of the highest birth: born to Cronus and Rhea, she was the sister of Zeus. As evidence of her antiquity in Greek lore, her name has been found on a tablet from Pylos dating to the thirteenth century B.C.

Demeter was said by Homer to have "lain with Iasion in a thrice-plowed field", the result of which was the birth of Plutus, whose name translates as "riches from the soil" (perhaps "cornucopia" would be an appropriate description).

The goddess was depicted then, as now, as carrying a sheaf of wheat. But her influence carried not only to cereal crops, but to all kinds of food crops. Not surprisingly, perhaps, she was also the goddess of health, and of births and marriages.

A ceremony held in her honour in ancient Greece was called Proarktouria, which possibly indicates that the festivities were held just before the rising of Arcturus. However the name may instead make reference to the constellation Virgo, which in fact rises just before the star Arcturus.

Virgo is unique in that it is the only constellation containing all the Bayer stars with no additional superscript letters or numbers: just the Greek alphabet from alpha to omega.

Constellation of the Month Virgo

	Star Name	Greek Letter	Magnitude	Mean Distance Between
Right Hand	Vindemiatrix	Epsilon Virginis	2.84	
Belly	Auva	Delta Virginis	3.37	
Left Thigh	Heze	Zeta Virginis	3.36	
Right Knee		Tau Virginis	4.21	< 10 arcseconds
		Tau Virginis	9.50	
		109 Virginis	3.71	
Tip of her Staff		Kappa Virginis	4.15	
Left Hand	Spica	Alpha Virginis	0.96	
		Theta Virginis	4.37	< 10 arcseconds
		Theta Virginis	9.00	
Left Breast	Porrima	Gamma Virginis	3.60	< 10 arcseconds
		Gamma Virginis	3.70	
Neck	Zaniah	Eta Virginis	3.87	
Top of Head	Zavijava	Beta Virginis	3.56	

	Name	Also Known As..	Magnitude	Object Type
	M5	NGC 5904	7.00	Globular Cluster
	M49	NGC 4472	10.00	Galaxy
	M53	NGC 5024	8.50	Globular Cluster
It takes a bit of	M58	NGC 4579	11.00	Galaxy
imagination to see	M60	NGC 4649	10.50	Galaxy
a woman standing	M61	NGC 4303	10.50	Galaxy
and holding a	M64	Blackeye Galaxy	9.00	Galaxy
staff pointed down in her	M84	NGC 4374	11.00	Galaxy
left hand while	M85	NGC 4382	10.50	Galaxy
holding a	M86	NGC 4406	11.00	Galaxy
sheaf of wheat	M87	Virgo A	11.00	Galaxy
in her right hand	M88	NGC 4501	10.50	Galaxy
	M90	NGC 4569	11.00	Galaxy
	M98	NGC 4192	11.00	Galaxy
	M99	Pinwheel Galaxy	10.50	Galaxy
Limting Star Magnitude	M100	NGC 4321	10.50	Galaxy
of Constellation Map	M104	Sombrero Galaxy	9.50	Galaxy
(-6.5)				