



December 03

Volume XXXIII, Issue 12

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Custer Christmas Party a 'Memorable Event'



Photo, courtesy Tom Madigan, Editor
Clockwise from left: Barbara Lebkuecher, Bob Vanson, Barbara Lomaga, John Sepenoski, Valerie Cardona, Tom Carey, Elaine Carey, Michael Cardona, Charles Cardona, Sr.

Good spirits, good food and clear skies all contributed to making this year's Holiday party one of the most memorable. All who attended brought with them a smile, a covered dish or dessert and good cheer. **Best wishes for the holidays and a prosperous New Year from the President, the Board, your editor and the membership of Custer Institute!**

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Announcements & General Interest

25” mirror blank ordered.

Generous donations (see pages 6, 7 and below) enabled a check to be written, placing on order the mirror blank that will become the heart and soul of our Observatory class, 25” classical Cassegrain. We expect delivery any day and will commence production of the mirror ASAP. The telescope will be a hybrid Cassegrain / Newtonian. Removable (forward) tube sections will allow toggling between an f/4 Newtonian and an f/12 Cassegrain.

Custer to receive generous donations.

In an effort to get our new dome and telescope projects off the ground, Charles A. Cardona III, member of Custer’s board and long-time Custer advocate, his brother John and this editor have donated substantial quantities of preferred stock in Adzone Research Corp (ADZR). Please turn to pages 8 and 9 for more details.

Editor's Column

<p>Tom Madigan, Editor 99 North Summit Ave. Patchogue, NY 11772-2226 tmadigan@optonline.net 631-447-5339</p> <p>Cutoff for submissions is the 15th of the month preceding publication</p> <p>Visit the new Custer Website at http://www.custerobservatory.org</p>	<p>The Custer Comment is published monthly by</p> <p>Custer Institute P.O. Box 1204 Main Bayview Road Southold, NY 11971 631-765-2626</p>
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My apologies, again, for this month's Comment being published so late. As was the case last month, there were many events of note scheduled or occurring throughout the month. This, combined with holiday preparations, conspired to make the Comment late. Going forward, I will make every attempt to publish it on time. Thanks for your patience. A special apology is extended to Bob Chapin who has faithfully submitted his monthly 'Heavenly Events' articles on a timely basis. Although some calendar events may have been missed, Bob, your diligence in timely submission, eloquent writing and poignant insight haven't been lost on myself or anyone who I've spoken with. Keep up the good work. Nár lagaí Dia do lámh! ("May God never weaken your hand!").

Best,
 Tom
Tom Madigan, Editor

Gift Corner & Classifieds

<p>We have meteorites.</p> <p>Great sets mounted in beautiful display cases. Perfect for gifts.</p> <p>New Custer logo coffee cups ONLY \$4 EACH</p>	<p>The Gift Shop still has a dwindling number of copies of ASTRONOMY FOR ALL AGES, by Philip Harrington & Edward Pascuzzi just \$20. As an added bonus, copies are signed by Ed Pascuzzi. We also have copies of PARALLAX, the book that was referred to in the recent lecture. Quantities are limited so hurry and add to your collection while supplies last. Back by popular demand, we again have the <i>exclusive Custer Astronomical Pocket Diary</i> still just \$9. Quantities are limited.</p>	<p>For Sale Super C-8 Telescope, Richfield Finder, Tripod Wedge, Polaris Pointer, Polar Axis Finder, Case liner, Handle, Handbook-\$1307. No-tool knob set for C-8- \$12. Illuminated Reticule ocular assembly for C-8 including 12.5MM ocular rheostat-\$66. 2 inch Premium grade Deep Sky filter and 1 1/4 inch ocular adaptor-\$121. Observer's Chair with adjustable height-\$47. Rubber eyeguards (4)-12. Vernon mounted glass filters- neutral density, blue 80A, violet 47, light red-\$23A, green 58, orange- \$51. Adapter for Celestron 1 1/4 inch non-threaded oculars-\$10. Rich Field Adaptor with TeleCompressor and 20mm Erfle ocular-\$150. 8mm Brandon-\$69. 12mm Brandon-\$59. 2.4X Dakin Barlow- \$59. 25mm Kellner-\$28. 40mm Kelner-\$28. Declination Motor & Accutrack Telescope Drive Corrector, Dual Axis-\$199. Counter Weight set-\$30. Astronomer's Flashlight-\$7. Omni-axis Camera Mount-\$ 50. Accessory tray-\$30. Accessory Case-\$25. Helical Focuser-\$28. Dewcap-\$40. T-adaptor-\$20. Eyepiece projection adapter: teleextende-\$20. Best offer or \$1600 for the whole. Original cost \$2468. Contact Bill Richards at 631-957-2032, 98 Laurel Road, Lindenhurst, NY 11757-1705.</p>
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HEAVENLY EVENTS TO WATCH FOR December 03

“I sing the almighty power of God,
That made the mountains rise.
That spread the flowing seas abroad
and built the lofty skies.
I sing the wisdom that ordained
The sun to rule the day;
The moon shines full at God’s command,
and all the stars obey.”

- hymn, Isaac Watts, 1715

During the first 3 weeks of December you’ll need binoculars to spot MERCURY a half hour after sunset, very low in the southwest - but you’ll surely find VENUS first, higher and to Mercury’s left. After looping through Aquarius since June, MARS picks up speed and enters Pisces. Fading from -0.4 to +0.2 magnitude this month, Mars is due south at nightfall and sets shortly after midnight. JUPITER is drifting slowly eastward among the stars of southern Leo. The -2.1 magnitude gas giant rises around 11 PM at midmonth and is due south at daybreak. SATURN reaches opposition in Gemini on New Year’s Eve, glowing at -0.5 magnitude, and will be in the sky all night.

- 1 The waxing gibbous Moon is beneath Mars this evening.
- 3 On December 3, 1973, 30 years ago today, Pioneer 10 came within 82 thousand miles of Jupiter’s cloudtops. Pioneer 10 was the first spacecraft to explore Jupiter; the second, Pioneer 11, arrived a day less than a year later.
- 8 Watch the full Cold Moon rise in the east-northeast at sunset. Then look for Mercury just above the southwest horizon. Mercury reaches greatest elongation east of the Sun tonight.
- 10 The bright waning gibbous Moon rises just to the left of Saturn after 6 PM.
- 13 Algol, β Persei, is in mid-eclipse at 8:53 PM, and again at 5:43 PM on the 16th.
- 14 This morning’s Geminid meteors have to contend with a bright waning gibbous Moon.
- 16 In the early morning hours the last quarter Moon pairs up with Jupiter.
- 21 Rise early, find a place with a good view to the southeast horizon shortly after 6 AM, and find the rising thin crescent Moon. Then enjoy a brief occultation of the nouveau-nova star Dschubba, δ (Delta) Scorpii, currently brighter than its historic 2.3 magnitude. This star will barely graze the bottom edge of the Moon as seen from Long Island - but in and southwest of New York City, it might miss! How about timing this occultation from different places on Long Island?
- 22 Winter begins in the wee hours, at 2:04 AM.
- 22 No moonlight to interfere with tonight’s Ursid meteors, which radiate from the Little Dipper’s bowl.
- 25 The bright “yuletide star” low in the southwest after sunset is Venus, and it’s setting alongside a slim crescent Moon.
- 29 Fat crescent Moon sets beneath Mars this evening.
- 31 Saturn is at opposition. Because it’s near its perihelion, or closest approach to the Sun, Saturn is only 748.3 million miles from Earth and will not be closer to us until December, 2032.

Prepared by Robert Chapin

Christmas Sunset

Look west as night falls on Dec. 25th for a lovely pairing of brilliant Venus and the crescent moon.
It's a wonderful way to end a wonderful day.

*The presents are opened, the stockings askew.
Two pounds of turkey are inside of you.*

*Your eyelids are drooping. The sun's going down.
Christmas is over. But wait... what's that sound?*

*The neighbors. They're shouting, "Look to the west!"
Outside you dash, along with the rest.*

*The sky is as pink as Santa Claus' nose.
And right in the middle--two UFOs!*

*Could it be an invasion? Some creatures from space?
Now you're awake. Your heart starts to race.*

*Run back to the house. Pick up the phone.
9-1-1, 9-1-1! "They're coming," you moan.*

*The voice on the line says, "Sir, just relax."
"There's nothing to fear. Let me give you the facts."*

*"Those spaceships you see aren't spaceships, no, no."
"Astronomers say it's a harmless light show."*

*"One's a planet called Venus, as bright as can be."
"The other's the moon. Now do you see?"*

*So go tell your neighbors: everything is alright."
"Merry Christmas to all. And to all a good night."*



Photo, courtesy Tom Madigan, Editor

As evening approaches on Christmas, Dec. 25th, step outside and look west toward the setting sun. Even before the sky turns completely dark you can see brilliant Venus and the crescent moon hanging together not far above the horizon--a beautiful sight.

The crescent moon beside Venus on Dec. 25th will be a lovely sight - a slender arc of bright light cradling the dark lunar disk. If you see a ghostly glow across the whole moon, you've seen **Earthshine!** Leonardo DaVinci first understood this phenomenon some 500 years ago. It is sunlight reflected from Earth onto the moon.

Side-by-side with Venus, a crescent moon with Earthshine is regarded as one of the prettiest sights in the heavens. And the ensemble is bright enough to see even from light-polluted cities.

PRESIDENT'S MESSAGE

The Partial Lunar Eclipse on November 8th supplied some excellent viewing and was well attended. Our membership rolls have been reset and those that did not renew have been dropped from the rolls. At that point we had 108 members, making our membership rolls the strongest they have been since around the time I became a member in late 1989. And membership continues to grow. This is a testament to the revitalized events and program schedule. My thanks to all that have helped make Custer's revitalization possible.

Jim Eagan and his helpers built an excellent platform inside the sheds southern bay. This now makes the new 14" GOTO Celestron fully and safely usable. Beginning in the New Year, it is our intention to make it available to the Science Teachers and their Top Science Students from North Fork High Schools that wish to undertake serious observing programs as their Science Fair competition projects.

If you walk around the back of the Elmer Building, you will see a wrapped up back yard observatory standing near the dumpster. The members of AOS informally asked Custer this past summer if they could locate a club telescope out at Custer, for use by their members. Though an exact agreement is being worked out, your Board's response was overwhelmingly a yes. It was suggested they make use of the old cement pedestal that was buried in the woods on the North side of the Shed. Over the last couple of months, AOS members have cleared the overgrowth and most of the trees that had made the area impenetrable and unusable. The back yard observatory, that was offered to Custer earlier this year, was then moved to Custer by AOS with Custer's help. Over the winter, AOS will complete and submit its final plans and, if required, a building permit will be obtained from the village. Then in the spring, the construction of a platform will commence and the observatory structure will be set in place. Both Custer and AOS will benefit from this new Observatory and once again make use of what had become a wasted part of Custer's property. This continues the long and proud history of Custer's cooperation with the Astronomy Clubs of Long Island.

If I don't see you at the Holiday Party on December 13th, my warmest wishes for a happy and safe holiday season to you and your loved ones, and God's Blessings. **Bob Vanson**

WELCOME TO OUR NEW OR RETURNING MEMBERS:

Bayard Van Hecke of NYC, Thomas Burton of East Marion and Madeline Dipre of East Islip.

Welcome one and all!

The 2003 Antarctic Total Solar Eclipse



Photo, Vic & Jen Winter of Ice Stars (<http://www.icstars.com/Antarctica/Eclipse2003.html>)

The ancient dictum that reality is stranger than fiction and that is eluded to in *Hamlet (Act II, scene 5)*: “There are more things in Heaven and Earth, Horatio, than are dreamt of in your philosophy”, and more recently by *Werner Heisenberg*, “Not only is the universe stranger than we think, it is stranger than we CAN think”, could never have been shown to be more true than witnessing a Total Eclipse of the Sun from Antarctica as the sun skims the horizon during its months long sunset. Well that’s what was witnessed by hundreds of dedicated souls, including David Levy of Comet Shoemaker / Levy fame, who braved the harsh, late summer conditions of Antarctica, to observe this strange and surreal event. There are many accounts of the eclipse, perhaps there’s one for each of the several hundred who risked life and limb to take this perilous journey, each one impressive in it’s own right, but the two that I found particularly impressive were presented by Fred Bruenjes of Ramona, California, (<http://www.moonglow.net/eclipse/2003nov23>) and Vic and Jen Winter of Ice Stars (<http://icstars.com/index.html>). The following is an exceptional composite photo (probably one of the better ones that I’ve seen) of the eclipsed sun, extensively enhanced to bring out the tenuous coronal streamers and detail.



Photo, copyright Fred Bruenjes (<http://www.moonglow.net>); all rights reserved

AdZone Sponsors Custer Dome

By Nancy Swett

The chairman and CEO of AdZone Research in Calverton, Charles Cardone III, and his brother, John Cardona, donated company stock valued at over \$100,000 to the Custer Institute of Southold.

The donation will enable the facility's board of directors to replace its old, leaking dome and offer new educational programs. Custer is the only public observatory on eastern Long Island. Charles Cardona is a member of Custer's board of directors and has been involved with the organization for more than 20 years. His background in astrophysics proved invaluable in his success. "My family and I are very strong believers in promoting science and technology for future generations, and are eager to help the Custer Institute," said Cardona.

AdZone Research is based at the former Grumman facility. It monitors more than 500,000 websites globally and provides analysis of security-related data transmissions.

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(<http://www.indyeastend.com/detail.asp?cat=news&article=1600>)

Amateur Observers Society to Use Prime Custer Locale



Photo, Judy Ahrens, Times/Review

The Amateur Observers Society dome, recently delivered to newly cleared land at Custer is overshadowed by Custer's main dome, soon to be replaced with a new, modern dome. This new dome will house a professional, research-class 25" reflector, currently in its nascent beginnings.

Custer Institute Receives Substantial Donation

SOUTHOLD, N.Y. – November 26, 2003 – AdZone Research, Inc. (OTCBB: ADZR) Chairman & CEO Charles A. Cardona III announced today that he and his brother, John Cardona, had made a recent donation valued over \$100,000 in stock to the Custer Institute, Inc. a non-profit research and education organization located in Southold, NY.

Charles Cardona is a member of the Board of Directors of the Custer Institute, Inc. and has been involved with the organization for more than 20 years. Charles Cardona's background in Astrophysics especially his statistical methods and programs studying Variable Stars has provided invaluable experience in creating the statistical models and systems for AdZone's Commercial and Defense Research.

The Custer Institute supports educational programs and research in astronomy and optical sciences. The institute offers programs, courses, lectures and special events for members of the public, school children, universities, and members of the scientific community. It operates astronomical observatories with several noted antique telescopes along with modern, up-to-date computerized equipment including a fully functional radio telescope observatory. The institute has been providing these services for more than 75 years, and is currently in the process of replacing an aging observatory dome and constructing a new observatory telescope, which will be one of the largest observatory telescopes in New York State.

Custer has been associated with many famous people in the astronomy and science community over the years, including Charles Elmer, of the Perkin-Elmer Corp., Dan Eichner, a famous American instrument maker, Albert Einstein, the famous physicist who worked on relativity, Peter VanDeKamp, the astronomer who was the first to discover an extra solar planet, Sarah Lippincott, a renowned female astronomer, and many others.

Mr. Cardona stated, "My family and I are very strong believers in promoting science and technology for future generations, and are eager to help the Custer Institute in its goals. We would encourage other employees, directors, shareholders and supporters of AdZone to consider Custer when thinking about their charitable donations."

Custer Institute's Treasurer, Barbara Lebkuecher, was enthusiastic about the recent donation and said, "This donation by John and Charles Cardona, among others, will allow us to complete the new dome and offer even better programs".

The shares donated were reflected on recent Form 4 filings.

Those wishing to donate to the Custer Institute may address correspondence to Barbara Lebkuecher, Treasurer, Custer Institute Inc. Observatory Fund, PO Box 1204, Southold, NY 11971. More information about Custer may be found at <http://www.custerobservatory.org>.

AdZone Research is headquartered in Calverton, N. Y., in a secured facility that formerly housed major defense contractor Northrop Grumman Corporation. The facility was earlier used for top-secret defense research and development, and was part of the United States Navy's Naval Defense Technology Center.

Through monitoring of more than 500,000 Web sites worldwide, AdZone provides tracking and monitoring of targeted information on the Internet, with an expanded focus on global Internet analysis of security-related data transmissions. For additional information, please visit the company's Web site at <http://www.adzoneresearch.com>.

Certain statements contained herein are "forward-looking" statements (as such term is defined in the Private Securities Reform Act of 1995). Because such statements include risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements.

Contact: Custer Institute
Charles A. Cardona III
Program Chairman
631-369-1100

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CUSTER EVENTS CALENDAR

OBSERVATORY DUTY

Any staff on hand will be more than glad to assist in the operation of the telescope.

AT THE INSTITUTE

Public observing every Saturday night, weather permitting. This month's dates are Dec 6th, 13th, 20th and 27th.

The Custer Comment

**TOM MADIGAN, Editor
CUSTER COMMENT**

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FORWARDING AND ADDRESS CORRECTION REQUESTED

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