



THE CUSTER COMMENT

For the Curious

SUMMER 2009, VOL. XL, ISSUE 3

Newsletter of the Custer Institute & Observatory, Est. 1927, 1115 Main Bayview Road, Southold, N.Y. 11971

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Left to right: David Barnett, the Public Scope, David Van Popering. Photo by Bill Crispino.

CUSTER'S NEW PUBLIC SCOPE

David Barnett and David Van Popering

The "Public Scope" was created to provide a modified star hopping telescope for public use in an open air setting. The setup has several advantages. It helps orient observers to objects in the night sky by reducing the confusion some experience when viewing them in a relatively enclosed space, such as a dome. Being a "manual" scope, it assists observers in learning the location of celestial objects. And the Public Scope allows for the direct interaction between the public, the telescope and the night sky.

Observing through a telescope in a dome can present some challenges for the novice. The rotating dome, with its narrow opening, restricts the full vista of the heavens and, when rotated, the observer can lose his/her bearings. In fact, some of the larger constellations do not even fit within the field of view found within the dome's aperture. A publicly accessible scope that's not enclosed allows viewers to maintain their bearings and to understand where the subject they are looking at is located in the night sky.

Another challenge for the novice observer is learning how to find where everything is in the night sky. In this modern age of electronic/computerized astronomy, goto telescopes show us many of the wonders out in space automatically. Once powered on, such scopes almost magically locate, level and align themselves; then, with a simple push of a button, they can take you to any object in their database and track that object until you wish to go to another. Does this allow novices to really "learn" the sky? Since it has no electronics, the Public Scope helps observers learn the sky by "star hopping": with the aid of a simple star

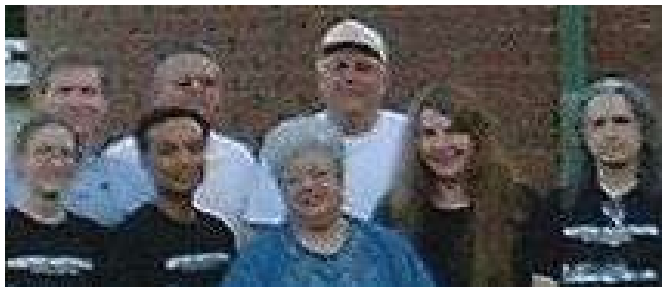
("Public Scope" continued from p. 1)

chart, observers can find any object by identifying a visible star on a common gridline (be it Right Ascension or Declination), then slew along the appropriate line to the object. By having to manually push and point a telescope along equatorial gridlines, people see how the star chart relates to the night sky and can understand the angular separation between certain alignment stars and desired objects.

The Public Scope setup includes a Celestron C-11" optical tube assembly (OTA) and a custom-made mount with a simplified, non-motorized/non-computerized German Equatorial design that allows the operator to follow the celestial gridlines of Right Ascension and Declination.

We hope that being outside under the stars will immerse observers in the night sky on a more emotional level, and increase their knowledge and appreciation of the universe around them.

Editor's Note: Custer would like to express its deep appreciation to David Barnett for donating the optical tube, and to both him and David Van Popering for designing and machining the mount, as well as for having the vision of a Public Scope and for following through on its creation. Thanks also to Nicole Greene for her help in the installation and other steps along the way.



MEET THE BOARD 2009 ELECTION RESULTS

The elections were held on June 13, 2009. Of Custer's 326 members, 35 attended the meeting and 26 sent in proxies. The vote for the Nominating Committee's slate was unanimous. The 2009-2010 Board of Directors is as follows (see photo above, left to right, back to front rows): Brian Andrews, Esq.; John Mastromarino, CPA (Finance Chair; Comptroller for a town in Nassau County); Alarico "Rico" Verticchio (retired machinist); Urszula Golebiewska, Ph.D. (Assistant to the Secretary; biophysics prof. Queensborough Community College); Chiaki Yanagisawa, Ph.D. (physics prof. Manhattan Community College, Stony Brook Uni); Barbara Lebkuecher (Treasurer; retired school teacher); Donna L. McCormick (Pres.; writer; nonprofit administrator); Jeffrey Owen Katz, Ph.D. (pres. Scientific Consultant Services). Missing: Pete Guastella (Secretary; research science teacher, Manhasset High School); David Van Popering (VP; computer technician, Southold Library); John Leonardi (Assistant to the Treasurer; retired VP sales, international air freight company); Anna Verticchio (Assistant to the President; retired English teacher). Thanks to the Nom Com (Anna Verticchio, Ruth Makofske, Justine Haupt) for their fine work!

JUNE 13, 2009 ANNUAL REPORT OF THE PRESIDENT

Donna L. McCormick

AWARDS MADE BY CUSTER. On July 19, 2008, Denis Svechkarev, President of the Kharkov Amateur Astronomer's Society (Ukraine) was presented with a \$100 award and certificate of achievement for his organization's contribution to amateur astronomy. At the October 4, 2008 Jamboree, two students were presented with scholastic achievement awards for their science projects: Kaitlin Madigan for "The Altitude of the Sun and the Changing Seasons" and Alexander "A.J." Scaramucci for "A Search for Novae in the Andromeda Galaxy." In February 2009, Custer presented two students from the Long Island Science and Engineering Fair awards for their outstanding projects in astronomy: Samuel Bryant for "The Correlation Between Barometric Pressure and the Average Velocity of Cosmic Rays," and Akshay Gupta for "The Role of Ultra-High Energy Cosmic Rays in Low Level Cloud Nucleation." Each of the four students received a \$100 award and a one-year complimentary family membership.

AWARDS RECEIVED BY CUSTER. On October 4, 2008, Assemblyman Marc S. Alessi presented a "New York State Citation to commend Custer Institute and Observatory Inc. on the occasion of its 30th Annual Astronomy Jamboree...the residents of the 1st Assembly District recognize Custer...for their years of educational service and commitment to the field of Astronomy."

BUILDINGS AND GROUNDS. In Aug. '08, Home Depot donated funds which were used to pay their contractors to install a much-needed new roof and gutters. In Oct., Bob & Dave Warasila, Helio Takai and others donated their time and materials to dig trenches and lay conduit for network connections and instrumentation lines from the main building to the shed, Jeff Katz and Bobbi Eisenberg ran the wiring through the conduit, and member Charlie Turner donated the topsoil to fill in those trenches, a job completed by Katz, David Van Popering, and myself. By the end of Oct., several projects were completed: ASLI installed their observatory pod next door to AOS, the repair/replacement of Custer's entranceway stairs and the addition of railings was completed, as was all the work needed to the prevent water intrusion problems which resulted from the replacement of the dome. On Jan. 1, 2009, there was a small fire in the Elmer Room caused by a faulty switch in a halogen lamp: the damage was minimal--mostly soot and damage to the fireplace mantle; Custer received an insurance settlement of \$6445. In March, the second floor ceiling was sheetrocked and spackled, as were other areas that had suffered water damage. In April, the second floor was painted by several helpful members.

DONATIONS. Since June 2008, Custer received approx. \$6,550 in cash donations from the following people: David Barnett, Tom Burton, Vincent Caracci, Tom & Elaine Carey, Paul Connor, JoAnn Delafield, Ronald DeVergiles, Joel Dikowsky, Mr. & Mrs. S. Joseph Domina, Doris Eich, David Fisher, Bob & Judy Ghosio, Tara Grant, Jonathan Greenfield, the Greenfield family (Ina, Marcelle & Karl), Nunzio & Dorothy Grella CPA, Frank & Joanne Gumper, David Higbee, Higgins Charitable Trust, Tony Hoffman, Robert & Susan King, Laura Klein, George Kucinskas, Barbara Lebkuecher, John & Mary Leonardi, Lockwood Fund, Nikki Longo, Mary Maran, John Mastromarino CPA, Tom Mauri MD, Ray Menell, Pat Milford, Robert

Ragonese, Mary Rasmussen, Richard Scaramucci, Charles Scaringello, Betty Schloss, Harry & Diane Schrader, Marc & Barbara Scola, Sven Steen, Joyce Sullivan, Anna & Rico Verticchio, John Vogt, Anne Walsh, Dianne Wamsley, Bob Warasila, Myron Young. **RAFFLE (R) AND OTHER DONATIONS** were received from: AOS (R: family membership), ASLI (R: family membership and books), Berger Brothers (R: 2 camera-binos), Bridgeport-Port Jefferson Ferry (passage for speakers), Camera Concepts (R: gift certificate & red dot finder), Channing Daughters (wine for receptions), Claudio's Restaurant (R: gift certificate), Cross Sound Ferry (passage for speakers), East End Arts Council (R: family membership), Home Depot (roof & gutters), Barbara Lebkuecher (R: book), Tom Madigan (R: book), North Fork Fun~N~Fitness (R: gift basket and classes), Silver Sands (rooms for speakers), Charlie Turner (topsoil).

FINANCE. John Leonardi (Assistant. to the Treasurer) has continued to enter Custer's financial information into the QuickBooks database installed by Finance Chair, John Mastromarino CPA, who has donated his accounting services to prepare Custer's annual IRS and Charities Bureau filings. Custer's T.D. Ameritrade account was moved to Merrill Lynch and an Endowment Management Account was established by the end of 2008. According to our Treasurer, our income for this fiscal year was \$35,034 (includes restricted grants/donations); expenditures totaled \$21,531.

FUNDRAISING/GRANTS. In August, member Nunzio Grella, CPA, donated \$700 to help replenish Custer's Scholastic Awards fund, which originally was established by John and Betty Bondarchuk in honor of Leonard Vail. On Oct. 1, 2008, Custer was one of 5 recipients (19 applicants) of a \$5,000 "Break-Thru Mini-Grant" from Brookhaven National Lab for Custer's Education Through Research program; Steve Orlando and I submitted the application. In Dec., Music Director, Anne Verticchio, was informed that her grant application to the NYS Council on the Arts was approved in the amount of \$1,182; and on March 9, 2009, she was notified of the award of a \$1,200 grant from the Suffolk County Community Arts Regrant Program.

LIBRARY. Lauren Bernat, who just graduated St. John's with a degree in Library Science, became Custer's Librarian in March.

MEMBERSHIP. Over the past four years, membership has increased at a steady rate; there has been a 149% increase since June 2005 and a 25% increase this last year alone. There were 203 memberships (268 members) last June. The current membership stands at 254 (326 members): 72 Family, 55 Individual, 64 Senior, 14 Student, 13 Sponsor, 9 Life, 20 Complimentary, 7 Honorary (Richard Berry, Congressman Tim Bishop, John Dobson, Susan Harder, Eileen Hess, Dr. Pasquale Schievella, Dava Sobel). Since June '08, 23 memberships have been dropped from the roster for failure to pay dues.

PROGRAMS. The year was filled with a variety of astronomy-related and cultural events. In addition to the annual Jamboree, there were over a dozen lectures (including telescope clinics led by Jeff Norwood and talks by distinguished scientists from Stony Brook Univ., NY Uni., BNL, etc.), a star party on July 7th, two special lecture-receptions (Denis Svehkarev from the Ukraine and John Dobson), a memorial for former Custer President George Vratatos, five meteor shower parties, portable planetarium shows, and an excellent Astro 101 class by George Lomaga.

CUSTER THANKS...



When I walked into the Sherwin-Williams store on Middle Country Road in Centereach, I was greeted with a friendly handshake by manager Dennis McManus. I introduced myself as president of Custer and described some of our programs. I then told him why I was in his store: the observatory was in dire need of a paint job and I was shopping around for the best price because the budget was very limited. No sooner were those words out of my mouth than he asked, "Would 10 gallons help?" I nearly hugged him. When trying to come up with a color scheme for our lecture hall, I returned to the store and met another employee, Phillippe: to my surprise, he threw in pints of test colors so we could try out our ideas. By June, we put the donation to work and the library was made to look new again. And Custer's hard-working staff of volunteer painters were very pleased with the quality of the product made by the largest, and one of the oldest (est. 1866) paint manufacturers in the United States. While we'll need more than 10 gallons to take care of all of Custer's painting projects, the observatory is well on the way to having a new face and it's largely due to the generosity of kind folks who reached out and did their part to "cover the world" so Custer could cover the universe. So thanks Sherwin-Williams!

Several scout troops visited Custer during the year, and Observatory Programs Coordinator David Van Popering opened up one weeknight for a group of Montessori school students from Brooklyn who were visiting Camp Quinnipet on Shelter Island. A delegation from Custer set up scopes at Channing Daughters winery for the Hamptons Choral Society annual fundraiser. David Van Popering coordinated Members Night activities on the last Fri. of every month. Liza Coppola hosted Open Mic Nights every 1st Fri. There were 8 concerts, including four that were held in conjunction with parties. Custer remains open every Saturday evening for public observing (weather permitting).

PUBLICATIONS. Last Fall, a Publications Committee was formed (David Cohn, Tom Madigan, David Van Popering and myself) and placed in charge of the publication of the *Custer Comment* and the website. The decision was made to publish the newsletter as a quarterly; the first issue was distributed in September. In the intervening months, time constraints forced David Cohn to step down as CC editor and I assumed the role. Last winter, David Van Popering went online with the newly designed website, which has received much well-deserved praise.

PUBLICITY. The July 4th issue of *Dan's Papers* published an article about Custer's July 7th Star Party. Doug Geed from News 12 filmed a segment on Custer that centered on Home Depot's roof donation (aired on Aug. 17-18). The roof and Jamboree were covered by *The Suffolk Times* in their Sept. 4th and Oct. 9th issues. *The Long Island Catholic* did an article about the Jam-

boree and its keynote speaker, Bro. Guy Consolmagno (the Vatican Astronomer). Brookhaven National Lab's newsletter included Custer's receipt of the Break-Thru Mini-Grant, as did a press release they distributed which was picked up by local papers. In its Nov. issue, *Living on Long Island* devoted a full page to Custer's holiday parties and the *NY Times* also included Custer in its feature story about interesting things to do on New Year's Eve. *Newsday* ran a "topper" about the unveiling of Custer's 25" Obsession; *The Suffolk Times* devoted 1/2 page to the Obsession event in their May 21 issue, and on May 18 Observatory Director Jeff Katz was interviewed on WLIU.fm's Bonnie Grice show to promote the unveiling. Thanks to Custer member Cliff Chiesa, in its May issue *50+ Lifestyles* ran a cover photo of Treasurer Barbara Lebkuecher looking through the eyepiece of Custer's 14" Meade. In February 2009, a crew from Hofstra's television station visited, filmed Custer's activities and interviewed Jeff Katz and myself; that will air on their station as well as be viewable on their website. Notices appeared throughout the year in *Newsday*, *The Suffolk Times*, and other local and astronomy club periodicals and hotlines, including extended coverage of several events in the newsletter of the Amateur Astronomers Association of NY. Radio show hosts Bruce Alan Martin (WUSB.fm), Ahmad Ali (WBAL.fm and WUSB.fm) and others regularly promote Custer during their broadcasts. Notices about events and Custer news are regularly sent to an email list I developed that now contains approx. 1200 addresses. Press releases about significant events and achievements are sent to a media list of over 100. To promote Custer, Jeff Katz continues to write a monthly astronomy column for the *Long Island Pulse* magazine and, until a recent change in publication format, David Van Popering did the same for the e-magazine, *North Fork Parents*.

I would like to express my deep appreciation to all Custer Members, Staff, Sponsors, and Supporters for helping to sustain this wonderful organization and for making this another exciting year of growth and achievement!

JUNE 13, 2009 ANNUAL REPORT OF THE OBSERVATORY - RESEARCH COMMITTEES

Jeffrey Owen Katz, Ph.D., Chair

OBSERVATORY COMMITTEE/STAFF: Jeff Katz, Chair; Steve Bellavia, David Cohn, Bill Crispino, Jim Eagan, Bobbi Eisenberg, Bill Funke, Urszula Golebiewska PhD, Justine Haupt, Kurt Massey, Barbara Lebkuecher, John & Mary Leonardi, Kerry Martin, Donna McCormick, Steve Orlando, Andi Pisacano, David Van Popering, Ann & Rico Verticchio, Anne Verticchio, Chiaki Yanagisawa Ph.D.

RESEARCH COMMITTEE: Jeff Katz, Chair; Matt Blaszczak, Brent Gingrich, Pete Guastella, Justine Haupt, Ted Koukounas, Mike Kozma, Donna McCormick, Steve Orlando, Helio Takai PhD, Chiaki Yanagisawa Ph.D.

DOMES REMEDIATION. Sealants and a "skirt" were added to the dome to prevent water intrusion. The water-damaged areas were repaired (sheetrock replaced, areas painted). The Board is moving forward to recover the costs of the remediation work from the contractor whose workmanship caused the problems.



Senior Staff Member Justine Haupt and the Dome Scope (Obsession)

EDUCATION THROUGH RESEARCH PROJECT. In October, thanks to Steve Orlando and Donna McCormick, Custer received a \$5,000 grant from Brookhaven National Lab for this project. Several students have participated in Custer's research-related activities over the past year, including Justine Haupt, Adam Lamson, and AJ Scaramucci; several others may become involved during the summer. I also served as the official "mentor" of Horace Mann High School student, Gabrielle Ferrara, on an exoplanet project which she presented at her school for credit. The Research Committee has been networking with educators and organizations that focus on students in an attempt to find participants for our internship program. Progress has been slow. A number of students have expressed interest but few have followed through; one possible reason is that most are not local. It is our expectation that more students will take advantage of our program when the research facilities are fully automated and remotely accessible so travel will not pose as much of an obstacle.

EQUIPMENT DONATIONS. Tom Burton donated a classic Tasco 7TE-5 60 x 1000mm scope, tripod and case. Paul & Miriam Epstein donated a 10" Meade LX-200 and accessories. Jim O'Toole donated a 13.5" Odyssey. Tony Pirera donated two silvered secondary mirrors for the Obsession's new optics. Rico Verticchio gave Custer a Barlow and lens. Joe Castoro, Justine Haupt, David Van Popering and I donated computer equipment. Bob & Dave Warasila provided the conduit and labor needed for running network and instrumentation wiring between the buildings. Jim Eagan contributed a garage door opener and installed it, thus automating the north bay observatory hatch. Gary Meyers of StellarCat gave us a significant discount on the StellarCat and related accessories for the retrofit of the 25" Obsession.

EQUIPMENT AUTOMATION, INSTALLATIONS.

MARIACHI Project: Custer continues to be a site for this project, which also serves as an educational attraction for visitors. **Meade 16:** due to its ongoing problems, the scope was sent back to Meade to be refurbished; with approval from the Board, the scope will be sold on consignment by Jeff Norwood (Camera Concepts) and the proceeds set aside for future observatory needs. **Dome:** the motor-slot controller died in August and was replaced. **Meade 14":** When the Meade 16 was "retired," the

Meade 14 (received as a grant from David Levy's National Sharing the Sky Fdtn) became the dome scope. When the Obsession took its place, ASLI accepted our offer to install the Meade 14 in their observatory pod which is on Custer's grounds; we will have access to it so the scope can continue to be used for our educational programs. **Celestron 14:** Steve Orlando and I fixed tracking problems on the C14 in the south bay, cleaned it, re-greased it (with a donation of expensive lube from Kluber Lubrication), and adjusted the bearings. A used Hyperstar was purchased and is now installed on the C14. **North Bay Setup:** Steve Orlando placed on loan his telescope and imaging equipment for use in the Education Through Research program. **Automation & Remote Access:** enormous progress has been made towards automated and remote (network accessible) operation of both the C14 and the North Bay equipment. Software has been installed and configured, many technical problems were solved, although some remain. Network gear (routers, Ethernet switches) was installed in the radio room. Network connections and instrumentation lines were run between the buildings. The C14 is now fully automated; all that's left to do is automate the hatch. Thanks go to the many members of the Observatory and Research Committees for their help with this project.

SATURDAY OBSERVING SESSIONS. I created the position of Observatory Programs Coordinator and appointed David Van Popering to the post in acknowledgment of his excellent work with the public in the dome on Saturday nights. Thanks also to Bill Crispino, Justine Haupt, Steve Orlando, and Rico Verticchio for their dedicated service manning the scopes every Saturday, as well as to all those who help out and/or set up their own scopes for public viewing when they visit.



NYS HONORS CUSTER & STAFF

On May 16 the NYS Assembly presented Custer with its second Citation in eight months thanks to District 1 Assemblyman Marc S. Alessi. The certificate (above) reads: "NEW YORK STATE ASSEMBLY CITATION recognizing and honoring the Custer Institute and Observatory, Inc. for the unveiling of its Newtonian-style reflecting telescope and its revolutionary new optics design; and WHEREAS, We honor the Custer Institute Observatory's Research Director, Dr. Jeffrey Owen Katz and Senior Observatory Staff Member Justine Haupt for their designs of revolutionary new optics allowing observers to remain at standing level while using a Dobsonian mounted telescope; and WHEREAS, We commend the Custer Institute and Observatory for being the oldest public observatory and acquiring the largest telescope for public use on Long Island; and WHEREAS, Educational Corporations such as the Custer Institute offer outstanding services to residents of the communities of the State of New York and are deserving of public recognition and applause for their efforts; and WHEREAS, We acknowledge that the Custer Institute and Observatory provides students, researchers and the public with unique opportunities in the field of astronomy; and WHEREAS, We believe that exceptional educational institutes with such noble aims and accomplishments, such as Custer Institute and Observatory, should be celebrated and recognized by all the citizens of the great State of New York; now THEREFORE, Let it be proclaimed that on this the 16th day of May in the year 2009, New York State Assemblyman Marc Alessi, on behalf of the residents of the 1st Assembly District, recognize Custer Institute and Observatory Inc. for their possession of the largest public telescope and the innovative adaptations they have made to it."

IN MEMORIAM THEODORE "TED" FREDERICKS

September 15, 1915 - July 8, 2009



Ted Fredericks grew up in Brooklyn and moved to Cutchogue in 1978. He worked for his father's moving company but, in 1948, he took an evening class in mineralogy at Brooklyn College that proved to be a turning point: Ted collected and assembled minerals and rocks into kits for sale to educational institutions; he grew that part-time business and became one of the major U.S. suppliers to universities

and museums. In 1980, he founded the Long Island Mineral and Geological Society and initiated the annual Gem and Mineral Show, which is still an annual event in Southold-Mattituck; at his request, from 1990-1998, the proceeds were used to sponsor a Science Scholarship for a Mattituck High School graduate. In 1998, he was inducted into the National Rockhound and Lapidary Hall of Fame in special recognition of his educational work. From 1989-1993, Ted taught "Mineral Identification" classes at the Custer Institute. Ted was a much-loved and valued member of Custer. Custer is one of four nonprofits his family listed for in memoriam donations.



Left photo by Rich Huber: Southold Town Supervisor, Scott Russell. Right photo (left to right, back to front) of Custer's Board and Staff by Justine Haupt: Jeff Katz, Justine Haupt, David Van Popering, Donna McCormick, John Mastro-marino, Urszula Golebiewska, Brian Andrews, Chiaki Yanagisawa, Bill Crispino, Pete Guastella.

OBSESSION'S FIRST LIGHT(S)

The dome's new 25" f/5 Obsession telescope had its first light party on May 16th; because weather conditions interfered with a full night of observing, a second party was held on the 19th. Several dozen folks came each night to help celebrate, including Southold Town Supervisor Scott Russell, Sylvia King-Cohen of *Newsday*, Bruce Martin of WUSB.fm, and Michelle Myers from *The Suffolk Times* (her story, "Universe in Focus in Southold: Long Island's biggest telescope, 'Dob-a-saurus,' debuts at Custer Institute," appeared in the May 21, 2009 issue). Suffolk County Community College (SCCC) astronomy professor, George Lomaga, spoke on behalf of the college, which placed the telescope on loan to Custer back in October 2008. SCCC's Chair of Science and Mathematics, Ted Koukounas, who was pivotal in arranging the loan, later joined the festivities. Custer's Observatory-Research Director, Dr. Jeffrey Owen Katz, presented a brief talk about the scope, the new optics he and Senior Observatory Staff Member, Justine Haupt, had designed for it, and thanked all of those who participated in retrofitting and installing the scope in its new home. Hundreds have visited the Obsession since then; all are amazed by the scope and the wonderful sights it has revealed.

GREAT SOUTH BAY AMATEUR RADIO CLUB AT CUSTER



At 8AM on July 18, a huge tower was set up on Custer's lawn and 24 hours of broadcasting began. Hams from all over the world were contacted and told about Custer. They even tried to contact the Space Station! Custer visitors were given a chance to broadcast and learn about amateur radio; the most impressive student was our youngest member, Kevin Swamy (6 yrs old). Thanks to Kevin Morgan and the GSBARC guys for a great event!

FOR SALE BY CUSTER

TELESCOPE. We are selling our 16" Meade LX200, which had been in service as the observatory's main scope, housed in the dome for two years (now replaced by the 25" Obsession). After being decommissioned, the telescope was returned to and refurbished by Meade. Those interested should contact Jeff Norwood at Camera Concepts in Patchogue (631-475-1118).

UPRIGHT PIANO. Asian console piano with bench. Specs: HSINGHAI model #751357; oldest brand of piano made in China, believed to have been manufactured in the 1980s but in like-new condition; recently tuned; high polish ebony finish; sleek modern leg-less design. Asking \$800. Call 631-765-2626 or email CusterDonna@yahoo.com for photos, info or to purchase. Nominal moving charge additional (for moving info, contact Douglas Gregg, Classic Piano Doc, 765-3996).

PROJECTION TV. We'd like wall-mountable sets for media & exhibit needs so are selling off our lightly used, large projection tv to finance the project. For details: CusterDonna@yahoo.com

CUSTER'S 31st ANNUAL ASTRONOMY JAMBOREE

WITH SPEAKERS FROM ALL LOCAL ASTRONOMY CLUBS

SATURDAY, SEPTEMBER 26, 2009

For further details, please go to www.CusterObservatory.org

The lectures will be held at Southold High School, 420 Oaklawn Avenue, Southold, NY 11971 (just South of Route 25)



5:00 P.M. KEYNOTE SPEAKER: BILL KORBEL, News 12 Meteorologist
"LIFE AS A METEOROLOGIST: FORECASTING OVER 40 YEARS"

Bill Korbelt will discuss his lifelong love of weather and the technological advances in forecasting--from teletype machines to supercomputers--that he has witnessed over his 40 year career. This native Long Islander graduated New York University with a degree in meteorology, began his career as a weather officer in the Air Force, and served two years as a forecaster for Air Force One. Bill broke into broadcasting with WCBS News Radio 88, then spent over 15 years as part of WOR's "Rambling with Gambling." His transition to television came in 1993 when he joined the team at the first, largest and most-watched regional news network in the nation, News 12. Bill is an avid golfer, a licensed pilot, and lives in Merrick with his wife, Sharon.

NOON - 1PM REGISTRATION: CHECK IN AT SOUTHOLD HIGH SCHOOL

1:00 P.M. "SOLAR ECLIPSES: PAST AND FUTURE" by BILL BOGARDUS, AOS

This year, a total solar eclipse was visible from China and Bill Bogardus was there to witness it. He will describe the 2009 eclipse, as well as others he has seen, and speak about eclipses that are due in the future and how to prepare for them. Bill Bogardus is President of the [Amateur Observers' Society of NY](http://AmateurObservers.org) (AOS), is a Member of Custer, was recently elected Secretary of the Astronomical League, and is a Master Observer.

2:00 P.M. "LIVING HISTORY: THE DETROIT OBSERVATORY" by KEN SPENCER, ASLI, ATS

There are few places left that allow us to step back and experience 19th century astronomy as it was then. The Detroit Observatory (est. 1854) at the University of Michigan, Ann Arbor, is one such portal. It was host to the 2009 Antique Telescope Society Convention, which will also be discussed. Ken Spencer is a Member of the [Astronomical Society of Long Island](http://AstronomicalSociety.org) (ASLI), the [Antique Telescope Society](http://AntiqueTelescopeSociety.org) (ATS), and of Custer.

3:00 P.M. "THE RESURGENCE OF CHINESE ASTRONOMY" by TONY HOFFMAN, AAANY

The world's most populous country has a rich astronomical heritage going back millennia and is gaining a foothold in space. The past decade has seen an explosive growth in Chinese astronomy, particularly on the amateur front. The discussion will include the progress of astronomy in China, past achievements and current trends that are likely to lead to impressive accomplishments in the future. Tony Hoffman is on the Board of the [Amateur Astronomers Association of NY](http://AmateurAstronomers.org) (AAANY), is a Member of Custer, and works as a managing editor of *PCMag.com*.

4:00 P.M. "ENGINEERING MATERIALS FOR THE EXPLORATION OF SPACE " by DR. MATTHEW PUTMAN, MO

The potential to solve the mysteries of space has never been greater for either the professional scientist or the amateur. Developments in material science allow for less expensive but more powerful telescopes, chips uniquely suited to the exploration of space, and engineering, that can potentially create everything from personal probes to affordable space ships. Matthew Putman is on the Board of [Montauk Observatory](http://MontaukObservatory.org) (MO). He has a Ph.D. in Applied Physics and is currently a professor at Columbia University. He is a founding member of the World Science Festival.

6:00 P.M. Dinner Break Begins (arrangements are being made for a prix fixe dinner at an area restaurant)

9:00 P.M. "THE UNIVERSE IN VERSE" POETRY WITH BOB AND STEVE CHAPIN (at Custer Observatory)

10:00 P.M. 50:50 Raffle Drawing, followed by refreshments and observing (weather permitting) until midnight (or later).

PRE-REGISTRATION REQUESTED

Send this form to Custer Inst., P.O. Box 1204, Southold, NY 11971. Questions? 631-765-2626 or CusterDonna@yahoo.com.

PLEASE PRINT

Name _____ Email Address _____

Address _____

City _____ State _____ Zip _____ Phone _____

\$ _____ I am a Member of ___ Custer, ___ AAANY, ___ ATS, ___ ASLI, ___ AOS, ___ MO. Please reserve ___ tickets at \$35 each.

\$ _____ Please reserve ___ tickets at ___ \$45 Non-Members, ___ \$30 Seniors, ___ \$10 Full-Time Students

\$ _____ I only wish to attend Bill Korbelt's Keynote Address. Please reserve ___ tickets at \$15 each.

\$ _____ 50:50 Raffle: I would like ___ tickets at \$5 each (limit 5 per person). Winner will be notified if absent for drawing.

\$ _____ I want to join Custer: ___ Individual \$45, ___ Family \$60, ___ Senior/Student \$25, ___ Sponsor \$100, ___ Benefactor \$250, ___ Patron \$500

\$ _____ I would like to make a tax-deductible donation to Custer Institute in the amount of \$ _____

\$ _____ **TOTAL.** Confirmation will be sent only via email upon request.

Check One: ___ Enclosed is my check, or ___ I have made payment via Paypal.com to the account of CusterPaypal@yahoo.com

The Custer Institute is a 501(c)(3) NYS educational nonprofit staffed by volunteers and funded by public support.

UPCOMING EVENTS

Sat., August 22, 8:00 - 10:00 PM

BECCA HASSELBROOK and JEANINE CULLEN IN CONCERT

Becca Hasselbrook (8-9PM) is a singer-songwriter-pianist incorporating alternative, jazz, folk and pop. Jeanine Cullen (9-10PM) is a vocalist-songwriter from the North Fork who's jazz-infused voice carves out a unique, new facet in neo-soul/pop. A must-see event! Suggested donation for both performances: \$13 Members; \$15 Non-Members; \$8 Students.

Sat., August 29, 9:00 PM until ?

MESSIER MARATHON (weather permitting)

Messier Objects form an introduction to deep sky observing for countless amateur astronomers who try to locate all 110 objects in one night. We'll try our best to view as many MO's as possible. We'll have telescopes to borrow but feel free to bring your own. Suggested Donation: General admission of \$5 Adults, \$3 Children under 14, free for Members.

Sat., Sept. 26

31st Annual Astronomy Jamboree (see inside back cover for details)

Sat., Oct 3, 8PM

Concert: String Trio with Wendy Fogel

Sat., Oct 17, 5-7PM

Storytelling and Concert by Johnny Cuomo

Sat., Nov. 21, 8PM

Performance: Sol y Sombra, traditional Spanish guitar and costumed dancers. **MUST SEE!**

Sat., Dec. 5

Holiday Party and Concert

Thurs., Dec. 31

New Year's Eve Under the Stars

First Fridays, 7-10PM

Open Mic Night with Liza Coppola

Last Fridays, 7PM on

Members' Night

Custer Observatory is open to the public every Saturday night from dusk until midnight for guided tours of the night sky through our selection of large telescopes. Consider supporting our programs by becoming a member. Annual dues are: \$45 Individual, \$60 Family, \$25 Senior/Student, \$100 Sponsor, \$250 Benefactor, \$500 Patron, \$1000 Corp. Sponsor.

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www.CusterObservatory.org

THE CUSTER INSTITUTE (est. 1927)

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