



# The Custer Comment

★ For The Curious ★

**June 2003**

**Volume XXXIII, Issue 5**

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## **MAY'S Spectacular Lunar Eclipse**



Photo montage courtesy Carlos Sanlley of The Dominican Republic and Custer member Doug Hardy.

### ***First Light Ceremony, June 14***

Dedication of Celestron 14, 3:00 PM.

See [page 4](#) for further details.

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### ELECTRONIC DISTRIBUTION

Please sign up for your copy of The Custer Comment to be conveniently delivered right to your inbox. If you have an internet connection and would like to take advantage of this opportunity to both help Custer and to provide you with a new and exciting publication, please contact Tom Madigan. It's a win-win situation for all concerned. Custer saves on printing and postage costs while, at the same time, providing you with an electronic publication of the highest quality. With this issue, we've begun publishing color photo's when possible and appropriate. Although the photos will be available in both the electronic version and the hard-copy version, only the electronic version will contain the color version of the photos. Some advantages of receiving the electronic version:

1. Immediate delivery, no delays and lost mail;
2. Immediate savings on postage and printing, allowing us to provide more exciting programs and to further accelerate the acquisition of our new dome and observatory class telescope.
3. Only print what you need, no unwanted or unnecessary paper;
4. Color versions of pictures when possible;

## Editor's Column

<p><b>Tom Madigan, Editor</b>          Tom Madigan          99 North Summit Ave.          Patchogue, NY 11772-2226  <a href="mailto:tmadigan@optonline.net">tmadigan@optonline.net</a>          631-447-5339</p> <p>Cutoff for submissions is the 15<sup>th</sup> of the month preceding publication</p> <p>Visit the new Custer Website at  <a href="http://www.custerobservatory.org">http://www.custerobservatory.org</a></p>	<p><b>The Custer Comment is published monthly by</b></p> <p>Custer Institute          P.O. Box 1204          Main Bayview Road          Southold, NY 11971          631-765-2626</p>
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The electronic distribution effort is ongoing. If you would rather receive the Custer Comment in electronic form instead of hard copy, please email or call me using the contact info, above. Any postage and printing costs we save can be put directly into the "Dome Replacement Fund". Please see [The President's Message](#) for further details.

Best,  
 Tom  
*Tom Madigan, Editor*

## Gift Corner & Classifieds

<p><b>We have meteorites.</b></p> <p><b>Great sets mounted in beautiful display cases. Perfect for gifts.</b></p> <p><b>New Custer logo coffee cups ONLY \$4 EACH</b></p>	<p>The Gift Shop still has a dwindling number of copies of ASTRONOMY FOR ALL AGES, by Philip Harrington &amp; 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.</p>	<p><b>For Sale</b>          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 Reticle 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.  <b>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 &amp; 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.</b></p>
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## **Announcements & General Interest**

### George Vratto's Nominating Committee Recommendations

All current board members and officers wish to run again. This would include all 5 officers, and the 2 members of the board whose terms expire this year. During the Annual Membership Meeting, members will have the opportunity to nominate other members, who are present, to also run for the available board positions. This will be followed by a vote of the membership.

<b>Officers</b>		<b>Directors</b>	
President	Bob Vanson, 2003	Observatory Chair	Jim Eagan, 2004
Vice President	George LoMaga, 2003	Member of the Board	Chas. Cardona III, 2004
Treasurer	Barbara Lebkuecher, 2003	Member of the Board	Duff Williamson, 2004
Secretary	Anna Verticchio, 2003	Member of the Board	Alarico Verticchio, 2004
Finance Chair	Warren Hamburger, 2003		

### Dedication of Celestron 14, 3:00 PM.

Custer associate and long-time friend of Custer Vice President, George LoMaga, Frank Gumper has generously donated a Celestron 14, further enhancing Custer as Long Island's pre-eminent Astronomical landmark.

#### Itinerary:

Event start: 3:00 PM;  
Business meeting: 4:00 PM;  
Barbecue: 5:00 PM;  
Dedication Ceremony: 8:00 PM.

### Professional Class Observatory

Commensurate with the new dome, should be an instrument to match. We have received a generous donation of \$1,000.00 to be put towards the acquisition of a mirror blank for the new telescope.

## HEAVENLY EVENTS TO WATCH FOR June, 2003

*"To see the earth as it truly is, small and blue and beautiful in that eternal silence where it floats, is to see ourselves as riders on the earth together, brothers on that bright loveliness in the eternal cold—brothers, who know now they are truly brothers."*

Archibald MacLeish

Spring is upon us. Lyra, Cygnus and Aquila can be seen making their way up in the East later on in the evening. With Vega, Deneb and Altair and the Summer Milky Way heralding their arrival, we know the balmy days and nights of Summer aren't far behind.

### Events of Note

June 1<sup>st</sup>: For observers in Southeast Asia this evening, Jupiter's moon Ganymede casts its shadow onto Io and makes it disappear completely 77 seconds near 13:40 UT.

June 3<sup>rd</sup>: Mercury reaches greatest elongation, 24 deg. west of the Sun in the morning sky.

June 7<sup>th</sup>: First-quarter Moon (4:28 p.m., EDT)

June 10<sup>th</sup>: Mercury shows its greatest illuminated extent, 20 square arc seconds, when half sunlit this morning.

June 13<sup>th</sup>: Asteroid 12 Victoria, at magnitude 8.8 and near opposition, is 17' north of nu Ophiuchi this evening.

June 14<sup>th</sup>: Full Moon (7:16 a.m. EDT). Earliest sunrise of the year at latitude 40 deg. north.

June 21<sup>st</sup>: Last-quarter Moon (10:45 a.m. EDT). Mercury is ½ deg. south (lower right) of Venus. Summer (in the N. Hemisphere) begins at the solstice, 3:10 p.m. EDT.

June 22<sup>nd</sup>: Uranus is 3 deg. north of Mars this morning.

June 28<sup>th</sup>: Latest sunset of the year at latitude 40 deg. north.

June 29<sup>th</sup>: New Moon (2:39 p.m. EDT).

WELCOME TO OUR NEW OR RETURNING MEMBERS:  
Ben Miller of Cutchogue, NY; William Marin and Alyce Passanant, both of Southold, NY.  
Welcome one and all!

## **PRESIDENT'S MESSAGE**

It is expected that the repairs to the shed roof will be completed in time for the Annual Membership Meeting. However, even if the roof is not ready, a dedication ceremony for Custer's new Celestron CGE-1400 14" Goto Schmidt-Cassegrain Telescope will take place during the Annual BBQ and Membership Meeting on Saturday June 14th.

Elsewhere in this issue is the George Vratton's Nominating Committee recommendations. During the Annual Membership Meeting, members will have the opportunity to nominate other members, who are present, to also run for the available board positions. This will be followed by a vote of the membership. See you out at Custer June 14<sup>th</sup>!

It has been very gratifying to be informed by our Treasurer, Barbara Lebkuecher, that members and friends of Custer continue to send in nice sized donations towards the Dome Replacement Fund. Custer is facing a rather monumental expense in the next 2 ½ years to replace our 50 year old wooden dome with a new, hopefully aluminum dome to last the next 50-100 years. If you haven't yet contributed, please consider doing so and don't forget, your donations are tax deductible.

**Bob Vanson**

## ***MAY'S Spectacular Lunar Eclipse***

Although the weather could have been better on the evening of Thursday evening, May 15<sup>th</sup>, there were some who did observe and photograph this spectacular Lunar Eclipse. The following photo by Custer Member Kurt Massey is a good example of what can be achieved with a bit of determination and a digital camera.



# The Universe, Past, Present and Future

A treatise by Thomas J. Madigan

Second installment in a multi-part series.

At the beginning is where our knowledge is very incomplete. Modern science has attempted to address some of the questions concerning this era. The first and primary event before which there was no physical Universe we call The *Big Bang*. Science can take us back to within  $10^{-44}$  seconds of this primordial singularity but not before. This value of  $10^{-44}$  seconds or *Plank time* is believed to be the quantum unit of Time itself. Some of the solutions proposed to explain the initial event include schemes where there is not just one Big Bang, but many spawning eternally from prior space-times. Each Big Bang, associated with a separate closed system or universe, instantly detaches itself from the space-time that spawned it. I merely state this solution, since it is held by some to explain the beginning, I don't necessarily agree with it. It sounds more like an extension of the Steady State Theory of Cosmology, which has all but been abandoned. It is important to make precise use of definitions here. "Universe" is defined as being the whole, or sum of all, including space and time; does it then make sense to speak of alternate universes or other space-times? Using this definition of "Universe", we can have only one BIG BANG, not many. In my mind, Theology and Metaphysics end where Science begins, here at  $10^{-44}$  seconds.

## Important Events

1. The Big Bang, the initial primordial event
2. Plank Time begins  $\sim 10^{-44}$  seconds, believed to be the quantum unit of Time itself
3. Inflation begins  $\sim 10^{-37}$  seconds
4. Inflation ends  $\sim 10^{-32}$  seconds

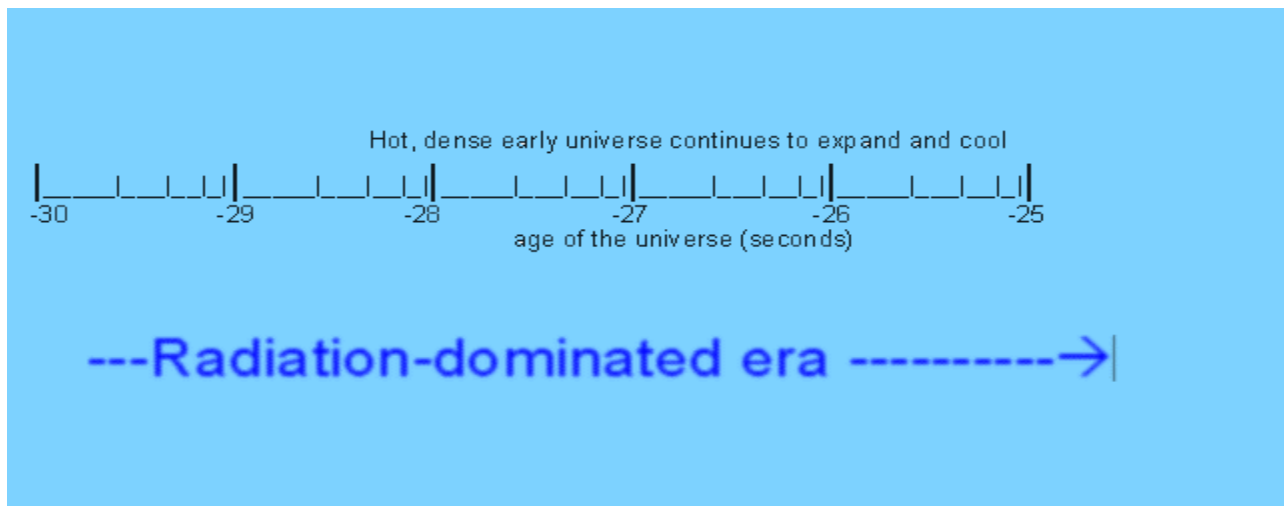


Diagram will be included as appropriate.

### Conventions

When possible, all discussions of time will be based on log, base 10 arguments. As such, I will express the number followed by its base 10 multiplier in parentheses, for example: 1 million would be expressed as  $10(6)$  or 1 trillion as  $10(12)$ . Fractions will also be based on powers of 10 when possible, for example:  $1/1000$  second will be expressed as  $10(-3)$ .

# *Custer Journal*

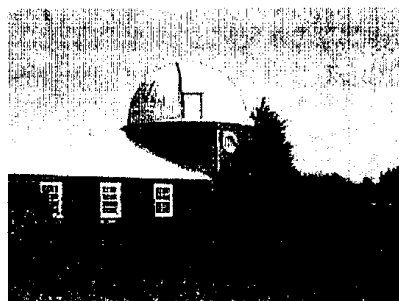
*25th Astronomy Jamboree - 75th Custer Anniversary*

Custer Institute is seeking support to create a historical journal commemorating the 25th Astronomy Jamboree and the 75th anniversary of Custer Institute. Your donation will help us to document the history of this landmark institution.

Copies of the journal will be available for visitors attending lectures, community events, courses and observations at the Institute. Also, additional copies will be located at local libraries, wineries and the Town Hall.

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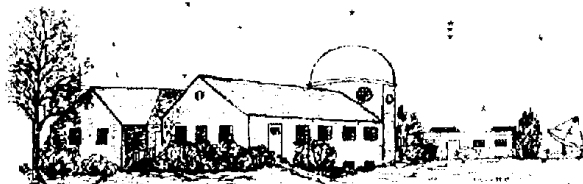
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## **CUSTER EVENTS CALENDAR**

### **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; June 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup>.

**The Custer Comment**

**TOM MADIGAN**, Editor

**CUSTER COMMENT**

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