

The

# Rosette Gazette

Volume 21, Issue 5

Newsletter of the Rose City Astronomers

May, 2009



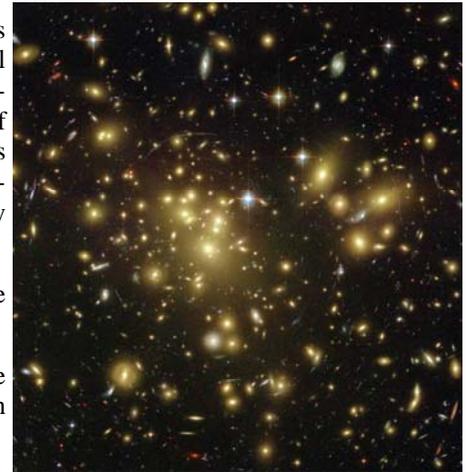
## RCA MAY 18 GENERAL MEETING

### Quantum Astronomy: Modern Physics at Cosmic Scales

*Presented by Dr. Laurance Doyle PhD.*

Dr Doyle is a Principle Investigator for SETI in Los Gatos CA. His recent submittal to a professional astronomy journal is presently being refereed for legitimacy of scientific principles and experimentation, and validation as a new field of astronomical observation. This process has required referees comprehending fully the Uncertainty Principle, or their education of. In explaining quantum astronomy to the Rose City Astronomers the following questions are addressed:

- Are the weird aspects of quantum physics confined to the microscopic?
- By decreasing what can be known of an attribute can one actually learn something new that could not have been learned with less ignorance?
- Does quantum physics recognize time as defined by general relativity, and vice versa?
- Can one trade off information at the detector/observer, thereby changing events that should have already taken place in the past?



Virgo Galaxy Cluster Abell 1689's "Gravitational Lens" Magnifies Light of Distant Galaxies  
*Hubble Image Courtesy NASA, et al.*

In this talk we'll discuss how to use the uncertainty principle as a quantum eraser in a cosmic-scale double-slit experiment -- the double-slits being gravitational lenses millions to billions of light years distant.

Hopefully by the time of the seminar, his first official paper will have been accepted by a professional astronomy journal. Anyway, if history can be changed, it won't matter.

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RCA is a member of the Astronomical League.  
<http://www.astroleague.org>

**All are Welcome! Monday May 18**

**Social Gathering: 7 pm Presentation Begins: 7:30 pm.**

**Location: OMSI Auditorium**

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Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.  
Moon photos below courtesy David Haworth

First Quarter Moon  
May 1

Full Moon  
May 8

Last Quarter Moon  
May 17

New Moon  
May 24



## CLUB OFFICERS

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### RCA MAGAZINE SUBSCRIPTIONS



One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year or \$65.95 for two years. The RCA member rate for Astronomy magazine is \$34 for one year or \$60 for two years. For more information go to the RCA web site index and click on any of the links for magazines. Larry Godsey, Treasurer, 503-675-5217, will be taking renewals and new subscriptions at the Magazine Table before General Meetings. Please make checks out to "RCA" and allow two months for your subscription to be renewed.

### RCA LIBRARY

The Rose City Astronomers maintains a comprehensive club library of astronomy related articles, books, CDs and videos. These items can be borrowed by members through checkout at the general meetings for a period of one month with renewals available by phone or e-mail to the club library director, Jan Keiski.



The RCA library is constantly growing through many donations and the purchase of new materials. A listing of library materials (PDF format) can be found at the library web page: <http://www.rca-omsi.org/library.htm>

Jan Keiski (jikeiski@comcast.net) 503-539-4566

# Sun Myths

May, 2009

By Tom Koonce

*The International Year of Astronomy theme during May is "Our Sun"*

The closest star to the Earth has inspired awe, a sense of supreme power and acted as the first clock for mankind since the dawn of our existence. It was 1610 when the first telescopic observations were made of sunspots, it has only been within the last 400 years that we've been able to determine the Sun's true nature. Rudimentary observations had been made millennia before this time, with the earliest recorded solar observation being made by the Babylonians of a solar eclipse on 5 May 1223 BC. The observation was written on a clay tablet uncovered in the ancient city of Ugarit, in what is now Syria. The spectacle of the Sun being covered by the face of the Moon was a phenomenon that occurred with some regularity and could be observed with the naked eye by early civilizations. Incomprehensible astronomical events such as these led to the creation of mythologies that sought to offer explanations of what was happening in the heavens. Interestingly, there are several similarities among the mythologies around the world even though cultural exchange between some of the societies hadn't occurred.

Within Egyptian culture, the Sun-god "Re" was the creator. Re was portrayed as having a hawk's head with a fiery red disk on top. Sometimes there

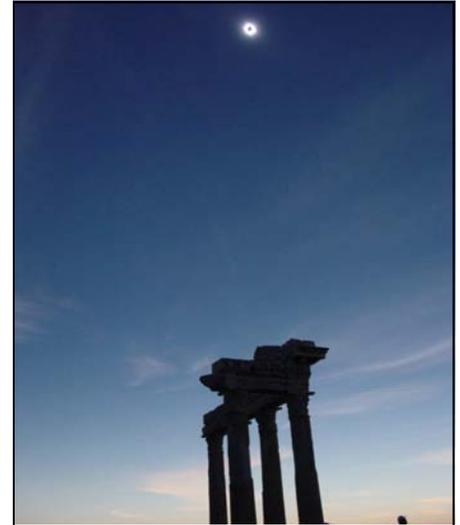
was a cobra surrounding Re that symbolized how the Sun could bring death. Re had power over Osiris, ruler of the underworld. Light vanquished darkness. It was said that humans sprang forth from Re's tears and that his children were the air and clouds, and his later descendants became the Earth and the stars, a mythological explanation of the belief that light brought life to the world.

In Greek and Roman mythology, Apollo was the son of Zeus (Jupiter) and Leto (Letona) and was the twin brother of the goddess Artemis. He was the god of the Sun, logic and reason. He was also a fine musician and healer. His most famous sacred place was at Delphi, site of the Oracle of Delphi. The Romans also believed Apollo was the god of light, music, and healing.

Leto travelled all over Greece to find a place to give birth to Apollo. She finally came upon an island named Delos. The island agreed to allow the birth of Apollo if he in turn founded a temple on the island. Leto agreed, and when Apollo grew up, he changed Delos into a beautiful island. Apollo was known as the god who could foretell the future.

The regular, predictable rising of the Sun each day instilled a faith in the future in most cultures. The Sun's

morning light swept back the darkness and fear of the night, shone onto crops giving life, and brought the joy of light and life, replacing the despair of evil spirits and death.



1995 Solar Eclipse above the Temple of Apollo in Turkey

In West African lore, the Sun was a harsh, fierce entity called Liza who was inseparable from his twin sister Mawu, the Moon. Together they represented universal order and harmony. Liza resided in the east (where the Sun rises) and Mawu resided in the west (where the Moon's phases begin). Liza was the god of light, heat, work and strength. Mawu was the goddess of darkness, fertility, rest and motherhood. When there was an eclipse, it was said that Mawu and Liza were making love.

In very few mythologies, the Sun was portrayed as taking feminine form. For instance the oldest Japanese religion, Shinto, regards the Sun as a goddess named Amaterasu. When she was in her cave the darkness allowed evil, despair, grief and destruction to reign over the Earth, but when she was enticed to come out and the brilliant light of Amaterasu finally illuminated and colored the world.

*(Continued on page 4)*



Picture from the "Book of the Dead". One of the two figures with an orange disk is Re-Harakhti, the other may be Re. The other two figures are pharaohs.

*Image courtesy James Wasserman, The Egyptian Book of the Dead, Chronicle Books.*

## Sun Myths *(Continued from page 3)*

These examples can be distilled down into common themes such as light triumphs over darkness, good triumphs over evil, the Sun represents supreme order in the universe, and it is the Sun which brings life to the Earth. We can see that the cultural mythologies were explanations for astronomical behaviors ancient peoples observed every day. We may have different explanations for these observations today, but underlying truths remain. Without the Sun, we would die. The Sun will rise tomorrow.



Symbol for Shamash, Ancient Sumerian Sun God

Three thousand years ago the Sumerians' mythology named Shamash as a Sun god in Mesopotamia, between the valleys of Tigris and Euphrates rivers. Since he could see everything on Earth,

he represented also the god of justice; the triumph of good over evil. It was said that every morning without fail, the scorpion-men of the East Mountain would open the gate and allow Shamash to come out. He was pulled across the sky in a chariot. At the end of the day, Shamash would enter the West Mountain, and begin his travel through the Underworld. The next day, he would begin yet another journey across the sky.

Clear Skies! Tom.

### References:

[http://www.san-julian.co.uk/solar\\_eclipse\\_2006.htm](http://www.san-julian.co.uk/solar_eclipse_2006.htm)

<http://www.windows.ucar.edu/tour/link=/mythology/planets/sun.html&edu=high>

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## RCA will be entering a float in the May 30th, 2009 Starlight Parade!

The parade begins at 8:30 p.m. Live television coverage starts at 9 p.m. on KGW channel 8.

The float will be honoring our club and the International Year of Astronomy. Our "Celebrity" on the float will be RCA member Christine Lee who was the 2007 Astronomical League Jack Horkheimer Award winner. Please help prepare for the parade with any of the following tasks:

- Build a float. We will have a work party on Saturday, May 9th at Technical Marine Services (6040 N Cutter Cir Ste 302, Portland, OR 97217) from 10:00 a.m. to who knows when? Anyone who wants to help make this thing terrific is welcome to come and help out.
- Help get lots and lots and LOTS of lights. The Starlight Parade people want us to be seen a block away. So we're looking for strings of Christmas lights...icicle and otherwise. We

prefer white, but may use other colors for some of our decorative touches. If you want to loan us some lights, please bring them to the May 9th work party at Technical Marine Services. Not tangled please, but nicely looped up, and with a tag with your name on each string so we can return them. Please bring the kind that doesn't die if one bulb in the string is out. If you've got some bright flashers that are red LED and star shaped, that would be great. We can dream, can't we?

- If you are particularly clever with electricity and want to help us make this dazzling, we can use you. Like ideas for extra energy sources, and perhaps how to use real lights on a float.



2007 Starlight Parade photo courtesy:  
[http://www.flickr.com/photos/christinas\\_play\\_place](http://www.flickr.com/photos/christinas_play_place)

For more information contact project leaders David Nemo

<david@nemoworld.com>  
or Margaret Campbell-McCrea  
<campbellm101@gmail.com>

# PRODUCT REVIEW

## Tele Vue's 13mm Ethos eyepiece gets a workout.

By John W. Siple

**T**ele Vue Optics, the established leader in eyepiece innovation and design, has done it again by introducing a stylishly sleek ocular with a whopping 100° apparent field of view. The 13mm Ethos has been on the market now for well over a year. During that time it has grown into a phenomenal bestseller for the parent company. As of May, Tele Vue's latest crown jewel can be purchased for a price of about \$620, often with free shipping.

The 13mm Ethos has gone through one slight design change since first released to the astronomical public—the girth was reduced from 63.5mm to 62mm (about 1.5mm) in the early spring of 2008. This allows the use of two matched 13mm Ethos oculars in a binoviewer, providing the proper interpupillary distance. Optically there is no difference in performance between the two styles. The Ethos is made in Taiwan by expert opticians, and now includes 6, 8, 10, and 17mm focal lengths.

After reading nothing but rave reviews about the 13mm Ethos eyepiece, and hearing only positive comments from users, I decided to go ahead and purchase one of the hyper-wide field marvels. The eyepiece's popularity can be judged by how fast it has been flying off of dealers' shelves; a few were out of stock, plus some mega wholesalers of optical goods, such as OpticsPlanet, when called had only several remaining samples left in their inventory.

As a first effort, I placed a wanted advertisement in the classified section of a popular online astronomy discussion forum, and promptly received two positive hits. I was somewhat surprised (and delighted) at this. Both encouraging responses were from dedicated astro-photographers, where imaging the night sky was their primary area of interest.

One seller had the original 63.5mm version—he needed the funds from the sale of the eyepiece to purchase additional camera equipment for his telescope. He had some flattering comments about the performance of the Ethos, saying “you are going to love this eyepiece.”

The second seller had received the 13mm Ethos as a Christmas gift from his wife last year. He already had a 13mm Nagler in his eyepiece chest, and sadly felt that the new Tele Vue item would get little use. His wife had attempted to return the unused TV product, but several months had already elapsed, and the astronomical distributor would not give her a full refund.



I went ahead and purchased both of the pre-owned 13mm Ethos eyepieces. Remarkably, they arrived together in the same FedEx van. The 63.5mm model was obviously well-cared for and looked almost new. The other ocular, never taken out of its wrapping, was in pristine condition. All of the original

tags and labels were still intact. It had the slightly smaller but subtly changed 62mm barrel diameter.

First light was through a vintage Jaegers 6-inch F/5 Rich Field Telescope. This particular achromatic refractor is one of my favorite instruments, providing a wide, well-corrected field. I decided to test just the Ethos with the 63.5mm barrel diameter, leaving the unused companion ocular as a backup for future use. The night air was unusually calm, where very high power could be used without any image breakdown.

The Great Globular Star Cluster in Hercules, M13, was targeted as a test object. After acquiring the famous deep-sky object with a low power eyepiece, I put the 13mm Ethos into the telescope's 2-inch Lumicon star diagonal. Contrary to expectations, star images were blurry and appeared like streetlights seen at a distance through thick fog.

To my relief, the solution to the problem soon presented itself. In my haste to try out the 13mm Ethos, I had foolishly forgotten to remove the slip-on protective cover at the end of the eyepiece. Once the opaque cover was removed from the light path, I jumped with joy. **THIS IS THE BEST EYEPIECE THAT I HAVE EVER USED!** And I have used plenty of them over my lifetime.

Looking through the 13mm Ethos eyepiece is a *grand* experience, like peering out the round portal of a spaceship as you sail past globular star clusters, remote island universes, and other cosmic phenomena. The sightseer has to roll his or her eye around to take in all of the view, where the optically perfect field is studded with star images that are tack sharp from edge-to-edge. The ultimate observing experience. A masterfully designed eyepiece that is worth every penny. **The author's rating: A+**



## BOARD MEETING MINUTES

April 6, 2009

OMSI Classroom 1

Margaret Campbell-McCrea

Attending: Tom Nathe, Matt Vartanian, Margaret Campbell, Ken Hose, Jan Keiski, Sameer Ruiwale, Dave Nemo, Larry Godsey, Dawn Willard, Art Morris, Howard Knytych, Dale Fenske, Jean London.

The meeting was called to order at 7:12 p.m.

### OFFICER REPORTS:

- Secretary: A quorum was met with 13 voting members present.
- Treasurer: Larry Godsey reported that we have \$22,505.34 in the RCA general account, and \$19,319.07 in the Site Fund, for a total of \$41,824.41. Even with upcoming expenses, we are slightly ahead of where we were at this time last year. Larry asked for another \$50 in his budget to cover the cost of another batch of RCA checks. Larry handed out the first quarterly profit and loss statement for Board members to look at in detail later. There was some discussion about where to take the expenses of printing for the public outreach that we're doing this year.
- Programming: Matt Brewster reported that in April will have Terry Matilsky from the Chandra X-Ray Project. In May the program is Lawrence Doyle from SETI, and June is our information fair.
- Observing: Matt Vartanian reported that he's talked to the new manager at Stub Stewart about having RCA star parties there, in addition to the OMSI star parties which will be held at both Stub Stewart and Rooster Rock. We will agree to make them public, but not advertise them much, since Stub Stewart will probably do the advertising. Probably these will turn into a kind of hybrid event - part public and part private. We're thinking of having three events there. Matt will discuss the parameters before he commits to this. He will post information through the Forum as he finds out. The first one is scheduled for Saturday, April 25.
- Community Affairs: Dawn Willard reported that we had a good turnout at OMSI for 100 Hours of Astronomy. The weather was very good, which meant there is light attendance at OMSI. We had solar scopes in the plaza during the day, and about a dozen scopes and a dozen visitors in the evening. We have a public party at Reed College on Thursday, May 7th. She'll put out a request for volunteers. She also has an email from Cooper Mountain for an August 1st star party. She'll call them back.
- There was some discussion about creating a form on the website for reporting volunteer hours for reporting to the IRS. Dawn and Larry will work on that.
- Media Director: Sameer will call Patton about Diana. Dawn will send her an email.
- VP Membership: Ken Hose reported that we have 6 new members and 5 renewals. Our total is 350 member families. We had 294 last year and 292 the year before. We took in \$314 in dues.

- New Members: Howard Knytych reported that he will try every other month to have a new-member meeting with different presenters each time. He's asked Dale Fenske for the next one (April) to discuss ALCOR observing programs. Howard will inform Larry Godsey for the website.
- Sales: Margaret Campbell reported that there were \$214.00 in sales in March. The order of SkyTools was completely sold out.
- Library: Nominal.
- Scopes: Tom Nathe reported for Greg for April only, since Greg is out of town. He looked at a 6" f10 to be donated with, on condition that we not change the optics. The Board decided not to accept the 6" until we understand more about the restrictions. We'll be donating an 8" DOB to OSP for the youth mentoring section. A recently donated 10" DOB will replace the 8" one.
- IDA: Art Morris has talked to Washington County about their light pollution ordinance, and to several smaller towns (Newberg, Sherwood, Tualatin, etc.). He contacted Bernie Kuehn about making a presentation to the Wildlife people in Washington County but hasn't heard back. He also called the City of Newberg about their new hotel which has nice lighting, recommended by IDA, to thank them.
- Dawn forwarded a letter from a state senator looking for support on a light pollution bill. Dawn offered Art a kit which he can use for public speaking. They will connect. Sameer gave him a contact from Lake Oswego.
- Magazines: Nominal.
- Webmaster: Nominal.
- Site: Nominal.
- Youth: Jean London suggested having a youth astronomy resource page on the website, which would link events and programs like Saturday Academy, OMSI events, etc. She will talk to the Stub Stewart people about having family-friendly events at the OMSI star parties, and perhaps at the RCA star parties. She'll give information about kids and family-friendly to Larry Godsey and he'll get it on the website.
- SIGS: Tom reported that on the 19th the Chandra people will be coming to TMS for a pizza party and a software presentation, how to access their data library for the Chandra data sets. That will be on Sunday, the day before the RCA meeting. And of course, David Haworth is hosting the Astrophotography workshop on April 18th.
- ALCOR: Dale Fenske will renew the roster for the June reflector.
- OMSI: Jan will send me the materials for this. May 4th Board meeting is time to renew our contract with OMSI.
- Sister Club: GAMA is working on getting their own website set up.

### OLD BUSINESS:

- 2009 Starlight parade: We've been accepted. We also will have a letter with some ideas. Margaret will set up the

(Continued on page 7)

## **Board Meeting Minutes** (Continued from page 6)

next work party and order decorations. David Nemo will advertise for outwalkers.

- Posting speaker videos on website: Larry has uploaded them and they work.
- Purchase of PST: Camp Hancock's is gone. John Harris is not sure he wants to sell his. Larry is going to put a new one in the budget for next year.
- Astronomy Day at Pioneer Place – Sameer Ruiwale has attempted to contact the person but has not heard back.
- GAMA on the Forum – Done.
- NASA Night sky Network materials for Youth Program: – Dawn Willard sent Jean London the materials, with the password to Night sky network.
- Joint viewing with GAMA – Jan Keiski talked to Carlos and GAMA has the laptop and is working toward doing sharing. We need to pick a date, publicize it, preferably toward mid-summer.
- Members' Only section of website – Larry Godsey is going to go ahead and go with it at the next meeting, giving a common password and login for all RCA members.

### **NEW BUSINESS:**

- Astronomy Day: It's going to be before our next meeting, so this will have to be done via call for volunteers via Forum. It's going to be in two places: OMSI and Pioneer Place or other location.
- OMSI: Jan Keiski reported that Jim Todd will get with us about his plans. Sameer asked Dawn to get some of Jim's materials for giving out. Other sources: Night sky Network, IYA, IDA.
- Pioneer place / other locations – a work in progress.
- Listing Board member phone numbers: This was a discussion that had come up via the Forum. After some discussion we decided to remove personal telephone numbers from the newsletter. Also, articles submitted to the newsletter should not have email addresses on them. We agreed to have phone numbers listed in the member's only section of the website. Larry will ask board members whether they want their phone / email published.
- Mirror making machine purchase: Greg had put this agenda item on the Forum. It would cost \$200 and can make up to 14" mirrors. We decided we need more information about where it's going to be kept, who has access to it, who takes care of it, whether it's transportable, etc. Tom Nathe will speak to Dan about keeping it at TMS, and will also drop a note to John DeLacey about it.
- Having RCA swap meets at general meetings: This was another discussion that began in the Forum. We decided to have two a year: in December, as usual, and in June, with the SIG Fair. We'll advertise the big ones, but allow people to sell things at other meetings. We need to find out where the June meeting is going to be and if we can have a few extra tables. Sameer will inform Matt about this.

- Vendor's policy: Dave suggested putting together a policy for vendors. After some discussion we agreed that if they're RCA members and they give advance notice and it's astronomically related, it's okay. Jan Keiski will ask Jim Todd about OMSI's policy about vendors at RCA meetings.
- The trip to LAIGO. Lamont Brock is supposed to be working on it for the Cosmology SIG. Sameer will ask him about it.
- 2009-2010 RCA budget: Larry Godsey handed out a proposed budget for the coming fiscal year for us to discuss next month, and asked Board members to bring proposals for the budget for next year.
- Signing of the annual contract with OMSI: Jim Todd will have the contract ready for the May Board meeting.

The meeting adjourned at 9:00 p.m.

### **TO DO:**

1. Matt Vartanian will discuss the parameters of Stub Stewart star parties before he commits us to them. He will post information through the Forum as he finds out.
2. Dawn will put out a request for volunteers for the Reed College S.P. She will also contact Diana about media contacts. She will work with Larry about having a form on the website for reporting volunteer hours. Dawn will send Art Morris a kit for IDA presentations.
3. Larry will work with Dawn about creating a form on the website for reporting volunteer hours. He will also prepare a proposed budget for next year. He will publicize the members' only section of the website, giving everyone a common password and login. Also, will talk to Larry Deal about removing personal telephone numbers from the list of officers in the newsletter, and from any newsletter article, and will contact Board members to ask if they want to publicize their telephone numbers and/or email addresses.
4. Sameer will talk to Patton about the Media Director position. Contact Matt Brewster about getting more tables for the June SIG meeting so we can include a Swap Meet. Contact Lamont Brock about the trip to LIGO.
5. Howard will keep Larry Godsey informed when he has new-member orientations for publicity.
6. Jean will connect with Larry Godsey about putting a kids' section on the website, and about advertising family-friendly star parties at Stub Stewart.
7. Art will contact the state senator about the light pollution bill he's sponsoring.
8. Dale will update the member list for the Reflector.
9. Margaret will set up the next Starlight Parade work party, and order float decorations.
10. David will advertise for outwalkers and order costume elements.
11. Jan will continue to work with GAMA for joint viewing via laptops. She also will ask Jim Todd about OMSI's policy about vendors at RCA meetings.
12. Tom will talk to Dan Grey about storing the mirror-making machine. Also will talk to John DeLacey.

## The Swiss Army Knife of Weather Satellites

Spotting volcanic eruptions, monitoring the health of crops, pinpointing distress signals for search and rescue teams.

It's not what you might expect from a weather satellite. But these are just a few of the abilities of NOAA's newest polar-orbiting weather satellite, launched by NASA on February 6 and turned over to NOAA for full-time operations on February 26.

Formerly called NOAA-N Prime and now renamed NOAA-19, it is the last in its line of weather satellites that stretches back almost 50 years to the dawn of the Space Age. Over the decades, the abilities of these Television Infrared Observation Satellites (TIROS) have gradually improved and expanded, starting from the grainy, black-and-white images of Earth's cloud cover taken by TIROS-1 and culminating in NOAA-19's amazing array of capabilities.

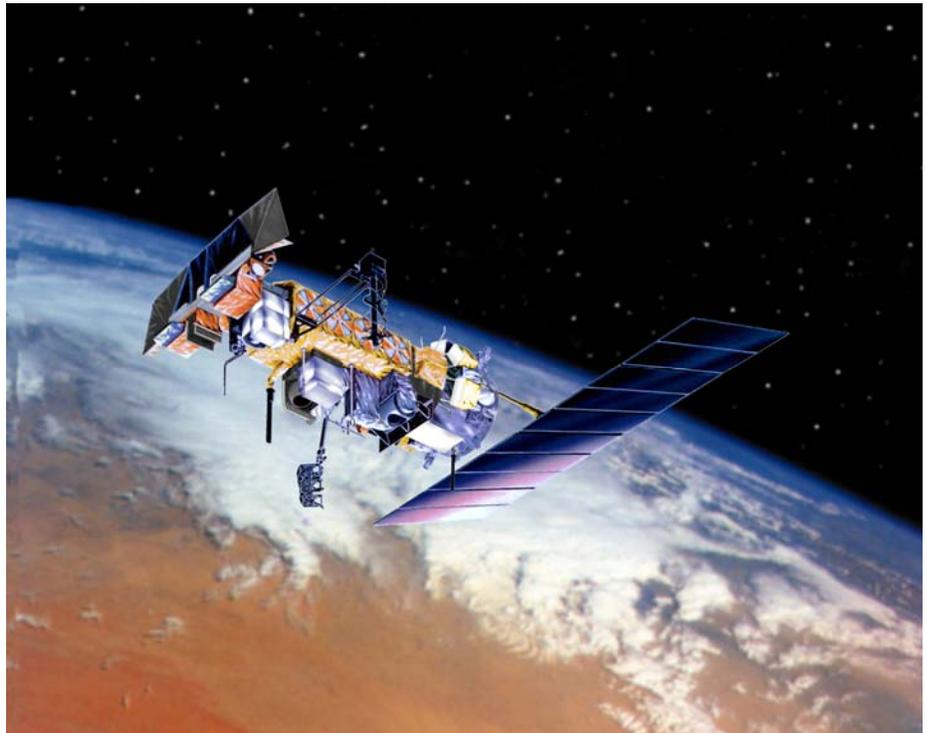
"This TIROS series has become quite the Swiss army knife of weather satellites, and NOAA-19 is the most capable one yet," says Tom Wrublewski, NOAA-19 Satellite Acquisition Manager at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

The evolution of TIROS began in 1998 with NOAA-K. The satellites have carried microwave sensors that can measure temperature variations as small as 1 degree Celsius between Earth's surface and an altitude of 40 kilometers—even through clouds. Other missions have added the ability to track large icebergs for cargo ships, monitor sea surface temperatures to aid climate change research, measure the

amount of ozone in Earth's protective ozone layer, and even detect hazardous particles from solar flares that can affect communications and endanger satellites, astronauts in orbit, and city power grids.

each day.

NPOESS will have yet more capabilities drawn from its military heritage. Dim-light sensors will improve observations of the Earth at night, and the



*The new NOAA-19 is the last and most capable in the long line of Television Infrared Observation Satellites (TIROS).*

NOAA-19 marks the end of the TIROS line, and for the next four years it will bridge the gap to a new series of satellites called the National Polar-orbiting Operational Environmental Satellite System. NPOESS will merge civilian and military weather satellites into a single system. Like NOAA-19, NPOESS satellites will orbit Earth from pole to pole, circling the planet roughly every 100 minutes and observing every location at least two times

satellites will better monitor winds over the ocean — important information for ships at sea and for weather and climate models.

"A lot more capability is going to come out of NPOESS, improving upon the 161 various environmental data products we already produce today," Wrublewski says.

Not even a Swiss army knife can do that many things, he points out.

For more on the NPOESS, check out <http://www.npoess.noaa.gov>. Kids can find out about another NOAA satellite capability—tracking endangered migrating species—and play a fun memory game at: [http://spaceplace.nasa.gov/en/kids/poes\\_tracking](http://spaceplace.nasa.gov/en/kids/poes_tracking).

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*

## RCA 'Downtowner's' Lunch

Join us on the first Friday of each month for lunch at a great downtown restaurant (Holidays and such may push us to the second Friday of some months, check the calendar at <http://www.rosecityastronomers.org> ).

The location is announced on the RCA general forum discussion list. at <http://www.rosecityastronomers.org/forum> under special interest groups.

Always great conversation and food.

For more information contact: Margaret Campbell at [secretary@rosecityastronomers.org](mailto:secretary@rosecityastronomers.org)



Photo by Jan Keiski

## Astro-Imaging Special Interest Group

The "AI-SIG" is about advancing the skills of beginner, intermediate and advanced astro-imagers. We rely on the skills of our members to bring each other along as we image the beautiful night sky and its many wonders. Whether you use a CCD, DSLR, point-and-shoot or film camera, members of this group can help you achieve better images with less effort and frustrations. Please join us as we learn together to produce "stellar" images!

Next Meeting: Monday, May 11, 2009, 6:30pm  
Beaverton Public Library  
In Meeting Room B  
12375 SW 5th St, Beaverton

## Science Special Interest Group (SCI-SIG)

Next meeting is May 9 at 3pm. Following the Telescope Workshop at Technical Marine Services.

This group is for people who would like to advance their skills in astronomy beyond casual observing. Various projects that some group members are involved in include; variable and double star observing, occultations, photometry and astrometry. A science background is not required, however a curious mind does help.

Location: Technical Marine Service, Inc  
6040 N. Cutter Circle on Swan Island

<http://www.rosecityastronomers.org/sigs/science.htm>

Tom Nathe [sigs@rosecityastronomers.org](mailto:sigs@rosecityastronomers.org)  
RCA SIG coordinator

## Observing Site Committee

To lead and coordinate efforts of the Rose City Astronomers (RCA) in securing and managing a variety of observing sites for private use by members, and for community outreach and special events organized by the RCA.

Please Check

<http://nemoworld.com/RCA/sitehome.htm>  
for more information.

Or Contact: David Nemo <[david@nemoworld.com](mailto:david@nemoworld.com)>

## Telescope Workshop

When: Saturday, May 9, 10:00 AM - 3:00 PM

Place: Technical Marine Service, Inc.  
6040 N. Cutter Circle on Swan Island

For more information contact:

Director: John DeLacy [johncdelacy@comcast.net](mailto:johncdelacy@comcast.net)

Assistant: Don Peckham [don@dbpeckham.com](mailto:don@dbpeckham.com)

## ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, May 20, 7 PM.

Topic: "To be determined"

Presented by: Matt Brewster

Place: Linus Pauling Complex,  
3945 S.E. Hawthorne St., Portland.

Sig Directors: Lamont Brock 503-235-5893  
Jim White..... 503-236-7802

Email: [cosmology-sig@rosecityastronomers.org](mailto:cosmology-sig@rosecityastronomers.org)  
[www.rosecityastronomers.org/sigs/cosmology.htm](http://www.rosecityastronomers.org/sigs/cosmology.htm)

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3356



MAY 2009						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

**May 2009**

May 1	Fri	Downtowner's Luncheon	TBD	Noon
May 4	Mon	RCA Board Meeting	OMSI Parker Room	7pm
May 9	Sat	Telescope Workshop	Swan Island	10am-3pm
May 9	Sat	Science SIG	Swan Island	3pm
May 11	Mon	Astro Imaging SIG	Beaverton Public Library	6:30pm
May 16	Sat	Non RCA Star Party	Prineville Reservoir	
May 18	Mon	RCA Information Fair	OMSI Auditorium	7pm
May 20	Wed	Cosmology SIG	Linus Pauling Complex	7pm
May 22-23	Fri-Sat	Dark Sky Star Party	Maupin	
May 23	Sat	RCA Star Party	Stub Stewart State Park	

**June 2009**

Jun 1	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Jun 5	Fri	Downtowner's Luncheon	TBD	Noon
Jun 6	Sat	Telescope Workshop	Swan Island	10am-3pm
Jun 6	Sun	Science SIG	Swan Island	4pm
Jun 8	Mon	Astro Imaging SIG	Beaverton Public Library	6:30pm
Jun 13	Sat	OMSI Star Party	Stub Stewart and Rooster Rock S. P.	
Jun 15	Mon	General Meeting	OMSI Auditorium	7:30pm
Jun 17	Wed	Cosmology SIG	Linus Pauling Complex	7pm
Jun 19-20	Fri-Sat	Dark Sky Star Party	Maupin	
Jun 20	Sat	RCA Star Party	Stub Stewart State Park	

The RCA General Meeting falls on the third Monday of each month. We usually meet in the Auditorium at OMSI, next to the Murdock Planetarium. Occasionally the meeting is held in Murdock Planetarium. Check here each month for details, or look us up at the RCA web site (<http://www.rosecityastronomers.org>).

**RCA CLUB INFORMATION**

Web Site: <http://www.rosecityastronomers.org>