

The

# Rosette Gazette

Volume 19, Issue 01

Newsletter of the Rose City Astronomers

January, 2007



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

## RCA INFORMATION FAIR

### Monday, January 15th!

The January meeting features our annual Information Fair. This is a great opportunity to get acquainted, or reacquainted, with RCA activities and members.

There will be several tables set up in OMSI's Auditorium with members sharing information about RCA programs and activities. The library will be open with hundreds of astronomy related books and videos. If you prefer to purchase books the RCA Sales table will feature a large assortment of Astronomy reference books, star-charts, calendars and assorted accessories.

Learn about amateur observing programs such as the Messier, Caldwell and Herschel programs. Depending on table allocation, RCA members will be displaying programs such as observing the Moon, Planets, Asteroids and more. Find out about our Telescope Library where members can check out a variety of telescopes to try out. Find out about the observing site committee and special interest groups. Special interest groups, depending on participation, include Cosmology/Astrophysics, Astrophotography and Amateur Telescope Making.

Above all get to know people who share your interests.

**The fair begins at 7:00 PM, Monday January 15th in the OMSI Auditorium.** There will be a short business meeting at 7:30, . Enter at the Planetarium Entrance right (north) of the Main Entrance. Proceed to your right to the 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

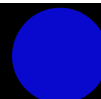
January 3



January 11



January 18



First Quarter Moon  
January 25



Club Officers			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jimrpdx@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Ken Cone	503-292-0920	kccone@hevanet.com
OMSI Liaison	Jan Keiski	503-539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



### 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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

### *From the President's Desk...*

I just looked out the window and it's raining again, or maybe raining still is more accurate? Ah well, in the Pacific Northwest this time of year, that shouldn't be surprising. But what are we astronomers supposed to do under these conditions? Hibernate until June?

Actually, there are many astronomical activities in which you can engage. I like to call these activities "playing astronomy." You can take your star charts and draw in the boundaries of the constellations. I find this extremely useful when I'm trying to locate that dim fuzzy deep in Ophiuchus months later in the summer skies. You can organize your observing notes. In my case, this can take a whole day of enjoyable work. Handling those sketches of spring galaxies and summer globulars and nebulae can bring back very pleasant memories of those black velvet nights. Review your equipment; does anything need repair, are any improvements needed, do you need anything you don't yet have? Mentor a student or beginner. I spent a wonderful off-season last year helping a high school student research her senior thesis on astronomy. Offer to give a presentation to the club or a school. Write an article for the RCA Gazette.

Is the rain still coming down? Time to play some astronomy!

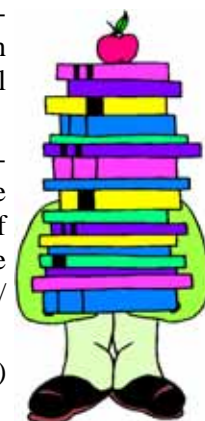
*Carol Huston*

### 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-oms.org/library.htm>

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





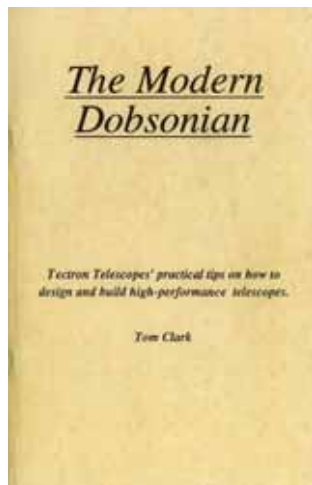
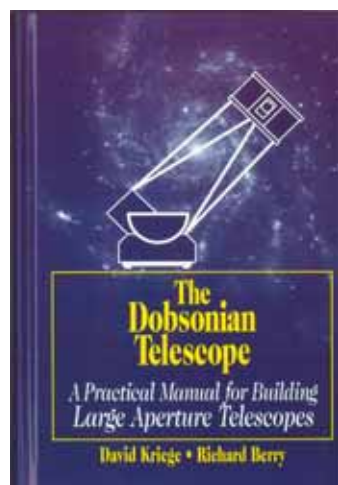
## A SAMPLING OF TELESCOPES FOR THE AMATEUR ASTRONOMER—PART 18

By John W. Siple

An astronomy club star party, where the telescope field is littered with instruments of all sizes and types, is a perfect opportunity to see first-hand what is currently popular among amateur astronomers. In vogue today are truss-tube Dobsonians (“Dobs”). Favored by many observers are those instruments in the 14.5 to 16-inch aperture class; there is a preponderance of these big light buckets pointing skyward, giving detailed views of planets, comets, and deep-sky phenomena.

How astronomy came to be dominated by these “Dobs” is just as remarkable as the views they provide. In San Francisco during the 1970s, John Dobson, later an icon to telescope designers, wheeled his porthole-glass mirror telescopes around the streets of the city. Mr. Dobson, as a member of The San Francisco Sidewalk Astronomers, freely shared his consummate knowledge of the heavens. His ideas about telescope construction caught on and snowballed into what is one of today’s premier astronomical industries.

The trend has been toward more user friendly instruments with quick setup and takedown times, in other words, backyard telescopes that *will be used a lot*. Accomplished master opticians, machinists, and professional woodworkers have entered the field, often forming their own optical companies and imprinting their unique skills, superior knowledge, and design strategies on the Dobsonians they make and/or sell.



*A wonderful pair of reference volumes for the amateur telescope makers' home library.*

Potential “Dob” owners have several courses of action: they can construct their own from detailed plans and available materials, purchase a sparkling new instrument, or locate a fine used example. Dave Kriege’s and Richard Berry’s 496-page comprehensive tome *THE DOBSONIAN TELESCOPE: A Practical Manual for Building Large Aperture Telescopes*, first published in 1998, instantly achieved cult status among telescope makers. This is probably the best guide on the subject. Less intense for initiates but nevertheless a fun read is Tom Clark’s 80-page booklet *THE MODERN DOBSONIAN*:

*Tectron Telescopes' Practical Tips on How to Design and Build High Performance Telescopes.*



*Dave Kriege and his 15-inch f/4.5.*

Within the last decade at least a dozen “Dob” companies have appeared on the scene; a viable option (and relief) for those individuals with limited telescope building skill who wish to start observing almost immediately. These commercial manufacturers of telescopes, knowledgeable in the tricks-of-the-trade, all seem to have an artistic flair, handcrafting their instruments out of golden oak (the wood of kings), exotic hardwoods, or humble fir. However,

every model, regardless of whatever innovative engineering feats the designers have imparted to their scopes, still rely on sound, basic principles established by John Dobson and other pioneers in the field.

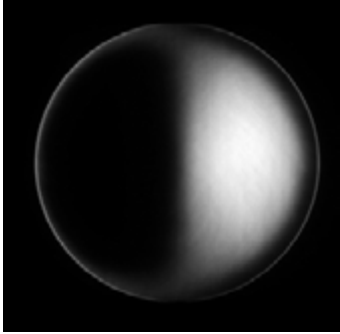
The best designs have achieved a proper balance between beauty, dynamics, optical performance, and cost. Tom Clark’s insightful passage describes the ideal deep-space telescope:

*“In the back of every amateur astronomer’s mind lies a ‘dream telescope’...your own mini-Palomar Observatory...that will open up the whole universe to you. A spaceship of the imagination to take you to distant stars, nebulae, galaxies....”*

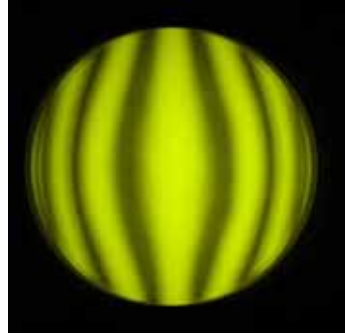
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*This masterfully-crafted 14.5-inch f/4.3 Starmaster Portable Telescope, assembled in position for equatorial tracking with a Tom Osypowski platform, has a Zambuto primary mirror. From the Oregon Star Party.*



Shadowgram.



Ronchigram.

*“Good optics are the heart of a fine telescope. Grinding and polishing the mirror is the most difficult part of making a telescope. And the most critical. Mirror making is a hobby that has been around for many years, and many people have put their hands to the task, but it is time consuming, requiring a great deal of skill, patience and perseverance. Especially when the mirror gets big. And especially if you strive for excellence. One of the hardest things is to know how to test optics, interpret what you see, and know what do do from there to correct the optical surface to the desired parabolic curve....” Steve Swayze*

Distant stars are brought into sharp focus only by optics with exacting specifications. Because of the time and effort involved in their production, these precise mirrors often constitute a significant percentage of a telescopes’ cost. Thomas R. Cave, whose company manufactured the famous Astrola-brand Newtonian telescopes a generation ago, reaffirmed this by saying, “There are *cheap optics* and *good optics* but there are no *good cheap optics*.”

Geniuses of mirror figuring, known throughout the astronomical community for consistently producing a superb product, are in very high demand. This clique of gifted, resourceful individuals includes Steve Swayze, John Hall (Pegasus Optics), Paul Jones (Star Instruments), Robert Royce, John Hudek (Galaxy Optics), Steve Dodds (Nova Optical), James Mulherin (OMI), Steve Kennedy, and others. Arch-Master of the Guild is Carl Zambuto of Rainier, Wash. Carl’s understudy, Ed Stevens, has also gained a fine reputation for producing extremely smooth, zone free mirror surfaces that give high contrast images and pinpoint stars.

Serrurier truss telescope “shells” without the optics can be purchased. Most commercial “Dob” companies then offer the buyer a choice of master optician mirrors—invariably fast, wide field of view f/4 to f/6 optic sets—to be placed in their new truss instruments. Expect to pay around \$1,800 for a finished 14.5-inch Pyrex mirror alone; slightly larger 16-inch mirrors cost several hundred dollars more. Those made of dimensionally-stable quartz or Astrositall can be requested from some companies, but they are considerably more expensive than their Pyrex counterparts.

Depending on the source, an expenditure of \$3,300 to \$4,600 for a fully-operational 14.5-inch truss-tube Dobsonian telescope is the norm. A 16-inch with greater light gathering power will cost the amateur astronomer about twenty percent more.

Truss-tube telescopes are not limited to the use of wood in their construction. MAG 1 Instruments, makers of the unique “PortaBalls,” use molded fiberglass, while SpicaEyes’ Dobsonians are constructed solely out of aluminum.

Used examples are plentiful and can be purchased at one half or more of the cost of a new instrument—those having master optician mirrors bring a premium. A vast array of accessories, some frivolous but the majority enhancing the performance of the telescope, can be added. Light shrouds, digital setting circles, equatorial platforms, and feathertouch focusers all make nighttime viewing more enjoyable.

*Bench test photos of a Zambuto mirror (P/V 1/19, RMS 1/53, relative transverse aberration 0.51, Strehl ratio 0.986) courtesy Peter Smitka (top) and Event Horizon Crayford focuser (left) by Jim’s Mobile; truss-tube Dobsonian (above, left) by Obsession Telescopes.*

(Continued on page 5)





## Telescope Sampling 18 (Continued from page 4)

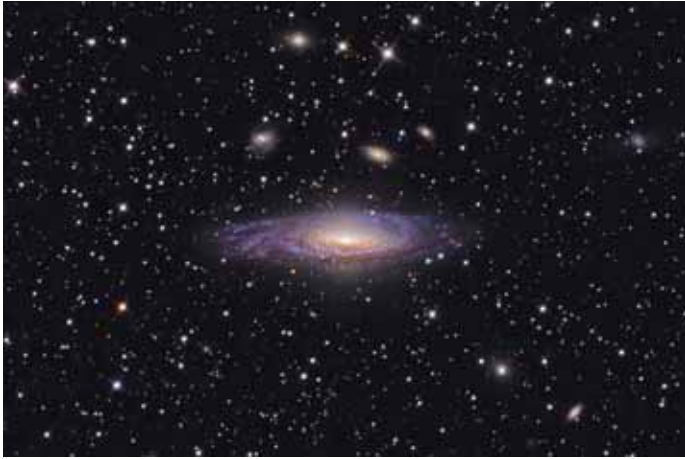


Image of the “Deer Lick Group” courtesy Russell Croman.



Stephan's Quintet image gallery (corresponding redshift values below) courtesy N.A. Sharp/NOAO/AURA/NSF.

First light through a newly acquired telescope, especially one of sufficient aperture to probe deep into the heavens, is a thrilling and awe-inspiring moment. Depending on the season, uncountable deep-sky challenges await the stalwart observer. Nestled among the stars of western Pegasus, the Winged Horse in mythology, lays a prominent spiral galaxy reminiscent of the Milky Way, a rich globular star cluster with a star-gobbling black hole lurking at its center, and a perplexing association of five faint galaxies.

NGC 7331 (Caldwell 30) is a swirling mass of light 10.7' X 4.0' in dimension with a structure similar to that of the Great Andromeda Galaxy. However, it is a much fainter glow at magnitude 9.5 but still a glorious sight in backyard telescopes. A large aperture telescope easily shows the dark dust lanes on NGC 7331's western rim along with its crown of satellite galaxies. This menagerie is affectionately called the “Deer Lick

Group.” Peering through 43 million light years of space, NGC 7331, with its spiral structure, star clouds, and bountiful clusters, has often been compared as a reflection of our own home galaxy by astronomers.

Slewing your telescope 1/2° to the SSW of NGC 7331 brings into view a region of the sky populated by a tight clustering of five remote (350 million l.y.) galaxies. Stephan's Quintet is named in honor of the French astronomer E.M. Stephan, who discovered this little grouping in 1877. The quintet, catalogued as Hickson 92, consists of NGC 7317, 7318A, 7318B, 7319, and 7320. The brightest member, NGC 7320, shining at magnitude 12.6, has a discordant redshift, indicating a much closer distance of 41 million l.y. Likely a foreground object projected in front of the main cluster, NGC 7320's possible interaction with the other four galaxies has stirred up debate among cosmologists—similar to what astronomers faced over a century ago in explaining Olber's Paradox. In a Telescopes & More 16-inch f/4.0 Dobsonian, all five of these small, elusive 13th magnitude galaxies are closely bunched together in the eyepiece field at 109x.



M15 digital photo courtesy Matthew T. Russell.

Orbiting the outskirts of the Milky Way is the impressive 6.4 magnitude globular star cluster M15 (NGC 7078). This globe of hundreds of thousands of suns, 12.3' in apparent diameter, is located 3.5° northwest of Enif (ε Pegasi). The cluster lies in an attractive low power field, forming an isosceles triangle with a 6th magnitude star 20' to the east and another one of 7.5 magnitude 5' to the NNE. M15 is characterized by its dense, blazing and difficult to resolve core—studies indicate a supermassive object (black hole) resides there.

Hopelessly embedded amongst the thousands of resolved outlying stars of the cluster is the tiny planetary nebula known as Pease 1 or Kustner 648. At 15th magnitude and 3 arc-seconds in diameter, this object is the ultimate challenge for the experienced deep-sky hunter. According to veteran observer extraordinaire Chuck Dethloff, “Pease 1 is definitely visible in a 16-inch telescope with high-quality optics and operating under good seeing conditions.” Give this mix of incredible deep-sky wonders a try the next clear, moonless night!

# Space Weather for Air Travelers

By Dr. Tony Phillips



At a time when much of the airline industry is struggling, one type of air travel is doing remarkably well: polar flights. In 1999, United Airlines made just twelve trips over the Arctic. By 2005, the number of flights had grown to 1,402. Other airlines report similar growth.

The reason for the increase is commerce. Business is booming along Asia's Pacific Rim, and business travel is booming with it. On our spherical Earth, the shortest distance from Chicago to Beijing or New York to Tokyo is over the North Pole. Suddenly, business travelers are spending a lot of time in the Arctic.

With these new routes, however, comes a new concern: space weather.

“Solar storms have a big effect on polar regions of our planet,” explains Steve Hill of NOAA’s Space Weather Prediction Center in Boulder, Colorado. Everyone knows about the Northern Lights, but there’s more to it than that: “When airplanes fly over the poles during solar storms, they can experience radio blackouts, navigation errors and computer reboots—all caused by space radiation.”

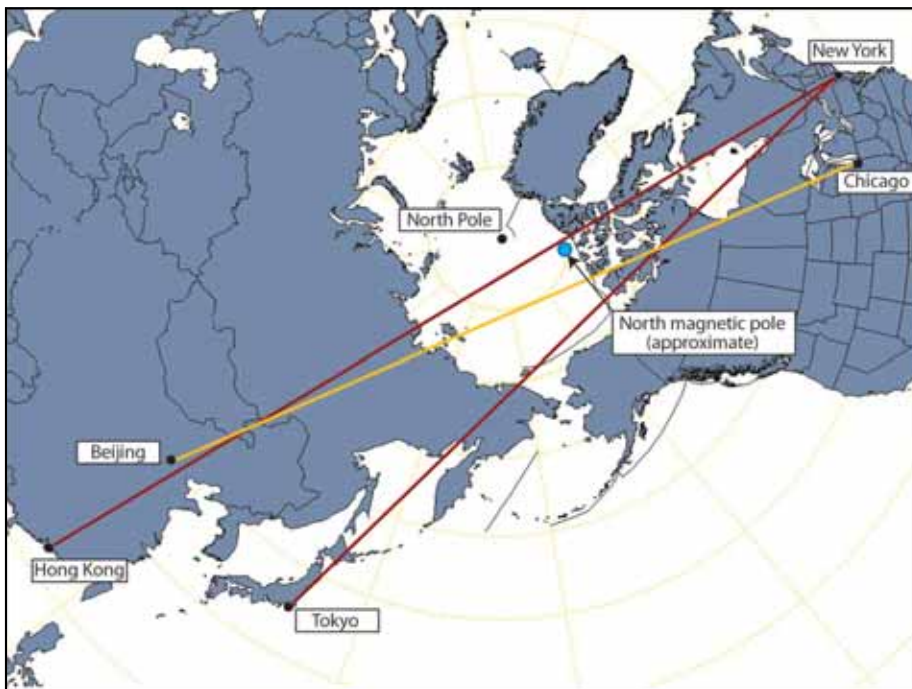
In 2005, United Airlines reported dozens of flights diverted from polar routes by nasty space weather. Delays ranged from 8 minutes to nearly 4 hours, and each unplanned detour burned expensive fuel. Money isn’t the only concern: Pilots and flight attendants who fly too

often over the poles could absorb more radiation than is healthy. “This is an area of active research—figuring out how much exposure is safe for flight crews,” says Hill. “Clearly, less is better.”

To help airlines avoid bad space weather, NOAA has begun equipping its GOES weather satellites with improved instruments to monitor the Sun. Recent additions to the fleet, GOES 12 and 13, carry X-ray telescopes that take spectacular pictures of sunspots, solar flares, and coronal holes spewing streams of solar wind in our direction.

Other GOES sensors detect solar protons swarming around our planet, raising alarms when radiation levels become dangerous.

“Our next-generation satellite will be even better,” says Hill. Slated for launch in 2014, GOES-R will be able to photograph the Sun through several different X-ray and ultra-violet filters. Each filter reveals a somewhat different layer of the Sun’s



The shortest airline routes from the Eastern U.S. to popular destinations in Asia go very near the magnetic North Pole, where space weather is of greatest concern.

explosive atmosphere—a boon to forecasters. Also, advanced sensors will alert ground controllers to a variety of dangerous particles near Earth, including solar protons, heavy ions and galactic cosmic rays.

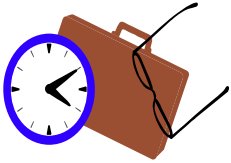
“GOES-R should substantially improve our space weather forecasts,” says Hill. That means friendlier skies on your future trips to Tokyo.

For the latest space weather report, visit the website of the Space Weather Prediction Center at <http://www.sec.noaa.gov/>.

For more about the GOES-R series spacecraft, see [http://goespoes.gsfc.nasa.gov/goes/spacecraft/r\\_spacecraft.html](http://goespoes.gsfc.nasa.gov/goes/spacecraft/r_spacecraft.html).

For help in explaining geostationary orbits to kids, or anyone else, visit The Space Place at [http://spaceplace.nasa.gov/en/kids/goes/goes\\_poes\\_orbits.shtml](http://spaceplace.nasa.gov/en/kids/goes/goes_poes_orbits.shtml).

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



## BOARD MEETING MINUTES

December 4, 2006  
OMSI Board Room  
Andy Phelps

Meeting called to order by Carol Huston at 7:05pm.

Board members present: Larry Godsey, Carol Huston, Matt Brewster, Peter Abrahams, Jim Reilly, Jan Keiski, David Nemo, Andy Phelps, Ken Hose, Greg Rohde, Patton Echols, Dareth Murray

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 12 voting members present.
- Treasurer's Report – Larry Godsey: \$33,635.26 total liabilities and equity. We will have to file form 990 this year due to our assets.
- VP Programming – Matt Brewster: Everything is ready for set up of dinner meeting. Cafeteria will be available at 6:30pm. Food still needs to be purchased; awards committee will handle awards, and drawing will be held for binoculars.
- Community Affairs – Patton Echols: nominal
- VP Membership – Ken Hose: 7 new members, 6 renewals, \$254 collected in dues, 280 member families.
- New Member Advisor – Jim Reilly: New member meeting had to be cancelled due to illness – will try to re-schedule before Messier Marathon.
- Book Library - Jan Keiski: nominal
- Telescope Library – Greg Rohde: Received donation of very old scope – mirror appears in good condition.
- Magazine Subscriptions – Larry Godsey: Nominal.
- IDA – Dareth Murray: Will be presenting to Washington County Planning Organization. The town of Mosier will soon have lighting ordinance.
- Webmaster – Dareth Murray: Comcast thought the RCA list was spam. This caused a disruption in delivery of discussion info. Was cleared up within 2 days. Will be changing the list of officers on the website. Will set up a new calendar for website.
- Site Committee – David Nemo: Will be holding the drawing for binoculars at December dinner meeting.
- ALCON 07 – Dareth: ALCON committee meeting will be held Dec. 10. Volunteers are needed for on-site logistics. Registration discount is offered for RCA members.

### Old Business

- Action Item: Patton is continuing to research the forum issue.

- Action Item: Sky Calendar at meetings: Peter posted a request for volunteers to the list and received no response. The search continues.
- Action item: Carol has the RCA banner – will hand off after meeting.
- Offered donation of CCD imager: Matt has been advised that the imager may not be appropriate for general club use.
- Phone line report: Greg received call for advice about new scope purchase. December 4 – January 8: Andy Phelps, January 9 – February 5: Dareth Murray.

### New Business

- Mentorship program – arrange meetings between people with needs and people with knowledge. Jim Reilly volunteered to take this on.
- Ken Hose is handling new member packet updates.
- Directorships – should we add a volunteer coordinator position? Should this fall under the SIG director's duties? There are people who are interested in helping out but are unsure how to go about it. More discussion is needed with Ken Cone.
- Motion was made to recognize the RCA-GAMA joint astronomical conference held on September 14-24, 2006 as an official RCA event. Motion: Matt Brewster, Second: Jim Reilly, vote passed.
- Astronomical League has an outreach award. We should check AL website for specifics and to see if the club may qualify.
- Nominated slate of board of directors was elected by unanimous vote at November 2006 meeting.

Meeting adjourned 8:23pm.

### Telescope Workshop

When: Saturday, January 6, 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

Assistant: Don Peckham don@dbpeckham.com

### ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, January 17, 7 PM.

Topic: "Science and Logic"

Presented by: Dennis Anderson

Place: Linus Pauling Complex,

3945 S.E. Hawthorne St., Portland.

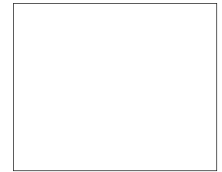
Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499).

<http://www.rca-omsi.org/cosmologysig.htm>



Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## January 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	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			

### ***January 2007***

Jan 6	Sat	Telescope Workshop	Swan Island	10am-3pm
Jan 8	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Jan 15	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Jan 17	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7:pm

### ***February 2007***

Feb 3	Sat	Telescope Workshop	Swan Island	10am-3pm
Feb 5	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Feb 19	Mon	RCA General Meeting	OMSI Auditorium	7:00pm
Feb 21	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7:pm

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.rca-omsi.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-omsi.org>



The

# Rosette Gazette

Volume 19, Issue 02

Newsletter of the Rose City Astronomers

February, 2007



## RCA FEBRUARY GENERAL MEETING

### Telescope Making Outline of the creative thinking process Presented by Dan Gray

Entrepreneur Dan Gray is President of Technical Marine Service, Inc. which provides systems design and trouble shooting for seagoing ships and land-based industrial sites. Dan has successfully applied a similar creative-thinking process toward telescope making and will share these ideas in his talk.

The RCA Telescope Making Workshop is generously hosted by Dan at his Swan Island facility where he and fellow RCA members have generated innovations through the incorporation of many of Dan's ideas.

Please join the Rose City Astronomers Monday, February 19th to see some remarkable innovations and design concepts, and learn how they were developed.



For more information on Dan's 28" telescope shown here, visit:  
<http://www.siderealtechnology.com/28inch/>

**All are Welcome!**  
**Monday February 19**  
**Social Gathering: 7 pm.**  
**Meeting Begins: 7:30 pm.**  
**Location: OMSI Auditorium**

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  - .... Cosmology SIG
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- 12. Messier Marathon!
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RCA is a member of the Astronomical League.  
<http://www.astroleague.org>

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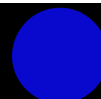
Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.  
Moon photos below courtesy David Haworth

Full Moon  
February 1

Last Quarter Moon  
February 10

New Moon  
February 17

First Quarter Moon  
February 23



<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jimrpx@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Vacant		
OMSI Liaison	Jan Keiski	503-539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



## **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

### **The Start of the Observing Season.**

Well, here it is again: the start of another observing season. The RCA will begin its official observing season in March (3/16-3/18) with two star party events: the Kah-Nee-Ta Messier Marathon and the Camp Hancock Dark Sky Star Party. Both of these activities provide a wonderful opportunity for getting out your scope and observing with your fellow RCA Members. Starting with these star parties, our club will generally have several star parties a month until next October.

The Kah-Nee-Ta star party offers resort amenities as well as dark skies. Those attending this get-together can relax in a private room (at about a 50% discount from their regular lodging fares), talk astronomy around a huge social-gathering fireplace, and eat their meals in a restaurant.

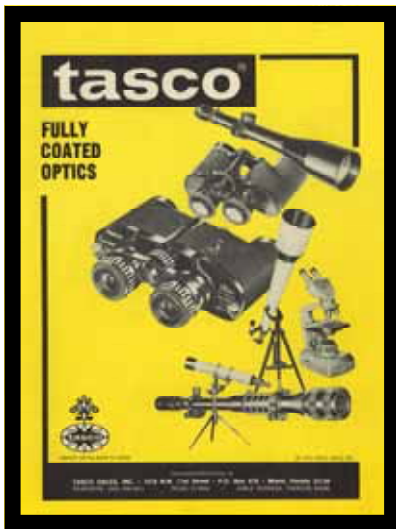
The Camp Hancock Dark Sky Star Party is more rustic. Lodging is shared bunkhouses (bring your own sleeping bag), central lavatory facilities, and meals are family style and served in a chow hall. Both sites offer east-of-the-Cascades dark skies for observing, and have been fun, popular activities for many

of our members.

So, now is probably a good time to review some basic star party information for those who may be new at this. First, realize that it's going to be cold out there. Not just now in the early days of spring, but even in the dead of summer, you will be uncomfortably cold out in the telescope fields if you're not appropriately dressed. You need at least a heavy jacket, and a hat and gloves wouldn't be out of place. Next, and this may sound a little like belaboring the obvious, but it's also going to be dark out there, and we want to keep it that way. Many of our members are engaged in formal observing programs and are looking for DFOs (Dim Fuzzy Objects). In order to see some of these, even in the large telescopes some of our members use, eyes need to be completely dark-adapted. This dark adaptation is a fragile thing: one second of exposure to white light and it will take them 20 minutes or more for their night vision to recover to its previous levels. So, only red flashlights on the telescope field please, and keep them dim at that. Think also about your car's headlights, interior lights, and especially back up lights (which come on automatically when any vehicle is put into reverse). All of these can mar or destroy dark adaptation.

*(Continued on page 9)*





## Tasco Scopes

### Yesteryear's 60mm alt-azimuth refractors attract collectors.

By John W. Siple

**T**he science-minded citizen, upon attending planetarium shows, public star parties and campouts deep in the back country where the night sky is unbelievably dark, soon yearns for that “first telescope.” To fill this niche, Tasco Sales Inc. of Miami, Florida provided a selection of easily affordable 60mm (2.4-inch) alt-azimuth refractor telescopes for the beginning stargazer.

Now considered collectable among amateur astronomers, this precision lineup of imported Japanese instruments—the bulk of sales were in the 1960s and '70s—has as its membership Models #9TE-5 (234X) Starbrite, #12TE-5 (266X) Solarama, and the #19T (320X) Observatory Self-storing.

Even to the nonprofessional, these vintage Tasco refractors appear *quality-made*, a cut-above those run-of-the-mill 2.4-inch scopes so often found in many of today's department stores. These three instruments were designed as beginners' telescopes but still capable of giving a grand tour of

the major worlds of the solar system and the brighter double stars, star clusters, nebulae, and galaxies.

The #9TE-5 Starbrite (Reg. No. 59234) and #12TE-5 Solarama (Reg. No. 512266) joined Tasco's catalogue listings in the 1950s (Tasco was formed in 1954 as Tanross Supply Co. by entrepreneur George Rosenfield) at \$49.95 and \$89.95, respectively. The Starbrite and Solarama were also advertised with TE and T suffixes.

A late comer to the catalogue pages was the unusual #19T (Reg. No. 2350) pillar refractor, where the scope can be stored *inside* the metal column where the tripod legs attach. This feature “permits the observer to transport the telescope on field trips without the necessity of taking the Styrofoam gift box.” Introduced in 1972 three years after the first Apollo Moon Landing for \$179.95, this 2.4-inch telescope was an innovative new style conceived by Tasco's engineers.

Several other Tasco 2.4-inch alt-azimuth refractors made their debut in the 1960s and '70s. The most noteworthy is the #9TE-0 (Reg. No.

*The 1970 catalogue (above, left) and a collection of Tasco 60mm alt-azimuth telescopes (above) from the 1960s and '70s.*

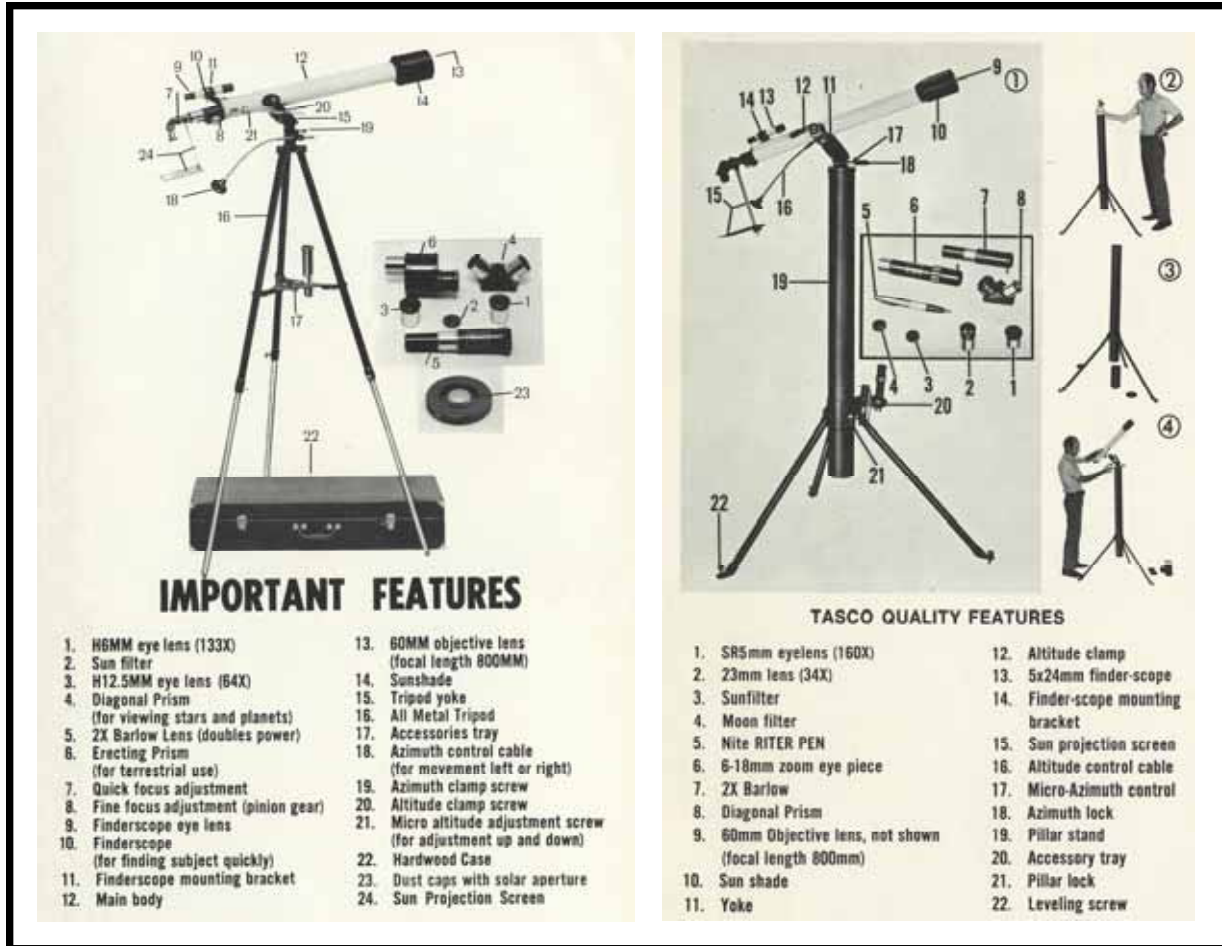
09236), an advanced hybrid of the Starbrite and Solarama refractors and big brother to Tasco's very popular 50mm Cosmic I & II models (see photo above, top center). This 236X refractor from 1969 is one of the company's finest all-around examples of precision engineering. It is a great astronomical and terrestrial telescope for discriminating amateurs and students.

Model #9S, a 350X scope from the 1970s, is identical in form to the Starbrite. However, it carries some additional accessories—an erecting prism, one extra eyepiece, the Nite-riter pen, and Tasco's elaborate Model No. 6621 6-18mm zoom erecting system.

In its quest for the ideal beginner's telescope, Tasco acquired its merchandise from a variety of top-notch Japanese optical companies. The ubiquitous Starbrite and Solarama refrac-

*(Continued on page 4)*





tors came from Towa Optical Manufacturing Co. (the majority of the company's cheaper refractors and reflectors came from them), while Royal Astro Optical Industries Co. Ltd. and Koyu Co. Ltd. (Vixen) supplied Tasco with their premium grade instruments.

Vixen apparently was the source for Tasco's #9TE-0 and #19T. Other worldwide and regional distributors of quality astronomical instrumentation, such as Colonial Optical Co. (Mayflower) of Inglewood, Calif., also rebranded numerous telescopes with their own logos.

Each telescope was sold with Tasco's wonderful booklet *A Key to Worlds Beyond* (now a collector's item); Rand McNally's *Modern Map of Outer Space* and *Official Map of the Moon* were also included, both suitable for

wall-hanging in the amateur astronomer's den.

In side-by-side comparison tests, the #9TE-0 (focal length 710mm) was judged by the author to be the best optical performer (the Solarama was a close runner-up). The #19T Observatory Self-storing, although giving a superb performance at low magnifications, had noticeable astigmatism. The 700mm focal length Starbrite was deemed to operate best at lower powers. All four Tasco refractors have coated, air-spaced, achromatic objective lenses (the #9TE-0 and #19T use foil spacers) mounted in non-adjustable cells.

The #9TE-0 and #12TE-5 both have alt-azimuth mountings identical to that of the #9TE-5 except for the inclusion of an auxiliary azimuth slow motion control mechanism. Of course

*Assembly diagrams for the #12TE-5 (above, left), copyright 1966 Tasco Sales Inc., and the #19T, ©1972. Reprinted by permission of Bushnell Performance Optics.*

the #19T, because of its sophisticated mechanical design strategy and unusually good fit and finish, offers the amateur astronomer the most stable views of deep-sky objects.

On the secondary market, the Starbrite and Solarama alt-azimuth refractor telescopes are usually available from a variety of sources—the former at \$40-50, while the latter can be found for a slightly higher \$75-100. The scarcer #9TE-0 and #19T models can sell for \$125 and \$200, respectively. This group of refractors was replaced in the early 1980s by Tasco's cheaper red-tube models.

(Continued on page 5)

## Tasco Scopes (Continued from page 4)



*Dazzling Sirius by Paul Mayo.*

Ancient skywatchers, by following the line of Orion's belt stars to the southeast, gazed upon the brightest star in our nighttime sky. Sirius, blazing at magnitude -1.46, became known as "The Scorching One," "The Sparkling One," "The Dog Star," and "The Nile Star."

Astronomers in the 19th century suspected an unseen companion by observing periodic shifts in Sirius' track among the background stars. Orbital calculations showed a period of 50 years, but because of the bright glare of the primary it went undetected for many decades.



*Orbital diagram courtesy Chris Butler.*



*"Ice World 2" artwork by Don Dixon.*

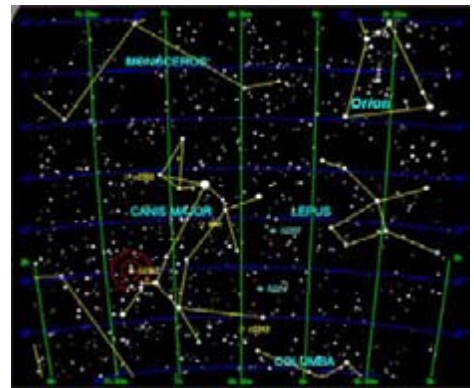
Finally on January 31, 1862, the new Clark 18½-inch lens made for the refractor at Dearborn Observatory, while trained on Sirius revealed the suspected companion—an 8.5 magnitude white dwarf called "The Pup."

The next best opportunity to view "Sirius and The Pup" together in moderate aperture scopes occurs in the year 2022, when they are separated by a relatively wide 11". In all of the Tasco instruments, Sirius is an intense, blue-tinted white diamond. However, "The Pup" is invisible to users of the limited aperture Tasco refractor telescopes.

The sprawling galactic star cluster M41 (NGC 2287), a celestial showpiece found 4° south of Sirius, is a favorite object for small telescopes. At magnitude 4.5 and with an apparent diameter greater than that of the Full Moon, M41 is also an easy target for the unaided eye and binoculars.

Using a Tele Vue 40mm Plössl eyepiece (20X) in the #12TE-5 Solarama, over three dozen shimmering stars—the curving chains of the brighter 7th magnitude members forming a butterfly pattern—grandly fill the field of view. Near the center of this loosely-concentrated star cluster is a prominent 6.9 magnitude orange-red K-type giant star. Visible to the north of the cluster's center is a large irregular patch of fainter 9th to 11th magnitude suns. This deep-sky object appears segregated, with the brighter members found in the southern part. M41 has a linear diameter of 24 light years and lies 2,350 light years from Earth.

Surrounding the 4.4 magnitude star Tau (30 Canis Majoris) is the compact open star cluster NGC 2362. The #19T, at 80X in a University Optics Wide Scan 10mm ocular, shows Tau embedded among fifteen 7th magnitude and fainter stars (averted vision helps here). The cluster has a distinctive pentagonal-shape, with the apex pointing southward.



*Courtesy StarrySkies.com*

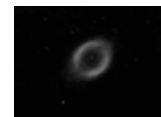
NGC 2362, or the Tau Canis Majoris Star Cluster, is one of the youngest open star clusters known. Its estimated age is one million years; most of the stars that comprise the cluster are extremely hot, luminous O and B-type supergiants. Tau itself is one of the most luminous stars in the Galaxy, outshining our own Sun by 50,000 times. NGC 2362 is 8 light years across and 5,000 light years away.



*Tau Canis Majoris Star Cluster courtesy Paul Mayo NSW Australia (www.skylab.com.au/pmsa).*

Herschel 3945 (mags. 4.8, 6.8; sep. 27") or the "Albireo of Winter," positioned just 1.6° northwest of NGC 2362, is a beautiful double star with gold and blue components. The #9TE-0 refractor, operating at 39X with an Edscorp 18mm orthoscopic ocular in the eyepiece holder, easily resolves this wide, colorful pair.

A snowy winter night, with Canis Major near the meridian and its stars flickering in the ice-cold breezes, is a call to dig out that old Tasco from storage. Be sure to dress warmly!



## Great Comet McNaught!

What makes a comet great? If you saw comets Hyakutake in 1996 and Hale-Bopp in the 1997 you have a good idea indeed, but what do we make of Comet McNaught? Very bright at -1.5 or so as it hung in the bright western sunsets of January 11 and 12, it was obviously very bright – but not all that conspicuous.

Certainly in a dark sky it would have been spectacular, but since it wasn't do we give it the title "great" anyway? Perhaps the best way to judge is by the reaction of non-amateur astronomers, and that was pretty mild. So even though Comet McNaught was seen naked eye in broad daylight January 13 and 14 by those fortunate to have clear enough skies, it was still not visually spectacular.

That's not to say that it wasn't spectacular in a knowledge based view – knowing how rare daylight comets are certainly made it a wonder to the minds' eye. But that's a view that generally takes a great deal of interest to start with. At this point I was thinking that those who were calling McNaught a "great" comet were either a little carried away or hadn't been lucky enough to see Hyakutake or Hale-Bopp in their primes.

And then the Comet McNaught emerged into the evening sky of the southern hemisphere.

From the reports and wonderful photos I've seen online it's clear that the comet should now be properly called Great Comet McNaught. The most impressive series of online photos I found as of January 20th were taken by Rob McNaught, the comet's discoverer, from Siding Springs Observatory in Australia. A series of his photos are at: <http://msowww.anu.edu.au/~rmn/C2006P1new.htm> and one his best is shown to the right.

Aside from being a gorgeous sight, it's also instructive in that the graceful arc of the multiple tails traces the orbital path of the comet. In fact the northern parts of the tail could be seen on the western horizon after sunset in the northern hemisphere sky. If we had clear skies locally I'm sure many of us would have seen them. Oh well...

But really, what a treat this has been even though we got to see so little of it with our own eyes. This comet became much brighter than we dared hope, plus it didn't have months of build up in the astronomical press – imagine the hype that could have developed around it. So even though the southern hemisphere gets the best view it's difficult to feel like we got the short end of the stick. They didn't get to see Comet Hyakutake at its best, so in a way it's a fair trade. Who knows, maybe everyone on the planet will get a good look at the next great comet.

And a final thing to feel good about. We have a pretty amazing streak going with the last three great comets – the weather. For Hyakutake, Hale-Bopp and now McNaught we've had at least two nights of exceptionally clear skies during times of the year we've had every right to expect we'd be completely clouded out.



*Comet McNaught sketch through 7x50 binoculars, January 11, 2007*



*Photo by Rob McNaught, January 20, 2007, Siding Springs Observatory*



## 2007 RCA Observing Schedule

Month	Date	Day of Week	Event	Location
Mar	16-18	Fri-Sun	Messier Marathon and Dark Sky Star Party	Kah Nee Ta
Mar	16-18	Fri-Sun	Messier Marathon and Dark Sky Star Party	Camp Hancock*
Mar	24	Sat	Vernal Equinox Celebration	Rooster Rock St. Park
Apr	20-22	Fri-Sun	RCA Dark Sky Star Party	Camp Hancock*
Apr	21	Sat	Astronomy Day	Rooster Rock St. Park
May	12	Sat	RCA Star Party	TBA
May	19	Sat	Planet Parade	Rooster Rock St. Park
Jun	9	Sat	RCA Star Party /Outreach	McMenamins**
Jun	16	Sat	Summer Solstice Celebration	Rooster Rock St. Park
Jun	22-24	Fri-Sun	ARRL Field Day - Ham Radio	Larch Mountain***
Jul	13-15	Fri-Sun	RCA Dark Sky Star Party	Trout Lake, WA*
Jul	12-15	Thu-Sun	Table Mountain Star Party	Ellensburg, WA*
Jul	21	Sat	Luna Viewing	Rooster Rock St. Park
Aug	9-12	Thu-Sun	Mount Bachelor Star Party	Bend, OR*
Aug	11	Sat	RCA Star Party	White River Canyon
Aug	12	Sun	Perseid Meteor Shower Watch	Rooster Rock St. Park
Aug	16-19	Thu-Sun	Oregon Star Party	Indian Trail Spring*
Sep	7	Fri	RCA Star Party	Dethloff's Property
Sep	8	Sat	RCA Star Party	Dethloff's Property
Sep	14-16	Fri-Sun	RCA Dark Sky Star Party	Camp Hancock*
Sep	15	Sat	Autumnal Equinox Celebration	Rooster Rock St. Park

\* Indicates camping or camping nearby.

\*\* Pending final agreement with McMenamins

\*\*\* Good day to stay off the mountain!

For all events: weather permitting. Schedule subject to change.

## Star Party Driving Directions

### CAMP HANCOCK

OMSI's Camp Hancock Field Station is located near Clarno. You have two basic route choices to choose from. 1) Take I-84 east from Portland to Biggs Junction (exit 104), exit and head south on Hwy 97 to Shaniko. 2) Or you may take Hwy 26 east over Mount Hood. Turn left onto Hwy 216, which will take you to Hwy 197 just west of Maupin. Turn right on Hwy 197 and take it south to its junction with Hwy 97. Turn left onto Hwy 97 and take it to Shaniko. At Shaniko, turn south on Hwy 218 (Shaniko-Fossil Hwy) and continue through Antelope and east towards Clarno near the John Day River. Look for the entrance to Camp Hancock about two miles east of the John Day River.

### INDIAN TRAIL SPRING

Travel east out of Prineville on Hwy 26 approximately 14 miles past the Forest Service Headquarters located at the east end of town, turn right onto the Ochoco Ranger Station Road. Zero your trip meter and travel 8.4 miles, until you come to a Y in the road just past the Big Summit Ranger Station. At this Y, stay to the right turning onto FS road # 42. Follow this for 19 miles as it winds up into and through Big Summit Prairie. Then turn right onto FS 4240 and proceed for 2.7 miles, turn right onto FS-800. Go 1.5 miles west on 800 and you will arrive at Indian Trail Spring. The site is located on National Forest Service lands and is at 5000 feet of elevation.

### KAH-NEE-TA

Travel east on Hwy 26 past Mt. Hood Government Camp, turning south towards Bend at the junction on Mt. Hood. Turn Left towards Simnasho (approximately 29 miles east of Government Camp - Big Kah-Nee-Ta sign on Hwy 26). Follow the road to Kah-Nee-Ta resort (also marked by large sign at resort driveway entrance). On the way to the resort, you'll pass the observing site before dropping down into the river valley. It is in the open field up to your left from the highway close to the Mile 14 milepost marker.

### LARCH MOUNTAIN

From Portland take I-84 towards Hood River and take exit #22 for Corbett. Zero your trip meter at the stop sign. At the stop sign you turn right and head up the hill towards Corbett. At 1.3 miles the road Y's, stay left at this "Y" and then take a left onto the Columbia Gorge Scenic Hwy. Zero your trip meter and proceed for 1.9 miles, take a right onto Larch Mountain Road. It is paved and marked with a big sign. Follow the road to the top of Larch Mountain (14 miles). At the top you turn right (just before the parking lot) into a large unpaved open area. You are at 4000 feet elevation.

### ROOSTER ROCK STATE PARK

Head east on I-84 from Portland. Take exit #25 and loop over the freeway to the State park. Day Use Permit is \$3.00 nonmember / \$1.50 OMSI member per vehicle at Rooster Rock State Park.

### WHITE RIVER CANYON

From Portland, take Hwy 26 east towards Mt. Hood. Shortly past Government Camp, you will see a sign for Hwy 35 (Hood River turn off). Take this exit and go approximately 4.2 miles and look for a green sign marked "White River Canyon BSA Lodge Parking". Go past the entrance roughly 50 yards and turn left into a large Forest Service parking area.



## BOARD MEETING MINUTES

January 8, 2007

OMSI Classroom 1

Andy Phelps

Meeting called to order by Carol Huston at 7:09pm.

Board members present: Larry Godsey, Carol Huston, Matt Brewster, Peter Abrahams, Jim Reilly, Jan Keiski, David Nemo, Andy Phelps, Matt Vartanian, Bob McGown, Dareth Murray, Sameer Ruiwale, Ken Hose, Greg Rohde, Patton Echols.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 11 voting members present.
- Treasurer's Report – Larry Godsey: \$33,941.70 total liabilities and equity. Larry distributed department spending reports to individual department heads.
- VP Programming – Matt Brewster: January – info fair including Youth, OSP, magazines, observing, IDA, Cosmology and Camp Hancock. Still to contact: Imaging, Telescope workshop, new members.  
February – Dan Gray, Creative design.
- VP Observing – Matt Vartanian: 2007 Observing schedule nearly complete, still trying to fill May opening. Matt will coordinate with Matt B. to exchange info with Larry Deal about Kah Nee Ta. Discussion was held about holding 2 events on the same weekend. Some members may choose to attend Hancock instead of Kah Nee Ta, reducing our ability to fill guaranteed rooms. On the other hand the two locations attract very different people and may not make much difference. Hancock was only available this weekend and was booked in response to growing demand for Hancock star parties. Overall consensus was that the board is comfortable with the minimal risk involved in holding these two events on the same weekend.
- VP Membership – Ken Hose: 1 new member, \$16 collected in dues, 281 member families. This is about the same as last year. Ken has emailed new member packet documents to board members for review.
- Book Library - Jan Keiski: nominal
- Telescope Library – Greg Rohde: Sealed bid auction has very few bids.
- Magazine Subscriptions – Larry Godsey: Nominal.
- Sales – Sameer Ruiwale: \$237 December, \$964 November sales. Is it worth setting up in December? Carol reminded us that the sales table is a service to members and not a profit center. It is good to have it open in December for last minute gifts.
- IDA – Bob McGown: Just returned from Seattle where he operated the IDA booth at the American Astronomical Society conference. He also made a presentation to the Citizen Action Group in Beaverton. It was very successful.

- Webmaster – Dareth Murray: Calendar on website has been updated. Will make minor changes as suggested. Dareth also felt she should no longer be listed as OSP liaison because OSP is a separate entity and its Director is on the RCA board.
- Site Committee – David Nemo: Update on Site fundraising after one year: \$10,945 cash donations from 26 people, 6 of \$1000 or more. We've also received \$2660 in pledges. The Binocular raffle made about \$400-\$500. David is investigation a lead on some property.
- OMSI – Jan Keiski: nominal
- SIG Director – Ken Cone (via email) Ken has resigned the position of SIG Director.

### Old Business

- Action Item: Sky Calendar at meetings: The search continues.
- Volunteer coordinator position: Is it needed? Should it be included in SIG director's duties? More discussion needed. Action item: Greg Rohde will contact a member about the vacant SIG director position.
- Phone line report: Only 1 call received in December. January 9 – February 5: Dareth Murray, February 6 – March 5: Bob McGown.

### New Business

- Carol reviewed what board members need to know and distributed and discussed a list of contents of board website.
- Dareth motioned that "Yuri's Night," a celebration of first human spaceflight (April 12) be an official RCA event. (Bob seconded) Brief discussion was held. Motion defeated. Yuri's Night should be posted in the newsletter and mentioned at general meeting.
- 501(c)(3) status: Discussed specifics about accepting donations (in-kind) and donation of club assets. These must be to other 501(c)(3) organizations. Also discussed that revision of by-laws involves re-filing of articles of incorporation with the state.
- For February: Think about board positions and set goals for this year.
- Larry motioned that RCA sponsor the Clear Sky Clock for Portland (Carol seconded) Motion passed.

Meeting adjourned 8:56pm.

### Presidents Message *(Continued from page 2)*

Ok – enough lecturing. There are other etiquette considerations as well as comfort and preparation ideas to help your fun and comfort level at star parties. Check out the beginners' section of the RCA web site for the articles on star party etiquette and star party supplies. These are also generally available at the membership table at each month's general meeting. Now, let's get out there again and enjoy the wonders of the night sky!



# We're Going to Camp Hancock TWICE This Spring!

**March 16th - 18th and April 20th - 22nd**

Camp Hancock is an OMSI sponsored field station for the promotion of science education. It is located about 150 miles from Portland and is 2 miles east of the John Day River in Eastern Oregon in the Clarno Fossil Beds. Camp Hancock is NOT a resort hotel; it is a rustic kid's camp with 16 bunkhouses that sleep up to 14 people each in A-frame buildings. The bunkhouses are one room with bunks, mattresses, limited electricity and heaters on a 60 minute timer. You will be sharing the bunkhouse with others in our group.

## Lodging:

The bunkhouses are not reserved, except by prior arrangement for medical necessity. Bring your own warm sleeping bag (it will be cold at night) and whatever else you need, especially warm clothes. Please inform Larry Godsey at [larrygodsey@comcast.net](mailto:larrygodsey@comcast.net) or 503-675-5217, if you have special diet needs or have medical issues. One of the cabins will be set aside as a "ladies only" bunkhouse. The remaining bunkhouses are first-come and you will be sharing with others. There is a limited area for Tents, RVs and trailers. We've been usually able to provide limited electricity to most of the RVs and trailers, but bring your own power cord, and be prepared to be self sufficient in case there is not enough power available.

RVs, Trailers and Tents are \$14 per night per person.

Bunks in the A-frame bunkhouses are \$20 per person per night.

## Meals:

Camp Hancock offers breakfast and a sack lunch (Saturday and Sunday), and dinner (Friday and Saturday). The meals are served family style and everyone is expected to help with setting up, clearing the tables and doing dishes. Breakfast is served at 9am Saturday and Sunday, with fixings put out for making a sack lunch at 10am both days. Dinner will be at 6pm on both Friday and Saturday. Everything must be paid for with your registration before March 25th. Meals must be preordered and can NOT be purchased on-site.

Breakfast - 9am - is \$5 per person per day (Saturday & Sunday)

Sack Lunch - 10am - is \$4 per person per day (Saturday & Sunday)

Dinner - 6pm - is \$6 per person per day (Friday & Saturday)

## Registration:

Mail-in registration and payment deadline for the March outing is March 10th.

Mail-in registration and payment deadline for the April outing is April 16th.

## More Information:

There is more information on the web, including an order form you can fill out on-screen. The information, including pictures, downloadable Camp Hancock information, Clarno Fossil Bed information, driving maps and instructions, etc. will also be found on the web.

We have been asked again not to enter camping area until after 3pm, although Dob Valley will be open for setup after 2pm.

Go to "<http://larrygodsey.home.comcast.net/hancock/>" for complete information and registration forms.

# Awards



**Rufus Day III  
Herschel 400  
Award Number 357  
400 Herschel  
Objects Identified**

For more info visit:

<http://www.astroleague.org/observing.html>

## ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, February 21, 7 PM.

Topic: "Science and Logic"

Presented by: Dennis Anderson

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

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

# **OMSI** Astrophotography Conference 2007

## Introduction to Astronomy Image Processing for Electronic & Film Cameras

**Saturday March 10, 2007**

**8:00 am to 10:00 pm**

**Oregon Museum of Science and Industry  
Auditorium**

**1945 SE Water Avenue  
Portland, OR 97214-3354**

Astrophotography using electronic cameras and film cameras provides many benefits such as observing fainter details, making scientific measurements and producing stunning images that are shared with others. A key part of astrophotography is using image processing software to remove camera defects, lens defects and telescope defects. Also, image processing seems to have a magical ability to reduce sky glow and to enhance hidden details in the image.

The OMSI Astrophotography Conference covers the various aspects of image processing from the basics to advanced techniques. This conference is designed for attendees with no image processing experience to those who use image processing for their astro images.

The first session in the morning introduces the fundamentals of image processing as applied to astrophotography and provides a foundation for sessions that follow. The other sessions will show how to plan your image taking and how raw camera images are transformed into spectacular images of the universe. A special session on scientific measurements will provide you with an overview of astrometry and photometry and demonstrate how to use image processing software to make astrometry and photometry measurements on your images.

Two image processing labs, one using Photoshop and the other using free software, will take you step-by-step in improving astro images. Attendees are encouraged to bring their laptops with Photoshop CS3 Beta, DeepSkyStacker, PixInsight LE and GIMP and follow along in these labs. Tables, soft seat chairs and AC power are provided for the attendees.

At the end of the conference is an open session where attendees can present their image processing techniques or projects. A conference CD-ROM with presentations, reference materials and software is provided to each attendee.

The conference is sponsored and hosted by Jim Todd, (OMSI).

### Conference Schedule

Check <http://www.stargazing.net/david/OMSI/index.html> for Updates

- 8:00 am Registration
  - 8:30 am Image Processing Introduction, David Haworth
  - 9:30 am Getting Started Hints and Tips from My Experiences, Mike Hagen
  - 10:30 am Image Processing - From Photons to Image of Messier 33, Tom Carrico
  - 12:00 am Lunch on your own at the OMSI cafeteria
  - 1:00 pm Astrometry and Photometry, Richard Berry
  - 2:30 pm Photoshop Image Processing for Astro Images, Dave Sandage
  - 3:30 pm Image Processing Using Free Software, David Haworth
    - DeepSkyStacker
    - PixInsight LE
    - GIMP
- URLs for free software are at <http://www.stargazing.net/david/OMSI/index.html>
- 4:30 pm Dinner On Your Own
  - 6:00 pm Adobe Photoshop CS3 Beta Image Processing Lab, David Haworth
    - URL for CS3 Beta software is at <http://www.stargazing.net/david/OMSI/index.html>
  - 7:00 pm Open Session: Attendees demonstrate image processing techniques or projects
  - 10:00 pm Closing

Advanced registration is required because seating is limited. Registration is \$60.00. OMSI electronic registration is at OMSI Education Programs: Online Catalog & Registration. Direct link to OMSI is on

<http://www.stargazing.net/david/OMSI/index.html>

For questions about the conference contact

Jim Todd (503-797-4000 or [JTodd@OMSI.edu](mailto:JTodd@OMSI.edu))

**David Haworth (360 834-7561 or [David@airspd.net](mailto:David@airspd.net))**

Oregon Museum of Science and Industry (OMSI) information is at <http://www.OMSI.edu>.

# Launch Your Star Party Season with The Rose City Astronomer's 20th annual Kah Nee Ta Messier Marathon! Friday through Sunday March 16-18th, 2007



*Photo taken at Kah Nee Ta Messier Marathon 2005  
by Jan Keiski*

Kah Nee Ta's diverse facilities offer deluxe comfort for this early spring star party at half price for RCA attendees (\$75+ tax for double occupancy single king or double queen {children under 14 stay free, additional adults at \$14/night}). This year the resort has grouped us together in the West Wing near the lobby and café, with the nearest hospitality suite being occupied by our event host Jim Reilly. In addition, they offer a complimentary gathering room where our group may connect and rally together for each night's observing session located at either the new observing site (if conditions are drier), or the traditional quarry site.

This year's event is being held Friday through Sunday March 16-18th (extended stays are welcome).

Traditionally, RCA has opened its star party season each year by holding a Messier Marathon in March on the new moon weekend. Even though it is billed as a Messier Marathon, observers (and their families) come for many reasons: to try their hands at locating as many of the 109 Messier Objects as they can during a one-night shot; to observe their favorite objects under Central Oregon's clear dark skies; to spend a wonderful weekend with other astronomers swapping observing stories and exchanging information; or even just to spend a relaxing weekend with their families – all in comfortable accommodations that offer various other activities.

To make your participation in this activity more enjoyable, there is some advance preparation you can do that will help pave the way for a fun, comfortable night (or two) of viewing:

- **SUPPLIES:** Taking care of your personal comforts in advance can make or break your enthusiasm for participating in what could potentially be close to a 10-hour session of observing. Wear warm clothing in layers including warm footwear, a hat, and gloves. Bring some kind of chair for resting. Bring a thermos of coffee, hot chocolate, or soup and other pepper-up type snacks to jolt your flagging energy. Don't forget your handy equipment such as a red flashlight, extra batteries, dew protection, charts, and note-taking supplies. If you are totally new to observing and need more information, see the Member Services Table at a RCA general meeting and pick up the member guides "Introduction to Star Parties," "Star Party Supplies," and "Star Party Etiquette." (In addition, these articles are available on the Beginner's Section of the RCA Web Page at <http://www.rca-oms.org>)
- **BE PREPARED:** Have a good plan prepared ahead of time outlining the objects you want to observe. If you are doing the Marathon, a search sequence of objects is a critical element to strategically moving your way across the sky as objects are setting in the west. Procure or develop a search sequence, and look it over. (Search sequences will be available at club meetings before the event, as a handout that weekend, and among the reference materials listed below.) You will not have much time between the first signs of darkness and the time several of the first tough objects on your list will set in the west, so a good plan is essential to observing these. It is a good idea to review ahead of time the search sequence for the Virgo Galaxy Cluster, and maybe even to prepare your own map through this area. All members are encouraged to attend, even without observing aids. Note that you can observe many of the Messier Objects with binoculars. Many observers who set up their own telescopes are eager to share the sights of the universe and help novices learn more about equipment, how to find objects, and enjoy the wonderful views. However, be sensitive to the observer who is racing the western horizon in a time crunch to log objects before they disappear.
- **GET THERE EARLY:** Get to the site as early as you can so that you can enter the area and set up your equipment before it turns dark. The field is easy to maneuver a vehicle through, but if you've never done it in the dark, you could end up in a ditch – which has happened. You will need to be set up and ready to go for those first objects if you are doing the Marathon.
- **MARATHON NOTES & HINTS:** View as many objects as you can as early as you can. RCA member Jim Reilly, a veteran Messier Marathoner, has written in his log of

*(Continued on page 13)*



**Kah Nee Ta Messier Marathon** (Continued from page 12)

Marathon experiences: “You will know immediately if you can reach all of the Messiers. The first two (M74 and M77) are among the toughest every year. Study your charts ahead of time so you are very familiar with where they will be located, and train your telescope on that area as the sky starts to dim and objects become barely visible right before disappearing over the horizon. Hopefully, you will get lucky! After that, be sure to reach M79 in Lepus early as its southerly location causes it to drop fast. The Cassiopeia/Perseus area and M33 also depart early, but it needs to be fairly dark before Andromeda’s companions (M32 and M110) and tiny M76 will show up in a smaller scope.” Once the first early objects are located, you may then begin to work at a slower pace. The first part of the session will end in the Virgo cluster of galaxies. They will challenge even the hardest of observers. After the Virgo cluster is complete (sometime around 1 AM), you may then take the one nice long break of the night -- a good time to relax a bit, refuel, and see how other observers are faring. You should start back on the search by 2:30 AM in order to find all of the objects left on the list. If you get hung up on any of the remaining objects, remember that they are rising. Don’t waste time becoming stranded on one of these; continue with the next objects and come back later to the ones that tripped you up. Daylight will invariably win the race as you scramble for the final few treasures – including the elusive M30 which is the ultimate morning object.

- **RESOURCES:** There are many books, charts, and internet sites that highlight the Messier objects and/or the Messier Marathon. One of the best internet sites is the Messier Marathon Web Page (<http://www.seds.org/messier/xtra/marathon/marathon.html>). This site has lots of information and many links to help prepare you for this event. Some other reference pieces are: The national Astronomical League’s guides, “The Messier Objects: A Beginner’s Guide” and “The Binocular Messier Club,” both available at RCA Sales; the observing program section of the national Astronomical League’s web page; “The Messier Marathon Observer’s Guide,” a book by Don Machholz; “The Messier Album,” a book by Mallas and Kreimer; “Messier’s Nebulae & Star Clusters” by Kenneth Glyn Jones (a fantastic book but expensive); “Finder Charts of the Messier Objects, Volume 1 and 2” by Brent Watson; and many other books, posters, and charts available through “Sky & Telescope” and “Astronomy” magazine book services.

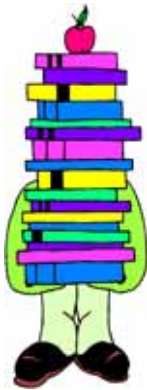
The Messier Marathon’s main purpose is to provide an event where observers can have fun observing, no matter how they choose to participate. For those who try to do the Marathon, the competition is friendly. Messier Marathons, while a challenge for seasoned observers, are designed to improve your viewing skills. As the springboard for the Rose City Astronomers’ star party season, it is a fun event for observers to stretch their winter observing skills while providing a pleasant retreat for the whole family.

**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-oms.org/library.htm>

Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566



**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.rca-oms.org>).



*Photo by Jan Keiski*

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaiillists.htm>

Always great conversation and food.

For more information contact: Margaret McCrea at [mmcrea@nwind.com](mailto:mmcrea@nwind.com)

**Telescope Workshop**

When: Saturday, March 10, 10:00 AM - 3:00 PM

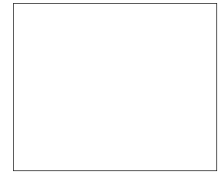
Place: Technical Marine Service, Inc.  
6040 N. Cutter Circle on Swan Island

For more information contact:

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

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

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## February 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	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			

### February 2007

Feb 3	Sat	Telescope Workshop	Swan Island	10am-3pm
Feb 5	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Feb 19	Mon	RCA General Meeting	OMSI Auditorium	7:00pm
Feb 21	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7:pm

### March 2007

Mar 10	Sat	Telescope Workshop	Swan Island	10am-3pm
Mar 5	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Mar 19	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Mar 21	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7:pm

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.rca-oms.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>

The

# Rosette Gazette

Volume 19, Issue 03

Newsletter of the Rose City Astronomers

March, 2007



## RCA MARCH 19 GENERAL MEETING

### The Pre-history of the Space Telescope; Early dreams & designs.

Presented by Peter Abrahams

#### In This Issue:

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  - .... Magazines
  - .... Hancock Star Parties!
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- 6 .. The Observer's Corner
- 8 .. RCA Library
  - .... Telescope Workshop
  - .... Cosmology SIG
  - .... Downtowners
- 9 .. Board Minutes
  - .... Yuri's Night
- 10. Calendar

To become airborne was an early dream of humanity. It was a profound dream because of the meaningfulness of the perspective from aloft: the subject was able to observe the earth and to become closer to heaven. In this context, a telescope is the most basic augmentation of the airborne experience: it expands the new perspective, allows measurement and analysis, and provides new forms of beauty. The first telescopes in space were anticipated by imaginative authors and by exacting engineers, whose dreams and proposals have a part in this story. The earliest telescopes to achieve space, the rocket launched suborbital missions, both successes and failures, will be described, along with the effect they had on science and culture. Telescopes in orbit and in space probes are the current generation of instruments, a prelude to a future of lunar and planetary telescopes. Every success can be seen to have had a direct effect on the widening of horizons provided by the telescope. This presentation will serve as an introduction to a very extensive subject.



*The Hubble Space Telescope hovers at the boundary of Earth and space in this picture, taken after Hubble's second servicing mission in 1997. Hubble drifts 353 miles (569 km) above the Earth's surface, where it can avoid the atmosphere and clearly see objects in space. Courtesy NASA*



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

**All are Welcome! Monday March 19**  
**Social Gathering: 7 pm. Meeting Begins: 7:30 pm.**  
**Location: OMSI Planetarium**

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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

Full Moon  
March 3

Last Quarter Moon  
March 11

New Moon  
March 18

First Quarter Moon  
March 25





<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	tlescope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaisant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Vacant		
OMSI Liaison	Jan Keiski	503-539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



### **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

### **You may be reading this too late to register for the March 16 to 18 Star Party at Camp Hancock, so don't miss April 20 to 22!**

Camp Hancock is an OMSI sponsored field station for the promotion of science education. It is located about 150 miles from Portland and is 2 miles east of the John Day River in Eastern Oregon in the Clarno Fossil Beds. Camp Hancock is NOT a resort hotel; it is a rustic kid's camp with 16 bunkhouses that sleep up to 14 people each in A-frame buildings.

#### **Lodging:**

RVs, Trailers and Tents are \$14 per night per person..  
Bunks in the A-frame bunkhouses are \$20 per person per night.

#### **Meals:**

Breakfast - 9am - is \$5 per person per day (Saturday & Sunday).  
Sack Lunch - 10am - is \$4 per person per day (Saturday & Sunday).  
Dinner - 6pm - is \$6 per person per day (Friday & Saturday)

#### **Registration:**

Mail-in registration and payment deadline for the March outing is March 10th.  
Mail-in registration and payment deadline for the April outing is April 16th.

#### **More Information:**

There is more information on the web, including an order form you can fill out on-screen. The information, including pictures, downloadable Camp Hancock information, Clarno Fossil Bed information, driving maps and instructions, etc. will also be found on the web.

We have been asked again not to enter camping area until after 3pm, although Dob Valley will be open for setup after 2pm.

Go to <http://larrygodsey.home.comcast.net/hancock/> for complete information and registration forms.

## A LUNAR GALLERY—III

By John W. Siple



The Full Moon presents an opportunity to view features on its cratered surface that are less noticeable during other phases when long shadows are cast. Seen in full illumination, streaming ray systems, with their focal points starting near crater ramparts, dominate the lunar landscape. According to the impact theory, rayed craters are caused by rocky interplanetary debris hitting the Moon's surface. The dusty ejecta, often sprayed outward over great distances, form distinctive light-colored streaks on the surrounding terrain.

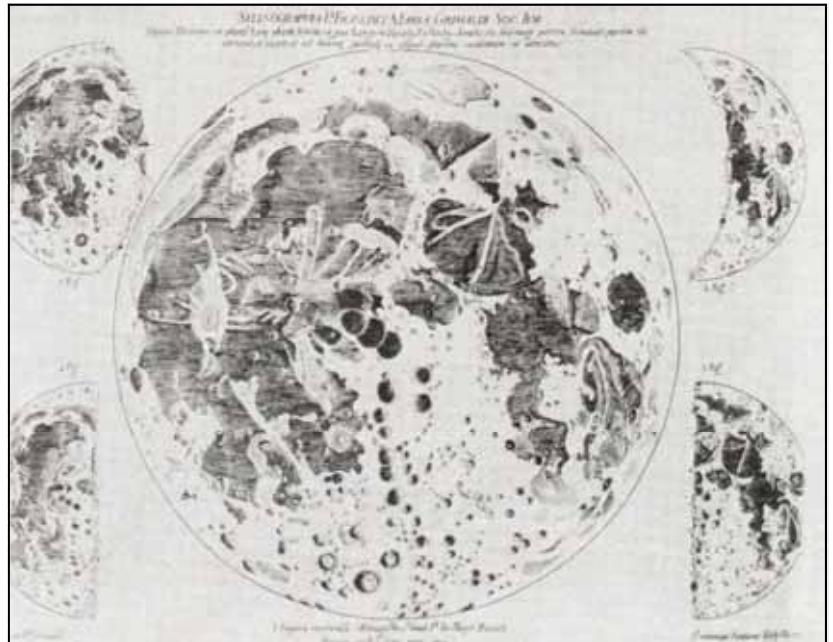
With their unobstructed light paths, refractor telescopes are often the choice of discriminating lunar and planetary observers. The large 108mm pedestal refractor with a focal length of 1600mm, sold by Tasco Sales Inc. as their Observatory Model #20T (or TE) from the early '60s until about 1980, is an ideal lunar telescope. Priced by Tasco at \$999.95 throughout the 1960s, this impressive telescope was heavily promoted for home and school observatories. The top-of-the-line achromatic refractor was made in Japan by Royal Astro Optical Industries Co., Ltd. as Model R-102 with a main objective lens supplied by Horiguchi Optical Co. Another major importer of quality Japanese telescopes, Optica b/c of Oakland, Calif., also listed the same instrument in their catalogues as #2009B.

The photographs in this gallery were taken through the Tasco 4¼-inch f/14.8 refractor telescope using a Celestron NexImage Solar System Imager. The raw webcam data (the imager approximates a magnification of 320x) was further processed using *RegiStax* software to remove the effects of atmospheric turbulence and to bring out fine lunar detail.

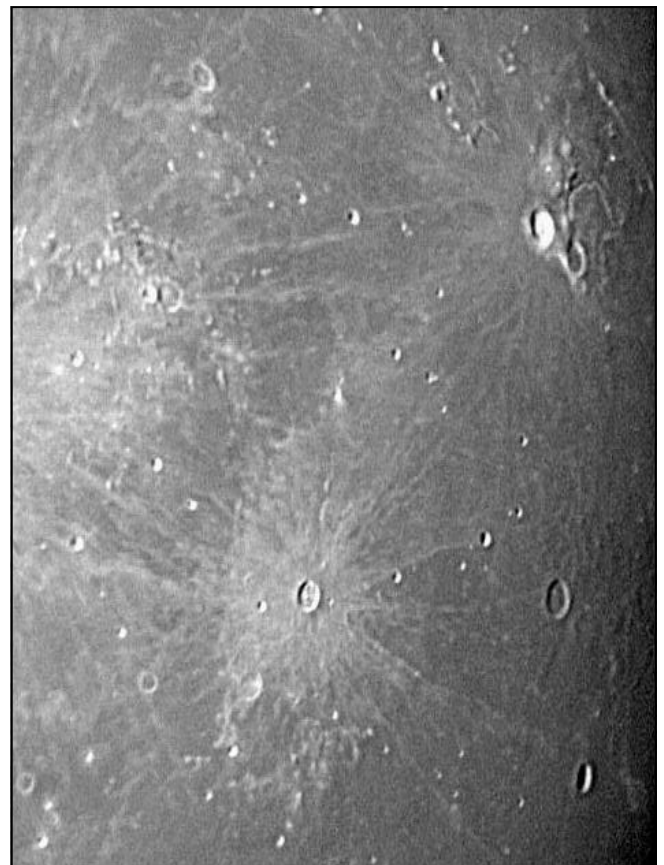
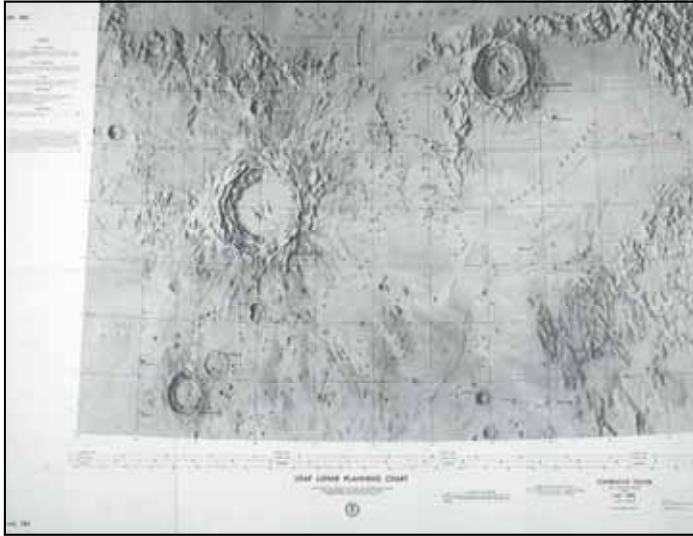
*Continued on page 4*



**Fig. 15.9.** A map of the Moon by E. Divini (1649). Reprinted from Zdeněk Kopal's *The Moon*, ©1969. Courtesy of D. Reidel Publishing Co.



**Fig. 15.10.** A map of the Moon reproduced opposite p. 204 of Riccioli's *Almagestum Novum* (Bologna, 1651), due to F. M. Grimaldi. (Kopal)



*A Lunar Gallery—III (continued from page 3)*

Clockwise from top left: (a) Copernicus, nicknamed “The Monarch of the Moon,” has high, terraced walls and an impressive ray system. Reprinted from page 118 (Fig. 6.2) of Z. Kopal’s and R. W. Carder’s *Mapping of the Moon: Past and Present*, Astrophysics and Space Science Library, Vol. 50, ©1974. The first LAC chart of the Moon, LAC-58 published by ACIC in Feb. 1960. This chart was drawn from photographs without benefit of telescopic observations. Courtesy of D. Reidel Publishing Co. (b) The 108mm pedestal refractor as pictured in the 1968 Optica b/c telescope catalogue. Courtesy of Raymond Barbera. (c) This panoramic #20T image shows the rayed crater Kepler, 22 miles across and located to the west of Copernicus on the Oceanus Procellarum (“Ocean of Storms”). The long, winding Schröter’s Valley is visible near the crater Aristarchus in the upper right-hand corner of the photo. (d) Tycho, 54 miles in diameter, is the center of the Moon’s greatest ray system. This image, processed in color, was taken on January 31, 2007, one day before Full Moon.



# Sidereal Time Is Our Friend

By Tim R Crawford

Early on in our search for DSO's (deep sky objects) or DFO's (dim fuzzy objects) we struggle to figure out not only what we want to observe but what is going to be available in the sky to observe at any given time or location.

Initially, I think most of us start with a rotating disk finder then migrate to one of the popular planetarium programs to figure out "what's up" as well as the objects location.

As we grow in the hobby some of us then turn to the efficiently of observing software that lets us build observing lists; I think by now most of these programs also provide information about which of the lists objects are visible at any given time and location.

It took me a long time to realize it but there is a relatively quicker system to give us an idea of what is going to be available in our local sky on any given night.

If an object has a R.A. (right ascension) of, for example, 08h 24m 16s then we know that an object with that R.A. will transit (pass the local Meridian - imaginary line running North to South in the sky) at a Sidereal time of 08:24:16.

Sidereal is pronounced: Sigh-dear-ee-uhl.

In other words, at any given Sidereal time objects with that corresponding R.A. are passing the local Meridian (transiting)

Depending upon the time of year, a typical location will have objects visible about three hours either side of the transit time. Using the example Sidereal time of 08:24:16 then objects from approximately a RA of 05h 24m 00s to 11h 24m 00s should be visible (unless possibly of negative declinations from mid north locations) if dark enough.

Therefore we need only know an objects R.A. and the local Sidereal Time to judge whether or not the object will be visible to us for the planned session.

Knowing both of these bits of information is actually not that difficult.

The R.A. of an object is actually quite readily available in most all of the lists and books of suggested objects to view as well as planetarium and listing programs.

Another good way to access the R.A. is to use one of the many Internet catalogs by entering the objects name or checking listings, for example:

For NGC objects:

<http://www.seds.org/~spider/ngc/ngc.html>

For Messier objects:

<http://www.seds.org/messier/dataRA.html>

For Variable Stars:

<http://www.aavso.org/vsx/>

Local Sidereal time is readily available with a freeware pro-

gram for PeeCee's, titled "Astronomer's Digital Clock:"

<http://users.zoominternet.net/~matto/>

This software "tool" also shows the UT time and the Julian date along with other useful information.

The observing list program, "Astroplanner," also lists local Sidereal time as well as the objects coordinates, altitude and time of transit [I am a long time user and big fan of this software, which runs on both the Mac and PeeCee platforms]:

<http://www.ilangainc.com/ASTROPLANNER/>

In addition, there is at least one manufacture, BRG Precision Products, that manufactures clocks that show and maintain the local Sidereal time: <http://www.brgprecision.com/opsc.html>

As a variable star observer I am very much aware of my targets R.A. from the Star Charts provided by the AAVSO:

<http://www.aavso.org/>

My "budget" solution to knowing and being aware of the Sidereal time, when in my "office" was to simply purchase a "military" style 24 hour clock as shown.



Every few days, however, I have to re-adjust the clock to current local Sidereal Time, which advances about four minutes faster than solar time each day (I use the Astronomer's Digital Clock pgm for this purpose).

As an additional example, as I write this the local Sidereal time is about 01:30:00. As local PST is about 4:30pm I know that if I have a clear sky tonight that at the estimated dark time of 7:00pm, which is 2.5 hours from now that the local Sidereal time will then be about 04:00:00 which means that all objects with a R.A. of approximately 04h 00m 00s will then be crossing the Meridian (transiting).

This also tells me that when I open objects with a R.A. of about 01h 00m 00s could still be visible in the West (possibly excepting those with negative or very low declinations from our mid northern latitudes) while objects with a R.A. of about 07h 00m 00s could be visible in the East.

*(Continued on page 6)*

## ***Sidereal Time*** (Continued from page 5)

If I were to then stay open until 1AM PST I could project from the current 1:30:00 Sidereal time (and PST of 4:30PM) that when I closed objects with a R.A. of about 10h 00m 00s would be passing the meridian which would also tell me that I could have views of objects, at that time, with R.A.'s of from about 07h 00m 00s to 13h 00m 00s.

Please keep in mind that how many R.A. hours either side of an object currently passing the Meridian might be available for viewing is going to depend upon your location, the time of year and the objects declination.

Remember that Local Sidereal Time provides us with the Right Ascension of all Celestial Objects transiting (crossing the local Meridian).

Now for those of you with a further interest in this topic.

Our "normal" (PST) time system is really solar time and is based upon the solar day, which is the time it takes the earth to make one rotation and return the sun to the same place in the sky.

Sidereal time is based upon a sidereal day, which is the time it takes the earth to make one rotation and return the stars to the same place in the sky.

A mean Sidereal day is about 23h 56m 4.1s in length. The reason this is shorter than a Solar day is because the earth is also moving around the sun, as well as turning, and it must turn just a bit further each day to return the sun to the same place in the sky.

If you want something more technical about Sidereal time, than already provided, look it up at <http://www.wikipedia.org>, which also provides an illustration.

Ad Astra (to the stars)

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## ***THE OBSERVER'S CORNER***

*Howard Banich*



### **Into the Whirlpool**

Sometimes I'm asked why I go through all the trouble of messing around with a 28" telescope. The following observation is one answer, but the moral of this tale is not to get the biggest possible telescope, but to push the one you already have past its normal limits when the sky lets you. With that thought in mind, on with the story...

Once upon a time, or last May 29th to be exact, I was lucky enough to experience one of those amazing nights that we all hope for every time the sky clears. The sky was dark, transparent and steady and the temperature was surprisingly comfortable. In short, just about perfect. But the best part was seeing something new and surprising in an object I've looked at many, many times through all sizes of telescopes.

M51, the Whirlpool Galaxy was near the zenith and looked great at first glance, which wasn't unexpected since I was looking at it through a 28" Newtonian after all – it should look great! But it looked even better than normal because of the excellent sky conditions, which to me means piling on the magnification.

One of the features I enjoy trying to see within M51 is the beginning of one of the main spiral arms coming out of the core. They look like two faint prongs projecting out from the northern side of the core and quickly blend into one of the two main spiral arms. These prongs are visible in almost every M51 photo, which inspired me to try to see them visually in the first place. I've seen them well in a 16 inch scope and suspect a 12 inch would be able to pull them in too. If you can see the spiral arms in M51 give them a try yourself.



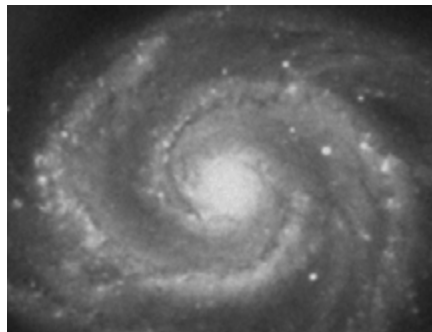
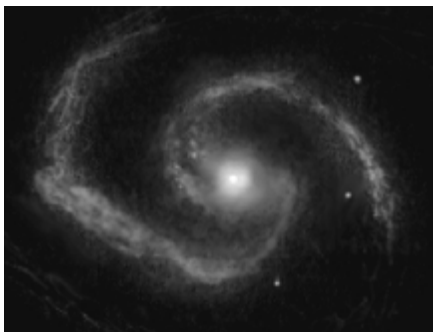
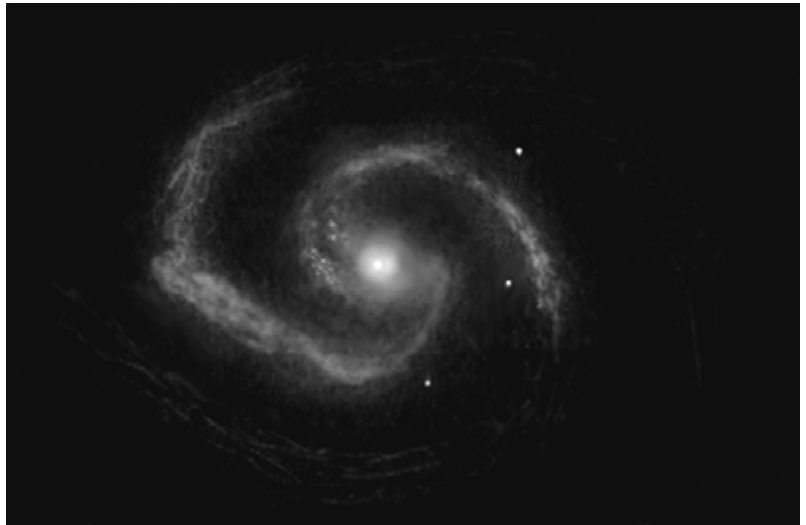
*The red dotted line shows the outline of the two prongs coming out of the north side of the core. DSS image.*

(Continued on page 7)

*The Observer's Corner* (Continued from page 6)

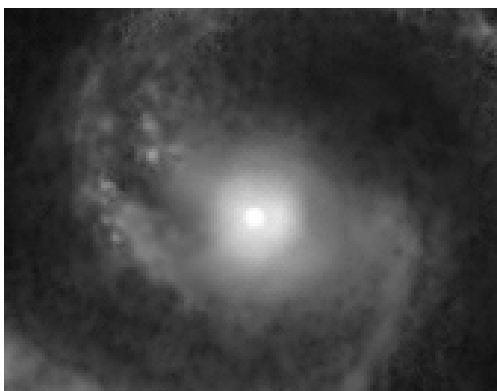
Seeing the prongs well depends on the sky conditions – on a poor night they're difficult to detect but on a great night they stand out quite well, and they certainly looked fantastic on the night of May 29th, 2006 even at low power. As I pushed up the magnification I was startled to see something new, at least to me. Here's my sketch of the central region of M51:

At 710x, I started seeing small glimmerings of light shimmer in and out of view within the prongs, like they were studded with tiny, barely seen stars. But at 31 million light years distant, M51 is too far away for my scope to resolve individual stars, so I must have been seeing something else.



The frame on the left is my sketch of M51's core and inner spiral arms at 710x – note that I concentrated on the core area and the star-like points that glimmered in and out of view, and that the farther from the core I got the less detail I put in the sketch. The middle view is from a DSS image cropped to show the same area as the sketch, and the view on the right is from the latest Hubble Space Telescope image of M51, also cropped to show the same area. Comparing the three images is interesting as they not only show very different levels of detail - from a purely visual view to state-of-the-art space imaging - but also because of how much they have in common.

Zeroing in on the core and the two prongs shows the area of interest to better effect:



The view on the left is a detail from my sketch and the image on the right is the core detail from the HST photo of M51, both showing the same area of the core and prongs. Although the overall level of detail is again quite different, they both show the star-like glimmerings.

A brief aside on my sketch - don't get too caught up in the fine textures around the core and prongs. It's just a pencil sketch that was enlarged about 300%, and then lightly processed in Photoshop. My guess is that it's probably an artifact originally caused

*(Continued on page 8)*

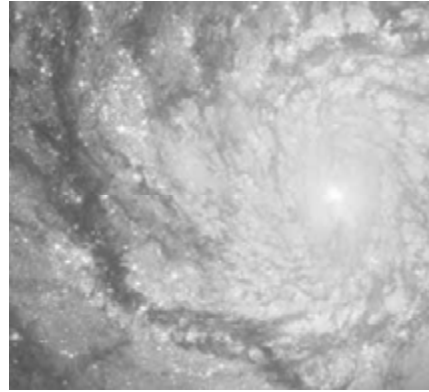


**The Observer's Corner** (Continued from page 7)

by the texture of my notebook paper.

In the HST image the star-like points are difficult to tell apart from foreground Milky Way stars, of which there must be at least a few, but most are star clouds, HII star forming regions and huge star clusters.

Here's a close up from the HST image of the prong area showing the clusters, star clouds and star forming HII regions, which are the reddish-pink areas, plus a few potential Milky Way foreground stars:



The black and white image perhaps gives a better representation of what's there to be seen visually if one had a large enough scope, which is an amazing amount of detail.

What I didn't do on that fabulous night was examine the entire spiral structure of M51 at high power for comparable detail, which is why my sketch above shows only the central region. I did note that most of the spiral arms had a textured, knotted appearance, but I left a detailed exploration for another time. That's the problem with a rare great night, it's just too tempting to roam off to other great sights, which is exactly what I did as my notes show the Ring Nebula was my next stop...

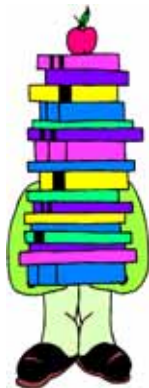
So back to the moral of this story - when you find yourself under a great sky, push the magnification beyond what you normally do and see if you can find something unexpected. Maybe you won't live happily ever after for having tried, but then again maybe you will.

**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-oms.org/library.htm>

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



**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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaillists.htm>

Always great conversation and food.

For more information contact: Margaret McCrea at [mmcrea@nwlink.com](mailto:mmcrea@nwlink.com)

**ASTROPHYSICS / COSMOLOGY SIG**

Date/Time: Wednesday, March 21, 7 PM.

Topic: "Meteorite Hunting in Africa"

Presented by: Sean League

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

**Telescope Workshop**

When: Saturday, April 7, 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)



## BOARD MEETING MINUTES

February 5, 2007  
OMSI Classroom 1  
Andy Phelps

Meeting called to order by Carol Huston at 7:07pm.

Board members present: Larry Godsey, Carol Huston, Matt Brewster, Peter Abrahams, Jim Reilly, Jan Keiski, David Nemo, Andy Phelps, Matt Vartanian, Bob McGown, Dareth Murray, Sameer Ruiwale, Ken Hose, Greg Rohde, Patton Echols, Dale Fenske.

Guest present: Lorien Reilly

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 16 voting members present.
- Treasurer's Report – Larry Godsey: \$37,223.35 total liabilities and equity. Site Fund money in the amount of \$12,500 was placed in a CD. The question was raised and discussion ensued about placing our fixed assets (books and telescopes) on the balance sheet. Consensus was that an up-to-date list should be (and is) maintained but these assets don't need to appear on our balance sheet. Also, Larry would like to spend \$50 on stamps for endorsing checks. This was approved.
- VP Programming – Matt Brewster: February – Dan Gray, Creative thinking in telescope design.
- VP Observing – Matt Vartanian: March star parties: Hancock and Kah-Nee-Ta. KNT will be run with more communication this year. Attendees will travel in caravan to observing site. Jim Reilly will hold new member orientation
- VP Community Affairs – Patton Echols: nominal.
- VP Membership – Ken Hose: In January we had 3 new members, 1 returning member and 3 renewals. We took in a total of \$158. Gene Dietzen was added to the membership list but Carol has the check and the amount is not reflected in the \$158. The total membership stands at 288 member families vs. 297 last January.
- New Member Advisor – Jim Reilly: Has a room at Kah-Nee-Ta to give new member orientation.
- Sales – Sameer Ruiwale: January sales: \$430.
- Book Library - Jan Keiski: Collected \$28 in "the bunny" donation jar.
- Telescope Library – Greg Rohde: Received two \$50 gift certificates for JMI.
- Magazine Subscriptions – Larry Godsey: Nominal.
- IDA – Bob McGown: Met with PSU mechanical engineers about shielding lights.
- Webmaster – Dareth Murray: Will place correct Kah-Nee-Tah information on the website.

- Site Committee – David Nemo: nominal
- ALCOR – Dale Fenske: Updated RCA roster for AL. Sent 8 applications for awards.
- OMSI – Jan Keiski: We have a cabinet in the planetarium OMSI wishes us to dispose of. Carol contacted Jenny to update new member packet material for JRCA.

### Old Business

- Action Item: Sky Calendar at meetings: Dave Powell has agreed to take this on.
- SIG Director position: Greg Rohde has contacted Tom Nathe about the position and Carol will supply details about it.
- ALCON update: Website is up and running, [www.alconexpo.com](http://www.alconexpo.com). So far 14 vendors are registered and the slate of speakers is filling fast.
- Member packet updates: Not all items have been updated – Ken will go with current and recently updated materials in about a week.
- Mentorship program: Jim Reilly has volunteers in specialized areas. Carol and Jim will talk offline about how to proceed with the program.
- Phone line report: Only 1 call received in January. February 6 – March 5: Bob McGown, March 6 – April 2: Dale Fenske. Discussion held about the effectiveness and necessity of the phone line. Sameer will investigate Internet phone to save money.

### New Business

- Motion to pursue legal action to recover domain name (Patton), seconded (Dareth), Motion passed. (Note: Dale was not present for the vote)
- Board goals for 2007: Carol will send out board schedule of actions for review. Board reviewed procedures for donation receipts, specifically who may issue them and what forms to use.

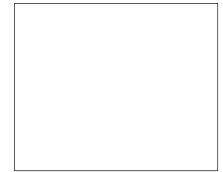
Meeting adjourned 9:08pm



Rock the Planet! We are celebrating the first human in space along with millions of others all around the world! Yuri's Night will be held at the Lucky Lab (915 SE Hawthorne) in their special party room, April 12th, Thursday night. Call or email Bob or Dareth to get in on the party details! Here is the official website: <http://www.yurisnight.net/2007/>



Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## March 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	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

### March 2007

Mar 5	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Mar 10	Sat	Telescope Workshop	Swan Island	10am-3pm
Mar 19	Mon	RCA General Meeting	OMSI Planetarium	7pm
Mar 21	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

### April 2007

April 2	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
April 7	Sat	Telescope Workshop	Swan Island	10am-3pm
April 16	Mon	RCA General Meeting	OMSI Planetarium	7pm
April 18	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

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.rca-oms.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>



The

# Rosette Gazette

Volume 19, Issue 04

Newsletter of the Rose City Astronomers

April, 2007



RCA APRIL 16 GENERAL MEETING

Revelations in Planetary Formation

Presented By Tom Quinn

Professor of Astronomy, University of Washington

## In This Issue:

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  - .... Magazines
  - .... President's Message
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- 8 .. RCA Library
  - .... Telescope Workshop
  - .... Cosmology SIG
  - .... Downtowners
  - .... Site Committee
  - .... Awards
  - .... Alcon Expo
- 9 .. Board Minutes
  - .... Yuri's Night
- 10. Calendar

**The discovery of nearly 200 planets around other stars has revealed several surprises. The first is that configurations of planetary systems can be very different than that of our own Solar System, with Jupiter size planets orbiting very close to the parent star. The second is that planets are a very common phenomenon, even occurring in binary star systems.**



**These surprises, coupled with high resolution observations of star forming regions have lead to re-evaluations of our theories of planet formation. Dr. Quinn will review the standard picture of planet formation in the context of our own Solar System. He will then discuss both the standard model and alternative models in the context of the properties of extra-solar planetary systems.**

**All are Welcome! Monday April 16**

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

**Location: OMSI Planetarium**



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

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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

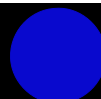
Hubble Space Telescope Mars Photo Courtesy: P. James (U. Toledo), S. Lee (U. CO), NASA.

Full Moon  
April 2

Last Quarter Moon  
April 10

New Moon  
April 17

First Quarter Moon  
April 23



<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Vacant		
OMSI Liaison	Jan Keiski	503-539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



### **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

March 30, 2007

Carroll Iorg  
A.L. Awards Coordinator  
7241 Jarboe  
Kansas City, MO 64114

Re: Mabel Sterns Award for 2006

Dear Carroll,

We are proud to submit "The Rosette Gazette" and its editor, Larry Deal, for your consideration for the prestigious Mabel Sterns award. The board and members of Rose City Astronomers hold our newsletter editor in high esteem for the consistent quality and attention to detail. Larry has been the editor of the Rosette Gazette for over four years and has taken it to new heights issue to issue.

It was hard for us to pick just one issue for your consideration, since in our opinion, all of them are worthy. However, we are including the July 2006 issue (4 copies) as a representative example of Larry's continuing excellence as a newsletter editor.

Thank you for the opportunity of participating in this award process. And we look forward to hosting you at the convention in August!

Sincerely,

Carol Huston

President, Rose City Astronomers

# A Lunar Gallery—IV

## A “Sea of Showers” and “Bay of Rainbows”

By John W. Siple

According to popular theory, Luna was born 4.5 billion years ago in a chance collision between the newly formed Earth and a wandering planet the size and mass of Mars. This event, known as the “Big Splash or Whack,” placed a disk of shattered debris in close orbit around the wounded Earth. The Moon coalesced out of this splattered, pulverized material, and over time spiraled outward from its original position to a spot now located 239,000 miles from Earth.

### THE YOUNG MOON

The Moon and planets were heavily bombarded by meteoroids, comets, and asteroids in their early history. The larger chunks roaming interplanetary space gouged out the Moon’s broad maria or seas upon impact.

Mare Imbrium or the “Sea of Showers” was created 3.85 billion years ago when a 100-mile-wide planetoid slammed into the Moon. The resulting titanic upheaval of lunar crust from the collision excavated a circular multi-ring basin 750 miles across. Fluid, basaltic lava then flowed into the gargantuan depression, burying the peaks of craters and forming the dark, smooth floor of the mare that we see today.

According to planetary scientist Bill Hartmann, three separate concentric basin rings or frozen shock waves can



*The future Moon is pelted by material girdling the Earth and beyond in “Origin of the Moon” (top). In “Basin Forming Impact” (above, left), the young Moon is the target of a rare but catastrophic asteroid collision. Impact basins, gouged out by these huge asteroids, then filled with fluid lava, shown in “Basalt Flow on the Moon” (above, right). Courtesy of Space Artist/Planetary Scientist William K. Hartmann.*

be identified by examining the area’s jumbled topography. (Other astronomers have proposed as many as six rings to account for the structural geology.)

A lion’s share of Mare Imbrium’s treasures can be found by following the contours of each of these rings. The Caucasus Mountains, the sawtooth shaped peaks of the Apennines and discontinuous spires of the Carpathians form a great parabolic arc on the outer (main) ring or rim. The blocky Alps, between the craters Cas-

sini and Plato, mark the boundary of an inner, second ring. Appearing like brilliant islands floating on a sea of wrinkled lava are the ring fragments closer to the point of impact—the Straight Range, Teneriffes, Spitzbergens, and the solitary mounds of Pico and Piton.

Sinus Iridum (“Bay of Rainbows”) is the most prominent bay on the Earth-facing side of the Moon. This famous bay, located on the northwestern margin of Mare Imbrium, is all that

*(Continued on page 4)*



## Lunar Gallery (Continued from page 3)

remains of a 162-mile-wide crater—the seaward side has been inundated by lava flows. Sinus Iridum was created after the Imbrium event but before the massive outpouring of basalt. The curving outer exposed rim of the bay is defined by the Jura Mountains. Observers eagerly anticipate the “jeweled-handle” effect, when Sinus Iridum’s floor is deep in shadow and the Jura Mountains catch the first rays of the rising sun. The crater Bianchini, 25 miles in diameter, sits near the midpoint of the bay’s distinctive rim.

### THROUGH THE ASTRONOMER’S TELESCOPE

Mare Imbrium resembles a horse-shoe—its mountain ranges tower above the surrounding plain in the east, south, and north; to the west the vast lava fields stretch unbroken until they reach the low hills of the Harbinger Mountains. A scenic tour includes stops at all of the majestic mountain ranges, Hevelius’ “Greater Black Lake” (Plato), the plentiful bays and capes, and the long, narrow gash of the lunar Alpine Valley.

Craters of importance abound in the region. Smooth, dark-floored Archimedes, at 50 miles across, is the largest crater inside of Mare Imbrium. It forms a grand trio with nearby Autolycus and Aristillus. Toward the west are perfectly sculpted Timocharis and Lambert. Peculiar Cassini, resembling a washbasin, lays at the edge of the Palus Nebularum (“Marsh of Mists”). Deep, massively-walled Eratosthenes sits at the southern peninsular tip or tail of the Apennines.

### 2.4-INCH VS. 6-INCH LUNAR TELESCOPES

Almost every amateur astronomer has access to a 2.4-inch (60mm) refractor telescope. Along with other mainstream lunar observers, the author on



*A pair of classic telescopes for observing and photographing the Moon from the 1960s. Tasco’s 2.4-inch #7TE-5 Solarama refractor remounted on a metal pier (above, left) is suitable for a wide range of general lunar studies. The Optica b/c 6-inch (150mm) f/8.7 Newtonian (above, right) has a significant increase in resolving and light gathering power for more detailed, brilliant views of craters, mountains, and basins. Photographs by the author.*

occasion prefers watching the disk of the Moon through older, collectable instrumentation, such as the Tasco Model #7TE-5 Solarama (pictured at top of page). These higher grade vintage telescopes often give wonderfully clear vistas of our nearest neighbor in space.

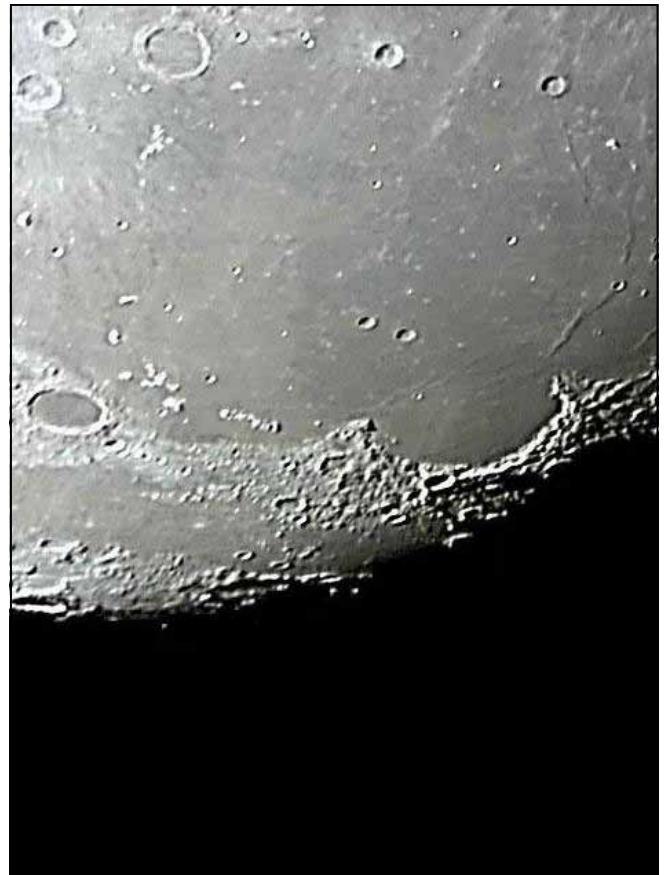
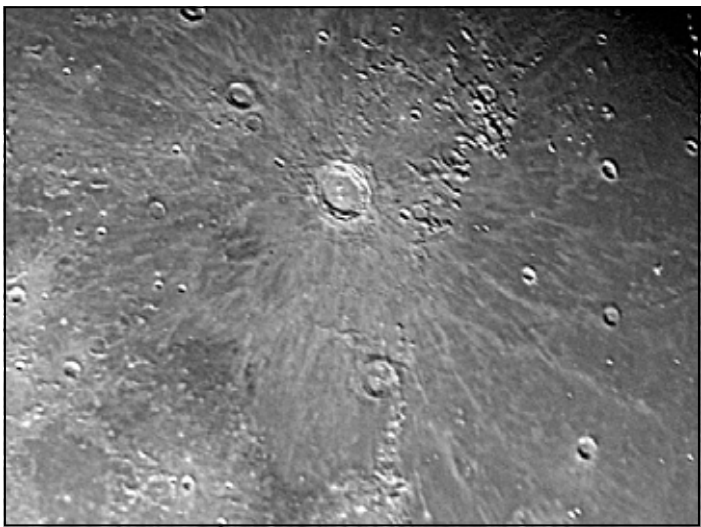
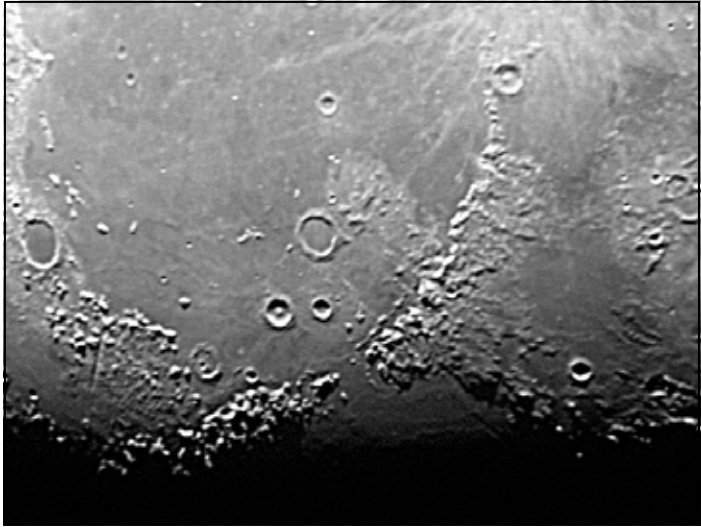
With their increased aperture, 6-inch telescopes have a distinct advantage over their smaller 2.4-inch brethren in visual observing and astrophotography. A 6-inch f/8.7 (1300mm focal length) Newtonian on a motor-driven pedestal mount was used for better resolution shots of the Moon’s surface. The top-of-the-line reflector telescope was made in Japan during the 1960s and ’70s by Royal Astro Optical Industries Co., Ltd. as Model #LN-6E.

It was imported into the U.S.A. by Optica b/c, a major telescope, filter, and accessories distributor located in Oakland, Calif. Their 1968 catalogue

lists the scope as Model #6 DTC (Deluxe Telescope Complete), where it is priced at a relatively expensive \$479. An electric clock drive mechanism for automatic star tracking was available for an additional \$75. (This was at a time when the amateur astronomer could purchase a standard Criterion RV-6 Dynascope for \$195 and a Cave Optical Co. 6-inch Astrola Deluxe Model “A” reflector for \$460.)

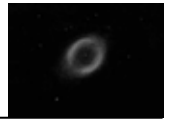
A Celestron NexImage Solar System Imager was used for the photographs of Mare Imbrium taken in this lunar gallery. The Celestron imager provides magnifications of roughly 200x in the 2.4-inch refractor and 260x through the 6-inch Newtonian. The raw webcam data was further processed using the companion *RegiStax* freeware to remove the effects of atmospheric turbulence and to sharpen the outlines of lunar features.

*(Continued on page 5)*



*A Lunar Gallery—IV (continued from page 4)*

*(top left) The Tasco 2.4-inch #7TE-5 Solarama image of Mare Imbrium shows the broad expanse of this sea. The large impact basin is bounded in its southern realm by the curving arcs of the Apennine and Carpathian mountain ranges, while the Alps rim the northeastern part of the mare. Mare Serenitatis is at the middle bottom of the frame (partially in shadow) and Mare Vaporum is visible in the lower right-hand side of the photo. (top right) The 6-inch pedestal mount Newtonian reflector telescope as pictured in the Optica b/c 1968 catalogue. Courtesy of Raymond Barbera. (lower right) Sunrise over crescent-shaped Sinus Iridum, the most spectacular bay on the Earth-facing side of the Moon. Its two cusps are marked by the promontories Heraclides and Laplace. (lower left) The Carpathian Mountains form a dividing line between Mare Imbrium (at right, north in photo) and the Oceanus Procellarum in this 6-inch shot. The prominent terraced, rayed crater is Copernicus. Sinus Æstuum (“Seething Bay”) is to the immediate left of the crater Eratosthenes.*



## Product Review



### Sorel Conquest boots

NM1049-265

Average retail \$120.00

How many times have you decided to quit observing for the night because your feet were too cold?

Warm boots are an essential part of an amateur astronomer's equipment. There's an old saying that goes something like "if your hands are cold, put on a hat" and much the same can be said of a good pair of boots – if your head is cold, put on a warm pair of boots. Of course, a hat is still a good idea but the point is that boots are a crucial part of your observing clothing.

Warmth is not all that boots should provide. Comfort and support are essential ingredients as well, and are prerequisites for a boot to work well – if they're not comfortable it hardly matters how warm or supportive they may be. So with warmth, support and comfort as the prime qualities to look for, how does the Sorel Conquest boot stack up?

Before getting into these details, my bias in looking for a new pair of boots will help put my comments into a more useful context. I had a pair of Sorel's Caribou boots for 14 years, and although they were always comfortable and kept my feet warm they had no support to speak of – they were nearly as flexible as a pair of galoshes.

Since I go up and down a ladder to get to the eyepiece of my scope my feet would get sore, and after several nights at star parties my feet were really sore. So I needed something with good support while retaining the qualities of warmth and comfort. That's when I stumbled across Sorel's Conquest boot at REI. They didn't have my size in stock but it was apparent this boot had the support I needed so I ordered my size on line. Here's what I've found:

### Warmth

Rated to -40 degrees, the Conquest have proven to be plenty warm to 15F with snow on the ground, the coldest conditions I've had them in so far. I'm not likely to be out in conditions much colder so it's doubtful I'll ever find out how they work at -40, thank goodness. I've found that they were equally warm with either one or two pairs of socks, which speaks well to the boots innate ability to insulate from the cold. 3M's Thinsulate Ultra material is the primary insulating material.

### Comfort

This is highly subjective because different foot types, individual comfort preferences and the activity the boots will be used for all combine in different ways for everyone. The only way to find out if any pair of shoes or boots are comfortable is to try them on, and even then it's no guarantee because actual use is when you really find the true fit.

But for the purposes of amateur astronomy a static fit test in the store should give a pretty accurate indication of how the boots will fit. I purposely bought a size larger than my measured foot size to leave plenty of room for two pairs of socks. They do fit best with two pairs of socks but surprisingly this is most apparent around the ankles. I've found that with one pair of socks the Conquests can pinch my ankles when walking but two pairs take care of that. Nonetheless, I'm a little disappointed in this regard.

### Support

The main reason I bought the Conquests is for the support and I'm happy to report it's as good as I hoped. Going up and down the ladder no longer leaves my feet sore, plus walking on rocky terrain is a easier on my feet as well.

The overall stiffness of the boot is the best feature, especially while on a ladder. The boot holds my feet easily and with little strain while going up and down the ladder, but most importantly while standing on a ladder rung while making an observation. High marks for this.

Also, the deep tread of the outsole gives excellent traction in snow, soft ground and ladder rungs. Traction is another element of support – if the sole is slippery then it hardly matters how good the other support features are.

*(Continued on page 7)*



## **Sorel Boots** *(Continued from page 6)*

### **Other features**

The Conquest has a rugged water proof design including a built in gator. This is overkill for the purposes of amateur astronomy, but the gator seems to help hold heat inside the boot. The molded rubber body of the bottom half of the boot keeps feet dry in dewy conditions which is especially useful in western Oregon.

The lacing system is a little awkward around the ankles because the lacing grommets here hold the laces captive, instead of having small hooks as is common on boots of this type. These captive grommets make getting an even lace pressure more difficult, but with some fussing a comfortable lacing can be achieved. However, this is more difficult than it should be, and small lacing hooks along the ankle of the boot would be an improvement.

The laces themselves are too thin and would be easier to handle if they were thicker. They do stay tied nicely though.

The pull-tie of the gator gets in the way of tying the laces and really isn't needed. This can be overcome by tucking in the tie before lacing up the boot, but for me that's not the intuitive sequence.

The ankle strap doesn't seem to provide a real function – pulling it tighter merely tightens the laces on the front of the boot a little, but the lacing system can't be pulled tight enough for this to make any difference. It does look cool though.

### **Overall**

Although not perfect, and footwear seldom is, the Sorel Conquest boot gives me 95% of what I need in a warm, supportive and well fitting boot for observing. They may not be available at retail this time of year so check the internet to locate a pair.

Sorel

<http://www.sorel.com/Product.aspx?top=1&cat=130&prod=53>

Moosejaw.com <http://www.moosejaw.com/moosejaw/>

## **Another Camp Hancock Star Party April 20, 21 & 22!**



*(photo by David Haworth)*

Camp Hancock is an OMSI sponsored field station for the promotion of science education. It is located about 150 miles from Portland and is 2 miles east of the John Day River in Eastern Oregon in the Clarno Fossil Beds. Camp Hancock is NOT a resort hotel; it is a rustic kid's camp with 16 bunkhouses that sleep up to 14 people each in A-frame buildings.

### **Lodging:**

RVs, Trailers and Tents are \$14 per night per person..

Bunks in the A-frame bunkhouses are \$20 per person per night.

### **Meals:**

Breakfast - 9am - is \$5 per person per day (Saturday & Sunday).

Sack Lunch - 10am - is \$4 per person per day (Saturday & Sunday).

Dinner - 6pm - is \$6 per person per day (Friday & Saturday)

### **Registration:**

Mail-in registration and payment deadline for the April outing is April 16th.

### **More Information:**

There is more information on the web, including an order form you can fill out on-screen. The information, including pictures, downloadable Camp Hancock information, Clarno Fossil Bed information, driving maps and instructions, etc. will also be found on the web.

We have been asked again not to enter camping area until after 3pm, although Dob Valley will be open for setup after 2pm.

Go to <http://larrygodsey.home.comcast.net/hancock/> for complete information and registration forms.



## 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.

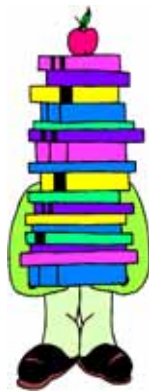
Or Contact: David Nemo <david@nemoworld.com>

### 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-oms.org/library.htm>

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



## Awards



**Ken Hose**

Deep Sky Binocular Award  
# 237



**Mark Kowalski**

Binocular Messier Award  
#744

For more information visit:

<http://www.astroleague.org/observing.html>

### Telescope Workshop

When: Saturday, April 7, 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)

### 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaillists.htm>

Always great conversation and food.

For more information contact: Margaret McCrea at [mmcrea@nwlinc.com](mailto:mmcrea@nwlinc.com)



Photo by Jan Keiski

### ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, April 18, 7 PM.

Topic: "SETI & Quantum Computers"

Presented by: Bob McGown & Dareth Murray

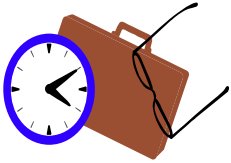
Place: Linus Pauling Complex,  
3945 S.E. Hawthorne St., Portland.

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

### ALCON EXPO 2007 Portland, Oregon

Registration for the August event is now available at:  
<http://www.alconexpo.com/index.html>



## BOARD MEETING MINUTES

March 5, 2007  
OMSI Classroom 1  
Andy Phelps

Meeting called to order by Carol Huston at 7:04pm.

Board members present: Carol Huston, Andy Phelps, Larry Godsey, Matt Brewster, Ken Hose, Jan Keiski, Greg Rohde, Bob McGown, Dareth Murray, David Nemo, Dale Fenske

Guests present: Doug Huston, Tom Nathe.

### Board Reports

- Secretary's report – Andy Phelps: Quorum (10) met with 11 voting members present. Andy asked if anyone could act as backup secretary just in case, Bob McGown agreed. Andy also asked if last months minutes were acceptable based on some discussion on the board e-list. Everyone agreed the minutes should stand as written.
- Treasurer's report – Larry Godsey: \$31,087.93 total liabilities and equity. Seed money of \$1000 was returned by ALCON committee.
- Programming – Matt Brewster: March speaker is Peter Abrahams on pre-history of the telescope. April: Jeffery Barnes, atmospheric scientist – Mars. Kah-Nee-Ta has 34 room/nights filled so far. Native American storyteller will present on Saturday. Will try to get this info in the Gazette.
- Membership – Ken Hose: 2 renewals, 1 new member; \$106 collected in dues. Currently, 290 member-families. Matt B. discussed the possibility of advertising in order to boost membership. Consensus was that this is a good idea. Tom added that a new member SIG could serve new members well. Dale added that new members bring great energy to the club.
- Book Library – Jan Keiski: Discussed use of a recently donated book that is very fragile. It will not be available for loan.
- Telescope library – Greg Rohde: Spare parts auction brought in \$665. Received new donation of 10.0-inch Odyssey Dobsonian. Matt B. suggested that we could purchase some imaging hardware with the auction money; he will write proposal.
- Magazine Subscriptions – Larry Godsey: Nominal.
- OMSI Liaison – Jan Keiski: April through October we will be meeting in the planetarium. An RCA cabinet was moved to the library storage area.
- IDA – Bob McGown: Bob's mercury vapor lamp is available to lend. Will operate the IDA table at ALCON.
- Webmaster – Dareth Murray: nominal
- Site Committee – David Nemo: nominal.
- ALCOR – Dale Fenske: Astronomy Day materials are

available to purchase from Astronomical League. Discussion on what the club should do to promote Astronomy Day. Three observing awards are in process.

### Old Business

- Motion to appoint Tom Nathe as the SIG/Volunteer Director (Greg), Seconded (Ken H.), Motion passed.
- Member packet updates: completed
- Incorporation of youth into RCA – Discussion on what we can do in addition to the YRCA summer activities.
- Mentorship program – carryover to April to include Tom.
- Phone line report: 4 calls including meteorite sighting. , March 6 – April 2: Dale Fenske, April 3 – May 3: Larry Godsey, May 4 – June: Matt Brewster.
- Legal action: Patton not present.
- Update of Board info – Schedule of actions distributed by Carol.

### New Business

- Establishing "knowledge base" on RCA website: Discussion was held on the possibility of setting something up. Questions asked about the format it would take – Wiki, library of files, bulletin board, etc. It would require a dedicated volunteer to make it happen. Board agrees that this is a good idea but we don't have the resources at the present time.
- General meeting supplies: We need backup people to cover tables at meetings. We must make sure supplies are at every meeting.
- Proposal to participate in GLOBE at night program – will be sent to general list.
- ALCON meeting: Latest committee meeting was successful, now we just need registrants.

Meeting adjourned: 8:44pm



Rock the Planet! We are celebrating the first human in space along with millions of others all around the world! Yuri's Night will be held at the Lucky Lab (1945 NW Quimby in the Pearl) in their special party room, April 12th,



Thursday night. Call or email Bob or Dareth to get in on the party details! Here is the official website:

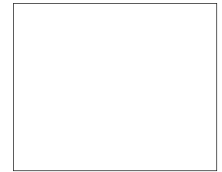
<http://www.yurisnight.net/2007/>

For local information:

<http://www.rca-omsi.org/yurisnight.htm>



Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



April 2007						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	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					

***April 2007***

April 2	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
April 7	Sat	Telescope Workshop	Swan Island	10am-3pm
April 16	Mon	RCA General Meeting	OMSI Planetarium	7pm
April 18	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
April 21	Sat	Astronomy Day	Rooster Rock S.P.	7:30pm
April 20-22		Dark Sky Star Party	Camp Hancock	3pm

***May 2007***

May 5	Sat	Telescope Workshop	Swan Island	10am-3pm
May 7	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
May 19	Sat	Planet Parade	Rooster Rock S.P.	7:30pm
May 21	Mon	RCA General Meeting	OMSI Planetarium	7pm
May 23	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

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.rca-oms.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>

The

# Rosette Gazette

Volume 19, Issue 05

Newsletter of the Rose City Astronomers

May, 2007



## RCA MAY 21 GENERAL MEETING

### “Why a Bar?”

Presented by Dr. Victor Debattista, University of Washington

Since Edwin Hubble began evaluating and classifying galaxies, it has been determined that bars are present in more than two thirds of all disc type galaxies. It is then not surprising that our own Milky Way galaxy is in fact a barred spiral. In the departure from axis symmetry of a galaxy, bars represent the strongest, most robust and long-lived equilibrium.

Dr. Victor Debattista in collaboration with colleagues have studied various properties of bars and determined combinations of relationships with galactic cores, halos and companion galaxies in galaxy groups. Through theory and simulations, predictions of bar pattern speeds and shapes allow for the establishment of parameters for galaxy evolution.



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  - .... Cosmology SIG
  - .... Downtowners
  - .... Site Committee
- 7 .. Board Minutes
- 8 .. Calendar



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

**All are Welcome! Monday May 21**  
**Social Gathering: 7 pm. Meeting Begins: 7:30 pm.**  
**Location: OMSI Planetarium**

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Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.  
NGC 1300 image Courtesy Hubble Heritage Team, ESA and NASA.  
Moon photos below courtesy David Haworth

Full Moon  
May 2

Last Quarter Moon  
May 9

New Moon  
May 16

First Quarter Moon  
May 23



<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaisant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



## **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

### The Traveling Astronomer

With vacation season just around the corner, I am sprucing up my "astronomy will travel" trunk and getting all of my observing materials ready to go. One thing I have done over the years is to make observing programs specific to the trip I am about to take. Sometimes this is based on the size of the instrument I can take: either binoculars or 102mm refractor. In any case, the Bright Star Atlas is a handy accompaniment to a trip. The objects listed in it are geared for a smaller instrument; it is reasonably compact; and it has a lot of good information packed into a small space. I have used the Bright Star Atlas to develop a number of informal observing programs that have been fun additions to my business trips and vacations. I have a standard set of notes I take to Maui; I put together a 100-object listing for a trip to Australia; and I have several small packets for outings to New Mexico, Colorado, Central Oregon, and Eastern Washington.

I generally travel with a 102mm refractor, though I haven't tried to take it on a plane as carry-on luggage since the security

standards have gotten tighter. I have a wheeled 22" carry-on in which the refractor fits perfectly. I pack all of my observing clothing around the scope, which acts as great padding. Even in the summertime, I need lots of insulating layers to keep warm on a cool observing night. I add a Quik-Finder and fit in a small-soft-added case of eyepieces and accessories, and put the charts and observing notebook in the outside pocket. This makes a compact, easy-to-manuever set of equipment that goes together easily and isn't too much trouble to haul around.

With my traveling gear, I have observed at the top of Mt. Haleakala in Maui, in the desert at Kata Tjuta in Australia, in the parking lot of several resorts, from the roof of a hotel, from a mountain top in Eastern Washington, the mountains in New Mexico, as well as from the many wonderful star parties that RCA has hosted. No matter where you are or what you are doing, there is always some way you can make astronomy a part of your vacation. Astronomy is certainly a portable hobby!



# Maui Observing – Mt. Haleakala Style

by Carol Huston



What can you say about observing at 10,000 feet altitude in paradise? Well, the first word that comes to mind is SPEC-TACULAR. The second word, however, is COLD. Be prepared for the cold, and the deep sky views will reward you with memories to last forever. My benchmark rating of a No. 10 sky (for seeing and transparency conditions) is from the site at the top of Mt. Haleakala (hall-ay-AH-kuh-luh).

Mt. Haleakala is the volcanic peak that formed Maui's southern half and, at 10,023 feet, is Maui's highest point. Accessible by a paved highway system going south out of Kahului, Mt Haleakala is about a 40 mile drive from the airport. The direction is well marked by signs, and the last ten miles or so is a series of switchback roads that end at the summit in a large flat parking lot. If you see clouds, don't despair. Generally, the tradewinds keep a cloud layer at about the 6000-foot level, so you drive through the clouds and come out on top of them.

At the summit, there is a shelter and restrooms. Further down at the southeast end, there is a kiosk that overlooks the 30-square mile Haleakala Crater. This crater is a collection of hills, hummocks, and tuff cones covered with various colors of volcanic rock. A popular tourist activity is to come up to the crater before daybreak (an EARLY morning exercise) and watch the sun rise through the cloud layers over the crater. As an observer, I prefer to come up mid afternoon and watch the sun set through the clouds the opposite direction, and then set up my telescope and look at the stars. From this vantage point, the highest on Maui, you can look down over the islands of Lanai, Kahoolawe, Molokini, and Molokai in the west. You can also see the coastline and the northern Maui areas from here: beautiful scenery that just can't be described.

There is an interesting set of observatory-like looking buildings that share the summit called Science City that you can see a short distance away. This is a government (military) and private installation geared towards tracking satellites and making laser distance measurements. These facilities are closed to

the public (solidly fenced off), and I have never actually seen any signs of life around them.

**Logistics:** Observing from the top of Mt. Haleakala is a challenging but rewarding experience. The flat paved parking lot makes a great place to set up a telescope or binoculars, and most of the other people clear out as darkness descends. There is usually a pretty stiff breeze. This breeze combined with the altitude and temperature make observing in the tropics a cold-weather activity. Come prepared for that. On my Maui trips, I usually bring a whole set of clothes that are only worn at the top of Haleakala for this purpose: warm shoes or hiking boots, thick socks, layered pants and long-sleeved shirts, my warmest jacket with hood, a hat, gloves, and scarf. I wouldn't try to come up here and observe without any of that. (It is colder up here than observing in Oregon at high altitude in the spring or fall.) Unfortunately, when you leave your sea-level tropical condo earlier in the day, it seems inconceivable that you are going to be needing warm clothes – but take my word for it. One year, I brought up a big blanket to wrap up in, thinking it would be good enough. NOT!!! Enough said about the cold – but you get my point here.

**Timing:** A word about timing: Hawaii doesn't go on daylight savings time. Check out the sunset time for the dates you are there, but in April, the sun sets shortly after 6:00 PM, which seems very early to what we are used to. Be prepared to get up there no later than 5:15 to watch the sun setting through the clouds – you really won't want to miss that. Allowing for a two-hour drive from Kahului, that means leaving there around 3:15. If you are staying in Kaanapali (which is about one hour from Kahului), you need to leave there at 2:15 to make it. You probably will want to view the crater, which takes another 45 minutes or so (leave time from Kaanapali is now 1:30). You will be driving through the Upcountry area to reach Mt. Haleakala which offers some great activities in its own right: tropical gardens, the Makawao art galleries; the Pukalani Country Club luncheon and coconut cream pie; a winery further around the highway on the west side; a park visitors' center, plus many scenic overlooks along the way. You can see that you can build a whole day's activity into a sunset viewing session on Mt. Haleakala if you leave early enough. However, it is easy to miss the sunset if you don't leave early enough or keep your eye on the time.

**Observing:** Working on the Messier observing program or the binocular Messier list from this site is a real treat. I personally like to work on some type of observing program so have developed for myself a Southern Skies Observing Program that contains all of the deep sky objects shown on Tirion's Bright Star Atlas. This set of charts shows all of the stars with a visual magnitude of 6.5 or brighter, all of the Messier objects, and some of the brightest deep sky objects in sky (though dimmer than magnitude 6.5). This magnitude range makes this atlas a

*(Continued on page 4)*

## **Maui Observing** *(Continued from page 3)*

great accompaniment to a small telescope or binoculars. In addition, it is the perfect size for travelling and packing: thin, compact, and easy to use in the field.

At about 20 degrees north latitude, Maui offers the observer a glimpse of the Southern Hemisphere objects that elude most of us in the more northern locales. The summit of Haleakala extends your southerly observing reach, but a lot of these objects are observable at sea-level too. Depending upon the time of year (and time of night), you can see Omega Centauri, Centaurus A, the Southern Cross in Crux with its Jewel Box Cluster, Eta Carinae, and many more of the favorite Southern Sky deep sky objects. All of these objects are accessible to small telescopes and binocular viewing, a plus when travelling. The tail of Scorpius and the center of Sagittarius are at about 45 degrees in the sky, making them optimum targets for viewing. The bottom loop of the tail of Scorpius contains several prominent open clusters/diffuse nebulae, a few of which were too low for Messier to catalog. The constellations directly below Scorpius are Corona Australis, Ara, and Norma. While containing a few bright deep sky objects, this area surprisingly isn't as rich as the Scorpius-Sagittarius region.

In April and the months around it, you can find Omega Centauri and the Southern Cross in the southern horizon. We found them from the lanai of our condo at sea level – though at midnight! To locate Omega Centauri, NGC 5139, you need to navigate south from the Libra-Virgo area. A trick I use to find it is to first locate Arcturus and then Spica (Arc to Arcturus and drive a spike to Spica). Almost equidistant down and slightly angled the opposite direction is Omega Centauri. (Check out Chart #6 in Tirion's Bright Star Atlas and see the pattern here.) I use this technique to determine if Omega Centauri is even within viewing reach, and then fine-tune the navigation with the chart. Under good viewing conditions, Omega Centauri is a naked-eye object (a fuzz ball), so if you even get close to the area, you can probably locate it.

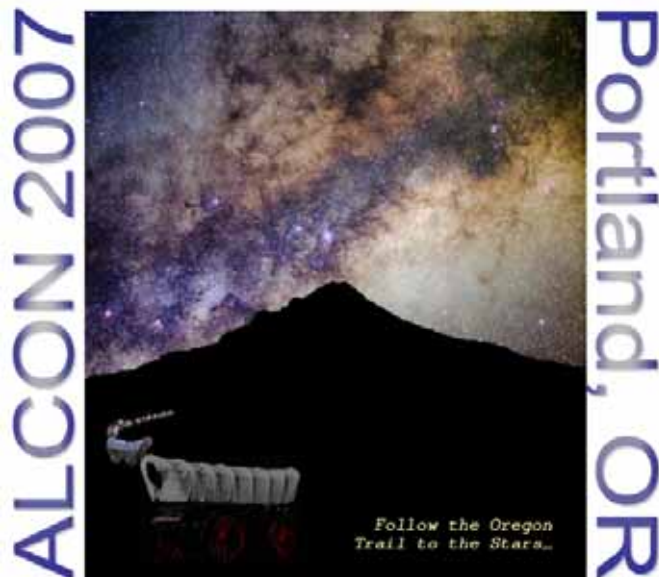
Further south and a little to the west is the Southern Cross, Crux, with its beautiful open cluster called The Jewel Box. The January-February-March time-frame is probably more optimum for finding Eta Carinae. I haven't been there this time of year and haven't viewed Eta Carinae from Maui, but given the viewing conditions and location, it looks like it is possible. I think that the Large and Small Magellanic Clouds, along with the spectacular globular cluster of 47 Tucanae, are just a little bit too south to be viewed from here. I'd like to be proven otherwise though!

---

## **ALCON EXPO 2007**

### **Follow the Oregon Trail to the Stars**

**RCA is honored to host the 65th Annual Astronomical League Convention and Exposition in Portland on August 3 & 4, 2007!**



Please join us in welcoming amateur astronomers from all over the world to the wonderful Pacific Northwest. A committee of several RCA members has been meeting monthly since last fall to plan an entertaining and educational conference for attendees. There are many volunteer opportunities in which you can participate, so contact Dareth Murray, ALCon Expo 07 Chair, if you'd like to help out on the production end.

Many world-class speakers and presenters have been lined up to make the programs top-notch, along with exhibits and vendor displays.

Advance registration is easy at the ALCON website, [www.alconexpo.com](http://www.alconexpo.com), where you can also get more specific information on the schedule, the speakers, the vendors, the banquets, other activities, housing, and guest services.

We hope to see a good turn-out of RCA'ers, so that other AL members can experience the enthusiasm that makes RCA such a wonderful club.



## Product review – the Blug

### Great Red Spot Astronomy Products

Collimating a Newtonian telescope is fairly straightforward once you know what you're doing, but getting to that point can be frustrating and surprisingly time consuming. Laser collimators have made this process a lot more intuitive but their accuracy is limited by one's ability to judge how well centered the laser beam is to the center dot of the primary mirror and judging how well centered the beam is on itself. The Blug makes the latter part much easier.

The Blug is a contraction of "Barlow plug". For several years, a technique known as a barlowed laser has been utilized to increase the sensitivity of laser collimators. This is simply the addition of a Barlow lens in front of the laser, with a white paper mask taped to the front of the Barlow lens. A precisely centered small hole in the paper mask lets the laser beam through and provides a surface to see the return beam on.

What happens is that the parallel light from the laser is made to diverge by the Barlow, and then the parabolic primary mirror makes the now wider light beam parallel again as it reflects it back toward the laser/barlow combination. The center dot, or more commonly center donut, on the primary mirror casts a noticeable shadow that's easy to see and center around the hole in the paper mask, making the laser collimation method easier to maximize for accuracy.

So why does anyone need to buy a Blug if all you need to do is cut a round piece of paper with a hole in its center to tape over the end of your Barlow lens? Unless the Barlow projects far enough into the focuser so its end is easy to see when looking into the telescope tube, you might have trouble seeing the return beam with the shadow of the center donut. This is what the Blug is designed for – to make sure the return beam with shadow is easy to see, and in fact for those with truss tube Dobs this will be visible from the back end of the scope where the collimation knobs are. This means there's no need to walk to the front end of the scope to check your progress. Now that's a welcome improvement!

The Blug is designed with a 45 degree angle face, and is made to fit into the inside end of the focuser while the laser is in the outside end. This combination insures easy visibility of the Blug and probably works well with almost every focuser ever made. As fate would have it, I have the one focuser it won't work with.

Feather Touch focusers and the Blug don't fit together easily. But I had a thought that a simple adaptor would fix that and luckily I was right. The end of my 2 inch laser collimator has a 1.25" nose that matches the end of the 1.25" version of the Blug, which at \$40.00 is fairly inexpensive. It occurred to me that plumbing fixtures often come in diameters that fit to 1.25 inch pipe, and with a quick trip to Ace Hardware I came up with a short length of thin wall pipe.

I cut off the end that accepts 1.25 inch outside diameter pipe and press fit it to the Blug, and then press fit that to the laser collimator. The fit is snug enough to stay put but not so tight that it takes much force to remove. Just right.



*This view is looking up toward the Blug inserted into the inside end of the focuser of an Obsession telescope. Note the shadow of the primary mirror's center donut. Photo from Howie Glatter's website: <http://www.greatredspot.com/collimator.htm>.*



(Continued on page 6)



**The Observer's Corner** (Continued from page 5)

The procedure is to collimate as normal with the laser, and once close to insert the Blug for the final adjustments. The end result is that I'm getting a little more accuracy from the laser collimator and a lot more consistency. For that result I'll give the Blug four out of five stars and recommend it anyone who regularly uses a laser collimator.

I still find that the final accuracy of the Blug is effected by my subjective view of when the shadow of the primary mirror donut is centered on the Blug's 45 degree face. That may improve with time, but we'll see.

However, for the \$40.00 price tag the Blug is a fairly inexpensive gadget, and if you're as nutty as I am about collimation it's worth the cost.

### 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaillists.htm>

Always great conversation and food.

For more information contact: Margaret McCrea at [mmcra@nwind.com](mailto:mmcra@nwind.com)



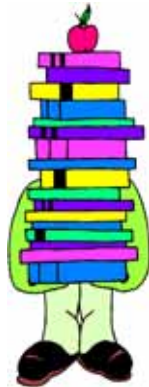
Photo by Jan Keiski

### RCA LIBRARY

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Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566



### Telescope Workshop

When: Saturday, May 12, 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 [johndelacy@comcast.net](mailto:johndelacy@comcast.net)

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

### 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)>

### ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, May 23, 7 PM.

Topic: "Impact Structures"

Presented by: Sam Kimpton

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>



## BOARD MEETING MINUTES

April 2, 2007  
OMSI Classroom 1  
Andy Phelps

### Meeting called to order by Carol Huston at 7:09pm.

Board members present: Larry Godsey, Carol Huston, Peter Abrahams, Jim Reilly, Jan Keiski, David Nemo, Andy Phelps, Matt Vartanian, Dareth Murray, Ken Hose, Greg Rohde, Tom Nathe.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 12 voting members present.
- Treasurer's Report – Larry Godsey: \$39,470.93 total liabilities and equity.
- VP Observing – Matt Vartanian: April 20-22, Camp Hancock; April 21, OMSI Star Party at Rooster Rock; April 12, Yuri's Night.
- VP Membership – Ken Hose: March: 1 renewal, Membership stands at 291 member families. It has been noted that attendance has been low at recent meetings. If an ongoing trend develops, this may need to be addressed. We'll discuss issues of membership philosophy on the board e-list and continue at next board meeting. Action Item: Ken will add "joining date" to membership list. Action Item: Greg Rohde will print RCA Tri-fold brochure for general meeting.
- New Member Advisor – Jim Reilly: New member meeting at Kah-Nee-Ta was not attended. Another will be held at Camp Hancock. Mentor list was activated for a member who needed info/help with a telescope. It appears no one was able to respond to this time-sensitive situation.
- Book Library - Jan Keiski: nominal
- Telescope Library – Greg Rohde: An 8-inch Dobsonian was added to the club's scope library. Aluminum eye-piece cases were purchased.
- Magazine Subscriptions – Larry Godsey: Nominal.
- IDA – Bob McGown: Met with PSU mechanical engineers about shielding lights.
- Webmaster – Dareth Murray: nominal.
- Site Committee – David Nemo: Site fund stands at \$14,249, expected to surpass \$15,000 soon. Tom N. and Greg R. have information about locations.
- SIG Director – Tom Nathe: nominal
- OMSI – Jan Keiski: We will have limited space to set up tables at general meeting. Meetings will be in planetarium through October. Space will be needed for JRCA June through August.

### Old Business

- Action Item: Patton report on forum issue. First letter will go out soon. Details being worked out.
- Phone line discussion – should we keep the phone line? Motion to discontinue RCA Phone line: Ken Hose, Seconded: David Nemo. Motion passed.
- Board website updates: Some updates need to be made. Board members should email updates to Dareth.
- Knowledge Base on website: Greg Rohde and Doug Huston will work to compile documents based on e-list discussions.
- Phone line report: One phone message last month. April 3 – May 7 (or until line is disconnected) Larry Godsey.

### New Business

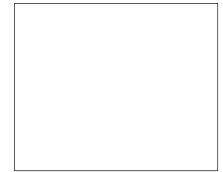
- Planetarium programs: Notes for Jim Todd: We need to know what the process is to create a planetarium program. What do we need to provide and what time is needed? Jan will communicate with Jim about the details of doing a live planetarium show.
- E-list rules: Dareth updated and sent rules to e-list. Rules will be sent to each list recipient each month.
- Nomination of Rosette Gazette for AL Mabel Sterns award. Other club level AL awards/nominations. Carol has nominated the Gazette. Award committee will arrange for other club-level awards.
- JRCA – 6-12 year olds meet June, July, & August. Would like to hold "kids star party" for kids and parents – will need volunteers. This will be advertised in the Gazette. Carol would like ideas on how the club can serve 13-18 year-olds.

### Meeting adjourned 9:00pm



Image Courtesy: NASA and the Hubble Heritage Team

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



May 2007						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	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 2007***

May 5	Sat	Telescope Workshop	Swan Island	10am-3pm
May 7	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
May 19	Sat	Planet Parade	Rooster Rock S.P.	7:30pm
May 21	Mon	RCA General Meeting	OMSI Planetarium	7pm
May 23	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

***June 2007***

June 2	Sat	Telescope Workshop	Swan Island	10am-3pm
June 4	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
June 16	Sat	Summer Solstice	Rooster Rock S.P.	7:30pm
June 18	Mon	RCA General Meeting	OMSI Planetarium	7pm
June 20	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

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.rca-omsi.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-omsi.org>



The

# Rosette Gazette

Volume 19, Issue 06

Newsletter of the Rose City Astronomers

June, 2007



## RCA JUNE 18 GENERAL MEETING

### Navigating by the Stars: A talk on Celestial Navigation By Bob McGown

#### In This Issue:

- 1 .. General Meeting
- 2 .. Board Directory
  - .... Magazines
  - .... Market Place
  - .... Membership Renewal!
- 3 .. Oregon STAR PARTY!
- 4 .. Alcon Expo!
  - .... RCA Library
  - .... Telescope Workshop
  - .... Cosmology SIG
  - .... Downtowners
- 5 .. Board Minutes
- 6 .. Calendar

Celestial navigation has been called the lost art and is still taught at the naval academy. For centuries ancient explorers and navigators of the oceans have relied upon the stars and clever instruments to find their way at sea. From the early Greek mariners to the camel caravans of Ali Baba in the Sahara, navigating by the stars has led to the evolution of mapping the sky as well as the development of complex mathematics.

This presentation outlines the long sought quest for measuring global longitude starting with Galileo, includes Neville Maskelyne & the Lunar Distance Method of navigation, then on to the development of the chronometer.

In modern times celestial navigation was used by mariners in combination with their sextant and nautical charts. In this age of Loran radar and Global Positioning Satellites, an understanding and appreciation for the history of navigation lives on for hikers, climbers, sea kayakers, and sailors.

Bob will provide star sighting demonstrations with a sextant that he first learned as a cadet in the Seabees, after the lecture.



The astrolabe was highly refined in the Islamic world by 800ad and was introduced to Europe from Islamic Spain (Andalusia) in the early 12th century.



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

**All are Welcome! Monday June 18**  
**Social Gathering: 7 pm. Meeting Begins: 7:30 pm.**  
**Location: OMSI Planetarium**

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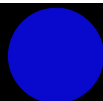
Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.

Moon photos below courtesy David Haworth

Last Quarter Moon  
June 8



New Moon  
June 14



First Quarter Moon  
June 22



Full Moon  
June 30



Club Officers			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaisant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



### 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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.



### MARKET PLACE

*Run your non-commercial astronomy related classified ad in the monthly Gazette. Rates are reasonable (free!)*

**For Sale: Celestron C-11 NEXSTAR GPS, Losmandy counterweight system, autoguider, mounting rings, full aperture white light solar filter, coma corrector/reducer, Williams Optics 2" diagonal, JMI transport case. Eyepieces extra.....All for \$2500**

**Orion ED-80 refractor tube assembly. Includes mounting rings for dove-tail mount, star diagonal, 25mm eyepiece, finder....\$400.**

**Orion Sky View Pro mount, no motors, \$150**

**ED-80 and mount together.....\$500**

**Bob Duke  
duke@99west.com  
360-665-0772**

### It is time to renew your RCA membership!

The membership year runs from July 1 through the end of June. Most of us will be up for renewal in a few weeks. Renewal dues are \$24. You can find renewal forms on the RCA website. You can either mail your dues to the address on the form or bring your check to the next RCA meeting. Help support your club and keep your membership benefits active.



M81 Courtesy NASA, ESA and the Hubble Heritage Team (STScI/AURA).



# OREGON STAR PARTY, 2007!



The 20th annual OREGON STAR PARTY (OSP) will be held this year August 16th through the 19th. For those who have yet to experience OSP, the OSP is held in the Ochoco Forest and the site is remote, and dark. The dark skies draw observers from all over the US and Canada, as well as from other countries. This year we will have a contingent of observers from Argentina that are coming to enjoy the northern skies and they will be talking about the southern skies and observing from above 10,000 feet in the Andes. We also have many other great speakers and there are events for both adults and kids during the day and night.

Held in the isolation and darkness of the Ochoco Mountains in Eastern Oregon the OSP is located four hours from Portland and 50 miles east of Prineville, Oregon. At 5000 feet above sea level, the star party takes place in a 40 acre clearing in the Ochoco Forest and is accessible most of the way from Prineville via a paved road, with only the last 4 miles on a graveled road. While many come for the week the official star party dates are August 16th through August 19th and OSP boasts the darkest skies in the Northwest. For information, directions, registration, speakers and activities go to the website at <http://www.oregonstarparty.org>.

**REGISTRATION** - Because of the earlier date in August this year for OSP, Pre-Registration will close on July 20th and must be in our hands by then. If you don't pre-register before July 20th, you'll still be able to register on-site at the star party in the Registration Tent, but at a higher price. We've got lots of room so there's never a problem finding space to camp. However, you can only order the OSP T-shirts, OSP Sweatshirts, OSP Hooded Sweatshirts and Star Dinners on the Pre-Registration Form. The only on-site sales of OSP t-shirts, OSP sweatshirts and OSP hooded sweatshirts will be on Saturday in the Information Tent if there are any extras left over after people who Pre-Registered pick up theirs.

**SPEAKERS** - Again this year we have a great lineup of speak-

ers talking on various facets of astronomy. Kevin Poe from the US National Park Service on the NPS and light pollution, Dr. David Brooks on the Large Binocular Telescope, Dr Nils Turner on CHARA and Optical Interferometry, Leo Cavagnaro from Argentina on southern sky observing, Carrie Gordon on geology of the Ochoco's, Terry Holtzappli on archeology of the Ochoco's, David Haworth on simplifying astrophotography, Harry Colvin on Pro-Am research collaborations, and Bob McGown on the Anthropic Principle.

**ACTIVITIES** - There are many daytime activities including the Telescope Walk-about, the Mars Rover Races, the Meteorite Hunt, the Solar System Walk, the Kids vs. Adult quiz, the Swap Meet, the Limiting Magnitude show, the Sky Identification shows (3 different ones this year), and the bus tours put on by the Oregon Forest Resources Institute and the USFS (there will be 2 different ones this year). So many things to do during the day at OSP in addition to the very dark night skies. Lots of vendors will be there this year as usual.

**YOUTH ACTIVITIES** - This year the youth tent will be open with activities for the kids from 10am until 4pm every day. Parents are encouraged to volunteer to help in the Youth Tent.

**VOLUNTEERS** - The Oregon Star Party has a dedicated committee of 29 people who work year around planning for the outing. But it still takes a lot of volunteers to make it actually happen. We still need people to volunteer for a 2 hour shift to help with registration, parking, shower ticket taking, setup and cleanup. Contact Jan Keiski, our Volunteer Coordinator at [jikeiski@comcast.net](mailto:jikeiski@comcast.net) with your name, email address or phone number, and if you have any area and time you would particularly like to volunteer for and she'll get back to you. For youth activities contact Jenny Forrester, [jenny@theforrest.org](mailto:jenny@theforrest.org); for adult mentoring contact Mark Dakins, [mdakins@earthlink.net](mailto:mdakins@earthlink.net); and for youth telescope mentoring contact Bernie Kuehn, [kuehnb@earthlink.net](mailto:kuehnb@earthlink.net). Again this year there will be door prizes just for the volunteers. We will also be signing up volunteers at the June 18th and July 16th RCA meetings.

**INFORMATION TENT** - The OSP Information tent at the junction of the 800 and 802 roads just across from the Activities Tent is where you can ask questions and get answers - Sign up for a 2 hour volunteer shift - Buy shower tickets - Obtain First Aid help - Kids can sign up for the Youth Telescope Mentoring program - Adults can sign up for help with their telescope problems and questions - Sale of extra T-shirts, Sweatshirts, and Hooded Sweatshirts on Saturday - and ask more questions.

**BURGERS AND LATTES** - Mary will be back with the Chuck Wagon serving up breakfast, lunch, dinner and late night snacks as in the past and Shawna will be back with the Espresso Blast for our caffeine fixes. This year both the Chuck Wagon and the Espresso Blast are again planning on being open for business Wednesday afternoon through Sunday Noon.



# ALCON EXPO 2007

## Follow the Oregon Trail to the Stars

**RCA is honored to host the 65th Annual Astronomical League Convention and Exposition in Portland on August 3 & 4, 2007!**



Please join us in welcoming amateur astronomers from all over the world to the wonderful Pacific Northwest. A committee of several RCA members has been meeting monthly since last fall to plan an entertaining and educational conference for attendees. There are many volunteer opportunities in which you can participate, so contact Dareth Murray, ALCon Expo 07 Chair, if you'd like to help out on the production end.

Many world-class speakers and presenters have been lined up to make the programs top-notch, along with exhibits and vendor displays.

Advance registration is easy at the ALCON website, <http://www.alconexpo.com/>, where you can also get more specific information on the schedule, the speakers, the vendors, the banquets, other activities, housing, and guest services.

We hope to see a good turn-out of RCA'ers, so that other AL members can experience the enthusiasm that makes RCA such a wonderful club.

### 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emallists.htm>

Always great conversation and food.

For more information contact: Margaret Campbell at [mmcrea@nwnlink.com](mailto:mmcrea@nwnlink.com)



*Photo by Jan Keiski*

### ASTROPHYSICS / COSMOLOGY SIG

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

Topic: "Sacred Geometry"

Presented by: Glen Stockton

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

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

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Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566





## BOARD MEETING MINUTES

May 7, 2007

OMSI Classroom 1

Andy Phelps

Meeting called to order by Carol Huston at 7:02pm.

Board members present: Larry Godsey, Carol Huston, Peter Abrahams, Jan Keiski, David Nemo, Andy Phelps, Matt Vartanian, Dareth Murray, Ken Hose, Greg Rohde, Tom Nathe, Dale Fenske, Bob McGown, Matt Brewster.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 14 voting members present.
- Treasurer's Report – Larry Godsey: \$43,345.12 total liabilities and equity. Larry presented new monthly report which is easier to read. He distributed draft of 07-08 budget. It was reviewed and minor adjustments were made – it will be voted on in June. Recently, the club's solar filter was sold. This income, with income from silent auction totaled \$2245.75. Motion was made by Greg Rohde that \$2245.75 be placed in RCA general fund. Seconded by Dareth Murray – motion passed.
- VP Programming – Matt Brewster: May – Victor Debatista, Barred spiral galaxies, theory and modeling.
- VP Observing – Matt Vartanian: May 19 – Planet Parade star party at Rooster Rock State Park. June 15-16 club star party in Maupin. This star party came about through contact with several people by David Nemo in the investigation of property.
- VP Membership – Ken Hose: April membership: 7 new members, 2 renewals. Current membership: 298 member families.
- Book Library - Jan Keiski: nominal
- Telescope Library – Greg Rohde: Eyepiece cases are being upgraded. Discussed possible new donation and the number of scopes in the club library.
- IDA – Bob McGown: Meeting with businesses on 122nd avenue about light pollution.
- Magazine Subscriptions – Larry Godsey: Nominal.
- Webmaster – Dareth Murray: Will put Planet Parade and May 12 Salmonberry star party on web page.
- Site Committee – David Nemo: (see report in "observing" above)
- SIG Director – Tom Nathe: Small new member group met at Hancock. Proposed creating SIG for beginners. Will need volunteer to run it. Discussed utilizing special e-list for beginners. Floated several ideas aimed at new member outreach.

- ALCOR – Dale Fenske: Roster is ready to go to A.L. Carol suggested roster be sent 4 times per year to insure all new members receive the Reflector.
- OMSI – Jan Keiski: Jim Todd will meet with Dave Powell to prepare planetarium show. RCA-OMSI agreement was reviewed. Dareth Murray motioned to approve agreement with OMSI, Greg Rohde seconded, motion passed. Carol signed the agreement.

### Old Business

- Action Item: Patton report on forum issue. Carol will follow up with Patton.
- ALCON update: Registration is starting to pick up. Other aspects nominal.
- Action Item: Jim Reilly and Tom Nathe connect. We have a need for a mentor. This may be a way to support youth programs during the off-season. Carry over to next meeting.
- Board website updates: Tri-fold has been updated – phone number removed.
- Knowledge base on website: Carry over to next meeting.

### New Business

- PacifiCorp "Global Days of Service" program: Corporation will match volunteer hours with donation to organization. Carol will share info about this on e-list.
- Photographer contacted RCA/Discussion of a standard for response to outside requests. It was decided that such requests would have to be dealt with on an individual basis and best judgment would be used.
- Camp Hancock's need for a new star party site and upgrades: Larry informed us that Camp Hancock no longer has use of "Dob Valley." The National Park Service owns this land and they will be using it for an Information Center. This eliminates about 75% of Hancock's astronomy area. An impromptu collection was taken up at the recent star party and almost enough money was collected to complete construction of new, and enlargement of existing astronomy areas at the camp. Motion was made by Tom Nathe for RCA to donate \$500 to Camp Hancock to improve astronomy programs, seconded by David Nemo. Motion passed.
- RCA's insurance – Larry found the old policy – has ordered copy of new policy. We are covered.

Meeting adjourned 8:58pm

### Telescope Workshop

When: Saturday, June 30, 10:00 AM - 3:00 PM

Place: Technical Marine Service, Inc.

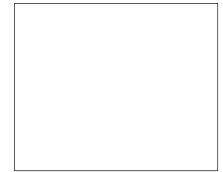
6040 N. Cutter Circle on Swan Island

For more information contact:

Director: John DeLacy johncdelacy@comcast.net

Assistant: Don Peckham don@dbpeckham.com

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



June 2007						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
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

***June 2007***

June 2	Sat	Telescope Workshop	Swan Island	10am-3pm
June 4	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
June 16	Sat	Summer Solstice	Rooster Rock S.P.	7:30pm
June 18	Mon	RCA General Meeting	OMSI Planetarium	7pm
June 20	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
June 30	Sat	Telescope Workshop	Swan Island	10am-3pm

***July 2007***

July 2	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
July 16	Mon	RCA General Meeting	OMSI Planetarium	7pm
July 18	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
July 28	Sat	Telescope Workshop	Swan Island	10am-3pm

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.rca-omsi.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-omsi.org>



The

# Rosette Gazette

Volume 19, Issue 07

Newsletter of the Rose City Astronomers

July, 2007



## RCA JULY 16 GENERAL MEETING

### The Mysterious Frontiers of Our Universe, BIG and small

Presented by Professor James Brau

Jim Brau is Knight Professor of Natural Science and physics professor  
at the University of Oregon.

#### In This Issue:

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- 10. Membership Renewal
  - .... Telescope Workshop
  - .... Awards!
  - .... Maupin S.P. Pictures!
- 11. Board Minutes
- 12. Calendar

**One hundred years ago, Einstein revolutionized physics** with a number of seminal publications. His revolutionary ideas inspired the search for a unified theory of Nature's forces, a theme for leading physics research throughout the 20th Century. That research revealed an understanding of Nature and the Universe that is powerful and predictive, but incomplete.

Dr. Brau will discuss development of our understanding of the microworld of particle physics, the role of large particle colliders, and connections to our understanding of the cosmology of our mysterious universe, at a level accessible to the general audience.

Please join the Rose City Astronomers on Monday July 16th for Dr. Brau's rousing presentation on the frontier of modern science. Dr. Brau received his Physics PhD from MIT, and is a native of the Pacific NW.



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

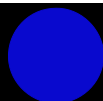
**All are Welcome! Monday July 16**  
**Social Gathering: 7 pm. Meeting Begins: 7:30 pm.**  
**Location: OMSI Planetarium**

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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

Last Quarter Moon  
July 7



New Moon  
July 14



First Quarter Moon  
July 21



Full Moon  
July 29



<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



### **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

### **Your RCA Membership Dollars at Work**

Your Rose City Astronomers board members meet once a month to review programs and activities for the club. These are members, just like everyone else, that have chosen to volunteer their time to helping make this astronomy club fun, rewarding, and successful for all members. One of the things the board does is determine how to best spend the club's money to support the activities that most benefit the membership and the club direction. As an example here are some of the things the board budgeted for our membership dollars for this coming year's programs:

For income, RCA receives \$24 per membership which brings in about \$7200 in dues each year. Our club accounts earn interest of about \$200 per year. RCA sold some old telescope equipment last year which added \$2200 to the coffers.

For expenditures, RCA has budgeted this year about \$9000 to run all of the club operations. This includes website fee and maintenance, communications supplies, program and speaker costs, newsletter publication and mailing, printing for Interna-

tional Dark Sky Association and membership materials, library purchases and maintenance, telescope library purchases and maintenance, star party expenses, special interest groups, and Junior RCA. Also included are dues for association memberships which include our memberships in the Astronomical League as well as the International Dark Sky Association. Additionally we also have insurance premiums, legal fees, and miscellaneous administrative costs (awards, copying, paper, etc.).

Some of RCA's programs that are a benefit to members are self-sustaining, and board members work very hard to make them happen. One of these is the magazine subscription program where members receive sizable discounts on Astronomy magazine and Sky & Telescope magazine. Monetarily, this program is a wash to RCA's budget. Another self-sustaining program is the sales table. Our club purchases materials for sale, and then sells these items to club members at a sizable discount from other retail sources. The intention is not to make a lot of money for the treasury with these sales; the focus is to

*(Continued on page 10)*



# CLASSIC TELESCOPES

## Backyard astronomy with a Cave Astrola 6-inch reflector.

By John W. and Diane A. Siple

Remembrances of years past conjures up images of dark suburban skies and views through that first truly good telescope. Backyard astronomy was dominated during the 1960s and early '70s by such equipment suppliers as Cave Optical Co., Star-Liner Co., Criterion Mfg. Co., and The Optical Craftsmen. Proud owners of one of these finely-made reflectors were guaranteed miraculous views of the rings of Saturn, double stars, and the Milky Way's clusters and nebulae.

Amateur astronomers with a passion for handcrafted telescopes were drawn to the advertisements in *Sky & Telescope* magazine. The leader of the pack was Cave Optical Co. of Long Beach, California. The company offered a complete range of its "Astrola" Newtonians and Cassegrains to fit every customer's specific requirements and budget.

Well-heeled prospective buyers glanced seriously at the ads for the fully-equipped 12.5-inch "Transportable" and "Permanent Observatory" instruments, priced at a relatively steep \$1,200 and \$2,100. (Cave offered custom scopes with mirrors up to 24-inches in diameter, but these were usually reserved for observatory emplacement in public institutions.)

Popular among many junior and adult beginning astronomers were Cave's medium-sized reflectors in the 6 to 8-inch aperture class. Those who decided to purchase the 6-inch models could choose between Cave's basic Student Standard, the Student Deluxe with enhanced features, and the "loaded" Deluxe Newtonians. The optical performance on each model in the "A" sequence is identical, since all of the instruments use the same renowned, precision mirrors made by master opticians at Long Beach.



(Cave Optical Co. was founded in 1951 by the father-son team of Thomas Cave Sr. and Jr.—the company sadly closed its doors in 1980. A former Cave Optical employee of extraordinary skill, Larry Hardin, reestablished full-scale production of Astrola mirrors in 1999.)

Having browsed the pages of their catalogue, the novice stargazer, teacher, or discriminating telescopist enthusiastically opted to purchase one of the professional quality models. Cave's 6-inch series are denoted by the letter "A," slightly bigger 8-inch telescopes are signified by a "B," and the huge 10-inch and 12.5-inch Newtonians by "C" and "D."

A simple no-frills 6-inch Astrola reflector sold for \$200 in 1967 and 1968, a wise choice for amateurs on a limited

*Above, left: The Cave Optical Co. catalogue from 1967/1968. Center: Photo from the catalogue pages showing the Model "A" Deluxe Newtonian. Above, right: Diane's 6-inch Astrola; the mirror is dated October 23, 1967.*

As their most expensive unit (priced at \$460 in 1967 and 1968), the Model "A" Deluxe "...features the finest obtainable fully rotating ring tube, most accurate Sidereal clock drive and setting circles." The catalogue literature also touts that "the optical performance and steadiness of the mounting on the 6-inch Astrola models are fully comparable to the finest refractor of equal aperture." In actual field tests this claim has been proven time and again by users.

*(Continued on page 4)*



## *Classic Scopes (Continued from page 3)*

Thomas R. Cave Jr. personally engraved each mirror after final figuring was completed with a diamond pencil marker, a tradition started by his father. True Cave Optical Co. mirrors (yes, there are clever copies) are signed on either the side or back in freehand Old English script with the company's name, the focal length and ratio, a serial number starting with the letter "M," and the date of completion. The co-author's Model "A" Deluxe Newtonian has a 6-inch mirror that is etched "Cave Optical Co., 47 15/16" F.L., F/8, #M672968, Oct. 23, 1967."

Under dark sky conditions the Cave 6-inch reflector has a limiting threshold magnitude of 13.8. Combined with a resolving power of 0.7 arc-seconds, the observer can start his or her own Messier Album and view the night sky's famous double stars in regal style.



*A postcard picturing Cave Optical Co.'s larger 8-inch Model "B" Deluxe Newtonian, another very popular telescope among amateurs.*

Cave Optical Co. had this to say about the exciting performance of their 6-inch Astrola reflector telescopes on the Moon and planets:

*Observational performance is truly amazing; details on the moon's surface considerably less than one mile in diameter are visible. The polar caps and all the Maria details as well as "canals" are visible on Mars near opposition. Jupiter displays a wealth of belt details totally beyond smaller telescopes. The four large satellites of Jupiter under high power display disks of varying size. The Cassini Division and the Encke outer ring Division in the Rings of Saturn are visible and the crepe ring is not difficult to see. At least five moons of Saturn are visible.*



*Image of the Cigar Galaxy M82 in Ursa Major by courtesy of Jim Thommes.*

Visible all year long (circumpolar) for northern hemisphere observers north of latitude  $+20^\circ$  is the intriguing galaxy duo known as Bode's Nebulae. Even under strong Moonlight in the 6-inch Astrola Newtonian their dissimilar galactic forms are obvious. M81 and M82 are separated by only 38' and both galaxies easily fit into the same field of view of a University Optics 32mm König eyepiece (38x).

The more exotic of the pair is M82 (NGC 3034), a mottled streak 12.0' X 5.6' in apparent size. In an Astrola 20mm Orthostar ocular (61x), this magnitude 8.4 peculiar galaxy has numerous bright patches concentrated near the core and is centrally bisected by a diagonal dark lane. Older astronomical literature classifies this object as an "exploding galaxy." Modern observational evidence shows M82 embedded in a vast intergalactic dust cloud where star formation is occurring at a phenomenal pace.



*Image of M81 by courtesy of Matthew T. Russell.*

In stark contrast to M82 is M81 (NGC 3031), a beautiful spiral galaxy with a broad, bright central hub and gracefully curving spiral arms. At 61x in the 6-inch, the low surface brightness oval halo has an uneven texture, hinting at the  
*(Continued on page 5)*

## Classic Scopes (Continued from page 4)

spiral arm's buried whorls. Two 11th magnitude stars are visible embedded in the halo just south of the galaxy's core. M81, at magnitude 6.9 and with a size of 24.0' X 13.0', is the more dominant of Bode's Nebulae. Both objects belong to a small cluster of galaxies 10 million light years away.



Photograph of the Whirlpool Galaxy M51 by courtesy of Steve Reilly.

The famous "Whirlpool Galaxy" M51 in Canes Venatici, catalogued as NGC 5194, is considered one of the all-time favorites among deep-sky observers. M51's system consists of two overlapping galaxies; the larger and brighter galaxy NGC 5194 (mag. 8.4; size 11' X 7.8'), seen broadside-on, is a spiral of the Sc type, while the companion NGC 5195 (mag. 9.6; size 5.4' X 4.3') is an odd, distorted galaxy difficult to classify. Lord Rosse, a prolific Irish Astronomer Royal, visually first detected the spiral pattern of NGC 5194 in 1845.



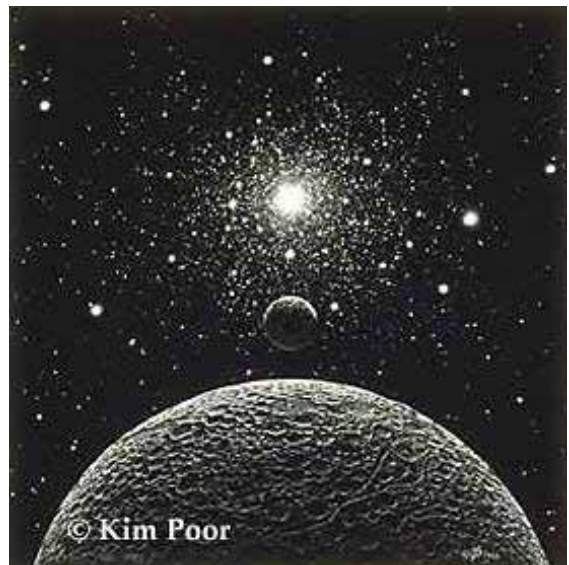
Drawing of M51 at 76x.

A thrilling sight in the Cave Astrola 6-inch, this extragalactic pair resembles a black and white rendition of Steve Reilly's magnificent M51 portrait above, albeit missing the hard-to-detect luminous connecting bridge and with a faded impression of spiral structure. This spellbinding object appears to "float" against a background sea of scattered stars. (A foreground star is conspicuously visible only a scant 1.5' southwest from the nucleus of the spiral galaxy.)

The large spiral is 37 million light years away; the irregular companion must be further than this, since a small segment of the dusty tidal bridge of Whirlpool lies in front of that galaxy.

The "Diamond of Virgo" consists of Spica, Arcturus, Denebola, and Cor Caroli. At the northern point of this heavenly crystal is Cor Caroli ( $\alpha$  Canum Venaticorum), a star named by Halley in honor of Charles I of England. The "Heart of the Monarch" is also a stunning double star—a primary star of magnitude 2.9 with a companion of magnitude 5.4. The pair is separated by a wide 20". At 185x in an Orthostar 6.6mm eyepiece, the major star shines with a pure, steady, white light while the fainter secondary star is subtly tinted olive-blue.

Seven degrees northwest of alpha is the class C5<sub>4</sub> carbon star known as "La Superba." Carbon stars are big ("La Superba" is almost one billion miles across!) and very cool (2,000-3,000° K) with "sooty" atmospheres. A Tele Vue Radian 3mm eyepiece (406x) helps to bring out the deep-orange hue, where the diffraction rings and disk are flush with color. Since the star's light output is variable from magnitude 5.0-6.4, it is also designated Y Canum Venaticorum.



Limited edition artwork "Globular Star Cluster" by courtesy of Kim Poor ([www.novaspace.com](http://www.novaspace.com)).

Riding high above the treed horizon in Oregon is M3 (NGC 5272), considered one of the three finest globular star clusters for northern hemisphere observers. It and another lesser globular, M53 (NGC 5024) in nearby Coma Berenices, are prime targets for the Cave 6-inch scope.

An Orthostar 16mm ocular (76x) shows them as partially resolved balls of light with huge, blazing cores—a speckled haze of stars permeates both clusters from edge-to-edge. (M53 has a noticeable clump of suns just north of its center.) A flight of 33,900 light years must be traveled to reach the stars of M3, and a greater distance of 65,000 light years is needed to reach M53. Use your Cave Astrola to journey to these far off inhabitants (see space artist Kim Poor's representation above) of our Galaxy and beyond!

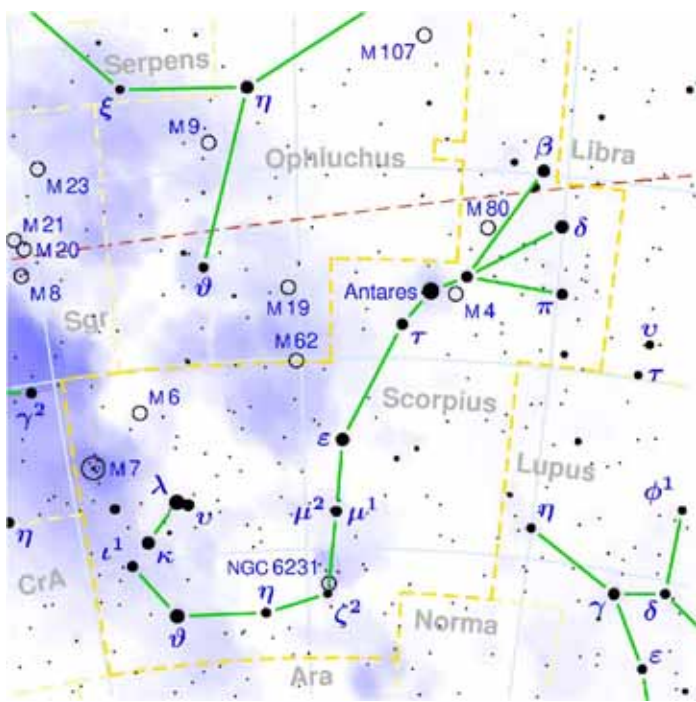




## NGC 6231 and Friends

I recently had the chance to observe from 19 degrees north latitude for several nights with a 13 inch Dobsonian and yes, it was fabulous. Centaurus and Crux stole the show, but somewhat unexpectedly an object that we can see from Oregon was right in there with Omega Centauri, the Jewel Box, the Eta Carinae nebula and Alpha Centauri as my most memorable sights.

NGC 6231 is a bright and concentrated open cluster in Scorpius, located just north of Zeta ( $\zeta$ ) Scorpii, a bright and widely separated triple star, which is located where the tail starts to curve west to east.



Location of NGC 6231 in Scorpius. The southern horizon here in Oregon is about where the border between Scorpius and Ara is located. <http://en.wikipedia.org/wiki/Scorpius>

In a dark sky 6231 stands out without optical aid as the head of the False Comet, with the tail being made of the open clusters Crumpler 316 and Crumpler 318. The emission nebula IC 4628 overlaps the two Crumpler clusters – which also overlap each other and almost overlap 6231 – and just north of this happy conglomeration are two more NGC open clusters, 6242 and 6268. This area is very rich for the naked eye, binoculars or a telescope – and best

of all the only other thing you need to enjoy all this is a dark sky with a good southern horizon. No plane ticket required.



NGC 6231 is the bright group of stars toward the bottom right side of the photo. The bright triple star below 6231 is Zeta Scorpii and the nebula above left center is IC 4628 with the straggling Crumpler 316 and 318 open clusters in between, completing the False Comet. Open cluster NGC 6242 is at top center.

<http://www.darkskyimages.com/jewelbox.htm>

By a good southern horizon I mean a great southern horizon because 6231 will be only about 4 degrees above the true horizon when it's on the meridian. So some planning will be needed so you don't miss it – wait an hour too long and it will too far into the southwestern horizon murk for a good view. A good rule of thumb for summer 2007 is that 6231 will be on the meridian at about the same time as Jupiter.

(Continued on page 7)



## *NGC 6231 and Friends* (Continued from page 6)

6231 comes in with an integrated magnitude of 2.6. Compare that to the Pleiades at magnitude 1.2 and you already have an idea how bright this cluster is. But where M45 is about 110 arc minutes across, NGC 6231 is 14 arc minutes and they have about the same number of stars – 93 to 100 respectively. Now this is one impressive open cluster, and I'm sure that if it were another 10 degrees higher in our sky it would be on everyone's list of favorite deep sky objects.



*NGC 6231, DSS image*

Discovered in 1654 by Giovanni Batista Hodierna, a Sicilian Roman Catholic priest who taught mathematics and astronomy, NGC 6231 is estimated to be only about 3.2 million years old. 6231 belongs to the Scorpius OB association of young and highly luminous stars and has the nickname the “Northern Jewel Box”. To my eye this name does it an injustice and is something of a misnomer – how can anything a -41 degrees declination be “northern” even if the Jewel Box itself is at -60 degrees?

Don't get me wrong, the Jewel Box open cluster in Crux is a gorgeous sight, but whereas it's a delicate beauty with wonderfully colored stars, 6231 is more immediately impressive with its teeming mass of bright, closely packed stars.

6231 is about 5900 light years away, and if it were as close as the Pleiades at about 440 light years it would appear considerably brighter and larger in our sky. Imagine that...



*NGC 6231, DSS image*

As I mentioned, 6231 looks great no matter what, if any, magnification is used. Although I haven't had the pleasure yet I suspect that a view through 15x80 binoculars might provide the most spectacular view of the entire False Comet area.

I used magnifications of 46x and 59x with my 13 inch scope and found seven stars were distinctly brighter and grouped more closely than the rest. Impressive by itself, this was imbedded in handfuls of successively fainter stars crowding around the bright central group. Now this is what an open cluster should look like!

It's true that it takes special circumstances to get a good view of NGC 6231 from Oregon – a great southern horizon, minimal horizon murk and a dark sky – but this is one southern sky delight that doesn't require having to travel south for a chance to see it. So with a little planning and some good luck anyone can bag this wonderful southern sky treasure, which will be even more enjoyable when you think of all the money you just saved.

# OREGON STAR PARTY, 2007!



The 20th annual OREGON STAR PARTY (OSP) will be held this year August 16th through the 19th. For those who have yet to experience OSP, the OSP is held in the Ochoco Forest and the site is remote, and dark. The dark skies draw observers from all over the US and Canada, as well as from other countries. This year we will have a contingent of observers from Argentina that are coming to enjoy the northern skies and they will be talking about the southern skies and observing from above 10,000 feet in the Andes. We also have many other great speakers and there are events for both adults and kids during the day and night.

Held in the isolation and darkness of the Ochoco Mountains in Eastern Oregon the OSP is located four hours from Portland and 50 miles east of Prineville, Oregon. At 5000 feet above sea level, the star party takes place in a 40 acre clearing in the Ochoco Forest and is accessible most of the way from Prineville via a paved road, with only the last 4 miles on a graveled road. While many come for the week the official star party dates are August 16th through August 19th and OSP boasts the darkest skies in the Northwest. For information, directions, registration, speakers and activities go to the website at <http://www.oregonstarparty.org>.

**REGISTRATION** - Because of the earlier date in August this year for OSP, **Pre-Registration will close on July 20th and must be in our hands by then.** If you don't pre-register before July 20th, you'll still be able to register on-site at the star party in the Registration Tent, but at a higher price. We've got lots of room so there's never a problem finding space to camp. However, you can only order the OSP T-shirts, OSP Sweatshirts, OSP Hooded Sweatshirts and Star Dinners on the Pre-Registration Form. The only on-site sales of OSP t-shirts, OSP sweatshirts and OSP hooded sweatshirts will be on Saturday in the Information Tent if there are any extras left over after people who Pre-Registered pick up theirs.

**SPEAKERS** - Again this year we have a great lineup of speakers talking on various facets of astronomy. Kevin Poe from the US National Park Service on the NPS and light pollution, Dr. David Brooks on the Large Binocular Telescope, Dr Nils Turner on CHARA and Optical Interferometry, Leo Cavagnaro from Argentina on southern sky observing, Carrie Gordon on geology of the Ochoco's, Terry Holtzappli on archeology of the Ochoco's, David Haworth on simplifying astrophotography, Harry Colvin on Pro-Am research collaborations, and Bob McGown on the Anthropic Principle.

**ACTIVITIES** - There are many daytime activities including the Telescope Walk-about, the Mars Rover Races, the Meteorite Hunt, the Solar System Walk, the Kids vs. Adult quiz, the Swap Meet, the Limiting Magnitude show, the Sky Identification shows (3 different ones this year), and the bus tours put on by the Oregon Forest Resources Institute and the USFS (there will be 2 different ones this year). So many things to do during the day at OSP in addition to the very dark night skies. Lots of vendors will be there this year as usual.

**YOUTH ACTIVITIES** - This year the youth tent will be open with activities for the kids from 10am until 4pm every day. Parents are encouraged to volunteer to help in the Youth Tent.

**VOLUNTEERS** - The Oregon Star Party has a dedicated committee of 29 people who work year around planning for the outing. But it still takes a lot of volunteers to make it actually happen. We still need people to volunteer for a 2 hour shift to help with registration, parking, shower ticket taking, setup and cleanup. Contact Jan Keiski, our Volunteer Coordinator at [jikeiski@comcast.net](mailto:jikeiski@comcast.net) with your name, email address or phone number, and if you have any area and time you would particularly like to volunteer for and she'll get back to you. For youth activities contact Jenny Forrester, [jenny@theforrest.org](mailto:jenny@theforrest.org); for adult mentoring contact Mark Dakins, [mdakins@earthlink.net](mailto:mdakins@earthlink.net); and for youth telescope mentoring contact Bernie Kuehn, [kuehnb@earthlink.net](mailto:kuehnb@earthlink.net). Again this year there will be door prizes just for the volunteers. We will also be signing up volunteers at the June 18th and July 16th RCA meetings.

**INFORMATION TENT** - The OSP Information tent at the junction of the 800 and 802 roads just across from the Activities Tent is where you can ask questions and get answers - Sign up for a 2 hour volunteer shift - Buy shower tickets - Obtain First Aid help - Kids can sign up for the Youth Telescope Mentoring program - Adults can sign up for help with their telescope problems and questions - Sale of extra T-shirts, Sweatshirts, and Hooded Sweatshirts on Saturday - and ask more questions.

**BURGERS AND LATTES** - Mary will be back with the Chuck Wagon serving up breakfast, lunch, dinner and late night snacks as in the past and Shawna will be back with the Espresso Blast for our caffeine fixes. This year both the Chuck Wagon and the Espresso Blast are again planning on being open for business Wednesday afternoon through Sunday Noon.

# ALCON EXPO 2007

## Follow the Oregon Trail to the Stars

**RCA is honored to host the 65th Annual Astronomical League Convention and Exposition in Portland on August 3 & 4, 2007!**



Please join us in welcoming amateur astronomers from all over the world to the wonderful Pacific Northwest. A committee of several RCA members has been meeting monthly since last fall to plan an entertaining and educational conference for attendees. There are many volunteer opportunities in which you can participate, so contact Dareth Murray, ALCon Expo 07 Chair, if you'd like to help out on the production end.

Many world-class speakers and presenters have been lined up to make the programs top-notch, along with exhibits and vendor displays.

Advance registration is easy at the ALCON website, <http://www.alconexpo.com/>, where you can also get more specific information on the schedule, the speakers, the vendors, the banquets, other activities, housing, and guest services.

We hope to see a good turn-out of RCA'ers, so that other AL members can experience the enthusiasm that makes RCA such a wonderful club.

### 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaiillists.htm>

Always great conversation and food.

For more information contact: Margaret Campbell at [mmcrea@nwnlink.com](mailto:mmcrea@nwnlink.com)



*Photo by Jan Keiski*

### ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, July 18, 7 PM.

Topic: "Casimir Effect and the zero-point energy problem"

Presented by: Michael Meo

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

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

### 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 check-out 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-oms.org/library.htm>

Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566





**President's Message** (Continued from page 2)

provide a benefit to members on some of the astronomical items they purchase (so to speak).

Another of the programs that RCA members have been investing in is the funding for a permanent observing site for our

club. Last year RCA members donated about \$6500 to the fund which now stands at almost \$16,000.

As you can see, RCA's membership dues and donations are working to provide the best programs and activities for our members.

**It is time to renew your RCA membership!**

The membership year runs from July 1 through the end of June. Most of us will be up for renewal in a few weeks. Renewal dues are \$24. You can find renewal forms on the RCA website. You can either mail your dues to the address on the form or bring your check to the next RCA meeting. Help support your club and keep your membership benefits active.

*Awards*



**Joel Loh**

**Messier Award  
Number 2346**

*For more info visit:*

<http://www.astroleague.org/observing.html>

**Telescope Workshop**

When: Saturday, July 28, 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)

**Maupin Star Party**

**June 15-16, 2007**

**Photography by Anthony Hill**





## BOARD MEETING MINUTES

June 4, 2007

OMSI Classroom 1

Andy Phelps

Meeting called to order by Carol Huston at 7:00pm.

Board members present: Larry Godsey, Carol Huston, Jan Keiski, David Nemo, Andy Phelps, Matt Vartanian, Dareth Murray, Ken Hose, Greg Rohde, Bob McGown, Matt Brewster, Sameer Ruiwale. Guest present: Doug Huston.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 13 voting members present.
- Treasurer's Report – Larry Godsey: \$39,852.57 total liabilities and equity. Distributed and discussed proposed budget for fiscal year 2007-2008. Motion: Dareth Murray – Proposed budget be accepted. Second: Greg Rohde; motion passed.
- VP Programming – Matt Brewster: June: Bob McGown, Celestial Navigation. Matt asked if there are any board members interested in meeting with speakers prior to the meeting, should the situation arise. The following are interested: Greg, Andy, Carol, Doug, Dareth, Bob. Also discussed was the wide range of members and guests at general meetings and how the programming meets their needs.
- VP Observing – Matt Vartanian: June 16 OMSI Summer Solstice star party at Rooster Rock, June 15,16- Maupin. Will need porta-potty. This expenditure will exceed observing budget. Motion: (Matt V.) Spend \$75 on porta-potty rental. Seconded: Dareth – Motion passed.
- VP Membership – Ken Hose: May membership: 9 new members, 6 renewals. Current membership: 308 member families. \$404 collected in dues.
- New Member Advisor – Jim Reilly (via email): Planning new member meeting in July.
- Sales Director – Sameer Ruiwale: \$126 sales in May. Ordered many new books. Received a favorable response from new publishers who were contacted.
- Book Library - Jan Keiski: nominal
- Telescope Library – Greg Rohde: Ordered Coronado PST with case. After examining checkout patterns, is considering reducing the number of scopes in library. This will help with storage space issues.
- IDA – Bob McGown: Met with chief electrical inspector for Portland about lighting issues. Gave presentation at PCC in Electrical Code/Lighting class.
- Magazine Subscriptions – Larry Godsey: Nominal.
- Webmaster – Dareth Murray: Web Site is up to date with current star parties.
- Site Committee – David Nemo: Raffle for PST will be held in June. It has broken even.

- OMSI – Jan Keiski: Discussed conflicting star parties in June. Matt V. will compile a list of committed volunteers for the Rooster Rock star party. It was also mentioned that OMSI star parties should be scheduled away from the new moon. June – September meetings will be held in the planetarium. We will only be able to set up tables between the entrance doors and the “Moon” wall (at the gate). If tables are needed, coordinate with Jan. Youth space will be in the turbine cafe – Jan will find out how to get access.

### Old Business

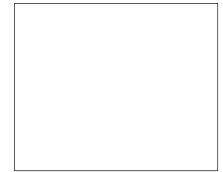
- Action Item: Patton report on forum issue. Carol will call Patton.
- ALCON update: Several new registrations from Dareth – total now about 63. Will make a brief presentation at general meeting. The president and VP of GAMA will be attending ALCON and should also be recognized at RCA meeting.
- Action Item: Jim Reilly and Tom Nathe connect. Tabled.
- Board website updates: Decided to move RCA tri-fold brochure (recently updated by Carol) and “Common Star Party Objects” documents to public site.
- Action Item: Larry to get a copy of RCA's insurance policy and make copies for President, Treasurer, and post on website. Done.
- Action Item: Greg Rohde and Tom Nathe volunteered to represent RCA in the Washington County Lighting Standards reviews. Carol will be involved also.
- Camp Hancock project review: On June 1, Larry gave OMSI a check for \$2400. This included RCA donation and individual contributions.

### New Business

- Stub Stewart Park: Do we need a champion from the board to follow this routinely? The park has an area set aside for astronomy. Greg Rohde will stay on top of this. He also mentioned that there may be changes to Haag Lake Park to allow for astronomy use.
- Request from Dick Tobiason of Bend for an official State of Oregon constellation. The board is not interested in pursuing this.
- Larry needs deposits in by the end of June.
- Discussed coverage of new member table to make sure nobody is missed. Several board members are available to provide extra coverage.
- Club donated membership to Jackson Bottom Wetlands Association auction.
- Dareth and Bob arranged with Evergreen Aviation Museum to host Yuri's night next year. A star party may also be part of the event.

Meeting adjourned 8:53pm

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## July 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	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				

### July 2007

July 2	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
July 13-15	Fri-Sun	Trout Lake Star Party	Trout Lake, WA	
July 16	Mon	RCA General Meeting	OMSI Planetarium	7pm
July 18	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
July 21	Sat	OMSI Lunar Viewing	Rooster Rock S.P.	
July 28	Sat	Telescope Workshop	Swan Island	10am-3pm

### August 2007

Aug 3-4	Fri-Sat	ALCON 2007!	Portland, Oregon!	
Aug 6	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Aug 9-12	Thu-Sun	Mt Bachelor Star Party	Mt. Bachelor, OR	
Aug 12	Sun	OMSI Perseid Meteor Watch	Rooster Rock S.P.	
Aug 16-19	Thu-Sun	Oregon Star Party!	Indian Trail Springs	
Aug 20	Mon	RCA General Meeting	OMSI Planetarium	7pm
Aug 22	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
Aug 25	Sat	Telescope Workshop	Swan Island	10am-3pm

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.rca-oms.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>



# The Rosette Gazette

Volume 19, Issue 08

Newsletter of the Rose City Astronomers

August, 2007



## RCA AUGUST 20 GENERAL MEETING

### “Animal Communications, Information Theory, and the Search for Extraterrestrial Intelligence”

By Dr. Laurance Doyle

#### In This Issue:

- 1 .. General Meeting
- 2 .. Club Officers
  - .... Magazines
  - .... Mabel Stearns Award
- 3 .. The Observer's Corner
- 5 .. RCA Library
  - .... Cosmology SIG
  - .... Downtowners
  - .... Membership Renewal
  - .... Telescope Workshop
  - .... Site Committee
- 6 .. Astrogeology in N. Cal.
- 9 .. Board Minutes
10. Oregon STAR PARTY!
11. NASA Space Place
12. Calendar

In anticipation of possible future reception of extraterrestrial intelligent signals, researchers at the SETI Institute and University of California, Davis have been using information theory to study intra-species, as well as inter-species communications systems. Metacommunications, signals that modify the meaning of subsequent signals, demonstrate cognitive process sophistication. Recent publications of vervet monkeys and bottlenose dolphins are providing insights and parameters of expectation in animal communication.

Information Theory, first pointed out in Claude Shannon's seminal work, "A Mathematical Theory of Communication." involves the quantification of the complexity of messages, which can determine, for example, how much data can be transmitted over a given communications channel, for example. Information Theory is thus at the crossroads of mathematics, statistics, computer science, physics, neurobiology, and electrical engineering.

Dr. Doyle is a principal investigator at the SETI Institute in Mt. View, California researching these and other subjects related to Life in the Universe. He has published several papers about how such information theory "patterns" in animal communication systems relate to human communication systems, with an emphasis on cetaceans—bottlenose dolphins and humpback whales in particular. He obtained his Master of Science degree in astronomy from San Diego State University, and his Doctorate in astrophysics at the University of Heidelberg, Germany.



Allen Telescope Array at Sunset  
Image Courtesy the SETI Institute (<http://www.seti.org>)

**All are Welcome! Monday August 20**

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

**Location: OMSI Planetarium**



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

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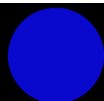
Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.

Moon photos below courtesy David Haworth

Last Quarter Moon  
August 5



New Moon  
August 12



First Quarter Moon  
August 20



Full Moon  
August 28



Club Officers			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org

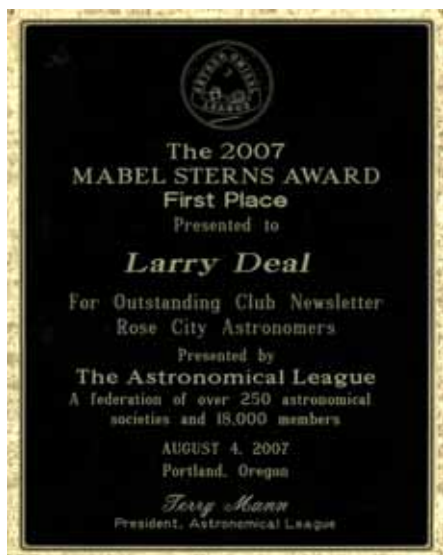


### RCA MAGAZINE SUBSCRIPTIONS

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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## Rosette Gazette and RCA Newsletter Editor Win Top Astronomical League Award!

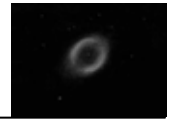
Saturday August Second, 2007: Editor Larry Deal is shown holding a plaque designating this Newsletter as the First Place winner of the 2007 Astronomical League Mabel Stearns Award (<http://www.astroleague.org/al/awards/sterns/sterns07.htm>).



The award was presented at the Astronomical League Banquet, the closing event of the 2007 Astronomical League Conference in Portland.





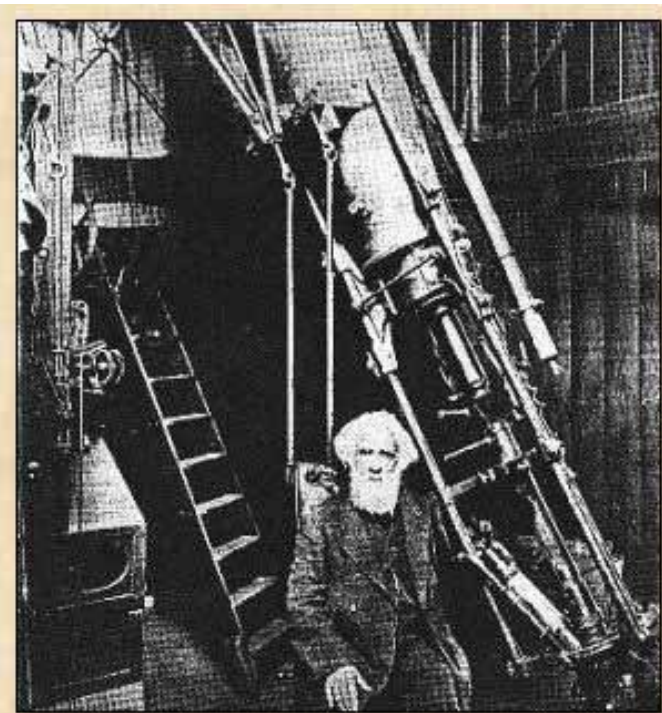


## NGC 6543, the Cat's Eye nebula

The Cat's Eye nebula is one of the great planetary nebulae if for no other reason that it has such a great nickname. Plus its NGC number is a mini-countdown which is kinda fun too. But much more than that it's one of those special deep sky objects that rewards repeated observation under all sky conditions and sizes of telescopes.

NGC 6543 was discovered by William Herschel in February 1786 using his 18.7 inch reflector. Located nearly at the ecliptic's north pole in the crook of Draco's neck it's a somewhat challenging star hop, but for those with DSC's or a go-to scope finding it is a snap.

Nearly 80 years later another British amateur astronomer, William Huggins, was the first to turn a telescope equipped with a visual spectroscope toward a planetary nebula, which just happened to be the Cat's Eye. Up until this time it was generally believed that any nebulous object was composed of faint stars that only needed a large enough telescope to reveal them.



*Sir William Huggins with his telescope and spectroscope.*

When Huggins looked through his 8 inch refractor / spectroscope combination he was able to see from its spectrum, which consisted of three bright lines, that this was an object composed of a luminous gas. By compari-

son, an object made up of stars would have a continuous spectrum. This was an historic observation as it marked a turning point in how we think about the cosmos – suddenly there was a whole new class of truly nebulous objects.

So even if you can barely see the Cat's Eye in your scope you're still able to catch a bit of the light that helped open up the universe to modern scientific measurement and analysis, and that's cool all by itself.

### Visual Impressions

Herschel's description is intriguing as his view was somewhat different than mine, which is probably more a reflection (no pun intended) of the differences in our telescopes:

"A planetary nebula. Very bright. Has a disk of about 35" diameter but very ill defined edge. With long attention a very bright well defined round center becomes visible."

I've seen this magnitude 8.8 planetary nebula as having a rather sharply defined perimeter and the central star is fairly easy to see in decent seeing. It's rather small with a diameter of about 20 arc seconds, about one third the size of the Ring Nebula. Sweeping it up at low power is tricky and your best bet may be to look for what looks like a bluish-green star that seems a bit larger than the rest of the nearby stars.

Sweeping up 6543 under typical suburban sky conditions is sometimes even easier as there are fewer faint field stars as distractions, and the high surface brightness of the object holds up well to high magnifications, which also helps darken the sky background.

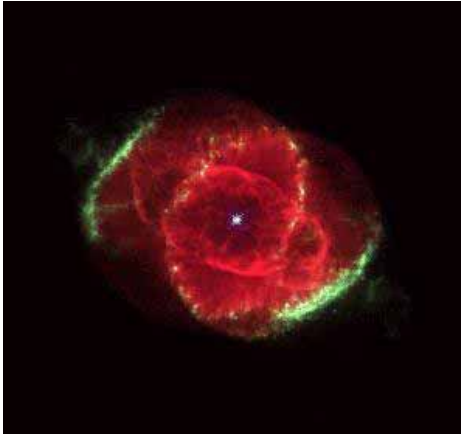
The best part is being able to detect the helix swirls within the nebula at high power. To detect them is rather like seeing the fine divisions in Saturn's rings in that it takes patience and continued viewing while trying different eyepiece and barlow combinations to have a shot at success, not to mention having steady seeing conditions. Hmmmm...

Anyway, the bluish-green color of the 6543 is something to watch for at all powers. Generally it's most evident at lower power but on exceptional nights the color remains obvious even at high power.

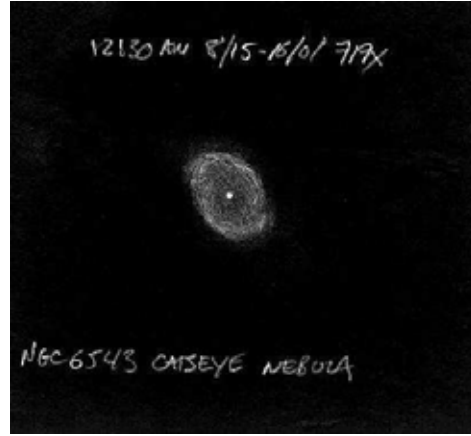
The Cat's Eye has an extremely faint extended halo that's nearly impossible to see visually, but there is a bright spot that's in reach of larger scopes cataloged as IC 4677, which glows very softly at magnitude 15.7. Try

*(Continued on page 4)*





*NGC 6543, Hubble Space Telescope image*

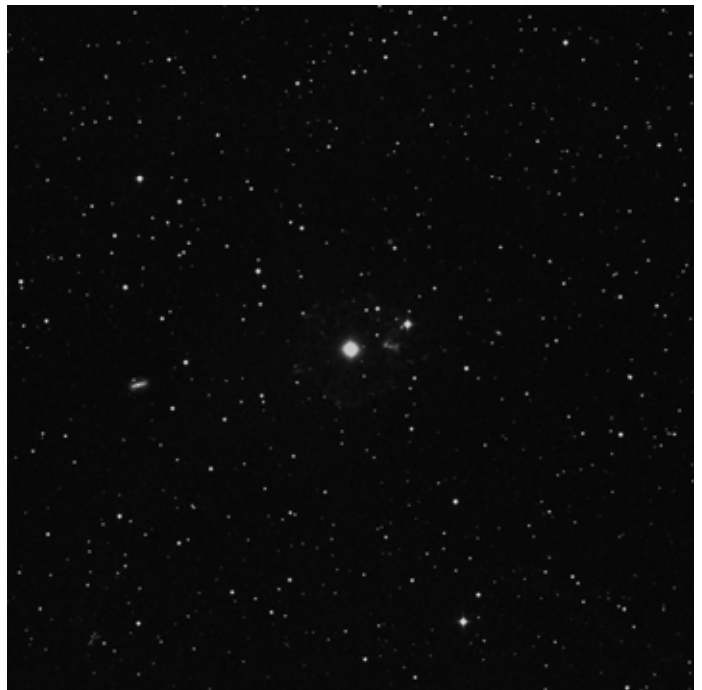


*Sketch of NGC 6543 with a 20" f5 Newtonian*

nebula filters and see if they help but your best bet is wait for the very best sky conditions. Outside the halo is the distant galaxy NGC 6552 at a more accessible but still quite faint magnitude 14.4.



*Too bad we can't see all the detail that the HST was able to record in this fabulous deep image. The dusty outer concentric shells were probably puffed out in fairly regular eruptions of the central star, but the formation of the complex Cat's Eye shape is not well understood. The image is about a half light year across and the nebula lies approximately three thousand light years from us.*



*Note the brightest part of NGC 6543's halo just right of the main nebula, which is over-exposed and looks like a bright star in the center of this image. For scale, the HST images and sketch above are within the over-exposed star like area. Galaxy NGC 6552 is at left center of the image. DSS image. See the June 29, 2007 APOD color image of this same area: <http://antwrp.gsfc.nasa.gov/apod/ap070629.html>*

Of course, a big help in detecting details is steady seeing in a nice dark, transparent sky with 6543 near the meridian - just the sort of conditions we're likely to have at the Oregon Star Party. But don't reserve the Cat's Eye just for special skies, it's just too interesting an object to pass by the rest of the year.

## Have you renewed your RCA membership?

The membership year runs from July 1 through the end of June. Most of us will be up for renewal in a few weeks. Renewal dues are \$24. You can find renewal forms on the RCA website. You can either mail your dues to the address on the form or bring your check to the next RCA meeting. Help support your club and keep your membership benefits active.

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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)

### 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)>

### 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaillists.htm>

Always great conversation and food.

For more information contact: Margaret Campbell at [mmcrea@nwind.com](mailto:mmcrea@nwind.com)



Photo by Jan Keiski

### ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, August 22, 7 PM.

Topic: "Deep sky observing - Argentina Night! "

Presented by: Ken Hose

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

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

### 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 check-out 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-oms.org/library.htm>

Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566



# Astrogeology in Northern California: from the Great Basin to Modoc Country

By Bob McGown and Dareth Murray



Located at the extreme North & West end of California, the three alkali lakes in Surprise Valley are dry by late May. The afternoon wind sends twisters of alkali dust hundreds of meters upward, swirling in the dry lakebeds and surrounding area.

Looking east across the Central Alkali Lake at the Hays Canyon Range through the alkali dust devils creates an almost a Mars-like scene. The desert varnish on the seemingly orientated black rocks strewn around the area make them look like meteorites flung across the dry alkali lakebeds in the Great Basin and Surprise Valley.

An unusual crater-like formation on the Hays Canyon Range was investigated as we crossed the causeway over the dry lakebed. A small sign and a scrawled yellow rock with "Nevada" were the only indications we had left California. This land is reminiscent of the harsh but exotic Alvord Desert as seen from the top of Steens Mountains in Southern Oregon.

Just north of the alkali lakes is year-round Goose Lake. This lake straddles Oregon & California and is where one of the largest meteorites in the world was found – the 1.2-ton Goose Lake Meteorite. Three hunters discovered it in 1938. A subsequent expedition by Earle G. Lindsey (then director of Chabot Observatory) and H.H. Ninniger (famous meteorite hunter) retrieved the meteorite and it was taken to be displayed at the Golden Gate International Exposition in 1939. It is an iron octahedrite currently in the meteorite collection housed at the U.S. Natural History Museum in Washington, D.C. There was no evidence of any crater associated with this meteorite at Goose Lake. It has been suggested that the Willamette Meteorite was rafted down on a glacier to its final resting place in West Linn, Oregon.



If the Goose Lake Meteorite was carried with glacier erratics and talus, like the Willamette Meteorite, it would mean that it did not fall at Goose Lake at all which would explain why there is no crater. Another possibility is that there is no crater because it fell in the winter in snow drifts which would cushion the fall and not produce a recognizable crater. It has been called the "Marilyn Monroe" of meteorites because of its symmetrical shape and pleasing visual attributes.

Dr. Leni Sinclair and Dan Weaver's farm just outside of Cedarville was our destination.



*Leni looks at the sun*

The first thing we did was unload the telescopes (13 ½" and 10" Dobsonian) and the solar Coronado scope. We did some preliminary solar observing. Dr. Sinclair had never seen the sun in a telescope! Later that evening, before the wind picked up and the clouds rolled in, we

*(Continued on page 7)*



*Astrogeology in Northern California* (Continued from page 6)

were able to observe the Moon, Jupiter, Saturn and other night sky objects. Dareth's son Kris Murray and his friend Chris Chan were also observers and fellow hikers for the weekend.

A welcome sight in the village of Cedarville, south of Goose Lake, was a bookstore, lodged within a historic building, one of the first in the valley. We were all amazed, after some conversation, to find that the owner, Michael Sykes, was a fellow eclipse chaser and was planning a trip to see the total solar eclipse next year in Siberia as we! Not only that, he had been in Goldendale, Washington in 1979 when Bob McGown was there observing the eclipse at the Stonehenge replica. We traded travel and eclipse stories and happily found some more great books for our home library. We schemed to meet in Siberia to take in the eclipse together.

An afternoon hike up into the Hays Range from Eagleville showcased the spectacular geology of the area. We hiked up a dusty road leading over the mountains through huge boulders of rock and a canyon with layers of sediment, reminiscent of some we have seen in the Columbia Gorge, from the Ice Age Flood.



We caught a glimpse of an antelope high on the ridge and closer to the road, a small rattlesnake that coiled in alarm. We took a few pictures and quickly let the snake have the bushes! The day grew cooler as clouds piled up against the mountains

One of the highlights of the trip was visiting the Lava Beds National Monument. The Lava Beds lie on the northern slope of the huge shield volcano, Medicine Lake, which encloses about 72 square miles at an average elevation of 4,500 feet. It is covered with volcanic

rock, about 2/3 basaltic lava, which erupted over 11,000 years ago. This monument has the most lava caves in the continental United States with over 400 located and explored. They range from a few yards in length to the longest, Catacombs Cave, which has 6,900 feet of surveyed passage. Some are complex horizontally with many interconnected branches. Others are vertically complex with many levels. There are ice caves; lava bridges over caves and many caves housing the Townsend long-eared bat. When the bats are home, the caves are closed to the public with horizontal fences locked in place. The bats can fly in and out, but humans are not allowed.

Near the visitor center is a Cave Loop trail, which showcases a variety of caves and makes for a fascinating tour of the different kinds of lava tube caves. The whole system's master tube passes through the Cave Loop area. The Mushpot Cave has a distinctive feature, which was formed when a small amount of lava was ejected from an underlying channel that had developed a lower level roof. It is one of the most developed caves with lights and extensive interpretive signage. The Labyrinth "Branch" of caves has 8 major caves, including the Mushpot. It is a complex series of separate segments of lava tubes with about 3,900 feet of cave passage. The "Garden Bridges" part of the loop is a tangle of branches, parallel tubes and collapses. In about a 2 acre area are entrances to 10 caves and many bridges. As we walked on the floors of these caves, we noticed the two different kinds of lava. Pahoehoe is smooth whereas aa is rough and can be very sharp. These Hawaiian words describe the condition of the lava not its chemistry. Flowing pahoehoe changes to aa gradually as it loses heat and dissolved gasses.

We took a side trip to Mammoth Crater. Lava flowed from Mammoth Crater about 30,000 years ago creating most of the lava tube caves in the monument. The 2 mile trip around the crater (The Big Nasty Trail) proved to be just that, as Leni and Bob hiked to the burnt forest on the back side of the crater, glimpsed a shadow of (perhaps) a mountain lion, took the better part of valor and came back around to the rest of the group.

Skull Cave was our final stop, off the main Cave Loop towards the Petroglyphs and Captain Jack's Stronghold, at the extreme north end of the park next to Tule Lake. This huge cave (about 60 feet in diameter) is a segment of a larger system called the Modoc Lava Tube System, 10 miles long. The third level of the cave has perennial ice with only patches exposed. The early discoverer of the caves, J.D. Howard, named this cave for the bones of

*(Continued on page 8)*

*Astrogeology in Northern California* (Continued from page 7)

the creatures that had fallen into it.



*Kris, Chris and Dareth go up the mouth of Skull Cave*

This ice is similar to the Arnold Ice Cave in Central Oregon, at Road 18, studied by the Mars Society. The ice sheet in Arnold cave as well as many other ice caves was harvested in the summer for food preservation and refreshment.

On Mars, ice caves may hold many secrets to the ancient climate of Mars as well as a possible chronological record to the conditions right for life on the red planet.

Lava tubes are a terrestrial analog for subterranean space bases on the Moon and Mars, so we were especially interested in the Modoc terrain. The Oregon L-5 Society (National Space Society) had young astronaut training in lava tubes in Central Oregon, as well as the Oregon Moon Base Project. We have also worked on a NASA institute of advanced concepts projects with the Mars society on a biosphere in a lava tube hornito. The Lava Beds National Monument has been the focus of astrobiology studies, lava tube modeling, NASA space base analog studies and Air Force infrared cave detection from high altitudes. Oregon L-5 has studied Lava tube detection on the Moon with IR techniques and gravimeters.

As we made our way back to Cedarville, we stopped at Petroglyph Point, a huge extrusion of volcanic tuff. This was once bordered by Tule Lake, but as the climate became drier, the lake retreated. Now it is home to thousands of cliff swallows that make their nests high in the nooks and crannies of the rock. Other birds lodge there too, like kestrels and red-tailed hawks, predators of the small cliff swallow and others. The geometric patterned petroglyphs themselves have been covered with modern-day graffiti in some cases. It is thought that the oldest petroglyphs were made by the Modoc tribes coming in canoes to the edge of the bluff, over the Tule Lake about 4,500 years ago. We were reminded of the Modoc War of 1872-1873, in which "Captain Jack", leader of the Modocs, held off the U.S. Cavalry for 5 months, hiding in the lava tubes nearby the lake. The Stronghold was a labyrinth within a set of adjacent tumuli. This still wild country holds many tales, both ancient and more recent. Only a few hours from "civilization" this stark and beautiful land reminds us of our rich planetary heritage.

**Scenes from Trout Lake Star Party, July 13-16, 2007**

**Photography by Jan Keiski**







## BOARD MEETING MINUTES

July 2, 2007

OMSI Parker Room

Andy Phelps

Board members present: Larry Godsey, Tom Nathe, Greg Rohde, Carol Huston, David Nemo, Ken Hose, Andy Phelps, Matt Brewster, Jan Keiski, Dale Fenske, Peter Abrahams

Guests present: Doug Huston, Dan Gray

The meeting was called to order by Carol Huston at 7:12pm

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 11 voting members present.
- Treasurer's Report – Larry Godsey: Accounts: \$17,796.62 in club operations, \$15,657.47 in the Site Fund, and \$12,050.46 in the ALCON account. Larry distributed the budget summary for fiscal year 2006-2007. One outstanding bill for \$873.90 has yet to be paid (club operations account amount above has been adjusted for this). He also distributed the 2007-2008 budget which was approved at the June board meeting. A discussion was held concerning the amount of money in our operating funds. Carol proposed a discussion for a future board meeting: what additional member activities should RCA funds support, and how much money should we keep in reserve?
- VP Programming – Matt Brewster: July: Jim Brau, University of Oregon, Cosmology; August: Laurance Doyle, SETI, Animal communication, information theory as it relates to SETI; Future: Dave Klumpar, Auroras.
- VP Membership – Ken Hose: We had 6 new members and 43 renewals this month, which brought in \$1228 in dues. As of June 30, we have 316 member families. July 1 starts the new membership year. So far, we have had 87 renewals and are tracking fairly close to last year's renewal activity. Ken should be writing a blurb for the July, August, and September issues of the Gazette reminding members to renew. Members who haven't renewed by September will be dropped from the member's only activity areas.
- Sales – Sameer Ruiwale: (via email) June sales: \$359.
- Book Library – Jan Keiski: Has some new books purchased from Sky & Tel. The library crew will have a "compact" library set up while we have limited space.
- Telescope Library – Greg Rohde: Received 2 donations, and he will review and decide what to do with them.
- Magazine Subscriptions – Larry Godsey: Nominal
- Site Committee – David Nemo: Made about \$250 on Coronado raffle. The Maupin star party was successful

with about 25 people attending. The property owner would be interested in having us return.

- SIGs – Tom Nathe: Nominal
- ALCOR – Dale Fenske: Astronomical League dues are due. Dale has given bill to Larry. In the future, we will plan on paying AL dues in July so the Treasurer won't have to scramble to get it in the accounts before fiscal year end. This means that we will have two AL dues payments showing for year 2007 but none for 2006. AL elections are being held to fill board positions. Motion: (Tom Nathe) Dale votes as proxy for RCA. Seconded (Greg Rohde). Motion passed.
- OMSI – Carol and Jan: Until OMSI's Body Worlds is finished running and possibly until October, the general meeting will be in the lobby of the Sky Theater and Planetarium. By November, we should be back in the Auditorium. Table usage in the lobby will be tight but doable if rearranged somewhat to accommodate the flow of people and materials. Jan, Larry, and Carol will monitor people setting up on tables to ensure that RCA's member activities are placed appropriately. In response to problems the presenters incurred at last month's meeting, Jim Todd will bring his laptop to the July RCA general meeting as a backup. OMSI star parties: July 21: Lunar Viewing at Rooster Rock. August 12: Perseid Meteor Shower Party at Rooster Rock. New event, August 28, 2:00 – 6:00 AM: Lunar Eclipse party in east OMSI parking lot.

### Newsflash!

Jan has found a new photo share website to replace the photo site of the RCA star parties and meetings archived at Club-Photo, which is now defunct. She will be uploading photos soon: Year 2007 photos first, then 2006.

### Old Business

- Action Item: Patton report on forum issue. Website address is now "parked". Carol will work with Patton to coordinate action.
- ALCOR update: Tom Nathe – One confirmed keynote speaker has cancelled due to a scheduling conflict. More speakers are being sought. Currently about 90 people have registered for conference.
- Action Item: Mentorship program – Jim Reilly and Tom Nathe connect. This may be a way to support youth programs during the off-season? Tabled until after ALCOR.
- Knowledge base on website: Greg and Doug to build. Tabled until after ALCOR.

### New Business

- Dan Gray: Wants to determine membership interest in forming a SIG on doing science with small telescopes. Dan would be willing to lead the SIG if no one else steps

(Continued on page 10)



up. Possible activities include occultations, double stars, and extrasolar planet photometry. Dan has two contacts including Robert K. Buchheim, who authored "The Sky is your Laboratory," who may be interested in speaking about this at RCA meetings. Dan will work with Tom Nathe, SIG Coordinator, to promote this SIG to the membership. Dan and Tom should make a pitch at the next general meeting, post a notice to the e-list, and put together a brief article for the Gazette.

- Schedule CPA review meeting. Do we need to do this year? The board decided that a full CPA review was not necessary, especially due to the high cost. However an in-house review is always prudent and has not been done for many years. Larry Godsey will meet with Carol Huston and David Nemo this fall to review the financial books.
- Nominations Committee – We'll need to form by August board meeting to start the process for the Year 2008 board elections. The current elected position incumbents should be prepared to discuss whether they intend on continuing in their positions.
- NWRAL discussion. Carol would like to reestablish connection between RCA and NWRAL. She would like to help them establish a presence in the region and add value to the northwest astronomy community. Carol will be meeting with NWRAL weekly and report to the board on NWRAL progress.
- Youth Programs – Discussion on what we should provide for teenagers who attend our meetings. Would a SIG work? Will continue discussion at future meetings.
- GAMA visitors – Three members of Argentina astronomy club will be in town for ALCON and will attend the August general meeting. Carol proposed that RCA present them with several gifts: RCA t-shirts, RCA coffee mugs, and RCA logo stickers. The Argentina travel group might also present them a plaque along with some astronomy accessories that are hard for them to procure in Argentina.

## So what is there to do in August

with warm sunny days and cool clear nights? Well, during the daytime you could read the paper over a morning cup of coffee, and grab a quick bite for lunch and have dinner at the local pizzeria. Then as the sun sets and the evening cools off, you watch TV for a while and then snuggle under the covers for a good nights sleep.

OR

You could sleep in and enjoy your breakfast, lunch and dinner outdoors with the warm sun on your back and a light breeze ruffling your hair. You could enjoy astronomical and scientific talks, take a tour through the forest, visit vendors selling astronomical equipment and goodies and other astronomical related items, drool over giant telescopes and admire the handiwork of unique homemade scopes, go for a walk in the woods, or just kick back and chat with some friends. And then as the sun sets and the warm daytime temperatures drop, the world around you comes alive with the sound of dust covers being removed from telescopes, the whirring of the goto scopes, the chatter of people setting up telescopes, planning their evening viewing and the occasional burst of "WOW! YOU 'GOTTA SEE THIS".

The Oregon Star Party comes alive August 16-19 with another great outing with warm sunny days and cool clear nights in the high desert area of Ochoco Mountains 50 miles east of Prineville, Oregon. At 5000' feet in elevation and 50 miles from the nearest city, the sky is so dark that the milky way is the major source of light pollution. The saying the 'you gotta see it to believe it' is no truer any-

where than at OSP.

The talks during the day range from "Keep It Super Simple (KISS) Imaging" all the way to the Large Binocular Telescope (300 inch mirrors) and Optical Interferometry. Need help for yourself or the kids? Then our mentoring programs are designed for adults and kids. Don't want to bring food? The Chuck wagon and Espresso Blast will be up and running Wednesday for dinner until lunchtime on Sunday.

So, plan now to join us for the 20th annual Oregon Star Party. If you didn't pre-register we have lots of room on our 40 acres and you can register on-site.

See you at OSP!



## Omit Needless Bytes!

by Patrick Barry and Tony Phillips

Now is an exciting time for space enthusiasts. In the history of the Space Age, there have never been so many missions “out there” at once. NASA has, for example, robots on Mars, satellites orbiting Mars, a spacecraft circling Saturn, probes en route to Pluto and Mercury—and four spacecraft, the two Voyagers and the two Pioneers, are exiting the solar system altogether.

It’s wonderful, but it is also creating a challenge.

The Deep Space Network that NASA uses to communicate with distant probes is becoming overtaxed. Status reports and data transmissions are coming in from all over the solar system—and there’s only so much time to listen. Expanding the network would be expensive, so it would be nice if these probes could learn to communicate with greater brevity. But how?

Solving problems like this is why NASA created the New Millennium Program (NMP). The goal of NMP is to flight-test experimental hardware and software for future space missions. In 1998, for instance, NMP launched an experimental spacecraft called Deep Space 1 that carried a suite of new technologies, including a new kind of communication system known as Beacon Monitor.

The system leverages the fact that for most of a probe's long voyage to a distant planet or asteroid or comet, it's not doing very much. There's little to report. During that time, mission scientists usually only need to know

whether the spacecraft is in good health.

“If you don't need to transmit a full data stream, if you only need some basic state information, then you can use a much simpler transmission system,” notes Henry Hotz, an engineer at NASA's Jet Propulsion Laboratory who worked on Beacon Monitor for Deep Space 1. So instead of beaming back complete data about the spacecraft's operation, Beacon Monitor uses sophisticated software in the probe's onboard computer to boil that data down to a single “diagnosis.” It then uses a low-power antenna to transmit that diagnosis as one of four simple radio tones, signifying “all clear,” “need some attention whenever you can,” “need attention soon,” or “I'm in big trouble—need attention right now!”

“These simple tones are much easier to detect from Earth than complex data streams, so the mission needs far less of the network's valuable time and bandwidth,” says Hotz. After being tested on Deep Space 1, Beacon Monitor was approved for the New Horizons mission, currently on its way to Pluto, beaming back a simple beacon as it goes.

Discover more about Beacon Monitor technology, as well as other technologies, on the NMP Technology Validation Reports page:

<http://nmp-techval-reports.jpl.nasa.gov>.



*This artist's concept shows the New Horizons spacecraft during its planned encounter with Pluto and its moon, Charon. The spacecraft is currently using the Beacon Monitor system on its way to Pluto. Credit: Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute (JHUAPL/SwRI)*

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

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## August 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	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	

### August 2007

Aug 16-19	Thu-Sun	Oregon Star Party!	Indian Trail Springs
Aug 20	Mon	RCA General Meeting	OMSI Planetarium 7pm
Aug 22	Wed	Astrophysics/Cosmology SIG	Linus Pauling House 7pm
Aug 25	Sat	Telescope Workshop	Swan Island 10am-3pm

### September 2007

Sep 7	Fri	Downtowner's Lunch	TBD Noon
Sep 7-8	Fri-Sat	RCA Star Party	Dethloffs
Sep 10	Mon	RCA Board Meeting	OMSI Classroom 1 7pm
Sep 15	Sat	Omsi Autumnal Equinox S. P.	Rooster Rock State Park
Sep 14-15	Fri-Sat	RCA Star Party	Camp Hancock
Sep 17	Mon	RCA General Meeting	OMSI Planetarium 7pm
Sep 19	Wed	Astrophysics/Cosmology SIG	Linus Pauling House 7pm
Sep 29	Sat	Telescope Workshop	Swan Island 10am-3pm

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.rca-oms.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>



The

# Rosette Gazette

Volume 19, Issue 09

Newsletter of the Rose City Astronomers

September, 2007



## RCA SEPTEMBER 17 GENERAL MEETING

### How Can Amateur Astronomers Contribute to Astronomical Science?

Presented By Robert Bucheim

Today, telescope construction is funded by national budgets, and instruments are launched into space to get clearer views of celestial objects. Is it still possible for amateur astronomers to contribute to astronomical science? Yes, indeed! There are still some research projects that require the small telescopes, flexibility in observing schedule, and familiarity with the night sky that are attributes of the advanced amateur astronomer.

These projects provide results that are valuable to the astronomical community, and provide publishable contributions to the professional literature. Pursuing them can transform the backyard stargazer into an amateur scientist.

Mr. Bucheim presently works with Lockheed Martin in Southern California and is a trustee of the Orange County Astronomers club. He will be offering his book for sale at the RCA general meeting outlining numerous observing projects worthy of publication.



Observing Site of the Astronomical Research Group of Oregon  
(<http://www.whirlpoolgalaxy.com/argo.html>)

### In This Issue:

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- 2 .. Club Officers
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  - .... President's Letter
- 3 .. A Lunar Gallery—V
- 5 .. RCA Library
  - .... Cosmology SIG
  - .... Membership Renewal
  - .... Telescope Workshop
- 6 .. Calendar



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

**All are Welcome! Monday September 17**  
**Social Gathering: 7 pm. Meeting Begins: 7:30 pm.**  
**Location: OMSI Planetarium**

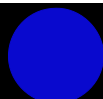
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Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.  
Moon photos below courtesy David Haworth

Last Quarter Moon  
September 3



New Moon  
September 11



First Quarter Moon  
September 19



Full Moon  
September 26



<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



### **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

As I look back over the years, I have seen major changes to our organization occur. When I joined RCA in 1989, there were less than 50 members. It was an informal group, all very enthusiastic to share their hobby of astronomy with newcomers and show them the wonders of the night sky. Since then, I have seen the club grow to 300+ member families, one of the larger clubs in the United States. What hasn't changed is members' basic enthusiasm and the willingness to share their knowledge. Even though the club is daunting in its size, the friendliness and informality of its membership is what makes this club so successful.

I remember only too well how confusing everything was to me. I knew I wanted a telescope, but what kind amongst all of the choices? I also knew that I was interested in astronomy as a whole, but how would that play out in pursuing it as a hobby? Many members at that time took me under their wings and showed me the ropes, let me view through their scopes, showed me how to read star charts, and oriented me to the constellations. I found my niche through their guidance, and I learned a lot of the things that had been confusing to me before.

As I became more active in the club, I could see more "newbies" coming in with this same confusion, and I could recognize it all too well. I wanted to give back to this organization, and I found my calling in serving on the RCA board in new member information. This led to the creation of the welcome packet, the new member packet, new member orientations, and new member information. Over the years, I gravitated through a number of the officer positions on the board.

Your current RCA Board consists of 20+ volunteers who all have stories such as this, and each person fulfills a role that provides a valuable service to the membership of this club. These activities obviously take some personal time, but the rewards of

*(Continued on page 5)*

# A LUNAR GALLERY—V

**The Sea of Serenity holds bountiful treasures for moonwatchers.**

**By John W. Siple**

**C**ycles of light and shadow during the course of the Moon's monthly period present an ever-changing aspect of the lunar surface. Integral to any successful moonwatching program is the observation under different lighting conditions of Luna's broad maria or seas.

Mare Serenitatis (Sea of Serenity) is a vast, lava-filled impact basin located in the Moon's northeastern quadrant. The sea adjoins neighboring Mare Tranquillitatis, together forming a huge, roughly-hewn dark dumbbell on the lunar surface. In moon lore, Mare Serenitatis' shape fuels the imagination of Earthbound observers, becoming part of the beetle, the lady reading a book, the rabbit, and many others. This area was a touchdown spot for manned lunar exploration: Apollo 17 landed here in December 1972.

Mountain ranges separate the sunken mare from its neighboring seas. Acting as barriers are the curving Montes Haemus in the southwest, the rugged Montes Caucasus in the northwest, and the jumbled hills of Montes Taurus in the highland region to the east.

The four billion-year-old mare is noticeably anemic in the number of large craters on its floor, but still holds many promising targets for the lunar enthusiast. Attention is immediately drawn to the crater Bessel in the southern interior. A long, straight ray passes almost directly through the center of the 12-mile-wide crater. Selenographers (lunar geographers) have theorized that the bright ray is



part of the great Tycho ray system, or possibly ejecta from nearby Mene-laus on the rim of the mare.

The steep-walled crater Plinius, 32 miles across, lies at the junction between Mare Serenitatis and Tranquillitatis, acting as a sentinel guarding passage between the two large seas. Posidonius, 62 miles in diameter, is an oval, low-walled plain found at the entranceway to Lacus Somniorum (Lake of Dreams). It adjoins Chacornac, a ruined crater to the south. Nearby le Monnier, 34 miles across, is a crescent-shaped bay—the seaward side of the breached crater has been flooded by mare basalts.

The long, sinuous Serpentine Ridge parallels the eastern shore. (The northern portion is now called Dorsa Smirnov.) To catch a glimpse of this meandering wrinkle-ridge the light-

*In this striking Swift 60mm shot, the large, irregularly contoured “sea” Mare Serenitatis stands out in bold relief on the lunar surface.*

ing angle must be oblique, near the terminator sunlight grazes the rounded ridge for the best eyepiece views.

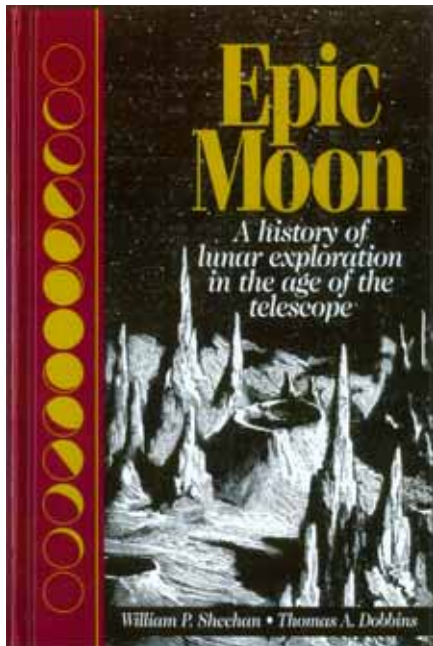
The perimeter of Serenitatis has a different hue than the subtle grayish-green of the mare's center. Here, the Moon's regolith and crust are rich in the element titanium, a potential windfall for future lunar prospectors. The region is also known for its rare Transient Lunar Phenomena (TLP)—flashes, glows, and other weird events—generally attributed to out-gassing and the release of volcanic ash.

Linné, a small crater found on the

*(Continued on page 4)*

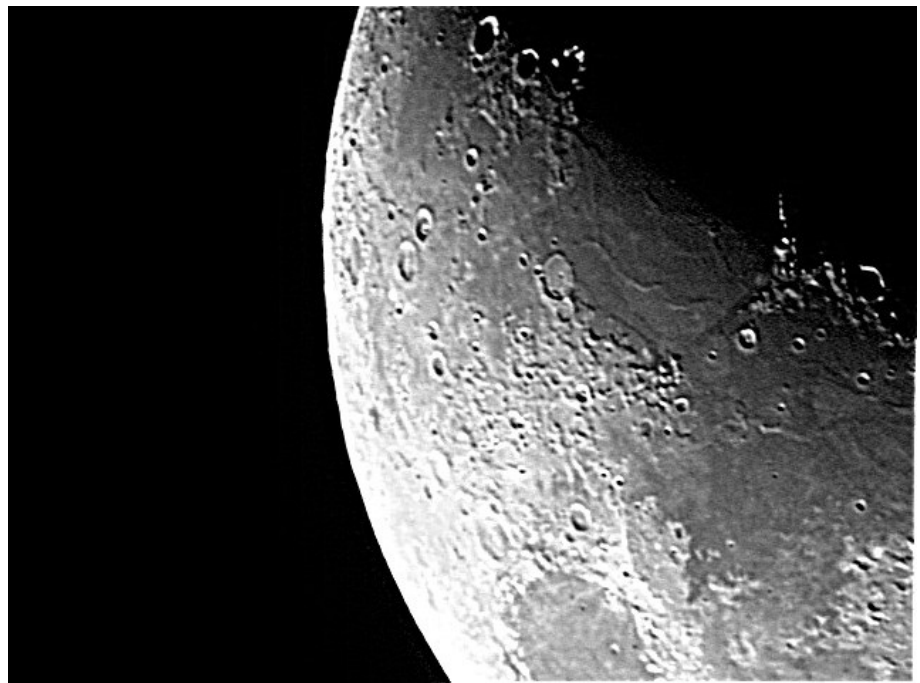


mare's northwestern undulating floor, has been branded the "vanishing crater." On 16 October 1866, astronomer Julius Schmidt reported its apparent disappearance while viewing Mare Serenitatis with a 6-inch refractor from his observatory in Athens, Greece. In Linné's place only a small whitish patch or cloud remained. His extraordinary announcement resulted in a careful reexamination of whether or not the Moon was truly a dead world.



A detailed account of the discovery and subsequent worldwide controversy surrounding mysterious Linné is found in Chapter 11 of *Epic Moon: A history of lunar exploration in the age of the telescope*.

Apollo 15 photographs of Linné, a crater that was artfully dodging even the best telescopic observers of the 19th century, proved that it was a relatively young, normal impact crater with a border of whitish material. The disappearing (and reappearing) act was simply the result of a rapid response to changing illumination or angle of the Sun above the crater during the lunar day.



Above: Unitron 40mm lower resolution image of Mare Serenitatis. Left: Epic Moon by William P. Sheehan and Thomas A. Dobbins. Below: The Swift and Unitron refractors used for lunar viewing and photography.

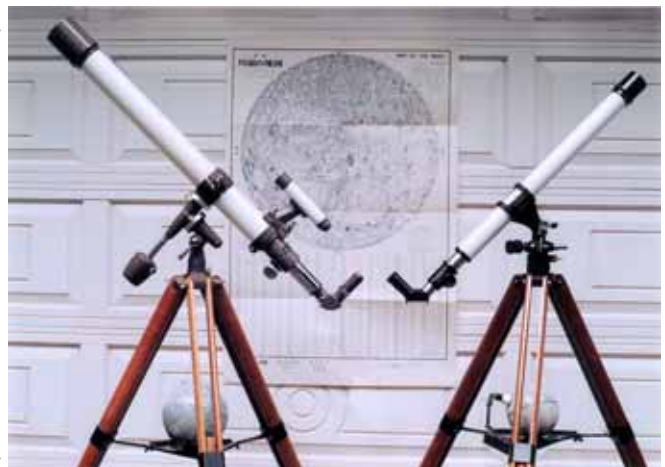
Sir Patrick Moore, in his authoritative 1976 book *New Guide to the Moon*, had this to say on the subject: "Weighing the pros and cons, I am of the firm opinion that no change has occurred there, and by now I doubt whether many people will disagree."

Two achromatic refractor telescopes of outstanding optical quality from the 1960s were used for observing and photographing our nearest neighbor in space. Unitron's 40mm f/17.5 Model 127 and Swift's 60mm f/13.5 Model 839 provided absolutely stunning "spacecraft-like" panoramas.

The optimum time to mine the mare's telescopic treasures does not necessarily occur

during full illumination, since the bright glare and lack of contrast gives the area a washed-out appearance. The best opportunity for viewing features in bold relief happens at lunar sunrise or sunset when long, slanting shadows are cast.

In *A Key to Worlds Beyond*, a wonderful booklet supplied with vintage Tasco telescopes, Arthur P. Smith Jr. mentions that during such conditions, "Mountain peaks and crater walls sometimes stick up into the blinding sunlight, past the edge of the day-night line and look like disconnected points of light."



**President's Message** (Continued from page 2)

being able to share your knowledge of such an interesting hobby have their own set of payoffs that just can't be beat. We are approaching the election season within RCA, and you might be thinking about whether or not you would be interested in serving on the board. Look for more information within the next month!

RCA's bylaws spell out our purpose: **RCA is a non-profit, volunteer organization dedicated to promoting the enjoyment and education of astronomy and related subjects to members and the general public.** As I look back over the years, I can see that the purpose of our bylaws has been fulfilled for me, members supporting other members, and I look forward to this organization carrying on the same direction in the future.

## Have you renewed your RCA membership?

The membership year runs from July 1 through the end of June. Most of us will be up for renewal in a few weeks. Renewal dues are \$24. You can find renewal forms on the RCA website. You can either mail your dues to the address on the form or bring your check to the next RCA meeting. Help support your club and keep your membership benefits active.

## 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaillists.htm>

Always great conversation and food.

For more information contact: Margaret Campbell at [mmcrea@nwl.com](mailto:mmcrea@nwl.com)



Photo by Jan Keiski

## Telescope Workshop

When: Saturday, September 29, 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 [johndelacy@comcast.net](mailto:johndelacy@comcast.net)

## ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, September 19, 7 PM.

Topic: "Ham Radio Night"

Presented by: Scott Fitzpatrick and Russ Paul

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

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

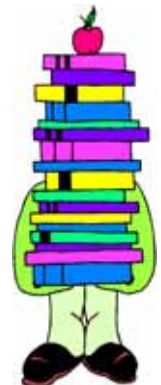
<http://www.rca-oms.org/cosmologysig.htm>

## RCA LIBRARY

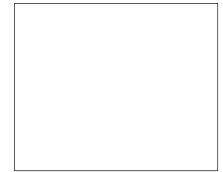
The Rose City Astronomers maintains a comprehensive club library of astronomy related articles, books, CDs and videos. These items can be borrowed by members through check-out at the general meetings for a period of one month with renewals available by phone or e-mail to the club library director, Jan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

Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566



Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## September 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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23	24	25	26	27	28	29
30						

### ***September 2007***

Sep 10	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Sep 15	Sat	Omsi Autumnal Equinox S. P.	Rooster Rock State Park	
Sep 14-15	Fri-Sat	RCA Star Party	Camp Hancock	
Sep 17	Mon	RCA General Meeting	OMSI Planetarium	7pm
Sep 19	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
Sep 29	Sat	Telescope Workshop	Swan Island	10am-3pm

### ***October 2007***

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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.rca-oms.org>).

### **RCA CLUB INFORMATION**

Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>



The

# Rosette Gazette

Volume 19, Issue 10

Newsletter of the Rose City Astronomers

October, 2007



## RCA OCTOBER 15 GENERAL MEETING

### Astronomical Observing Tips and Tricks

Presented By Dave Kasnick

**Dave's presentation is an all inclusive program for amateur astronomers and step by step guide. He will discuss topics beginning with Timing Factors affecting your observing session, Location, and Preparation and includes check lists and the development of an observing plan with an introduction to available astronomical software. He then provides familiarity with web based Weather sites and evaluation of Sky Conditions.**

**After Dave walks us through Set Up, he describes Observing Methods for finding those rascal objects. Various Visual Techniques are discussed. He then concludes by sharing ways to enhance the visual experience with utilization of various eye pieces and Accessories like filters.**

**Handouts will be provided for attendees.**

**All are Welcome! Monday October 15**

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

**Location: OMSI Planetarium**

### In This Issue:

- 1 .. General Meeting
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  - .... Cosmology SIG
  - .... Downtowner's Lunch
  - .... Telescope Workshop
- 7 .. Eclipse from Mendoza
- 8 .. Calendar

**URGENT! If you haven't renewed your Membership by the October General Meeting you will be dropped from the club bulletin board, RCA email list and will no longer receive the Rosette Gazette by mail**

**Elections for club officers** will be held at the November meeting. All elected board positions are currently open for nominations. If you would like to be nominated for a position, please contact Greg Rohde or Andy Phelps. The following is the current slate of nominees and incumbent officers:

**President:** Sameer Ruiwale      **VP Membership:** Ken Hose      **VP Observing:** Doug Huston  
**VP Communications:** OPEN      **VP Community Affairs:** Patton Echols  
**Treasurer:** Larry Godsey      **Secretary:** Margaret McCrae



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

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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

Last Quarter Moon  
October 3

New Moon  
October 10

First Quarter Moon  
October 19

Full Moon  
October 25



<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



## **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

### **Winter Observing**

Well, our gray time of year is descending upon us, earlier than normal it seems. The weather is turning colder, and the rain is already starting to come down. What happened to our Oregon Indian Summer and those beautiful autumn days where the sun is still shining, the wind is starting to blow, the leaves are turning to flame colors on the maples, and the chill in the air is crisp but dry?

With this change of seasons, it's time to get ready for winter observing. If we get any very clear nights in the next four months or so, they are sure to be accompanied by really cold weather. While the crisp clear nights can be spectacular, winter observing has its own set of challenges.

Observing in cold weather can be very rewarding, but to enjoy it, you need to be totally prepared. First consideration is to keep warm. It is important to wear layers of clothing, including warm socks, warm gloves, and insulated shoes or boots. Skier type clothing is good with the different layers of insulation and polypropylene long undies, t-neck shirts, and socks. For the outer layer, I have found that coats made out of micro-

fiber are warmer than nylon or Gortex type fabrics. A neck warmer or scarf makes a big difference, but a critical component of your cold-weather outfit would be a hood or hat since a lot of body heat is lost through your head. (Is it from all that thinking?)

To keep my hands warm, I bought some cheap polar fleece gloves and cut off the underneath part of the tips of the index finger and middle finger, so just the pads of those two fingers are exposed. When it is real cold, I put on a pair of leather lined driving gloves underneath the polar fleece gloves and still get traction from my fingertips.

Hand warmers are great to keep you warm – in your pockets, in your gloves, and in your leggings. But, they can also be used with your eyepieces or Telrad to keep them from dewing over as well. Another trick to keep you just a little bit warmer is to put a towel or some thick fabric on your observing stool so there is one more layer of insulation between your body and a hard cold surface.

Don't underestimate the warming capabilities of a cup of hot cocoa or hot soup in the middle of an observing session. And, my last tip for cold-weather observing: don't ever drop a white Telrad screw in the snow. You will NEVER find it with your red flashlight.



# TELESCOPES OF THE ROSE CITY ASTRONOMERS



*Left:* **LORIEN REILLY'S 8-INCH MEADE MODEL 826**

Lorien is shown standing next to her 1975 Meade reflector. An avid amateur astronomer along with her husband and father, she is diligently working on the Messier Certificate.

*Below right:* **DAN GRAY'S 94MM F/7 BRANDON**

This fine "baby blue" VERNONscope & Co. apochromatic refractor graces Dan's astrophotography setup, acting as a guidescope during dark sky imaging sessions.



**Members of the RCA club view faraway galaxies, Martian dust storms, and explore other wonders of the universe with a wide variety of classic telescopes.**

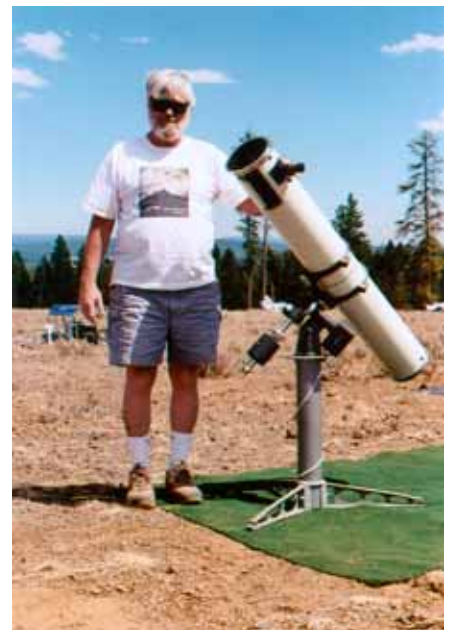


*Above:* **Dr. WILLIAM MOYNIHAN AND HIS COULTER ODYSSEY II**

Observations contributed by William and his son Michael through their 17.5-inch Coulter Dobsonian helped in the creation of the Astronomical League's Herschel II Certificate. The big "Dob" is now used for spotting deep sky objects at the Oregon Star Party.

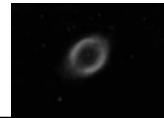
*Right:* **JIM WOODRUFF'S CRITERION RV-6 DYNASCOPE**

In 1971, this sparkling new 6-inch f/8 equatorial reflector arrived at Jim's residence. The classic Newtonian—one of Criterion's finest—is used primarily for viewing detail on Mars, Jupiter, and Saturn.



Photography and text by John W. Siple





## Five open clusters in a row in Cassiopeia.

Late in the evening of September 10-11, 2007 I was star hopping my way to the faint supernova remnant Abell 85 in Cassiopeia, and instead found a totally unexpected treasure.

Abell 85 is tucked away several degrees north of the bright star Caph, (Beta Cas, magnitude 2.3). Checking my trusty Sky Atlas 2000 chart I it was apparent that I could use the open star cluster NGC 7790 as part of a star hop along the way to the SNR. Flipping open Uranometria to chart 18 showed that another cluster, NGC 7788 was right next door along with a bunch of stars bright enough to make the star hop fairly easy.

Going to the scope I quickly found 7790 and 7788 but I also saw a third cluster in the same fov. Fainter than the two NGC clusters, it was still a distinct open cluster and was in a straight line with the other two. Holy cow, what a great sight!

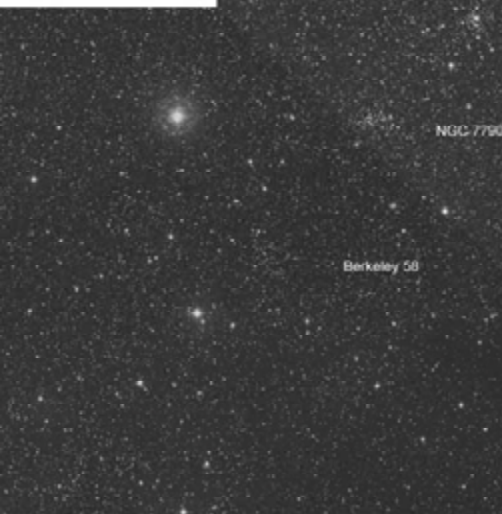
Going back to Uranometria I then saw that the fainter cluster was labeled Be (Berkley) 58 and what's more there were two other open clusters in a straight line extending to the northeast! Sheesh, why didn't I notice them before? Maybe the dim red light of my flashlight, the lateness of the hour (about 1:30am), and just maybe I was in a bit of a hurry to get on to Abell 85... attention can be a fickle thing.

Back to the scope and sure enough, although they were not all that bright or rich, there were two more recognizable clusters, completing the line of five. The other two are labeled Ha (Harvard) 21 and King 12.

As it turned out there's a sixth clus-

ter, Fr (Frolov) 1 about a quarter degree north of this line of clusters, which all told spans only about 1.2 degrees.

Even at my lowest power I couldn't fit them all in one field of view but I was enthralled nonetheless. I'd never heard of this line of clusters and even though they're not as visually attractive as the Double Cluster they make an



*This is a three photo composite made from Digital Sky Survey images showing the line of five open clusters in a row in Cassiopeia. The cluster Fr 1 is off this line to the north (center right). The five cluster line spans about 1.2 degrees.*

amazing sight simply because they're so close together and are in a nearly perfect straight line.

I went back and forth through these clusters for the better part of 30 minutes before tearing myself away to continue looking for Abell 85, the reason I was in this neck of the woods anyway. As it turned out it was too faint for me on this night so I'll have to go back there again sometime, but I did take another cruise through the line of clusters again before heading off to my next

target.

I suspect that Harvard 21 and Berkeley 58 would be the most difficult clusters to see with a smaller scope, or in light polluted skies. But don't let that stop you from giving this corner of our galaxy a look sometime, especially if your lowest power eyepiece can hold all five clusters in the same field of view.

From a true dark sky site I'll bet they'd all look great through an 8 inch f4 scope...



## BOARD MEETING MINUTES

September 10, 2007

OMSI Classroom 1

Andy Phelps

Dale Fenske, Matt Vartanian, Greg Rohde, Ken Hose, Carol Huston, Jenny Forrester, Tom Nathe, David Nemo, Andy Phelps, Jan Keiski, Bob McGown, Sameer Ruiwale, Dareth Murray.

Meeting was called to order by Carol Huston at 7:14pm.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 13 voting members present.
- VP Observing – Matt Vartanian: Star Party at Dethloff's Fri & Sat, 9/7, 9/8 was successful. OMSI will be holding the Autumnal Equinox star party at Rooster Rock on September 15. About 35 people have registered for Camp Hancock on September 14-16.
- VP Membership – Ken Hose: August membership report: 9 new members joined, 33 members renewed, \$994 collected in dues. Membership now stands at 175 paid member families. Members who haven't renewed by the end of September will be dropped from the e-list and mailed newsletter list.
- Book Library – Jan Keiski: Club photo albums have been restored by WinkFlash.com. Club will purchase PBS special entitled "Seeing in the Dark."
- Telescope Library – Greg Rohde: Library added 2nd Coronado PST. A request was received for information about availability of inexpensive used telescope for a deserving young astronomer. Discussion was held about possibility of donating one of the club's excess scopes. There are legal restrictions concerning a 501c3 entity making donations of assets. Discussion was tabled until next meeting.
- IDA – Bob McGown: Spoke about light pollution and IDA at Table Mountain Star Party.
- Webmaster – Dareth Murray: Domain name rca-omsi.org will be renewed and website will be slowly transitioned to rosecityastronomers.org. All printed materials will now be printed with the new URL. Currently both URLs work for RCA site. This will be kept in place for at least a year.
- Site Committee – David Nemo: nominal
- SIGs – Tom Nathe: nominal
- Alcor – Dale Fenske: Roster has been sent to Astronomical League
- OMSI – Carol and Jan: Auditorium and classroom 1 have been reserved for the 2008 RCA General Meetings. If the auditorium is not available, the planetarium will be the alternate location. The RCA Board Meetings in classroom 1

were also reserved for 2008 for the first Monday of every month except for Labor Day, September 8. OMSI has received a few calls from people who were trying to reach RCA but were unable to do so due to our cancelled phone number.

### Old Business

- Action Item: Patton report on forum issue. Martin Alvey's latest update. Website address is now parked. Review of latest information and e-list discussion which generated many good comments and ideas. A letter has been drafted to non-member creator of RCA forum. Discussion was held about the creation of a forum communication website to replace or be used in conjunction with the current email list. The board is in favor of utilizing the electronic forum that can meet the needs of as many members as possible. David Nemo volunteered to lead/create a committee of board members and general club members who will research the viability and options of a forum format. Greg Rohde, Sameer Ruiwale and Matt Vartanian have volunteered to serve on this committee. David will also request participation from other members on the e-list who have expressed opinions on both sides of the issue.
- Action Item: Mentorship program – Jim Reilly and Tom Nathe connect. We have a need for a mentor right now. This may be a way to support youth programs during the off season. Tabled until after ALCON. Tabled.
- Knowledge base on website: Tom and Doug to build. This option should be reviewed in conjunction with the forum options above.
- NWRAL discussion. Tabled.
- Elections: Delayed due to cancellation of August Board Meeting. Nominating committee selected, Andy Phelps, Bob McGown, and Greg Rohde. Must place announcement in October newsletter. Current board member intentions: Secretary, VP Observing, VP Programming, and President will not return.

### New Business

- ALCON report -- Committee treasurer David Nemo reported that ALCON showed a financial gain of about \$5000 which will be split between RCA, AL, and NWRAL. RCA's portion is approximately \$2000. There were many last minute and on-site registrations. Volunteers were very helpful.
- Report on AL's Thursday Council Meeting: Carol learned that many astronomy clubs offer scholarships to young college students and RCA should consider this. The concept of "sister clubs" was reviewed. Carol had some suggestions for the AL publicity chairperson who had requested some feedback.
- GAMA connection; Dareth Murray: The GAMA-RCA connection has grown with the visits of RCA members to Argentina and GAMA members to Portland. It was sug-

*(Continued on page 6)*

*Board Meeting Minutes (Continued from page 5)*

gested that RCA formalize the relationship that exists between the two clubs in a sister-club relationship. Dareth and Carol will research the sister club concept and present findings to board at a future meeting.

- Youth Programs: Jenny Forrester: Previously, RCA purchased youth observing programs from AL and these have been distributed to youth participants. Future program possibilities include family/youth specific star parties. Jenny will be stepping down as youth leader, and RCA will need to find a new youth director.
- Proposal from Charles Fu of Zen-Ray Optics; RCA has been asked to evaluate new astronomy products. This would include possibly selling them through the sales table. Sameer will follow up.
- Proposal from Jay Wilkins to present to RCA general meeting and set up a table. (Carol e-mailed this to all board members on about July 24.) Jay inquired about starting a SIG. The SIG director felt that the subject matter was implausible and would communicate with Jay.

Also, Matt Brewster needs to respond to Jay regarding Jay's request to present his topic at an RCA general meeting.

- Joining ASOP's Night Sky Network – Dareth and Carol will follow up.
- RCA Awards committee: This committee should be proactive with AL awards in addition to the RCA awards presented in December.
- Park Liaison – Greg Rohde is Stub Stewart liaison.
- City Liaison (City of Beaverton? City of Portland? City of Gresham?) Tabled.
- Greg Rohde: There are 7 UNIX/sparks stations (computers) that were donated for use with ALCON that need to be disposed of. Discussion was held about what to do with these. The board decided that these machines have no value. Greg will dispose of them as he sees fit.

**Meeting Adjourned at 9:01pm.**

## 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.rca-oms.org>).

The location is announced on the RCA general email discussion list. Information on how to join this list is at <http://www.rca-oms.org/emaillists.htm>

Always great conversation and food.

For more information contact: Margaret Campbell at [mmcrea@nwind.com](mailto:mmcrea@nwind.com)



*Photo by Jan Keiski*

## Telescope Workshop

When: Saturday, October 27, 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, October 17, 7 PM.

Topic: "The mystery of organic molecules and the ISM"

Presented by: Pat Hanrahan

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

Contact: Bob McGown (503-244-0078)  
or Dareth Murray, (503-957-4499).

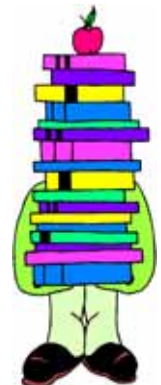
<http://www.rca-oms.org/cosmologysig.htm>

### 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 check-out 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-oms.org/library.htm>

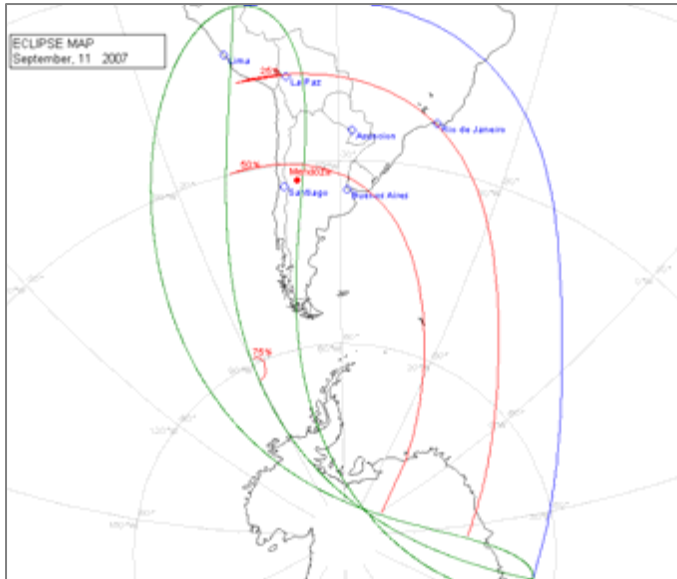
Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566





# Partial Solar Eclipse September, 11 2007

Report by Leo Cavagnaro from Mendoza, Argentina



On September, 11 we had the opportunity to observe, from South America, a very interesting partial solar eclipse. This was the 6th partial eclipse of Saros 154, a young Saros Cycle. The phenomenon was visible only in part of South America and part of Antarctica. The map ( left) shows the region on the planet where the eclipse was visible).

We had a clear morning sky here in Mendoza so the eclipse was visible very well. The beginning was at 07:37 am ( 10:37 am UT), a few minutes before sunrise, with the Sun at 1.6 degrees below the Horizon in that moment. The maximum of the eclipse was at 08:39 am local time ( 11:39 am UT) with the Sun at 11.3 degrees

of altitude. From this city, the eclipse magnitude was 0.54 (54%).

Last year ( on September 22) we could enjoy a similar eclipse ( but of smaller magnitude) from Uspallata, during our 1st Joint Astronomical Observations with our friends of RCA who visited Mendoza.

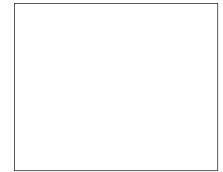
The eclipse of September 11 finished at 09:47 am local time ( 12:47 pm UT), with the Sun at 25 degrees of altitude.



I took some pictures from my house in Mendoza City using just a digital camera ( Canon A570 IS) and Mylar filter. Here I send a couple of pictures. In the first one you can see the shadow of a tree.

The next solar eclipse visible from Argentina will occur on July 11, 2010. This will be a total eclipse and the totality will be visible from Patagonia (South Argentina). Unfortunately with the Sun very very low above the West Horizon, with the Total phase beginning some minutes before sunset). Maybe a best option to observe that eclipse would be the coast of South Chile.

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Nov 24	Sat	Telescope Workshop	Swan Island	10am-3pm

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**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-omsi.org>

# The Rosette Gazette

Volume 19, Issue 11

Newsletter of the Rose City Astronomers

November, 2007



## RCA NOVEMBER 19 GENERAL MEETING

### Awe, Fear and Wonder All About Comets Presented by Dave Powell

#### In This Issue:

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- 2 .. Club Officers  
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.... President's Letter
- 3 .. Mare Orientale
- 7 .. Classic Telescopes
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.... Telescope Workshop  
.... Communication Survey
10. Calendar

As the title indicates, the presentation is about comets. Dave will take you on a journey through history, from the earliest recorded observations to the present day, with special emphasis on Comet Holmes. From the nucleus, to the tip of their tails, you will learn all about comets; there will also be some great photographs too. After the meeting, if the weather is clear, we will have the opportunity to view Comet Holmes from the plaza in front of OMSI. Dave is well known to RCA members, as the guy who does the monthly Night Sky Report. Dave has also given past presentations at

RCA meetings, The Oregon Star Party and at ALCON 07.



Image of Comet Wild 2 from NASA's Stardust spacecraft (courtesy <http://www.jpl.nasa.gov>)



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

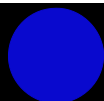
**All are Welcome! Monday November 19**  
**Social Gathering: 7 pm. Meeting Begins: 7:30 pm.**  
**Location: OMSI Auditorium**

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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

Last Quarter Moon  
November 1



New Moon  
November 9



First Quarter Moon  
November 17



Full Moon  
November 24





<b>Club Officers</b>			
President	Carol Huston	(503) 629-8809	StarsCarol@comcast.net
Past President	Peter Abrahams	(503) 699-1056	telscope@europa.com
VP Membership	Ken Hose	(503) 591-5585	khose@comcast.net
VP Observing	Matt Vartanian	(503) 244-5023	matt@vartanian.net
VP Community Affairs	Patton Echols	(503) 936-4270	mpecho@rdrop.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
Secretary	Andy Phelps	(503) 408-1758	aphelps@spiritone.com
Sales Director	Sameer Ruiwale	(503) 681-0100	sameer_ruiwale@hotmail.com
Newsletter Editor	Larry Deal	(503) 708-4180	gazette_ed@comcast.net
New Member Advisor	Jim Reilly	(503).493-2386	jim-lorien@granitic.net
Web Master	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Dareth Murray	(503) 957-4499	darethlee@comcast.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	Jenny Forrester	(503) 504-8070	jenny@theforrest.org



## **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. 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 and click on any of the links for magazines. Larry Godsey, 503-675-5217, Subscription Coordinator, 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.

## ***President's Message*** **By Carol Huston**

### The Holidays for Astronomers

During the holiday season, people start looking around for gifts for their loved ones and friends. For the astronomy enthusiast in your life, this can present you with a number of opportunities as well as challenges. If you are unfamiliar with astronomy gear, take some time to connect with a seasoned member to get some advice. A good start would be contacting the New Member Advisor, Jim Reilly, who has a listing of mentors who can help you figure out a number of different things. Any of the board members could also give you some assistance with this.

First of all, if you are interested in a buying a telescope, it is important to do some research before you buy. A rule of thumb: if a telescope makes claims about having "450 power!" (450X) or more, don't buy it. There are lots of cheap instruments readily available on the market -- in local department stores or local discount stores -- that do not perform very well for astronomical use. There are several articles and booklets in the RCA Member Library that provide information on choosing a telescope and appropriate accessories. Again, talk

to other club members. The variety of instruments RCA members have range from binoculars to large reflectors, from refractors to Schmidt-Cassegrains. Each instrument has its advantages and disadvantages, so it is important that you determine your needs in order to match them up with the equipment that fits them the closest.

There are other great accessories and ideas for your astronomy enthusiast. The RCA Sales Table at each general meeting has a myriad of books, charts, calendars, lights, t-shirts, and gadgets, etc., that are priced way below regular market for members' benefit. The annual calendars are out now and they have spectacular celestial images on them as well as handy astronomical information.

And, a gift membership to RCA also makes a wonderful gift that keeps giving the whole year. We prepare a nice certificate and include a member packet to make a wonderful presentation to an individual or family.

A reminder: RCA's Holiday Social gathering will be held the Monday, December 17, at OMSI in the cafeteria section. We hope to see you all there for our annual potluck!

# MARE ORIENTALE

An ancient mountain-rimmed sea on the Moon's southwestern limb offers a challenge for lunar observers.

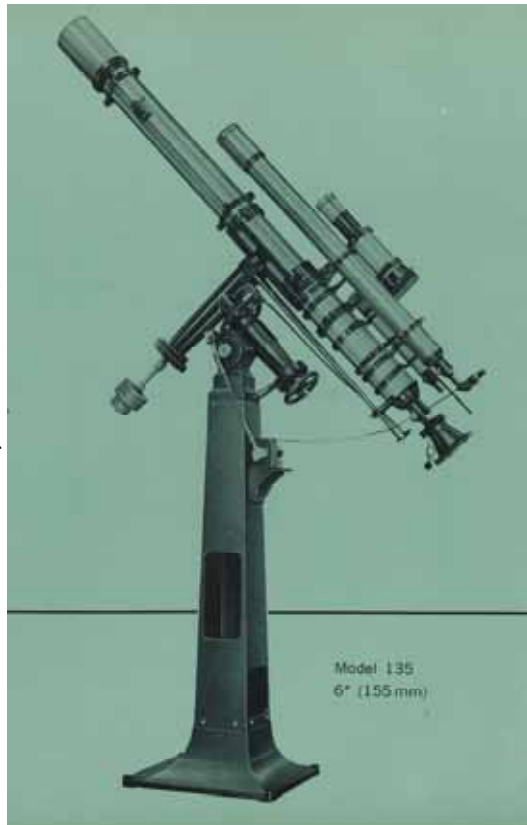
by John W. Siple

Shallow sky observers, or those dedicated watchers of objects within our solar system, are favored with spectacular vistas of vast, dark-hued lunar maria. The Moon's far side has its share of mammoth depressions, but there is a dearth of these deep basins filled with seas of frozen, dark basaltic lava. At last count, Luna had about 30 of these circular-shaped asteroidal impact scars, both full and bereft of basalt, covering its globe from pole-to-pole.

As a quirk of fate in the Earth-Moon system, exotic Mare Orientale, called the "Eastern Sea," straddles the dividing line between the near and far sides of the Moon. ("Eastern Sea" is a misnomer, since in 1961 the International Astronomical Union reversed or flipped the cardinal directions on the Moon.) This solitary mare, hovering near the limit of earthshine at 95° west longitude, completely dominates photographs of the region taken by NASA.

The magnificent 3.84 billion-year-old Orientale basin—the youngest and finest example of its type on the Moon—is an almost perfectly preserved impact feature that resembles a giant bull's eye target ring. (Mare Orientale proper, a level plain some 190 miles across, is located at the exact center of the symmetrical multiring basin.) Attributed to a cataclysmic asteroid impact, the effects of the ancient encounter are evidenced over a tremendous area. According to noted lunar geologist Charles A. Wood, "A veritable storm of ejecta rock roared across the Moon, causing damage that varied in degree and type with distance from the impact."

Scholars generally credit the German cartographer Julius Franz in *Der Mond* (1906) for naming the large mare and its associated lakes of lava. A drawing of Mare Orientale made by astronomer H. P. Wilkins, who called the intriguing feature "Mare X," was published in a 1937 volume of the *Journal of the British Astronomical Association*. Sir Patrick Moore independently discovered the sea in 1946 with his 15-inch reflector and then christened it Mare Orientale.



Large refractors, such as this Unitron-Polarex 6-inch f/16, are ideal for viewing detail in and around Mare Orientale.  
Courtesy of Unitron Ltd.

Tidally locked, our pockmarked Moon presents the same face Earthward. However, a nodding or swaying of the Moon's disk, called libration, brings into view features normally concealed around the eastern and western limbs. Portions of elusive Orientale can therefore be glimpsed only during extremely favorable librations when the Moon's southwestern hemisphere is tipped in our direction.

(Because of the awkward position on our Moon's southwestern limb, the exact nature of Mare Orientale and its surrounding mountain rings was not fully resolved until 1967, when Lunar Orbiter IV passed over the region.)

After the Full Moon phase, a marginal 7° tilt is necessary to see the cliff-like progressive sequence of radial mountain ranges and the dark central lava-filled plain. During such favorable libration conditions, the skeletal outlines of craters in the Orientale basin dot the surrounding broken terrain. Once hidden from view on the far side of the Moon, giant massifs now reflect their brilliant sunlight Earthward.

(Continued on page 4)

## THE GREAT RING MOUNTAINS

Mare Orientale is encircled by three major widely spaced mountain ranges that resemble crater terraces. The concentric ring-walls closest to the heart of the impact zone are comprised of the double escarpment of the jumbled Inner and Outer Rook Mts. They extend the basin's diameter outward to 305 and 385 miles, respectively.

The sharp peaks of the Cordillera Mts.—towering ridgelike massifs that slope abruptly toward the Rooks but with massive ejecta deposits outside—define the rim of the great impact basin. The Montes Cordillera increases the diameter of the basin to a staggering 600 miles!

Oriente enthusiasts monitor what has been dubbed the “Weird Big Mountain.” According to accomplished lunar observer Akkana North, “It’s very prominent in certain lighting conditions—a big symmetrical cone which appears to be surrounded by a ‘moat’, a low area encircling its base.” She goes on to say, “None of the lunar atlases I’ve seen show anything like this (because none of them show it in quite the right lighting condition) and it’s hard to find anything on the charts which looks like that, so I’m still not sure what it is (probably not Maunder), though I’ve heard different theories.”

## DARK LAKES OF THE MARE REGION

Two meandering ribbons of basalt, Lacus Veris (Lake of Spring) and Lacus Autumni (Lake of Autumn), are located between the great ring mountains. Formed by deep-seated material oozing through fractures in



the weakened lunar crust, Lacus Veris is snuggled against the inner embankments of the Outer Rook Mts. It is the longest of the pair, extending almost a quarter of the way around the basin. The isolated pool of Lacus Autumni lays against the inside of the Cordillera Mts. in the northeast.

## THROUGH THE ASTRONOMER'S TELESCOPE

Amateur astronomers, pointing their instruments in the direction of the Moon's southwestern hemisphere, will soon come to the exceptionally dark splotch of Grimaldi, a walled-plain 120 miles in diameter. Another welcoming signpost in the journey to Mare Orientale is the prominent rayed crater Byrgius A. Depending on the Moon's phase, these two important landmarks are visible even in binoculars and spyglasses.

Once identified, the peaks of Montes Rook and Montes Cordillera appear as brilliant white bumps on the lunar limb in profile views through ama-

*A period of meteoric bombardment and volcanic activity on early Earth is depicted in Atmosphere. Artwork copyright Joe Tucciarone.*

teurs' telescopes. The greatly foreshortened Mare Orientale itself is a long, dark stripe hugging the curved edge of the Moon.

Laci Veris and Autumni appear as two thin winding lines on the lunar landscape in the author's high-definition 5-inch f/16 Unitron refractor telescope. Beadlike nodes, indicating the position of accompanying craters on Lacus Veris, breaks the continuity of that slender pencil of darkness. The squiggle of shorter Lacus Autumni has a distinctive “S-shape.”

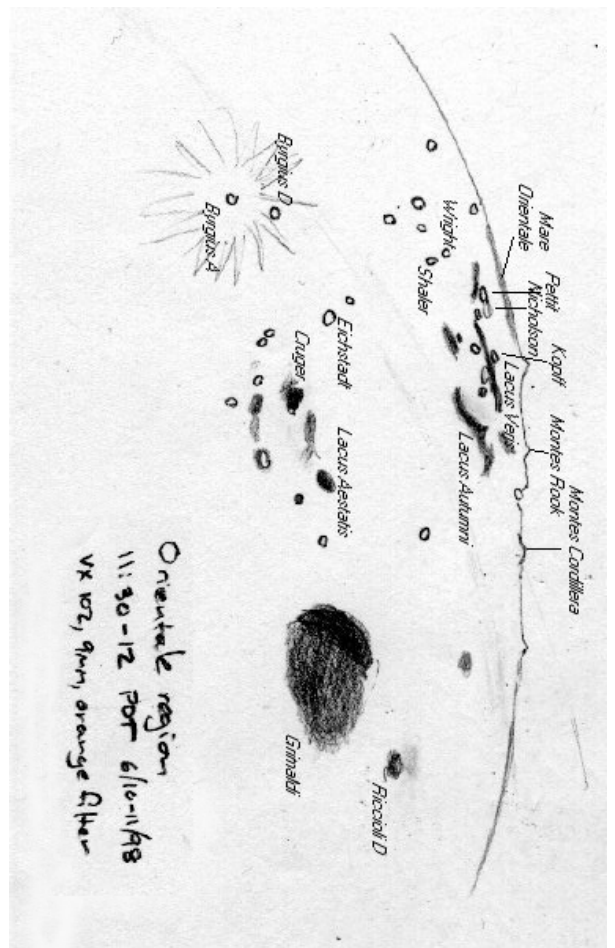
The 5-inch telescope gives a tantalizing glimpse of Orientale's awesome structure. Owners of larger aperture instruments can hunt for the shrouded outlines of craters in the Eichstädt and Wright-Schaler sectors of the Orientale region and follow the path to the “Weird Big Mountain.”

*(Continued on page 5)*



**Mare Orientale** (Cont'd from page 4)

The color composite image of the Moon (right) was taken on December 9, 1990 by the Galileo Orbiter spacecraft at a range of about 350,000 miles. Courtesy of JPL/NASA. Thomas Williamson's remarkable shot of the Moon's southwestern quadrant (below, left), taken through his 203mm f/7 Newtonian telescope on November 15, 2003, shows the long dark stripe of Mare Orientale. This photograph indicates what amateur astronomers can expect to see in medium-sized instruments during extremely favorable libration conditions. Akkana North's (formerly Peck) detailed reference drawing (below, right) was made on the nights of June 10-11, 1998, using her Vixen 102mm refractor telescope.



# CLASSIC TELESCOPES

## Observing the splendors of Andromeda with an Optica b/c 4-inch reflector.

by John W. Siple

THE STARRY NIGHTS of Autumn belong to a mythological royal family immortalized by the constellations of Cepheus the King, Cassiopeia the Queen, and Andromeda the Princess. In the Babylonian *Epic of Creation*, Andromeda is rescued by the hero Perseus after the defeat of the dragon Draco. In the firmament, "Her head touches the Great Square of Pegasus, her toe rests on Perseus, while one hand is fettered near Cepheus and the other near Pegasus."<sup>1</sup>

As the season advances, the constellation's chief treasure, the Great Andromeda Galaxy, M31, climbs to a position high overhead for northern hemisphere observers. Low power is essential for getting the best possible views of this misty spindle of light through your telescope and may also include M31's two companion galaxies, M32 and M110.

Optica b/c's 4-inch f/10 pedestal mount Newtonian reflector, made in the 1960s and '70s, was selected for observing the splendors of Andromeda. This premium grade reflector (Figures 1 and 2) was manufactured by Royal Astro Optical Industries Co., Ltd. of Tokyo, Japan as #LN-4E and then distributed throughout the world. Optica b/c of Oakland, California displayed it in their catalogs as #4DTC (Deluxe Telescope Complete), where in 1968 it was priced at a relatively expensive \$196. The price escalated to \$271 with an optional electric drive.

The 4-inch Optica b/c Newtonian provides a stunning view of M31 in a Tele Vue 32mm Plössl eyepiece. At 31x, the 3.5 magnitude spiral galaxy appears as a giant hazy ellipse of light that gradually brightens toward an inner core. The Andromeda Galaxy's 178' X 63' inclined galactic form, viewed 15° from edge-on, spans the eyepiece field (see Figure 3).

Numerous field stars in the Milky Way are superimposed on M31, reminding the observer of the true size and distance of this island universe of 300 billion suns.

Individual stars cannot be resolved in small amateurs' telescopes, but astronomers use Cepheid variables, or stars where the pulsation rate tells the luminosity, to accurately calculate the distance. (The pale orange starlight of  $\delta$  Cephei, prototype of the Cepheids, fluctuates rhythmically in a period of 5.4 days. A similar system is found in Figure 4.)

The visually challenging dust lanes (Figure 5) that mark the position of the spiral arms on the galaxy's northwestern side were suspected using averted vision, but these normally require a good 8 or 10-inch telescope operating under dark skies to be detected with confidence.

The two Messier satellite systems were picked up without any difficulty using the same low power eyepiece. M32 (NGC 221), at magnitude 8.2, is found just 24' southeast of M31's nucleus, embedded in the outer halo. Appearing like a fuzzy star (dimensions 8' X 6') in the 4-inch scope, this object has a notably brighter center.

Harder to spot is M110 (NGC 205), which is located on the opposite side of the parent galaxy, 36' northwest from M31's hub. It is bigger (dimensions 17' X 10'), less condensed, and about the same luminosity (mag. 8.0) as M32, but what can defeat observers is its low surface brightness. (M110 is morphologically similar to NGC 185, another elliptical satellite galaxy.) You really have to hunt for this diffuse patch of light on some nights!

Andromeda is home to a wonderful collection of colorful double stars. Gamma ( $\gamma$ ) Andromedae, or Almach, has often been likened to Albireo because of the striking color contrast between the two components. Placing an Optica b/c 5mm orthoscopic ocular (200x) in the focuser, the primary star (mag. 2.3) shines with a golden light, while the 10" distant secondary (mag. 5.5) is a beautiful greenish-blue.

(Continued on page 7)



Figure 1. The classic 4-inch pedestal-mounted Newtonian as shown in the 1968 Optica b/c telescope catalog.



Figure 2. The author's deluxe 4-inch f/10 (1000mm focal length) equatorial reflector telescope.





Figure 3. The Great Andromeda Galaxy photograph was taken with the Alfred Jensch 2m Schmidt Telescope. (Go to [www.tls-tautenburg.de](http://www.tls-tautenburg.de) for more observatory images.)

Located only  $5^\circ$  south and a little west of  $\gamma$  Andromedae is the sprawling ( $1\frac{1}{2}$  Moon diameters) open star cluster NGC 752. At 31x, over 80 colorful orbs of 9th to 12th magnitude overflow the eyepiece field. A neat trio just south of the cluster's center draws the observer's attention. The field glass double 56 Andromedae (mags. 5.7, 5.9; sep. 190") lies on the southwest edge of the open cluster. These two closely matched yellowish-orange suns act as a celestial guidepost, marking the pathway to the ancient stars of NGC 752.

Several low power eyepiece fields to the east of the 56 Andromedae-NGC 752 combo is another easy to split, attractive double star. 59 Andromedae (mags. 6.1, 6.8; sep. 16.6") has a yellow primary and bluish-white secondary star. The color contrast is especially evident in the 4-inch telescope at 80x using an Optica b/c HM 12.5mm eyepiece.

Above the Great Square of Pegasus, near the tight Y-shaped asterism of Frederik's Glory (formed by the stars  $\iota$ ,  $\kappa$ ,  $\psi$ , and  $\lambda$ ) and just 26' south-southwest of 13 Andromedae, lies the famous Blue Snowball. Since the annulus of NGC 7662 measures only 32" X 28", the nebula looks like a grayish-blue out-of-focus star at low to medium power in the 4-inch reflector.

At a higher magnification of 208x in a Tele Vue 4.8mm Nagler, the 8.5 magnitude planetary nebula is slightly elliptical and has a darkly shaded hole at its center. During moments of steady seeing, several patches of light are visible on the woolly outer edge of the disk. The magnitude 13.2 central star, suspected of being variable, is visible only in large aperture telescopes. E. E. Barnard's rather harsh rendition of NGC 7662, drawn at Yerkes Observatory (Figure 6), hints at the structure visible in large backyard instruments.<sup>2</sup>

#### REFERENCES

1. Unitron Monthly Report to Observers, "Andromeda: Constellation of the Month," *Sky & Telescope*, 24, (1962), p. 172.
2. J. Mullaney and W. McCall, *The Finest Deep-Sky Objects*, (Cambridge: Sky Publishing Corporation, 3rd printing, 1978), No. 104 in the authors' listing of fine objects.



Figure 4. Artwork by Dan Durda.



Figure 5. M31 drawn by Leopold Trouvelot at Harvard College Observatory in 1874.

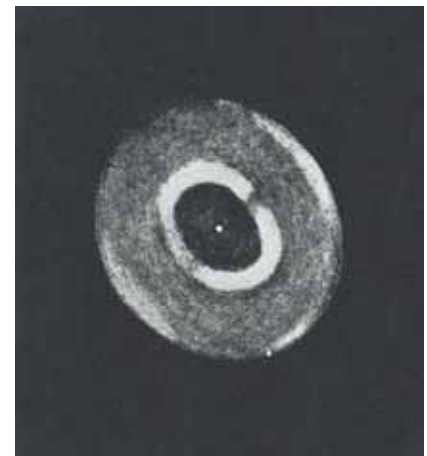


Figure 6. The planetary NGC 7662 in Andromeda, as seen by E. E. Barnard in the 40-inch refractor of Yerkes Observatory.





## BOARD MEETING MINUTES

October 1, 2007  
OMSI Classroom 1  
Andy Phelps

Board members present: Matt Brewster, Jan Keiski, Greg Rohde, Larry Godsey, Ken Hose, Sameer Ruiwale, Bob McGown, Dareth Murray, Carol Huston, Andy Phelps, Dale Fenske, Peter Abrahams, Matt Vartanian.

Carol Huston called the meeting to order at 7:07pm.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 13 voting members present.
- Treasurer's Report – Larry Godsey: Larry would like to transfer the money market savings account plus about \$2000 from the checking account to a certificate of deposit in order to realize a greater interest rate. Our cash flow will not be affected, as we have over \$7000 in the checking account. Larry would like to move about \$2000 from the Site Fund checking account to the Site Fund CD. The CT-12 will be filed this month.
- VP Programming – Matt Brewster: Matt feels it is necessary to have a credit card in order to pay for hotel rooms for speakers. The board is in favor of this idea as it can also be used for the sales table. Discussion centered on security and a system of checks and balances to minimize the liability of the club. MOTION: Dale Fenske – RCA procure a credit card with a limit of \$500, to be held by the treasurer. SECONDED: Sameer Ruiwale. Motion passed. MOTION: Matt Brewster – The president and past president will conduct an annual financial review of the clubs accounts. SECONDED: Greg Rohde. Motion passed. October speaker is David Kasnick, Observing tips and tricks. Matt would like to copy packets of information for attendees. Attendance has been 130-160 people.
- VP Observing – Matt Vartanian: No more star parties have been scheduled for this year. Matt will work with the incoming VP of Observing on the 2008 Kah-nee-ta and Hancock star parties. These will be scheduled on different weekends. Hancock attendance will be limited to 40 people due to the loss of "dob valley." Larry will be in contact with the Hancock staff to assess the possibility of expanding astronomy hill. He will report at a future meeting.
- VP Membership – Ken Hose: Six new members, 26 renewals, 206 member families. About 20 more renewals have been received in the mail since the September general meeting. About 60 members have not renewed their membership this year. A notice was placed on the email list to notify members that they would be removed from the list if membership was not renewed.

- Sales – Sameer Ruiwale: September sales were \$247. Calendars will go on sale at October meeting. Sameer will be ordering new T-shirts and sweatshirts.
- Book Library – Jan Keiski: Acquired new CD from the Jet Propulsion Laboratory. Will be getting copies of Robert Buchheim's book The Sky is Your Laboratory. Jan is appreciative of the donations from members.
- Telescope Library – Greg Rohde: Club member has offered to rebuild 12.5" truss-tube dob in order to make it lighter and easier to use. Coulter 13.1" scope is ready to go into service.
- IDA – Bob McGown: Discussed light pollution with rangers at Mt. Adams and Mt. St. Helens. Wondered if we should place RCA or IDA brochure at ranger stations. Gave IDA presentation at Smith Rocks. Will give presentation to IECO (electrical contractors).
- Magazine Subscriptions – Larry Godsey: nominal
- Webmaster – Dareth Murray: Larry will renew all domain names.
- Site Committee – David Nemo: (via email) The Communications Committee (as I have been calling it) is composed of: David Nemo, Chair, Sameer Ruiwale, Matt Vartanian, Greg Rohde, Paul Swanson, Scott Turner, Dave Sandage, John Harris, Tom Leavitt, Steve Weiler, Chuck Dethloff. Our charge is to make recommendations to the Board on: The Internet-based method/technology by which the Board communicates with members and the Internet-based method/technology maintained by the Club for members to communicate with other members. And if we propose any change to the current e-mail listserve, we will also address how it would be implemented and maintained.
- SIGs – Tom Nathe: (via email) The science SIG kick-off was a huge success. There were some 18 people in attendance (out of some two dozen who raised their hands at the meeting). Formally, we have no direct leadership. Dan Gray is acting as the group's facilitator and is allowing us to use his facility. The meeting takes place right after the telescope workshop. One of the first items that has been taken care of is the creation of a 'RCA-SCI' email list serve. This will allow the SIG members to discuss topics of interest to them without bothering the rest of the community. Another item that was taken care of was the creation of sub-sigs within the group. This allows for regions of interest to grow and shrink as needed. Currently the subgroups are - Data Mining, Occultations, Variable and Double stars, and Photometry. I gave a talk on asteroid occultations that generated some interest. I was asked to look in on quantity discounts for a video display unit used in video occultation work (the KIWI-OSD). We can get a 5% discount on quantities of 10 or more. At the next broad meeting I would like to propose to the broad to purchase one of these units (\$250, normal

(Continued on page 9)

## Board Meeting Minutes *(Continued from page 8)*

price) and set up an occultation kit for use by the RCA membership. I'll provide more details then. Jim Reilly and I finally touched bases for getting a beginner's SIG as well. Getting the two of us together is been problematic, but we're working on it. Hope to have more information by the next board meeting.

- Alcor – Dale Fenske: nominal
- OMSI – Carol and Jan: There is an 80% probability that the October meeting will be held in the auditorium. November meeting in the auditorium. December meeting will be held in the café. RCA holiday potluck will be the 3rd Monday, Dec. 17.

### Old Business

- Review status of forum communications with Patton, Martin, Geramy, and Carol. Patton will contact Geramy to purchase the domain name rosecityastronomers.com. Larry is working with Patton to facilitate this.
- Action Item: Forum committee review and proposals. Consider adding in the previous action item of developing a knowledge base section. Tabled.
- Action Item: Mentorship program – Jim Reilly and Tom Nathe connect. We have a need for a mentor right now. This may be a way to support youth programs during the off season? Tabled.
- NWRAL discussion. Tabled.
- Election process: Committee report. Greg Rohde: The proposed slate of nominees is: Sameer, President; Margaret McCrea, Secretary; Doug Huston, VP Observing. Nominations remain open through the October gen-

## Telescope Workshop

When: Saturday, November 17, 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

Assistant: Don Peckham don@dbpeckham.com

## ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, November 21, 7 PM.

Topic: "Microgravity & More"

Presented by: Chrissie Lee

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499).

<http://www.rca-oms.org/cosmologysig.htm>

eral meeting. Andy Phelps will send a notification of nominees to Larry to include in October newsletter.

- Action Item: Carol and Dareth to review and present information about sister club concept in connection with the GAMA group. Tabled
- Action Item: Carol to procure a new youth director for RCA. Tabled.
- Action Item: Sameer to review/report on proposal from Charles Fu of Zen-Ray Optics. Tabled.
- Action Item: Tom Nathe to connect with Jay Wilkins about SIG. Matt Brewster to connect with Jay about presenting to an RCA general meeting. Tabled.
- Action Item: Carol and Dareth review/present information about joining ASOP's Night Sky Network. Tabled.
- Action Item: Finishing up and closing down ALCON actions. Tabled.
- Action Item: Greg Rohde -- 501c3 and the UNIX stations. Tabled.

### New Business

- Park Liaison – Greg Rohde is Stub Stewart liaison. Tabled.
- City Liaison (City of Beaverton? City of Portland? City of Gresham?) Tabled.
- Adjourned 9:15

### Communications Committee Update

The Committee's charge is to make a recommendation to the Board that addresses these two questions:

What primary Internet-based method/technology should the Board use to communicate with members?

What primary Internet-based method/technology should the Club maintain for members to communicate with other members?

The first step the Committee is taking is to gather feedback from members on what you all think of the current listserv, and you're your interest is in making changes. Each family member is welcome to complete the survey.

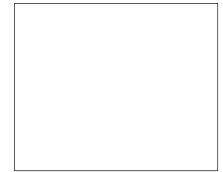
If you are on the Listserv, you have already received an email with a link to the online version of the survey, and hopefully have already responded.

If you are not on the Listserv (or lost track of the email announcement) and wish to complete the online survey, go to: [http://www.surveymonkey.com/s.aspx?sm=7pLeh6w4gCGEXY1vAejLmg\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=7pLeh6w4gCGEXY1vAejLmg_3d_3d)

If you do not have email or access to a computer to take the survey online, call David Nemo (W: 503-823-3214) and he will mail you a printed copy of the survey to complete and return.

The Committee will use this feedback to guide them in developing a recommendation to present to the Board in January 2008.

**Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354**



## November 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	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	

### ***November 2007***

Nov 5	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Nov 17	Sat	Telescope Workshop	Swan Island	10am-3pm
Nov 19	Mon	RCA General Meeting	OMSI Auditorium	7pm
Nov 21	Wed	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

### ***December 2007***

Dec 3	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Dec 7	Fri	Downtowners' Luncheon	TBD	Noon
Dec 15	Sat	Telescope Workshop	Swan Island	10am-3pm
Dec 17	Mon	RCA Holiday Potluck!	OMSI Cafeteria	7pm

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.rca-oms.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-oms.org>



The

# Rosette Gazette

Volume 19, Issue 12

Newsletter of the Rose City Astronomers

December, 2007



## RCA DECEMBER 17 HOLIDAY POTLUCK

In keeping with annual tradition, the December meeting of the Rose City Astronomers will be a holiday buffet and social gathering for all family members to be held in the OMSI Planetarium lobby.

Each member is asked to bring a dish to serve 10-12 people.

If your last name begins with . . .

A to G, please bring an appetizer or side dish

H to N, please bring a dessert

O to Z, please bring a main dish

Plates, silverware, and beverages/ice will be supplied by the club. Just bring your dish along with a serving utensil and enjoy the holiday spirit of the RCA membership.

The Holiday Social is a great event to pick up some excellent holiday deals! Save time to shop at the RCA Sales Table for your favorite astronomy gifts. In addition, the Swap Meet will be back by popular demand and there will be ample empty tables around the room for everyone who is interested in displaying items for the Swap Meet.

There will also be tables provided for interesting celestial displays. If you have taken any astronomy pictures this year and want to share them, this is your ideal opportunity. Members also bring their latest inventions and "astro stuff." If you have a fun gadget, item, or tool, please bring it in and show it off to the rest of the membership!

Note that December 17 is the THIRD Monday of the month which is the evening of our normal general meeting. We hope to see everyone there!

**All are Welcome! Monday December 17**

**Festivities Begin: 7 pm. Location: OMSI Planetarium Lobby**

### In This Issue:

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- 2 .. Club Officers  
.... Magazines
- 3 .. ALCON Revisited
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- 9 .. Mars 2007
- 10. Telescope Workshop  
.... RCA Library
- 11. Board Minutes
- 12. Calendar



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

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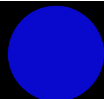
Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.

Moon photos below courtesy David Haworth

Last Quarter Moon  
December 1



New Moon  
December 9



First Quarter Moon  
December 17



Full Moon  
December 23



Club Officers				
President	Sameer	Ruiwale	(503) 681-0100	sameer_ruiwale@yahoo.com
Past president	Carol	Huston	(503) 629-8809	StarsCarol@comcast.net
VP Membership	Ken	Hose	(503) 591-5585	khose@comcast.net
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Secretary	Margaret	Campbell-McCrea	(503) 232-7636	mmcrea@nwlk.com
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Newsletter Editor	Larry	Deal	(503) 708-4180	Gazette_ed@comcast.net
New Member Advisor	Jim	Reilly	(503) 493-2386	jim-lorien@granitic.net
Web Master	Dareth	Murray	(503) 957-4499	darethlee@comcast.net
Alcor, Historian	Dale	Fenske	(503) 256-1840	fenskedw@msn.com
Library Director	Jan	Keiski	(503) 539-4566	jikeiski@comcast.net
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Observing Site Director	David	Nemo	(503) 224-6366	david@nemoworld.com
Media Director	Patton	Echols	(503) 936-4270	mpecho@rdrop.com
IDA Liaison	Bob	McGown	(503) 244-0078	bobmcgown@comcast.net
OSP Liaison	Larry	Godsey	(503) 675-5217	larrygodsey@comcast.net
Subscription Director	Larry	Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Tom	Nathe	(503) 641-3235	tmnathe@verizon.net
OMSI Liaison	Jan	Keiski	(503) 539-4566	jikeiski@comcast.net
Youth Programs Director	open			



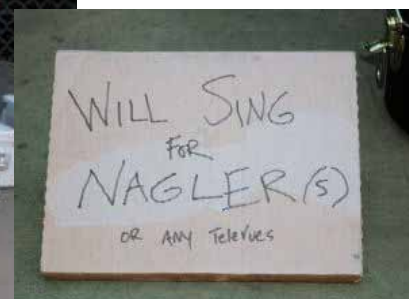
### RCA MAGAZINE SUBSCRIPTIONS

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.



A Scene from the 2007 Astronomical League Convention (ALCON) in Portland, Oregon.

More memories from ALCON 2007 on Page 3



(Photos by Tom Nathe)



# ALCON 2007

**We Followed the Oregon Trail to the Stars!**

by

**Dareth Murray, Chair  
& Carol Huston, Vice Chair  
ALCON 07 Committee**

The Astronomical League's 60th anniversary convention was held in Portland, Oregon, Friday and Saturday August 3 and 4, 2007, on the campus of Portland State University (PSU). Co-sponsored by the PSU Physics Department, ALCON-07 was offered as one of its summer credit classes. The convention hosts, the Rose City Astronomers, had worked for over two years to make this event the best ever. The weather cooperated and some of our guests from the South and Midwest were astonished at how temperate Portland is.

On Thursday, the day before the convention, the AL Council met for their annual all-day business session. Meanwhile, twenty-six vendors were bringing their wares into the grand ballroom of Portland State University's Smith Memorial Union. They were excited by the amount of room they had. There were artists, telescope makers, telescope vendors, eyepiece and equipment sellers, book publishers, local crafters with unique items – you name it. Meade, Sky & Telescope, and Astronomy Magazine were all well represented. The ALCON 07 Vendor Committee (Steve Aberle, Greg Rohde, and Rebecca Gee) was responsible for the smashing success of this aspect of the convention. They started over 18 months before the convention to book both local and national vendors. Kudos to them for a fantastic job.



By 5 p.m. on Thursday the vendors were all set up and were happy to attend a catered reception along with the AL Council and the RCA ALCON 07 Committee members and volunteers. Later in the evening, Rick Kang from the University of Oregon, Pine Mountain Observatory (PMO) in Bend, Oregon spoke to a crowded room at University Place sharing some of

ALCON 2007



Milky Way photo by David Haworth • Rose City Astronomers

the exciting outreach work that PMO is doing for school children K-12 and beyond.

On Friday morning, Dareth Murray and Carol Huston, chair and vice-chair of the ALCON 07 Committee, convened the event promptly at 8:30, welcoming AL President Terry Mann and AL Vice President Carroll Iorg along with many other attendees. After that, it was non-stop action for the rest of the day and night. Carol was parked at the Guest Services table, giving out information, welcome packets, and directions to different sites in the city. Her innate ability to make people feel at home really helped the out-of-state attendees. She is a shining star for RCA!



Dareth & Carol (photo by Jan Keiski)

Across from Carol, the registration booth was very busy the first few hours of the convention as attendees picked up their registration packets, badges, and other goodies. David and Gail Nemo were tireless, staffing the registration booth all day. Gail with her brilliant smile and David with his dedicated and genial attention to detail helped the registration process go like

*(Continued on page 4)*



**ALCON 2007** (Continued from page 3)

clockwork. David also put in extra time as Treasurer and Webmaster for ALCON 07 while Gail handled registrations months before the event. It was a class act.



*Gail Nemo (Photo by Tom Nathe)*

Friday provided a stellar lineup of international and local amateur astronomers and professionals who fired their audiences with the best of what astronomy is all about. Kelly Beatty, editor of Sky and Telescope Magazine, gave a riveting presentation about the early years of Sputnik. Andy Burns, from Bath, England told the Herschel story, as only he can, being one of the directors of the Herschel Museum in Bath. Tim Crawford spoke on Visual & CCD Observing of Variable Stars, and Todd Duncan spoke on Our Cosmic Context. Bob Grossfeld gave a presentation on the Sunriver Nature Observatory, and Bert Stevens spoke on Asteroid Astronomy, NEO and Far.



*Tim Crawford (Photo by Tom Nathe)*

The Friday night dinner was billed as a potlatch – a Pacific Northwest Native American term for a celebration, a giving of

food and gifts. We celebrated our Potlatch at the Native American Community Center at PSU. Staffed by the tireless and dedicated volunteers, Tim and Chris Anderson, the potlatch was a fine evening with good company, good conversation, and excellent entertainment.



*(photo by Jan Keiski)*

The highlight of the evening was the Native American dancers from the Umatilla Nation who brought everyone to their feet with their drumming, dancing, and chanting. They engaged the group in a tribal dance of friendship; many in the audience participated in this wonderful dance. After the dancing, Andy Burns gave an entertaining presentation on various aboriginal races' ideas about the cosmos and what is really up there. Many gifts were given, including a replica of Herschel's front door by Andy Burns and shells by Bob McGown, ALCON Committee member. We left, uplifted by the united strength of our combined passion for the universe and wandered over to the park for a star party organized by the RCA and sponsored by Meade.

On the public tennis courts near the Native American Center, we were able to do some observing with about 15 instruments ranging from a twenty-eight inch string Dob to binoculars. Livening up the star party were our friends Deb and Paul Hirshmann on stand-up bass and guitar/mandolin with John Harris playing washboard – good ol' Oregon rhythm and blues. With the downtown Portland light glow, we had only a view of the main players in the sky, but it was fun. We even

*(Continued on page 5)*

## ALCON 2007 *(Continued from page 4)*

attracted some passersby who looked through a telescope at Jupiter for the first time in their life. This is one of the reasons we love this hobby: the ability to get people interested in the night sky. We talked about light pollution and what we can all do about it. About midnight, we slowly packed up gear, instruments, and ourselves and crept back to our rooms.



*Tennis Court Downtown Star Party (Photo by Tom Nathe)*

On Saturday, the convention had two tracks of presentations: technical and general, along with the Astronomical League's annual business meeting and the presentations of the two youth-award winners. The first roundtable titled Blue Sky Thinking, Black Space Realities consisted of Timothy Zahn, New York Times best selling science fiction author, Richard Berry, former editor of Astronomy magazine, and Kelly Beatty, editor of Sky and Telescope magazine. The discussion ranged from the early beginnings of the space exploration program to present NASA, China, and ESA efforts and also included speculation on future projects. It was lively, with many questions from the audience.



*Dareth Murray introduces panel participants...Timothy Zahn, Richard Berry and Kelly Beatty (Photo by Tom Nathe)*

Other highlights of the day included ALCON 07 committee member Bob McGown and exploration geologist Richard Bence who gave a highly technical presentation on Planetary Interiors & Extrasolar Meteorites. There was a very popular roundtable on telescope making and CCD imaging with Dan Gray, Mel Bartels, and David Haworth, all RCA members.

Leo Cavagnaro, vice president of the Grupo de Astrónomos Mendocinos Aficionados (GAMA) from Mendoza, Argentina, gave a fascinating talk on Exploring the Southern Skies. Leo, along with two other GAMA members, flew to Oregon to give presentations at ALCON 07 and at the Oregon Star Party in mid-August. This was their first visit to the U.S., and they loved everything Oregon!

Richard Berry gave an interesting presentation on Stellar Photometry with CCD Cameras, David Haworth talked about Observing the Universe with a Camera, Dr. Greg Bothun presented Dark Matter and the Universe, and Dr. Irwin Horowitz presented Astronomical Spectroscopy.



At 5 p.m., we celebrated the 60th anniversary of the A.L. with a cake in the vendor hall. All the vendors donated items for a raffle which was held immediately after the cake cutting. This highly popular event was a fun way to bring to an end the activities of the day. Now, all that was left of the convention was the long anticipated Awards Banquet.



The banquet began by honoring the flags of the three countries represented at the convention: Argentina, Great Britain, and the U.S. with their national anthems. Diana Murray prepared a special video for the U.S. anthem. Master of Ceremonies, Sameer Ruiwale, introduced Dareth Murray, the chair of the ALCON 07 Committee. She, in turn, introduced her committee and volunteers. Tom Nathe, chair of the Speaker Committee, gave all the ladies a beautiful rose corsage. The President of the A.L., Terry Mann, was introduced as were many distinguished guests, speakers, and their spouses.

After the delicious buffet, Terry Mann presented the Jack  
*(Continued on page 6)*



**ALCON 2007** (Continued from page 5)

Horkheimer Award for exceptional service to Charles "CJ" Wood. Carroll Iorg introduced Kelly Beatty who then presented the National Young Astronomer Award to Naomi Pequette, a senior at Littleton High School, Littleton, Colorado. This special young lady received a 10 inch Meade LX-200 telescope among other things! Both of the youth winners and their parents were guests of the Astronomical League for the convention and banquet.



The Rose City Astronomer's Rosette Gazette newsletter was selected best in the A.L. for the year! Larry Deal, the editor, has done a terrific job editing the Gazette for over three years



and we are all very proud of the professional look he has given the newsletter. You can see it for yourself at: <http://www.rca-omsi.org/gazette/>

Marni Berendsen, keynote speaker for the banquet, gave a fun-filled, audience participation presentation titled Pull the Universe from Your Pocket. Using everyday materials like adding machine paper and pencils, Marni was able to illustrate just how big the solar system is and where we are in it. The Astronomical Society of the Pacific has a program called Night Sky Network, which Marni was promoting in the vendor hall for ALCON 07. This program, which includes NASA and JPL as sponsors, started in March 2004 and provides outreach materials for amateur astronomy clubs so they can bring astronomy and the excitement of NASA missions to their communities.



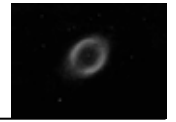
*Marni Berendsen (Photo by Tom Nathe)*

At the end of Marni's presentation, Dareth called on the Des Moines folks who will be hosting ALCON 08. They gave a short presentation on the great convention they will be putting on next August. Dareth then thanked everyone again, and officially turned over the responsibilities for ALCON to the capable representatives from the great city of Des Moines, Iowa. With a final thank you from Dareth to all those volunteers who had labored so long and hard to make ALCON 07 such a success, this convention came to a close and passed into history. See you in Iowa in 08!



*Alcon 2007 Photographer Jan Keiski at work (Photo by Tom Nathe)*





## The Strange Case of Comet Holmes

How does a faint and practically unknown periodic comet suddenly burst into worldwide fame? By exploding? An impact? By splitting in two? We still don't know, but whatever caused Comet Holmes to suddenly brighten from magnitude 17 to 2.5 starting October 23 certainly created a sensational object.

Whatever mechanism created this outburst it seems more likely to be an inherent property of the comet rather than an impact. Consider that this comet was discovered in November 6, 1892 by Edwin Holmes, a British amateur astronomer, when it went through a similar outburst. It had another but smaller outburst around January 15, 1893 so that would imply a highly improbable sequence of three impacts over 115 years to explain the dramatic brightenings of Comet Holmes. Certainly not outside the realm of the possible, but just barely.

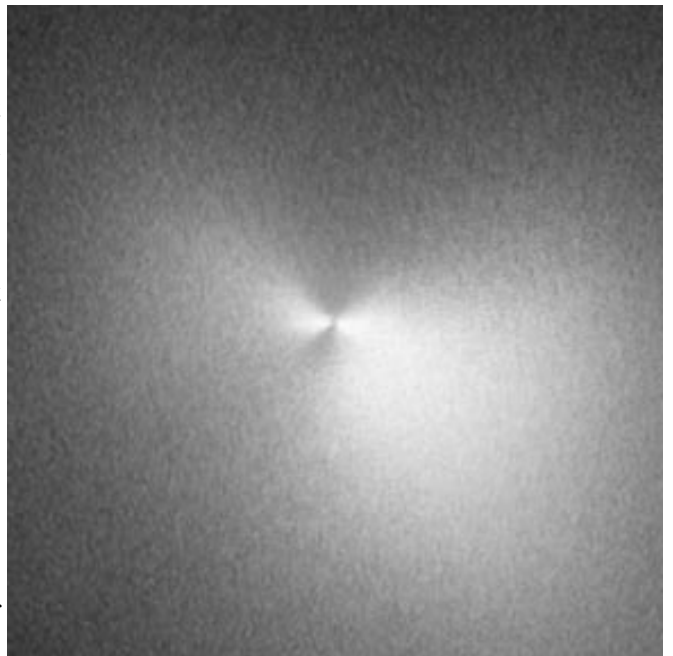
An interesting article about the comet written in 1893 from Lick Observatory can be accessed at:

<http://books.google.com/books?id=yxoAAAAAMAAJ&pg=PA93&lpg=PA93&dq=spectrum+of+comet+holmes&source=web&ots=nRHbsrcrE&sig=BNFcN4kv2kC7pFZZRnUqzyU5UEY#PPA93,M1>

Comet theorist Zdenek Sekanina of the Jet Propulsion Laboratory has estimated that the October 23, 2007 outburst expelled approximately 100 million tons of dust into space. That sounds huge but is only one fifth the amount of ash that Mount St. Helens shot into the air when it erupted in 1980. The Hubble Space Telescope imaged the pseudo nucleus of Comet Holmes and has seen a surprisingly smooth distribution of material around it, implying that the comet hasn't split up.

What about an explosion? Many comets undergo dramatic brightenings as they get close to the Sun, in fact that's why comets get brighter at all as they approach the Sun. Because the brightening of Comet Holmes has been so dramatic something unusual must be going on, or perhaps the structure of this comet is unusual. In 1984 astronomer Fred Whipple proposed that Comet Holmes 1892-3 outbursts may have been caused by small satellites whose orbits crashed them into the main part of the comet. Although not as unlikely as impact, having three satellites crashing into one comet seems a bit of a stretch.

An intriguing hypothesis has been proposed by Gary Kronk ([http://cometography.com/periodic\\_comets.html](http://cometography.com/periodic_comets.html)) who suggests that the fluctuating perihelion distance of Comet Holmes may be the key to its outbursts. In 1892 it was 2.12 AU (astronomical unit, with 1.0 being the mean distance of the Earth to the Sun). This distance has been increased by encounters with Jupiter in 1908, 1968 and then in 2004 a third encounter decreased its perihelion distance to 2.05AU.



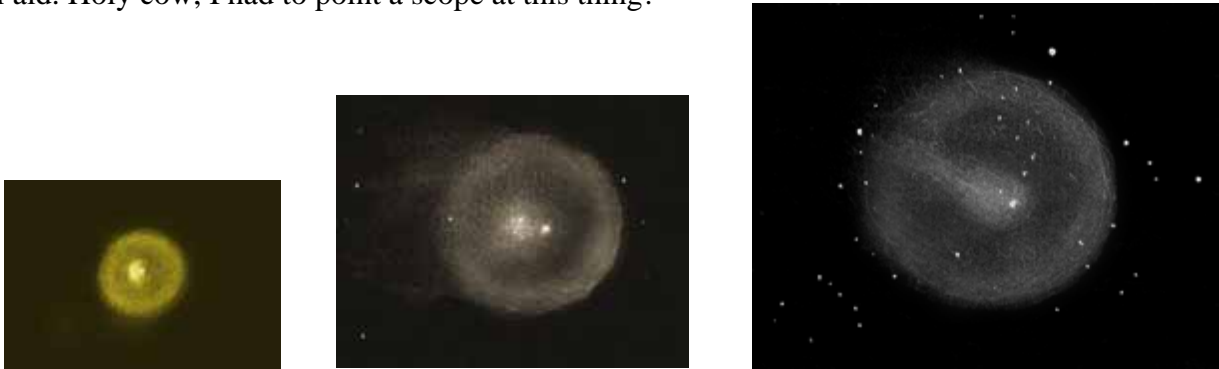
*Comet Holmes as seen by the HST on November 4, 2007. This image of Comet Holmes's inner coma is 10" wide. The 2-mile-wide nucleus of the comet is unresolved by HST and it's also apparent that the comet had not broken apart. NASA / ESA / Harold Weaver (JHU/APL).*

(Continued on page 8)

## *The Observers Corner* (Continued from page 7)

This implies that the closer to the Sun that Comet Holmes gets the more likely it is to have major outburst. That seems downright plausible, as it's easy to imagine that the comet's volatiles would evaporate more vigorously the closer it is to the Sun.

There are tons of excellent astrophotos on the web, just do a search on "Comet Holmes" and you'll find plenty, but it's the visual appearance of the comet and how it evolved that captured my imagination. I first saw it, like most of us in the Pacific Northwest, on the evening of October 25. Of course it was clear – full Moon that night – but even so on first glance after walking out of my house I easily saw the comet with no optical aid. Holy cow, I had to point a scope at this thing!



*Comet Holmes: (left to right) October 25, October 30 and November 5, 2007. The sketches are scaled to approximate the expansion of the comet.*

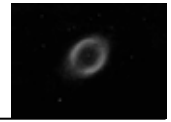
My first telescopic view was a startling and memorable sight, and is only partially captured in the first sketch on the left. Round, bright and a lovely golden-yellow it was also surprisingly distinct and large. Even at low power (46x through a 13" Newtonian) it was immediately apparent that this was a unique comet. 112x gave the best view and it was mesmerizing – the color was especially enjoyable.

Five nights later the color was essentially gone, with only a trace left in the brightest area near the pseudo nucleus. But holy cow again, the comet had expanded tremendously and now a faint trace of a broad tail was barely seen. This really impressed me since this and the October 25<sup>th</sup> observation were from my light polluted backyard only 23 blocks from downtown Portland! I could only imagine what the tail might have looked like in a dark sky.

Six more nights later on November 5<sup>th</sup> I had a chance to observe the comet in dark skies and through a 28 inch scope. No tail, no color but it's gigantic and the lowest power of the big scope (105x) barely fit the entire comet into the fov. At 219x the number of stars that were seen shining through the comet gave it a wonderful transparency, like fine crystal in moonlight. I was also fascinated how the brightest area near the pseudo nucleus had become very comet-like in shape but was still contained within the slightly elongated outer coma. Depending on my frame of mind it either looked like rocket exhaust or a jelly fish.

On each of these nights and a few in between the comet was a bright naked eye object around magnitude 2.5 or so making it the third brightest object in Perseus. It was also obviously non-stellar from my backyard but just barely so. From dark skies it was definitely fuzzy looking, larger and had more contrast.

My last look for now was on November 8 from my backyard and the comet had faded noticeably both naked eye and through the 13" scope. But its appeal hadn't faded at all and even though I'm writing this nearly two weeks later I can't wait to see it again.



Editor's Note: Somehow I missed getting Howard's November piece in the November Rosette Gazette. I found it too interesting to leave out another month, enjoy.

## Mars 2007

This November has two notable features to its night sky. First, the constellations of the evening sky are the same as the early morning sky we see in August at the OSP – Orion and friends will dominate the sky for the next several months. Second, Mars is brightening rapidly toward its late December opposition.

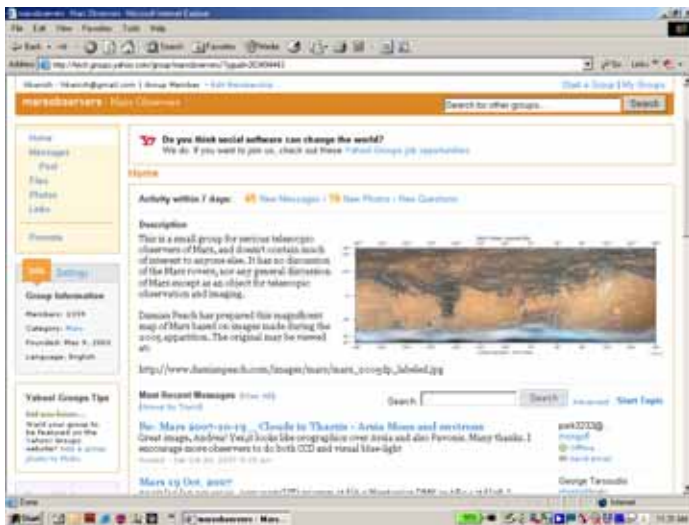
Since most of us are unlikely to be at a true dark site this time of year Mars is probably going to be our observing highlight of the month. "Probably" leaves room for the unexpected like a bright aurora, a surprisingly strong meteor shower or even a bright comet. You never know...

Although Mars doesn't reach opposition until late December now's the time to start observing so you can train your eye to discern detail on the Martian disc. Not only that, but this opposition of Mars is the closest we're getting until 2016. We also have the advantage this year of Mars being about as far north on the ecliptic as it can get, meaning that the planet will be as high in our sky as it can get and that our views will be more likely to be sharp and steady.

Having said that, here are a few words of perspective for observing Mars:

1. If you've been following the latest webcam images on the internet made with webcams, know that you will not see the same amount of detail through your telescope. But don't miss out on all the great images as they record an incredible amount of detail. It's worth joining the Yahoo Mars Observer group just to keep up on the latest results from some of the worlds most talented imagers: <http://tech.groups.yahoo.com/group/marsobservers/?yguid=263494443>

2. Even though Mars is approaching opposition it will still appear quite small in your eyepiece, not quite the apparent size of the globe of Saturn.
3. The albedo surface features are difficult to see at first glance because they typically have surprisingly low contrast. Again, don't let the great webcam images on the internet set your expectations.
4. Mars is not red. It's a pleasing combination of orange-yellow with gray-ish dark areas. Clouds can be gray-ish white and the polar caps are a nearly pure white and dust clouds are a dusky yellow.
5. To see any significant detail on Mars you need to look for several minutes at a time, minimum. The longer you look, the more likely you'll see more. Two reasons for this – one, the longer you look the more steady moments of seeing you're likely to encounter, and two, it takes a few minutes for your eye to get past being dazzled by Mars' brightness.
6. Sketching is a great way to help your eye see more detail. However, having a good photo of Mars for reference at the eyepiece works just as well. The idea is to pay very close attention to selected areas, which will not only fix your bearings on what you're looking at but may allow for some of the finer details to come through. Also, knowing the names of the features you're seeing makes them all the more exciting.
7. One side of Mars is pretty blank so if you don't see much it may be because that's the side you're looking at. Or maybe the seeing is lousy. To be sure, check the internet for programs that show what side of Mars you're looking at, like this one at Sky & Telescope's website: <http://www.skyandtelescope.com/resources/software/3304921.html?c=y&page=2>



(Continued on page 10)



## Mars 2007 *(Continued from page 9)*

8. Colored filters can help a lot. Red helps with seeing surface features and blue helps isolate clouds. Magenta is a nice intermediate color to boost details as well, which is what the filters advertised as "Mars Filters" are. A variable polarizing filter reduces the brightness exactly to the level that's comfortable to your eye and may allow more detail to be seen right off the bat.
9. Better than filters is a binoviewer. Observing with both eyes tends to improve contrast, plus it's much easier to observe for several minutes at a time with both eyes open.
10. The first week of December holds a special treat as Mars will be just a few degrees south of the nice open cluster NGC 2266. Actually they won't appear all that far apart from the end of October through mid-December.
11. Looking even further ahead, we're nearly certain to have clear skies on the night of this December's opposition as it's also the night of full moon. Unfortunately it's also Christmas Eve. Alas.

### Telescope Workshop

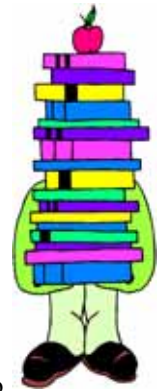
When: Saturday, December 15, 10:00 AM - 3:00 PM  
Place: Technical Marine Service, Inc.  
6040 N. Cutter Circle on Swan Island  
For more information contact:  
Director: John DeLacy [johncdelacy@comcast.net](mailto:johncdelacy@comcast.net)  
Assistant: Don Peckham [don@dbpeckham.com](mailto:don@dbpeckham.com)

### 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-oms.org/library.htm>

Jan Keiski ([jikeiski@comcast.net](mailto:jikeiski@comcast.net)) 503-539-4566



RCA Library's Chief Cook and Bottle Washer Jan Keiski Celebrates!



Library volunteers Chris Steinkamp, Carolyn Nissen and Penny Henning working the November General Meeting.



## BOARD MEETING MINUTES

November 5, 2007  
OMSI Classroom 1  
Andy Phelps

Board members present: Matt Brewster, Larry Godsey, David Nemo, Patton Echols, Dale Fenske, Jim Reilly, Carol Huston, Matt Vartanian, Ken Hose, Greg Rohde, Tom Nathe, Jan Keiski, Andy Phelps, Bob McGown. Guest: Doug Huston.

### Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 14 voting members present.
- Treasurer's Report – Larry Godsey: Total Liabilities & Equity: Operations \$20,030.73, Site Fund \$15,954.78. The club has a credit card with a low limit. It is a small business Visa. Larry can control the amount available to charge.
- VP Programming – Matt Brewster: Speaker for November had to back out. He will try to get a speaker to talk about comet 17P/Holmes. Matt needs people to show up early to help set up the December dinner meeting in the OMSI Café.
- VP Observing – Matt Vartanian: Matt will work with Doug Huston this weekend to work on the 2008 observing calendar. Kah-Nee-Ta star party will be arranged so it will not conflict with Camp Hancock.
- VP Community Affairs – Patton Echols: nominal
- Media Director – Patton Echols: nominal
- VP Membership – Ken Hose: Current membership is 250. \$1108 collected in dues. 8 new members and 38 renewals. Renewal reminders were very successful.
- New Member Advisor – Jim Reilly: New member orientation meeting will be held at 6:15 prior to the general meeting.
- Sales – Sameer Ruiwale: October sales were \$369. New products have arrived since last general meeting.
- Book Library – Jan Keiski: Nominal.
- Telescope Library – Greg Rohde: Nominal
- IDA – Bob McGown: nominal
- Magazine Subscriptions – Larry Godsey: Nominal
- Site Committee – David Nemo: Nominal
- SIGs – Tom Nathe: Science SIG has had two meetings. Will be on hiatus for November and December.
- Alcor – Dale Fenske: Will update membership list to A.L. when RCA list is updated in November.
- OMSI – Carol and Jan: November meeting will be held in the auditorium and December holiday potluck and meeting will be held in the auditorium and planetarium lobby.

### Old Business

- Action Item: Forum issue – status. Patton and Larry reported that RCA is now in possession of URLs. Forum Committee report – David reported that the survey is up and running. There have been about 75 responses so far. Dave Sandage incurred an expense of \$19.95 to operate survey. He will be reimbursed. Committee hopes to give a recommendation to board in January.
- Action Item: Mentorship program – Jim Reilly and Tom Nathe connect. We have a need for a mentor right now. This may be a way to support youth programs during the off season? Jim will reconnect with members who have expressed interest in being mentors. He and Tom will discuss other details. Rollout may be possible at info fair in January.
- Action Item: Awards Committee develop a comprehensive list of AL and RCA awards with criteria and submittal dates – Dareth, Bob, Doug, Dale: Doug reports that several members are being considered for various awards. Carol would like a list of all RCA and AL awards.
- 2008 Election Process: Report from committee – Greg: We have nominees for all open positions except for V.P. of communications. Matt may have ideas for possible nominees. Andy will facilitate election at November meeting.
- Action Item: Sameer to follow through on the proposal from Charles Fu of Zen-Ray Optics. Zen-Ray has proposed that the RCA sales table carry smaller binoculars (up to 100mm).
- Action Item: Carol and Dareth to review and present information about sister club concept in connection with the GAMA group. Tabled
- Action Item: Carol to procure a new youth director for RCA. Tabled.
- Action Item: Tom Nathe has been contacted by a member about starting a SIG. The board is reviewing.
- ALCON report: David: ALCON realized a profit of \$5226.95 which will be split between the Astronomical League, NWRAL and RCA. There still remains an outstanding bill from NASA for about \$76.00 for speaker cancellation fees.

### New Business

- NWRAL discussion: Carol has attempted to work with NWRAL in an effort to get them more involved in the region. Board discussed its desire to be involved in this effort.
- Astronomy Day: Astronomical League has a lot of material on Astronomy Day. RCA used to be very active in promoting this event. Carol would like us to participate in the next Astronomy Day. Sameer and Doug will look into this.
- Sameer has not found a replacement for sales coordinator. Ken Cone will run the sales table, but does not want the position. Sameer will continue to follow some leads on potential replacements.

Oregon Museum of Science and Industry  
 Rose City Astronomers  
 1945 SE Water Avenue  
 Portland, Oregon 97214-3354



## December 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	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					

### ***December 2007***

Dec 3	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Dec 7	Fri	Downtowner's Luncheon	TBD	Noon
Dec 15	Sat	Telescope Workshop	Swan Island	10am-3pm
Dec 17	Mon	RCA Holiday Potluck!	OMSI Lobby	7pm

### ***January 2008***

Jan 7	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Jan 21	Mon	RCA General Meeting	OMSI Auditorium	7pm

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.rca-omsi.org>).

**RCA CLUB INFORMATION**  
 Message Line: (503) 255-2016  
 Web Site: <http://www.rca-omsi.org>