

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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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



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RCA MAGAZINE SUBSCRIPTIONS

One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year. 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.

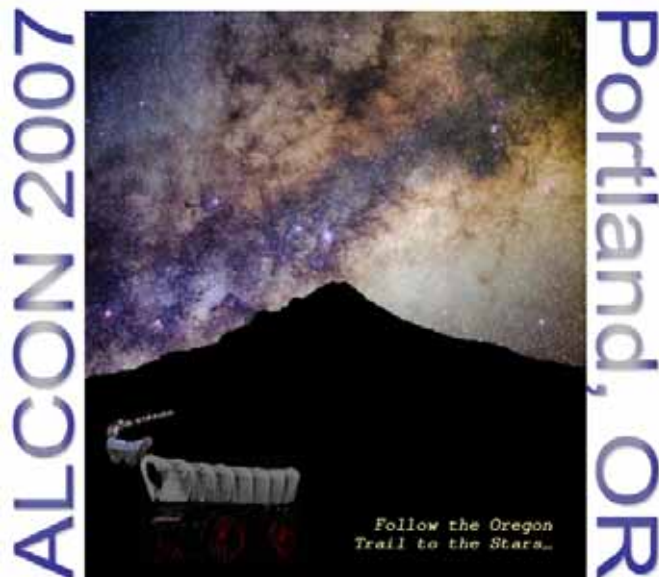
In April and the months around it, you can find Omega Centauri and the Southern Cross in the southern horizon. We found them from the lanai of our condo at sea level – though at midnight! To locate Omega Centauri, NGC 5139, you need to navigate south from the Libra-Virgo area. A trick I use to find it 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, 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>.



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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



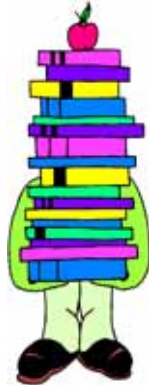
Photo by Jan Keiski

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) 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 johncdelacy@comcast.net

Assistant: Don Peckham 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>

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

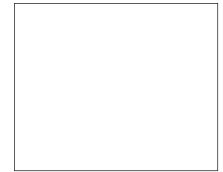
- Planetarium programs: Notes for Jim Todd: We need to know what the process is to create a planetarium program. What do we need to provide and what time is needed? Jan will communicate with Jim about the details of doing a live planetarium show.
- E-list rules: Dareth updated and sent rules to e-list. 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>