The
Rosette Gazette

Volume 18, Issue 1 Newsletter of the Rose City Astronomers January, 2006

In This Issue:

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

RCA INFORMATION FAIR

Monday, January 16th!

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 16th 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.

First Quarter Moon January 6
Full Moon January 14
Last Quarter Moon January 22
New Moon January 29

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	m_brewster@juno.com
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.net
Secretary	Andy Phelps	(503) 408-1758	
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@spiritone.com
Library Director	Jan Keiski	(503) 539-4566	jikeiski@comcast.net
Telescope Director	Greg Rohde	(503) 629-5475	gfrohde2000@yahoo.com
Observing Site Director	David Nemo	(503) 224-6366	david6366@msn.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
Camp Hancock Liaison	Glenn Graham	(503) 579-1141	the.grahams@verizon.net
Subscription Director	Larry Godsey	(503) 675-5217	larrygodsey@comcast.net
SIG Director	Ken Cone	503-292-0920	kcone@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.

A Few Words From Your New-Member Advisor

If you are new to RCA: welcome! Hopefully you've been to a few meetings, and by now have overheard convincing arguments that O-IIIs are better than UHCs for Omega and the Veil, and that while plössls and apos are great you really need a huge Dob and a Nagler or two to really appreciate the Herschels, Hicksons and Caldwells (but bring your Uranometria!).

Does any of this sound familiar? Does it sound sane??

As your New-Member Advisor, I'm here to help you learn what you want to know – not necessarily what I know, nor what 'we' think you should know – it's your hobby as much as it is ours! Maybe you're starting from scratch, or with a pair or binoculars or a genuine 200x refractor from Sears (hey… that's how I started!), or maybe some generous soul handed you a 12-inch computer-controlled telescope and left you in the dark. While that's where astronomers do their best work, you want to know a little about the hobby before the lights go out; that's where I (supposedly) come in. However, I need your help – despite how you may feel at times, a bright "NOVICE" sign is not flashing above your head, so you need to find me so I can assist you. Plenty of other members are at that level, and we all began there a few months (years, decades) ago. I have brochures, websites, gear and personal stories (if it can be done wrong, I've probably done it!) that I'll gladly share to help you find your way to whatever part of the hobby has caught your attention. And if I can't give you the answer, then… [excuse me a minute]

If you're not new to RCA: help! I have years (OK, decades) of observing under my belt, but that does not qualify me to give guidance on everything. I need our collective knowledge if I am to guide all those who seek help. I've always been an alt-az Newtonian guy, so I know precious little about SCTs, refractors or other exotic designs, nor have I used equatorial or fork mounts. I also have very limited skills at astro-imaging beyond ASA400 film and a barn-door tracking mount. Also, anything with a computer readout attached to it is foreign to me. Even the things I do claim to know have limits: while I do own several astronomical software packages, I know little or nothing about several more. You do not need to join me at orientation meetings, nor do you need to spread your name publicly if you would rather not – I will occasionally funnel you the questions I cannot answer and you can decide how best to help. If you want to do more that would be most excellent! If I am still asking too much, think about plan 'B' – you train me so that I will know enough to cause slightly less trouble. In whatever capacity you can, please consider helping out – thanks!

Are the novices still here? Great! Anyway, at the January meeting I will have a spot among the displays, along with some of the brochures I mentioned (plus a few props, I expect). Please drop by and say hello, and let's see what the RCA can do for you!

jim reilly, jimr@granitic.net

From Neolithic Newgrange to the Royal Observatory

By Dareth Murray & Bob McGown

After leaving the Whirlpool Star Party and Birr, our adventures took us along Ireland's winding, narrow roads to the village of Kells, where the famous Book of Kells was written. Did we mention that in Ireland all signs are in English and Gaelic? This made for missed turns and much confusion on our part. We finally ended up in Slane after whizzing by innumerable castles, ruins and high crosses. We counted ourselves lucky that the dining room was closed at our so that we were able to sample the tasty Irish stew in the adjoining pub. It is true that pub food is usually better than the expensive restaurants in Ireland!

In the morning we arose to the inevitable Irish breakfast and were at the doors of the visitor center for Brú na Bóinne before they opened. This area in Ireland has been designated a World Heritage Site. It includes the well-known passage tombs of Knowth, Newgrange and Dowth as well as many other burial mounds.

The visitor center is elegant and has very interesting exhibits on the possible life of the Neolithic dwellers that constructed these mysterious mounds.

The passage tomb complex of Knowth consists of a Great Mound with 17 smaller satellite mounds around it, covering about an acre. The Great Mound has many examples of Neolithic art on the structural stones. Since the people who lived there did not have a written language that survived, the meaning of the art is open to interpretation. Irish scholar Philip J. Stooke has identified the carvings at the end of the chamber in the eastern passage as lunar maps. Archeoastronomer Paul Griffin calls Nnowth an observatory with two "telescopes…Their focal lengths can be walked and the telescope casings are made of stone." Paul, a distant relative of the Third Earl of Rosse, likened the chambers of Knowth to the Leviathan telescope in Birr.

We left Knowth, soaked from a sudden rainstorm that brought the wind dancing around us. As we neared Newgrange, the sun came back out and we had some blue skies – for a while. Newgrange is fantastic. Pictures do not do it justice. It must be experienced first hand. Going into a structure built over 5,000 years ago and then seeing (after the tour guide turned her flashlight off) that miraculous shaft of sunlight shining slowly into the chamber. The people who built these amazing structures obviously knew about the sun and the moon. They built Newgrange precisely to align with the Winter Solstice on December 21st.

Bob points out carvings at Newgrange.

On the south side of the structure is a curious arrangement of thousands of pieces of white granite brought from many kilometers away. It is yet another mystery of these Neolithic people. We thought it might be a form of sun worship to bring these bright, sparkling stones to the dreary, damp Ireland winter. We heard that the drawing for actually participating in the Winter Solstice event is about nine years booked up!

After a vigorous stop at the gift shop, we regretfully headed away from Brú na Bóinne. We were now headed for Dunsink Observatory, the oldest scientific institution in Ireland, near Dublin. Built in 1785, Dunsink houses the astronomy section of the School of Cosmic Physics in the Dublin Institute for Advanced Studies. Sir William Rowan Hamilton, discoverer of quaternion mathematics, was the director of this observatory in the 19th century. Another claim to fame includes involvement in the first Irish space experiment aboard the shuttle Challenger in1988. Their principal area of research today is X-ray astronomy, using space telescopes.

(Continued on page 4)

From Neolithic Newgrange... *(Continued from page 3)*

It was challenging finding Dunsink, as it is at the end of a dead end road that is not well mapped. We did find it, in the midst of a rainsquall, and found the gates locked. Pheasants wandered on the grass beyond the fence and we could see the copper green dome of the old observatory off to the left. The working observatory was on the right and no one seemed to be there. Bob, with no hesitation, immediately rang the bell on the inside of the wrought iron gate. After much back and forth, it was determined that we would be admitted.

Bob at the Grubb Refractor.

Bob's silver tongue held us in good stead once again and we finally got a nice guided tour of the old observatory. The 1868 Grubb 12" Refractor is housed in the South dome. This beautiful vintage brass and steel scope was used for early planetary observations.

Dropping the car off at the Dublin airport, we caught a bus for downtown Dublin. We wanted to visit Trinity College and see the famous Book of Kells. However, by the time we arrived, the library was closed so we wandered around the campus. Bob was looking for the rock gym but when we finally found it, it was closed for repairs. It was pouring down rain and not likely to stop anytime soon. We found a terrific gift shop in the middle of Dublin and loaded up with souvenirs. After dinner we found the bus that would take us back to the Travel Lodge by the airport (very reasonable rates) and the next morning we were on the 8 a.m. Ryan Air to Glasgow, Scotland. We were looking forward to seeing Ben Nevis, the highest peak in the United Kingdom. Alas, by the time we found a hotel near the train station to stash our bags, we found that the ride to Ft. William near Ben Nevis was three and a half hours – one way! We decided to go anyway, even though we would only have a few hours in Ft. William.

The train ride through the Scottish highlands was incredible. It was slightly overcast with a few sun breaks. The hills were covered with ferns turning golden and the trees just starting to turn orange and red. As we got further into the highlands the terrain became steeper and we saw lots of small waterfalls down both sides of the hills around the valley. Arriving at Ft. William, Bob immediately went to some mountaineering shops, as Ft. William is the mountaineering capital of the UK! I wandered around the charming old town, taking pictures and poking my nose into lots of shops. I picked up some ready made salads, bread, cheese and bottle of red wine at the local supermarket. We then enjoyed a leisurely dinner on the almost vacant train back to Glasgow and were treated to a most magnificent sunset. Arriving back in Glasgow at 9 p.m. we wandered the city in search of an Internet connection. We found an Internet Café and were able to find out what was going on in the rest of the world. An earthquake in Pakistan!

The next morning we boarded the train for Edinburgh. We were on our way to the Royal Observatory. Edinburgh is a fantastic city built on an ancient extinct volcano. It was overcast, threatening rain. We jumped in a cab and arrived at the Royal Observatory in a downpour!

(Continued on page 5)

From Neolithic Newgrange... *(Continued from page 4)*

The Royal Observatory on Blackford Hill, Edinburgh.

In the East Tower, above the visitor center, is the 36" Cassegrain reflector used by Astronomer Royal Ralph Sampson in the 1930's. This telescope and its improved spectrograph allowed him to record the spectra of much fainter stars than with the 24" reflector in the West Tower.

When the rain let up we hiked down Blackford Hill with some engineering students who told us not to miss the "Royal Mile." We hopped on a bus and were quickly in the middle of the city. The Royal Mile is crowded with churches, shops, restaurants, pubs, and more shops - with the incredible Edinburgh Castle at the west end of town. We visited the Whiskey Museum and the Tartan Factory near the castle. Stopping at St. Giles Cathedral, we wandered around the cavernous building admiring the stained glass windows and all the special statuary. We peeked into a private room and saw the ornate chair where the Queen of England sits when she visits Edinburgh. It is a lively, colorful city with a multitude of great places to eat. After enjoying a delicious dinner at a pub down one of the winding, cobblestone streets, we arrived at the train station, ready for our next adventure. Coming up? Jodrell Bank Radio Telescope Observatory and Stonehenge!

RCA LIBRARY

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

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

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

Telescope Workshop

When: Saturday, January 14, 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: Thursday, January 19, 7 PM.

Speaker: Mark Martin Topic: "Quantum Gravity "

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

www.rca-omsi.org/cosmologysig.htm

Start an Astronomical League observing program tonight!

After finally finding some time under the stars, have you ever thought, "What should I observe? There's so much up there!"

The Astronomical League offers nearly 30 observing programs to help in just that situation. Some are designed for the novice such as Constellation Hunters, Universe Sampler, and Lunar Clubs. Other programs, including the Messier, Urban, and Planetary Observer Clubs, are better suited for intermediate observers. More experience deep sky hunters can hone their skills with the tougher selections of the Herschel, Arp Peculiar Galaxies, and Galaxy Groups and Clusters Clubs. Truly, there is a program for everyone!

Upon completion of each club, the observer is presented a certificate suitable for framing and a nifty lapel pin. These lists are a low stress way to enjoy the many wonders of the night sky.

Check out which program is right for you! Visit www.astroleague.org/observing.html

THE OBSERVER'S CORNER

Howard Banich

Along with the Moon, Saturn is almost guaranteed to delight and amaze someone on their first look through a telescope. Many of us recall our first telescopic view of Saturn and may even credit that revelation as the beginning of our interest in astronomy. Well, prepare to be delighted and amazed again because Saturn reaches opposition January 27.

It will appear at its largest and brightest of the year on that date, but will remain nearly so throughout our winter and spring seasons because it will shrink in apparent size and brightness only slightly. At the same time it will become more convenient to observe in the evening sky. We're heading toward the next ring-plane crossing in 2009, when the rings are briefly presented to us edge on, so they won't be this open again until 2012.

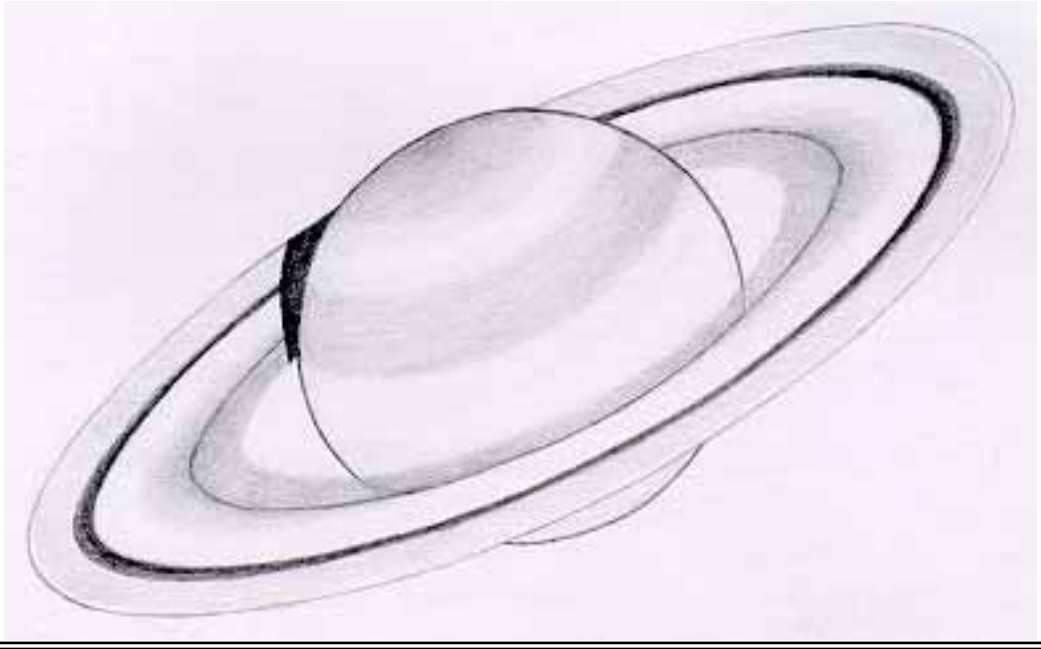
This all means we'll have a fabulous view for the next five months or so, which is great timing since Mars is now rapidly falling behind us in its slower orbit. Of course, the weather will need to cooperate, but we often get a partial clear night between storm systems and they can offer some surprisingly steady seeing.

If you're new to astronomy you'll probably be surprised that the rings are clearly visible in the smallest of scopes. This is a riveting sight even though the small-scope image is likely to be rather tiny and devoid of further detail. However, seeing Saturn live and in person for the first time is like seeing a miracle, in that it's so far outside our everyday experience that we have almost nothing to compare it to. It's difficult to pull away from the eyepiece that first time.

If you've been around the solar system a few times you'll have a good idea what to expect and may have a telescope capable of showing more than a flattened ball with a hoop around its middle. You've probably seen Cassini's Division in the rings, maybe a vague atmospheric belt or two on the planet itself and a few of its moons. On a very good night you may have noticed color differences within the rings and on the planet, and maybe picked up a hint that the largest moon, Titan, is slightly orange. You may have seen the shadow of the planet cast onto the rings, and maybe even the shadow of the rings cast onto the planet. That's when Saturn appears most 3D-ish and spell-binding – it really does look like an amazing flattened ball with a hoop around it. It's really difficult to pull away from the eyepiece when you can see all this.

For those that that first saw Saturn when it had 9 or 10 known moons (at least 47 have been discovered to date) and have had every opportunity to become jaded with this miracle planet, Saturn still glues us to the eyepiece. There may be more details in the rings and the planet's atmosphere to see on the very best nights, and Titan may show as small orange disc, but it's still the beauty of Saturn that captivates. It's still difficult to pull away from the eyepiece when the seeing starts to settle down and the finest, most subtle details flutter into visibility.

So experience hardly matters because this gem of the solar system casts its spell on almost everyone in the same way. It's just plain difficult to pull away from a good view of Saturn.



BOARD MEETING MINUTES

December 5, 2005
OMSI Classroom 1
Ken Cone

Meeting called to order by Matt Brewster for Carol Huston

Board members present: Peter Abrahams, Matt Brewster, Ken Cone, Patton Echols, Ed Epp, Larry Godsey, Ken Hose, Jan Keiski, Dareth Murray, David Nemo, Jim Reilly, Greg Rohde , Sameer Ruiwale, Matt Vartanian

Non-board members present: Andy Phelps, 2006 Secretary was introduced to the board. Welcome Andy!

Board Reports

- Secretary's Report – Ken Cone: Quorum (12) met with 14 voting members present.
- Treasurer's Report – Ed Epp: $18,775.32 total liabilities & equity. Ed has reconciled the books with bank accounts. Telescope committee and site committee may need to be budgeted in the future. Discussion about doing quarterly printouts.
- VP Programming – Matt Brewster: Winter Social plans (12/12) January meeting will be no speaker with special interest groups (SIGs) to provide information for all members. Discussion about February meeting being an "experts panel" with questions/answers from the panel. The idea is to share information on various astronomy topics with several speakers, then have a question & answer session at the end.
- VP Observing – Matt Vartanian: schedule ready for 2006 and will be published in January 06. We will have star parties at both Hancock and Kah-nee-tah in March 2006.
- VP Community Affairs – Jeff Sponaugle: no report
- VP Membership – Ken Hose: currently there are 272 member families with 2 new members and $125 for November. Ken will notify 107 individuals whose memberships have lapsed from last year. Dareth will purge the email list at the end of December.
- New Member Advisor – Jim Reilly: Open house for new members on December 9. Jim will have new members table at January meeting.
- Media Director – Patton Echols: Info Fair will be January meeting. Patton will do a press release.
- Sales – Sameer Ruiwale: $623.00 sales for November. Sameer suggested doing a software purchase for the December meeting. Sameer has researched Deep Sky and the package, looks good. Recommendations from the board were to go ahead with the purchase.
- Book Library – Jan Keiski: Library received, among other items, an astronomy themed monopoly board game. And it's already checked out!
- Telescope Library – Greg Rohde: Only one telescope in library -- all others checked out. Request to spend $65 for hard case for Coronado telescope. Approved in budget.
- IDA – Bob McGown: no report
- Magazine Subscriptions – Larry Godsey: $683.30 for November sales.
- Webmaster – Dareth Murray: no report
- Site Committee – David Nemo: attended metro council Cooper Mountain master plan. David spoke on behalf of RCA to endorsing the plan. Metro also controls other open space so this was a good introduction. Request for two things: to turn off lights, and park availability after dark. Potential for public outreach observing. Park will be developed in next two years.
- SIGs – Ken Cone will have a SIGs table at the January meeting.
- OMSI – Jan Keiski: met with Jim Todd concerning moving most of the library material into the planetarium.
- Gazette Editor, Alcor, and JRCA: no report

Old Business

- Action Item: David Nemo and Bob McGown to work up guidelines for lifetime membership and guidelines for targeting donations – property, cash, and acknowledging donors. No action.
- Action Item: Dale will work with OMSI to put together a packet of information to provide to people who purchase telescopes from OMSI.
- Action Item: Jim Reilly to work with Dave Sandage to put together a list of mentors to help members who want/need assistance with specific astronomy topics or projects. Potential for end of December package.
- NWRAL November Vote? Tabled until next meeting.
- Phone Line Report: November 6 through December 4: Matt Vartanian
- December 4 through January 8: Jeff Sponaugle
- January 9 through February 5: Sameer Ruiwale

New Business

- ALCON 2007 – Dareth passed around program from 2005. 14 people have volunteered so far for the committee. Most likely date is end of July, two weeks before table mountain. Lloyd Center Doubletree is prospective site. Dareth and Bob have been talking with potential speakers. Expect the first committee meeting to be the end of January 06. RCA can expect an average of 250 attendees to the conference; Berkeley had 600. Dareth will develop draft budget by next meeting.

Meeting adjourned 8:30pm.

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

January 2006

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 2006

Jan 9	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Jan 14	Sat	Telescope Workshop	Swan Island	10am—3pm
Jan 16	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Jan 19	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

February 2006

Feb 6	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Feb 11	Sat	Telescope Workshop	Swan Island	10am—3pm
Feb 20	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Jan 24	Thurs	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 18, Issue 2 Newsletter of the Rose City Astronomers February, 2006

In This Issue:

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

To All RCA Members and Friends

Imagine……It's a clear night and you have the itch to set up your telescope for a few hours of observing someplace that is safe, darker than your backyard and a short drive away. As a member of the Rose City Astronomers, you pack up your gear and head to the ***RCA Nearby Observing Site*** located about 30 miles from downtown Portland. When you get there you join other club members making use of observing pads and piers with electricity, a heated clubhouse with restrooms and private storage lockers, access to club telescopes, and a wi-fi internet signal that blankets the site. You stay as long as you want, in safety and comfort.

Imagine……It's a new moon weekend and you want to head for darker skies with your trailer or tent for a couple of nights of observing. As a member of the Rose City Astronomers, you pack up your gear and head to the ***RCA Remote Observing Site*** located about 2 ½ hours from downtown Portland east of Mt. Hood. When you get there you find a secluded clearing, no nearby lights and the Milky Way. You hook your gear into a solar charged bank of batteries and spend the night absorbed in your search for faint galaxies and nebula you can't see from home.

Is this a dream? Of course it is. Can this dream come true? **ABSOLUTELY**!

For over two years now, the RCA Observing Site Committee has been actively discussing and exploring the alternatives for acquiring property to use as observing sites just like described above. In order to be serious about locating and acquiring these observing sites we need one important thing – **money** -– and that's the purpose of the **M-110 Campaign** announced at the January Club Meeting.

The goal of the **M-110 Campaign** is to raise **$110,000**. You can help us reach this goal by using the enclosed envelope to make a cash donation now, or a pledge we can count on later. Large or small, all contributions will help and are equally appreciated – and since RCA is a 501(c)(3) nonprofit corporation, your donations to this project are also tax deductible!

Only with your help can and will this dream come true.

Sincerely,

David Nemo
Observing Site Director

Carol Huston
RCA President

First Quarter Moon February 4

Full Moon February 12

Last Quarter Moon February 20

New Moon February 27

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	m_brewster@juno.com
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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@spiritone.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	kcone@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.

President's Message

By Carol Huston

February 2006

A Look Into 2006

In the dead of winter, as I listen to the rain on the roof, I try to find ways to "play astronomy" indoors. As I contemplate the new year, I have taken a look forward to the activities we have to anticipate in astronomy throughout each month.

In January, Saturn will make a nice pairing with the Beehive Cluster (M44) late in the evening of 1/31. In February, the Zodiacal Light should be visible in the west after evening twilight for the last half of the month. In March on the 14th, the New Moon will rise in Penumbral Eclipse and should be easily visible here in Portland (of course, if the skies will participate). In April on the 16th, Mars will make a nice pairing with M35 in Gemini. In May on the 5th, the Aquarid meteors peak at 1 AM. In June, Mercury will be at greatest elongation on the 20th. In July, the Crescent Moon occults the Pleiades on the 20th at 4 AM. In August, the Perseid meteors peak on the 12th. In September on the 7th will be the largest Full Moon of 2006. In October, the Orionid meteors peak. In November on the 8th, Mercury will transit the sun with the entire transit visible on the west coast (again, will the weather cooperate in November?). In December, the Geminid meteors peak on the 14th.

We have a lot to keep us active this coming year!

RCA FEBRUARY GENERAL MEETING

Evolution of Interacting Galaxies

Presented By Catherine Garland Ph.D.

Deep images acquired with the Hubble Space Telescope, and presented at this lecture, reveal that early in the history of the Universe most galaxies did not exist in isolation, but were interacting with each other. Galaxies are observed to collide with and even to "cannibalize" each other. It is now recognized that galaxy interactions drive much of galaxy evolution--even if all the details aren't yet worked out! Dr. Garland will discuss current knowledge of how galaxies interact and what effects such interactions have on their evolution. We'll have a look at visible, infrared, and radio wavelength images of interacting galaxies as each sheds a different light on the interaction processes.

Catherine Garland is primarily a radio astronomer and studies the gases, such as hydrogen and carbon monoxide, in starburst galaxies. She is currently an Assistant Physics Professor at Castleton State College in Vermont, teaching astronomy and physics.

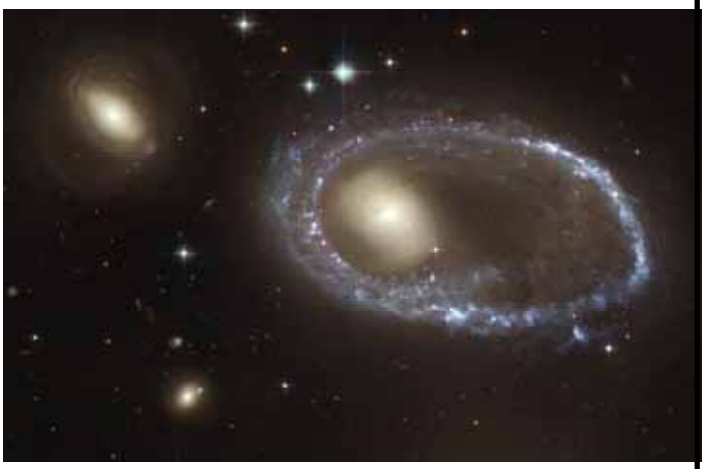


Image Credit: NASA, ESA, and The Hubble Heritage Team

All are Welcome! Monday February 20
Social Gathering: 7 pm.
Meeting Begins: 7:30 pm.
Location: OMSI Auditorium

RCA LIBRARY

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

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

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

Awards

Patrick Honrahan
Messier Certificate # 2242
All 110 Messier Objects

Margaret Campbell-McCrae
Deep Sky Binocular Award
207
All 60 Non Messier Objects

Frank Siemensen
Binocular Messier Award
#693
More than 50 Messier Objects

John Harris
Binocular Messier Award
#692
More than 50 Messier Objects

For more information visit:
http://www.astroleague.org/observing.html

Observing Site Project Moves Forward

With the announcement at the January General Club Meeting of the beginning of the **M-110 Capital Fundraising Campaign**, the Observing Site Project is taking a major step towards realizing the goal of acquiring private club observing sites.

Background

In November 2003, a group of club members organized an 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.*

Based on information and input from a variety of sources - including a survey of Club members - the Committee proposed and received support from the RCA Board for a long-term vision of securing access/control of a variety of site-types to serve different observing purposes and desires of the Club and individual members as follows.

One or more **Close-In** site (15-30 minutes from downtown Portland) where the Club and members have "permission" to schedule public star parties and/or use on drop-in basis

A **Nearby Site** (+ one hour from Portland) that is available for "drop-in" use by members only as well as Club events. Skies are reasonably dark and site is secured with some improvements.

A **Remote Site** (2-3 hours from Portland) that is available for multi-night use by members only and Club events. Skies are very dark and site is secured with some improvements.

The Plan

Based primarily on a survey of the general membership and confirmed through discussion between the Site Committee and the Board, acquisition of a **Nearby Site** is clearly the top priority, followed by a **Remote Site**.

The challenge of finding suitable property for a Nearby Site within the Portland metro area –– and the purchase price - will be much greater than for the Remote Site. While outright purchase of property is the ultimate goal and would give the Club maximum control of property development and use, the Site Committee will also be trying to identify property owners that would be willing to enter into a long-term lease with the Club to give us the access we desire (24/7) at less cost. On the other hand, finding property for a Remote Site should be relatively easier and cheaper.

As viable opportunities emerge for either a Nearby or Remote Site, the Site Committee will investigate their suitability and potential, and prepare a recommendation to the Board – who will make the final decision on pursuing any acquisition or lease, following discussion and feedback from the full general membership.

Gaining control of any Close-In Site is expected to be by special use permit of either a public agency or private property owner – as the cost of any property would likely be prohibitive to the Club.

All funds received during the M-110 Fundraising Campaign are being maintained in a separate fund dedicated for observing site purchase and maintenance – and will be under the control of the Board of Directors.

The M-110 Campaign

The Site Committee and the Board have wrestled with the classic question of what should come first - the "chicken" (the property) or the "egg" (the money) and decided that we need to accumulate at least a sizeable "nest egg" in order to be able to make a purchase offer when an opportunity presents itself. It's also clear from the survey that while many members said they would be willing to donate cash now – sight unseen – most others wanted to "see" what the property was like before contributing. That's fine and we can work with that.

Our goal of $110,000 is an educated guess at the moment of what it would cost to purchase the two sites. It could obviously end up being more or less. If it's less and we have by then raised more than enough funds, then we have a head start on making major site improvements like an observatory or bunkhouse. If it's more and everyone is in love with the property, then we would obviously need to come up with the cash to make it happen.

While we will be seeking donations from local corporations and foundations and undertaking fundraisers and other money-raising activities, it will ultimately depend on the generosity of RCA members to reach our goal. Special recognition will be made for large donors, but donations of any amount will be equally appreciated. In addition, your RCA is a 501(c)(3) non-profit corporation, so any donations are tax deductible.

Pledges are also welcome and can be accommodated through monthly payments to suit your budget, for example: $25/ month for 16 months would equal $400 – the average amount of funds we need per member to reach our goal. Donations of other assets that can be converted to cash (e.g., stocks or real property) are welcome too, as are bequests or other planned giving arrangements.

For more information on the Observing Site Project – or to make an online donation - follow the link from the main RCA Website (http://www.rca-omsi.org/index.htm) to the Site Committee Website (http://nemoworld.com/RCA/sitehome.htm).

Questions about the project can be directed to any Site Committee member: David Nemo, Matt Vartanian, Bob Bond, Greg Rohde, Paul Swanson, Peter Abrahams, or Margaret Campbell-McCrea.

A NEXIMAGE LUNAR PORTFOLIO

By John W. and Diane A. Siple

Our astronomy club is made up of a mixture of dedicated telescopic observers, astrophotographers, telescope makers, cosmologists, and others. The co-author's interest began in 1968 as a young boy upon receiving a Tasco 2.4-inch refractor telescope as a Christmas present. Many memorable clear nights were spent learning the positions of the Messier objects, double stars and celestial sights befitting a telescope of that size. A constant companion was James Mullaney's and Wallace McCall's bestselling 31-page booklet *The Finest Deep-Sky Objects,* a compendium of 106 of the best telescopic objects north of declination -40°. William T. Olcott's definitive *Field Book of the Skies* was often close at hand.

Notwithstanding the planets and deep-sky objects, a favorite target was Earth's 384,000 km distant Moon with its retinue of craters, mountains, basins and rilles. The visibility of lunar features is dependent upon the phase of the Moon; those seen at First Quarter are hidden in shadow at the time of the Third. The Astronomical League's Lunar Club, part of their comprehensive observing program, is intended for individuals who wish to become more familiar with Earth's nearest neighbor in space. A collection of 100 easily observable lunar features that can be seen by the naked eye, with binoculars or in a small reflecting/refracting telescope are on the list. A certificate and lapel pin is awarded to those steadfast observers who complete the list by following the guidelines, and currently the tally of awardees is fast approaching 500. A more challenging, optional aspect of the program is to use a digital camera or other photographic medium to document selected items on the roster.

To fulfill the latter agenda, Celestron's widely-acclaimed Solar System Imager was purchased for $99 and interfaced with a 5-inch Unitron refractor and an IBM Thinkpad T30 Notebook (1.8 GHz Pentium 4, 256MB, 40GB, DVD/CD-RW, Windows XP Pro, 14.1" TFT). The package includes a webcam that feeds streaming (live) video at a preset frame rate to the laptop's screen, controlling software (*Amcap*) for the webcam, and a powerful software program (*RegiStax*), akin to adaptive optics, that can counteract the effects of atmospheric turbulence and produce miraculous images of the lunar landscape. NexImage's lightweight webcam inserts directly into any 1.25-inch focuser, is threaded to accept filters, and is fully compatible with Barlow lenses and focal reducers. A *Lunar Tutorial* using a sample video is included with the purchase, and running through the steps beforehand is a saving grace.

Successfully recording an image using *Amcap* can be broken down into several tasks that any competent amateur astronomer can accomplish with a minimum of effort. The NexImage Solar System Imager step-by-step instructions are self explanatory, and captured images of the Moon are saved to a file folder such as My Documents for future image processing. (An AVI—audio video interleave extension—*must* be used or the user will receive the error message "Failed to open AVI file" when trying to select the input through *RegiStax*.)

(Continued on page 6)

A NEXIMAGE LUNAR PORTFOLIO *(Continued from page 5)*

The true power of NexImage lies in a cunningly written image processing program called *RegiStax*. Authored by Dutch amateur astronomer Cor Berrevoets, this magical software processes the raw, fuzzy data gathered from *Amcap* AVI files. A complete, very detailed overview of *RegiStax* by Mr. Berrevoets is on pages 130-135 of the April 2004 issue of *Sky & Telescope* magazine. Readers who are not familiar with computer jargon or mathematical entities such as histograms may find his article somewhat daunting, but it must be kept in mind that the crux of *RegiStax* can be broken down into just three primary subtasks: alignment (registering); stacking (combining), and wavelet processing (a complex mathematical function applied to digital signals that separates useful, hidden information from electronic noise, giving a clean, final result).

Although many individuals are enthralled with the appearance of the full Moon, the best renditions of the lunar surface are taken at other phases, where the solar illumination is oblique and rugged shadows are cast. This is especially apparent near the terminator, or the boundary between the illuminated and dark portions of the Moon, where the Sun is rising and the illumination angle is particularly oblique. This selenographic fact, where craters display bold relief, was taken advantage of during the imaging session with the 5-inch Unitron refractor. Unprocessed raw data from *Amcap* can be seen bordering the top and bottom of the finished product. Look at the difference that *RegiStax* makes!

Posidonius, a walled plain 95 km in diameter found at lunar coordinates 31.8ºN 29.9ºE, is named in honor of the great Rhodian polymath and philosopher (135 BC – 51 BC). Bordering Mare Serenitatis (Sea of Serenity) and Lacus Somniorum (Lake of Dreams), this striking oviform lunar plain or filled-in crater is characterized by peculiar low ramparts, and has a floor crowded with minute detail. In Posidonius' long history, several lava flows from different eras of lunar activity have flowed throughout its interior, and the floor has been covered to a great depth by this mare material. Floor fracturing has occurred, resulting in kilometer-sized tilted blocks of lunar basalt and an intricate rille system named the Rimae Posidonius. Offset just to the west of its center is the 11 km wide impact crater Posidonius A. The ruined, adjoining crater Chacornac is to the southeast (at one o'clock), while to the north is the crater Danielle. A series of wrinkle-ridges, called the Dorsa Smirnov, run parallel to the eastern shore of Mare Serenitatis.

The final image of Posidonius was obtained by processing 50 frames in *RegiStax* (collected at a frame rate of 5 FPS with a time limit of 10 seconds). According to Celestron's literature, the signal-to-noise ratio of the stacked composite image is directly proportional to the square root of the number of frames that combine. Therefore approximately a $\sqrt{50}$ or 7 times reduction in noise has occurred. Collecting and stacking a greater number of frames to get further noise reduction can be done at the user's discretion, but *RegiStax* can only process AVI files up to 1GB in size. An annoying error message, "Failed to decompress AVI frame" will appear if the video file is too large, but this is easily remedied by unselecting an appropriate number of frames from the *Show Frame List*. The video clip for Posidonius required an acceptable 49.153 KB of allocated storage space on the IBM laptop's hard drive. The corresponding JPEG file after image processing with *RegiStax* is 69.6 KB in size. The final processed image can also be stored in a BMP, TIFF, or FITS format. We stopped data manipulation after wavelet processing, but *Registax* does offer some additional data processing options such as rotating the frame to match the correct orientation in a favorite Moon atlas.

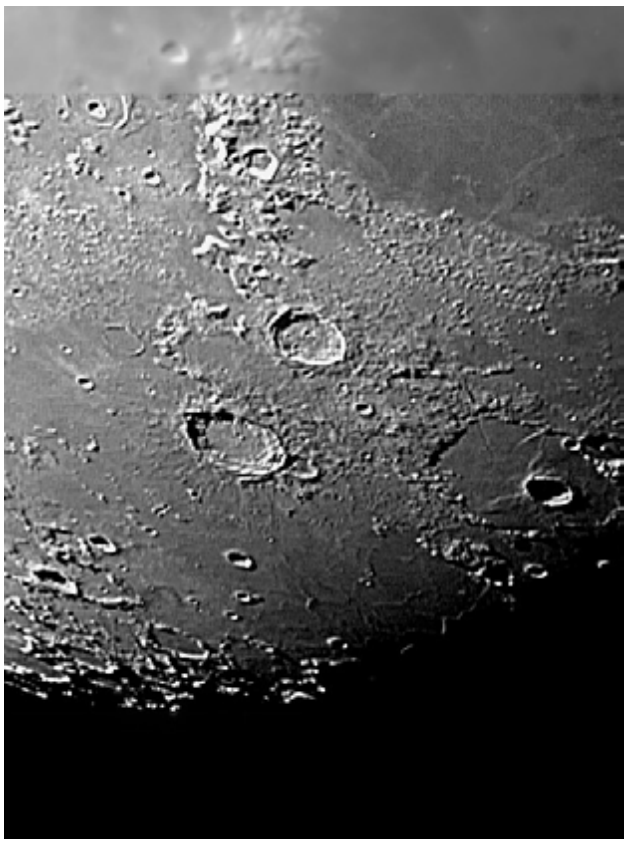
(Continued on page 7)

A NEXIMAGE LUNAR PORTFOLIO *(Continued from page 6)*

Situated at 15.4°N 23.7°E, the crater Plinius with its spires stands as a lone sentinel guarding the strait between Mare Serenitatis and Mare Tranquillitatis (Sea of Tranquillity). Named in honor of of Gaius Plinius Secundus (23-79 AD), better known as Pliny the Elder and author of *Naturalis Historia*, this conspicuous 43 km wide crater is encroached on its northwestern side by a cape called Promontorium Acherusia (visible to the immediate left of Plinius in the frame).

The Apollo 17 astronauts, commanded by Eugene A. Cernan, set their Lunar Excursion Module down in the Taurus-Littrow Valley on December 11, 1972. Their touchdown point (20.2° N 30.8°E), and where the footprints of the American astronauts were stamped into the lunar soil, is located opposite Promontorium Archerusia at the southeastern margin of Mare Serenitatis. This historic site is visible at the bottom center of the Unitron 5-inch image. The primary purpose of Apollo 17's visit to the Moon was to determine what geologic relationship existed between mare material and rocks found in the highlands. Sojourns in The Lunar Roving Vehicle were made to the North and South Mastiffs, and to the "Tortilla Flat." The astronauts had to maneuver around such small craters as "Camelot," "Shakespeare" and "Cochise." What a thrill it is to actually photograph, albeit at low resolution from Earth, a true Apollo landing site!

South of the long and narrow Mare Frigoris (Sea of Cold), and bordering the jagged peaks of the Caucasus Mountains lies a superb crater duo. Named in honor of two of Plato's closest collaborators on universal matters, these twin craters dominate the region. The Greek philosopher Aristoteles (384 BC – 322 BC), was prolific in his teachings and writings from Apollo's Lyceios (the Lyceum). The crater holding his name, at 50.2°N 17.4°E and the northern of the pair, is 87 km across with very steep terraced interior walls that rise to a height of three kilometers over the surrounding terrain. A series of radial ridges or hillocks comprise the geology of the outer walls, and make it an unmistakable crater in any telescope. Mitchell, a smaller crater 30 km in diameter, can be seen attached to the eastern rim of Aristoteles. (The famous lunar Alpine Valley is just outside of the field of view at left.)



Eudoxus of Cnidus (410 BC – 355 BC) is the progenitor of many mathematical theorems and laws. The "Kampyle of Eudoxus" in algebra is named after him. In mathematical astronomy he formulated a complex system for predicting the movements of the Sun, Moon and Wanderers (planets) based on 27 concentric spheres. The 67 km diameter crater at 44.3°N 16.3° E that is named in his honor, though not quite as impressive as the one dedicated to Aristoteles, has left its lasting impression on the lunar landscape.

(Continued on page 8)

A NEXIMAGE LUNAR PORTFOLIO *(Continued from page 7)*

A future prospect for those individuals who thoroughly enjoy looking at Earth's nearest celestial neighbor and cannot ignore a challenge to test their observing skills is the recent introduction of The Astronomical Society's Lunar II Club. The impetus for creating a new observing club is best summarized by the League's statement:

> "The Moon is the nearest celestial object in our observable universe and is always a public favorite at star parties. It was the target of past manned and robotic exploration missions, and it is likely that public interest will be stimulated again as new lunar missions are announced and executed. Many avid lunar observers voiced their desire for a second, more challenging program to follow the very popular Lunar Club. In response the Astronomical League formed a club for experienced lunar observers called Lunar II."

A detailed listing of the lunar features along with the rules and regulations set forth by the Astronomical League are available on their website at www.astroleague.org/al/obsclubs/lunarII/lunarIII.html. Concordantly, planetary scientist Charles Wood's interesting proposal of 100 telescopic explorations of the Moon (see the April 2004 issue of *Sky & Telescope*, pages 113-120), many of them part of the Lunar II Club and cross-referenced, is another viable option. An excellent source for learning how to make sketches of the Moon is Harold Hill's book *A Portfolio of Lunar Drawings*.

In late October of last year, with the silvery light of a waning gibbous Moon illuminating the Willamette Valley, the Celestron NexImage was put to the test. The images of our Moon through the Unitron 5-inch telescope were taken in less than ideal conditions. There was a steady, cold breeze blowing, and toward the end of the imaging session a gray, pallid layer of fog began to form in the early morning sky. The heavy-duty Meade equatorial mounting was not polar aligned with any great accuracy, and as a result measurable drift of the Moon's image on the laptop's screen became apparent after only several minutes of tracking. Despite these adverse conditions, Celestron's NexImage Solar System Imager overcame the difficulties and managed to provide excellent, high resolution shots on each try. Considering ourselves strictly visual amateur astronomers, this first attempt at lunar astrophotography was a very enjoyable, new adventure into the realm of webcams and software processing.

Works Consulted:

Berrevoets, C. (2004). Processing webcam images with RegiStax. *Sky & Telescope*, 107(4), 130-135.

Celestron. (2005). Astro imaging made easy. Retrieved January 5, 2006, from http://www.celestron.com/neximage/index.htm

Davis, M., & Staup, D. (2003). Shooting the planets with webcams. *Sky & Telescope,* 105(6), 117-122.

Lewis, H. A. G. (Ed.). (1969). *The Times Atlas of the Moon*. London: Times Newspapers Limited Printing House.

Menzel, D. H. (1964). *A Field Guide to the Stars and Planets*. Boston: Houghton Mifflin.

Moore, P. (1976). *New Guide to the Moon*. New York: W. W. Norton.

Sinnot, R. W. (1973). Visit to Taurus-Littrow. *Sky & Telescope*, 45(3), 79-84.

Wood, C. A. (2004a). Introducing the lunar 100. *Sky & Telescope*, 107(4), 113-120.

Wood, C. A. (2004b). Floor-fractured craters. *Sky & Telescope*, 108(6), 71-72.

Zimbelman, J. R. (n.d.). Apollo 17 site: Traverse map. *Lunar and Planetary Institute*. Retrieved January 9, 2006, from http://www.1pi.usra.edu/publications/slidesets/apollolanding/ApolloLanding/slide_37.html

2006 RCA Observing Schedule

Month	Day	Day of Week	Event	Location
Mar	24-26	Fri-Sun	RCA Dark Sky Party	Kah Nee Ta * *
Mar	25	Sat	Vernal Equinox Celebration	OMSI East Parking Lot
Mar-Apr	31-2	Fri-Sun	RCA Dark Sky Star Camp	Camp Hancock * *
Apr	15	Sat	Planet Parade	OMSI East Parking Lot
Apr	29	Sat	RCA Star Party	Sean's Astronomy Shop
May	6	Sat	Astronomy Day	OMSI East Parking Lot
May	27	Sat	RCA Star Party	Larch Mountain
Jun	3	Sat	Imaging The Sky Conference	OMSI Auditorium
Jun	10	Sat	Summer Solstice Celebration	OMSI East Parking Lot
Jun	23-25	Sat	ARRL Field Day - Ham Radio	Larch Mountain * * *
Jun	24	Sat	RCA Outreach Star Party	McMenamins Grand Lodge
Jul	8	Sat	Luna Viewing	OMSI East Parking Lot
Jul	20-24	Thu-Sun	Table Mountain Star Party	Ellensburg, WA * *
Jul	21-22	Fri-Sat	RCA Star Party	Trout Lake, WA *
Jul	27-30	Thu-Sun	Mount Bachelor Star Party	Bend, OR
Jul	29	Sat	RCA Star Party	Dethloff's Property
Aug	11	Fri	Perseid Meteor Shower Watch	Rooster Rock St. Park
Aug	19	Sat	RCA Star Party	White River Canyon
Aug	24-27	Thu-Sun	Oregon Star Party	Indian Trail Springs * *
Sep	2	Sat	Autumnal Equinox Celebration	OMSI East Parking Lot
Sep	22-24	Fri-Sun	RCA Dark Sky Party	Indian Trail Springs
Oct	20-22	Sat	RCA Dark Sky Star Camp	Camp Hancock * *
Nov	8	Wed	Mercury Transit	OMSI East Parking Lot

* Indicates camping or camping nearby.

* * There is a charge for these outings.

* * * Good day to stay off Larch Mountain. The Ham Radio group uses lots of lights!

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

RCA members do also occasionally get together for other impromptu star parties. RCA's E-mail list provides you with the opportunity to hear about these spontaneous opportunities as they occur. If you are an RCA member and would like to be added to this list, please send email to Dareth at darethlee@comcast.net requesting that you be added to the list.

For more information about all RCA activities, please check out our club's web site at: http://www.rca-omsi.org/ Or call our club's phone information line at (503) 255-2016.

Much discussion has been held regarding the SAFETY of RCA members while observing at public or private locations. The RCA does NOT assume any liability for the actions of others and can NOT guarantee your safety at any site. It is always a good idea to observe in small groups to minimize your risks.

Detailed information on all events: http://www.rca-omsi.org/starpartysites.htm

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 it's 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

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.

TROUT LAKE, WA

A map is located at: http://www.rca-omsi.org/TroutLake.pdf

DIRECTIONS TO CHUCK AND JUDY DETHLOFF'S HOUSE

Going west on Highway 26 from Portland take Highway 6 towards Tillamook. Go almost 13 miles and turn right onto Timber Road (toward Timber) just past the Glenwood Store. Go 2 miles and look for the Dethloff's driveway on left. Come up the driveway and follow it to the right towards the house.

Additional information is available at: http://www.rca-omsi.org/starschedule.htm

BOARD MEETING MINUTES

January 9, 2006
OMSI Classroom 1
Andy Phelps

Meeting called to order by Carol Huston at 7:06pm.

Board members present: Matt Brewster, Ed Epp, Larry Godsey, Ken Hose, Carol Huston, Jan Keiski, David Nemo, Andy Phelps, Greg Rohde, Jeff Sponaugle, Matt Vartanian.

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 11 voting members present.
- VP Programming – Matt Brewster: January meeting will be annual information fair. Carol will conduct brief annual formal business meeting. Sign needs were discussed. In Focus projector is needed for David Nemo's site selection fundraiser presentation.
- Treasurer's Report – Ed Epp: $19,079.86 total liabilities and equity. Quarterly printouts were presented to budgeted departments. Acquisition of solar telescope was moved to assets.
- VP Observing – Matt Vartanian: The 2006 star party schedule is complete and ready to post. Announcement will be made at general meeting about Kah-nee-ta. Future possibility of combining RCA's Messier Marathon at Kah-nee-ta with NWRAL's regional meeting was discussed.
- VP Community Affairs – Jeff Sponaugle: Discussed printing needs for elements of new member packets.
- VP Membership – Ken Hose: Currently there are 280 member families with 7 renewals and 3 new members. Total of $238 dues paid in December. A reminder email was sent to members who haven't renewed.
- Book Library - Jan Keiski: Plans are in place for an inventory of library materials with a book sale of excess library materials to follow the inventory.
- Telescope Library – Greg Rohde: Nominal.
- Magazine Subscriptions – Larry Godsey: $158.85 for December sales.
- Site Committee – David Nemo: A designer is needed for lapel pins. Carol suggested expanding David's role to being "site liaison," not only for procurement of a location.
- OMSI - Jan Keiski: Digistar 3 is now installed in the planetarium. OMSI will hold a Stardust return party on January 15, at 1:30am in planetarium as well as a New Horizons launch party Tuesday, January 17 at 10:24am.

Old Business

- Action Item: David Nemo and Bob McGown to work up guidelines for lifetime membership and to develop guidelines for targeting donations – property, cash, and acknowledging donors. No action.
- Action Item: Dale will work with OMSI to put together a packet of information to provide to people who purchase telescopes from OMSI. No action.
- Action Item: Jim Reilly to work with Dave Sandage to put together a list of mentors to help members who want/need assistance with specific astronomy topics or projects. No action.
- Phone line report:
  January 9 through February 5: Sameer Ruiwale
  February 6 through March 5: Jeff Sponaugle

New Business

- Discussion about Tom Nathe's idea to donate telescope, binoculars, or observing guides to troops overseas. There were many questions about practicality/feasibility. In order for further action to take place, someone would have to volunteer to lead this project.
- Carol distributed 2006 Actions/Meeting Calendar, RCA Board Contact List (updates were made), Donations Guidelines and RCA Receipt
- Privacy policy – tabled until next meeting.
- David Nemo suggested getting a P.O. Box for receipt of fund raising checks. He will look into details.

Meeting adjourned 8:19pm.

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Thursday, February 23, 7 PM.

Speaker: Mark Martin

Topic: "Quantum Gravity Part 2"

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499) for more information.

www.rca-omsi.org/cosmologysig.htm

Telescope Workshop

When: Saturday, February 11, 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

February 2006

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 2006

Feb 6	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Feb 11	Sat	Telescope Workshop	Swan Island	10am—3pm
Feb 20	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Jan 23	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

March 2006

Mar 6	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Mar 11	Sat	Telescope Workshop	Swan Island	10am—3pm
Mar 20	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Mar 23	Thurs	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 18, Issue 3 Newsletter of the Rose City Astronomers March, 2006

In This Issue:

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

MARCH RCA GENERAL MEETING

"HOW CELESTIAL OBJECTS ARE NAMED"

Or

"HOW TO GET YOUR NAME IN THE SKY WITOUT PAYING $54.95"

Presented by Dave Powell

Have you ever wondered how stars get their names? Have you ever thought if it's a good idea to purchase a star name for yourself or a loved one? These questions will be answered, as well as a brief history of the naming of several prominent celestial objects. Dave has given a series of presentations at the Oregon Star Party. Last year he presented "One Leg at a Time, How the Great Astronomers Put on Their Pants" to the Rose City Astronomers. This presentation has a light touch and shows part of the human side of astronomy. If you are a newcomer or an experienced observer, you just may learn something new or helpful. All are welcome.

Monday March 20

Social Gathering: 7 pm.

Meeting Begins: 7:30 pm.

Location: OMSI Auditorium

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

First Quarter Moon	Full Moon	Last Quarter Moon	New Moon
March 6	March 14	March 22	March 29

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	m_brewster@juno.com
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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@spiritone.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	kcone@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.

President's Message

By Carol Huston

March 2006

Stars of Diversity

The recent discussions on the board list have pointed up what I think is one of the great attractions of our hobby and a strength of our club. Within the broad category of astronomy, there are numerous niches that allow people to pursue their particular astronomical interest, and within our club you can find a group of people also pursuing that interest.

We have people who view the night sky just for the pleasure it brings them. There are jewels of rare beauty in the heavens. We have other visual astronomers who are pursuing observing programs; the big game hunters of amateur astronomy. We have astronomers who are actually conducting scientific research on various aspects of the night sky: double stars for example. Astronomy is one of the very few sciences where amateurs can make significant contributions and are considered valuable members of the field even by the professionals.

We have members who are involved in imaging the sky using various methods. Some of their photos are absolutely breathtaking. Our club in fact, was in the forefront of this endeavor and we have and have had members with international reputations in this field.

We have other members who find satisfaction in delving into the whys and hows of astronomy. Their instruments are equations, pencil and paper, not telescopes and eyepieces, and they find beauty in the elegance of a tightly reasoned derivation but they are still astronomers.

Amateur astronomy is a rich, diverse hobby, and our club reflects this richness. Whatever your particular interest, we have a group you can feel right at home in!

2006 Star Parties

March 25: OMSI Vernal Equinox Star Party

Spring officially begins with the vernal equinox on Monday, March 20 at 9:25 am PST. On Saturday evening, March 25, OMSI, Rose City Astronomers and Vancouver Sidewalk Astronomers will celebrate the vernal equinox and the beginning of spring with a free Star Party! Join us as we gaze at the spring night sky at **Rooster Rock State Park**, located 22 miles east of Portland on I-84 (east of Sandy River) at exit 25, starting at 7:30 pm. From beginners to experts of all ages, here's your opportunity to view the stars, and other objects up-close and personal through telescopes. Viewing highlights includes the planet Mars and Saturn, Orion Nebula, Beehive star cluster and more! For possible weather cancellation, call (503) 797-4610 on March 25 after 3:00 PM to get the latest information.

OMSI Star Parties to be held at Rooster Rock State Park

With the exciting changes on the new property next door starting March 1 means the end of OMSI Star Parties on the east parking area. For the next 7 years, there will be construction lights and building structures on the property making it impossible for good viewing from the east lot. Plus, OMSI will have two major blockbuster exhibits for 2006 and 2007 that will make parking difficult. There are really no other areas suitable at or near OMSI for viewing.

Oregon Parks & Recreation and Rooster Rock State Park has agreed to co-host the OMSI Star Parties for 2006. Advantages are plenty of parking spaces, darker skies, park staffing, and no lighting issues. The volunteers from Rose City Astronomers and Vancouver Sidewalk Astronomers will continue to provide outstanding telescope support and expertise for the viewing. Rooster Rock State Park is located 22 miles east of Portland on I-84 (east of Sandy River) at exit 25. Following is the schedule for 2006 OMSI Star Parties.

Revised 2006 OMSI Star Party Schedule:

- Vernal Equinox Celebration
  March 25, 2006 - Rooster Rock
- Planet Parade
  April 15, 2006 - Rooster Rock
- Astronomy Day
  May 6, 2006 - Rooster Rock
- Summer Solstice Celebration
  June 10, 2006 - Rooster Rock
- Lunar Viewing
  July 8, 2006 - Rooster Rock
- Perseid Meteor Shower Watch
  August 11, 2006 - Rooster Rock
- Autumnal Equinox Celebration
  September 2, 2006 - Rooster Rock
- Mercury Transit
  November 8, 2006 - OMSI East Parking Lot

RCA Observing Site Fund Status February 2006:

Orientation Meeting for New RCA Members

If you have joined our club recently, or have little experience with astronomy, you might be uncomfortable about seeking answers to any number or questions: what to buy, what to see, when and where to look, what does NGC stand for, and other questions that reveal your inexperience. All of us in the club began there too, so let us help you with a new-member* orientation at 7PM, Friday March 10th at the home of Jim Reilly, the RCA New-Member Advisor. We will spend a couple of hours talking about astronomy and our favorite club! I'll fill you in on some of my astro-experiences (including memories of when I was new at this) and the benefits to you from being a Rose City Astronomer; you can ask questions about this great hobby. I will not have every answer on the spot, but together we can figure out the next person to ask & we'll find the answers!

Some of the topics we'll cover:

- **Club resources and how to access them.**
- **How to prepare for and participate in star parties.**
- **Helpful tips on what you'll need to get started.**
- **Introduction to observing programs.**
- **Generic review of equipment (with props!).**
- **Volunteer opportunities with RCA.**
- **Question and Answer (more than one of each, if necessary!)**

Please RSVP by contacting Jim Reilly (503-493-2386, or jimrpdx@granitic.net); let me know how many are coming with you so I can grab the right number of chairs. Remember also to bring along your new-member packet for reference; I'll have a few spares, just in case. This informal session will be geared to helping you make the most out of your participation in RCA, so feel free to pass along any advance questions and topics when you RSVP.

**** You don't have to be absolutely new! Slightly used members are also welcome.***

Telescope Workshop

When: Saturday, March 11, 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: Thursday, March 23, 7 PM.

Speaker: Bob McGown

Topic: "African Skies - Hess and SALT telescopes "

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499) for more information.

www.rca-omsi.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 checkout at the general meetings for a period of one month with renewals available by phone or e-mail to the club library director, Jan Keiski.

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

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

A SAMPLING OF TELESCOPES FOR THE AMATEUR ASTRONOMER—PART 13

By John W. Siple

The Unitron Model 127 1.6-inch (40mm) altazimuth refractor telescope was first featured by United Trading Co. of Boston, Mass. in their premier October 1951 *Sky & Telescope* magazine advertisement. The diminutive refractor was imported from Japan and then sold in the U.S.A. for $75. It was continuously promoted along with Unitron's other quality astronomical products throughout the 1950s and '60s in *Sky & Telescope*. The Model 127 1.6-inch, as their lowest priced altazimuth unit, was created as an incentive for those wishing to explore the night sky for the very first time.

In September 1962, the concept was taken a step further with the introduction of Unitron's "700 Series" of small refractors. The Model 127 was renamed the 740 and the price was dropped to $55 without any change in design, but a 9mm eyepiece was eliminated and made available optionally. (Models 750 and 760 with the same basic characteristics were introduced along with the 740—they have larger objective lens diameters of 50mm and 60mm, respectively.) The name of this series of fine telescopes is derived from their identical focal length of 27.5-inches (700mm).

The Unitron Model 127/740 and its sister "700 Series" scopes are characterized by a unique dual focusing mechanism. A nonremovable slide-out drawtube is pulled for preliminary focusing (extends up to 4.5-inches on the Model 127), while a standard rack-and-pinion focuser riding on the end of the long drawtube is used for

(Continued on page 6)

(above) **The Unitron Model 127 1.6-inch altazimuth refractor telescope and its unusual focusing mechanism (a Tele Vue 19mm Panoptic eyepiece is in the focuser for comparison). From the author's collection.**
(right) **Advertisement from the 1958 UNITRON ASTRONOMICAL TELESCOPES *Including the New* OBSERVER'S GUIDE. Courtesy Unitron Instruments, Inc., Telescope Sales Division.**

{The author's example was sold by the Polaris Telescope Shop, 14319 Michigan Ave., Dearborn, Michigan 48126.}

A SAMPLING OF TELESCOPES *(Continued from page 5)*

final adjustments. The Polaris Telescope Shop of Dearborn, Michigan, was a distributor of 1.6 to 3-inch Unitron refractors from 1959 until the inventory was sold off in the early 1980s. The Polaris name in bold white script, along with the focal length and aperture (marked either 40mm or 42mm for the Model 127), was placed on the focusing mechanism of the Unitron telescopes that were sold there.

The altazimuth mounting is simply a three-quarter scale version of Unitron's very popular Model 114 2.4-inch, but with some important differences. The non-detachable felt-lined cradle that holds the Model 127 metal tube assembly to the mounting head consists of a buckle-style clamp, and the paint finish is grayish-black crinkle instead of the standard Unitron glossy black. The 1.6-inch air-spaced, achromatic objective lens with a resolving power of 2.9 arc-seconds and a limiting magnitude of 10.8 (approx.) falls into the viewfinder classification as perceived by most mainstream amateur astronomers. However, this is misleading since the long focal ratio (f/17.5) and high contrast, plus the suppression of chromatic aberration, helps to compensate for a deficiency in light grasp. The field of view is somewhat limited, but the 5 x 16 viewfinder with crossline eyepiece adequately picks up the observer's selected celestial targets. Apparently, some very early versions were supplied without the viewfinder and mounting bracket. These features, coupled with the ease of manufacture of small 40mm doublet objectives with exacting optical specifications, results in a dynamic, well-proportioned telescope.

α Ursae Minoris (Polaris or the North Star) has many facets. It lays within 1° of the north celestial pole, hence its name. As a Population Type II Cepheid variable star, the diameter pulsates rhythmically. Polaris is also a double star, a test object for 2-inch scopes, and has the honor of being the gemstone in an asterism called the Engagement Ring. As a double star (mags. 2.0, 8.2; sep. 18.4"; p.a. 218°) it is just beyond the capability of the Model 127 to resolve, and is best left to the realm of 2-inch and larger telescopes. The 35' circlet of six or so 7-9th magnitude stars that comprise the Engagement Ring grandly fills the entire field of view of a Unitron 40mm Monochromatic ocular (18x). The crowning North Star (type F7 Ib) is a fiery yellow topaz. Our Pole Star is 431 light years away.

Photo of M44 courtesy Chris Cook.

M44 (NGC 2632), known since ancient times as the Praesepe ("Manger") or Beehive Cluster, is visible from most suburban locations to the unaided eye as a 1.5º diameter cloud of the 3rd magnitude. Its true nature as a swarm of suns was first determined by Galileo in 1610. Using a Tele Vue 32mm Plössl eyepiece (22x), the Unitron refractor shows this galactic star cluster as a bright scattering of 50 stars. The distance of the Praesepe from Earth is 577 light years.

Saturn, in its 29.5-year orbit around the Sun, has been passing within the domain of the Beehive Cluster. In the mind's eye, this ringed world and M44 must have appeared much the same as Galileo saw them through his homemade telescopes 400 years ago. However, the technological strides made in optics and mechanical design over the interim clearly gives the edge to the Unitron Model 127. (Fanciers of antique instruments can view Galileo's telescopes at the Instituto E Museo Di Storia Della Scienza of Florence, Italy.)

The double star ι^1 Cancri (mags. 4.2, 6.6; sep. 30.5"; p.a. 307°), located 8.5° northeast of M44, is known as the "Albireo of Spring." A much easier double than Polaris for the Unitron 1.6-inch optics, lower powers can adequately resolve the pair. True to its namesake, a 19mm Tele Vue Panoptic eyepiece (37x) applied to the Iota Cancri system reveals the primary star (spectral class G8 III) as an orb of pure golden color. The companion star (type A3 V) is a radiant blue. This binary jewel is 300 light years away.

Advertisements in *Sky & Telescope* for the "700 Series" were discontinued in November 1966. (The rare 2-inch Satellite Scope was also dropped from the catalogue at the same time.) Called a "protected investment" by Unitron in their advertisements of yesteryear, in today's world of used equipment the Model 127 (or 740) 1.6-inch can bring $225-275. Those scopes that have a Polaris trademark on the focuser may garner slightly higher prices, especially for sentimental reasons (many amateur astronomers visited Walter Grabow and his wife Cora at their shop in Michigan, where they purchased instruments, parts and telescope making supplies).

Launch Your 2006 Star Party Season with RCA's Messier Marathon

Traditionally, RCA has opened its star party season each year by holding a star party and Messier Marathon in March on the new moon weekend. This year's kick-off event will be held March 24-26 with the 20th Annual Messier Marathon at the Kah-Nee-Ta Resort in Warm Springs. Even though this event is billed as a Messier Marathon, observers (and their families) come for many reasons: to try their hands at locating as many of the 110 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.

During our past 19 functions, the weather has been very good to us; we have never failed to obtain at least part of a night's clear skies for observing, which is nothing short of amazing during spring in the Pacific Northwest. The event is popular with families since it is one of the few that affords a warm bed and hot shower, not to mention a heated swimming pool, great food, a giant fireplace, a luscious spa, and much more. The Kah-Nee-Ta Resort has a variety of family activities in which all can participate. They roll out the carpet for RCA, offering us rooms at half off their regular prices as well as a social gathering room for daytime get-togethers. There is no formal registration for the event itself, and you make your room reservations directly with Kah-Nee-Ta. Here are the details for this year's star party:

DATES: March 24th through 26th , 2006

LODGING: Rooms will rent for $75 per night, single or double, plus $14 extra per person up to a maximum of four per room. Children under 14 are free when occupying the same room as their parents. This represents a savings of 50% over regular room rates. To register for a room, you should call Kah-Nee-Ta directly at 1-800-554-4786 to make your reservation, mentioning that you are with the RCA star party. RCA has reserved a number of rooms at the special.

EVENT REGISTRATION: There is no other registration to attend the star party.

DINING: Based on feedback from the attending group last year we have chosen not to have a chicken banquet this year. We also learned from Kah-Nee-Ta that they are not offering a buffet style dinner this year. For Saturday the plan is to have dinner in the main lodge restaurant. Reservations are recommended. Because the restaurant cannot handle our large group all at once the plan is to stagger the group by suggesting you make dinner reservations some time between 4:30 and 6:00pm. Needless to say this is a very loosely organized dinner. This time range should allow for everyone to make it to the observing site before dark.

ACTIVITIES: Full use of resort facilities including swimming, horseback riding, hiking, golf, tennis, a health spa, and casino gaming. Some of these activities are seasonal, please check the web site for more resort information at http://www.kah-nee-taresort.com Social Room – Informal socializing and swapping observing stories, Saturday from 11:00 AM til 3:00 PM, in the Confederated room.

OBSERVING SITE: We are still working on securing an improved observing site. We will communicate the location of our observing site to attendees via the email list and on site at Kah-Nee-Ta. Maps will be provided.

MORE INFORMATION: Prior to the event: Contact Matt Vartanian at:

Phone: 503-705-2733
Email at matt@vartanian.net

Start your 2005 observing season with RCA by attending the 19th Annual Messier Marathon. You don't have to do a marathon to participate. Some participants come just to spend their time observing their favorite objects, work on their observing programs, or mingle with other astronomers. You don't even need a telescope to participate; other members are enthusiastic to share their views. This is a good opportunity for beginners to get acquainted and seasoned observers to get back into the groove. We look forward to seeing you there!

Camp Hancock Dark Sky Star Party

March 31st - April 2nd

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. For maps, pictures, and more info go to the OMSI Hancock web site. Camp Hancock is NOT a resort hotel; it is a rustic kid's camp with 16 bunkhouses that sleep up to 14 people 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.

(Continued on page 8)

Camp Hancock Star Party *(Continued from page 7)*

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. Please inform Larry Godsey at larrygodsey@comcast.net or 503-675-5217, as soon as possible 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.

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

Registration:
Mail-in registration and payment deadline is March 25th.

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

C o n g r a t u l a t i o n s !

During the February General Meeting, RCA President Carol Huston presented the Galileo Award to Jan Keiski for significant contributions to amateur astronomy and to the growth and health of the Rose City Astronomers.

RCA President Carol Huston presented Margaret Campbell-McCrae (left) with a Certificate of Recognition for hosting the monthly Down Towner's Luncheon. Ken Cone (center) received a Certificate of Recognition for his tenure as club secretary.

BOARD MEETING MINUTES

February 6, 2006
OMSI Classroom 1
Andy Phelps

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

Board members present: Carol Huston, Peter Abrahams, Ken Hose, Jeff Sponaugle, Ed Epp, Andy Phelps, Sameer Ruiwale, Patton Echols, Dareth Murray, Dale Fenske, Jan Keiski, Greg Rohde, Bob McGown, Ken Cone, David Nemo.

Guest present: John Glenn

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 15 voting members present.
- Treasurer's Report – Ed Epp: $19,100.92 total liabilities and equity.
- VP Membership – Ken Hose: Currently there are 298 member families with 9 renewals and 9 new members. Total of $622 dues paid in January. It is unknown at this time if email reminder has been effective. Money needs to be transferred to library from dues for a member who paid membership and library donation with same check.
- New Member Director – Jim Reilly (via email): Hopes to have another orientation before Kah-Nee-Ta. Has begun compiling list of mentors.
- Media Director – Patton Echols: Portland Parents magazine contacted RCA about stargazing with children. Discussion about creation of an image library of photos from RCA events and members' astrophotos for distribution to media upon request.
- Sales Director – Sameer Ruiwale: $813 January sales.
- OMSI – Jan Keiski: Will hold book sale at February meeting.
- IDA Director – Bob McGown: Made Oregon light pollution report to IDA. Hillsboro 20/20 plan was discussed; Bob needs a copy of it for the next report. Jan Keiski was contacted by PGE for input on environmental impact study of new wind turbine site being constructed near Klondike observing site. She told them to use red strobes.
- Telescope Director – Greg Rohde: Now has wooden case for PST.
- Web Director – Dareth Murray: List of renewals needs to be updated so she can purge the email list.
- Site Committee – David Nemo: Site committee underwriting additional cost of mailing newsletters to all members. Too soon to gauge response. Will be setting up donation pages for website. Donations will be able to be directed to various departments.
- SIG Director – Ken Cone: Reviewed membership survey. Discussed possibilities of using data for deciding what to include on new member packets, different ways to organize library, and improving SIG attendance and awareness. Would like to run the survey at least annually. It was also noted that SIG leaders must have a backup plan for announcement of SIG meetings at general meeting.
- OMSI Liaison - Jan Keiski: Digistar 3 is up and running.
- ALCOR – Dale Fenske: nominal. Discussed phone line options.

Old Business

- Action Item: David Nemo and Bob McGown to work up guidelines for lifetime membership and to develop guidelines for targeting donations – property, cash, and acknowledging donors. Need specifics – discussion about timing and appropriateness.
- Action Item: Dale will work with OMSI to put together a packet of information to provide to people who purchase telescopes from OMSI. This is an invitation to join RCA and information on first telescope purchase. Dale will send draft to board for approval.
- Action Item: Jim Reilly to work with Dave Sandage to put together a list of mentors to help members who want/need assistance with specific astronomy topics or projects. Completed.
- NWRAL report – Carol. No report received from NWRAL.
- Phone line report:

  January 9 through February 5: Sameer Ruiwale

  February 6 through March 5: Jeff Sponaugle

  March 7 through April 3: Dareth Murray

New Business

- ALCON committee report – Dareth: Date of ALCON 2007 is July 24-29, 2007. Will be held at the Doubletree Lloyd Center. Committee is setting up future meeting times.
- Proposal by RCA member John Glenn on Scouting merit badge program: John would like to make contact with local scouting organizations to examine feasibility of holding a star party to work with scouts or provide volunteers to meet with scouts at their locations. Discussion centered on logistics and concerns about having enough volunteers. Board gave John approval to make initial contact.

Meeting adjourned 8:48pm.

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

March 2006

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 2006

Mar 6	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Mar 11	Sat	Telescope Workshop	Swan Island	10am—3pm
Mar 20	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Mar 23	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

April 2006

Apr 3	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Apr 15	Sat	Telescope Workshop	Swan Island	10am—3pm
Apr 17	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Apr 20	Thurs	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 18, Issue 4 Newsletter of the Rose City Astronomers April, 2006

In This Issue:

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

RCA APRIL GENERAL MEETING

SCIENCE PROJECT NIGHT

With Oregon Episcopal School Students

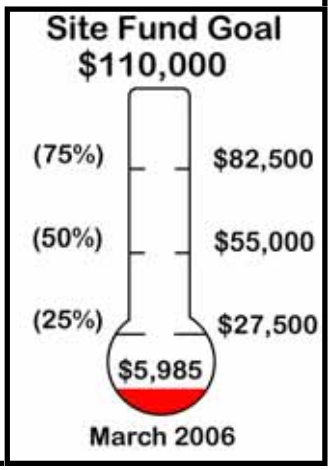
The one dozen top science students from Oregon Episcopal School will again engage us with their projects of various science disciplines during the April meeting of the Rose City Astronomers. Following brief project descriptions, meet and engage these students in conversation while viewing procedures outlined on their display boards.

Astronomy students this year have studied the mass-light ratio in galaxies, plotted the light curve for a hot Orion variable using images from the Lowell Observatory, studied the effect of a copper impactor on the orbit of Temple 1P, used Fourier Analysis-neural net program to look at AAVSO variable star classification, analyzed the spectra of red giant variables taken with the Coude Feed Spectroscope at Kitt Peak, modeled a neutron star, and studied the topography of Venus.

In addition students have engineered a novel solar cell, looked at the shrinkage of Mt. Jefferson glaciers over the last 50 years, used water hyacinths to remove arsenic from water, measured catalytic converter metals in the environment, identified a bioindicator for marine oil spills, and shown auto recombination of mRNA in a compartmentalized system.

Please join the RCA, with family members, in welcoming and sharing with these students, and hear how they obtained observation time on the Lowell Observatory Telescope, the Pine Mountain Observatory, and the Kitt Peak Coude Feed Spectroscope.

All are Welcome! Monday April 17
Social Gathering: 7 pm. Meeting Begins: 7:30 pm.
Location: OMSI Auditorium



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

First Quarter Moon April 5
Full Moon April 13
Last Quarter Moon April 20
New Moon April 27

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	m_brewster@juno.com
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message

By Carol Huston
April 2006

The Start of the Observing Season.

Well, here it is again: the start of another observing season. The RCA began its official observing season around the new moon weekend in March with the Kah-Nee-Ta Messier Marathon. Starting with this star party, our club will generally have several star parties a month until next October when some of us will go into astro-hibernation again until next March while others will get out their mucklucks and cold-weather gear to brave the elements for winter observing.

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 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.

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!

THE OBSERVER'S CORNER

Howard Banich

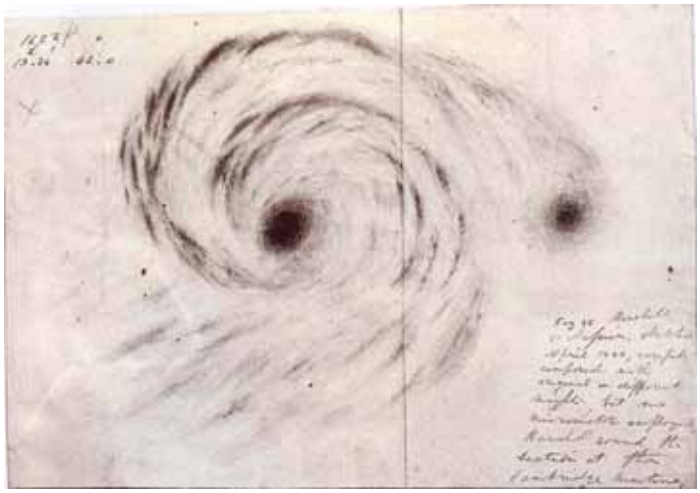
M51, The Whirlpool Galaxy

April and May is prime time for the Whirlpool Galaxy. Gliding nearly overhead late in the evening there is no better time for a great view, especially when we're lucky enough to get a really clear and transparent Spring night near new moon. That seems to happen once or twice every Spring on the west side of the Cascades, so but you'll need to get out of town to a fairly dark sky for a good view.

M51 was discovered by Charles Messier on October 13, 1773 while observing a comet visible at the time:

> "Very faint nebula, without stars, near the eye of the Northern Greyhound [hunting dog], below the star Eta of 2nd magnitude of the tail of Ursa Major: One cannot see this nebula without difficulties with an ordinary telescope of 3.5 foot [FL]: Near it is a star of 8th magnitude. It is double, each has a bright center, which are separated 4'35". The two 'atmospheres' touch each other, the one is even fainter than the other. Re-observed several times."

Lord Rosse discovered the spiral nature of M51 in April 1845 with his 72 inch telescope and made several sketches, the one presented here being the most accurate:



http://www.wsanford.com/~wsanford/exo/rosse/index.html

This sketch has an immediacy to it such that it might have been made at the eyepiece of the 72 inch telescope, and certainly conveys a sense that Lord Rose was a careful observer. It also shows how faint the connecting spiral arm between the two galaxies of M51 is, even in such a large telescope. It's interesting to compare his sketch to the latest HST image, especially because Lord Rosse didn't have preconceived ideas of what M51 looked like from detailed photographs – he came to it with a fresh set of eyes. It's just as intriguing to note that he missed seeing the spiral shape with his 36 inch telescope, as did William Herschel with his 18 and 40 inch telescopes.

http://hubblesite.org/newscenter/newsdesk/archive/releases/2005/12/image/a

On the other hand, it's now possible to see more because we know what to look for.

This interacting pair of galaxies is just about everyone's favorite, at least in terms of seeing more than an indistinct blur. The two galaxies that make up M51 – NGC's 5194 (the one we see with the spiral arms) and 5195 - are bright enough that their central regions are seen well in an 80mm refractor in moderately dark skies from the Oregon coast.

M51 is approximately 31 million light years distant in the constellation Canes Venatici, (the hunting dogs), and is just a few degrees southwest of the Alkaid, the end star of the Big Dipper's handle. So it seems more associated with the Big Dipper than the fainter stars of Canes Venatici but for most practical purposes that hardly matters. For star hopping purposes, starting from Alkaid is certainly the most convenient.

I takes a 6 to 8 inch scope to start to detect the spiral structure, and the darker the skies and larger the scope the more spectacular the view becomes. As with almost every deep sky object, you'll be disappointed with the view through light polluted skies. However, in a really dark sky a 16 inch or larger scope can inspire gasps of wonder, and this wonderful view has perhaps been the one of the leading causes of aperture fever. M51 is also one of those fortunate objects that increasing aperture enhances the way most people anticipate it should.

My first look at M51 came with a 76mm f15 Tasco refractor when I was thirteen. I recall that view quite well but wonder how accurate my memory is now considering all the great views I've had since then – that is, I wonder if I saw as much as I recall. That first view was in the suburban skies of Arvada, Colorado, a suburb of Denver, but that was back when the

(Continued on page 4)

The Observers Corner

(Continued from page 3)

Milky Way was still distinct on a good night – i.e. a very long time ago.

Both 5194 and 5195 were easily seen as was a large oval haze around 5194. A smaller haze surrounded 5195 and I thought I could see a trace of the spiral arm that connects the two, but not the spiral arm pattern that surrounds 5194.

A view with an 80mm f/5 refractor last year from the Oregon coast showed only the two bright galactic cores, but then the elevation difference between the coast and Arvada is about 5400 feet. That has to give the Arvada site an advantage in sky transparency and a huge edge in being able to see faint details. I could distinctly see the spiral pattern with a 8 inch f4 Newtonian from Colorado on the very best nights and on a few occasions I convinced myself that I could see the spiral arm connecting the two galaxies.

This is increasingly interesting for a couple of reasons. First, my eyes were obviously more sensitive back then, and second, in scopes that are much larger (16 to 28 inches) the connecting spiral arm seems only a little easier to see now than in the 8 inch thirty years ago.

And that doesn't seem to be accountable only to aging eyesight - at least I hope not. At any rate, I theorize that back in the day my brain was making more of a connection between 5194 and 5195 than my eyes were because I not only knew what to look for, but I also really wanted to be able to see the connection. And now that my eyes have truly seen it in much larger scopes, and how faint it really is, it's not difficult to convince myself now that I couldn't have seen that faint arm in a much smaller scope.

But I haven't tried observing M51 in a small and large scope during the same night, so it's possible I'm not making a true comparison because sky conditions vary a lot night to night. Another consideration is how accustomed my eyes are to using a particular scope. Like anything else, practice increases proficiency, so it's probable that using a small scope a lot would help me see more than a casual look every so often.

So it's still quite possible I can see the connection in a smaller scope in great sky conditions, especially if I've been using it regularly. One of these nights I might give this a try, and if so I'll make a note of it in a future column.

Like any deep sky object, magnification plays a critical role in how much can be seen. Increasing magnification to find the sweet spot between image scale and contrast can improve your view tremendously. Experiment with your eyepieces and Barlows and you might be surprised at how much more you can see.

For those who like to see as faint as they possibly can, there are two 16 magnitude background galaxies just to east of M51, but still within a high power eyepiece fov. IC 4277 is a very thin edge-on galaxy that is directly east of the core of 5195. IC 4278 is east, southeast of 5194's core. Both are about one 5194-diameter away from the respective cores and both are very difficult to see, requiring the very darkest and transparent night to detect through a large scope. Steady seeing helps a lot too. And if the seeing is steady, see how close to the core of 5194 you can trace the spiral arms.

M51, interacting spiral galaxies: NGC's 5194 and 5195.

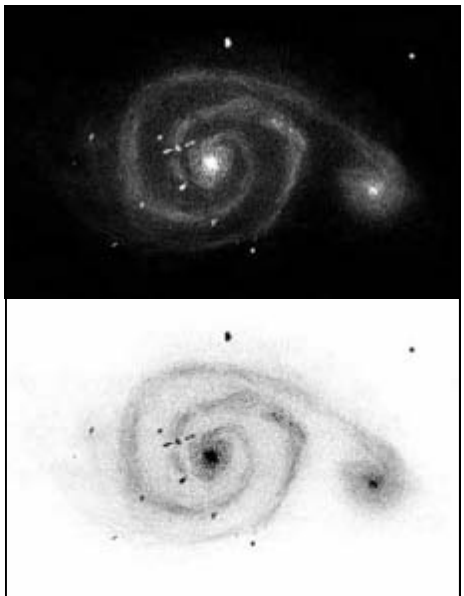
NGC 5194: Magnitude 9.0, surface brightness 12.5. Size, 11.2' x 6.9'. (SA (s)bc pec I-II)

NGC5195: Magnitude 10.5, surface brightness 12.3. Size 5.8' x 4.6'.(IO pec)

RA 13 hours, 30 minutes, Declination +47 degrees, 13 minutes.

SA 2000, second edition, chart 2,

UA 2000, second edition, page 37.



Sketched June 30, 2005 with 28 inch Newtonian at 300x. The highlighted star is Supernova 2005 cs. Note how distinct the connecting arm is compared to Lord Rosse's sketch.

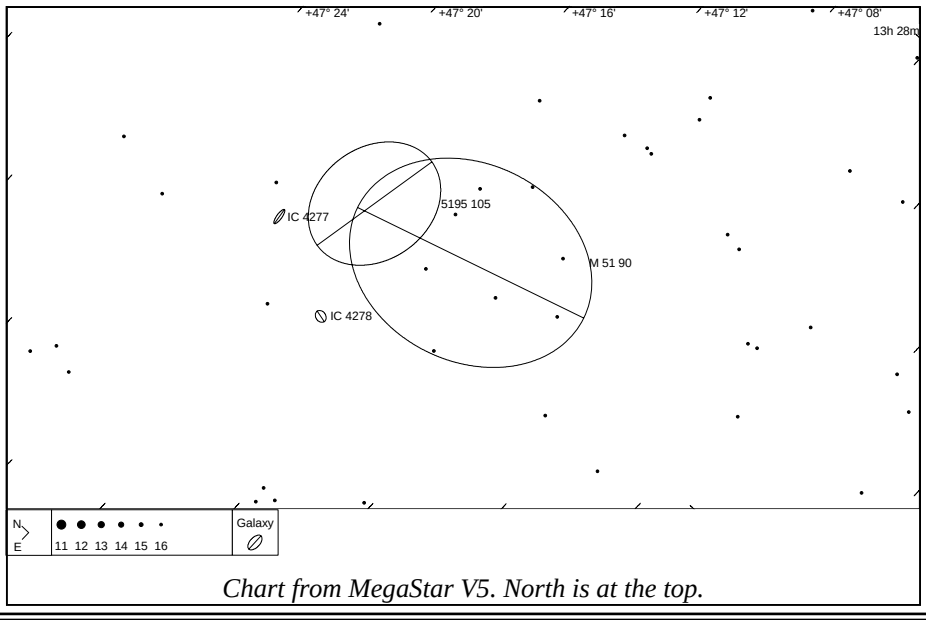


Chart from MegaStar V5. North is at the top.

A SAMPLING OF TELESCOPES FOR THE AMATEUR ASTRONOMER—PART 14

By John W. Siple

The Tasco Sales, Inc. 4.5-inch f/8 (45X, 90X, 150X, 300X) #11TE-5 Lunagrosso reflector was the starter telescope for an entire generation of skygazers. A time-line of production that spans the fledgling American space program to the dawn of the Space Shuttle era, the Lunagrosso found its way into innumerable science-minded households. During its banner years, the 4.5-inch telescope, imported from Japan, was a favorite off-the-shelf item in department stores, hobby shops and science factories. Many of the world's future astronauts, engineers, and professional astronomers got their first look at Saturn's rings and Jupiter's moons through Tasco's 300-power Newtonian.

Newly offered in 1960 for the popular price of $89.95, the #11TE-5 came supplied with a basic, sturdy equatorial mount. By the mid-1960s the telescope had assumed the form most familiar to amateur astronomers and collectors—the instrument was upgraded with a heftier mounting, an azimuth setting circle was added, and a rack-and-pinion focuser replaced the simple helical unit. A treasured 62-page telescope reference manual for beginning astronomers, *A Key to Worlds Beyond* (1966), written by Arthur P. Smith, Jr. of the Southern Cross Observatory and past president of the Astronomical League, was included with each telescope purchase. The instrument has mechanical and optical attributes that are meant to last for generations of heavy use, especially at star parties and by budding young amateur astronomers who love to learn how telescopes work.

Apparently a Towa Optical Manufacturing Co. product created for worldwide distribution by Tasco Sales, Inc., the 4.5-inch Lunagrosso Newtonian, Reg. No.

(Continued on page 6)

(upper left) **The author's customized Tasco 4.5-inch f/8 (900mm focal length) #11TE-5 Lunagrosso Newtonian reflector.** (left) **Page from the 1970 Tasco catalogue.** (above) **Motor drive (tracking) options.**

A SAMPLING OF TELESCOPES *(Continued from page 5)*

511300, is a quality-engineered, precise tool for observing the heavens. A stable design with tight tolerances during its lifetime of sales, it is possible to directly interchange components on different #11TE-5 scopes and with other similar Towa astronomical goods. Models #11TE-5 and #11T are identical—this only reflects a change in nomenclature by Tasco. #11TR, introduced in the 1980s, has a red main body tube. The layout shown below, indicating the important parts of the 300-power telescope, is found in the 12-page owner's manual.

(Continued on page 7)

1. H20mm Eyelens
2. H6mm Eyelens
3. Dust Cap with Solar Aperture
4. 2X Barlow
5. Sun Filter
6. Moon Filter
7. 4.5" Spherical Mirror
8. "Squaring-on" adjustment screws
9. Lock screws
10. Main Body Tube
11. Cradle
12. Finderscope adjusting screw
13. Finderscope eyelens with cross-hair
14. Finderscope mounting bracket
15. Finderscope objective lens
16. Eyelens set screw
17. Focus tube
18. Focusing knobs
19. Declination axis
20. Declination clamp screw
21. Declination circle
22. Declination circle indicator
23. Declination axis body
24. Hour circle clamp screw
25. Hour circle index (Moving)
26. Hour circle (Inner)
27. Hour circle (Outer)
28. Hour circle indicator (fixed)
29. Polar axis clamp screw (not seen)
30. Clock drive mounting stud
31. Latitude scale and indicator (not shown)
32. Flexible control for declination axis
33. Flexible control for hour axis
34. Azimuth clamp screw
35. Azimuth circle
36. Clock drive gear
37. Clock drive clutch
38. Counter-poise weight
39. Counter-poise shaft
40. Tripod
41. Accessory tray

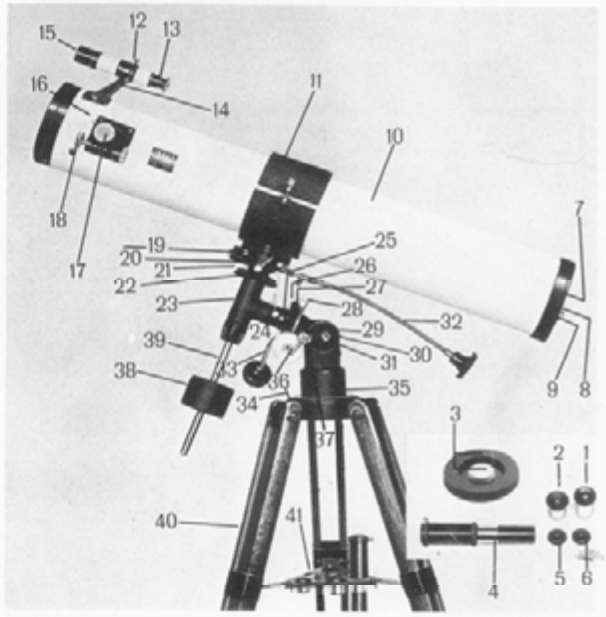


Figure 1

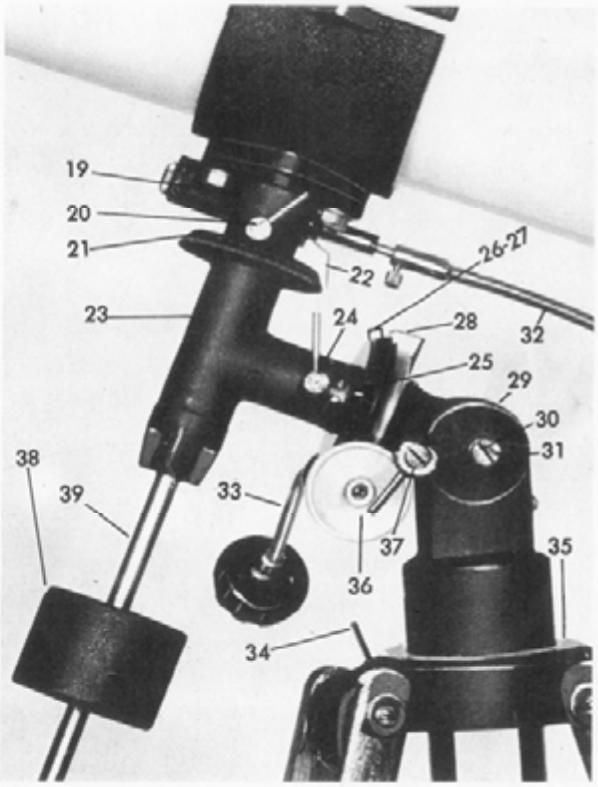


Figure 2

A SAMPLING OF TELESCOPES *(Continued from page 6)*

Vast quantities of 4.5-inch f/8 mirrors were made in Japan by batch techniques for placement in Tasco's #11TE-5 telescope. According to Tasco's literature, the 5/8-inch thick Pyrex spherical primary mirror is ground to 1/4-wave or better and is silvered (aluminized) on the first surface, then overcoated for added protection and longer mirror life. 1/4-wave optics are great for low-power deep-sky forays and lunar observations, but more accurate mirrors open a portal to a universe of unbridled clarity. Fortunate indeed is the owner of such a telescope; the observer is then only limited by his or her own eyesight and the selection of eyepieces. (The author's superb 4.5-inch Lunagrosso mirror, tested by the Foucault method, has a 1/10-wave surface accuracy with some detectable roughness—an artifact in the form of a small hump or hill is found at the center of the mirror.)

The Tasco Newtonian uses a 13/16-inch minor axis elliptical secondary mirror set in an adjustable holder, where a three-strut spider support with legs spaced symmetrically 120° apart holds the array to the inside of the main body tube (the incoming star light is spread into six broken rays). The strut width to aperture ratio is 0.114/4.5 or 0.025, providing a balance between strong mechanical strength and scattered light (see the September 1960 issue of *Sky & Telescope*, pages 166-171, for the classic article "Spider Diffraction in Moderate-Size Telescopes," a must for any telescope making library). The telescope has 180 times the light collecting power as the unaided eye, and the resolving power by Dawes criteria is 4.56/4.5 or 1.0 arc-second. The limiting (threshold) magnitude, far from city lights under dark sky conditions, approaches 12.9.

M65/66 image courtesy Matt Russell.

Alpha Leonis or Regulus ("The Kingly Star"), shining at magnitude 1.4, is a perfect object for star testing mirrors. (David Bruning's *Astronomy* magazine article, "Test Your Scope's Optics" found on pages 56-59 of the July 1994 issue, is a good reference source.) A 7.7 magnitude companion, called the "Indigo Star," is 177" distant.

Pointing the Lunagrosso reflector telescope midway between the stars Iota and Theta Leonis, a wondrous pair of 9th magnitude spiral galaxies, M65 (NGC 3623) and M66 (NGC 3627), come into view. Located far beyond our own Galaxy in the depths of intergalactic space at a distance of 31 million light years, these two island universes appear as smudges of light in the 4.5-inch reflector. They form a common bond pair separated by 190,000 light years. A Tele Vue 24mm Wide Field ocular (37.5X) shows these sharply-defined swirls of nebulosity to best advantage, where M66 (dimensions 8.2' X 3.9') has hints of internal structure and is the more dominant of the two. A 9th magnitude star is visible 2.75' northwest of M66's center. M65, 8.7' X 2.2' in size and located 21' to the west of M66, has a spindly appearance and displays geometry similar to that of the Andromeda Galaxy, M31. Agnes Mary Clerke, honorary member of the Royal Astronomical Society, in 1905 mentioned "…the one (M65) showed a bright center with four appendages resembling the sails of a windmill; the other (M66), a complex arrangement of envelopes partially surrounding a nucleus, somewhat like the paraboloidal veils flung around the head of a comet near perihelion. These, however, were incomplete views. On Dr. Roberts' plates, both objects took shape as ovoid formations, composed of closely winding luminous coils thick inlaid, in the case of M66, the chief of the pair, with nebulous condensations." The Rift Galaxy, NGC 3628, is found 35' to the north of the main pair (all three galaxies are known collectively as the Leo Triplet of Spirals).

Located 2.4° southeast of Beta Ursae Majoris, and a favorite at dark sky sites among amateur astronomers, is the Owl Nebula (M97). At 37.5X the Owl Nebula, shining with a magnitude of 9.9, is a striking silvery disc of light 194" in diameter (the two dark areas, giving M97 its association with the nocturnal bird of prey, become visible in 12-inch and larger telescopes). M108, considered one of the more difficult objects for small telescopes on the Messier listing, is found 48' to the northwest of M97 and in the same low power field of view. An 8.1' X 2.1' textured streak glowing at magnitude 10.0, this faraway galaxy, because of its mottled appearance, reminds the observer of Bode's Nebula M82.

The Tasco 4.5-inch f/8 Lunagrosso Newtonian reflector telescope started a revolution in affordable telescopes designed to teach beginning amateur astronomers the wonders of the universe. The company's slogan, "Reach into worlds beyond with a Tasco," rings true with the Lunagrosso. An excellent condition #11TE-5, along with its adorned yellow and black gift box, can garner $125-175 (the torrential flood of similar copies imported from overseas has kept the price down on used examples).

Image of M97 courtesy Gary White and Verlenne Monroe/Adam Block/ NOAO/AURA/NSF.

An African Odyssey – Part One

By Dareth Murray

On New Year's Eve, I began the 12,000 mile journey that would land me in Windhoek, Namibia on Jan. 1, 2006. I enjoyed the fireworks on Dec. 31 as seen from above, as my plane flew out of Frankfurt right around midnight. Ten hours (and several time changes later) I arrived at the airport in Windhoek. The dry heat struck me like a blast furnace! A 4x4 SUV was waiting at the airport to take us down to the Sossusvlei Mountain Lodge where I would meet up with Bob McGown. We waited to pick up Miles Paul, who would be taking Bob's place as the resident astronomer at the lodge. Miles arrived but his luggage did not! Many in the club and from OSP know Miles Paul. He is a dedicated observer and co-author of *Galaxies, Groups & Clusters Observing Guide*, along with Bob.

It was a scenic five hour drive through incredible mountains and desert prolific with African wildlife. We finally reached the lodge about seven p.m. After a delicious four course dinner, we went up to the observatory. Miles and Bob got the 12" Mead telescope ready and discussed all that had happened while Bob had been there. Some guests came up to observe including a young girl from Portugal. She remembered all the things Bob had taught her the night before and chattered about the planets and stars. Her parents came up later and they all raved about seeing Saturn for the very first time.

Front entrance to Sossusvlei Mountain Lodge.

I was spellbound, seeing the fabled southern sky. It was crazy. Orion was upside down! The Milky Way is so much brighter from the south. I observed all the things I had only read about or as seen from Hubble. Reality wins!

We got up the next morning at 4:30 a.m. to take advantage of a dune safari that had an opening for us. I screamed at a huge black spider sharing the shower with me, but it very quickly went the other direction. So with about two hours of sleep, we hurried to the front of the lodge to meet our safari guide and the other guests going to the dunes. The lodge station wagon held six plus the driver and guide, Ronnie. Ronnie was the one who had been spat on by a black spitting cobra some months ago. He was totally recovered. We learned that all one has to do is get the spit off as soon as possible and it is not that bad.

On the drive, we met a cool African American couple from New York – Susan Taylor (managing editor of the black fashion magazine, Essence) and her husband, Khephre Burns, an author and playwright. His play "Tall Horses" had just finished at the Kennedy Center last month. He is the author of the book Black Stars in Orbit, about African American astronauts. We passed by the famous Dune 45 and ended up at the turnaround to hike up and over Dune 22.

Probably the most photographed dune in the world! Dune 45 – Namibian Desert

Bob and the most of the group made it up all the way. We all finally arrived to the grove of Shepard trees to a wonderful breakfast feast prepared by Ronnie who had literally run up and down the dune so he had time to set it up.

We got back to the lodge about noon for a much needed nap. After dinner we stayed on the lodge patio enjoying the cooler air of the late afternoon and the breeze that had come up. Susan and Khep were there and we chatted with them about a possible balloon safari the next day.

Next thing I knew, we were signed up to go the next morning at 4 a.m! Dinner was wonderful, some kind of fish. All the meals are exquisitely prepared, with freshly made bread, several courses and a tempting dessert.

After dinner we headed up to the observatory. Miles Paul was now the official resident astronomer but he and Bob traded astronomical info with the guests who wandered up. We were able to see many southern sky objects including: LMC, SMC, Tarantula Nebula, Tuc 47, Coal Sack and many more. However, dark clouds came up about 11 and we called it a night, knowing we had another very early wake up call. And good news for Miles – they found his luggage!

Up at 4 a.m. & into the balloon at 5:30. The balloon was enormous! It carried a 12 person gondola and the pilot Williem. He

(Continued on page 9)

An African Odyssey *(Continued from page 8*

told us that the balloon holds about 300,000 cubic feet of hot air. We were amused at that, because of course, light travels at 300,000 kilometers per second. Just one of those cosmic coincidences. We were soon floating over the dunes we had toiled up the previous day. Except for the occasional whoosh of the blasts of heated air, it was perfectly quiet. All too soon we were back down on the ground. It was a very smooth landing.

Surrealistic view of dunes from our balloon.

There was a truck to take us to the champagne breakfast at a nearby hill. What a view and what a feast! Our pilot whacked off the top of the sparkling wine bottle with a very sharp machete!

Back to the lodge at about noon, we were informed that we could move into a villa, number 10 at about 3 p.m., after the current occupants departed the lodge. This would be a welcome change from the cramped pilot's quarters with a shared bathroom. We were delayed by a huge sand storm blowing in from the south which was accompanied by a thunder and lightning storm that lasted until 3:30. Finally moved in, we found our new villa luxurious and exotic with an indoor and outdoor shower.

Later in the afternoon we decided that it was cool enough and we had enough time to hike to the San Bushman paintings on the rock walls of the canyon beyond the lodge. Bob assured me it was a mere 20 minute stroll. Right! Over an hour later, we arrived at the rock art. I was not disappointed. It reminded me somewhat of the rock art we saw in New Mexico last year. We saw one of the most graceful animals on our way back – an oryx or gemsbok. As the sun began to set, a mountain kestrel winged past us as we hurried back to the lodge for the 8 p.m. dinner – ostrich pie. Delicious and didn't taste at all like chicken!

The evening was a total bust as far as astronomy went - couldn't even see the crescent moon. So we retired to our room and worked on Bob's observatory report as well as his report about the generator fire on Christmas Day. He ended up practically rebuilding the generator.

An oryx or gemsbok.

Another thing he did was build a wall for the previously dangerous walkway up to the observatory. It would have been all too easy to slip and fall on those sharp rocks and potential scorpions!

Bob leans on the wall he built for the observatory.

The next day we hiked over the mountain to "The Village" where the lodge staff lives. It was extremely hot and I was glad for a lift back to the lodge. It looked like another thunder storm was on the way and sure enough about 2:30, it proceeded to darken up and pour down rain. Afterwards, Bob and I soaked our feet in the small round pool below the lounge and watched the dragon flies and birds swoop in to get water. No observing that night either.

Next morning we left at 7:30 in a typical safari game vehicle with a roll bar and no seat belts to measure the rain gauges. We measured the water in the gauge near the giant orange windsock and airstrip and continued on toward the marvelous linear

(Continued on page 10)

An African Odyssey *(Continued from page 9)*

dune straight ahead. We arrived at "Stonehenge", a jumbled collection of large boulders incongruously nestled at the bottom of the dune. Hopping back in the all terrain vehicle we took the shortcut back to the lodge, just in time for breakfast. Everyone was talking about the flooded roads. The supply truck for the lodge was stuck on the other side of a road turned into a raging river.

Bob in the game viewer next to Stonehenge – note the storm clouds.

I began to pack all our stuff for the next day's ride back to Windhoek. Good thing I had brought an extra duffle bag. Between Bob's rock specimens and our gift shop purchases, our 4 bags were bulging. Dinner that night was the usual gourmet meal - kudu steak, I think. After hanging out a bit with Miles and seeing the baby scorpion he had found with his new UV flashlight and brought back for the terrarium, we went on back to the villa. There was no rain this night, but the sky was completely overcast. For the third night in a row, we were skunked!

The mud was a problem too!

We left at 5:30 a.m., needing to get an early start because the usual way was flooded and we had to take a different, longer route. There were lots of mini-rivers to cross and it was a pretty exciting ride back to Windhoek and our rental car. In this picture, they waded into the river/road to see how deep it was. We ended up going around the left side. We were more than ready to begin the next part of our African adventure – a 5 hour drive to Grootfontein and the Hoba Meteorite – largest in the world!

RCA LIBRARY

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

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

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

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Thursday, April 20, 7 PM.

Topic: "From Black Holes to Dark Energy"
Bring your favorite book.

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499) for more information.

www.rca-omsi.org/cosmologysig.htm

Telescope Workshop

When: Saturday, April 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

Assistant: Don Peckham don@dbpeckham.com

Board Meeting Minutes

March 6, 2006
OMSI Classroom 1
Andy Phelps

Meeting called to order by Carol Huston at 7:08pm.

Board members present: Carol Huston, Peter Abrahams, Ken Hose, Matt Vartanian, Ed Epp, Andy Phelps, Patton Echols, Dareth Murray, Dale Fenske, Jan Keiski, Larry Godsey.

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 11 voting members present.
- Treasurer's Report – Ed Epp: $21,834.94 total liabilities and equity. Reminder: It's time to start thinking about budgets. The quarterly budget report will be out next month.
- VP Observing – Matt Vartanian: March 25 & April 15 are OMSI star parties at Rooster Rock. March 25 is also Kah-Nee-Ta Messier Marathon. Thirty people have booked so far. Final arrangements are being made to use a new observing site at Kah-Nee-Ta. Following weekend will be Camp Hancock; currently 35 people have signed up.
- VP Membership – Ken Hose: February: 9 new members/ 12 renewals, $670 collected in dues. Currently 319 member families. Web site needs to be changed, as it is confusing. Some existing members have been paying the prorated amount, which is for new members only. Dareth will change the website.
- New Member Director – Jim Reilly (via email): Holding new member orientation Friday, March 10.
- Media Director – Patton Echols: Nominal
- Library Director – Jan Keiski: Nominal
- Subscription Director – Larry Godsey: Nominal
- Web Director – Dareth Murray: Had difficulty purging email list due to some email addresses not including members' names. Ken will work with Dareth to track down email addresses.
- Site Committee – David Nemo: (via Peter) Site Committee is continuing to receive donations.
- OMSI Liaison - Jan Keiski: OMSI star parties will be held at Rooster Rock State Park due to construction lights next to OMSI parking lot. June, July and August general meetings will be held in planetarium.
- ALCOR – Dale Fenske: nominal (ALCOR). Contacted Qwest to have voice mailboxes reduced to a single box since that is what the club uses. This should save us $7.00 per month.

Old Business

- Action Item: David Nemo and Bob McGown to work up guidelines for lifetime membership and to develop guidelines for targeting donations – property, cash, and acknowledging donors. Need specifics – discussion about timing and appropriateness.
- Action Item: Dale will work with OMSI to put together a packet of information to provide to people who purchase telescopes from OMSI. This is an invitation to join RCA and information on first telescope purchase. Dale tried sending via email, had trouble, will resend.
- Action Item: Jim Reilly to work with Dave Sandage to put together a list of mentors to help members who want/need assistance with specific astronomy topics or projects. Completed.
- Phone line report:

  February 6 through March 5: Jeff Sponaugle

  March 7 through April 3: Dareth Murray

  April 4 through May 1: Dale Fenske

New Business

- ALCON committee report – Dareth: Held ALCON committee meeting on March 5. Committee chair positions have been filled. Committee email list up and going. Contract with DoubleTree is ready to be signed.
- Directorships – Carol: Question was raised: Do we have the right mix of directorships to meet club needs? Board in general seems to think directorships are in line. Discussion was held on the position of Camp Hancock liaison and if it needs to be a board position.
- Agreement with OMSI – annual review – Carol: Will be meeting with Jim Todd to set up agreement. Current agreement is fine with most board members.

Meeting adjourned 8:13pm.

Volunteer at Pine Mountain Observatory!

University of Oregon's Pine Mountain Observatory, east of Bend, will host public visitors again this summer, and needs the assistance of dedicated amateur astronomers to conduct tours on Friday and Saturday evenings, May 26th through September 30th. There are a wide variety of "jobs", including greeters (minimal astronomical knowledge necessary), operators of the large telescopes, lecturers and gift shop sales staff.

Benefits include access to observing through large professional instruments and availability of the astronomers' residence for dormitory facility. This is a great opportunity to learn first hand about observatory operations, learn more about astrophysics, and to share your knowledge and enthusiasm with the general public.

Training/certification sessions occur in late April and May. If you can commit for even just two or three weekends during the summer, that's a huge help, and we're encouraging tour guides to bring their own scopes if they wish. Contact Tour Chair, Greg Hogue, 541-771-6987, ghogue@bendcable.com or Rick Kang, rkang@efn.org, 541-683-1381.
Website: http://pmo-sun.uoregon.edu/~pmo/

Amateur astronomers from Bend, Eugene, and Portland have been the mainstay of the Tour-Guide team the past decade.

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

April 2006

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 2006

Apr 3	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Apr 15	Sat	Telescope Workshop	Swan Island	10am—3pm
Apr 17	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Apr 20	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

May 2006

May 1	Mon	RCA Board Meeting	OMSI Classroom1	7pm
May 13	Sat	Telescope Workshop	Swan Island	10am—3pm
May 15	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
May 18	Thurs	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 18, Issue 5 Newsletter of the Rose City Astronomers May, 2006

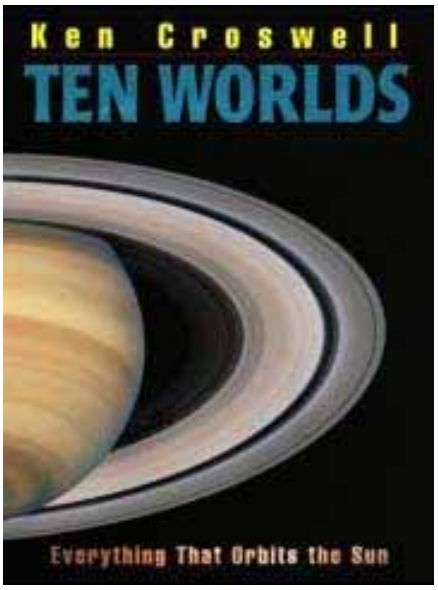
In This Issue:

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

RCA MAY GENERAL MEETING

TEN WORLDS: Everything That Orbits the Sun

Presented by author Ken Croswell



With the discovery of a new world larger than Pluto and three times farther from the Sun, our solar system now has *ten* known planets. During this talk, astronomer Ken Croswell takes you on an up-to-date tour of them all, showing spectacular color images of the planets and their largest satellites. He focuses on the latest developments beyond Neptune: astronomers have spotted more than a thousand icy objects in the Edgeworth-Kuiper belt, whose largest members are Pluto and the newly discovered tenth planet, 9 billion miles from the Sun. Furthermore, we now know of three moons orbiting Pluto and one moon orbiting the tenth planet. What are these far-off planets and their moons like? What will the newly launched spacecraft to Pluto tell us? And do Pluto and the tenth planet even deserve to be called planets?

Ken Croswell earned his Ph.D. in astronomy from Harvard University and is the author of seven books, including Magnificent Universe and Ten Worlds--the only book with all ten planets. He lives in Berkeley, California.

All are Welcome! Monday May 15
Social Gathering: 7 pm. Meeting Begins: 7:30 pm.
Location: OMSI Planetarium

First Quarter Moon	Full Moon	Last Quarter Moon	New Moon
May 4	May 12	May 20	May 26

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	m_brewster@juno.com
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message *May 2006...*

My Fondest Astronomy Memories

By Carol Huston

For those of us who have been involved in astronomy for any length of time there are many fond memories of special nights, special accomplishments and special friends. As the summer observing season swings into high gear, I am reminded of some of my best times under the stars.

In the early 90s, a number of RCA members and I went to Australia for an astronomy vacation. All our nights under the southern skies were special but one stands out for me. Candace Pratt and I were observing in the Warrumbungle Mountains in the interior of Australia near the Anglo-Australian Observatory complex at Siding Springs. The skies were dark, clear and full of stars. At one point in the night, Candace went inside our motel room to get a warmer coat leaving me out in the Australian outback all alone with the night noises. A kookaburra and a cockatoo were screeching at each other and us, and a host of other, unidentifiable noises emanated from the forest behind me. It suddenly dawned on me that these noises were totally different from the night noises I was used to back in the states. It struck me with force then that I was in a foreign place, tens of thousands of miles from home. I stood there listening, fascinated, to this exotic symphony and I wrote in my observing notes for that night "Maybe I should be afraid, but they sound friendly."

Another fond memory is of a night on Mt. Haleakala on the island of Maui in Hawaii. It was a magical night. The sky was as clear as the finest crystal, and blacker than I have seen any sky since. You could see the outline of another island off in the distance with the smooth, dark Pacific Ocean between. There was a warm breeze blowing, and Omega Centauri sat low on the horizon poised above the island of Lanai looking like an explosion of little diamonds.

Finally, I remember my first eyepiece sketch. It was at Table Mountain Star Party and I was in the early stages of working on my Herschel objects. There were two globular clusters in the same field of view in Sagittarius that were so pretty that I just kept coming back to look at them again and again. It finally occurred to me that I needed to sketch them to preserve their beauty for myself. I had such fun doing the sketch that I decided to go back and re-do all the objects I had observed up to that point and sketch them. I ended up with the whole Herschel list sketched. These sketches are still one of my most prized possessions.

I have many more pleasant memories of nights spent under the Milky Way. In fact, as I think about it, every night observing is a special night, and I am looking forward to creating new special memories!

A LUNAR GALLERY

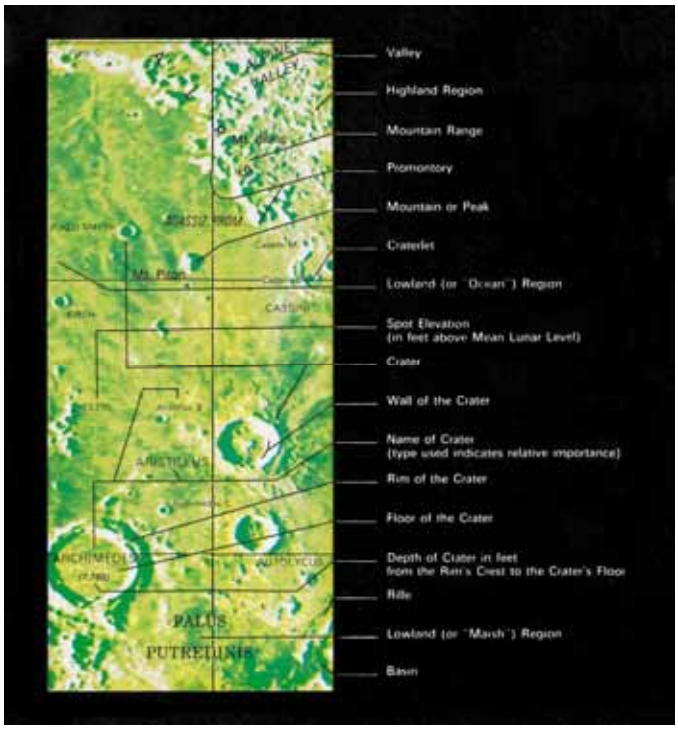
By John W. Siple

The 1960s and ’70s were golden years for lunar exploration. The unmanned NASA Ranger and Surveyor probes proved highly successful, and intrepid space-faring explorers from the Apollo missions reached Luna’s orbit and surface. A call by the public for quality optical instrumentation to closely observe our nearest neighbor in space and other wonders of the universe resulted in a huge influx of reflector and refractor telescopes from Japan. The Tasco Sales, Inc. ‘ultra precisions’ were meant to satisfy the discriminating telescopic observer. The four finely-crafted equatorial refractor telescopes in this series are the 60mm (2.4-inch) Model No. 7TE-5 Solarama, the 76.2mm Models No. 10TE Solarama and 15TE Planetary, and the 108mm No. 20TE Observatory.

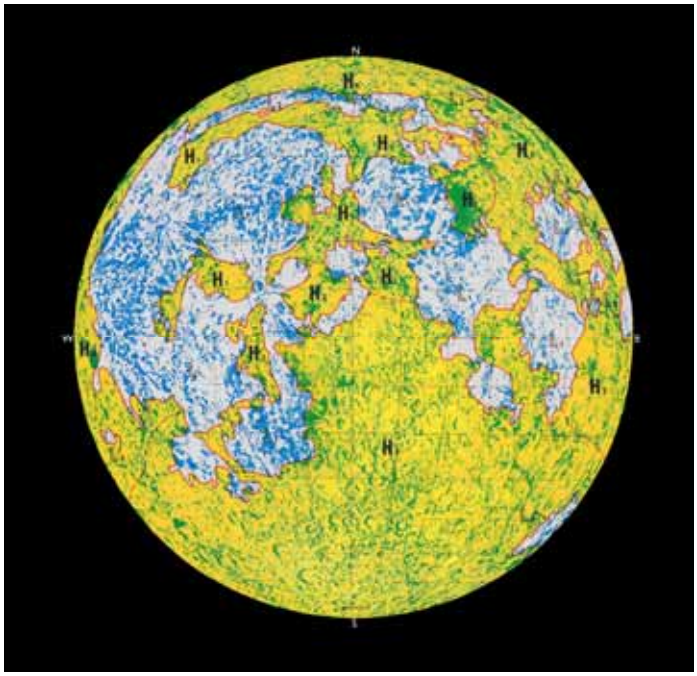
As the junior member of the ‘ultra precisions,’ the very popular 2.4-inch f/17 (1000mm focal length) No. 7TE-5 Solarama, introduced in 1966, allows the observer to ‘focus on the far-out stars with professional ease,’ and to ‘travel the skyways down to 10.7 magnitude with resolving power of 1.9 seconds.’ The Tasco 1970 catalogue list price was $199.95, but jumped to $269.95 by 1973. The 2.4-inch refractor was discontinued in about 1977.

The author’s customized No. 7TE-5 Solarama telescope, configured for astrophotography, has been remounted on an Optica b/c pier with matching legs and leveling screws, and a synchronous clock drive is used for automatic star tracking (see photo at left). Under good seeing conditions, the air-spaced, achromatic objective lens focuses lunar light with surprising sharpness. The images of the Moon’s globe in this gallery were taken through the telescope using a Celestron NexImage Solar System Imager, and processed with *RegiStax* software (the NexImage CCD chip gives the same approximate magnification as a 5mm eyepiece). Lunar craters as small as 6 miles across can be seen in the processed photographs.

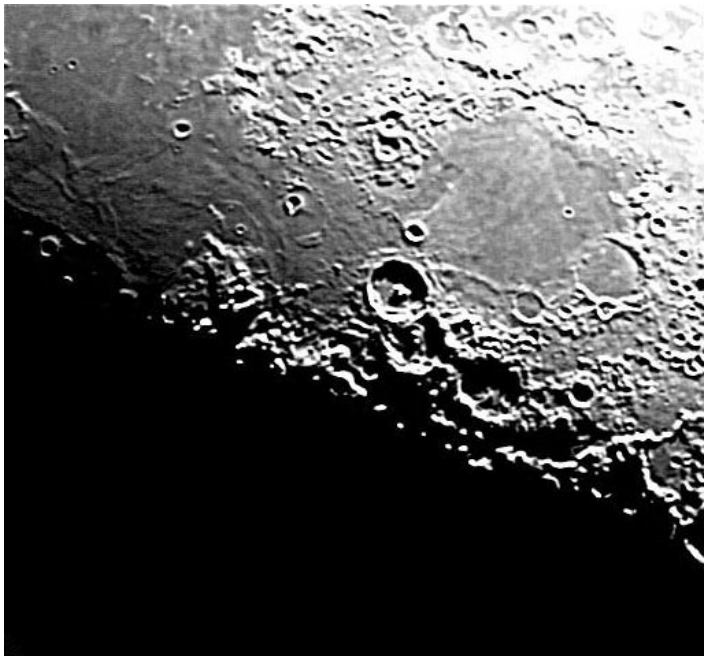
Continued on Page 4

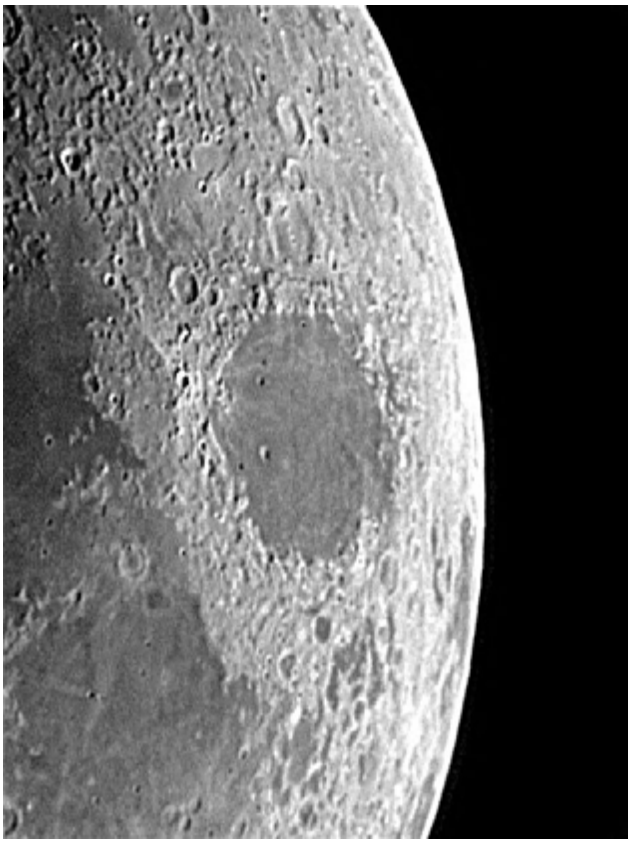


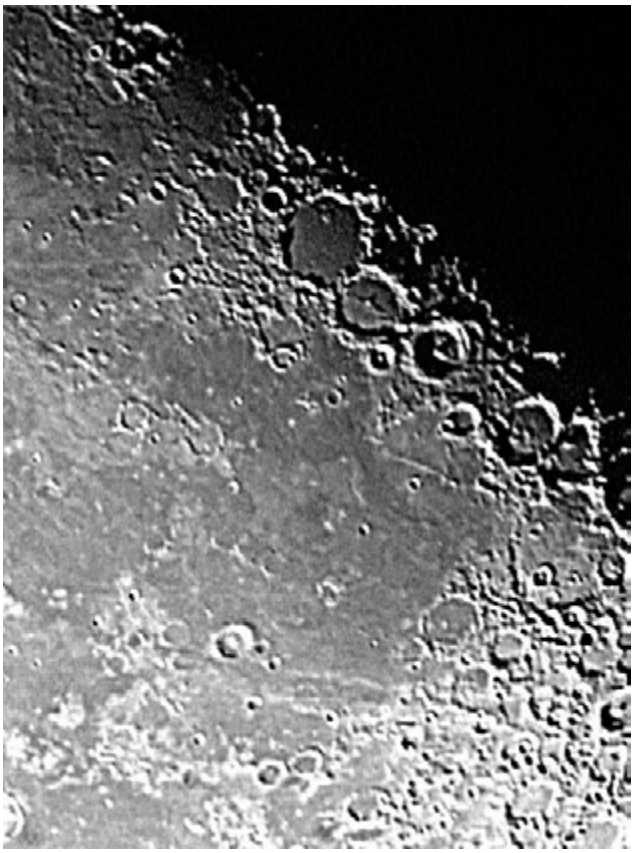
The vicinity of the Moon’s Alpine Valley and the craters Archimedes, Aristillus, and Autolycus. The map legend highlights many lunar topographic features that are visible in small Earth-based telescopes.



Major physiographic divisions (H = Highlands, L = Lowlands). © Rand McNally from the 1985 Official Map of the Moon. Both charts reproduced with permission R.L.06-S-38.







A Lunar Gallery *(continued from page 3)*

Clockwise from top left: (a) **The Theophilus, Cyrillus, and Catharina crater chain on the northwestern border of Mare Nectaris. Theophilus, 63 miles in diameter, has a central triple peak (with designations ψ, φ, and α) that rises to a height of 7,500 feet—equivalent to Oregon's Three-Fingered Jack Mountain.** (b) **Mare Crisium, an impact basin 280 by 350 miles in diameter. It is actually elongated east-west, but appears foreshortened in the photo because of our viewing angle on Earth.** (c) **The great walled plain Ptolemaeus and the craters Alphonsus and Arzachel near the center of the Moon's disk. The famous Straight Wall is visible near the crater Thebit.** (d) **The Cavalerius, Hevelius, and Lohrmann crater group at the western edge of Oceanus Procellarum**.

Astronomy Day May 6, 2006 - Rooster Rock State Park

Visitors to the Rooster Rock State Park will be star-struck on the evening of May 6 as they peer into and learn about the cosmos during the Astronomy Day 2006 Star Party scheduled to begin at 7:30 p.m. Astronomy Day is a worldwide event designed to promote public awareness and interest in astronomy and space science.

Join us as we gaze at the spring night sky at Rooster Rock State Park, located 22 miles east of Portland on I-84 (east of Sandy River) at exit 25, starting at 7:30 pm. Parking is $3 per vehicle. Members of RCA and VSA will make their telescopes available to anyone who attends, and OMSI Planetarium Manager Jim Todd will present informal talks on the occurrence.

From beginners to experts of all ages, visitors will have the opportunity to view the stars and other objects through a variety of telescopes. In addition to seeing the planets Jupiter and Saturn, the Orion Nebula, the Beehive star cluster and other celestial bodies will be visible. For possible weather cancellation, call (503) 797-4610 on May 6 after 3:00 PM to get the latest information.

Jim Todd
OMSI Planetarium Manager
Portland, Oregon
JTodd@OMSI.edu

Rose City Astronomers '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-omsi.org).

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

Always great conversation and food.

For more information contact: Margaret McCrea at mmcrea@nwlink.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 checkout at the general meetings for a period of one month with renewals available by phone or e-mail to the club library director, Jan Keiski.

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

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

Astrophysics / Cosmology SIG

Date/Time: Thursday, May 18, 7 PM.

Topic: "The science in science fiction"
Presented by: Mark Dakins

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

Contact: Bob McGown (503-244-0078)
or Dareth Murray, (503-957-4499) for more information.
http://www.rca-omsi.org/cosmologysig.htm

Telescope Workshop

When: Saturday, May 13, 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






Camp Hancock Star Party
March 2006
Photos by Jan Keiski






2006 RCA Observing Schedule Revised May 2006

Month	Day	Day of Week	Event	Location
Mar	24-26	Fri-Sun	RCA Dark Sky Party	Kah Nee Ta * *
Mar	25	Sat	Vernal Equinox Celebration	Rooster Rock State Park
Mar-Apr	31-2	Fri-Sun	RCA Dark Sky Star Camp	Camp Hancock * *
Apr	15	Sat	Planet Parade	Rooster Rock State Park
Apr	29	Sat	RCA Star Party	Sean's Astronomy Shop
May	6	Sat	Astronomy Day	Rooster Rock State Park
May	27	Sat	RCA Star Party	Larch Mountain
Jun	3	Sat	Imaging The Sky Conference	OMSI Auditorium
Jun	10	Sat	Summer Solstice Celebration	Rooster Rock State Park
Jun	*23-25*	*Sat*	*ARRL Field Day - Ham Radio*	*Larch Mountain* * * *
Jun	24	Sat	RCA Outreach Star Party	McMenamins Grand Lodge
Jul	8	Sat	Lunar Viewing	Rooster Rock State Park
Jul	20-24	Thu-Sun	Table Mountain Star Party	Ellensburg, WA * *
Jul	21-22	Fri-Sat	RCA Star Party	Trout Lake, WA *
Jul	27-30	Thu-Sun	Mount Bachelor Star Party	Bend, OR
Jul	29	Sat	RCA Star Party	Dethloff's Property
Aug	11	Fri	Perseid Meteor Shower Watch	Rooster Rock St. Park
Aug	19	Sat	RCA Star Party	White River Canyon
Aug	24-27	Thu-Sun	Oregon Star Party	Indian Trail Springs * *
Sep	2	Sat	Autumnal Equinox Celebration	Rooster Rock State Park
Sep	22-24	Fri-Sun	RCA Dark Sky Party	Indian Trail Springs
Oct	20-22	Sat	RCA Dark Sky Star Camp	Camp Hancock * *
Nov	8	Wed	Mercury Transit	OMSI East Parking Lot

* Indicates camping or camping nearby.

* * There is a charge for these outings.

* * * Good day to stay off Larch Mountain. The Ham Radio group uses lots of lights!

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

RCA members do also occasionally get together for other impromptu star parties. RCA's E-mail list provides you with the opportunity to hear about these spontaneous opportunities as they occur. If you are an RCA member and would like to be added to this list, please send email to Dareth at darethlee@comcast.net requesting that you be added to the list.

For more information about all RCA activities, please check out our club's web site at: http://www.rca-omsi.org/ Or call our club's phone information line at (503) 255-2016.

Much discussion has been held regarding the SAFETY of RCA members while observing at public or private locations. The RCA does NOT assume any liability for the actions of others and can NOT guarantee your safety at any site. It is always a good idea to observe in small groups to minimize your risks.

Detailed information on all events: http://www.rca-omsi.org/starpartysites.htm

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 it's 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

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.

TROUT LAKE, WA

A map is located at: http://www.rca-omsi.org/TroutLake.pdf

DIRECTIONS TO CHUCK AND JUDY DETHLOFF'S HOUSE

Going west on Highway 26 from Portland take Highway 6 towards Tillamook. Go almost 13 miles and turn right onto Timber Road (toward Timber) just past the Glenwood Store. Go 2 miles and look for the Dethloff's driveway on left. Come up the driveway and follow it to the right towards the house.

Additional information is available at: http://www.rca-omsi.org/starschedule.htm

BOARD MEETING MINUTES

April 3, 2006
OMSI Classroom 1
Andy Phelps

Meeting called to order by Carol Huston at 7:10pm.

Board members present:
Carol Huston, Ken Hose, Jim Reilly, Matt Vartanian, Jeff Sponaugle, Ed Epp, Andy Phelps, Patton Echols, Dale Fenske, Jan Keiski, Greg Rohde, Larry Godsey, Ken Cone, Bob McGown

Guest present: John Glenn

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 14 voting members present.
- Treasurer's Report – Ed Epp: Total liabilities and equity: $21,352.70. Discussed setting next years' budget. Distributed quarterly reports. Budget proposals are due at next board meeting.
- VP Observing – Matt Vartanian: Kah-nee-tah had 79 room/nights occupied. OMSI star party April 15 at Rooster Rock, Sean's Astronomy shop April 29. Will republish star party schedule to correct location of OMSI events (Rooster Rock)
- VP Community Affairs – Jeff Sponaugle: Received several contacts concerning star parties. Guest, John Glenn has contacted Boy Scouts, will invite them to Rooster Rock on June 10 for guidance in obtaining astronomy merit badge.
- VP Membership – Ken Hose: 3 new members, 4 renewals in March, $200 collected in dues. Currently 326 member families. Discussed changes made to new member packet.
- New Member Advisor – Jim Reilly: Discussed placing new members on new member email discussion list and holding new member star parties. It was decided that the general list should be sufficient due to the friendliness of members.
- Media Director – Patton Echols: no report
- Book Library – Jan Keiski: Will be purchasing bar code readers and software.
- Telescope Library – Greg Rohde: While in Taiwan, purchased 15 eyepieces and 5 barlows at optics factory.
- IDA – Bob McGown: Working in Laurelhurst neighborhood with the Mazamas to reduce "glare bombs." Will follow up on Hillsboro 20/20 plan. Several IDA speakers will attend ALCON 07.
- Magazine Subscriptions – Larry Godsey: no report
- SIGs – Ken Cone: Survey indicated interest in astrophotography. Discussed setting up on-line forum.
- OMSI - Jan Keiski: RCA general meetings will be in the planetarium June, July and August.
- ALCOR – Dale Fenske: Updated AL records. Dale is collecting RCA historical info.

Old Business

- Action Item: Dave and Bob to work up guidelines and finalize plan for lifetime membership. Should wait until after site committee fund raising. Long-term financial health of club must be considered.
- Action Item: Dale will work with OMSI to put together a packet of information to provide to people who purchase telescopes from OMSI. Shared info sheet, "Keeping your astronomical passion," to be offered with scopes sold at OMSI and possibly other stores. Discussion centered on reasons and purposes for use. Should include information on how to use scopes and find objects.

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 <david6366@msn.com>

Awards

Gregory Rhode
Messier
Award Number 2275
More Than 70 Messier Objects Identified

For more info visit:
http://www.astroleague.org/al/obsclubs/obsclub.html

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

May 2006

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 2006

May 1	Mon	RCA Board Meeting	OMSI Classroom1	7pm
May 13	Sat	Telescope Workshop	Swan Island	10am—3pm
May 15	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
May 18	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

June 2006

Jun 2	Fri	Downtowner's Lunch		Noon
Jun 5	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Jun 10	Sat	Telescope Workshop	Swan Island	10am—3pm
Jun 19	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
Jun 22	Thurs	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 18, Issue 6 Newsletter of the Rose City Astronomers June, 2006

In This Issue:

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

RCA JUNE GENERAL MEETING

"Mapping the Milky Way"

Presented by Zeljko Ivezic
University of Washington

The formation of galaxies like the Milky Way was long thought to be a steady process that created a smooth distribution of stars. Instead, recent discoveries of complex substructure in the distribution of the Milky Way's stars have deeply shaken this standard view.

Dr. Izevic will discuss how the unprecedented, accurate and robust SDSS (Sloan Digital Sky Survey, http://www.sdss.org) photometry and astrometry have enabled some of these discoveries, and will speculate what further progress can be expected from the upcoming next-generation surveys, such as LSST (Large Synoptic Survey Telescope, http://www.lsst.org).

Zeljko Ivezic is a professor in the Astronomy Department at the University of Washington. He holds a PhD in physics from the University Kentucky. His research interests are in detection, analysis, and interpretation of electromagnetic emission from astronomical objects.

During his seven years in Princeton, he earned the status of SDSS "builder" for his software development. Zeljko currently serves as the Project Scientist for LSST, a next generation optical sky survey.

M51 Courtesy the Sloan Digital Sky Survey

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

First Quarter Moon	Full Moon	Last Quarter Moon	New Moon
June 3	June 11	June 18	June 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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	m_brewster@juno.com
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message *June 2006...*

By Carol Huston

RCA Astronomical League Connection:

Rose City Astronomers is a member society of the Astronomical League (AL), a national organization composed of over 240 local amateur astronomical societies from all across the United States. These organizations, along with various individual members, form one of the largest amateur astronomical organizations in the world.

What does this membership do for our club and for our members? Probably RCA's biggest benefit as a member of the AL is member participation in observing programs that culminate in observing awards. These observing programs range of beginner efforts (Binocular Messier, Constellations, Messier Objects, Lunar, etc.) to more advanced projects (Herschel 400, Herschel II, Arp Peculiar Galaxies, Galaxy Groups and Clusters, Master Observer's Program, etc.). In fact, RCA members have authored and maintain a couple of these nationally recognized observing programs: The Herschel II Program and the Galaxy Groups and Clusters Program. Want to learn all about one of the great League observing programs? Go to www.astroleague.org/observing.html.

Another benefit our RCA members receive from the AL is their quarterly newsletter, The Reflector. To make sure you are receiving your AL newsletter on schedule, please make sure your address stays current in the RCA membership roster. The AL sponsors an annual meeting each year, held in the summer months. In 2006, this event will be held in Texas and features a trade show, book exhibition, and many speakers and activities. Planning is underway for 2007's annual meeting which will be hosted by RCA in Portland. If you are interested in participating, contact Dareth Murray. As a member society, our RCA members also receive a book buying service, where you can order astronomical related books at 10% discount, without paying shipping costs. Are you interested in buying a particular book about our fascinating hobby? Then go to www.astroleague.org/al/bookserv/bookserv.html.

To acquaint yourself more fully with what you can receive from the national AL, you can visit their website at www.astroleague.org for more complete information. As a member society of the AL, RCA is proud to pass on these many benefits to our members.

THE OBSERVER'S CORNER

Howard Banich

June is the easiest month of the year to observe from dawn to dusk, and if you have the chance it's rather fun because you can still get a decent amount of sleep and have a relatively full day before and after. Making this a goal isn't necessary since the most dark sky time we have this month is 3 hours and 35 minutes and you can end up observing all night without realizing it.

I've written about the Bug Nebula in Scorpius in my June article way too many times now, so to the relief of some I will only say to take a look if you get a chance. For a change of pace this year I'll focus on the northern half of the sky.

The Owl Nebula is in prime position and is within the same wide field view is the edge on galaxy M108. Surprisingly close is the elusive Hickson Galaxy Cluster (HGG) 50, and if your scope can manage a two degree field of view you can fit in all three. Note that I didn't write "you can see all three" because the brightest galaxy in HGG 50 is magnitude 18.7 and only 0.2 x 0.2 arc minutes in size – very faint and very small. However, the Owl Nebula and M108 are much brighter at magnitudes 12.0 and 10.7 and are well within reach of small telescopes under a dark sky.

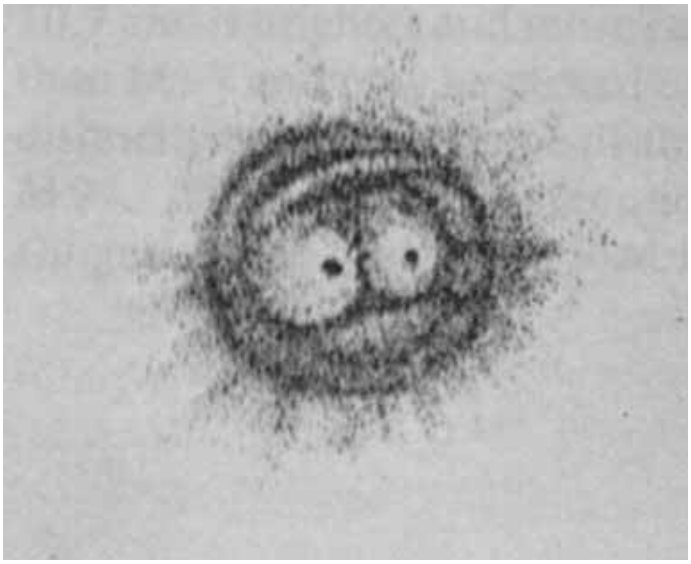
This is a rough combination of two DSS images showing HGG 50, M97 and M108, left to right. HGG50 is highlighted by the small yellow rectangle in the lower left. The field of view is about 2 degrees.

Although the Owl Nebula is often more difficult to see than M108 in light polluted skies, it responds well to UHC and OIII filters. A large planetary nebula, it appears quite round. The two darker "eyes" are difficult to see until you're looking through a 6 inch or larger scope when the central star also becomes more easily seen.

Medium magnifications seem to work best in giving a pleasing view but if the seeing is steady, try higher powers. You might be able to make out some subtle variations in the brightness of the nebula.

The Owl Nebula, M97. DSS image.

There is one faint star in one of the dark eyes, which was discovered by Lord Rosse in 1848. At the time, he saw a star in each of the dark areas and gave him the impression of an owl – and ever since M97 has been the Owl Nebula. But what of the other star that's no longer there? According to Lord Rosse, he observed it until March 1850 but within weeks it "had vanished, nor could it ever again be found, though looked for about forty times during the ensuing quarter of a century."



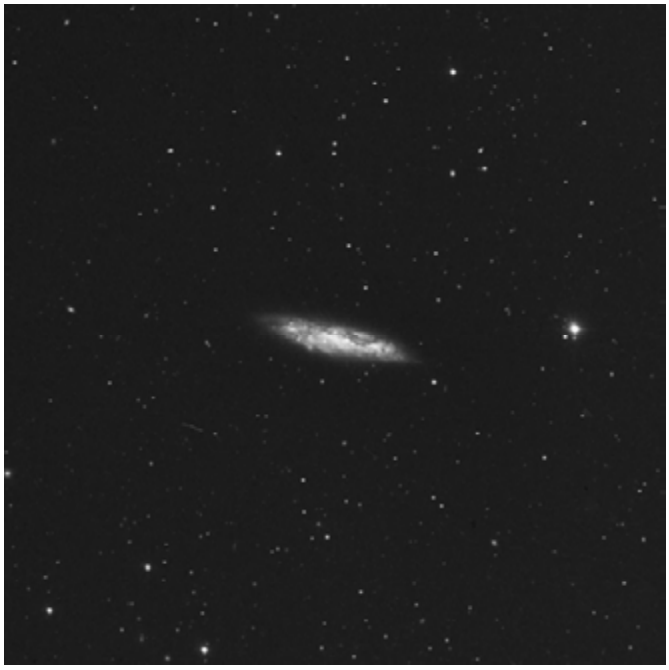
Lord Rosse sketch of the Owl Nebula with both "eye" stars visible. http://www.seds.org/messier/more/m097_rosse.html

(Continued on page 4)

The Observer's Corner *(Continued from page 3)*

It seems unlikely that an accomplished observer such as Lord Rosse would be fooled for two years, but stranger things have happened. In my opinion, the two stars that are seen today are the two stars Lord Rosse saw but he didn't remember their locations accurately.

About a degree to the northeast is M108, a nearly edge on galaxy. It's somewhat reminiscent of M81 in that it has an irregular, mottled appearance. I've found it particularly difficult to sketch accurately and still don't have a satisfying drawing of it.



M108, DSS image.

M108 takes magnification well so pour on the power if the night allows, but it's an interesting object at any power.

If you have a 20 inch or larger scope you might want to give HGG 50 a try on the very darkest night. This is the faintest group in the Hickson catalog of 100 galaxy groups by far, and is considered beyond the reach of almost all amateur scopes. Not being able to see it doesn't count against a successful completion of observing the HGG's though, which is certainly fair. In fact, for the 12 years I had my 20 inch scope I didn't even give it a try.

When I finished my 28 inch scope a couple years ago I was eager to see if I could detect HGG 50 and soon had a chance from Steens Mountain just before dawn in October 2004. Much to my surprise I was able to see the two brightest members rather easily and suspected a third. It was so easy I thought I must be looking at some other group of galaxies at first, but triple checking myself and my sketch confirmed this was it.

HGG 50, DSS image.

Since then I've seen the brightest two through a less pristine sky, which reinforces a couple points:

- Photographic magnitudes don't correlate well to visual magnitudes. I'll bet HGG 50 brightest galaxies are really in the low 17th visual magnitude range.
- Just because an object is listed as too faint to see in your scope, give it a try anyway when conditions a really great – who knows?

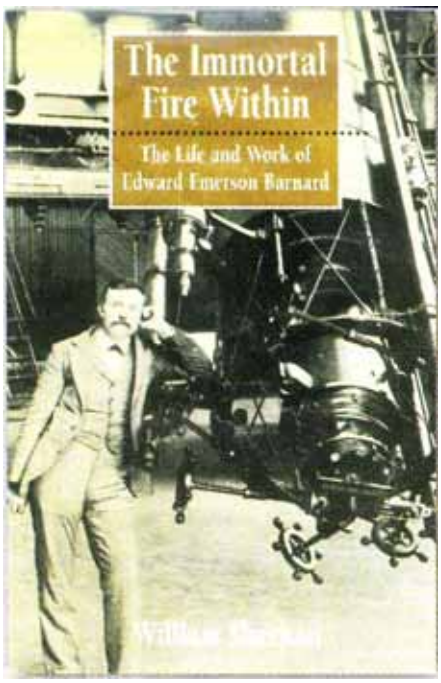
If you can find the Owl Nebula, following the rather distinctive pattern of stars to HGG 50's location is a piece of cake so giving it a try wouldn't hurt. Better yet, it might be fun.

RCA LIBRARY

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

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

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



Book Review By ***Tim R Crawford***

The Immortal Fire Within

"The Life and Work of Edward Emerson Barnard."

by William Sheehan

Barnard was born in the slums of Nashville, TN in late 1857. To help support his widowed mother he went to work as an assistant in a photographer's studio at the very tender age of 9 years.

His job was to run errands for the shop and to guide one of the largest solar camera's in existence from the roof. The purpose of the solar camera was to provide light so that enlargements could be made from the gathered sunlight. It was hard and difficult work for a young man.

About 1870 Barnard gained access to his first scope, a 2.25" refractor. In 1877 He purchased his own telescope, a 5" refractor, with which he discovered his first confirmed Comet in 1881.

Because of his comet work and writings about several of the planets, in 1883 Barnard received a fellowship from Vanderbilt University where he was to take charge of the University Observatory, help with teaching astronomy and to receive instruction free of charge in any other subjects, even though his own previous formal education was limited to just a few months.

Again, because of his writings and discoveries he was invited join the Staff of the Lick Observatory, when it opened in 1888.

Barnard was a tireless and obsessed observer whose interests included not only planets and comets but double stars, dark nebulae, globular clusters, planet moons and even some variable stars. In addition, Barnard was one of the earliest photographers of the heavens, having been well trained in this art by his first job.

The Author of the book had access to Barnard's own observational notebooks a well as many unpublished manuscripts within the archival holdings of institutions where he worked up to and including his last position at the Yerkes Observatory when it opened in 1895.

With the materials accessed, the Author, William Sheehan, was able to convey not only Barnard's obsession to observe but his hard work, the many obstacles he had to overcome and the professional frustrations that he experienced (especially the strained relationship he had with the Director of the Lick Observatory during his 7 year tenure there).

In addition, the Author includes many of Barnard's own words though out the text. In this example he had traveled to San Jose, at noon, from the Yerkes Observatory, on Mt. Hamilton, to give a public evening lecture:

"I did not want to disappoint the people, and I certainly could not let the comet go by [Swift] unphotographed. San Jose was nearly a mile below us in vertical height, and twenty-seven miles distant by stage road. The only possible way for me to secure the photograph and not disappoint my audience was to return to Mount Hamilton that night after the lecture. At ten o'clock I hired a horse and buggy in San Jose and drove up that lonely mountain road, the journey taking five hours, and arrived at the summit at three o'clock in the morning, in time to take the photograph of the comet… In the main the journey was a most impressive one- alone in the mountains, with only the horse in front and my friends, the stars, above me."

This is a very expensive book to purchase (approx $ 120.00) so many of you, like I did, may want to seek a library copy (I acquired mine though interlibrary loan). *Ad Astra*

BOARD MEETING MINUTES

May 4, 2006
OMSI Classroom 1
Andy Phelps

The following members were present: Carol Huston, Ken Cone, David Nemo, Dareth Murray, Larry Godsey, Bob McGown, Greg Rohde, Jan Keiski, Patton Echols, Ken Hose, Matt Vartanian Ed Epp, Andy Phelps.

Board Reports

- Secretary's Report - Andy Phelps: Quorum (11) met with 13 voting members present.
- Treasurer's Report - Ed Epp: Total liabilities and equity: $22,651.49. Budget expectations: Sales was very close to budget, should stay the same for next year. Awards should have its own line item. The Camp Hancock and Subscription lines balance. Question: Does programming budget need to be $1000? Discussion about how telescope library purchases should be shown on balance sheet. Should they be fixed assets or a line item? Ed, Carol, Greg, and Patton will hold an offline discussion to work this out. Discussion about whether or not we need a phone line. Ken Hose projects $7000 income from dues.
- VP Programming - Matt Brewster: (via Jan) Ken Croswell in May.
- VP Observing - Matt Vartanian: May 6 Astronomy Day star party at Rooster Rock. May 27 Larch Mountain. Star parties will be featured on RCA homepage.
- VP Membership - Ken Hose: 3 new members, 0 renewals. $90.00 received in dues. 329 member families.
- Media Director - Patton Echols: no media contacts.
- Book Library - Jan Keiski: nominal
- Telescope Library - Greg Rohde: Blue "box kite" scope is at telescope making workshop for weight reduction work. Decision will be made about what to do with the old solar scope.
- IDA - Bob McGown: Bob and Dareth are going to Northwest Astronomers' Conference in Everett, Washington. Bob needs copies of IDA material, asked about board copy person. Suggestion was made to sell RCA coffee mugs.
- Webmaster - Dareth Murray: We now own www.rosecityastronomers.org should we ever need it.
- Site Committee - David Nemo: Site fund has received $4200 in cash. Combined with pledges, total stands at $8100. On June 24 there will be a fundraiser at McMenamin's Grand Lodge. David used his personal social security number to set up the site fund Pay-Pal account.
- OMSI Liaison - Jan Keiski: Upcoming star parties will be included on web site. Carol mentioned that new OMSI administration seems very supportive of astronomy dept. and Jim Todd.

Old Business

- Action item: Dave and Bob to work up guidelines for lifetime membership. Develop guidelines for targeting donations property, cash, and acknowledging donors. Tabled for now.
- Phone line report: May 2 June 5: Jim Reilly, June 6 July 10: Greg Rohde

New Business

- ALCON Committee Report - Dareth Murray: Committee met at the Nemo's and had a very productive meeting. Some planning sub-committees need to be formed. ALCON '07 will be held at PSU. The physics department will co-sponsor. PSU was chosen because it has the space needed and also has rooms available for out-of-town visitors. David Nemo, ALCON Committee treasurer, will make financial reports to ALCON Committee, in turn ALCON Committee will report to RCA Treasurer who will summarize on report to RCA Board. Bob arranged for students to receive academic credit for attending the conference. This could possibly increase attendance.
- Motion: That the recommendation of the RCA ALCON 2007 Convention Committee to hold the 2007 Astronomical League Convention at Portland State is hereby approved; and that the Convention Committee Chair be directed to notify and seek approval of the Astronomical League for this venue; and request that the Astronomical League advance the RCA ALCON 2007 Convention Committee up to $2500 in funds to underwrite costs of planning and hosting the convention.
  Motion to approve: Patton Echols
  Second: Greg Rohde
  Vote: in favor: 12, Opposed: 0
- Motion: That David Nemo be authorized to establish a bank account at The Bank of the West on behalf of the Rose City Astronomers for the purpose of managing funds for the Astronomical League national convention: ALCON 2007; and that the RCA Treasurer be directed to transfer a sum of $1000 from the RCA general account to the ALCON 2007 account to underwrite necessary expenses related to the convention; and that David Nemo, acting as ALCON 2007 Treasurer is authorized to pay expenses related to the convention that have been authorized by the Convention Committee Chair, Vice Chair, or a sub-committee chair and are consistent with the Convention budget approved by the ALCON 2007 Convention Committee.
  Motion to approve: Dareth Murray
  Second: Patton Echols
  Vote in favor: 12, opposed 0

(Continued on page 7)

Board Minutes, New Business *(Continued from page 6)*

- RCA's website and forum versus bulletin board list: Geramy Rapp, a local astronomer but not an RCA member, bought www.RoseCityAstronomers.com and created a prototype of a proposed web-based discussion forum, asking the RCA Board for approval to implement. Question: Do we need this format or is the current email format sufficient? Pros and cons of both formats were discussed. Further discussion is needed to evaluate whether this format would be beneficial to all members of RCA.

  ACTION: Dareth will communicate with Geramy that the board needs to have further discussion and ask him to take down the site until such discussion can take place.

- Girl Scouts and Boy Scouts; how RCA can support these programs: Brief discussion on this point; concluded that several volunteers are needed in order to manage these programs.

Meeting adjourned 9:12pm.

Summer officially begins with the summer solstice on Sunday, June 21 at 5:26 am PDT. On Saturday evening, June 10, OMSI, Rose City Astronomers and Vancouver Sidewalk Astronomers will celebrate the summer solstice and the beginning of summer with a free Star Party! Join us as we gaze at the spring / summer night sky at Rooster Rock State Park, located 22 miles east of Portland on I-84 (east of Sandy River) at exit 25, starting at 8:30 pm. Parking is $3 per vehicle. Members of RCA and VSA will make their telescopes available to anyone who attends, and OMSI Planetarium Manager Jim Todd will present informal talks on the occurrence.

From beginners to experts of all ages, visitors will have the opportunity to view the stars and other objects through a variety of telescopes. Viewing highlights includes the planet Saturn, Jupiter, the Moon, star clusters, and more! For possible weather cancellation, call (503) 797-4610 on June 10 after 3:00 PM to get the latest information.

Jim Todd OMSI Planetarium Manager

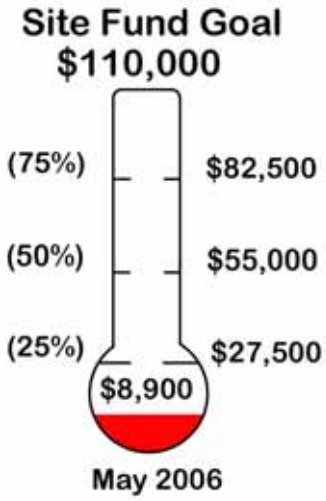
RCA Public Star Party June 24 McMenamins Grand Lodge in Forest Grove

Mark your calendar for Saturday night June 24, and join fellow club members in an evening of food, microbrew and observing at the McMenamins Grand Lodge in Forest Grove.

This is being publicized as a public star party, so we encourage you to bring your scopes and be prepared to share your equipment and knowledge of the sky with members of the public and Lodge guests. Setup will be on the lawn in Delia's Garden behind the Yardhouse Pub. Parking is nearby. Come as early as you want to eat or play a round of Frisbee golf on the adjacent course. Stay as late as you want - or even overnight at the lodge.

McMenamins will be making a generous donation to the Observing Site Fund for us coming out to share our equipment with their guests - and hopefully attracting several hundred other customers - so if it's cloudy, come anyway to show our appreciation for their donation and we'll make it a party.

For more information contact David Nemo (david@nemoworld.com), or follow the link on the website Star Party Calendar: .



Telescope Workshop

When: Saturday, June 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

Assistant: Don Peckham don@dbpeckham.com

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Thursday, June 22, 7 PM.

Topic: "Saturnian moon updates!"
Presented by: Lamont Brock

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499) for more information.

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

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

June 2006

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 2006

Jun 2	Fri	Downtowner's Lunch		Noon
Jun 5	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Jun 10	Sat	Telescope Workshop	Swan Island	10am—3pm
Jun 19	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
Jun 22	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

July 2006

July 7	Fri	Downtowner's Lunch		Noon
July 10	Mon	RCA Board Meeting	OMSI Classroom1	7pm
July 17	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
July 20	Thurs	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 18, Issue 7 Newsletter of the Rose City Astronomers July, 2006

In This Issue:

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

RCA JULY GENERAL MEETING

"Studying the Formation of the Milky Way"

Presented by Dr. Fabio Governato
Research Professor of Astronomy
University of Washington

This image is generated from modeling simulations performed using parallel supercomputers by Dr. Fabio Governato.

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

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

First Quarter Moon	Full Moon	Last Quarter Moon	New Moon
July 3	July 10	July 17	July 24

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

2006-2007 MEMBERSHIP RENEWAL

Your RCA membership is active through June 30, 2006. Please renew your membership for the year July 1, 2006 through June 30, 2007.

You may renew your membership for $24 at the July 17th RCA General Meeting or by mail. Send to:
RCA Membership, OMSI, 1945 S.E. Water Ave., Portland, OR 97214.

Make check payable to: RCA. Thank you for your support and participation.

New Observing Clubs

The Astronomical League is pleased to announce three new observing clubs and a public outreach club.

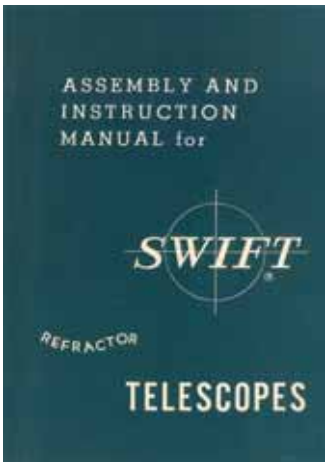
The Lunar II, Planetary Nebula and Open Cluster Observing Clubs have been added for your observing enjoyment. As of June 6, 2006, the Open Cluster Observing Club will accept Negative Observations. See paragraph 6 of the Rules and regulations section for more details.

The Outreach Club gives recognition to those that extend our hobby to the general public.

Please go to the main Observing Clubs web page where you will find useful information on all of the Astronomical League's Observing Clubs:
http://www.astroleague.org/observing.html

A SAMPLING OF TELESCOPES FOR THE AMATEUR ASTRONOMER—PART 15

By John W. Siple

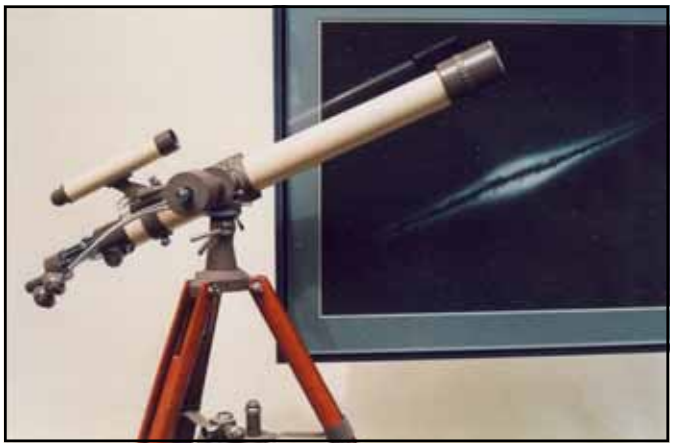


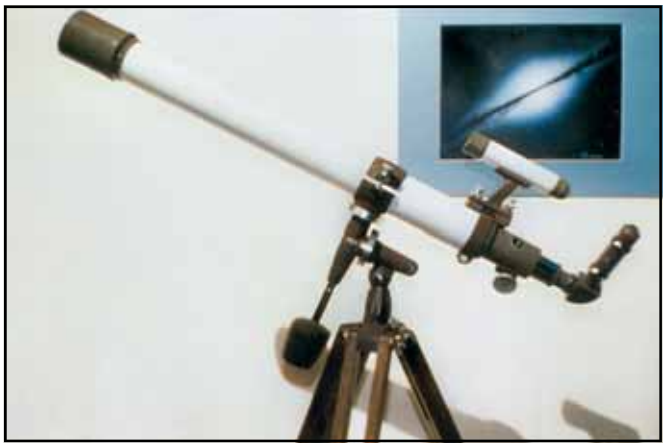
Swift Instruments, Inc. is America's oldest optical company, having been founded in 1926 by Robert W. Swift. The Boston firm is known for developing and importing beautifully made and technically advanced scientific products. Over the past 80 years Swift has sold quality spotting scopes, binoculars, microscopes, telescopes, and weather monitoring instruments. A branch office was established in San Jose, Calif. in the early fifties, which today serves as the company's headquarters. During the 1960s Swift marketed three astronomically significant refractor telescopes, which were promoted as instruments for performing "serious amateur work" and as an opportunity to view "space spectaculars" in regal style.

An advertisement on page 348 of the December 1961 issue of *Sky & Telescope* magazine has them attractively priced: Model 831—79mm, 167x, $290.00; Model 839—60mm, 135x, $148.00; and Model 838—50mm, 116x, $116.50. They could be purchased directly from Swift's Dept. S-12, 952 Dorchester Ave., Boston 25, Mass. According to the Swift literature, these refractor telescopes were the brainchild of Dr. Shusuke Kojima, of Tokyo, Japan, one of the world's foremost authorities on the design of observatory instruments. The telescopes were manufactured to the highest standards of mechanical and optical precision by one of Japan's leading optical equipment manufacturers. A key characteristic, common to each of the scopes, is distinctive brown enamel on the majority of exposed metal surfaces, which are triple-coated and oven-baked for maximum durability. The air-spaced, achromatic objective lenses are precision-ground from centerpot optical glass, cold-polished and hard coated. Furthermore, their literature states that "proof of the excellence of Swift telescopes can be found in their remarkable resolving power or ability to show as separate objects distant pairs of lines or dots which inferior telescopes of equal magnifying power show as a single object."

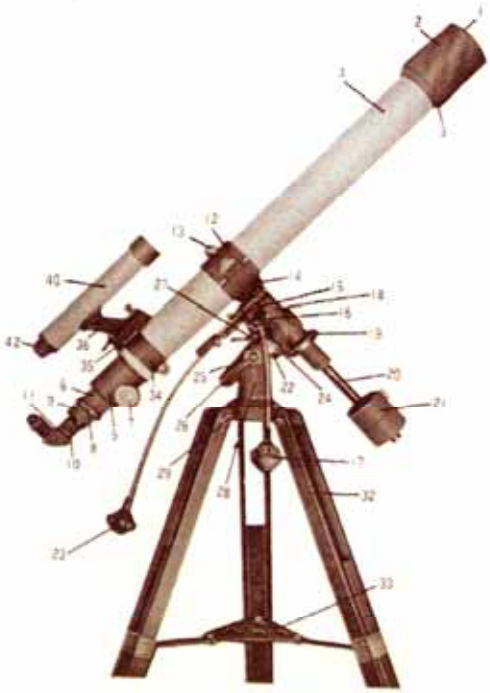
Swift refractors really excel in optics—star tests on the 60mm and 79mm scopes show textbook Airy disks with highly suppressed aberrations. Images are sharp and clean, with excellent color rendition and contrast. (The Model 831 with an effective aperture of 77mm operates at f/13.0, so some secondary color is to be expected on bright bluish-white stars such as Vega.) The optics tend to stay in collimation, and upkeep is essentially zero. Each telescope is loaded with 0.965" observing accessories, from erecting prisms for terrestrial use to Barlow lenses for doubling magnifications. The ingenious use of compression or retaining ring technology at all accessory joints provides for secure locking and prevents scratching the barrel of that favorite eyepiece. Three quality oculars for a wide range of observing applications were standard issue on the 79mm Model 831: 6mm and 9mm Huygenian Mittenzways, and a 40mm Achromatic Huygenian. The smaller refractors have two, a 6mm Huygenian Mittenzway and 20mm Huygenian. Model 831's 10X40mm and 839's 6X30mm viewfinders are both overbuilt and have unusual elevation and azimuth adjustments. However, these two telescopes have dissimilar mounting head designs; the 60mm unit can be easily held in one hand, while the 79mm mounting head (with cwt.) weighs-in at 11 lbs. The third refractor in the series, Model 838 with an objective diameter of 50mm and a focal length of 700mm (f/14), is similar in appearance to the 839 (the 50mm and 60mm tubes are white—Model 831 has light tan main body and viewfinder optical tubes). An interesting feature on the 79mm mounting is the use of flexible slow motion cables with "space-balls" as knobs. Optional eyepieces and accessories, such as a 6mm Triplane ocular, an eyepiece turret with four openings, or a telephotography adapter could be added at a later date by the owner of a Swift instrument. In keeping with the color theme, each refractor was sold along with its own masterfully-crafted brown wooden storage case.

Continued on page 4

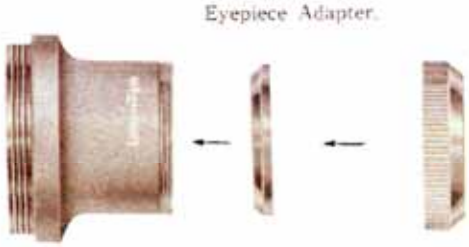


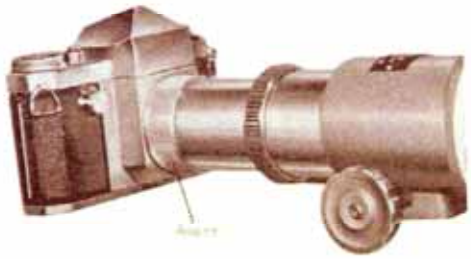


A fine pair of Swift equatorial refractor telescopes from the early 1960s. Model 831 (Serial 643117), pictured at left and assembled in position for terrestrial use, has specifications D=77mm F=1000mm (f/13.0). Model 839 (Serial 60408) is smaller with D=60mm F=810mm (f/13.5). Both telescopes have superlative optics. From the author's collection.



Model 831





PARTS LIST

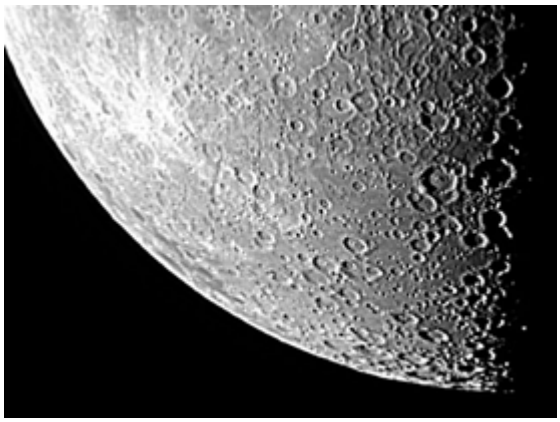
1. Dust Cap
2. Lens Hood
3. Objective Head
4. Main Tube
5. Eye-end
6. Focusing Drawtube
7. Focusing Pinion Handle
8. Retaining Ring for Secondary Drawtube
9. Secondary Drawtube
10. Eyepiece Adapter
11. Retaining Ring for Eyepiece Adapter
12. Holding Band
13. Nut for Holding Band
14. Base for Holding Band
15. Declination Clamp
16. Slow-motion Device in Declination
17. Flexible Handle in Declination
18. Declination Axis
19. Declination Circle
20. Shaft for Balance Weight
21. Balance Weight
22. Slow-motion Device in Right Ascension
23. Flexible Handle in Right Ascension
24. Right Ascension Circle
25. Polar Axis
26. Right Ascension Clamp
27. Polar Axis Clamp
28. Mounting Pillar
29. Tripod Head
30. Tripod Head Clamp
31. Washer Ring for Tripod Head
32. Tripod
33. Accessory Tray
34. Holding Band for Finder Scope
35. Finder Scope Base
36. Finder Scope Leg
37. Elevation Adjusting Screw
38. Retainer for Elevation Adjusting Screw
39. Windage Adjusting Screw (or Lever)
40. Finder Scope Tube
41. Retaining Ring for Finder Eyepiece
42. Eyepiece for Finder Scope

©1961 Swift Instruments, Inc. Layout created from the Assembly and Instruction Manual (numbers 30, 31, 37-39, and 41 are missing).

Continued on page 5

A SAMPLING OF TELESCOPES *continued from page 4*

Cutting a wedge of our night sky 20 degrees across in the direction of the constellations Libra, Scorpius, and Serpens encompasses some stunning double and multiple star systems, and includes one of the finest globular star clusters in the heavens. The journey begins by visiting Earth's closest neighbor in space. The ecliptic, or the path of the Sun against the background stars during the course of the year, passes directly through Libra and Scorpius. The Moon is often found among the stars of those zodiacal constellations during late spring and summer nights. Swift's achromatic refractors provide tack sharp imagery of Luna, and the globe shimmers with the opalescent sheen of moonstone.



The Moon's heavily cratered Southern Highlands at 162x in the 60mm Swift 839 refractor.

The half-a-billion mile distant Jupiter has been wandering among the stars in Libra much of this past year. In good seeing conditions, up to six cloud bands along with the Great Red Spot are visible in the 831 scope. The Jovian world, in its continuing movement around the Zodiac, has been passing between the stars $\alpha^{1,2}$ and β Librae (known as the "Gateway Stars"). The wide, colorful double star $\alpha^{1,2}$ Librae or Zubenelgenubi (mags. 2.8, 5.2; sep. 231.0"), the southern guidepost, is an attractive sight in both the 60mm and 79mm refractors. Using a 40mm ocular (25x) in the larger instrument, the primary star appears as a yellowish orb while its relatively distant companion is a pale bluish-grey. This fine system is found 57 light years from Earth. The journey continues by visiting the 2.6 magnitude star β Librae or Zubeneschamali, the famous "Emerald Star." Observers throughout the centuries have been enchanted by its striking pale green hue. Examining this stellar beauty in the Model 839 refractor with a 10mm Clave' Plössl eyepiece (81x), the amateur astronomer is immediately struck by the intense emerald radiance, a sight not soon forgotten after the observing session ends. Mystery surrounds this star, since Eratosthenes and later Ptolemy catalogued it as luminous as 1.1 magnitude Antares. Zubeneschamali is 120 light years from our point of departure.

1.9° to the north of Zubenelgenubi is the difficult double star μ Librae (mags. 5.8, 6.7; sep. 1.8"). This object is a tough test for the 79mm refractor optics, since the separation is close to Dawes Limit of 1.51 arc-seconds for the telescope. High magnification is needed to resolve the pair, so a 9mm eyepiece combined with a 2X Barlow lens (222x) were applied to the Mu Librae system. The Model 831 revealed two yellowish-white diffraction disks nearly in contact separated by dark sky, a testimony to the superb optical figuring by Swift! This pretty pair of stars is 540 light years from our Solar System. Pausing just inside the northwestern Scorpius border, we come to the 68 light year distant multiple star system ξ Scorpii (AB: mags. 4.8, 5.1; sep. 0.9", and AC: mags. 4.8, 7.3; sep. 7.6"). Although the tight pair, currently at 0.9" in its highly eccentric orbit, is beyond the small refractors' capability to resolve, the wider pair in the system is an easy target in both telescopes. At 111x in the 79mm refractor, the primary is a yellowish-white and the 7.6" distant secondary an attractive grey. $\sum$1999 (mags. 7.4, 8.1; sep. 11.6"), another fine double 283" to the south in the same field of view and physically related to Xi, adds to the beauty of the scene. One of the sky's famous double-doubles for small telescopes!

The trip ends 24,500 light years from Earth at one of the grandest star clusters that the northern sky has to offer. A visual treat for the telescopic observer is the globular star cluster M5 (NGC 5904), found 22' to the NNW of 5 Serpentis. Shining at magnitude 5.7 and with a diameter of 17.4', it is possible to see this splendid deep-sky object at dark-sky observing locations with the unaided eye. Swinging the 79mm telescope to its location, a Tele Vue 19mm Panoptic eyepiece (53x) shows M5 as an impressive ball of light with a large, bright core and a fainter irregular outer halo of partially resolved suns. A 10th magnitude foreground star is conspicuously visible on the southwest side, 2.8' from the globular's center. In larger telescopes, where the cluster is resolved into thousands of points of light, the author has always seen M5 as a giant celestial rose. The star cluster has over 500,000 members and with an age of 13 billion years ranks as one of the Galaxy's oldest known inhabitants. Contemplating our journey home and looking back toward Earth, our Sun is visible in M5's sky as a very dim 19th magnitude star.

Image of M5 courtesy Hillary Matthes, REU Program/NOAO/AURA/NSF.

Swift's Models 831, 838 (not in the author's collection) and 839 set a standard of optical excellence among their peers. They meet every discriminating lunar, planetary and double star observer's most stringent requirements: *par excellence.* Although extremely well-made by Japanese standards for the time, Swift refractors tend to fall short in mechanical comparison with the more expensive Unitron brand refractors (Swift's top-of-the-line Model 831 was priced $145.00 lower than Unitron's equivalent Model 142—quite a tidy sum in the 1960s). The Model 831 is a highly sought-after collectible telescope, with few examples ever leaving private collections. An excellent condition 79mm telescope is worth $500-650, while the 50mm and 60mm versions can bring $200 and $275, respectively. These three fine vintage refractor telescopes are wonderful instruments for both the novice observer and dedicated amateur astronomer alike, and recall an era of telescope making of superior craftsmanship at very affordable cost.

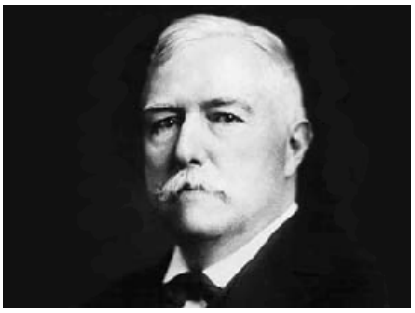
THE OBSERVER'S CORNER

Howard Banich

Time for Barnard's Star

Barnard's Runaway Star is a faint red dwarf in northeast Ophiuchus that has the largest known proper motion across the sky. According to Burnham's Celestial Handbook, it takes only 351 years to move one degree across the sky. It's only 5.96 light years away, making it the 5th closest star to Earth. That's a tricky way of stating that after the Sun and the three stars that make up the Alpha Centauri system it's the next closet. At least that we know of so far.

E. E. Barnard discovered it in 1916 by comparing photographs taken in 1894 and 1916, and then finding it on a photo taken by E. Pickering in 1888. The proper motion of Barnard's star is a combination of its closeness and its intrinsic high velocity through space. In about 8000 years it will pass less than 4 light years from the sun.



E.E. Barnard

I first made an observation of this magnitude 9.5 star in 1983 soon after buying the three volume set of Burnham's Celestial Handbook. Using a finder chart from Burnham's I was able to track it down fairly easily and then noted its position on a line marking the stars' proper motion from 1880 to 2040. That chart is on page 1252 of volume two, and page 1253 has a negative photo showing over a degree of sky around the star, making location that much easier. A distinctive "V" shaped asterism helps guide the way. Barnard's Star is also marked on chart 15 of Sky Atlas 2000 with a close up on chart A, which is in the back of the atlas.

And then I didn't make another observation for 20 years.

I thought about it from time to time – it's located less than a degree from 66 Ophiuchi, a magnitude 4.8 star, and well placed for most of the spring and summer – but somehow I couldn't quite swing my telescope over to track it down again. And then on June 4, 2003 I finally made it back. I sketched the field and couldn't wait to compare it to my original observation to see how much it had moved in 20 years. And then I couldn't find my original notes. Argh!

A few days alter I remembered that I'd marked its position on the Burnham's chart, and finding that little 1983 mark was about as exciting as an original discovery for me. It was with surpassing pleasure that I marked my 2003 observation on the chart.

This was exciting - it had moved a good half inch on the scale of the page 1252 chart! Being able to mark the actual motion of a star through space over the course of 20 years gave me a sense of the starry sky in motion. I've know intellectually that stars swirl through the Milky Way, only too slowly for us to notice on our human timescale. Observing Barnard's Star proper motion gave me a direct and rare connection to this fact that only a significant chunk of my life time could provide.

DSS image of the field of Barnard's Star. It's the brightest star near the center of the photo, and using the page 1252 chart from Burnham's, the photo seems to have been taken in the mid-1980's.

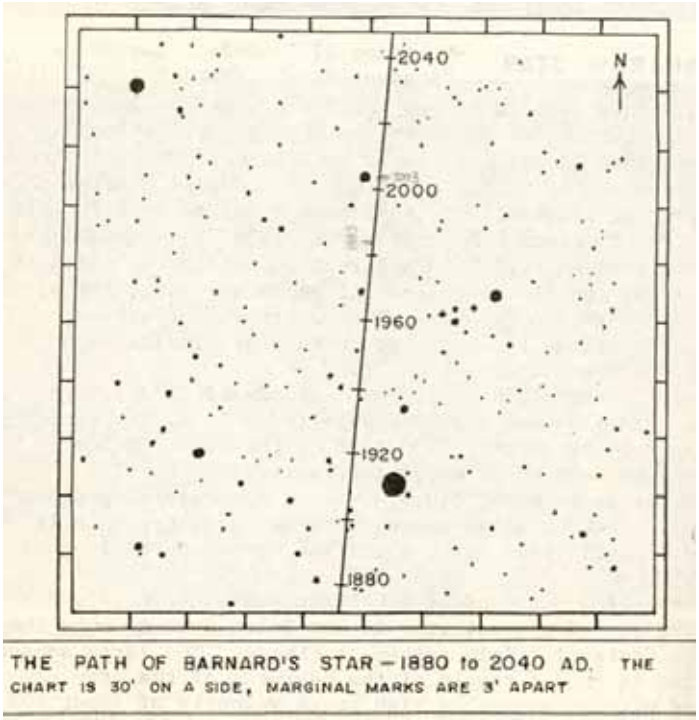
(Continued on page 7)

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

By the way, as part of my research for writing this article I found my original notes – from June 4, 1983, exactly 20 years before my latest observation. The best I can come up with for that nifty convergence is "whoa – that's flippin cool!"

I also like what I wrote in my 1983 notes: "Only six light years distant, this inconspicuous little star is the second closest after the triple Alpha Centauri system – starlight only six years old, and next to the sun the youngest starlight I've ever seen."

I'm not going to wait another 20 years for my next observation though. However, just out of curiosity I looked up June 4, 2023 - it's on a Sunday. Even though it won't be my next observation of Barnard's Star I do believe I'll have another look at it on that fine and future night. I'll mark its position on page 1252 about a half inch above the 2003 mark, if for no other reason than to note one more tick of the Milky Way's galactic clock.



Page 1252, volume two of Burnham's Celestial Handbook with my 1983 and 2003 positions of Barnard's Star marked on the line of its proper motion. Note the "V" shaped asterism to the right of the 1960 position.

The OREGON STAR PARTY is held in the isolation and darkness of the Ochoco Mountains in Eastern Oregon 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 and is accessible most of the way from Prineville via a paved road, with only the last 4 miles on a graveled road. Come join us August 24th through August 27th for the darkest skies in the Northwest. Information, directions, registration, activities are listed on the website at http://www.oregonstarparty.org.

REGISTRATION - Pre-Registration closes on July 28th and must be in our hands by then. So if you didn't pre-register before July 28th, you'll have to register at a higher fee on-site at the star party in the Registration Tent. You can only order T-shirts, Sweatshirts and Dinners on the Pre-Registration Form. The only on-site sales of t-shirts and sweatshirts will be on Saturday in the Volunteer/OSP Information Tent if there are any extras left over after people who Pre-Registered get theirs.

HOODED SWEATSHIRTS - This year we also have hooded sweatshirts available. Because we didn't get the information in time to put it on the registration forms, you can pre-order them, then pick them up and pay for them at the Registration Tent on Thursday and Friday. See the website for more information.

SPEAKERS - We've managed to get a great list of speakers again this year. There will be great presentations by Mark Martin on Dark Matter and Dark Energy, Jack Semura on "From the Big Bang top OSP", Miles Paul and Bob McGown talking on Observatories and observing from Africa. There will also be an interesting talk by Jeff Kaufman on "The Allen 1cm Telescope Array". Dave Haworth, Howard Knytych will be talking about observing and imaging, just to mention some of the speakers.

ACTIVITIES - Don't forget 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

(Continued on page 8)

Oregon Star Party *(Continued from page 7)*

Magnitude and Sky Identification programs. There are a lot of things to do during the day at OSP in addition to the very dark night skies.

YOUTH ACTIVITIES - This year Jenny has another exciting schedule of 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 32 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 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, momaesme@gmail.com; for adult mentoring contact Mark Dakins, mdakins@earthlink.net; and for youth telescope mentoring contact Bernie Kuehn, kuehnb@earthlink.net. Again this year there will be door prizes just for a volunteer's special drawing.

VOLUNTEER/OSP INFORMATION TENT - There will again be the tent for volunteer and OSP information at the junction of the 800 and 802 roads just across from the Activities Tent. Ask questions and get answers - Sign up to volunteer to cover a 2 hour 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.

DOOR PRIZES - To date we've received a lot of wonderful door prizes and more arriving each day.

BURGERS - yes, Mary will be back with the Chuck Wagon serving up breakfast, lunch, dinner and late night snacks as in the past. This year the Chuck Wagon is again planning on being open for business Wednesday afternoon through Sunday Noon for us.

Telescope Workshop

When: Saturday, July 8, 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

RCA LIBRARY

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

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

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

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Thursday, July 20, 7 PM.

Topic: "Eddington's Folly", East Indian Physicists
Presented by: T.G. Doddathimmaiah

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

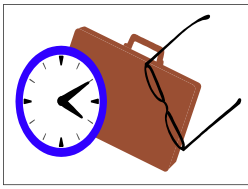
Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499) for more information.

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

Breaking News...

OMSI's Perseid Meteor Shower Watch is now scheduled for Saturday, August 12, 2006 at Rooster Rock State Park



BOARD MEETING MINUTES

June 5, 2006
OMSI Classroom 1
Andy Phelps

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

Board members present: Carol Huston, Peter Abrahams, Matt Brewster, Jeff Sponaugle, Ken Hose, Matt Vartanian, Ed Epp, Greg Rohde, Bob McGown, David Nemo, Andy Phelps, Patton Echols, Dareth Murray, Jan Keiski, Larry Godsey, Jenny Forrester.

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 14 voting members present.
- Treasurer's Report – Ed Epp: $22,553.79 total liabilities and equity. Astronomical League still needs to be paid for this year, and Ed will get the bill from Dale Fenske. Depreciating telescopes was discussed. This probably wouldn't help, due to our tax-exempt status. The proposed budget for fiscal year 2006-2007 was reviewed at length. Items added to last year's activities were $200 for awards and $200 for youth programs. Many entries were reduced to balance the new budget to estimated annual income so we wouldn't plan a deficit budget. Motion: Dareth moved to accept the budget as modified; seconded by Matt; and accepted unanimously. Question: In the future, should dues be raised to cover a budget deficit? It was decided that this discussion is too big to take place during a budget review. Ed announced his plans to resign as treasurer at the end of his term in December. Since the treasurer job is such a key role and needs some training to transition, the board should be looking for a new candidate earlier that can step in and spend some time training with Ed.
- VP Observing – Matt Vartanian: June 10 is OMSI star party at Rooster Rock, June 24 is fund raiser star party at McMenamin's Grand Lodge in Newberg (benefits site fund).
- VP Community Affairs – Jeff Sponaugle: MDA has requested a star party on July 9; we successfully put one on for them last year. We also received a request to put on a star party along the Deschutes River in September.
- New Member Advisor – Jim Reilly: (via email) will hold new member orientation on June 7.
- Media Director – Patton Echols: Press release sent out for McMenamin's Star Party; it will be mentioned in Bob Duke's column.
- Book Library – Jan Keiski: Has found new library software. Has added several new books.
- Telescope Library – Greg Rohde: Nominal.
- IDA – Bob McGown: Has been meeting with neighborhoods about light shielding. Matt would like Bob's help in preparing a proposal to Tri-Met about Max-line lighting.
- Magazine Subscriptions – Larry Godsey: May subscriptions were $457.50
- Webmaster – Dareth Murray: David & Larry will be updating web site for ALCON 07.
- Site Committee – David Nemo: June 24 event at McMenamin's Grand Lodge. Will be holding a "big ticket" raffle in the next few months. Saw a site near Hagg Lake – will hold an evaluation star party. Site fund stands at just over $9000 in pledges and donations.
- OMSI – Carol and Jan: June, July, and August general meetings will be held in planetarium. Agreement with OMSI will be signed.

Old Business

- Action Item: Dave and Bob to work up guidelines for lifetime membership. Develop guidelines for targeting donations – property, cash and acknowledging donors. Tabled for now.
- Phone Line Report: June 6 through July 10: Greg Rohde, July 11 through August 7: Patton Echols

New Business

- ALCON Committee Report – Dareth: Very productive meeting: Account was set up at Bank of the West; PSU is the venue for the event; in process of arranging Star-B-Que and Gala banquet; speakers are being contacted via mail.
- SETI Institute – Bob McGown: Bob would like to represent RCA on a team of astronomers in the SOFIA project, a 100-inch infrared telescope mounted in a plane. Motion: Dareth, second: Greg, motion passed unanimously.
- JRCA Summer Program – Jenny Forrester: Will hold youth program June, July and August for ages 6-16. Wants to facilitate "Sky Puppies" program from AL for kids 10 and under and "Universe Sampler" program for kids 11 and older. Approved.

Adjourn: 9:18pm.

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 <david6366@msn.com>

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

July 2006

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 2006

July 7	Fri	Downtowner's Lunch		Noon
July 8	Sat	Telescope Workshop	Swan Island	10am—3pm
July 10	Mon	RCA Board Meeting	OMSI Classroom1	7pm
July 17	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
July 20	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm

August 2006

Aug 4	Fri	Downtowner's Lunch		Noon
Aug 5	Sat	Telescope Workshop	Swan Island	10am—3pm
Aug 7	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Aug 21	Mon	RCA General Meeting	OMSI Planetarium	7:30pm

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 18, Issue 8 Newsletter of the Rose City Astronomers August, 2006

Spacescapes...Nightscapes

A Visual Exploration Of The Night And Beyond
Presented by John Foster

Artist and photographer John Foster presents slides of nocturnal vistas photographed during travels throughout the western U.S. and journeys through space and time via his artwork. If time and distance didn't matter where would you go? Through artistic media one is free to move about the universe.

John Foster has been the contract planetarium artist for OMSI since 1983 and has done freelance work for many years. His clients have included *NASA, The National Science Foundation, National Geographic ,The Planetary Society, Sky and Telescope, Astronomy,* and many others. His award –winning images appear routinely in publications worldwide.

All are Welcome! Monday August 21

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

Location: OMSI Planetarium

In This Issue:

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

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

First Quarter Moon	Full Moon	Last Quarter Moon	New Moon
August 2	August 9	August 15	August 23

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message

August 2006...

By Carol Huston

An Interesting Phenomena

How many times have you heard, "How can you live and observe in the Pacific Northwest with all of that rain? That must be hard."? Well, I have uncovered some interesting statistics from my landscaping hobby that I'd like to share with you.

Our major observing season spans from May through October (not that we don't observe during the other months – May through October are just more major for observing outings). The United States (the lower 48) is divided pretty much in half by the 100th meridian. In the gardening world, the land east of the 100th meridian is considered "the wet east", while everything west of the 100th meridian is considered "the arid west". I never thought I'd hear Portland and Seattle being termed "arid", but those two cities fall into the arid west category. Average rainfalls in the arid west from May through October are: Seattle – 10.42; Portland – 9.8; San Francisco – 7.95; Los Angeles -- .86; Boise – 4.15; Salt Lake City – 6.11; and Billings – 8.78. The much wetter east average rainfalls from May through October are: Omaha – 21.72; Dallas – 16.4; St. Louis – 18.47; Chicago – 20.02; Atlanta – 21.27; Cleveland – 18.91; Boston – 19.57; New York – 21.32; and Miami – 43.89. Note that the wettest city in the west has less rainfall than the driest city in the east – for six months out of the year!

These statistics should give you a satisfactory retort to the "all of that rain" type of comments you may ever hear! Enjoy your summer – even with this heat.

A SAMPLING OF TELESCOPES FOR THE AMATEUR ASTRONOMER—PART 16

By John W. Siple

Unitron's original yoke-style Model 150 4-inch f/15 altazimuth refractor telescope was introduced in April 1953 for $465. The streamlined 4-inch altazimuth long-focus refractor, at half the weight (and cost) of their giant 100 lb. equatorial No. 152, was a popular alternative for those wishing for quality optics in a more manageable telescope. Unitron's Model 150 altazimuth mounting has a very workable swept-fork form, where the telescope optical tube rides on trunnions for vertical movement. Motions in both altitude and azimuth are silky smooth, and the telescope can be used in either terrestrial or astronomical mode with equal ease. To facilitate tracking of astronomical objects in azimuth, an auxiliary manual slow motion control was added in February 1956. The example pictured at left has been modified by the author to resemble Clark's Type T design; a hinged cradle sandwiched between the fork arms permits easy removal of the tube assembly and the tube can be moved longitudinally for the best balance position.

This Unitron product, the choice of leading universities and active amateur astronomers the world over, was repeatedly advertised on the outside back cover of *Sky & Telescope* magazine throughout the mid-to-late 1950s and early '60s. From May 1967 to September 1970, the reader was given an added treat: *Sky & Telescope* began publishing a monthly series of articles entitled "A Messier Album" by accomplished visual observer John H. Mallas and astrophotographer Evered Kreimer. Detailed observations and drawings of all 110 Messier objects were made by Mr. Mallas through his 4-inch Unitron Photo-Equatorial refractor, the same optical system used for the Model 150. The clarity and definition of celestial wonders as viewed through a 4-inch Unitron is demonstrated fully by browsing through the pages of those articles (*The Messier Album*, a collection of all 41 installments, has been reprinted several times by Sky Publishing Corporation).

(Continued on page 4)

Peter Taylor Quidley's (1945) intriguing artwork "Balloons," circa 1986. The 1950s era Model 150 refractor is used as a prop in this Cape Cod painting. Note the Unitron telescope's brass tube assembly, typical of earlier manufacture (the original overlying enamel has been removed).

++For absolutely safe solar observation it is highly recommended that a modern, commercial Mylar filter or similar be employed.

Advertisement from the UNITRON ASTRONOMICAL TELESCOPES Including the New OBSERVER'S GUIDE. ©1958, United Scientific Co.

Telescope Sampling 16 *(Continued from page 3)*

Unitron 4-inch inner objective lens cells marked D100mm and D102mm—the font spacing and size is slightly different.

The heart of the Unitron optical system is an air-spaced, achromatic objective lens that is fully corrected for spherical and chromatic aberration and for coma. The precisely machined anodized aluminum cell holding this precious commodity is marked with the focal length (1500mm) and the aperture. 4-inch lenses made in Unitron's early history, used on both altazimuth and equatorial telescopes, are considered some of the best in the industry and have a D100mm inscription. Those marked D102mm were used on telescopes from the late fifties onward. The telescope manufacturer's literature states that:

> "UNITRON"S achromatic objectives are designed to meet the most exacting requirements of the professional astronomer. Exclusive lens formulae, use of the newest types of optical glass, painstaking care in manufacture—these are some of the ingredients of a UNITRON objective."

Image of Campbell's Hydrogen Star by Al Kelly using a Starlight Express MX916 and a 32" f/4 Newtonian.

An opportunity for testing the 4-inch Unitron's ability to discern stellar-like planetary nebulae is offered by hunting the incredibly rich star fields of Cygnus for PK64+5.1, also known as Campbell's Hydrogen Star. A tiny 8" planetary hovering at visual magnitude 11.3 and with a dominant central star (mag. 10.03) of the Wolf-Rayet classification, this object blends-in with the other stars of the Milky Way. It is found just 2.6° northeast of the Northern Cross's famous colorful double star Albireo. A trick to locating the nebula is its light reddish-orange hue, which becomes more obvious in bigger instruments with their greater light-gathering power. Contrary to what other observers' logs might suggest for such a moderate-size refractor in finding this small, difficult object, the position of Campbell's Hydrogen Star was quickly pinpointed in the 4-inch Unitron using a 35mm Panoptic eyepiece (43x). Examining this stellar powerhouse and possible future supernova with powers ranging from 79x to 312x, little change in appearance was observed by increasing the magnification—a bright central star displaying a perfectly circular, hazy outer envelope with only a very gradual increase in apparent size. In *Astronomy & Space* magazine (September 2002, page 32), experienced visual amateur astronomer Susan Delaney mentions:

> "When compared to nearby field stars at 92x in an 18" Newtonian, this almost stellar-like object appeared as a bright, mag. 10, deep orange-red star with a small, faint, orange-tinged diffuse glow. When the magnification was increased to 170x and 227x, a small disk of uniform brightness was clearly visible, however, its pale orange tinge was lost. It did not respond to the UHC or OIII filters at any power. According to other visual observers, this object responds favourably to an H-beta filter."

Image of M27 courtesy Jack Newton Arizona Sky Village.

The fabulous Dumbbell Nebula M27 (NGC 6853) in Vulpecula is a favorite object that is returned to again and again in observing sessions during clear summer night skies. M27 is found 3.3° due north of Gamma Sagittae, the tip of the arrow in that constellation, embedded in a star strewn portion of the heavens. Spanning an impressive 8' X 5.7' in size, only exceeded in dimension by the Helix Nebula in Aquarius, the closest planetary nebula, the Dumbbell is an easy target in all amateur telescopes. In a 20mm Nagler (75x), this 7.3 magnitude puff of misty light is oriented NNE-SSW, and has a very noticeable bright patch on the western side of the SSW lobe. The hourglass-shaped Dumbbell Nebula exhibits a soft greenish glow that is the result of the illuminating central star, a very hot (85,000° K) bluish dwarf whose ultraviolet radiation causes the rarified gas to fluoresce. An Oxygen-III filter intensifies the view of the entire nebula complex. However, the magnitude 13.8 central star was just beyond the threshold limit for the 4-inch Unitron and was not seen.

The two truncated cones of M27 have given rise to a variety of monikers, some outlandish, since their discovery on July 12, 1764 by Charles Messier: hourglass, celestial pillow, apple-core, bowtie, cotton-reel, etc. What is your impression of M27 through the eyepiece?

(Continued on page 5)

Telescope Sampling 16 *(Continued from page 4)*

Image by Scott Tucker/www.darkskyimages.com.

Bounded by the glowing coils of the Veil Nebula to the northeast, the Dumbbell to the southwest and the full glory of the Northern Cross to the north is the galactic star cluster NGC 6940. Shining at a bright integrated magnitude 6.3 and with an impressive diameter of 31', this swarm of over 100 suns is a logical target for richest-field telescopes. NGC 6940 has the majority of its members fixed squarely in the 11th to 12th magnitude bracket, making the cluster accessible to a variety of other amateur equipment from dark-sky locations. The 4-inch Unitron refractor also provides a memorable view in a Tele Vue 32mm Wide Field ocular (47x), where the cluster appears as a mildly concentrated, detached portion of the Milky Way. A caveat is the sheer richness of the Summer Milky Way in that region of the sky—NGC 6940 tends to blend-in with the background stars, which can make identification somewhat difficult (see the magnificent photo of the Cygnus Milky Way above—NGC 6940 is the small fuzzy spot at the very bottom center of the frame). The semiregular variable star FG Vulpeculae, ruby red in color and with a magnitude range of 9.0-9.5 over an 80 day period, is clearly visible in the Unitron refractor at the cluster's center.

Undoubtedly, this sprinkling of star dust would be far more impressive if it were found at the same distance as the Pleiades or Beehive Cluster, but a location 2,500 light years away has appreciably dimmed the light of its stars. This open star cluster's plotted location and high NGC number on star atlases can be viewed as one of an outpost, the last vestige of summer's treasure horde of celestial gold before the great constellations of Autumn wheel into position with their myriad offerings for telescopic enjoyment.

Image of NGC 6572 courtesy Bruce Bodner/Adam Block/ NOAO/AURA/NSF.

Resembling some kind of strange, giant gaseous baseball hit around in a cosmic stadium, the planetary nebula NGC 6572, at magnitude 8.1, is the brightest of its class in the constellation Ophiuchus. At 224x, this bizarre-looking object shines with an intense bluish light in the Unitron 4-inch refractor, and has a definite N-S orientation. A magnitude 9.5 field star lies just 3.7' to the immediate east, and is a recommended aid for getting the proper focus of your telescope on NGC 6572's diminutive 15" X 12" elliptical disk.

Astronomer James Mullaney, in *Celestial Harvest—300-Plus Showpieces Of The Heavens For Telescope Viewing & Contemplation*, with a sense of light-hearted observing humor, says:

> "The very dim central star is all-but-invisible–at least partly due to the high surface brightness of the engulfing nebulosity – an interesting twist to the phrase 'light pollution'."

As with Campbell's Hydrogen Star and numerous other planetary nebulae populating our Galaxy, the central star of NGC 6572 (mag. 12.88) is a massive, hot, evolved sun of the Wolf-Rayet type. These luminous stars are characterized by intense stellar winds, and may eventually form exotic collapsars in their evolutionary history, sending out strong gamma-ray bursts as they form black holes.

Unitron's 4-inch Model 150 presented the consumer with portability, easy terrestrial pointing, quality optics, and all in a package of less than fifty pounds. (The popular 1972 catalogue shows the mounting redesigned to a counterweighted configuration with detachable cradle—this same unit was offered for a short period of time in the late 1980s as a mounting option on VERNONscope's famous 130mm f/8 Brandon line.) These old yoke-style Model 150 Unitron refractors are extremely collectable. They make wonderful props for modern artwork, backdrops for planetarium exhibits, grace the dens of serious collectors, and of course are used for probing the heavens. Normally a complete instrument in good operating condition can realize $1,400-1,700 on the secondary market, but there have been some recent sales of around $2,100 for sterling examples with the scarcer 1950s 100mm doublet objectives.

THE OBSERVER'S CORNER

Howard Banich

M57, The Ring Nebula.

This wonderful object has been a favorite of amateur astronomers for centuries. It's especially appealing in late summer when it's near the zenith soon after the sky gets dark, and also because it's one of the easiest deep sky objects to locate being almost exactly halfway between gamma and beta Lyrae, two obvious naked eye stars. Through almost any size telescope it can be seen as a ghostly but sharply defined oval and in all but the smallest scopes the central hole is obvious. Its central star is a different mater…

The Ring is one of the relatively rare deep sky objects that take high magnification well, and so has been the given as much attention by amateurs for observing its distinctive nebulosity as for spotting its elusive central star. A high magnification view of the Ring through a large scope is practically required at summer star parties, and the promise of seeing the central star will form a line for hours. It's a great sight and if you haven't had the pleasure yet I highly recommend treating yourself next time the opportunity presents itself.

So what is this amazing object and why is shaped like a ring (or a donut or a Cheerio, etc…). How was it discovered? Who really found it first?

The Ring Nebula was actually first seen by **Antoine Darquier de Pellepoix** from southern France with a 64mm refractor while observing a comet in late January 1779. He wrote:

> *"Nebula between gamma and beta Lyrae; it is very dull, but perfectly outlined; it is as large as Jupiter & resembles a planet which is fading."*

The Ring was the second planetary nebula discovered - the Dumbbell was first in 1764, by Messier – and it's a possibility that Darquier's description gave rise to the term "planetary nebula" for this class of objects.

Charles Messier's description of the Ring Nebula, which he independently discovered just a few days after Darquier while observing the same comet is rather different:

> *"A cluster of light between Gamma & Beta Lyrae, discovered when looking for the Comet of 1779, which has passed it very close: it seems that this patch of light, which is round, must be composed of very small stars: with the best telescopes it is impossible to distinguish them; there stays only a suspicion that they are there." He probably used a 90mm refractor for this observation.*

It's interesting that neither Darquier or Messier mentioned the dark center but their discoveries are a fascinating echo of the recent very close passage to the Ring of comet Schwassmann-Wachmann 3, fragment C, this past May.

William Herschel had a history of observations of the Ring and his well deserved reputation as one of the best visual observers of all time makes them fascinating reading (telescope descriptions are the focal lengths of his scopes):

> *1782: "7 foot telescope. I suspect it to consist of very small stars; in the middle it seems to be dark."*
>
> *1783: "10 foot telescope. With 130x it seems to be a rim of stars, but with 350x there remains a doubt. It is a little oval; the dark place in the middle is also oval; one side of the bright margin is a little narrower than the other."*
>
> *1784: "20 foot telescope. It is an oval with a dark place within; the light is resolvable. 240x showed several small stars near, but none that seems to belong to it. It is near 2 minutes in diameter."*
>
> *1785: "A perforated Nebula, or Ring of Stars. Among the curiosities of the heavens should be placed a nebula, that has a regular, concentric, dark spot in the middle, and is probably a Ring of stars. It is of an oval shape, the shorter axis being to the longer as about 83 to 100; so that, if the stars form a circle, its inclination to a line drawn from the sun to the center of this nebula must be about 56 degrees. The light is of the resolvable kind [i.e., mottled], and in the northern side three very faint stars may be seen, as also one or two in the southern part. The vertices of the longer axis seem less bright and not so well defined as the rest. There are several small stars very near, but none seems to belong to it. It is the 57th of the Connoissance des Temps." (or as we know it, M57 in Messier's catalog).*
>
> *1805: "large 10 foot telescope. By a meridian passage of 7 seconds of sidereal time, the diameter is 1' 28".4." By the observation with the 20 feet telescope, the profundity of the stars of which it probably consists must be of higher than 900th order; perhaps 950."*

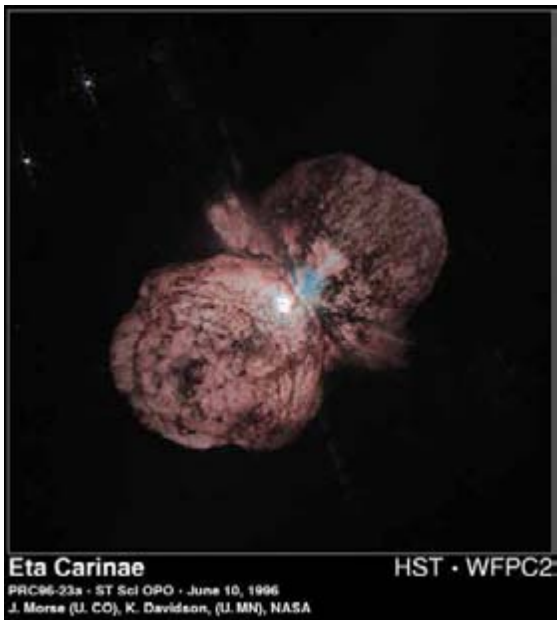
The central star was discovered in 1800 by German astronomer Friedrich van Hahn with a 20 foot focal length scope. I'm surprised Herschel didn't see it first because he was such a careful observer and was almost convinced the Ring itself was made of stars anyway, so he was no doubt trying his best to resolve individual stars. This is more a tribute to how difficult an observation the central star can be and how much observing conditions play a part. Herschel was probably just unlucky with less than ideal seeing conditions. Even so, his 1784 observation claims he resolved the Ring into stars, but that's an unfortunate side effect of his belief that all nebulous objects consisted of stars. It's also a good reminder to not always believe what you think you see.

(Continued on page 7)

(Continued from page 6)

The Ring exists because its formally Sun-sized central star ejected its outer layers into space while turning itself into a white dwarf. The white dwarf star, now 100,000 K hot, ionizes its former stellar atmosphere exciting it to glow in visible light. The three dimensional shape of the Ring is probably much like the Dumbbell and Eta Carinae nebulae – a bi-polar, hourglass shaped nebula that appears two-lobed from the side but ring-like and mostly dark from either end. The center of the Ring is actually filled with nebulosity but since it emits mostly UV light we see it as dark. With the Ring we're lucky to get this end-on view but I suspect it would be a showpiece object no matter what angle we saw it from.

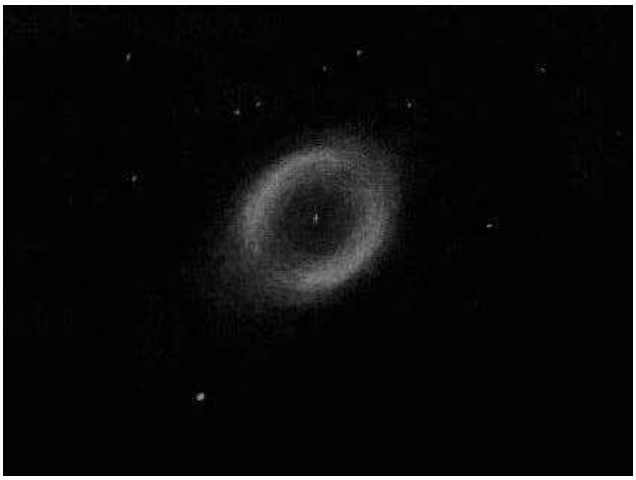
M27, ESO 8.2 meter VLT photo
Courtesy European Southern Observatory (ESO)



Eta Carinae, HST photo
Courtesy Jon Morse (U of Colorado), and NASA

A few things to look for the next time you observe the Ring:

- Note the overall elliptical shape of the perimeter of the Ring, but also the almost circular perimeter of the dark central hole.



M57, 20" f5 sketch

- Look for the longer ends of the nebula to appear slightly fainter and less well defined.
- Can you detect the faint nebulosity in the central hole? Compare its brightness to the sky outside the Ring. If you detect something, can you see any shape to it?
- For those with exceptional color sensitivity, can you detect a color difference between the outer and inner edges of the nebula?
- To see the central star you'll need magnifications of at least 300x but preferably more. I've found I can usually start to see it well in steady seeing conditions around 400x but higher powers give a more definite view. Steady seeing and some patience will also be needed because this star will come across as very small and faint. The smallest scope I've heard of anyone using to see the central star is 12" (diameter, that is) but a 15" and up scope is needed for most of us. Bigger is definitely better in this case. If you can see it, do you get an impression of color?
- For those with scopes 20 inches and larger, you have a chance to see the second star within the dark central area. Again, you'll need exceptional conditions as it's much more difficult than the central star to see. This star is a chance alignment and I don't know if it's in front of or behind the Ring.

I hope we all get for our best view ever of the Ring this summer, but keep looking regardless. This one is worth repeated viewing not just over the years but also during the course of a single night, especially if sky conditions improve.

2006-2007 MEMBERSHIP RENEWAL

Your RCA membership is active through June 30, 2006. Please renew your membership for the year July 1, 2006 through June 30, 2007.

You may renew your membership for $24 at the August 21st RCA General Meeting or by mail. Send to: RCA Membership, OMSI, 1945 S.E. Water Ave., Portland, OR 97214.

Make check payable to: RCA. Thank you for your support and participation.

RCA LIBRARY

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

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

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

Rose City Astronomers '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-omsi.org).

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

Always great conversation and food.

For more information contact: Margaret McCrea at mmcrea@nwlink.com

Photo by Jan Keiski

Discovery and crew land safely after a successful mission (STS-121) at 9:14 am. (EDT) on July 17, 2006
Courtesy NASA.

BOARD MEETING MINUTES

July 10, 2006
OMSI Parker Room
Ken Cone for Andy Phelps

President Carol Huston called the meeting to order at 7:10 PM.

Present: Carol Huston, Matt Vartanian, Larry Godsey, Sameer Ruiwale, Ken Hose, Ken Cone, Greg Rohde, Ed Epp, Jan Keiski, David Nemo, Patton Echols, Matt Brewster, Dareth Murray.

Board Reports

- Secretary's Report – Andy Phelps represented by Ken Cone: Quorum (11) met with 13 voting members present.
- Treasurer's Report – Ed Epp: Ed passed out the quarterly/end of year report showing budget versus actual. Club assets are $22,020.05 with $8,952 earmarked for the Site Fund. The savings on this year's expenditures resulted from reducing paper distribution of the Rosette Gazette. Income is mainly from membership dues and merchandise sold at the sales table.
- VP Programming – Matt Brewster: This month (July), Fabio Governato from U of W will present a talk on galaxy modeling in the planetarium. The speaker for August is Eric Egal, also from U of W.
- VP Observing – Matt Vartanian: There will be two star parties in July. Last weekend's star party was great.
- VP Community Affairs – Jeff Sponaugle: Absent.
- VP Membership – Ken Hose: Membership renewals = 50, new members = 2, member families = 142. June dues received $1276.
- New Member Advisor – Jim Reilly: Absent.
- Media Director – Patton Echols: No report
- Sales – Sameer Ruiwale: No sales in June; both Sameer and Ken were on vacation.
- Book Library – Jan Keiski: new Messier Marathon book by Don Machholz. OMSI star party was popular with lots of questions asked about RCA.
- Telescope Library – Greg Rohde: The 8" Hardin dob is a new donation to the club. It is "new in box" condition and replaces Telescope #6 (blue box kite 10" Dob) which will be rebuilt at the ATM workshop.
- IDA – Bob McGown: Absent.
- Magazine Subscriptions – Larry Godsey: $285.80 for June receipts.
- Webmaster – Dareth Murray: The web site includes a form for new member renewal, info about Trout Lake star party, plus a new section for beginner's on the main page. The club now owns the URL "rosecityastronomers.org"
- Site Committee – David Nemo: started raffle last month, McMenamins Grand Lodge 45+ telescopes site committee took in a $500 plus $220 merchandise, a great success.
- SIGs – Ken Cone: no report
- OMSI – Carol and Jan: Will get the tri-fold for OMSI store.
- Gazette Editor and Alcor: Absent.

Old Business

- Action Item: Dave and Bob to work up guidelines for lifetime membership. Develop guidelines for targeting donations – property, cash, and acknowledging donors. Tabled for now.
- Phone Line Report: June 6 through July 10: Greg Rhode: Helped a new member with his scope.
- July 11 through August 7: Patton Echols
- August 8 through September 11:_____

New Business

- ALCON Committee Report: Dareth gave summary meeting minutes. Some committees still need leaders such as merchandise, youth activities, and others. Contact Dareth if you can help.
- RCA's e-list versus forum. Several months ago, Jeff Sponaugle offered to explore an on-line forum format for RCA interaction and group focus. Carol will connect with Jeff for him to follow through on that review. MOTION: David moved to authorize up to $500 to retain counsel for the purpose of discouraging others from using the RCA name "rosecityastronomers". Dareth seconded. Passed unanimously.
- Greg proposed a generic RCA business card that all board members could use to pass out at public star parties and for general use with people asking questions. He will work with Jan to set up some personalized versions for the two of them, as well as a generic design so each board member can add their personal information as needed.
- Discussion of RCA outreach: VP of Community Affairs should track all presentations made by RCA members at schools, clubs, and other outreach opportunities. Any board member giving a presentation or star party needs to get that information to Jeff. The AL now has a national award for public outreach and we want to make sure that we are recording all of the activities for which we volunteer.
- Carol suggested we need to start thinking about the election process which formally begins in August. This would include the positions of President, VP of Membership, VP of Observing, VP of Community Affairs, VP of Communications, Treasurer, and Secretary. The appointed directorships would not be included.
- Carol presented an issue posed from a non-RCA member who was requesting access to the members-only e-list without joining RCA. The board decided that there were several club activities that, for specific reasons, were made available to the general public and there were several club activities that were available to members only, with the e-list being available to members only. Carol to communicate back to the requester.
- Several months ago, Jeff Sponaugle offered to explore a forum format for RCA interaction and groups focus. Carol will connect with Jeff for him to follow through on that review. MOTION: David moved to authorize up to $500 to retain counsel for the purpose of discouraging others from using the RCA name "rosecityastronomers". Dareth seconded. Passed unanimously.

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

August 2006

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 2006

Aug 4	Fri	Downtowner's Lunch		Noon
Aug 5	Sat	Telescope Workshop	Swan Island	10am-3pm
Aug 7	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Aug 12	Sat	OMSI Persied Meteor Watch	Rooster Rock S. P.	
Aug 19	Sat	RCA Star Party	White River Canyon	
Aug 24-27	**Th-Su**	**Oregon Star Party**	**Indian Trail Springs**	
Aug 21	Mon	RCA General Meeting	OMSI Planetarium	7:30pm

September 2006

Sep 1	Fri	Downtowner's Lunch		Noon
Sep 2	Sat	OMSI Autumnal Equinox	Rooster Rock S.P.	
Sep 9	Sat	Telescope Workshop	Swan Island	10am-3pm
Sep 11	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Sep 18	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
Sep 21	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
Sep 22-24	Fri-Sun	RCA Star Party	Indian Trail Springs	

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 18, Issue 9 Newsletter of the Rose City Astronomers September, 2006

RCA SEPTEMBER GENERAL MEETING

UNIVERSE DESIGNED TELESCOPES
A New Way to Approach Telescope Design
Presented by Mel Bartels

Mel will talk about a new way of thinking about telescopes that he's been developing the past several years. He will present new telescope designs, show current state of the art designs, and explain how they inherit from telescopes built throughout the ages. Mel will use our Universe's design as an inspiration, and touch on creativity, our mind, and the meaning of it all.

Mel Bartels has been looking "up" since the 1960s. Interests in deep sky observing and cold camera astrophotography turned to large thin mirror grinding when he met John Dobson in 1980, and was given a night on John's 24" at Crater Lake.

Mel has ground mirrors up to 30" in size, led several mirror making classes, and conducted a Telescope Optics Workshop in Bellingham Washington where half a dozen people figured 16" mirrors.

Mel ran the Amateur Telescope Makers listserv for six years, a worldwide group dedicated to sharing and advancing the art of telescope making. Since 1990, Mel has worked on computer control of motorized telescopes, and developed a freely distributed control system that in use worldwide. In addition, Mel continues developing innovative mounting designs, recently inventing the TriDob. The International Astronomical Union honored Mel by naming asteroid 17823 Bartels for his contributions to amateur astronomy.

All are Welcome! Monday September 18

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

Location: OMSI

In This Issue:

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

Full Moon	Last Quarter Moon	New Moon	First Quarter Moon
September 7	September 14	September 22	September 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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message

September 2006

By Carol Huston

High-Tech Telescopes
Defining Terms Used in Marketing

With the advent of CCDs and the new computer-controlled telescope drives, this may be your first brush with the arcane world of really high-tech. For anyone who may be considering some of the advanced products now on the market, these definitions will provide an interpretation of a few terms that you've no doubt seen widely used in advertisements.

ALL NEW - The power supply, connectors, and software are not compatible with previous versions. Even the screw threads are different. ADVANCED DESIGN - Salespeople don't understand it. BREAKTHROUGH - It nearly worked on the first try. DESIGN SIMPLICITY - It was developed on a shoestring budget. EXCLUSIVE - We're the only ones who have the directions telling how to use it. FIELD TESTED - The manufacturer has no way to test it. FOOLPROOF OPERATION - It's unrepairable, short of sending it back to the factory (which can't fix it either). FUTURISTIC - It only runs with the help of a next-generation computer, which isn't available yet. HIGH ACCURACY - The screw threads match the threads of the holes they're supposed to mate with. IT'S HERE AT LAST - We've released a 26-week project in 48 weeks. MAINTENANCE FREE - see Foolproof Operation. MEETS OR EXCEEDS OPTICAL STANDARDS - We haven't the foggiest idea about the total wavefront accuracy. NEW - It comes in a different color than the first version. PERFORMANCE PROVEN - It worked through beta test. QUALITY STANDARDS - It works most of the time. REVOLUTIONARY - Everything that's supposed to go round and round actually goes round and round. SATISFACTION GUARANTEED - We'll send you another manual if this one fails to work. STOCK ITEM - We shipped it once before and we can do it again, probably. UNMATCHED - No one else wants to copy our design. UNPRECEDENTED PERFORMANCE - May mean two different things: 1). Actually worked the first time right out of the box. 2. Nothing before ever ran so erratically. YEARS OF DEVELOPMENT - We finally got one to work.

From Meteorites to Termites! Further adventures in Namibia

By Bob McGown & Dareth Murray

From Windhoek, we headed up to Grootfentein and the Hoba Meteorite. It was a good road all the way but we had several heavy cloudbursts that slowed us down and plenty of regular rain too. In many places the land around the highway on either side was completely flooded. We did see some animals along the way: warthogs, an eagle, some Kudu and literally thousands of termite hills. These hills can reach 9 feet high above ground and as much as 20 meters below! We called them termite "castles" because they are so symmetrical and somehow give the impression of a medieval fortress.

Bob with the Hoba meteorite.

Getting toward six p.m. the rain let up so we decided to visit the Hoba Meteorite on the way to Grootfontein, our overnight destination. The Hoba is the largest meteorite ever found on the Earth and is still where it landed! It was down at the bottom of a stone amphitheater with about 5 inches of water surrounding it! Bob measured some of the obvious damage to the meteorite. According to the guidebooks, it was originally 66 tons but is now only about 60! Supposedly when it came screaming through the atmosphere it was close to 100 tons, creating a limestone crater.

Soon we were back on the road, headed for the Meteor Inn in Grootfontein. There was a serious road block right before town. They looked at Bob's passport and International Driver's License, wrote down where we had come from and our plans for the next few days. Finally they let us through. We found the Meteor Inn in the middle of town. It was funky but in a cool way. In our room, there was a mosquito net that came down from a ring in the ceiling but we were told it was not necessary - no mosquitoes yet! We had arrived during the rainy season. Coming from Oregon, I was not upset…yet!

Next morning we left town and headed for Mushara Lodge near Etosha National Park. We quickly found it and were stunned at this luxurious lodge with thatched roof cottages, a large swimming pool & extensive grounds with stunning flowering trees. Wow!

We made arrangements to have our first game drive at 3 p.m. that afternoon. The game viewer, open on the sides but with flaps for bad weather, was waiting for us. There were ten of us along with the driver. This was a six hour game drive and we saw an incredible variety of animals: lions - one male & 2 females; spotted hyenas; dik diks (the smallest antelope in Africa); springbok; kudu; élan; gazelle; a civet cat; warthogs, jackels, too many giraffes, many types of antelope, a group of banded mongoose and lots of termite mounds. And birds! A 7-ft wing-span vulture, eagles; guinea fowl, striped Korhaans; black face plovers, several kinds of eagles; hawks; ostriches; an Egyptian vulture crow, two flocks of horn bills and some Kori Bustards, one of the largest birds that can still fly. Arriving back at the lodge for dinner, we talked with a German couple, Sabina and Reynard. The sky had cleared, so we could show them some southern constellations and African sky lore.

A male lion has his mate in sight!

We were up at 6:30 the next morning ready for another game drive. The lodge made us a picnic breakfast/lunch with lots of good food that we munched on throughout the trip. This time we had the game viewer and Namibian guide Gunter to ourselves. Gunter stopped whenever we asked and was quick to point out various birds we hadn't seen the day before. Right away, at the Dik Dik watering hole we came upon four lions! There were two couples, one mating and the other couple just sleeping. Gunter says that lions sleep about 18-20 hours a day! We saw Egyptian eagles and Eagle owls. Another highlight was the pair of flamingos headed east. Gunter told us they migrate from Walvis Bay to Etosha (northern part) and because of the early rainy season, they were already on their migration. Here is the bad part. Rainy season means NO elephants! They migrate north, away from the populated areas. No need to hang out at the water hole!

(Continued on page 4)

More Adventures in Namibia *(Continued from page 3)*

On our way out, we stopped at the German fort, Namutoni. This site, in 1904 was where seven German soldiers held off 500 Owambo warriors! At night, the soldiers sneaked out of the fort and got away. The infuriated Owambos burned the fort to the ground. The next year it was rebuilt exactly to duplicate the original one. It was declared a national monument in 1950 and opened to tourists in 1957. The park itself is almost 100 years old and was declared a game preserve in 1907. On the way out of the park, there were two young male giraffes fighting on the road. They wouldn't get out of the way at first. Gunter told us they were just "practicing" as they were quite young.

Two young male giraffes in the road.

We spent the afternoon at a Stratomatolite/ historical mining place at Lake Ojikoto, about 45 k from Mushara. A Namibian ham radio operator named Robbie Robinson was our genial host and he and Bob swapped ham radio stories while I shopped for souvenirs. Lake Ojikoto is a collapsed dolomite/ limestone cave. In 1913, during the beginning of WWI, a German Army Captain in the area had an arsenal at Lake Ojikoto. When he realized that he might lose his cannons, he threw them into the lake rather than let the enemy have them. Today, South African divers have gone deep down, some 100 meters, and recovered some cannons off the ledges. They are on display in the museum in Tsumeb, the mining town nearby. There are still 19 cannons and ammunition at the muddy bottom of the lake.

Next morning we were up at 6, ready for an early start. Bob got the solar scope out and we showed all the native staff some of the solar activity. There was a large prominence and everyone was very impressed, having never seen the Sun in a telescope! There were people here that had never seen an ice cube let alone the Sun. The roads back to Windhoek were clear and we made good time from Mushara to Windhoek. We wanted to find the HESS telescope array south of Windhoek, up in the mountains. Unfortunately, on our way out of town, there was a colossal downpour and we missed the first turnoff. As we were driving, the road deteriorated and obviously lots of rain had come down recently because it soon became a sea of water and mud. We didn't dare stop but kept going despite the torrential rains and extremely dangerous road conditions. There was no other traffic!

We were alone, out in the middle of Namibia, getting on toward sundown and no sign of the right road to the HESS! We did have plenty of water and some crackers. We joked that we could survive for a few days out there if we got into car trouble and had to stop. Fortunately after some hair-raising river-crossings, we came to a fork in the road and found the correct road for the HESS. From about 300 kilometers from Windhoek, approaching from the south down the road, we spotted a small sign on the left – HESS! There was a dirt road with a gate. The small sign said: no entrance without prior arrangement. Bob hiked in to the HESS telescope array on the wrong side of the lion and hyena fence while Dareth guarded the car.

We decided that we would just have to find out more and return to the HESS another time. No sooner had we started on our way back to Windhoek, we were drenched by rain. Lightning pulsed to the north and thunder boomed. Bob saw a medium sized catlike animal cross the road so fast, it was surreal. We figured it was a cheetah, from the cheetah farm advertised nearby!

The storms here make Oregon look like Southern California!

As we got into town another torrential rainstorm hit. We found a nice old German hotel on the edge of town. It was now about 9 p.m. and we were exhausted. Bob from driving and me from navigating! But we needed some food so tottered down to the dining room, open until 10. We had an excellent dinner (Ostrich medallions) with the usual South African red wine. We needed a 6:30 a.m. wake-up call in order to get the plane for Cape Town the next day. Bob and I sorted and re-packed

(Continued on page 5)

More Adventures in Namibia *(Continued from page 4)*

for the final leg of our adventure. Next stop - Cape Town and Sutherland, with the largest optical telescope in the Southern Hemisphere - the 11-meter South African Large Telescope (SALT.)

Dareth and her African "sisters" in the marketplace at Windhoek.

BOARD MEETING MINUTES

August 7, 2006
OMSI Auditorium
Andy Phelps

Meeting called to order by Carol Huston at 7:08pm.

Board members present: Ed Epp, Larry Godsey, Ken Hose, Carol Huston, Jan Keiski, David Nemo, Andy Phelps, Greg Rohde, Peter Abrahams, Patton Echols, Matt Vartanian.

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 11 voting members present.
- Treasurer's Report – Ed Epp: $24,264.51 total liabilities and equity. Discussed depreciation of telescope library.
- VP Observing – Matt Vartanian: August 12 OMSI star party at Rooster Rock (Perseids), August 19 White River Canyon, September 2 OMSI Autumnal Equinox star party at Rooster Rock.
- VP Membership – Ken Hose: 50 renewals and 8 new members in July - $1385 collected in dues. Currently 198 member families. Larry and Dareth have added a renewal page to the RCA website. Larry added that there are 84 people on email list who have not renewed.
- Book Library - Jan Keiski: Will be unable to attend August general meeting – assistant will operate library.
- Telescope Library – Greg Rohde: Jeff Henning will operate telescope library at August general meeting.
- Magazine Subscriptions – Larry Godsey: nominal
- Site Committee – David Nemo: Received money from McMenamins for June star party. Needs to purchase binoculars for raffle; will contact Sean's.

Old Business

- Action Item: Dave and Bob to work up guidelines for lifetime membership. Develop guidelines for targeting donations – property, cash and acknowledging donors. Tabled for now.
- Action Item: Greg & Jan: Business cards – Greg had cards printed at Minuteman press in Hillsboro. Board members who need cards should notify Greg.
- Action Item: Carol connect with Jeff about tracking community outreach activities. No action.
- Action Item: Patton report on forum issue: Continuing to follow through with actions. Nothing to report at present.
- Phone line report:
- July 11 through August 7: Patton Echols – 6 calls received.
- August 8 through September 11: Carol Huston
- September 12 through October 2: Andy Phelps
- October 3 through November 6: Matt Vartanian

New Business

- Election process: Nomination committee was formed. It will consist of Greg Rohde and David Nemo. Announcement will be made at August general meeting. Currently the only vacant position is Treasurer.
- Non-member access to e-list: The board maintains desire to keep the e-list a benefit of membership. List will be updated at beginning of September to remove non-members.

Meeting adjourned 8:08pm.

RCA LIBRARY

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

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

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

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

September 2006

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

September 2006

Sep 9	Sat	Telescope Workshop	Swan Island	10am-3pm
Sep 11	Mon	RCA Board Meeting	OMSI Classroom1	7pm
Sep 18	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
Sep 21	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
Sep 22-24	Fri-Sun	RCA Star Party	Indian Trail Springs	

October 2006

Oct 2	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Oct 6	Fri	Downtowner's Lunch		Noon
Oct 16	Mon	RCA General Meeting	OMSI Planetarium	7:30pm
Oct 19	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
Oct 20-22	Fri-Sun	RCA Star Party	Indian Trail Springs	

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 18, Issue 10 Newsletter of the Rose City Astronomers October, 2006

RCA OCTOBER GENERAL MEETING

Astro Safari

Presented by Bob McGown and Sean League

Bob and Sean take us to the continent of Africa as they relate experiences of hunting telescopes, meteorites, 1000 foot dunes and total solar eclipses.

Bob McGown worked at Sossusvlei Mountain Lodge in Namibia as resident astronomer for 45 days. While there he visited the Hess Telescope array. Then traveling southward Bob takes us to telescopes of Capetown and Sutherland, South Africa where the fabled Herschel's telescope cataloged the southern NGC deep sky objects.

Sean League tripped to Niger to see the Total Solar Eclipse. Racing across the desert in Land Cruisers, Sean takes us to ancient villages in the Sahara, where the vast golden horizon is striped down the middle by the Milky Way.

Join the Rose City Astronomers at the October general meeting as these two share their adventures of caving, climbing, and wrestling with locals around the campfire. We'll see historical observatories, famous meteorites, odd penguins, an eclipsing sun, and...sand.

All are Welcome! Monday October 16

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

Location: OMSI Auditorium

In This Issue:

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

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

Full Moon	Last Quarter Moon	New Moon	First Quarter Moon
October 6	October 13	October 21	October 29

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message

October 2006

By Carol Huston

End of the Observing Season.

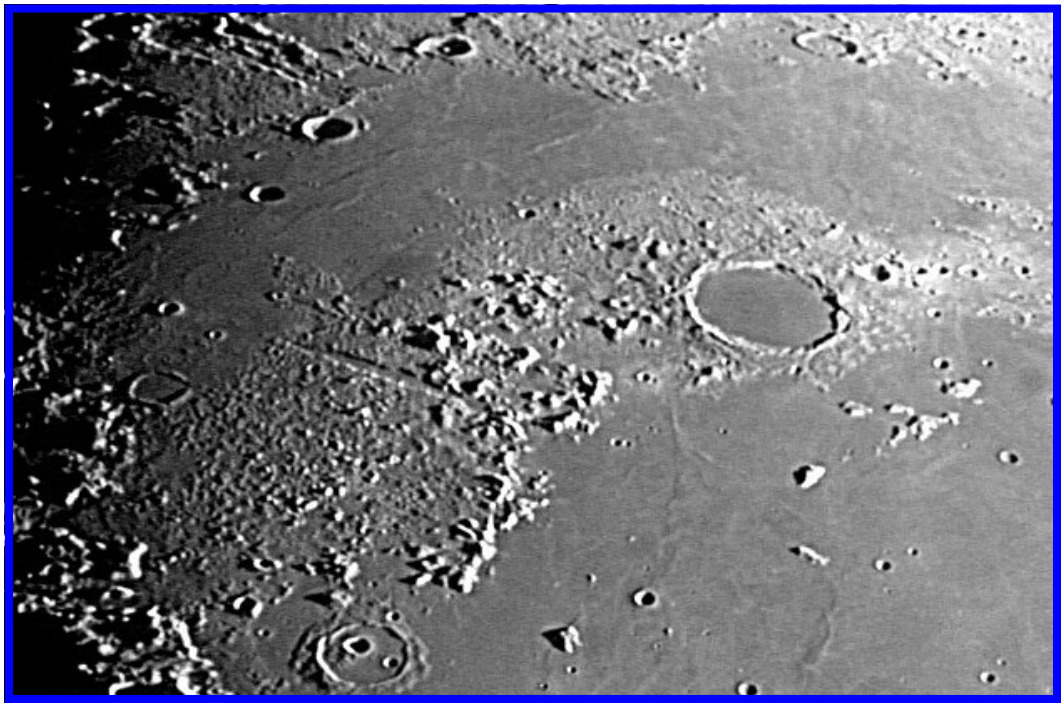
The leaves are changing colors and dropping off the trees. The days are cooling off and on a still, Sunday afternoon you can almost smell the coming winter. Summer is over, and with its passing, the RCA official observing season draws to a close. The club's last official star party is the Mercury Transit public star party to be held on Wednesday, November 8, at OMSI.

We had another excellent observing season, starting with the traditional kick-off star party at Kah-Nee-Ta. This year we had our first RCA Outreach Star Party in June. RCA astronomers set up their telescopes for the public at McMenamins Grand Lodge. The public response to this was overwhelming. People came to McMenamins that night just to get a glimpse of the night sky through our telescopes. The Oregon Star Party was, once again, a resounding success. Hundreds of astronomers enjoyed the great, dark, transparent skies of Indian Trail Springs in the Ochocco National Forest. We can still look forward to the occasional cool, crisp, clear winter night, but another spring and summer full of dark skies and the companionship of fellow astronomers has past.

So, this winter, as you look wistfully at the cloudy, rainy skies that are our lot this time of year in the Pacific Northwest, look back over this last observing season and enjoy the memories of those warm summer nights out under the great canopy of stars. And, look forward to creating more astronomical memories with friends in the coming 2007 observing season.

A LUNAR GALLERY--II

By John W. Siple



Our Moon, from slim crescent to landscape-illuminating full, is one of the most written about and photographed astronomical objects. The first photograph of the Moon was taken on 23 March 1840 by John William Draper. Prior to that date, the age-old method of hand-drawing lunar features was the standard technique of recording observations through the eyepiece. Today the amateur astronomer has at their disposal a vast array of advanced imaging equipment and related software tools. However, some lunar certificate programs still require detailed drawings, and the full benefit of your telescope can only be realized by sketching the Moon's surface and phenomena.

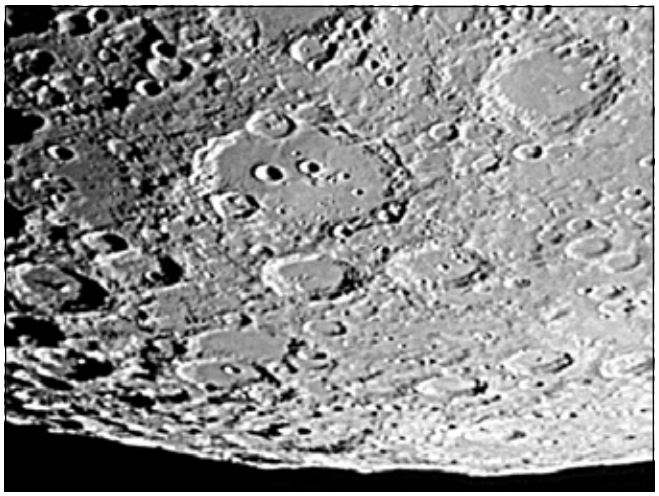
A few recommended quick reference sources to learn more about your renditions of lunar features and their history are the widely circulated (Peterson's Field Guide Series) *Stars and Planets* by Jay M. Pasachoff--especially the 1964 edition by Donald H. Menzel with its wonderful Lick Observatory photos, and Patrick Moore's *New Guide to the Moon* (1976). Advanced amateur astronomers might want to add to their libraries Antonin Rukl's bestselling *Atlas of the Moon* and the 1991 edition of master telescopic illustrator Harold Hill's *A Portfolio of Lunar Drawings*. The very collectible 1969 *The Times Atlas of the Moon*, generated by The Aeronautical Chart and Information Center, with its 110-pages of finely-drawn maps, is a coveted cartographic tome for serious lunar observers.

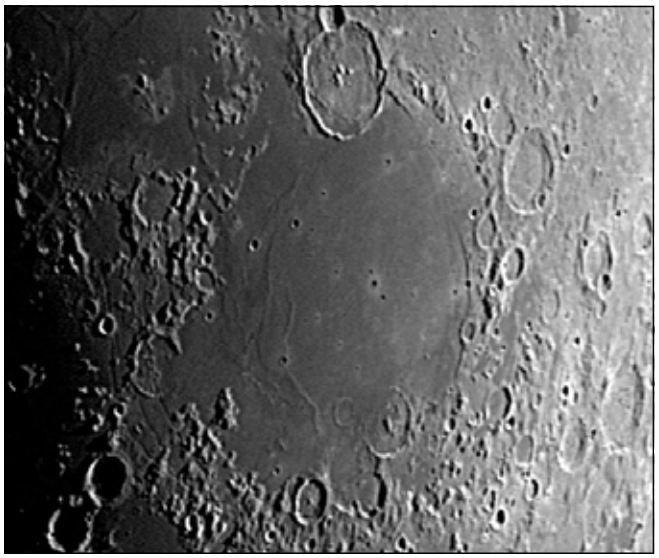
As a 4.7-billion-year-old member of the Solar System, Luna has had its share of chaotic history. The surface can be divided into two distinct areas: highlands that are heavily cratered and the dark, wide lava-filled plains called maria (favorite areas to target with your camera lie along the edges of these great impact basins). Harold Hill indicates that "the marginal zones of most of the lunar maria are regions where features resulting from subsidence and crustal movements such as wrinkle ridges, rilles and faulting are very much in evidence…"

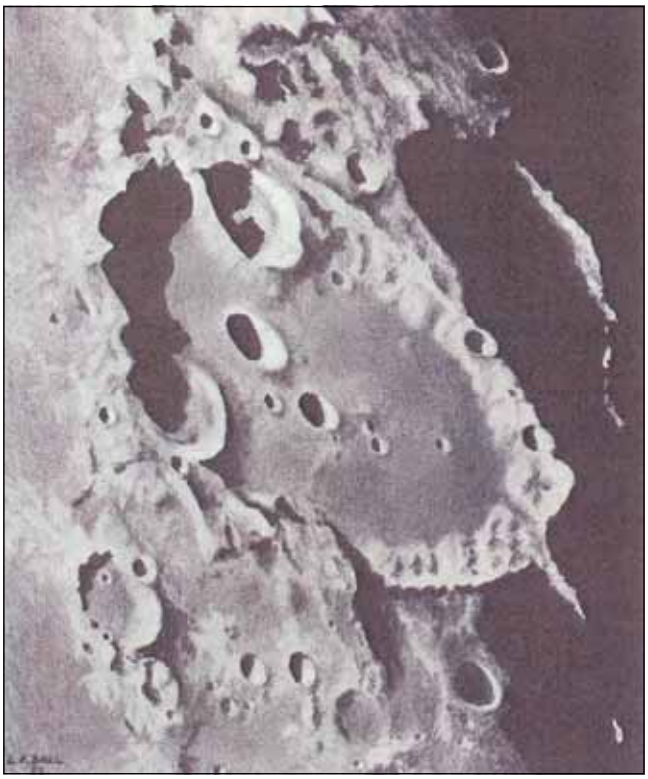
The panoramic 5-inch Unitron refractor webcam image shown above of the northern border of 800-mile-wide Mare Imbrium, the largest of the circular seas and located in the northwest or "marine quadrant," is one of the most photogenic regions on the Moon. The famous 83-mile-long Vallis Alpes or lunar Alpine Valley, and the oval-shaped, smooth-floored crater Plato sit astride the curving rim of that ancient, giant impact basin where major crustal deformation and upheaval has occurred.

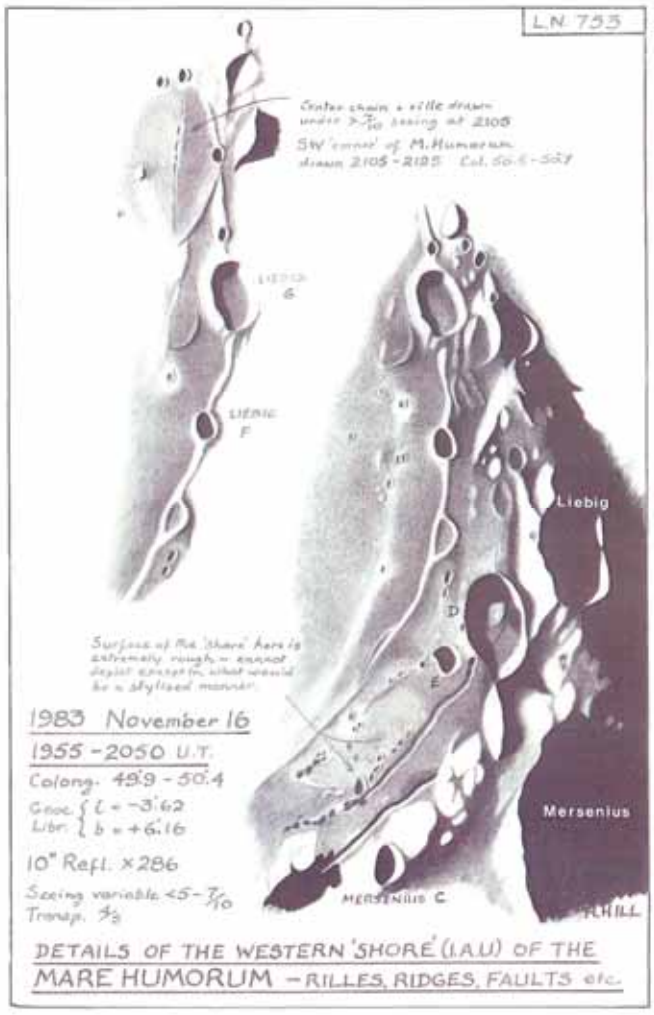
Photographs in this gallery were obtained with the 5-inch f/16 Unitron refractor telescope coupled with a Celestron NexImage Solar System Imager (NexImage's CCD chip approximates a magnification of 400X), and processed with *RegiStax* software. Total capture time for any given webcam image, taken in the clear night skies of the Willamette Valley of Oregon under excellent seeing conditions, was ten seconds.

(continued on page 4)









A Lunar Gallery-II *(continued from page 3)*

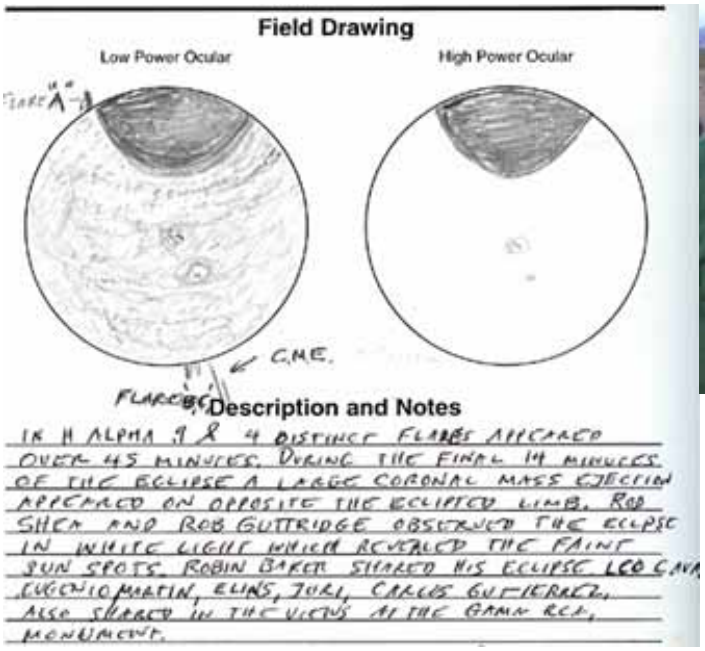
Clockwise from top left: (a) **Magnificent Clavius, 144 miles across and with walls soaring 13,000 ft. high, dominates the lunar southern highlands.** (b) **Corresponding likeness (note image inversion and shadow direction) from the British Astronomical Association's *Guide to Observing the Moon*. 1982 March lunation. Moon's age: 9 days. 260 mm reflector, x250. (Drawing by L.F. Ball.) Courtesy of Enslow Publishers, Inc.** (c) **Harold Hill's unusually complex illustration of the western shore of Mare Humorum, a convoluted mix of rilles, craters and bays. Courtesy of Cambridge University Press.** (d) **Mare Humorum webcam image taken on August 18, 2006, five days before new moon. The prominent 55-mile-wide crater Gassendi—an area of transient lunar phenomena, is at the top of the frame (north), while the arc-shaped bay Hippalus is visible at the 8 o'clock position on the eastern shore of the sea.**

September 22, 2006 Annular Eclipse of the Sun

Upsallata, Argentina

By Bob McGown

Our observing trip to the high Andes valley of Upsallata culminated with an annular solar eclipse. After many nights of excellent observing, a small group of the amateur astronomers from Oregon and some of the GAMA Argentina group traveled out of town to observe the eclipse at 6 a.m. On Friday, 2006 September 22, an annular eclipse of the Sun will be visible from within a narrow corridor which traverses half the Earth.



The path of the Moon's antumbral shadow begins in northern South America and crosses the South Atlantic with no further landfall. A partial eclipse will be seen from a much larger region including Argentina and South America, the eastern Caribbean, western Africa, and Antarctica. This was the 16th eclipse of Saros 144. The series began with the first of eight partial eclipses on 1736 Apr 11. The first central eclipse was annular in the Southern Hemisphere on 1880 Jul 07.

The series will produce a total of 39 annular eclipses, the last of which is 2565 Aug 27.The eclipse series terminates on 2980 May 05 after 23 more partial eclipses. For future eclipse predictions, Fred Espenak has worked out many eclipses up to a thousand years into the future. (http://sunearth.gsfc.nasa.gov/eclipse/eclipse.html)

There were eight of us who ended up at a stone monument about 2 kilometers out of Upsallata. GAMA members who observed the eclipse at the monolith site: Leo Cavagnaro, Carlos Gutierrez, Elias Delgado & Eugenio Martin. Rod Shea set up his 90-mm Takahashi with an extender Q and white light filter. Robin Baker had his eclipse glasses and a lot of enthusiasm! Rob Guttridge had his 80 mm refractor set up below the monument, which initially blocked the cold breezes coming from the north. We all warmed up as the Sun warmed the valley floor. I set up my Coronado solar telescope nearby. As we waited for the sunrise, we were wondering if the observing site was outside the window for optimum viewing.

Robin, Rod and Carlos waiting for the sunrise

As we stood in the great Andean alluvial plain, between the Cordillera Tigre and the Upsallata Mountain, we waited for the light of dawn to reach the summits of the Cordillera Tigre. It was like a Stanley Kubrick 2001 Space Odessey movie as the line of the descending alpenglow illuminated the sunlit the Andean summits peering above alluvial valley, like guardians Andean ranges. Like a glowing soldiers marching along the Andean mountain tops, the horizontal line of sunlight crept down the high glaciers.

(Continued on page 6)

Robin and Leo watching the eclipse

Annular Eclipse of the Sun *(Continued from page 5)*

In a coronal like glow above the Upsallata range, the sun rose to our cheering and shouts. It was a few minutes until we saw the bite out of the lower portion of the sun. We shared observations between scopes and studied the disc. Rod and Rob counted the tight sunspot group. After the sun rose higher in the atmosphere, they also spotted a faint sunspot group below the main group which was not easily detectable.

For this eclipse, I had my Coronado PST with a borrowed 13 mm Nagler Teleview from Rod. As the Sun rose in the sky like an Incan god, the flares and prominences emerged along the disc. A distinct flare was visible at the edge of the eclipse. After the eclipse was 45-minutes into the migration of the moon across the sun's disc, a solar flare emerged on the south limb of the Sun. There were three distinct flares that stood alone. After awhile the easterly most flare emerged into space and became an amazing long flare. This flare was about 1/14 the diameter of the solar disc. Shortly thereafter, the flare separated and became a coronal mass ejection. It was observed by all as we all took photos of this amazing phenomenon.

We watched the valley come alive as great condors sailed on the high Argentine air currents. After the eclipse the Argentinean amateurs adorned the stone monument with eclipse information and the logo of GAMA and Rose City Astronomers. This was some excellent cosmic graffiti!

Meanwhile, at the Gran Hotel Upsallata, Greg and Joni Babcock set up their scope with a white light filter at about 8 a.m. They were joined by Dareth Murray as they observed the eclipse from the comfort of the hotel

As a coincidence, the space launch dispatchers cast off Solar-B an international solar research mission to study the sun was launched Friday, Sept. 22 at 4:36 p.m. CDT from Japan. The launch vehicle flew smoothly, and mission controllers have confirmed the satellite's successful placement into its scheduled orbit. In orbit, Solar-B's newly given nickname is "Hinode" which means 'sunrise'. The Japan Aerospace Exploration Agency, Solar-B is collaboration among the space agencies of Japan, the United States, United Kingdom and Europe. The Marshall Center oversaw the development of the spacecraft instrumentation provided by NASA, with additional support by industry and academia.

There was a cosmic feeling after the eclipse. Seeing the concentric shadow's silhouette of the Moon against the bright Sun, one might imagine the dance of the solar system and the Moon's orbit. Like the ancient druids dancing before a Stonehenge eclipse ritual, the Andean eclipse brought about a feeling of closure to our astronomical expedition to Argentina.

RCA LIBRARY

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

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

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

Nominations Committee:

Its election time again and the board will be elected for the next year by the membership at the November General meeting.

The current slate of candidates is:

- President - Carol Huston
- VP Membership - Ken Hose
- VP Observing - Matt Vartanian
- VP Community Affairs - Patton Echols
- VP Programming - Matt Brewster
- Treasurer - Larry Godsey
- Secratary - Andy Phelps

All positions are still open for further nominations until the election in November. Anyone wishing to nominate additional candidates should contact either Gregory Rohde <gfrohde@yahoo.com>or David Nemo <david@nemoworld.com>.

First Joint Astronomical Conference of RCA and GAMA

By Margaret Campbell

We can proudly say that the First Joint Astronomical Conference between members of RCA and our GAMA hosts of Mendoza, Argentina was a rousing, unmitigated success - - thanks primarily to the unending warmth and graciousness of our hosts.

On Sept. 14, nineteen people left Portland for Argentina, invited by Leo Cavagnaro, who has been in communication with RCA and OSP for more than five years. We were a combination of seasoned viewers, beginning viewers, and non-viewing friends. We were greeted with such enthusiasm and generosity that for a week we felt like royalty. Among other things, the GAMA people gave us a banquet, wined and dined us, took us to a tango show and a winery before we'd been in town two days. On Monday we moved from Mendoza to a small ski village nearer the Andes where we stayed at a lodge and went viewing at a private location at night. The GAMA group had arranged for the Argentinean Army to set up an activities tent, with a side cook tent and port-a-potties for us, and to provide two soldiers per evening to accompany us! During our week at Uspallata Valley we took a day trip to Cerro Aconcagua, the highest mountain in the Western Hemisphere, the Bridge of the Incas, a natural mineral bridge, to CASLEO Observatory where we unfortunately did not get to observe, and finished it off with a traditional barbeque, with more singing, dining, drinking, dancing, speeches, and toasts.

The skies were not as generous to us as we hoped. We got one full night of viewing, but got so cold by 1:30 a.m. that we quit. The other nights we dodged clouds, but managed to get a few more short sessions in. Friday morning was a partial eclipse, and the day was spent on a variety of personal activities, including hiking, rafting, petroglyphs, shopping and visits to a hospital and a factory.

Among my memories is an unforgettable night of the Tarantula Nebula, 47 Tucanae, and Omega Centauri. I also liked very much seeing some rather "ho-hum" items from OSP turn into gorgeous glamour queens in the southern skies - - M 4 and M 55, to be exact. Sagittarius and Scorpius were in full form and lovely, but very much sideways. Orion came up upside down and even more confusing, backwards!

The most important part of the trip, however, was connecting with one very amazing amateur astronomer - - our host and the energy behind the trip, Leo. He made a book of 100 southern springtime objects, complete with charts and pictures and data on all the objects, which he gave to us as presents. It's top quality, and we'd like to see the Astronomical League publish it.

Leo has a heavy, hard-to-move 8" scope, two eyepieces, and he doesn't use a finder scope which is fine - - the one he has isn't useful. He finds all his objects just by knowing the sky so well, and what's more, he doesn't settle for the big showpieces. The smaller, dimmer and more obscure an item is, the more he likes to find it - - and he's got all those NGC numbers memorized. I was floored when I saw tiny little glob after smidgy little galaxy after bits of nebulae, all from this clumsy scope and no finder!!!! This man is a true observer and I believe he could give Stephen J. O'Meara's eyes a run for the money. Our other friends were working with even smaller scopes, few eyepieces, and one of our friends had no eyepieces at all. We left them with some gifts - - a Barlow, an eyepiece, a couple of filters, a Telrad, an atlas, and Ken Hose donated his 8" travel scope.

But our Argentinean hosts were not to be outdone in the gifts department. They made a poster for the hotel, they put welcome banners on the tour bus and banquet hall, they arranged for newspaper and television coverage of our trip, and they gave us each a commemorative plate of the event, and sent one home with me for RCA.

All week we were having such fun that at some time each of us thought, "I'm going to really hate to leave this place." I had ambitiously thought I would do the entire southern sky program, but finished only half of it. CASLEO still beckons, and I just found out there is a cosmic ray observatory in Mendoza. So, there is reason to return. I can't wait. In the meantime, we'd like to invite Leo and any of his other friends who can come up here to OSP, RCA and perhaps ALCON 2007. Leo's friendship for us is genuine, and we'd like to show him some American hospitality in return. He'd be a terrific addition to anyone's speaker's roster. Oh, and did I mention, the Andes were spectacularly beautiful?

Photo by Rob Guttridge

Camp Hancock Star Party
Oct 20th - Oct 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. For maps, pictures, and more info go to the OMSI Hancock web site. 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.

Dob Valley photo by Jan Keiski

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. Please inform Larry Godsey at larrygodsey@comcast.net or 503-675-5217, as soon as possible 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.

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)

Photo by Jan Keiski

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

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

Registration:

Mail-in registration and payment deadline is March 25th.

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.

BOARD MEETING MINUTES

September 11, 2006
OMSI Classroom 1
Andy Phelps

Meeting called to order by Carol Huston at 7:03pm.

Board members present: Ed Epp, Larry Godsey, Carol Huston, Jan Keiski, Dareth Murray, David Nemo, Andy Phelps, Greg Rohde, Sameer Ruiwale, Matt Vartanian.

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) not met with 10 voting members present.
- Treasurer's Report – Ed Epp: $26,425.49 total liabilities and equity. $772 to deposit.
- Sales – Sameer Ruiwale: August sales $473. $115 sale to OSP committee will count in September sales.
- VP Observing – Matt Vartanian: Porta-Potties have been ordered for upcoming star party at Indian Trail Springs on September 22-24.
- Book Library - Jan Keiski: Added new books including Moon maps and Sky & Telescope observer's guide.
- Telescope Library – Greg Rohde: Received donation of solar filter for 8-inch SCTs.
- Magazine Subscriptions – Larry Godsey: Nominal.
- OMSI – Jan Keiski: Jim Todd is attending a planetarium conference.
- Site Committee – David Nemo: Site committee now has $15,160 in cash and pledges. Sales of tickets for the binocular raffle have covered the cost of the prize.

Old Business

- Phone line report – Carol: Received about 10 calls about Perseids, telescope recommendations and a possible donation.
- September 12 – October 2: Andy Phelps
- October 3 – November 6 Matt Vartanian
- Election: Review of incumbents running for office and vacant positions: All positions have nominees. Nomination/election process was reviewed and is proceeding in accordance with bylaws. Discussed bringing in new board members and identifying possible nominees.
- Action item: Carol connect with Jeff Sponaugle about tracking community outreach activities. Astronomical League gives awards for community outreach. Patton Echols is filling in for Jeff in community affairs position. Club outreach activities should be reported to Patton for the purpose of tracking.
- ALCON 07 – Dareth: Recent committee meeting was productive. Reviewed the financial and attendance success of ALCON 06, held in Dallas, TX. Advertising for ALCON 07 should run in the next issue of the Reflector (AL newsletter). Ten percent of vendor space has already been rented. Logo will be created. Early registration will be offered to RCA members.

New Business

- Mentor program suggested by Jim Todd: Discussed the possibility of using planetarium to present a sky identification program on a regular basis throughout the year. This led to a discussion about types of programming offered by RCA. The balance of observational vs. theoretical programs was discussed. This raised the idea of surveying the membership on programming desires. Action item: Greg Rohde will discuss this further with Matt Brewster. Another action item: Dareth will look in to finding someone to give a brief "what's going on in the night sky" talk at each meeting. Board recognized that the RCA can be intimidating to new members and discussed ways to make our meetings less so. Action item: Carol will connect with Jim Reilly about this.

Meeting adjourned 8:33pm.

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Thursday, July 20, 7 PM.

Topic: "How long is a second? "
Presented by: Dave Powell

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

Contact: Bob McGown (503-244-0078)

or Dareth Murray, (503-957-4499) for more information.

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

Telescope Workshop

When: Saturday, October 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

Assistant: Don Peckham don@dbpeckham.com

ALCON EXPO 2007

Portland, Oregon

Anyone interested in being on the Astronomical League Conference Committee for the conference in Portland in 2007, please contact Dareth Murray - darethlee@comcast.net

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

October 2006

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				

October 2006

Oct 2	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Oct 6	Fri	Downtowner's Lunch	Location TBA	Noon
Oct 7	Sat	Telescope Workshop	Swan Island	10am-3pm
Oct 16	Mon	RCA General Meeting	OMSI Auditorium	7:30pm
Oct 19	Thurs	Astrophysics/Cosmology SIG	Linus Pauling House	7pm
Oct 20-22	Fri-Sun	RCA Star Party	Camp Hancock	

November 2006

Nov 6	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Nov 11	Sat	Telescope Workshop	Swan Island	10am-3pm
Nov 20	Mon	RCA General Meeting	OMSI Auditorium	7:30pm

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 18, Issue 11 Newsletter of the Rose City Astronomers November, 2006

RCA NOVEMBER GENERAL MEETING

Observing the Universe with a Camera

Presented by David Haworth, www.stargazing.net/david

Telescopes extend an astronomer's ability to observe fainter objects and fainter details. And like wise, astroimaging provides the same benefit to the astronomer. Using a camera provides an excellent way to observe and to record new celestial objects and to capture fainter details.

Astroimaging cameras range from normal every day cameras to specially designed cameras for astronomy. Examples of astroimaging will be shown using film cameras, web camera, digital cameras, digital SLR cameras, and special astronomy cameras. For some celestial objects a normal camera lens will provide excellent results and at other times the telescope is used as the camera lens.

With digital cameras the image can be seen immediately after the image was taken and some digital cameras can be used as an electronic eyepiece on a telescope. Astroimaging provides an enjoyable way to extend an astronomer's ability to observe the universe.

Milky Way Dark Horse taken with 50mm lens on a Nikon D70 digital SLR camera at OSP2006.

All are Welcome! Monday November 20

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

Location: OMSI Auditorium

In This Issue:

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

Full Moon	**Last Quarter Moon**	**New Moon**	**First Quarter Moon**
November 5	November 12	November 20	November 27

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message

By Carol Huston

Are you familiar with the wonderful resources available right here in RCA? Even if you think you are, I suggest you take a stroll through RCA's Web site. It has something for everyone!

RCA's Web site is your on-line link to club services. It contains the board listing which has contact information for all the club's officers and directors, schedules of events and activities, and a list of all the club's special interest groups; information on the book library, telescope library, and current club projects; and information on current astronomical events. RCA's Information for Beginners link accesses a wonderful selection of articles for beginners about various aspects of astronomy.

I'd also like to introduce you to a more obscure gem that you might not have visited yet: RCA's member Web sites. You can find these by going to the RCA Web site home page and selecting Star Links / RCA Member Web Pages. What fabulous knowledge and talent we have right here in our own club! There is something for everyone from beginner to seasoned observer, from the artistic and beautiful, to the informative and technical.

Peter Abrahams, one of RCA's past presidents, is a well-known writer and speaker on the history of telescopes and binoculars. His Web site is a huge source of historical information about astronomical instruments. David Howarth's site, besides being artistic, contains a wealth of information about amateur astronomy. Don't forget to gaze at the opening images for a while to get the benefits of the graphics. Michael Cole, an accomplished imager, has a whole series of his wonderful images posted on his site. Mel Bartels's site contains a wealth of information about telescope making. If you want information on various telescope-making techniques, this is the place for you. In addition, Mel's record of his Oregon Star Party Telescope Walkabout sessions provides a very interesting virtual tour of many of the interesting kinds of telescopes that have been used to pierce the dark skies of Indian Trail Spring over the years

David Sandage's Web site has interesting and useful information about CCD and astro-imaging, while Bob McGown's site covers a plethora of subjects from astronomy to hiking. Wes Stone's site contains journals and essays about various astronomy subjects and events and is a total pleasure to read. Some of Wes's writings are interesting and informative, and some are just pure fun. Matt Vartanian and Scott Turner have fun records of events, and Jim Reilly has kept us amused for years with his journal of activities.

The RCA is a large, dynamic club with fun, interesting members and activities. I recommend you get to know your club and its members by visiting RCA's Web site and follow the links to our members' Web pages!

Africa – the rest of the story!

Adventure & Science – a great combination

By Bob McGown & Dareth Murray

Hurrying to the airport to make our flight to Cape Town, we discovered to our horror that our plane ticket was for the next day! We had already turned in the car. As luck would have it, we were able to get two seats on the outgoing plane for a few more dollars. By that time, the plane was ready for boarding. It was a full flight, an old plane and we were in the back. Two weeks earlier, Bob had been guarding an airplane on this very tarmac, while helping fly guests in and out of Sossusvlei Mountain Lodge! We could see the Kalahari Desert below us as we traveled south from Namibia to South Africa. It was a very scenic flight. There were linear dune formations visible from the air with the spectacular Orange River that divides Namibia and South Africa. Bob took pictures from the plane and amongst the fairy circles, self organizing plant structures. He glimpsed the Rotor Kamm meteor crater out the window of the plane, flying over diamond country.

Typical method of transportation!

At the Cape Town Airport, computers with Internet access were right at hand near the currency exchange booths. We got some SA Rand and jumped on the Internet to find a place to stay in Sutherland, our next destination. No problem, we found a likely sounding B&B right away and made reservations.

The roads around Cape Town are excellent – like driving at home. We got on the N1 freeway west to Sutherland. It was a beautiful scenic trip. We saw acres and acres of vineyards. The mountains we passed through were breathtaking. It was reminiscent of the Canadian Rockies. There were lots of trucks on the road. This is one of the main routes to Jo'burg, as everyone calls Johannesburg.

We pulled into Sutherland and finally found the Primrose B&B. The owners, David & Denise, were waiting for us. We were their only guests, as this was not the busy season. They had made a reservation for us at the Jupiter Bistro, the only place in town open for dinner! We talked with them for awhile and found that Dave would be the tour guide for the SALT the next day. What a stroke of luck! We talked astronomy for about an hour and then walked down to the Jupiter Inn. They told us we were their first American visitors. The sky was clear. Moon near full, but we could still see the southern stars.

Sunset at Sutherland, South Africa

The next morning we found our genial hosts in their comfortable kitchen and sat around talking astronomy and telescopes. Dave told us he would give us a special tour of the facility at 3 p.m. and then we could come up in the evening while he got the telescopes ready for his Saturday night tour. This was the day we had waited for! We headed up the mountain to the SAAO visitor center and looked at the impressive meteorite exhibit and displays that explained difficult concepts of astronomy in an easy to understand way. There were many interactive displays.

The first telescope that we toured was 1.9-meter Grubb Parsons reflector. When we arrived at the dome we were greeted by about 50 springbok grazing outside around the cylindrical dome. We also saw some elusive rock dassies. They are hyrax, a small plump mammal with no ears - whose closest relative is the elephant!

Dave explained that this telescope had been relocated from its location in Pretoria in 1974. There was competition as to where it should go but Sutherland finally won out because of the dark skies nearly all year around. The mount had to be changed to compensate for the difference in longitude & latitude. Dave opened the dome and easily slewed the massive telescope around. It was a marvel of South African engineering ingenuity.

(Continued on page 4)

Africa *(Continued from page 3)*

South African Large Telescope (SALT)

Our tour included the newly completed South African Large Telescope SALT. An international collaboration of six countries put the telescope together. This new technology telescope is a similar design to the HET telescope at McDonald Observatory in Texas. Bob thought it would be good to put this technology in a cold trap on the south pole of the Moon!

As we entered the telescope dome the right wall was glass which gave us a view of the control room. There was a sign in the window that read "Do not feed the Astronomers," shades of Kurt Vonnegut's alien zoo! Two mirror segments were missing out of the total of 91 segments. It is collimated by a laser tower which was incorporated into the dome structure and seemed to be protected from the wind a bit better than its counterpart at McDonald.

Dave asked the telescope operator to slew the scope which is suspended on an air-bearing riding on a precession cement slab. The dome is refrigerated and the electronics are cooled so as not to distort any images. The rotating scope makes a loud noise as air compressors inflate the air bearing. The dome is a radar dome and the telescope is fixed with a moving secondary mirror.

From here, we went over to the dome of the Japanese Infra-Red telescope. The Japanese are looking for brown dwarf stars in the Orion nebula. It was excellent to get a tour from the Japanese professor. We gave a bow when we left the dome.

The other scope we toured was the Super WASP - Wide Angle Search for Planets. The Ph.D. student presently working on the project is Dave Wilson, a dedicated astrophysicist who wrote the software for the project.

A high-performance mount held six-wide angle cameras that search for eclipsing binary stars. There is a similar system on La Palma operated by British astrophysicists. The goal is to find other classic eclipsing binaries like the classic HD 209458 in Pegasus which has a light dip of 1.9%.

Cameras on the Super WASP

While Dave and Bob were up on the mountain, wrestling with the roll-off roof observatory, Dareth and Denise walked home from the Jupiter Inn by themselves at 11 p.m. The night was calm, a dog barked and Dareth said she felt as safe as she would have in her old childhood town of Silverton, Oregon. Dave and Bob got the telescopes collimated and had some good fun finding the now familiar southern sky objects. Sagittarius was overhead and the "Ghost of Jupiter" planetary nebula was brilliant.

The next morning we did some solar observing with the Coronado in Sutherland. Dave and Denise had never seen a Coronado. To our surprise, the scope must have been taken apart by security people, probably when we flew from Namibia to South Africa. The eyepiece was dismantled and the elements had been removed. The tube was also disassembled. We will put a note on the scope that asks it not be dissembled due to its delicate nature. Dave was very taken by the scope and we have a feeling he has probably ordered one for himself by now!

(Continued on page 5)

Africa *(Continued from page 4)*

On the advice of our hosts, we drove through mountain passes and gorges heading toward Free State. The overlying silhouettes of mountains looked like something out of Lord of the Rings. No wonder - Free State is where J.R. R. Tolkien was born. The layered silhouettes of mountains must have inspired him as it did us. We traveled through deep gorges with strange cactus that were 12 feet tall. The drive to the Canga Caves was breathtaking! This cave system is the most famous in South Africa. We have seen many excellent caves in the U.S. and Ireland but this one was right up there! In fact, this one had something the others didn't…African cave drumming! For many years there were underground concerts in the great hall. The cave was electrically lit from a large lighting control panel. One of the speliotherms sounded hollow and when tapped upon, made a drumming sound. Our guide told us that it was solid but also translucent. As the grand finale of our deep cave tour, our South African guide played African music on the cave formation and it resonated like an African drum!

We made our way from the Canga Cave to the coast of the Indian Ocean. We dumped our stuff at the friendly B&B recommended by Denise and headed for the point to put our toes in the Indian Ocean at Mossel Bay. The first post office box in Africa is located here.

Bob finding abalone shells in the Indian Ocean

When Bartholomeu Diez sailed around the cape he put a letter in to a boot nailed to a tree. A couple of years later, Vasco De Gamma opening the spice route, found the letter and left another letter. So now when you mail a letter in Mossel Bay, it is post marked '1482 Mossel Bay'. Bob found some great shells on the rocks as the tide was out - an abalone shell with an oyster on it, chitins and other wonderful creatures of the sea. We had an excellent Italian dinner overlooking the bay, watching the dolphins leap the waves.

After breakfast, we headed back to Cape Town, about 4 hours. We drove through the Little Karoo, which is mostly grain fields complete with ostriches, sheep and cattle. Bob even spotted a Secretary Bird. We saw the observatory sign on the way in to Cape Town but wanted to get to the Nine Flowers B&B first. We were right in the middle of Cape Town at rush hour! Most pedestrians there don't pay attention to the traffic lights. They just cross the street where ever they want. It makes for interesting driving! Clouds were covering Table Mountain in the morning, so after consulting with our host, we decided to go see the Cape of Good Hope and the African penguins. It was a beautiful drive out the peninsula. We had breathtaking views of the ocean on both sides.

Stopping at Boulders Beach, we walked along the boardwalk and got our first glimpse of a penguin. After seeing that first one, we then saw literally thousands! We learned all about them and their cousins, the Emperor Penguins who live on the Antarctic ice. These ones are about one-third the size of the Emperor but very cute. We learned that penguins mate for life and the male and female take turns sitting on the egg (sometimes two, usually just one). We even got to see "Henry", the mischievous penguin, climb out of the sewer pipe and climb over a six foot cyclone fence. These African Penguins are also known as the 'Jack Ass' penguin for their notable braying sound.

The weather cleared up as we left Cape Town under a blanket of clouds. What a drive out to the very tip of the continent! We took the funicular up to almost the top and walked up the stairs to the lighthouse at the very top of the mountain. We could see in every direction. The ocean was beautiful. There were lots of tourists, even some other Americans! It was funny to hear the American "accent" after so much British and German. Getting back into town, we had time to visit the South African Mu-

(Continued on page 6)

Africa *(Continued from page 5)*

seum. It is a wonderful natural history museum describing the culture and people who first lived in this area. It also contained some of the great meteorites of South Africa.

We drove over to the SAAO Observatory from the Wild Fig restaurant and they were just letting in visitors. Every second Saturday night, the observatory is open to the public for free tours. We had timed this visit carefully! It turned out that Case Rijsdijk, a good friend of Dave & Denise, was there helping with the tour. He is officially "retired" but likes to hang out for the public. The official astronomer on duty was Dr. Patricia Whitlock along with her trusty calico cat, Shrödinger. Case started the tour out in the historic observatory showing some of the original equipment and books from centuries ago. There was a respectable crowd of about 20, all local except for us. After Case's introduction we all walked to the auditorium where Patricia gave an excellent presentation on the SALT observatory in Sutherland. Since we had just been there, it was especially meaningful to us. We then went to the dome with the "old" refractor (18") and 24" astrograph. Some of the domes even rotated on cannon balls. We stayed there until about 10 p.m.

Only two more days in Africa! We slept in until 8 and decided to go on the 10 a.m. tour of the city, including a trip to Table Mountain. It was slightly overcast, but we thought it might improve. We walked to the bus stop and got on the Red double-decker tour bus. We saw some interesting places in Cape Town and arrived at the base of Table Mountain about 11 a.m. We took the gondola cable car to the top of Table Mountain.

This is a stunning summit 1,069 meters above Cape Town with yellowwood gnarly pine-like trees. There is actually a constellation named after Table Mountain called Mensa, the table. Abbé Nicolas Louis de Lacaille, a French astronomer, put it on his star map in 1750. The weather cleared some and we had a 360 degree view. Uh, oh! Bob spotted the local climbing club. They had ropes and were promoting their absailing of the pinnacle. So he rented some climbing gear to rappel down about 300 meters (straight rock cliff) and then climbed back up. That is Cape Town in the distance.

Flying back to Windhoek, we awoke the next morning to overcast skies and decided to go visit the meteorites and do some last minute shopping. We could walk from the hotel and really got a good flavor of the city that way. We checked out the Gibeon meteorite fountain in the town square. It is actually a stainless steel sculpture.

Bob showing missing meteorite stand

We noticed that one stand was empty. We found out later that a local had stolen the meteorite. He was jailed for a year and after getting out, immediately stole another one!

After an authentic Namibian lunch (not sure what it was, but tasty) we reluctantly went back to the hotel and got our bags ready for the long flight home.

Twenty four hours later, we were back in Portland. It was nice to be home - in the rain. At the same time, we wished our trip hadn't been so short even though Bob had two months there. The friendly people and magnificent scenery of South Africa and Namibia's Sossusvlei Mountain Lodge will draw us back there again.

ALCON EXPO 2007

Portland, Oregon

Anyone interested in being on the Astronomical League Conference Committee for the conference in Portland in 2007, please contact Dareth Murray - darethlee@comcast.net

A SAMPLING OF TELESCOPES FOR THE AMATEUR ASTRONOMER—PART 17

By Diane A. and John W. Siple

Richest-Field telescopes (RFT's) of the very popular Dobsonian design—essentially wide-field, short-focus 'light buckets'—have dominated the astronomy marketplace for well over a quarter century. The first affordable example available commercially was sold *en masse* by the firm of Coulter Optical Co. They were manufactured in the resort town Idyllwild, located in the forested San Jacinto Mountains in Riverside County, California. The company's now famous Odyssey line of telescopes, both of the 'blue' and 'red' types, broke the aperture barrier and hooked many amateur astronomers on deep-sky observing.

Coulter's owner, James A. Braginton (Jacobson), who had been selling telescope mirrors, parts, and accessories since 1967, patterned the Odysseys after San Francisco Sidewalk Astronomer John Dobson's large aperture telescopes. Solidly constructed with tremendous light grasp, this new generation of Newtonian reflectors heralded a new age of observing fervor. Coulter Optical Co.'s release of its ruggedly-built 'Dobs' reads like a bestselling novel: the 13.1" Odyssey I in May of 1980, the 10.1" Compact and 17.5" Odyssey 2 in January '82, and the 8" in June '84. The colossal 29" Odyssey 29, made from October '82 - March '87, was the world's biggest production scope. Their redesigned 'red' models with lighter altazimuth mountings and permanently mounted mirrors were in full production by the Spring of 1987.

The emphasis at Coulter Optical Co. was on performance. The 10.1" f/4.5 Odyssey Compact 'blue' model, sold until the end of 1986, is a favorite among deep-sky hunters. Attractively priced at only $299.50, well within the average household budget, the telescope found its way into the hands of many thousands of eager observers throughout this country and elsewhere. Their 10.1" Odyssey Compact, because of its good light-gathering power, fine optics and easy small-car transportability, is often seen at public star parties. Telescope owners are thrilled at the sight of seeing densely-packed globular star clusters resolved into their component suns and whirling galaxies millions of light years beyond our Milky Way.

The 'twins'–a matching pair of Odyssey Compacts from the mid-1980s.

Ideal for observing teams and coaching neophytes is a pair of Coulter telescopes. The setup procedure for the 'blue' Dobsonians is really quite simple, since each model of telescope, irrespective of aperture, is nearly modular in design. The 10.1" Odyssey Compact has an inexpensive cardboard form used for pouring concrete (Sonotube) as its optical tube. A 14" square box of plywood 20¼" high, containing the altitude bearings built around the Sonotube's bottom half, acts as the mirrorbox. This combined unit is the telescope's heaviest section, tipping the scales at 43 lbs. The rocker box with groundboard, also made of durable plywood that accepts the optical tube assembly, is relatively vibration-free but adds another 27 lbs. to the weight of the telescope. At the beginning of each observing session, the primary mirror is loaded into the base of the mirrorbox through a 'trap-door' mechanism.

(Continued on page 8)

Telescope Sampling 17 *(Continued from page 7)*

A null-figured 10.1" f/4.5 paraboloidal Pyrex mirror, 1⅛" thick, is the 'blue' Odyssey Compact's workhouse. The mirror's ability to image stars to an accuracy of ⅛-wave is well-documented (and appreciated) by many users, and it has the ability to delve into the night skies down to a limiting magnitude of 14.7. The claims made about the telescope's performance in back issues of *Sky & Telescope* and *Astronomy* magazine ring true as appraised by the authors; stars are tight pinpoints and discerning hidden detail in deep-sky objects, invisible in lesser instruments, now becomes routine.

Free movement of the telescope in any direction is accomplished through surfaces riding on ultra-smooth Teflon. The side axels are aluminum coiled around wood, which in turn 'float' on frictionless Teflon. An attractive coating of bluish Zolatone, a water-resistant sealer, gives the original line of Coulter Odyssey telescopes their common namesake.

Employee putting finishing touches on a 13.1" f/4.5 Odyssey I. Photo courtesy of Mary E. Braginton.

An added boon to observers, especially the senior crowd, is that regardless of which direction the 10.1" Odyssey Compact is pointed in, users have the luxury of *sitting down*. No craning of necks to view faint fuzzys or climbing of ladders to reach the correct eyepiece position. Sketches of deep-sky objects during long stretches of nighttime viewing are drawn in a relaxed position from the amateur astronomer's comfortable observing chair. Conveniently placed handles make transport a breeze. Recommended accessories are either a Telrad Reflex sighting device or right-angle viewfinder, where the finding of celestial wonders is made much easier than by simply hand-pointing the telescope to the proper direction in the sky. Collimation of the optical axis, if needed, is made by changing the tilt-angle of the 3-point mirror cell.

Image of the Sc Spiral Galaxy M74 courtesy Todd Boronson/AURA/NOAO/NSF.

Located 1.5° east-northeast of Eta Piscium is the 9.4 magnitude spiral galaxy M74 (NGC 628). One of the sky's best examples of a face-on spiral galaxy also has the reputation of being one of the hardest Messier objects to find. The galaxy's light is spread out over an area of 10.2' X 9.5', resulting in a very low surface brightness. This object is a lovely sight in the 10.1" Odyssey telescope using a 24mm Brandon ocular (48x)—a small, bright nucleus surrounded by a lumpy outer halo is visible. Spiral structure was strongly suspected over a wide range of magnifications, and the galaxy is peppered with foreground stars.

Drawing of M74 at 89x.

Only a short hop from M74 and at the center of Pisces is the white dwarf known as Van Maanen's Star or Wolf 28. This incredibly dense, very old sphere of star stuff, only 100 miles smaller in diameter than Earth, lies at a distance of 14.4 light years and has a large yearly proper motion of 2.98". It is visible in the Odyssey Compact as a moderately faint 12.4 magnitude star.

(Continued on page 9)

Telescope Sampling 17 *(Continued from page 8)*

Image of NGC 253 taken by Daniel Verschatse with an RCOS 14.5" Ritchey-Chrétien @ f/9 (prime focus) from San Esteban, Chile (http://astrosurf.com/antilhue).

Drawing of NGC 253 at 68x.

The grand Silver Coin or Sculptor Galaxy (NGC 253), 30.0' X 6.9' in size and at magnitude 7.6, dominates the skies near the South Galactic Pole. The galaxy was first seen by Caroline Herschel in 1783. It is the brightest member of the Sculptor Group of Galaxies, a collection of a half dozen extragalactic nebulae 8 million light years away. NGC 253 is tipped nearly edge-on to our line of sight, providing a nice contrast to the face-on spiral M74. Cigar-shaped, silver-tinted NGC 253 has long broad arms and a bright, angular core as seen in the 10.1" Coulter telescope—only slightly inferior to the Great Andromeda Galaxy. A fine pair of 9th magnitude stars are located off the southern flank and point directly at the galaxy's dusty spiral arms.

The globular star cluster NGC 288, found only several low power eyepiece fields away to the southeast from the Sculptor Galaxy and shining at magnitude 8.1, is another major attraction in Sculptor. NGC 288 is a diffuse glow 13.8' in diameter that is easily resolvable in most backyard telescopes. If the lopsided hexagonal pattern of 10th and 11th magnitude field stars surrounding this low surface brightness globular is ignored, then the speckled haze of NGC 288 resembles a dimmer and smaller version of M55 in Sagittarius. (This subjective impression is especially apparent in the 10.1" Odyssey Compact at 29x.) NGC 288 is 28,700 light years distant from the Sun and lies 39,100 light years from the Galactic Center. The very faint galaxy PGC 03068, which is only accessible in the largest observatory telescopes or photographically, lies on the edge of the cluster.

Image of NGC 288 courtesy of Josch Hambsch, Mol, Belgium (http: www.astronomie.be/hambsch). Takahashi FSQ 106 image taken at the International Amateur Observatory (http: www.ias-observatory.org/IAS/index-english.htm in Namibia, Farm Hakos.

Coulter Optical Co.'s 10.1" f/4.5 Odyssey Compact 'blue' model Dobsonian telescopes, along with the other reflectors in the series, make observational astronomy *fun*—they were created for yielding maximum enjoyment and capture of photons in a simple design. Yet upgrades to existing Coulter telescopes are often made. Sets of expensive eyepieces, a Paracorr or universal coma corrector for parabolic mirrors and equatorial platforms for easy tracking and astrophotography are the most common accessories. (Coulter offered its own equatorial mountings for the Compact and Odyssey I—the 10.1" single-arm mounting was available for $249.50.) The Braginton's business on the Hill on Pinecrest Avenue in Idyllwild, Calif. closed its doors September 9, 1995, after proudly serving the needs of the astronomical community for almost three decades. Today, a 10.1" Odyssey Compact can be purchased on the secondary market for around $300, a bargain for the amateur astronomer.

In Tribute to a Great Man and Astronomer…

It has been said that small inventions can make a big difference. This was certainly the case when entrepreneur James A. Braginton (Jacobson) of Idyllwild, Calif. took his close friend and confidant John Dobson's idea and turned a contraption of plywood, glass, and cardboard into a marketable telescope.

Travelers, upon entering the park-like setting of the community of Idyllwild-Pine Cove, were greeted by the welcoming sign of Coulter Optical Co. outside a 1940s-style cottage, set against a backdrop of towering trees. Beckoning amateur astronomers inside, the small business on Pinecrest Avenue offered a selection of charts, books, and accessories, plus its world famous Odyssey astronomical telescopes and optic sets.

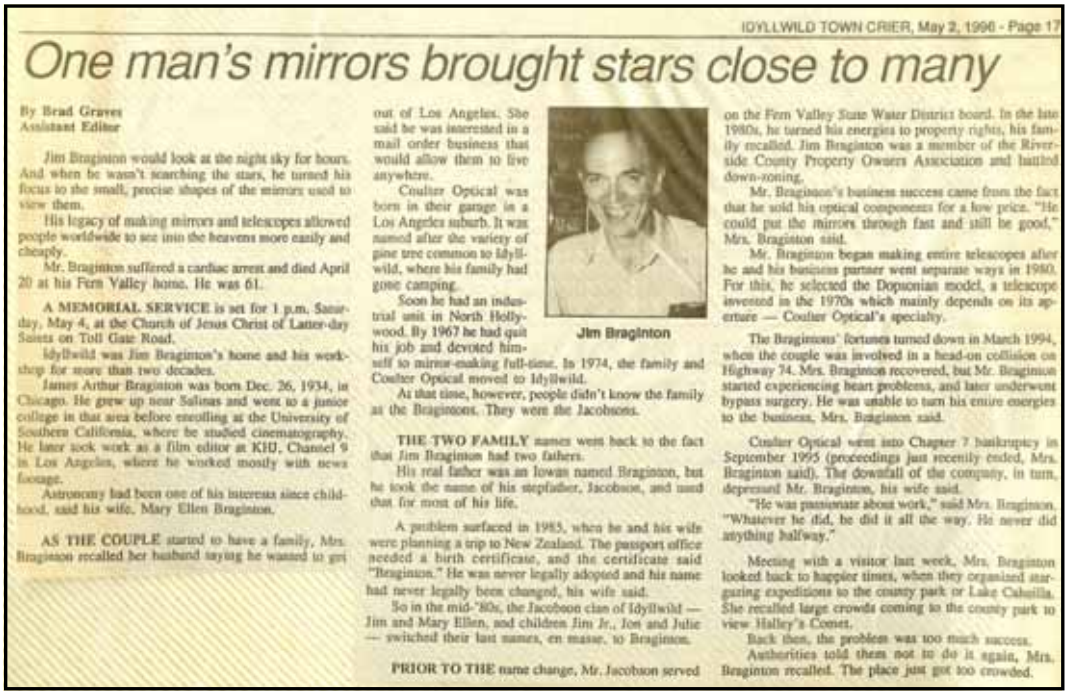
Coulter Optical Co. was named after the 'Coulter Pine,' a tenacious evergreen tree found only in certain parts of Southern California. The company's philosophy was a purposeful meld of hard work, growth and love of the night sky. Owner James A. Braginton was a pioneer in Dobsonian telescope technology. Today's world full of solid and truss tube 'light buckets' can be traced back to his initial efforts. He was the first to capitalize on a great idea and made viewing the universe affordable to all. His astronomical activities extended outside of the daily shop routine of supervising mirror grinding, telescope construction, and taking customers' orders. James was very active in the Idyll-Gazers, the local astronomy organization (the club president was a Coulter employee) and was a regular attendee at the Riverside Telescope Makers Conference.

Mr. Braginton's unlimited energies were also directed toward politics, in and around Idyllwild. He was the local coordinator of the Cahuilla County Steering Committee, working to carve out a new county from the eastern two-thirds of Riverside County.

Coulter Optical Co., hoping to expand its business operations, fell under the tight restrictions imposed by city zoning ordinances. Mr. Braginton fought hard for positive changes to his thriving business. When James' health began to fail in 1994 the fortunes of the company suffered along with him. Through it all he still "…remembered the many nights on a mountaintop or in the middle of the desert where he touched the universe and felt a sense of belonging to it." His legacy was continued by Florida's Murnaghan Instruments.

Joan Williams of Idyllwild had these final kind words to say about Mr. Braginton in a Town Crier editorial:

If I ever needed help the Bragintons were there. Jim worked hard to support his ideas and his family, with Mary by his side working just as hard. He contributed much to the telescope world and very much to the community of Idyllwild. He is known worldwide for his telescope mirrors and the Odyssey Telescope. Thousands of people have and use his telescope mirrors and Odyssey Telescopes today. His mirrors and telescopes are in Germany, England, Switzerland, Japan, Australia, Africa, Austria, France and many other foreign countries and certainly the United States of America. One of Jim's 29-inch mirrors is in the observatory in Hawaii. Even the big observatories know Jim produced an excellent product. John Dobson had an idea and made it on a one-man scale. Jim was able to take John Dobson's idea and bring it to the world to use and enjoy as the Dobsonian Telescope. All other Dobsonian Telescopes are a take-off of Jim's idea. Jim was the pioneer, yes the first. Without Jim's enthusiasm, ideas, and hard and long working hours there would not be a worldwide Dobsonian Telescope today. Jim made the upper atmosphere affordable to view. Jim is missed by all around the world.



IDYLLWILD TOWN CRIER, May 2, 1996 - Page 17

One man's mirrors brought stars close to many

By Brad Graves
Assistant Editor

Jim Braginton would look at the night sky for hours. And when he wasn't searching the stars, he turned his focus to the small, precise shapes of the mirrors used to view them.

His legacy of making mirrors and telescopes allowed people worldwide to see into the heavens more easily and cheaply.

Mr. Braginton suffered a cardiac arrest and died April 20 at his Fern Valley home. He was 61.

A MEMORIAL SERVICE is set for 1 p.m. Saturday, May 4, at the Church of Jesus Christ of Latter-day Saints on Toll Gate Road.

Idyllwild was Jim Braginton's home and his workshop for more than two decades.

James Arthur Braginton was born Dec. 26, 1934, in Chicago. He grew up near Salinas and went to a junior college in that area before enrolling at the University of Southern California, where he studied cinematography. He later took work as a film editor at KHJ, Channel 9 in Los Angeles, where he worked mostly with news footage.

Astronomy had been one of his interests since childhood, said his wife, Mary Ellen Braginton.

AS THE COUPLE started to have a family, Mrs. Braginton recalled her husband saying he wanted to get out of Los Angeles. She said he was interested in a mail order business that would allow them to live anywhere.

Coulter Optical was born in their garage in a Los Angeles suburb. It was named after the variety of pine tree common to Idyllwild, where his family had gone camping.

Soon he had an industrial unit in North Hollywood. By 1967 he had quit his job and devoted himself to mirror-making full-time. In 1974, the family and Coulter Optical moved to Idyllwild.

At that time, however, people didn't know the family as the Bragintons. They were the Jacobsons.

Jim Braginton

THE TWO FAMILY names went back to the fact that Jim Braginton had two fathers.

His real father was an Iowan named Braginton, but he took the name of his stepfather, Jacobson, and used that for most of his life.

A problem surfaced in 1985, when he and his wife were planning a trip to New Zealand. The passport office needed a birth certificate, and the certificate said "Braginton." He was never legally adopted and his name had never legally been changed, his wife said.

So in the mid-'80s, the Jacobson clan of Idyllwild — Jim and Mary Ellen, and children Jim Jr., Jon and Julie — switched their last names, en masse, to Braginton.

PRIOR TO THE name change, Mr. Jacobson served on the Fern Valley State Water District board. In the late 1980s, he turned his energies to property rights, his family recalled. Jim Braginton was a member of the Riverside County Property Owners Association and battled down-zoning.

Mr. Braginton's business success came from the fact that he sold his optical components for a low price. "He could put the mirrors through fast and still be good," Mrs. Braginton said.

Mr. Braginton began making entire telescopes after he and his business partner went separate ways in 1980. For this, he selected the Dobsonian model, a telescope invented in the 1970s which mainly depends on its aperture — Coulter Optical's specialty.

The Bragintons' fortunes turned down in March 1994, when the couple was involved in a head-on collision on Highway 74. Mrs. Braginton recovered, but Mr. Braginton started experiencing heart problems, and later underwent bypass surgery. He was unable to turn his entire energies to the business, Mrs. Braginton said.

Coulter Optical went into Chapter 7 bankruptcy in September 1995 (proceedings just recently ended, Mrs. Braginton said). The downfall of the company, in turn, depressed Mr. Braginton, his wife said.

"He was passionate about work," said Mrs. Braginton. "Whatever he did, he did it all the way. He never did anything halfway."

Meeting with a visitor last week, Mrs. Braginton looked back to happier times, when they organized stargazing expeditions to the county park or Lake Cahuilla. She recalled large crowds coming to the county park to view Halley's Comet.

Back then, the problem was too much success.

Authorities told them not to do it again, Mrs. Braginton recalled. The place just got too crowded.

BOARD MEETING MINUTES

October 2, 2006
OMSI Classroom 1
Andy Phelps

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

Board members present: Ed Epp, Larry Godsey, Carol Huston, Patton Echols, Jan Keiski, Dareth Murray, David Nemo, Andy Phelps, Ken Hose, Greg Rohde, Matt Vartanian.

Guest: Doug Huston

Board Reports

- Secretary's Report – Andy Phelps: Quorum (11) met with 11 voting members present.
- Treasurer's Report – Ed Epp: $29,201.33 total liabilities and equity. We need a way to pay for hotel rooms for some speakers. Personal credit cards shouldn't be used. Discussion should continue with Matt Brewster.
- VP Observing – Matt Vartanian: Star party at Indian Trail Springs was very successful. About 20-30 people attended. October 20-22 is Camp Hancock. November 8 is Mercury transit (OMSI star party).
- Community Affairs – Patton Echols: Goldendale star party for home school kids had several volunteers, as did Jackson Bottom Wetlands star party. Also a speaker has been requested for a school setting.
- Membership – Ken Hose: 3 new members, 2, returning, 9 renewals - $556.00 collected in dues. Membership stands at 260 member families.
- Book Library - Jan Keiski: Several new books added to library. Will complete inventory soon. Another book sale coming up.
- Telescope Library – Greg Rohde: Donated 8 inch SCT is being cleaned. Will get new tripod for it at Sean's Astronomy Shop. Received donation of 8 inch solar filter for SCT. An 8-inch dob has been checked out for a year with no word from member. Greg is still looking into this.
- Magazine Subscriptions – Larry Godsey: Nominal.
- Webmaster – Dareth Murray: Cleaned up email discussion list – removed non-renewing members.
- Astronomical League – Carol is handling observing programs in Dale's absence
- OMSI – Jan Keiski: December dinner meeting will be in auditorium due to exhibit. Jim Todd will address possibility of using planetarium during meetings.
- Site Committee – David Nemo: Site committee now has $15,500 in cash and pledges.

Old Business

- Phone line report – Andy failed to check phone line. However after the meeting, found that there were 2 calls. One had already contacted Patton concerning speaker, and the other donated a telescope to OMSI.
  October 3 – November 6 Matt Vartanian
  November 7 – December 4 Greg Rohde
- Elections: All positions have nominees – will be included in October newsletter.
- ALCON- Dareth: Logo has been chosen. Vendors are being lined up. Friday night dinner location has been set. ALCON web site is up. Advance tickets are being sold to RCA members at $50 each.

New Business

- David Nemo suggested the club purchase a vinyl banner with club logo for public events. Carol has a small one with logo.

Meeting adjourned 8:27pm.

RCA LIBRARY

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

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

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

Telescope Workshop

When: Saturday, November 11, 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

November 2006

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 2006

Nov 6	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Nov 11	Sat	Telescope Workshop	Swan Island	10am-3pm
Nov 20	Mon	RCA General Meeting	OMSI Auditorium	7:30pm

December 2006

Dec 4	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Dec 9	Sat	Telescope Workshop	Swan Island	10am-3pm
Dec 18	Mon	RCA Holiday Meeting	OMSI Cafeteria	7:00pm

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 18, Issue 12 Newsletter of the Rose City Astronomers December, 2006

In This Issue:

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

RCA WINTER SOCIAL AND 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 Cafeteria.

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.

Jan's got the Spirit! ***(2004)***

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 18 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 18

Festivities Begin: 7 pm. Location: OMSI Cafeteria

Full Moon	Last Quarter Moon	New Moon	First Quarter Moon
December 4	December 12	December 20	December 27

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	Jeff Sponaugle	(503) 590-5522	jsponaugle@kryptiq.com
VP, Programming	Matt Brewster	(503) 740-2329	renaissant@comcast.net
Treasurer	Ed Epp	(503) 284-5834	epp@zdome.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	kcone@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.

President's Message

By Carol Huston

Observing Programs

Some of us just like to graze the night skies, casually going from object to object, but others like to have some purpose, some structure and maybe a challenge when we get out under the stars. For those observers, the Astronomical League offers some excellent observing programs that require you to locate, observe and describe various types of objects. Most of these programs also include an award which you can receive upon completion. If you haven't seen the latest listing of programs, you should take a browse through the AL's website www.astroleague.org. They are adding new programs all of the time, and RCA members are eminently qualified to receive some of these awards. In fact, looking through the list of recipients for each award, I find RCA members listed in most of them! There is literally something for every skill level or area of interest.

Beginners' or Introductory Programs are: The Constellation Club – a beginners' program to help you get acquainted with the night sky markings. For the northern club, you will be required to observe and sketch 39 constellations. The Lunar Club – 100 features of the lunar surface. When life hands you moon phases or light pollution, observe the moon! Sky Puppy Club – This program is for children 10 years of age or younger and is designed to familiarize them with the night sky. The Universe Sampler – A smattering of different objects from stars to planets, comets, and deep sky objects.

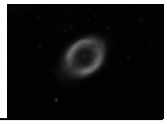
Binocular Programs are: Binocular Messier Club – Find and observe 50 Messier objects. Binocular Deep Sky Club – Observe 60 deep sky objects. Southern Skies Binocular Club – Observe and record 50 objects in the Southern Hemisphere, a great accompaniment to a Southern Hemisphere vacation!

For those observers looking for a more serious challenge: ARP Peculiar Galaxies – An imaging program asking you to image 100 of the 338 objects in the ARP Peculiar Galaxy Catalog. The Caldwell Club – Observe 109 objects from the Caldwell Catalog. The Herschel 400 – Observe 400 challenging deep sky objects. The Herschel II – Find and observe another 400, even more challenging, Herschel deep sky objects. Galaxy Groups and Clusters – Observe or image 250 objects from the program list. Globular Cluster Club – Describe and classify 50 clusters. The Messier Club – Observe and record

(Continued on page 7)

THE OBSERVER'S CORNER

Howard Banich



Dim and Dimmer – 2006 OSP observations

For the first time, the Oregon Star Party offered official observing programs with certificates and pins for their successful completion. The advanced program was called ***Dim and Dimmer*** which consisted of 10 pairs of objects – one dim and the other dimmer.

What a great idea! I had a blast going through this challenging list and the OSP skies cooperated with excellent transparency and steady seeing. Plus I'm a sucker for an observing pin so I was all in right from the start.

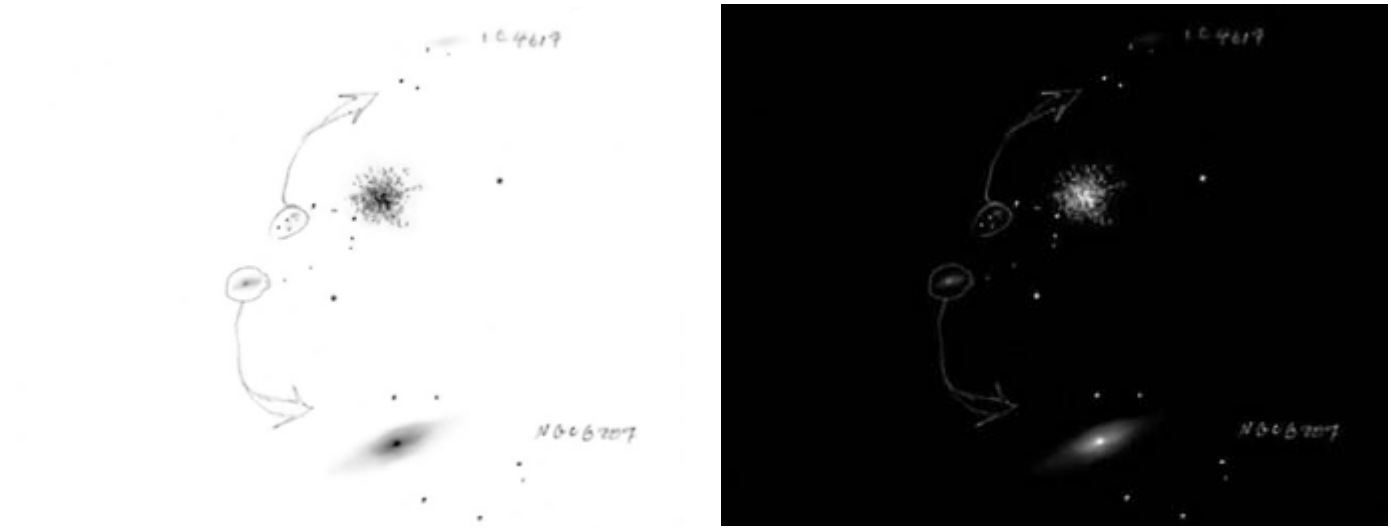
The below sketches are based on my observations of these nifty objects with a 28" f4 Newtonian, and the notes are what I wrote at the eyepiece. That explains the terse descriptions and poor sentence structure…

I've cleaned up my pencil sketches to more closely show what I saw in the eyepiece, but don't take them too strictly since there is some interpretation. Overall the sketches are pretty faithful though.

Dim: **Hickson 79, Seyfert's Sextet** galaxy cluster.
Dimmer: Three individual members of Seyfert's Sextet.

"Great view! The two tidal tails can be seen with averted vision and the entire assemblage is quite striking. This may be the best view ever of the tidal tails for me. 569x, 10:23pm, August 24-25, 2006."

Dim: **NGC 6206**, 12th magnitude galaxy near M13
Dimmer: **IC 4617**, 15th magnitude galaxy even closer to M13



"Very nice! 6207 is so overshadowed by M13 but it's a pretty nice galaxy and worth a close look. Hard to believe that's a chance alignment star right in 6207's center – does a perfect job impersonating a bright stellar core. 406x, 1:03am, August 24-25, 2006." (IC 4617 was easy to see with averted vision and was detectable with direct vision about half the time.)

(Continued on page 4)

The Observer's Corner *(Continued from page 3)*

Dim: **M1-92, the Footprint Nebula** (appears within Sh2-91)

"The seeing is rather soft for this small of an object to show at its best but this is still a cool sight. It definitely fits its name well. 569x, 11:36pm, August 24-25, 2006"

Dimmer: **Sh2-91** supernova remnant (two arcs)

"Arc 1"

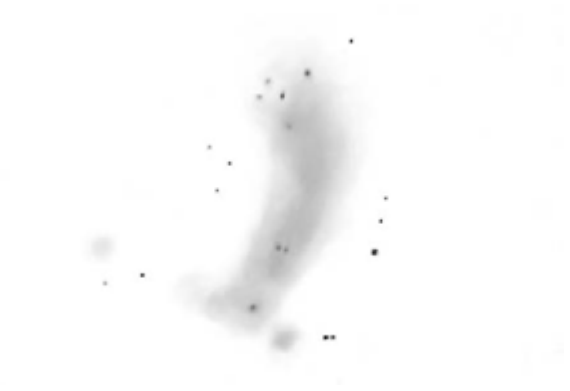
"Arc 2"

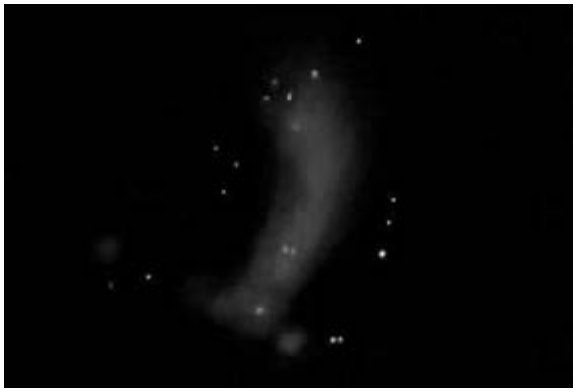
"Two arcs! I'm a bit surprised to have found anything at all, let alone two arcs, given that I could see nothing of them a few weeks ago – and they're not that difficult to see with the OIII filter. Pretty cool – I've marked the position of both arcs in Uranometria (page 48) for future reference… 92x, 12:39am, August 24-25, 2006"

(Continued on page 5)

The Observer's Corner *(Continued from page 4)*

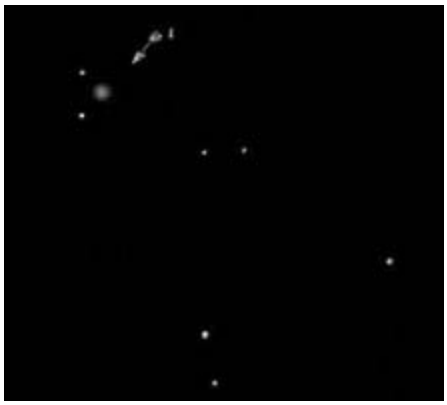
Dim: **NGC 6822**, Barnard's galaxy
Dimmer: **IC 1308**, an HII region within Barnard's Galaxy



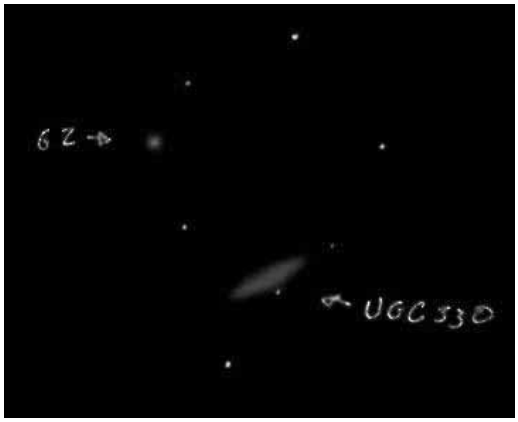


"Wow – best view ever of this wonderful dwarf galaxy! Two bright HII regions are visible with a faint fuzzy well away from the galaxy – background galaxy, star cloud? If it's another HII region it doesn't respond to the OIII or UHC filters. Lot's of faint stars across the face of the galaxy – I wonder if they're part of Barnard's Galaxy or just some random Milky Way stars. 258X, 10:34pm, August 24-25, 2006." (IC 1308 is the HII region on the lower right).

Dim: **G1**, globular cluster in M31.
Dimmer: **G2**, globular cluster in M31.



"Not much larger than the nearby field stars in this so-so seeing, but G1 is still relatively easy to pick out because of the distinctive star field it's in. No stellar points, it just looks like an out of focus star. 812x, 2:14am, August 24-25, 2006."



"G2 is rather near G1 and is about as easy to find. Although much fainter and a little smaller than G1 it still comes across as a faint disk rather than a faint star – somewhat nebulous looking too. A good find. 569x, 2:43am, August 24-25, 2006." (the galaxy UGC 330 was rather distinctive and much more obvious than G2. It was a handy signpost on the way to G2).

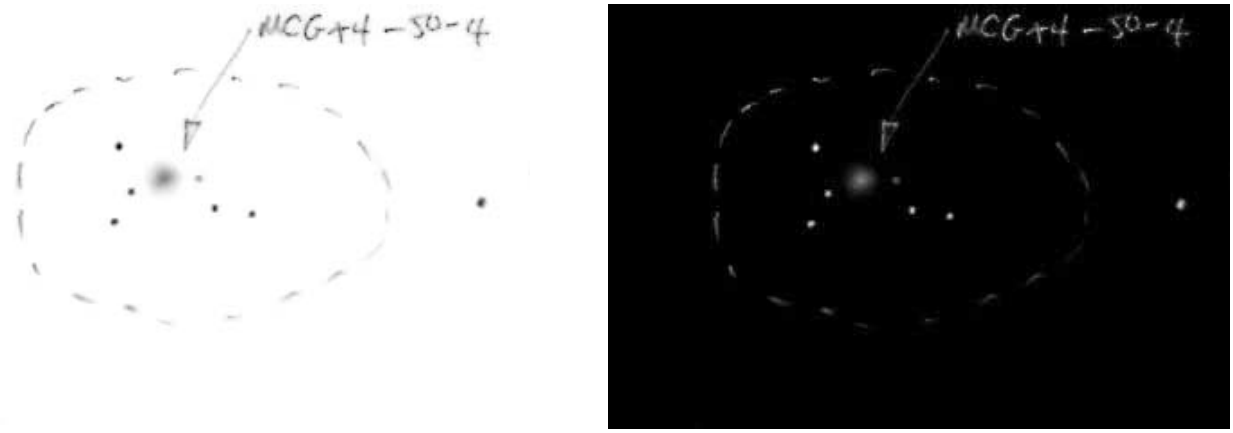
(Continued on page 6)

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

Dim: **Abell 70** planetary nebula.
Dimmer: **the galaxy behind the edge** of Abell 70.

"Nifty planetary with a background galaxy overlapping ("back lapping"?) a portion of the planetaries ring shape – cool. Rather dim and the UHC helps make the planetaries ring definitely visible. 258x to 406x, 1:27am, August 23-24, 2006."

Dim: **Galaxy PGC 66471** shining through planetary nebula Abell 74.
Dimmer: **Abell 74**.



"The galaxy is easy enough to see but I can't convince myself that I can see the planetary – actually, it's just as easy to convince myself that in a nearby, randomly chosen fov that I see something too but how unlikely is that? So although I suspect the planetary I can't say I really saw it. 92x to 406x, 2:42am, August 23-24, 2006." (I did definetely see it the next night through Chuck Dethloff's 24" scope – a dimmer sight, that's for sure).

Dim: Uranian moons **Titania and Oberon**.
Dimmer: Uranian moon **Ariel or Umbriel**.

"Best view I've ever had of Uranus moons! The moon (?) on the lower right is the faintest and by far the most difficult to see but it's definitely there. 1:14am, 406x, August 25-26, 2006" (those are diffraction spikes coming "out" of Uranus).

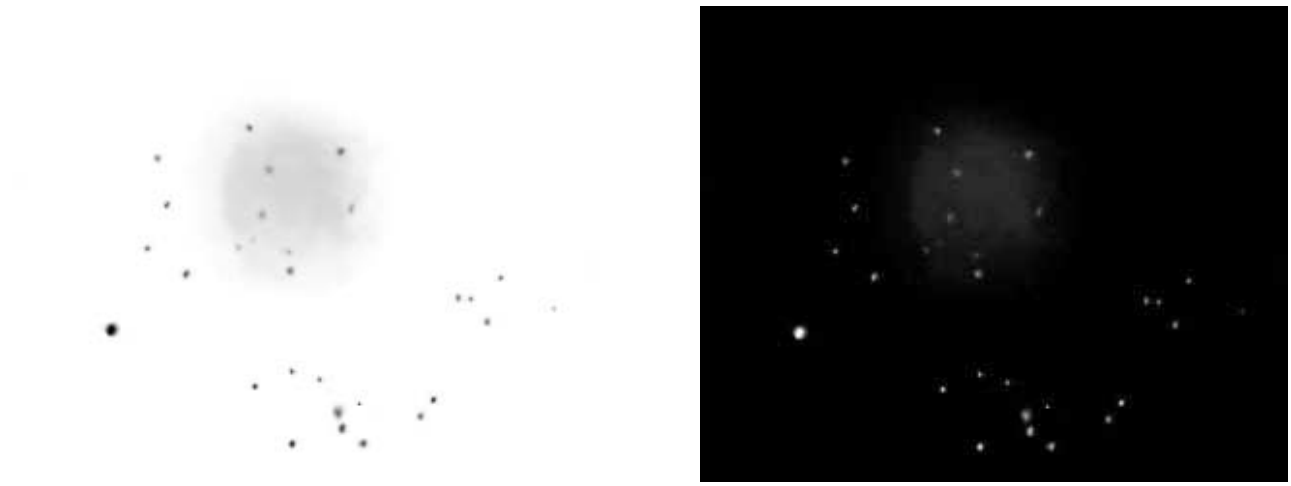
(Continued on page 7)

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

Dim: H II region **NGC 604** in M33.
Dimmer: **Individual stars** within NGC 604.

"5 stars in 604 tonight! Lot's of internal detail too, plus a small nebulous patch of the tip of 604. Best view ever? Maybe! 812x, 4:06am, August 24-25, 2006."

Challenge object –
Dim: Dwarf irregular galaxy **IC 1613**.
Dimmer: **Individual stars** within IC 1613.



"Faint and large, 1613 would be easy to pass by in a less dark and transparent sky. Indistinct is its middle name! I have no idea if any of these stars belong to 1613 but I plotted all I could see. I'll check Megastar tomorrow. 406x, 4:04am, August 24-25, 2006". (Looks like at least a few of them do belong to 1613).

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

70-100 Messier Objects. The Urban Observing Club – designed for those in cities and light pollution. Several others are: The Southern Skies Telescopic Club, The Open Clusters Club, Planetary Nebula Club, and the Lunar II Club.

Topical Programs: There are specific observing programs to find and record asteroids, comets, double stars, Earth-orbiting satellites, meteors, planetary objects, and sunspots. The Master Observers' Club is for those who have completed 10 or more AL observing programs. A new program that should be of interest to many RCA members is the Outreach Club that gives an award for public outreach activities.

There are many, many others, some easy, some very challenging. If you want to have a goal, a challenge when you go observing, look into these observing programs on the Astronomical League website. I can almost guarantee you'll find something there you'll have fun doing!

Observing in the High Andes - Uspallata, Argentina

by Bob McGown & Dareth Murray

Winery tours, local craft booths, banquets, and torrid tango dancers kept our attention the first few days of our trip to Argentina which the Grupo de Astronomos Mendocinos Aficianados (GAMA) billed as the "First Joint Astronomical Observations of GAMA – RCA". Our tour bus had a sign with the RCA logo and GAMA logo proclaiming the event as did the Hotel Aconcagua Lobby. Nineteen intrepid RCA members (well, one was a friend of a member) went on this ten-day adventure and were royally received by the GAMA club, showered with gifts and hospitality.

Leo with GAMA/RCA sign at Hotel Aconcagua

We boarded our deluxe double-decker bus and left Hotel Aconcagua Monday morning, September 18, for Uspallata and our long-awaited southern observing.

As we climbed up into the Andean foothills, past wine yards and oil fields & refineries, we could see the trees just coming into bud and the early spring green on the hills. It was an enjoyable trip, broken by a very long lunch, which became even longer due to a surprise birthday party for not one but three of our RCA party! We finally arrived at the Gran Hotel Uspallata in the late afternoon and settled in to our rooms.

Gran Hotel Uspallata

About 6 p.m. we piled into the bus, loaded up with all our astronomy equipment and some GAMA telescopes as well. Some of the GAMA members had ridden with us coming from Mendoza and others came in separate vehicles. A few kilometers out of the village, we turned onto a narrow bumpy dirt road to a privately owned farmstead, a distance of about 20 kilometers. After passing a stone corral with sheep and horses, we were surprised to see an army tent (along with two Argentine soldiers) and even small tables & chairs set up for observing!

Left: A herd of sheep near our observing site with Uspallata Mountains in background

Setting up our observing site in the high Andes!

Those of us who had solar telescopes set them up. We had our Coronado PST and there was a white light filter scope from the GAMA club. The two soldiers peered through the Coronado and observed the Sun for the first time through a telescope.

Argentine soldiers with the scope, or was it a rocket launcher?

(Continued on page 9)

Observing in the High Andes *(Continued from page 8)*

Everyone was very busy putting their scopes together, collimating and getting observing guides and star maps out on the tables. As the sun fell below the mountains in a blaze of golden glory, the night sky started to come alive.

Early in the evening we saw the Southern Cross. The great Omega Centauri globular cluster was visible - naked eye!

The Carina Arm of the Milky Way rose with Sagittarius overhead with the Large and Small Magellenic Clouds. We had seen these in Africa in January of 2006 but here they seemed even more brilliant. Early in the evening we saw the International Space Station traveling from west to east in the southern horizon. It was so luminous we weren't sure it was the ISS, but perhaps a UFO! Leo proudly claimed it as a special gift from GAMA to RCA! The following night we saw the ISS followed by a small speck of light which was the space shuttle Atlantis!

RCA night scopes included: Rod Shea's 90mm Takahasi, Ken Hose with his 8" truss Dob, Rob Guttridge's 80mm refractor, Margaret Campbell-McCrea's 12.5 truss Dob, Greg Babcock's 10" suitcase truss Dob and Larry & Loni Swenson's 90mm Orion. The members of the GAMA club were very proud of their telescopes, constructed out of material available to them. The only spotting device that the GAMA astronomers had was on Pepe's scope which had a homemade telrad. But they are wizards at just sighting down the tube to find deep sky objects. Some of the GAMA club who observed with us over the 5 days we were at Uspallata were: Leo Cavagnaro (Vice President of GAMA and co-organizer of the trip), Carlos Gutierrez, Eugenio Martin (President of GAMA), Alejandra (and sometimes her cherub-like 2-year old daughter Esperanza) Guerrini, Antonio Sanchez, Elio Delgado, Oscar Castro, Violeta Alonso, Jose Galli (Pepe) with a homemade telrad, Eduardo Gruciani and son Nicolas, Graziano Di Giannantionio, Marcelo Vera and Amedeo Tenaglia. Many of them spoke at least some English. Eduardo and Amedeo were the official "translators" for the group. Some of our observations included the constellations of Eridanus and Sculpter and the South Polar Group of galaxies with the barred spiral NGC 300 and NGC 1365 in Fornax. One of our favorite clusters was the Fornax cluster, the southern super cluster. In Leo's 8" scope there were eight galaxies in the field. It was awesome! We continued to observe as but it was getting pretty cold, so we piled on more layers and hats. The smell of hamburgers wafted from the cooking tent as professor Amadeo & Violeta became our chefs. About 10:30 we saw some clouds start to build up against the mountains, on both sides. When a few drops of rain were felt, we decided to call it a night and take the scopes down. They were left set up in the lower floor of the bus. There was a massive storm later that night and some of the fields and roads were flooded.

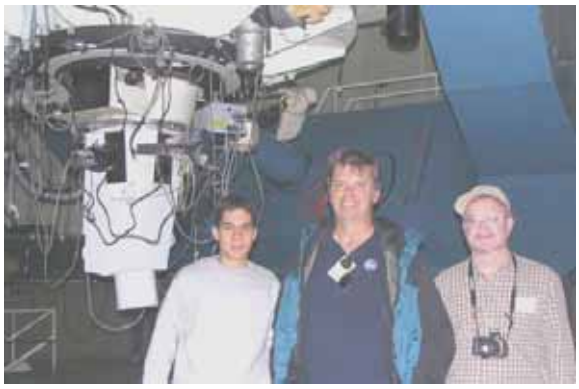
In the following days, we went on many excursions. One was to the Parque Provincial Aconcagua to see up close and personal the highest mountain in the western hemisphere – Mt. Aconcagua at 22,841 feet. One of the stops along the way was Puente del Inca which is a natural stone bridge over the Las Cuevas River, one of Argentina's natural wonders. The coppery-gold color of the rocks comes from minerals in the water. The rubble at the right of the church is what is left after an avalanche swept away the hotel.

Puente del Inca mineral springs

The structures under the unusual mineral flow are the bath houses for the hot springs. We saw some of the Argentine Condors majestically winging their way from the high mountains down into the river valley. They are spectacular birds with a wing span of up to ten feet or more.

Another memorable excursion was to the Astronomical Observatory "El Leoncito" or more commonly referred to as "Casleo", a mere 100 kilometers away – we should have been there in plenty of time for lunch. The company was interesting, as usual, and we were happy to see the unending Andes mountain ranges and the beauty of the high desert plain. At the turn off to the observatory, we breathed a sigh of relief. After 4 hours, we were nearly there. Well, not quite. That road was not built to support a tour bus with 40 people plus equipment. At one point, we all got out of the bus so that it could make it around a particularly steeply banked corner.

Finally, we found ourselves at the top of the ridge. Here was the observatory and some very friendly folks with lots of food for us. The observatory was inaugurated in September 1986 and started operations in 1987 so it is fairly new. A state law has been passed by the state congress to protect the site and its sky as an astronomical reservation. After a late lunch, our host, Dr. Hugo Levato, gave us a tour of the observatory, pointing out all its unusual and interesting features. He told us the ob-



Carlos, Bob and Robin at the heart of the scope

(Continued on page 10)

Observing in the High Andes *(Continued from page 9)*

servatory enjoys between 270-300 nights of clear sky per year! The Boller & Chivens 2.1meter telescope with a Ritchey-Chrètien reflector optical system (called "Jorge Sahade") is used for CCD astronomy. Three of the group (including Bob) climbed past the "Jorge Sahade" dome to visit the sub millimeter solar telescope (SST) which has a 1.5m diameter and operates in 405Ghz and 212Ghz for observations of high-energy phenomena in the Sun. Outside the solar geodesic was a solar heliostat that reflected the Sun's spectra through a pipe on the outside of the observatory.

Another instrument nearby the observatory was a gamma ray spectrometer used to study gamma ray scintillations in the Earth's upper atmosphere. There were also three WWII search lights used in conjunction with the observations to confirm scintillations. This research is done to study electromagnetic pulses through the atmosphere. After the tour, Dr. Levato gave a presentation on his experiences at the most recent IAU conference in Prague, Czech Republic, the result of which demoted Pluto to non-planet status. Dr. Levato said way too much time was spent on this subject but he did agree with the decision. Bottom line for planetary status: the semi-major axis must be inside the planetary body and the planets must be formed by the same processes.

By this time it was getting on toward early evening and to the disappointment of many we learned that the research telescope would not be available for our use. In any case, we decided it was better to come down the mountain before it got dark. It was a long journey back to the hotel but some of the GAMA club serenaded us with traditional Argentine ballads. We even watched a Monty Python movie on the bus's TV monitors. We arrived back at the hotel well after midnight, too late for any observing and tired out from all that bus riding!

One morning in between observing, Ken, Marianne and Bob hiked up some hills in a wild wind storm. One of the most festive events of the week was the gala barbeque on Thursday. It was a feast, designed to outdo all the previous feasts we had become used to. There were the usual speeches and giving of gifts.

This time, each one of us received a large platter with both groups logo (all in color) giving the dates of the "First Joint Astronomical Observations". An extra plate was made for the Rose City Astronomers club and given to the club by Margaret at the October meeting.

Then we had the dancing! A group of children dressed in traditional Argentine garb, filed down and began to dance. They were probably between the ages of 6 and 12. After their performance, we were further treated to more by older couples in full costume, again showing off the traditional dances of the region.

After the barbeque, we attended a presentation by Dr. Richard Branham Jr., head of the Argentine Institute for Snow and Ice Studies in Mendoza. He is a physicist from Chicago and it was quite nice to hear a familiar American accent! He spoke about various aspects of General Relativity in a witty and conversational style and mentioned one of his colleagues was Vera Rubin, of astrophysics fame. The mini-conference broke up about 6 p.m. and we ran outside to see what the weather was up to. At 7 p.m. it was quite overcast and the group decided not to risk the hour and half trip out to the observing field.

Later on, a few die-hards noticed the sky clearing about 10:30 p.m. Bob and seven other GAMA and RCA renegades hijacked the bus, driving a few kilometers out of town to an observing spot Leo liked. They happened to have some telescopes on hand (in the lower part of the bus) and got in a few hours of observing. Observing southern Herschel galaxies, they even saw a fireball in the eastern horizon, glowing fiercely and then fading away.

Dancers at the Barbeque –the piano on stage in back was used for Eva Perón's performances

On the final day of our trip, a few courageous RCA'ers went on a white-water rafting trip which had been arranged the day before. We, along with Steve & Jan Katz & Greg Babcock roared down the spring-melt Mendoza river below Aconcagua for a afternoon raft trip that seemed to last a lifetime! What a view of the canyons and Andes towering high above! Soaking wet but very happy, we made it back to the hotel just in time for lunch. In the afternoon, the group had another mini-conference at the hotel with Bob McGown presenting on SETI: the search for Extra-terrestrial Intelligence and astrobiology.

White-water rafting on the Mendoza River!

(Continued on page 11)

Observing in the High Andes *(Continued from page 10)*

The beginning of the presentation was the first five minutes of the movie "Contact" which set the stage. The talk ranged from quantum computers & signal detections, as well as the detection of the beginnings of life in the form of microbes in extreme locations on this planet and perhaps Mars. Bob discussed his recent involvement in the NASA Marte project, a search for life in an underground biosphere near the Rio Tinto River in Spain.

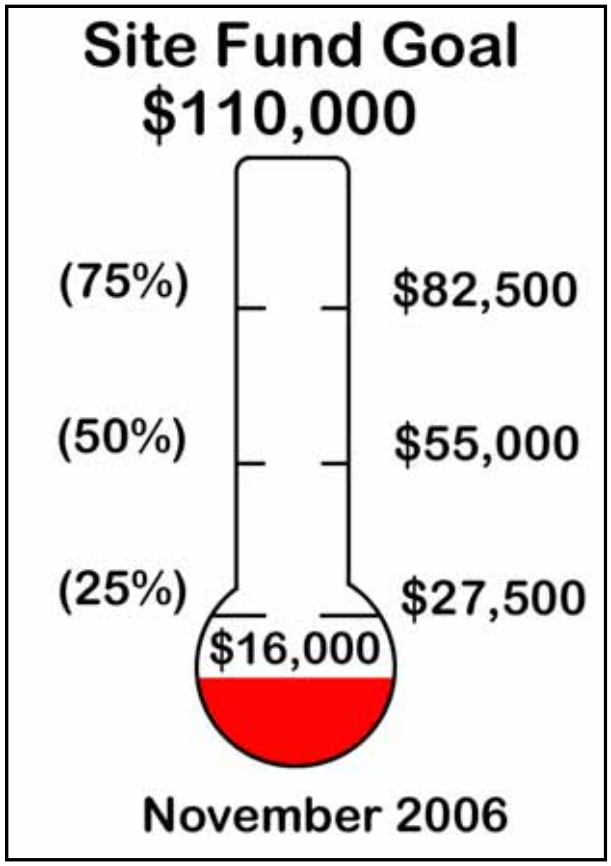
Friday night was the last night for observing! Almost everyone turned out for the occasion and it was excellent. Some of the objects viewed included Palomar 9 & the Fornax Galaxies. We observed until after midnight. All too soon, our wake-up knock from Margaret came the next morning at 6:30. Nostalgically, we boarded the bus, making sure we had everything we had come with. This was our last trip on the bus and we spent the next few hours joking with Leo, Carlos, Eugenio and Amedeo about our adventure.

We made it to the airport in plenty of time, with the GAMA group taking care of us every step of the way. And then came the farewell speeches! And some last gifts. At the last moment, Bob gave his laser light pen to the GAMA group, as a final gift.

Our luggage was searched, passports checked and stamped and we were on our way back to Portland via Santiago, Chile and Atlanta. We arrived in Portland about 1 p.m. on Sunday the 24th. As we waited in baggage claim, the group exchanged hugs and promises to get together soon and share our pictures and memories of the trip. We definitely plan a return trip to see our new friends in Mendoza, perhaps in the early fall, when it is warmer! It is a wonderful country, gracious people and with so many more things to see and do, we will plan on a much longer trip next time.

Margaret finishes her observing notes

Visit http://www.rosecityastronomers.org/argentina.htm for more on all the folks who went on the trip and access their pictures too!



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>

ALCON EXPO 2007

Portland, Oregon

Anyone interested in being on the Astronomical League Conference Committee for the conference in Portland in 2007, please contact Dareth Murray - darethlee@comcast.net

RCA LIBRARY

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

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

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

RCA 'Downtowner's' Lunch

Photo by Jan Keiski

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-omsi.org).

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

Always great conversation and food.

For more information contact: Margaret McCrea at mmcrea@nwlink.com

Mercury Transit Observing at OMSI, November 8, 2006
Photos by Jan Keiski

BOARD MEETING MINUTES

November 6, 2006
OMSI Classroom 1
Andy Phelps

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

Board members present: Ed Epp, Larry Godsey, Carol Huston, Matt Brewster, Peter Abrahams, Jim Reilly, Bob McGown, Jan Keiski, David Nemo, Andy Phelps, Ken Hose, Greg Rohde.

Guest: Jim Todd

Board Reports

- Secretary's Report – Andy Phelps: Quorum (10) met with 12 voting members present.
- Treasurer's Report – Ed Epp: $31,720.24 total liabilities and equity. Waiting for deposits from Sameer for sales table for September and October. CT12 articles of incorporation has been filed by Larry Godsey.
- VP Programming – Matt Brewster: David Haworth – Astro imaging presentation, November. This would be a good time to announce commitment of donation of CCD imager to telescope library (donation has not been accepted yet). December meeting (3rd Monday) – Holiday Dinner in café (still confirming with Jim Todd)
- VP Membership – Ken Hose: 5 new members, 11 renewals, $392 collected in dues, 267 member families.
- New Member Advisor – Jim Reilly: Meeting scheduled for Nov. 19 for new members at Jim's house. Jim needs some new member packets.
- Book Library - Jan Keiski: Has "Astro-Cards" for library. Still selling old books.
- Telescope Library – Greg Rohde: Has 12.5" and 10" mirrors at telescope workshop. We have many scopes; should we sell these mirrors? We received a recent donation of an 8"SCT and had an offer of a 13" Coulter Dobsonian. We now have 18 scopes. Storage is a problem in the cloudy months.
- Magazine Subscriptions – Larry Godsey: Nominal.
- IDA – Bob McGown: Received $50 gift certificate for Lumicon. Has made some informal IDA presentations. Argentina group may want to give presentation at upcoming meeting. Bob needs copying done.
- Site Committee – David Nemo: Site committee now has $16,000 in cash and pledges.
- ALCOR – Carol: Carol is handling awards from Astronomical League during Dale Fenske's absence.

Old Business

- Action Item: Dave and Bob to work up guidelines for lifetime membership. Develop guidelines for targeting donations – property, cash, and acknowledging donors. Tabled for now.
- Action Item: Greg and Jan: Business cards – Board members needing business cards should email Greg.
- Action item: Dareth find someone to do a brief sky calendar at general meetings. Peter is unable to do it at the present time and he suggested we find someone else.
- Elections, the next step: Elections will be held at the November meeting.
- Vote Patton Echols in as VP of Community Affairs pro tem. Greg Rohde made motion, Jim Reilly seconded. Approved with unanimous vote.
- Phone line report: November 6 – December 4: Greg Rohde. December 4 – January 8: Andy Phelps.

New Business

- Jim Todd – OMSI: Jim discussed use of the planetarium for educational "night sky" presentations at monthly meetings. This will be especially easy because we will be unable to hold meetings in the auditorium from April through October 2007 due to exhibit. Jim also confirmed that RCA meeting times have been set for 2007. YRCA will need to find space for June, July and August meetings. Also, Jim mentioned that the RCA-OMSI relationship is very strong and is seen as a model for science centers around the country.
- Awards committee for the holiday banquet: Dareth, Bob and Doug Huston.
- Volunteers – who can use what – Carol: Think about needs for volunteers. Some people have offered their time; this would be a great opportunity to bring new people to the board.
- Copy person: We make a sufficient volume of copies such that we need a "copy person" to coordinate various board members' copying needs. This person could download PDFs and make copies at OMSI or other locations. Greg Rohde has agreed to take this on.

Meeting adjourned 9:09pm.

Telescope Workshop

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

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

For more information contact:

Director: John DeLacy johncdelacy@comcast.net

Assistant: Don Peckham don@dbpeckham.com

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

December 2006

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 2006

Dec 4	Mon	RCA Board Meeting	OMSI Classroom 1	7pm
Dec 9	Sat	Telescope Workshop	Swan Island	10am-3pm
Dec 18	Mon	RCA Holiday Meeting	OMSI Cafeteria	7:00pm

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

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