

The

Rosette Gazette

Volume 22, Issue 1

Newsletter of the Rose City Astronomers

January, 2010



RCA JANUARY 18 GENERAL MEETING!

VIDEO TELECONFERENCE WITH GAMA!

& GREG BABCOCK'S JULY 2009 SOLAR ECLIPSE TRIP

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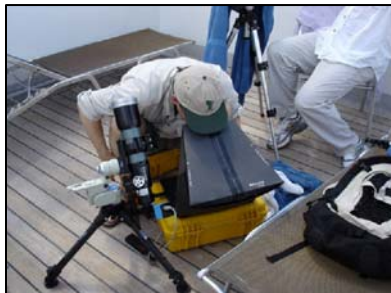
This month is a joint meeting with the Grupo de Astronomos Mendocinos Aficionados (GAMA); our Sister Club; located in Mendoza, Argentina. Featuring live coverage from Mendoza on the big screen in the OMSI Auditorium.

It will be their pleasure to share with RCA members an overview of GAMA activities during 2009. They will also share some comments about their 8th "Modified Messier Marathon for Southern Observers" to be celebrated in Uspallata Valley on February 12-14.



"GAMA has a deep desire to enhance their relationships between astronomy groups in the northern and southern Hemispheres." says Leo Cavagnaro. Leo is GAMA Liaison to RCA, VP of Observing, speaker at ALCON Portland 2007, and author of many southern hemisphere astronomy articles in the Rosette Gazette.

http://www.rca-oms.org/sister_clubs/gama.htm



Also guest speaker Greg Babcock will share experiences from his recent solar eclipse trip.

<http://www.synrgistic.com/astro/astrogallery/eclipse2009/eclipse2009-home.htm>



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

All are Welcome! Monday January 18
Social Gathering: 7 pm. Meeting Begins: 7:30 pm.
Location: OMSI Auditorium

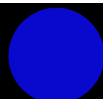
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Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.
Moon photos below courtesy David Haworth

Last Quarter Moon
January 7



New Moon
January 14



First Quarter Moon
January 23



Full Moon
January 29



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RCA MAGAZINE SUBSCRIPTIONS

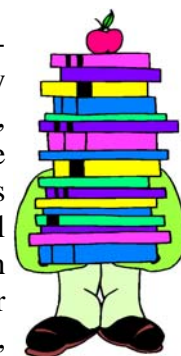


One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year or \$65.95 for two years.

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

RCA LIBRARY

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



The RCA library is constantly growing through many donations and the purchase of new materials. A listing of library materials (PDF format) can be found at the library web page:

<http://www.rosecityastronomers.org/library.htm>
 Jan Keiski <library@rosecityastronomers.org>
 503-539-4566



Classic Telescopes

Observing winter's Gemini through a specialty refractor.
By John W. Siple

was made by Astro Optical Industries Co. Ltd. during the 1960s and '70s. It was listed in the company's catalogues first as model R61 and then a few years later with minor mechanical improvements as R61-D. The skilled designers in Japan maintained an unequivocally professional tone throughout its construction, producing a versatile instrument with unusually good optical properties.



According to the literature, this trendsetting telescope, superior in many aspects to those available in the current era, wields powers of up to 400x and has a light grasp over 73 times that of the naked eye. The classic refractor telescope was exported from Japan and then resold by SPI (Southern Precision Instrument Co.) of San Antonio, Texas, along with several other major and minor astronomical equipment distributors based in the United States and elsewhere.

The universal department store Sears, Roebuck & Co. offered the telescope for a brief period of time—it was listed at \$149.50 in their 1961 catalogue—but abandoned the professional model in favor of other small, more cheaper selling spotting scopes and refractors. Eventually sales from various sources totaled at least a thousand, but the exact number of telescopes manufactured is still a company secret. In today's world, avid

collectors are often willing to spend \$600-700 for a mint condition, gingerly used Astro Optical R61 or R61-D telescope.

Astro's upscale version R61-D equatorial telescope, a jewel of optical perfection, was charged with the responsibility of tracking down the constellation's most famous heavenly treasures. An irresistible treat of Gemini's deep-sky and an obvious first target for the refractor is M35, a breathtaking open cluster of the 5th-magnitude that evokes exclamations of delight from stargazers. Users of small telescopes will count around 75 to 100 stars, loosely scattered in an area of the sky the same size as the full Moon.

Through the precise focus of the 2.4-inch telescope at 30x, one of Messier's best objects displays overlapping wedges, looping festoons and chains of dazzling stars embedded within a finer blaze of celestial mist. When the sky is dark and clear, keen-eyed observers seated at the controls of their R61-D scopes should be able to pick out the faint globular glow of NGC 2158, a highly concentrated open cluster located just one half degree to the southwest of M35's center.

In the vintage glass at 46x, this neat little object, 5' in diameter, is visible as a spot of fuzzy light situated near an isolated clump of 9th-magnitude stars. Those instruments having apertures greater than about 10-inches resolve M35's companion cluster into a compressed mass of minute stars, similar to that shown in the photograph at center by Nigel Sharp (NOAO/AURA/NSF). NGC 2158 is relatively distant from us at 12,000 light years, four times as far off in intergalactic space as its famous neighbor.

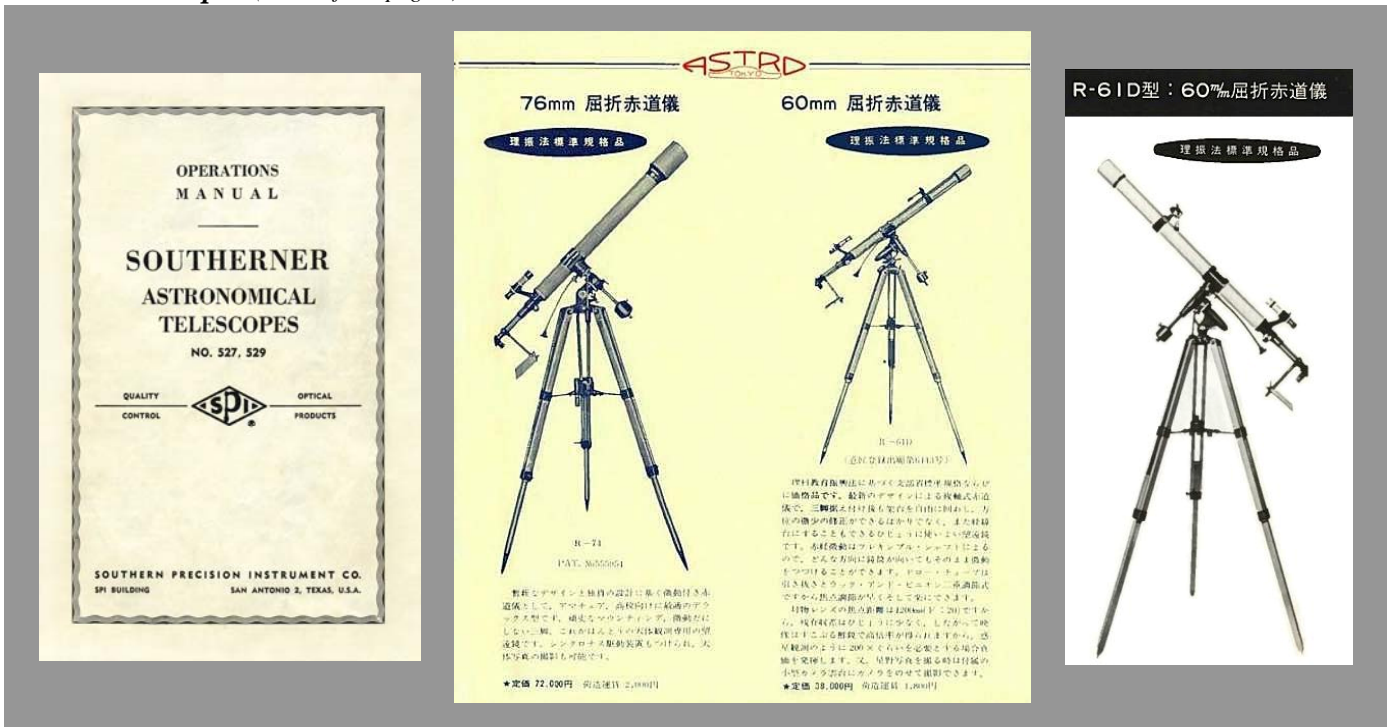
NIGHTS IN JANUARY find the constellation Gemini, the Heavenly Twins, occupying a position high in the southern sky. The shimmering stars of this zodiacal group lie below Auriga and to the east of Taurus, while the foot of the constellation is immersed in the pale glow of the winter Milky Way. In mythology, Gemini's beloved stars Castor (the "Horseman") and Pollux (the "Boxer") are the sons of Leda, who was seduced by Zeus in the guise of a swan. Mariners from ancient times considered them patron saints, seeking their help in storms.

Found within the ruling area of the Twins is an incomparable array of deep-sky splendors. The hand-painted constellation card at upper right is a useful guide for learning more about the individual stars of Gemini. Published in London in 1825 and invented by a "woman of science," it is part of a larger set known as *Urania's Mirror*, after the Greek muse of astronomy. A beautiful color photograph of the region, taken by Philippe Durville, is displayed directly above.

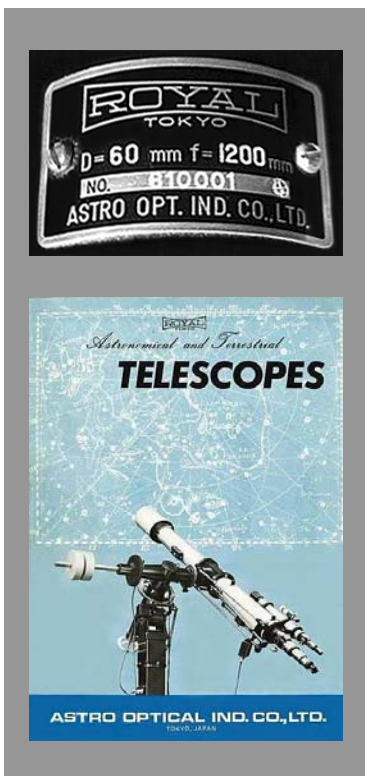
A once popular 2.4-inch-aperture (60-millimeter) astronomical refractor with an uncommonly long focal length of 47.2-inches was selected for taking an extended visual tour of Gemini's celestial riches and in casual star hopping. This desirable telescope



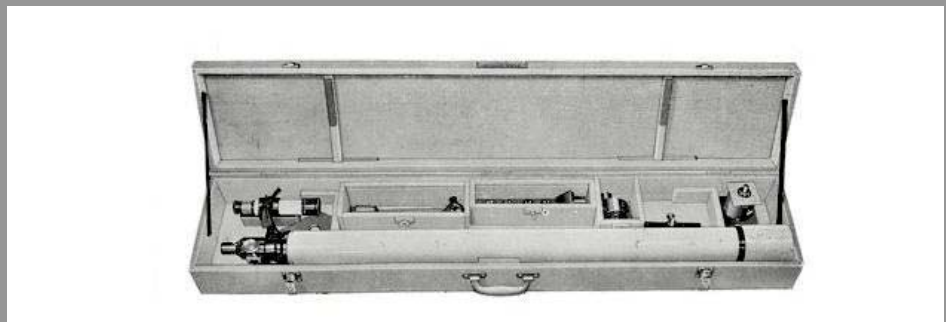
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The classic R61-D refractor telescope, made in Tokyo, Japan by Astro Optical Industries Co. Ltd., has graced many yearly catalogue advertisements. (left) An owner's guide for the basic operation of the 60mm refractor was included with each telescope purchase. In this detailed 10-page instruction pamphlet published by Southern Precision Instrument Co., the R61-D instrument (and earlier R-61) is specifically described as their Model No. 527. (center) Two choices of equatorially mounted refractors appear on this page out of the 1970 catalogue. The larger 76mm model is another precision engineered instrument often found in the hands of serious collectors. (right) The R61-D telescope is priced at 68,000 yen in this circa 1975 Astro Optical promotional ad. Catalogue images are courtesy of Max Lattanzi.

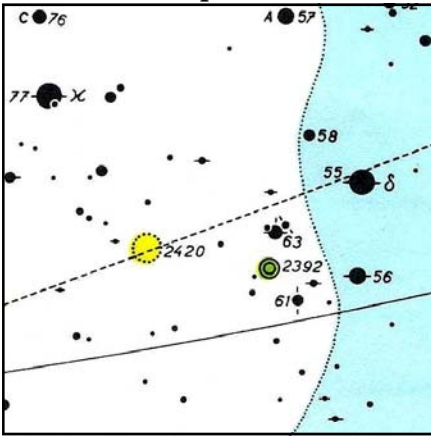


The label from the first Astro Optical R61-D (stamped with a “Royal Tokyo” logo) off of the production line (top left) and the same telescope used for making detailed observations of Gemini’s deep-sky showpieces. Identifying marks indicate that this exclusive refractor, serial number 610001, has an aperture of 2.4-inches ($D = 60\text{mm}$) and a focal length just under four feet ($f = 1200\text{mm}$). Another publication that was available from Astro Optical in Japan (bottom left), this time their illustrated catalogue from 1968-69. The R61-D, one of the company’s best astronomical and terrestrial telescopes, was discontinued in 1980 after about two decades of successful sales. Valuable accessories include a Barlow lens for the doubling of powers, a porro or erecting prism, and a small set of high quality oculars. When not in use, the disassembled instrument is safely stored in its own long wooden chest (below).



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Classic Telescopes (Cont'd from page 4)



Left to right: A finder chart for NGC 2392 (located roughly 2.5 degrees to the east-southeast of Delta Geminorum), Ron Stanley's 7-inch Maksutov-Cassegrain deep-sky image, and the Eskimo Nebula from Hubble courtesy of Andrew Fruchter (STScI) et al., WFPC2, HST, NASA.

Glorious Castor, shining at magnitude 1.9 and almost as radiant as its brother star Pollux, is one of the finest doubles that the winter night sky has to offer. Through the Astro Optical 2.4-inch refractor at high power, Castor reveals its duplicity as a pair of gleaming white suns in close proximity to each other. Their current separation stands at 4.5", which makes this duo an easy target for small telescopes. That value has been steadily increasing toward a maximum distance of about 7", reached next in 2075.

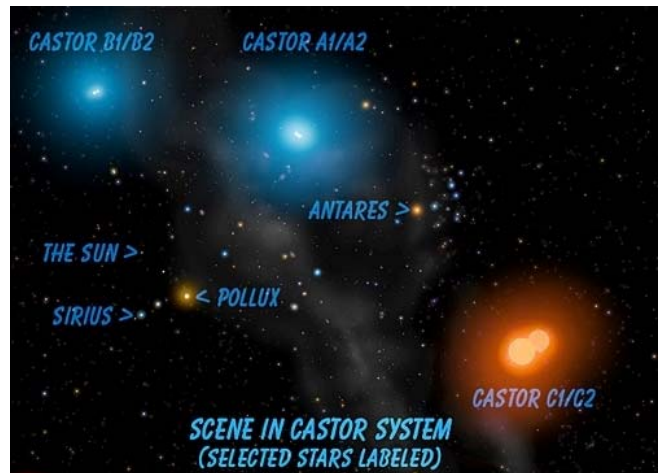
Another member of the starry clan is Castor C, a lesser 9th-magnitude orb found a generous 71" away to the south-southeast from the main pair. At 46x, the "Horseman's" trio of flaming suns is elegantly framed at the center of the eyepiece field. All three stars have hidden components that are detectable only through advanced techniques, so Castor is really a six star system!

A quick movement of the telescope on its axis to a point eleven degrees south of Castor has the observer staring directly at NGC 2392, the Eskimo Nebula. This astounding 8.3-magnitude planetary nebula, 20" in di-



ameter, is characterized by overlapping bright rings and dark patches, surrounding a noticeable 10.5-magnitude central star. Its distance is 3,800 light years.

In this graphic representation of Castor prepared by astronomer Chris Butler, all six of the individual components are shown. An inhabitant located on a planet orbiting deep inside that star system would see a night sky similar to this one. The famous multiple star in Gemini lies at a distance of 52 light years.



An 8th-magnitude field star lies just 99' away to the north, which helps as a guide when hunting for this planetary nebula. The Eskimo Nebula's splendor is echoed best at 171x, where it appears as a tiny, vibrant bluish-gray disk. Except for the enhanced color, Ron Stanley's portrait of the Eskimo Nebula (shown above) simulates the view seen through most amateurs' telescopes.

U Geminorum, a cataclysmic variable star discovered by J.R. Hind in 1855, is one of the constellation's most enigmatic objects. A star system continually on the knife edge of oblivion, it consists of a white dwarf (or hot blue subdwarf) and a cooler red subgiant in a rapid orbit. According to theorists, mass transfer causes an explosive buildup on the surface of the hotter star, forcing an outburst. Most of the time this is manifested as small, sometimes rapid variations in light.

The stellar anomaly is presumably choking in a dense cloud of expelled matter as a result of its repeated violent outbursts over many millennia. A speculative rendition of

U Geminorum, illustrated by scientist and acclaimed author William K. Hartmann, is shown at far left. During extreme flare-ups this dwarf nova can easily be detected through the R61-D refractor as a star of the 9th-magnitude. However, when at its state of weakest energy U Geminorum is a dim 14th-magnitude cinder accessible only in large backyard telescopes.

Devotees of classic instrumentation and active observers will find Astro Optical's R61-D model to their liking. Longtime collectors accustomed to intricate work by the old masters of telescope making can appreciate its sleek styling and great optics. As a specialty within a specialty, the much-admired Japanese refractor brings into close visual contact many of Gemini's deep-sky treasures. When next out on a cold winter's night, remember that you are using a telescope originally designed for astronomy's elite.

A Winter Blast of Fun!

By Tom Koonce

The weather is often keeping us inside at this time of year. The only stars we get to see are those as we are dashing from the car to the house in the evenings. For a few seconds we may glance up at Orion's Belt or perhaps a bright planet through bitterly cold, but alluringly steady, clear skies. You might briefly think about going inside and grabbing your telescope and coming back out for a few minutes of observing, but then the choice between the bitter cold and the Siren's song of the warmth of the house becomes clear as you retreat inside. It's frustrating, surely, but while amateur astronomy is a hobby that teaches patience and perseverance we don't want to sit idly by all winter.

Perhaps we should treat the winter months as an "opportunity". We could use these few months to explore our creativity, get our equipment finely tuned and ready, or even expand our horizons online by conducting real science for professional astronomers. With that in mind, here are a few ideas for the winter months. Maybe you'll like to try a few. These could count as New Year's Resolutions. All count as fun!

- Clean all of your eyepieces (<http://www.televue.com/engine/page.asp?ID=143>)
- Clean your telescope (http://www.ehow.com/how_10336_care-telescope.html), (http://sctscopes.net/SCT_Tips/Maintenance/Cleaning_Your_Optics/cleaning_your_optics.html)
- Change the batteries in your Telrad, red light flashlights and other powered accessories.
- Inventory all of your astronomy gear. Take pictures of all of it for insurance purposes.
- Organize your eyepiece case and / or make a new eyepiece case (http://www.cloudynights.com/item.php?item_id=1090)
- Image process all of those great shots that you've been meaning to get to (http://www.spacetelescope.org/projects/fits_liberator/improc.html)
- Accomplish real science on your home computer – help scientists classify galaxy types: (<http://www.galaxyzoo.org/>)



- Build a model of the Cassini Spacecraft (or many others!) (<http://www.jpl.nasa.gov/scalemodels/>)
- Establish an "astronomy fun fund" for yourself and put \$5/week into it
- Write a few letters to your town in favor of lighting control (<http://www.darksky.org/>)



- Review the Astronomical League list of observing clubs. There are a few new ones you might like try. (<http://www.astroleague.org/observing.html>)

- Repaint your old telescope with a cool pattern (<http://www.cloudynights.com/ubbthreads/showflat.php/Cat/0/Board/classics/Number/2294472/page/0/view/collapsed/sb/5/o/o/fpart/all>)



- Update your GoTo software on-line to the latest version
- Build your own dobsonian telescope (<http://www.backyardvoyager.com/dobplans.html>)
- Create a list of community outreach activities that you think your club might be able to do this year.

- Sketch out what your backyard observatory will look like one day (<http://obs.nineplanets.org/obs/obslist.html>)



- Survey your club members about what was their best astronomy-related experience this past year. Try to have more of those this next year.
- Make a glare shield for your telescope from black foam craft sheet (http://www.atoztelescopes.com/products/dew_shield.asp)

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2010 Preliminary Star Party Schedule

(Subject to change)

<u>Dates</u>	<u>Day of Week</u>	<u>Event</u>	<u>Location</u>
April 9 - 11	Fri - Sun.....	RCA Dark Sky Camp Weekend.....	Camp Hancock
May 15	Sat.....	Prineville Reservoir Star Party	Prineville, Oregon
July 9 - 11.....	Fri - Sun.....	Trout Lake Star Party Weekend	Trout Lake Washington
July 10 - 14.....	Sat - Wed	Golden State Star Party	Adin, California
July 15 - 18.....	Thu - Sun	Mt Bachelor Star Party at SunRiver	Sunriver Oregon
Aug 11	Wed	OMSI Perseid Meteor Shower Watch	Rooster Rock & Stub Stewart
Aug 11 - 15	Wed - Sun.....	Oregon Star Party	Indian Trail Spring, Oregon
Aug 12 - 15	Thu - Sun	Table Mountain Star Party	Ellensburg Washington
Sept 10 - 12	Fri - Sun.....	RCA Dark Sky Camp Weekend.....	Camp Hancock
Oct 7 - 9	Thu - Sat	Mt Bachelor Star Party at Brothers	Brothers, Oregon

For the most up to date star party information visit: http://www.rosecityastronomers.org/sp/sp_schedule.htm

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, January 20th, 2010 , 7 PM.

Topic: To be determined

Presented by: Also T.B.D.

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

Email: cosmology-sig@rosecityastronomers.org
www.rosecityastronomers.org/sigs/cosmology.htm

Telescope Workshop

When: Saturdays, Jan. 2 and 30, 10:00 AM - 3:00 PM

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

For more information contact:

Director: John DeLacy johncdelacy@comcast.net

Assistant: Don Peckham don@dbpeckham.com

Astro-Imaging Special Interest Group

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

Next Meeting: Monday, January 11th, 2009, 6:30pm

Beaverton Public Library
In Conference Room
12375 SW 5th St, Beaverton

Science Special Interest Group (SCI-SIG)

Next meetings are January 2nd and 30th at 3pm. Following the Telescope Workshop at Technical Marine Services.

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

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

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

Tom Nathe sigs@rosecityastronomers.org



BOARD MEETING MINUTES

November 2, 2009

OMSI Classroom 1

Margaret Campbell-McCrea

The meeting was called to order at 7:04 p.m.

Attending: Diane Fredlund, Larry Godsey, Ken Hose, Scott Kindt, Jan Keiski, Sameer Ruiwale, Greg Rohde, David Nemo, Margaret Campbell-McCrea, Dawn Willard.

Non-voting attendees: Duncan Kincaid, Larry Froberg, Peter Abrahams

Board Reports

- Secretary's Report: Margaret Campbell reported that a quorum (10) was met with 10 voting members present.
- Treasurer's Report: Larry Godsey handed out the most current balance sheet and profit and loss sheet. The RCA current assets are \$19,367.85, the Site Fund assets are \$19,558.30, for a total of \$38,926.15.
- Programming: Matt Brewster reported that Ken Crosswell will be our speaker in November, speaking on the lives of stars. Matt, as usual, will do the advance publicity. Ken Crosswell will have copies of his book for sale at the meeting. He can take only cash or checks, no cards.
- Observing: No report.
- Community Affairs: Dawn Willard reported that because of the weather, most October events were canceled. We are scheduled to take part in the Keep Portland Weird event at the downtown Multnomah County Library in November. We will have a table up for solar viewing. There is nothing else scheduled until February.
- Media Director: Diana Fredlund reported that she contacted OPB's Think Out Loud about having a program on light pollution, and had a positive result from the show. We agreed to aim for the first of next year. We need to put our application in about three weeks in advance. Sameer Ruiwale agreed to work on this project with Diane. Greg will send her the name of someone from the Hillsboro Planning Commission for the show. We suggested that she contact Dareth Murray, who used to be active in the regional IDA.
- Membership: Ken Hose reported that we had 20 new members in Oct., and 7 renewals. We have 304 member families. There were 276 last year and 250 the year before. Last year our maximum number was 320. Ken commented that we're getting a lot of new members. Also, 20% of our transactions are through PayPal. We took in \$586 in new member dues in October.
- New Members: Howard Knytych was not in attendance for a report, but it was noted that the orientation in October went well. There were 20 – 30 people in attendance. There will be no new member orientation in December because of the potluck. New member orientation will resume in January.
- Sales: Margaret Campbell reported \$187 in sales, \$122.25 in donations to the Site Fund in November.

- Book Library: Jan Keiski reported that there will be a book sale in November.
- Telescope Library: Greg Rohde reported that he has made a complete inventory of the telescopes by size and type, and will be selling off two 8" dobs. He already has buyers. He will be replacing them with 10" dobs - - a Hardin and a home built. He has purchased another Coronado PST, with case, for \$400, and is looking for a tripod for it, and for the PST that Dawn Willard uses for public star parties too.
- IDA: No report.
- Magazine Subscriptions: Larry Godsey: nominal.
- Webmaster: Larry Godsey reported that he has removed 65 people from the Forum and broadcast list because they did not renew their dues. 28 members are not on either Forum or broadcast list (by choice). Of the 304 members, 250 are on the broadcast list. Of them, 100 have posted on the Forum at least once.
- Site Committee: David Nemo: nominal.
- Youth Director: Jean London reported through Margaret that six children attended last month, and that a total of 32 kids have attended the kid's program so far.
- SIGs: Scott Kindt: nominal.
- Alcor: No report.
- OMSI: Jan Keiski: nominal.
- Sister Clubs: Jan Keiski: nominal. Margaret will invite Greg Babcock to be a speaker in January.

Old Business / Action Items

- Mirror-making machine: Greg Rohde reported that he has not contacted Steve Swayze about fixing the broken arm on the machine, or making the training video.
- Stub Stewart parking bumpers tape project: Greg Rohde reported that he hasn't been out there because of the rain.
- Article for the website on the refurbished 12.5" library scope: Diana Fredlund reported that she didn't receive the email from Sameer.
- Election Committee: Margaret Campbell reported that all positions have been filled, meaning that someone has volunteered to run for each one of our Board positions. There was some discussion about making the election process less lengthy, but still meet our by-law and 501©(3) obligations.
- Stub Stewart SP impromptu star party notification process: There was a lengthy discussion regarding our relationship with Stub Stewart. Greg will be out there this week taping the parking bumpers, and will try to talk to the supervisor, and Sameer will also make an appointment to talk to him.
- Minor Catalogs Project: Margaret Campbell reported that nothing has been done.
- Raffles for star-party volunteers: Larry Godsey report that he talked to IRS about this and we cannot give volunteers

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August Board Minutes *(Continued from page 8)*

cash or cash-like items. We can give up to \$75 in gifts such as cups, plaques, etc. An appreciation dinner is okay. A raffle is okay if the prize is worth less than \$75. Larry spent some time informing us of new IRS laws regarding donations to non-profits. He also reported that there will be a 501©(3) training meeting in January for board members of non-profit organization. Larry will put information on the Board's Forum for that.

New Business

- December Holiday Potluck:

Potluck (rotation sequence): Larry will send out the formula that we used for assigning food for the potluck, which worked well last year, so we'd like to use it again. Matt Brewster will get the honey-baked ham again, and pasta or bread with it. There is some question as to whether the food pan warmers will be working.

Events: There will be music by Howard Knytych, and a slide show that Jan creates on a CD. Duncan Kitchin will add music to it.

Swap meet: This will be in the hallway, but for a limited time, so sellers will be able to eat.

Awards: We haven't had a committee for awards this year. Matt will talk to Carol Huston about what she knows about past awards and award eligibility

- Next year's star party schedule: Sameer and Matt Vartanian have been emailing back and forth about it, along with Jim Todd and Larry Godsey. The OMSI star party schedule has been published. We haven't started on the RCA schedule yet. Sameer will talk to Matt Vartanian about this right away, and about Kah-Nee-Tah.
- Camera equipment proposal: Matt Brewster will have a proposal for the Board's review at the next several Board meetings. It will come in three steps. 1. Imaging w/o stacking, 2. Imaging/stacking 3. Software and notebook. Duncan has already brought this up to the imaging club and they have discussed it but are not ready for a proposal yet. It is still in discussion.

- Ken Hose was asked if a past member could be allowed to stay on the Forum and he would pay the dues when he had it. The Board was not inclined to agree to this. It costs us to carry people on the membership list, and it's a security measure.
- Greg proposed that the club produce a calendar out of our RCA images. The cost is \$3.55 each. The consensus was that it is a very good idea, but it is too late for this year

The meeting adjourned at 9:00 p.m.

To Do:

- Matt Brewster will do regular publicity regarding our November meeting. Matt will talk to Carol Huston about where the awards committee was when it stopped meeting.
- Diane Fredlund will check to see if she's been getting emails from Matt and Sameer. She will write the article on the refurbishing of the 12.5" telescope.
- Sameer Ruiwale will work with Diane Fredlund on the Think Out Loud program. He will make an appointment to speak to or meet with Dan, the supervisor at Stub Stewart, and will contact Matt Vartanian about next year's star party schedule.
- Margaret will invite Greg Babcock to be our January speaker.
- Greg Rohde will send Diane the name of the Hillsboro Commissioner who might want to be on the Think Out Loud program. He will speak to the supervisor at Stub Stewart when he goes out there to tape the parking bumpers.
- Larry Godsey will put information about the IRS training for non-profit organization board members on our board member pages. Larry will also send out the formula we used for assigning potluck dishes to different sections of the alphabet, so we don't get too many desserts and not enough vegetables.
- Duncan Kitchin will add music to Jan's CD of photos for our holiday potluck entertainment.

Winter Fun *(Continued from page 6)*

- Listen to an astronomy related podcast on your computer (<http://www.astronomycast.com/>)
- Write a letter to your state congressmen and senators in favor of the space program
- Explore Google Moon and Google Mars

- Make a cover for your telescope when not in use

I hope that you find this short list inspirational on the cold, dark, days of winter and that it prepares you for the upcoming warmer weather and "Messier Marathon" in March.



JANUARY 2010

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 4	Monday	RCA Board Meeting	OMSI Classroom 1	7pm
January 8	Friday	Downtownner's Luncheon	Kell's	Noon
January 11	Monday	Astro Imaging SIG	Beaverton Public Library	6:30pm
January 18	Monday	General Meeting	OMSI Auditorium	7pm
January 20	Wednesday	Cosmology SIG	Linus Pauling Complex	7pm
January 30	Saturday	Telescope Workshop	Swan Island	10am-3pm
January 30	Saturday	Science SIG	Swan Island	3pm

February 2010

February 1	Monday	RCA Board Meeting	OMSI Classroom 1	7pm
February 5	Friday	Downtownner's Luncheon	Kell's	Noon
February 8	Monday	Astro Imaging SIG	Beaverton Public Library	6:30pm
February 15	Monday	General Meeting	OMSI Auditorium	7pm
February 17	Wednesday	Cosmology SIG	Linus Pauling Complex	7pm
February 27	Saturday	Telescope Workshop	Swan Island	10am-3pm
February 27	Saturday	Science SIG	Swan Island	3pm

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

<http://www.rosecityastronomers.org>

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

The

Rosette Gazette

Volume 22, Issue 2

Newsletter of the Rose City Astronomers

February, 2010



RCA FEBRUARY 15 GENERAL MEETING

Great Balls of Fire! (*Rocks from Space*)

Presented by Dick Pugh

Researchers at the **Portland State University Cascadia Meteorite Laboratory (CML)** travel back in time 4.5 billion years to understand broad-scale processes that occurred at the birth of the solar system, by studying the minute mineralogical and chemical features of meteorites.



Credit Hiroyuki Iida, Science@NASA



Credit: J. W. Young (TMO, JPL, NASA)

Mr. Pugh will discuss this research and bring some of his extensive collection of meteorites to the RCA this month. The RCA and their families will have the opportunity to handle and examine these rare and highly valued specimens. Attendees may also bring meteorites for identification. This Power Point presentation is partially sponsored by NASA.

For a complete summary of Mr. Pugh's background visit: http://meteorites.pdx.edu/pugh_vita.htm

In This Issue:

- 1... Holiday Potluck!
- 2... Club Officers
 - Magazines
 - RCA Library
- 3... Classic Telescopes
- 5... The Observer's Corner
- 7... Southern Galaxy's
- 11. Star Party Schedule
- 12. Dec. Board Minutes
- 13. Awards
 - Telescope Workshop
 - Astro Imaging SIG
 - Science SIG
 - Cosmology Sig
- 14. Calendar



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

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

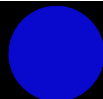
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Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.
Moon photos below courtesy David Haworth

Last Quarter Moon
February 5



New Moon
February 13



First Quarter Moon
February 21



Full Moon
February 28



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RCA MAGAZINE SUBSCRIPTIONS

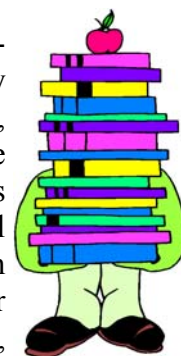


One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year or \$65.95 for two years.

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

RCA LIBRARY

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



The RCA library is constantly growing through many donations and the purchase of new materials. A listing of library materials (PDF format) can be found at the library web page:

<http://www.rosecityastronomers.org/library.htm>
 Jan Keiski <library@rosecityastronomers.org>
 503-539-4566

Classic Telescopes

TRAVELING SOUTH OF THE CELESTIAL EQUATOR INTO PUPPIS WITH A TASCO 4¼-INCH REFRACTOR

By John W. Siple



M93 is one of several very fine open clusters in Puppis. Some 80 plus stars are counted as cluster members, occupying a volume about 20 light-years in diameter. M93 is at a calculated distance of 3,400 light-years. Courtesy of the Treasure Coast Astronomical Society.

THE GREAT SHIP used in the quest for the Golden Fleece was once honored among the stars as the constellation Argo Navis. Occupying a region of the sky nearly 75 degrees long, it was located east of Canis Major and south of Monoceros and Hydra. In the 1750s, Argo Navis was divided into several smaller constellations by Lacaille. They are recognizable today as Carina the Keel, Vela the Sails, and Puppis the Stern. Two other minor subdivisions made were Pyxis the Compass and Malus the Mast, but only the former still survives on star charts.

As a bit of celestial luck, three of the heaven's finest galactic clusters are located within the borders of Puppis. Close neighbors in the constellation and commingled with the stars of the Milky Way are M47 (photo at right) and M46. Equally impressive M93, pictured at top left, is another rich throng of starlight found inhabiting the area. On dark nights from the countryside, all three open clusters are visible to the naked-eye as distinct non-stellar objects.

A trip into the region was undertaken by selecting a sophisticated instrument from the 1960s. During the great wave of telescope ownership in that past decade, attention was often drawn to the illustrated pages of Tasco's catalogs. Many of their top-selling telescopes came from Japan, which were sold with precision-engineered mountings and a plethora of useful accessories.



M47 (NGC 2422) is a moderately rich but irregularly scattered group centered on six bright stars. Photo courtesy of Richard McCoy.

Heading the "must have" list among amateur astronomers was the company's #20T observatory model, a behemoth-sized 108mm f/15 refractor possessing intricate controls and a superb objective lens. A resolving power of one arc-second and a magnitude limit over 12 are just a few of its properties. Through the big refractor, the art of finding and observing some of the finest deep-sky treasures in Puppis becomes a simple pleasure.

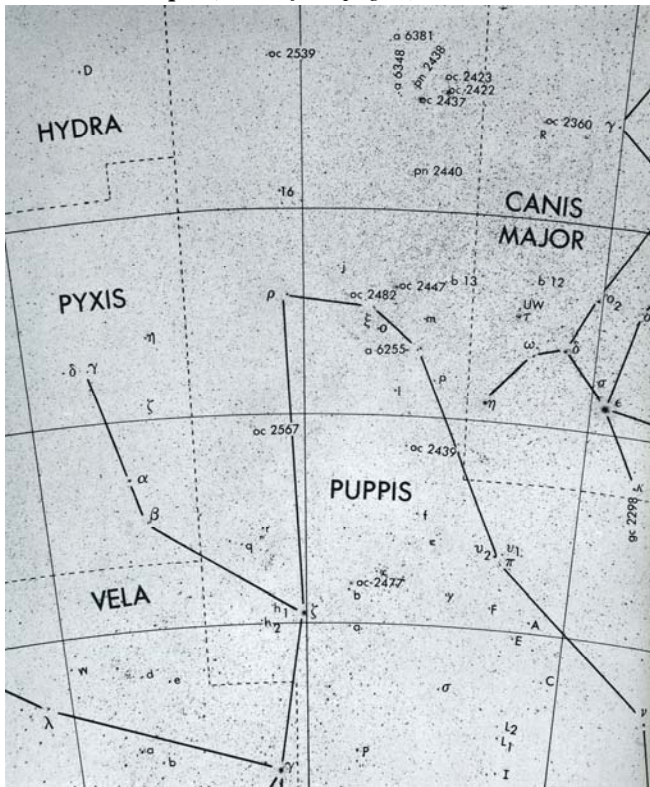


Shown above is a fine example of Tasco's pedestal-mounted #20T model, the company's biggest and most expensive refractor telescope. It was available through direct sales or by mail order for a period of over fifteen years. Photo courtesy of Mike Carman.



The Milky Way serenely passes through Puppis at lower left in Thomas J. Filsinger's *Map of the Heavens*. Puppis was once part of a larger constellation known as the great ship Argo Navis.

(Continued on page 4)



Above: Major deep-sky objects in Puppis are shown on this sky chart from *A Field Guide to the Stars and Planets*, published in 1964 by Donald H. Menzel. Courtesy of the Houghton Mifflin Company.



Right: One of the best open clusters for small telescopes is M46, a huge assemblage of over two hundred stars. Its distance is about 4,500 light-years, while the accompanying planetary nebula NGC 2438 is located closer at 2,900 light-years. Photo courtesy of Paul Mayo.

With a total magnitude of 4.6, M47 is the brightest of the three star clusters, appearing as a detached tuft of the Puppis Milky Way. Giovanni Hodierna is credited as first to view this collection of stars in a telescope. The group was recorded by Messier in 1771, but he unintentionally wrote down the wrong coordinates, thus making M47 a “missing object.” Historical experts corrected the positional error and arguably proved that it was seen by the famous comet hunter.

A glance through the Tasco refractor at 62x shows this open cluster from 1,600 light-years away as a delightful tangle of six bright stars lying on a dim sheen of fainter ones. Over 50 stellar gems are counted in an area 30' across. Observers have compared the pattern formed by the brighter members in M47 to the constellation Orion, but most see a small dipper or lozenge shape.

Close to its center is the double star Σ 1121, a standout pair of bluish-white 7th-magnitude suns separated by 7.4". Also well worth looking for is NGC 2423, a somewhat ill-defined but very memorable open cluster found by following a short trail of stars extending from

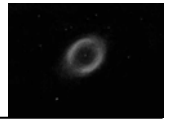
the northern side of its more spectacular neighbor in the heavenly Stern.

The 46th entry on Messier’s list (NGC 2437) is a beautiful, billowing cloud of relatively dim stars that lies 1.5 degrees to the east of M47. It is sensitive to sky conditions, becoming almost invisible when the atmosphere is not completely clear. Projected against the northern edge of M46 is the 11th-magnitude planetary nebula NGC 2438, a ghostly gray ring 64" in diameter. The round nebula is not physically associated with the star cluster; it is a foreground object, the result of a chance alignment in our galaxy.

M46 is a magnificent spectacle in the large refractor telescope. When observed at 50x, this object is a rich, uniform mass of over eighty stars embedded within a larger, unresolved circular haze. Outliers add to the dimensions of the cluster, increasing its actual diameter to about 30' X 25'. At a magnification of 123x, NGC 2438 is easily visible as a sharp annular glow offset north from M46’s crowded heart. A star sits on the southeastern lip of the planetary nebula, acting as a celestial anchor and marker.

M93 (NGC 2447), an unusually rich cache of stardust, can be found in a low power sweep northwest of the 3rd-magnitude star Xi and eastward from NGC 2362 in Canis Major. The 6th-magnitude open cluster has a distinctive triangular or wedge shape, a characteristic that provides positive identification through the eyepiece. Examining M93 at 84x, the middle of the 21' wide cluster unfolds into a knotty, jumbled mass of over 30 jewel-like stars arranged into an arrowhead or “V” pattern. Adding to the visual effect are numerous twisted arcs and streamers of about 50 fainter stars that fan outward from a sculpted, compact center.

A short distance from M93 is the exquisite double star Kappa Puppis, which is often confused by beginners with the letter ‘k’ on star charts. Kappa’s twin white suns, shining at magnitudes 4.5 and 4.7 and separated by an easy 10", are a grand sight in the Tasco telescope. At an increased power of 229x, this entrancing duo strongly resembles autumn’s famous double star γ Arietis, a common observation made by deep-sky hunters. What comparison do you make through your refractor or reflector telescope?



Two Variable Nebulae

February is often a washout for observing in western Oregon. But let's pretend we'll get a nice clear night or two on a weekend when we have no other commitments and observing for a few hours is actually feasible. Now what? How about a couple of variable nebulae? That's right, nebulae that actually change their apparent shape and brightness over only a few months or years. Cool stuff.

Hubble's Variable Nebula

The reflection nebula **NGC 2261** has a distinguished pedigree – it was discovered by William Herschel in 1783, and in 1916 Edwin Hubble found its appearance and brightness were variable. It's been known as Hubble's Variable Nebula (HVN) ever since. In addition, it was the first object photographed by the 200 inch Hale Telescope on Mt. Palomar in 1949.

It's illuminated by the variable star R Monocerotis (R Mon) located at the pointy end of the nebula. However, the variability of the star and the nebula are not correlated so something pretty interesting is going on here.

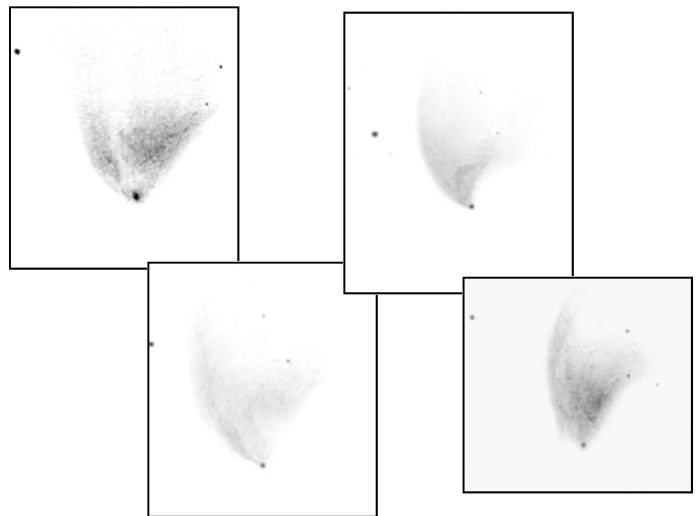


R Mon is a protostar which has a bidirectional gas outflow called Herbig-Haro jets. We see only one of the jets of HVN because the opposite jet is apparently hidden by a dense molecular cloud that surrounds R Mon. It turns out that the rapid changes to HVN are actually shadows cast by denser, more rapidly moving parts of the molecular cloud close to R Mon. Shadows make the rapid changes in the visible appearance of the nebula easy to understand, otherwise the 0.2 by 0.4 light year size of the nebula would strain the imagination, not to mention astrophysics. It has varied through a range in brightness of two magnitudes since its variability was detected by Hubble.

R Mon is a Herbig Ae/Be star, which makes it a high mass counterpart of a T-Tauri star, which we'll explore in regards to Hind's Variable Nebula. Both are pre-main sequence variable stars and are often seen with nebulosity. R Mon is a B type star with 10 solar masses, varies in brightness up to 4 magnitudes and has a small companion star not visible through amateur scopes. It's 3000 light years away, is 3 light years long and 1.5 light years wide.

Hubble's Variable Nebula looks very much like a small comet at first glance, and it doesn't look all that different in an amateur scope than the 1999 HST image on the left – less internal detail but the overall shape is plain to see. It's also relatively easy to find as it's only about a degree southwest from the Christmas Tree Cluster, NGC 2264 and the famous Cone Nebula, and about 3 degrees northeast of the Rosette Nebula. It can be seen by relatively small scopes (4 to 6 inches) and enjoyed from a moderately light polluted sky because of its high surface brightness. Its surface brightness also means it takes magnification well, so don't be shy.

HVN is a great multi-year project for sketching or photographing. It's fun to track its changes in appearance and brightness over the course of several years - or months for that matter - and gives a sense of the astrophysical processes that help shape stars throughout the galaxy.

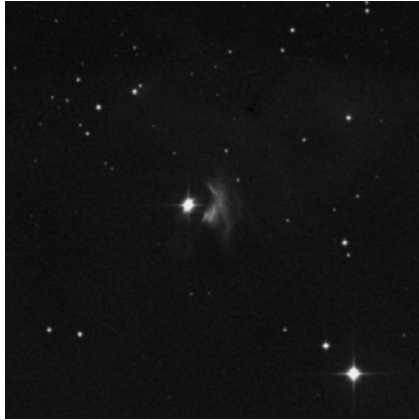


Sketches were made in 1999, 2005, 2007 and 2009, left to right, with 20 inch and 28 inch scopes. Magnifications ranged from 250x to 550x and no filters were used.

(Continued on page 6)

Hind's Variable Nebula

This one has an even more interesting history. J.R. Hind of London discovered **NGC 1555** in 1852 with a 7 inch refractor. He described it as very faint, but it was seen by several other observers until 1868 when it faded from view. It wasn't seen again until 1890 when E.E. Barnard and S.W. Burnham rediscovered it with the 36 inch refractor at Lick Observatory in California.



Digressing a bit, doesn't it seem that going by two initials instead of one's first name was quite the rage among prominent 19th century astronomers? But back to the topic at hand...

The nebula faded again by 1895 and was recovered photographically in 1899. Hind's Variable Nebula has been followed ever since and has continued to vary in brightness and shape.

Interestingly, in 1868 Otto Struve reported the discovery of another faint nebula near Hind's. It was soon confirmed by Heinrich d'Arrest and given the designation **NGC 1554**. However, since that observation it has not been seen and is now known, rather romantically, as Struve's Lost Nebula. It seems likely that it was a portion of the larger Hind's nebular complex that brightened temporarily.

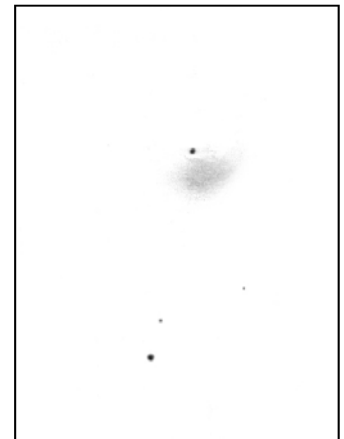
T Tauri is less than 3 solar masses, about 10 million years old and is still undergoing gravitational collapse. This puts it somewhere between a protostar and low mass main sequence star and means it has a large accretion disk left over from its formation. Instabilities in the disk, variations in the star itself or nearby clouds of dust – or a combination of all three - are thought to account for the rapid changes in brightness of T Tauri and Hind's Variable Nebula. Overall its brightness has erratically varied from magnitude 8.5 to 13.5. Hind's Variable Nebula is the visible part of the surrounding dust and gas that T Tauri is embedded in as shown in the photo by Don Goldman posted at <http://apod.nasa.gov/apod/ap071213.html>.

T Tauri and Hind's Variable Nebula are about 460 light years away in Taurus, and their position is pretty easy to find. However, finding their location and seeing Hind's Variable Nebula are often two different things.



I've seen Hind's Variable Nebula well only a few times, which is an indication how faint it can be since I've used 20, 28 and 40 inch scopes in my attempts over the years. I suspect my timing has been off because at times it's been spotted by rather small scopes. So I'll keep looking – there's no telling when it will brighten – or disappear altogether. The sketch presented here was made at the 2008 OSP and shows my best view to date. Magnification was 250x.

Sometime back in the mid-90's I had a shot at Hind's Variable Nebula with Steve Swayze's 40 inch f/5 and came up empty – there was nothing to see. The best I did with my 20 inch f/5 was a “maybe” detection, and it's only in the past four years with my 28 inch f/4 that I've had positive sightings.



So Hind's Variable Nebula is a more difficult object than Hubble's and definitely requires a truly dark sky for a positive observation. Now it may be that Hind's is one of those objects that is more easily seen in a smaller, wide field instrument. I haven't tried this - yet – but it's definitely worth a shot. The darkest sky most of us are likely to encounter when this fascinating object is up is at the OSP, but you'll have to stay up all night – the sketch above was made at 4am. 250x gave the best view.

I haven't mentioned using any type of nebula filter but that's only because none improved the contrast. The best strategy to see Hind's Variable Nebula is a very dark and transparent sky. It's located a few degrees north of the main grouping of the Hyades Cluster and a degree and half west of Tau Epsilon.

INTERACTING GALAXIES IN THE SOUTHERN SKY

by Leo Cavagnaro

Part 3. A Compact Group, a Galaxy Chain and a Merging Pair

November 14, 2009 was the last night to observe a sample of interacting galaxies in the spring southern sky. This time I drove to a place named “Jocoli” from where I carried out other deep-sky objects observations. The site is situated about 40 miles north to Mendoza city.

With the 8-inch telescope set up, I spent some minutes enjoying the starry night with the unaided eye. The sky was clear but not exceptionally dark so the reports below are results of the observations made under those conditions.

The first hours of the nights in middle November are appropriate to observe galaxies because the view is far away from the dusty lane of our Milky Way. Constellations Piscis Austrinus (The Southern Fish), Sculptor and Aquarius are home of some galaxy groups that represent a challenge for observers with 8-inch mirrors, especially two groups situated in the western part of constellation Piscis Austrinus.

Piscis Austrinus and Sculptor are constellations visible from Oregon. They reach about 15 degrees of altitude in the sky looking toward the south for observers in Portland, so you could try to observe the galaxies from your observing site using a bigger mirror and compare results.

The Compact Group Hickson 90

Situated in the western part of constellation Piscis Austrinus, whose brightest star (magnitude 1.2) is Fomalhaut, a group of galaxies is found which receive the number 90 in the list compiled in the nineteen-eighties by the Canadian astronomer Paul Hickson.

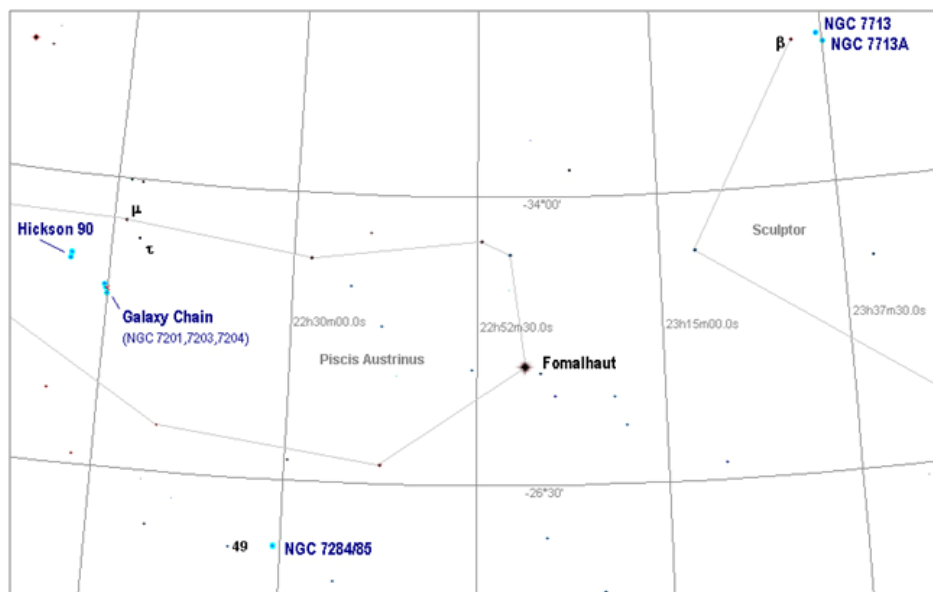
This compact group lies about 1.7 degrees from the 4.5 magnitude star μ in Piscis Austrini which I used as a starting point to find it (see map in first page).

Hickson 90 is a group with four galaxies: two late-type galaxies NGC 7172 and NGC 7174, and two early-type galaxies, NGC 7176 and NGC 7173. Three of these galaxies are located in the core of Hickson 90 (see the paper “**Kinematics in Hickson Compact Group 90**” by Leonardo Castañeda-Colorado and Michael Hilker, both from the Sternwarte der Universität Bonn, Germany).

A first observation using low magnification (42x) shows a field with several stars fainter than magnitude 11. The star HD 209253 (magnitude 6.6) is the brightest one in the 1.2 degree eyepiece field. Using this magnification the galaxies NGC 7172, 7173 and 7176 were barely visible, with averted vision being necessary in order to get a better view of the triplet.

The pair NGC 7173 / NGC 7176 is visible more easily than NGC 7172 which was very hard to see. Observing carefully the appearance suggests the presence of the two galaxies. Higher magnification will decidedly allow you to get a more clear view of each member of the pair.

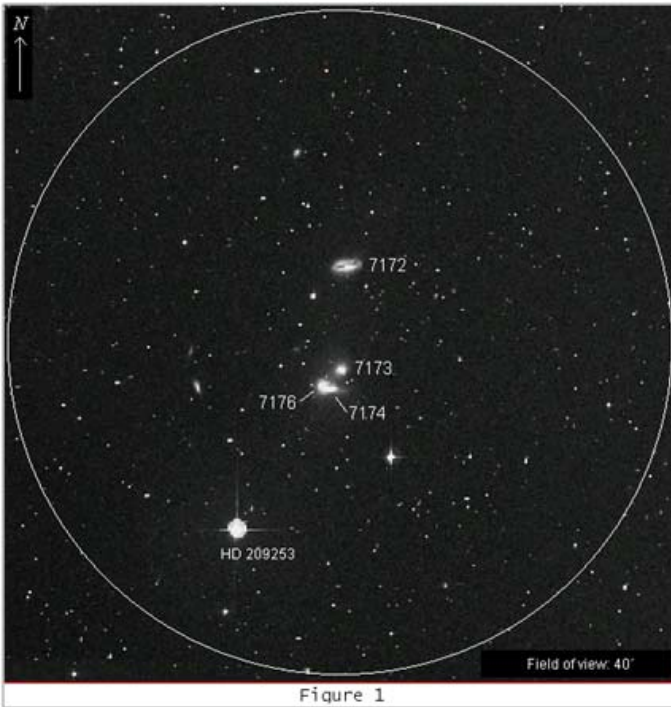
(Continued on page 8)



The map shows the positions of galaxy groups in the southern constellations. November, early in the evening, is a good time to observe these faint patches of light.

Southern Sky Galaxies (Continued from page 7)

NGC 7176, situated about 10 arcminutes from the star HD 209253 and at 6 arcminutes from HD 209137, one of the brightest stars of the field (9.3 magnitude) to the southwest of this galaxy, is the brightest and biggest member of the group, showing a seemingly star-like bright core. On the other hand, NGC 7173 looks smaller (SkyCharts and Skymap Pro 6 also give the denomination NGC 7174 to this galaxy) lying very close to NGC 7176 at only 1.5 arcminutes.



At 53x, the triplet is better seen and I was able to split and discern the galaxies NGC 7173 and NGC 7176 more easily, showing their nuclei or central regions like bright dots. As for NGC 7172, it was seen a little better at this power even if it was still hard to see, although I could glimpse its shape using averted vision with it appearing a little elongated and smooth in brightness.

I decided to use 78x which was a good magnification for observing the group. When I first saw NGC 7176 it appeared showing its star-like bright core. At this magnification a bright dot or stellar-like structure was seen very close to the nucleus. There is an elongated galaxy only 35 arcseconds from NGC 7176 named NGC 7174 (also HCG 90D, MCG -5-52-10, ESO 466-40).

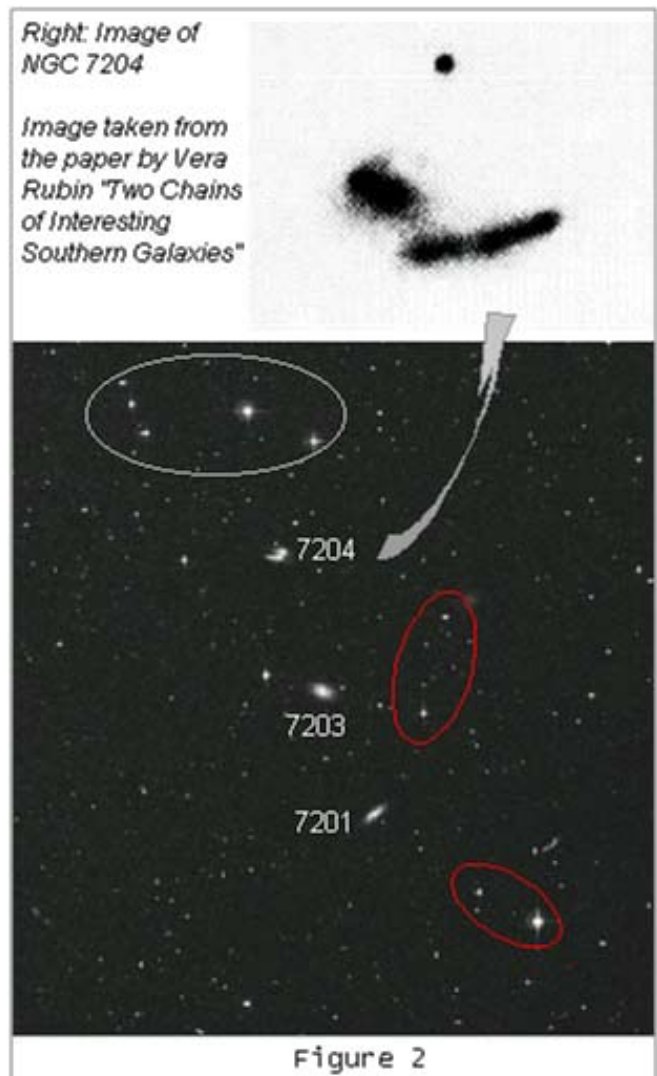
In regards to the other members, the core of NGC 7173 also looks stellar, however NGC 7172 has a smooth appearance and with a little bigger angular dimension.

A final observation at 196x made possible to observe the Sa type galaxy NGC 7172 with a smooth structure. NGC 7176 looks clearly elongated and with averted vision the core looks

not stellar but like a bright spot and the small structure near the core, fainter than this one, is visible. With averted vision NGC 7172 is larger than the other galaxies.

A Chain of Faint Galaxies

After observing the compact group I turned my telescope to a place situated only 1.2 degrees apart, with the idea of observing an interesting chain of galaxies. This chain is formed by three NGC galaxies (i.e. 7201, 7203 and 7204). A faint galaxy is visible to the west in the DSS image, PGC 68026. Skymap shows NGC 7202, situated between NGC 7201 and NGC 7203, as an unclassified object. Nothing is visible in the DSS image where it lies.



I spent some minutes to find the chain at low magnification (42x), the stars indicated with a white ellipse in Figure 2 (where North is up) helped for a first approach to the accurate positions of each member. At this power the galaxies represent

(Continued on page 9)

a challenge for an observer using an 8-inch telescope and were not clearly visible, so higher magnification was necessary.

Getting deeper into the group, at 53x I could identify the zone where the spiral galaxy (Sa) NGC 7201 lies using the stars indicated with red ellipses in Figure 2 because the imaginary lines that join the stars point to the zone where this extremely faint galaxy should be visible. Using averted vision I could glimpse a small hazy patch there. NGC 7203, situated between the stars TYC 7489-227-1 (mag 10.9) and TYC 7489-810-1 (mag 11.6) looked similar through my telescope at this magnification.

At 78x both galaxies are still very faint and represent a challenge. It was necessary to observe the zone for a long time using averted vision and to recognize the stellar patterns used as a guide to observe these members of the chain, both looking faint and round in shape.

A final observation at 106x made it possible to observe NGC 7201 and NGC 7203 a little better. The faint galaxy NGC 7204, situated 7 arcminutes north-northeast of NGC 7203 was not visible at these different magnifications and under the observing conditions that night. According to the now old paper **“Two Chains of Interesting Southern Galaxies”** by Vera Rubin (Department of Terrestrial Magnetism, Carnegie Institution of Washington, D.C.) NGC 7204 consists of a string of four or five emission knots (see top panel in Figure 2)

Both Hickson 90 and this galaxy chain were included as members 34 and 36 by Klemola (1969) in his list of groups of southern galaxies.

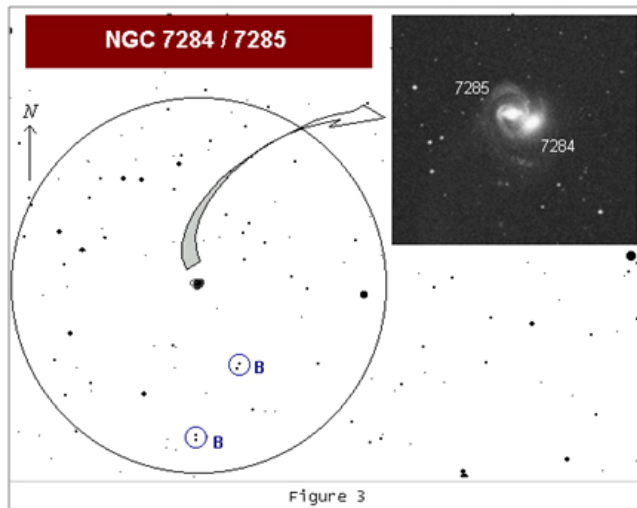
NGC 7284/7285, a Merging Pair

These galaxies lie just on the border of constellations Piscis Austrinus and Aquarius. It seems to be a merging pair, appearing in Table 1 (p. 327) in the paper **“A Spectrophotometric Survey of Merging Galaxies”** by Charles T. Liu and Robert C. Kennicutt from Steward Observatory.

According to the Revised NGC Data, NGC 7284 is an SB0 galaxy with a magnitude of 12.0 and a surface brightness of 13.3 per square arcminutes. However NGC 7285 is seemingly a SBa galaxy with a magnitude of 11.9 and a surface brightness of 13.0 per square arcminutes. The pair is included in the well known Arp and VV catalogues with numbers 93 and 74 respectively.

Observing at 42x, the field shows several faint stars with magnitudes between 12 and 13. The pairs of stars indicated with letter **B** in Figure 3 were useful for me to locate the galaxies, especially the southernmost pair. The merging galaxies lie about 25 arc minutes straight North of this pair of 12.7 and 12.9 magnitude stars.

I began the observation of NGC 7284/85 when they were at an altitude of 30 degrees two hours before setting behind Los Andes mountains so they were observed under not favorable conditions. Observing carefully and using averted vision a very faint nebulosity could be seen at this magnification, round in shape and with a smooth brightness.



Higher magnification (78x) was necessary to observe the pair a little clearer and to try to observe details within, even if the target was still faint through my 8-inch. A more detailed observation applying averted vision made possible the identification of some brighter “points” or spots within, which were also viewed at 106x.

A Galaxy Group near the Sculptor Group

Any atlas or sky chart will show NGC 253, the famous “Silver Coin Galaxy” and NGC 55 (this one plotted in Figure 4 where north is down), two bright galaxies that belong to one of the most known and nearest galaxy groups to our Local Group, the “South Polar Group” or “Sculptor Group”. Both galaxies are gems in the southern skies and are visible even with binoculars from dark sky sites. Situated in constellation Sculptor, this group also contains the interesting galaxies NGC 300 and NGC 7793 among others.

However, a less known group lies in the southwest corner of this faint constellation (composed by four stars with visual magnitudes of about 4.4) not far, in projection on the sky, to the Sculptor Group. This group is known as LGC 478 which contains the galaxies NGC 7713, IC 5332, ESO 347-17 and ESO 348-9. NGC 7713 (an SBcd galaxy) and its neighbor, the SBc galaxy NGC 7713A (seemingly not a member), are situated about 42 arcminutes from the star Beta Sculptoris (see Figure 4).

(Continued on page 10)

Southern Sky Galaxies (Continued from page 9)

Besides these galaxies, there is a new galaxy, that appears to be a dwarf galaxy named **APPLES 1**, that would be a possible member of the LGC 478 group or, most probably according to some researches, just a field dwarf galaxy (read the paper “**Discovery of a Solitary Dwarf Galaxy in the Apples Survey**” by Anna Pasquali et. al., The Astronomical Journal, 129:148–159, 2005 January), **APPLES 1** is at a location, in galactic coordinates, $l=348^{\circ}.5, b=-65^{\circ}.1$. I have indicated this galaxy on the map (red dot in Figure 4). You can see this galaxy is very close, in projection on the sky, to the Grus Quartet, a group of four galaxies that are all visible through an 8-inch telescope (read the article “**Interacting Galaxies in the Southern Sky, Part 1**” appearing in the January 2009 Rosette Gazette). It is situated only 15 arcminutes from the Grus quartet’s galaxy NGC 7552.

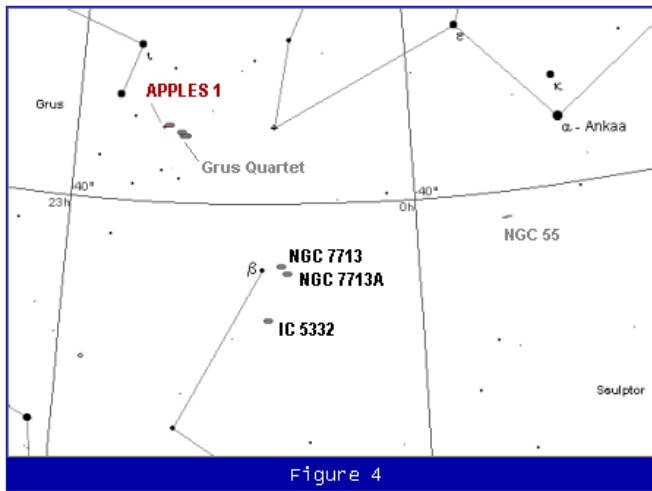


Figure 4

That night I observed NGC 7713 and its companion, NGC 7713A. I missed the chance to observe IC 5332, a SBcd galaxy with angular dimensions of 6 arcminutes (data by SEDS) or 8 arcminutes according to the Revised NGC/IC Catalog. At 42x, NGC 7713, the brightest member of LGC 478 galaxy group, is visible with direct vision even if the use of averted vision made possible to appreciate its elongated shape. On the other hand, NGC 7713A was not visible at all. The brightest stars in the eyepiece field (about 10th magnitude) lie toward the direction of Beta Sculptoris.

At 78x, NGC 7713 looks clearly elongated showing fainter ends which are noted in the DSS image of this object. The SBc type galaxy NGC 7713A was a faint object for my 8-inch telescope. For moments, “something” seems to be there after identifying the accurate zone using the 9th and 12.5th magnitude stars indicated with the red ellipse in Figure 5. New observations at higher magnifications (106x and 148x) did not guarantee that NGC 7713A would be visible in an 8-inch telescope observing under that sky conditions. Once again, a round and extremely faint nebulosity seems to be visible for moments, but without a doubt it is at the threshold of visibility.

The altitude of these galaxies at the time of the observation was about 35 degrees. New observations from different skies and at higher altitudes would be useful in order to compare results.

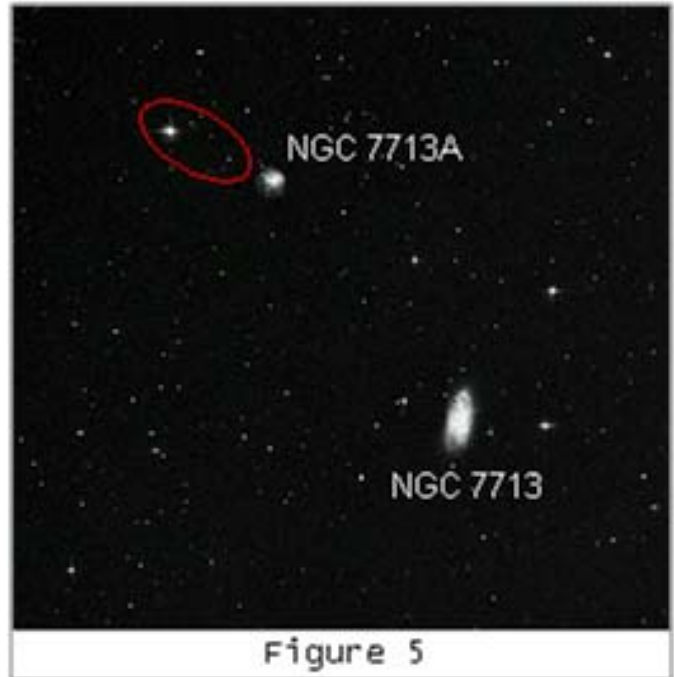


Figure 5

Is NGC 7713A Visible Through an 8-inch Telescope?

A Brief Analysis of NGC 7713A Visibility Applying Optimum Detection Methods (ODM)

NGC 7713A was at the threshold of visibility (at least “at my threshold”) when I tried to find it under a good but not exceptionally dark sky, and with the galaxy at not a very good altitude (about 35 degrees). This is a low altitude if we take into account this galaxy reaches 85 degrees when it transits, the altitude being a very important factor among others like the sky conditions, the dark adaptation and the “aluminum coverage state of your mirror”.

If we take the values of magnitude and Surface Brightness from the Wolfgang Steinicke's Revised NGC and IC Catalog, mag:12.5 SB: 13.4 mag. per square arcminutes, this galaxy, according to the Clark's Method, should be visible under a 6.2 limiting magnitude sky even at low magnification (ODM=46x)

A new observation of NGC 7713A from an even darker sky and especially with the galaxy as high as possible would be necessary, and also checking if the values of the published magnitude are accurate for this object.

A big Thank You to Jan Keiski who helps me check the grammar on my articles

2010 Star Party Schedule

For most events - Weather permitting - Subject to change
exceptions are Kah-Nee-Ta, and Hancock which take place no matter what the weather.

Month & Day	Day of Week	Event	Location	Notes
March 12-14	Fri - Sun	Dark Sky Star Party & Messier Marathon	Kah-Nee-Ta	3
March 12-14	Fri - Sun	Dark Sky Star Party & Messier Marathon	Maupin	1
27-Mar	Sat	OMSI Vernal Equinox Celebration	Rooster Rock & Stub Stewart	2
April 9 - 11	Fri - Sun	Dark Sky Camp Hancock Weekend	Camp Hancock	5
April 16 - 18	Fri - Sun	Dark Sky Star Party Weekend	Maupin	1
24-Apr	Sat	OMSI Astronomy Day	Rooster Rock & Stub Stewart	2
May 14 - 16	Fri - Sun	Dark Sky Star Party Weekend	Maupin	1
15-May	Sat	OMSI Planet Parade	Rooster Rock & Stub Stewart	2
15-May	Sat	Prineville Reservoir Star Party	Prineville, Oregon	6
5-Jun	Sat	Starlight Parade	Downtown Portland	6
12-Jun	Sat	Dark Sky Star Party	White River Canyon Parking Lot	1
19-Jun	Sat	OMSI Summer Solstice Celebration	Rooster Rock & Stub Stewart	2
July 9 - 11	Fri - Sun	Trout Lake Star Party Weekend	Trout Lake Washington	1
July 10 - 14	Sat - Wed	Golden State Star Party	Adin, California	4 & 6
July 15 - 18	Thu - Sun	Mt Bachelor Star Party at SunRiver	Sunriver Oregon	4 & 6
17-Jul	Sat	OMSI Lunar Viewing	Rooster Rock & Stub Stewart	2
August 6 - 8	Fri - Sun	Dark Sky Star Party Weekend	Maupin	1
7-Aug	Sat	Dark Sky Star Party	White River Canyon Parking Lot	1
August 11 - 15	Wed - Sun	Oregon Star Party	Indian Trail Spring, Oregon	4 & 6
12-Aug	Thu	OMSI Perseid Meteor Shower Watch	Rooster Rock & Stub Stewart	2
August 12 - 15	Thu - Sun	Table Mountain Star Party	Ellensburg Washington	5 & 6
September 3 - 5	Fri - Sun	Dark Sky Star Party Weekend	Maupin	1
11-Sep	Sat	OMSI Lunar Viewing	Rooster Rock & Stub Stewart	2
October 8 - 10	Fri - Sun	Dark Sky Camp Hancock Weekend	Camp Hancock	5
October 8 - 10	Thu - Sat	SunRiver Star Party at Brothers	Brothers, Oregon	4 & 6

Notes:

- 1) No Fees, No Registration.
- 2) Note that there is a \$3 day use charge at this Oregon State Park.
- 3) Advance Reservations are Highly Recommended & No Camping at the Viewing Area.
- 4) Pre-Registration and Pre-Payment Recommended, but you can register and pay on site.
- 5) Pre-Registration and Pre-Payment required, no on-site registration.
- 6) These are regional Star Parties put on by other groups, not RCA sponsored events.



BOARD MEETING MINUTES

December 7, 2009

OMSI Classroom 1

Margaret Campbell-McCrea

Attending: Jan Keiski, Sameer Ruiwale, Greg Rhode, David Nemo, Margaret Campbell, Dawn Nilson, Scott Kindt

Guests: Larry Froborg

The meeting came to order at 7:10 p.m.

Board Reports

- Secretary's Report – Margaret Campbell: Quorum (10) was not met, with 7 voting members present. Introduced Dawn Nilson.
- Treasurer's Report – There was no treasurer's report from Larry Godsey as he was out of town, but the monthly information has been posted on the Board website as follows: RCA current assets are \$20,324.42, and the Site Fund assets are \$19,683.77, for a total of \$40,008.19.
- VP Programming – Matt Brewster - - No report.
- VP Observing – Matt Vartanian - - No report.
- VP Community Affairs: Dawn Willard sent a message through Sameer that she has a couple of events coming up in February.
- Media: Diane Fredlund - - No report. Margaret agreed to write the article on the 12.5" scope rebuild.
- Membership: Ken Hose was not at the meeting, but reported via the Forum that we have 315 member-families. Last year at this time there were 287, and in 2007 there were 256. There were 6 new members and 5 renewals in September. We took in \$205.00 in dues.
- Sales – Margaret Campbell reported \$648.95 in sales in November.
- New member advisor: Howard Knytych - - No report. There will not be a new member session in December, but there will be one in January.
- Book Library – Jan Keiski reported that she is looking for a rolling stand for the DVDs and videos. Sameer suggested a DVD book on beginning astrophotography. Duncan Kitchen suggested another, that he will put in the library.
- Telescope Library – Greg Rohde: Nominal.
- IDA: Dawn Nilson reported that she is building a grass-roots constituency on the issue of light pollution. She is in the process of organizing a downtown brown-bag lunch symposium bringing together astronomers, lighting designers, and wildlife people. She is aiming for the 17th or 24th of February, and has two confirmed presenters: Mary Coolidge from the Audubon Society of Portland, and Jan DeBrowski from Marylhurst will speak for astronomers. Dawn sees this event as the first in a series of discussions. She has gathered a number of sponsors for the event, and has received positive responses from Metro, the City of Gresham Natural Resources Co-ordinator, the Oregon Zoo, and others. She is planning on holding the event in the

auditorium in the Portland Building. She will do publicity at the Urban Ecology Conference in late January, and will do a press release. There was some discussion of a tie-in with Think Out Loud. We discussed having Board members attend, and will have RCA and IDA flyers there. We will announce the event at the RCA meeting on the 15th of Feb. Sameer agreed to help Dawn pull together this event and do publicity.

- Webmaster: Larry Godsey - - No report.
- Forum: Larry Godsey and David Nemo will come up with a policy regarding proper Forum etiquette which they will post to the Forum and will send out as a broadcast message.
- Site Fund: Dave Nemo - - Nominal.
- Youth director: Jean London reported through Sameer that the youth group are still working on the Sky Puppies Chapter 3, and this month on Orion. She also reported that more parents are approaching her with ideas.
- SIGs: Scott Kindt - - Nominal. Sameer reported that he presented at the last Cosmology SIG and there was a good turn out, perhaps 15, but no food was there, as had been advertised.
- ALCOR: Dale Fenske - - No report.
- OMSI –Jan Keiski. Nominal.
- Sister Club update – Jan Keiski: Nominal.

Old Business / Action Items

- Repair of mirror-grinding machine: Greg contacted Steve. There is no missing arm, but it needs a holder for the tool. Greg now has an idea of what needs to be done, and can fix it.
- Mirror-making machine: No instructional material has been made yet.
- Jan continues to work on the January meeting program. Greg Babcock has agreed to carry the second half of the program. Jan will test the connection with GAMA during the day on the Monday of our meeting.
- The striped tape at Stub Stewart: Nothing done.
- Sameer got in touch with Dan Lucas at Stub Stewart State Park. The result of the conversation is that people who want to use the park for viewing should get a free one-year permit to use the park, which they can do online, through the club website, or even get it from a park ranger when they go out there. They will still have to pay a day-use fee. The park rangers have been instructed not to kick out any astronomers, but the park did ask that viewers check in with the rangers when they arrive, so the park knows who is there. Calling the park in advance is not as effective, because the message doesn't always get to the right people. Sameer will post this information on our website, start a thread on the Forum, and put it in the newsletter.
- Minor Catalogs Project: Margaret Campbell - - Nominal.

(Continued on page 13)

Board Minutes (Continued from page 12)

- Music on Jan's CD: Done.
- December potluck: Sameer will send rotation sequence to Dareth. Dave Powell will be receiving his Master Observer's Award. Sameer might be able to Skype into the potluck, or record a video for us to play. Howard Knytych will be singing. Sameer will send email to Matt Brewster that he has to Emcee the program.

New Business

- Night Sky Report: David Nemo stepped in as an interim reporter. We will invite Peter Abrahams to do it again.
- Sameer will not be back in time for the January Board meeting. He will send out the agenda, and David will chair the meeting. Sameer will also send an article to the newsletter about our accomplishments this year.
- Margaret volunteered to chair the Starlight parade committee in 2010.

The meeting was adjourned at 8:15 p.m

To Do:

- Dawn Nilson will continue to organize the Dark Skies Symposium, with Sameer and Diane for publicity.
- Sameer will (1) work with Dawn on organizing the Dark Skies Symposium, (2) post the information about getting a permit to view at Stub Stewart on our website, start a thread on the Forum, and put it in the newsletter, and (3) send potluck rotation sequence to Dareth, (4) send email to Matt Brewster that he has to Emcee the program, (5) send out the January agenda, and (6) write an article for the newsletter about our accomplishments this year.
- Greg will repair the mirror-grinding machine and send his Hillsboro contact to both Dawn and Diana.
- Margaret will write the article on the 12.5" telescope rebuild.
- Larry Godsey and David Nemo will promulgate a club policy on Forum etiquette and post it to the Forum and send it out as a broadcast message.

**Honorary Messier Award #2477
all 110 objects documented
Edward Younie**

**Master Outreach Award #72
more than 100 volunteer hours service
David Powell**

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, February 17th, 2010, 7 PM.

Topic: History of the RCA

Presented by: Dale Fenske

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

Email: cosmology-sig@rosecityastronomers.org
www.rosecityastronomers.org/signs/cosmology.htm

Telescope Workshop

When: Saturday, February 27, 10:00 AM - 3:00 PM

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

For more information contact:

Director: John DeLacy johncdelacy@comcast.net

Assistant: Don Peckham don@dbpeckham.com

Astro-Imaging Special Interest Group

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

Next Meeting: Monday, February 8th, 2009, 6:30pm
Beaverton Public Library
In Meeting Room B
12375 SW 5th St, Beaverton

Science Special Interest Group (SCI-SIG)

Next meetings are February 27th at 3pm. Following the Telescope Workshop at Technical Marine Services.

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

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

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

Tom Nathe sigs@rosecityastronomers.org

FEBRUARY 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 Board Meeting OMSI Classroom 1 7pm	2	3	4	5 Downtowners Luncheon Kell's 12pm	6
7	8 Astro Imaging SIG Beaverton Library 6:30pm	9	10	11	12	13
14	15 General Meeting OMSI Planetarium 7pm	16	17 Cosmology SIG Linus Pauling Cntr 7pm	18	19	20
21	22	23	24	25	26	27 Telescope Workshop 10-3, Science Sig 3pm Swan Island
28						

March 2010

March 1	Monday	RCA Board Meeting	OMSI Classroom 1	7pm
March 5	Friday	Downtowner's Luncheon	Kell's	Noon
March 8	Monday	Astro Imaging SIG	Beaverton Public Library	6:30pm
March 15	Monday	General Meeting	OMSI Auditorium	7pm
March 17	Wednesday	Cosmology SIG	Linus Pauling Complex	7pm
March 27	Saturday	Telescope Workshop	Swan Island	10am-3pm
March 27	Saturday	Science SIG	Swan Island	3pm

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

<http://www.rosecityastronomers.org>

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

The

Rosette Gazette

Volume 22, Issue 3

Newsletter of the Rose City Astronomers

March, 2010



RCA MARCH 15 GENERAL MEETING

Mars: From Planet to Place

Presented by Joseph Levy

In This Issue:

- 1 ...General Meeting!
- 2 ...Club Officers
 -Magazines
 -RCA Library
- 3 ...Stalking Galaxies
- 5 ...Improve Your View
- 6 ...In Retrospect
- 7 ...Hancock Star Party!
- 8 ...Jan. Board Minutes
- 9 ...Telescope Workshop
 -Astro Imaging SIG
 -Science SIG
 -Cosmology Sig
- 10 .NASA Space Place
 -Celestron C8 for Sale
- 11 .Calendar

Mars defies simple comparisons. It is a desert planet, replete with dune fields and playas; an ice planet, supporting features interpreted to be glacial remnants and permafrost; a fluvial planet, showing signs of recently trickling gullies and ancient lakes and floods; a volcanic planet, home to the largest shields in the solar system, hemisphere- spanning lava plains, massive graben, and complex igneous mineralogy; and it is a dynamic planet, with scouring winds, episodic ice ages, and an impact record billions of years in the making. In short, Mars is an Earth-like planet in that it contains a long history

of complex and interrelated geological processes. Understanding the geology of Mars requires an iterative study of spacecraft data and physical modeling, guided by analysis of terrestrial geological processes. In this talk, we trace several recent discoveries in the field of Mars geology that have advanced our knowledge of the Red Planet transforming it from a curious from point of light into a potentially habitable place.

Joseph S. Levy is a Postdoctoral Fellow at Portland State University Department of Geology.



All are Welcome! Monday March 15

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

Location: OMSI Auditorium



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

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

Last Quarter Moon
March 7

New Moon
March 15

First Quarter Moon
March 23

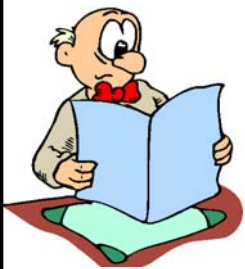
Full Moon
March 29



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RCA MAGAZINE SUBSCRIPTIONS

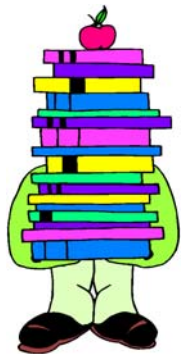


One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year or \$65.95 for two years.

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

RCA LIBRARY

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



The RCA library is constantly growing through many donations and the purchase of new materials. A listing of library materials (PDF format) can be found at the library web page:

<http://www.rosecityastronomers.org/library.htm>
 Jan Keiski <library@rosecityastronomers.org>
 503-539-4566

Stalking Galaxies in Leo with a Classic Refractor Telescope

By John W. Siple

MARCH SKIES are dominated by the presence of Leo Major, the Great Lion, known as the proudest and most regal of the zodiac signs. For individuals located in the northern hemisphere, the rising of the Sickle of Leo is a traditional herald of the coming of Spring. In Figure 1 we see Alexander Jamieson's portrait of the fabled Nemean lion, a kingly beast that has been the emblem of fire and heat for many cultures.

Scattered throughout Leo Major is a gregarious collection of island universes. The 18th century French astronomer Charles Messier studied in detail several of the brighter members through a 3½-inch achromat, calling them M65, M66, M95, and M96. A late comer to the list was M105, which was added to his famous catalog in 1947 at the urging of astronomer H.S. Hogg.

In keeping with the tradition of Charles Messier, a refractor telescope of classic design (Figure 2) was used to hunt for the constellation's best and brightest galaxies. This particular optical instrument, containing a high performance 4-inch diameter objective lens with a 1600mm focal length, was made in Japan by a relatively small company called Yamamoto Seisakusyo (trade name SYW).

It had a primary designation of either AE-106 or AE-108, but carried additional markings depending on the country's retail outlet. Patrons of the sciences living in Germany during the 1960s and '70s could find examples engraved with the name 'Busch' (as ET-60), while customers from Italy and France were sold instruments marked as 'Sky Master' and 'Jupiter - Perl', respectively. Other titles that it often went by are 'Sport Master', 'Palomar', and 'Satellite.'

Positioned about 2½ degrees south-southeast of the 3rd-magnitude star θ in the Lion's hind-quarters is the Leo Triplet, a trio of interacting galaxies that are easily accessible to small instruments. Each island universe is viewed at a different angle of inclination to our line of sight. Discovered by Pierre Méchain in 1780, the dominant member of the group is M66, a beautiful specimen of spiral architecture.

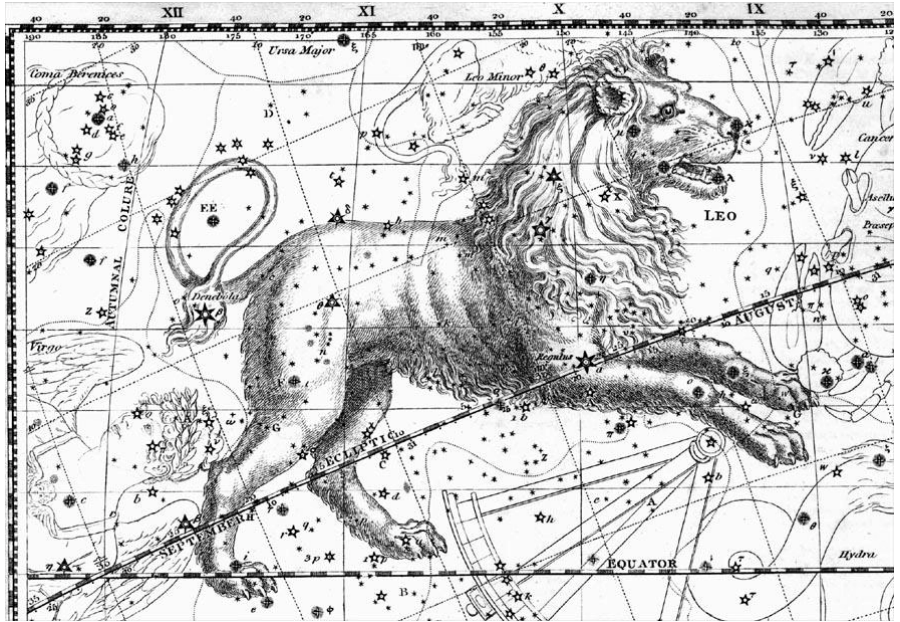


Figure 1. The constellation Leo Major as shown on plate 17 of Alexander Jamieson's *A Celestial Atlas*, published in London in 1822. The early Egyptians worshipped the starry lion because the annual flooding of the Nile occurred, in ancient times, when the Sun crossed into that constellation.

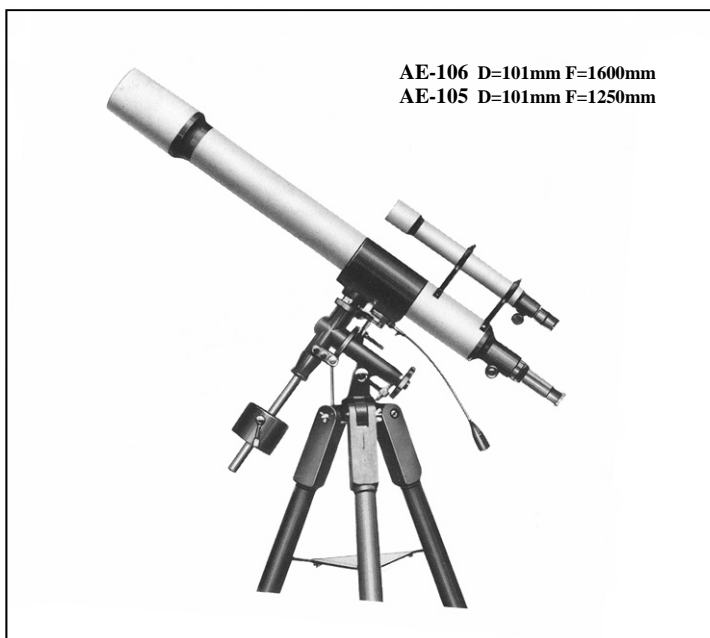


Figure 2. Displayed above is the 4-inch refractor telescope that was used for making detailed observations of galaxies in Leo Major. The classic refractor was manufactured in Japan by a company called SYW. In the United States the sole distributor was R.V.R. Optical Co.

(Continued on page 4)



Figure 3. The spiral M65 and its neighbor M66, the more face-on system at left (east-southeast), are about 0.4 degree apart. Photograph by Sheldon Faworski and Sean Walker (MASIL).



Figure 4. Shown above is the galaxy NGC 2903, photographed by Dietmar Hager from his observatory in Linz, Austria.



Figure 5. M95 (left) courtesy of Jay GaBany, and M96 by the efforts of Adam Block and GaBany. The galaxy pair is at a distance of 31 million light-years.

M65, pictured at right in Figure 3, is a very fine, very elongated galaxy with tightly coiled arms. A slow, concentrated scan with medium power shows the 9.3-magnitude object, spanning 10' by 3' and oriented nearly north-south, as an oval mass of light with diffuse margins. In the 4-inch glass at 123x, hints of irregularities around its edges and tips give the impression of a buried spiral pattern.

Its broader companion M66 is definitely more noticeable, probably due to an eye-catching shape and the presence of a 10th-magnitude star that rests almost on the galaxy's north-western edge. At higher powers, M66 favors a mottled or clumpy appearance. There is a luminous, oval core, and a fainter, oval halo.

When thin clouds move in, averted vision may be needed to search for the much more difficult NGC 3628 located just 36' to the north of M66. This rift galaxy is about four times longer than it is wide, measuring 15' by 4' in angular size. Once spotted, it appears as a dim and expansive gossamer glow. Embedded within the halo is a rectangular core with dimensions of about 3' by 0.75'.

NGC 2903, displayed in Figure 4, is a many-armed spiral galaxy of type SB found south of λ below the Lion's jaw. It has a cataloged size of 13' by 7' and a total visual magnitude of 9.0. Through the Yamamoto 4-inch refractor at 84x, NGC 2903 appears to the author, in the words of astronomer Alan MacRobert, "like a small, oval piece of extragalactic cotton." Other accomplished observers have called it "superb!" and "picturesque."

The star fields east of Regulus are rich in galaxies. Lying in this area are the 9th-magnitude spirals M95 and M96, discovered by Méchain in 1781. As seen through the telescope at 62x, M95 is an uneven patch of dim grayness, 7' by 5' in size and possessing a sharp stellar nucleus. Its theta structure on observatory photographs has earned it the nickname the "Golden Eye galaxy" (see Figure 5).

Like its neighbor to the west, M96 shows only an uneven, lightly textured disk but with a silver-gray sheen. Most deep-sky reference books list it as slightly smaller and brighter than M95, which agrees quite well with the view through the SYW brand refractor. Only 48' to the north-northeast is 9.3-magnitude M105, which makes a good stopping place in our Leo galaxy hunt. A parting glance at 84x reveals a tiny, bright nucleus located inside of a mottled 4.5' by 4.0' halo. NGC 3384, an oval blur in the same starry field, lies 8' away.

Sharpen, Steady and Clarify Your View

By Tom Koonce

There are at least three important elements affecting your telescope that if improved, can make a dramatic improvement in the views you'll get this springtime. You've probably heard a lot about the first element – collimation. If you are using a Newtonian or Schmidt-Cassegrain telescope, accurate optical collimation can make a huge difference in your views. How much? From personal experience I can tell you that with an eight inch Schmidt-Cassegrain, it makes the difference between being able to make out the main bands on Jupiter and being able to see the curly festoons between the main bands on clear, steady evenings. There are many fine articles about the proper way to collimate your telescope. One can be found [here](#), and another example can be found [here](#), but a Google search will reveal dozens more.

The second element to upgrade is your mount. Nothing can ruin a great observing night faster than a shaky, unsteady or oscillating mount. A number of years ago, I recall that a friend of mine had had custom telescope called a Schiefspiegler built for him. This was not a small telescope (at over 4 feet in length), but the planetary and binary star views promised to be superb based upon the indoor optical tests. I went out with him the first night he set it up. We found out that the slightest breath of wind or slight tap to the side of the scope would cause oscillations lasting for many, many seconds. This wasn't only annoying; it nearly made us seasick and it certainly spoiled the view. I remember that he spent several hours later trying to beef-up the mount. Ultimately he sold the telescope because he couldn't get the mount steady enough to be both functional and portable. Always go for 'overkill' when it comes to your mount.

No astronomer has ever been heard complaining that their mount was just too steady. A big part of why the great observatories of the world are so expensive to build is because awesome views require rock steady support of the optics. I'm always trying to add stability. Little tricks like hanging a brick from a chain from below the center of your mount's tripod will add stability. Isolation pads under the tripod legs can reduce vibration. Talk to other amateurs at the next event to hear about other ideas you may try.

The third often neglected element is, of course, your eyepieces. Anything that affects the light path coming from the object you want to view contributes to the overall quality of the image your seeing. Spending good money for your telescope but then using cheap eyepieces will result in a disappointing view of the star, galaxy, or planet you want to see. The most obvious improvement to the sharpness, contrast and field of view can be obtained by using better eyepieces in the scope that you already have. Beginners typically will use whatever eyepiece(s) that came with their telescope, so I'm addressing the needs of "intermediate" level amateur astronomers with this advice. I recommend the Meade, Celestron, Pentax and Orion lines of Plossl eyepieces, and strongly rec-



Photo Used With Permission of Rod Nabholz

www.homebuiltastronomy.com/downbino/EyepieceCase.html

ommend anything made by TeleVue. The best way to shop for an eyepiece is to go out with other amateurs to a star party and borrow their eyepieces for a few minutes and check out the view they produce using your own telescope. Most of the other folks in the astronomy club will be glad to do this since that's likely how they originally decided on what eyepieces to buy! You may be able to field test two or three "side-by-side". Just remember to treat their eyepieces as if they were gold and return them right after you're done with your assessment.

There are trustworthy classified ad sites like those at AstroMart.com and CloudyNights.com that can offer you exceptional deals on top quality eyepieces. With patience and knowledge of what you want to buy you can build an eyepiece collection of higher-end eyepieces for relatively little money. If you have used 1 ¼ inch diameter eyepieces for a while, you may consider adding a 2" eyepiece to your collection. This may require that you upgrade your telescope's focuser to accommodate the larger size, but this is the sort of eyepiece change that will make your jaw drop with the spectacular vistas they show.

By considering any one of these elements you'll get the "Wow!" factor back into your viewing when you see the detail that your equipment is really capable of seeing.

Reference websites:

www.astromodel.50megs.com/Collimation.html

www.skyandtelescope.com/howto/diy/3306876.html

www.galacticfool.com/collimate-newtonian-telescope

www.telescopemaking.org/schief.html

www.homebuiltastronomy.com/downbino/EyepieceCase.html

IN RETROSPECT

Adventures in backyard observing from rural Linn County

By John W. Siple

Living in a rural environment in the mid-Willamette Valley can be a godsend for astronomy. Nights are relatively dark and free of significant amounts of light pollution, plus there is easy access to the amenities of several bustling metropolitan areas. Stargazing is supposed to be fun, which it is, but what comes as a surprise to many people is that this simple hobby can quickly turn into a light-hearted and sometimes perilous adventure.

The district in Oregon near Corvallis where my wife and I live is an anachronism. Groves of white oak trees dot the countryside, while a sluggish stream, called Owl Creek, makes its way into a nearby lake. Home construction in this part of the Willamette Valley began in earnest in the late 1960s, when access was only by dirt roads. Our neighborhood is surrounded by agricultural fields and Victorian style homes, many with placards stenciled 'century farms.'

Since we live next to a large supply of fresh water, the area is replete with all types of wildlife. In the hot summer months, nights are punctuated with the deep croaking sounds of giant bullfrogs, while droves of stinging mosquitoes gather in the heavy air. After midnights with a waning moon in the sky, owls communicate, calling to each other from the tall Douglas Fir trees that line the front of our property.



Until a few years ago, I regularly used a custom-made reflector telescope with a 20-inch diameter mirror for most of my critical observations. An evening's routine began by getting down on my knees and grabbing the wheelbarrow handles attached to the telescope's bottom, slowly dragging it inch-by-inch underneath the opened garage door, and finally removing the handles and protective mirror cover.

The house adjacent to ours once had a loud occupant in the form of a nervous Boston terrier. Definitely not a lovable Marley, the dog would hear my shuffling movements and start a high pitched barking. This annoying canine serenade would continue for hours, only ending when the telescope was safely put away for the night.

On a somewhat milder note were the infrequent visitations by raccoons. Each spring season I would receive a polite growl from a mother raccoon guarding her babies, who just happened to take up a temporary residence in our Arborvitae hedge. Their curiosity seemed boundless, matched only by a natural willingness to climb and have fun.

Harder to ignore was the intoxicating scent of skunks. After carefully setting up the telescope for a night's planned activities, a skunk would let out its fragrant odor—this cute four-legged woodland critter *just knew* when I was getting ready to observe.

Several times I was greeted by a flapping sound coming from above. A confused bat, in its forage for insects, had been inadvertently attracted to the telescope. These mammals are known to judge distances through the generation of sonic waves, which were bouncing off the mirror and causing the poor creature to fly in repeated circles.



Above: The author in earlier days poised next to his 20-inch telescope. Below left: Curious onlookers common to Owl Creek. Photo courtesy of Ronald Wittek.

Luckily I was never hit, but one night the bat crashed into the side of our house, flying off unharmed except for a bruised pride. After that incident the airspace around my Dobsonian telescope was free of winged intruders.

A reminder of more soothing nights under the stars came by listening to the quaint sound of Union Pacific's train whistle off in the distance or to the cries of coyotes that inhabit the neighboring fields of rye grass, clover and hay. All types of birds heralded the coming of dawn and an end to a night's observing session—the loud squawking of scrub jays and the chatter from an occasional robin or goldfinch.

Nights alone with the 20-inch telescope have been filled with unforgettable memories, not only of the stars but also from the diverse wildlife living around our local area. While perched over the telescope's eyepiece and listening to a rustle in the bushes nearby, I would often think to myself what new visitor has come to investigate. Astronomy from home has turned into a knowledge seeking and light-hearted adventure.

Camp Hancock Outing April 9-11, 2010



There's still lots of room left at OMSI's Camp Hancock the Weekend of April 9-11. With hot meals and rustic cabins it fits the bill for a great outing for on cool Spring weekend. Dark skies, cabins, real bathrooms, hot showers, good meals and great friends top off the second outing of the year for RCA.

Camp Hancock is an OMSI sponsored field station for the promotion of science education. It is located about 150 miles from Portland and is 2 miles east of the John Day River in Eastern Oregon in the Clarno Fossil Beds. Camp Hancock is NOT a resort hotel; it is a rustic kid's camp with 16 bunkhouses that sleep up to 14 people each in A-frame buildings. The bunkhouses are one room with bunks, mattresses, limited electricity, and heaters on a 60 minute timer. You will be sharing the bunkhouses with others in our group, but it's never crowded and we usually average less than 3 people per cabin.

There are electrical outlets on both Astronomy Hill and the Ridge for those who need power for their scopes, ccds and computers. Plus, wireless internet service is also available at Hancock. We do expect to get permission again to use the "Dob Valley" which will increase our capacity.

Lodging: The bunkhouses are not reserved, except by prior arrangement for medical necessity. Bring your own warm sleeping bag (it will be cold at night) and whatever else you need, especially warm clothes. One of the bunkhouses will be set aside as a "ladies only" bunkhouse. The remaining bunkhouses are shared. There is a limited area for Tents, RVs and trailers. We've been usually able to provide limited electricity to most of the RVs and trailers, but bring your own power cord, and be prepared to be self sufficient in case there is not enough power available.

RVs, Trailers and Tents are \$20 per person per night.

Bunks in the A-frame bunkhouses are \$25 per person per night.

Meals: Camp Hancock offers breakfast (Saturday and Sunday) and a sack lunch (Saturday only), 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, Breakfast at 9am and lunch fixings set out at 10am. There is no food available outside of these times.

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

Sack Lunch - 10am - is \$4 per person (Saturday only)

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

Registration: Mail-in registration and payment deadline for the April outing is April 2. We will be taking registrations at the March 15th meeting, or you can mail in your registration before then. Everything must be paid for with your registration.

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 RCA website.

PLEASE NOTE: We have been asked again not to enter camping area until after 3pm, because there is a school group that will be leaving shortly before we arrive.





BOARD MEETING MINUTES

January 4, 2010
OMSI Classroom 1
Duncan Kitchin

Board Members Present

Ken Hose (VP Membership)
Dawn Willard (VP Community Affairs)
Larry Godsey (Treasurer, Webmaster, Magazine Sales)
Duncan Kitchin (Secretary)
Larry Froberg (Sales Director)
Howard Knytych (New Member Advisor)
Dale Fenske (ALCOR, Historian)
Jan Keiski (Library Director, OMSI Liason)
David Nemo (Observing Site Director)
Scott Kindt (Special Interest Groups Director)
Jeannie London (RCA Youth Director)

Call to Order

The meeting was called to order at 7pm by David Nemo and, there being 11 of board members present, the quorum requirement of 10 was declared to be met.

Directors' Reports

- Treasurer's Report – Larry Godsey: balance and P&L sheet prepared. Everybody under budget except telescope library, which is close. Renewed CD today. Rates are terrible right now.
- VP Programming – Matt Brewster: Report from Jan Keiski. The meeting this month will be with our sister club, GAMA in Mendosa, joining us on the big screen in the OMSI auditorium.
- VP Observing – Matt Vartanian: Calendar has been prepared & distributed. Comment that only 2 evening events scheduled so far. Proposed action item to investigate additional RCA evening events.
- VP Community Affairs – Dawn Willard: 2 people wanting star parties in February or March, but no contact details available. Jim Todd has request for March star party also. New request for March 11th, but clashes with other events which may limit volunteer availability.
- Media Director – Diana Fredlund: Wants to know about sending out a media release about the next meeting.
- VP Membership – Ken Hose: 5 new members in the last month, \$197 from 5 renewals. Big spike in membership in October & November; may be due to outreach activities. 20 – 30% of new membership in those two months. 115 or so new members in the last year – approximately 1/3 which is higher than typical 20%. Membership now up considerably. Payments increasingly via Paypal.
- New Member Advisor – Howard Knytych: Howard will be putting together a presentation about winter observing for the next month or two.
- Sales – Larry Froberg: Larry transitioning into sales role. New assistant volunteered, hopes to get one more. Has created spreadsheet with inventory & sales reports. This will

help to identify items which are not selling, and hot items to be reordered in a timely manner. Wants to know if ok to firesale items not selling – this is ok. Also looking at requests from members \$487 December sales. Email from somebody in Mass – looking for older publications that we have for sale. Clarified that it was ok to sell outside of the club. Probably not ok to sell on ebay due to hassle factor. Larry Godsey will be setting up credit card for sales purposes – temporary card which is pre-paid for specific orders.

- Book Library – Jan Keiski: Nominal.
- Telescope Library – Greg Rohde: Not present.
- IDA – Dawn Nilson: Not present.
- Magazine Subscriptions – Larry Godsey: Nominal.
- Webmaster – Larry Godsey: Nominal.
- Site Committee – David Nemo: Nothing to report.
- Youth Director: Jean London: Making progress on the star puppies certificates with several of the youth membership. Introduced 'wheel of fortune' proposed for youth games, assisting in constellation identification etc.
- SIGs – Scott Kindt: Nominal. Ken wanted to suggest better advertising of science SIGs. There have been a number of great presentations recently and it is felt that they may be of interest to a wider audience than currently attending. Dale suggests a shorter presentation at the general meetings as an introduction. Scott would also be prepared to add a 5 minute or so talk to the general meetings.
- Alcor – Dale Fenske: Need membership for Reflector in March. Astronomical league wants to know whether the payment is correct given our much increased membership. Reflector was right before cutoff point, when our membership was 340, rather than the 300 that we reported. Propose different method of averaging and reporting membership, rather than reporting membership in November. Possibly purge membership list earlier than September, to make the list more accurate. 3 awards to be presented at the next general meeting.
- OMSI – Jan Keiski: February meeting in planetarium.
- Sister Club update – Jan Keiski: Visit from astronomer from Kitt Peak. Travelling to La Silla Chile in January 16th (weekend before meeting). Membership geared up for January joint meeting.

Old Business

- Make an arm for the mirror-making machine – Greg Rohde. Not present.
- Create Mirror Making Machine usage instructions after it is operational – David Nemo / Greg Rohde. Not present.
- Update about Stub Stewart parking bumpers tape project - Greg Rohde Not present.

(Continued on page 9)

Board Minutes *(Continued from page 8)*

- Submit an article for the website on the refurbished 12.5" library scope – Margaret Campbell. Not present – David will send email to inquire.
- Update on proposal for "Think out loud" radio show – Diana Fredlund / Margaret Campbell. Not present.
- Update on Minor Catalogs Project – Margaret Campbell. Not present.
- Send the name of the Hillsboro Commissioner who might want to be on the Think Out Loud program to Diana Fredlund - Greg Rohde. Not present.
- Article in newsletter for 2009 RCA activities / accomplishments – Sameer Ruiwale. Not present.
- Update on Dark Skies Symposium – Dawn Nilson . Not present.
- Formulate a club policy on Forum etiquette to review - Larry Godsey / David Nemo. David has written a draft proposal as previously discussed, circulated for comment. David will post under new member instructions. Larry Godsey comments that reinstatement should be at the discretion of the administrator, and not require board approval. Suggested that there be a temporary ban/reinstatement without board intervention. After discussion, last sentence to be deleted, leaving in the discretion of the administrators to deal with the specifics of sanctions.

ASTROPHYSICS / COSMOLOGY SIG

Date/Time: Wednesday, March 17th, 2010 , 7 PM.

Topic: "Relativity and Geometry"

Presented by: To Be Announced

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

Email: cosmology-sig@rosecityastronomers.org

www.rosecityastronomers.org/signs/cosmology.htm

Telescope Workshop

When: Saturday, March 27, 10:00 AM - 3:00 PM

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

For more information contact:

Director: John DeLacy johncdelacy@comcast.net

Assistant: Don Peckham don@dbpeckham.com

New Business

- RCA 2010 Star Party Schedule review – Matt Vartanian. Already passed out, some feedback received about schedules for evening observing.
- Proposal on adding imaging equipment to Telescope Library – Matt Brewster. Not present. Move this to old business.
- 2010 Goals for RCA – feedback / suggestions from all board members. Listed so far:
 - ◆ Astronomy Day at two locations in the Portland metro area
 - ◆ Starlight Parade – continued participation. Margaret will be heading up the committee for this.
 - ◆ Increase our media presence and visibility
 - ◆ Create RCA calendar. Need to start thinking now about pictures for calendar.

Astro-Imaging Special Interest Group

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

Next Meeting: Monday, March 8th, 2009, 6:30pm
Beaverton Resource Center
Small Community Room
12500 SW Allen Blvd
Beaverton

Science Special Interest Group (SCI-SIG)

Next meetings are March 27th at 3pm. Following the Telescope Workshop at Technical Marine Services.

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

Location: Technical Marine Service, Inc
6040 N. Cutter Circle on Swan Island
<http://www.rosecityastronomers.org/signs/science.htm>
Tom Nathe sigs@rosecityastronomers.org

Exploring the universe is a bit like groping around a dark room. Aside from the occasional pinprick of starlight, most objects lurk in pitch darkness. But with the recent launch of the largest-ever infrared space telescope, it's like someone walked into the room and flipped on the lights.

Suddenly, those dark spaces between stars don't appear quite so empty. Reflected in the Herschel Space Observatory's 3.5-meter primary mirror, astronomers can now see colder, darker celestial objects than ever before—from the faint outer arms of distant galaxies to the stealthy “dark asteroids” of our own solar system.

Many celestial objects are too cold to

emit visible light, but they do shine at much longer infrared wavelengths. And Herschel can observe much longer infrared wavelengths than any space telescope before (up to 672 microns). Herschel also has 16 times the collecting area, and hence 16 times better resolution, than previous infrared space telescopes. That lets it resolve details with unprecedented clarity. Together, these abilities open a new window onto the universe.

“The sky looks much more crowded when you look in infrared wavelengths,” says George Helou, director of the NASA Herschel Science Center at Caltech. “We can't observe the infrared universe from the ground because our atmosphere blocks infrared light, and

emits infrared itself. Once you get above the atmosphere, all of this goes away and suddenly you can look without obstruction.”

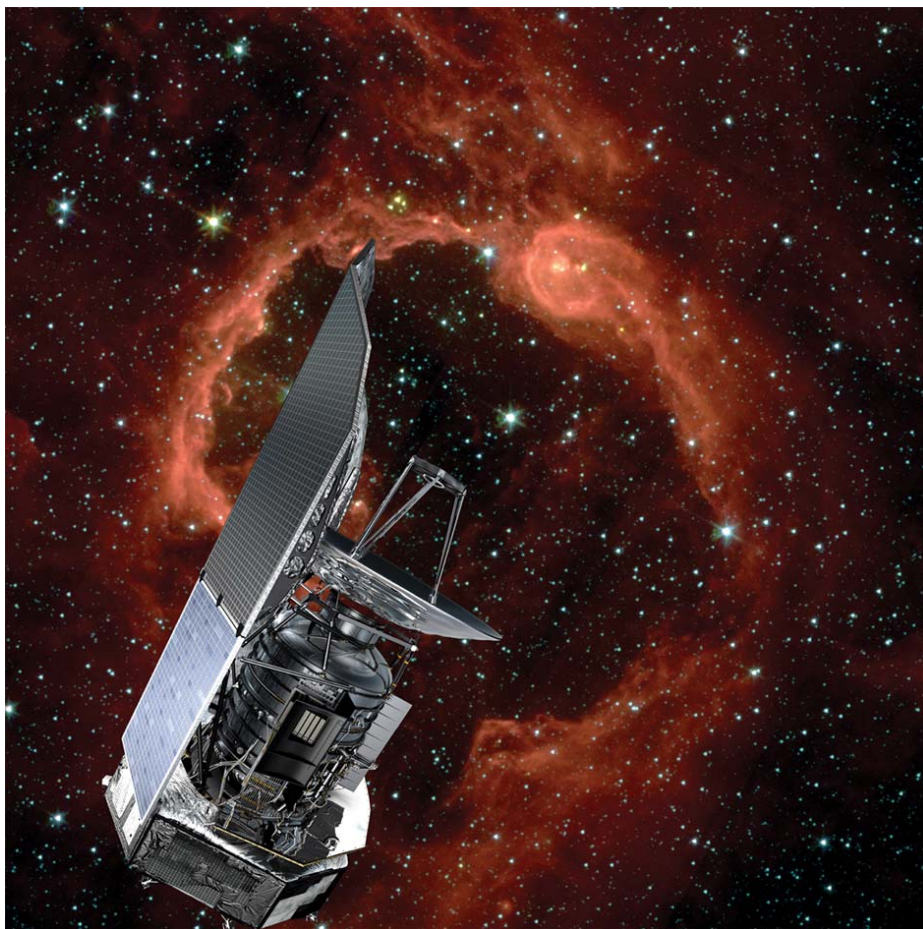
Herschel launched in May from the Guiana Space Centre in French Guiana aboard a European Space Agency Ariane 5 rocket. Since then, it has expanded the number of distant galaxies observed at far infrared wavelengths from a few hundred to more than 28,000. And with the instrument testing and system check-out phases finally completed, the discoveries are only now beginning.

Beyond simply imaging these dark objects, Herschel can identify the presence of chemicals such as carbon monoxide and water based on their spectral fingerprints. “We will be able to decipher the chemistry of what's going on during the beginnings of star formation, in the discs of dust and gas that form planets, and in the lingering aftermath of stellar explosions,” Helou says.

And those are just the expected things. Who knows what *unexpected* discoveries may come from “flipping on the lights?” Helou says “we can't wait to find out.”

Herschel is a European Space Agency mission, with science instruments provided by a consortium of European-led institutes and with important participation by NASA. See the ESA Herschel site at <http://sci.esa.int/science-e/www/area/index.cfm?fareaid=16>. Also, see the NASA sites at <http://herschel.jpl.nasa.gov>, <http://www.herschel.caltech.edu>, and http://www.nasa.gov/mission_pages/herschel. Kids can learn about infrared light by browsing through the Infrared Photo Album at The Space Place, http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml.

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



The Herschel Space Observatory has 3.5-meter primary mirror, allowing astronomers to see colder, darker celestial objects than ever before.

MARCH 2010

Sun Mon Tue Wed Thu Fri Sat

	1 Board Meeting OMSI Classroom 1 7pm	2	3	4	5 Downtowners Luncheon Kell's 12pm	6
7	8 Astro Imaging SIG Beaverton Resource Center 6:30pm	9	10	11	12 Star Parties Kah-Nee-Ta & Maupin	13 Star Parties Kah-Nee-Ta & Maupin
14	15 General Meeting OMSI Auditorium 7pm	16	17 Cosmology SIG Linus Pauling Cntr 7pm	18	19	20
21	22	23	24	25	26	27 Telescope Workshop 10-3, Science Sig 3pm Swan Island
28	29	31				

April 2010

April 2	Friday	Downtowner's Luncheon	Kell's	Noon
April 5	Monday	RCA Board Meeting	OMSI Classroom 1	7pm
April 9-10	Fri-Sat	Star Party	Camp Hancock	
April 12	Monday	Astro Imaging SIG	Beaverton Public Library	6:30pm
April 16-17	Fri-Sat	Star Party	Maupin	
April 19	Monday	General Meeting	OMSI Auditorium	7pm
April 21	Wednesday	Cosmology SIG	Linus Pauling Complex	7pm
April 24	Saturday	OMSI Star Parties	Stub Stewart State Park. & Rooster Rock	
May 1	Saturday	Telescope Workshop	Swan Island	10am-3pm
May 1	Saturday	Science SIG	Swan Island	3pm

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

<http://www.rosecityastronomers.org>

Rose City Astronomers
Oregon Museum of Science and Industry
1945 SE Water Avenue

The

Rosette Gazette

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April, 2010



RCA APRIL 19 GENERAL MEETING

Connecting To Your Cosmic Context

Presented by Todd Duncan

In This Issue:

- 1...General Meeting!
- 2....Club Officers
-Magazines
-RCA Library
- 3....Larry Deal Memoriam
- 4...Exploring Hydra
- 6....Observer's Corner
- 7....AL Awards
- 8....Southern Galaxies
- 11..Spectacular Spiral
- 12..RCA Board Minutes
- 13..SIGs
- 14..Calendars

Our frame of mind profoundly influences how we think, feel, and act.

Just consider the difference between your narrow perspective when someone cuts you off in traffic at the end of a long day, and the expansive feeling of connection while lying

under the stars on a summer night, wondering if someone out there is looking back at you.

Views about sustainability are particularly dependent on staying aware of the threads connecting you to the universal tapestry in which you are a strand.

The aim of this talk is to help you spend more of your time in that expansive, connected frame of mind, and convince your non-astronomical friends of its value. Dr. Duncan will briefly survey the story of our cosmic environment and history, building a thread of connection from your present state of awareness



out across the unimaginable distances and nearly 14 billion years of history that make the present moment possible. Hell also offer a few simple suggestions for returning to that connected frame of mind whenever you lose it.

Todd Duncan is a cosmologist whose work is guided by the theme of better understanding how our immediate human experiences connect to a cosmic perspective that gives them meaning. He combines a research background in physics with experience teaching science concepts to a wide range of audiences. He's the author of "An Ordinary World: The Role of Science in Your Search for Personal Meaning", and co-author of "Your Cosmic Context: An Introduction to Modern Cosmology".

After the presentation Todd is happy to sign his books if you bring them.

All are Welcome! Monday April 19

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

Location: OMSI Auditorium



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

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

Moon photos below courtesy David Haworth

Last Quarter Moon
April 6

New Moon
April 14

First Quarter Moon
April 21

Full Moon
April 28



CLUB OFFICERS

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President	Sameer Ruiwale	president@rosecityastronomers.org
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Youth Programs Director	Jeannie London	youth@rosecityastronomers.org
Sister Club Liaison	Jan Keiski	sisterclubs@rosecityastronomers.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 or \$65.95 for two years.

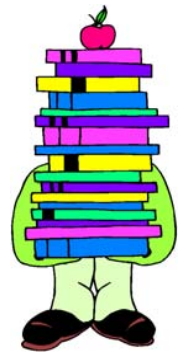
The RCA member rate for Astronomy magazine is \$34 for one year or \$60 for two years. For more information go to the RCA web site index and click on the link for magazines. Renewals and new subscriptions at the Magazine Table before General Meetings. Please make checks out to "RCA" and allow two months for your subscription to be renewed.

<http://www.rosecityastronomers.org/magazines/>
 Larry Godsey <magazines@rosecityastronomers.org>

RCA LIBRARY

The Rose City Astronomers main-tains 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. 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.rosecityastronomers.org/library.htm>
 Jan Keiski <library@rosecityastronomers.org>



In Memoriam
Larry Deal
1955-2010

Larry joined the Rose City Astronomers in January 1999 and had been an active member for the past eleven years. He volunteered for the Rosette Gazette Newsletter editor position in March of 2003.

In September 2005 he received an honorable mention for the Astronomical League's Mabel Stearns Award which recognizes astronomy newsletter excellence.

In 2007 he won first place for the Mabel Stearns award for his work on the Rosette Gazette.



Photo by Jan Keiski.

Larry at Hancock
Dark Sky Party
in October 2007

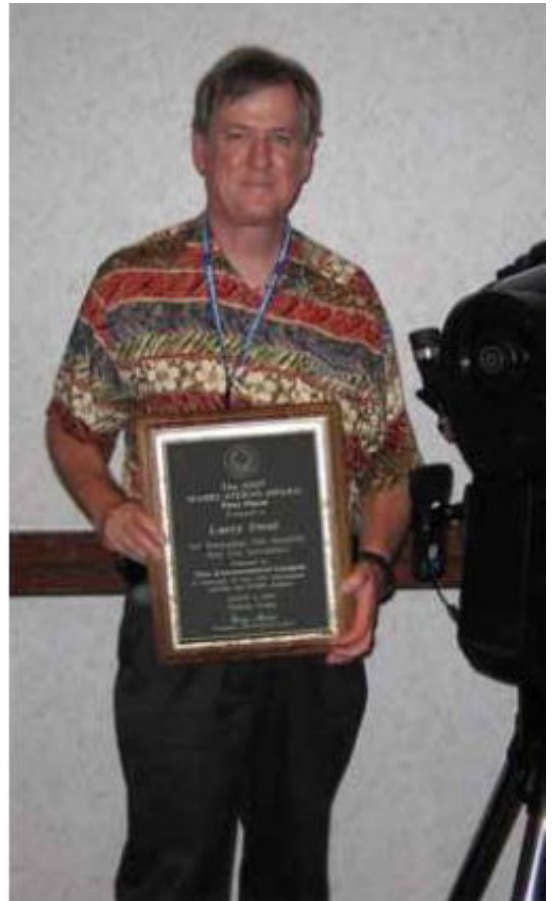


Photo by Jan Keiski.

The family asks that in lieu of flowers please make donations payable to:
Audubon Society of Portland
5151 NW Cornell Road
Portland, OR 97210

Explore the Finest Deep-Sky Objects in Hydra

Challenge yourself to spot the Southern Pinwheel, the Ghost of Jupiter, and a planet-bearing quaternary star system through a classic 6-inch reflector.

by John W. Siple

ON APRIL NIGHTS, Hydra, the Sea Serpent, holds sway in the south. This snake-like figure, the largest and longest of the 88 recognized constellations, winds its way through a wide swath of the night sky. At one time its boundaries extended even further, encompassing Corvus, Sextans and Crater. An evening's vigil shows the constellation's true size, which straggles almost interminably south and eastward across the heavens, below the stars of Virgo and paralleling the ecliptic.

According to an old legend, Hydra was the multi-headed monster that once lived near the marshes of Lerna. Its job was to protect the Golden Fleece, which the creature did with a deadly precision. In early Babylonian mythology, it represented Tiamat, the great dragon of chaos, while in China the water serpent was known as the 'Red Bird' or 'Willow.' The constellation's resemblance to a wandering stream led the Egyptians to associate it with the River Nile.

Because of the constellation's long extended and serpentine form, it reaches almost from Canis Minor to Libra. In its heavenly design, chartists have drawn Hydra's head as a single ring-shaped figure of five stars, just south of Cancer. A slightly variable orange giant, Alphard or the Solitary One, marks the position of the serpent's heart. Although big, Hydra has little to offer the casual observer, but the few objects that it does have are definitely worth searching for in a telescope.

Astronomers can choose from a list that includes the rich galactic cluster M48, one of Messier's infamous 'missing objects' and now identified with NGC 2548. Another tempting target is the grand spiral galaxy M83 or Southern Pinwheel, located beneath the tail portion of Hydra near the Centaurus border. A telescopic voyage into the region would not be complete without seeing the planetary nebula NGC 3242, lodged on the beast's body close to the star Mu (μ).

A circa 1967 Cave Astrola 6-inch F/8 Newtonian reflector was successfully employed by the author to hunt for Hydra's deep-sky delights. This modestly-priced instrument was one of Cave Optical Co.'s bestselling telescopes and a regular sight in *Sky & Telescope* ads. The Long Beach, California company is world famous for producing outstanding mirrors, but all of their completed instruments are ranked highly by both collectors and discriminating amateurs.



Above: The sea monster as illustrated on a card from *Urania's Mirror*, published in London in about 1825. Throughout the month of April the southern constellation can be seen in its entirety, sliding across the heavens from dusk until dawn. Hydra spans about one quarter of the sky but has little to show amateur astronomers besides its mere length.

Left: One point of interest for deep-sky observers is the Southern Pinwheel. First described by the French astronomer Nicolas-Louis de Lacaille during a survey of the heavens at the Cape of Good Hope in 1751-52, this galaxy was glimpsed some thirty years later by Charles Messier from his observatory in Paris. Best viewed from southerly latitudes, it is one of the most spectacular examples of its class. Since 1923, six separate supernova outbursts have been recorded in the triply branched spiral. A distance of about fifteen million light-years has been determined for M83. Photograph courtesy of Wolfgang Kloehr.



(Continues on Page 5)

Exploring Hydra (Continued from page 4)



At left is the multiple star HD 98800, a member of the TW Hydrae Association. It is located just across the border in the constellation Crater at coordinates (epoch 2000) RA 11h 22m and declination $-24^{\circ} 47'$. Artwork courtesy of NASA/JPL-Caltech/T. Pyle (SSC). Andrew C. Stewart's stunning mind's-eye interpretation (right) of a face-on spiral galaxy, viewed from a habitable ocean planet, closely approximates M83's appearance.

If undecided on which object to look at first, a logical solution is to start in the western sky with M48. Finding this isolated open cluster is easy. Simply point your telescope in the direction of the little asterism of stars that includes 1 and 2 Hydra—M48 lies only 3° to the southwest. The total magnitude is about 5.8, confirming claims that the cluster's glow can be seen by the naked-eye.

Through the Cave Newtonian some of the best views are at low magnification, where M48 is transformed into a triangular-shaped group of more than seventy 8th- to 12th-magnitude stars loosely scattered in an area of the sky about 1° across. In his 6-inch refractor, W. H. Smyth noted that the object appeared as "a splendid group, in a rich splashy region of stragglers, which fills the field of view, and has several small pairs, chiefly of the 9th-magnitude."



A favorite object for telescopes on an April evening is the planetary nebula NGC 3242 in Hydra. This photograph in filtered light was made by Adam Block (NOAO/AURA/NSF).

Moving eastward to a place marked by the 4th-magnitude star Mu (μ) Hydrae, we encounter the constellation's brightest planetary nebula. It is found 2° south and just a tad bit west of that star. Staring down from the heavens like a pale blue cat's eye, the planetary, often referred to as the Ghost of Jupiter, enralls the observer with its appearance. William Herschel lays claim to its discovery, sighting the annular ring nebula in 1785.

NGC 3242 has a total light roughly equivalent to that of an 8th-magnitude star, but has a disk measuring only $25''$ across. As a result the surface brightness is quite high, averaging about 10 times greater than Lyra's M57. The Cave 6-inch scope at 174x shows it slightly elongated northwest-to-southeast with brighter patches at each end. The distinctive double shell structure is equally obvious in moments of steady seeing.

A deviation from the normal routine comes by turning the 6-inch telescope on HD 98800. This fancy designation refers to TV Crateris, a multiple system 150 light-years away containing four young T Tauri-type stars, and where the stars are paired off into binaries. One of the stellar twins, identified as HD 98800B, has a circling ring of dust and possible planets, while the other 'A' pair 50 astronomical units away has neither.

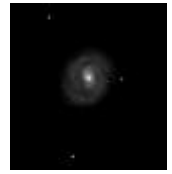
A praiseworthy test for the Cave optics is the ability to split the A-B pair. Its doublet components are nearly equal in brightness, magnitudes 9.59 and 10.06, and are currently $0.83''$ apart. Dividing them can therefore be a difficult task. The multiple star's low altitude above the southern horizon combined with the telescope's limited light grasp and borderline resolving power all contributed to an

inconclusive result. Perhaps other skilled amateurs using 8-inch and larger instruments operating under more favorable conditions can successfully pick out the two stars.

Hydra is not without its share of globular clusters. M68, an outstanding example, has an apparent diameter of $12'$ and glows at magnitude 7.8. It can be found by following the Sea Serpent's trail of stars further to the southeast close to a spot occupied by 5.5-magnitude ADS 8612, directly underneath the 'sail' of Corvus. In an eyepiece that provides 94x, it is partially resolved, containing tattered streamers of stars winding out from a mottled central disk.

NGC 5694 is another of Hydra's globular clusters, tucked away in the extreme northeastern corner of the constellation a little less than 2° west of a $3\frac{1}{2}^{\circ}$ -long chain of 4th- to 6th-magnitude stars. A harder target than M68, it lies in an attractive field at the end of a bent arrow of fainter stars. In the 6-inch telescope at 94x, this 10th-magnitude swarm of suns appears as a tiny, concentrated patch about $3'$ across. At a distance of 113,000 light-years, NGC 5694 is one of the most remote globular clusters known to us.

The last object on our travels across Hydra is M83. With a diameter of $13'$ by $11'$ and shining at magnitude 7.5, it is probably the brightest, intrinsically, of Messier's galaxies. For those who possess Cave 6-inch telescopes, a visual rendezvous will reveal a bright, circular core buried within an oval $5'$ by $2'$ halo. Surrounding this is another but broader envelope nearly $8'$ across. M83's spiral arms, arcing from either end of a short bar at the center of the galaxy, can be seen with averted vision on clear, dark nights.



Today's new word is...

Have you ever come across a word that you'd never seen before and you couldn't wait to use it somewhere? I did not long ago and this is my first chance to use it – "gobsmacked". The definition is "utterly astounded" and it sounds wonderful when spoken.

I bring it up here because I was gobsmacked by two pairs of interacting galaxies in Canes Venatici, and no, one of them is not M51. I had the pleasure of observing them nearly at the zenith on the nights of March 18th and 19th from Chuck and Judy Dethloff's place in the Coast Range west of Forest Grove. Both nights had enjoyable conditions – not overly cold, dewy or frosty and little to no breeze. SQM readings were between 21.12 and 21.35.

NGC 4485 and NGC 4490

I was looking for Arp 23 when I stumbled across this pair, and for the whole time I was working on my sketch I thought I'd found Arp 23. It wasn't until I looked at the photo in the book *Arp Atlas of Peculiar Galaxies* (<http://www.willbell.com/HANDBOOK/arp.htm>) to compare to my sketch did I realize my mistake, but my initial reaction – aside from "how did I do that?" was "how did Halton Arp miss putting this pair on his list?" 4485/4490 has been nicknamed The Cocoon, but what really grabbed me was the obvious gravitational interaction between these two bright galaxies. I love this kind of stuff so I was thrilled and astounded at the view.

It's good to put this into a broader context – most Arp galaxies are on the faint side and although I've found most of them to be surprisingly interesting, this pair is brighter and more detailed than most. Of course there are bigger and brighter Arp galaxies like M51 and M101 but I was unprepared for 4490/4485.



Also, my description of "bright and detailed" may be the same as your definition of "dim and fuzzy", so expecting a similar view with an 8 inch scope from a light polluted site will be disappointing.

That said, at magnitudes 10.2 and 12.3, these two galaxies are rather bright as NGC galaxies go. Sure, I was using a big scope but I have no doubt that a 12 inch scope on a dark, transparent night would show both quite well. Look not only for the tidal tail linking the two galaxies (it's really faint) but also for the linear knot of star burst activity near the core of 4490.

Evidently, this pair is around 45 million light years away and the galaxies are presently pulling away from each other after their closest approach. This is creating a tidal tail of star and gas between them and creating star burst areas along the tail and within both galaxies. The tidal tail is measured at approximately 24,000 light years long and is destined to grow longer as the galaxies continue to pull away from each other.

I didn't know any of this while observing 4485/4490 but the view was riveting even so. I'll go back for another look the next time I observe and will no doubt enjoy the view even more. I generally mark an exclamation mark on my Sky Atlas 2000 next to objects that are really special, and this pair of interacting galaxies got three. Gobsmacked indeed!

Arp 23

However, I will probably re-observe this interacting pair first. Arp 23 is also composed of two NGC galaxies, 4618 and 4625, but to my eye they're even more interesting. I observed them as high clouds were moving in so there's a good chance there's more to see under better conditions. At first glance the larger of

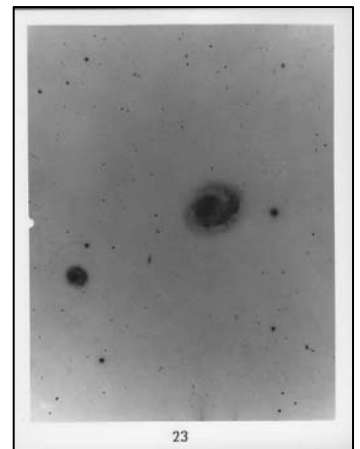


Photo by Halton Arp
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the two galaxies, 4618, looked more like a large oval planetary nebula with two brighter areas on its perimeter. A closer, longer look showed that 4618 is composed of one big spiral arm, with its core at one end of the arm. I thought that looked really cool and used a bunch of different magnifications to find the one that gave the best view, but each one I tried was terrific.

4625, the smaller companion looked like an irregular blob with its core displaced away from its center. But checking the original photo taken by Arp it shows the same basic structure as 4618 – one big spiral arm. How cool is that? I can practically hear both galaxies whooshing around each other. Both 4625 and 4618 are classified as distorted dwarf galaxies, and although they are gravitationally interacting there's no tidal tail of material between them, at least not in visible wavelengths. They are approximately 30 million light years away.

Although not as bright or as apparently large as the NGC 4485/90 duo, Arp 23's two galaxies are listed at magnitudes 11.2 and 12.9, which are still on the bright side for NGC galaxies. There are certainly tons of NGC galaxies that are fainter than this. I suspect a scope around 16 inches of aperture would be needed for a good look, but that's just a guess – have a look and see for yourself.

I didn't see the far background galaxy seen the Arp photo (probably taken with the 5 meter Hale telescope) but it might be detectable under a more transparent sky. Anyway, I gave Arp 23 three "!!!" as well.

That was partly because I didn't expect that the real Arp 23 would be as interesting as the NGC 4490/4485 duo, and that they're both so close to each other near Beta Canes Venatici. But mostly because it was so interesting to look at under all magnifications.

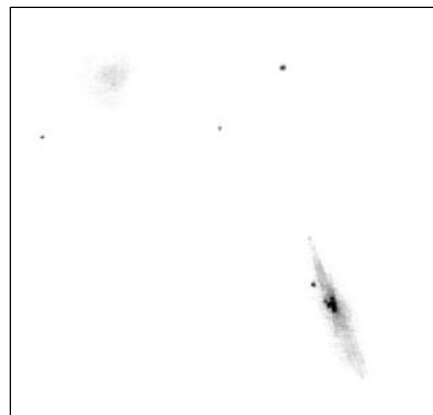
By the way, Caltech has an online version of the Arp catalog at <http://ned.ipac.caltech.edu/level5/Arp/frames.html> complete with his original images. I find using the book *Arp Atlas of Peculiar Galaxies* in the field to be a valuable resource to check what I'm seeing – and to make sure I'm looking at what I think I am. There's also a web site of amateur images of all 338 Arp objects at <http://www.338arps.com/> that's quite good too.

GR-8 irregular dwarf galaxy

Ok, this isn't part of the gobsmacked observing experience of the above two objects but I did observe it on the same night as NGC 4490 and 4485.

My good friend Leo suggested I track down this irregular dwarf galaxy a few years ago and I finally did so on March 18th. Also listed as UGC

8091, this 14.4 magnitude object is a tough catch and it took averted vision to find it. But once located it was dimly visible with direct vision even though its surface brightness of 14.6 is really quite faint. Don't expect to see it without some effort under a dark, transparent sky while using a fairly large scope.



This is the first object I recall that I can't find a decent image of on the internet so I only have my sketch and a DSS image to present - a Google search brought up only 14 individual hits and none have a good photo. I can't even find how far away it is.

The bright edge on galaxy at the bottom right of the sketch is NGC 4866, so once you find this 12.1 magnitude galaxy it almost points the way toward GR-8, which is the small, dim smudge in the upper left corner.

Both are located in northern Virgo and, at the very least NGC 4866 is worth the trip for smaller scopes. I'm still intrigued by GR-8 because I know practically nothing about this little galaxy, so thanks again to Leo for serving up another astronomical treat. Anyone know where I can find out more about it?



Awards

Congratulations to Mark Kowalski for completing the LUNAR CLUB II. Certificate number 26.

THE EXTRAGALACTIC HII REGION N11 AND ITS SURROUNDING FIELD

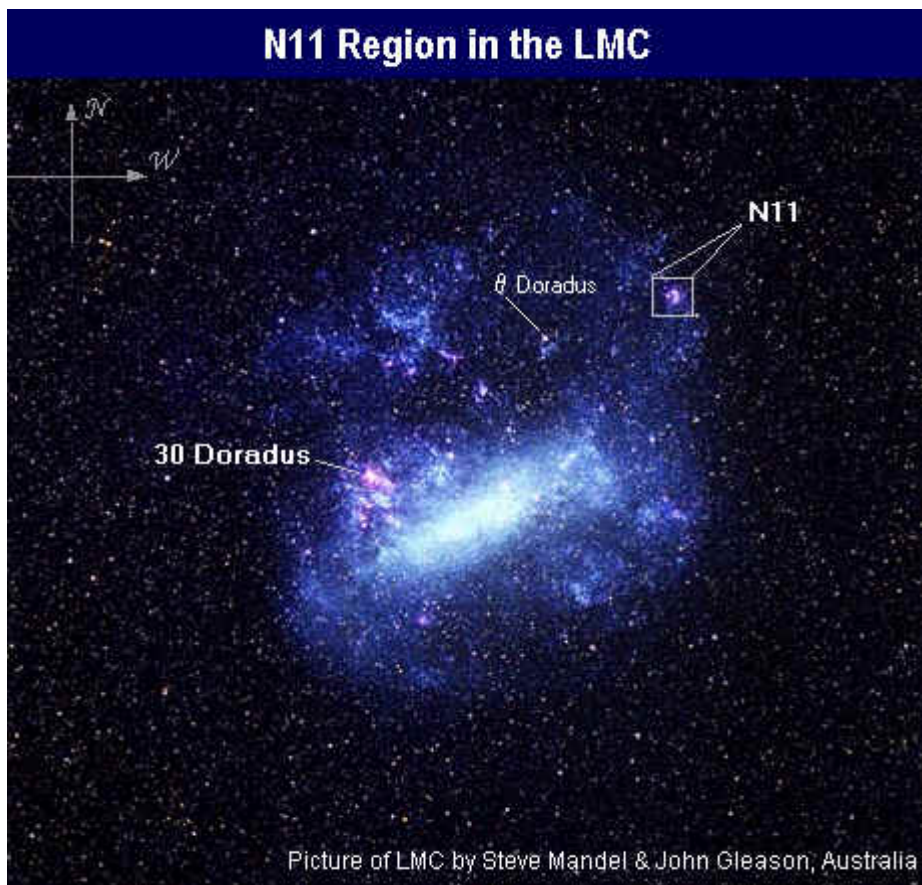
by Leo Cavagnaro

The Observation of the Second Largest HII Region in the Large Magellanic Cloud

The northwest corner of the Large Magellanic Cloud (LMC) is home of many different kind of deep sky objects, including bright nebulae, open and globular clusters and supernova remnants. Several of these objects are visible within the range of average size amateur telescopes.

But more than this, the northwest region hosts the second largest HII region of our satellite galaxy, the N11 complex.

I began the observation of this interesting formation from an observing site at Uspallata Valley (2,000 meters above sea level) at 01:25am on February 14, 2010, when the LMC was at 40 degrees altitude. This is a circumpolar object at this latitude and it reaches about 53 degrees when it transits. At the lowest altitude (inferior transit) it is visible at 13 degrees above the southern horizon. Taking this into account, the best season to observe this galaxy is during the southern summer months (December, January, February & March) when it is high in the sky.



The N11 Complex and Its OB Associations

N11, whose parts are known with the more familiar numbers in the NGC catalogue, lies about 4.75 degrees to the northwest of the 30 Doradus complex (Tarantula Nebula) and can be, according to Y. Nazé *et. al.* in their paper “**XMM-Newton Observations of the Giant HII Region N11 in the LMC**”, a more evolved version of this latter nebulae. Observing our nearby satellite galaxy through common and average size binoculars, i.e., 10x50s, N11 is one of the most prominent features that is clearly visible among others, like the 30 Doradus Complex, the conspicuous off-center bar-type structure (see picture above) and the stellar arcs in the northeast part of the galaxy, where Shapley’s Constellation III (one of the most enigmatic structures in the Local Universe: a coherent semi-circular arc spanning several hundred parsecs, composed of

thousands of bright young stars and tens of star clusters) in the LMC4 region lies (nebulae complex to the north of 30 Doradus and to the east of q Doradus). I have indicated all of these features on the picture above taken by Australian astro-photographers. If you come to the southern hemisphere to observe the sky have in mind that N11 is one of the extragalactic bright nebulae.

The 4.8 magnitude star q Doradus, which is clearly visible to the naked eye from a dark sky site, can be a good starting point to find N11 (see picture in first page). This HII region lies about 1.8 degree west-northwest of this star. A first view at low magnification (42x) shows a prominent nebulae com-

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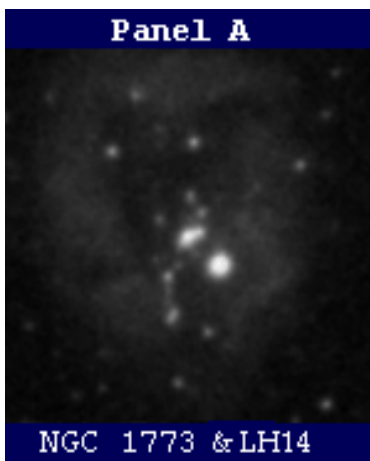
plex about 15 arcminutes wide in a $PA^1=234$ degrees. It is clearly visible even with direct vision and without a filter and contains some patches with different angular sizes and shapes. As mentioned in the paper above it harbors some associations² of massive stars: LH9, LH10, LH13 and LH14 (Lucke & Hodge 1970) and even a SNR, N11L, which is included in another observing project I am carrying out with a bigger mirror (16 inches).

The pattern of three stars indicated with a red circle in Figure 1 on the next page helped me find one of the hazy patches in the complex, NGC 1773, the smaller of the three most conspicuous component of the complex. It is situated half way between the stars HD 32427 (visual magnitude 9.2) and GSC-8889-0432 (visual magnitude 10.7) indicated with letter **A** and **B** respectively in Figure 1 which you can also use to find it. At this power, NGC 1773 shows a star-like bright center surrounded by a faint and small round nebulosity (see Figure 2). The bright core looks off-center with the nebula. Higher magnification is necessary in order to get a more detailed view of its structure.

An open cluster, NGC 1776, with a magnitude of 13 and about 1 arc minute in size (according with the [Wolfgang Steinicke's Revised NGC and IC Catalog](#)) lies close to the star **B** but I could not see it at this magnification.

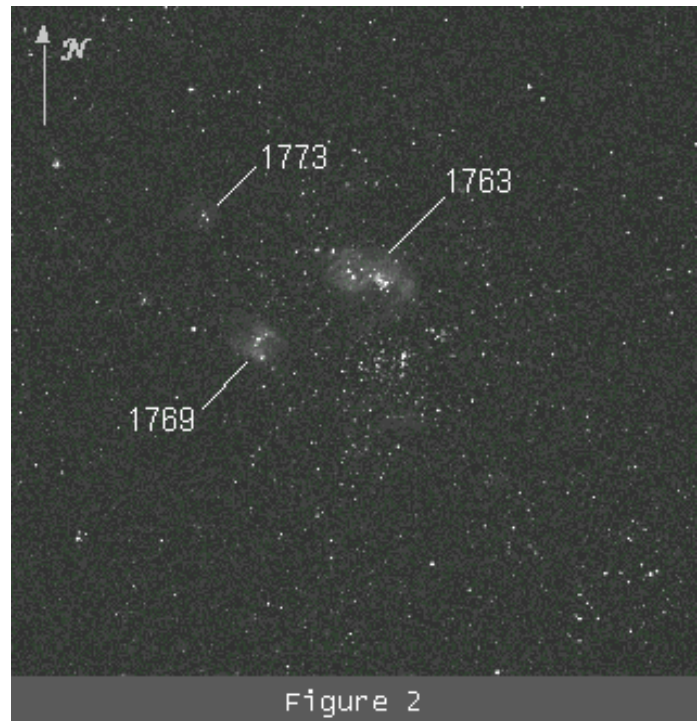
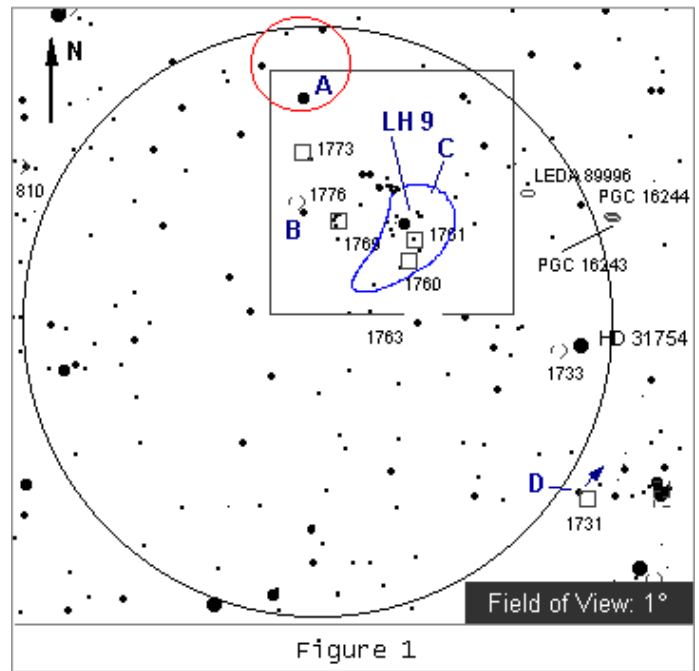
One of the two brightest patches of the complex, NGC 1769 (indicated in Figure 2), looks round with a symmetric nebulosity surrounding a bright stellar-like core. If you observe this nebula carefully for several minutes using averted vision its shape is better viewed.

The other brightest nebula, NGC 1763, is indicated in Figure 2. It is a structure with a brightness similar to that of NGC 1769, and elongated approximately east-west. A more detailed observation at the same magnification (42x) made possible the detection of a stream of faint stars within this nebulae structure, the bigger one.



The zone labeled **C** (Figure 1) that is outlined with a blue line is visible as several faint stars very close to each other embedded in a faint nebulosity. The brightest part is coincidentally in the area where nebulae NGC 1760 and NGC 1761 are situated in the eyepiece field (in the southwest part of the complex).

After the observation and identification of the whole



complex, I decided to use the UHC nebula filter to observe each patch again at the same magnification.

NGC 1769 and NGC 1763 appeared smooth in brightness through this filter and more contrasted with the background sky. On the other hand, NGC 1773 looked sharper and the nebulosity in the region labeled **C** more obvious, with a detached small spot in the south edge, surely NGC 1760.

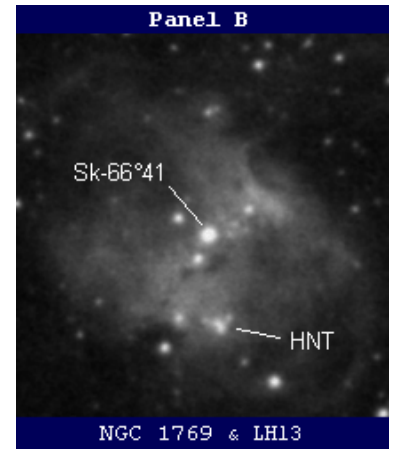
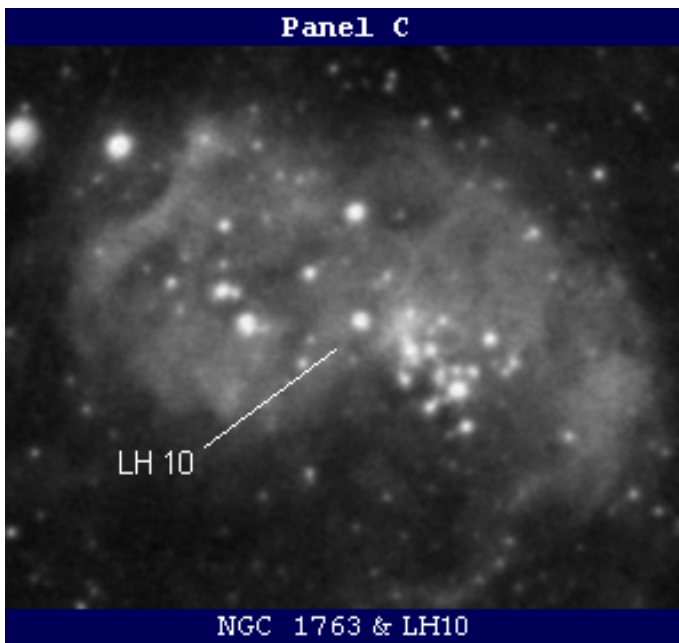
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Using an eyepiece that gives a little higher magnification (78x) two stars appear in NGC 1773 (also N11D) surrounded by a faint nebulosity (see **Panel A**). Embedded in the nebulosity lies LH 14, the least studied of the four OB associations.

NGC 1769, at this magnification, shows the star-like core and the surrounding circular nebulosity with more detail. Mentioned above, there are some OB associations in the N11 complex. LH 13 lies in this bright component also known as N11C. LH 13 contains two compact stellar clusters, Sk-66°41 and HNT. The ages of the two clusters suggest there is no association between them (Heydari-Malayeri *et. al.* 2000). I think the stellar core I saw through my 8-inch telescope is actually Sk-66°41 according to its position in NGC 1769 (see **Panel B**).

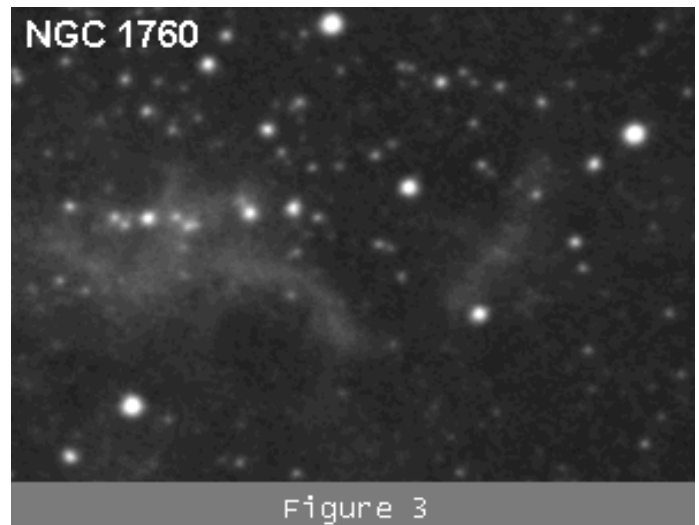
At 78x the stream of stars in the elongated patch NGC 1763 (also N11B) is clearly visible on its south edge (**Panel C**). These stars belong to the OB Association LH 10 which is the youngest cluster of the N11 complex, containing several O3



stars and, according to Nazé *et. al.* 2001, is still embedded in its natal cloud but its most massive components have already begun to blow bubbles around them.

Finally, the region indicated with **C** in Figure 1 looks very interesting at this higher magnification with several stars easier to observe in a hazy background. This group of stars I saw is the LH 9 association (indicated in Figure 1), whose action on its surroundings has triggered a burst of star formation in the periphery leading to the birth of the three other OB associations (Rosado *et. al.* 1996).

At 106x using a UHC nebula filter a very faint and smooth nebulosity with an irregular shape is visible in the zone where NGC 1760 lies (see eyepiece field in page 7). The view I had of NGC 1760 was not as detailed as shown in the DSS image (Figure 3).



The Surrounding Field of N11

Other objects are situated close to the N11 complex. If we move about 25 arc minutes to the southwest we find the brightest star in the 1 degree field, HD 31754, a 6.4 magnitude reddish star. Very close to it lies the faint (magnitude 13.3) open cluster NGC 1733. I tried to observe it but it was not visible at 42x.

Three galaxies are situated to the west of the N11 complex, the pair of PGC galaxies (16243 & 16244) were not visible at low magnification (42x) and the same occurred with the galaxy LEDA 89996, also not visible at higher magnification (106x).

To the south of these galaxies lies NGC 1731 (see eyepiece

field in page 2). According to [Wolfgang Steinicke's Revised NGC and IC Catalog](#) and software Skymap Pro 6, this is a cluster with nebulosity. Through my 8-inch telescope it looks like a faint luminosity engulfing the 10.7 magnitude star TYC 8889-619-1 indicated with letter **D** in Figure 1. The nebula extends toward the direction indicated by the blue arrow there.

Our nearby galaxy is home of several interesting nebulae complex and group of stars, it is rich in objects to explore through telescopes, thus discovering the wonderful structure and content of this companion, with the Small Magellanic Cloud, of our Milky Way.

(Continued on page 11)

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1_ **PA**= Position Angle

2_ **OB Association:**

The concept of a stellar association was originally introduced in 1949 by V. A. Ambartsumian, who later separated them into OB and T associations (Ambartsumian 1968). Morgan, Sharpless, & Osterbrock (1952) considered as a stellar association any loose group of stars within an area where bright OB stars exist and with evidence of a common origin.

A recent definition of a stellar association (Kontizas et al. 1999) refers to it as a single, unbound concentration of early-type luminous stars, embedded in a very young star forming region.

Spectacular Spiral

By Tom Koonce

Antelope Valley Astronomy Club, Inc. - Lancaster, California

Every year around mid-April the Whirlpool galaxy is well placed for observation in the northern sky in Canes Venatici (The Hunting Dogs). The Whirlpool is also known as M51 and NGC 5194, but most people know it by the nickname that is obvious after your first view. It has a smaller, yellowish companion galaxy, NGC 5195 in the distance. The Whirlpool is the best spiral galaxy in the sky, in my opinion. It can be seen with a small telescope, the spiral arms detected in an 8" scope, and when it is viewed through a really large telescope it is a stunning sight that you'll never forget. It's always a star party favorite when it's visible higher in the sky. A friend once let me observed it through his 51" reflector and I could hardly tear myself away from the view after 15 minutes. I thought I had only been at the eyepiece for 30 seconds...

You will find it quickly by following the curved handle of the Big Dipper away from the dipper to the star Alkaid at the end of the handle. Then look 2 degrees (outer ring of your Telrad) lower to the south and west in declination at about a 90 degree angle to the handle of the dipper. Scan around the area at low powers and you'll spot it as a fuzzy patch of gray.

The more magnification that you apply to the view, the more of the galaxy's structure will be revealed. Under clear, dark skies you will easily be able to make out the spiral structure of the two tightly wound spiral arms, dust lanes and the illusion of a connecting bridge of material between the two galaxies that is not actually there, at least to the extent that it looks like through the eyepiece. The two galaxies interacted about 70 million years ago, with M51 coming out the winner, gaining mass and kick starting many regions of active star formation.

While it certainly would have been an exciting (bad?) time to be living in the Whirlpool galaxy, the result today is a spectacular face-on spiral galaxy just 31 million light years away from us with plenty of interesting details, such as the pinkish knots of star forming regions and the radial wisps of interactions between the spiral arms. At medium power, sharp observers may be able to spot another much smaller edge-on galaxy, NGC 5229, to the northwest in the same field of view.

There are a few tricks to observing the Whirlpool galaxy and other 'faint fuzzies' like it. Obviously clear, dark skies and



Photo Credit: HST, ACS

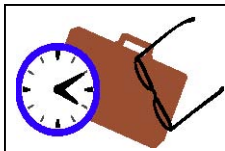
steady seeing are important. Filters will not enhance your views of galaxies, since galaxies are composed of stars emitting at all frequencies, filtering the view down to a particular band of frequencies will not increase the contrast of the view, like looking at the Ring Nebula with an OIII filter. The best way to visually observe extended, dim, magnitude 8.4 objects like the Whirlpool is to increase the amount of light getting to your eye... thus "bigger aperture is better." Please be careful when viewing awesome deep sky objects like M51 through really big telescopes, as it has been known to lead to serious infections of "Aperture Fever" in some observers. Sadly, there is no known cure for it and no known health insurance plans cover the cost of treatment. Trips to the Texas Star Party, Winter Star Party and other major deep sky events where big telescopes are present only offer temporary relief.

Now that the weather is warming up once again, take some time in April to get to know the spectacular Whirlpool galaxy, either for the first time or perhaps visit your old friend and study it in new detail.

Clear Skies, Tom

For More Information:

<http://hubblesite.org/newscenter/archive/releases/2005/12/image/a>
<http://apod.nasa.gov/apod/ap090526.html>



BOARD MEETING MINUTES

February 1st, 2010
OMSI Classroom 1
Duncan Kitchin

Board Members Present

Sameer Ruiwale (President)
Ken Hose (VP Membership)
Larry Godsey (Treasurer, Webmaster, Magazine Sales)
Duncan Kitchin (Secretary)
Larry Froberg (Sales Director)
Diana Fredlund (Media Director)
Jan Keiski (Library Director, OMSI Liason)
Greg Rohde (Telescope Library)
David Nemo (Observing Site Director)
Scott Kindt (Special Interest Groups Director)

Call to Order

The meeting was called to order at 7:07pm by Sameer Ruiwale and, there being 10 board members present, the quorum requirement of 10 was declared to be met.

Approval of Agenda

The agenda was approved by unanimous consent.

Approval of Minutes

Moved Duncan Kitchin, Second Larry Froberg: Approve minutes from the January 2010 board meeting. Motion passes.

Directors' Reports

- * Treasurer's Report – Larry Godsey: Balance & profit and loss statements were distributed. The CD was renegotiated, yielding a much better rate, but not as good as we have had in the past. The new CD matures Feb 2nd 2011.
- * Motion : increase budget for Astronomical League Dues by \$200 to meet new requirements. Moved : Larry Godsey, second Greg Rohde. Question from David Nemo: is this from budgeted or unbudgeted money? This is from unbudgeted money and represents a change to the budget. Motion passes 10-0-0.
- * Discussion: we have some money in the library fund. Should it be transferred? No change at present.
- * VP Programming – Matt Brewster: not present. Somebody is presenting in the planetarium for this month. From Ken Hose : received email about speakers, wanting to know what our speaker program was this year. Discussion : can we generate a list of past speakers? This is in the newsletters
- * VP Observing – Matt Vartanian: not present. Need to close on the star party schedule, since there have been some changes. Ken Hose: disconnect in terms of camp Hancock? It seems that we have a double booking, and the September date is not available. October slot is available. Larry Godsey is going to book October 8 – 10. What is the situation with Kahneeta? Not currently clear.
- * VP Community Affairs – Dawn Willard: Not present. Has received a request from PCC to provide a speaker on the subject of astronomy as a profession.
- * Media Director – Diana Fredlund: Will issue a news release

for the next meeting. Question from Larry Godsey – do we want to do that given that the meeting is in the planetarium with limited seating? Consensus was that there isn't likely to be an issue so this should be fine.

- * VP Membership – Ken Hose: 2 new members, 1 renewal. Brought in \$97 in news. Total member families 326, compared with 299 this time last year, year before 278.
- * New Member Advisor – Howard Knytych: Not present.
- * Sales – Larry Froberg: Despite lower turnout, still managed \$481 in sales. Completed a sale of some older magazines to a gentleman in Massachusetts. Will add some additional details onto the financial reports to give a better picture of the results. Still looking for an additional volunteer. Not critical at present, but will need some more help eventually.
- * Book Library – Jan Keiski: Nominal
- * Telescope Library – Greg Rohde: Accepted donation of a classic 6" Dobsonian. In good enough condition that it can be used in the library. Sold one of the older 8" scopes. Still trying to track down one unreturned telescope.
- * IDA – Dawn Nilson: Sent email to let us know that nobody from RCA has RSVPd for the February IDA symposium at OMSI. May need to look into additional promotion amongst membership for this event.
- * Magazine Subscriptions – Larry Godsey: Nominal
- * Webmaster – Larry Godsey: Nominal
- * Site Committee – David Nemo: No big news – some payroll deduction checks for the site fund.
- * Youth Director: Jean London: Not present.
- * SIGs – Scott Kindt: Nominal
- * Alcor – Dale Fenske: Not present
- * OMSI – Jan Keiski: February – planetarium. Astronomy day – OMSI has not given a firm date for this year yet. Requesting to make a later date this year in hopes of getting better weather. Has traditionally been the last week of April, when it is usually clouded out.
- * Sister Club update – Jan Keiski: Sister club wants to commend Larry Godsey for the website, which they found very useful. GAMA also wanted to let us know how much they appreciated the teleconference at the last joint meeting. Getting ready for the southern Messier marathon. Leo is going to send us pdf of his observing charts that he puts together for his group.

Old Business

- Make an arm for the mirror-making machine – Greg Rohde: Greg found the part that we were missing – it was a tool holder.
- Create Mirror Making Machine usage instructions after it is operational – David Nemo / Greg Rohde: Not done, but ready to start now that all of the parts have been located.
- Update about Stub Stewart parking bumpers tape project - Greg Rohde: 1/3 are done. Hasn't had the necessary dry weather to do the rest.
- Submit an article for the website on the refurbished 12.5" library scope – Diana Fredlund is taking over responsibility for this. Will take a look over the next week or two. Will put the article in the newsletter.

(Continued on page 13)

(Continued from page 12)

Update on proposal for "Think out loud" radio show – Diana Fredlund / Margaret Campbell. Waiting for a response from Dawn Nilson. Has information from "Think out Loud"; only needs notice of two or three weeks.

Update on Minor Catalogs Project – Margaret Campbell. Margaret may be providing some contributions for the newsletter, but we will remove this item from the list for now.

Send the name of the Hillsboro Commissioner who might want to be on the *Think Out Loud* program to Diana Fredlund - Greg Rohde. May have somebody to add.

Article in newsletter for 2009 RCA activities / accomplishments – Sameer Ruiwale.

Update on Dark Skies Symposium – Dawn Nilson. Already covered.

Formulate a club policy on Forum etiquette to review - Larry Godsey / David Nemo – DONE

Proposal on adding imaging equipment to Telescope Library – Matt Brewster. Tabled for now.

RCA 2010 Star Party Schedule final review – Matt Vartanian. Already discussed

Single night RCA only events.

Hancock in October – plan to book this date as discussed earlier.

OMSI Star Party moved from June 5th to June 19th. June 5th is the starlight parade.

Need information on Kahneeta.

New Business

Update on Non-profit Board Training – Larry Godsey. Larry Godsey and Duncan Kitchin attended, found to be extremely useful. Will no longer have to file a 990 from 2011 onwards, because the floor for total revenue is being raised to \$50000, our revenue is approximately \$40k.

2010 Goals for RCA – feedback / suggestions from all board members.

Listed so far:

Astronomy Day at two locations in the Portland metro area
Starlight Parade – continued participation. Margaret will be on the committee, along with Sameer Ruiwale, Greg Rohde, David Nemo & Dawn Willard. Meeting today for the first time this year. Application is due this month \$750 budget, but \$250 is the application fee.

Increase our media presence and visibility

Create RCA calendar. Suggested that we need to start getting material for 2011 in place now. We need to fix dates for next year much earlier; will need all of our schedules fixed by middle of October. This is much earlier than usual, so we should set this as a goal. Greg Rohde agreed to drive this project.

Items of equipment (long refractor tube and equatorial mount) belonging to the RCA in Lars Hedbor's garage. Need to decide what to do about them. Sameer will coordinate and let Greg Rohde know.

Adjournment

There being no further business, the meeting was adjourned at 8:11pm.

Science Special Interest Group

When: Saturday, May 1st, 3:00pm

When: Saturday, May 29th, 3:00pm

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

SIG Leader: Dan Gray

Email: sci-sig@rosecityastronomers.org

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

Astro-Imaging Special Interest Group

When: Monday, April 12th, 6:30pm

Location: Beaverton Public Library
Conference Room
12375 SW 5th St
Beaverton

SIG Leader: Greg Marshall

Email: ai-sig@rosecityastronomers.org

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

Telescope Workshop

When: Saturday, May 1st, 10:00am - 3:00pm

When: Saturday, May 29th, 10:00am - 3:00pm

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

SIG Leader: John DeLacy

Assistant: Don Peckham

Email: tw-sig@rosecityastronomers.org

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

Downtowners Luncheon

When: Friday, May 7th, Noon

Location: Kell's

112 SW Second Ave. Portland

SIG Leader: Margaret Campbell-McCrea

Email: ai-sig@rosecityastronomers.org

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

New Members Special Interest Group

When: Monday, May 17th, 6:30pm

Location: OMSI

Planetarium

SIG Leader: Howard Knytych

Email: ai-sig@rosecityastronomers.org

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

ASTROPHYSICS / COSMOLOGY SIG

When: Wednesday, April 21st, 2010, 7:00pm

Topic: To Be Announced

Presented by: To Be Announced

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

SIG Leaders: Jim White & Lamont Brock

Email: cosmology-sig@rosecityastronomers.org

www.rosecityastronomers.org/sigs/cosmology.htm

APRIL 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2 Downtowners Luncheon Kell's Noon	3
4	5 Board Meeting OMSI 7pm-Classroom 1	6	7	8	9 Camp Hancock	10 Camp Hancock
11	12 Astro Imaging SIG Beaverton Library 7pm	13	14	15	16 Maupin	17 Maupin
18	19 General Meeting OMSI Auditorium 7:30pm	20	21 Cosmology SIG Linus Pauling Cntr 7pm	22	23	24 OMSI Star Parties Rooster Rock Stub Stewart
25	26	27	28	29	30	

May 2010

May 1	Saturday	Telescope Workshop	Swan Island	10am-3pm
May 1	Saturday	Science SIG	Swan Island	3pm
May 3	Monday	RCA Board Meeting	OMSI Classroom 1	7pm
May 7	Friday	Downtowner's Luncheon	Kell's	Noon
May 10	Monday	Astro-Imaging SIG	Beaverton Public Library	7pm
May 14-15	Fri-Sat	Star Party	Maupin	
May 15	Saturday	OMSI Star Party	Stub Stewart & Rooster Rock State Parks	7pm
May 17	Monday	General Meeting	OMSI Auditorium	7:30pm
May 19	Wednesday	Cosmology SIG	Linus Pauling Center	7pm
May 29	Saturday	Telescope Workshop	Swan Island	10am-3pm
May 29	Saturday	Science SIG	Swan Island	3pm

The RCA General Meeting falls on the third Monday of each month. We usually meet in the Auditorium at OMSI, next to the Murdock Planetarium. Occasionally the meeting is held in Murdock Planetarium. Check the RCA web site for the latest information.

<http://www.rosecityastronomers.org>

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

The

Rosette Gazette

Volume 22, Issue 5

Newsletter of the Rose City Astronomers

May, 2010



RCA MAY 19 GENERAL MEETING

Hubble Space Telescope

Presented by Jim Todd

RCA General Meeting
May 17 at 7:30 pm

Hubble at OMSI's OMNIMAX Theater

For nearly 20 years, the Hubble Space Telescope has dazzled us with unprecedented views of the cosmos—from the splendor of our celestial neighborhood to galaxies billions of light years away. Now through the power of the new IMAX film Hubble, moviegoers at the Oregon Museum of Science and Industry's (OMSI) OMNIMAX Dome Theater will blast off alongside the Atlantis STS-125 crew on an awe-inspiring journey into space to perform important repairs and upgrades on the Hubble Space Telescope and witness up close some of the most challenging spacewalks ever performed.



the audience really is there," said producer/director Toni Myers. "Fifteen years ago we made a film about space exploration that included Hubble, when it started sending back the first images. Today, we have Hubble's entire phenomenal legacy of data to explore. With IMAX, we can transport people to galaxies that are 13 billion light years away-back to the edge of time. Real star travel is here at last."

Hubble will offer an inspiring and unique look into the Hubble Space Telescope's legacy and highlight its profound impact on the way we view the Universe and ourselves. Recounting the amazing journey of the most important scientific instrument since Galileo's original telescope, viewers will experience firsthand Hubble's awe-inspiring imagery, from the heart of the Orion Nebula and our Milky Way to the edge of the observable Universe.

"It's been said that The IMAX Experience(r) is the next best thing to being in space, and with IMAX,

All are Welcome! Monday May 17

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

Location: OMSI Omnimax Theater

In This Issue:

- 1....General Meeting
- 2....Club Officers
-Magazines
-RCA Library
- 3....Local Happenings
- 5...Asteroid Collision
- 6....Star Party Scene
- 7....RCA Board Minutes
- 8....SIGs
- 9...Calendars



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

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

Moon photos below courtesy David Haworth

Last Quarter Moon
May 6

New Moon
May 13

First Quarter Moon
May 20

Full Moon
May 27



CLUB OFFICERS

Office	Name	Email
President	Sameer Ruiwale	president@rosecityastronomers.org
Past President	Carol Huston	pastprez@rosecityastronomers.org
VP Membership	Ken Hose	membership@rosecityastronomers.org
VP Observing/Star Parties	Matt Vartanian	observing@rosecityastronomers.org
VP Community Affairs	Dawn Willard	community@rosecityastronomers.org
VP Communications	Matt Brewster	communications@rosecityastronomers.org
Treasurer	Larry Godsey	treasurer@rosecityastronomers.org
Secretary	Duncan Kitchin	secretary@rosecityastronomers.org
Sales Director	Larry Froberg	sales@rosecityastronomers.org
Newsletter Editor	Scott Kindt	editor@rosecityastronomers.org
Media Director	Diana Fredlund	media@rosecityastronomers.org
New Member Advisor	Howard Knytych	newmembers@rosecityastronomers.org
Webmaster	Larry Godsey	webmaster@rosecityastronomers.org
ALCOR, Historian	Dale Fenske	alcor@rosecityastronomers.org
Library Director	Jan Keiski	library@rosecityastronomers.org
Telescope Director	Greg Rohde	telescope@rosecityastronomers.org
Observing Site Director	David Nemo	sitefund@rosecityastronomers.org
IDA Liaison	Dawn Nilson	ida@rosecityastronomers.org
OMSI Liaison	Jan Keiski	omsi@rosecityastronomers.org
Magazines Director	Larry Godsey	magazines@rosecityastronomers.org
SIG Director	Scott Kindt	sigs@rosecityastronomers.org
Youth Programs Director	Jeannie London	youth@rosecityastronomers.org
Sister Club Liaison	Jan Keiski	sisterclubs@rosecityastronomers.org

RCA MAGAZINE SUBSCRIPTIONS

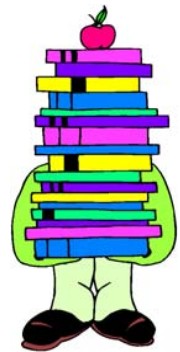


One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year or \$65.95 for two years. The RCA member rate for Astronomy magazine is \$34 for one year or \$60 for two years. For more information go to the RCA web site index and click on the link for magazines. **No table will be available at the May general meeting. Renewals and new subscriptions should be mailed in this month.** Please make checks out to "RCA" and allow two months for your subscription to be renewed. <http://www.rosecityastronomers.org/magazines/> Larry Godsey at magazines@rosecityastronomers.org

RCA LIBRARY

The Rose City Astronomers main-tains 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. 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.rosecityastronomers.org/library.htm>
Jan Keiski at library@rosecityastronomers.org>



Local Happenings

Stolen Telescope Announcement

Sometime between April 22nd and May 3rd someone stole Jan Keiski's Hardin Optics, Red, 10" dobsonian tube from the storage units in the "secure" under building parking area where she lives. They did not take the base.

She is asking for your help to be on the lookout for this while you peruse various websites or newspapers that might be selling astro items.

Please contact Jan with any information or leads.
Jan Keiski: 503-539-4566, jikeiski@comcast.net



"Big Red was more than just metal and glass to me." Jan

Starlight Parade 2010



RCA Float in the 2009 Starlight Parade
Photo by Jan Keiski

Once again the Rose City Astronomers are entering a float in the 2010 Starlight Parade. The Starlight Parade is happening on June 5th this year. Show your support by cheering them on from the parade route or volunteering to help. Contact Sameer at president@rosecityastronomers.org

Parade information:

<http://www.rosefestival.org/events/starlightparade/>

(Continued on page 4)

Local Happenings

(Continued from page 3)

2011 RCA Calendar

When is the Trout Lake Star Party in 2011? If I get a telescope for my birthday will it be near the full moon? These questions and more could be answered with a 2011 RCA calendar. The calendar is in the planning stages at this time with a publication date towards the end of this year.

Camera's ready? What we need from you is your calendar worthy photos. Photos should be related in some way to astronomy and should preferably be taken within the year. Submissions are due by September 1, 2010. Please email all submissions to Greg Rohde at: telescope@rosecityastronomers.org



MAY 2011

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				

RCA INFORMATION FAIR

Monday, June 21st!



The June meeting features our annual Information Fair. This is a great opportunity to get acquainted, or reacquainted, with RCA activities and members. A swap meet will also be held so bring in your astro goodies and checkbooks.



MEMBERSHIP RENEWAL

It's that time of year again, astronomy friends, to renew your membership with the Rose City Astronomers. Our membership year runs from July 1 to June 30th. If you've joined the club this year, your membership is good until June 30, 2011 as you've paid a pro-rated fee when you joined.

Dues will remain the same at \$24.00. This is a bargain for all the benefits available to you, as we are sure you are well aware. Membership is not just about personal benefits. Your membership dues support the work that RCA does in the community to promote the enjoyment and science of astronomy. Speakers, public star parties, classes and support for astronomy in schoolrooms, and outreach programs just to name a few of the programs that your membership dues support.

How to renew? You may print the renewal form from the RCA website <http://www.rosecityastronomers.org/renew.htm> and mail it with your check (no cash in the mail, please). Checks or cash are accepted at the general meeting. Plenty of renewal forms available also. You can pay online, via PayPal, with debit or credit card at <http://www.rosecityastronomers.org/pp/renew.htm> (note that there is a 1 dollar handling fee for this option, total online renewal cost is \$25.00).

At the general meetings you'll find the friendly VP of Membership, Ken Hose, at a table just inside the entrance of the OMSI auditorium. We're ready to receive your prompt renewal and answer any questions, too!

Membership status can be checked on the website at: <http://www.rosecityastronomers.org/renew.htm>

Suspected Asteroid Collision Leaves Trailing Debris

from STSci.edu

NASA's Hubble Space Telescope has observed a mysterious X-shaped debris pattern and trailing streamers of dust that suggest a head-on collision between two asteroids. Astronomers have long thought the asteroid belt is being ground down through collisions, but such a smashup has never been seen before.

Asteroid collisions are energetic, with an average impact speed of more than 11,000 miles per hour, or five times faster than a rifle bullet. The comet-like object imaged by Hubble, called P/2010 A2, was first discovered by the Lincoln Near-Earth Asteroid Research, or LINEAR, program sky survey on Jan. 6. New Hubble images taken on Jan. 25 and 29 show a complex X-pattern of filamentary structures near the nucleus.

"This is quite different from the smooth dust envelopes of normal comets," said principal investigator David Jewitt of the University of California at Los Angeles. "The filaments are made of dust and gravel, presumably recently thrown out of the nucleus. Some are swept back by radiation pressure from sunlight to create straight dust streaks. Embedded in the filaments are co-moving blobs of dust that likely originated from tiny unseen parent bodies."

Hubble shows the main nucleus of P/2010 A2 lies outside its own halo of dust. This has never been seen before in a comet-like object. The nucleus is estimated to be 460 feet in diameter.

Normal comets fall into the inner regions of the solar system from icy reservoirs in the Kuiper Belt and Oort Cloud. As a comet nears the sun and warms up, ice near the surface vaporizes and ejects material from the solid comet nucleus via jets. But P/2010 A2 may have a different origin. It orbits in the warm, inner regions of the asteroid belt where its nearest neighbors are dry rocky bodies lacking volatile materials.

This leaves open the possibility that the complex debris tail is the result of an impact between two bodies, rather than ice simply melting from a parent body.

"If this interpretation is correct, two small and previously unknown asteroids recently collided, creating a shower of debris that is being swept back into a tail from the collision site by the pressure of sunlight," Jewitt said.

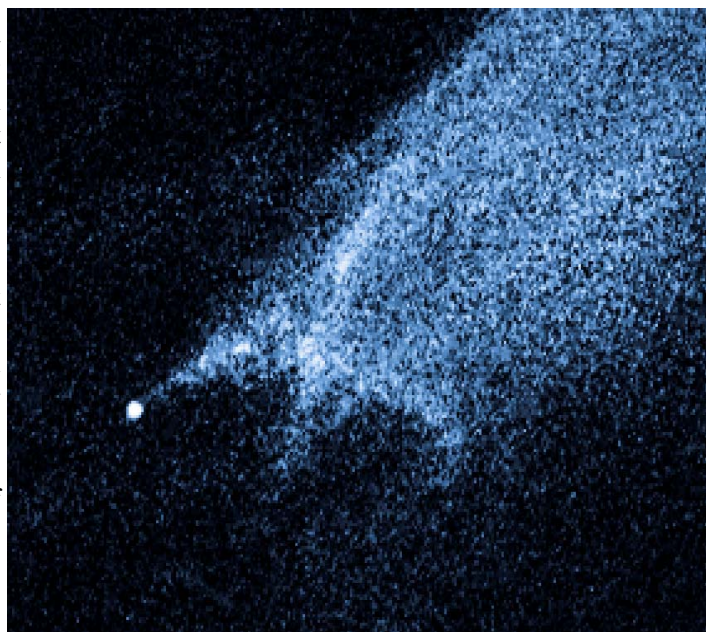


Photo from NASA and STSci

The main nucleus of P/2010 A2 would be the surviving remnant of this so-called hypervelocity collision.

"The filamentary appearance of P/2010 A2 is different from anything seen in Hubble images of normal comets, consistent with the action of a different process," Jewitt said. An impact origin also would be consistent with the absence of gas in spectra recorded using ground-based telescopes.

The asteroid belt contains abundant evidence of ancient collisions that have shattered precursor bodies into fragments. The orbit of P/2010 A2 is consistent with membership in the Flora asteroid family, produced by collisional shattering more than 100 million years ago. One fragment of that ancient smashup may have struck Earth 65 million years ago, triggering a mass extinction that wiped out the dinosaurs. But, until now, no such asteroid-asteroid collision has been caught "in the act."

At the time of the Hubble observations, the object was approximately 180 million miles from the sun and 90 million miles from Earth. The Hubble images were recorded with the new Wide Field Camera 3 (WFC3).

For Hubble images and more information, visit:

<http://www.nasa.gov/hubble>
<http://hubblesite.org/news/2010/07>

Star Party Scene

Upcoming Star Parties

OMSI Star Parties - May 15 Planet Parade

In mid-May, three of the solar system's visible planets will join Earth's Moon in the night sky. Venus, Mars, and Saturn and the Moon will gather in the evening sky on Saturday, May 15, and weather permitting, they will put on a beautiful sight! Join OMSI, Rose City Astronomers, and Vancouver Sidewalk Astronomers at both Rooster Rock State Park and L.L. "Stub" Stewart State Park starting at 8:30 p.m., weather permitting. From beginners to experts of all ages, here's your opportunity to view the stars and other celestial objects up close and personal through telescope and binoculars.

Join us as we gaze at the spring night sky at two locations. To reach Rooster Rock State Park, located 22 miles east of Portland on I-84 just east of Sandy River at exit 25. To reach L.L. "Stub" Stewart State Park, take US-26 west of Portland and turn right on OR-47. The event is free, but the Parks department charges \$5 parking fee per vehicle. Warm clothing and a flashlight with red light are recommended. Personal telescopes and binoculars are welcome.

On the scheduled day of each OMSI Star Parties, it is suggested that interested visitors call the OMSI Star Parties Hotline, (503) 797-4610 #2, or check the OMSI Star Parties web site: <http://www.omsu.edu/starparties> for possible weather-related cancellations.

Past Star Party Reports



Luscher Farm in West Linn

Lake Oswego Reads Star Party February 18, 2010 by Scott Kindt

For the middle of February you'll find it hard to beat the night. No, it wasn't dark skies. No, the seeing wasn't 10 out of 10. No, the weather wasn't a balmy 75°F at night. But it was not too cold and you could see the Orion Nebula and not the Pacific Northwest Nebula. The farm didn't seem like it would be too bad of a place except for the bright field lights that just cleared the slight rise to the north.

About 60-80 people showed up at Luscher Farm to take in the winter skies. There was a lot of different sky stuff to look at. We had a 5 day old moon, mars, the Pleiades, M42, M31, M37, NGC 2392 (the Eskimo nebula), R Leporis (Hind's Crimson Star) and a few others. Everyone had a good time.

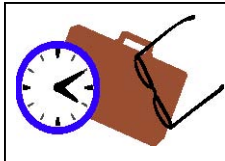
Maupin Star Party - May 14-16, 2010

This is an RCA sponsored event for members and guests. The Rose City Astronomers have been granted permission to use private property approximately 8 miles West of the town of Maupin for Star Parties.

There is No registration or fees for the event itself, just show up and enjoy the weekend. 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 some serious observing. More information: <http://www.rosecityastronomers.org/sp/maupin.htm>



Takeoff at the Wapanita Airstrip.



BOARD MEETING MINUTES

March 1st, 2010 7pm
OMSI Classroom 1
Duncan Kitchin

Board Members Present

Sameer Ruiwale (President)
Ken Hose (VP Membership)
Larry Godsey (Treasurer, Webmaster, Magazine Sales)
Duncan Kitchin (Secretary)
Larry Froberg (Sales Director)
Howard Knytych (New Member Advisor)
Jan Keiski (Library Director, OMSI Liaison, Sister Club Liaison)
Greg Rohde (Telescope Library Director)
David Nemo (Observing Site Director)
Scott Kindt (Special Interest Groups Director)

Call to Order

The meeting was called to order at 7:15 by Sameer Ruiwale and, there being 10 of board members present, the quorum requirement of 10 was declared to be met.

Approval of Agenda

Motion : Approve the agenda. Moved: Duncan Kitchin, Second Larry Froberg. Motion passes 10-0-0.

Approval of Minutes

Motion : Approve minutes from the February 2010 board meeting. Moved: Duncan Kitchin, Second Larry Froberg. Motion passes 10-0-0.

Directors' Reports

Treasurer's Report – Larry Godsey: profit & loss sheet and balance sheet were passed around. Larry asked whether a month by month profit and loss printout would be useful, in addition to the year-to-date profit and loss already generated. After some discussion, consensus that year-to-date numbers are all that should be printed, but it would be useful to have month by month numbers available on the website.

- Motion: Increase the telescope library budget by \$650 to \$1860 in order to buy some equipment such as filters and eyepieces, since Sean's Astronomy Shop is currently having a sale. Moved : Larry Godsey. Second : Duncan Kitchin. Discussion : This will increase our total budget by \$780 to approximately \$10k, taking into account the increase in AL dues approved last month, in excess of our income of approximately \$8k. This is acceptable as long as we don't have this expense every year. Motion passes 10-0-0.
- VP Programming – Matt Brewster: Not present. Action Item: Sameer will talk to Matt Brewster to get information on March speaker.
- VP Observing – Matt Vartanian: Not present. Sameer spoke with Matt Vartanian after the last meeting, particularly regarding additional Stub Stewart star parties. Discussion : need to ensure that we do not schedule Kah-Nee-Ta at the same time as other events such as Maupin or Hancock, since the club could be liable for rooms in the event that the block is not filled.
- VP Community Affairs – Dawn Willard: Not present. Lake Oswego star party February 18th, reported as great success with 10 or so scopes available, hosted by public library, well attended.

- Media Director – Diana Fredlund: Not present.
- VP Membership – Ken Hose: 3 new members joined, 1 renewal, taking in a total of \$128 in dues. We now stand at 333 member families. 2 of the transactions in the last month were via PayPal.
- New Member Advisor – Howard Knytych: Has been holding programs alternate months, none last month. Working on something for this month. May do something related to springtime observing, such as observing galaxies as extended dim objects. Larry Godsey suggests something about preparation for the upcoming season, such as advising on books to read and tuning up telescopes. Greg Rohde suggests some training in use of a Telrad using the "dummy Dob"; a telescope with no primary modified for pointing training in the planetarium. Also suggested that it might be valuable to discuss site safety and plans for the upcoming season.
- Sales – Larry Froberg: \$214 in sales, including \$32 sale to the library. This represents a decline from the prior month, but in line with seasonal expectations.
- Book Library – Jan Keiski: Chris Steinkamp is finishing the library materials inventory. Will be notifying anybody who is overdue in returning books. There will also be a library sale of surplus books coming up soon.
- Telescope Library – Greg Rohde: Greg Rohde has been to Sean's Astronomy Shop to buy items in the sale. Mostly accessories such as eyepieces, filters and eyepiece racks for dobsonian rocker boxes.
- IDA – Dawn Nilson: Not present. Light pollution symposium was held last week; three speakers. Was well attended, including four RCA board members, and provided some useful additional contacts and information. Dawn Nilson will be sending Jan Keiski all of the PowerPoint presentations.
- Magazine Subscriptions – Larry Godsey: Nominal.
- Webmaster – Larry Godsey: Nominal. Jan Keiski will be sending links to our website to JPL.
- Site Committee – David Nemo: David has talked to the property owner at Maupin to see if there is anything that members might be able to do to help maintain the site. Also still looking to see if there is any property available for sale in that area.
- Youth Director: Jean London: Not present. Last month's youth meeting was well attended.
- SIGs – Scott Kindt: Cosmology SIG is getting many excellent speakers, based on demand from SIG membership. One person who wrote a book on Pluto may be able to speak at a general meeting.
- Alcor – Dale Fenske: Not present.
- OMSI – Jan Keiski: Auditorium for March 15th general meeting. OMSI vernal equinox star party March 27th. Jim Todd and Dawn Willard will be organizing a star party for the OMSI After Dark function on March 31st.
- Sister Club update – Jan Keiski: GAMA's Southern Messier marathon was a big success: two clear nights of viewing. Visiting scientist, Claude Plymate, from Kitt Peak, met with the membership. GAMA appreciates concerns expressed by RCA members following the recent major earthquake in the region.

Old Business

Create Mirror Making Machine usage instructions after it is operational – David Nemo / Greg Rohde. Machine is now functional, need to create instructions.
Update about Stub Stewart parking bumpers tape project - Greg Rohde. Nothing additional to report.

(Continued on page 8)

(Continued from page 7)

Submit an article for the website on the refurbished 12.5" library scope – Margaret Campbell. Nothing to report.
Update on proposal for "Think out loud" radio show – Diana Fredlund / Margaret Campbell. Requirements have been received, now have to work on program.
Send the name of the Hillsboro Commissioner who might want to be on the *Think Out Loud* program to Diana Fredlund - Greg Rohde. Greg should be able to get the name this week.
Article in newsletter for 2009 RCA activities / accomplishments – Sameer Ruiwale. Sameer is putting together now, should go into the April newsletter.
Report on Dark Skies Symposium – Dawn Nilson. Report received, noted earlier.
Proposal on adding imaging equipment to Telescope Library – Matt Brewster.
Update on calendar printing costs from vendor – Greg Rohde. Greg will get some sample calendars of each of the available sizes.
Update on transferring equipment from Lars' Hedbor's garage to TMS – Greg Rohde. Greg collected the telescope parts. Refractor tube by itself needs two people to carry. Moved to TMS.
Update on adding Stub-Stewart RCA only star-parties to 2010 schedule – Matt Vartanian.

New Business

Member feedback on having newsletter printed copies available at meetings – Sameer Ruiwale. Suggested that there could be a binder at the library with newsletter copies for reference.
Policies and Procedures document requirement for non-profits – Duncan Kitchin. Duncan is preparing an updated set of policies and procedures, which will be presented to the board for approval when complete.
RCA 2011 star party schedule planning. David Nemo: can we set a date when next year's star party schedule can be complete? Suggested that we aim for a date of July; this date is driven by the need to have an early schedule in order to have a calendar printed.
Astronomy Day Planning – Sameer Ruiwale.
Greg Rohde: Portland Rose Festival Starlight Parade float. Assembled the frame for the central visual element on Saturday; a 8ft x 6ft illuminated galaxy picture.
Sameer has received requests from a member interested in the cosmology SIG, but not able to attend, wanting to know if meetings could be made available online.

Adjournment

There being no further business, the meeting was adjourned at 8:36.

Special Interest Groups

Astro-Imaging Special Interest Group

When: Monday, April 12th, 6:30pm
Location: Beaverton Public Library
Conference Room
12375 SW 5th St
Beaverton
SIG Leader: Greg Marshall
Email: ai-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/astroimage.htm>

Science Special Interest Group

When: Saturday, May 29th, 3:00pm
Location: Technical Marine Service, Inc
6040 N. Cutter Circle on Swan Island
Portland
SIG Leader: Dan Gray
Email: sci-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/science.htm>

Downtowners Luncheon

When: Friday, May 7th, Noon
Location: Kell's
112 SW Second Ave. Portland
SIG Leader: Margaret Campbell-McCrea
Email: downtown-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/downtowners.htm>

New Members Special Interest Group

When: Monday, May 17th, 6:30pm
Location: OMSI
Planetarium
SIG Leader: Howard Knytych
Email: newmembers@rosecityastronomers.org
http://www.rosecityastronomers.org/sigs/new_members.htm

Telescope Workshop

When: Saturday, May 29th, 10:00am - 3:00pm
Location: Technical Marine Service, Inc.
6040 N. Cutter Circle on Swan Island
SIG Leader: John DeLacy
Assistant: Don Peckham
Email: tw-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/tmw.htm>

Astrophysics / Cosmology SIG

When: Wednesday, May 19th, 7:00pm
Topic: Galaxy Formation and the Early Universe
Presented by: To Be Announced
Location: Linus Pauling Complex,
3945 S.E. Hawthorne St., Portland.
SIG Leaders: Jim White & Lamont Brock
Email: cosmology-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/cosmology.htm>

MAY 2010

Sun Mon Tue Wed Thu Fri Sat

						1 Telescope Workshop 10am - 3pm Science SIG 3pm
2	3 Board Meeting OMSI 7pm-Classroom-1 Eta Aquarid Meteor Shower	4	5	6	7 Downtowners Luncheon Kell's Noon	8
9 Mothers Day	10 Astro Imaging SIG Beaverton Library 7pm	11	12	13 New Moon	14 Maupin Star Party	15 OMSI Star Party Rooster Rock and Stub Stewart Maupin Star Party Prineville Star Party
16	17 General Meeting OMSI Auditorium 7:30pm	18	19 Cosmology SIG Linus Pauling Cntr 7pm	20	21	22
23	24	25	26	27	28	29 Telescope Workshop 10am - 3pm Science SIG 3pm
30	31					

June 2010

June 4	Friday	Downtowner's Luncheon	Kell's	Noon
June 5	Saturday	Starlight Parade	Downtown Portland	8:30pm
June 7	Monday	Board Meeting	OMSI Parker Room	7pm
June 12	Saturday	Star Party	White River Canyon Parking Lot	
June 14	Monday	Astro-Imaging SIG	Beaverton Public Library	7pm
June 19	Saturday	OMSI Star Party	Stub Steward & Rooster Rock State Parks	7pm
June 21	Monday	General Meeting	OMSI Auditorium	7:30pm
June 23	Wednesday	Cosmology SIG	Linus Pauling Center	7pm
June 26	Saturday	Telescope Workshop	Swan Island	10am-3pm
June 26	Saturday	Science SIG	Swan Island	3pm

The RCA General Meeting falls on the third Monday of each month. We usually meet in the Auditorium at OMSI, next to the Murdock Planetarium. Occasionally the meeting is held in Murdock Planetarium. Check the RCA web site for the latest information.

<http://www.rosecityastronomers.org>

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

The

Rosette Gazette

Volume 22, Issue 6

Newsletter of the Rose City Astronomers

June, 2010



RCA JUNE 21 GENERAL MEETING

RCA Information Fair

This months general meeting features our annual Information Fair. Come visit us and get acquainted with RCA activities and members.

There will be several tables set up in OMSI's Auditorium with information on RCA programs and activities. Learn about the following:

- Learn about membership benefits.
- Learn about RCA star parties & regional star parties.
- Learn about Astronomical League amateur observing programs such as the Messier, Caldwell and Herschel programs and how to earn observing certificates and awards for these.
- Find out about RCA special interest groups (SIGs) such as Cosmology, Astrophysics, Astrophotography, Amateur Telescope Making and others.
- Find out about our Telescope Library where members can check out a variety of telescopes to try out.
- The RCA library will be open with hundreds of astronomy related books and videos.
- The RCA Sales table will feature a large assortment of Astronomy reference books, star-charts, calendars and assorted accessories for purchase.



In This Issue:

- 1....General Meeting
- 2....Club Officers
-Magazines
-RCA Library
- 3....Local Happenings
- 4....SIGs
- 5...Astronomy Day
- 6....Star Party Scene
- 8....RCA Board Minutes
- 10..Calendars



RCA swap meet to be held, where members have the opportunity to trade their astronomy related items.



The fair begins at 7:00 PM with a short business meeting at 7:30 PM.

Enter at the Planetarium Entrance right (north) of the Main Entrance. Proceed to your right to the auditorium.

All are Welcome! Monday June 21

Social Gathering/Information Fair: 7 pm. General Meeting Begins: 7:30 pm.

Location: OMSI Auditorium



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

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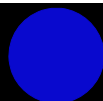
Hubble Deep Field above courtesy R. Williams (STScI), the Hubble Deep Field Team and NASA.

Moon photos below courtesy David Haworth

Last Quarter Moon
June 4



New Moon
June 12



First Quarter Moon
June 19



Full Moon
June 26



CLUB OFFICERS

Office	Name	Email
President	Sameer Ruiwale	president@rosecityastronomers.org
Past President	Carol Huston	pastprez@rosecityastronomers.org
VP Membership	Ken Hose	membership@rosecityastronomers.org
VP Observing/Star Parties	Matt Vartanian	observing@rosecityastronomers.org
VP Community Affairs	Dawn Willard	community@rosecityastronomers.org
VP Communications	Matt Brewster	communications@rosecityastronomers.org
Treasurer	Larry Godsey	treasurer@rosecityastronomers.org
Secretary	Duncan Kitchin	secretary@rosecityastronomers.org
Sales Director	Larry Froberg	sales@rosecityastronomers.org
Newsletter Editor	Scott Kindt	editor@rosecityastronomers.org
Media Director	Diana Fredlund	media@rosecityastronomers.org
New Member Advisor	Howard Knytych	newmembers@rosecityastronomers.org
Webmaster	Larry Godsey	webmaster@rosecityastronomers.org
ALCOR, Historian	Dale Fenske	alcor@rosecityastronomers.org
Library Director	Jan Keiski	library@rosecityastronomers.org
Telescope Director	Greg Rohde	telescope@rosecityastronomers.org
Observing Site Director	David Nemo	sitefund@rosecityastronomers.org
IDA Liaison	Dawn Nilson	ida@rosecityastronomers.org
OMSI Liaison	Jan Keiski	omsi@rosecityastronomers.org
Magazines Director	Larry Godsey	magazines@rosecityastronomers.org
SIG Director	Scott Kindt	sigs@rosecityastronomers.org
Youth Programs Director	Jeannie London	youth@rosecityastronomers.org
Sister Club Liaison	Jan Keiski	sisterclubs@rosecityastronomers.org

RCA MAGAZINE SUBSCRIPTIONS

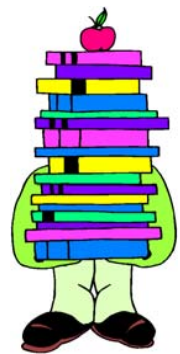
One of the benefits of RCA Membership is a reduced rate subscription to Sky & Telescope and Astronomy magazines. The RCA member rate for Sky & Telescope Magazine is \$32.95 for one year or \$65.95 for two years. The RCA member rate for Astronomy magazine is \$34 for one year or \$60 for two years. For more information go to the RCA web site index and click on the link for magazines. Please make checks out to "RCA" and allow two months for your subscription to be renewed.



<http://www.rosecityastronomers.org/magazines/>
 Larry Godsey <magazines@rosecityastronomers.org>

RCA LIBRARY

The Rose City Astronomers main-tains 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. 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.rosecityastronomers.org/library.htm>
 Jan Keiski <library@rosecityastronomers.org>

Local Happenings



MEMBERSHIP RENEWAL

It's that time of year again, astronomy friends, to renew your membership with the Rose City Astronomers. Our membership year runs from July 1 to June 30th. If you've joined the club this year, your membership is good until June 30, 2011 as you've paid a prorated fee when you joined.

Dues will remain the same at \$24.00. This is a bargain for all the benefits available to you, as we are sure you are well aware. Membership is not just about personal benefits.

Your membership dues support the work that RCA does in the community to promote the enjoyment and science of astronomy. Speakers, public star parties, classes and support for astronomy in schoolrooms, and outreach programs just to name a few of the programs that your membership dues support.

How to renew? You may print the renewal form from the RCA website <http://www.rosecityastronomers.org/renew.htm> and mail it with your check (no cash in the mail, please). Checks or cash are accepted at the general meeting. Plenty of renewal forms available also. You can pay online, via PayPal, with debit or credit card at <http://www.rosecityastronomers.org/pp/renew.htm> (note that there is a 1 dollar handling fee for this option, total online renewal cost is \$25.00).

At the general meetings you'll find the friendly VP of Membership, Ken Hose, at a table just inside the entrance of the OMSI auditorium. We're ready to receive your prompt renewal and answer any questions, too!

Membership status can be checked on the website at: www.rosecityastronomers.org/renew.htm



Starlight Parade 2010 By David Nemo



RCA Float in the 2010 Starlight Parade
Photo by David Nemo

Thanks to lots of hard work by a host of volunteers, RCA once again had an impressive entry in this year's Rose Festival Starlight Parade.

Float participants include: Brian Wilson, David Nemo, Kasia Jakubowski, Sydney Rappaport, Chris Steincamp, Sameer Ruiwale, Carolyn Sterrett, Craig Sterrett, Michael Orelove, TJ, Dawn Willard, Ron Willard. Unfortunately, a couple of other hard workers, Margaret Campbell-McCrea (who chaired the Parade Committee) and Greg Rhode (who conceived and constructed the spiral light galaxy) were unable to participate in the parade, but had a big hand in our success. Also, a big thank you to Dan Gray who let us build and store the float in his shop - out of the rain.

If you were along the parade route, thanks for shouting encouragement and support for our entry. Thanks as well to the RCA Board for funding our entry that exposed our club to over 300,000 (my guess) live parade watchers and a regional TV audience as well.

(Local Happenings continued on page 4)

Local Happenings

(Continued from page 3)

2011 RCA Calendar

When is the Trout Lake Star Party in 2011? If I get a telescope for my birthday will it be near the full moon? These questions and more could be answered with a 2011 RCA calendar. The calendar is in the planning stages at this time with a publication date towards the end of this year.

Camera's ready? What we need from you is your calendar worthy photos. Photos should be related in some way to astronomy and should preferably be taken within the year. Submissions are due by September 1, 2010. Please email all submissions to Greg Rohde at: telescope@rosecityastronomers.org



MAY 2011

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				

Special Interest Groups

Astro-Imaging Special Interest Group

When: Monday, June 14th, 7pm
Location: Beaverton Public Library
Conference Room
12375 SW 5th St
Beaverton
SIG Leader: Greg Marshall
Email: ai-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/astroimage.htm>

Science Special Interest Group

When: Saturday, June 26th, 3:00pm
Location: Technical Marine Service, Inc
6040 N. Cutter Circle on Swan Island
Portland
SIG Leader: Dan Gray
Email: sci-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/science.htm>

Downtowners Luncheon

When: Friday, July 9th, Noon
Location: Kell's
112 SW Second Ave. Portland
SIG Leader: Margaret Campbell-McCrea
Email: downtown-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/downtowners.htm>

New Members Special Interest Group

When: Monday, June 21st, 7pm
Location: OMSI Auditorium with the Information Fair
SIG Leader: Howard Knytych
Email: newmembers@rosecityastronomers.org
http://www.rosecityastronomers.org/sigs/new_members.htm

Telescope Workshop

When: Saturday, June 26th, 10:00am - 3:00pm
Location: Technical Marine Service, Inc.
6040 N. Cutter Circle on Swan Island
SIG Leader: John DeLacy
Assistant: Don Peckham
Email: tw-sig@rosecityastronomers.org
<http://www.rosecityastronomers.org/sigs/tmw.htm>

Astrophysics / Cosmology SIG

When: Wednesday, June 23rd, 7:00pm
Topic: Galaxy Formation and the Early Universe
Presented by: To Be Announced
Location: Linus Pauling Complex,
3945 S.E. Hawthorne St., Portland.
SIG Leaders: Jim White & Lamont Brock
Email: cosmology-sig@rosecityastronomers.org
www.rosecityastronomers.org/sigs/cosmology.htm

Yes, we know that the official date for the national Astronomy Day has come and gone, but we all know what the weather is like here in the Pacific Northwest in April. Therefore, OMSI and the Rose City Astronomers have decided to postpone Astronomy Day activities this year until June 19th with the hopes that better weather will prevail and to have it coincide with the 60th anniversary of the OMSI planetarium.

Astronomy Day is a grass roots movement designed to share the joy of astronomy with the general population - "Bringing Astronomy to the People." On Astronomy Day, thousands of people who have never looked through a telescope will have an opportunity to see first hand what has so many amateur and professional astronomers all excited. Astronomy clubs, science museums, observatories, universities, planetariums, laboratories, libraries, and nature centers host special events and activities to acquaint their population with local astronomical resources and facilities. Many of these events are located at non-astronomical sites; shopping malls, parks, urban centers—truly Bringing Astronomy to the People. It is an astronomical PR event that helps highlight ways the general public can get involved with astronomy - or at least get some of their questions about astronomy answered.



ASTRONOMY DAY
June 19, 2010

The Planetarium celebrates its 60th anniversary this year with a special celebration event on June 19. How hard is it to train to become an astronaut? What is it like to walk in space? How do you exercise in zero gravity? Find out the answers to these questions and more when the Oregon Museum of Science and Industry (OMSI) welcomes NASA astronauts Dottie Metcalf-Lindenburger and Jim Dutton for free special speaking engagements as part of OMSI's 60th anniversary celebration of the Kendall Planetarium. Astronaut Dutton will visit OMSI June 12 with presentations at 2:00 p.m. and 3:30 p.m. in the OMSI planetarium. Astronaut Metcalf-Lindenburger will visit OMSI on June 19 at 11:00 a.m. and 3:00 p.m. in the OMSI auditorium.

All presentations will be comprised of a brief talk by the astronauts followed by questions from visitors. The events are free, but space is limited and reservations are required. To reserve space at one of the presentations, email rsvp@omsi.edu or call 503.797.4677 with your name, contact info, and number of people.

Dutton and Metcalf-Lindenburger were both part of a recent resupply mission to the International Space Station (ISS). Dutton was the pilot on the crew of STS-131 and has logged over 362 hours in space. Metcalf-Lindenburger was a mission specialist and has also logged over 362 hours in space. Dutton is originally from Eugene, Oregon and now lives in Newberg. Prior to joining NASA, Metcalf-Lindenburger was an Earth science and astronomy teacher at Hudson's Bay High School in Vancouver, Washington.

The astronaut visits are part of OMSI's 60th anniversary celebration of the Kendall Planetarium. The free anniversary event will be held June 19, 10:00 a.m. – 4:00 p.m. on the OMSI front plaza. Several local astronomy groups will offer hands-on activities and telescopes for sky viewing. Several historic artifacts, including the original planetarium projector, will be on display beginning June 7.

In addition, OMSI will be hosting a Star Party at Rooster Rock and Stub Stewart State Parks beginning at 9:30 p.m. on June 19. Visitors will have the opportunity to view the stars and other celestial objects up close and personal through telescopes and binoculars. See additional information about the star parties on [page 6](#),

Star Party Scene



Upcoming Star Parties

White River Star Party - June 12

In mid-June, Mars and Saturn will be in the evening sky, and weather permitting, they will put on a beautiful sight! Neptune rises around 11:45 Jupiter and Uranus rise about 1am. Here is your chance to get away to some dark skies to view the stars and other celestial objects through telescopes and binoculars.

Directions to the White River site can be found at the website: <http://www.rosecityastronomers.org/sp/whiteriver.htm>

On the scheduled day it is suggested that interested astronomers check the RCA web site: <http://www.rosecityastronomers.org/index.htm> for possible weather-related cancellations.

On the scheduled day of each OMSI Star Parties, it is suggested that interested visitors call the OMSI Star Parties Hotline, 503 797-4610 #2, or check the OMSI Star Parties web site for possible weather-related cancellations.

<http://www.oms.edu/starparties>

The event starts at sunset and is free with \$5 parking per vehicle. Warm clothing and a flashlight with red light are recommended. Personal telescopes and binoculars are welcome.

To reach Rooster Rock State Park, take I-84 east of the Sandy River at exit 25. The park is located 22 miles east of Portland.

To reach L.L. "Stub" Stewart State Park, take US-26 west of Portland and turn right on OR-47. The park is located 23 miles west of Portland.

OMSI Star Parties - June 19 Summer Solstice Celebration

Summer officially begins with the summer solstice on Monday, June 21 at 4:28 a.m. PDT. On Saturday evening, June 19, 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 at Rooster Rock State Park and L.L. "Stub" Stewart State Park starting at 9:30 p.m., weather permitting. From beginners to experts of all ages, here's your opportunity to view the stars and other celestial objects up close and personal through telescopes and binoculars. Viewing highlights includes Venus, Mars and Saturn, several clusters, and more!

OMSI, Rose City Astronomers, Vancouver Sidewalk Astronomers and Oregon Parks and Recreation invite you to our free Star Parties. The Star Parties provide a great opportunity to meet other people that share your interest in astronomy, and to view the planets, moon, stars, and other celestial sights through telescopes and binoculars of all sizes. From beginners to experts, all ages are invited. This year, all viewing will be held at both Rooster Rock State Park and Stub Stewart State Park on the same night!

Past Star Party Reports

Maupin Star Party - May 14-16, 2010

Observing report, Maupin May 14.
By Steve Stanton

I arrived at the Wapinita Airstrip about 5 PM to overcast skies and occasional showers, but the Clear Sky Chart promised better weather at sunset. I'd guess the population was about 20 people? The ground was nice and firm and the grass was less than a foot tall. All was well.

Come sunset and, yes!, all the clouds had gone away! The evening was warm with very light winds and NO mosquitoes! The seeing was a bit fuzzy, but a fine night nonetheless. At sunset we had a great view of a thin crescent moon over Mt. Hood, with Venus high and bright in the sky. The International Space Station passed overhead at 9:12 PM to give us all a great start to the night.

This was my first evening of recording Messier objects; I intend to finish up next spring. I was armed with my newly-printed Ultimate Messier Log from the RCA

(Continued on page 7)

Star Party Scene



(Continued from page 6)

website: <http://www.rosecityastronomers.org/sp/index.htm>, a printout of what's up from SkyTools Pro software (purchased through the RCA at a fabulous discount) and my books of Telrad charts. SkyTools recommended Cancer and Leo as the first two constellations. Experienced observers may want to skip to the end here, as these are the comments of a rank beginner.

Cancer - M44, around 10 PM. This huge collection of stars completely defeated me the first time I looked for it. That's because I looked for it with my telescope and not binoculars. In my telescope (14.5 inch f/4.3 with 26mm eyepiece), the field is filled with a bunch of stars. That's nice, but where's the star cluster? Like the Pleiades, the Beehive is best seen at very low power. In a binocular, you can frame the cluster in black velvet and it's gorgeous.

Cancer - M67. I had not seen this grouping before and I was impressed. I was reminded of a sparse version of M37, a big and bright cluster of dozens of stars. Well worth the visit.

On to Leo - M105. I have seen what's called the Leo Trio, but I didn't know there are TWO of them. Finding M105 was easy, but I was surprised to find not 1 but 3 galaxies in my 26mm eyepiece! What a treat. As it turns out, M105 is the brightest of these three. A check of my maps showed the two companions right where they belonged, and I learned that I could add NGC 3384 and the fainter NGC3389 to my list of observed objects.

Leo - M95 and M96. A pair of bright galaxies! These two are just contained within the 1.3 degree field of view of my scope with a 26mm eyepiece, and a more detailed view is had by doubling the magnification and viewing each separately. Both are spirals, and I'll return to them another time to view them more thoroughly.

Leo - And, the Leo Trio. Here are the galaxies I had seen before. Containing M66, M65 and an NGC galaxy, this is a fine sight, but I think I like my 'new'

trio around M105 better, having 'discovered' them on my own instead of having them shown to me.

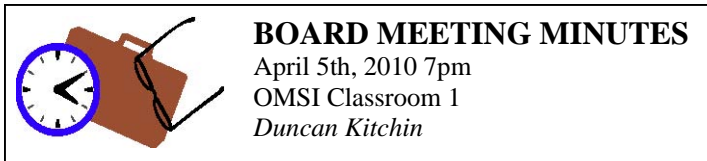
Bonus observation in Leo: While fiddling with my iPod Touch planetarium program, I noticed the double star Al Geiba in Leo. Easy to find in the 'lions mane', this golden pair is separated by 4" and is a lovely sight. Seeing wasn't great, and the pair was very twinkly at 250X.

I took a break and visited Scott Kindt. He had what he called the Stargate asterism in his scope. This is a combination of two triangle-shaped arrangements of stars, one group contained in the other. Very cool looking, and nearby was the next item on my list, M104, the Sombrero Galaxy. So, I headed back down to field to find both of these. I found M104, low in the sky in Virgo. Pretty far down in the muck, but the Sombrero shape was easily seen. However, I failed to find the Stargate on my own. But, now I've recorded it in my log book, so I'll remember to look for it when I visit M104 again.

I'd planned to try to sort my way through the Virgo galaxies, but a cloud appeared in the region. Since it was past midnight and I was starting to feel a little worn, I decided to log a few old friends, and viewed the M13 and M92 globular clusters in Hercules, and M57 in Virgo. M57 was interesting in that I could remember it as the first Messier object I ever found, with my 6" Dob in my backyard. At the time (a couple of years ago), I thought it was tiny and dim and hard to find. Now, with >4x the light gathering power, much darker skies, and a couple of years observing, it looks big, bright and easy to find. I felt I'd made some progress!

Turned in a little after 1 AM. Saturday started cloudy and got cloudier. Around 4 PM someone (I forget who) got the updated CSC forecast on their 3G phone. All white squares, all night. Most folks (including me), packed their kit and headed home. But, one out of two is not bad for May in Oregon, and I'm looking forward to the rest of the season.

Background photo of the Wapanita Airstrip by Scott Kindt



BOARD MEETING MINUTES

April 5th, 2010 7pm
 OMSI Classroom 1
 Duncan Kitchin

Board Members Present

Sameer Ruiwale (President)
 Ken Hose (VP Membership)
 Dawn Willard (VP Community Affairs)
 Larry Godsey (Treasurer, Webmaster, Magazine Sales)
 Duncan Kitchin (Secretary)
 Larry Froberg (Sales Director)
 Diana Fredlund (Media Director)
 Howard Knytych (New Member Advisor)
 Jan Keiski (Library Director, OMSI Liaison)
 Greg Rohde (Telescope Library)
 David Nemo (Observing Site Director)
 Dawn Nilson (International Dark Sky Liaison)
 Scott Kindt (Special Interest Groups Director)

Call to Order

The meeting was called to order at 7:08 by Sameer Ruiwale and, there being 13 of board members present, the quorum requirement of 10 was declared to be met.

Approval of Agenda

Motion to approve the agenda. Moved: Duncan Kitchin Second: Larry Froberg. Passed by unanimous consent.

Approval of Minutes

Moved: Sameer Ruiwale. Second: Duncan Kitchin. Approve minutes from the March 2010 board meeting. Passed by unanimous consent.

Directors' Reports

- Secretary's Report : Duncan Kitchin. Nominal.
- Treasurers Report : Larry Godsey provided balance sheet and profit and loss statement. Costs being held well, on schedule to meet budget. All of the materials are also available on the board website.
- Book Library : Jan Keiski. Jan intends to turn back in some of the budget, because we have had so many book donations and the library contents are in good shape.
- Sister club: GAMA sends condolences for the passing of Larry Deal. Weather is now starting to get very cold, but members are continuing to observe.
- VP Programming : Matt Brewster. Not present.
- VP Observing : Matt Vartanian. Not present.
- VP Community Affairs: Jim Todd cancelled OMSI star party, due to inclement weather. Dawn has been contacted by evergreen Aviation museum in McMinnville asking for help setting up for star parties. Two of the dates fall on the same dates as other events (OSP and Trout Lake). Dawn will assist in recruiting volunteers, but is expecting volunteer numbers to be very low on those two dates. Girl scouts have also requested organization of a star party. Dawn will ask if volunteers can get free admission to the aviation museum if they show up with telescopes.
- Media Director: Diana Fredlund. Diana needs dates for OMSI astronomy day. Shooting for June 19th. This may be a good date to coordinate with think out loud. Trying to get an article out

about 12.5" telescope. Also waiting for speaker information to publicize – ready to get the word out as soon as information is available.

- VP Membership : Ken Hose. 6 new members, 3 renewals, membership now stands at 338 families. At this time there were 315 member families last year and 294 the year before; continuing to trend higher. Dues of \$276 were brought in last month in total. Almost half of that amount was via PayPal.
- New Members : Howard Knytych. New member meeting last month attended by approximately 12-15 people. Talked about popular observing sites, and didn't finish until some time into the general meeting. Greg Rohde also attended and helped with information. Looking for suggestions for May meeting.
- Sales : Larry Froberg. Sales were a little lower last month, but in line with seasonal expectations. Total of \$134 at sales table. Skytools 3 purchase promoted through list and at meeting; 33 copies ordered, 31 were pre-sold, 1 additional order received after the order sent in. In the original order 1 extra standard and 1 extra pro version were ordered for sales table, so the extra standard edition is already sold and the pro edition will still be available at next meeting. Sameer suggests that we should consider 3 or 4 additional copies for the sales table. Larry Froberg & Larry Godsey both concerned about having that amount of value on the books at one time. Suggest alternately waiting for new pre-sales, possibly do the same thing next year. Also a suggestion that we could either set up a SIG or do a presentation at the member meeting. Currently estimate ~80 club members with Skytools. Larry Froberg has a volunteer to do a presentation. Not sure how far in advance we need to schedule, and noted that a presentation could take up a large amount of time given the depth of material. Some discussion on options for most appropriate presentation. Will start discussion thread on the forum.
- Telescope Library : Greg Rohde. Donated Celestron C10 taken in heavy duty metal case. Dawn also has a small aperture refractor donation. Will create discussion on the board forum.
- IDA: Dawn Nilson. Getting follow up calls from Oregon Zoo, offered poster that had been created, put them in touch with Dave Ingram at IDA. Zoo is looking into some things on management and on outreach. Dawn has been fielding many calls on how to manage facilities. Would also like to try to set up one of the speakers for Environmental science at Marylhurst. Also a possibility for think out loud program. Regarding the Portland firefighters memorial project, some discussion regarding whether we have a response. Many positive impacts from symposium: one of the attendees reports talking to a state senator in California afterwards and getting positive responses.
- Magazines : Larry Godsey. Nominal
- Webmaster : Larry Godsey. Nominal
- Site Committee : David Nemo. Nominal
- Youth Director : Jeannie London. Not present
- SIGs : Scott Kindt. Nominal
- Alcor : Dale Fenske. Not present

Old Business

Gazette binder of past issues will be available in the library at the end of April with a dedication to Larry Deal.

Remaining old business items were tabled to the next months meeting due to time constraints.

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(Continued from page 8)

New Business

- Larry Deal, newsletter editor, passed away last Sunday. Memorial service is this Sunday at 1pm at Findley Hills. Sameer Ruiwale will be attending, believe Margaret will also attend. Sameer will also supply text for a memorial notice for the website, to be provided to Larry Godsey. Discussion of memorial contribution to the Audubon society. Sameer will organize such a donation from the club. Motion to donate \$50 to Audubon society, moved Sameer, second Ken Hose. Motion passes by unanimous consent. Sameer will also make an announcement at the meeting.
Larry Godsey has stepped in to finish the newsletter for this month. Need to find a replacement editor. Sameer will put out a request on the forum. Need to think about the expertise required. Requires some experience of some kind of publishing package. Will be difficult to find a replacement. Large amount of work – about 10 – 12 hours per month to create. Larry Godsey will volunteer to cover for a couple of months, but we really need a permanent replacement soon. May also want to have a discussion about submissions and formatting for inclusion in the newsletter.
- OMSI : insurance issue. Damage caused to podium last month due to water spillage on electronic panel. Replacement cost of \$700. Our contract with OMSI makes us liable for damages. OMSI is investigating covering this, but Sameer suggests that we should cover this as our responsibility. Will also make this policy in future to not have water on the podium; we will set up a side table. Should we pay the cost or try to recover through insurance? Larry Godsey has a call into the insurance, waiting for a call back. Expect that the deductible will be high enough that a claim would not be worth it. Shouldn't change the rates, since this is an astronomical league group plan, but Larry needs to talk to the adjuster to find out what the deal is. Motion: authorize Larry G and Sameer to decide how to proceed appropriately. Moved Sameer Ruiwale Second : Scott Kindt. Motion passed by unanimous consent.
- Rooster Rock/Stub Stewart star parties. Need to consider a policy for what happens in inclement conditions, when participants will still show up even if volunteers are not available.
- Future program idea : Hubble service mission show on Omnimax. Jim Todd suggested this as a program for the RCA. Will not be free, but Jim is prepared to offer a discount. Dome has a capacity of 300. Regular cost is \$6, subsidized. We can't charge admission for the general meeting; required to be free and open to the public. Club could fund the subsidized price; will not be substantially more expensive than a regular speaker. Question as to what do we do if more than 300 people show up? Sameer will write back to Jim, will determine a date that works to set this up. Already budgeted for under speaker costs.
- LED Name badges : Larry Froberg. Sameer has found a source that sells them for \$6 in bulk, can sell for \$8 on the product sale table. Will cost \$6.08 for 30 badges; outlay of \$204. Larry Froberg will look into this.
- Kah-Nee-Ta. Sameer wrote to Matt Brewster to get some information. Before Kah-Nee-Ta, we were one room away from meeting our room commitment. Any outstanding liability to be verified, but should be limited. Going forwards, we need to determine how we are doing relative to meeting the room block commitments and whether the club wants to carry the liability.

Need to discuss scheduling particularly the Hancock conflict with Maupin in the same month. For camp Hancock, registrations are way down this time, and we are very close to the lower limit for meeting our commitment. Now being charged \$40 per person per night irrespective of whether visitors are camping or using bunkhouses. Still a very good deal comparatively, but need to be careful going forwards about meeting the minimum of \$1600 (20 people for each of two nights). Now have an upper limit of 40 registrations, which means that the window is 20 to 40. May have some unpaid for liability this time around (possibly approximately \$200). Larry asks for prior approval for committing to October camp Hancock, on the understanding that there is a liability that we are signing up for. Motion to approve the contract for Camp Hancock in October, understanding the liability that the club is taking on if registrations are below the minimum required to cover \$1600 (20 registrations for each of 2 nights). Moved Duncan Kitchin, second Dawn Willard : Approved by unanimous consent.

- Astronomy day : Sameer is trying to change the date for the OMSI astronomy day to June 19th. Official date is 24th April, but this date rarely works because of the weather. Sameer wants to see if we can set something up in Pioneer place this year on June 19th also. We have a large amount of materials to use. Dawn Nilson has light pollution posters which would be good to use. Sameer will coordinate offline with Dawn, Dawn and Diana.
- Larry Godsey provided a proposed 2010-2011 budget. Includes prior years data from 2004-2005 through 2008-2009, with an average actual total expenditures for those years, current and budget details for this year and proposed budget for next year. We have two months to discuss, expect to present for a vote in June. Any requests for budget changes should be sent to Larry Godsey in the intervening interval.
- Backup of information needed for all critical information. Much information is already available on the website, currently available only to Larry Godsey, the webmaster assistant and Sameer. This includes backups of the membership documents. All of the financial data is backed up there every month. We should have copies of the publisher files for the newsletter. Diana has a template for news releases.
- Need to consider contingency plans for absences of key board members. Some of our key programs may need some additional help to ensure that we are meeting all of the necessary requirements.

Adjournment

There being no further business, the meeting was adjourned at 9pm.

JUNE 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4 Downtowners Luncheon Kell's Noon	5 Starlight Parade 8:30pm
6	7 Board Meeting OMSI 7pm-Classroom-1	8	9	10	11	12 White River Canyon Star Party
13	14 Astro Imaging SIG Beaverton Library 7pm	15	16	17 New Moon	18 Maupin Star Party	19 Astronomy Day OMSI Star Party Rooster Rock and Stub Stewart
20	21 General Meeting OMSI Auditorium 7:30pm	22	23 Cosmology SIG Linus Pauling Cntr 7pm	24	25	26 Telescope Workshop 10am - 3pm Science SIG 3pm
27	28	29	30	31		

July 2010

July 9	Friday	Downtowner's Luncheon	Kell's	Noon
July 9-11	Friday-Sunday	Trout Lake Star Party	Flat-Top Sno Park near Trout Lake WA	
July 12	Monday	Board Meeting	OMSI Parker Room	7pm
July 12	Monday	Astro-Imaging SIG	Beaverton Public Library	7pm
July 15-18	Thurs-Sun	Star Party	Mt. Bachelor (Sunriver Nature Center)	
July 17	Saturday	OMSI Star Party	Stub Stewart & Rooster Rock State Parks	7pm
July 19	Monday	General Meeting	OMSI Auditorium	7:30pm
July 21	Wednesday	Cosmology SIG	Linus Pauling Center	7pm
July 24	Saturday	Telescope Workshop	Swan Island	10am-3pm
July 24	Saturday	Science SIG	Swan Island	3pm

The RCA General Meeting falls on the third Monday of each month. We usually meet in the Auditorium at OMSI, next to the Murdock Planetarium. Occasionally the meeting is held in Murdock Planetarium. Check the RCA web site for the latest information.

<http://www.rosecityastronomers.org>

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