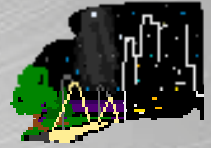


North Central Florida's
Amateur Astronomy Club
29°39' North, 82°21' West

March/ April
Issue 103.1/104.1



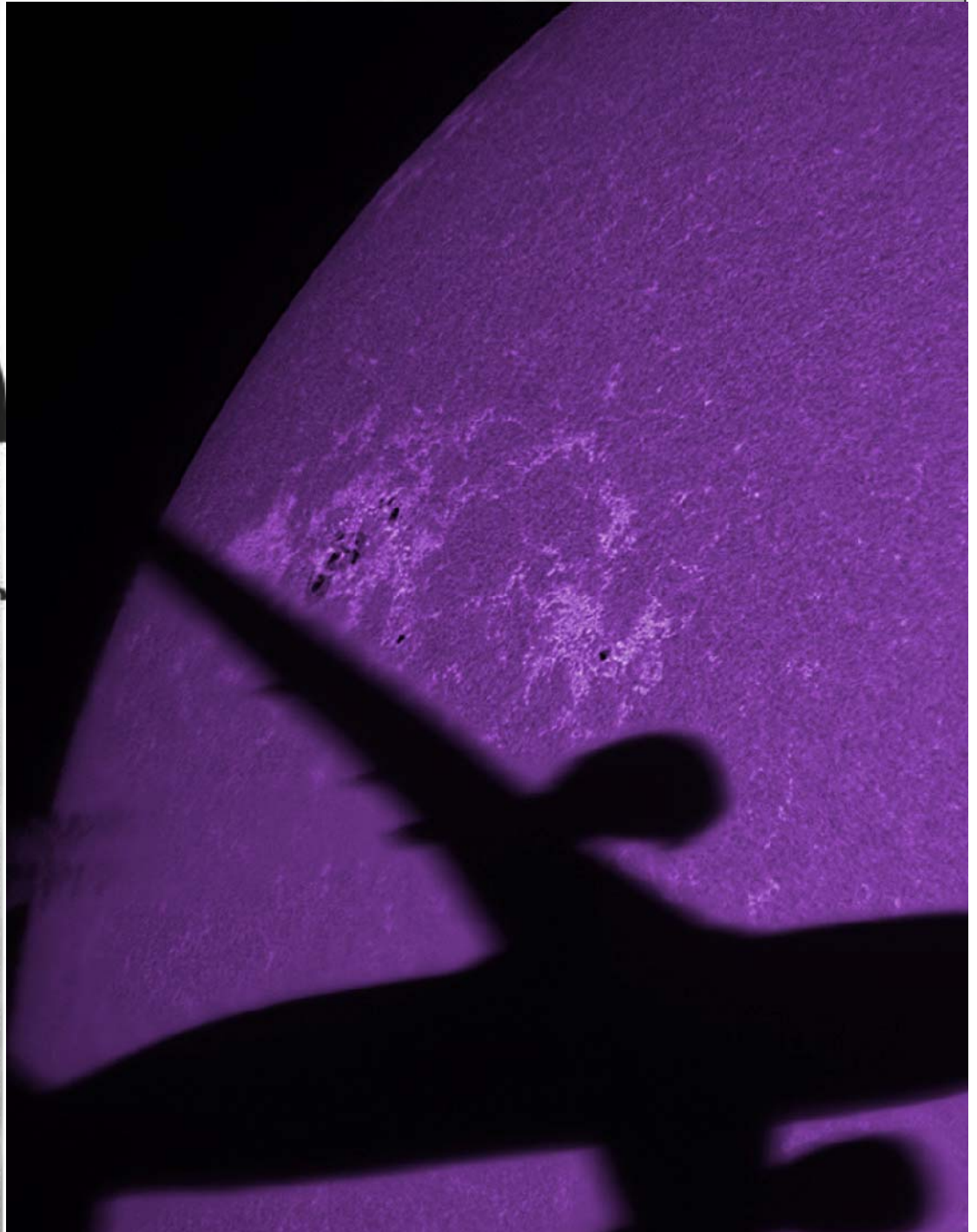
Member
Astronomical
League



Member
International
Dark-Sky Association

FirstLight

Newsletter of the Alachua Astronomy Club



AIRPLANE AND SUNSPOT: Howard Eskildsen was monitoring the active region around sunspot 1164 on Feb. 27th when an airplane flew by: "Until now, I could only have dreamed of such a composition," Howard says. This image attracted nationwide attention and was posted on spaceweather.com as well as the National Geographic website. Congrats Howard!



I hope everyone is enjoying the warmer weather and getting outside to look at the heavens this Spring! We have had some great Star Parties these past few weeks and more are in store for the future. Thank you Clint & Paula McLain and Al Boning for the superb slate of Star Parties for this coming year.

The NSP is being used on a regular basis and people of all ages have been enjoying the darker skies that Newberry has to offer. Our Eagle Scout, John Paul Organ, is busy working up the final details for the bench seating around the observing pads to complete our original layout.

We have a few more new members this year as our ranks continue to grow.

It's nice to see so many new young faces at our meetings. Let's keep up the good work on recruiting new members! Our middle school Science Fair recipient of the George Russell prize, Cammeron Smith, Jr., is a new member of our club. I know that you all will make him feel welcome! We are working on ideas to "brand" our club with bumper stickers and advertisements as well as co-sponsoring events with the UF Astronomy department. We also continue to assist with the annual Santa Fe College lunar observing night as well.

Several of our members have published some great photographs on various astronomical web sites. Dr. Howard Eskildsen will have one of his cool photos of the sun with a commercial jet transiting across the disk appear on a National Geographic site. He also made the news with another LPOD photo called the "Backyard Moon". Our editor, Arne Reykowski, has been taking really nice astronomy pictures out at the NSP for his presentation at the March meeting.

We are right in the middle of the Web-upgrade effort. I appreciate everyone's patience with this slow process. In the end, our new web site should be easier to maintain and allow the many sub-groups of the club like LOG, ATM, Outreach, Schools, Programs and Star Parties to input changes on a common calendar. Every effort is being made to keep all of our old site's pages so that they can eventually be migrated over to our upgraded site.

Many of our members went down to the annual Winter Star Party in the Keys this past month. That event is sponsored by the Southern Cross Astronomical Society and it draws about 1,000 amateur astronomers as well as many telescope vendors.

Thomas Dobbins' participation at the last ATM meeting was really terrific. Special thanks to Bob O'Connell and Chuck Broward for a super ATM/LOG. We are grateful for Tom's time and all of the wonderful stories he shared with us. The telescopes he brought to the meeting were fun to see and look through.

Andy Howell has lined up a great list of speakers for our general meetings for this year and Lisa Eager is doing a really fantastic job producing news releases for our public events. Mike Toomey is doing a fine job with our Public Outreach and Tandy Carter continues to produce fun School Events with our public schools in the area.

Tim Malles gave a very cool presentation at our February meeting on his use of art and the Hubble Space Telescope photos. His "Keyhole Project" showed us all what incredible talent and imagination Tim has!

We have also been revising and updating our club's Bylaws. Special thanks go to Al Boning and his committee for ironing out all of the wrinkles. These changes will soon be presented to the membership for consideration.

As you can clearly see from above, we are fortunate to have a lot of great volunteers working to make our club shine like the stars we so much enjoy observing. Thank you all for your efforts, and I apologize if I forgot to mention anyone!

Bob

Here is a composite photo showing this month's moon at first quarter and at last quarter. It shows how the moon looks from side to side in a process called libration.

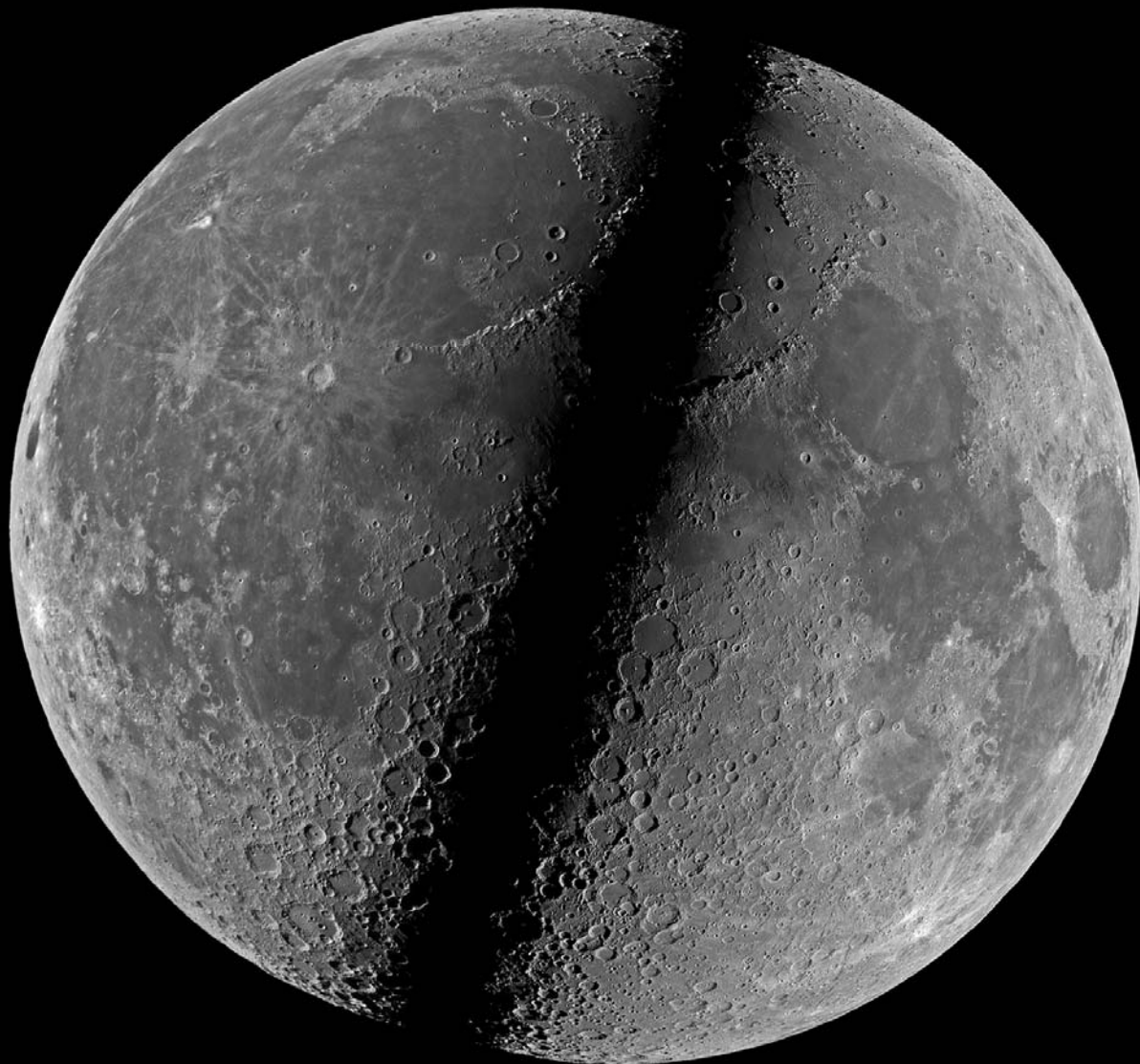
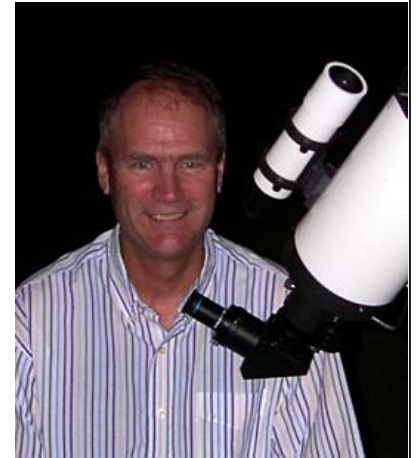
Look at the center of the image; there are many craters that appear on both sides of the image. If the center of the moon always stayed at the same place this would never happen, but the moon turns its face slightly from side to side to make this possible.

Technical Details

First Quarter Moon 2011/03/13, 00:54 UT, Orion ED 80, 600 mm f.l., 2X Barlow, DMK 41AU02.AS, No Filters. Libration: Latitude $-00^{\circ} 36'$, Longitude $-08^{\circ} 17'$.

Last Quarter Moon 2011/03/26, 10:17 UT, Orion ED 80, 600 mm f.l., 2X Barlow, DMK 41AU02.AS, No Filters. Libration: Latitude $-00^{\circ} 04'$, Longitude $+07^{\circ} 37'$

(This image was selected as LPOD image for April 2, 2011—the editor)



SPECIAL EVENTS - 2011

See the AAC website for details

<u>Event</u>	<u>Date</u>	<u>Location</u> Check the website for directions	<u>Start/End Time</u>
Oak Hammock Star Party	Friday, April 8	Oak Hammock 5000 SW 25th Blvd Gainesville, FL	6:30pm - 9:00pm
Kanapaha Botanical Gardens Moonlight Walk	Saturday, May 14	Kanapaha Botanical Gardens 4625 SW 63rd Boulevard	7:00pm-11:00pm

STAR PARTY / OBSERVATION SCHEDULE: Upcoming Events - 2011

<u>Event</u>	<u>Date</u>	<u>Location</u>	<u>Start/End Time</u>
AAC Start Party	Saturday, April 2	Hickory Ranch	Sunset approx 7:38pm ET
AAC Star Party	Saturday, April 30	Newberry Star Park	Sunset approx 7:51pm ET
AAC Star Party	Saturday, May 7	Newberry Star Park	Sunset approx 7:55pm ET



It's Raining on Titan (Credit David Hardy, FIAAA, see also APOD 2011 April 1 and <http://iaaa.org>)

Alachua Astronomy Club, Inc.
2011 Officers

President: Bob Lightner
Phone: 352-373-3055
Email: president@floridastars.org

Vice-President: Marlene Grabbe
Phone: 352-732-2767
Email: vicepresident@floridastars.org

Treasurer: Ivo Rabell
Phone: (352) 665-9381
Email: treasurer@floridastars.org

Secretary: Paula McLain
Email: sec@floridastars.org

Board of Directors
Howard Eskildsen
Al Boning
Bill Helms
Pamela Mydock

Chairs and Committees:
Star Parties: Paula & Clint McLain,
Coordinators
Al Boning - Assist. Coordinator
Email: starparty@floridastars.org

Programs/Promotions: Andy Howell
Phone: (352) 505-4852
Email: programs@floridastars.org

Outreach Coordinator: Mike Toomey

School Liaison & Outreach:
Tandy Carter
Email: outreach@floridastars.org

ATM SIG: Chuck Broward
Phone: 352-373-7527
Email: ATM@floridastars.org

Astronomical League Correspondent:
Charles S. Broward
Phone: 352-373-7527

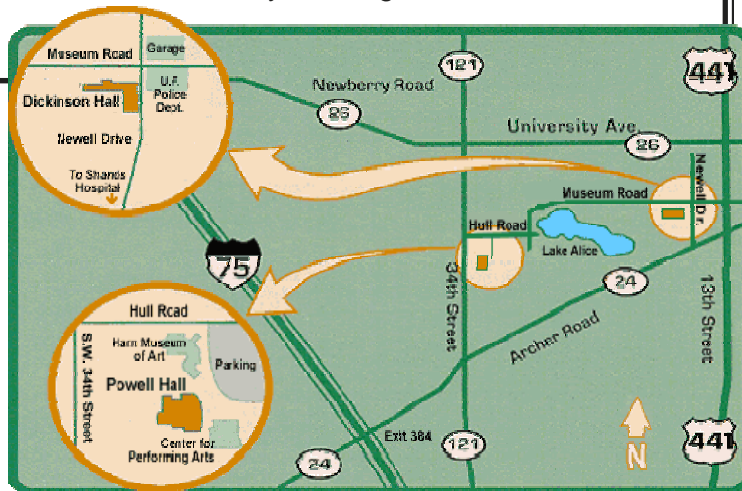
Telescope Custodian: vacant
Email: telescopes@floridastars.org

Lunar Observing/SIG: Bob O'Connell
Phone: 352-475-1586
Email: lunar@floridastars.org

Webmasters: Mike Toomey
Email: webmaster@floridastars.org

FirstLight Editor: Arne Reykowski
Phone: 352-562-3387
Email: firstlight@floridastars.org

AAC Meeting Location - AAC regular meetings are held on the second Tuesday of each month at **7:00 p.m.** at the Florida Museum of Natural History, **Powell Hall**, in the Lucille T. Maloney Classroom, on UF campus, unless otherwise announced. All meetings are free and open to the public. Join us for some great discussions and stargazing afterwards. Please visit our website for more information (floridastars.org). There is no monthly meeting in December.



Submitting Articles to FirstLight

The AAC encourages readers to submit articles and letters for inclusion in *FirstLight*. The AAC reserves the right to review and edit all articles and letters before publication. Send all materials directly to the *FirstLight* Editor.

Materials must reach the *FirstLight* Editor at least 30 days prior to the publication date.

Submission of articles are accepted **by e-mail or on a CD**. Submit as either a plain text or Microsoft Word file. (In addition, you can also send a copy as a pdf file, but you also need to send your text or Word file too.) Send pictures, figures or diagrams as separate gif or jpg file.

Mailing Address for Hard Copies or CDs

Note: Since our mailbox is *not* checked daily, mail materials will be before the deadline date. (Hence, submission by e-mail is much preferred!)

c/o FirstLight Editor
The Alachua Astronomy Club, Inc.
P.O. Box 141591
Gainesville, FL 32614-1591 USA

By E-Mail: Send e-mail with your attached files to
FirstLight@floridastars.org.

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Review February Club Meeting



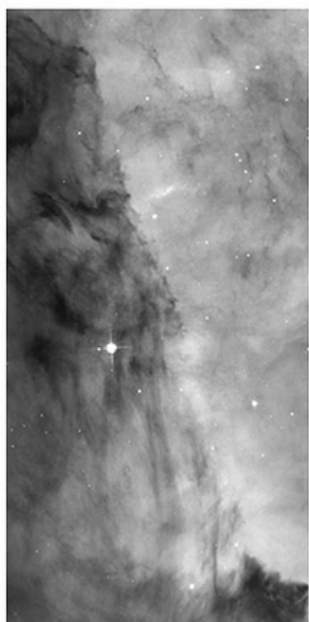
Title: *The Keyhole Project: Voyage of Discovery*

Space artist and amateur astronomer Tim Malles sees images of faces, figures and creatures hidden inside Hubble Space Telescope photographs of the Keyhole and Carina Nebulae. He has found so many recognizable features that an ongoing art project, The Keyhole Project, has been created around them. "Its like finding faces in the clouds, only space clouds are much larger and more complex," remarks the artist. Malles turns his trained eyes to closely examining the images of stars, swirling gas and dust and creates paintings that reveal his unique vision and interpretation of what he sees there. "It does feel like I'm peering through a keyhole, perhaps finding a hidden message or unlocking a secret. There seem to be too many recognizable features in one area. Some are beautiful and others are haunting. It's heavenly and hellish all at once and an awesome surprise to find faces in random cosmic violence."

From the Constellations to the man in the Moon, the Zodiac to the face on Mars, it has always been man's conceit to place himself among the stars. The Keyhole Project targets man's lofty and unending attempt to anthropomorphize the heavens. From straining to see through a narrow opening to unlocking and opening the door wide, the project explores our primitive and psychological need to make a human connection to the abstract and particularly with what we do not understand. Not only do we instinctively attempt to find a human context there, we search for the highest possible meanings - religious and spiritual themes. "Like peering into a crystal ball or cosmic reflecting pool, you will always see something of yourself reflected back to you." The Keyhole Project crosses the intersection of science and religion, inner and outer spaces, and offers the connection through visionary art.

More to read at <http://www.thekeyholeproject.blogspot.com/>

Exodus 3:2 There the angel of the Lord appeared to him in flames of fire from within a bush.



Carina Nebula

NASA STScI



Moses

Copyright 2010 Tim Malles

Song to the tune of, "Deep in the Heart of Texas."

**The stars at night,
are big and bright,
from the NSP,
observing pads.**

**With the azimuth south,
and the altitude high,
we observe,
the sky.**

**The AAC,
with camaraderie,
joins us under,
dark skies.**

**Every star party,
is a jubilee,
from the NSP,
observing pads.**

The hobby of Astronomy has led me places I would never have imagined. This might be the strangest of them all.

Al



Not Seven and probably not even Sisters:
Sandhill cranes flying overhead capture the last rays of sunlight.



Before darkness falls, AAC volunteers enjoy a beautiful sunset at Hickory Ranch.



Our first guests arrive for a look at the King of Planets - Jupiter.



Tandy Carter sets up his equipment for the night's outreach activities.

Even though our outreach at Dudley Farm was not heavily attended, we did have a very enthusiastic crowd of visitors which made the outreach very enjoyable for everyone. Most of us were still showing the night sky a little after 10:00pm.

The view of night sky turned out beautiful even though we're only a stones throw from Gainesville's bright lights.

Listed below are the volunteers at last night's outreach. I want to thank each and every-one of you for a job well done:

Lisa Eager, Paula and Clint McClain, Rich Russin, Tandy Carter, Byron Bergert, Neil White, H.A. and Marlene Grabbe, Chuck Broward, Mike Toomey, James Quinlan, Paul Griffin, Rich Bourdrot, Don Loftus.

I know many of you volunteers took pictures. If you can attach and e-mail them to listserve or ATM; it would be greatly appreciated.



H.A. Grabbe



Tandy Carter



Lisa Eager Clint McClain and Chuck Broward



Don Loftus entertaining two guests



Paula McClain with a guest

Tom Dobbins, Corresponding Editor for Sky & Telescope Magazine and noted lunar observer, often with an unlit stogie stuck between his teeth, was informative and entertaining. Interspersed with astronomical nuggets were Russian anecdotes. It seems he has many contacts at the TAL factory and as a result he got the TAL Klevtsov at a substantial discount. I think it was me that started off the evening and got Tom going when I mentioned that I had gone online, looked at the Klevtsov-Cassegrain optical design and asked him about it. After that he didn't stop talking for a long time and no one wanted him to. I was both pleased and surprised that I got to talk with him as much as I did. But then we had something in common since his Tal Klevtsov shares the same mount as the club's TAL 2 newt with which I'd become quite familiar during the six months I was its custodian. As the evening wound down, two transparent cloud layers, moving in opposing directions, moved in.

Thank you to Tom Dobbins.

Thank you Chuck for hosting this very enjoyable event.

And thank you to whomever (Bob O'Connell?) is responsible for getting Tom Dobbins to show up.



Holding Court - Tom Dobbins holds court with Bob O'Connell, Howard Cohen, Chuck Broward, Clint McLain. Tandy Carter is obscured by the TAL. On the left is a Vixen VMC200L, 200mm, f9.75, also a Klevtsov and on the right is the 200 mm TAL Klevtsov on an Oberwerk tripod. I remember Tom saying that the mount and tripod under the Vixen could be had for something less than \$200 but I don't remember the name of the vendor.

Declination Adjust - Tom Dobbins adjusts the declination of his TAL. In spite of the seeing we had great views of the Moon. Leave it to Bob O'Connell to promptly train the scope on Aristarchus. Clint McLain is caught at an awkward moment.



Spider Vanes - The curved vanes of the TAL Klevtsov can be plainly seen, look carefully and you can see the meniscus lens and a baffle of the OTA.



Font of Info -Tom Dobbins is a font of astro info. Howard Cohen, Bob O'Connell, Tom Dobbins, Fred Heinrich and Chuck Broward. That's Tom's TAL Klevtsov in the foreground.

The Gang - Tom Dobbins was so interesting to listen to that what appears to be a 100 mm f 6 refractor on Chuck's mount was totally ignored. Tandy Carter, Bob Lightner, Chuck Broward, Fred Heinrich, (Clint McLain), Tom Dobbins, (Howard Cohen), and Bob O'Connell. Is that Paula McLain behind Bob Lightner ?



Tom and Howard - Howard Cohen looks on as Tom Dobbins begins the setup of his Vixen VM200L. Bob O'Connell is in the background and Fred Heinrich is on the right.

He led a life of passionate dedication to astronomy and the mission of our department

(~ Rafael Guzman, Chair for Astronomy, University of Florida)

Howard L. Cohen
March 2011

JPO

was his signature but these few letters fail to represent his true legacy. Dr. Oliver, an emeritus professor of astronomy at the University of Florida in Gainesville, passed away Thursday, February 10, 2011 after a courageous and long battle with renal cancer. He leaves behind memories of a life and career to envy. During his forty years of service to his profession and department, this unique astronomer distinguished himself as a research scientist and instrumentalist, creative software designer, gifted teacher and speaker, a vocal advocate of public outreach, and friend to all who knew him (Fig. 1).

I first met Dr. Oliver in the fall of 1970 when he was interviewing for a position in the University of Florida's astronomy program (then a combined department with physics). Immediately I felt this young astronomer could bring the department unique skills and knowledge. I was correct. We rapidly bonded and remained good friends and colleagues during his long and dedicated service to his community, university and department.

Born in New Rochelle, New York during late fall 1939 just a few months before the start of World War II, John's birth was a gift in a year that many would like to forget. Twenty-three years later he would graduate with a bachelor of science degree in physics from Rensselaer Polytechnic Institute in Troy, oldest technological university in the English-speaking world. John then moved west to California where he would begin preparing for a long and distinguished career in astronomy. In California, Oliver had the good fortune to work with several eminent astronomers. This included Albert E. Whifford, Director of Lick Observatory, and known for his work on interstellar reddening, and Merle F. Walker, an expert in photometry, who also helped establish Pluto's rotation period. His close relation with Lawrence H. Aller, one the 20th century's memorable astronomers, known for ability to combine observation, theory and education, and for his care and kindness, helped bind Oliver and astronomy together for life.

During this period he served as a research assistant at the renown Lick Observatory, joined the technical staff of the Aerospace Corporation, became an acting director of the Pine Mountain Observatory (University of Oregon), and a research assistant at the University of California. Eventually, the University of California in Los Angeles would award him both a master's degree (1968) and Ph.D. (1974) in astronomy.



Fig. 1: John Parker Oliver. Dr. Oliver was a talented astronomer and professor devoted to his department for forty years.

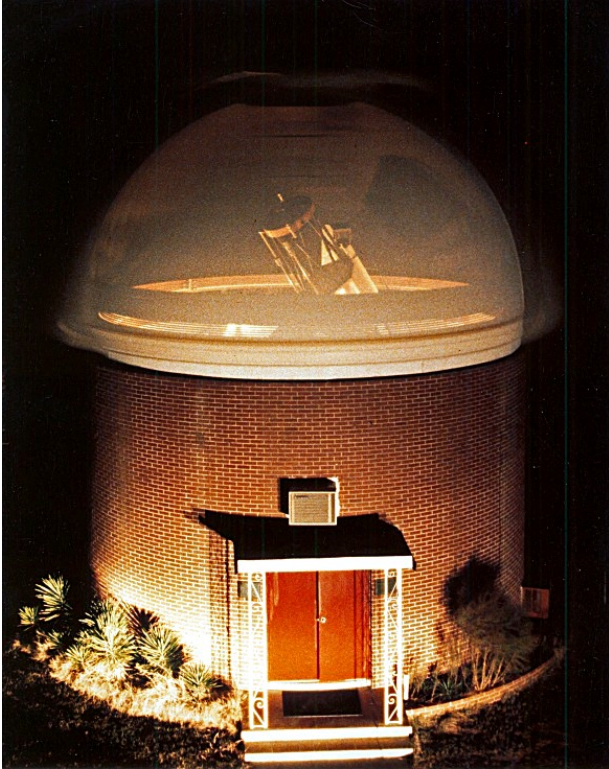


Fig. 2: Rosemary Hill Observatory. This “Xray view” shows the 30-in. telescope within the building’s dome. See text for how photo was made. (Cred. H.L. Cohen, J.P. Oliver and A.G. Smith.)

The brilliant and eminent astronomer, Daniel M. Popper, supervised Dr. Oliver’s doctoral dissertation, “An Investigation of Eclipsing Binary Stars Exhibiting Calcium II Emission.” This research suggested that many systems Dr. Oliver investigated belonged to a new category of variable eclipsing binary stars. Using Oliver’s suggestion for this class, these stars became known as RS Cvn variables.

Unique among astronomers, Popper himself was fussy about errors of measurement—uncompromising about accurate, conscientious work and intolerant about careless research. Dr. Oliver was the only student to receive a Ph.D. under this authoritative and honest astronomer, a testament to Dr. Oliver’s own talents.

As a University of Florida faculty member and astronomer, Dr. Oliver occupied many roles over the years. I cannot remember all but a list would include service as associate chair, Director of Rosemary Hill Observatory, both undergraduate and graduate coordinators, and coordinator of the astronomy seminar series.

During this time Dr. Oliver played other major roles in department functions. He made significant contributions to both the operation and instrumentation of telescopes at Rosemary Hill Observatory near Bronson, Florida. The establishment of the 18-inch Ritchey-Crétien telescope as a working telescope was a major accomplishment for which he wrote its operational software. For example, this telescope made possible observations of the Beta Cephei variable, BW Vulpeculae, as part of a coordinated international campaign of photoelectric photometry by Dr. Oliver, myself and our students during 1982. (A Beta Cephei or Beta Canis Majoris variable is a type of variable star with low amplitude brightness variations due to short period pulsations of the star’s surface.)

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Dr. Oliver also wrote software for high speed occultation observations of stars by the Moon or asteroids. I recall many nights spent with him at the 30-inch reflector at Rosemary Hill doing such work. One such experience is memorable because of its aftermath. We had prepared the telescope and its instruments to observe stellar occultations by the Moon and left the observatory for a quick meal at a local restaurant in nearby Bronson. This small, one-light North Florida town had few eateries. In fact, at least back then, I think only one. Our observing was successful that evening but the next day food poisoning took its toll. Fortunately, its effects were felt after our observations were completed! Subsequently, we always brought our own supper to the observatory.

We also collaborated to produce an unusual photograph of the 30-inch telescope and its observatory building that most people never see. An aerial lift bucket had been left near the observatory for maintenance work on the observatory dome. One evening, I used the lift bucket to make a time lapse photograph of the building while John rotated the dome slit.

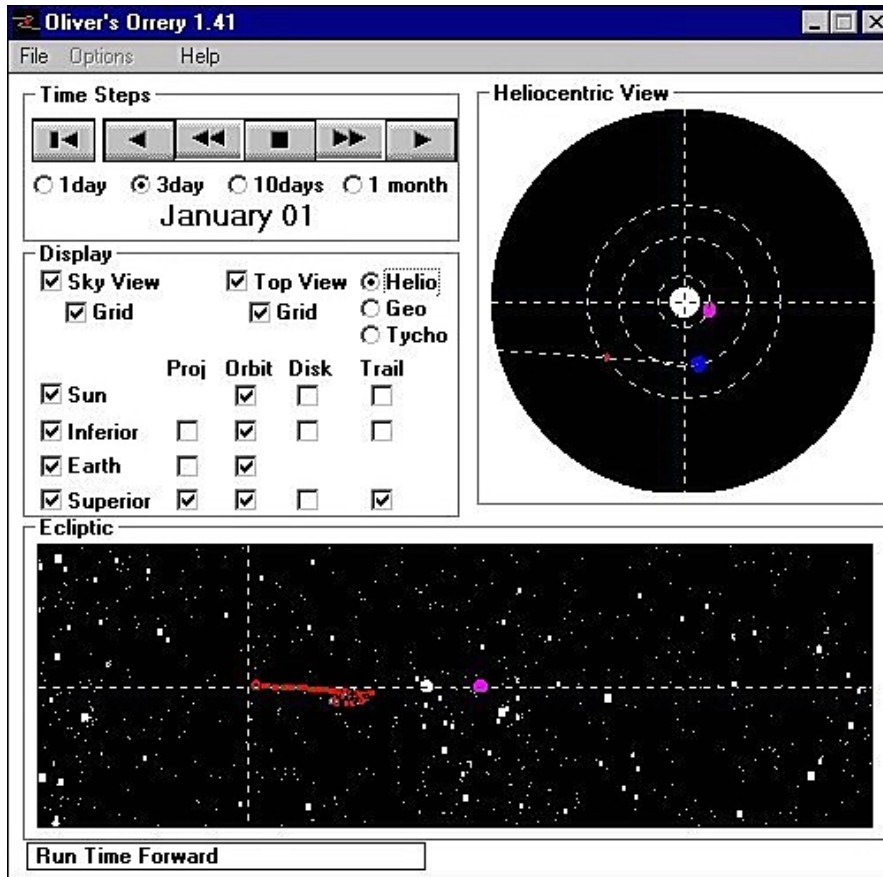


Fig. 3. Oliver's Orrery. This efficient and simple to use program written by Dr. Oliver is unique in its ability to relate planetary motions in various Solar System models to their apparent motions on the sky. (Cred. J.P. Oliver.)

the J. Wayne Reitz Union and west of Aerospace Engineering. Have you ever visited this facility and noticed the German equatorial head of the historic 8-inch Clark telescope's mount as it is strangely rotated ninety degrees about the telescope pier? When moved to the new site (about 1971), the walls were rebuilt orienting the long axis of the building North-South. (The roof and water hydraulic mechanism that used to open the roof was moved to the new site and placed on the new walls.)

Forgetting that the building orientation had been rotated by 90 degrees, the pier for the 8-inch telescope was installed still pointing toward the short axis of the building, which originally had a North-South orientation. This of course, now made the polar axis point in an East-West direction rather than North-South! Rather than demolish the concrete base on which the metal pier stood, Professor Oliver became creative and decided to cut the metal pier below the equatorial head. He then rotated the equatorial head 90 degrees and bolted the head onto the lower section of the pier, an ingenious fix to this problem!

Next time you visit this observatory, look carefully at the pier for the 8-inch Clark refractor and notice that the equatorial head is rotated 90 degrees with respect to the rest of the pier. This is both a memorial to Dr. Oliver and testament of his creative skills.

Since the dome lights were on, the moving slit acted as a shutter to produce a view of the entire interior and telescope. Then we made a second exposure of the observatory's exterior illuminated by our car's headlights. Dr. Alex G. Smith, an expert in astronomical photography, combined our images in the department's dark-room to produce an interesting "X-ray view" of the 30-inch observatory building and its telescope (Fig. 2).

The UF Campus Teaching Observatory was another of John's pet projects. Dr. Oliver was responsible for its operation during the 1970s including its relocation to its present site.

Construction of a new campus telephone Centrex exchange required that the astronomy department move the observatory from its location behind the campus police station to an area south of



Fig. 4. LDEF. JPO was a co-investigator and member of the science team that analyzed data collected by the Long Duration Exposure Facility spacecraft. Launched in 1984, LDEF remained in orbit for almost 6 years. Precise times of impacts were recorded for the first 346 days in orbit. (Cred. NASA Langley Research Center.)

programs that both of us thought would help students understand difficult subjects. A favorite of mine is “Oliver’s Orrery” that makes clear how different models of the solar system operate to produce the planetary motions that we observe on the sky (Fig. 3). Subsequently, I often used his novel orrery in my own classes. This program probably still has no equal.

Professor Oliver’s skills and knowledge of computers also enabled him to design and build data acquisition instruments and allowed him to produce volumes of control software. As a result, he taught several of the department’s most important advanced courses for observational work. His long running and popular course about techniques of observational astronomy covered an enormous range of topics including star catalogs, planning observations, telescope basics and optics, detectors, statistics, photometry, spectroscopy and more.

Outside the classroom, Dr. Oliver was equally productive. Research interests involved 3-mm radio astronomy, photometry of eclipsing binary systems, and the design of astronomical instruments and computer controlled telescopes.

Over the years Professor Oliver taught thousands of students both basic astronomy and advanced topics in undergraduate and graduate courses. Since binary stars were common research interests, we collaborated on teaching a sequence of graduate courses on these significant stars.

More important, we were always looking for new techniques to improve teaching. Therefore, Professor Oliver was among the first to adopt new technologies in the classroom including the first in the astronomy department to use PowerPoint in his classes. He also received grants from the UF Center for Information Technology for this purpose. Emulating his techniques, I quickly adopted PowerPoint in my own teaching.

Ultimately this enabled me to produce elaborate and sophisticated presentations. My own teaching benefitted enormously from these new techniques. Thank you John.

John’s computer skills with visual basic also allowed him to design several simple but important programs



Fig. 5. SPOT. Dr. Oliver traveled to the South Pole four times as co-investigator in the South Pole Optical Telescope Project. (Cred.. J.P. Oliver.)

He was the first visiting astronomer of the Copernicus Institute, Warsaw Poland where he helped participate in its establishment. He also had a joint appointment as Senior Research Scientist at the UF's Institute for Space Science and Technology from 1988 to 1994.

During this time he was a co-investigator on the Long Duration Exposure Facility/Interplanetary Dust Experiment and the Clementine Orbital Meteoroid and Debris Counter (Fig. 4). These experiments obtained data on the impact flux of natural micrometeoroids and provided information on the population of small man-made debris in near Earth space. In fact, he was twice a NASA Faculty Research Fellow at the Jet Propulsion Laboratory where he developed models used to predict meteoroid impacts on space probes. He was always excited about discovering orbital debris clouds around the Earth.

Like many professions astronomy has its share of specialist societies. The International Astronomical Union and the American Astronomical Society are among the most prestigious in astronomy. Dr. Oliver was a member of both. He was also elected to the Sigma Xi scientific honorary society. He published thirty refereed papers including eighteen papers on astronomical instruments and telescopes, was the editor or author of five books, and author of chapters on astronomical instrumentation in eight books.

Dr. Oliver and I also collaborated on a few unusual meeting presentations and papers for popular astronomy magazines. His knack for the unusual combined with my own interests were a good match. For example, the subject of terrestrial impacts by comets and asteroids is now popular. However, in the late 1970s, we speculated about stellar encounters with our Solar System. Using star catalogs and some math, we produced a unique presentation and paper, "Look Who's Moving Into Our Neighborhood: Nearby Stellar Motions on a Geologic Time Scale" (*Astronomy*, 1979 April). In another example, plagued by common misconceptions about star colors held by people including astronomers, we researched color perception and stellar radiation. This resulted in an unusual meeting presentation and paper, "Star Colors—An Astronomical Myth?" (*Sky and Telescope*, 1981 February).

After my own retirement from teaching several years ago, John and I would periodically meet for lunch. We not only reminisced but also often commented that young, astronomers today no longer seem to have the broad knowledge base of astronomy that our teachers required us to have. In fact, to Dr. Oliver's credit, I know of few astronomers who can converse as well as he could on the wide spectrum of information that astronomy covers today.



Fig. 6. Armagh Celestial Sphere. This two-meter diameter polished granite star ball was created by artist Brian Connolly. Dr. Oliver provided the templates to locate the positions of stars and other heavenly objects engraved on its surface. (Cred. Armagh Observatory.)

A favorite and special project from 1984 to 1988 was Dr. Oliver's involvement as co-investigator on UF's South Pole Optical Telescope where his knowledge of computer controlled instruments came into play. I was envious that this project enabled him to visit the Amundsen-Scott South Pole station four times during the Antarctic summers! This small, specially built telescope operated for several seasons to evaluate observing conditions at the South Pole in the visible region of the spectrum. This was the first stellar telescope to operate at Earth's South Pole! (See Fig. 5.). In October 1986 the US State Department and US Navy awarded him the Antarctic Service Medal for his activities in Antarctica.

Unlike the present UF astronomy department, which now has an active commitment for public outreach, Dr. Oliver and I were among the first few that had an interest in public programming or the public schools. Dr. Oliver became active working with middle school science teachers, was a creator of "Conversations About Science and Mathematics" and was an innovator in large classroom teaching. Both he and I volunteered as judges at science and engineering fairs.

However, unlike the few years I served in this capacity, Dr. Oliver selfishly gave his time to judge both local and state fairs for more than twenty years, finally stopping about a year before his death.

Long-time members of the Alachua Astronomy Club, Inc. will favorably remember Dr. Oliver for his interesting, absorbing and clear presentations to the club. For example, in 1996 Dr. Oliver talked about "Calendars and You" and in 1999 gave an exhilarating presentation on "Finding Asteroids for Fun and Profit: Asteroid Astrometry with Amateur Telescopes." However, his most memorable talk was probably his 2005 presentation, "Reflections of a Retiring Astronomer." In this talk, Dr. Oliver mused on his more than forty years as an observational astronomer. (Dr. Oliver became an emeritus professor in 2007.) Unfortunately, to his regret, failing health prevented him from making future appearances at club meetings.

In his last two years Dr. Oliver embarked on another noteworthy and very remarkable enterprise. In the northern Irish town of Armagh, home to The Armagh Observatory, a modern astronomical research institute with a rich heritage extending back to 1790, now stands a large, two-meter (nearly seven foot) diameter globe made from solid polished grey granite. This impressive and beautiful star ball rests on one of four large base stones engraved to depict the story of the development of astronomy through the ages. And on its surface the brightest stars and other features of the sky are etched in gold.

The sphere is aligned north with the stars correctly oriented toward the pole star. Entitled "Celestial Sphere" this artwork is the vision of artist Brian Connolly, who created this structure as a tribute to the importance of astronomy and scientific research in Armagh.

Nevertheless, it was Dr. Oliver who helped Connolly by providing the templates used to precisely position the stars and other heavenly features on the sphere (Fig. 6). The star ball was installed November 2010 and dedicated December 2010. At the end of November, Dr. Oliver and I were hoping to have lunch. He also wrote me that he was trying desperately to get well enough to travel to the dedication. Unfortunately neither happened.

John died peacefully eight weeks later. Predeceased by a son, Michael, he left behind his wife Barbara of forty-seven years, three children, Jennifer, Keith and Rebecca, two grandchildren, Elspeth and Moira, and a great granddaughter, Dorothy. He also left behind dear friends and colleagues and a legacy difficult to match.

I frequently attend performances in the Phillips Center for the Performing Arts with my wife. He was also often there with Barbara and we would seek each other out at intermissions. We would often speak about the state of our department where he had spent much of his life. Recently I was again at the Phillips Center. I looked for John. Of course he wasn't there and the lobby seemed strangely empty. John did not want a funeral but was cremated. His family held a service in celebration of his life at his home on March 20, 2011 (date of the 2011 Vernal Equinox).

However, John's devotion to his department and the closeness he cherished with his students will not be forgotten. His family has established and will maintain "The John P. Oliver Graduate Award" to be given annually to a graduate student exemplifying the qualities that Dr. Oliver valued. Send donations, if you wish, to the UF Foundation (P.O. Box 14425, Gainesville, FL 32604-2425, attn. Cody Helmer) with the award's name on the check.

Usually each year, Dr. Oliver would send a reminder on September 15th that approximately on this day in 1979, the Department of Astronomy was formally born. He was proud of this fact. During his long tenure in its astronomy program, he helped shape the department and the operation of its observatories. He was unique among many astronomers due to his abilities and flair as an excellent speaker and teacher, a superb instrumentalist and programmer, as a talented research scientist, and a friend to all who knew him.

After Professor Oliver's death, Dr. Rafael Guzman, chair of the Department of Astronomy, wrote that all who are able, should join John's family at his celebration of life, "as a tribute to both a close friend and a life of passionate dedication to astronomy and the mission of our department."

HOWARD L. COHEN is an emeritus professor in the University of Florida's Department of Astronomy and a founding member of the Alachua Astronomy Club, Inc..



April 12, 2011 will mark the 50th anniversary of the first manned space flight by Russian cosmonaut Yuri Gagarin.

The Man:

Yuri Alekseyevich Gagarin (9 March 1934 – 27 March 1968), was a Soviet pilot and cosmonaut. After being selected for Air Force Group 1, he became the first human to journey into outer space when his Vostok spacecraft launched successfully and completed an orbit of the Earth on April 12, 1961. After re-entry, Gagarin ejected from the craft and landed safely by parachute. After the mission, Gagarin became an international celebrity, and was awarded many medals and honors, including Hero of the Soviet Union. Vostok 1 marked his only spaceflight, but he served as backup to the Soyuz 1 mission, which ended in a fatal crash. Gagarin later became deputy training director of the Cosmonaut Training Center outside Moscow which was later named after him.

The Mission:

Yuri Gagarin's spaceship Vostok 1 launches April 12, 1961 at 9:07am local time from Baikonur. Fourteen minutes into the mission, the 3rd stage separates and the spacecraft reaches orbit. For the first time, a human flies through space and experiences zero gravity. And also for the first time, a human being is able to see the entire planet below him. Since everything looks like a success, the official Russian news agency TASS reports the historic event at 10:02 a.m. In Zvyozdny Gorodok (Star City) near Moscow, Gagarin's wife is surprised when her neighbor, all excited, tells her about the news. (The officials, fearing failure of the mission and subsequent embarrassment, had kept the launch a secret.) After one orbit in space, the deceleration engine is automatically activated. Nothing indicates failure of the mission. However, as has become known only centuries later, this mission almost ended in complete disaster: The Vostok spaceship consists of the spherical capsule and the service unit. Under normal circumstances, the service unit should separate one minute after initiating descent. But during this flight, some cable connections do not separate. Like a stubborn dog on a leash, the capsule drags the service unit with it back into the earth's atmosphere, causing the whole assembly to undergo a turbulent ride. Gagarin's ship faces overheating and burn-out during this critical entry phase. It takes nine scary minutes until the cables finally melt and the service unit separates. But Gagarin's ship still rotates uncontrollably around its axis. Through the little window, Gagarin sees the "yellow-red reflections of the flames engulfing the spaceship", as he will report later. "But in the cabin it was only 20 degrees Celsius, despite the fact that I was sitting in the middle of an inferno while falling towards earth". Then, at around 21,000 feet, an explosion, the door is blown away and Gagarin is ejected. The capsule and the cosmonaut are returning to earth on separate parachutes and land near the town of Saratov. The whole flight took about 108 minutes.



Gagarin died when his training jet crashed in 1968. The precise cause of the crash is uncertain, but investigators have proposed various explanations.

Kika Silva Pla planetarium at Santa Fe College in Gainesville, Florida, held its annual lunar festival on March 20, 2011. This year it correlated with the date of the full moon at perigee. Programs included a presentation by Bill Helms, a former NASA engineer who had worked all of the launches of the Apollo program, and a presentation by U.F. astronomy professor, Dr. Tesesco, entitled the “The Moon’s Violent Birth.” Planetarium shows included, “Eclipse: The story of our nearest neighbor in space,” and “Pink Floyd Darkside of the Moon.” I joined fellow members of the Alachua Astronomy Club to provide telescopic viewing later in the evening.

When guests had departed, I shot two AVI files of the moon and later processed and combined them for a whole disk image. The following morning I imaged the sun with the same telescope set up with a Ca-K filter and combined the lunar and solar images to show the differences in apparent sizes of the sun and the previous evening’s full moon at perigee. What a difference a couple of (arc) minutes makes!

Howard

(The image below was selected as LPOD image for March 29, 2011—The Editor)



Lunar Image:

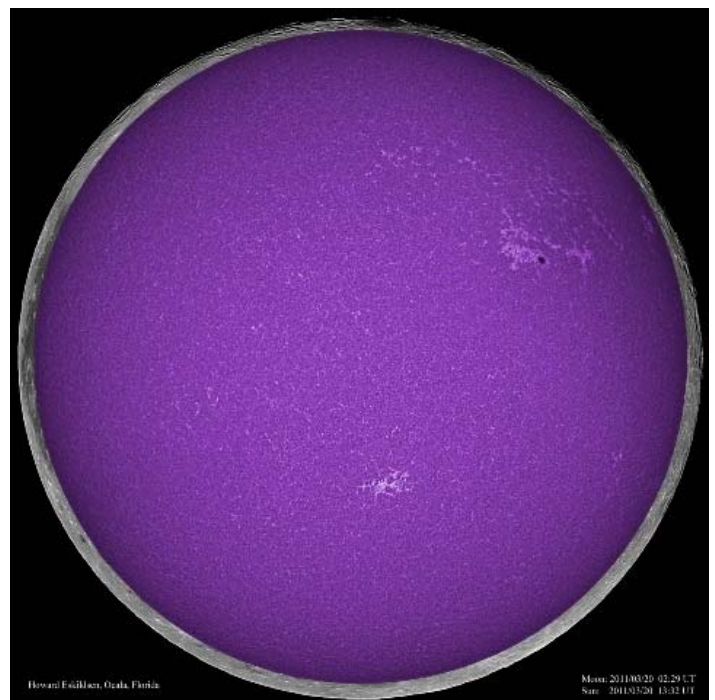
Date: 2011/03/20

Time: 02:29 UT

Telescope: Orion ED 80 refractor

Camera: DMK [41AU02.AS](#)

Apparent diameter: 33.97' per VMA



Solar Image:

Date: 2011/03/20

Time: 13:32 UT

Telescope: Orion ED 80 refractor

Solar Filter: Lunt B600 Ca-K Module

Camera: DMK [41AU02.AS](#)

Apparent Diameter: 32.12' per ALPO Solar Section ephemeris

The Rosette Nebula NGC 2244 and NGC 2237-2239 taken at the Spring Fling star party.

The Rosette Nebula is a large donut shaped star forming HII region in the Monoceros region of the Milky Way. Prominent features include the open cluster NGC 2244 and the nebulous regions NGC 2237-2239.

The cluster and nebula lie at a distance of about 5,000 light years from Earth. Radiation from O and B class stars in the cluster excite atoms in the nebula causing them to produce the emission radiation that we see.

The image was taken using a five inch refractor, Apogee U8300 camera and 5 nm Hydrogen alpha filter. The image represents four hours of exposure.

See also: http://www.members.cox.net/byron.bergert/Rosette_20110311_1.jpg

Byron



Photo credit: Byron Bergert

My family and I visited the Alte Sternwarte (Old Observatory) in Bonn during July 2008. The Old Observatory was the site where astronomer, Friedrich Wilhelm August Argelander, compiled the famous Bonner Durchmusterung catalog. Argelander and his assistants, Eduard Schönfeld and Adalbert Krüger, observed 324,198 stars during the seven years, 1852-1859, to compile the catalog. Altogether, they made over 700,000 observations as each star was observed at least twice. The Bonner Durchmusterung covered the sky from -2 to +90 degrees declination, but Schönfeld later extended the catalog to -23 degrees declination in 1886. The original Bonner Durchmusterung consisted of 40 charts, and star positions were referenced to the epoch 1855.

Amateur and professional astronomers continued to use the Bonner Durchmusterung into the 1960's and 1970's. Over 150 years after its first publication, the Bonner Durchmusterung is still being used! It is the basis of many (b)-scale charts printed by the American Association of Variable Star Observers (AAVSO). All stars in the Bonner Durchmusterung have a BD designation. For example, BD +19 1941 is the 1,941st star in the zone of +19 degrees declination.

The significance of the Bonner Durchmusterung is that it was the first modern star catalog. It covered the sky down to magnitude 9.5 and even fainter in certain areas. Amazingly, the instrument used to make the catalog was a rather small (by today's standards) 3-inch f/8 refractor. Typically, two people worked together to make the observations. One person worked at the telescope, calling out stars and noting declinations as they crossed a meridian line in the eyepiece. Another person recorded the star's magnitude and sidereal time shown on a pendulum clock. This was very strenuous work, because as many as 30 stars appeared each minute. Argelander published the catalog in three volumes, with the last one appearing in 1862.

Although the Old Observatory ceased operations in 1973, it is still worth visiting for its significance in astronomical history. According to *Sky and Telescope* (May, 1965), the Bonner Durchmusterung is the only 19th century star catalog that has remained useful because of its depth, completeness, and accuracy. You will find the Old Observatory at 47 Poppelsdorfer Allee in the southern suburbs of Bonn, Germany.



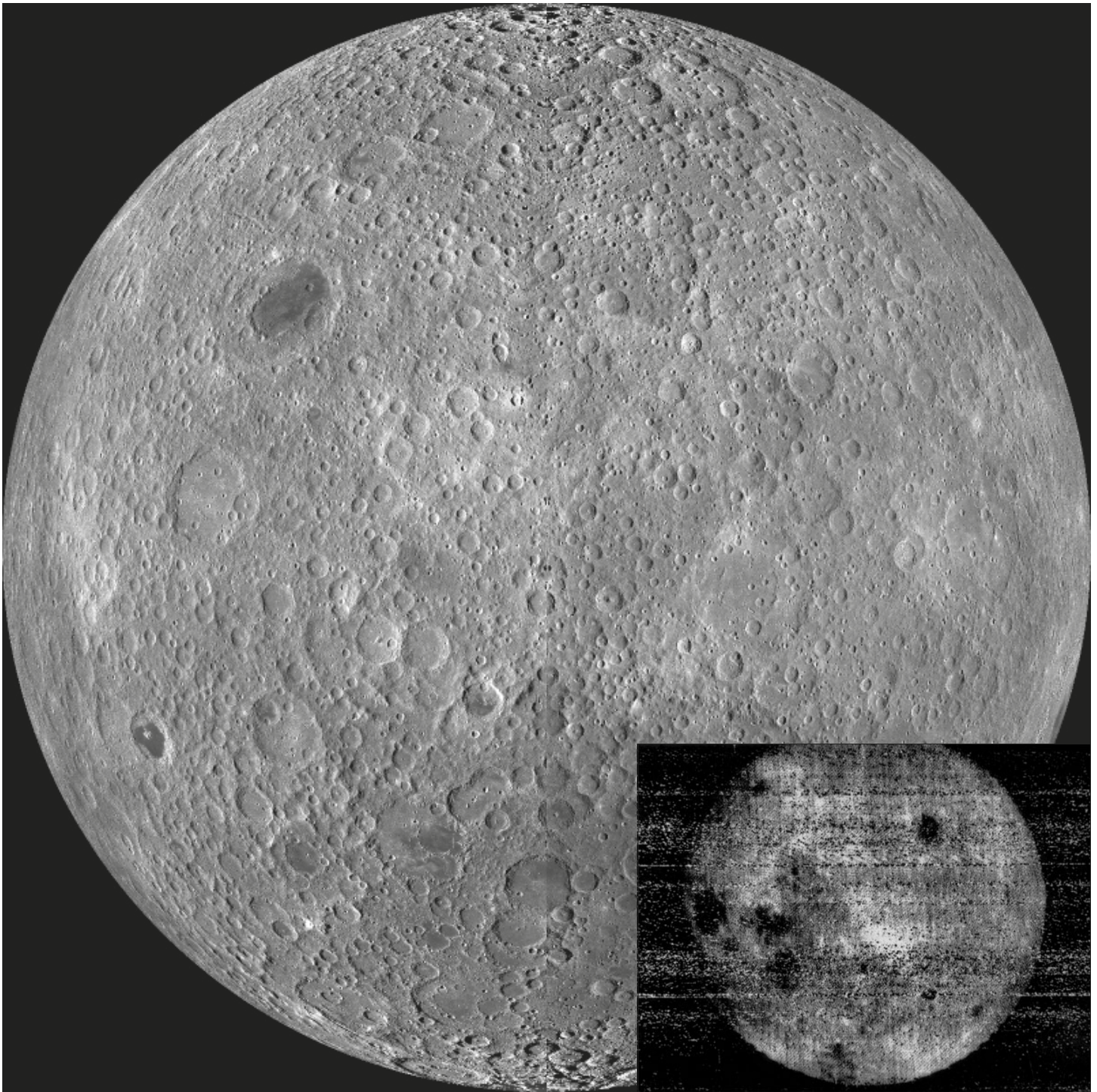
1-Observing towers at Old Bonn Observatory;



2-Andy and Jessica at front entrance of the Old Bonn Observatory;



3-Plaque with historical inscription.



The Far Side

Tidally locked in synchronous rotation, the Moon always presents its familiar nearside to denizens of planet Earth. From lunar orbit, the Moon's far side can become familiar, though. In fact this sharp picture, a mosaic from the Lunar Reconnaissance Orbiter's wide angle camera, is centered on the lunar far side. Part of a global mosaic of over 15,000 images acquired between November 2009 and February 2011, the highest resolution version shows features at a scale of 100 meters per pixel. Surprisingly, the rough and battered surface of the far side looks very different from the nearside covered with smooth dark lunar maria. The likely explanation is that the far side crust is thicker, making it harder for molten material from the interior to flow to the surface and form the smooth maria.

We came a long way: The insert on the lower right, shows the first image of the Lunar far side taken by the Russian space probe Luna 3, on October 7, 1959.

(Sources: APOD 2011 April 9, <http://apod.nasa.gov/apod/ap110409.html> and http://www.wired.com/science/discoveries/news/2008/10/dayintech_1007)

Simple Beginnings, or: What can I do with a Point-and-Shoot Camera?

After my presentation on Astrophotography at the March meeting, I received many positive comments from club members. But I also learned that especially beginners to the topic, felt somewhat overwhelmed by the amount of information presented.

To those in the audience that are interested in astrophotography but have not yet found their way into the hobby, please don't feel discouraged!

When we had the star party event at the Museum of Natural History last year, we had a few visitors walking up to our telescopes and perform free hand through-the-lens photography with their point-and-shoot cameras. The results, I must say, were surprisingly good. This type of photography can be greatly improved with adapters that allow to fix the camera to the telescope. Orion (www.telescope.com), among others, sells some of these adapters (see Fig. 1).

There are also adapters available to connect some point-and-shoot cameras in the same way as DSLR cameras to the telescope (Fig. 2). Figure 3 shows a result of this approach. It is very impressive what results can be achieved with such humble means.

For more reading, I would recommend visiting: <http://www.spacealberta.com/photo/digital.htm>



Fig. 1 This adapter allows to connect virtually any point-and-shoot camera to a telescope for eyepiece projection photography.



Fig. 2 This adapter is specifically designed for the Olympus C-740 digital camera.

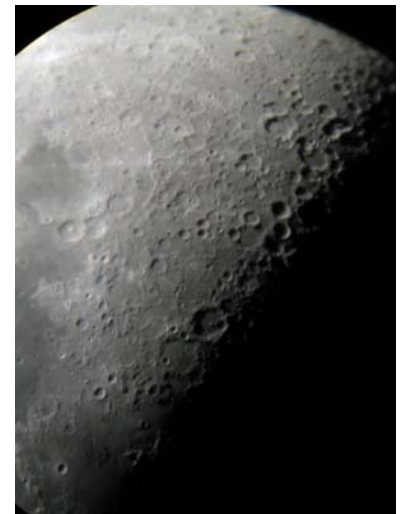
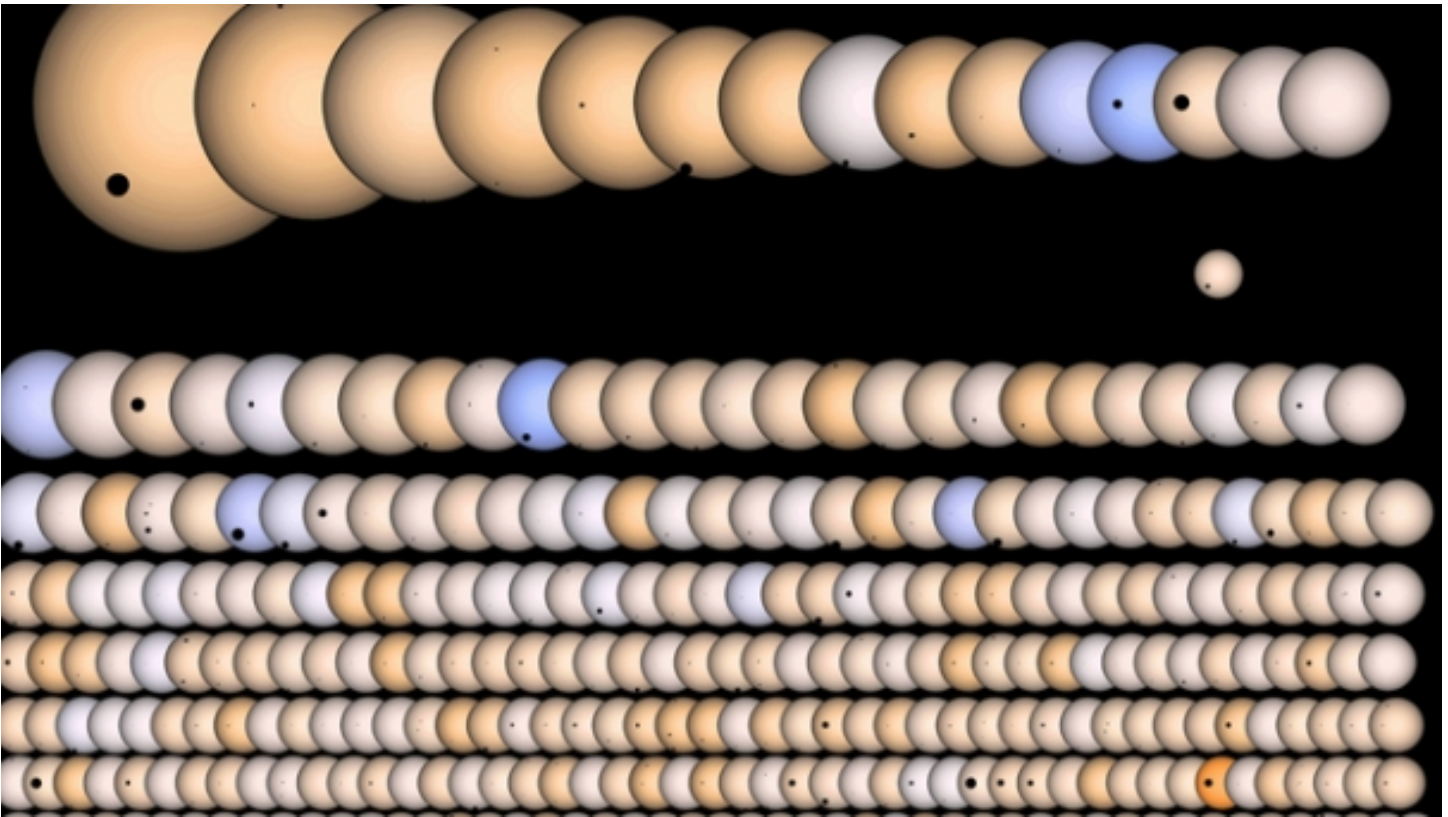


Fig. 3 This is a results from a simple point-and-shoot camera



A photo may be worth 1,000 words, but a new depiction of NASA's Kepler mission is worth 1,235 potential alien planets. The graphic is the brainchild of scientist Jason Rowe, who created it in an attempt to convey Kepler's exoplanet discoveries to the masses in a clear, concise manner. For reference, our own sun is shown sitting by itself, just beneath the top row. Both Jupiter and Earth are depicted transiting the sun in the illustration. From <http://kepler.nasa.gov/multimedia/Images/graphics/?ImageID=140>



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 Newsletter of the Alachua Astronomy Club, Inc.
 P.O. Box 141591
 Gainesville, Florida 32614-1591
 Web: www.firstlightfloridastars.org
 Email: firstlight@floridastars.org