



# the Skyscraper

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Amateur Astronomical Society of Rhode Island ★ 47 Peepoad Road ★ North Scituate, Rhode Island 02857 ★ www.theSkyscrapers.org

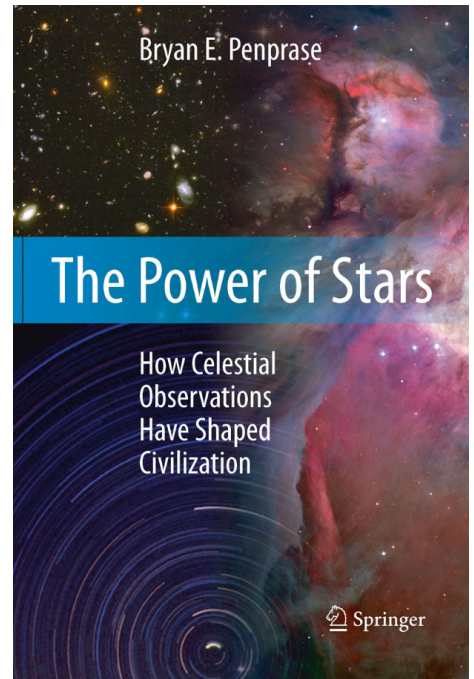
## June Meeting with Dr. Bryan E. Penprase

Friday, June 10, 7:30pm  
Seagrave Memorial Observatory  
**"The Power of Stars" -  
How Civilizations have  
Responded to the Sky**

Pomona College Professor and author Dr. Bryan Penprase discusses his new book "The Power of Stars" and describes the variety of constellations, cosmologies and calendars from cultures across the world and through the centuries. Using a wide variety of sources, Dr. Penprase presents a visual feast of astronomy, with constellation maps, aerial views of aligned celestial structures, and images of the universe as created by a wide range of cultures. He will also discuss

how our modern civilization responds to the sky, both with architecture and the dazzling array of new discoveries such as Dark Matter and Dark Energy, and how our modern picture of the universe arose from the work of astronomers such as Herschel, Hale, Hubble and others.

Dr. Bryan Penprase received a B.S. in Physics and an M.S. in Applied Physics from Stanford University in 1985 and his Ph.D. in Astronomy and Astrophysics in 1992 from the University of Chicago. He served at both universities as both a Research and Teaching Assistant, was a Predoctoral Research Fellow at the Space Telescope Science Institute in Baltimore and an NRC Postdoctoral Researcher at IPAC/ Caltech in Pasadena. Dr. Penprase has been a professor of Physics and Astronomy and Director of the Brackett Observatory at Pomona College since 1993. Dr. Penprase recently was awarded a Downing Exchange Award to become a visiting fellow at Downing College, Cambridge, in his work on quasar absorption lines. He also was a visiting scholar at the Harvard Smithsonian Astrophysical Observatory, and an ASEE/ JPL Summer faculty fellow. Dr. Penprase recently has been conducting research at



Caltech, the Carnegie Observatories, and JPL using the Las Campanas Observatory, the Keck Telescope and Hubble Space telescope, among other facilities. He has worked extensively in many areas of astrophysics, primarily in observational astronomy related

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Phases  
of the  
Moon



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Other notable events: Summer solstice is on the 21st. Pluto is at opposition on the 28th.

Seagrave Memorial Observatory  
is open to the public

weather permitting

Summer hours begin May 7  
Saturdays: 9:00-11:00 pm

# President's Message

Tom Thibault

Dear Skyscrapers Members,

Our weather has been getting warmer, but the clouds continue to dampen our efforts to gaze upon the starry skies. The remnants of the powerful storms in the central and southeast regions have been finding their way to New England. Yet we have had a number of Public Viewing Nights and hopefully the number will continue to increase.

The arrival of the warmer weather provides an excellent opportunity for interested members to consider volunteering to assist on our Public Viewing Nights. Please consider joining the members of the Observing Committee on Saturday evenings. The personal satisfaction of sharing the night sky with the young, old, and families is very gratifying.

This also provides a great opportunity for you to view through our society's wonderful telescopes. All experience levels are welcome and what better way to learn than through the tutelage and camaraderie of our membership. Our trustee's can be contacted regarding training on our society's telescopes for those interested in joining the Observatory Committee.

## StarConn

Presented by the Astronomical Society of Greater Hartford and with the kind and generous cooperation of the Astronomy Department of Wesleyan University.

**Saturday, June 4  
at Wesleyan University**

## Executive Committee Meeting

members welcome

**Monday, June 6, 7:00 pm  
at Seagrave Observatory**

Our May meeting featured Professor Roy Kilgard of Wesleyan University's Van Vleck Observatory. He provided an interesting overview of the past, present, and future of the Van Vleck Observatory. The presentation included historical photos of its original facilities and equipment, as well as the current state of the observatory. Roy outlined the astronomical contributions of the past and continuing research of the present. The Van Vleck Observatory is a beautiful facility with a rich historical background and with its close proximity to Rhode Island deserves to be on your list of locations to visit.

Our business meeting followed and included membership appreciation noted for our exiting 2nd Vice President Steve Hubbard and Trustee Jim Brenek. Their terms of service have ended and their contributions to Skyscrapers have been significant. Steve and Jim, thank you both so much. Al Hall informed us of the upcoming StarConn event presented by ASGH., and invited all to attend. The ASGH annual event is being held on June 4th at Wesleyan University in Middletown, CT. Information on the event for those interested can be found at <http://www.asgh.org>. Bob Forgiel listed a number of upcoming Public Outreach Programs. It appears Skyscrapers will be busy this year sharing the night sky, so I urge all members to consider volunteering to assist in our mission of educating both our membership and the public to the wonders of astronomy.

Lastly, it was noted that our first Members Night Program "Constellations" was a success, Dave Huestis and Francine Jackson hosted a great session. The group was treated to Dave's informative explanations of the workings of our night sky in conjunction with Francine's colorful mythological tales of our featured spring constellations. Our second session of the program featuring the Summer Constellations is being scheduled. I invite all to attend, what's better than a night under the stars with friends that is both informative and just plain fun.

Unfortunately, the scheduled CCD Marathon was postponed due to the weather. Bob Horton noted a rescheduling of this event will be forthcoming. Astrophotography has become increasingly affordable and now within the reach of most everyone. What better way to determine if this avenue of astronomy interests you than discussing with those that currently find it so rewarding. It's also a perfect opportunity for those currently involved to exchange their knowledge and expose each other to different equipment and formats.



The Skyscraper is published monthly by Skyscrapers, Inc. Meetings are usually held on the first Friday of the month. Public observing is usually held every Saturday night at Seagrave Memorial Observatory, weather permitting.

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### Directions

Directions to Seagrave Memorial Observatory are located on the back page of this newsletter.

### Submissions

Submissions to The Skyscraper are always welcome. Please submit items for the newsletter no later than **June 17** to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or e-mail to [jim@distantgalaxy.com](mailto:jim@distantgalaxy.com).

### E-mail subscriptions

To receive The Skyscraper by e-mail, send e-mail with your name and address to [jim@distantgalaxy.com](mailto:jim@distantgalaxy.com). Note that you will no longer receive the newsletter by postal mail.



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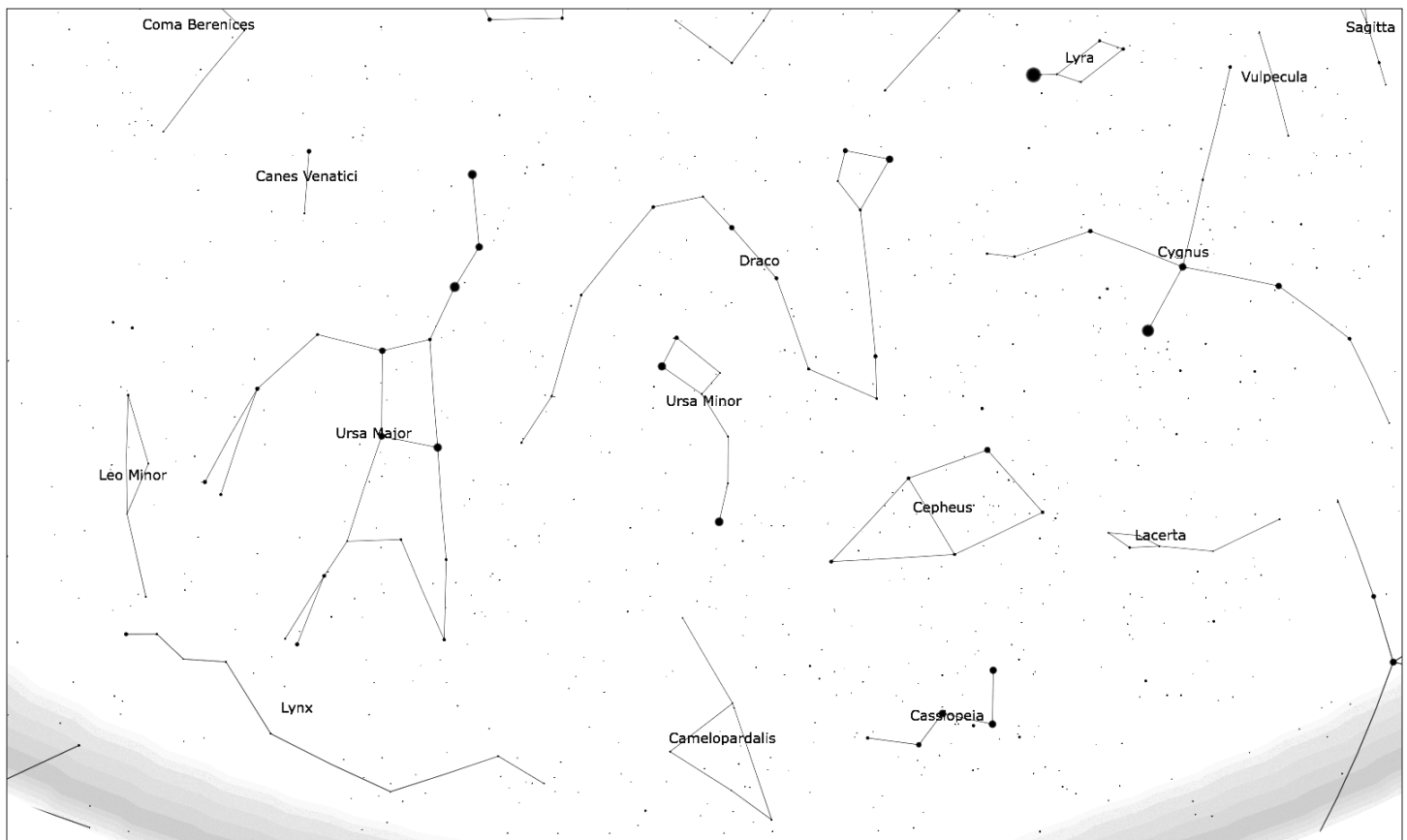
We have recently received some generous donations; all those that attended our May meeting were treated to our new projection screen donated by our own Jerry Jeffrey. Jerry's donation included a digital projector as well and will also be put to good use. Thank you, Jerry, from the entire membership. We received a number of astronomical

items donated by Dan and Lois Von Riesen. We have cataloged all the items and will be using a number of them here at Seagrave. The remaining items will be offered to our membership. Please refer to the posting in this month's newsletter regarding the items and the process for acquiring those you find of interest.

My final note to all: 2011/2012 membership dues were payable beginning in April. If you haven't remitted your dues please do

so at your earliest convenience to continue your support of Skyscrapers. Dues can be mailed to Skyscrapers Inc., 47 Peepoad Road, North Scituate, RI. 02857, Attn: Jim Crawford, or feel free to see Jim personally during any of our functions he is in attendance.

Clear Skies  
Tom Thibault  
Skyscrapers  
President



# The Circumpolar Constellations

Francine Jackson

We normally spend a lot of time enjoying the seasonal constellations, the ones that our ancestors depended on as indicators of changes here on Earth, but we often forget that there is a set of star patterns that are always there, waiting for us when we turn around to the north. These are the circumpolar constellations, the ones that, although

their positions do change with time, they seem to travel in a circle centered at the sky's north pole, and are always visible from our northern latitudes.

Most evident is the Big Bear, Ursa Major. This pattern is so easily seen as a bear that cultures all over the Earth saw this part of the sky as a huge mammal, a big brown bear throughout much of central Europe, a polar bear for those in the Scandinavian countries, either a bear or other cuddly woodland creature in North America; however, in Thailand, your imagination gets a little stretched - there it was a crocodile.

Unfortunately, our lit skies have erased much of the animal in cities, but the back end of the bear, the Big Dipper, can still be made out everywhere. Five of these seven stars are actually a part of a cluster of stars called an association. One of these, the star

at the crook of the handle, Mizar, was the eye test for Greek soldiers. Look closely near this star - if you can see a dimmer star right next to it, your eyes are good enough for battle. Dimmer Alcor, although it seems to be a close neighbor to Mizar, is in fact much farther away, and only in the same direction. This is referred to as an optical double.

The two stars at the outside edge of the dipper lead us to the most important star in the Northern Hemisphere, the one just a couple degrees off the North Celestial Pole, Polaris, the North Star. Most are very surprised to learn that its importance isn't its brightness, just its position, close enough to seem to remain stationary in the northern part of the sky. It is also just within a couple degrees of your latitude. Polaris is also at the end of the tail of Ursa Minor, the Little Bear, but this constellation is so dim, and so much

smaller than the Big Bear, that you will have a very tough time finding an animal in this part of the sky. And, just as the Big Bear has its dipper, within this bear is the Little Dipper, although near impossible to see in city skies. As an aid, think of both dippers as placed in pour position; they are angled such that the fluid in their bowls will pour into each other.

Continuing the line from the Big Dipper to Polaris will take you to what at first glance might be a capital M or W, but look closely at the central star, and you should see another star, dimmer, but still visible from the city. This star will change the shape of this pattern from a letter to a chair. You have found Cassiopeia, the Lady in the Chair. Cassiopeia was a beautiful queen who liked to remind her subjects of this. But it wasn't

until she started saying she was much better looking than the guardians of Neptune that she found herself in trouble. Jupiter sat her in a chair and placed her in the sky in such a position that for half the year, when you look toward the north, you will see the chair upside-down; Cassiopeia must fight to stay in her chair, or land back on Earth face first. After a while it was decided to send her husband, Cepheus, up into the sky to keep her company. He is the very dim clown head shape located right next to her. Simply draw a line from the two stars at the bottom of each chair leg to find him.

Going back to the two pointer stars of the Big Dipper, this time only go up one distance from them. The star you find is the end of Draco, the Dragon. If you have seen the Movie "Dragonheart," you might

have actually seen the constellation as it's positioned in the sky. Beginning just above the Big Dipper, this mythical animal follows the curves of both dippers, with his head a crooked square, the asterism the Lozenge, curling back onto itself.

There's also a very dark part of the northern sky that at first might seem to not have any stars in it at all. As every part of the sky must belong to a constellation, this dim little area has been designated Camelopardalis, the camel-leopard, or, as it is familiarly known, the giraffe. At times, it seems our ancestors had unique senses of humor.



## Midland Mall Remembrance

Dave Huestis

You may be thinking that my editors somehow switched the title of my monthly astronomy column with that of another columnist. What connection could there possibly be between astronomy and the once grand experiment called the Midland Mall? Well, those of you who have been Rhode Island residents for just more than 36 years may already know the answer to

that question. Perhaps you were one of many visitors who experienced a memorable display presented by Skyscrapers (The Amateur Astronomical Society of Rhode Island) at the Midland Mall during a ten-day span from April 7 – 17, 1975. I dedicate this remembrance to the Midland Mall and all the people who helped to make the event a memorable one.

The Skyscrapers organization was founded by Professor Charles H. Smiley of Brown University in May 1932. The society incorporated in November 1936 and the first order of business was to purchase the observatory on Peeptoad Road in North Scituate, the former property of Frank Evans Seagrave. The observatory became the home of Skyscrapers, and the membership always had a core group of individuals who were excellent caretakers of the observatory and the 8 ¼-inch Alvan Clark refractor.

However, in the middle to late 1960s the "old guard," many of them charter members, had long since retired and were passing away. The observatory fell into a state of disrepair and major upkeep was lacking. Membership in Skyscrapers was at a decline.

During the fall of 1974, one of the next generation of Skyscrapers members, Dave Armitage, presented an ambitious idea to the organization. He proposed that the society should construct a portable planetarium to be hopefully erected at one of the local malls, and utilize Brown University's vintage star projector to present a realistic nighttime sky. We would get great publicity for Skyscrapers, plus it would help attract new members.

Dave subsequently presented the portable planetarium proposal to the management of the Midland Mall (now the defunct Rhode Island Mall) who were truly excited about the project. The mall manager presented the idea to the mall's Merchants' Association at a January 9, 1975 meeting. He reported that the merchants liked the idea, noting that nobody else had done anything like this in the state before. Negotiations continued for

a short while and finally Skyscrapers was given the go-ahead. The mall looked on the effort as something to boost traffic during a “slow” period of the year, so they booked the planetarium for a week in April. As Dave recalled, “It was the first and only place we had asked. Fortunately it was a two-story mall. We definitely needed the height in order to inflate the dome.”

The project was well under way during January, 1975. Dave worked out the design of the structure: a 25-foot wooden ring substructure with wood-grained paneling for walls, with a canvas fabric cut in 12 triangular panels that were sewn together to form the dome. Once the dome was completed, it was time to paint it. We used a metallic methyl ethyl ketone that smelled terrible. A simple task you might think. Unfortunately the canvas material was very porous and it soaked up paint like a sponge. It needed several coats, not only to make it light tight, but also to make it air tight! Otherwise it would not inflate!! The first couple of coats were done at Seagrave Observatory. While the dome was thought to be uniformly painted, we would later find out that there were excessive pinholes across a wide section of the dome. It ended up that we used these “points of light” to portray the Milky Way during our planetarium program.

On two separate occasions while the structure was under construction up at Seagrave Observatory, wind damaged it considerably. Once we recovered from these setbacks it was time to test the inflation process. This task was accomplished by using two big fans. They worked great. When the exit door was shut and the fans were powered up, the dome inflated quickly.

While the “portable” planetarium was being constructed, Dave Armitage worked on the planetarium show we would present. The show talked about how many stars were in the Milky Way, and how many could support life of some kind. You can read a complete transcript of the program by following this link: <http://www.theskyscrapers.org/1975-planetarium-show-transcript>

The Shepard’s Department Store, which had anchored the east end of the Midland Mall, had gone out of business and the store was vacant. On Friday, April 4, 1975, we were able to move the pieces of our planetarium to the now empty store so we could assemble it out in the mall. First, however, we had to assemble the planetarium in the old Shepard’s building to finish the painting job after the second windstorm incident at Seagrave. (For several years later, after

another store opened at the former Shepard’s location, we used to “visit” the paint stains on the floor.) Also, we realized that upon folding the dome for transport to the mall, the paint flecked off, causing more pinholes.

Our inaugural show was scheduled to run on Monday, the 7th, but just before we were supposed to open, the fire marshal stopped by for an inspection. Our beautiful wood paneling, which formed the walls of the structure, did not meet the fire code. They were going to shut us down before we even got started. If we wanted to continue we would have to meet the fire code. So, we had to cover our beautiful planetarium walls with an ugly fire retardant white paint.

When the planetarium was finally erected and the fans were installed we realized we had to suspend the center of the dome from the roof of the mall. Without this support, the dome would deflate and collapse when the doors opened at show’s end and smother everyone inside! When the dome was inflated the first time the doors blew open because of the pressure, so we had to install spring loaded locks to keep the door closed.

Also, each time the dome was inflated and deflated, more paint came off. Each night after closing, the dome had to be repainted to reduce the number of pinholes.

At the opposite end of the mall Skyscrapers members set up several telescopes and other displays highlighting members’ astrophotos and NASA space missions. This educational component provided a platform from which to speak to the public about astronomy, space science, and of course, about the Skyscrapers organization and membership in it. A lot of work went into creating and staffing those displays for the duration of our show.

Dave recalls, “The projector was definitely underpowered for what we asked it to do. During the day the light coming in through the mall skylight was so bright it overpowered the images of the stars and the pinholes caused by the repeated inflation and deflation. So, during the day the projector was turned off.” Otherwise the portable planetarium and program were pretty uniformly received by visitors.

During our 10-day run (April 7 – 17), over 9,000 folks paid 10 cents each to view our planetarium presentation. Once publicity had appeared in the Providence Journal about our endeavor, folks were actually making special trips to the mall to see our show. The mall management was ecstatic about the increased traffic, and Skyscrapers netted a profit of \$300. In the April 1975

issue of The Skyscraper, Dave Armitage was quoted as saying, “Far above anyone’s expectations! It even beat out my expectations.” Membership increased, our Saturday night open houses were better attended, and the society garnered much respect.

I personally think the mall project was a key turning point in the direction of Skyscrapers’ history. This episode was the primary “nexus” in a series of events that culminated in the revival of our society. I believe the success of our public outreach programs today are a direct result of the success we experienced at the Midland Mall in April 1975. We could accomplish anything we put our minds and souls to do!!!

And finally, we actually beat the professional astronomers in creating an inflationary universe!! We also beat the Starlab folks in conceptual idea by about three years, and actual construction by two years. Though we called it a portable planetarium, it was hardly portable!

I was a new member when the portable planetarium project began, having been elected into Skyscraper membership on January 4, 1975. I feel privileged to have joined the society during the time of its revival.

An expanded version of this story, along with many more images of the project, can be found on the Skyscrapers web site at: <http://www.theskyscrapers.org/1975-portable-planetarium-project>

Perhaps there will be a revival in the Rhode Island (Midland) Mall’s future as well.

If you want to experience the universe firsthand then please visit any of the local observatories during one of their public open nights.

Before packing up the family for a ride out to Seagrave Memorial Observatory (<http://www.theskyscrapers.org>) in North Scituate on a Saturday night, or out to Ladd Observatory (<http://www.brown.edu/Departments/Physics/Ladd/>) in Providence on the next Tuesday night, be sure to check their websites for the public night schedules and opening times. Frosty Drew Observatory (<http://www.frostydrew.org/observatory/>) in Ninigret Park, Charlestown, is open every clear Friday night. I will write about this south coast observatory in a future column.

All of these facilities offer a unique observing experience.

Keep your eyes to the skies.

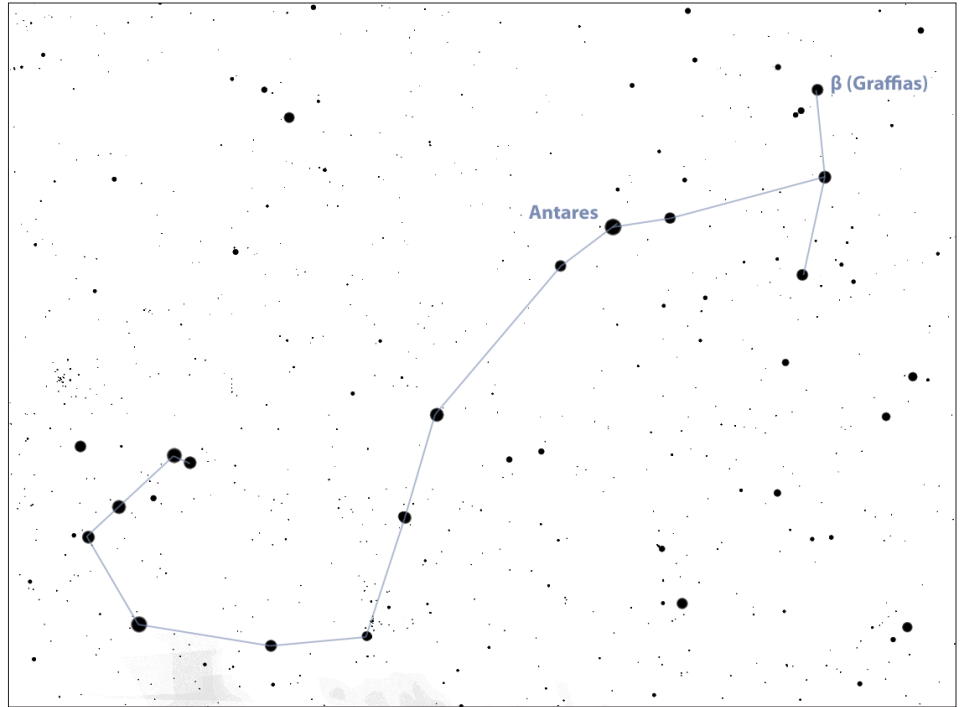
## Glenn Chaple's Sky Object of the Month

# β Scorpii

This month, we travel southward to the constellation Scorpius and the showpiece double star beta (?) Scorpii. Also known as Graffias or Akrab (take your pick – I'll go with Graffias), beta Scorpii is an eye-pleasing pair of magnitude 2.6 and 4.5 stars separated by 13.6 arc-seconds. The magnitudes and separation are quite similar to those of the better-known Mizar; indeed, Graffias rivals Mizar in visual splendor.

Graffias is an ideal target for any backyard astronomer, regardless of his/her experience or size telescope. Its brightness and prominent location (it's the uppermost of a vertical row of bright stars just west (to the right) of Antares) makes Graffias an easy-to-find target. An ample separation allows Graffias to be split with the smallest of telescopes and a magnification as low as 25X.

What makes beta Scorpii particularly intriguing are its colors. A number of observers describe the pair as blue-white, which is in keeping with their B-type spectra. But look closely. I've always seen the companion as decidedly bluish, even turquoise. What's your opinion?



There appears to be disagreement as to whether Graffias is a true binary pair or an optically aligned duo. The two have shown little movement relative to one another since the earliest measures in 1779, but they share a common proper motion. If Graffias is a

binary system, the orbital period must be in excess of one thousand years. This must-see double star lies about 600 light years away.

Your comments on this column are welcome. E-mail me at [gchaple@hotmail.com](mailto:gchaple@hotmail.com).

## Dr. Bryan E. Penprase *continued from page 1*

to the interstellar medium and star formation. Dr. Penprase most recently has focused his observing efforts to include observations with the Pomona College 1-meter telescope, and the Keck telescope in Hawaii.

Dr. Penprase's research in astronomy and astrophysics has taken him around the world, to observe with telescopes such as the Australian AAT, the observatories of CTIO and ESO in Chile, Caltech's telescopes on Mauna Kea and at Palomar, and the Nordic Optical telescope in La Palma, Spain. He has given astronomy tours and talks since 1986 at the Yerkes Observatory, in Williams Bay Wisconsin, and public sky shows at the Adler Planetarium in Chicago, as well as a popular monthly planetarium show in Claremont at the Millikan Planetarium of Pomona College.

The main research problems of most

interest to Dr. Penprase are related to spectroscopic observations of the intergalactic and interstellar medium, using both ground and space based telescopes to perform detailed studies of distant clouds of interstellar gas. Recently Dr. Penprase has been collaborating with the Gamma Ray Burst astrophysics group at Caltech, headed by Dr. Shri Kulkarni. His research catches a glimpse of the host galaxy of a Gamma Ray Burst, which is in the process of exploding at the other edge of the universe. Dr. Penprase is also collaborating with Caltech astrophysicist Dr. Wallace Sargent, in a study on the abundances of elements in the early universe, and the process of formation of the first galaxies, as revealed by absorption lines within quasars at distances as large as ten billion light years (looking back to a time when the universe was just 1/4 its

present age!).

The absorption from the cold atoms and molecules in interstellar space may be analyzed to measure the temperature, density and pressure of the remote corners of the galaxy, and the early universe, and Dr. Penprase has pioneered in new techniques in performing remote sensing of this cosmic gas as well as in 3D mapping of the structure of our local galaxy using absorption lines

# Milky Way Safari

Dauna Coulter and Dr. Tony Phillips

Safari, anyone? Citizen scientists are invited to join a hunt through the galaxy. As a volunteer for Zooniverse's Milky Way Project, you'll track down exotic creatures like mysterious gas bubbles, twisted green knots of dust and gas, and the notorious "red fuzzies."

"The project began about four months ago," says astrophysicist Robert Simpson of Oxford University. "Already, more than 18,000 people are scouting the Milky Way for these quarry."

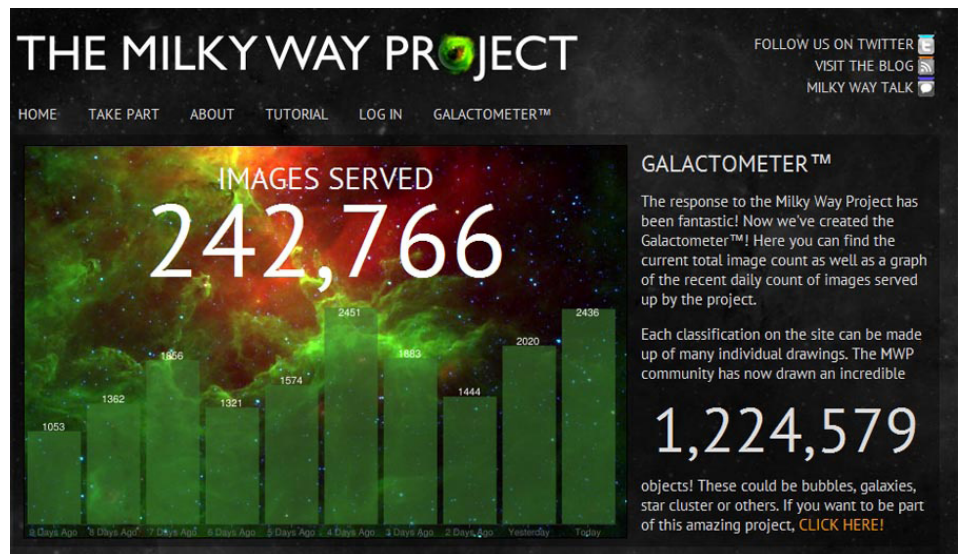
The volunteers have been scrutinizing infrared images of the Milky Way's inner regions gathered by NASA's Spitzer Space Telescope. Spitzer's high resolution in infrared helps it pierce the cloaking haze of interstellar gas and dust, revealing strange and beautiful structures invisible to conventional telescopes. The Milky Way Project is helping astronomers catalogue these intriguing features, map our galaxy, and plan future research.

"Participants use drawing tools to flag the objects," explains Simpson. "So far they've made over a million drawings and classified over 300,000 images."

Scientists are especially interested in bubble-like objects believed to represent areas of active star formation. "Every bubble signifies hundreds to thousands of young, hot stars. Our volunteers have circled almost 300,000 bubble candidates, and counting," he says.

Humans are better at this than computers. Computer searches turn up only the objects precisely defined in a program, missing the ones that don't fit a specified mold. A computer would, for example, overlook partial bubbles and those that are skewed into unusual shapes.

"People are more flexible. They tend to



**Volunteers study infrared images of our galaxy from the Spitzer Space Telescope, identifying interesting features using the special tools of the Milky Way Project, part of the Citizen Science Alliance Zooniverse web site.**

pick out patterns computers don't pick up and find things that just look interesting. They're less precise, but very complementary to computer searches, making it less likely we'll miss structures that deserve a closer look. And just the sheer numbers of eyes on the prize mean more comprehensive coverage."

Along the way the project scientists distill the volunteers' data to eliminate repetitive finds (such as different people spotting the same bubbles) and other distortions.

The project's main site (<http://www.milkywayproject.org>) includes links to a blog and a site called Milky Way Talk. Here "hunters" can post comments, chat about images they've found, tag the ones they consider especially intriguing, vote for their favorite images (see the winners at <http://talk.milkywayproject.org/collections/>

[CMWS00002u](http://www.milkywayproject.org/collections/)), and more.

Zooniverse invites public participation in science missions both to garner interest in science and to help scientists achieve their goals. More than 400,000 volunteers are involved in their projects at the moment. If you want to help with the Milky Way Project, visit the site, take the tutorial, and ... happy hunting!

You can get a preview some of the bubbles at Spitzer's own web site, <http://www.spitzer.caltech.edu/>. Kids will enjoy looking for bubbles in space pictures while playing the Spitzer concentration game at <http://space-place.nasa.gov/spitzer-concentration/>.

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

# May Reports

Ed Haskell, Secretary  
Jim Crawford, Treasurer

## The Skyscrapers Inc. Executive Committee Meeting Minutes May 2, 2011

The way to handle the mechanics of moving funds from one account to another as we progress through the budget year was discussed.

The Observing Committee is compiling a new list of keyholders.

Numerous ideas were explored about the best way and the timing of notifications of closing the Observatory due to weather and other causes. Eventually a clear policy will be determined and publicized.

A recent donation has provided a long list of observing hardware. Some is plainly usable in the Observatory or to augment loaner scopes. Other pieces should be sold to members or on a service such as AstroMart. Dand and Bob will cull the list determining which item belongs in which category. Sometime in the next 60 days members will have an opportunity to bid on those items not being kept for the Society's use.

The Annual Picnic will be July 9th.

AstroAssembly will be October 1st.

The June meeting will be rescheduled to June 10 to accommodate the speaker.

Meeting adjourned at 9pm.

Respectfully submitted

Ed Haskell, Secretary

## Skyscrapers Minutes May 6, 2011 Seagrave Observatory

**Program:** President Tom Thibault introduced the speaker, Dr. Roy Kilgard, of the Van Vleck Observatory at Wesleyan University, where he is Research Assistant Professor of Astronomy. His research emphasis is in X-ray emission from galaxies, with recent work centered on stellar- and intermediate-mass black holes and their link to episodic star formation events in galaxies.

**Abstract:** The Van Vleck Observatory sits atop Wesleyan University's Campus in Middletown, CT, painting a scenic backdrop



for all who visit the University. For 175 years, Wesleyan has been the site of active astronomical research, and the Van Vleck Observatory is currently the home to two telescopes of note: a 20" Alvan Clark refractor and a 24" Boller and Chivens Cassegrain telescope. Dr. Kilgard's talk provided a fascinating overview of the Observatory, its historical instruments, its scientific work, and the people who have called Van Vleck Observatory home. He then turned from his role (untrained but plainly very skilled) as an historian of science, to the present, discussing observations currently taking place with modern instruments on campus and at facilities around (and above!) the world.

Attendance was lower than usual and those who stayed away missed an excellent presentation enjoyed by members of all technical levels.

### Business Meeting

**Secretary's Report** adopted with no changes from floor.

**Treasurer's Report** was heard.

**1st Vice President** reports that the June 10th meeting will feature Dr. Bryan E. Penprase, Chair of the Department of Physics and Astronomy and Director of the Brackett Observatory at Pomona College since 1993.

**2nd Vice President** reviewed early plans for AstroAssembly, which occurs on the first weekend in October, and this year has the theme Fifty years of Space Exploration. Invitations to speak have been issued and have received an early acceptance from John Mustard who will speak on the Mars Science Lab, a large Rover to be deployed in 2012. Donations of prizes are solicited.

**Outreach Coordinator** reported on upcoming public observing events and requested volunteers with or without scopes to assist. The Audubon Society of Rhode Island

and numerous school and scout groups will observe over the next several weeks. If the weather will only cooperate for a change. A major event is scheduled at the Newport Folk Festival, July 30. Help is needed.

**Trustees** announced that Jerry Jeffrey has donated a projector and screens to the Society. Additional tree removal next door to Seagrave was discussed.

**For the Good of the Organization:** All Hall reminded us that our sister society, The Astronomical Society of Greater Hartford, is sponsoring their annual STARCONN convention on June 4 and Skyscrapers are always welcome. This year the topic is Astrobiology. The venue is the facility of this evening's speaker, Wesleyan University in Middletown, CT. More information is available at <http://www.asgh.org/starconn/StarConnSchedule.htm>

President Tom Thibault thanked retiring Trustee Jim Breneck for his dedicated service to the Society. His three years have overseen dramatic improvements to the Observatory. Tom also welcomed incoming officers for 2011-2012.

Adjourned at 9:20 pm.

Respectfully submitted, Ed Haskell,  
Secretary

## Cash Flow

4/1/2011- 4/30/2011

### INFLOWS

Donation, Other	
Other Donation, Other	\$86.20
Dues	
Family	\$200.00
Regular	\$200.00
Senior	\$30.00
TOTAL Dues	\$430.00
Interest Inc	\$11.24
Skytelmagincome	\$98.85
<b>TOTAL INFLOWS</b>	<b>\$626.29</b>

### OUTFLOWS

Electric	\$9.41
Skytelexp	\$98.85
Postage and Delivery	\$8.80
Refreshment Expense	\$12.00
Trustee Exp	\$110.08
<b>TOTAL OUTFLOWS</b>	<b>\$239.14</b>
<b>OVERALL TOTAL</b>	<b>\$387.15</b>

### Cash Accounts

Citizens Checking	\$8,273.76
Capital One	\$11,469.89
<b>Total</b>	<b>\$19,743.65</b>



# Skyscrapers Telescope and Accessories Sale

Saturday, July 9, 2011  
July Cookout Meeting

Recently Skyscrapers was the recipient of a large donation of astronomical equipment.

After an inventory was conducted we have decided to keep some items and to sell off the remaining.

Estimated values for this equipment have been determined based on current market pricing for used equipment selling on Astromart and Ebay. The EXCEL spreadsheet below shows those items and the suggested selling price.

However, it was further decided that the membership would be offered those items first at a discounted "membership" price. Please see that column on the spreadsheet.

Items with \$0 noted for the member's price 'can be yours for the asking. However, if more than one member is interested we will conduct a drawing to select the winner.

Items with no value indicated at all were difficult to assign a value. Before the sale we will try to better ascertain a member's price. On some of those items it may come down to Best Offer from a member.

The items will be available for examination at the June and July monthly meetings of Skyscrapers. Other review times can be arranged with the Trustees or any Executive Board member who has keys to the anteroom.

Any member can indicate a desire to purchase an item(s) at the membership price, as long as their 2011-2012 dues have been paid. If more than one member expresses an interest in the same item, their names will be entered into a drawing and the one whose name is drawn will become the buyer.

The sale will take place at our July Cookout meeting on Saturday, July 9, 2011.

Those items which remain after that date will be posted on Astro Mart or E-bay at the non-membership price.

If you have any questions please contact Tom Thibault.

Item	Est. Value	Member discounted price
Homemade 6-inch f/11 telescope, 1 1/4-inch Edmund focuser, cardboard tube, no finderscope	75	\$35
University Optics 8-inch f/8 aluminum tube, aluminum mirror cell, 6x30 finder, 1 1/4-inch rack and pinion focuser, tube counterweights	250	\$150
University Optics 8-inch f/8 telescope kit includes instructions, 8-inch primary, 1.5" inch secondary mirror, aluminum mirror cell, 1 1/4 rack and pinion focuser, spider and secondary holder, single stalk secondary holder, never used, excellent condition	200	\$125
Homemade equatorial fork mount, with complete 6-inch Byers drive, will accept 6 or 8 inch tube, RA axis is 1 1/2 inch, value is in the drive per Bob Horton	250	\$125
Criterion drive corrector with hand paddle and all connectors, works.	75	\$35
Edmund 7/8-inch focal length, fair	15	\$5
Edmund 2-3 x achromatic barlow 80's vintage	30	\$10
Pentax thread mount camera adapter	5	\$3
University Optics camera adapter for prime focus and eyepiece projection, includes t-ring of unknown brand	20	\$10
Edmund Hershel wedge	15	\$10
Edmund camera holder and solar projection screen	25	\$15
Edmund set of 5 3/4-inch setting circles bakelite, like new	15	\$10
Edmund 5 3/4-inch declination circle will fit 1 1/2 inch shaft, looks well used.	5	\$3
vintage 1953 illuminator	10	\$5
Meade 60 mm refractor, .965 eyepieces, no plastic, 70's, includes Kellner 22 mm, Kellner 9 mm crosshair, green filter, guide scope ring mounts	40	\$25
.965 star diagonal	3	\$1
3 1/4-inch coated lens, possibly Jaegers, approx f/10	75	\$40
Homemade plate camera, 3-inch portrait lens		
Homemade star diagonal		
1 1/4-inch filters, 1 red and 1 blue	10	\$5
various brass eyepieces and star diagonal of unknown origin		
Antonin Becvar Atlas of the Heavens, Atlas Coeli 1950.0 1962	10	\$3
Edmund Star and Satellite Path Finder (Planisphere) 1974-1976	2	\$1
Golden The Sky Observer's Guide, 1965	2	\$1
Rand McNally Astronomy Made Easy, William Johnson, 1931	5	\$2
NASA Apollo 11 cloth patch more than likely part of the 1st batch produced	5	\$3
16 commercial slides of various astronomical objects	1	0
Slides of Mars 1969 - commercial?	1	0
Christmas Star slides	1	0
Lunar/Solar Eclipse slides	1	0
Deep sky objects slides - commercial	1	0
Apollo 14 slides, commercial	1	0
Astronomical principles and optics illustrations slides	1	0
<b>Total Value of Items</b>	<b>1149</b>	
<b>Total member sales</b>		<b>\$622</b>

# Directions to Seagrave Memorial Observatory

## **From the Providence area:**

Take Rt. 6 West to Interstate 295 in Johnston and proceed west on Rt. 6 to Scituate. In Scituate bear right off Rt. 6 onto Rt. 101. Turn right onto Rt. 116 North. Peeptoad Road is the first left off Rt. 116.

## **From Coventry/West Warwick area:**

Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

## **From Southern Rhode Island:**

Take Interstate 95 North. Exit onto Interstate 295 North in Warwick (left exit.) Exit to Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.

## **From Northern Rhode Island:**

Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight's Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

## **From Connecticut:**

- Take Rt. 44 East to Greenville and turn right on Rt. 116 South. Turn left at Knight's Farm intersection (Rt. 116 turn left) and follow Rt. 116. Watch for Peeptoad Road on the right.
- Take Rt. 6 East toward Rhode Island; bear left on Rt. 101 East and continue to intersection with Rt. 116. Turn left; Peeptoad Road is the first left off Rt. 116.

## **From Massachusetts:**

Take Interstate 295 South (off Interstate 95 in Attleboro). Exit onto Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.



47 Peeptoad Road  
North Scituate, Rhode Island 02857