

The Skyscraper

Vol. 33 no. 1

The monthly publication of



Amateur Astronomical Society
of Rhode Island

47 PeepToad Road
North Scituate, RI 02857

www.theskyscrapers.org

President

Dave Huestis

1st Vice President

Glenn Jackson

2nd Vice President

Ted Ferneza

Secretary

Joel Cohen

Treasurer

Bill Kirby

Members at Large

Mercedes Rivero-Hudec
Jerry Jeffrey

Trustees

Richard Arnold
Jack Szelka
Marian Juskuv

Librarian

Dan Lorraine

Editor

Jim Hendrickson

See back page for directions to
Seagrave Observatory.

Submissions

Please submit items for the newsletter
by December 15 to Jim Hendrickson, 1
Sunflower Circle, North Providence, RI
02911 or email to jim@distantgalaxy.com

Email subscriptions:

To receive The Skyscraper by email, send
email with your name and address to
jim@distantgalaxy.com. Note that you
will no longer receive the newsletter by
postal mail.

© 2006 Skyscrapers, Inc.

The Skyscraper

January 2006

January Meeting with Gerry Dyck

FRIDAY, JANUARY 6TH AT NORTH SCITUATE COMMUNITY CENTER

The monthly meeting of the Skyscrapers will be held Friday January 6th at 7:30pm at the North Scituate Community Center, North Scituate RI. Our featured speaker will be long time member and friend of Skyscrapers, **Gerry Dyck**. Gerry's presentation will be in three parts: (1) Back Yard Astronomy - images about what really happens at our observatory, (2) O. M. Mitchell, Astronomer and Civil War General - a talk about the founder of Cincinnati Observatory and the mastermind of the Great Locomotive Chase, and (3) Great Moments in Astronomy - and expanded and improved version of "In Case you weren't there" with music.

DIRECTIONS TO THE COMMUNITY CENTER: From Seagrave Observatory: North Scituate Community Center is the first building on the right side going south on Rt. 116, after the intersection of Rt. 6 Bypass (also Rt. 101) and Rt. 116, in N. Scituate. Famous Pizza is on the corner of that intersection. Parking is across the street from the Community Center.

JANUARY 2006

6
FRIDAY

7:30PM **January Meeting &
Holiday Party**
North Scituate Community
Center

7
SATURDAY

7:00PM **Public Observing Night**
Seagrave Observatory,
weather permitting

14
SATURDAY

7:00PM **Public Observing Night**
Seagrave Observatory,
weather permitting

21
SATURDAY

7:00PM **Public Observing Night**
Seagrave Observatory,
weather permitting

28
SATURDAY

7:00PM **Public Observing Night**
Seagrave Observatory,
weather permitting

IN THIS ISSUE

PRESIDENT'S MESSAGE Dave Huestis	2
MY LIFE AS AN AMATEUR ASTRONOMER John Kocur	2
SKYSCRAPERS 2006 MEETING SCHEDULE Glenn Jackson	3
METEOR SHOWER PROSPECTS FOR 2006 Dave Huestis	4
2006 NEW MEXICO TRIP Dan Lorraine & Rick Lynch	4
ANNULAR SOLAR ECLIPSE EXPEDITION Gregory Shanos	5
JUST ANOTHER PLANET BOOK? Gerry Dicy	7
SECRETARY'S REPORT Joel Cohen	8
CONSTITUTION & BYLAWS	9
NASA'S SPACE PLACE: A NEW VIEW OF THE ANDROMEDA GALAXY	11

President's Message

Dave Huestis, President

Happy New Year to Everyone!

If you were unable to attend our December monthly meeting, you missed the best holiday celebration we have ever hosted.

Our Events Coordinator Dolores Rinaldi provided a great variety of food for the occasion. If you went away hungry it was your own fault. Thank you to all those members who made cash donations to help defray the cost of all the goodies. Oh yes, and thanks to John Kocur for making a wonderful pasta salad.

This celebration would not have been so successful without the help of many people. A tremendous thanks go to Dolores' food preparation crew, Eileen Szelka, Becky Cohen, Jackie Sarandrea and Tina Huestis. We couldn't have done it without their hard work.

Many other members helped to deliver food and decorations, set up tables and chairs and the audio visual equipment, as well as help with the cleanup afterwards. If I start naming names I may forget someone, so I won't do that. You know who you are. Thank you all for

making this a memorable celebration.

A well deserved thank you goes out to our speaker, Barbara Welther, for a great talk about 19th and 20th century women astronomers. We hope she visits us again in the near future.

For the beginning months of 2006, Glenn Jackson has scheduled a great lineup of speakers. On tap for January is member Gerry Dyck who will present several short entertaining talks.

Don't forget, our January, February and March meetings will be held at the North Scituate Community Center. If weather is an issue on a meeting night, those with email will be so informed. WPRO AM will carry any necessary cancellation announcement as well.

I'm still looking for a few folks to tell us their stories on "How I Became an Amateur Astronomer." Email me or see me at one of our meetings.

Included in this issue is a copy of our recently revised Bylaws, plus our Constitution. I encourage all members to read both of these documents to become familiar with our guidelines for conducting business in the Skyscraper organization.

Let's hope Mother Nature brings us more clear skies in 2006 than she has in recent years!

My Life as an Amateur Astronomer

John Kocur

I have always been fascinated by Astronomy. Growing up in Douglas, Massachusetts, I remember when I was a little boy looking up at the night sky, it seemed like there were millions of stars above. In 1962, the skies were velvet black. Light pollution didn't exist at that time in my area. I was 6 years old then.

On Feb. 20th, 1962, astronaut John Glenn became the first American to orbit the Earth. At that point, I became enthralled with outer space, rockets, stars, planets, and the possibility of extraterrestrial life. In 1967, I purchased a copy of *Know the Stars* by H.A. Rey. I absolutely loved that book and still have it today. I pointed my first pair of binoculars, with plastic lenses, at the brightest star I could find overhead and wondered if a boy on a planet around that star might be looking back at my solar system.

Well, 1969 rolls around and I was absolutely glued to the television watching live as Neil Armstrong and Buzz Aldrin landed on the Moon. I was thrilled to say the least. My brother and I had built a Saturn V model



The Skyscrapers trip to Arizona, Meteor Crater.

rocket. It stood over 3 ft. tall. We learned about the different components and how they worked to help the astronauts accomplish their mission.

Later on, my interest in science grew through high school and college. My focus was on biology but I still had an interest in astronomy. While I was attending UMass, Amherst, I took a course in astronomy. I learned about types of stars, galaxies, nebulae, cosmology, and various other astronomical facts. The class was very enjoyable and interesting, but

I didn't know where any of these fantastic deep sky astronomical objects were located. After graduating from UMass, my family and career took priority.

Today, I am working as a Surgical Technician in the Operating Room at a local hospital.

On Christmas, 1995, my wife gave me a pair of Tasco 7 X 35 binoculars as a gift. The first object I looked at was the Moon. It was a beautiful sight, but quite familiar. Next I pointed it at Jupiter. I was astonished at what I saw. There was Jupiter with four moons around it, 2 on each side, in line with the planet. Wow, I didn't think a small pair of binoculars could resolve those moons!

Late March, 1996, comet Hyakutake appeared. I grabbed my binoculars and brought my daughter Lindsey, who was 9 years old at the time, out to the backyard. There it was, suspended overhead

displaying a thin wispy tail. I held the binoculars for my daughter and helped her find the comet. "I see it, I see it!" she shouted, jumping up and down. I was so happy she was able to experience it. That was a moment I will never forget, our first comet. Talk about going full circle 29 years later, it's amazing. March, 1997, Comet Hale-Bopp arrived. It was a magnificent sight in the northern sky, a visitor that traveled billions of miles. I wished I had a telescope.

June, 1997, the Astronomy bug bit again. One day as I was shopping, I passed a magazine rack and a copy of Astronomy Magazine caught my eye. There, on the cover, was a picture of M104, the Sombrero Galaxy. I was hooked. Captivated by all the fantastic astrophotography, the endless variety of scopes, and the idea that I could see a lot of these objects from my backyard, I needed to know more. I decided I was

Continued on page 7

Skyscrapers 2006 Meeting Schedule

Glenn Jackson, 1st Vice President

MEETING DATE	SPEAKER	TOPIC
JANUARY 6 North Scituate Community Center	Gerry Dyck Long-time Skyscrapers member	Variety: O. M. Mitchell , Astronomer and Civil War General; Great Moments in Astronomy; Backyard Astronomy
February 3 North Scituate Community Center	Ron Dantowitz Clay Center, Brookline MA	Satellite Laser Imaging Project
March 3 North Scituate Community Center	Dr. Steven D'Hondt University Rhode Island	Principal Investigator NASA Astrobiology Institute
April 7 Annual Meeting Seagrave Observatory	Arthur Upgren Directory, Van Vleck Observatory Wesleyan University	Many Skies ... an Alternative History. That is, how history might be changed if we had three moons or rings like Saturn
May TBA Seagrave Observatory	Dr. George Greenstein Department of Astronomy Amherst College	"Portraits of Discovery: Profiles in Scientific Genius"
June 2 Seagrave Observatory	Dr. Miguel Morales Harvard-Smithsonian Center for Astrophysics	Radio observations of the early universe. "Seeing the First Galaxies" peering through the primeval fog with radio light.

Meteor Shower Prospects for 2006

Dave Huestis

Once again it looks like the major meteor showers for 2006 won't be events that we would write home about. Unfortunately the Moon will interfere with most of them except the upcoming January Quadrantids, the Delta Aquarids and Capricornids of late July, and the October Orionids. And then, who knows what the weather will bring during the peak of those shooting star displays? All we can do is wait and hope Mother Nature is more kind to us stargazers this year.

And unless a new comet is suddenly discovered, there is only one very special astronomical event for us to observe in 2006. It's a transit of Mercury across the face of the Sun. On November 8, 2006, planet Mercury will pass between the Earth and the Sun. With specially filtered telescopes, astronomers will see the tiny disk of Mercury silhouetted against the solar disk. Here in New England the transit will begin just after 2:00 pm and will still be in progress as the sun sets around 4:30 pm. Folks farther west of our location will be able to observe it for a longer duration. From the US west coast on into the central Pacific, astronomers will be able to watch the entire five-hour transit.

For now, I look forward to the first major meteor shower of 2006, the Quadrantids. This display is always best after midnight, and this year a waxing crescent Moon sets very early in the evening. Unfortunately the predicted peak of activity is during daylight hours on the 3rd for us in New England. So you should try observing on the night of January 2-3 and 3-4.

If the weather cooperates you will see bright, blue and fast (25.5 miles per second) meteors as they blaze more than halfway across the sky. A small percentage of them leave persistent dust trains in the atmosphere. You can really start observing any time, but the best views will be between midnight and dawn. Begin by looking toward the

northeastern sky. As the morning progresses, begin scanning a little more westward as the point in the sky where the meteors appear to radiate from will rise and arc across the heavens.

Just pick a dark sky location away from annoying lights. The Quads do have a sharp peak, sometimes lasting only an hour or two. So remember to stay warm and alert. If you fall asleep out there you may not only miss some splendid shooting stars, but your loved ones may have to thaw you out afterwards! Enjoy the show (hopefully not snow!).

Clip and save the 2006 meteor shower prospects chart below and use it to plan your observing schedule for the coming year. Even despite the interfering moonlight for many of them, if the weather promises to be favorable for a specific display, by all means take advantage of clear skies to catch a glimpse of a meteor or two. You never know when you will see one again (remember the bad luck we had during 2005).

Good luck and stay warm.

Happy New Year and keep your eyes to the skies.

DATE	SHOWER	MOON PHASE
January 2-4	Quadrantids	Waxing Crescent
April 21-22	Lyrids	Last Quarter
May 5-6	Eta Aquarids	First Quarter
June 14-16	Lyrids	Waxing Gibbous
July 27-28	Delta Aquarids	Waxing Crescent
July 28-29	Capricornids	Waxing Crescent
August 12-13	Perseids	Waning Gibbous
October 20-21	Orionids	New Moon
November 16-17	Leonids	Waning Crescent
December 13-14	Geminids	Waning Crescent

2006 New Mexico Trip

Dan Lorraine and Rick Lynch are planning this year's Skyscrapers trip for the beginning of May. Possible sites to visit include Apache Point, VLA, New Mexico Museum of Space History and the Clyde Tombaugh Planetarium and IMax Theater, LodeStar

Astronomy Center, Roswell, Santa Fe, Chaco Canyon, Petroglyph National Monument, and Zuni Pueblo. If interested please contact Dan (DWLorraine@aol.com) or Rick (hstrclrsch@aol.com).

Annular Solar Eclipse Expedition

MADRID, SPAIN, OCT. 1, 2005 - OCT. 8, 2005

Gregory Shanos

OCT 1st 2005

Departed Tampa International Airport at 10:00am. Arrived at Miami International Airport an hour later at 11:00am. Had a 7 hour layover in Miami. Met with Dave and Wendy Levy at 4:30pm. Found out that we were the only participants in the group! An up-close and personal tour to Spain with famed Comet Hunter Dave Levy. Departed for Madrid at Gate 44 American Airlines at 6:15pm. However the plane flight was delayed for an hour. Airborne at 7:30pm. Flight time was 8h 30m to Madrid.

OCT 2ND, 2005

Arrived in Madrid at 10:00am local time. The Levy's baggage was lost in transit. Arrived at the Hotel Urban a five star ultra-modern hotel in downtown Madrid. Klipsi was at the hotel lobby at noon to greet us. See www.klipsi.com for more info on this incredible man. Klipsi had his own crew of eclipse chasers. Approx 15 individuals from France, Germany and the States. We then proceeded by foot to locate an observing site. Walking through the city of Madrid was a wonderful experience. The architecture of the buildings were incredible. Ate lunch at a square called Calle Mayor. The food was excellent at this outdoor cafe. We then continued our quest for an observing site. We found one however there were many high buildings in the southeast so this was a scratch. Jet lag was setting in so we attempted to flag a taxi. No taxi ever stopped thus we slowly headed back by foot to the hotel. With map in hand we eventually made it back to the hotel. We decided to use Klipsi's alternate site. The taxi would take us there tomorrow. We slept at 8pm local time. Had a restful sleep this evening.

OCT 3 2005, ECLIPSE DAY!

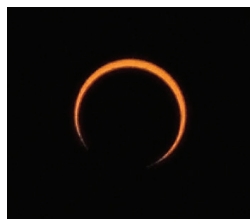
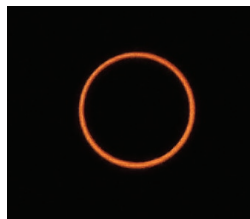
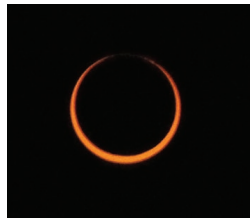
Woke up at 6:30am. The weather conditions were perfect clear and cool not a cloud in the sky! Went downstairs for breakfast. Dave Levy informed me that he found a new observing site. The top floor of the hotel! This was suggested by the hotel staff. I therefore took the elevator to the top floor and wow what a wonderful observing site. Dave took a taxi to inform Klipsi that we will be observing from the roof

of the hotel. Klipsi was no where to be found at this alternate site. Dave made it back 10 minutes before first contact. First contact occurred at 9:40:42am local time (7h 40m 42s UT). The sight of first notch is always a good sign that you are at the right location. The notch started due north on the sun and proceeded downwards. The Annular Ring started to form at 10:56:50am (8h 56m 50s UT) and the ring closed at 10:59:50 am (8h 59m 50s UT) By this time we had the entire guest list from the hotel up on the roof. It was getting very crowded. Many of the hotel guests were British and French. The eclipse ended at 12:23:34 pm local time or (10h 23m 34s UT). Dave Levy then interviewed my wife and I for the Lets Talk Stars Internet Radio Show. Overall this was an incredible experience. We then walked back to the Calle Mayor for a wonderful lunch. Did some souvenir shopping on the way back. Headed back to the hotel at 6:00pm. The Levy's baggage was now at the hotel. Found out I had free Internet access. Read my AOL email for kicks. Asleep at 9:00pm. I did not have a restful sleep this evening.

OCT 4, 2005

Woke up at 7:30pm. A short walk to our bus stop site for a half day tour of Madrid. First stop was the Palace of Charles III. The palace was magnificent. This palace was used only to entertain guests not as living quarters. Each room was large and magnificent.

Second stop was the Museum del Prado. This was a very large art museum with original paintings from 16 th & 17th century European artists. Most of the paintings were of a religious nature. You could take photos of the paintings with no flash. I took several photos of my favorite paintings with my Nikon D70 digital camera. The tour completed at 1:00pm. We stopped at Mc Donald's for lunch. Surprisingly the food was delicious. Returned to the hotel. Dave Levy downloaded my best digital photographs into his computer. He then burned a CD of his best eclipse photos. We then rested up for a Flamingo dinner show at 8:30pm. I slept for a couple of hours and then prepared for our exciting night out. We boarded the bus and had a wonderful evening tour of the



city. We arrived at the show -The club was named Florida Park, ironic since I now live in Florida. The show was fantastic. There was traditional Spanish music and dancing. The dancing was incredible. You were not allowed to videotape however I was able to obtain some video footage of the dancers. The show concluded at 11:30pm. Arrived back at the Hotel Urban at 1:00am. Fell asleep at 1:30am.

OCT 5, 2005

Woke up at 5:30am. Checked out of the hotel and took a taxi to the airport at 6:30am. Arrived at the airport at 7:00am. After a two hour layover, the airplane took off for Barcelona. I was fortunate to have a window seat. I therefore videotaped the terrain of Spain during the hour long flight. Arrived at Barcelona at 9:00am. The weather was completely overcast. A taxi cab drove us to the Hotel Fira Palace, a four star hotel. This hotel was excellent however it was far from the center of town. Ate at the Canota Restaurant- had lamb chops. Absolutely delicious. Walked the Streets of Barcelona. Retired to the hotel for the night. Slept well this evening.

OCT 6, 2005

Arrived at Pullmantur Travel for a bus tour of the City of Barcelona. Our first stop was a famous Cathedral. The name escapes me at the moment. The Cathedral was being restored due to the effects of city pollution on the stone of the church. The inside was incredible. The architecture and stone religious figurines were of impeccable design. Our next stop was the Olympic Stadium where the 1992 Olympics were held. We spent the most time at a place called the Spanish Village. This is the "Universal Studio's" of Spain. This Spanish Village is a reproduction of all the various towns of Spain in one open area. It was built in 1929 for an International Exhibition. Now the Spaniards use it as a disco, for weddings, conferences and other social engagements. Most of the buildings have no inside to them. Just the outside to show the architecture of the time. We had a nice lunch at the Spanish Village. We then visited a UNESCO site called the Park Guell. This is a park that was designed by the famous architect Antonio Gaudi. Check out UNESCO for a complete description of this incredible place. Then we proceeded to another church called the Sangrata Familia. This church is currently being built and was an original design of Gaudi himself. The church mimics the old time cathedrals with some very modern twists. The church is set to be completed in 2010. We then proceeded to the Picasso Museum. I was unable to photograph or video anything in this

museum. I was impressed with the sheer volume of paintings Picasso did in his lifetime. This was our last stop and now back to the hotel. Denise was not very hungry, so I went to Dinner with the Levy's at our now favorite Restaurant. During the Dinner Dave Levy asked if he could interview me for the Lets Talk Stars internet radio show. I was honored. After dinner, Dave interviewed me regarding my experiences in Astronomy. I stated how it all began with Halley's Comet, Skyscrapers Inc, etc. Listen to the broadcast at www.LetsTalkStars.com for the complete presentation. After the interview, went back to my room for some much needed sleep. Another day awaits tomorrow...

OCT 7, 2005

Arrived at Pullmantur Travel for a day tour of the Mountains of Montserrat. Montserrat means serrated mountain since the mountain resembles a serrated knife blade. At the base of the mountain was a magnificent church. The area is also a major religious center. We hiked the mountain on a rather easy to walk trail. The view of these mountains was spectacular-breathtaking. We then returned to the base of the mountain to hear a boy's choir at the church. The church was incredibly crowded. We were not allowed to videotape however I was able to obtain some precious footage through the crowds. Returned back to the bus by 1:30pm. Returned to Barcelona. Heard that the Hard Rock Cafe was only 4 blocks from Pullmantur, thus we decided to find the Hard Rock. I love collecting Polo (Gulf) shirts from various cities from around the world. After getting lost and asking directions from some locals, we eventually found The Hard Rock Café. Purchased the much needed Polo shirts then ate at a nearby McDonald's. We next took a cab back to our hotel the Fira Palace. Reviewed my videos and packed for our departure to the States tomorrow.

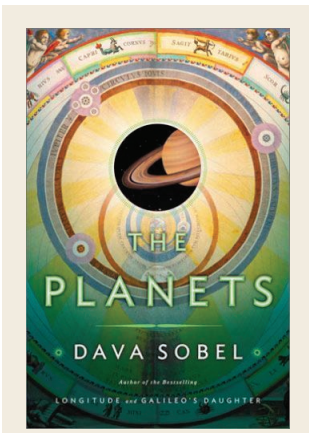
OCT 8, 2005.

Slept at midnight and woke up at 4:00am for a 4:45am pickup to the airport. Plane leaves Barcelona to Madrid at 7:00am. Slept the entire one hour trip. Customs check then to our gate. Departed Madrid at 11:00 am local time. A seven hour trans continental flight across the Atlantic Ocean lay ahead. Arrived at Miami, Florida at 3:50pm local time. Had to recheck our baggage since the flight number was wrong. Departed for Tampa at 6:00pm. Arrived in Tampa at 7:05pm. Finally arrived home at 9:30pm. This concludes our Annular Eclipse Excursion to Spain.

Just Another Planet Book?

A BOOK REVIEW OF *PLANETS* BY DAVA SOBEL

Gerald Dyck



Dava Sobel, *The Planets*, Viking Press, Hardcover: 288 pages, 2005, ISBN: 0670034460

When our local town librarian called my attention to a new addition to our library, I wondered if it were just another planet book by a non planetary scientist. But I checked it out and began to read. After a few pages I was drawn in enough to finish the book in a few sittings and was glad I had taken the time to do so.

Dava Sobel, the author of *Longitude* and *Galileo's Daughter*, begins her story

by recounting her own childhood fascination with the planets. Then she devotes a chapter to each of the planets, though Uranus and Neptune share a chapter. Sun and Moon also get a chapter each, so the book might have been entitled *The Solar System*.

She finds an interesting and unexpected vantage point for each celestial orb. The subject of creation leads into the birth of the Sun. From the background of Greek and Roman mythology she introduces Mercury, the messenger to the gods. The Venus chapter is called "Beauty" and includes the mildly interesting coincidence that each evening or morning apparition of Venus (goddess of love) lasts for nine months, equal to the human gestation period. A brief history of geography is the backdrop for the chapter devoted to Earth. Lunacy is paired with her musings on the Moon.

My Life as an Amateur Astronomer

continued from page 3

going to learn the sky with binoculars. Upgrading to Nikon 10 X 50's, I used an old Apple computer to log objects that I observed starting with M45, the Pleiades, then M42, the Orion Nebula and so on.

After studying the sky for a whole year, I decided to get my first real telescope. The Meade ETX 90 spotting scope was my scope of choice. Since it was just an optical tube, no drive motors or computer,

The Mars chapter is related from the perspective of the Martian meteorite AH84001. That chunk of rock, found on an Antarctic glacier, tells its instructive and violent life story. Author Sobel reminds her readers that before the split between astrology and astronomy many notable scientists (Johannes Kepler, for one) practiced on both sides of the heavenly "fence". Then she casts a fanciful horoscope for the Galileo probe to learn how its astronomical fate matches its astrological prediction. A colorful picture of Jupiter is painted in the process. The story of Gustav Holst's famous planetary composition ushers in the description of Saturn and the most recent Cassini and Huygens missions.

One of the best chapters for me was the story of Uranus and Neptune, told in the form of an imaginary letter from Caroline Herschel to Maria Mitchell. Miss Herschel congratulates Miss Mitchell on her comet discovery, then tells the story of the Uranian and Neptunian discoveries from her unique perspective. Well done. She points out the curious fact that the orbital period of Uranus matches the life span of its discoverer - 83.7 years.

Finally, the whole UFO phenomenon, the dreams of the aristocratic Bostonian, Lowell, and the perseverance of the Kansas farm boy are woven together to tell of Pluto. It includes a succinct discussion of the planet or TNO status of our Uncle Clyde's discovery.

I am grateful to our librarian for pointing this book out to me. It provided a couple of hours of good reading. But I probably will not invest the \$24.95 to keep a copy on my shelves.

I was forced to locate objects manually using star charts. To this day I am so glad I took that route. This gave me a real understanding of the night sky which allows me to point out objects to people with ease. In 1999 I started attending star parties beginning with the Connecticut Star Party, CSP9. I learned so much and met many wonderful people at these parties.

Since the astronomy bug has bitten me so

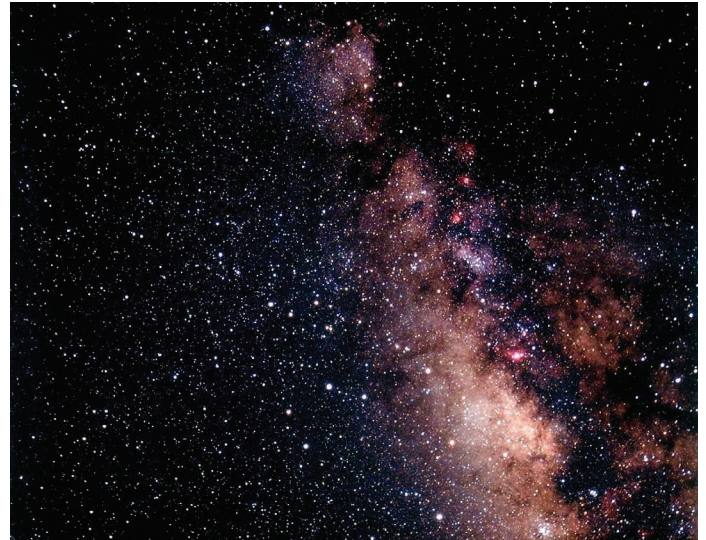
many times, I started to develop a condition known as "aperture fever". The only cure was to build my own 8 inch f/6 reflecting telescope. I spent 3 months researching the internet, books, and magazines. With all the information I had gathered, I felt confident enough to begin construction in July of 2002. My new telescope saw first light on Sept 5, 2002, the day before CSP12. I was very pleased with the results. I was now able to search for DSO's, objects beyond the reach of my 90mm Maksutov.

Seeking more knowledge and interested in joining a local astronomy club, I became a member of The Skyscrapers in 2003. The Skyscrapers is the best amateur astronomy club in all of New England. The members are the reason why it's the best. I feel welcome and look forward to each and every meeting. The guest speakers at the meetings are topnotch and AstroAssembly is a wonderful event, not to be missed. The trips to White Mountain, Calif., and Arizona were outstanding. I would have never made those trips on my own. They were experiences of a lifetime. All this is possible because of the hard working, dedicated officers and members of this fine organization. The friends I have made at The Skyscrapers and star parties will always be close to my heart.

So what's in store for the future? More trips,

more star parties, and astrophotography, of course. In 2006 my telescope will be computer controlled which will allow me to take long exposure wide field and deep sky shots. The challenges of digital imaging and processing will keep me busy. And as always, I want to share my knowledge and experience with fellow amateur astronomers, and learn from them as well. That's what being a member of an astronomy club is all about. The sky's the limit.

Stay tuned.



The Milky Way from White Mountain, CA. Photo by John Kocur, Al Hall, and Dick Parker

Secretary's Report

Joel Cohen, Secretary

Monthly Meeting

December 3, 2005, Scituate Community Center

Meeting Start - 7:48 PM

Secretary's Report - accepted as published with corrections re motion from last month's meeting (the motion was not passed as the vote needs to come in this evenings meeting)

Treasurer's Report - accepted as read

Trustee's Report - Jack Szelka asked for volunteers for Public Nights for upcoming Saturdays other than the Holidays.

Librarian's Report - none

Historian's Report - none

Upcoming Speakers - January, Jerry Dyck; February, Ron Dantrowitz; April, Dr. Arthur Upgren; March, Dr. George Greenstein

New Business - none

Old Business - A motion to change the dues structure for newly applying members passed unanimously. A motion to appropriate \$905.00 (per Bob Horton, the charge from Meade

for an insurance plan which covers maintenance on both Meade Telescopes) was passed unanimously.

Steve Siok asked if there were a punch list for problems to be addressed. Bob mentioned the charges included shipping and containers.

Good of the Organization - Ted Ferneza mentioned the Star Party for the Greenville Boy Scouts on December 7th. Steve Siok mentioned the exhibit at the Peabody Museum on Yale Campus in New Haven, CT. On display are artifacts discovered at Machu Pichu (which are now in dispute by the government of Peru). Dave Huestis thanked Bill Guca for his recently published article in the Skyscraper and asked others to contribute as well. Meeting Cancellation Notices will be broadcast on WPRO AM. Dave also thanked the folks who helped to pick up the foods and decoration, then set up and prepare the wonderful holiday repast .

Adjournment - 8:10 PM

Following adjournment everyone enjoyed the fine assortment of special refreshments set out for the Holiday Meeting. Dr. Barbara Wether enchanted us with a history of the women astronomers who had worked at the Harvard Center for Astrophysics between 1890 and 1950. Dr. Wether's talk focused on noted astronomer and star cataloguer, Annie Jump Cannon.

CONSTITUTION

ARTICLE I: NAME

The name of this Society shall be "Skyscrapers, Inc. (Amateur Astronomical Society of Rhode Island)."

ARTICLE II: OBJECT

The object of this Society shall be to educate the general public and membership on matters pertaining to astronomy. It shall be an educational, nonprofit organization.

ARTICLE III: LEGAL STATUS

This Society is incorporated as a non-business corporation under the laws of the State of Rhode Island.



Photo by Dan Lorraine

ARTICLE IV: MEMBERSHIP

- §1 Membership in this Society shall be of five classes: Junior, Senior, Contributing, Senior Citizen and Honorary.
- §2 An applicant for junior, senior, contributing or senior citizen membership shall submit the standard form of application together with dues as specified in Article I, Section 2, of the By-Laws, shall be proposed by an existing member, and shall become a member upon receiving a favorable majority vote at a regular meeting of the Society.
- §3 Junior members shall be between 13 and 17 years of age both inclusive, and upon reaching 18 years of age shall automatically become senior members without payment of additional dues for the dues year in which this occurs. Junior members shall be entitled to all the privileges of senior members except those of voting and holding office.
- §4 Senior members and senior citizen members shall have the privilege of voting and holding office. Senior members must be 18 years of age or older; senior citizen members must be 65 years of age or older.
- §5 Contributing members shall be senior members who pay the additional dues prescribed by the By-Laws. They shall be entitled to all the privileges of senior members.

- §6 Honorary membership may be conferred upon any person for unusual and outstanding accomplishment in science. It may be conferred upon a non-member for outstanding contribution to the Society. Honorary membership is conferred by unanimous vote of those present at any Annual Meeting, the name having been proposed at a previous regular meeting of the Society. An honorary member shall have all the privileges of a senior member except those of voting and holding office. This membership shall be for life and no dues shall be required.

ARTICLE V: OFFICERS

- §1 The officers shall consist of a President, First Vice-President, Second Vice-President, Secretary and Treasurer. Their duties shall be such as are implied by their respective titles, and as prescribed by the By-Laws.
- §2 The officers shall be elected by ballot at the Annual Meeting for a term of one year or until their successors are elected and take office. A majority vote shall be required to elect.
- §3 No member shall hold the same office for more than two consecutive terms.
- §4 Vacancies occurring in office may be filled by appointment of the President until successors are elected and take office.

ARTICLE VI: MEETINGS

- §1 The Annual Meeting shall be held in April of each year at the call of the President. The membership shall be notified 10 days in advance thereof.
- §2 Regular meetings shall be held monthly at the call of the President
- §3 Special meetings may be called by the President or on a petition directed to the Executive committee and signed by any 10 members. The call shall state the pending business and no other business shall be transacted. The call shall be mailed to the membership at least 5 days in advance of the special meeting.

ARTICLE VII: EXECUTIVE COMMITTEE

There shall be an Executive Committee, whose membership and powers shall be as prescribed by the By-Laws.

ARTICLE VIII: BOARD OF TRUSTEES

There shall be a Board of Trustees, whose membership and powers shall be as prescribed by the By-Laws.

ARTICLE IX: AMENDMENTS

The Constitution and By-Laws may be amended at any regular meeting by two-thirds (2/3) vote of all senior and contributing members present, provided said amendment has been presented in writing and read at the previous regular meeting, a notice incorporating said amendment has been mailed to the membership

BYLAWS

ARTICLE I: FISCAL YEAR & DUES

- §1 The fiscal year shall be from April 1 through the following March 31. The dues year shall be the same as fiscal year.
- §2 Dues are payable in April for the dues year then beginning. The annual dues shall be: \$10.00 for Junior Members; \$40.00 for Members; \$50.00 for Family Members; and \$10.00 for Senior Citizen Members. Persons applying for membership during the months of April through December pay the above stated annual dues for the current fiscal year (April – March). Persons applying for membership during the months of January through March pay the above stated annual dues, but their membership extends through the next fiscal year. Persons making donations over and above the foregoing amounts shall be called Contributing Members. Four distinguished categories of Contributing Members shall be designated: Sponsors (\$60); Supporters (\$100); Patrons (\$250); and Benefactors (\$500).
- §3 The Secretary may, with the approval of the Executive Committee, drop from membership any member who is three months or more in arrears.

ARTICLE II: OFFICERS

- §1 The regular term of all Officers, Members-at-Large and Junior Trustee shall commence at the adjournment of the May meeting.
- §2 The President may at any time appoint such additional officers, chairmen and committees as may be required. The terms of all of these (except, as appropriate, special committees) shall expire with the term of the appointing President. The President shall be, ex officio, a member of all committees.
- §3 In the absence of the President the First Vice-President shall assume his duties. In the absence of both, second Vice-President shall assume the duties of the President.
- §4 The Secretary shall:
- 1 Take the minutes of all meetings, regular, special, Annual and Executive.
 - 2 Maintain an accurate, classified list of the membership of the Society.
 - 3 Notify applicants for membership of their election or rejection, unless they were present at the meeting where this occurred.
 - 4 If required by the President, notify all additional officers, chairmen and committees of their appointment.
 - 5 Send all required notices to the membership.
 - 6 In general, conduct the correspondence of the Society.
 - 7 Have custody of the records and archives of the Society.
- §5 The Treasurer shall:
- 1 Pay on his/her own authority any routine bills for periodic operating expenses.
 - 2 Pay on the authority of the Society or Executive Committee any bills.
 - 3 Keep an itemized account of all receipts and disbursements and submit a written report of the same at each regular meeting.
 - 4 Submit an annual report of all receipts and disbursements at the Annual Meeting. An auditor appointed by the President shall audit this report, and the report of the auditor shall be submitted at the Annual Meeting.
 - 5 Have custody of the monies, securities and investments of the Society, together with the financial records.

ARTICLE III: EXECUTIVE COMMITTEE

- §1 The Executive Committee shall consist of the President, First Vice-President, Second Vice-President, Secretary, Treasurer and two Members-at-Large.
- §2 The Members-at-Large shall be elected at the Annual Meeting, and their terms shall be the same as those of the officers.
- §3 The powers of the Executive Committee shall be: 1 To advise the President and assist him in carrying out the duties of his office. 2 To take any action that might be taken by the Society, unless such action is reserved to the Society at Large in the Constitution or By-Laws.
- §4 The Executive Committee shall meet at the call of the President or on application of any two members. The President shall be, ex officio, chairman.

ARTICLE IV: BOARD OF TRUSTEES

- §1 The Board of Trustees shall consist of three Trustees, the term of each to be three years. No Trustee shall serve two consecutive terms. One Trustee shall be elected each year at the Annual Meeting. The Trustee with the longest continuous service shall be the Senior Trustee. Vacancies occurring in office shall be filled by special election to be called by the President with at least 10 days notice to the membership.
- §2 The Board of Trustees shall have custody of the grounds, structures and equipment belonging to the Society. They may at any time establish or amend rules for the use of said grounds, structures and equipment. They may at any time grant or withdraw permission to individuals to use the Alvan Clark telescope.
- §3 The Board of Trustees shall be responsible to the Society. Decisions of the Board of Trustees may also be overruled by five members of the Executive Committee, all voting in the affirmative.

ARTICLE V: QUORUM

Twelve (12) senior and contributing members shall constitute a quorum for the transaction of business at any meeting as defined in Article VI of The Constitution. At no time shall the lack of a quorum prevent those present from proceeding with the program of the day or evening.

ARTICLE VI RULES OF ORDER

The rules contained in 'Robert's Rules Of Order, Revised' shall govern the Society in all cases to which they are applicable and in which they are not inconsistent with the Constitution and By-Laws.

ARTICLE VII: DISSOLUTION

Upon dissolution of the corporation, the Board of Trustees shall after paying or making provisions for the payment of all liabilities of the corporation, dispose of all of the assets of the corporation in such a manner as to comply with, or to such organization or organizations organized and operated exclusively under, Section 501(C)(3) of the Internal Revenue Code of 1954.

A New View of the Andromeda Galaxy

By Dr. Tony Phillips and Patrick L. Barry

This is a good time of year to see the Andromeda galaxy. When the sun sets and the sky fades to black, Andromeda materializes high in the eastern sky. You can find it with your unaided eye. At first glance, it looks like a very dim, fuzzy comet, wider than the full moon. Upon closer inspection through a backyard telescope—wow! It's a beautiful spiral galaxy.

At a distance of "only" 2 million light-years, Andromeda is the nearest big galaxy to the Milky Way, and astronomers know it better than any other.

The swirling shape of Andromeda is utterly familiar.

Not anymore. A space telescope named GALEX has captured a new and different view of Andromeda. According to GALEX, Andromeda is not a spiral but a ring.

GALEX is the "Galaxy Evolution Explorer," an ultraviolet telescope launched by NASA in 2003. Its mission is to learn how galaxies are born and how they change with age. GALEX's ability to see ultraviolet (UV) light is crucial; UV radiation comes from newborn stars, so UV images of galaxies reveal star birth—the central process of galaxy evolution.

GALEX's sensitivity to UV is why Andromeda looks different. To the human eye (or to an ordinary visible-light telescope), Andromeda remains its usual self: a vast whirlpool of stars, all ages and all sizes. To



The GALEX telescope took this UV image of the Andromeda galaxy (M31), revealing a surprising shape not apparent in visible light.

GALEX, Andromeda is defined by its youngest, hottest stars. They are concentrated in the galaxy's core and scattered around a vast ring some 150,000 light years in diameter. It's utterly unfamiliar.

"Looking at familiar galaxies with a new wavelength, UV, allows us to get a better understanding of the processes affecting their evolution," says Samuel Boissier, a member of the GALEX team at the Observatories of the Carnegie Institution of Washington.

Beyond Andromeda lies a whole universe of galaxies—spirals, ellipticals and irregulars,

giants and dwarfs, each with its own surprising patterns of star formation. To discover those patterns, GALEX has imaged hundreds of nearby galaxies. Only a few, such as Andromeda, have been analyzed in complete detail. "We still have a lot of work to do," says Boissier, enthusiastically.

GALEX has photographed an even greater number of distant galaxies—"some as far away as 10 billion light-years," Boissier adds—to measure how the rate of new star formation has changed over the universe's long history. Contained in those terabytes of data is our universe's "life story." Unraveling it will keep scientists busy for years to come.

For more about GALEX, visit www.galex.caltech.edu. Kids can see how to make a galactic art project at spaceplace.nasa.gov/en/kids/galex/art.shtml.



Skyscrapers December meeting & holiday party at the North Scituate Community Center, December 3. Barbara Welther gave a talk about early 20th century women astronomers at Harvard College Observatory. Photos by John Kocur.

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, RI 02857