



The Orion Nebula: SBIG 1001E on Meade 16" SCT at Barus and Holley Observatory; L = 12 exposures x 5 seconds each, binned 1x1; R,G,B = 3 exposures each x 5 seconds each, binned 2x2; 27 exposures total, total exposure time = 2.25 minutes. Images combined and processed using Maxim DL. Photo by Bob Horton.

The Skyscraper

Vol. 35 No. 4 April 2008

SKYSCRAPERS, INC • Amateur Astronomical Society Of Rhode Island • 47 Peepetoad Road North Scituate, RI 02857 • www.theSkyscrapers.org

April Meeting with Dr. Alan Guth Friday, April 4 at Seagrave Memorial Observatory

Dr. Alan Guth, Professor of Physics at the Massachusetts Institute of Technology, is best known for the “inflationary” theory of cosmology in which many features of our universe, including how it came to be so uniform and why it began so close to the critical density can be explained by. Dr. Guth is the author of *The Inflationary Universe, the Quest for a New Theory of Cosmic*

Origins, Alan Guth, A Golden Age of Cosmology and other publications. He will be presenting a talk entitled “Inflationary Cosmology.”

For the April meeting we will be returning to Seagrave Observatory. Elections will be held at the April meeting and membership renewals are due. An elections ballot and renewal form are included in the back of this issue.

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April 2008

4

Friday

7:30 pm Annual Meeting with Dr. Alan Guth

Seagrave Memorial Observatory

5

Saturday

8:00 pm Public Observing Night

Seagrave Memorial Observatory, weather permitting

12

Saturday

8:00 pm Public Observing Night

Seagrave Memorial Observatory, weather permitting

19

Saturday

8:00 pm Public Observing Night

Seagrave Memorial Observatory, weather permitting

26

Saturday

8:00 pm Public Observing Night

Seagrave Memorial Observatory, weather permitting

Join Skyscrapers, Inc. in celebrating
National Astronomy Day
Saturday May 10th

Daytime Programs

at Scituate Community Green

10 am - 4 pm • Solar viewing, Demonstrations

Evening Programs

at Seagrave Memorial Observatory

6 pm • Workshop: Make a Star Wheel

7 pm • Presentation: “Mysteries of the Night Sky”

6 pm - 8 pm • Seagrave Observatory Historical Walk

8 pm • Public Observing

President's Message

Glenn Jackson

The Messier Marathon Challenge is on. The only thing that we need is a break in the weather. I have been observing twice this month, both nights were cut short by the clouds rolling in. I encourage all to get the telescopes out and enjoy any break in the weather that we might be graced with. Send in your log to be included in the minutes of the April 4th meeting and to receive a certificate of participation. Your observations and participation will be preserved for all future generations of Skyscrapers.

The Skyscrapers annual business meeting will take place this month April 4th starting at 7:30. The significance of this meeting is that new officers for the coming year will be voted into office, the proposed budget for the coming year will be discussed and approved, and our new membership year begins. The slate of officers has been presented to the membership and the proposed budget has been amended and presented to the membership. A vote on both issues will take place at the upcoming meeting. A report from Bob Napier and Dave Huestis on the status of the financial books of the society is also anticipated.

Last year we had a total of 96 members in all categories. Our goal this year is to have 100 members in all categories. By the time that this newsletter reaches you, you should have received a membership mailing.

The membership application should be completed and mailed to Jim Crawford or brought to the April 4th meeting. The one significant change in membership this year is the ordering of subscriptions to Sky and Telescope and Astronomy. As you know if you order your magazine subscriptions through Skyscrapers you receive a significant discount. If you plan on this option you must pay for your renewal, regardless of the renewal date, at the time you pay your membership. You do have the option of waiting until your subscriptions run out but you will have to re-new on your own. To receive the discounted rate you will have to get your special membership number from Jim Crawford and send your funds to the appropriate magazine on your own.

Star parties offered by Skyscrapers continue to be popular. We are receiving request on a regular basis. The weather has not been cooperating but that will change for the good before long. The two star parties that we were able to squeak in between the clouds were very successful and enjoyed by all who attended. Check your calendar and come out and support our Public Out Reach Programs. We have had as many as 15 members volunteer for these star parties, come be a part of the camaraderie. I look forward to seeing you there.

Star Party Calendar

Wednesday March 26th	7:30pm	Portsmouth Middle School	
Saturday April 4th	8:00pm	Seagrave	Troop 33 North Attleboro
Tuesday April 8th (rain date April 9th)	7:30pm	Chaffee Athletic Fields at Briggs Farm	Cranston High School
Thursday April 10	7:30pm	Seagrave	Christian Home Educators
Friday April 11	8:00pm	Steere Farm School	
Monday April 14	7:30pm	Seagrave	Boy Scouts

17th Annual North East Astronomy Forum & Telescope Show

April 26th & 27th, Rockland Community College, Suffern, New York.

White Mountain Observing Trip

New Dates: July 26th - August 2nd Still accepting reservations under the best skies in the USA.



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 by April 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.

April Lyrids Meteor Shower

Dave Huestis

I hope many of you took advantage of the clear night sky back on February 20 to observe the total lunar eclipse. Despite a dire weather forecast, the partial phase before totality was only hampered by occasional scattered clouds. By the time of totality the clouds disappeared and only a hazy sky prevailed.

The eclipsed Moon was still quite bright. It showed subtle hues of red and orange, but did not vanish from the sky. The Moon was a beautiful sight to see nestled within the stars of Leo, with bright Regulus shining above and even brighter Saturn to the lower left.

More than 200 folks braved the chilly weather and visited Ladd Observatory in Providence to catch a glimpse of this wonderful lunar eclipse through a variety of telescopes and binoculars.

There is one event I would like you to view during early April, and that's the passage of the Moon through the Pleiades star cluster. This pattern of stars is also known as the Seven Sisters or Subaru. Check out the emblem on the cars of the same name!

On April 8 observers here in the northeast can watch the three-day old crescent Moon pass in front of a few of the stars in the Pleiades cluster before moonset. You'll need a good west north-west horizon for the best viewing advantage.

After sunset look westward and locate the Moon. Once it gets dark you'll see the star cluster up and to the left of the Moon. Beginning around 9:45 pm EDT the earthshine (reflected sunlight from the Earth projected onto the lunar surface) edge of the Moon (not the sunlit crescent side) begins to

pass in front of some of the cluster's stars. A pair of binoculars or a small telescope often provides the best view during this astronomical event called a stellar occultation.

A note of interest: whatever phase the Moon is in, if you were on the Moon's surface looking back at the Earth, the Earth would be in the opposite phase. In the above scenario, from the Moon the Earth would be three days past full. Therefore, the earthshine on the lunar surface not illuminated by the Sun is the reflected light from a very large and bright Earth in the lunar sky.

If you are a meteor observer I don't need to tell you that either the weather or Moon has conspired to bring meteor observing to a standstill during the last few months. And besides those factors, there were no major meteor streams visible to us during February and March.

While I wish I could say that April will reverse these poor observing trends, bright moonlight will certainly spoil the view of the Lyrids meteor shower, which peaks this year on the night of April 21 to the morning of the 22nd.

Unfortunately the bright gibbous Moon, only two days past full, will drown out all but the brightest of the April Lyrid meteors. This shower peaks around midnight, so I would suggest starting your observing program an hour before. Face the eastern sky and try to use a building to shield your eyes from direct moonlight. The constellation Lyra, from where the meteors will appear to radiate, will be well up in the eastern sky.

The swift and bright Lyrid meteors

disintegrate after hitting our atmosphere at a moderate speed of 29.8 miles per second. They often produce luminous trains of dust that can be observed for several seconds. Some recent observations indicate increased activity during the last few years.

Because moonlight will interfere by brightening the sky, an observer can expect to see perhaps 10 or less meteors per hour (below the normal peak rate of 15 to 20 per hour). Since the Lyrids are a narrow stream of particles, the nights before and after the peak will display even less meteors, given the ever present moonlight.

So despite less than ideal observing conditions, I still encourage you to make an effort to catch a glimpse of a few shooting stars during the April Lyrids display. It will be good to get out under the stars once again after the poor winter weather we've experienced. We can also do without Mother Nature's April rain showers thank you very much!

Seagrave Observatory on Peepatoad Road in North Scituate is open to the public every Saturday night, weather permitting of course. Check the web site at <http://www.theskyscrapers.org> for times and any closure notice.

You can also visit Ladd Observatory (<http://www.physics.brown.edu/physics/commonpages/ladd/>) located on Hope Street on Providence's East Side on any clear Tuesday night (8-10pm).

Keep your eyes to the skies.

Tracking Wildlife from Space

Patrick Barry

It's 10 o'clock, and do you know where your Oriental Honey Buzzard is?

Tracking the whereabouts of birds and other migrating wildlife across thousands of miles of land, air, and sea is no easy feat. Yet to protect the habitats of endangered species, scientists need to know where these roving animals go during their seasonal travels.

Rather than chasing these animals around the globe, a growing number of scientists are leveraging the bird's-eye view of orbiting satellites to easily monitor animals' movements anywhere in the world.

The system piggybacks on weather satellites called Polar Operational Environmental Satellites, which are operated by the National Oceanic and Atmospheric Administration (NOAA), as well as a European satellite called MetOp. Sensors aboard these satellites pick up signals beamed from portable transmitters on the Earth's surface, 850 kilometers below. NOAA began the project—called Argos—in cooperation with NASA and the French space agency (CNES) in 1974. At that time, scientists placed these transmitters primarily on buoys and balloons to study the oceans and atmosphere. As electronics shrank and new satellites' sensors became more sensitive, the transmitters became small and light enough by the 1990s that scientists could mount them safely on animals. Yes, even on birds like the Oriental Honey Buzzard.

"Scientists just never had the capability of doing this before," says Christopher O'Connors, Program Manager for Argos at NOAA.

Today, transmitters weigh as little as 1/20th of a pound and require a fraction of a watt of power. The satellites can detect these feeble signals in part because the transmitters broadcast at frequencies between 401 and 403 MHz, a part of the spectrum reserved for environmental uses. That way there's very little interference from other sources of radio noise.

"Argos is being used more and more for animal tracking," O'Connors says. More than 17,000 transmitters are currently being tracked by Argos, and



The ARGOS program tracks the whereabouts of endangered migrating animals via miniature transmitters on the animals and the POES satellites in orbit.

almost 4,000 of them are on wildlife. "The animal research has been the most interesting area in terms of innovative science."

For example, researchers in Japan used Argos to track endangered Grey-faced Buzzards and Oriental Honey Buzzards for thousands of kilometers along the birds' migrations through Japan and Southeast Asia. Scientists have also mapped the movements of loggerhead sea turtles off the west coast of Africa. Other studies have documented migrations of wood storks, Malaysian elephants, porcupine caribou, right whales, and walrus, to name a few.





Argos data is available online at www.argos-system.org, so every evening, scientists can check the whereabouts of all their herds, schools, and flocks. Kids can learn about some of

these endangered species and play a memory game with them at spaceplace.nasa.gov/en/kids/poes_tracking.

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

April 2008 Celestial Events

Craig Cortis

	4	11:55pm	New Moon.
	8	9:00pm	Moon 1.0° NNW of the center of the Pleiades; some stars occulted; begin viewing approximately 8:30pm.
	10	10:00am	Jupiter at western quadrature.
	12	11:30am	Moon 1.2° N of Mars; Mars sets at 2:15am.
		2:31pm	First Quarter Moon.
	16	3:00am	Mercury at superior conjunction.
	20	6:24am	Full Moon.
	22		Lyrid Meteor Shower; bright Moon interferes.
	27	10:13am	Last Quarter Moon.
	30		"May Eve," a cross-quarter day.



The Horsehead Nebula in Orion: Taken with the AT66 and DSI Pro II piggybacked on my mount.

Blue @ Green = 5.5 min x 5 subs. Photo by Bob Forgiel.

Mercury Becoming visible low in the west near month's end; ½ hour after sunset; magnitude -1.2 on April 27, dimming as it becomes higher each day; best seen on May 13.

Venus Rises approximately ½ hour before sun on April 1, becomes lost to view by mid-month, not to be seen again until mid-September in the evening sky.

Mars In Gemini; sets at 2:20am on April 10, magnitude -0.9; sets at 2:00am on April 20, magnitude 1.1.

Jupiter In Sagittarius; rises at 2:25am on April 10, magnitude -2.2; rises at 1:50am on April 20, magnitude -2.3.

Saturn In Leo; sets at 4:40am on April 10, magnitude 0.4; sets at 4:00 am on April 20, magnitude 0.5.

Asteroids 5 Astraea at opposition on April 6, magnitude 9.4; 7 Iris at opposition on April 9, magnitude 9.4; 41 Daphne at opposition on April 10, magnitude 9.3. In Leo; sets at 4:40am on April 10, magnitude 0.4; sets at 4:00 am on April 20, magnitude 0.5.

March Meeting Notes

Friday, March 7, 2008; North Scituate Community Center

Nichole Mechnig



Meeting called to order at 7:52 pm by President Glenn Jackson - 48 members in attendance - 1st V.P. Steve Hubbard introduced guest speaker: **Ken Launie** Ken discussed how he came about collecting unusual space related things, such as postcards that depicted certain observatories throughout the country and the world. Ken told the members that he was big into E-Bay and how to go about looking for certain space objects. He also collected old telescope manuals and ads. Many of the members were able to recall some of the old observatories. Thank You Ken Launie for your presentation.

Secretary Report as published in the February issue of Skyscraper was accepted by the members.

Financial Report as published in the February issue of Skyscraper was accepted by the members.

1st VP – Steve Hubbard: Scheduled Speakers still the same as last month

2ndVP–KathySiok: AstroAssembly 2008 @ the Community Center October 4th AstroAssembly 2009 @ the Community Center Historian Dave Huestis 75th Anniversary book Net profit \$21.00

Star Party- Bob Forgiel: Boy Scouts March 12th and March 14th. April 11th @ Steer Farm Elementary School.

Trustees: Minor damage to the floor in the Clark telescope. Loan-a-dome damaged by the high winds pieces everywhere. Any member with spare eyepieces are encouraged to donate to the observatory.

Nominations for this upcoming elections: Member-at-large: Roger Forsythe Trustee: Jim Brenek Jack Szelka opened the floor to any of the members wishing to make separate nominations. President Glenn Jackson closed the floor with no opposition to the nominations.

Budget was presented to the mem-

bers for the upcoming 2008-2009 year, Joel Cohen asked the amended Budget to show the Income of the 2007-2008 show \$4,000 for AstroAssembly. Unanimously voted Budget will be voted on by the members during the April monthly meeting

New Members: Graham Pattison Tom Thibault membership was moved to be accepted and will be voted in at the April monthly meeting

Old Business: Removal of the Port a John unanimously voted to remove. Tabled expansion to the observatory clubhouse unanimously voted. Tabled expansion to the observatory with handicapped bathrooms unanimously voted.

Good of the Organization: April 4th meeting at the observatory E-Board meeting March 27th @ the Community Center. Cookies for the meeting please call Glenn Jackson. Roger Forsythe has had MS for a long time and he walks for the Healthy Heart and MS if you wish to help out please do so. Messier Marathon March 29th @ Seagrave. Submit log of your observations before the April meeting and the will be documented in the monthly minutes.

Astronomy Day: May 10th 10-4 pm looking for volunteers Solar Scopes Saturday night @ Seagrave and at the park across from the Community Center, maybe ads in the newspaper and talk with science teachers

President Information White Mountain trip please see Glenn Jackson soon. Financial Records to be Audited by Dave Huestis and Bob Napier for the April meeting. Thank You to Staples for their donation of \$500 in gift cards to the membership to be used at Seagrave. Membership dues for 2008-2009 are payable @ the April 4th meeting -new this year when a member has paid their dues if they also have a subscription to S&T that will be paid also this way the treasures job for the year is a little easier. Questions or concerns please do not hesitate to notify Glenn Jackson either by e-mail or by phone glenn.jackson@cox.net

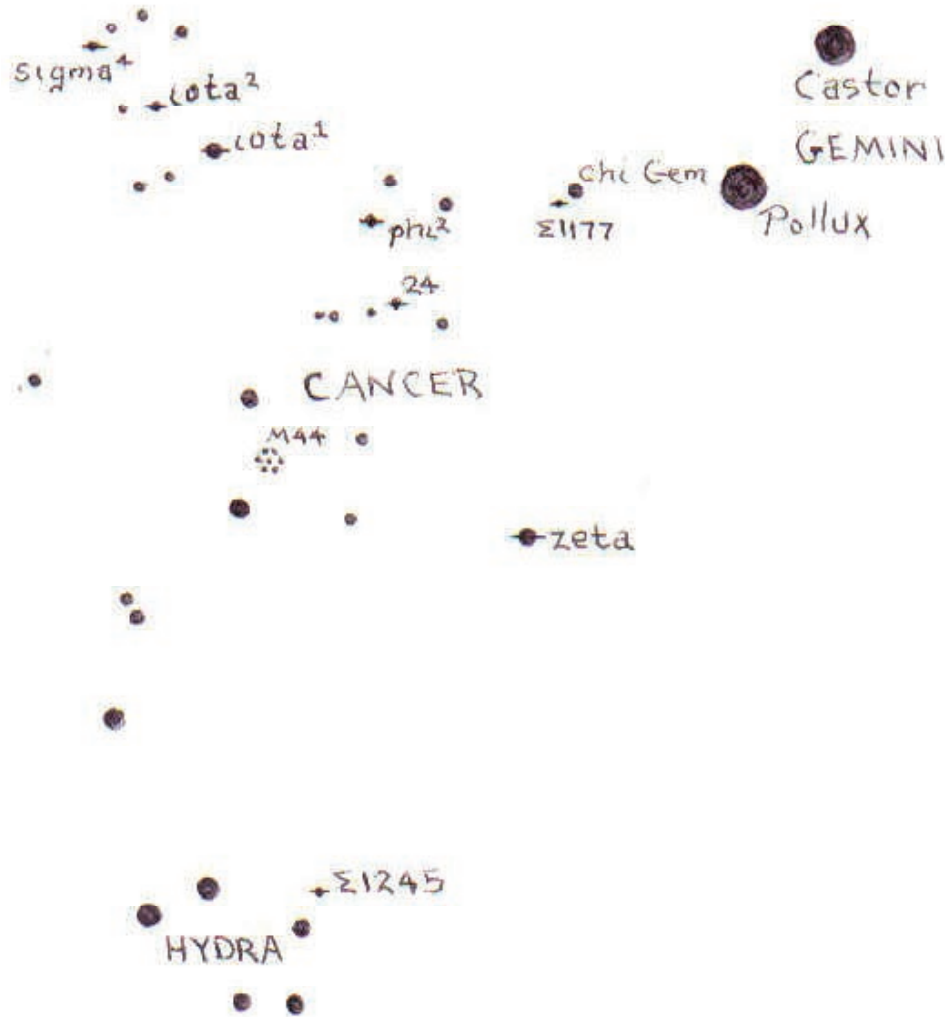
Meeting adjourned at 10:19 pm

Treasurer's Report

4/1/2007 through 3/20/2008

Jim Crawford

INFLOWS	
Anniversaryinc	1,248.00
Astro Ass'y Regiistration and Banquet	3,497.50
astroincome	1,309.00
Other astroincome	1,309.00
75th Anniversary Bookincome	2,100.00
cookoutinc	342.00
Donation:	
Collationdonation	185.00
Other donation	125.00
TOTAL donation	310.00
Dues:	
Contributing	957.00
Family	970.00
Junior	20.00
Regular	2,120.00
Senior	210.00
TOTAL dues	4,277.00
Interest Inc	41.88
magincome	
Astronomymaginc	230.00
skytelmagincome	494.25
TOTAL magincome	724.25
Starparty	457.00
TOTAL INFLOWS	14,305.73
OUTFLOWS	
Anniversaryexp	2,270.12
Astroexp	
Astrocatcer	1,050.00
Astrorestroom	110.00
Astrosupplies	128.76
Hallrental	100.00
Speaker Fee	203.18
T-Shirts	386.10
Tentrental	585.00
Other astroexp	698.24
TOTAL astroexp	3,261.28
Auto	
Auto Fuel (Speaker)	20.00
Bookexp	35.32
Collation (Monthly Mtg's Refreshments)	497.47
Cookoutexp	650.00
Corporationfee	30.00
Insurance	2,397.00
Membersubscriptions	
Astronomymagexp	170.00
Skytelexp	503.24
Other membersubscriptions	92.95
TOTAL membersubscriptions	766.19
Portajohn	35.00
Postage and Delivery	85.78
Printing and Reproduction (75th book)	2,889.00
Other Tax, Business	0.75
Trusteexp	2,073.68
Utilities	
Electric	175.80
Propane	423.15
TOTAL Utilities	598.95
TOTAL OUTFLOWS	15,610.54
OVERALL TOTAL	-1,304.81
Checking Acct Balance	
	\$2761.07
Savings Acct Balance	
	\$5,687.76
Capital One Acct Balance	
	\$10,132.90



Spring Double Stars: Cancer

Glenn Chaple

For our spring double star selection, we'll say goodbye to Gemini and shift eastward to the faint constellation Cancer. Notable for its bright Messier cluster M44 (the Praesepe), Cancer is also home to a splendid array of double and multiple stars. How many can you notch? (Data from the Washington Double Star Catalog (WDS))

Struve 1177 : magnitudes 6.7 and 7.4, separation 3.5", Position Angle 350° (2003)

This pretty pair is located near the Cancer/Gemini border just a half degree southeast of chi Geminorum. Use 150X or more for a clean split.

ζ (zeta), Struve 1196 : mags 5.1 and 6.2, sep 5.9", p.a. 72° (2004)

Zeta is a fine double for small scopes and a grand triple for instruments of 6-inch aperture or more. The primary is a close binary with a period of 60 years; mags 5.3 and 6.3, currently widening

to a separation of 1.0" (P.A. 55°). If you have a 6-inch scope or larger, give it a try!

24 Cancri, Struve 1224 : mags 6.9 and 7.5, sep 5.7", P.A. 51° (2003)

24 Cancri is the western-most member of an attractive row of stars found 4 degrees northwest of M44. A delicate beauty!

φ² (phi²), Struve 1223 : mags 6.2 and 6.2, sep 5.2", P.A. 218° (2003)

Close, equally bright double stars are among the night sky's loveliest sights. This set of pure-white twins gleams at us from the darkness of space like the eyes of a distant cosmic cat. A must-see object.

Struve 1245 : mags 6.0 and 7.2, sep 10.0", P.A. 25° (2004)

This striking double star is located on the southern boundary of Cancer, just one degree north of the star delta

Hydrae.

ι¹ (iota¹), Struve 1268 : mags 4.1 and 6.0, sep 30.7", P.A. 308° (2003)

A showpiece double noted for its gold and blue colors – a springtime version of Albireo. In the same field, one-half degree to the southwest, is the faint pair Struve 1266; mags 8.8 and 10.0, 23.4", 65° (2003)

ι² (iota²), 57 Cancri, Struve 1291 : mags 6.1 and 6.4, sep 1.5", P.A. 311° (2004)

Test object for a 3-inch scope - save for optimum seeing conditions. A third component, mag 9.2 lies 54.5" away in a P.A. of 203° (1988).

σ⁴ (sigma⁴), 66 Cancri, Struve 1298 : mags 6.0 and 8.6, sep 4.5", P.A. 134° (2003)

The magnitude difference will make this duo a bit of a challenge in small scopes. Use the highest magnification seeing conditions will allow.

A Night With the Messiers

Jim Hendrickson

Not wanting to waste a clear night, given how lousy the weather has been lately, I packed up the Pronto last night (Monday, March 10) and headed to the observatory last night with Pennington's *Messier Marathon Field Guide*.

When I arrived at 2030 I set up in the parking lot to get a quick view of the crescent moon through the WNW sky now made available by the removal of the trees to the south of the clubhouse. This was also my first field test of a recently acquired TMB 9mm Supermonocentric. The eyepiece framed the moon in the 480mm scope almost perfectly, with little sky visible around the edge. Earthshine was very prominent and I was able to make out the maria and other major features on the dark side of the moon. There was also one lone sunlit peak just off the south limb of the crescent.

My original thought was to try to get M33 and M31 early on, but having spent about a half hour on the moon, these objects had sunk pretty low and by this time the transparency was worsening, so it was on to some of the star clusters. For the observations I used the 13mm Ethos as a lower power "finder" and except for larger objects, the 9mm TMB as my primary observation eyepiece.

M45, M36, M37, M1

First grab was M45. The Pleiades are always worth a look whenever they're up. Then over to the cluster in Auriga. M36 and M37 are often overlooked, but they reside in a spectacularly rich star field in the Milky Way and provide great views even in a small scope. M1, the Crab Nebula is a surprisingly easy target in the 70mm scope and spending a few minutes looking at it reminded me of the 2006 New Mexico trip, from looking at it in a 24 inch scope at GNTO to hiking out to Supernova Petroglyph the next day.

Before moving on I wanted to try the TMB 9mm on a couple of double stars. One of my old favorites, Mizar provided a nice view, with both Mizar and Alcor being visible in the field, and

the wide double was easily split. Next was gamma Leonis, a much tighter split that deserved a high power look. I then looked at Saturn for a bit.

M42, M43, M78

It was time to move the scope into the courtyard to look at a different section of sky. Orion was getting a bit low in the trees so I wanted view some of its Messiers before losing them. Like the Pleiades, M42 & M43 are also an "every time they're out" object to view. M78, a small patch of nebulosity between Betelgeuse and Alnitak was easily picked up at low power.

At this time I planned to go back into Perseus to grab the Messiers there before they sunk too low. Unfortunately by this time haze was beginning to fill much of the sky to the north, and I knew that I wouldn't be able to spot much through it. The scope was then moved to the back lot for viewing of Canis Major.

M51, M93, M46, M7, M50

With Sirius still well placed, it was time to grab all of the Messier clusters in the vicinity. M46 and M47 have been perennial favorites, but I hadn't looked at the other clusters probably since my last sincere attempt at a Messier Marathon 13 years ago.

M38, M35, M48, M44

Back northward, I had skipped a cluster in Auriga that I wanted to pick up before it was too late. Then moving back into Gemini I noticed Mars was fairly close to where M35 is. Using low power I zeroed right in on M35 and spend a few minutes studying it at low power. After a little while I figured I pick up Mars since I was in the area. Knowing that Mars is rather far away now that even high power wouldn't reveal any detail, I turned the declination knob until Mars was in view. I was instantly in awe at what I was looking at, and knew right away that this was the highlight of the entire session. With M35 still gracing the view on one half of the Ethos 100-degree field of view, Mars blazed prominently on the other side. It has been said by many observers that M35 contains an asterism that appears as an arrowhead, and it is one of those asterisms that doesn't take a stretch of the imagination to see. But here, the

spectacle was that the arrowhead was pointing directly at Mars.

Continuing southward, I picked up M44 (which was the last of the 3 naked eye Messiers I observed), then on to yet another overlooked, but otherwise worthwhile cluster M48.

M81, M82, M97, M51, M40, M101

At the point, the Big Dipper was riding high overhead and I knew my session would end soon as the temperature was dropping quite a bit and I didn't come prepared for a lengthy stay (had this been a weekend I would have planned for a longer session).

M81 and M82 were right about at transit, so what better time to view them. I had forgotten how difficult it is to move a GEM around this close to the pole. Within a couple of minutes I spotted the spectacular galaxy pair, which is another perennial favorite. These were also the first galaxies of the night, and even though M81 and M82 are a bright pair, I was moving into the more difficult realm of the Messiers, at least when it comes to using small aperture with a fair amount of light pollution.

Next was M97, one of only 4 planetary nebulae on the Messier list and the only one I would view tonight. Nearby M108 was the only Messier I attempted, but couldn't locate. I recall this being a difficult object, but I know I've seen it in the Pronto before. Perhaps putting in the 9mm Nagler would have brought it out, but I wanted to continue on with the list as I knew I would be ending the session soon.

M40 is the only double star in the Messier list, and rather conspicuous even at low power. This was followed by M101 and M51.

M67, M65, M66, M105, M95, M96

I missed the cluster M67 in Cancer on my first pass through the region so went back to get it before proceeding with the galaxies in Leo. Looking for galaxies, especially in this part of the sky where the light pollution is a bit more of an obstacle, I went to the 9mm Nagler for finding, since the higher magnification provides better contrast. M65 and M66 in the lion's hindquarters were an easy pick, as was M105, but the

visibility of a few NGC galaxies in the area made M95 and M96 a little difficult to identify.

Closing out the Messier hunt I moved again to Saturn. The ringed planet was now near transit and provided a nice view at high power. Finally I wanted to get one last look at Mars and M35.

I wrapped it up at about 2355 and bagged a total of 28 Messiers (25%).

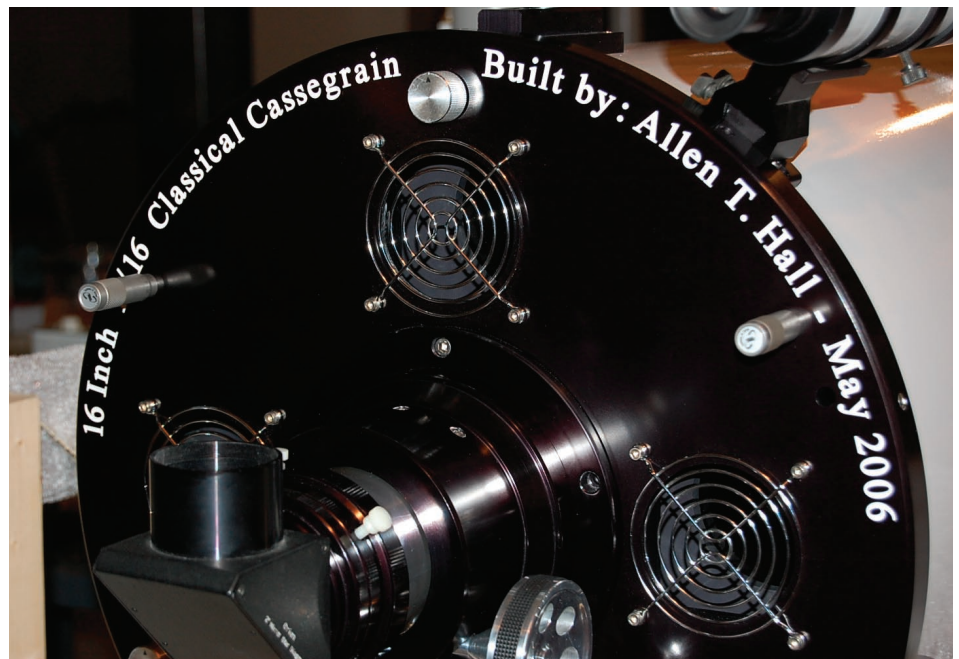
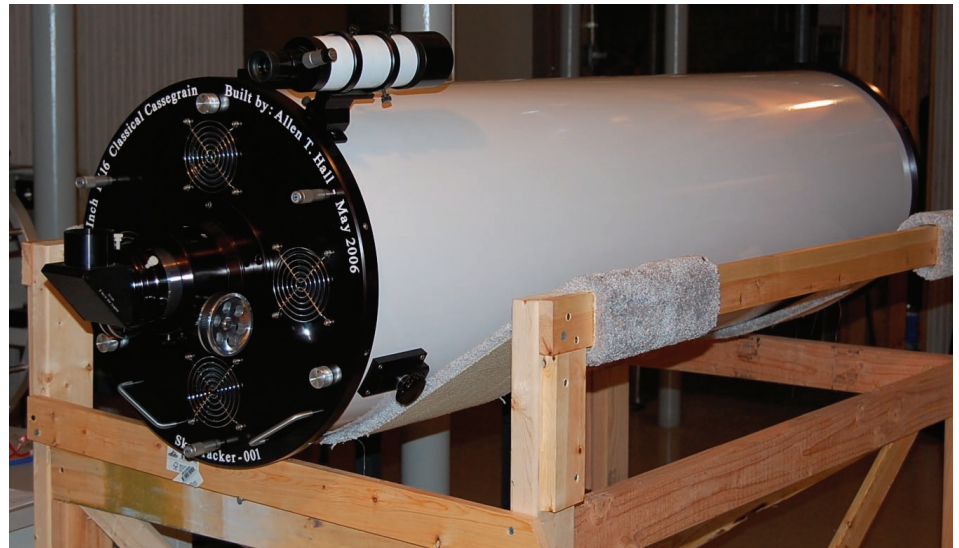
Messier Marathon

Glenn Jackson

Last night (Tuesday, March 11) I took Robert, the student that I am mentoring, out to Beavertail for the Messier Marathon. Robert was using a 10" Dobsonian, I was using my LX 90 in the browse mode with a Telrad Finder scope and Telrad Finder Charts. Robert and I scored 28 objects before the clouds rolled in. Just as well the wind was getting brutal at that point. My log is attached.

Messier	Constellation	Type	Rating
I. Early Evening Objects			
<input checked="" type="checkbox"/> M77	Cetus	Galaxy	Difficult
<input type="checkbox"/> M74	Pisces	Galaxy	Difficult
<input checked="" type="checkbox"/> M33	Triangulum	Galaxy	Difficult
<input checked="" type="checkbox"/> M31	Andromeda	Galaxy	Easy
<input checked="" type="checkbox"/> M32	Andromeda	Galaxy	Difficult
<input checked="" type="checkbox"/> M110	Andromeda	Galaxy	Difficult
<input checked="" type="checkbox"/> M52	Cassiopeia	Open Cluster	Moderate
<input checked="" type="checkbox"/> M103	Cassiopeia	Open Cluster	Moderate
<input type="checkbox"/> M76	Perseus	Planetary Nebula	Moderate
<input checked="" type="checkbox"/> M34	Perseus	Open Cluster	Easy
<input checked="" type="checkbox"/> M45	Taurus	Open Cluster	Easy
<input checked="" type="checkbox"/> M79	Lepus	Globular Cluster	Moderate
<input checked="" type="checkbox"/> M42	Orion	Diffuse Nebula	Easy
<input checked="" type="checkbox"/> M43	Orion	Diffuse Nebula	Easy
<input checked="" type="checkbox"/> M78	Orion	Diffuse Nebula	Moderate
<input type="checkbox"/> M1	Taurus	Supernova Remnant	Difficult
<input checked="" type="checkbox"/> M35	Gemini	Open Cluster	Easy
<input checked="" type="checkbox"/> M37	Auriga	Open Cluster	Moderate
<input checked="" type="checkbox"/> M36	Auriga	Open Cluster	Moderate
<input checked="" type="checkbox"/> M38	Auriga	Open Cluster	Moderate
<input checked="" type="checkbox"/> M41	Canis Major	Open Cluster	Easy
<input type="checkbox"/> M93	Puppis	Open Cluster	Moderate
<input checked="" type="checkbox"/> M47	Puppis	Open Cluster	Moderate
<input checked="" type="checkbox"/> M46	Puppis	Open Cluster	Moderate
<input checked="" type="checkbox"/> M50	Monoceros	Open Cluster	Moderate
<input checked="" type="checkbox"/> M48	Hydra	Open Cluster	Moderate
<input checked="" type="checkbox"/> M44	Cancer	Open Cluster	Easy
<input checked="" type="checkbox"/> M67	Cancer	Open Cluster	Moderate

II. Leo and the Big Dipper Region			
<input type="checkbox"/> M95	Leo	Galaxy	Difficult
<input type="checkbox"/> M96	Leo	Galaxy	Difficult
<input type="checkbox"/> M105	Leo	Galaxy	Difficult
<input type="checkbox"/> M65	Leo	Galaxy	Difficult
<input type="checkbox"/> M66	Leo	Galaxy	Difficult
<input checked="" type="checkbox"/> M81	Ursa Major	Galaxy	Moderate
<input checked="" type="checkbox"/> M82	Ursa Major	Galaxy	Moderate
<input type="checkbox"/> M97	Ursa Major	Planetary Nebula	Difficult
<input type="checkbox"/> M108	Ursa Major	Galaxy	Difficult
<input type="checkbox"/> M109	Ursa Major	Galaxy	Difficult
<input checked="" type="checkbox"/> M40	Ursa Major	Double Star	Difficult
<input checked="" type="checkbox"/> M106	Canes Venatici	Galaxy	Moderate
<input type="checkbox"/> M94	Canes Venatici	Galaxy	Moderate
<input type="checkbox"/> M63	Canes Venatici	Galaxy	Moderate
<input type="checkbox"/> M51	Canes Venatici	Galaxy	Moderate
<input type="checkbox"/> M101	Ursa Major	Galaxy	Moderate
<input type="checkbox"/> M102	Draco	Galaxy	Difficult
<input type="checkbox"/> M53	Coma Berenices	Globular Cluster	Moderate
<input type="checkbox"/> M64	Coma Berenices	Galaxy	Moderate
<input type="checkbox"/> M3	Canes Venatici	Globular Cluster	Moderate
<input type="checkbox"/> M68	Hydra	Globular Cluster	Difficult
<input type="checkbox"/> M83	Hydra	Galaxy	Difficult



Al Hall has completed the optical tube assembly of his massive 16" f/16 Cassegrain. The optics still need to be coated, but he expects to present the completed telescope at Stellafane this year. Photos by Al Hall.

Skyscrapers, Inc. Awards Prize at the 2008 AMGEN Rhode Island Science and Engineering Fair

On Saturday, March 15, 2008, Skyscrapers members Dave Huestis and Bob Napier participated in special judging at the AMGEN Rhode Island Science and Engineering Fair at the Community College of Rhode Island Knight Campus. Of the 476 projects at the fair, Skyscrapers honored Sarah

Beavers of Portsmouth High School for her project "Sky Glow: Enemy of the Night Sky." Sarah will receive a one-year family membership from Skyscrapers and is invited to display her project at our Summer Picnic Meeting on Saturday, July 12.

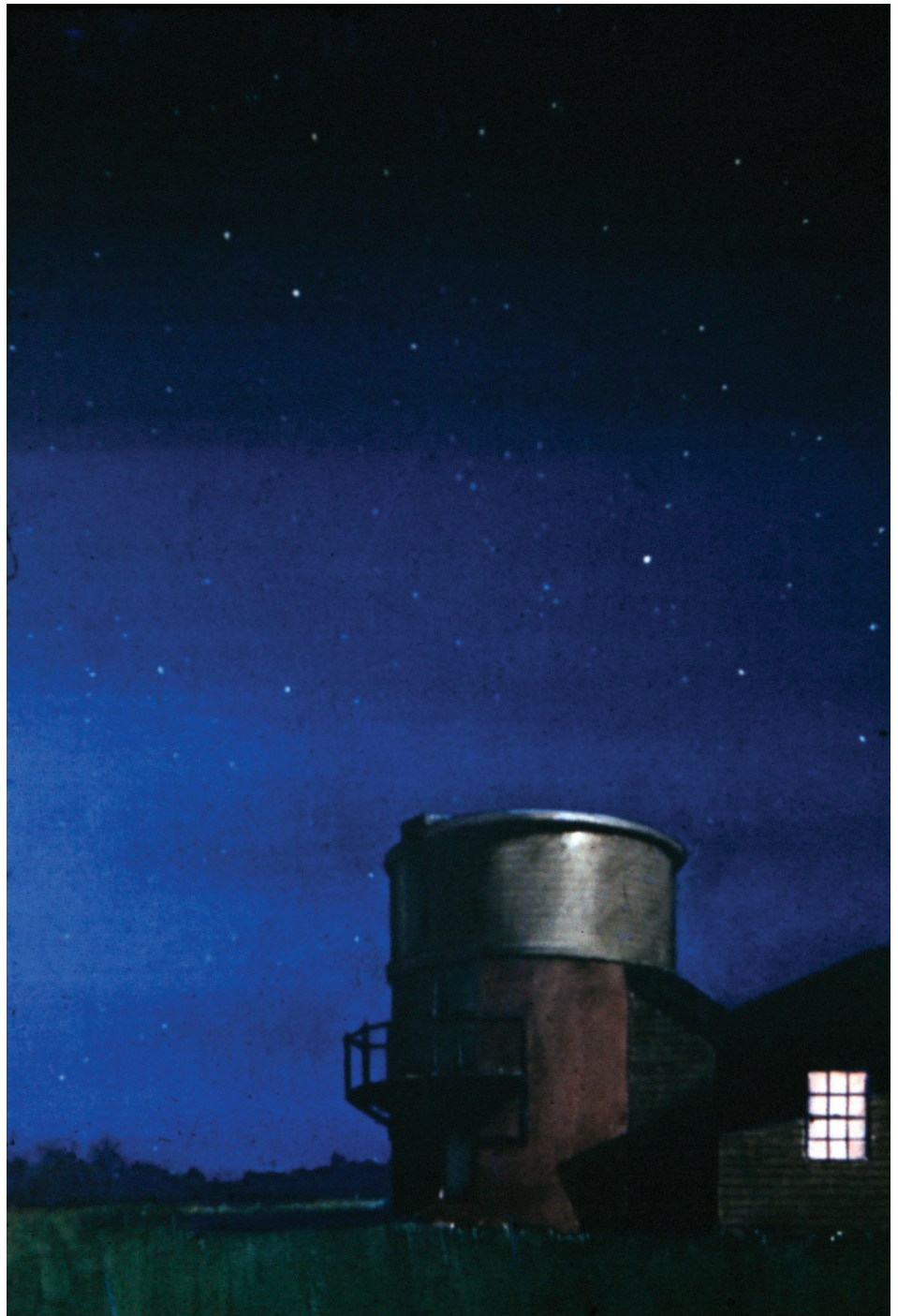
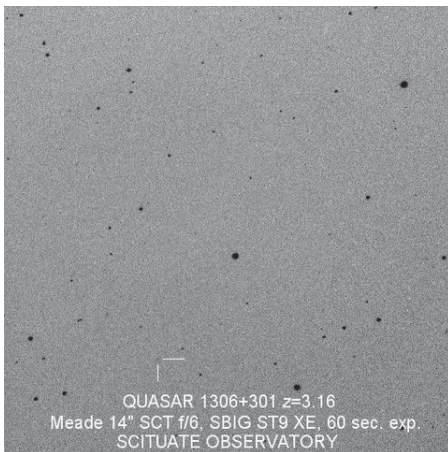
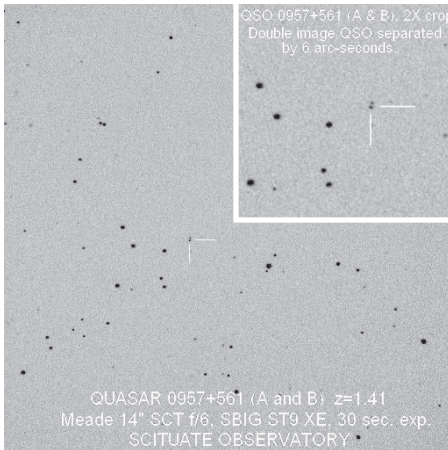
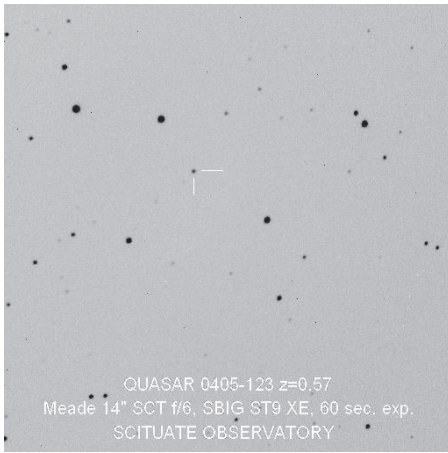


- 1 - M 86
- 2 - NGC 4388
- 3 - NGC 4387
- 4 - NGC 4402
- 5 - NGC 4458
- 6 - NGC 4438
- 7 - NGC 4413
- 8 - NGC 4425
- 9 - IC 3355
- 10 - IC 3363
- 11 - IC 3393
- 12 - IC 3388

Taken March 01-2008
AT 66 & DSI Pro II
mounted on 8" LX200GPS
exposure: 80x30 sec.
Meade Drizzle processing.



Fort Worth Eclipse Party, 1878: Frank Seagrave, far right, observes a total solar eclipse in Forth Worth, Texas on July 19, 1878.



Bob Napier shoots the deep sky. 1: QSO 0405-123 Quasar 0405-123, $Z=0.57$, light travel time 5.5 Billion years, co-moving distance 6.9 Billion light years. 2: QSO 0957+561 (A & B) Gravitationally Lensed Quasar 0957+561, $Z=1.41$, light travel time 9.1 Billion years, co-moving distance 13.8 Billion light years. 3: QSO 1306+301 Quasar 1306+301, $Z=3.16$, light travel time 11.6 Billion years, co-moving distance 21.6 Billion years.

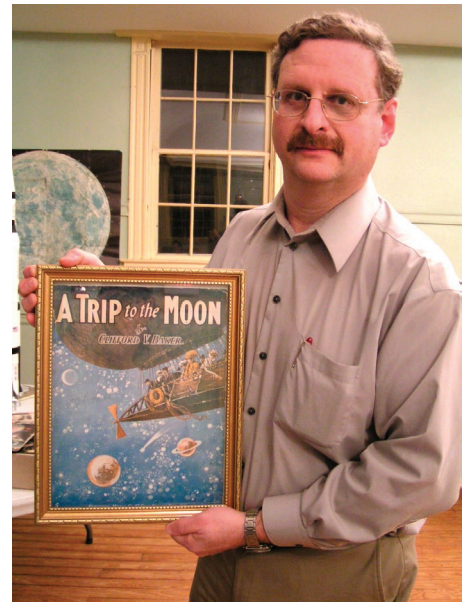
Historical photo of the month: a painting of Seagrave Observatory by member William J. Gardner, date unknown. From the Smiley Slide Collection at Ladd Observatory.

Proposed 2008-09 Budget

Glenn Jackson

EXPENSES	07-08 Budget	08-09 Budget	Change
Printing (nonAA)	\$120.00	\$0.00	-\$120.00
Subscriptions	\$70.00	\$0.00	-\$70.00
Perm Port-O-John	\$180.00	\$0.00	-\$180.00
Domain Name	\$25.00	\$25.00	\$0.00
Incorp. Fee	\$20.00	\$40.00	\$20.00
Postage	\$55.00	\$100.00	\$45.00
Special Programs	\$120.00	\$100.00	-\$20.00
Electric	\$170.00	\$200.00	\$30.00
Grass Mowing	\$150.00	\$200.00	\$50.00
Residential Fund	\$550.00	\$250.00	-\$300.00
Refreshments	\$450.00	\$450.00	\$0.00
Propane	\$120.00	\$500.00	\$380.00
Trustee Observatory		\$500.00	\$500.00
Cookout	\$650.00	\$500.00	-\$150.00
Trustee Expense	\$500.00	\$1,000.00	\$500.00
Property Insurance	\$2,537.00	\$2,635.00	\$98.00
AstroAssembly	\$2,570.00	\$3,000.00	\$430.00
TOTAL	\$8,287.00	\$9,500.00	\$1,213.00

INCOME	07-08 Budget	08-09 Budget	Change
S&T Sales	\$0.00	\$0.00	\$0.00
Other Donations	\$150.00	\$0.00	-\$150.00
Interest Income	\$0.00	\$300.00	\$300.00
Cookout	\$490.00	\$350.00	-\$140.00
Star Party Donations	\$650.00	\$650.00	\$0.00
AstroAssembly	\$4,105.75	\$4,200.00	-\$335.75
Dues	\$4,170.00	\$4,000.00	-\$170.00
TOTAL	\$9,565.75	\$9,500.00	-\$65.75



April Meeting with Ken Launie. Photos by John Kocur.

Skyscrapers 2008-09 Elections Ballot

Please fill out this ballot and bring it to the Skyscrapers' Annual Meeting on Friday, April 4, 2008, or mail it to the address below:

Skyscrapers, Inc. - Ballot
47 Peepoad Road
North Scituate, RI 02857

Mailed ballots must arrive at Skyscrapers by the April 6th Annual Meeting. **Mailed ballots and ballots brought to the meeting must have the member's name on the outside of the envelope for membership verification.** All entries must be marked "Ballot" on the envelope. Verified ballots will be accepted and counted without identity.

PRESIDENT

- Glenn Jackson _____
- (write-in) _____

1ST VICE PRESIDENT

- Steve Hubbard _____
- (write-in) _____

2ND VICE PRESIDENT

- Kathy Siok _____
- (write-in) _____

SECRETARY

- Nichole Mechnig _____
- (write-in) _____

TREASURER

- Jim Crawford _____
- (write-in) _____

MEMBERS AT LARGE (CHOOSE 2)

- Joe Sarandrea _____
- Roger Forsythe _____
- (write-in) _____
- (write-in) _____

TRUSTEE

- Jim Brenek _____
- (write-in) _____

SKYSCRAPERS, INC. MEMBERSHIP RENEWAL

NAME _____
 ADDRESS _____

 CITY _____
 STATE _____ ZIP _____
 PHONE _____
 EMAIL _____

Membership Dues

	Annual Dues (choose one category)
JUNIOR (13-17) <input type="checkbox"/>	\$10
REGULAR <input type="checkbox"/>	\$40
FAMILY <input type="checkbox"/>	\$50
SENIOR (65+) <input type="checkbox"/>	\$10
CONTRIBUTING <input type="checkbox"/>	
(any amount in excess of annual dues is gratefully accepted as a donation) \$ _____	

Magazine Subscriptions*

Members may optionally subscribe to the following publications at a significant discount from their regular subscription rates.

*Magazine subscription rates subject to change at any time.

ASTRONOMY \$29.95*
 (\$13 savings)

SKY & TELESCOPE \$32.95*
 (\$10 savings)

TOTAL \$ _____
 (Make check payable to Skyscrapers, Inc.)

Mail to:
 Membership Secretary
 Skyscrapers, Inc.
 47 Peepload Road
 North Scituate, RI 02857



47 Peepload Road
 North Scituate, RI 02857