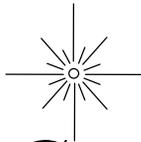




**AAAP 75th Anniversary
1929 to 2004**



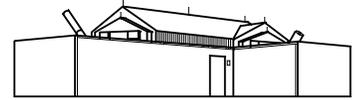
The Guide Star

Newsletter of the Amateur Astronomers Association of Pittsburgh Inc.

A Section of the Academy of Science & Art of Pittsburgh

September, 2004

Vol. 38, No. 6



Nicholas E. Wagman Observatory

Long-Time Club Benefactor, the SSP, Presented at Sept. Meeting

The Spectroscopy Society of Pittsburgh (SSP) has been a benefactor to the AAAP for nearly 20 years. The SSP, and its sister society, the Society for Analytical Chemists of Pittsburgh (SACP), sponsor the annual Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, a non-profit organization that is the source for the funding received by the AAAP. Over the years, the SSP has provided annual grants to the AAAP to be used for educational purposes. For example, SSP grants fund the purchase of the popular "Star & Planet Finders" given out at public star parties. (The SSP has also provided targeted grants for club equipment, most notable of which is a binocular viewer for the Brashear telescope at Wagman Observatory.) Over that time, the amount of these grants has continually increased, so that the SSP has become one of the largest contributors to our organization.



Another "donation", so to speak, from the SSP is the annual joint meeting with the AAAP, typically held in mid-October. The highlight of this meeting is a lecture by a nationally renowned researcher in astrophysics or one of the related space sciences.

Many of our members are not familiar with this organization. At the **Sept. 24, 2004** AAAP meeting (7:30 pm) at the **CSC, Dave Pensenstadler**, a long time member of both organizations, will discuss the SSP, its purpose and objectives, and how this group has supported science education and the AAAP over the years.

(continued on page 6, column 1)

Donated Zerodur 21-Inch Primary and Diagonal Brashear L.P. Welcomed to "First Light" for New Wagman Optics



Brashear L.P. Employees Gather 'Round the 21-Inch Manka

"Uncle John" Brashear would have been proud. The staff of the company directly descended from his original optics firm, and still bearing his name, was welcomed and thanked at the August 21 "First Light" ceremony for the new optics now installed in the 21-Inch Manka Reflector at Wagman Observatory. In appreciation for the generous donation of a 21" Zerodur primary and its diagonal mirror, we invited Brashear management and engineers to take the first official views through the recently upgraded scope. George Guzik presided over the ceremony outside the Scanlon wing, describing how the AAAP evolved from a 7-member to a 530-member club that developed a large amateur observatory (Wagman) and is on track to build a

(continued on page 2, column 1)

"Way" Good Viewing At Sept. SPs

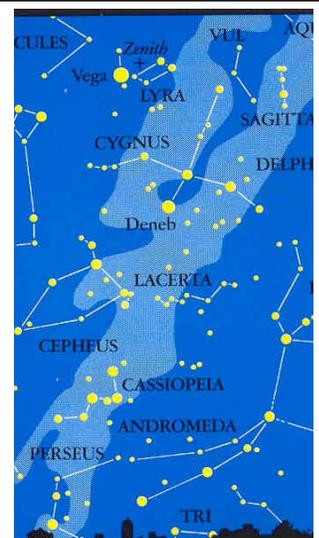
You're A "Way", Everyone's A "Way"

The theme for this month's Wagman and Mingo star parties is observing the Milky Way, which dominates the high sky this time of year. When showing the MW to your guests, there's a natural tendency to point to the faint NE/SW band as "the" Milky Way. Actually, all the stars and planets visible to the naked eye comprise the Milky Way galaxy (except the Andromeda Galaxy, under ideal conditions). In fact, our Earth and everything on it, including us, comprise the Milky Way galaxy. You might try out this concept on your guests, although you're sure to get a chuckle from some. Hopefully skies will be clear and dark enough during at least some upcoming star parties to take in the distant band of stars strewn across the sky:

(continued at right)

- **Sept. 4** – "Dark Sky/Moonrise Special" at Wagman and Mingo
- **Sept. 10 and 11** – Mingo only
- **Sept. 18** – Wagman site only
- **Oct. 2** - "Dark Sky/Moonrise Special" at Wagman

All events start at "Sol-Set". Not to sound like a broken record (broken CD?), but extra help with parking cars, tending to tables, steering crowds, helping set up visitor's scopes, etc. is always needed. It's the "way" we help make this club run smoothly.



ORAS "Astroblast" Almost Derailed by Park Management

In a totally expected move, the Park Authority Board that oversees Two Mile Run County Park park, site of the ORAS observatory and annual "Astroblast" regional star party, tried to stop the last month's before it got started. The club had to obtain a court injunction to keep Astroblast alive. The situation stems from a legal mess involving the original lease agreement, land use issues, user fees and a host of other problems created when the Board outsourced park operations to a commercial firm.



Luckily, their club was able to hire a locally renowned attorney, Mike Hadley, to obtain the court injunction. (Mr. Hadley has only been charging \$50 per hour.) However, the club's problems are far from over and now must file suit to enforce the terms of the original agreement, lest future events or the observatory itself be threatened. Toward that end, ORAS has set up an Observatory Rescue Fund to help defray upcoming legal costs:

(continued on page 6, column 1)

Plenty of Accolades At "First Light"

(continued from front page)

second major facility in Washington County.

AAAP member and Brashear technician **Phil Breidenbach** also spoke at the ceremony, giving a salute to his colleague, **Mark Yingling**, for making the acquisition of the new optics possible in the first place. It was Mark who initially proposed the idea to Brashear L.P. management several years ago and helped expedite the overall project.

The transition from old to new mirrors has not been fast or easy. The original primary blank had to be milled down to nearly half its original weight to suit the comparatively light duty structure of the scope. In addition, considerable work was required to produce a new rear holder for the mirror that could also be used in a transport container. Phil Breidenbach and other Brashear L.P. technicians worked strange and long hours for several years to achieve the desired 1/48 wave primary figure. Over the same period, **Flacc Stifel** and **Wade Barbin** toiled

(continued at lower right)



Two of the key players in the development of the new Manka Scope optics, Mark Yingling (L) and Phil Breidenbach

Mingo Construction Moving Towards The "Complete Building" Look

Here's the latest on construction of the Mingo Creek Park Observatory, compiled from notes by Mike Meteny, Ed Moss and Larry McHenry:

- ☛ Late July: All floors and entrance pads finished, interior walls done except for two rows on planetarium wall and reflector room wall. Handicapped entrance pad pouring nearly complete.
- ☛ Early August: All material for roofing and shingles now on site, including specialty-manufactured roof trusses. Separate conduit for electrical and data lines laid in concrete floors of all major rooms. Telephone/internet service and security options under review.
- ☛ Mid August: Framing for the wood sidewalls begun.

Other Progress Points (from Larry McHenry):

- ☛ The MCOP dedication will be delayed until Spring of 05 to leave plenty of time for extensive interior finishing. However, a late October "Open House" for members is under consideration (see next month's [Guide Star](#)).
- ☛ Dick Haddad continues his fundraising activities of both private and state sources. He is currently working on procuring an amount necessary to construct a restroom facility located adjacent to the observatory (similar to what is located by the pavilion).
- ☛ We have our first success in controlling light pollution along the observatory site's south eastern horizon. **Mike Meteny** approached the local gas utility company about a bright light located across the valley at one of their facilities. Mike was able to convince the utility to "unplug" the light, removing the brightest source in that direction. It was a noted improve-ment at this past weekends starparties. Way to go Mike!



Images by Larry McHenry and/or Dave Smith

over all the adaptations that would be needed to bring the new mirror and Manka Scope together. (For example, the 11 Celestron S-C had to be removed to help offset the added weight of the new optics.)

We've run out of superlatives for all the work done by Phil, Mark, others on the Brashear L.P. staff, and by Flacc and Wade to help complete this upgrade to the Manka telescope. If you have any mental snapshots of the images produced by the original 20" mirror, take a look now through the Manka scope at the vast improvement! What better way to express the quality of the work done and the great value of Brashear L.P.'s donation.

20-Public/41-Member Attendance At Mingo 8-4 Star Party



Images by
Larry McHenry



by Larry McHenry (from AAAP Listserv)

While the weather seemed more promising during the day on August 7, the evening proved to be one of our seemingly normal typical starparty nights: partly cloudy and hazy! (are we ever going to get out of this rut! ☺). But the 20 AAAP members present at the Saturday starparty at the Mingo Creek Observatory site still managed to show many celestial wonders thru their telescopes to the 41 public attendees.

Down at the pavilion, member **Chrissie Chojnicki** gave an 'Introduction to the Moon' talk, followed by myself with a presentation on 'Stargazing'. After the talks, Chrissie and I demonstrated how to use the Star Finder handouts, and using the club's green laser pointer, located several constellations and bright stars thru the haze. Both talks were well attended by the public, who afterwards enjoyed the astronomical displays and av inside the pavilion, with AAAP member **Gerry Schuster** answering many questions related to astronomy, the AAAP, and the new observatory. Assisting Gerry were AAAP parking attendants **Brad Kusman** and **Mark Orsatti**. In addition to globular starclusters and nebula, one of the highlights of the evening was a bright Iridium flare pass in the NE.

AAAP members who 'Signed-in' included:

Larry McHenry	John Diller
Mark Arelt	Ed Moss
Chrissie Chojnicki	Dan Reed
Brad Kusman	Dave Smith
Mark Orsatti	Jeff Dimitroff
Craig Lang	Frank Usouski
Gerard Schuster	George Pilipovich
Ken Sachs	Al Rusher
Jeff Marsh	Fadi Francis
Mike Meteny	

(and one member who I can't read their writing - sorry)

Raystown SP Helpers Go the Distance

by George Guzik and Charlotte Tunney
(from AAAP Listserv)

From George: "Thanks to Bill and Maureen Moutz and to Jim and Charlotte Tunney for making the long trip to Raystown Lake for our event on Friday the 13th. We hoped to hold a Star Party for the campers at the lake but clouds forced us to go to Plan B. The Visitor Center at the lake has a very good classroom facility so we "moved in" and made a presentation on basics of amateur astronomy. I didn't take an official count, however, I would estimate that about 25 to 30 campers attended. Last year's Raystown event was rained out. This year's event was only clouded out. Given this improving trend, maybe next year we'll have clear skies!"

From Charlotte: "Yes, Raystown at the time of our presentation was mostly cloudy. The optimistic people were standing outside after the presentation saying 'There's a star. What's that one?' However, about 45 minutes after Jim and I got set up on the campsite, the clouds went away and the trailer campers all went to sleep. Ahh, and it was very good. I stayed up with the Dob until the Pleiades rose. Sag. & Cass. were best. I tried for M51, but it was already behind the trees. Saw 4 meteors, 1 was long-tailed and yellow in the triangle. I felt bad about the public program - but..."

Despite Dampness, Keystone SP Succeeds

by Terry Trees (from AAAP Listserv)

There were no clouds in the sky on August 14 at the Keystone State Park Star Party. However, it was cold and fairly damp with a lot of dewing. Guess who took his LX-200 and forgot his Kendrick stuff? "Moi", as Miss Piggy use to say. We hosted about 40 to 50 public and after a presentation on meteors by George Guzik, observed a -5 Iridium flare. To me, it was much brighter than the -8 at Wagman several weeks earlier. After that we started showing the sky. People gave-up around 10:30 or so because of the dew, but a great time was had by all, thanks very much to **John Diller**, **Larry Sneider**, **George Guzik**, **Ed Moss**, **Mary Hall** and **Bill Moutz**. I hope I didn't forget anyone.

Astro Event Makes Splash at Ohiopyle

by George Guzik (from AAAP Listserv)

I had the pleasure of participating in an astronomy event at Ohiopyle State Park on July 31. Given that the weather wasn't very cooperative, I went to Plan B and gave a talk on amateur astronomy in the park's amphitheater. The amphitheater is quite a nice venue and even has facilities for video projection. About 30 of the park's campers attended, participated, and had some good questions. Interestingly enough, very few of the attendees were from the Pittsburgh area - most were from out of state. After the talk, several of the campers attended an observing session in a nearby field. We had just enough breaks in the clouds and the fog to view the Big Dipper along with 2/3rds of the Summer Triangle. The Blue Moon remained hidden behind clouds low along the horizon. The Ohiopyle staff was great to work with and we already have an invitation to return there next year. I'll work out the arrangements and keep you informed of the date of the event.

If Perseids Could Have Just Come Down Through the Clouds....



After waiting several years for a favorable Moon phase, a 75% mix of low and high clouds prevented anyone locally from seeing scores of Perseid meteors, as were seen elsewhere. Here are a few members' accounts:

- **Jerry Zhu:** "...hoping to see an earth-grazer meteor. No luck....did see two 'normal' perseids....both were extremely fast and dim (must be actually bright due to the clouds and light pollution), with a blue color...."
- **Pete Zapadka:** "...From dusk until about 10:30, I saw three very bright Perseids -- the last of which was high overhead and seemed to pass right in front of Vega....only place to look for meteors was in the gaps in the clouds."
- **Mark Arelt:** "...I observed about 10 meteors. Three of these were fairly bright, leaving short-lived...on the order of a second or so...trains. Two of these were particularly pretty when they moved from North to East along the tops of the trees on the site's Northern horizon."
- **Eric Fischer:** "Waited and waited as a line of clouds closed in on the last clear area of the sky. Decided to count to 100, then leave if nothing showed. When I reached 78 a nice -1 Perseid zoomed out of Cass."

And Furthermore...

- We're most pleased to report that Wayne Meyers returned home on August 3, and appears to be suffering no serious complications from his heart transplant surgery. He and Mari-Jo are grateful for all the cards, flowers and expressions of support for their family. (We'll we be seeing Wayne at a star party before the year is out? Hope so.)
- Light pollution item from George Guzik: "I've had several contacts with the Engineer for Frazer Township regarding the lighting at Pittsburgh Mills mall.....Mills has not yet submitted a final lighting plan for the mall. When they do submit the plan, the Engineer will send me a copy of it. We will then have an opportunity to meet with Mills representatives to discuss the plan...Tom Reiland and Flacc Stifel have been keeping touch with Frazer Township representatives regarding the potential for an outdoor lighting ordinance...Contact me if you would like to participate in any of these discussions."

(continued at top right)

News Notes Continued

- We regret to report that the husband of Ann Dorn passed away recently after a long battle with cancer. Ann is remembered for her large donation toward the telescope pier in the original Wagman Observatory. Our sincerest condolences are extended to Ms. Dorn.
- Star Cruise Follow-Up: One of our LHSC guests is missing a telescope controller paddle, possibly from an LX-200. Please contact Terry Trees if you found this object.
- The AAAP website "members" section has a new password (i.e. to gain access to the on-line version of the Guide Star. The NEW password is : bigBANG, just like that - all one word with upper case BANG.
- Eric Fischer has been accepted as a technical illustrator for the "Astronautix" web site, regarded as the definitive reference site for space exploration history. Eric will be initially providing configuration diagrams of the ISS.



Clearing Up Some Confusion on Club Long-Range Calendar

In last month's Fridge Calendar we showed December 17 as the date of the club's annual holiday party at Middle Road Fire Hall. Actually, 12-17 is the weather back-up date for the prime date of December 10 (note: not Cathy Rivi's fault; we were giving her conflicting data). Please mark your long-range calendars (paper or electronic) accordingly to avoid any schedule conflicts.

Amateur Astronomers Association of Pittsburgh, Inc.

A section of the Academy of Science and Art of Pittsburgh
Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon

2003-2004 Officers:

President:	George Guzik	724-863-8008
Vice President:	Bill Yorkshire	412-793-9552
Treasurer:	John Holtz	724-352-7596
Corresponding Sec:	Charlotte Tunney	412-441-3958
Recording Sec:	Dennis Derda	724-224-4688
Membership Sec:	Brent Hudock	724-437-5990
Guide Star Editors:	Eric Fischer (news)	412-487-7011

AAAP Homepage: 3ap.org

AAAP Webmaster: Kenn Lippert (lippert@nauticom.net)

Guide Star Associate Editors

Ann Norman (412-242-6806) Cathy Rivi (412-782-4605)
Guide Star Classified Ads: Cathy Rivi (sedna49@verizon.net)

AAAP Member Dues***:

AAAP Dues:	\$18.00
Junior Member (under 18):	\$13.00
Sky & Telescope Magazine:	Add \$33.00
Astronomy Magazine:	Add \$29.00

***Basic Procedure for Paying Dues:

1. Make check payable to "AAAP Inc."
2. Send check to John Holtz, Treasurer, 176 Hidden Hill Rd, Sarver, PA 16055-8907

Chester Roe's 1930 Letter to A.O. Starts Long Relationship

We know and say little about **Chester B. Roe**, Leo Scanlon's alter-ago in the 1929 founding of the AAAP. Thanks to the research of Allegheny Observatory and AAAP Historian/Archivist **Art Glaser**, we now know how the club entered the good graces of the A.O. staff shortly after the club's founding. Art discovered an exchange of letters between Roe and A.O. Director Heber D. Curtis, which enabled the club to visit the observatory as a group apart from the general public. In time

the relationship would blossom into club meetings, telescope making workshops and Open House events at Observatory, not to mention the entry of many AAAP members to the A.O. staff. Here are the seminal letters that started the whole affair:



416 Delp St.
Bellevue P.O.
Pittsburgh Pa

Dr. H. D. Curtis
% Allegheny Observatory
N.S. Pittsburgh Pa.

Dear Sir:

The group I represent have, several times, taken advantage of the public nights at the Observatory, and found them very unsatisfactory in several respects. This is not a complaint by any means. We enjoyed the evenings but they were incomplete, and we were obliged to "make room for the next man." Now, the purpose of this letter is to ask a favor. We would like to visit the Observa-

February 28, 1930

My dear Mr. Roe:-

We shall be glad to arrange a special afternoon or evening for the Amateur Astronomers of Pittsburgh. You mention Saturday afternoon as preferred, and if this is the case, we could give you any Saturday afternoon, or evening, or both combined, as we never schedule any of our regular public evenings for a Saturday.

One possibility would be to come at three or four o'clock some Saturday afternoon, bringing your families and picnic lunches. Eat supper al fresco at the Observatory after you had looked over its material equipment, and then remain to look at some celestial sights of interest after it became dark. This plan had, manifestly, better wait till the warmer weather of June or July for the greatest enjoyment by all concerned.

416 Delp St.
Bellevue P.O.
Pittsburgh, Pa

Dr. H. D. Curtis
c/o Allegheny Observatory
N.S. Pittsburgh, Pa

Dear Sir:

The group I represent have, several times, taken advantage of the public nights at the observatory, and found them very unsatisfactory in several respects. This not a complaint by any means. We enjoyed the evenings, but they were incomplete, and we were obliged to "make room for the next man." Now, the purpose of this letter is to ask a favor. We would like to visit the Observatory in a body, without being with another group. We want to see and find out everything about the place. We are interested in things that others are not. Such as the machine shop, transit instrument, spectroscopes, the library, the work of the observatory, and dozens of other things that even the general run of people would never think to ask about. We are even interested in the hardware and plumbing. Would it be too much, to ask you for a Saturday afternoon or some other evening where we can be shown through the observatory and see every thing there is to see from the boiler room to the flagpole.

I believe our secretary is sending you a notice of our next meeting. I hope you find it convenient to be present.

Yours very truly
Amateur Astronomers of Pgh.
Chester B. Roe
Pres.

February 28, 1930

My Dear Mr. Roe:

We shall be glad to arrange a special afternoon or evening for the Amateur Astronomers of Pittsburgh. You mention Saturday afternoon as preferred, and if this is the case, we could give you any Saturday afternoon, or evening, or both combined, as we never schedule any of our regular public evenings for a Saturday.

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But we shall be glad to have you select your own date; as Saturday afternoon is a half holiday with us, let us know a week in advance, so that some of us can be here. We can show you nearly everything but a transit instrument, as ours is partially dismantled. The march of progress; between, first, the Western Union signals from the Naval Observatory; next the coming in of convenient time signals by radio at most any time of the day from some station or other; and finally, the telechrone clocks which are just beginning to come in, the transit instrument is almost abandoned except at a few large observatories who use it in the meridian circle form in connection with fundamental work on star positions. Fifty years ago one of the important instruments of every observatory, it has fallen into almost complete disuse today, except as still used here and there for purposes of instruction.

I am leaving to observe an eclipse in Nevada, and shall be away after March 22nd. But, whenever you wish to come, Assistant Director Jordan will look after you and "give you the keys to the city."

Yours very truly,
Heber D. Curtis

Book Review

Celestial Harvest Reaps Praise from Jeff Kearns

Review of “Celestial Harvest: 300-Plus Showpieces of the Heavens for Telescope Viewing and Contemplation” by James Mullaney, Dover Publications, \$11.95.

James Mullaney and Wallace McCall led the Allegheny Observatory public lecture series in the 1960s. I had the good fortune to attend many of these Tuesday and Thursday night meetings. The best part of the evening would come after the formal lecture. We would shuffle past the fire-engine red Thaw refractor, descend to the crypt in the pier of the Keeler reflector, and then climb a long marble staircase to the 13-inch refractor. As we took turns at the eyepiece, Jim and Wally would offer interesting facts and witty anecdotes gleaned from their many years of observing. Fortunately, they collaborated to create the popular little book “The Finest Deep-Sky Objects”-copyright 1966. The AAAP Mullaney/McCall Award is based on this list.

Jim has updated and greatly expanded the 60’s classic “The Finest Deep-Sky Objects” as “Celestial Harvest: 300-Plus

Showpieces of the Heavens for Telescope Viewing and Contemplation.”

The book has several unique features. First of all, it is an extensive list of the best objects (363 total) that can be observed from the Pittsburgh area with a small to medium-size scope. More than a third of the objects can be seen under bright urban skies. All the pertinent numbers are presented for each object. Jim has carefully chosen quotes from many authors and combined these with his personal observations. Sometimes the quotes give different, even contradictory, impressions. The intent is to prompt the reader to go out and observe and draw his or her own conclusions. “Celestial Harvest” comes in handy at star parties when you want things to say to visitors looking through your scope. In addition to being a practical, all-in-one reference source, Celestial Harvest can also be used as a field notebook. Space is provided for written comments and drawings next to the data and descriptions of most objects. All this in an 8.5” x 11” paperback about 100 pages long--easy to tuck under the arm. If you want to take just one book along with your scope and star charts Celestial Harvest is it!

ORAS Battling To Protect “Astroblast”

(continued from page 2, column 1)

ORAS - Observatory Rescue Fund
c/o Tim Spuck
405 West 7th Street
Oil City, PA 16301

Donations to this fund are tax deductible. For detailed information on the situation and other ways you might help, contact ORAS President Tim Spuck at 814-678-3893 or tspuck@mail.ocasd.org or tspuck@hotmail.com

(Editor’s note: What irony! Washington County is falling all over themselves supporting Mingo, while Venango County is doing just the opposite with the ORAS observatory.)

Where Has the Summer Gone? Sept. Meeting Coming Up

Looking Back At the Summer

By tradition, the Sept. meeting also provides time for members to show images taken over the summer. This can include field trips as well as astronomical phenomena. However, if you have a large number of images to show, please contact George Guzik or Bill Yorkshire in advance so that time can be fairly allotted between members.

Note to new members: The club meets in the Science Stage auditorium on the first floor of the CSC. After going through the main entrance, simply hang and right to find the auditorium.

One-Shot Photo Gallery (And What A Shot!)

Our digital camera genius, Jerry Zhu, strikes again with a great lighting strike photo from the Greentree area, taken during the August 8 severe thunderstorms. Jerry’s image was also shown on WPXI during its storm coverage. The image below was taken with a Canon digital Rebel 300D camera.



September 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<p>Words of Wisdom for astronomers: Without enough sleep, we all become tall two-year-olds. ~JoJo Jensen, <i>Dirt Farmer Wisdom</i>, 2002</p>		1	2 John Holtz' Beginning Astronomy Class 7:30 PM Thursdays through Sep. 23	3	4 Star Parties: NEWO and MCPO
5	6  Labor Day	7	8	9	10 Star Party MCPO	11 Star Party MCPO
12	13	14 	15	16	17 AO Public Lecture Sponsor: University of Pittsburgh See below	18 Star Party NEWO Blackwater Falls Weekend Sep. 17-19 www.kvas.org
19 I believe a leaf of grass is no less than the journey- work of the stars. ~Walt Whitman	20 	21 	22 Autumnal Equinox 12:30 PM EDT	23	24 AAAP Meeting 7:30 PM Carnegie Science Center	25
26	27	28  Harvest Moon	29	30		

<p>Also this month: Sept. 17 Lecture: Big Bang to Black Holes. Allegheny Observatory. Free. RSVP required. 7:30 PM. (412)-321-2400.</p> <p>Looking ahead: Star Parties: Oct. 2 (Moonrise Special) Nicholas E. Wagman Observatory (NEWO), Oct. 9 Mingo Creek Park Observatory (MCPO), Oct. 23 NEWO and MCPO, Oct. 27 (Lunar Eclipse Special) NEWO and MCPO</p>	<p style="text-align: center;"><u>AAAP Long-Range Meeting Schedule</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Oct. 29, 2004</td> <td style="width: 50%;">Jan. 28, 2005</td> </tr> <tr> <td>Nov. 19, 2004</td> <td>Feb. 25, 2005</td> </tr> <tr> <td>Dec. 10 Holiday Party</td> <td>Mar. 25, 2005</td> </tr> <tr> <td>Dec. 17 if Snow</td> <td>Apr. 22, 2005</td> </tr> </table>	Oct. 29, 2004	Jan. 28, 2005	Nov. 19, 2004	Feb. 25, 2005	Dec. 10 Holiday Party	Mar. 25, 2005	Dec. 17 if Snow	Apr. 22, 2005
Oct. 29, 2004	Jan. 28, 2005								
Nov. 19, 2004	Feb. 25, 2005								
Dec. 10 Holiday Party	Mar. 25, 2005								
Dec. 17 if Snow	Apr. 22, 2005								

Classifieds

For Sale:

10-inch Mirror for Newtonian plus head of same scope, with spider, diagonal, diagonal mirror and eyepiece mount. Great aperture for starter with limited cash. A big 10-inch diameter tube and some wood will give you a fine Dob. \$200 delivered to Mahoning, Columbiana, Beaver or Allegheny Counties. **C-8 with tripod.** \$1200 (firm) delivered to same area. 1K Oaks solar filter free with purchase. Contact Francis Graham (330)-382-7466.

Meade 16" Dobsonian (Starfinder) package. Components in excellent condition, unassembled and in original packaging. Scope assembly and mirror in storage, Oakland area. Visits welcome. \$900 to \$1000. All proceeds pay-off-the-astronomically-priced-CMU-tuition fund. Contact Benjamin Tsai at tsaib@novastar.com.

Snappy Video Grabber, never used, with instruction pamphlets. Best offer. Contact Terry Trees at TNTrees@BellAtlantic.net.

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