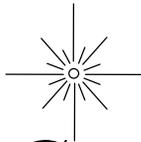




AAAP 75th Anniversary
1929 to 2004



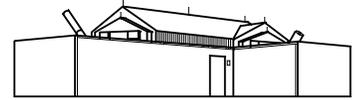
The Guide Star

Newsletter of the Amateur Astronomers Association of Pittsburgh Inc.

A Section of the Academy of Science & Art of Pittsburgh

March, 2004

Vol. 37, No. 12



Nicholas E. Wagman Observatory

?

Saying "Thank You" to the CSC: Astronomy Weekend

by George Guzik (from AAAP Listserver)

This year's Astronomy Weekend event will be held at the Carnegie Science Center on **April 3 and 4**. As in past years, we're looking for volunteers to bring their favorite astronomy subjects to the visitors at the CSC. Astronomy Weekend is an important event for us because it affords us an opportunity to "repay" the CSC for the support they provide to us during the year. The CSC provided a meeting facility to us for our business meetings this year. They provided the use of their audio visual equipment at those meetings and they held a special showing of "Ringworld" for us at the February meeting. Let's show the CSC that we appreciate their support by supporting Astronomy Weekend! Please contact me if you can be a part of this event.

(Editor's note: Make sure to make a mental/physical note about Astronomy Weekend, just in case the April Guide Star doesn't get to you in time as a reminder. Astronomy weekends feature a variety of visuals and activities such as table-top exhibits on different astronomical topics, telescopes (possibly pointed at a distant object), literature tables (including free copies of old S&Ts, etc.), face-painting for the kids, and lectures in the Science Stage theater, to name a few. If you are planning on bringing a large display or scope, plan on arriving at the CSC around 9:00 to 10:00 am and report to the security entrance on the west end of the building. For more info. on all such details, please contact George Guzik.)



"New-Blood Hounds" Needed for Nom. Committee

Seems like just the other day we closed out the annual election of officers.....But we fire up the process again this month with the selection of the official Nominating Committee. If you are interested in accepting this important duty, please contact President George Guzik. Three committee members are needed (in addition to the Chair). Note: Members interested in running for an AAAP office this year are also welcome to throw their eyepiece in the ring. Feel free to speak with any of the current officers about his/her respective duties.

It's True: LHSC Reg. Now Open!

by Terry Trees (from AAAP Listserver)

Registration for the sixth annual, week-long Laurel Highlands Star Cruise (June 14-20) is now open. In a nutshell, the final four days are filled with guest speakers, children's activities, beginner's classes, vendors and games. Saturday has very popular model rocket launches and many great door prizes in the Saturday night give-away. You'll love observing from beautiful, dark skies and, be assured, there are also many non-astronomy activities in the area as well. Star Cruise is held at the Pinehill Campground just off I-68 near Hazelton, West Virginia. Additional information about the event

(continued on page 3, column 1)

Astro "Bells & Whistles" Explained

Getting Down and Digital At the March Meeting

Perhaps your one of the thousands of backyard astronomers that enjoys the simple pleasures of viewing craters on the Moon, the rings of Saturn, Jupiter's Galilean moons or river of stars that make up the Milky Way. But as soon as you pick up an astronomy magazine, go to an astronomy web site, or attend an astronomers meeting, all you read or hear about is "digital setting circles", "CCD pixels", "image stacking", etc. If you want to know what "they" are talking about, but are fearful of asking the dreaded *dumb* question, the **March 5, 2004** AAAP meeting is for you (**7:30 pm**, Carnegie Science Center). Our guest speaker, **Dr. John Stein** of nearby Geneva College, takes a fresh, non-condescending look at the whole transformation of popular astronomy by the digital electronics/computer revolution. His talk is entitled "*High Tech Astronomy for Everyone*". John is well known to many long-term AAAP members as that friendly chap who once worked long hours at Allegheny Observatory in search of extra-solar planets. We can't think of a better person to clarify the rapidly evolving world of digital/electronic astronomy. Don't miss this chance to get yourself plugged in.



Tom Whiting's unique-design 30" Dob will be at LHSC (minus the snow!!!!)

Fair Weather Brings Fairly Interesting Observations (We Hope)



*Sun, Moon.,
Venus,
Jupiter and
Sirius.
Which is
brightest?*



Enjoy the March of Bright Objects At Month's End

by Tom Reiland (from AAAP Listserver)

The end of March will be an excellent time to observe five of the brightest objects in the sky in daylight. The Sun is the obvious object; followed by the Moon, Venus, Jupiter and Sirius. The Moon can be used to locate Venus on the 24th of March. The best way to locate Jupiter and Sirius is to find them after sunset one or two evenings before. Use a foreground object like a tree or building to mark their positions. The next clear evening start looking for them about thirty minutes before sunset using the land objects you chose for locators and, if necessary, use binoculars to find them and then try to view them with your nude eyes. Venus will be rather easy at -4.3 mag and Jupiter will be a few weeks passed opposition at -2.5. Sirius will be near the meridian and is -1.5 mag. I've been observing Venus naked-eye about twenty minutes before sunset over the last few weeks with ease. Good Luck. Start practicing now.

Optimum Messier Marathon Time Fast Approaching

by Tom Reiland

The best weekend for the Messier Marathon in 2004 is March 19-21. New Moon is March 20. Depending on your experience level, you should be able to observe at least 70 to 107, maybe 109 under ideal conditions at a light location. Practice your evening objects the weekend before so that you are familiar with their location and level of difficulty. M74 and M33 may be difficult to impossible to observe at this time, depending on the conditions in the evening. M30 will not be observable in the morning. It will take you 10 hours from start to finish to complete this task. The Messier Marathon was meant to be conducted using manual methods. You can use computer systems if that's your only means of finding objects. But that would be like entering a regular marathon on a motorcycle. Good luck no matter how and when you try it.



Rare Jovian Transits Coming Up

by Flacc Stifel (from AAAP Listserver)

On the evening of March 4-5, clear sky permitting, an exceptionally interesting opportunity will occur. Jupiter is just past opposition and there will be an unusual double satellite/shadow transit. Although the just-past-full Moon is only about 7 degrees away from Jupiter, the timing and placement are good.

- At about 12:05 EST 3/5/04 Europa will start across the face of Jupiter, followed at 12:08 by its shadow.
- At around 12:50 with Europa and shadow about 1/3 across, the GRS appears.
- At about 2:20 am Io starts to transit, followed by its shadow at 2:28.

Note that the proximity to opposition (just about a day before) causes the moon shadows to be at almost the same longitude as the moons themselves. My Starry Night pro shows that the disc of Europa will be just about tangent to its shadow, the disc of Io will actually cover 25 or 30 percent of its shadow. Both moons are located north and west of their shadows. The double phase ends at 2:55 am when Europa leaves the face of Jupiter, shortly followed by its shadow. A number of other interesting transit and shadow events occur this Spring. Check your Observer's Handbook or fire up your planetarium software! Clear skies!

Don't Let Anything "Get In the Way" of Observing These Occultations

by John Holtz

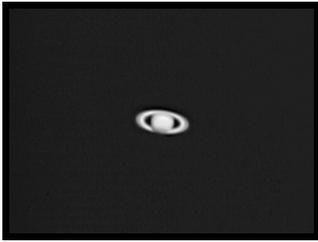
March provides two favorable asteroidal occultations and two noteworthy lunar occultations. The asteroidal occultations (passage of an asteroid directly in front of a star) are predicted to be visible from here, but as always, updates on these events could move the occultation path closer or farther away. If the conditions are very favorable, I will post finder charts on my website (<http://members.aol.com/jwholtz>). And now, the upcoming occultations are the following:

- ☐ Mar 8, asteroid 382 Dodona will occult an 11.0 mag star (R.A. 6h 56m 30.33s Dec +25° 0' 59.4") at 11:29 pm EST (4:29 UT Mar 9).
- ☐ Mar 9, the 4.4 mag star theta Virginis will reappear from behind the 94% waning gibbous Moon at 12:27 am (5:27 UT). Look at an angle of 57 degrees from the northern cusp on the dark limb. (The disappearance will occur on Monday evening at 11:19 pm, but would require an 8-inch scope and ruin your night vision for the Dodona occultation.)
- ☐ Mar 12, asteroid 508 Princetoni will occult an 11.6 magnitude star (R.A. 13h 29m 13.08s Dec 1° 55' 4.3") at 3:58 am EST (8:58 UT)
- ☐ Mar 28, nine disappearances behind the First Quarter Moon's dark limb between 8:21 pm and 12:50 am with scopes up to 10-inches. The easiest is a 7.7 magnitude star visible at 8:30 pm (not visible at 8:31 pm!) whose occultation can be seen with 4.5-inch and larger scopes.

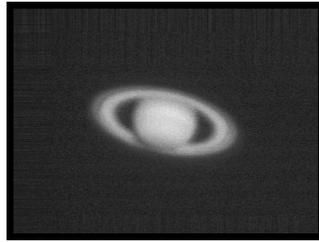
Yes, I Do More Than Just Solar Imaging!

by Larry McHenry (from AAAP Listserv)

I also got out on the evening of February 8 and observed Saturn (had to go buy more propane). I wanted to try out my new "Minus Violet Filter" from Sirius Optics. In addition to filtering out Violet light, it also blocks out of focus IR (my Stellacam video camera is a little IR sensitive). I noticed a definite improvement on the video monitor. The resulting images are a combination of six individual photos, imaged at the telescope's prime focus. I used AstroStack software to combine images, apply unsharp mask, and adjust brightness/contrast. Then I used Adobe PhotoDeluxe to create jpgs.



8" f10 SCT (8:15 PM)
02/08/2004 (2x camera zoom)



8" f10 SCT (9:00 PM)
02/08/2004 (2.8x Klee Barlow)

Raystown Lake and "Westsylvania Adventures" On Long-Range Agenda

by George Guzik (from AAAP Listserv)

As the earlier posting indicated, we are planning an event at Raystown Lake on August 14. We'll follow the same format as last year so that we can either hold a star party if weather permits or we can hold an indoor event if the weather doesn't cooperate.

We're also planning a star party to take place at Westsylvania Adventures (www.westsylvania.org/wa), which is a large event directed to school-age children. The organizers of this event are already making connections for NASA support and they are looking to us to provide an evening program that includes observing. The main events in Westsylvania Adventures will be held at Quemahoning Reservoir, near Johnstown, on May 6 and 7. Given that our last business meeting of the year is on May 7, we'll probably hold our event on May 6. Incidentally, the organizers of Westsylvania Adventures noted that they have typically had about 5000 attendees at their event in past years. Please contact me if you are interested in participating in either the Raystown or the Westsylvania event.

Star Cruise Prep Full Speed Ahead

(continued from front page)

and the area is available at <http://www.LHStarCruise.org> The WebSite also displays photos taken by attendees during previous Star Cruise events. Thank you and I hope to see you there.

And from Charlotte Tunney: "Please, consider giving just a few hours of your time to help make Star Cruise great. Talk to me at the next meeting or at Winterfest (the person with kind-of-red ponytails) or contact Charlotte Tunney 412-441-3958 - tunneyc@carnegieliibrary.org."

Le l'tems de News

☛ The Mother of All Shames on you for missing the "Ringworld" sky show at last month's meeting in the Buhl Planetarium. The program covered the history and soon-to-be adventures of the Cassini/Huygens probe, which is scheduled to reach Saturn in June of this year. The swirling imagery and cosmic music of "Ringworld" was impressive, to say the least. For those who did attend, your guess was right: The voice-over for the program is John Billingsley, who plays the jolly Dr. Phlox on "Star Trek - Enterprise".



☛ Since "Wagman Winterfest" was scheduled just as this Guide Star was going to press, we'll make a full report on the event in the April issue (no foolin'). Hopefully, the Weather Gods granted good conditions for the event.

☛ Now that the road to the Mingo Observatory site has been finished, we're turning our full attention to the actual start of building construction. Up next: Compiling all the construction specifications in preparation for sending out bids. Meanwhile, Dick Haddad continues his thus-far superb efforts at garnering more contributions from various charitable foundations. And a reminder about visiting the site: Ground conditions are certain to be muddy; please exercise extreme care while maneuvering around the site.

☛ Jay Apt is perhaps the best known Pittsburgh area resident to travel in space. Soon we can add another: Michael Fincke, a native of Emsworth, will live on the International Space Station (ISS) starting in mid-April. Visible passes of the ISS will thus take on special meaning around here, and we can expect to garner a fair amount of media attention when the passes take place.

☛ As we close in on the 75th anniversary of the club's founding (June 29), the Guide Star staff is inviting members to research/ contribute articles about the club's history for publication in the June edition (or a special edition). This can involve research through the club's archives at the University of Pittsburgh and/or interviews with the club's "Elder Statesmen/Women". Contact Eric Fischer, Ann Norman or Cathy Rivi if you are interested in making a written contribution.

☛ From John Holtz: "I have updated the Occultation & Transit page under SIG (Special Interest Group) on the AAAP web site (www.3ap.org). Lots of good occultations this year, including total occultations (Mercury and Jupiter), grazing occultations (three in two weeks), asteroidal occultations, transits (heard something is happening with Venus this year © John Cheng mentioned double shadow transits on Jupiter, so I've created a special table showing when these events will be visible. Everyone is free to visit the Occultation & Transit page; it is not limited to AAAP members."

THE FIRST MARTIAN ROVER *John Holtz reviews Sojourner: An Insider's View of the Mars Pathfinder Mission* by Andrew Mishkin



I usually don't read many books in a given year, so it's unusual for me to purchase three books at once, one of which may be of interest to the general astronomical audience. "Sojourner: An Insider's View of the Mars Pathfinder Mission". This is a non-technical book that talks about the various rover designs and concepts developed at the Jet Propulsion Laboratory (JPL) prior to the Mars Pathfinder, and of course the design, testing, and operations that made the Sojourner rover a success. With the excitement surrounding the current rovers, I thought a historical review of the "first" mission was well timed.

The book is written by one of the male engineers that was involved with the project from the beginning to the last sleepless day. Among the tidbits I learned are these: Did you know that JPL has a rover designed in the 60's as part of the lunar Surveyor program? That Sojourner used a commercially made radio modem to communicate with the lander? (Guess that Mars movie wasn't so far fetched after all.) That the *lander* failed first:

after 84 sols, or Martian days. That 4 days prior, Sojourner had been instructed to return to the lander and circle it in the event that communications were lost? How sad to think the Sojourner could still be circling the lander, waiting to hear a message with new instructions to perform. Unlikely, but what if?

The only complaint that I have is with the photographs. The photos from the Martian surface are mostly low quality or too dark. Perhaps the best photo isn't from Mars: it is of the pip-squeak Sojourner sitting next to two giant robots: the Mars Exploration Rovers of Spirit and Opportunity. After reading the trials and tribulations of Sojourner, the current missions are all that much more magical.

By the way, if you want my review of the other two books--a college physics textbook and a photo collection of the Wright Brothers--you'll have to wait. ☺

OWN A RARE CLASSIC: *John Cheng reviews The History of the Telescope* by Henry C. King

So help me, I'm not a shill for Dover Publications but.... Dover has recently reprinted Henry C. King's "The History of the Telescope", which originally appeared in 1955. It was reissued some time in the interim, but it's been on that "kinda' hard to find a good used copy list" for quite a while.

It's an exquisitely researched text on the 300-plus year history of the fabrication and use of astronomical instruments. While there's no math, it's packed with solid information, much of it, footnoted and documented.

You'll find a discussion of the sextant, watch Herschel cast and polish by day the optics that would enable his discoveries by

night. King introduces us to James Gregory, both Dollands, Fraunhofer, Cooke, Jesse Ramsden, Clark, Lord Rosse, not only Warner but also Swasey, George Ritchey and Pittsburgh's own J.W. Fecker. and John Brashear. The list could go on and on. This book is just a gold mine.

I've always considered the old, loose, dog-eared copy of King's book, surviving from my high school days, as priceless.... That's no longer the case.... \$24.95 US



TWO SUPERLATIVE RESOURCES FOR OBSERVERS *John Cheng reviews The Virtual Moon Atlas* freeware and *A Complete Manual of Amateur Astronomy* by Clay Sherrod.

Everyone, except the total deep-sky bigot, will want to download the freeware Virtual Moon Atlas that can be acquired at: http://www.astrosurf.com/avl/UK_index.html

Supplemented with the Lunar Orbiter image library available at the site, this package is literally too good to be free. "The failure of Sky Publishing to put the Rukl Atlas back in print, may make this the best moon atlas around. It provides details like size, position, and naming information."

A second highly recommended resource is the Dover reprint of Clay Sherrod's "A Complete Manual of Amateur Astronomy: Tools and Techniques for Astronomical Observations". What J.B. Sidgwick's handbook is to equipment, Sherrod's book seems to be for observing - no nonsense, moderate to heavy on most of the real details of the hobby.... magnitude estimation, position determination, sketching, logging, basic photometrics, chapters working with Jupiter, Saturn....

(continued on page 5, bottom left)



A GOOD, CHEAP BINO MOUNT?

(AAAP Listserv Discussion
compiled by Ann Norman)

John Cheng: Binoculars become a totally different animal when they're mounted. Not only is the view more pleasing when the inevitable shaking is removed, but more faint objects are captured. Also, navigating around the sky with an atlas is a lot more convenient when the instrument stays where you last left it and, as a bonus, mounting allows one to share the view.



The most expensive choice is the parallelogram mounts offered commercially. They work quite nicely. An old photography trick...use a beanbag. No matter how it's done, a rock steady binocular view is something not to be missed. On a late summer evening, when Sagittarius is glowing in the South and the star clouds are calling, BINOCULARS RULE!!

Simon Sloan: Does anyone know of good, cheap bino mounts?

Dave Smith: Dan Reed, in our club, has made a mounting he calls his "Cruchfield" that uses two old crutches to work in a parallelogram fashion to elevate the binoculars.

Truman Kohman: For some time I have had a dual-slow-motion tripod head to support my binoculars. It (or one similar) is available from Orion. Go to the Orion website, Accessories, Mounts and Tripods, Precision Slow-Motion Adapter. It's \$29.95, and well worth it. The adapter screws onto the top platform of the tripod and the binoculars screw onto it. The binoculars can be positioned roughly by the tripod controls, and precise aiming can be done by the azimuth and altitude slow-motion knobs. It's easy to follow an object as the Earth turns. Very handy!

Don Shepherd: I've had fairly good luck mounting my binoculars to a unipod I made with a paint roller, a foam paint roll, and an adjustable paint roller extension handle. I hold the binoculars up against the foam roll with two small bungee cords. It's not quite as stable as a tripod, but much better than freehand. Everything should cost less than \$20 at Home Depot.

James E. Moody: I thought Donald Shepherd's idea for a paint roller-based monopod was great, so when I found myself at hardware stores over the weekend, I looked into the paint roller and telescopic extension options.

Some poles lock into pre-set positions; these are not the best choice. When dealing with something as expansive as the universe I think the infinitely adjustable extensions are more appropriate.

The two-piece variable-position poles that extend from 4' to 8' seemed to be ideal. Some poles use an internal locking mechanism where a slight twist of the sections releases or engages the clamp (twist-lock). Others have a tightening collet to clamp the pole into position.

I bought the collet style. The binos need to be mounted to the roller. Donald mentioned bungee cords. I stumbled across a different solution: a tarp tie-down. This is basically an elastic loop about 12" long with a plastic ball on one end. You wrap them around something and slip the ball through the end of the loop, then slide a little sleeve to lock the ball in place. They came 10 in a plastic jar for just under \$5. You need two, one for each side of the bino.

Wednesday night I gave it all a try. The sky was pretty clear (a rarity) and neither of my neighbors had their outside lights on (even more astounding). The tiedowns worked very well to secure the Oberwerks to the paint roller (I still used a neck strap just in case). The whole assembly was very stable. It is no substitute for a tripod, of course, but amazingly better than hand-held or leaning on a car roof. I realized I'd made a good decision in buying my pole. The collet clamp can be easily adjusted from unclamped to clamped, and anywhere in between. Thus I could adjust it to enough of a grip to support the weight of the binocular but still extend or retract the pole by just gently pulling or pushing. This enabled me to keep one hand on the binoculars and the other on the collet. I could easily extend to see the Pleiades near the zenith and retract for the Orion nebula.

For over-all functionally I'd say this is a pretty good solution. For over-all coolness all I can say is that I'm glad we observe in the dark. ☺

Ed Kuzemchak: Instead of a paint roller, you might try a drywall sanding pad as a bino support. They are usually found with the drywall tape and joint compound. The pad is approx 4" x 8" and it screws on the end of your existing paint roller extension handle. It has a 2-axis flexible swivel and a rubber pad that the sandpaper mounts on. I find it to be very good for just sitting the binos right on top.

JOHN CHENG REVIEWS TWO RESOURCES

(continued from page 4)

Reservations? The book reflects the state of the hobby in the early eighties, so, for example, many of Sherrod's judgments on refractors are germane to the long focal length instruments that dominated the market in those days, not the fast APOs that

available today. *Sky & Telescope's* Leif Robinson in the foreword to Sherrod's text says, "Too bad a book like this wasn't available when I first became seriously interested in astronomy!" Man, that's the truth. If I wanted to do a favor for advancing amateur astronomers, with a real interest in observing, I'd give them a copy of this book.. Under \$20.00.

MARCH 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5 AAAP Business Meeting 7:30 PM CSC	6 
7	8	9 	10	11	12	13 
14	15	16	17 St. Patrick's Day	18 Let the Messier Madness begin! (March 19 – 21 is a good time.)	19 AO Public Lecture Cosmic Capitalism 7:30 PM Free – Must RSVP at (412) 321-2400	20 Vernal Equinox 1:49 AM EST 
21	22	23  VENUS	24 Look for Venus tonight (3 degrees to lower rt of crescent moon)	25	26 	27
28 	29 	30	31	The best weekend for a Messier Marathon will be March 19-21.		

<p>Looking ahead: April 23, 24 Star Parties at Wagman Observatory</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%;">Apr. 2, 2004</td> <td style="width: 50%;">Oct. 29, 2004</td> </tr> <tr> <td>May 7, 2004</td> <td>Nov. 19, 2004</td> </tr> <tr> <td style="color: red;">Summer Picnic</td> <td>Dec. 17, 2004</td> </tr> <tr> <td>Sep. 24, 2004</td> <td>Jan. 28, 2005</td> </tr> </table>	Apr. 2, 2004	Oct. 29, 2004	May 7, 2004	Nov. 19, 2004	Summer Picnic	Dec. 17, 2004	Sep. 24, 2004	Jan. 28, 2005
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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

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AAAP Dues:	\$18.00
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<u>Astronomy Magazine:</u>	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

"Benvenuto" To New Members

The following folks were gladly welcomed into the AAAP at the Feb. meeting:

Bob Arbster
 Bill King
 Elizabeth Moody
 Michael Moody
 John D. Mozer
 Howard Saunders
 Donald Wessel



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