The Guide Star

Newsletter of the Amateur Astronomers Association of Pittsburgh Inc
Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon
Website: 3ap.org

June 2011 ***Volume 45, No.6***

June's AAAP Events

June 3rd & 4th ***Public Star Party, Mingo Creek Park Observatory***

June 10th & 11th ***Public Star Party, Wagman Observatory***

June 25th ***Club Picnic at Wagman Observatory Deer Lakes Park, Minnow 2 Grove 4:00 pm.***

The club picnic is open to AAAP members and their guests. Hotdogs and pop will be provided by the club but members are encouraged to bring a side dish or snacks. At about 9:00 pm, attendees will adjourn to Wagman Observatory for a star party.

Some highlights in the skies above these events:

On all dates, Saturn will be under 20 arc minutes to the south of the famous double star gamma Virginis whose components are currently separated by about 1.75 arc second. Only a few years ago, this star showed no separation at all even in large aperture scopes. Also the Virgo Cluster, which boasts 18 galaxies brighter than magnitude 11, including 15 Messier catalogue entries, will lay to the north of Saturn.

The Wagman star parties on the 10th and 11th will feature the 9 and 10 day old gibbous Moon with large libration values. The lunar north pole will be tipped in our direction and structures not normally prominent, like the very old large walled plain, Goldschmidt, will be easy to examine. ***- GS Editor***

June 25th - 26th Radio Field Day 2011

AAAP again welcomes WASH (Wireless Association of the South Hills) to install their temporary field station atop the hill at Mingo Observatory, for 2011 Radio Field Day. The event begins on Saturday morning and concludes Noon Sunday. In conjunction with the radio station the observatory will be open to the public 8PM- 11PM for telescope viewing (weather permitting), with displays and astronomy programs/sky shows in the planetarium.

Radio Field Day http://en.wikipedia.org/wiki/Field_Day_(amateur_radio) is an annual exercise to encourage emergency preparedness. Sponsored by a number of amateur radio organizations, it is the largest single emergency preparedness exercise in the country. Over 30,000 operators participating annually. . These are some views from previous WASH Radio Field Days: http://n3sh.org/gallery/main.php?g2_itemId=3569

AAAP members and the public are encouraged to attend 2011 Radio Field Day at Mingo Observatory.

Thanks for you attention. ***- Kathy DeSantis***

From the New Club President…

Just a few quick items I would like to pass onto the membership…I would like to take a moment and thank Ed Moss for all of his years of dedicated service and leadership as President.

As I have outlined briefly in my past emails to the membership, there are many challenges facing our club:

- An increasingly older membership base
- Astronomy does not appear cool….
- The hobby appears to be expensive
- No mass appeal to the younger crowd.

I plan to address some of these things in the hope of growing our membership from its current level. I would like to ask all of you for any input you may have.

I will be communicating to the membership through monthly emails and the Guide Star of current events, meeting minutes from all Executive Meetings as well as committee meetings from both observatories. I respect your privacy. If you would like to receive these communications, please check to see that the secretary has your current email address. Sometimes it will be necessary to contact the membership before a Guide Star is published. I can promise you that it will be kept in complete confidence.

I will be asking the membership to express their opinions on a range of items: How to improve our club and observatories, your personal experiences in the club to casting your opinion and vote on all financial expenditures. I believe you should have an active say in what happens!

I wish to grow our outreach to the public by organizing more sidewalk astronomy events, closer work with national organizations like the International Dark Sky and our current relationship with the Night Sky network. Kathy DeSantis has worked extensively as the club contact between them and AAAP. (Thank you, Kathy) More outreach to our future astronomers currently in the grade school, middle school and higher education. They are the future of our club.

I hope to foster an organization where any member can inquire about a purchase, project or future consideration, and be able to either call myself or one of the officers for that information as well as log onto our web site and retrieve it. Nothing will be held behind closed doors…..

Lastly, I would like to acknowledge and thank all past and current officers, directors, executive committee members and you the membership for giving your personal time and commitment to this fine organization. I hope I can earn your trust and respect in the coming year !

If you would like to contact me, please feel free to contact me either by my email address or my cell phone #. They are listed below.

mailto:haoobservatory@verizon.net cell: 724-448-1982

My wife and I are looking forward to meeting all of you and discussing your ideas of the club at a star party or other AAAP function. We will be visiting both observatories. Thank You. ***- Anthony Orzechowski***

AAAP Election Results

The election of club executive officers for the term 2011- 2012 concluded at the May 2011 General Business Meeting. The results were:

President	Anthony Orzechowski
Vice President	Craig Lang
Corresponding Secretary	John Mozer
Recording Secretary	Dennis Derda
Membership Secretary	Don Hoecker
Guide Star Editor	John Cheng

Michael Meteney continues as Treasurer, the five year term of that office bridges the current election cycle. Thanks to all the members who voted and congratulations to the officers and best wishes for the coming term.

Executive Committee Formation for 2011-12

As the newly elected president, I would like to extend an invitation to any member who may wish to serve on the executive committee. Please forward your inquiry to my email address: mailto:haoobservatory@verizon.net

You can also reach me at my cell phone. The number is 724-448-1982. I look forward in hearing from you! ***- Anthony Orzechowski***

Eric Fischer on Star Party Chatter: "Star Words: Part 1"

This is the first in a series of Guide Star articles intended to help you spruce up your star party narratives. Let's face it, the public is captivated by Hubble and other professional astro-images, and disappointed when our scopes show the same objects as fuzzy blobs and blurry dots. Given these circumstances, the worst thing you can do is to comment and answer questions in astro-jargon (e.g. "Antares is a class M red super giant, magnitude approximately plus 1.").

Beginning with this article, I describe how you can keep up your guests' interest by relating astronomical terminology to familiar terms in the English language. For this purpose, we will be traveling from the Sun out into the greater Cosmos. I'm sure most of you know this stuff, but a refresher course never hurts. ☺ Note: Later articles will review other breeds of astronomical factoids that can keep star parties lively.

Sun: Known to the ancient Greeks as Helios. The first element discovered on another celestial body was discovered on the Sun, hence its name "Helium".

Mercury: Some people are said to have a Mercurial personality, that is, they show rapid changes in mood. Similarly, Mercury (the wing-footed messenger) changes position in the evening sky much more rapidly than the other planets.

Venus: Before the Ancients discovered that the Morning Star and Evening Star are one and the same, they referred to the evening star as "Hesperus" (a.k.a. "Vesperus") because it heralded the arrival of evening. Hence, we have "Verpers" association with evening church services. The morning star was sometimes referred to as Phosphorus, or marking the arrival of morning sunlight. Of course, phosphorescent material generates its own light.

The morning star "Phosphorus" heralds the arrival of sunlight.

Luna: People used to (and sometimes still do) blame the Moon for cases of mental illness, hence the word "Lunatic." This was a convenient solution for early medical practitioners since it could not be tested.

Moon: The time required for the Moon to circle the Earth was once used as a fixed measurement, thus the origin of the word "Month". In fact, we celebrate the Moon at the beginning of the work week on "Monday".

Lunar "Mare": Ancient astronomers guessed that the dark regions on the Moon were bodies of water, hence the origin of the words "marine" and "mariner".

Mars: If you are named Martin, Marvin, Marcus, Mark or Marco, you are a Martian.

Phobos and Deimos: Since Mars is the God of War, it was appropriate to name its two satellites for unpleasant conditions. Of course, anyone with a phobia understands this. Related to Deimos, the word "pandemonium" literally means "All possessed by demons"

"Pandemonium" (All Demons) on the floor of the Chicago Mercantile Exchange.

Ceres: One of the many gods and goddesses of the harvest, Ceres is related to the box of breakfast cereal on your kitchen table.

Jupiter: If you were born under the ancient astrological sign of Jupiter, you were considered lucky, thus you became "Jovial". When a Brit says "By Jove", he or she is actually swearing before the god Jupiter that something is true.

Saturn: If you like the weekend, you will be celebrating "Saturn's Day". Among others, Saturn was the god of the completed harvest, a time to rest. Saturn's slow motion across the sky may have inspired this.

Titan, Uranus and Pluto: Just as the element helium is associated with the Sun, the elements titanium, uranium and plutonium are associated with these three bodies. All three are associated with Greek and Roman gods.

Next month: What do earthquakes, punctuation marks and mascara have in common with astronomy?

It's Summertime! Globulars are in Season

One of most beloved writers on the deep sky, Walter Scott Houston once observed that while autumn is the time for hunting planetary nebulae and spring is given over to galaxies, summer is the season for viewing globular clusters.

Pick up any atlas and the concentration of globular clusters in the prime time summer constellations of Scorpius, Sagittarius and Ophiuchus is obvious. In fact, even as the great parade of these objects peters out to the north, two of the best and brightest present themselves, M5 in Serpens and M13 in Hercules.

Recall that about a century ago, the American astronomer Harlow Shapley, referencing globular clusters brought about another Copernican revolution of sorts. Reasoning that globular clusters would be gathered about the center of the galaxy, he concluded that the hub of the Milky Way was in the area of Sagittarius and that our Solar System was located in a modest neighborhood toward the periphery of the galaxy. Once more, a rude reminder that man is not the measure of all things, nor humanity the center.

Now admittedly, on the face of it, one globular cluster looks pretty much like any other, especially when imaged, but they're often unique and can offer interesting observing opportunities.

Let's start with Messier 54, a 7th magnitude globular in Sagittarius that was actually discovered by Messier in 1778 before he added it to his catalogue (Many of the Messier objects were discovered by observers other than Charles himself). He described it as "a very faint nebula, the center is bright, does not contain any star". Note, that indicates he couldn't resolve it into its constituent stars with the scopes he used.

What Messier didn't know and indeed what we didn't know until 1994 was that M54 is not gravitationally bound to our galaxy. It is in fact a large part (one fortieth) of our nearest neighbor, the Sagittarius Dwarf Elliptical Galaxy (SagDEG) which has had ten close encounters with the Milky Way so far and is a good bet not to survive the next brush in about 30 million years. M54 offers you a chance to get a close up look at a structure in another galaxy. Catch it now, because next time 'round, it's going to be part of the home team.

Getting back to Messier and his weak telescopes. M4, the 6th magnitude cluster in Scorpius was discovered by the Swiss amateur Philippe de Cheseaux, but Messier scores big for being the first to actually resolve a globular into its constituent stars when he examined it in 1764. He wrote, "Cluster of very small stars; with a weak refractor it is seen in the form of a nebula". Unfortunately, there's no mention of the instrument he actually used to resolve it, but modern manuals mention that some stars are resolved with only two inches of aperture.

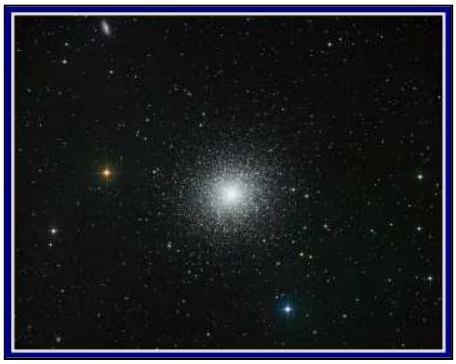
Messier 13 is a warhorse. It's the "Law & Order" of summer star parties. On any given night, somebody's showing it to the public. But there's still some interest for an experienced observer.

Scott Houston's "Propeller"

In the 19th century, visual observers noted three rifts in the center of M 13. This north up view, drawn using one of Lord Rosse's telescopes, clearly shows the feature offset slightly to the south east of the cluster center.

But over time the rifts in M13 disappeared from the target lists of amateur astronomers. Scott Houston thinks an unfortunate result of astronomical photography is that if a subtle feature is washed out or doesn't appear in photographs or images, amateur observers forget it's there. Visual observers need to be reminded that the eye can often see what the camera misses.

In any case, Houston nicknamed the feature the "propeller" in 1953 and noted that while it normally requires at least a 203mm scope (8 inches) or better running at around 200x in order to see it, one observer caught it with a 152mm under pristine conditions. So Messier 13 offers a challenge to observer, optics and seeing.



Granted, Messier 13 is glorious. And that's the whole problem. Dazzled by the cluster, one can fail to wander less than a degree to the north east (upper left) and catch the 12th magnitude spiral galaxy NGC6207, easily visible in a 130mm (5 inch) scope.

Now that we've sung the praises of M13, let's talk of a cluster called a "starry blizzard" by Scott Houston and extolled as "much more beautiful than M13" by no less an astronomer than E.E, Barnard. It's M5 in Serpens.

Barnard went on: "(M5) is more suitable for small apertures. In good seeing, a number of ink black patches or holes are visible, not in the densest part, but nearby to the SW and SE. Under best conditions, they look almost like black obscuring masses. Apparently near the cluster center is a group of six or seven small bright stars, which in small telescopes give the impression of a core of M5."

Serpen's "Starry Blizzard" – Messier 5

The German astronomer Ronald Stoyan says that with the use of larger apertures, M5 doubles in size, actually growing larger than M13. While Houston thinks that "M13 is the better known cluster only because it passes nearly overhead (for us)". For what it's worth, I agree. M5 is a knockout! ***– GS Editor***

AAAP at the BCSO

On Saturday, April 16, 2011, ten members of the Amateur Astronomers Association of Pittsburgh and the Kiski Astronomers attended and participated in the Butler County Symphony Orchestra's final performance of the year at the Butler Intermediate High School auditorium in Butler, PA. The theme of the BCSO's performance was "Space" which included five movements from "The Planets" by Gustav Holst, as well as a premier performance of "The Fermi Paradox" by Leon Steward, who is the current winner of the BCSO's composer competition. These pieces were well performed and thoroughly enjoyed by all of the people who attended the performance. The AAAP and KA members set up and manned several astronomy displays and personal telescopes in the entrance lobby of the auditorium that were visited by the concert goers before and after the performance and during the intermission. We also showed a slide presentation of planet and moon images during the last movement of "The Planets," which was a big hit.

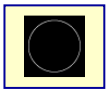
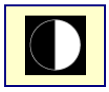
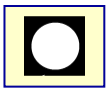
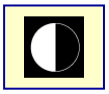
Thanks go to the following members of the AAAP and the KA who volunteered at this event and/or provided exhibits: Rob Cyphert, Eric Fischer (who prepared the slide presentation), David Koren, Larry McHenry, Ed Moss, Bill and Maureen Moutz, John and Sheila Mozer, Ann Norman, Bob Novak, Dave Smith and Fred Vero (who also played the trumpet in the BCSO performance).

- John Mozer

All times given are local.

Legend: SR = Sunrise, SS = Sunset, MR = Moonrise, MS = Moonset, PI = Approximate Percentage Visible Lunar Surface Illuminated Local Midnight

Details for AAAP Events can be found at: https://nightsky.jpl.nasa.gov/event-list.cfm?Club_ID=675&EventEra=Future

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1  SR:05:52 SS:20:44 MR:05:29 MS:20:50 PI:1%	**2** SR:05:51 SS:20:44 MR:06:20 MS:21:44 PI:0%	**3** Star Party Mingo Park Observatory Sunset SR:05:51 SS:20:45 MR:07:17 MS:22:31 PI:1%	**4** Star Party Mingo Park Observatory Sunset SR:05:51 SS:20:46 MR:08:20 MS:23:13 PI:5%
5 SR:05:50 SS:20:46 MR:09:27 MS:23:49 PI:10%	**6** SR:05:50 SS:20:47 MR:10:35 MS:***** PI:18%	**7** SR:05:50 SS:20:48 MR:11:44 MS:00:22 PI:27%	**8**  SR:05:50 SS:20:48 MR:12:54 MS:00:52 PI:38%	**9** SR:05:49 SS:20:49 MR:14:04 MS:01:22 PI:49%	**10** Star Party Wagman Observatory Sunset SR:05:49 SS:20:49 MR:15:16 MS:01:52 PI:61%	**11** Star Party Wagman Observatory Sunset SR:05:49 SS:20:50 MR:16:29 MS:02:24 PI:72%
12 SR:05:49 SS:20:50 MR:17:42 MS:03:00 PI:81%	**13** Mercury Superior Conjunction SR:05:49 SS:20:51 MR:18:53 MS:03:42 PI:90%	**14** SR:05:49 SS:20:51 MR:19:59 MS:04:31 PI:96%	**15**  SR:05:49 SS:20:52 MR:20:57 MS:05:27 PI:99%	**16** SR:05:49 SS:20:52 MR:21:47 MS:06:30 PI:100%	**17** SR:05:49 SS:20:52 MR:22:28 MS:07:35 PI:98%	**18** SR:05:49 SS:20:53 MR:23:02 MS:08:41 PI:94%
19 SR:05:49 SS:20:53 MR:23:32 MS:09:45 PI:89%	**20** SR:05:49 SS:20:53 MR:23:58 MS:10:48 PI:82%	**21** Summer Solstice 13:16 SR:05:50 SS:20:53 MR:***** MS:11:48 PI:73%	**22** SR:05:50 SS:20:54 MR:00:23 MS:12:46 PI:64%	**23**  SR:05:50 SS:20:54 MR:00:47 MS:13:44 PI:55%	**24** SR:05:50 SS:20:54 MR:01:12 MS:14:43 PI:45%	**25** Wagman Picnic Deer Lakes Park 16:00-21:00 Minnow 2 Grove SR:05:51 SS:20:54 MR:01:39 MS:15:42 PI:36%
26 SR:05:51 SS:20:54 MR:02:08 MS:16:41 PI:27%	**27** SR:05:51 SS:20:54 MR:02:43 MS:17:41 PI:19%	**28** SR:05:52 SS:20:54 MR:03:23 MS:18:40 PI:12%	**29** SR:05:52 SS:20:54 MR:04:11 MS:19:35 PI:6%	**30** SR:05:53 SS:20:54 MR:05:06 MS:20:26 PI:2%		

Some Celestial Highlights for June

Mercury at superior conjunction on the 13th reappears low in the western twilight by month end. On the 30th, it will set at 22:12, one hour and twelve minutes after sunset.

Venus is in the eastern morning sky. On the 1st, Venus will rise at 04:52 and at 04:58 on the 30th,.

Mars is in the dawn sky, rising at 04:35 on the 1st and 03:45 on the 30th.

Jupiter is low in the morning sky, at 0:35 on the 1st and 02:15 on the 30th.

Saturn is visible in the late evening sky to the west of the meridian. The planet will be close to the celebrated double star gamma Virginis all month, closing to about 16 arc minutes on the 14th .

Uranus is in the morning sky, rising at 02:52 on the 15th and 0:59 on the 30th

Neptune is in the eastern morning sky, rising at 01:32 on the 1st and 23:3459 on the 30th.

For those using programs to predict ***GRS*** transits, ***Jupiter's System II longitude value*** is 165°.

Selenographic Colongitude is 251.69° at 0h UT at beginning of the month. Add 12.2° each day.

A Welcome to Our New Members

A. J. Danny
Daniel Kleppner

Guide Star Submissions

All AAAP members are encouraged to submit items to the club newsletter. Articles, images, observations, notices, ads, book, software and equipments reviews, all are welcome.

Only submissions received before the 15th of the prior month are assured inclusion in the coming issue. The Guide Star is posted online and sent to print on the 20th of the prior month.

Send submissions or questions to: gseditor@3ap.org

2011 Upcoming Public Star Party Dates

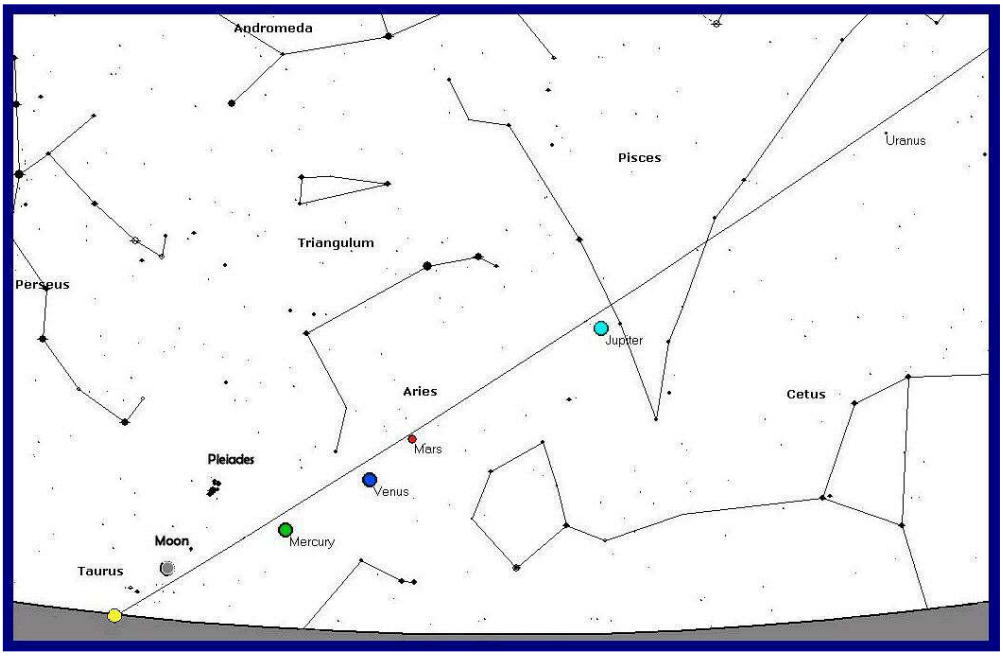
Date	Location
June 3, 4	Mingo Creek Park Obs.
June 10, 11	Wagman Obs.
July 8, 9	Wagman Obs. & Mingo Creek Park Obs.
August 5, 6	Wagman Obs. & Mingo Creek Park Obs.
September 2, 3	Wagman Obs.
September 17	Wagman Obs. & Mingo Creek Park Obs.
October 1	Mingo Creek Park Obs.
October 8	Wagman Obs.
October 15	Wagman Obs. & Mingo Creek Park Obs.
October 29	Mingo Creek Park Obs.

Eastern Horizon Sunrise June 1st

Those with a good eastern horizon, fair weather and a little luck may see this line up early on the morning of June 1st.

The Moon will be a razor thin 29.6 days old. Going west along the ecliptic, is the Pleiades, then Mercury, Venus, Mars and Jupiter.

By month's end, Mercury will be an evening object.



AMATEUR ASTRONOMERS ASSOCIATION
OF PITTSBURGH, INC
1070 SUGAR RUN ROAD
VENETIA, PA 15367-1515

ADDRESS SERVICE REQUESTED

NON-PROFIT ORG
U.S. POSTAGE
PAID
PITTSBURGH, PA
PERMIT NO. 394

Amateur Astronomers Association of Pittsburgh, Inc.

2011-2012 Executive Officers

President:	**Anthony Orzechowski** *president@3ap.org*
Vice President:	**Craig Lang** *vicepresident@3ap.org*
Treasurer:	**Michael Meteney** *treasurer@3ap.org*
Corresponding Sec:	**John Mozer** *correspondingsecretary@3ap.org*
Recording Sec:	**Dennis Derda** *recordingsecretary@3ap.org*
Membership Sec:	**Don Hoecker** *membershipsecretary@3ap.org*
Guide Star Editor:	**John Cheng** *gseditor@3ap.org*

AAAP Member Dues:	**$ 24.00**
Student Membership (K-12 & full time college student):	**$16.00**
Family Membership	**$ 40.00**

Basic Procedure for Paying Dues:

1. Make check payable to "AAAP Inc."
2. Send check to:

Michael Meteney, Treasurer
1070 Sugar Run Road
Venetia, PA 15367-1514