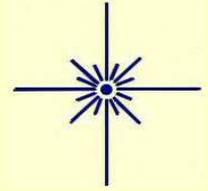




The Guide Star

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



August 2011

Volume 45, No.8

Picnic at Mingo Park Observatory, August 20th

Join your fellow club members at the 3rd annual AAAP-SSP picnic at Mingo Creek Park Observatory on August 20th 2011, at 4:30 PM. The club is hosting the SSP for all their support for our club, and to show them the wonders of the night sky.

The club is supplying hot dogs, bratwurst, kielbasa, buns, and condiments. Please bring other picnic items such as potato salad, pop, macaroni salad, etc. Last year we had a great turnout of about 65 people. Let's do even better this year. If you can't bring food we request you make a donation to the club of five dollars per person. Hope to see you at the picnic. – *Ed Moss*

Upcoming AAAP Public Star Party Dates

August 5, 6	Both Mingo & Wagman Observatories
September 2, 3	Wagman Observatory
September 17	Both Mingo & Wagman Observatories
October 1	Mingo Creek Park Observatory.
October 8	Wagman Observatory
October 15	Both Mingo & Wagman Observatories
October 29	Mingo Creek Park Observatory

Comments from the President.....

Dear members, it's only been about two months since taking office and during that time I have had the opportunity to meet and communicate with many of our members at star parties, through emails and by telephone. During this time, I have spoken with many of you about some of my ideas which I would like to bring to the table in the form of discussions. This in turn will promote communication among the members, which I hope can only lead to a better organization. In July, we had our first Executive Committee Meeting. At that time, I asked the committee for their opinions and suggestions for the following items:

1. Card access security systems at each observatory. Card access would be required when entering the building, to each telescope room, and the planetarium room at Mingo. The card would replace the current key required to enter either observatory. Each member who currently has a key would have it replaced with an access card. This security system would be installed and monitored by an outside firm. Completion of training on each telescope (or planetarium) would grant the member access to each corresponding room. A record would be logged as to who enters the facility/rooms, what time they entered and what time they exited. The sign in book would no longer be required when entering the facilities. Each director and associate director would have full access to their designated observatory. A master key for each observatory would be issued to the President, Vice President, and the I.T. Chairperson.

2. Rest Room Facilities at Wagman. The current Porta-john needs to be replaced with a restroom facility. I asked the committee if we can look into one of three options:

- Any available R.A.D. money from Allegheny County (currently 2012)
- Fundraising and contributions by either individuals, corporations or other government agencies
- Pay for the facility out of the general fund and then work to replenish the funds with our own fundraisers

3. Update or a complete makeover of our club website. A formal request would be made both in the Guide Star and through a mass email going out to the general membership for any individual(s) who would like to step forward to design, update, or maintain our web site to please consider stepping forward. This individual(s) would be compensated for their efforts. Our website is the first place prospective members would go to seek out more information about our organization.

4. Establish a "Welcome Day" to the membership complete with food and drink. This would also be advertised to the general public to help attract potential members. This could be a way to ask any member who has not visited either observatory to "try them out." One would be held at Wagman and another at Mingo on different dates corresponding to a star party.

5. Internet access at each observatory

6. All work not covered by a warranty that needs to be performed and cannot be done by parties in the membership would require a minimum of 3 written bids. The entire scope of the work to be performed would be spelled out completely in the bid. All contractors working at either facility would require proof of insurance. A copy of that insurance would be surrendered to the director of that facility.

7. By Law Changes: Required by approval by the general membership, and advertised on both the web site and in the Guide Star for a vote during the next general meeting would include the following: The addition of both the I.T. Chair and the Night Sky Chair as non-appointed members of the Executive Committee; Changes in the nominations of officers for election (Should there be a nominating committee); Ballot validation process; Duration of the following positions: President, Vice President to a term of 2 years instead of 1.

8. All meetings including the Executive, Mingo and Wagman committee meetings are to be recorded and communicated to all members by email and in the secured login site on our web site.

9. Full disclosure of all expenditures made by the club

10. Name tags for all current officers and Executive Committee members as a visual identification for the members and potential members at events. Many of our members do not know who our officers or observatory directors are.

These ideas are for discussion and deliberation, none are set in stone. Hopefully you, the membership, will reply to me or any of the officers with your comments or concerns. I look forward to all of your opinions, questions and concerns. Together we can work to maintain a more complete and open awareness to all members. Thank You.

- *Anthony W. Orzechowski, AAAP President*

From the President: Minutes from the Mingo Observatory Committee Meeting June 12, 2011

Members Present: Anthony Orzechowski, Craig Lang, Mike Meteney, Al Paslow, Dan Kleppner, Dan McKeel, Ed Moss, Gene Kulakowski, Ken Kobus, Paul Campbell, Nate Brandt, John Diller, Rosaline Orzechowski, Kathy DeSantis

Meeting started at 2:10PM.

Ed Moss chaired the meeting. Ed led the discussion about painting the end wall and the T-11. Bracing of the end wall was discussed. ACTION ITEM: Ed Moss to get bids for bracing of end wall. 3 bids should be secured, but a minimum of 2 are required. The contractor doing the work will need to be insured. A copy of their insurance must be given to the Mingo Director in the event of any mishap. Ed will contact a prior contractor that he used in the past for a bid on the job.

Painting of the exterior wall (T-11) was discussed. A Suggestion was made about club members doing the job. Tony pointed out that jobs like that might better be handled by a licensed, insured contractor. The club did not have the equipment or the resources to do a job like that. What might take the volunteers a couple of weekends could be done in a day or two by a contractor. Action Item: Mike Meteney will seek bids for the exterior painting. The same requirements will be in place, proof of insurance and bonded.

Planetarium Project

Discussion about the planetarium project and testing the mirror that is already on hand at Mingo. The decision about the make, model and Lumina's of the correct projector will be decided by renting different recommended projectors in the hope that one model will be found to do the best job in terms of resolution and brightness. Since Mike had announced previously that the partial funding would not be in place until sometime in the late Fall, and then hopefully again in the Spring, Action Item: Tony has decided to put any construction/purchases on hold until a clear plan is developed as to how to proceed with this project. Not all of the costs have been decided upon. The total grant is around \$21,000.00.

Tony mentioned that he was putting the planetarium project on hold until a plan would be developed as to proceed with construction, material and required contractor input.

Driveway leading to observatory from the shelter

Mike informed the committee that the county is going to gravel or limestone the road from the picnic grove/shelter at the entrance road to the observatory. Action Item: Ed would contact Chip Harris at Cherry Springs to see what type of material they used on the road up there. Mike also mentioned that the county would be fixing the road from the gate to the shelter, as time permits.

Discussion on the 10" D&G Refractor Mount and Pier

Discussions were made for the following items:

- Machining of discs and spacers
- Stiffing of plates
- What should be the height of the pier/which pier to use?
- Ed suggested that the whole scope be moved 6" forward from the center. Moving the center point changes the height of the pier and it could then remain the current height. Ed also expressed a concern about raising the pier by a foot or so. He was concerned that the park position would be too close to the roof.
- Tony suggested to use the standard equation to calculate the correct height of the pier.
- Al spoke about having to lay on the ground when viewing anything at Zenith.
- Mike stated that the heights of the walls are fixed. Barn doors do not open wide enough.
- Al asked why we were talking about parking the scope when it was never a problem before?
- Tony asked if the pier polar aligned when the cement footer was poured.
- Mike requested that a decision be made so the scope could be used for the star party season already in swing.
- Tony questioned the reason the Parallax was purchased. More capable mounts were and are available and proven to perform.
- Discussion on the spacing of the rings for the scope, to move the scope up more or center the scope for equal weight distribution.
- Al asked why the new plate was not finished. It is currently just a plate with no finish on it.
- Ed asked again about putting the scope and mount back up.
- Craig spoke about his concerns about putting it back together, only to take it back down again. More chance of someone getting hurt or damage to the scope.
- Al asked for everyone's opinion as to keep it down or put it back up. Although no vote was taken, over 75% of the members present agreed to keep the scope down until all information and repairs could be completed.
- Ed spoke about re-working the Delran disc. They may need enlarged.
- Tony is to research Pier Tech type mounts. Current Pier Tech III is capable of handling 1000# and can lift a total height of 48".
- Mike went over each line item that was part of the rebuilding/repair of the 10" D&G and the Parallax mount.
- A short discussion ensued about any warranty, clearances and measurements concerning the Parallax mount. What if the mount does not or can not perform to expectations?
- Ed spoke about the possibility of staying on as director for another year. Potential candidates need to have qualifications.
- Ed would like more individuals to be trained on the 24" or the Parallax
- Tony suggested that complete manuals be written for the operation of all scopes and the planetarium operation.
- Surge protectors need to be purchased for all scopes.

Meeting was adjourned at 2:10PM

Eric Fischer's Star Party Chatter: "The Cosmic Amusement Ride"

Among the most persistent celestial illusions are the "rising" and "setting" of the Sun, Moon, planets and stars. In this context, how do you tell your star party guests that they're simply seeing the effect of the Earth's rotation? For that matter, how do you tell them that they themselves are moving through space in many directions at once? This article describes some seat-of-the-pants analogies that will help you convey the many motions of objects on the Earth, the Earth itself, the Solar System, even the Milky Way Galaxy.

Sometimes I start my star party talks by noting that everyone around here is moving about 795 miles per hour due east, while folks at the equator are flying around at over 1000 miles per hour. It's only because the Earth's gravity pulls along the atmosphere that we don't live in a perpetual supersonic gale.

If that's not impressive to your guests, add that the entire earth is moving about 18.3 miles per second around the sun. This number may sound fast to your guests, but lacks a frame of reference. To give it real "zing", note that 18.3 miles per second would take you from your present location to the most distant visible horizon (e.g. Laurel Ridge, southeast of Wagman) in about 1 second.

At that speed, the Earth would reach the Moon in about 4 hours.

There's a familiar way of relating these two motions to your guests: The "Tea Cup" ride at amusement parks. When taking this ride, the cup rotates around its own axis while the entire cup revolves around a turntable.



Another more familiar amusement park ride, the Merry-Go-Round, can be cited to explain the daily and yearly movements of the constellations. In this analogy, compare the constellations to people standing outside the Merry-Go-Round as you ride the horse. If you look outward, you will see the same people coming around in a repeating fashion.

Bright Vega, our target in Lyra

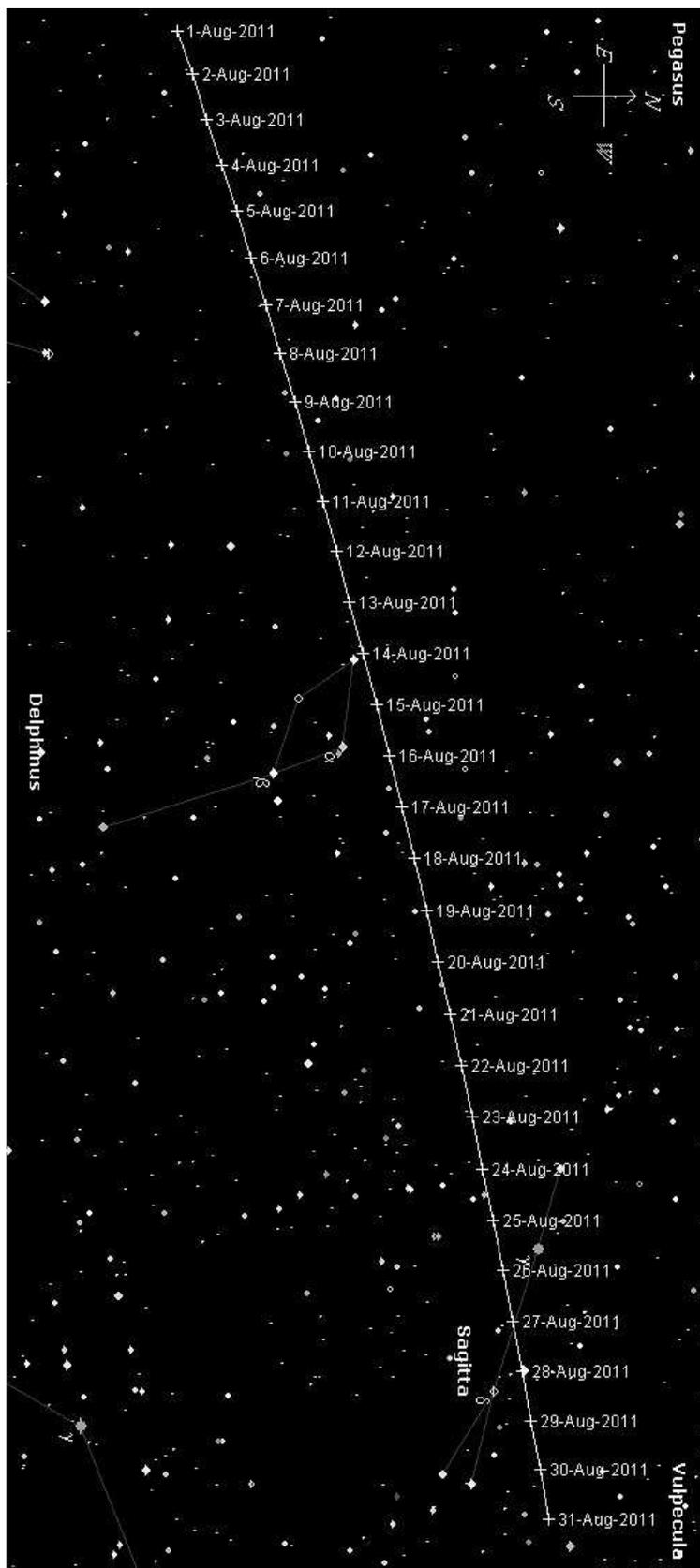
second. There's also the cosmic motion of the Virgo Supercluster, but let's not get carried away!

Thus, at any given moment, everyone at a star party (and everywhere else, of course) is undergoing at least four different contrary motions at once, as many as the wildest amusement park ride anywhere.

Next month: Explaining the flood of invisible cosmic forces and particles.

Comet C/2009 P1 Garradd

August's prime time sky will entertain a visitor, true, not the brightest, which can sometimes be the case with a guest, but welcome none the less. It does boast the advantage of being well placed.



Comet Garradd begins the month in western Pegasus and moves west through Delphinus, Sagitta, slipping into Vulpecula at month's end. Note: Comet Garradd will pass through CR399, (Brocchi's Cluster, the Coathanger) on September 1,2 and 3.

The comet was discovered by Gordon Garradd on August 13, 2009 as part of the Siding Spring Survey using a half-meter Schmidt camera in Australia. It was one of 227 comets discoveries in 2009, none of which were visual.

Current predictions (this is being written mid-July) put the comet at magnitude 8.8 on August 1 and at magnitude 8.1 on August 31.

Comet Garradd passes into Hercules in September and will reach perihelion on December 23, 2011.

- GS Editor

From the VP's Desk

How many rooms are there in our Mingo Creek Park Observatory? What is the mirror diameter of the Manka reflecting telescope at our N. E. Wagman Observatory? What does the N. E. in the name stand for? What is the gate lock combination to get you onto the grounds at both observatories?

You and I both should be disappointed if you cannot answer these questions. Not because you did not study, but because it indicates the strong possibility that you haven't been to either observatory. I would be disappointed in myself because I might not be doing enough to promote our great observatories to our members. While we do use our observatories for public star parties, they are first and foremost there for the members. So why have you not been to one or both of our observatories?

The directors, observatory committees, officers, and other volunteer members put some hard work into keeping the observatories running, so let's give them a "thank you" of sorts by visiting and getting to know our Wagman and Mingo observatories. These buildings are amazing. The CEO of the company I work for came to one of our Mingo star parties last summer. He told me afterwards that he expected us to be in a little garage like structure with a portable telescope or two and was amazed at what he did encounter. Also....

The following are firm dates for General Meetings to be held at the Carnegie Science Center. Please note that the October date is the first Friday of the month. Usually general meetings take place on the second Friday.

- Friday, September 9th, 2011**
- Friday, October 7th, 2011**
- Friday, November 11th, 2011**

Some results are in from the meeting speaker survey and it is clear that members want to hear more "hands on" or observing related topics. There will be more of that style of presentation this year.

- Craig Lang

AAAP Outreach on Earth Day

A short note on Earth Day 2011 in the Laurel Highlands. Even though the weather was rainy and chilly, a lot of people turned out for the celebration. I think some of the children get credit at school for attending. Fred Klein and I set up a double table. Fred's photographs were a big hit and his great presentation kept people listening, looking, and learning all day. I talked with people about light pollution



and had some handouts on the topic from Night Sky Network. I had pages to color and markers for the little children, talked about constellation recognition, did a little solar system quiz, and gave people a build-it-yourself star wheel (downloaded). We also had a suns and planets cookie jar.

All in all, a pretty successful day

- Charlotte Horton

Sun	Mon	Tue	Wed	Thu	Fri	Sat
<p>"For my confirmation, I didn't get a watch and my first pair of long pants, like most Lutheran boys. I got a telescope. My mother thought it would make the best gift."</p> <p>Wernher von Braun</p>	<p>1</p> <p>SR:06:17 SS:20:35 MR:08:31 MS:21:27 PI:2%</p>	<p>2</p> <p>SR:06:18 SS:20:34 MR:09:43 MS:21:58 PI:7%</p>	<p>3</p> <p>SR:06:19 SS:20:33 MR:10:56 MS:22:29 PI:14%</p>	<p>4</p> <p>SR:06:20 SS:20:31 MR:12:08 MS:23:03 PI:23%</p>	<p>5</p> <p>Star Party Mingo Obs. & Wagman Obs.</p> <p>SR:06:21 SS:20:30 MR:13:21 MS:23:40 PI:34%</p>	<p>6</p>  <p>Star Party Mingo Obs. & Wagman Obs.</p> <p>SR:06:22 SS:20:29 MR:14:31 MS:***** PI:45%</p>
<p>7</p> <p>SR:06:23 SS:20:28 MR:15:39 MS:00:23 PI:56%</p>	<p>8</p> <p>SR:06:24 SS:20:27 MR:16:40 MS:01:13 PI:67%</p>	<p>9</p> <p>SR:06:24 SS:20:25 MR:17:34 MS:02:08 PI:77%</p>	<p>10</p> <p>pi Sagittarii Occultation @ 22:01</p> <p>SR:06:25 SS:20:24 MR:18:20 MS:03:09 PI:85%</p>	<p>11</p> <p>SR:06:26 SS:20:23 MR:18:59 MS:04:13 PI:92%</p>	<p>12</p> <p>SR:06:27 SS:20:22 MR:19:32 MS:05:17 PI:97%</p>	<p>13</p>  <p>00:00 Perseid Meteor Shower Peak</p> <p>SR:06:28 SS:20:20 MR:20:02 MS:06:21 PI:99%</p>
<p>14</p> <p>SR:06:29 SS:20:19 MR:20:28 MS:07:23 PI:100%</p>	<p>15</p> <p>SR:06:30 SS:20:17 MR:20:53 MS:08:23 PI:98%</p>	<p>16</p> <p>SR:06:31 SS:20:16 MR:21:18 MS:09:22 PI:95%</p>	<p>17</p> <p>SR:06:32 SS:20:15 MR:21:43 MS:10:20 PI:90%</p>	<p>18</p> <p>SR:06:33 SS:20:13 MR:22:10 MS:11:19 PI:84%</p>	<p>19</p> <p>SR:06:34 SS:20:12 MR:22:40 MS:12:17 PI:76%</p>	<p>20</p> <p>Club Picnic at Mingo Creek Park Observatory @ 16:30</p> <p>SR:06:35 SS:20:10 MR:23:15 MS:13:16 PI:68%</p>
<p>21</p>  <p>delta Arietis Occultation @ 01:30</p> <p>SR:06:36 SS:20:09 MR:23:55 MS:14:14 PI:59%</p>	<p>22</p> <p>SR:06:37 SS:20:07 MR:***** MS:15:10 PI:49%</p>	<p>23</p> <p>SR:06:38 SS:20:06 MR:00:42 MS:16:04 PI:40%</p>	<p>24</p> <p>SR:06:39 SS:20:05 MR:01:36 MS:16:53 PI:30%</p>	<p>25</p> <p>SR:06:40 SS:20:03 MR:02:38 MS:17:37 PI:21%</p>	<p>26</p> <p>SR:06:41 SS:20:01 MR:03:44 MS:18:16 PI:13%</p>	<p>27</p> <p>SR:06:42 SS:20:00 MR:04:55 MS:18:52 PI:6%</p>
<p>28</p>  <p>SR:06:43 SS:19:58 MR:06:08 MS:19:25 PI:2%</p>	<p>29</p> <p>SR:06:44 SS:19:57 MR:07:22 MS:19:57 PI:0%</p>	<p>30</p> <p>SR:06:45 SS:19:55 MR:08:37 MS:20:29 PI:1%</p>	<p>31</p> <p>SR:06:46 SS:19:54 MR:09:52 MS:21:03 PI:5%</p>	<p>All times given are local.</p> <p>Legend: SR = Sunrise, SS = Sunset, MR = Moonrise, MS = Moonset, PI = Approximate Percentage Visible Lunar Surface Illuminated Local Midnight</p> <p>Details for AAAP Events can be found at: https://nightsky.jpl.nasa.gov/event-list.cfm?Club_ID=675&EventEra=Future</p>		

Some Celestial Highlights for August

Mercury disappears into evening twilight. Inferior conjunction on the 17th. It will reappear in the dawn sky by month's end.

Venus not visible this month. Superior conjunction on the 16th.

Mars moves from Taurus into Gemini early in the month, rising at 03:03 on the 1st and 02:35 on the 31st. Its angular diameter is only 4.5 arc second, considerably less than the 25 arc second diameter of the August 2003 opposition.

Jupiter is in Aries, rising at 00:20 on the 1st and 22:22 on the 31st. See Galilean satellite activity below.

Saturn is in low in the western evening sky setting at 23:21 on the 1st, less than three hours after the Sun. On month end it will set at 21:29.

Uranus in Pisces rises at 22:48 on the 1st and 20:45 on the 31st.

Neptune is in Aquarius. Rising at 21:26 on the 1st and at 19:26 on the 31st. It comes to opposition on the 22nd with an apparent diameter of 2.3 arc seconds.

For those using programs to predict **GRS** transits, **Jupiter's System II longitude** is 167°. **Selenographic Colongitude** is 277.26° at 0h UT at beginning of the month. Add 12.2° each day.

- 4th 00:10 **Jupiter** Rises
00:29 **Io** : Shadow Transit Begins
01:53 **Io** : Transit Begins (Both Io and Shadow transiting)
02:40 **Io** : Shadow Transit Ends
04:02 **Io** : Transit Ends
- 10th **pi Sagittarius** magnitude 2.87 will disappear behind the dark limb of the 12.3 day old Moon at approx 22:01 and will emerge at approx 23:06
- 12th 23:37 **Jupiter** Rises
- 13th 00:23 **Io** : Transit Ends
01:28 **GRS** : Crosses Central Meridian
03:17 **Europa** : Disappears into Eclipse
05:48 **Europa** : Reappears from Eclipse
06:05 **Europa** : Disappears into Occultation

Perseid Meteor Peak due at midnight. Because of the Full Moon, the International Meteor Organization calls this year's display "hopelessly moonlit". ZHR or Zenith Hourly Rates are usually quoted in the 90 to 100 range.

- 19th 23:10 **Jupiter** Rises
- 20th 00:06 **Io** : Transit Begins (Both Io and Shadow transiting)
00:55 **Io** : Shadow Transit Ends
02:14 **GRS** : Crosses Central Meridian
02:14 **Io** : Transit Ends
05:53 **Europa** : Disappears into Eclipse
23:06 **Jupiter** Rises
23:35 **Io** : Reappears from Occultation (Ganymede Shadow)
23:41 **Ganymede** : Shadow Transit Ends
- 21st 03:16 **Ganymede** : Transit Begins
04:42 **Ganymede** : Transit Ends
- delta Arietis** magnitude 4.3 will disappear behind the bright limb of the 21.5 day old Moon at approx 01:30 and will emerge at approx 02:26.
- 26th 22:43 **Jupiter** Rises
- 27th 00:39 **Io** : Shadow Transit Begins
01:56 **Io** : Transit Begins
02:49 **Io** : Shadow Transit Ends
03:00 **GRS** : Crosses Central Meridian
04:05 **Io** : Transit Ends

A Welcome to Our New Members

- Kristen Celo**
- Viola Christy**
- Paula Meddings**
- Matt Sandilla**
- Tom Turiak**



Treasurer's Report (2nd Quarter Summary)

<u>Account Balances</u>		<u>Expenses:</u>	
Cash	50.00	Equipment / Repairs	1,010.00
Checking	4,697.46	Food	112.19
Savings	7,122.43	Transportation	275.50
USXCD	124,488.29	Raffle Prizes	37.00
<u>Summary Report</u>		Printing	181.34
Income:		Postage	2.96
50/50	74.00	Officers Expenses	61.78
Donations	386.00	Supplies	13.75
Interest	1,838.23	Int. Dark Sky	100.00
Memberships	785.00	Star Finders	560.00
Sales	55.00	Acc. Rev./tax prep	3,284.73
Total Income	\$ 3,138.23	<u>Utilities:</u>	
		Electric	209.42
		Phones	137.68
		Grass Cutting	250.00
		Porta-John	279.27
		Security	64.50
		Misc.	64.00
		Total Exp.	\$ 6,614.12

This is a summary of our account balances and income and expenses for the 2nd quarter of this year. We have a net income/expense for this quarter of -3388.89. For the year to date we are -3313.56. As you will notice, a large expense is our account review and tax documents preparation.

If any member has accounting experience and would like to donate their time to help in this process, we could reduce greatly reduce our expenses. So if you would like to help out this way, or know of someone who could help us with this expense, please contact:

Mike Meteney at treasurer@3ap.org.

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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

Guide Star Submissions: All AAAP members are encouraged to submit items to the club newsletter. Articles, images, observations, notices, ads, book, software and equipment 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