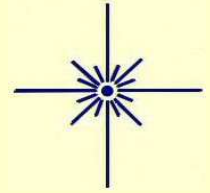




# The Guide Star

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



November 2012

Volume 46, No. 11

## AAAP General Business Meeting

**Friday, November 9, 2012, 19:30**

**Allegheny Observatory**

**Topic: Kevin J. Brunelle Astrophotography Contest**

The Brunelle Astrophotography Contest is a highlight in the annual cycle of AAAP events.

Members get to sit back and enjoy the sky as seen and captured over the past year through the efforts of enthusiastic and talented imagers within the club, some of whose work has been published and recognized nationally.

This year's contest has new rules and categories, so a reprint of the contest rules that appeared in the July Guide Star follows. Also, the contest is being held at historic Allegheny Observatory. (Parking is free, but limited, so carpool if you can.



**2011 Atmospheric Category  
Winner: Bill Hayeslip's Solar  
Pillar**

Attendees get to choose their favorites from among the entries and cast votes ranking their preferences. The ballots are tallied and the results are announced at the meeting. It's an enjoyable evening and a great way "to entertain the eye".

The first prize winners in each of this year's five categories will have 8 by 10 prints of their entries framed with recognition and prominently displayed at both Mingo and Wagman through the coming year.

Second and third prize winning images will be displayed on the video systems at the observatories.

Over the past decade or so, spurred by the advent of digital technology, astrophotography has become a major part of the



**2011 300mm And  
Greater Category  
Winner: Matt  
Dieterich's M42**

amateur astronomy hobby.

Today the best lunar and planetary images are often produced by amateurs and their efforts are routinely surpassed only by the images obtained from space-based systems.

The appreciation of the aesthetics of the sky, both deep and shallow, has been increased immeasurably by today's amateur astronomers and it's fair to say that right now astro-imagers are probably the most effective ambassadors for the astronomy hobby, portraying the views of the heavens which are intriguing to so many.

By the way, it's not well known, but the word "photography" was first used by an astronomer. Sources disagree, but it was either Sir John Herschel, who pioneered southern hemisphere astronomy, or the celebrated lunar cartographer, Johann Madler who gets the honor. - *GS Editor*

## Reprint: KJB Contest: Rules changes

Following are details on category and rules changes for the 2012 Kevin J. Brunelle Photography Contest, including some of the survey results which motivated the changes. You will find additional clarifications on the categories as well as partial reasoning for making the changes.

Following several months of polling the general membership, the KJB committee has analyzed and discussed the results of the surveys both internally and externally.

In order to provide club members sufficient time to adjust to the new rules, we feel it imperative to implement the following changes quickly. Discussion is encouraged but I would remind everyone that suggestions for change will only be considered for the 2013 KJB contest due to timing.

### Historical Categories:

- Atmospheric
- <300mm Focal Length
- >300mm Focal Length

### Categories for 2012 KJB Contest:

- Atmospheric
- Galaxy
- Nebula
- Stellar (Clusters, Constellations, Doubles, Star Trails, etc)
- Lunar / Planetary / Solar

Atmospheric will stay as is.

**Galaxies, Nebula, and Stellar:** Instead of dividing the categories into focal lengths we have decided to break it out into object categories. This allows a fair playing field where galaxies are being compared to galaxies and narrowband emission nebula are compared to other emission line images

**Lunar / Planetary / Solar (Any Solar System objects including Comets:** This category encourages image types we rarely see any more in the contest. Webcam imaging is one of the cheapest and most accessible (but not easy to master!) imaging types available that works well with the majority of equipment already owned by non-astrophotographers. High resolution solar system imaging requires different equipment and should not be compared against deep sky images. In addition to the lower cost and readily available equipment that solar system imaging offers, it can also be done in ones back yard without serious regard to light pollution.

\*\*\* Please note – Wide field shots are still greatly encouraged and should be entered into the category best fitting the main subject of the photograph.

Fundamental Rule Changes / Clarifications:  
General Contest Categories

- The Kevin Brunelle Photography Contest is open to all active AAAP Members
- All images entered should concern areas of interest to the AAAP
- Remote imaging is allowed provided the equipment is owned and setup by the astrophotographer
- The image must be the sole work of the contestant and may not be a collaborative work
- All images submitted must have been captured after the deadline for the November 11th 2011 KJB Contest and must be submitted before the yet to be announced deadline for the Nov 2012 KJB Contest. (see below)
- No more than 5 entries per category per person

With the new rules in place the KJB Committee and Exec Committee will work together to determine prize details to accommodate the additional categories. Suggestions on unique prizes are welcome. The official prizes will be announced at a later date.

The deadline for the 2012 Kevin J. Brunelle Contest will be October 30, 2012. Entries are to be sent to:

billsnyder51@yahoo.com or nmbrandt@hotmail.com

An online copy of the new rules and updates can be found at:

<http://www.natebrandt.com/Direct/2012KJBContest.pdf>

*Nathan Brandt, Treasurer - AAAP*

## *New at Mingo: Bundle Up Star Fest*



Around sunset on November 17th Mingo Observatory will host a brand new event for both members and the public.

It's called "Bundle Up Star Fest" and it comes at a perfect time. Hobby-withdrawal may be setting in due to the recent cessation of the all-too-brief AAAP star party season and most fortunately, the event is scheduled right around the Leonid meteor shower maximum.

Here's to a successful event...maybe the first of many annual "Bundle Up Star Fests".

## *September Star Party Volunteers*

### *Mingo Creek Park Observatory, September 8*

Bill Roemer	Nick Martch	George Guzik,
Jon Johnson	John Diller	Dick Haddad,
Kathy DeSantis	Gene Leis	Mike Meteney,
Fred Klein	Becky Valentine	Dan Peden
Don Hoecker	Michael Skowvron	Ed Moss
Gene Kulakowski		

### *Mingo Creek Park Observatory, September 22*

Nick Martch	Colleen Martch	Flo Rusch
John Diller	Bill Roemer	Dick Haddad
George Guzik	Ken Kobus	Kathy DeSantis
Don Hoecker	Gene Kulakowski	

### *Wagman September 8*

Phil Breidenbach	Bill and Diane Yorkshire
Vamsi Maddula	Bill Hayeslip
Rowen Poole	Mike Nizinski
Eric Fischer	Matthew Jones
Matt Maskas	Pat Rieger family
Frank Pastin	Lori Seitz
Tom Reiland	

### *Wagman September 22*

Bill Hayeslip	Becky Valentine
Rowen Poole	Tom Reiland

## From the President's Desk :

### *Your Help is needed....*

The Executive Committee recently reviewed a list of action items and prioritized them. Here are a few projects that we would like to accomplish, and your help with any of these would be greatly appreciated. Contact John Holtz at [President@3ap.org](mailto:President@3ap.org) or 412-477-9877.

- Redesign of our website 3ap.org (layout, graphics, text, etc.)
- Review and propose changes to By-laws
- Brainstorm how to get more members involved with club activities
- Promoting star parties
- Promoting astronomy/AAAP and increasing our membership

### Wanted: Old Guide Stars

I have been working on a project to identify all of the club officers. Many of the names for the early years (1929-1940) have been obtained from Popular Astronomy magazine where co-founder Leo Scanlon was very good about keeping the readers up-to-date with the doings of the AAAP.

The combination of the online Guide Stars and the archives at the University of Pittsburgh's [Archives Service Center](#) have most of the newsletters from 1948 through today, except for the time period of 1970 through 1977.

If you have newsletters from this time period, I would like to borrow them. If I can get the list from the current status of 81% of the officers known up to 90% or 95%, I would be very happy. Contact me at [President@3ap.org](mailto:President@3ap.org) or 412-477-9877.

**John Holtz**, President  
Amateur Astronomers Association of Pittsburgh, Inc  
([3ap.org](http://3ap.org))

My contact information:  
home: 412-243-1545  
cell: 412-477-9877

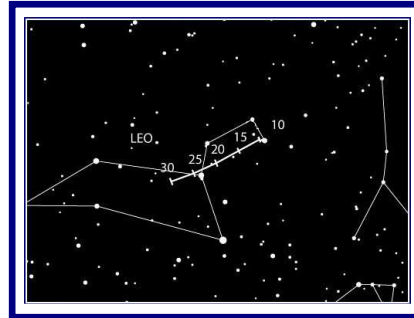
## For Observers:

### The Leonids

International Meteor Organization predictions state that this year's Leonids should adhere to the "normal" rate of 15 ZHR.

Maximum should be at 04:00 on November 17. This is just about ideal for watchers situated in the eastern US, Leo being high in the Southeast and the Moon having set well before midnight.

The IMO mentions the possibility of a two other peaks of lesser activity: 16:00 on November 17 with a ZHR less than 10 and 01:00 on November 20 with a similar reduced rate. The latter peak will be due to an encounter with the 1400AD dust tail of comet 55P/Tempel-Tuttle.



*The image on the left shows the drift of the Leonid radiant through the "Sickle" over the duration of the period of activity.*

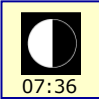

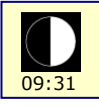
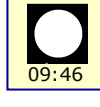
### The Moon's Golden Handle



*In this image of the 11 day old Moon, the terminator has progressed through most of Mare Imbium and lunar morning is dawning on the floor of the Bay of Rainbows at upper left, while the Jura range is already bathed in sunlight.*

On Friday November 23 from 1800 to midnight, the lunar terminator will sweep through Sinus Iridum or the Bay of Rainbows while the Moon is in our skies. At that time, the illumination "event" called the "Golden Handle" should be visible.

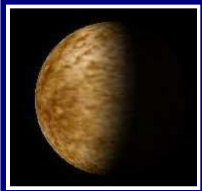
The Jura Mountains which form the (lunar) western border of the bay will catch the morning sunlight while the bay itself is still in lunar night forming an illuminated arc which can even be seen with the naked eye. - GSEditor

Sun	Mon	Tue	Wed	Thu	Fri	Sat		
<p><i>I could be worse employed Than as a watcher of the void Whose part should be to tell What star if any fell</i></p> <p><i>Suppose some seed-pearl sun Should be the only one; Yet still I must report Some cluster one star short.</i></p>			<p><i>I should justly hesitate To frighten church or state By announcing a star down From say the Cross or Crown.</i></p> <p><i>To make sure what star I missed I should have to check on my list Every star in sight It might take me all night.</i></p> <p align="right"><i>- Robert Frost</i></p>			1	2	3
4	5	6	7	8	9	10		
Daylight Saving Time Ends		 07:36			AAAP General Business Meeting 19:30 Allegheny Observatory			
SR:06:54 SS:17:13 MR:21:49 MS:11:36 PI:78%	SR:06:55 SS:17:11 MR:22:48 MS:12:13 PI:70%	SR:06:56 SS:17:10 MR:23:48 MS:12:47 PI:60%	SR:06:57 SS:17:09 MR:***** MS:13:18 PI:50%	SR:06:58 SS:17:08 MR:00:51 MS:13:49 PI:40%	SR:06:59 SS:17:07 MR:01:56 MS:14:20 PI:30%	SR:07:01 SS:17:06 MR:03:03 MS:14:52 PI:21%		
11	12	13	14	15	16	17		
		 17:08				Bundle Up Star Fest Leonid Maximum		
SR:07:02 SS:17:05 MR:04:14 MS:15:28 PI:12%	SR:07:03 SS:17:05 MR:05:27 MS:16:08 PI:5%	SR:07:04 SS:17:04 MR:06:41 MS:16:56 PI:1%	SR:07:05 SS:17:03 MR:07:54 MS:17:50 PI:0%	SR:07:06 SS:17:02 MR:09:01 MS:18:53 PI:2%	SR:07:08 SS:17:01 MR:10:01 MS:20:00 PI:6%	SR:07:09 SS:17:01 MR:10:52 MS:21:10 PI:14%		
18	19	20	21	22	23	24		
		 09:31			Lunar Golden Handle			
SR:07:10 SS:17:00 MR:11:35 MS:22:18 PI:23%	SR:07:11 SS:16:59 MR:12:12 MS:23:25 PI:33%	SR:07:12 SS:16:58 MR:12:44 MS:***** PI:44%	SR:07:13 SS:16:58 MR:13:14 MS:00:29 PI:54%	SR:07:14 SS:16:57 MR:13:42 MS:01:31 PI:64%	SR:07:16 SS:16:57 MR:14:11 MS:02:31 PI:74%	SR:07:17 SS:16:56 MR:14:40 MS:03:31 PI:82%		
25	26	27	28	29	30			
			 09:46			Times are local. SR = Sunrise, SS = Sunset, MR = Moonrise, MS = Moonset, PI = Approx. Percentage Visible Lunar Surface Illuminated Local Midnight		
SR:07:18 SS:16:56 MR:15:12 MS:04:29 PI:89%	SR:07:19 SS:16:55 MR:15:47 MS:05:27 PI:94%	SR:07:20 SS:16:55 MR:16:25 MS:06:23 PI:98%	SR:07:21 SS:16:55 MR:17:08 MS:07:17 PI:100%	SR:07:22 SS:16:54 MR:17:56 MS:08:08 PI:100%	SR:07:23 SS:16:54 MR:18:48 MS:08:54 PI:98%			

## Some Solar System Highlights

*Selenographic Colongitude* is 113.67° at 0h UT and 115.9° at 0h local on the first day of the month. Add 12.2° each day.

The following planetary entries include Local Rise and Set Times, Magnitudes and Disk diameters in Arc Seconds on the 1st, 10th, 20th and 30th days of the month.



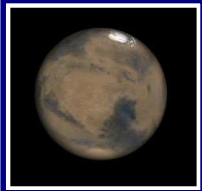
Date	Rise	Set	Mag	Arc
01	09:57:41	19:09:59	0.0	7.37
10	08:22:41	17:41:45	1.3	9.11
20	06:37:48	16:40:42	3.5	9.70
30	05:40:45	16:00:13	-0.1	7.53

**Mercury** is quite low in the western evening sky. It reaches inferior conjunction on the 17th and will reappear low in the eastern morning sky near month's end.



Date	Rise	Set	Mag	Arc
01	04:53:39	16:56:34	-4.0	13.26
10	04:13:05	15:47:36	-4.0	12.73
20	04:35:28	15:38:34	-4.0	12.23
30	04:58:40	15:31:29	-4.0	11.79

**Venus** is in the eastern morning sky all month. On the 27th, it will be about one half degree south of Saturn. Late in the month, low in the east, Mercury, Venus and Saturn will line up along the ecliptic, possibly providing an attractive naked eye spectacle for observers with a clear eastern horizon.



Date	Rise	Set	Mag	Arc
01	11:09:41	20:18:07	1.2	4.55
10	10:05:29	19:10:00	1.2	4.49
20	09:59:37	19:03:20	1.2	4.42
30	09:52:06	18:58:59	1.2	4.37

**Mars** is low in the southwestern evening sky, moves from Ophiuchus into Sagittarius on the 11th.



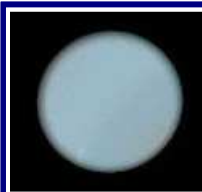
Date	Rise	Set	Mag	Arc
01	20:05:46	10:53:29	-2.7	46.79
10	18:26:53	09:13:49	-2.8	47.57
20	17:42:59	08:28:47	-2.8	48.15
30	16:58:39	07:43:10	-2.8	48.39

**Jupiter**, in Taurus, rises early in the evening. On both the 1st and the 28th, the Moon will be within 2° of the planet. Jupiter's System II longitude is 186°.



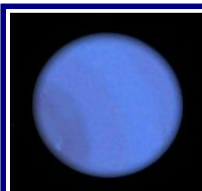
Date	Rise	Set	Mag	Arc
01	07:15:37	18:07:34	0.6	15.37
10	05:45:37	16:35:01	0.6	15.41
20	05:12:07	15:58:49	0.6	15.49
30	04:38:22	15:22:33	0.6	15.60

**Saturn**, in Virgo, will reappear low in the morning twilight by the middle of the month. The ring system, which we will continue to view from the north until 2025, will be inclined to our line of sight by about 18°.



Date	Rise	Set	Mag	Arc
01	16:46:39	05:04:21	5.7	3.64
10	15:10:40	03:27:40	5.8	3.62
20	14:30:48	02:47:14	5.8	3.60
30	13:51:07	02:07:11	5.8	3.57

**Uranus**, is well placed for viewing in the evening sky. In Pisces, the planet is in retrograde or east to west motion.



Date	Rise	Set	Mag	Arc
01	15:23:08	02:08:38	7.9	2.26
10	13:47:41	00:33:06	7.9	2.25
20	13:08:25	23:50:00	7.9	2.24
30	12:29:18	23:11:07	7.9	2.23

**Neptune**, placed for early evening viewing and setting around midnight be mid-month, has assumed direct or west to east motion in Aquarius.

**Jupiter Activity: Satellites & the Great Red Spot**

Following are times for Jovian satellite transits and occultations and Great Red Spot meridian crossings for the current month that are visible in our area.

They are organized by observing sessions beginning with the first event of interest on a given evening and continuing to Jupiter's setting or the Sun rising. Using November 16 & 17 as an example, at 18:02 on the 16th, Jupiter Rises. Thirty-two minutes later, Io's shadow will appear on the disk (S) followed by Io itself at 18:59. At that time both the satellite and its shadow will be on the disk (ST) At 20:44, Io's shadow exits the disk and at 21:09, Io itself exits the disk. After midnight, at 03:21 on the 17th, the Great Red Spot crosses the central meridian. At 03:47 Europa disappears into eclipse and will reappear at 06:58 just prior to sunrise at 07:09. All times are local.

**31 October****20:11 Jupiter Rises**

21:17	Io Shadow Transit Begins	S
22:04	Io Transit Begins	ST
23:27	Io Shadow Transit Ends	T

**November**

1 00:14	Io Transit Ends	
1 01:14	GRS: Crosses Central Meridian	
1 05:26	Europa Shadow Transit Begins	S
1 07:02	Europa Transit Begins	ST
1 07:50	Europa Shadow Transit Ends	T
<b>1 20:07 Jupiter Rises</b>		
1 21:05	GRS: Crosses Central Meridian	
1 21:34	Io Reappears from Occultation	
2 07:00	GRS: Crosses Central Meridian	
<b>2 20:03 Jupiter Rises</b>		
2 23:36	Europa Disappears into Eclipse	
3 02:52	GRS: Crosses Central Meridian	
3 03:27	Europa Reappears from Occultation	
<b>3 19:58 Jupiter Rises</b>		
3 21:24	Ganymede Reappears from Occultation	
3 22:43	GRS: Crosses Central Meridian	
<b>4 18:54 Jupiter Rises</b>		
4 19:11	Europa Transit Begins	ST
4 20:09	Europa Shadow Transit Ends	T
4 21:32	Europa Transit Ends	
5 03:29	GRS: Crosses Central Meridian	
5 06:34	Io Disappears into Eclipse	
<b>5 18:50 Jupiter Rises</b>		
5 23:21	GRS: Crosses Central Meridian	
6 03:42	Io Shadow Transit Begins	S
6 04:23	Io Transit Begins	ST
6 05:53	Io Shadow Transit Ends	T
6 06:33	Io Transit Ends	
<b>6 18:45 Jupiter Rises</b>		
6 19:12	GRS: Crosses Central Meridian	
7 01:03	Io Disappears into Eclipse	
7 03:52	Io Reappears from Occultation	
7 05:07	GRS: Crosses Central Meridian	
7 05:38	Ganymede Shadow Transit Begins	S
<b>7 18:41 Jupiter Rises</b>		
7 22:11	Io Shadow Transit Begins	S
7 22:49	Io Transit Begins	ST
8 00:21	Io Shadow Transit Ends	T
8 00:59	GRS: Crosses Central Meridian	
8 00:59	Io Transit Ends	
<b>8 18:37 Jupiter Rises</b>		
8 19:31	Io Disappears into Eclipse	
8 20:50	GRS: Crosses Central Meridian	
8 22:18	Io Reappears from Occultation	
9 06:45	GRS: Crosses Central Meridian	
<b>9 18:32 Jupiter Rises</b>		
9 18:50	Io Shadow Transit Ends	T
9 19:25	Io Transit Ends	
10 01:12	Europa Disappears into Eclipse	
10 02:36	GRS: Crosses Central Meridian	
10 04:43	Europa Reappears from Occultation	
<b>10 18:28 Jupiter Rises</b>		
10 19:32	Ganymede Disappears into Eclipse	
10 21:35	Ganymede Reappears from Eclipse	

10 21:56	Ganymede Disappears into Occultation	
10 22:28	GRS: Crosses Central Meridian	
10 23:44	Ganymede Reappears from Occultation	
<b>11 18:24 Jupiter Rises</b>		
11 20:21	Europa Shadow Transit Begins	S
11 21:28	Europa Transit Begins	ST
11 22:45	Europa Shadow Transit Ends	T
11 23:48	Europa Transit Ends	
12 04:14	GRS: Crosses Central Meridian	
<b>12 18:19 Jupiter Rises</b>		
12 00:05	GRS: Crosses Central Meridian	
13 05:36	Io Shadow Transit Begins	S
13 06:07	Io Transit Begins	ST
<b>13 18:15 Jupiter Rises</b>		
13 19:57	GRS: Crosses Central Meridian	
14 02:57	Io Disappears into Eclipse	
14 05:36	Io Reappears from Occultation	
14 05:52	GRS: Crosses Central Meridian	
<b>14 18:11 Jupiter Rises</b>		
15 00:05	Io Shadow Transit Begins	S
15 00:33	Io Transit Begins	ST
15 01:43	GRS: Crosses Central Meridian	
15 02:16	Io Shadow Transit Ends	T
15 02:43	Io Transit Ends	
<b>15 18:06 Jupiter Rises</b>		
15 21:26	Io Disappears into Eclipse	
15 21:35	GRS: Crosses Central Meridian	
16 00:02	Io Reappears from Occultation	
<b>16 18:02 Jupiter Rises</b>		
16 18:34	Io Shadow Transit Begins	S
16 18:59	Io Transit Begins	ST
16 20:44	Io Shadow Transit Ends	T
16 21:09	Io Transit Ends	
17 03:21	GRS: Crosses Central Meridian	
17 03:47	Europa Disappears into Eclipse	
17 06:58	Europa Reappears from Occultation	
17 17:57	<b>Jupiter Rises</b>	
17 18:28	Io Reappears from Occultation	
17 23:12	GRS: Crosses Central Meridian	
17 23:32	Ganymede Disappears into Eclipse	
18 03:02	Ganymede Reappears from Occultation	
18 17:53	<b>Jupiter Rises</b>	
18 19:04	GRS: Crosses Central Meridian	
18 22:57	Europa Shadow Transit Begins	S
18 23:43	Europa Transit Begins	ST
19 01:22	Europa Shadow Transit Ends	T
19 02:03	Europa Transit Ends	
19 04:59	GRS: Crosses Central Meridian	
19 17:49	<b>Jupiter Rises</b>	
20 00:50	GRS: Crosses Central Meridian	
20 17:44	<b>Jupiter Rises</b>	
20 20:05	Europa Reappears from Occultation	
20 20:41	GRS: Crosses Central Meridian	
21 04:52	Io Disappears into Eclipse	
21 06:37	GRS: Crosses Central Meridian	
21 17:40	<b>Jupiter Rises</b>	
22 01:59	Io Shadow Transit Begins	S
22 02:17	Io Transit Begins	ST
22 02:28	GRS: Crosses Central Meridian	
22 04:10	Io Shadow Transit Ends	T
22 04:27	Io Transit Ends	

**22 17:35 Jupiter Rises**

22 22:19	GRS: Crosses Central Meridian	
22 23:20	Io Disappears into Eclipse	
23 01:46	Io Reappears from Occultation	
<b>23 17:31 Jupiter Rises</b>		
23 18:10	GRS: Crosses Central Meridian	
23 20:28	Io Shadow Transit Begins	S
23 20:42	Io Transit Begins	ST
23 22:39	Io Shadow Transit Ends	T
23 22:52	Io Transit Ends	
24 04:06	GRS: Crosses Central Meridian	
24 06:23	Europa Disappears into Eclipse	
<b>24 17:26 Jupiter Rises</b>		
24 17:49	Io Disappears into Eclipse	
24 20:12	Io Reappears from Occultation	
24 23:57	GRS: Crosses Central Meridian	
25 03:31	Ganymede Disappears into Eclipse	
25 06:18	Ganymede Reappears from Occultation	
<b>25 17:22 Jupiter Rises</b>		
25 19:48	GRS: Crosses Central Meridian	
26 01:34	Europa Shadow Transit Begins	S
26 01:57	Europa Transit Begins	ST
26 03:58	Europa Shadow Transit Ends	T
26 04:17	Europa Transit Ends	
26 05:44	GRS: Crosses Central Meridian	
<b>26 17:18 Jupiter Rises</b>		
27 01:35	GRS: Crosses Central Meridian	
<b>27 17:13 Jupiter Rises</b>		
27 19:41	Europa Disappears into Eclipse	
27 21:26	GRS: Crosses Central Meridian	
27 22:19	Europa Reappears from Occultation	
28 06:46	Io Disappears into Eclipse	
<b>28 17:09 Jupiter Rises</b>		
28 17:17	GRS: Crosses Central Meridian	
28 17:38	Ganymede Shadow Transit Begins	S
28 18:12	Ganymede Transit Begins	ST
28 19:44	Ganymede Shadow Transit Ends	T
28 20:03	Ganymede Transit Ends	
29 03:13	GRS: Crosses Central Meridian	
29 03:54	Io Shadow Transit Begins	S
29 04:00	Io Transit Begins	ST
29 06:05	Io Shadow Transit Ends	T
29 06:10	Io Transit Ends	
<b>29 17:04 Jupiter Rises</b>		
29 17:16	Europa Shadow Transit Ends	T
29 17:24	Europa Transit Ends	
29 23:04	GRS: Crosses Central Meridian	
30 01:15	Io Disappears into Eclipse	
30 03:30	Io Reappears from Occultation	
<b>30 17:00 Jupiter Rises</b>		
30 18:55	GRS: Crosses Central Meridian	
30 22:22	Io Shadow Transit Begins	S
30 22:26	Io Transit Begins	ST

**1 December**

00:33	Io Shadow Transit Ends	T
00:36	Io Transit Ends	
04:51	GRS: Crosses Central Meridian	

### Suggested Deep Sky Objects for November

This table is part of a series of monthly Deep Sky targets compiled by Bob Kepple, co-author of *Night Sky Observer's Guide*. The complete set of tables, one per month, may be found at the AAAP web site : <http://www.3ap.org/> under the S.I.G. link (Special Interest Group) for Deep Sky Observing.

Bob mentions that, "...objects in the ... lists may be observed for about two months before and after the month they are listed... If you have a small telescope see how many objects you can find in the lists for larger scopes and, of course, individuals with larger instruments will have no trouble observing objects listed for smaller instruments...." [PA = Position Angle of second component in relation to primary, with 0° representing North, 90° representing East, etc.]

#### Objects for Binoculars

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
03 <sup>h</sup> 47.0 <sup>m</sup>	+24° 07'	M45	1.2v	110'		Tau	Open Cl 100* "Pleiades"
04 <sup>h</sup> 27.0 <sup>m</sup>	+16° 0'	Mel 25	0.5v	330'		Tau	Open Cluster 40* "Hyades"
04 <sup>h</sup> 46.0 <sup>m</sup>	+19° 04'	NGC 1647	6.4v	45'		Tau	Open Cluster 200*
05 <sup>h</sup> 28.7 <sup>m</sup>	+35° 50'	M38	6.4v	21'		Aur	Open Cluster 100*
05 <sup>h</sup> 36.1 <sup>m</sup>	+34° 08'	M36	6.0v	12'		Aur	Open Cluster 60*
05 <sup>h</sup> 52.4 <sup>m</sup>	+32° 33'	M37	5.6v	20'		Aur	Open Cluster 150*

#### Objects for Small Telescopes (2-6 inch)

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
04 <sup>h</sup> 09.2 <sup>m</sup>	+30° 47'	NGC 1514	10.9v	>114"		Tau	Planetary Nebula
04 <sup>h</sup> 51.1 <sup>m</sup>	+43° 42'	NGC 1664	7.6v	18'		Aur	Open Cluster 50*
05 <sup>h</sup> 03.6 <sup>m</sup>	+23° 49'	NGC 1746	6.1v	42'		Tau	Open Cluster 20*
05 <sup>h</sup> 10.7 <sup>m</sup>	+16° 32'	NGC 1807	7.0v	17'		Tau	Open Cluster 20*
05 <sup>h</sup> 12.1 <sup>m</sup>	+16° 42'	NGC 1817	7.7v	15'		Tau	Open Cluster 60*
06 <sup>h</sup> 11.6 <sup>m</sup>	+48° 43'	41 Aur	6.3, 7.0	7.7"	356°	Aur	Double Star

#### Objects for Medium Telescopes (8-14 inch)

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
03 <sup>h</sup> 19.7 <sup>m</sup>	-19° 25'	NGC 1300	10.4v	5.5'x2.9'		Eri	Galaxy
04 <sup>h</sup> 14.2 <sup>m</sup>	-12° 44'	NGC 1535	9.6p	">18"		Eri	Planetary Nebula
05 <sup>h</sup> 08.1 <sup>m</sup>	+37° 03'	NGC 1778	7.7v	6'		Aur	Open Cluster 25*
05 <sup>h</sup> 20.2 <sup>m</sup>	+39° 21'	NGC 1857	7.0v	5'		Aur	Open Cluster 40*
05 <sup>h</sup> 28.0 <sup>m</sup>	+35° 19'	NGC 1907	8.2v	6'		Aur	Open Cluster 30*
05 <sup>h</sup> 59.7 <sup>m</sup>	+37° 13'	37-Upsilon	2.6, 7.1	AB: 3.6"	313°	Aur	DS (AC: 10.6; 50"; 297°)

#### Objects for Larger Telescopes (16-inch & larger) Challenge Objects

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
03 <sup>h</sup> 09.8 <sup>m</sup>	-20° 35'	NGC 1232	10.0v	6.8'x5.6'		Eri	Galaxy
03 <sup>h</sup> 38.5 <sup>m</sup>	-23° 02'	NGC 1395	9.7v	5.4'x4.6'		Eri	Galaxy
03 <sup>h</sup> 40.2 <sup>m</sup>	-18° 35'	NGC 1407	9.7v	6.0'x5.8'		Eri	Galaxy
04 <sup>h</sup> 21.8 <sup>m</sup>	+19° 32'	NGC 1554-55	-	1.7'		Tau	R+E Neb. "Hind's Var Neb"
05 <sup>h</sup> 16.3 <sup>m</sup>	+34° 16'	IC 405	-	30'x20'		Aur	R+E Neb "Flaming Star Neb"
05 <sup>h</sup> 34.5 <sup>m</sup>	+22° 01'	M1	-	6'x4'		Tau	SNR "Crab Nebula"



## The AAAP Welcomes Its New Members

Michael Christeson	Lisa Lakkis & Family
Greg Cielieska & Family	Deirdre Lynch & Family
Lewis U. Davis Jr. & Family	Richard Maddox
Ryan Grasha	Jason Plank & Family
Charles Groves	Steven Quallich
Bob Hartnett	Connie Scotti
Nancy Hruska	James Sluk & Family
Mario Iasella & Family	Kevin Spencer & Family
Tom Korpziel	Glen Ward

### Membership Information

AAAP Member Dues:	\$ 30.00
Student Membership (K-12 & full time college student):	\$ 20.00
Family Membership	\$ 45.00

#### Basic Procedure for Paying Dues:

1. Make check payable to "AAAP Inc."
2. Send check to: Nate Brandt, Treasurer  
2520 Campmeeting Rd.  
Sewickley, PA 15143-9104

Membership Renewal Form can be found at:

[http://www.3ap.org/AAAP\\_Mem\\_RenForm\\_2013.pdf](http://www.3ap.org/AAAP_Mem_RenForm_2013.pdf)

New Membership Form can be found at:

[http://www.3ap.org/AAAP\\_New\\_MemForm\\_2013.pdf](http://www.3ap.org/AAAP_New_MemForm_2013.pdf)

### 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.

The Guide Star is posted online at month's end to both the club web site and the file section of the Yahoo Group AAAPgh.

Please submit items as early as possible for inclusion in the coming issue. Forward submissions or questions to:  
[gseditor@3ap.org](mailto:gseditor@3ap.org)

### Amateur Astronomers Association Of Pittsburgh, Inc

#### Executive Committee

##### 2012-2013 Elected Officers

President:	John Holtz <a href="mailto:president@3ap.org">president@3ap.org</a>
Vice-President:	Terry Trees <a href="mailto:vicepresident@3ap.org">vicepresident@3ap.org</a>
Treasurer:	Nate Brandt <a href="mailto:treasurer@3ap.org">treasurer@3ap.org</a>
Corresponding Sec:	Kelly Fletcher <a href="mailto:correspondingsecretary@3ap.org">correspondingsecretary@3ap.org</a>
Recording Sec:	Diane Yorkshire <a href="mailto:recordingsecretary@3ap.org">recordingsecretary@3ap.org</a>
Membership Sec:	Don Hoecker <a href="mailto:membershipsecretary@3ap.org">membershipsecretary@3ap.org</a>
Guide Star Editor:	John Cheng <a href="mailto:gseditor@3ap.org">gseditor@3ap.org</a>

#### Facility Directors

##### Mingo Creek Park Observatory

Director: Bill Roemer  
Assistant Director: Gene Kulakowski  
Assistant Director: Mike Meteney

##### Wagman Observatory

Director: Tom Reiland  
Assistant Director: Rowen Poole  
Assistant Director: Bill Yorkshire

#### Executive Committee Appointees

Eric Fischer  
Bill Moutz  
Chris Mullin  
Joyce Osborne-Fischer



## *Membership Renewals*

It is time again to renew your memberships for 2013.

Attached is a renewal form that has two parts. The first part is your personal information that we need to make sure our database is up to date and accurate. The second part is the billing information. Please fill in both parts of the form completely.

The membership categories remain unchanged, but there is an increase in the fees (which were last increased five years ago). This increase is to help cover the basic operating expenses of the AAAP. The basic membership is \$30.00. We also have a student membership for \$20.00. This is for any K-12 and full-time college student. We also have a family membership (\$45.00) that includes anyone living in the same household. The family membership need only include the basic primary members contact information and then list the remaining family member names. All correspondence, Guide Star, and mailings will be sent to the family members through the primary member's contact information. This will reduce printing and mailing costs and redundancy.

All members are encouraged to download the electronic version of the Guide Star from the website ([www.3ap.org](http://www.3ap.org)). For those without access to a computer and internet, there is an option to receive the newsletter through the mail. To defray the cost of copying and postage, there is now a charge for the mailed version of the Guide Star.

A reminder, the AAAP no longer processes Sky and Telescope subscriptions. If you want S&T magazine for the first time, use the enclosed form to get your club subscription rate.

If you are a current subscriber, use your renewal notice you receive from S&T. It should have the \$32.95 club rate on the renewal notice.

***Send new and renewal subscriptions for S&T magazine directly to SKY PUBLISHING! Do not mail them to us.***

Subscriptions to Astronomy magazine are still handled through the club. Please send these in ASAP so there is no lapse in your subscription. The lead-time on magazines is three months.

Current building key holders need to pay their key fees at this time. To get a building key for the first time, you must first be trained by an observatory director.

If you have any questions, you can contact Nathan Brandt, treasurer, or Don Hoecker, membership secretary. Thank you.

# ***AAAP Membership Renewal Form – 2013***

Please fill in this single form for anyone in your household who wishes to be a member of the AAAP. We are now offering adult, student, and family memberships. All family members must share the same residence. Student memberships have now replaced junior memberships. To be a student member, you must be a K-12 or fulltime college student. As in the past, you may receive a discounted subscription to Astronomy Magazine through the AAAP. The subscription must be included with your membership dues payment. There is a separate form to receive a discount subscription to Sky and Telescope Magazine. This is to be sent directly to Sky Publishing. **Do not send any Sky and Telescope subscriptions to the AAAP!**

Completely fill in the following information on this form (please print):

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ **9-digit** zip \_\_\_\_\_ –  
\_\_\_\_\_

Phone (Home) \_\_\_\_\_

(Work) \_\_\_\_\_

E-mail \_\_\_\_\_

**Guide Star:** We currently provide our monthly newsletter, the “Guide Star;” only by down-loading from our website; if you need a mailed hard copy, include the \$24.00 surcharge offered in the table on Page 2 of this form.

**Optional:** Do you have a telescope(s) or other special equipment, or special areas of interest in astronomy that you would like listed under your name in our membership directory? If so, please describe them below:

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Additional Family Members:

Name \_\_\_\_\_ Relationship \_\_\_\_\_

Name \_\_\_\_\_ Relationship \_\_\_\_\_

Name \_\_\_\_\_ Relationship \_\_\_\_\_

Name \_\_\_\_\_ Relationship \_\_\_\_\_

Name \_\_\_\_\_ Relationship \_\_\_\_\_

# ***AAAP Membership Renewal Form – 2013***

ITEM	PRICE	ENCLOSED PAYMENT
AAAP Adult Membership (Jan. 1 to Dec. 31 2013)	\$30.00	
AAAP Student Membership (Covers all students K-12 and <u>fulltime</u> college students).	\$20.00	
Family Membership - This membership covers the adult membership and all family members that live with the adult member. Please list all family members to be included on the Page 1 of this form.	\$45.00	
Printed (“snailmail”) hard copy of the <i>Guide Star</i> .	\$24.00	
“Astronomy” Subscription (12 issues per year) Both new and renewals are processed through the AAAP. Do <b>not</b> renew your subscription directly with Astronomy Magazine; you won’t get your discount.	US. \$34.00 Can \$40.25 Int. \$50.00	
Key Fee - Only current key holders! Check appropriate observatory: Mingo_____ Wagman_____	\$15.00 each	
Tax Deductible Donation	----	
<b>TOTAL PAYMENT</b>	----	

It is very important that all payments be received by 12/15/2012 so that magazine subscriptions can be processed in a timely manner.

Prices are subject to change without notice. Payments must accompany this application.

Make checks payable to:     **AAAP, Inc.**

Send this form with payments to:  
**Nathan Brandt – Treasurer, AAAP**  
**2520 Campmeeting Road**  
**Sewickley, PA 15143-9104**

Membership questions?  
E-mail: [MembershipSecretary@3ap.org](mailto:MembershipSecretary@3ap.org)  
Phone: 412-243-8298

Billing questions?  
E-mail: [Treasurer@3ap.org](mailto:Treasurer@3ap.org)  
Phone: 412-741-9529

# Astronomy Club Subscription Form

Sky Publishing Corp. P.O. Box 171 Winterset, IA 50273

CLUB NUMBER: <b>270</b>		
CLUB NAME	<b>Amateur Astronomers Association of Pittsburgh</b>	Sky & Telescope (S&T)
TREASURER'S NAME	<b>Nathan Brandt - Treasurer</b> Date _____	(1 year/12 issues) Club Rate
MAILING ADDRESS	<b>2520 Campmeeting Road</b>	United States \$32.95
CITY	<b>Sewickley</b> STATE <b>PA</b> ZIP CODE <b>15143</b>	Canada \$39.95
COUNTRY (IF NOT U.S.A.)	_____	International \$50.00
PHONE	<b>412-741-9529</b> FAX _____	
E-MAIL ADDRESS	<b>Treasurer@3ap.org</b>	

### SUBSCRIPTION INFORMATION

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