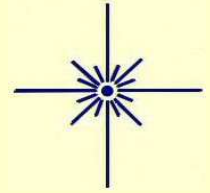




The Guide Star

Newsletter of the Amateur Astronomers Association of Pittsburgh Inc
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May 2012

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AAAP May General Meeting

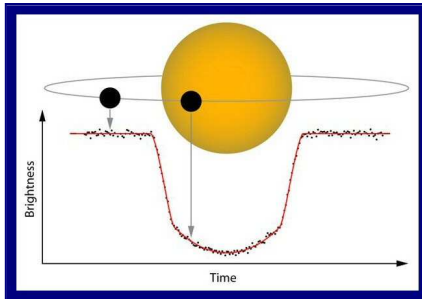
May 11, 2012, 20:00

Bayer Science Stage at the Carnegie Science Center

Featured Speaker: Thomas E. Oberst, Ph.D.
Assistant Professor of Physics
Director, Westminster Planetarium and
Observatory

Topic: Exoplanet Light Curves with Amateur Equipment

Dr. Oberst will provide an over view of the current hunt for exoplanets with an emphasis on the light curve method. Particularly, he will discuss efforts to measure light curves from exoplanet obtained at Westminster's campus using off-the-shelf equipment.



Dr. Oberst's primary research area has been far-infrared spectroscopy of star-forming regions. He's observed at the Caltech Submillimeter Observatory (CSO) and James Clerk Maxwell Telescope (JCMT) on Mauna Kea, Hawaii, and at the Antarctic Submillimeter Telescope and Remote Observatory (AST/RO) at South Pole, Antarctica. He's authored several papers describing the properties of extended star-forming regions in the Milky Way and external galaxies.

However, his interests have recently shifted to extra-solar planets and he's currently teaching himself the field of optical differential photometry with the intent to observe exoplanet light curves from Westminster's campus.

Dr. Oberst obtained a B.S. from Duquesne University and M.S. and Ph.D. degrees from Cornell. He is nearing the end of his fourth year at Westminster College.

AAAP Officer Elections will also be held at this meeting. Official ballots bearing an embossed club imprint and a unique sequence number were mailed to AAAP members in good standing in April.

The ballots included specific instructions on how to sign and return the ballots by mail.

Official ballots not returned by mail, may also be returned at the May meeting by giving them to a member of the nominating committee. They are: Bill Yorkshire, chairman, John Close and Rowen Poole.

Finally, ballots may also be obtained and submitted at the May meeting provided members sign a form attesting they have not previously voted by mail.

The Nominating Committee has submitted the following candidates for club officer positions in the coming term. Their names are printed on the ballots. Space is also provided for write-in candidates.

Each officer nominee was invited to submit a brief statement to accompany this announcement.

John Holtz: President

I am no stranger to the operation of the AAAP. I have been a member for 26 years. I became the Corresponding Secretary after one year of membership and spent the next eight years folding, stapling, and delivering 300+ Guide Stars to the post office. I was the Treasurer for ten years during which time the membership grew to a peak of 500+ and construction began on the observatory at Mingo Creek Park. I have also been a "constant" presence at Wagman Observatory, whether observing on club-only weekends or helping to park cars and operate the telescopes during public star parties.

One of my goals as the club President is to enhance the things that the AAAP offers that cannot be obtained from other sources (that is, the Internet): a "personal" touch from people willing to help you, access to world-class telescopes, and many other benefits. I look forward to getting to know you better and welcome your ideas on how to make the AAAP fun for everyone.

Clear and Dark skies to everyone.

Terry Trees: Vice President

Terry Trees received a Bachelors of Science degree from Case Western Reserve University, a Masters of Science degree from Slippery Rock University and his Doctorate from the University of Pittsburgh. He began his career in public education as a science teacher, counselor and an assistant principal. For the past 20 years he has been a computer network engineer, traveling to South America, Canada, and China. As an Adjunct Professor of Astronomy and Physical Sciences, Terry taught courses in astronomy, environmental sciences and information technology, at the undergraduate and graduate levels.

Terry is a member of the AAAP, the Royal Astronomical Society of Canada, the Kiski Astronomers and the Oil Region Astronomical

Society. He has served as an officer in several of these organizations (in the AAAP, during 6 of his first 7 years of membership, President, Vice President and Corresponding Secretary.). He was also the co-director of the Laurel Highlands Star Cruise.

Terry and his family have traveled to many regional star parties in the U.S. and Canada, where he has presented a number of astronomical topics. He has earned numerous observing awards from the AAAP and the Astronomical League and is currently pursuing the Herschel 400 Award.

Nate Brandt: Treasurer

My name is Nate Brandt and I am honored to be the Nominating Committee's candidate for AAAP Treasurer. I am a graduate of Penn State University and am a chemist for a Fortune 500 Company in the Pittsburgh area.

Having served on an observatory committee for the past few years, I would welcome the opportunity to work together with those on the executive board. As treasurer, I would favor a conservative approach to investing club funds in today's economy, preserving our assets for our future needs.

Astrophotography is an area of interest of mine, and in addition to my personal endeavors, I ran the Kevin J. Brunelle Photo Contest for the club this past year. I have been investigating ways to broaden the appeal of the AAAP through easily accessible digital media and have given astrophotography demonstrations at Wagman and Mingo star parties as well as other venues.

Chris Mullin: Treasurer

Chris Mullin has been a member of the AAAP since moving to Pittsburgh in 2008. He doesn't get out to star parties as much as he'd like, but you can often find him near the front left of the audience at our monthly meetings. Having a young son and a young company are partly to blame.

His qualifications for the post include an advanced degree in physics and a history of running Dynamic Eye, including managing all of the financial books, with an annual revenue of about \$300,000. He handles his family's finances, including the tax returns, and also served as treasurer of the Buffalo Astronomical Association for three years.

If elected, he would seek to reduce club expenses by doing our own taxes (saving over 10% of our budget) and to increase income by investing our \$100,000 endowment in a diversified stock portfolio. He believes the club needs far more openness and transparency in the actions of the executive committee and that the secrecy surrounding the actions of the last six months has only served to alienate and discourage members. He will argue vociferously for as open and liberal a reading of Robert's Rules as possible.

Don Hoecker: Membership Secretary

My name is Don Hoecker. I joined the AAAP in 1987, just in time to attend the dedication of the first section of the Wagman Observatory. I have been the Membership Secretary since 2009, and would be glad to continue for the coming year.

Diane Yorkshire: Recording Secretary

My name is Diane Yorkshire and I have been a part of the AAAP since 1992. A recipient of the Nova and Lois J. Harrison Awards, I have served in supportive roles in whatever capacity has been needed. I sponsored the Junior Astronomers (or "Astrokids" as they liked to refer to themselves) for several years, and enjoy face painting children along side my daughters during Astronomy Weekend at CSC. I also help to man the desk during star parties at Wagman, and currently serve on its Observatory Committee.

I hold an undergraduate degree in Communication Arts and graduate degrees in the field of Language Communications from the University of Pittsburgh; I am an English teacher, a Reading Specialist, and a Program Specialist. Having been a recording secretary for civic groups in the past, I understand the importance of keeping clear and accurate minutes as a permanent record of the events that shape an organization.

Kelly Fletcher: Corresponding Secretary

I have a B.A. in English Literature and an M.A. in Professional Writing. By day, I'm a technical writer for a company that develops engineering software. By night, I explore my creative side: a little fiction, a little creative essay, a little poetry if the mood strikes me. When called upon, I provide lyrics for my favorite progressive rock band—most recently, for a concept album called Pan: An Urban Pastoral.

Shortly after joining the AAAP in 2004, I became the editor of the Guide Star—and by extension, an Executive Committee member—and held both roles for a number of years. After a hiatus, I volunteered for the By-Laws Committee and returned to Exec Committee late last summer. In 2012, I'm running for Corresponding Secretary in the hopes of helping to promote stability (translation: join folks of like mind in addressing club business promptly and effectively, in a calm, professional, and straight-forward manner) so we can all turn our attention back to where it belongs: the club, the camaraderie of its members, and the stars.

Beyond that, I'm looking forward to hanging out, helping out, and observing at Wagman this summer...good stuff ahead! See you all then.

Kathy DeSantis: Corresponding Secretary

As Corresponding Secretary, I would handle the correspondence of the AAAP and other duties much as I have handled outreach and Mingo duties. I have a clear record of action to those ends since joining AAAP in 2005. I received the Nova Award(2005). I have informed the AAAP membership through the IT Committee maintaining the club's website calendar and NSN website. I update the club on the NSN, arrange outreach events with the public and members and make event posts. For several years (~2009-early 2011) I wrote and sent out weekly emails informing members of club activities and things astronomical.

Currently, I serve as Mingo Star Party Group Scheduling Coordinator and have worked every Mingo Observatory Public Star Party and in outreach apart from observatories. I led AAAP's efforts in the On Q segment in 2009 and the Mingo GLOBE Teachers Workshop in 2006. I built a radio telescope when I was teaching science and still use it, along with an 8" Dob, Meade ETX and big binoculars.

John Cheng: Guide Star Editor

I've been a member of the AAAP since 1999 and editor of the Guide Star for the last two years. I did undergraduate and graduate work in philosophy. I've been a visual observer since childhood and am retired.

I've long felt that the primary benefit to be derived from amateur astronomy, whether pursued as a leisurely pastime or as an effort to contribute to the science in some way, is the change it makes in the people that embrace it, the skills they cultivate, the knowledge they gain, and the attitude it can foster in a receptive individual.

With that in mind, I'll try to keep the focus of the Guide Star on club activities and events that properly concern amateur astronomy and to include content that might interest, enrich and help observers at all levels.

As a member of the Executive Committee, that same motive will inform any decisions I'm asked to make....put astronomy first.

Trouble Using Your Scope? Let Me Help

I am offering to help any member of AAAP learn to operate their telescope.

If you have a scope but don't know how to use it. If you want to learn the next step in your observing. If you have a fancy computerized scope and need help learning to operate it. If you have a simple scope and cannot find anything in it. If the view through the scope is not what you think it should be.

Call me at 412-372-8021(no text messages). or email at ffk@fredkleinastro.com and I will meet with you and try to make things better.

Please don't hesitate feeling that you would bother me with your minor problems, I WANT to help!

- Fred Klein

This Month's Eta Aquarid Meteor Shower

This meteor shower has many intriguing characteristics. First, its members come from the material in the outbound path of one of the most famous objects in the heavens, comet Halley. Second, due to their high velocity when striking our atmosphere, 66 km or 41 miles per second, eta Aquarids are known to be bright and nearly half of them produce visible trains or glowing ionized gas trails. Third, the shower has an extended period of maximum activity, meaning that while the specific dates of maximum activity are May 5 and 6, heightened activity (ZHR rates of 30) can be observed all the way from May 2 to May 10. Almost like they were designed for the more "relaxed" observers among us.

More's the pity then that the eta Aquarids are hard to observe from the Northern Hemisphere.

Easily, the strongest annual shower in the Southern Hemisphere, and capable of generating an average of 60 meteors per hour at maximum, the low altitude of the radiant in the pre-dawn hours at our latitude drops that number to ZHR of 10 or 20.

The radiant, centered around the 4th magnitude star eta Aquarii rises about 03:00 in early May with sunrise following at 06:00. The "rules of thumb" are more north you are, the less you'll see and the later in the morning you observe, the better your chances.

If you're awake, why not?

Recall that ZHR or zenith hourly rate is a hypothetical value which predicts the number of meteors an experienced observers would see in a perfectly dark sky (limiting magnitude of 6.5) if the radiant was directly overhead. This is hardly ever the case and for all practical purposes a ZHR of 5 is thought to be indistinguishable from normal sporadic activity.

But a another complication this year is.....

This Month's Full Moon

A term, with an astrological pedigree, recently made it into the astronomical lexicon : "supermoon", meaning a full moon occurring very close to perigee (the point in the Moon's orbit when it lies closest to Earth). It's not a rare event. It occurs multiple times in any year.

The full moon on May 5th is special because it's the closest in 2012. It occurs at 23:35, within a half-hour of lunar perigee at midnight. The Moon's distance from Earth during this time will be a scant 356,955 km (221,802 mi). For reference, the Moon's average distance is 384,400 km (238,855 mi) while its average distance at the farthest points in its orbit around Earth averages to 405,400 km (251,904 mi)

Bottom line, May's full moon will be about 30,000 km closer than average and will present a disk 33.476 arc minutes in diameter. It will be the largest full moon of the year.

Closest recent and coming full moons :

Year	Date	Moon's Distance from Earth
2011	March 19	356,575 km
2012	May 5	356,955 km
2013	June 23	356,991 km
2014	August 10	356,896 km
2015	September 28	356,877 km

An illustration of the difference in appearance of our Moon at apogee and perigee can be seen in these images captured last year. Quantitatively, the variance in apparent size can be as large as 14%.



Left, the full Moon October, 2011. Distance 406,430 km. Apparent diameter 29 minutes, 49 seconds.

Right, the full Moon in March, 2011. Distance 356,580 km. Apparent diameter 33 minutes, 56 seconds.

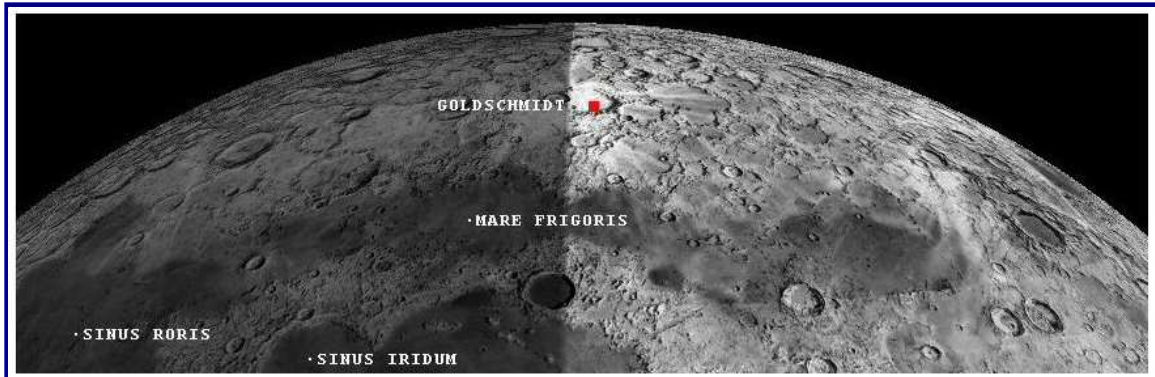
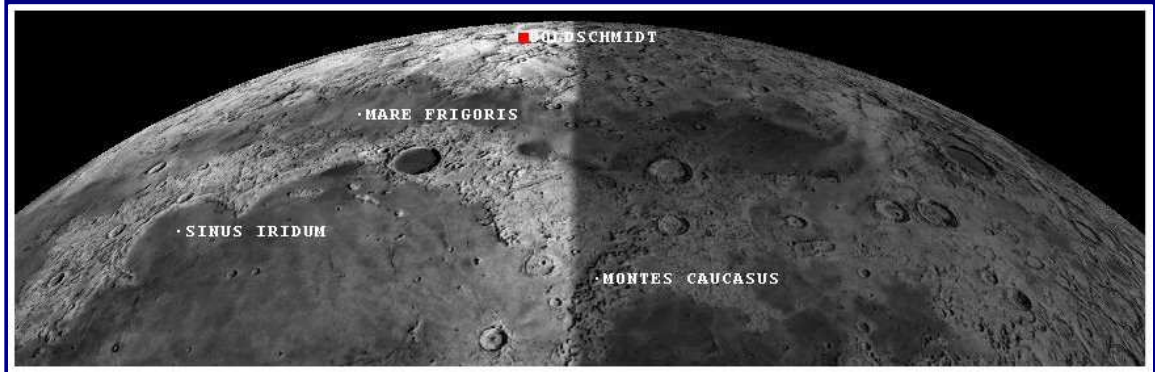
More on May's Moon

Our Moon wobbles or is subject to libration. Portions of the lunar surface tip into or out of our field of view.

While we never view more than 50% of the lunar surface at one time, thanks to libration, we can see 59% of the lunar surface over time.

Late in May, specifically around the 27th, the extreme northern section of the Moon will lean in our direction to a very large degree. This would be a good time to explore the lesser known terrain between Mare Frigoris and the pole.

The top panel shows the last quarter Moon on May 12. Using crater Goldschmidt as a reference, note how the northern polar region is tilted away from our line of sight. The lower



panel, showing the first quarter Moon of May 28th, exhibits the effects of extensive libration. Note that Goldschmidt and Mare Frigoris have shifted south and to lunar east, making them easy to view. Also notice that the famous crater Plato, renowned for the craterlets strewn across its darkened floor that challenge visual observers, is now located squarely on the quarter phase terminator. **- Guide Star Editor**

Treasurer's Report:

2012 First Quarter Summary:

As you can see, our expenses are \$5000.00+ over our income for the quarter. This is due to three things. Legal Fees incurred by the club, adding additional security equipment to both observatories, and repairs incurred at Mingo. The repairs involved a new focuser for the 10" refractor, installing new locks and door lock boxes, and other miscellaneous items.

Some money will be transferred from our Money Market Fund into our General Savings in the near future. I have delayed that to try and collect as much interest as possible.

Income

50-50	116.00
Donations	263.00
Interest	508.82
Membership	1624.00
Sales	80.00
Total Income	2591.82

Expenses:

Awards	9.90
Bank Fees	6.00
Equipment	1165.25
Raffle/Gifts	123.72
Guide Star	155.83
Legal Fees	2835.00
Mailings	112.08
Hall deposit	300.00
Mingo Maintenance	
And supplies	2141.41
Officers expenses	99.58
Printing (not GS)	160.64
Refund Hall	
security deposit	-50.00
Refund USPS Bulk	
Mail Deposit	-120.78
Utilities	689.73
Total Expenses	7627.36

Account Balances (4/13/12)

USX Share CD	101,477.56
USX Money Market	25,725.45
PNC Savings	114.89
Planetarium Fund	15,000.00
PNC Checking	1858.48
Cash	50.00
Total Account Bal.	144,284.38

Sun

Mon





Tue

Wed

Thu

Fri

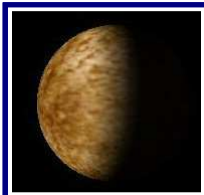
Sat

<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>		<p>1</p> <p>Occultation of Magnitude 5.8 19 Sextans by Moon's dark limb 01:44</p> <p>SR:06:18 SS:20:16 MR:15:16 MS:03:16 PI:67%</p>	<p>2</p> <p>SR:06:17 SS:20:17 MR:16:26 MS:03:47 PI:77%</p>	<p>3</p> <p>SR:06:16 SS:20:18 MR:17:39 MS:04:19 PI:86%</p>	<p>4</p> <p>Naked Eye Group: Spica, Saturn and our Moon</p> <p>SR:06:15 SS:20:19 MR:18:54 MS:04:55 PI:93%</p>	<p>5</p> <p></p> <p>Largest Full Moon in 2012</p> <p>SR:06:13 SS:20:20 MR:20:10 MS:05:35 PI:98%</p>
<p>Eta Aquarid Meteor Shower Active with Maximum due pre-dawn on May 5th</p>						
<p>6</p> <p>SR:06:12 SS:20:21 MR:21:24 MS:06:21 PI:100%</p>	<p>7</p> <p>SR:06:11 SS:20:22 MR:22:33 MS:07:15 PI:99%</p>	<p>8</p> <p>SR:06:10 SS:20:23 MR:23:32 MS:08:16 PI:95%</p>	<p>9</p> <p>SR:06:09 SS:20:24 MR:***** MS:09:23 PI:88%</p>	<p>10</p> <p>SR:06:08 SS:20:25 MR:00:22 MS:10:31 PI:80%</p>	<p>11</p> <p>AAAP General Business Meeting CSC 20:00</p> <p>SR:06:07 SS:20:26 MR:01:04 MS:11:38 PI:70%</p>	<p>12</p> <p></p> <p>SR:06:06 SS:20:27 MR:01:40 MS:12:43 PI:60%</p>
<p>Eta Aquarid Meteor Shower Active with Maximum due pre-dawn on May 5th</p>						
<p>13</p> <p>Jupiter Conjunction with the Sun</p> <p>SR:06:05 SS:20:28 MR:02:11 MS:13:46 PI:49%</p>	<p>14</p> <p>SR:06:04 SS:20:29 MR:02:39 MS:14:47 PI:39%</p>	<p>15</p> <p>SR:06:03 SS:20:30 MR:03:06 MS:15:46 PI:30%</p>	<p>16</p> <p>SR:06:02 SS:20:31 MR:03:32 MS:16:44 PI:21%</p>	<p>17</p> <p>SR:06:01 SS:20:32 MR:04:00 MS:17:42 PI:14%</p>	<p>18</p> <p>SR:06:00 SS:20:33 MR:04:29 MS:18:40 PI:8%</p>	<p>19</p> <p>SR:05:59 SS:20:33 MR:05:02 MS:19:37 PI:4%</p>
<p>20</p> <p></p> <p>SR:05:59 SS:20:34 MR:05:38 MS:20:32 PI:1%</p>	<p>21</p> <p>SR:05:58 SS:20:35 MR:06:20 MS:21:24 PI:0%</p>	<p>22</p> <p>SR:05:57 SS:20:36 MR:07:06 MS:22:13 PI:1%</p>	<p>23</p> <p>SR:05:56 SS:20:37 MR:07:58 MS:22:58 PI:4%</p>	<p>24</p> <p>SR:05:56 SS:20:38 MR:08:54 MS:23:37 PI:8%</p>	<p>25</p> <p>Star Parties at both Mingo Obs & Wagman Obs</p> <p>SR:05:55 SS:20:39 MR:09:53 MS:***** PI:14%</p>	<p>26</p> <p>Star Parties at both Mingo Obs & Wagman Obs</p> <p>SR:05:55 SS:20:40 MR:10:55 MS:00:13 PI:22%</p>
<p>27</p> <p>SR:05:54 SS:20:40 MR:11:58 MS:00:46 PI:31%</p>	<p>28</p> <p></p> <p>SR:05:53 SS:20:41 MR:13:03 MS:01:17 PI:41%</p>	<p>29</p> <p>SR:05:53 SS:20:42 MR:14:09 MS:01:47 PI:52%</p>	<p>30</p> <p>SR:05:52 SS:20:43 MR:15:18 MS:02:17 PI:63%</p>	<p>31</p> <p>Naked Eye Group: Spica, Saturn and our Moon</p> <p>SR:05:52 SS:20:43 MR:16:30 MS:02:50 PI:73%</p>	<p>"...If the pure and elevated pleasure to be derived from the possession and use of a good telescope were generally known, I am certain that no instrument of science would be more commonly found in the homes of intelligent people..."</p> <p>Garrett Serviss</p>	

Some Solar System Highlights

Selenographic Colongitude is 29.39° at 0h UT 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, 11th, 21st and 31st days of the month.



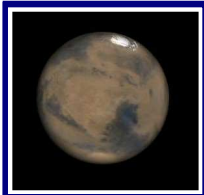
Mercury begins the month low in the eastern sky at dawn, rising less than a hour before the Sun on the 1st. As the month progresses, it appears closer to the Sun, reaching superior conjunction on the 27th.

Rise time / Set time	1st	05:31	18:08	11th	05:29	18:54	21st	05:38	19:59	31st	06:06	21:13
Magnitude / Arc Sec	1st	-0.0	6.43	11th	-0.6	5.64	21st	-1.5	5.16	31st	-1.9	5.14



Venus in Taurus, continues to dominate the western evening sky, setting a quarter hour before midnight on the 1st. Appearing closer to the Sun as the month progresses, its diameter increases, as its slims to a crescent. On the 22nd a slim crescent Moon will pass a scant 5 degrees south of the planet.

Rise time / Set time	1st	08:07	23:46	11th	07:42	23:19	21st	07:07	22:32	31st	06:20	21:24
Magnitude / Arc Sec	1st	-4.5	37.54	11th	-4.5	44.08	21st	-4.3	51.23	31st	-4.0	56.73



Mars in southern Leo, is well placed for late evening viewing. It dims and its apparent diameter decreases through the month.

Rise time / Set time	1st	14:28	03:55	11th	14:02	03:20	21st	13:39	02:46	31st	13:19	02:15
Magnitude / Arc Sec	1st	-0.0	9.91	11th	0.2	9.16	21st	0.3	8.50	31st	0.5	7.92



Jupiter, moving from Aries into Taurus, is in conjunction with the Sun on the 13th and is not visible this month.

Rise time / Set time	1st	06:49	20:55	11th	06:17	20:27	21st	05:44	20:00	31st	05:12	19:32
Magnitude / Arc Sec	1st	-2.0	32.87	11th	-2.0	32.77	21st	-2.0	32.77	31st	-2.0	32.89



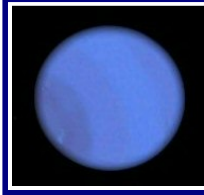
Saturn in Virgo, rises in early evening, continuing its retrograde (east to west) motion. Positioned near bright alpha Virginis or Spica, it will form part of a what may be an attractive naked eye grouping with our Moon on the 4th and the 31st.

Rise time / Set time	1st	18:36	05:56	11th	17:53	05:15	21st	17:11	04:34	31st	16:30	03:53
Magnitude / Arc Sec	1st	0.3	18.90	11th	0.4	18.77	21st	0.4	18.58	31st	0.5	18.36



Uranus on the Pisces - Cetus border, rises increasingly earlier than the Sun as the month progresses. On the 1st, it precedes the Sun by about an hour and a half, but by month's end the interval will have expanded to almost 3 hours.

Rise time / Set time	1st	04:56	17:13	11th	04:18	16:36	21st	03:39	15:59	31st	03:01	15:22
Magnitude / Arc Sec	1st	5.9	3.35	11th	5.9	3.37	21st	5.9	3.39	31st	5.9	3.41



Neptune is positioned in the heart of Aquarius and has become an easier morning object.

Rise time / Set time	1st	03:36	14:24	11th	02:57	13:45	21st	02:18	13:06	31st	01:39	12:27
Magnitude / Arc Sec	1st	7.9	2.21	11th	7.9	2.22	21st	7.9	2.23	31st	7.9	2.24

Suggested Deep Sky Objects for May

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
12h 30.0m	+51° 32'	7 CVn	6.2, 10.4, 9.0	AB 109", AC 229"	AC 172°, AB 327°	CVn	Triple Star
13h 15.8m	+42° 02'	M63	8.6v	13.5'x8.3'		CVn	"Sunflower" Galaxy
13h 23.9m	+54° 54'	79 & 80 UMa	2.3, 4.0	708.7"	71°	Uma	Double Star, "Mizar & Alcor"
13h 29.9m	+47° 12'	M51	8.4v	8.2'x6.9'		CVn	"Whirlpool Galaxy"
13h 42.2m	+28° 23'	M3	5.9v	16.2'		CVn	Globular Cluster
Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
12h 17.5m	+37° 49'	NGC 4244	10.4v	17.0'x2.2'		CVn	Galaxy
12h 19.0m	+47° 18'	M106	8.4v	20.0'x8.4'		CVn	Galaxy
12h 56.0m	+38° 19'	12-Alp a	2.9, 5.5	19.4"	229°	CVn	Double Star, "Cor Caroli"
13h 12.9m	+18° 10'	M53	7.5v	12.6'		Com	Globular Cluster
13h 23.9m	+54° 56'	79 Zeta	2.4, 3.9	14.4	150°	Uma	Double Star
Objects for Medium Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
10h 19.9m	+45° 33'	NGC 3198	10.3v	9.2'x3.5'		UMa	Galaxy
11h 11.5m	+55° 40'	NGC 3556	10.0v	8.1'x2.1'		UMa	Galaxy
11h 57.6m	+53° 23'	M109	9.8v	7.6'x4.3'		UMa	Galaxy
12h 13.8m	+14° 54'	M98	10.1v	9.1'x2.1'		Com	Galaxy
12h 22.9m	+15° 47'	M100	9.3v	6.2'x5.3'		Com	Galaxy
12h 25.1m	+12° 53'	M84	9.1v	5.1'x4.1'		Vir	"Galaxy, with N4388, N4387"
12h 26.2m	+12° 57'	M86	8.9v	12.0'x9.3'		Vir	"Galaxy, with N4388, N4387"
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
10h 18.3m	+41° 25'	NGC 3184	9.8v	7.8'x7.2'		UMa	Galaxy
11h 14.8m	+55° 01'	M97	9.9v	194"		Uma	Planetary Nebula "Owl"
11h 18.8m	+14° 25'	M99	9.9v	4.6'x4.3'		Com	Galaxy
12h 36.3m	+25° 59'	NGC 4565	9.6V	14.0'X1.8'		Com	Galaxy
12h 36.6m	+11° 14'	NGC4567-68	10.8, 11.3	4.7'x2.2'		Vir	Galaxies, "Siamese Twins"
12h 40.0m	-11° 37'	M104	8.0v	7.1'x4.4'		Vir	"Sombrero Galaxy"
12h 56.7m	+21° 41'	M64	8.5v	9.2'x4.6'		Com	"Black Eye Galaxy"
14h 03.2m	+54° 21'	M101	7.9v	26.0'x26.0'		UMa	Galaxy

2012 Star Party DatesWagman Obs.

May 25 – 26
 Jun 22 – 23
 Jul 27 – 28
 Aug 24 – 25
 Sep 8* – 22
 Oct 6* – 20

Mingo Obs.

May 25 – 26
 Jun 22 – 23
 Jul 6 – 7, 20 – 21
 Aug 10 – 11
 Sep 8 – 22
 Oct 6 – 20

* Moonrise

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

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AAAP Welcomes Our New Members

Dan Delisio
 Mike Fallon
 Perry Myers & Family

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

Membership Renewal Form can be found at:

http://www.3ap.org/AAAP_Mem_RenForm_2012.pdf