



# The Guide Star



**Mingo Creek Park  
Observatory**

Newsletter of the Amateur Astronomers Association of Pittsburgh, Inc.

*Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon*

*Website: 3ap.org*



**Nicholas E. Wagman  
Observatory**

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## Astronomers Prove Dark Matter Exists

By David McAlary  
Washington from News VOA.com  
21 August 2006

Astronomers say they have proven the existence of dark matter, an elusive form of matter believed to be much more abundant in the universe than the ordinary matter we can see. Detection came when they observed two massive clusters of galaxies colliding. Until now, dark matter was just a hypothesis. It was first proposed more than 70 years ago to explain why some galaxies that moved through space at an unusually rapid speed did not fly apart. Scientists suggested that some unseen type of matter exerted enough gravitational pull to keep them together, but University of Arizona astronomer, Douglas Clowe, says the notion of unseen matter has been discomfiting. Astronomers have long been in the slightly embarrassing position of having to explain their observations using something that we didn't know actually existed said Douglas Clowe but that has

changed as the result of work Clowe and colleagues have done with the U.S. space agency's orbiting Chandra x-ray telescope. They have witnessed the collision of two massive clusters of galaxies, an impact so great that it has split normal and dark matter apart. This made it easier for them to detect dark matter by measuring its gravitational force apart from the gravity of the normal, observable matter in the stars and hot gases of the clusters. "This provides the first direct proof that dark matter must exist and must make up the majority of the matter in the universe," he said.

The two galaxy clusters passed through each other at an incredible speed of 16 million kilometers per hour. As they did, the bulk of the luminous matter in the two clusters, which is in the form of hot gases, bumped into each other and slowed down; but the dark matter sailed ahead because it does not interact with normal matter the same way. The researchers could tell the dark matter was there because the Hubble Space Telescope and large ground telescopes showed that its huge gravitational force bent light coming from distant objects behind it. This distortion, called gravitational lensing, magnified the objects making them appear larger than if dark matter's gravity had been absent. "The great news about this is that it is the once and for all case that you can say dark matter does exist", said Sean Carroll.

Sean Carroll is a cosmologist at the University of Chicago who was not involved in the observations. He says particle physics laboratories around the world are trying to capture dark matter in an effort to determine its properties. "So there absolutely is a new particle that physicists get to go out there and find", he said. "That's great news because it tells theorists what to think about - to think about models for dark matter - and experimentalists what to do to go out there and look for that particle".

Before this latest finding, some astronomers had proposed an alternative to dark matter. They suggested that ordinary matter's gravity might be stronger on the massive scale of galaxies and galaxy clusters but Douglas Clowe says the new work shows that gravity's force is the same everywhere.

### **Binocular Viewing**

Al Paslow

I have to say that I've viewed M-51 under dark sky conditions with 11 x 80 B & L binoculars. The light grasp of the 80 mm objectives makes a difference and over all brightness of star clusters, nebula, etc. is just something that must be examined to be believed. Objects not visible in smaller binoculars can become very apparent in the 80's. Of course, transparency and dark skies is the key to binocular observing. Huge differences can occur in what can be seen. From Pittsburgh in many years of observing I could honestly say I never saw M-33 without optical aid. At best, the galaxy appears extremely dim but large and spread out even in the 24 inch at Mingo; from our area a very unimpressive sight; but in the clear sky deserts of southern Arizona, M-33 is tremendous! Large and bright, easily visible to the naked eye; sprawling outside the field of view of an eyepiece of a 6-inch f-4 instrument I was using in the 1970's. Unforgettable!

After acquiring various binoculars over the years, owning and using several different pairs are worthwhile. My 60-year-old 8 x 30 Zeiss works wonders with ample focus for my myopic eyes (I often run out of focus travel using many binoculars without eye glasses). 7 x 50's, of course, offer the advantage of the correct size exit pupil for most people's eyes and give quite a bright image. 10 x 50's offer a smaller field of view but a little bit more magnification. If you get into larger binoculars, with 70 or 80 mm lenses, you can really have problems hand holding the instrument. But ...wow, what views! Personally, I would not consider a 15 x 80, or 20 x 80, or perhaps 15 x 70 because they are impossible to hold steady longer than a few seconds unless, of course, you mount them on a tripod. It's great that your 15 x 70 mm Jeremy is image stabilized, Amen! Hence, I believe after using various binoculars over the years, the 11 x 80's are the absolute largest pair an average guy can hold for short periods of time. Any more hand held magnification in that aperture range is out of the question. I am sure Ed Moss or Dan McKeel, who also have used these babies at Mingo, can attest to that! Binoculars are a lot of fun, and actually a big pair really makes observational astronomy very exciting and educational!

### **More Binocular Observations**

By Jeremy Waldenville

I've had my 15 x 70 binoculars for four or five years but just recently started trying to observe some Messier objects. Previously, I lived in Crafton with not much luck due to the Pittsburgh light pollution. Now I'm in Butler County and the skies are much clearer. Just recently, on the August 15, I observed M2, M5, M8, M11, M13, M15, M22, M25, and M92 (wasn't sure about M16, 17, 20, 21 and 23) and a few doubles. I completely agree with Tom too. And the wide field of view is what I appreciate the most. Lastly, I just want

to say I've tried many times to observe M51, but never with any luck. Now I know there's still hope.

### **More Binocular Observations**

By Tom Reiland

Binoculars are under appreciated as an astronomical observing tool. I use mine more often than I use my scopes or the scopes at Wagman. I have observed close to 70 Messier objects and dozens of NGC's and other deep sky wonders with my 10 X 50's. I have seen M51, M57 (looks like a star), M71 and as Charlotte mentioned, several of us spent part of an evening at Wagman trying to see how many Messier objects we could find. I think I located about 40 that night. There are some things you can do with binoculars that you cannot with a telescope. Fit large star clusters like the Pleiades, Hyades, and Coma Berenices, also known as Mel 111, in the field of view. You can see features on the Moon, Jupiter's four large moons and scan the Milky Way. They are inexpensive, easy to carry, and don't need any time for setup. You won't break your back carrying mounts and tubes in and out of your house or car. They are great for learning the sky, the constellations, and improving star hopping techniques. It's a low-tech way to enjoy astronomy. I also use them to locate manmade satellites.



## BECOME A CERTIFIED GLOBE TEACHER!

*A certified GLOBE teacher is qualified to guide students in taking GLOBE environmental measurements, report data to the GLOBE database, and use GLOBE Mapping and Graphing utilities to visualize data.*

**\* Come join in the GLOBE Atmosphere Investigations \***  
*GLOBE is a hands-on, school-based science and education program that unites students, teachers, and scientists in study and research about the dynamics of the Earth's environment.*

### *Join the Hands-on Workshop October 14, 2006*

**Five Act 48 Hours**

This workshop will include training for teachers in the GLOBE Atmosphere protocols including hands-on sessions, and inquiry-based activities aligned with the Pennsylvania Academic Standards. Location is the Observatory at Mingo Creek County Park, hosted by the Amateur Astronomer's Association of Pittsburgh. Solar viewing through the new 24" telescope will be offered, as well as an invitation to a star-gazing party.

*The workshop is conducted by the PA NASA Educator Resource Center and sponsored by the PA NASA Space Grant Consortium.*

*GLOBE trainers will be Charylene Philp, NASA GLOBE Partner and Lisa Brown PH.D., Director, PA NASA Space Grant Consortium*

#### **Proposed Workshop schedule:**

<b><u>8:00am</u></b>	Registration and welcome Pre-survey
<b><u>8:15am</u></b>	Earth Systems Activity-Global Patterns Introduction to GLOBE
<b><u>9:30am</u></b>	Cloud Type Protocol
<b><u>10:30am</u></b>	Digital Multi-Day Maximum/Minimum Thermometer
<b><u>11:00am</u></b>	Break
<b><u>11:15am</u></b>	Cloud Cover Protocol
<b><u>12:15pm</u></b>	Precipitation Protocol – Demo Relative Humidity
<b><u>1:00pm</u></b>	Data Entry – GLOBE Database
<b><u>1:30pm</u></b>	Post-survey:Assessment

Breakfast and break refreshments are provided.

All teachers will receive workshop supplies along with related NASA resources.

Early registration is recommended since space is limited.

There is a small registration fee of \$20.

To register call or write Jane Konrad at the Pittsburgh Regional Center for Science Teachers (PRCST) at 412/648-7315; fax 412/648-7081; email [konrad@pitt.edu](mailto:konrad@pitt.edu)

For more information check out this web site: [http://www.globe.gov/globe\\_flash.html](http://www.globe.gov/globe_flash.html)

### A Farewell from Ireland By Simon Sloan



Fellow AAPers,

I am writing this with a saddened heart, but I though it would be best to let you all know that I will not be renewing my membership this year. I find myself dwelling back to the time when I was living in Pittsburgh. I enjoyed living there, but it's clear that I did not belong there. Anyway, I need to move on in life and I need to leave the past behind me, which sadly includes this. I've had a wonderful time and experience being part of this club. I will always remember it and the people I have met. I may visit Pittsburgh again one day. I hope I can and if I do, I will surely make a visit to the observatories. There is one person in particular that I wish to thank: Dave Smith. I would like to thank you for your kindness; I would never have gotten to attend all those star parties without your help. Those memories are priceless and they are some of my best memories. I miss the night skies at Wagman and Mingo. This is a wonderful club and a great community of people but for now I will say goodbye. I wish you all the best and that the club reaches newer heights. Live long and prosper.



### NASA Outreach By Kathy DeSantis

This is yet another NASA outreach, <http://radiojove.gsfc.nasa.gov/>, we are dabbling into as time permits. When you get a chance, check out their website or ask me about it. I have the prototype radio telescope to detect decameter gamma bursts from the Sun and Jovian Moons. I built this in the eighties and have it handy and would demonstrate as time permits. The deal is that I have to get the software updated and erect the antennae. I used to set my antenna on the roof of the high school where I taught. So it is going to take some tweaking to get it set up at Mingo. However, I have a yen to do a lecture on radio astronomy, based on my old notes, updated.



### Locating Deep Sky Objects By Tom Reiland

Here's a web page for you to use to help locate deep sky objects and confirm observations: [http://archive.stsci.edu/cgi-bin/dss\\_form](http://archive.stsci.edu/cgi-bin/dss_form). I use this regularly. This contains photographic plates from various observatories like Palomar plus space telescopes. You can either type in the name or the coordinates for the object that interests you. For Reiland's Object, type in these A and DEC positions: 23 05 00.00 + 60 04 00.00. You will see the cluster and the nebula that surrounds it. There are two stars slightly north and slightly east pointing to my object and over towards the west is an arc of three stars of similar brightness that also point to it. I.C. 1470 and my object fit in the same field of view in my 16" at 130X, which is slightly over 1/2 degree. I found it using an 8" scope from my backyard at about 60X. I used higher power to resolve it into about eight stars with faint nebulosity around it. That's when the sky was dark here.

If you want to see Minkowski 2-9, type in: PK10+18.2 to get the coordinates and the plate. You can choose how large of a field you want up to 60 X 60 minutes of arc (One square degree). The Uranometria charts show it on page 292. I observed it on August 11-12 at 10:45 p.m. from the club's Greene County location using 130X, 240X and 312X on my 16" scope. I just noticed that I observed nine other PN's for the first time that night. I found a total of sixteen first time objects during that observing session. Look's like it was a good one until the dew started to build up near the beginning of twilight. M 2-9 is bipolar (nothing to do with any mental problems) with a central star. I was able to see the star and the two fluted nebulae jetting out from the star. While going through my logbooks to find this info, I came across my independent discovery of the supernova in NGC 7541 (SN1998dh) on the night of July 26-27. That was eight years ago tonight while I was at a friend's farm at the southwestern tip of Greene County. I observed it two nights before that and made a note of a star just east of the galaxy. The next night was lousy, so I stayed in the farmhouse. The following night I checked it out at 2:06 a.m. and noticed the star I saw Friday, but now there was another star at the other (western) edge of the galaxy. I finally found one, only to learn Monday afternoon that it had been discovered by an SN search program at Lick Observatory a few days before my observation. It still felt good to know that I had discovered it on my own. With all of the automated systems scanning the skies for novae, SN's, asteroids and comets it's almost impossible for amateur observers to make any discoveries. Good luck with your hunting.

## Local Amateur Astronomer USES SPITZER SPACE TELESCOPE!

By Ann Norman



Tim Spuck of the Oil City Astronomers actually got to use the Spitzer Space Telescope! Don't be jealous! Come hear his story Friday, September 8 at 7:30 p.m. at the Carnegie Science Center. Tim, a teacher at Oil City High School, will give an insider's view of this infrared space telescope. The Spitzer is one of the NASA Great Observatories, which allow us to observe four different sections of the electromagnetic spectrum: infrared light, visible light, x-rays, and Gamma radiation. After submitting a proposal to the Spitzer Space Telescope Research Program for Teachers and Students, Tim Spuck and several of his students were awarded time on the telescope to collect data on T-Tauri stars in the Witch Head Nebula in Orion. The team turned up never-before-seen stars and their research contributes to the understanding of star formation.

### Cool Web Site

<http://www.cnn.com/2006/TECH/space/07/25/saturn.titan.ap/index.html>

[http://science.nasa.gov/headlines/y2006/23aug\\_mariner4.htm](http://science.nasa.gov/headlines/y2006/23aug_mariner4.htm)

<http://www.gps.caltech.edu/~mbrown/whatsaplanet/>

<http://www.gps.caltech.edu/~mbrown/whatsaplanet/howmanplanets.html>

<http://www.gadling.com/2006/06/06/best-stargazing-destinations-in-america/>

## Spectacular Meteor Shower Possible for 2007

By Joe Rao SPACE.com Sky watching Columnist  
Posted by PETE ZAPADKA

A spectacular meteor shower might be in the offing late next summer, SPACE.com has learned. It may not last very long, but could produce a bevy of bright, swift shooting stars for favorably positioned sky watchers. The prediction is found in a technical report co-authored by two astronomers who are targeting Sept. 1, 2007 as the date for the potential display. The meteors are called "Aurigids" because they appear to fan-out from the constellation of Auriga, the Charioteer. Strong Meteor showers occur whenever we ride into the dusty debris left behind in a comet's orbit. The debris left behind by Kiess, a comet last seen in 1911, is what produces the Aurigids. The comet takes approximately 2,500 years to orbit the Sun, but there are also dense trails of dust traveling along its orbit. Earth has had lancing blows in the past with a few of these dust trails in 1935, 1986 and 1994. In 2007, however, the Earth is expected to pass very close to the center of a dust trail, which astronomers Esko Lyytinen of Finland and Peter Jenniskens of NASA's SETI Institute in California said, should result in "a spectacularly rich shower of bright meteors". The researchers in the past used computer models to predict outbursts of the Leonid meteor shower, which wowed sky watchers in 2001 and 2002. Shooting stars, or meteors, are common any night of the year; five or six per hour are normal. During a respectable meteor shower, they can be seen streaking across the sky every few minutes. But occasionally the sky explodes in a shower of sparks, a rare meteor "storm" that is something to get excited about. Meteor storm possible? No one is certain how strong next year's Aurigids may be, but tomorrow Jenniskens will make an announcement at the General Assembly of the International Astronomical Union in Prague concerning an "Aurigid Meteor Storm" of Sept. 1, 2007. Meteor storms are typically said to involve at least 1,000 meteors per hour, a rate sometimes achieved only in 15-minute bursts. It is not clear what sort of hourly rate Jenniskens will announce as his prediction, however. "I do not know why Peter Jenniskens will announce this as a storm," Lyytinen told SPACE.com. "I have not especially tried to predict the strength, but I would guess only a good or moderate shower, a storm not impossible." The peak of the shower is predicted to occur at 11:37 GMT. Unfortunately, this comes during daylight for Europe and much of North America, but the western United States and Canada, as well as much of Alaska and Hawaii will still be in pre-dawn darkness and would be in an excellent position to view it.

## ANNUAL JOINT MEETING WITH SSP OCTOBER 18, 2006

The annual Joint meeting with the Spectroscopy Society of Pittsburgh (SSP) and the AAAP will take place on Wednesday, October 18, 2006, at the Duquesne University Mellon Hall of Science. The Tech Forum Talk begins at 5:30 with Professor Richard Griffiths of Carnegie Mellon University discussing the origin of the X-Ray background, from data taken by the Chandra X-Ray Observatory, and the European Space Agency XMM-Newton satellite. The social hour and dinner follows and the main meeting begins at about 8:00 pm. Our speaker is NASA scientist Dr. Michael Zolensky, who will discuss the results of the STARDUST mission. The abstract for this talk follows:

### Preliminary Examination of the Comet Wild 2 Samples Returned by the Stardust Spacecraft

The sample return capsule of the Stardust spacecraft was successfully recovered in northern Utah on January 15, 2006, and its cargo of coma grains from Comet Wild 2 has now been the subject of intense investigation. This presentation will present the "final" results from the preliminary analyses that will have been performed. The period since spacecraft recovery has been sufficient to permit numerous analyses by over 200 researchers, and to permit some understanding of the following fundamental sample issues:

1. Comet nucleus composition, mineralogy, petrology, isotopic composition and grain physical properties
2. Sample variability
3. Type and degree of sample alteration by the collection process, and subsequent sample handling
4. Sample documentation and handling procedures
5. Comparisons to what was reported by the Deep Impact Mission to Comet Temple 1

Because of the overwhelming last minute calls to the SSP dinner coordinator last year, we will handle dinner reservations differently this year. Please call or email David F. Pensenstadler, at 412.673.6797, or at [dfpens@comcast.net](mailto:dfpens@comcast.net) with your dinner reservation no later than Friday, October 13, 2006. Only your name, number of guests, including yourself, and any dietary restrictions need be included.

The AAAP has been participating in this joint meeting for over 20 years, where noted researchers and scientists in their respective fields have been brought

in to discuss a wide variety of subjects on science, astronomy, and spectroscopy. Let's show the SSP that we appreciate this singular honor with a large turnout at this meeting. If you are only interested in the talks, you need not attend the dinner. Just show up at the Mellon Hall of Science for either or both talks. The monthly SSP meeting notice will be sent to everyone on the AAAP membership list.



### ScopeOut Astronomy Fair Cincinnati, OH Sept 16th

By Craig Niemi

Posted by John Close

#### The "ASTRONOMY CAFE" COMES TO THE CINCINNATI OBSERVATORY CENTER'S ASTRONOMY FAIR.

On Saturday, September 16 2006, The Cincinnati Observatory Center will celebrate the hobby of astronomy with our annual ScopeOut Astronomy Fair. ScopeOut 2006 is an opportunity for families and people of all ages to look at the latest and greatest astronomical equipment offered by local and national vendors but that's not all! Other activities include:

- ☀ Telescope making demonstrations
- ☀ Space art and astrophotography exhibits
- ☀ Educational resources for teachers
- ☀ Science career information from UC, Xavier, NKU and other local universities
- ☀ Kids' crafts, art contest and activities
- ☀ Ask the Astronomer Booth
- ☀ Safe viewing of the sun
- ☀ Evening stargazing through our 102 and 163 year old telescopes
- ☀ Tours of this National Historic Landmark
- ☀ The public is encouraged to bring their telescopes for expert help
- ☀ Door prizes include telescopes, binoculars, and all sorts of astronomical goodies.

ScopeOut 2006's evening's dinner/lecture features Dr. Sten Odenwald. You'll find his award-winning web site

The Astronomy Cafe a fun place to visit for more about a career in astronomy, plus an 3001-question FAQ archive on space and astronomy from A to Z.

#### SCHEDULE OF EVENTS

- ☀ Noon to 5 PM for the Fair
- ☀ 6 PM to 8 PM for the dinner & Keynote Lecture
- ☀ 8 to 10:30 PM celestial viewing of the Moon and Stars (weather permitting)

#### ADMISSION

Adults \$5.00; Children \$3.00; Keynote Speaker and Dinner Reservations add \$15.

## Observations

### Iridium Flare

Posted by Phil Breidenbach

August 21, 2006

As I was leaving for my morning stroll around the neighborhood, I put a new CD in my CD player and walked outside. Just as the music was starting, the beauty of the morning sky hit me. The music just intensified the experience! (Love Lies Bleeding, instrumental start to the song). Later, after I got to work, I went out to the loading dock and watched a -2 Iridium Flare pass through Pegasus. I couldn't talk my co-workers out of their Monday morning funks to come out and join me. They'll never know what they missed. I don't know what it was like through a telescope, but it sure was clear to these "old" eyes!

### Fireball

Posted by Trevor Lewis

August 20, 2006

Last night at about 22:00 MDT, while soaking in the hot tub and enjoying the view of a clear night sky, I observed a fireball. It originated in about Canes Venatici and moved rapidly south, mostly horizontally, becoming brighter. It ended about 5 degrees short of Jupiter. I can't estimate a magnitude, but it was much brighter than Jupiter and brighter than the lights from Idaho Falls, which it appeared to pass over.

Trevor Lewis

### Messier's and NGC's

By Tom Reiland

Posted August 16, 2006

Sky conditions looked very nice just before 7 PM, so I decided to throw a few necessities in the car and head up to Wagman Observatory. I arrived a little after 8:30 PM. I probably missed Flac and Beth by a few minutes. Some scattered clouds were starting to move in as I opened up the Manka roof and started to get the scope ready. It looked like I might have wasted a trip, so I started to work on my 10 x 50 binoculars, hoping that I finally figured out the problem. I was right! Now they're aligned and working better than they have in a long time. By the way, I've seen both M57 and M71 with my 10 x 50's under very good conditions. M57 will look like a faint star. The clouds started to clear out at 9:45 and I started to observe with the 21". Jupiter didn't look very good. The image was fuzzy and dancing around, but the seeing eventually settled down thirty minutes later. I tried to find the supernova in NGC5587, SN 2006dy, but conditions weren't good enough. I never saw the galaxy before Tuesday, so I was able to add it to my list of galaxies observed. M51 (the Whirlpool), NGC5195 and 5198 looked good and I had no trouble locating the Globular Cluster on the outer edges of M31. It's listed as G1. I finally got to see my object through the Manka scope. I got a hint of the nebula

surrounding the cluster. I found Neptune's largest Moon, Triton at 435X. Stephan's Quintet is relatively easy to see with the 21" at 181X. I spent some time on two of my favorite planetary nebulae, NGC7009, the Saturn Nebula and NGC7662, the Snowball. The Moon rose just before 11:45 PM, but I decided to get another hour and finished up at 12:50 AM. I closed up the Manka and the building and drove off of the hilltop at 1:30 AM. Outside of a bird watcher, who was there when I arrived, and a couple who walked up the hill just after 10:30 PM and left soon after, I had the place to myself. In the early days of Wagman, it was common to find several members there on clear weekday summer nights. I haven't seen much of that lately. Must be the gas prices and today's lifestyle. Also, a lot of us are older and some started families. I miss those nights when there were at least four or five of us on the hill enjoying clear skies without much of the light pollution we have now.

### Sun Spots

Posted by James Schultheis

August 15, 2006

Sunday (8/13/06) Sue was observing with her Coronado PST (H-alpha) solar scope and she brought to my attention two medium/large sunspots (biggest I have seen in a while). She then checked Spaceweather.com and it indicated this was Sunspot 904, which is an M class type (medium size) spot, which can cause some radio disruption and magnetic disturbances. At last look on spaceweather.com, it looks like the spots are getting larger. I will be observing tonight and watching for any Auroral activity.

### Observation report from the South Hills 08/12/06

Temp 70 degrees; Low Humidity perhaps 35%; Transparency was fair; Time 9:30 p.m. to 10:45 p.m.

Posted by Chrissie Chojnicki & Richard Frye

Richard and I proceeded to a location that I used to observe from; a field behind my mom's house. It's on top of one of the highest hills in the South Hills. My mom was the astronomer in the family and was the catalyst to my hobby. It has been decades since I've observed from this location. Very shocking! The light pollution was horrible! I remember how dark it used to be. Anyway, we utilized the 10 x 50 Tasco binoculars and 7 x 35 Bushnell binoculars for our observations. We saw five meteors and only one that lasted .30 seconds. We were facing SSE overhead. It started from the northwest. It was a disappointing evening for the Perseid Meteors. However, Richard and I did view the Summer triangle, Polaris, moon (too bright), Vega, and a cluster that we still can't figure out which one it was; location in the Northeast. The jet contrails became pesky and the viewing along with the moon's rising made it difficult to see much more. Anyway, we hope Saturday night will be better.

## STARS IN THE NIGHT SKY NETWORK

By Chrissie Chojnicki

So you ask, what is the Night Sky Network?

The Night Sky Network is a partnership of amateur astronomy clubs, NASA, Astronomical Society of the Pacific, and the Astronomical League.

In 2002, the Astronomical Society of the Pacific conducted a survey of amateur astronomers to determine the nature of outreach by amateurs. In the survey, amateurs express the need for support of their outreach efforts. The main requests were:

- ☀ Materials on themed topics
- ☀ Training in the use of the materials
- ☀ Effective ways to communicate with varied audiences
- ☀ Networking with other amateurs doing outreach

The Night Sky Network was inaugurated to help meet these needs. Amateur astronomers have an interest in providing the public with entertaining, engaging ways to learn basic astronomy concepts. It is one of NASA's education goals as well to improve the American public's understanding of astronomy. So with that in mind, clubs across the country joined the NSN including ours. The Night Sky Network is all about uncovering the mysteries of the Universe that is helping astronomy clubs across the nation share their knowledge of the Universe with others during star parties or other club-related events. Astronomy clubs regularly share their knowledge, time, and telescopes with their communities and the NSN toolkits assist NSN trained participants in these interactions.

I am pleased to announce that our AAP club is one of the STARS IN THE NIGHT SKY NETWORK and ranks #16 out a group of 85 other Astronomy clubs across the country. These 85 clubs have logged four or more public astronomy events in the past six months (since February 14, 2006) using NASA Night Sky Network resources. The AAP has logged 13 Night Sky Network related events so far. I want to thank all of the AAP members who have decided to become NSN participants, went through at least one training session out of the 4 so far, and actually utilized the NSN toolkits for fun interactive demonstrations and presentations for events for children and adults of all ages and education levels.

The Night Sky Network is a partnership of [amateur astronomy clubs](#), [NASA](#), [Astronomical Society of the Pacific](#), and the [Astronomical League](#).

Amateur astronomers have an interest in providing the public with entertaining and engaging ways to learn basic astronomy concepts. It is one of NASA's education goals as well to improve the American public's understanding of astronomy. The Night Sky Network was developed with the dedicated assistance of an advisory team of amateur astronomy clubs.

### Why should my club apply for membership in the Night Sky Network (NSN)?

Your club will join a national coalition of amateur astronomy clubs bringing astronomy and the excitement of NASA missions to your communities.

Membership in the Night Sky Network is free.

This is an opportunity to:

- ☀ Enhance the public outreach you already do
- ☀ Encourage more of your members to participate in outreach
- ☀ Increase the confidence of those who are interested in outreach
- ☀ Earn national recognition for your outreach efforts
- ☀ Keep up-to-date on the latest NASA discoveries via members-only teleconferences with NASA scientists

Your club can:

- ☀ Receive Outreach ToolKits on themed topics in astronomy
- ☀ Discuss ideas for outreach with other NSN members
- ☀ Contribute your ideas to the development of new Outreach ToolKits



### New members

By Craig Lang

Feel free to speak up anytime on the list server. Just because you are new to the club or even new to astronomy does not mean that you are not welcome to post. Everyone's experience level is different and everyone's interests are different. Newbies hiding out and just lurking on the list server is not going to do much to help the newbies learn and it gives the regulars enough time to get themselves in trouble. Do not be afraid to post!



### Star Party Dates

#### Radio Astronomers at Mingo July 22<sup>nd</sup>

By Phil Breidenbach

July must have been radio/astronomy month. The Wireless Association of South Hills came to visit the Mingo Creek Observatory during the July 22<sup>nd</sup> star party. They set up a couple radios and operated a special event station there to share their hobby with the observatory's visitors. They had a good time and the visitors enjoyed seeing and using their equipment! They have a write up about it in their latest newsletter, the August Washrag, complete with some nice pictures. I'm not sure if you can access their newsletter through their website, but it is worth trying: <http://www.washarc.org/>. It is great that we are doing these multi club events!

- ☀ September 2 Moraine State Park North Shore at McDanel's Launch
- ☀ September 8 General Association Meeting at Carnegie Science Center
- ☀ September 9 Wagman Public Star Party
- ☀ September 23 Mingo Public Star Party
- ☀ September 23 Ryerson State Park
- ☀ September 30 Wagman Public Star Party

#### Skyview Radio Society at Wagman July 28<sup>th</sup>

By Phil Breidenbach

On the July 28<sup>th</sup>, we had the Skyview Radio Society visit Wagman for the star party. It was a rather hazy night, but overhead it was clear and the members of the club enjoyed themselves tremendously! For a while, towards the end of the evening, there were more radio amateurs than astronomers! There are some very nice photographs from that evening on their website under the photograph section. I think you will like them: <http://www.skyviewradio.net/>. If you are ever out near Turkey Ridge Road in the New Kensington area, stop by their clubhouse; they will be glad to show you around! It has a nice view of the night sky also.

#### Passing of the Gavel at Wagman Picnic



**FOR SALE:**

Celestron telescope  
 4-inch refractor on eq3 mount with wooden tripod  
 and dual axis drives.  
 Price: \$250 dollars  
 John Hudec 724-713-5110

For a copy of the September calendar go  
 to: [www.3ap.org/calendar](http://www.3ap.org/calendar)

**\* Amateur Astronomers Association of Pittsburgh, Inc. \***

*Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon*

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