

THE OBSERVER

Newsletter of The Tri-State Astronomers

Volume 26, Number 4 • Hagerstown, MD • April 2010



Spring Has Sprung - The Grass Is Rizz, etc.

What's Inside this issue!

- Editor's Notes*
- Minutes of the TSA*
- Our Friendly Skies*.....
- TSA Field Trip - Cosmic....
Conversation*.....
- Sidewalk Astronomy*.....
- And MORE as always !!!*

Enough, already! I said, ENOUGH! First of all, we had to put up with record breaking snowfalls, and then we seemingly have had nothing but rain! I am REALLY READY for some clear skies!

But that is just me complaining, and you don't want to hear that. Instead, I'm sure you would rather hear about the good things that have happened for club members during this past month. And we really DID experience some good things!

Of course, I am referring to the event that took place down in Washington with Neal DeGrasse Tyson, Director of the Hayden Planetarium in New York City, and well known authority on the Cosmos, and the science of Astronomy! In the following pages, you will read some of the impressions that those of us who were

privileged to attend, brought home with us. So, in this month's newsletter, we will feature some of the impressions that various TSA members either took away from that particular meeting, or from other experiences they have had as a result of their association with Dr. Tyson.

Of course, we will also have several of the other regular features in this month's "Observer". You will find "Our Friendly Skies" on page three, news of other activities that the club has enjoyed, the minutes of the last meeting, etc.

As always, there is good reading ahead, reading that I hope will not only entertain you, but stimulate your intellect and curiosity!

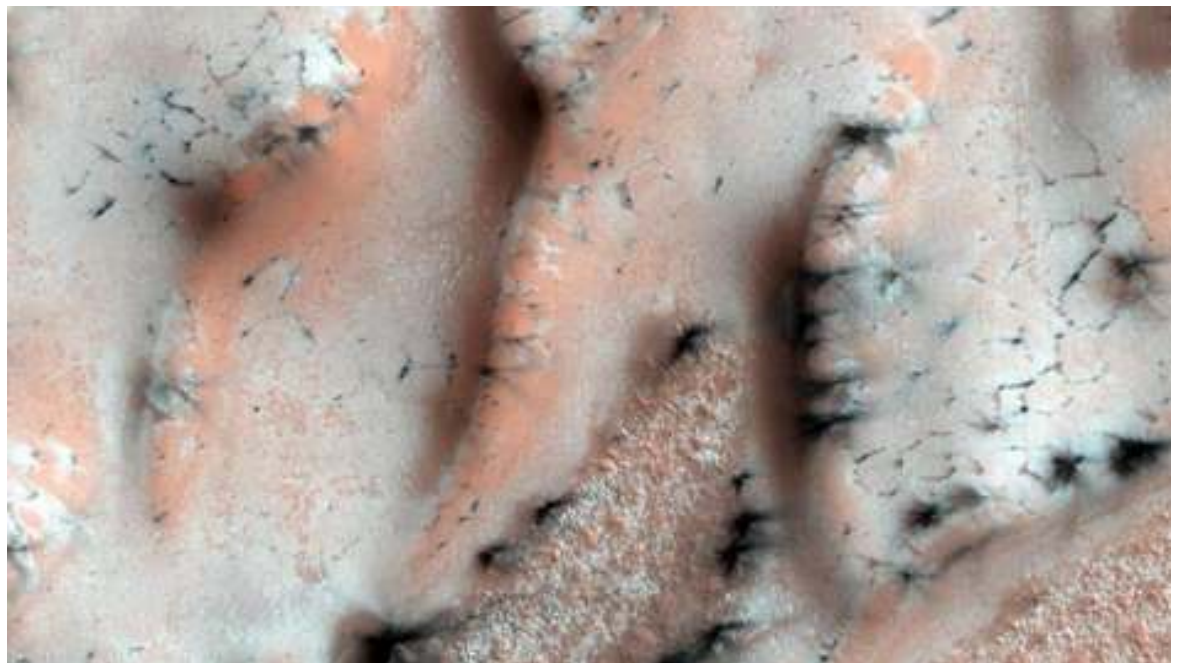


A Burst of Spring

Spring has sprung on Mars, bringing with it the disappearance of carbon dioxide ice (dry ice) that covers the north polar sand dunes. In spring, the sublimation of the ice (going directly from ice to gas) causes a host of uniquely Martian phenomena

In this image streaks of dark basaltic sand have been carried from below the ice layer to form fan-shaped deposits on top of the seasonal ice. The similarity in the directions of the fans suggests that they formed at the same time, when the wind direction and speed was the same. They often form along the boundary between the dune and the surface below.

Image Credit: NASA/JPL-Caltech/University of Arizona





Minutes - March 17, 2010 - St. Patrick's Day!

Tri-State Astronomers regular meeting

[Opening] TSA chairman Steve Berte' opened the March 17th meeting at 7:30 PM with 26 members and guests present.

[Astro Puzzler] The astro-puzzler was presented: How many constellations are there in the astronomical zodiac? 'Astronomical' was the key word – not to be confused with astrological ;-)

[Recent Outreach Events] On February 19 TSA members helped out at the Northern Middle School Family Science Night by setting up a telescope clinic, a hands-on moon tutorial and some outdoor night-time observing. Thanks to all who helped share the love of the heavens.

[Upcoming Outreach Events] A number of events are scheduled for the coming months including; April 16-17 and Oct. 15-16 - Antietam National Battlefield public star parties (our BIG events – not to be missed!) and a telescope clinic on May 22, 11:00am to 2:00pm at the Discovery Station. The star parties include public observing so the more members that can come out with their scopes, the better. If you can help at any of these, please let Chairman Steve know as soon as possible.

[Astro Puzzler Answer] And the answer is: Thirteen! The astronomical zodiac is made up of the 13 constellations which the sun's path passes through during one year. Twelve of the constellations are the same as the astrological zodiac; the 13th constellation is Ophiuchus.

[Club Officers Reports] The biggest news for the officers' report is that our beloved Mike Sager had to step down from his duties as Outreach Coordinator due to ever pressing job requirements. Many thanks to Mike for all his past hard work in promoting TSA and astronomy to the public. If anyone would be willing to step in to the vacancy, please see Steve Berte. Treasurer Steve Ott is hard at work on the club's taxes. A couple suggestions were made for future programs including trying to get our local NASA Solar Ambassador Greg Piepol to do a presentation on the sun and solar astronomy. I made a brief mention of NEAF – the big NorthEast Astronomy Forum in Suffern, NY on April 17th & 18th. Get more info at www.rocklandastronomy.com/neaf.htm.

[The Sky this Month] This month's constellations are Sextans and Leo (just across the elliptic from each other.) Leo hosts a number of DSOs (astrospeak for deep sky objects ;-) and double stars, as well as the asteroid Vesta for the next couple months. The Object of the Month is the "Spindle Galaxy" NGC3115 in Sextans. Note that NGC5866 / M102 is also referred to as the "Spindle Galaxy". No planetarium feature this month, but note that Rod Martin's Skylights podcast can now be found on the Astronomy.fm website. <<http://www.astronomy.fm>>

[The Observer & Web Site] The March Observer's snowy cover brought back some memories of the recent blizzard! Be sure to read it and also check out the latest info on the TSA website. Once again, don't forget to become a fan of TSA on Facebook.com. <<http://www.facebook.com>>

[Member Observing] Recent member observing escapades were discussed along with some virtual observing resources including <<http://www.nightskiesnetwork.com>>, <<http://www.slooh.com>>, and even NASA's Micro Observatory - <<http://mo-www.harvard.edu/MicroObservatory>> where you can do bonafide astrophotography – check them out – especially on those cloudy nights!

[Events in the News] In the news was the recent test of the Space X Falcon 9 rocket engine and a couple stories on Mars and its spud-like moon Phobos.

[Upcoming Programs] Upcoming monthly TSA meetings:
- APR: Jim Vail will present "How to Polar Align Almost Anything"
- MAY: I will discuss my experience with setting up a SkyShed Pod Observatory.
- JUNE: Grillin & Gazin at my home in Frederick (dates TBA...)
- JULY: Grillin & Gazin at Steve Berte's home in Middletown.
- AUG: Grillin & Gazin at Rod Martins home.

[Upcoming Events] Remember to mark your calendars for:
- Apr 16-17 (Fri, Sat); Antietam Star Party, Antietam National Battlefield
- Apr. 24 (Sat); 30th Annual Central PA Consortium Astronomers' Meeting in Gettysburg, PS (see TSA online calendar)
- May 22 (Sat); Telescope Clinic @ Discovery Station 11am to 2pm
- July 9-11 (Fri-Sun); Mason-Dixon Star Party, Wellsville, PA. Details at <<http://masondixonstarparty.org>>
- Dec 4; 'Blue Holiday' (like 'blue moon!') Christmas Party

[Tonight's Program] This month's program was Library Night! Various members brought their favorite books for a bit of show and tell and in some case, a few to give away! With thanks to the family of the recently passed-on TSA member Jim Taylor, at least three full boxes of books were made available to members to take. Many fine books were taken home that night by many!

Remember – if you haven't been able to get out much the past couple months (and even if you did ;-) don't forget to come out for the Antietam Star Party in mid-April. Weather permitting, it's always a great time of fellowship and observing with a chance to look at many objects thru many different scopes – come check it out!

Peace, blessings & clear skies! – Donn Williams



THE OBSERVER

is the monthly newsletter of the TriState Astronomers.

TSA is a nonprofit group that was established in 1985 to promote astronomy and encourage related activities to interested persons in the Maryland, Pennsylvania and West Virginia Area. Membership in the TSA costs \$15.00 annually. The group meets on the third Wednesday of the month in the planetarium of the Washington County Board of Education in Hagerstown, Maryland.

Outdoor observing sessions are usually scheduled each month during the weekend of the new moon, weather permitting.

TSA OFFICERS

Steve Berte' Chairman
Donn Williams Secretary
Steve Ott Treasurer and
Membership Chairman
Andy Smetzer Publicity Dir.
Dan Kaminsky Program Coord.
Jim Stanicek Newsletter Editor
Andy Smetzer Webmaster

Mailing Address:

TriState Astronomers
Washington Co. Planetarium
820 Commonwealth Ave.
Hagerstown, MD 21740

Web Site:

www.tristateastronomers.org



NEW MEMBERS ARE
ALWAYS
WELCOME !

Contents © Copyright 2010
TriState Astronomers
unless otherwise noted

Visible Evening Planets

VENUS appears low in the west and sets within an hour of sunset.
MERCURY is low in the west to the lower right of Venus.
MARS is visible high in the south at sunset.
SATURN is visible all night, in the east after sunset.

Visible Morning Planets

SATURN is visible in the west.
JUPITER is low in the east an hour before sunrise.

For more information about the visible evening planets and nighttime sky, download the planetarium's podcast "Skylights" from antpod.com.

SOLAR SYSTEM

Two planets highlight the evening sky, while two others make a brief appearance after sunset.

Saturn is in the sky all night. It rises during evening twilight and sets around sunrise. Saturn can be found about halfway between the blue star Spica in Virgo and the back of Leo the Lion. It looks like a cream colored dot against the background of stars. It is similar in brightness to the brighter nearby stars. To see the rings, at least 25 power is needed.

Mars is in the constellation Cancer and stands out in the region between Gemini and Leo. Look high in the south after sunset. Around the middle of the month Mars passes near the Beehive star cluster in Cancer the Crab. Mars is becoming dimmer and smaller in telescopes as the Earth speeds away in our faster orbit.

Venus is the brightest planet in our sky. Only the Sun and Moon are brighter in our sky. It is very low in the western sky as twilight ends. Use it to help find nearby Mercury.

Mercury hides near the Sun most of the time, but reaches its best evening appearance for us the first half of April. It is low, only about 10 degrees high a half hour after sunset. Lucky for us, it will be easy to locate because it is very close to Venus this month. Venus will be to the upper left and very bright. Look for Mercury early in the month because it reaches inferior conjunction on April 28 when it passes between the Earth and Sun.

Jupiter is emerging into the morning sky before sunrise. It may be seen low in the east as a bright star. It will get higher and better through the spring and into the summer. During April Jupiter rises about one hour before sunrise and two hours by month's end.

The Lyrid meteors peak during the morning hours of April 22 and 23. These meteors are often fast and bright. They will be best observed after the waxing gibbous moon sets.

SUN AND MOON

Easter is on April 4 this year. The date of Easter is determined by the dates of the full moon, spring equinox, and the following Sunday. Easter is determined as the first Sunday after the first full moon after the first day of spring. Spring is defined as March 21, regardless whether it is actually the 20th or 22nd.

In 2010, the full moon is March 28, so the following Sunday, April 4, is Easter. The date gets interesting in 2011. The full moon occurs March 19, two days before the equinox, so the next full moon determines the date. That full moon is Sunday, April 17, so the following Sunday is April 24 for Easter. The latest possible date is April 25 and that will occur in 2038.

On April 1, the Sun rises at 6:55, sets at 7:35 for 12 hours and 40 minutes of daylight. By April 30, the Sun rises at 6:13, sets at 8:04 for 13 hours and 51 minutes of daylight.

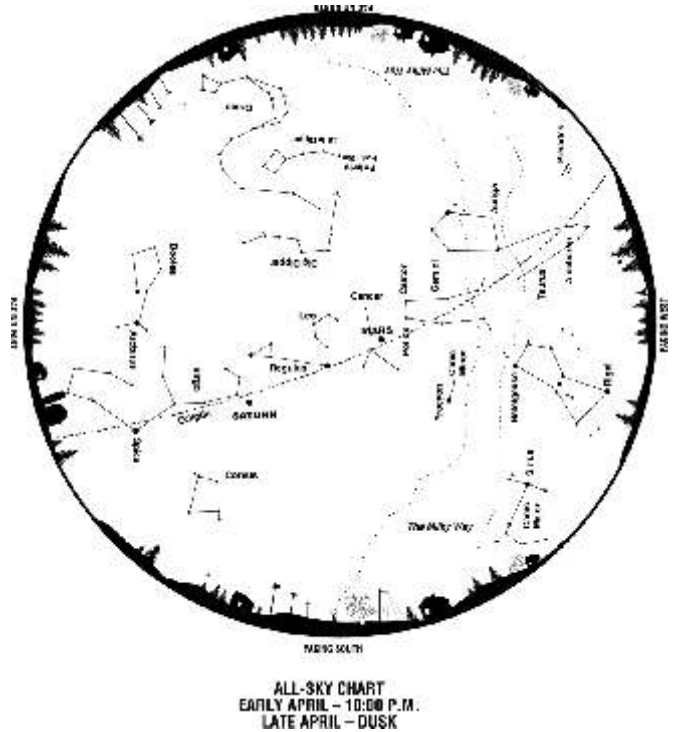
The Sun enters the astronomic boundaries of Aries from Pisces on April 18. The moon reaches last quarter on April 6, new on April 14, first quarter on April 21, and full on April 28.

BRISH PLANETARIUM

The current public program is "More than Meets the Eye." The program will be presented on Tuesdays through April at 7 p.m.

"More than Meets the Eye" shows how celestial objects really look through small telescopes and to the unaided eye as compared to the beautiful images from observatories.

Due to production problems, the originally scheduled program "New Horizons" will be postponed to the 2010-2011 school year.



An opportunity to observe the sky through good, quality telescopes will occur on April 16 and 17 weather permitting at the Antietam Battlefield Visitors Center. The event begins at sunset and lasts until around 10:30 or 11. There is no admission charge.

The Tristate Astronomers meet monthly in the planetarium. For more information and schedules for the club, go to www.tristateastronomers.org.

The planetarium is located at the Central Offices of the Washington County Public Schools on Commonwealth Avenue off Frederick Street in Hagerstown. The planetarium's website is

http://www.wcps.k12.md.us/depts_programs/planetarium/index.html (http://www.wcboe.k12.md.us/content/d_i_planet.cfm) and the phone number is 301-766-2898. Emails should be sent to martirod@wcboe.k12.md.us.

Venus and Mercury peek over the roof of a house in the south end of Hagerstown, MD, on March 31st at 8:30 in the evening. Photo Credit: A. and J. Stanicek



I met Dr. Neil DeGrasse Tyson for the first time at an Astronomical Society of the Pacific meeting at the University of Maryland, College Park, MD long before he started doing television. He described a program he did for homeless kids in New York City by letting them look through telescopes. He said one kid looked at Jupiter through a telescope and asked what he was seeing. When Dr. Tyson said that it was Jupiter and explained a little about the moons and cloud bands he could see through a telescope, the homeless kid smiled up at him and said, "Jupiter is ***** cool". And Dr. Tyson did not censor anything when telling his story.



Photo Credi: Nasa - Voyager 1

Elizabeth S. Wasiluk
Planetarium Director
Berkeley County Schools
Hedgesville High School

Just a decade or so ago, this country led the world in Science and Mathematics. Now, according to information I heard on a network newscast just the other day, we have slipped to a position of 15th in the civilized world. I find that pathetic.

One of Dr. Tyson's major points was that the problem so many young people are suffering from today, is a lack of curiosity about the world around them. They get a cell phone, television, computer, or whatever type of modern device you might care to think about and take them for granted, rather than wondering HOW and WHY they work the way they do !

Amateur Astronomy is one of those technical hobbies that answers the questions HOW and WHY, if one takes the time and effort to consider them. Unfortunately, according to Tyson, and verified by so many others, very few ARE DOING that VERY THING !

To me, that fact is one of the MAIN REASONS that young people are NOT INTERESTED in technical hobbies such as Amateur Astronomy and Amateur Radio these days. They just don't have any interest in figuring out HOW THINGS WORK! Sad !

BTW, Tyson said his favorite planet was Saturn !



Jim Stanicek
Editor "The Observer"
The Tri State Astronomers
Hagerstown, MD

I think my take away from the Pluto discussions is that folks like Neil deGrasse Tyson want everyone to understand it's not about the name. Whether or not Pluto is a 'planet' that can be memorized in a list of the recognized planets with cute little mnemonics to remember their order is irrelevant and if that is the most important thing to folks, then they don't know much about learning or education. What is important is that we are learning more and more about our own Solar System that includes a wide variety of tremendously interesting things like planets, comets, asteroid belt, Kuiper Belt, Oort Cloud, etc. Where any particular object (e.g., Pluto)

falls in our lexicon is not as important as our understanding of what the objects are, how they behave, how they interact with each other, etc. Folks need to focus on knowledge, not just the sugar coating of names. If we base our understanding of objects in the universe on emotion and superficial things like names, rather than scientific analysis and understanding of those objects and the processes that rule them, we are doomed to ignorance.

It's interesting to me that when you look back on the history of astronomy you see a long series of changing thought, and we accept that as the way it is. At any given time, humans have interpreted the universe based on the facts they had at hand at the time. When human interpretation of the cosmos has erred the most, it has been when emotion and non-scientific analysis have ruled. So astronomy is nothing if not a science of constantly shifting understanding of our universe. As we learn, we have always altered the model as needed. We continue to gain more knowledge of Kuiper Belt Objects, Planets and Dwarf Planets and as a result have again tweaked our understanding of our Solar System. In this latest adjustment, we've learned Pluto logically and scientifically is more properly called a Dwarf Planet. Get over it.

Steve Berte'
President
Tri State Astronomers
Hagerstown, MD

Open Houses (a.k.a., Sidewalk Astronomy) as a Means of Outreach *Steve Berte' - Chairman - Tri-State Astronomers*

From time to time I hold Open Houses in my backyard at my Orionis Observatory to share the night skies with my friends and neighbors. This is a great way to conduct an outreach event that will expose the general public to astronomy. However, even if you don't have an observatory, you too can conduct an event like this. Essentially, it's like doing "sidewalk astronomy" wherein you take a telescope and set up in an urban area and let passersby take a look at the night sky.

All you need do is let folks in your neighborhood know you'll be outside observing on a given night and invite them to join you. Don't let the fact that you won't have all the answers dissuade you from doing this sort of thing. People may ask things like "how far away is it?", but don't really mind if you say, "I'm not sure". All they want is to look at something in the night sky, and be told what it is. Since you control the scope and the observing list, you will know all you need to know about the objects you'll be looking at so you have nothing to fear!

I started out letting people know about my open houses by making flyers and walking around the neighborhood putting them in doors or attaching them to mailboxes. That can get time consuming so I started putting out a sign up sheet where people could put their name and email address if they were interested in coming to the next event. I've now got 20 people on my email list and I tell everyone they are free to "spread the word" and bring friends if they'd like. I still make flyers, but just attach them to my emails. This is definitely an easy and efficient way to do things.

At my most recent Orionis Open House I had my CPC1100 going in the observatory and my NexStar 8SE and Orion ST-80 out on the lawn. About 25-30 folks stopped by between 8 and 10:30 PM and we all got some great views of the moon, Mars (w/ice cap), Saturn (+4 moons), Great Orion Nebula, several star clusters, asterisms, and double stars. For these sorts of events, don't get hung up on whether there is a moon or not. Folks love the moon, and even with the 90% illumination I had to deal with recently, there are always more than enough star clusters, double stars and asterisms to keep the crowd happy.

You can leverage your TSA affiliation by providing your visitors with outreach materials available to the club. Just let us know in advance that you'll need some hand out materials and we can provide some to you. When I have people over, I set up my shed which is near my observatory with a red light and post the TSA and Night Sky Network banners in there. Those serve as backdrops to the outreach handouts I provide. However, all you really need is a card table or two on which to put materials and a red lens flashlight for folks to use to see and pick up materials and sign up for your email roster.

So give it a try! It's really a rewarding experience that results in introducing people to the wonders of the universe and builds friendships at the same time.

The Orionis Observatory in Steve's Back Yard, open for "business"

Photo Credit: S. Berte'



The TSA Object of the Month "The Spindle Galaxy" NGC 3115 in SEXTANS

NGC 3115 is also known as the "Spindle Galaxy." It is a lenticular, a "spiral galaxy without spiral structure", i.e. a smooth disk galaxy, where stellar formation has stopped because the interstellar matter was used up. From their appearance and stellar contents, they can often hardly be distinguished from ellipticals observationally. Dreyer calls this lenticular galaxy very bright (mag 9.7), large (8.3'x3.2'), very much elongated (P.A. 46°), and brightening sharply to a brightened, elongated nucleus. It lies 4.8° north of Lambda Hydrae.

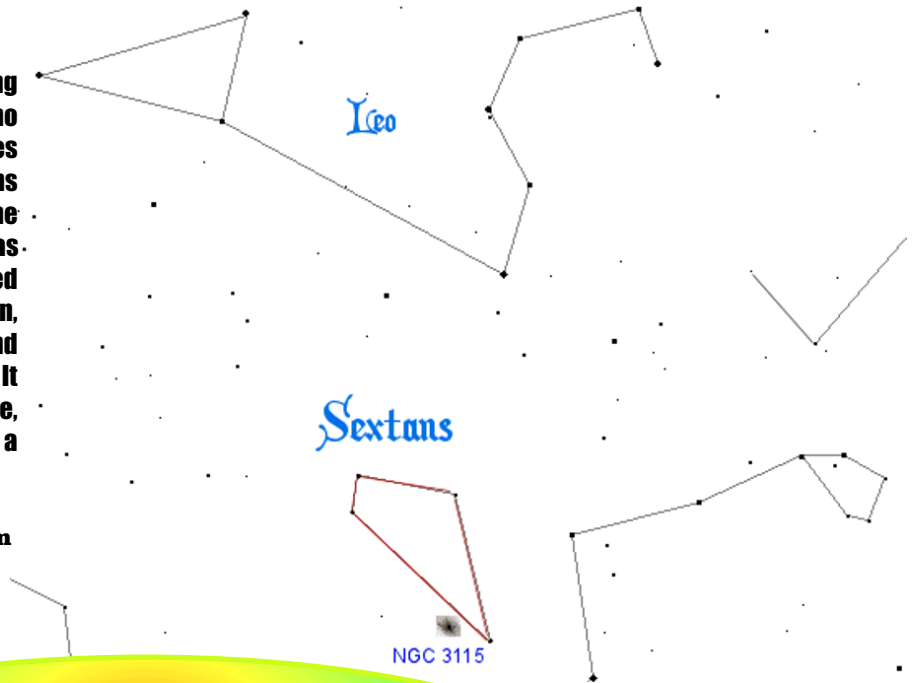
Photo Credit: Antihue - Chile



Constellations of the Month - Sextans & Leo

Sextans is one of the most unremarkable looking constellations in the sky. It is very small and has no bright stars. It was named by astronomer Johannes Hevelius in the 17th century after the Sextans Uraniae, otherwise known as the Sextant. Until the advent of computers and satellites, the Sextant was the primary tool for navigation at sea. It measured the angle of celestial objects above the horizon, which was compared with astronomical charts, and helped determine the exact location of the ship. It was also a favourite tool of astronomers at the time, which is what earned it a place in the sky as a constellation.

Sky Map and text credit: mexicanskies.com



**Coming next month
A Report from the Antietam
Star Party!**