



ASEM NEWSLETTER FEBRUARY 2012



Venus Image courtesy ASEM member
Gregg Ruppel

FROM THE EXECUTIVE DIRECTOR

As the days get longer and warmer, abnormally warmer recently, more time for observing is sure to follow. Let's be sure to take advantage of every opportunity to teach and learn as well as simply marvel at the joys of astronomy.

I would like to take a moment to mention our newest members, Jim and Sandra Oates! They are from the South County area, but I'm sure that they will be turning up at some of our events, as Jim's already joined in on some of our online discussions. Be sure to acquaint yourselves with them as the opportunity presents itself.

In sadder news, our member Colleen Kelley passed away in December. I would like to start a tradition of honoring our members. Tell me what you think of this idea, next time you are observing at 11:54 (I know that can be a little late for some of us), take a minute and pause to think of Colleen. The time represents Colleen's former address.

I continue to have the utmost respect for all the effort put out by our volunteers. Thanks again to everyone who contributes in ways large and small. Hoping to see you at the meeting or at Broemmelsiek as we hope to have the 32" out there sometime this Spring!

Stacey Thater
AfA Executive Director

[If any of you knew Colleen and/or can provide additional information about her for the next newsletter, please send it to newsletter@asemonline.org . thanks – Ed]

Sky Visitors at Weldon Springs

By member Bill Sheehy

If you missed January's regular ASEM meeting you missed an event that will likely never be repeated. The night of January 14, my wife and I arrived at the toxic waste rendezvous point shortly after 5:30 p.m. and began mingling as we usually do. While we all chatted, joked, and brought each other up to date, I gradually began to sense something just a bit out of the ordinary. There seemed to be an indefinable undercurrent of vague expectation, fueled by clandestine whispers about mysterious sky visitors. My imagination pictured everything from Santa Claus and his reindeer to aliens from Zeta Reticuli. When I asked Grant Martin what was up, his response was a coy grin. Shortly afterwards, he and several others surreptitiously left the hall.

Inside, meanwhile, the socializing continued. Amidst all the buzz, I heard someone mention that a few members had disappeared. Since my curiosity had already been peaked by Grant's Mona Lisa smile, I poked my head out the door. Off in the distance, huddled around the edge of the large parking lot, were several people milling about waving flashlights. In the darkness, they reminded me of drug smugglers waiting on the edge of some abandoned airstrip for a plane-load of Mexican marijuana. And that's when I heard it, faint at first, but growing rapidly. It was the unmistakable chuff-chuff-chuff of a helicopter. And it was landing in the parking lot!

Emblazoned on the top of the small black and white craft in large white letters was the word "Police." Instead of fleeing, however, the imagined drug smugglers approached the craft fearlessly. Inside were two armed police officers in olive flight suits. As they stepped out, the men with the flashlights shook their hands and then escorted them to the meeting room.

The cat was finally out of the bag. It had been a very hush-hush affair from the beginning, held close to the vest by only a handful of members. Sort of like the raid on Osama bin Laden's compound. Fortunately, this excursion did not end in gunfire (the officers kept their weapons shoulder-holstered the whole time). Rather, the police had been invited by "Marvelous Marv" Stewart to talk about the dangers of lasers.

As most of you know, lasers can cause eye damage and permanent blindness if used improperly. They have become especially dangerous to pilots. Hence the visit by officers David DeVillez (left) of the St. Charles County Sheriff's Department and Mark Holtz of the St. Louis County Police Department (Right). Like a growing number of other pilots, Officer Holtz has been lasered while flying. Last year there was an average of two laser strikes a month in the St. Louis area. Although many appear to be accidental, according to Officer DeVillez, an increasing number of them are the result of youngsters "having fun" targeting aircraft with this cool gadget. And some are downright malicious.



When a laser beam strikes a cockpit it is reflected off all the various cockpit surfaces, producing a brilliant flash of intense light, making it impossible for the pilot to see the instruments. A number of pilots have had to hand the controls over to the co-pilot until they recovered their vision. Imagine what would happen if there were no co-pilot, or if the co-pilot were also blinded by the flash. The greatest fear locally is that someone might aim a laser at a jumbo jet landing at Lambert.



Shining a laser at an aircraft is a federal crime, Officer DeVillez explained, punishable by up to twenty years in prison and a \$250,000 fine. The police investigate all reported incidents, which often involves dispatching a helicopter to the scene to spot the culprit from the air. He or she is then lit up by the helicopter's 30 million candlepower searchlight until ground officers arrive and make the arrest. Once in custody, the perpetrator is interrogated not only by the local police but also by the FBI, who have a keen interest in the problem.

So far, there are no reports of a pilot being permanently injured or of an aircraft being downed because of the pilot's temporary incapacity, but unless the problem is controlled, it would seem to be only a matter of time before real harm occurs. In fact, pilots are now issued special goggles to protect them, but these can make it difficult to see at night, which is when laser strikes occur. As Officer DeVillez described it, "It's like wearing sunglasses in the dark."



After the talk, we all went outside to view the helicopter close up. The two officers explained the various pieces of equipment and showed us the searchlight they use to spot suspects on the ground.

When it was time for them to leave, we all moved back to the edge of the lot and waved as the visitors slowly ascended into the night sky. On our way back to the meeting hall, the chopper hovered overhead while painting us with its

powerful searchlight. A final reminder, perhaps, to watch those lasers. After all, the star you are pointing at might just be a police helicopter.

For a dramatic video, shot from a Sacramento California helicopter as it is hit by a laser, and the subsequent helicopter chase and arrest, follow this link:

<http://tinyurl.com/laser-capture>

Another video showing the recent St. Louis police press conference where a local culprit apologizes can be seen here:

<http://www.fbi.gov/news/videos/making-a-point-about-lasers>



A contribution from Marv Stewart:

I don't believe for a minute that any club member would misuse a laser pointer. However, there are still articles in the newspaper and on the web about someone misusing them, and those that have been caught. Why anyone would aim one at a airplane trying to land, or a medical helicopter or a police helicopter is beyond me.

I invited the St Charles County Sheriff's Department to send someone to talk about their experience and they jumped on it. Those who were at the meeting learned several things.

One, That thin beam of green light is about four to five feet wide at the altitude the combined department helicopters fly, 800 to 1000 feet and will fill the cockpit with a dazzling light.

Secondly, it is very easy to find the source of the light, and they are equipped with GPS and address recognition so they know your home address when they are overhead.

Third, Not only do you get to meet the local law enforcement officers at your front door, you get to talk to the guys in suits. Yes, you will be contacted by the FBI, because it is a federal offence to shine a laser at any aircraft.



I would also like to mention the copter we saw was equipped with a 30 million candle watt spotlight, and there is no law against them shining it on you.

To be honest our guests were very knowledgeable, informative and entertaining. They were on duty so they had to leave early, but they answered our questions and gave us a quick tour of the helicopter and we would like to thank them for that.

Marv

Just before they left, Marv presented both officers with an ASEM mug as a token of our appreciation.

Ed: We should emphasize again, what Dave and Mark requested of us: It is up to us to help educate the public about these dangers and get the word out that these are not toys when it comes to automobiles and aircraft of any type.

REGULAR CONTRIBUTORS OR USUAL SUSPECTS – YOU DECIDE

MARV STEWART

How travelers and adventurers used the stars to find their way has interested me as much as the science of astronomy. In scouts, I learned to find north and read maps. A good map still grabs my attention and to this day I enjoy studying them.

I am also naturally curious and enjoy finding things out. In 1971 I found an old drawing in a book. There were three men dressed in robes and turbans standing in a desert oasis complete with palm trees and resting camels. It was night time there and there were stars in the sky, but the men were looking down into a bowl of water at the stars' reflections. Why?

I knew then that the bright star, Vega, would soon be overhead. I grabbed a small sauce pan with a black Teflon coating, put about an inch of water in it and ran outside. I immediately learned several things. It didn't matter if my pot was on perfectly level ground, because the water was self leveling. And in a few minutes, I was rewarded with Vega's bright reflection in the water. There is no doubt in my mind what so ever that Vega passed directly over my head, because I could see its reflection in that small pot at my feet.

The next piece of the puzzle is if I am trying to find my way home from another location when do I know that Vega is over my house, or city, or port? The answer is use another star, or constellation's position at that time. I chose the Big Dipper and the bright star, Dubhe. I took careful note of the position of the dipper in the sky and how far Dubhe was from the horizon. My second reference star is the setting Antares, in the constellation Scorpius, which is just off the horizon in the southwest. So where ever I am if Scorpius is going down in the southwest, and the Big Dipper's handle is pointed up with Dubhe in the lip of the bowl about 15 degrees off the horizon, if I were to drop a plumb bob from Vega it would land in front of my house. So from that point I know which way I must travel to get home.

So why the bowl of water? It is much easier to judge when a star is overhead by its reflection than craning your neck back to look up at the sky straight over your head.

CALENDARS

CLUB

- 2 Monthly Beginner Meeting 7PM
- 11 Monthly Membership potluck and entertainment (?) 6PM
- 21 Digital Sig 7PM
- 29 DIY-ATM sig 7PM

All meetings take place at the Weldon Springs Nuclear containment site at the specified times (Don't worry, you won't be irradiated any more than usual ;)

OUTREACH (VIA JIM TWELLMAN)

Looking at the ASEM calendar and the STLAstronomy calendar, I see no upcoming "road-trip" outreach events from now thru March. We of course will have FNOH's [Friday night open houses - ed], weather-permitting.

ASTRONOMICAL EVENTS FOR FEBRUARY (VIA MARV STEWART)

This is a good month to study the Moon's motion and use it as a marker to find interesting objects in the night sky.

- 01 The waning crescent Moon is 3 deg. s.s.e. of the Pleiades.
- 02 Candlemas, or Groundhog Day or cross quarter day. All this really means it is the day half way between the solstice and the equinox and there are six more weeks until the official end of winter. I don't care if that varmint sees his shadow or not!
- 05 The Moon is about 5deg s.s.w. of the Beehive Cluster.
- 07 Full Moon.
- 11 The Sun is 14.25 minutes slow. Meaning Instead of being at the meridian at noon, it will require 14 more minutes before it arrives there. Set your sundials accordingly.
- 14 Last quarter Moon.
- 21 New Moon.
- 25 Moon 3.2 degrees n of Venus
- 27 Moon 3.8 degrees NNW of Jupiter
- 29 Leap Day. The Moon is back to almost the same position it was on the 1st.

Watch Mars brighten from mag -0.5 to -1.2 (the brightest it will get this year as opposition is March 3rd). Its' size will also grow from 12 arc seconds to nearly 14". Look for the North polar cap and various light and dark features on the globe.

CLUB NOTES

From Carla Kamp, Hospitality director: John Furlong is bringing a pasta dish for the potluck. We do need volunteers for March and the months to follow. Please help by dropping a note to hospitality@asemonline.org or signing up at the general meeting.

Thanks



MEMBERSHIP

Membership issues can be addressed through our executive director Stacy Thater (pronounced “totter”) at these addresses:

Email: sthater@stchas.edu

Snail mail:

Alliance for Astronomy (ASEM)
PO Box 141
New Melle MO 63365

CLUB CONTACTS

Comments, questions, suggestions and money (just kidding) may be sent to the following addresses:

programs@asemonline.org

Use this address to communicate with the program committee. If you have something to present at a meeting or wish to contribute and let someone else perform, send it here. Questions and/or suggestions about programming etc. Remember, they are here to help you. This is a user friendly society and we like to see members get up and share.

equipment@asemonline.org

This address is used to find out about ASEM loaner equipment. If you find something amiss at BPark by all means report it here. If you are curious about borrowing an item, put in a request via this address.

hospitality@asemonline.org

Got a main dish you’d like to bring to the potluck? We sure could use it AND you will be reimbursed for your expenses.

newsletter@asemonline.org

Primary contact for the newsletter. Got an article or notice you’d like to see published? Send it here and be famous!

Outreach@asemonline.org

Special requests for groups at Broemmelsiek Park including:

- notice of large party (more than groups of twenty)
- request for specific requirements needed (school assignment, merit badge requirements, etc.)
- Requests for Star Party / Telescope event at another location

steve.boerner@asemonline.org

Web page and all other communications not covered above

MEMBER NOTES

ENTERTAINMENT

Late breaking news and member adventures (or shenanigans as the case may be) can usually be found at STLAstronomy in yahoo groups. If you aren't a member, you should join. Go to

<http://tech.groups.yahoo.com/group/STLAstronomy/>

and click "Join"

Think Clear, dark skies