President’s Notes

By Tim Brown, President

Our Gem – The Eagle Eye Observatory

If you haven’t checked out your observatory and viewing field you’re missing one of the finest perks of membership. Attending a member’s only star party at EEO is a fantastic opportunity to meet and socialize with your fellow members. Even when the weather is marginal, the members only star party is always fun.

If you are planning on buying your first scope, Members Only Star Parties offer a fantastic opportunity to check out every variety of scope and even astrophotography equipment. Most members are anxious to talk about and demonstrate their astro equipment. There’s no better way to decide what’s best for you before buying.

Come See the Milky Way

The main attraction at EEO is the sky at night. The Eagle Eye sky is a vast improvement over city skies for naked eye or telescopic viewing. Setup on our viewing field with its dozens of observation tables complete with power at each station.

Outreach

EEO is also our primary site for public outreach. Under the leadership of Jim Lynch, our Chair of the Outreach Committee, and with the assistance of AAS volunteers who get to share their love of the starry sky. They enjoy giving many folks their first introduction to astronomy and their first view through a telescope.

But, you don’t need a scope or to be an encyclopedia of astronomical knowledge to participate. Come and pass out red flashlights, sign people in or assist in any way that you feel comfortable. Believe me from one who has been there. It’s a lot easier than you think and a lot more fun. Most people are very easy to please. Pick out one stunning object, even the Moon or Albireo and you have a night of satisfied “customers”
What Equipment do we have in the observatory?

In the observatory, we have a go-to 25” Obsession scope and a custom made and beautiful 12” Dobsonian. You can use these fine instruments yourself for personal observing or on a public viewing night after completing a training course in observatory operation.

Eagle Eye Observatory Survey

The Executive Committee wants to know more about your use of EEO and the pluses and minuses about your observing experience at EEO. Do we need to consider other sites for our members use? If you haven’t come to EEO why haven’t you?

How important is EEO is to your dark-sky observation or astrophotography? Do you know of alternate sites that think would be a good match for our members? Tell what changes would want at EEO as we prepare to renew our contract with Calibre. Calibre is the operating company appointed by the LCRA to administer Canyon of the Eagles.

Give us an earful.

Monthly Meeting

At the General Assembly Meeting this Friday we hear from our fellow amateur astronomers from San Antonio. They will share their insights on the do’s and don’ts of Outreach. They’ll help us improve our own Outreach efforts and make them even more successful.

Planning a Star Party – Fast Track at Eagle Eye Observatory

Continuing with our theme of the month -Outreach - Dr Phil Schmidt, a retired mechanical engineering and Distinguished Teaching Fellow at UT will lead us through the planning for a star party of any size. Phil is a great teacher and an amazing resource for Outreach.

AAS Website – www.austinastro.org

Be sure to visit our website for times and descriptions of all our events and to explore the wealth of information on club activities.

I’m hoping to see you Friday night. Come enjoy the meeting and then join us at at Varsity Pizza for beer, pizza and conversation.

Tim Brown

“For my part I know nothing with certainty but the sight of stars makes me dream.” (Vincent Van Gogh)
AAS’ UPCOMING SPEAKERS
By Dawn Davies, Vice-President

Our speakers this month for our General Assembly Meeting are board members of the San Antonio Astronomical Association (http://sanantonioastronomy.org/). They will be speaking to AAS members about their society’s outreach efforts.

Your humble Vice-President will open the evening with a Practical Astronomy session on Citizen Science.

Brian Cuthbertson’s Observing Targets and NASA Space Place will be back in December!

AAS AFFILIATIONS

http://darksky.org/

https://nightsky.jpl.nasa.gov

https://www.astroleague.org/

http://www.tsgc.utexas.edu/
JOHN HUNTSBERGER REMEMBERED
By AAS Members

AAS members were saddened to learn last week of the passing of fellow AAS member John Huntsberger. (John is shown with banjo in Erika Rix’s picture, below, from 2012.)

On November 2nd, Jack Estes shared with the aas-members Yahoo! group: “A long time friend to many of us, Dr. John Huntsberger, retired professor at UT-Austin, passed at 5:20 pm yesterday….He was a dear friend and he was the first person I met in the Austin Astronomical Society back in 1997. He had moved back to Austin around the first of the year….His health had been deteriorating over the past couple of years and especially this year….His son Paul lives in Austin and I have spoken with him….There will be a celebration of life in January and Paul Huntsberger will let us know when.”

Other AAS members shared their thoughts and remembrances on the Yahoo! group and on Facebook.

Tim Brown: “Sadly, I only met John shortly before his move to the West Coast….At his home just days before he moved we sat and talked geology. I was amazed at his knowledge and even more at his love of teaching which was evident in our hours long conversation.”

Laurie Allai: “John was a dear friend to many people, myself included. Anyone who knew him could appreciate his zest for life and lifelong learning and teaching.”

Mark Lyon: “John was the first person I met in AAS. He was at South Llano River State Park, showing our BSA troop the night sky (on a truly horrible night for observing), but I saw Albireo through his Celestron, and thought, “this looks like fun”. It is. Thanks, John.”

Ron Wyllys: “What sad news! I used to see John often, when we were both active UT-Austin faculty members and worked in the same building.”

Linda Cartwright: “Thank you, John, for all that you taught me about astronomy!”

Phil Schmidt (above, on left): “Farewell John. Your encyclopedic knowledge of the sky and your ringin’ banjo will live on in my memories of many pleasant nights out at EOE, where you taught me the fine art of star-hopping, and our banjo/accordion jam sessions prepping for the AAS Holiday Party.”

Laurie Allai shared this YouTube link of a recording she made of John playing banjo: https://www.youtube.com/channel/UCnTc6ubp-8NtZzr69t7Qgcw/featured?view_as=subs! criber
THIS SATURDAY, NOVEMBER 11! SIGN UP TODAY!

Dr. Phil Schmidt is a retired mechanical engineering prof from UT and an award-winning teacher. He served several years as Outreach Chair of AAS and holds the Outreach Master certificate from the Astronomical League. This Fast Track workshop will cover elements of planning for star parties ranging from backyard get-togethers to large public events. Topics will include:

- Assessing site characteristics
- Profiling of prospective star party attendees
- Using online planning tools and planetarium software for target selection, timing, and prioritization
- Interacting with attendees, young and old, to maximize the WOW! Factor
- Staying for the public star party that evening and work with others to test new skills!

The workshop will include a hands-on segment in which participants will use planetarium apps to create detailed plans for the November 11 and December 9 AAS public star parties. Attendees are encouraged to purchase Sky Safari 5 Plus, currently available for Mac OSX, iOS, and Android platforms at half price (a real bargain) from [http://www.skysafariastronomy.com/](http://www.skysafariastronomy.com/)

The Session will begin at 4pm at Eagle Eye Observatory on November 11th. We'll start with the session and then follow on with the star party. As always, bring your equipment, beverages, seating, and whatever you need for a great evening of astronomy.

Members can enter Canyon of the Eagles free with their AAS membership card information. For non-AAS members attending, there is a park fee of $7 per person to enter.

Please sign up, so we know you’re coming. Thanks!
**EXECUTIVE COMMITTEE MINUTES, SEPT. 2017**

By Sean Leary, Communications Chair

Editor’s Note: Minutes of the September EC Meeting were published out of sequence in September. There are no approved minutes for publication this month.

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### Calendar of Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Details</th>
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| 10 November 2017 | Practical Astronomy
                6:30 PM
                General Assembly Meeting
                7:30 PM
                ETC 2.136 - UT Campus
                Engineering Teaching Center
                Dean Keeton and Speedway |
| 11 November 2017  | Fast Track 102
                4:00 PM - 8:00 PM
                Outreach Opportunity
                Public Star Party
                5:30 PM - 10:00 PM
                Canyon of the Eagles |
| 18 November 2017 | Members Only Star Party
                Canyon of the Eagles
                5:00 PM |
| 4 December 2017   | Executive Committee Meeting
                7:00 PM
                The Frisco Cafe |
| 7 December 2017   | “Starry Nights”
                5:30 PM - 7:00 PM
                Girlstart
                1400 W. Anderson Lane |

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Larry Martin (right rear) sets up at Central Market Park with Rob Pettengill and Austin Urban Stargazers for International Observe the Moon Night
GENERAL ASSEMBLY MINUTES, SEPTEMBER 2017

By Sean Leary, Communications Chair

Call to order: 7:31 pm at UT campus, ETC II 2.136
Quorum is met.
Moved, seconded, approved August 2017 GA minutes.

Tim Brown: Welcome and new member/visitor introductions.

Reports by officers.
Vice President (Dawn Davies): Next month’s featured speaker will be Rebecca Larson from UT, who will speak on early galaxies and Astronomy education in the 21st century. Negotiations ongoing for Don Pettit to speak. Holiday party will be in the 2nd Friday of December, 2017.
Treasurer (Mark Lyon): Membership renewal season is upon us.
Outreach (Jim Lynch): Public party was rained out last month. Many last minute program requests for the day of the eclipse, but most members were out of town. We have 2 nights per month for the membership. One night is for members only, the other is a public night. Dark sky protocol mentioned. Girlstart was successful.
Member Services (Joi Chevalier): We have Central Texas Star Party coming up next month, please sign up if you want to attend either dinner. FT 301 Astrophotography had to be rescheduled. Several COE rooms are available, but the RV sites are booked. Campsites still available. Several other Fast Track programs are scheduled for 2017 as well. There are several offsite facilities as well.
Equipment (Terry Phillips): Ealing sale is complete and delivered to Colorado. Video equipment will be purchased with the proceeds. Training on the telescopes will be offered during both nights of CTSP. This allows you to get a key to the observatory on non-party nights. Contact Domingo Sanchez for certificates and cards for training certification. Loaner scopes are available, and there are discussions about loaning the 12” SCTs.
Communications (Sean Leary): Website is still running, if anyone wants to learn about webservers, WordPress, and other topics, let me know!

Brian Lippincott: What’s Happening in Astronomy!

Quick notes: Southern Mexico earthquake last night was felt in Austin. Dana Leary is collecting gently used hardcover children’s astronomy books for Libraries of Love.

Featured speaker: panel discussion of our Aug 21st Solar Eclipse experiences

Adjourned at 10:02 pm.

Respectfully submitted
Sean Leary
Sept 8, 2017
TREASURER’S REPORT, OCTOBER 2017
By Mark Lyon, Treasurer

Deposits:
Dues payments
 Checks $2,240.00
 Paypal $1,900.00
Dues payments totals $4,140.00

Interest earned-checking
Interest earned-CD
Interest earned-CD
Total interest earned $0.00
Total Other Income $0.00
Deposit Totals September 1st through September 30th, 2017 $4,140.00

Expenses:
COE Internet Expense $69.35
COE Telephone $76.41
Expense Totals September 1st through September 30th, 2017 $145.76

Bank Balances:
University Federal Credit Union Donations Savings $557.41
PayPal Account $242.94
University Federal Credit Union Checking $27,601.08
University Federal Credit Union C.D. $5,813.03
University Federal Credit Union C.D. $5,793.87
University Federal Credit Union Scholarship $465.02
Total Cash $40,473.35

AAS members on 10/31/2017: 683
Total AAS Memberships as of 10/31/2017: 475

The monthly deadline for Sidereal Times submissions is the first day of the month of publication. Please send submissions to newsletter@austinastro.org.
COMMUNICATIONS REPORT, OCTOBER 2017
By Sean Leary, Communications Chair

1. Website:
   a. October ST banner
   b. October image of the month banner, gallery, and upload
   c. Aug, Sept image of the month gallery and upload
   d. Static page and Caldera form for holiday party signup
   e. Event and post for Texas Master Naturalist star party, post removed after event.
   f. Update ST page for Oct Sidereal Times, copy pdf to archive, add slider entries for Sept, Oct
   g. Hot fixes to Volunteer mgmt plugin (must be repeated on plugin upgrades):
      Volunteer Opportunity Details -> Sign Up Details
      Open Volunteer Spots -> Max Attendance
      Open Volunteer Spots -> Max Attendance
      Sign Up to Volunteer -> Sign Up to Attend

2. Email blasts:
   a. News and Notes Oct 2017
   b. FT102 1st and 2nd emails

3. Facebook
   a. None this month

4. Comms
   a. Confirmed how to contact webmaster
   b. Monitor and tune post queue so that only future posts are shown on page 1
   c. Document how household members can receive email blasts
   d. aas-ec@austinastro.org email forwarding fixed.
   e. Feedback to bylaws team for comm chair and other content

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AAS FRIENDS

Hi everyone!

There's a lot happening, so here's the Member Services schedule for the remainder of the year. These are also on the www.austinastro.org site in the Events Calendar - please confirm dates there. You can also subscribe to the AAS Calendar and have the events download/update automatically into your personal calendar.

We have 2 Fast Tracks to take us through 2018 - Preparing for A Star Party and Astrophotography.

Sign up here:

Fast Track 301: http://austinastro.org/index.php/volunteer-opportunity/sign-up-for-fast-track-301-astrophotography/

There's lots queued up for 2018, but we'll save that for later. :)

As always, thank you to our Members who graciously offer their member time to share their wealth of knowledge!

Joi & the Member Services Team

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast Track 102: Planning A Star Party</td>
<td>Nov 11 (public night)</td>
<td></td>
<td>Phil Schmidt</td>
</tr>
<tr>
<td>Fast Track 302: Planetary Viewing and Imaging</td>
<td>CANCELLED</td>
<td></td>
<td>Maurice Nelson</td>
</tr>
<tr>
<td>2017 Holiday Party</td>
<td>Dec 15</td>
<td>2600 Pegram Ave, Austin</td>
<td>Joi Chevalier</td>
</tr>
<tr>
<td>Fast Track 301: Astrophotography</td>
<td>Dec 16</td>
<td></td>
<td>David Ault</td>
</tr>
</tbody>
</table>

DON’T FORGET!

It’s Time to Renew Your AAS Membership! Your dues were payable in September, per AAS Bylaws. Membership categories and payment amounts can be found on page 29 of this issue.
Thank you to Rebecca Larson of UT Austin and AOTTX for presenting to AAS at last month’s General Assembly meeting!

The members all appreciated hearing about her research and research experiences.

Thank you, Rebecca!
MEMBERSHIP CARDS NOW IN YOUR PROFILES

At last, Wild Apricot, our membership database vendor, has made available to its customers membership card templates. Now, under your AAS membership profile you will see a mockup of a card with your name, Membership ID and membership expiration date. You are offered two options for displaying your card: one which is suitable for displaying from a smartphone, and another printable PDF which you can cut and laminate to your heart’s delight.

Congratulations to Wild Apricot for responding to longstanding customer requests for this feature!

Welcome New Members!

Bobby Corley  Ravi Teja Mulpuri
Luke Dryer      Elliot Murphy
Steven Eastin   Joseph Murphy
Chris Green     Lori Murphy
Katie Holt      Fred Peterson
Martin Walton-Gray  Andrew Umholtz
Image of the Month

Congratulations to
Bob Van Gulick - M45/Pleiades

M45 - This is M45 or better known as the Pleiades. The cluster in this shot is made of extremely hot blue stars. You can see the stars naked eye even from urban skies. The 3.5 hours of data in this image expose fascinating long filaments of dust in straight lines. Processed in Startools and Photoshop.

El Dorado Star Party 2017
The North America Nebula (NGC 7000 or Caldwell 20) is an emission nebula in the constellation Cygnus, close to Deneb (the tail of the swan and its brightest star). The remarkable shape of the nebula resembles that of the continent of North America, complete with a prominent Gulf of Mexico.

**North America Nebula (NGC7000) & The Cygnus Wall**

Williams Optics 81GTF 81mm Refactor F6.6  
QHY9 Mono Cooled -25c KAF8300  
Hydrogen Alpha (HA) bin1x1 28x1200s (9 Hours 20 Minutes)  
Oxygen III (OIII) bin1x1 78x1200s (26 Hours)  
RED bin1x1 8x300s (40 Minutes)  
GREEN bin1x1 8x300s (40 Minutes)  
BLUE bin1x1 7x300s (35 Minutes)  

Total Integration = 37 Hours  
50 Dark Frames  
50 Flat Frames  
200 Bias Frames  
Processed in PixInsight and Photoshop  
Taken From My Urban Austin Texas Backyard observatory.
Members’ Gallery: Mike Schaffer

Ansel Adams Wilderness, CA

Canon 6D, Canon 17-40mm f/4 Lens
17mm, f/4, 25 Seconds, ISO 6400
I made it out to the Eldorado star party this year and was able to collect data to make the image shown here. This covers the area around NGC672 & IC1727, an interacting galaxy pair about 26 million light-years away from us. I specifically framed it also to include a couple other more distant galaxies like NGC384 (upper left) and IC1731 (lower right). There are numerous galaxies hidden in the background (300+ by my rough estimate) that are little more than non-stellar smudges.

Scope: SkyWatcher Esprit 120 refractor
Camera: QSI 6120
Mount: Astro-Physics 1100GTO
Exposure: 47, 20 minute exposures through R, G & B filters
I thought I would send you my first light with my first refractor and first EQ mount. (It’s) just a humble lunar shot, but I’m excited to see where this journey takes me.

Orion Solar System Imager IV
13% Moon Filter
Barska 80mm F7 Triplet Refractor
iOptron CEM25P mount
Cut the moon into 6 sections and took 200 images of each section
Stacked the 200 images, and merged the results into a whole moon
Adjusted contrast in brightness in PS
**Members’ Gallery: Rob Pettengill**

**Beaver Moon Rise from Austin**

I caught this moonrise image in Austin before the skies clouded on 2017-11-05 01:32UT. Sony a6300 with Vivitar 200mm prime lens at f4. HDR stack: Main exposure 1/8 sec at ISO 100. Moon detail 1/160 sec at ISO 100. Best 8 of 40 images stacked and deconvolved in Lynkeos. Final crop and HDR compositing in Photoshop.
As I look up into the vastness of space, I can’t help wonder at my place in the stars.

Picture taken by me (Pam Castillo) at the Eagle Eye Observatory.

Picture Specs:
Canon 70D
Tokina 16mm lens
F/2.8
13 sec, single exposure
ISO 5000
Helix Nebula - This the Helix Nebula (NGC 7293) which is a large planetary nebula located in the constellation Aquarius. It is approximately 700 light years away from us and had a visual magnitude of +7.6. I have 2+ hrs of data captured in this image. Processed in Startools and Photoshop.

El Dorado Star Party 2017
Sidereal Times  • November 2017  •  21

MEMBERS’ GALLERY: BOB VAN GULICK

Sh2-171/ Ced 214

Sh2-171 - This is called Sh2-171 or Ced 214 in the constellation Cephus. This is the center of a huge emission nebula region that would also produce a nice widefield image. I was only able to capture 1 hr 36 min of data due to clouds. Processed in Startools and Photoshop

El Dorado Star Party 2017
This past June, I was accepted to the Astronomy in Chile Educator Ambassador Program and had the amazing opportunity to travel to Chile to learn about the astronomical research being done there.

Our group of 9 consisted of astronomy writers, amateur astronomers, astrophotographers, science teachers, astronomy educators and planetarium professionals from across the United States and from Chile. Together, we make up the 2017 ACEAP team. Each of us brought a love of astronomy and an affinity for communicating that love. The trip also served as an opportunity for us to connect with one another and learn from one another; a way to combine our efforts to better spread knowledge of astronomy to the public. No doubt, we were all looking forward to seeing the southern hemisphere night sky, learning about the intriguing astronomical research being done in Chile, and most of all, sharing our experiences with our communities when we return.

Something that I experienced that I want to share with everyone is the immense size of the telescopes! The light gathering power they possess is monumental compared to what our eyes can see. It is for this reason that research telescopes keep getting bigger and bigger. The more light they gather, the deeper we can see into our universe’s past.

The most important property is a telescope’s light gathering power. Today’s research telescopes maximize this important property. The larger the aperture (the opening at the top of the telescope tube), the more light the telescope will gather. These large ‘light buckets’ are collecting photons of light. The more photons of light they can gather the better, and the bigger their aperture, the finer detail they can resolve in very distant objects.

To get a feel for what light gathering power means, let’s start with our eye. What is the light gathering power of your pupil? Let’s figure it out!

The light gathering power is proportional to the area of the main mirror of the telescope. To compare the difference in the light gathering power of our eye to different sizes of telescopes, you calculate the ratio of the areas of their main mirrors (objective lenses).
The mathematical equation reads like so:

\[
\text{Light Gathering Power of Telescope} = \left( \frac{\text{Diameter of Telescope}}{\text{Diameter of Human Eye}} \right)^2
\]

Our human pupil has a maximum diameter of about 8 millimeters in dim light.

Let’s compare the light gathering power of our human eye to the size of the telescope mirrors we use in my classes.

The Funscope mirrors have a diameter of 76 millimeters.

The largest telescope mirror at Reimers Observatory, our 25” has a diameter of 635 millimeters.

The Gemini telescope I visited in Chile has a mirror with a diameter of 8000 millimeters.
Plug those numbers into the equation for light gathering power and compare them to the light gathering power of our human eye and this is what you get:

The Funscopes have about 90 times the light gathering power than the human eye.

The largest telescope at Reimers Observatory has 6,300 times the light gathering power than the human eye.

The Gemini telescope has 1,000,000 times more light gathering power than the human eye!

I wanted to introduce the idea of light gathering power to my students and also wanted them to experience what it was like to be in the presence of such large mirrors that can gather that much light, so I made a model of the Gemini telescope mirror, located on Cerro Pachón adjacent to the Cerro Tololo Inter-American Observatory in Chile, to use in my classes:

They really enjoyed it! They were blown away by the size of the mirror. Lots of them asked if we could use this exact mylar emergency blanket version like a telescope. That was a perfect opportunity to explain why we couldn't and why telescope mirrors need to be precise, smooth and also not easily moved by the wind, like the mylar version you see here.

I can’t wait to bring this to more programs so people can appreciate the work that goes into attempting to peer into the deepest reaches of our incredible universe!

To learn more about the ACEAP program visit: ACEAP and the Gemini telescope, visit: http://gemini.edu

[Editor’s note: This and future posts are reposted with permission from Amy’s Starry Sky Austin blog. Please visit http://www.starryskyaustin.com/astronomy-in-chile-the-telescopes/ for videos from her visit to Chile, as well as live hyperlinks to programs and sponsor organizations.]
UBarU Observatory and Summer Youth Astronomy Camp Update
By Roy Ellzey, Guest Contributor

UBarU now has its own observatory that resulted from the contact with a generous benefactor who saw our exhibit at the Texas Night Sky Festival in Dripping Springs last March. The observatory has a motorized, slide-off roof with a 16’ x 24’ viewing area, and an 8-foot wide warm room. It is equipped with a pier-mounted, PlaneWave 12.5” CDK and a 16” Sky-Watcher GoTo Dobsonian, both well-equipped for visual observing now, and will soon have good imaging additions.

The primary reason for the observatory gift was to enhance youth education in science and astronomy, but it is available for general use for a modest charge.

[We are excited to announce the] 2018 UBarU Summer Youth Astronomy Camp, scheduled for August 2 - 5 (Thursday evening through Sunday morning).

I have been working with David Lambert, Professor Emeritus of U.T. Astronomy and former Director of the McDonald Observatory, to create the format and curriculum for the camp, and hope that it will provide a fun, educational, and exciting experience for the young campers as they are immersed in astronomy activities over a long weekend. If this first camp goes well we may expand the format for the following summer.

We are still assembling the staff, so if any of the AAS members are interested, or would just like more information, please have them contact me.

royellzey@gmail.com
UBarU Camp and Retreat Center (Unitarian Universalist Friends Retreat Foundation)
277 U-Bar-U Drive, Mountain Home, TX  78058
http://ubaru.org/home/
Motion in the sky is the theme of Rob Pettengill’s images on display at Fisterra Studio for the 2017 East Austin Studio Tour. Rob is exhibiting with ten other guest artists at Fisterra, during the second and third weekends in November 2017. Fisterra is located at the corner of East 2nd St. and Waller St. just 3 blocks east of I35.

EAST is a free, annual, self guided art event that lets the public meet artists and experience the work of 500 artists in over 150 studios and galleries.

Rob’s metal prints in the exhibit include the 2017 Great American Eclipse, lunar, and planetary images. He will be at Fisterra Studio during tour hours between 11:00 AM and 6:00 PM, Saturday and Sunday, November 11-12 and 18-19. Drop by to learn how you can render your own images as spectacular metal prints that capture the glow live views through a telescope. Enjoy all the art at Fisterra and the other locations on the tour. Catalogs are available at all Austin Public Library branches and on-line.

For more information see:
http://east.bigmedium.org
http://astronomy.robpettengill.org/EAST.html

EAST stops with astronomy-inspired art:

20. Lisa Rawlinson
41. Rubina Anjum
172. Adrenne Hodge
238. Eileen McKeon Butt
239. Jennie Tudor Gray
240. Jennifer Cunningham
346. Rob Pettengill
Girlstart Outreach Report
By Dana Leary and The Editor

“At the November Girlstart event, girls and boys made comets. They learned about the three parts of a comet: nucleus, coma, and tail, while they decorated and named their comet. If you are interested in helping our AAS team at Girlstart, a STEM program for girls, please contact the AAS Outreach Coordinator.”

Girlstart’s STEM Studio and Mini-Planetarium is a unique space for families to explore astronomy! Starry Nights are held the 1st Thursday of every month (except January, June, July and August), with each month featuring a new astronomy experience and related hands-on activities. All ages are welcome to stop by any time between 5:30pm and 7:00pm. RSVP is recommended; however, it is not required to join us.

Upcoming Starry Nights at Girlstart:

Thursday, December 7, 2017
Featuring Inuit Star Lore Shows

Hands-on activities include:

- Engineer mini marshmallow igloo structures
- Make Inuit snow goggles
- Explore polar bear adaptations
- Design and decorate your own unique snowflake

Girlstart
1400 W. Anderson Lane
Austin, TX 78757
http://girlstart.org/
Astrofunnies
By “Copernicus”

Copernicus’ parents: “Copernicus, young man, when are you going to come to terms with the fact that the world does not revolve around you?”

Q: What is an astronomical unit?
A: One helluva big apartment.

Living on Earth may be expensive, but it includes an annual free trip around the Sun.

Two astrophysicists are discussing their research in a bar one evening when a drunk who has been sitting and listening in at the next seat turns and says, in a very worried voice, “What was that you just said?” “We were discussing stellar evolution, and I said to my colleague here that the Sun would run out of nuclear fuel and turn into a red giant star in about 5 billion years, possibly melting the Earth.” “Whew!” says the drunk, “You really had me worried. I thought you said 5 million.”

Q: What was the name of the first satellite to orbit the Earth?
A: The moon.

NASA just disclosed details why the Rover wouldn’t accept any commands. They took a picture of the Rover’s built-in display which showed a Windows screen and the text, “Press any key to continue.”

An astronomer is on an expedition to Darkest Africa to observe a total eclipse of the sun, which will only be observable there, when he’s captured by cannibals. The eclipse is due the next day around noon. To gain his freedom he plans to pose as a god and threaten to extinguish the sun if he’s not released, but the timing has to be just right. So, in the few words of the cannibals’ primitive tongue that he knows, he asks his guard what time they plan to kill him. The guard answers, “Tradition has it that captives are to be killed when the sun reaches the highest point in the sky on the day after their capture so that they may be cooked and ready to be served for the evening meal.” “Great”, the astronomer replies. The guard continues, “But because everyone’s so excited about it, in your case we’re going to wait until after the eclipse.”

Light Year – 40% less calories than a regular year.

Internet Email - If the world is getting smaller why are postal rates increasing?

NASA has proof that there is life on Mars – On Spirit and Opportunity rovers someone stole the CD players!
JOINING AAS OR RENEWING MEMBERSHIP

To join or renew your membership to AAS, please visit: http://austinastro.org/index.php/why-should-you-be-a-member/ AAS memberships run from 9/1 to 8/31, and there are five membership levels to choose from:

Household Bundle (up to 6 members) $40.00 (USD)
Subscription period: 1 year on September 1st
No recurring payments. For members of a household living at the same address.

Junior $15.00 (USD)
Subscription period: 1 year on September 1st
No recurring payments. For members up to age 18.

Students $15.00 (USD)
Subscription period: 1 year on September 1st
No recurring payments. For members age 18 and older.

Regular $25.00 (USD)
Subscription period: 1 year on September 1st
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Seniors $15.00 (USD)
Subscription period: 1 year on September 1st
No recurring payments. For members 65 years of age or older.

Astronomy on Tap ATX #38
Tue 11/21 7:30 pm, The North Door
Talks on galaxy merger, epoch of reionization, and inflation!

@AoTATX  Astronomy on Tap ATX

30 • November 2017 • Sidereal Times
OFFICERS OF THE SOCIETY, 2017-2018

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* designates appointed position

Visit Dawn Davies’ *Earthbound Astronomer* website at [https://www.earthboundastronomer.com/](https://www.earthboundastronomer.com/)


Rob Pettengill’s site can be found at [http://astronomy.robpettengill.org/](http://astronomy.robpettengill.org/). Rob’s material shared per CC BY-NC-SA 4.0 license.

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Joseph Macry writes a weekly column for Manor Community News: “This Week in Astronomy”. You can read the online edition here: [http://manorcommunitynews.com/](http://manorcommunitynews.com/)