

DECEMBER 2018

★ HOUSTON ASTRONOMICAL SOCIETY ★

# GUIDESTAR

FOSTERING THE SCIENCE AND ART OF ASTRONOMY  
THROUGH PROGRAMS THAT SERVE OUR MEMBERSHIP  
AND THE COMMUNITY



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Photo Credit:

This month's cover photo comes from the HAS facebook page.

**Friday December 7, 2018 6:00pm**

## HAS December Monthly Meeting



**Friday December 7, 2018 | 6:00pm to 8:45pm**



### **Holiday potluck party!**

**Date:** Friday December 7, 2018  
**Time:** 6:00pm to 8:45pm  
**Location:** Trini Mendenhall Community Center,  
1414 Wirt Rd. Houston, TX 77055

**HAS will provide the spiral ham and turkey and you bring the sides**

**5:30 pm Setup** Place potluck items in the kitchen and grab a chair in the auditorium.

**6:00 pm** "Who Am I?" Find clues by asking / meeting other members and asking who they are. Match their real names to the list of 10 famous figures of astronomy for DOOR PRIZES and bragging rights!

**6:00 pm** Member Astrophotography Exhibit and People's Choice!

**6:30 pm** Dinner lines open

**7:00 pm** Program: Educational Programs at Space Center Houston

**8:00 pm** Door Prizes!

**8:30 pm** Adjourn and Clean Up!

# Upcoming Events

## Monthly Calendar

### December 2018

| Date    | Time      | Event  |
|---------|-----------|--|
| 1       | 5:30p.m.  | Novice Lab at the Dark Site                      |
| 7       | 2:20 a.m. | New Moon   |
|         | 6:00 p.m. | HAS Potluck Meeting, Trini Mendenhall            |
| 13 – 14 |           | Geminids Meteor Shower                           |
| 15      |           | Mercury at Greatest Western Elongation           |
| 19      | 7:00p.m.  | VSIG Meeting                                     |
| 21      | 5:23p.m.  | December Solstice (first day of winter solstice) |
| 21 - 22 |           | Ursids Meteor Shower                             |
| 22      |           | Full Moon  |

### January 2019

| Date  | Time      | Event                                |
|-------|-----------|--------------------------------------|
| 3 – 4 |           | Quadrantids Meteor Shower            |
| 4     | 7:00 p.m. | HAS Novice Meeting                   |
|       | 8:00 p.m. | HAS General Meeting, U of H          |
| 6     | 8:28 p.m. | New Moon                             |
|       |           | Venus at Greatest Western Elongation |
| 21    |           | Full Moon                            |
|       | 9.36 p.m. | Total Lunar Eclipse                  |
| 22    |           | Conjunction of Venus and Jupiter     |

## Other Meetings

### Johnson Space Center Astronomical Society | [jscas.net](http://jscas.net)

Meets in the Lunar and Planetary Institute on the 2nd Friday of each month.

### Fort Bend Astronomy Club | [fbac.org/club\\_meetings.htm](http://fbac.org/club_meetings.htm).

Meets the third Friday of the month at 8:00 p.m. at the Houston Community College Southwest Campus in Stafford, Texas.

### North Houston Astronomy Club | [astronomyclub.org](http://astronomyclub.org)

Meets at 7:30 p.m. on the 4th Friday of each month in the Teaching Theatre of the Student Center at Kingwood College. Call 281-312-1650 or E-mail [bill.leach@nhmccd.edu](mailto:bill.leach@nhmccd.edu).

### Brazosport Astronomy Club

Meets the third Tuesday of each month at the Brazosport planetarium at 7:45 p.m. The Brazosport planetarium is located at 400 College Boulevard, Clute, TX, 77531. For more information call 979-265-3376.

## HAS Meetings

All meetings are at the University of Houston Science and Research building. See the last page for directions to the location and more information.

### Novice meeting

7:00 p.m. room  
117 Science & Research 1 Bldg

### General meeting

8:00 p.m. room  
117 Science & Research 1 Bldg

## General Membership Meeting

The Houston Astronomical Society holds its regular monthly General Membership Meeting on the first Friday of each month, unless rescheduled due to a holiday or a conflict with other events at the University of Houston.

## Board of Directors Meeting

The Board of Directors Meeting is held on dates and at locations scheduled by the board. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.



**Houston  
Astronomical  
Society**



**GuideStar\_HAS**



**STARLINE  
832-go4-HAS0**

# Houston Astronomical Society Directory

## Directors at Large

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## Advisors

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University of Houston

**Brian Cudnik**

Prairie View A&M University

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## HAS Board Meeting

HAS Board meetings are scheduled regularly. All members are invited to attend these meetings, but only board members can vote on issues brought before the board. Meetings are held at the Trini Mendenhall Community Center (1414 Wirt Road) at 6:30 p.m. on the date specified the calendar.

## As Great as 2018 Was – 2019 is Sure to Be Better!

With December upon us, 2018 is coming to an end. I have mixed feelings about the passing of another year, especially as it relates to astronomy and HAS. On the one hand, most amateur astronomers living in Central and Southeast Texas are probably happy to see 2018 end, as the weather can only get better (right?). On the other hand, HAS accomplished a number of things of note this year, including new events and new partnerships for outreach.

While I have not been able to find specific data for 2018, it seems that since late 2017, cloudy and rainy weather days have congregated around the 3rd quarter and New Moon weekends. For me, with the exception of a good week of weather in Fort Davis for TSP, opportunities for good observing have been hard to come by this year.

It seems that in 2018, more planned events have had to be canceled due to weather, than any year in recent memory. This has included canceled outreach events in town, as well as Novice Labs, Observatory Training sessions and meteor shower observing parties at the Dark Site. It has been so frustrating.



Photo - Sarah Silva

And yet, we've scheduled more outreach events and with marginal weather forecasts, have had more volunteers show up to share the night sky with the public. And when the weather looked promising, even during the middle of the week and in the bitter cold weather, our members have trekked to Columbus to get some time under darker skies. When there has been any break at all, at least 5 and more often between 15 and 30 members could be found using the Dark Site, even when the weather was forecast to be marginal.

This year saw HAS partner with two municipal parks to provide volunteers and telescopes for outreach events scheduled by the Park. HAS member Daniel Roy partnered with League City to bring a monthly star party to Rustic Oaks Park. Each event (clouds or no clouds) has included astronomy education and presentations, as well as public observing through volunteer provided telescopes.

Joe Khalaf, HAS Outreach Coordinator also partnered with Houston's newly renovated Midtown Park to bring astronomy and telescopes to the public at several highly publicized events coordinated with the Park. These outreach events have been very successful with as many as 10 telescopes set up to show 300 or more members of the public the wonders of the night sky. These events were well received by both the public (with many attending more than one event) and our volunteers who were delighted and gratified to share their love and knowledge of the night sky.

In 2018, HAS recommitted to the basics of observational Loaner Scope Chairperson has scope training classes, where on training in setting up and "fleet". Since Allen has added (GEMs) to the loaner inventory, instruction on both Dobsonian

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training our Novice members in astronomy. Allen Wilkerson our continued his successful loaner new members receive hands aligning the scopes in our loaner several German Equatorial Mounts this year that training has included and GEM mounted scopes.

Last March, HAS held its first ever BYOT (Bring your own Telescope) event. Chaired by VP. Joe Khalaf, the event was open to our members as well as the general public. The event was very successful and was attended by over 40 people, with at least 15 telescopes present.

Several members of the public brought their telescope in the hope of learning how to use it. All attending, members and public alike, were given lessons on telescope and eyepiece basics and shown how to navigate the night sky. They were then coached one on one by experienced HAS members who helped them set up their telescopes and shown how to align them. The event generated several follow-up emails and phone calls after the event, as students reached out to their coaches for guidance as they set up their scopes on their own. Look for our next BYOT event to be held in 2019!

# President's Letter | Don Selle

Despite the weather and the lack of good weekend observing opportunities, 2018 has been a busy and successful year for HAS. For me personally, it has been my great honor and pleasure to lead this truly unique and vital organization. I have had many great experiences this year working with a very capable and enthusiastic leadership team and interacting with you the members of HAS who make everything we do possible. THANK YOU!

So what will 2019 bring? The 2018 events highlighted in this article have been so successful, there is no doubt they will be repeated, and while I can't give a specific "money-back guarantee" I am certain 2019 will provide many more great opportunities for observing and learning the night sky.

## **VOLUNTEER OPPORTUNITIES**

An organization such as HAS survives on the energy and enthusiasm of the many people who volunteer to make our events possible and memorable. Without HAS volunteers, not much would happen.

Please consider volunteering to help HAS better achieve our mission to Foster the Art and Science of Astronomy Through Programs that Serve Our Membership and the Community.

We have several specific needs listed below. Honestly - the salary is terrible, but the payback is immense! Whether you feel that one of them would fit your experience and talents, or you would just like to get more involved, let us know at: [info@astronomyhouston.org](mailto:info@astronomyhouston.org)

### **Videographer & Video Editor**

Video record and edit HAS events such as the speakers at our monthly meetings, so we can share with members who were not able to attend or who are interested in a past topic. In this position, you will need to attend most HAS monthly meetings to record the programs and presentations, then edit the videos prior to uploading them for our members. Experience is not necessary but will be helpful.

### **Web Designer**

Work with our WebTech Director Mark Ferraz to update and maintain our great HAS website and other online properties. PHP coding and Drupal experience are greatly needed and preferred.

### **Welcoming Committee Chairperson**

Greet members and guests at our monthly meetings, including distribution, collection and maintenance of members name badges. No experience required. In this position, you are guaranteed to become acquainted with a broad cross section of HAS membership which is sure to enhance your membership in HAS!

## Women's Special Interest Group (WSIG)

By Rene Gedaly

### 1st Women's Observatory Training Class Cancelled—Now What?

By all accounts, 2018 was a miserable time to be an observer in Houston. As happened too often, another observatory training class was cancelled, this one the November 10th women's class.

What to do for 2019? The observatory training team believes it has come up with the solution: 1st come, 1st serve classes. Here's how it works.

Starting March 2019, we will open class to all women during the first good-weather Saturday. The call will go out, and the first six women who respond get added to the class. Remember: class prerequisites apply. Subsequent training will also run this way.

As serious observers, that's how we already operate. When good weather is forecast, we boogie to the dark site—scores of us will be on the field or in private observatories. And Observatory Director Chris Ober and Trainers will be there for you, too.



It was do or die on this fourth attempt to get trained during "good enough" weather. So after graduating, the class danced a jig to celebrate. Congratulations to the November 3, 2018 class of certified observatory telescope operators! From left: Mike McCurdy, Richard Echols, Jeff Barney, Eric Barney, and RC Johnson. Trainers were Rene Gedaly and Ed Fraini.

Photo: Rene Gedaly



## Time To Renew Your Membership

By Mike Edstrom, Treasurer

Time to **RENEW YOUR HAS MEMBERSHIP** so you can take your 2019 Dark Site Training January 1st and get the new gate code before it changes on March 3rd! HAS memberships run from 1 January to December 31.

**Fortunately, renewing your membership is fast and easy!**

1. Renew online with PayPal - Login to your account at <https://www.astronomyhouston.org/members/renew>. We greatly appreciate if you pay by PayPal because it automates the process. With over 600 members, it saves us a lot of work.
2. Renew at a monthly meeting and pay by check or cash.
3. Mail a check the old-fashioned way to Treasurer, Houston Astronomical Society, PO Box 6657, Katy, TX 77491.

We hope that you will continue to support HAS and look forward to seeing you at our next meeting or event at the Columbus dark sky site!





This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit [nightsky.jpl.nasa.org](http://nightsky.jpl.nasa.org) to find local clubs, events, and more!

## NASA Night Sky Notes: Observe Apollo 8's Lunar Milestones

By David Prosper

December marks the 50th anniversary of NASA's Apollo 8 mission, when humans first orbited the Moon in a triumph of human engineering. The mission may be most famous for "Earthrise," the iconic photograph of Earth suspended over the rugged lunar surface. "Earthrise" inspired the imaginations of people around the world and remains one of the most famous photos ever taken. This month also brings a great potential display of the Geminids and a close approach by Comet 46P/Wirtanen

You can take note of Apollo 8's mission milestones while observing the Moon this month. Watch the nearly full Moon rise just before sunset on December 21, exactly 50 years after Apollo 8 launched; it will be near the bright orange star Aldebaran in Taurus. The following evenings watch it pass over the top of Orion and on through Gemini; on those days five decades earlier, astronauts Frank Borman, Jim Lovell, and Bill Anders sped towards the Moon in their fully crewed command module. Notice how the Moon rises later each evening, and how its phase wanes from full on Dec 22 to gibbous through the rest of the week. Can you imagine what phase Earth would appear as if you were standing on the Moon, looking back? The three brave astronauts spent 20 sleepless hours in orbit around the Moon, starting on Dec 24, 1968. During those ten orbits they became the first humans to see with their own eyes both the far side of the Moon and an Earthrise! The crew telecast a holiday message on December 25 to a record number of Earthbound viewers as they orbited over the lifeless lunar terrain; "Good night, good luck, a merry Christmas and God bless all of you - all of you on the good Earth." 50 years later, spot the Moon on these holiday evenings as it travels through Cancer and Leo. Just two days later the astronauts splashed down into the Pacific Ocean after achieving all the mission's test objectives, paving the way for another giant leap in space exploration the following year.

The Geminids, an excellent annual meteor shower, peaks the evening of December 13 through the morning of the 14th. They get their chance to truly shine after a waxing crescent Moon sets around 10:30 pm on the 13th. Expert Geminid observers can spot around 100 meteors per hour under ideal conditions. You'll spot quite a few meteors by avoiding bad weather and light pollution if you can, and of course make sure to bundle up and take frequent warming breaks. The Geminids have an unusual origin compared to most meteor showers, which generally spring from icy comets. The tiny particles Earth passes through these evenings come from a strange "rock comet" named asteroid 3200 Phaethon. This dusty asteroid experiences faint outbursts of fine particles of rock instead of ice.

You can also look for comet 46P/Wirtanen while you're out meteor watching. Its closest approach to Earth brings it within 7.1 million miles of us on December 16. That's 30 times the average Earth-Moon distance! While passing near enough to rank as the 10th closest cometary approach in modern times, there is no danger of this object striking our planet. Cometary brightness is hard to predict, and while there is a chance comet 46P/Wirtanen may flare up to naked eye visibility, it will likely remain visible only via binoculars or telescopes. You'll be able to see for yourself how much 46P/Wirtanen actually brightens. Some of the best nights to hunt for it will be December 15 and 16 as it passes between two prominent star clusters in Taurus: the Pleiades and the V-shaped Hyades. Happy hunting!

Catch up on all of NASA's past, current, and future missions at [nasa.gov](http://nasa.gov)



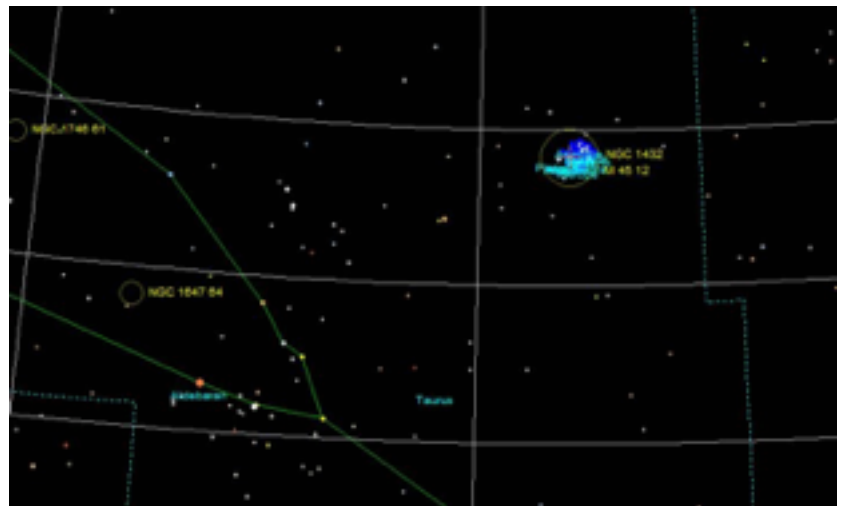
Earthrise, 1968. Note the phase of Earth as seen from the Moon. Nearside lunar observers see Earth go through a complete set of phases. However, only orbiting astronauts witness Earthrises; for stationary lunar observers, Earth barely moves at all. Why is that? Credit: Bill Anders/NASA

## Asterisms - Ally's Braid

**Asterism:** a grouping of stars that form a recognizable pattern.

|                         |               |
|-------------------------|---------------|
| <b>Constellation:</b>   | Taurus        |
| <b>Right Ascension:</b> | 03h 47m 00.0s |
| <b>Declination:</b>     | +24° 07' 00"  |
| <b>Magnitude:</b>       | 5 to 8        |

This month's asterism, Ally's Braid, is embedded in the middle of the well-known group of stars called The Pleiades, M45, or the Seven Sisters. The Pleiades are located in the constellation Taurus and can be easily located after finding the "point of the bull" triangle of stars (seen here in the lower left). The star Aldebaran is the "eye of the bull". The Pleiades is a naked eye object under most skies.



The "braid" starts at the bright star Alcyone  $\eta$  in the center of the cluster. From Alcyone going towards the upper left there are 3 bright stars, a slight change in direction and 4 more stars. The last star is a bright 5th magnitude. These make up the "braid".

This was named by Stephen Saber and the name "Ally's Braid" comes from the main star, Alcyone.



# About The Houston Astronomical Society

## Welcome to Our Organization

The HAS is a group of dedicated amateur astronomers, most of whom are observers, but some are armchair astronomers. The benefits of membership are:

- Access to our 18 acre observing site west of Houston -- a great place to observe the universe!
- A telescope loaner program -- borrow a HAS telescope and try observing for yourself!
- A monthly novice meeting, site orientation meeting, and general meeting with speakers of interest. Access to meeting videos on the HAS web site.
- Opportunities to participate in programs that promote astronomy to the general public (such as Star Parties at schools)
- A yearly all-clubs meeting for Houston area organizations
- Meet other amateurs and share experiences, learn techniques, and swap stories

You're invited to attend our next meeting. You'll have a great time! All members have the right to participate in Society functions and to use the Observatory Site. Regular and Student Members receive a subscription to The Reflector. The GuideStar, the monthly publication of the Houston Astronomical Society is available on the web site. Associate Members, immediate family members of a Regular Member, have all membership rights, but do not receive publications. Sustaining members have the same rights as regular members with the additional dues treated as a donation to the Society. Sky & Telescope and Astronomy magazines are available to members at a discount.

## Membership Application

You can join (or renew at the organization web site, [www.astronomyhouston.org](http://www.astronomyhouston.org)). Click the 'Join HAS' Tab. Send funds to address shown on last page of GuideStar. Attention - Treasurer, along with the following information: Name, Address, Phone Number, Special Interests in Astronomy, Do you own a Telescope? (If so, what kind?), and where you first heard of H.A.S.

## Event Notification or Cancellation

HAS uses RAINEDOUT.NET to communicate late breaking updates about our various events. . Message delivery is via text messaging and e-mail. There are several ways to subscribe. If you would like to receive these notices via text messaging directly to your phone, subscribe to any of the sub-groups which interest you.

RainedOut notices will also automatically be sent to our e-mail list. Note that regular e-mail list conversations are not part of RainedOut communications and will not be sent to your phone as part of this service. Instructions to sign up for the e-mail list (a great way to keep your finger on the pulse of the club) are found here:

<http://www.astronomyhouston.org/about/email-list>.

## Houston Astronomical Society

P.O. Box 800564

Houston, TX 77280-0564

The Houston Astronomical Society is a non-profit corporation organized under section 501 (C) 3 of the Internal Revenue Code. The Society was formed for education and scientific purposes. All contributions and gifts are deductible for federal income tax purposes. General membership meetings are open to the public and attendance is encouraged.

## Check the Website

[astronomyhouston.org](http://astronomyhouston.org)

The HAS website not only has news and information about our society, but also a variety of features to manage your membership and connect with other club members.

Current members can post photos, trade gear, pay dues, manage discount magazine subscriptions, swap stories in the forum, and more.

Questions about the site? Need a hand to get your account set up? Contact [webmaster@astronomyhouston.org](mailto:webmaster@astronomyhouston.org).

*The HAS web site is the winner of the 2012 Astronomical League award for excellence*

To receive text messages, send any or all of the following (one at a time) to 84483

**OUTREACH** Public Outreach Events

**STARPARTY** Members only star Parties

**URBAN** Urban Observing Events

**MEETINGS** HAS Meetings

You will receive a confirmation message back for each successful enrollment.

For more information, please visit [www.RainedOut.net](http://www.RainedOut.net).

## Member Projects Spotlight

We want to spotlight the astronomical projects and observations that you are working on.

Send us an email at [guidestar@astronomyhouston.org](mailto:guidestar@astronomyhouston.org) and tell us. Whether it be a specific research project in astronomy that you're working on, an astro league observing program, an astrophotography project, or something else, let us know so we can let the rest of the society know.

## GuideStar Advertising Policies

### Personal advertisements

- Members in good standing of the Houston Astronomical Society (HAS) may request that an ad be placed in the GuideStar for personal items (for sale or wanted).
- Items offered for sale must be of interest to amateur astronomers.
- No more than two telescopes may be advertised within any calendar year.
- Ads will not run for more than 3 consecutive months
- Ads will be run on a space-available basis.
- Ads must be provided to the editor in electronic format (email, text file) by the 15th of the month preceding the month-of-issue.

### Commercial advertisements

- Advertisement sizes:
  - \* Full page = 6.875" w x 9" h
  - \* Half page = 6.875" w x 4.25" h
  - \* Quarter page = 3.31" w x 4.25" h (allows for column gutter)
- Commercial advertisements will be run in the GuideStar at the following fee schedule:

| Size         | One time | One quarter (3 consecutive months) |
|--------------|----------|------------------------------------|
| Full page    | \$100.00 | \$250.00                           |
| Half page    | \$50.00  | \$125.00                           |
| Quarter page | \$25.00  | \$62.50                            |

- Artwork provided must be in electronic format (image file, PDF, etc.) and must be in the correct proportions to fit the space provided. Contact editor with questions.
- Artwork may be in color or in black and white.
- Items or services advertised must be of interest to amateur astronomers
- Payment for advertisements must be done in advance (pay to the 'Houston Astronomical Society')

The H.A.S. GuideStar is published monthly by the Houston Astronomical Society. All opinions expressed herein are those of the contributor and not necessarily of Houston Astronomical Society. The monthly Meeting Notice is included herein. GuideStar is available on the HAS web site to all members of H.A.S., and to persons interested in the organization's activities. Contributions to GuideStar by members are encouraged. Electronic submission is helpful. Submit the article in text, unformatted MS-Word format via email [GuideStar@astronomyhouston.org](mailto:GuideStar@astronomyhouston.org). Copy must be received by the 15th of the month for inclusion in the issue to be available near the end of the same month. Or, bring copy to the General Membership Meeting and give it to the Editor, or phone to make special arrangements. [Contact the editor for writing guidelines.](#)

### Editing & Production:

Bob Wiesner | 713-240-7059

[GuideStar@astronomyhouston.org](mailto:GuideStar@astronomyhouston.org)



The GuideStar is the winner of the  
**2012 Astronomical League  
Mabel Sterns Newsletter award**

# Parking At The University Of Houston Main Campus

## Directions to meeting

### From I-45 going south (from downtown)

- exit at Cullen Boulevard
- turn right on Cullen
- turn right on Holman Street; the parking lot is past the Hoffeinz Pavilion
- Science and Research is across the street (2nd building back)

### From I-45 going north (from NASA/Galveston)

- exit at Cullen Boulevard
- turn left on Cullen
- turn right on Holman Street; the parking lot is past the Hoffeinz Pavilion
- Science and Research is across the street (2nd building back)

## Parking at the University of Houston Main Campus

For the monthly Houston Astronomical Society Meeting the map below shows the location of the 15C parking lot, west of Cullen Boulevard on Holman Street.

The map is from the University of Houston web site and identifies the lot that is available for parking while attending the Houston Astronomical Society monthly meeting. This parking is available from 6:30 p.m. until 10:00 p.m. on the Friday night of the HAS meeting (usually the first Friday of the month).

This parking is free. If you get a notice from the UH campus police on the night of the meeting, call the UH Security office and let them know that this area has been made available on HAS meeting night by the Parking Department.

