



SOL (Solar Observing Lab) is a daylong event focused on safe solar observing, equipment and understanding eclipses. This event is in preparation for the upcoming annular eclipse (October 14, 2023) and total eclipse (April 8th, 2024) and will provide a hands-on space for anyone interested in observing the sun.

The SOL takes place October 22, 2022, running from 10am to 3pm and will be held at the Earth & Space Expedition Center in North Phoenix. During this time people of all ages are welcome to attend and learn about our star and how to safely observe it and the phenomena that occur around it. The event is open to the public and people of all ages and interest.

SOL will host a collection of astronomers sharing a wide variety of modern-day solar equipment from filters to telescopes. This will allow attendees to have a rare, hands-on, experience with a much of today's top tier equipment giving them a chance to truly understand the different types of filters and telescopes for safe observations of the sun.

Aside from the displays outside there will also be multiple, one-hour talks presented inside. These talks will cover the basics of equipment and how to prepare for the coming eclipses. We will cover how to safely observe and photograph these celestial events. The presentations will be limited to 40 people per class and require pre-registration. If the event space can accommodate more than 40 this can be discussed further. We want to make sure as many people can attend the talks as possible but also give enough time to cover questions.

The SOL is a truly unique opportunity for people to experience a wide variety of solar equipment. Due to solar astronomy's niche much of this equipment is very specialized and expensive. Because of this it is very rare to have a wide variety of equipment laid out for viewing in one place. SOL looks to provide that opportunity and give people a chance to truly experience our local star and how to approach it safely.

SOL is a joint effort between Focus Astronomy and the Astronomy Association of Arizona as well as the Earth & Space Expedition Center of Arizona. The schedule for this event can be found on page 2 of this packet.



Event Schedule

Day Time Events

- Astronomers Set Up: 8:30am to 10:00am
- Doors Open to the Public: 10:00am
- Event Closes to the Public: 3:00pm

Star Party Schedule

- Stargazing Set Up: 5:00pm to 6:00pm
- Stargazing: 6:30pm to 9:30pm
- Doors Close: 9:30pm

Talk Schedule

Hall A:

Preparing for a Solar Eclipse: 10:30am to 11:15am

This talk covers the basics needed to observe the 2023 and 2024 eclipses. From basics equipment to photographing it we cover what is needed to get your eclipse image and how to do it safely.

Simple Safe Sun: Noon to 12:30pm

This short presentation covers safe eclipse viewing techniques for students and educators.

Preparing for a Solar Eclipse: 1:00pm to 1:45pm

This talk covers the basics needed to observe the 2023 and 2024 eclipses. From basics equipment to photographing it we cover what is needed to get your eclipse image and how to do it safely.

Hall B:

Women in Astrophotography: 10:30am to 11:15am

Join the women of STELA (Striving to Engage Ladies in Astrophotography) about getting women involved in astronomy and astrophotography.

2024 Total Solar Eclipse: Noon to 12:45pm

Join solar astronomer Bob Yoesle about the upcoming 2024 Total Solar Eclipse.

Intro into H-alpha Solar Imaging: 1:00pm to 1:45pm

Join Simon Tang (The Stupid Astronomer) for an introduction class is imaging the sun with narrowband H-alpha solar filters.



Vendor/Astronomer

Astronomers:

On the day of the event attending astronomers will need to arrive and set up between 8:00am to 9:30am. The telescope field will be outside on the basketball courts. Astronomers will be able to leave their vehicles next to the telescope field and can remain parked until the end of the event. The telescope field opens to the public at 10:00am at which time all vehicles will need to remain parked until the telescope field is closed at 3:00pm.

The telescope field will be open to vehicles from 3:00pm to 6:00pm for break down of the SOL event and preparations for the star party. For those staying for the star party you can keep your equipment set up if you wish. All vehicles must be off the field and parked on the fire lane by 6:00pm. No break down of equipment can start until 9:30pm.

If you are planning to attend as an astronomer, please email focusastronomy@gmail.com with your name, type of car, equipment you wish to display and shirt size.

Vendors:

SOL is open to vendors wishing to display their equipment. There is no fee required to attend as a vendor, but you are responsible for your equipment/product while showcasing at SOL. Product can be shipped ahead of time and pallets can be accepted and stored at the Earth & Space Expedition Center if the vendors need to.

On the day of the event vendors will need to arrive and set up between 8:00am to 9:30am. The telescope field will be outside on the basketball courts. Vendors/astronomers will be able to leave their vehicles next to the telescope field and can remain parked until the end of the event. The telescope opens at 10:00am at which time all vehicles will need to remain parked until the telescope field is closed at 3:00pm. From 3:00pm to 6:00pm vehicles can come in to pick or drop off equipment. All vehicles must be parked by 6pm for the star party to begin.

Bad Weather:

In the unlikely event of bad weather, a large indoor room is set aside just in case all telescope displays need to be moved inside. We will inform attending vendors ahead of time if this appears to be the case. Tables will be provided for display/booths purposes if the event needs to be moved indoors.

Sales:

Vendors are allowed to sell product on site if they so choose. Please make sure your company is set up to sell in Phoenix, Arizona.

NOTE: There is no power on the telescope field, you will be responsible for powering your own equipment.



Public Information

SOL is open to people of all ages and interest levels. There is a general admission fee to enter the Challenger Space Center, all admissions to go funding the center. There is no additional fee to attend SOL.

General Admission Information:

- Adults: \$10
- Children: \$8
- Children Under 5: Free
- Paradise Valley Student (with ID): Free
- Paradise Valley Teachers (with ID): Free

Tickets can be purchased at the door, or a pre-registration will be available ahead of time, passes can then be picked up at the Challenger Gift shop on the day of SOL.

There is no additional fee to attend the talks, but it is requested that you pre-register to save a seat in the talks.

Star Party:

For those wishing to come back for the star party in the evening. Your SOL ticket will allow you to return at no extra cost. Just show your ticket at the door for re-entry.

If you are only coming for the star party, you will need to purchase a star party ticket at the Earth & Space Expedition Center giftshop.

Star Party Admission Information:

- Adults: \$5
- Children: \$4
- Children Under 5: Free
- Paradise Valley Student (with ID): Free
- Paradise Valley Teachers (with ID): Free
- Returning SOL Attendee (with ticket): Free

Parking:

Parking is available at the Challenger Space Center, but spaces are limited. Cars can park along the street if the lot is full. There is no fee or time limit for parking.



Star Party

After the daytime portion of the SOL event has been completed a public star party will take place on the same telescope field. The star party will run from 6:30pm to 9:30pm and is open to all ages. For those you have set up their equipment for SOL, you are welcome to stay and keep your equipment set up for the night's festivities.

Astronomers:

For those wanting to set up please make sure you are on site to set up between 5:00pm and 6:00pm. We will shut the gate to astronomer vehicles at 6:00pm.

Please make sure you bring all proper equipment for safe nighttime viewing. There is no power available on site so you will be required to power your own equipment.

Star Party Displays:

- Focus Astronomy mobile meteorite display
- 28" Large Aperture Outreach Telescope
- Live imaging set ups from various astronomers
- Hyperstar demo from Starizona



Silent Auction

Throughout the daytime activities a silent auction will also be available for attendees. The auction will be held at the Astronomy Association of Arizona (AAA) booth and all funds raised will be provided to AAA to continue their outreach efforts. AAA is a 501c3 non-profit that provides educational astronomy events across the Phoenix area. For more information, please visit www.astronomyassociationarizona.org.

Silent Auction Items:

Sky-Watcher Star Adventurer 2i Pro Pack (2x)

Celestron StarSense Explorer DX 130AZ telescope

Mt. Lemmon Sky Center Tickets for two

Lowell Observatory tickets, four pack

Optolong 12nm OIII-CCD filter (2")

Optolong 12nm OIII-CCD filter (1.25")

Optolong H-Beta filter (2")

Optolong H-Beta filter (1.25")

Losmandy DUP14 dovetail plate, clear anodized, special edition (2x)

Silent Auctions Rules:

1. Winners of each item will be announced at 2:30pm at the AAA booth.
2. Payment for each item will need to be done at the event.
3. Items will need to be taken at the event; items will not be shipped to winners.
4. Items will have a listed minimum bid at the event.



Raffle

SOL will host a raffle for attendees to win a collection of various prizes. The raffle will be held at the STELA booth where entries can be placed. The list of items is listed below as well as rules.

Raffle Items:

Sky-Watcher Star Adventurer 2i Pro Pack

The Sun (book)

Astronomy, A Visual Guide (book)

Night Watch (book)

The Backyard Astronomer's Guide, 4th Edition

Raffle Rules:

1. Winners of each item will be announced at 2:45pm at the STELA booth.
2. Winner must be present to win
3. Items will need to be taken at the event; items will not be shipped to winners.
4. One item per winner.

SOL attendees can obtain free solar eclipse glasses once inside the event. These glasses have been donated by Rainbow Symphony and branded just for SOL. Rainbow Symphony is the leader in safe solar eclipse glasses, their products meet strict safety standards and meet the required ISO 123 12-2:2015 rating. Instructions for safe usage of the glasses is printed on the back of the glasses.

SOL eclipse glasses can be obtained for free at the STELA booth throughout the day.





Displaying Vendors

Astronomy Association of Arizona (Buckeye, AZ):

The Astronomy Association of Arizona (AAA) is a 501c3 non-profit based in Buckeye, AZ. Their goal is to bring astronomy education for the public and schools across Arizona. For more information on AAA please visit

<https://astronomyassociationarizona.org/>

Astro Hutech (Lake Forest, California):

Astro Hutech is a premium astronomy equipment dealer. They specialize in a wide range of telescopes, filters, and other astronomical equipment. Astro Hutech will also be representing Player One cameras during SOL. For more information on Astro Hutech please visit www.hutech.com.

Daystar Filters (Warrensburg, MO):

Daystar Filters has been producing world class solar filters for decades. Their wide range of specialized hardware is nearly unmatched in the industry. From their Quark filters to advanced space applications, Daystar has repeatedly pushed the industry of solar research and observation forward. For more information please visit www.daystarfilters.com

Losmandy Astronomical (Burbank, California):

Losmandy Astronomical has been producing a wide range of telescope mounts and hardware for 40 years. Losmandy will be joining SOL for both the daytime activities as well as the evening star party event. For more information, please visit their website at www.losmandy.com. Losmandy will be joining us all the way from Burbank, California.

Lowell Observatory (Flagstaff, Arizona):

For over 125 years, Lowell Observatory has inspired people to explore the wonders of space. Located in Flagstaff, Arizona, Lowell offers an amazing experience for those looking to explore astronomy. For more information, please visit www.lowell.edu.

Lunt Solar Systems (Tucson, Arizona):

Lunt Solar Systems has provided some of the best equipment for observing the sun for years. Their wide variety of filters, telescopes and accessories provide their customers with some of the best (and safest) views of the sun available to the astronomy community. Located in Tucson, Arizona. For more information, please visit www.luntsolarsystems.com

Mt. Lemmon Sky Center (Tucson, Arizona):

For over 20 years the University of Arizona's Mt. Lemmon Sky Center has provided a unique experience for those looking to engage the night sky. Their night programs provide a glimpse of the universe rarely seen by the public. Their high above Tucson, Arizona makes for an excellent observing site while being close by for many people to come enjoy. For more information, please visit www.skycenter.arizona.edu.

Sky-Watcher (Torrance, California):

One of the leading telescope manufacturers in the world Sky-Watcher provides a wide range of products from trackers to advanced imaging platforms. Sky-Watcher will be onsite displaying many of their latest products both day and night. Joining us from Torrance, California, for more information please visit www.skywatcherusa.com.

Starizona (Tucson, Arizona):

The leading telescope shop in the state of Arizona, Starizona has been support Arizona's astronomy community for decades. Starizona will be on site throughout the day and showcasing their world famous Hyperstar system at the evening star party. www.starizona.com

S.T.E.L.A. (Global):

Striving To Engage Ladies in Astrophotography is an amazing group getting women in astronomy and astrophotography by women for women. SOL will be STELA's first public appearance and a chance to meet many of their members. For more information, please visit <https://www.instagram.com/we.are.stela/>

United States Space Force

The United States Space Force specializes in operations and defense for the United States when it comes to space. This is the latest branch of the US Military. We will be join by Technical Sergeant Lindsey Harvey who can answer all questions about the USSF. www.spaceforce.com



Contact Information

SOL is a joint effort between Focus Astronomy, the Astronomy Association of Arizona, and Earth & Space Expedition Center. If there are any questions, please see the following for contact information.

Location:

Earth & Space Expedition Center

17835 N 44th St

Phoenix AZ 85032

623-322-2001

<https://www.earthandspaceexpeditioncenter.org/>

Scott Oliver

soliver@theearthandspacece.org

Main Event Contact:

Kevin LeGore

602-999-3731

focusastronomy@gmail.com

Main Event Website:

www.focusastro.org/sol



Telescope Field:

Telescope field is on the basketball courts on the south side of the campus.

North side of the courts is for telescopes. Southside of the courts is astronomer/vendor parking. Additional parking for astronomers is vendors can be found on the fire road.

The SOL daytime event and star party will take place here.

Vendor/Astronomer Entrance:

Vendors and astronomers will enter the rear gate off Grovers Ave. You will then be guided into the telescope field. The telescope field gate will be closed at 9:45am, cars will not be able to leave until after 3pm.



Gift Shop:

The Gift Shop is where attendees can purchase tickets or pick up pre-ordered tickets.

Once you have your tickets you can walk to the museum, attend any daytime activities as well as the SOL event.

Public Entrance:

The main entry point can be found on the North end of the main parking lot.

Enter the gate and follow the breeze way to the Gift Shop to purchase tickets or pick up pre-ordered tickets. This pathway will be designated with signs.



Public Parking:

On site public parking is available on the south end of the campus. There are two lots available, and parking is free.

If lots are pull parking along the street is also an option.