



STATEWIDE STAR PARTY

# TIPS FOR HOSTING A SUCCESSFUL SKYWATCHING SESSION

*The Moon and Beyond*

<http://www.ncsciencefestival.org/starparty/>

## SUGGESTED MATERIALS

- Telescopes
- Binoculars
- Table
- Moon maps
- Star charts
- Trimmed red balloons (to cover white flashlights)
- Activity materials
- Red lights
- Orange traffic cones
- First-aid kit
- Stepstool (as an aid while viewing)
- Green laser

## ACTIVITY IDEAS

- Preview what you expect to see in the sky and teach how to use star charts.
- Viewing through telescopes and binoculars
- Star party kit activities
- Storytelling
- Sky tour

## SETTING UP YOUR SITE

- Choose a viewing area away from unshielded lights. Turn off outdoor lights where possible.
- Shield the viewing area from headlights. Traffic cones can help you block off areas from parking.
- Consider marking telescopes and tripods with glow-in-the dark tape, red lights, or red glow sticks.
- Mark the path to the viewing area with red light, glow sticks, or solar lights. Or escort visitors with a red flashlight.
- Have a small “orientation” table marked with red light that has star charts, trimmed red balloons, and activity materials.
- Offer a sky tour and other activities away from the telescopes to help spread out crowds.

## GETTING THE MOST FROM THE VIEWING EXPERIENCE

If possible, gather groups as they arrive for a briefing so they will feel comfortable and safe, know what to expect, and help protect equipment.

- Ask for no white light in the telescope viewing area from flashlights, cellphones, or flash photos. Pass out trimmed red balloons to cover white flashlights and cellphone lights.
- Explain other rules, e.g., no smoking, alcohol, running, or pets.
- Let people know where to find the telescopes, how many there are, and what kinds of objects they’ll see. You may want to introduce the telescope operators.
- Ask visitors to touch the telescope only with permission. If telescope operators have a chair or stepstool, they can use a red light to direct visitors to “put your hands on the stool to steady yourself” and then (aiming the light at the eyepiece) “look here.”
- Parents with young children should look through the telescope before their children do. Then they’ll be in a better position to help their child.
- Visitors who wear glasses should try looking first with glasses on.
- Encourage visitors to ask questions and to speak up if they don’t see anything. Telescope operators should give visitors meaningful information (say “This is the Orion Nebula, a place where stars are forming” rather than just “This is M42”).

### USING A GREEN LASER?

Green lasers can damage eyesight and cause problems for aircraft. Be mindful of safety:

- Use only lasers <5 milliwatts.
- Choose a laser that requires you to continuously depress the button to operate it. Use the laser sparingly.
- Keep the laser on a lanyard around your neck or otherwise attached to yourself. Don’t let anyone else touch the laser.
- Never point a green laser near a person, vehicle, wildlife, reflective material (such as a road sign) or aircraft—even if it seems to be at a great distance.
- Avoid aiming the laser close to the horizon.
- Circle any object in the sky that you are not absolutely positive is a star, rather than holding the laser on it—in case the “star” is actually an airplane.

# MOON OBSERVING TIPS

## 1) No telescope required.

With just your eyes, you can see the large dark patches called “maria.” Even a small pair of binoculars reveals surface features such as craters. Use Moon maps to help people identify specific features or the general locations where astronauts have landed.

## 2) Avoid the Full Moon.

When the Moon is full or near full, its bright light washes out stars, deep-sky objects, and meteors. It’s not even usually a great time for observing the Moon!



## 3) Schedule smart.

If you want to observe the Moon in the evening sky, schedule your skywatching when the phase is waxing crescent, or first quarter (when the Moon appears half lit). Many astronomers use a filter on their telescope to reduce the Moon’s light.

## 4) Daytime might work! Seriously!

On the dates of the 2019 Statewide Star Party, April 12 and 13, the Moon’s phase is roughly first quarter, which means the Moon is above the horizon during afternoon and evening hours, and at its highest in the sky around sunset. Check moonrise and moonset times for your location using a source such as TimeAndDate.com: <https://www.timeanddate.com/astronomy/>. You’ll want to make sure the Moon will be high enough during your skywatching session to see it above any buildings or trees.

CAUTION: Make sure it’s impossible to aim telescopes or binoculars at the Sun. For example, set up your viewing so that a building blocks the Sun.

## 5) Ready. Set. Aim.

Aim your binoculars or telescope at the Moon’s sunlit side near the terminator. The terminator is the line that separates the daytime (lit) portion of the Moon from the nighttime (dark) portion. Thanks to the long shadows there, features will stand out in sharp relief. You’ll see lots of interesting detail.



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