

Program Descriptions

America the Beautiful at Night

Wally Pacholka, AstroPics

Join renowned professional photographer Wally Pacholka for an evening of stunning photographs and stories from our national parks. Wally will share some of the techniques he uses to capture spectacular pictures of America's National Parks at night.

Art and Science Faire

Enjoy interactive exhibits where you can make space art, play with the sun, learn about preserving our dark sky, and meet people who study space for a living!

Ask a NASA Astronomer

Sachindev Shenoy, NASA SOFIA

Our universe is filled with mystery. From dark matter to black holes, here is an incredible opportunity to ask a NASA astronomer about anything that has sparked your cosmic curiosity!

Astrochemistry: The Chemistry of Stars

Dr. Andrew Mattioda, NASA Ames

Until relatively recently, "space" was thought to be a vacuum—empty. However in the early 1970s, astronomers started noticing small molecular species in space. Where do these molecules come from and how do we study molecules or other objects in space?

A Visit to Pluto and Beyond!

Brian Grigsby, Shasta High School

The New Horizons mission will help us understand worlds at the edge of our solar system by making the first reconnaissance of the Pluto system and by venturing deeper into the distant, mysterious Kuiper Belt—a relic of solar system formation.

Exploring Mars for Evidence of Life

Dr. David Des Marais, NASA Ames

Evidence of interactions between volcanism and water has been discovered on Mars. NASA senior research scientist, Dr. Dave Des Marais, explains how Lassen is studied to search for clues of ancient life on Mars.

Exploring the Outer Solar System

Dr. John Keller, RECON / Cal Poly

After 3 billion miles, the NASA New Horizons Spacecraft completed a flyby of Pluto, providing unprecedented views of this famous planetary body of the Kuiper Belt! Hear results from this mission and learn about the Research and Education Collaborative Occultation Network (RECON), an exciting citizen science effort to study objects beyond Neptune.

Explore Your Place in Space

Suzy Gurton, Astronomical Society of the Pacific

Enjoy fun, hands-on activities focused on our place in the solar system. Perfect for kids of all ages. Bring the family and have a blast!

Junior Ranger Astronomy

Activities for 6 to 12 year olds

Junior Rangers will learn that *Half the Park is After Dark* through fun activities and take home some great lessons about the importance of preserving and protecting our dark night skies for future generations.

Just How Common is Life in the Universe?

Dr. Scott Sandford, NASA Ames

What sorts of organic compounds get delivered to newly formed planets? Studies demonstrate that many of the key building blocks of modern life are produced in space and then delivered intact to planetary surfaces. This talk will discuss these studies and the likelihood that life could be common in our universe.

Life Elsewhere in the Universe

Dr. Sanjoy Som, NASA Ames

What is astrobiology anyway? Beyond "searching for aliens," astrobiology presents an opportunity to discover the intricacies of how our planet works and sustains life and appreciate what this means in the broader context of life in the universe.

Majesty of the Night Sky

Vic Maris, StellarVue

This inspiring program will reveal the wonders of our universe. Rumor has it that Galileo himself may make an appearance!

NASA Astrobiology Tent

Meet with NASA scientists to find out more about astrobiology—the study of the origin, evolution, distribution, and future of life in the universe! Stop by Sulphur Works and take home something from NASA.

Searching for Life on Exoplanets

Dr. Niki Parenteau, NASA Ames/SETI

Researchers estimate that each of the roughly 100 billion stars in our Milky Way galaxy should have at least one exoplanet. What would life look like on planets orbiting stars different than our sun? This talk will discuss how studying life in the hot springs at Lassen can help inform our search for life elsewhere.

Solar Scope Viewing

Come and safely marvel at our closest star through a solar scope and learn some surprising and interesting facts about the center of our solar system.

Telescope Viewing

Lassen's dark night sky is a treasure and the reason for our festival! Stop by for laser-guided tours of the constellations along with telescopes pointed at planets, star clusters, dying stars, and distant galaxies.

The City Dark Film Screening

Do we need the stars? This critically acclaimed film features stunning astrophotography and a cast of eclectic scientists. *The City Dark* is the definitive story of light pollution and the disappearing stars.

The Power of Comet and Asteroid Samples

Dr. Scott Sandford, NASA Ames

Much of what we know about other bodies in our solar system is based on remote telescopic observations or data from spacecraft. Learn about how sample return missions have revolutionized our understanding of comets and asteroids.

Year of the Dwarf Planets / Our Sky Tonight

Gigi Giles, NASA Solar System Ambassador

The New Horizons mission has arrived at the dwarf planets Pluto and Ceres. Come learn about the exciting discoveries! Followed by a tour of the constellations and celestial objects visible in tonight's sky.

Lassen Volcanic Dark Sky Festival August 7 - 9, 2015



Half the Park is after Dark!

From animals to plants and water to volcanoes, Lassen Volcanic National Park protects many different natural phenomena. One of the most spectacular is frequently overlooked—our incredible, dark, night sky. Lassen is one of the best places to learn about and enjoy the splendor of the night sky. Far from the light pollution of civilization, Lassen is one of the last sanctuaries of natural darkness. Whether you have yet to experience the grandeur of the Milky Way, or you are a dedicated amateur astronomer, Lassen's dark skies offer an unparalleled view of the celestial wonders.

We welcome you to join NASA scientists, park rangers, and astronomers in celebrating all that is out of this world during the Dark Sky Festival. View the program schedule and descriptions enclosed to learn more about programs, presentations, and Junior Ranger activities.

A few tips for night sky observation:

Dress warmly for nighttime events.

Do not use flashlights or cell phone lights. Your eyes will become accustomed to the darkness. Flashlights with red lenses are allowed.

Food, beverages, and smoking are prohibited.

If you don't see the object through the telescope, let the operator know.

Averting your vision to the side of an object will often bring out more detail.

Amateur astronomers are welcome to use the Bumpass Hell or Kohm Yah-mah-nee parking areas to set up their own observation equipment.

Telescope Viewing Locations

Telescope viewing will occur outside KYVC, in the Bumpass Hell parking area, and adjacent to the Manzanita Lake Campground D-loop.

Program Schedule

Locations: Kohm Yah-mah-nee Visitor Center (KYVC) | Bumpass Hell Parking Area (Bumpass Hell) | Manzanita Lake (ML) | Loomis Museum (Loomis)

Friday, August 7

Time	Event	Location
9:30a - 11:30a	Jr. Ranger Astronomy	Summit Lake Amphitheater
10:00a - 11:00a	The City Dark Film	KYVC Aud.
12:00p - 1:00p	Exploring the Outer Solar System	Loomis Auditorium
1:00p - 4:00p	Art & Science Faire	Loomis Plaza
2:00p - 4:00p	Solar Scope Viewing	KYVC, Loomis Plaza, Bumpass Hell
2:00p - 3:00p	Year of the Dwarf Planets / Our Sky Tonight	KYVC Auditorium
3:00p - 4:00p	The City Dark Film	Loomis Aud.
4:00p - 5:00p	Life Elsewhere in the Universe	KYVC Auditorium
8:30p - 9:30p	Searching for Life on Exoplanets	KYVC Amphitheater
8:30p - 9:30p	Majesty of the Night Sky	ML Amphitheater
9:30p - 11:00p	Telescope Viewing	Bumpass Hell, KYVC, MLCG

Clouds or Smoke

Stargazing activities may be cancelled in the event of cloudy, stormy, or smoky weather. Check with park staff for more information. Cancellation will be posted on www.nps.gov/lavo and www.facebook.com/lassennp.

Junior Ranger Night Explorer

Junior Rangers ages 5 to 12 can earn a Night Explorer patch by completing activities in the Night Explorer workbook. Get your book at KYVC or the Loomis Museum. Supplies are limited.

Saturday, August 8

Time	Event	Location
9:30a - 11:30a	Jr. Ranger Astronomy	ML Amphitheater
10:00a - 11:00a	The City Dark Film	KYVC Aud.
12:00p - 4:00p	NASA Astrobiology	Sulphur Works
12:00p - 1:00p	Exploring the Outer Solar System	Loomis Auditorium
1:00p - 4:00p	Art & Science Faire	Loomis Plaza
1:00p - 2:00p	Year of the Dwarf Planets / Our Sky Tonight	KYVC Auditorium
2:00p - 3:00p	Ask a NASA Astronomer!	Loomis Auditorium
2:00p - 4:00p	Solar Scope Viewing	KYVC, Loomis Plaza, Bumpass Hell
2:00p - 3:00p	Explore Your Place in Space	KYVC Back Patio
3:00p - 4:00p	The City Dark Film	Loomis Aud.
3:30p - 4:30p	Astrochemistry: The Chemistry of the Stars	KYVC Auditorium
8:30p - 9:30p	Exploring Mars for Evidence of Life	KYVC Amphitheater
8:30p - 9:30p	America the Beautiful at Night	ML Amphitheater
9:30p - 11:00p	Telescope Viewing	Bumpass Hell, KYVC, MLCG

Dark Sky Supporters

The Dark Sky Festival is made possible with support from AstroPics, Astronomical Society of Nevada, Astronomical Society of the Pacific, California Guest Services, International Dark Sky Association, Lassen Association, NASA, RECON, SETI, StarChaserz, StellarVue, and visitors like you.

Sunday, August 9

Time	Event	Location
9:30a - 11:30a	Jr. Ranger Astronomy	ML Amphitheater
10:00a - 11:00a	The City Dark Film	KYVC Aud.
12:00p - 4:00p	NASA Astrobiology	Sulphur Works
1:00p - 2:00p	Year of the Dwarf Planets / Our Sky Tonight	KYVC Auditorium
1:00p - 4:00p	Art & Science Faire	Loomis Plaza
2:00p - 4:00p	Solar Scope Viewing	KYVC, Loomis Plaza, Bumpass Hell
2:00p - 3:00p	Ask a NASA Astronomer!	Loomis Auditorium
2:00p - 3:00p	Explore Your Place in Space	KYVC Back Patio
3:00p - 4:00p	The City Dark Film	Loomis Aud.
3:30p - 4:30p	Just How Common is Life in the Universe?	KYVC Auditorium
8:30p - 9:30p	The Power of Comet and Asteroid Samples	KYVC Amphitheater
8:30p - 9:30p	A Visit to Pluto and Beyond!	ML Amphitheater
9:30p - 11:00p	Telescope Viewing	Bumpass Hell, KYVC, MLCG

Thank you!

Thank you for your interest to protect Lassen's dark night sky and for your attendance. We hope that you continue to be curious about the wonder of a starry night and share your experience with friends and family. Donations received during the festival will benefit future astronomy events at the park.