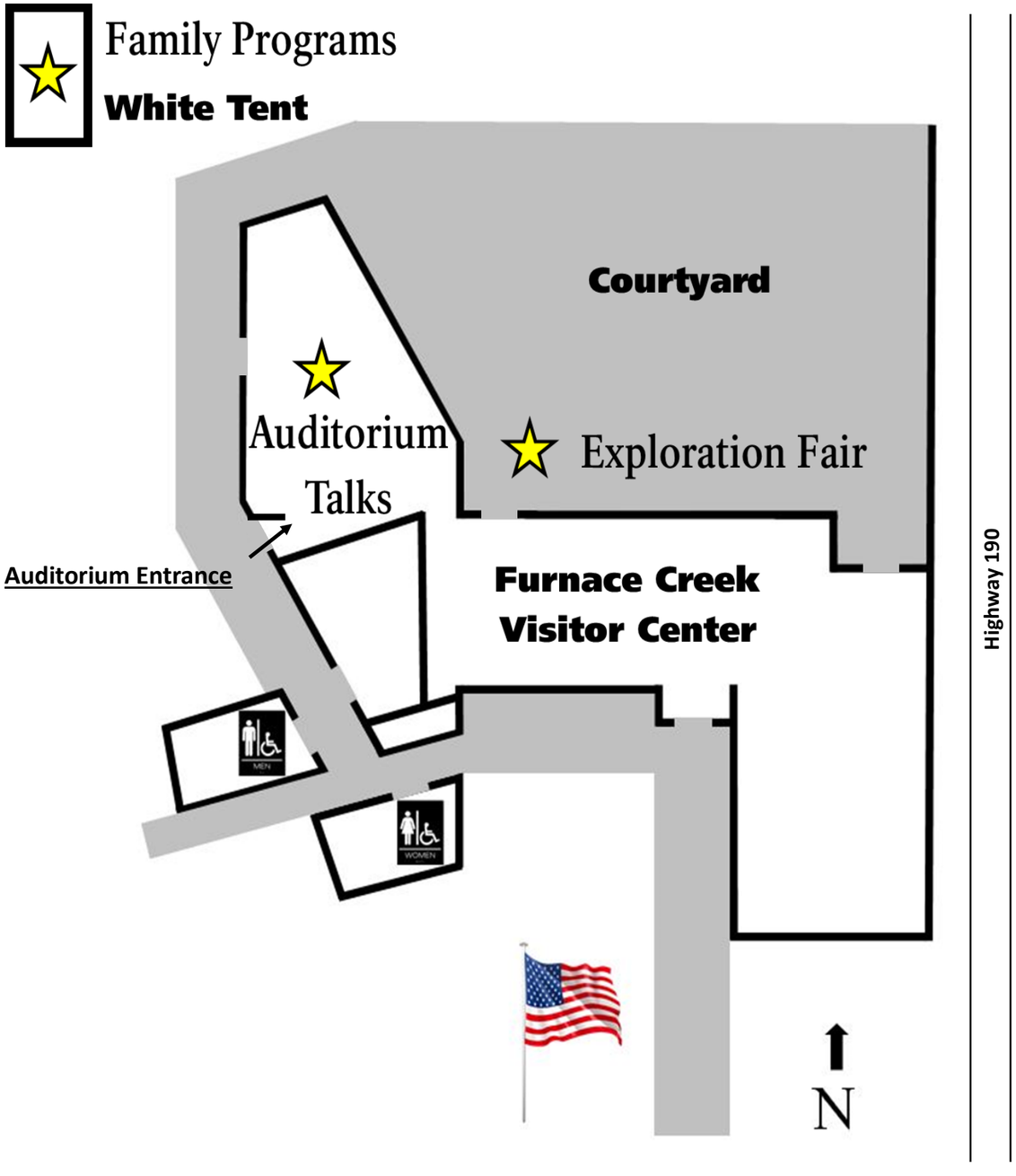
Furnace Creek Programs Map



Special thanks to the supporters of the 2023 Death Valley Dark Sky Festival, including the Death Valley Natural History Association, Las Vegas Astronomical Society, NASA's Goddard Space Flight Center, Jet Propulsion Laboratory, Ames Research Center, SETI Institute, and California Institute of Technology.

Death Valley National Park

2023

DEATH VALLEY DARK SKY FESTIVAL

Schedule

February 10-12

Friday

1:00-2:00pm — **Astrophotography "How-To" Session**

Kayla McCraren (Death Valley NPS)

Furnace Creek Auditorium (Visitor Center)

An opportunity to learn how to take pictures of the stars with your own DSLR camera! Note this session is intended for astrophotography newcomers. Participants should bring their DSLR camera and tripod.

7:00 - 8:00pm — **Astrophotography Meet Up**

Mesquite Flat Sand Dunes

Photograph the stars in one of the darkest locations in the country. Volunteers and rangers will be on hand to assist. A DSLR camera and tripod are essential to enjoy this session.

TICKETED PROGRAMS

Tickets are required for Keynote Talks. Pick up your free ticket on a first come first serve basis starting the day before each Keynote Talk at the Furnace Creek Visitor Center front desk from 8 am - 5 pm.

***Keynote Speaker* Exploration of Venus**

TICKETS REQUIRED *Ralph Lorenz (Applied Physics Lab)*

6:00-7:00pm

Furnace Creek Auditorium (Visitor Center)

Learn about new space missions to our sister planet, including VERITAS and DAVICI, and about recent findings from the Japanese Akatsuki spacecraft currently in orbit around Venus.

7:30-9:30pm — **CalTech Presents: Astronomy on Tap**

Trivia

Stovepipe Wells Badwater Saloon

Join Caltech scientists for two 20-minute public astronomy talks and space-themed pub trivia (with prizes!) at the Badwater Saloon. All ages welcome!

8:00-9:00pm — **Night Sky Talk**

Ranger Talk (Death Valley NPS)

Harmony Borax Works

Explore the incredible night sky with a ranger! Bring a red flashlight! Binoculars and chairs optional.

Saturday

5:30-6:30 am — Badwater Basin

Moon Walk
Ranger Program (Death Valley NPS)
Easy, ranger led walk on salt flats under the light of the moon.

9:30-10:30 am — Mars Hill (park on shoulder of road near Artists Drive Exit)

Searching for Signs of Ancient Life on a Cold and Desolate Mars
Michael Tuite (JPL)
Explore Mars's geology and its potential for hospitable conditions and, possibly, ancient life.

10:00-11:00am — Furnace Creek Auditorium (Visitor Center)

The Dynamic Landscape of Death Valley, as Seen by NASA's NISAR Mission
Carson Schubert (JPL)
Learn how NASA's NISAR mission will tell the story of Death Valley in unprecedented detail and unlock the landscape's mysteries.

11:00-12:00pm — Badwater Basin

Who's Swimming in Salty Waters?
Meghana Kumar (JPL)
Come discuss how organisms are able to survive in Badwater Basin, and how NASA's Europa Clipper will determine if Europa's icy surface could harbor life.

11:00-1:00pm — STRENUOUS HIKE — Ubehebe Crater

Mars-Like Places on Earth: A Journey to Ubehebe Crater
Rosalba Bonaccorsi (SETI Institute/NASA Ames Research Center)
Come learn how research in Death Valley can help guide us in our understanding of Mars on a strenuous hike into the bottom of the crater.

11:30-12:30pm — Furnace Creek Auditorium (Visitor Center)

The Science of Black Holes
Cameron Hummels (CalTech)
Join a discussion on the recent scientific advances leading to a greater understanding of how black holes are born, how they can die, and how we can see them.

1:00-2:00pm — Furnace Creek Auditorium (Visitor Center)

30 Years of Mars Exploration: The Roving Generation
Doug Ellison (JPL)
Learn about the challenges, failures, and successes of the last five rovers on the red planet.

1:00-2:00pm — Dantes View

Dantes View: SunRISE and Parallels to Humans Hiking
Shannon Berger (JPL)
SunRISE is a constellation mission that will use six space vehicles to study coronal mass ejections from our sun. Learn how keeping space vehicles flying is similar to how humans function.

2:30-3:30pm — Furnace Creek Auditorium (Visitor's Center)

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3:30-4:30pm — Mesquite Flat Sand Dunes

Dune Stories: Earth, Mars, & Titan
Michael Malaska (JPL/CalTech)
Come out to Mesquite Dunes and compare and contrast dunes on Earth with those on other worlds.

Keynote Speaker *TICKETS REQUIRED* **7:00-8:00pm** — Furnace Creek Auditorium (Visitor Center)

The Cosmic Autobiography
Katarina (Dida) Markovic (JPL)
Discover how we understand how the universe came to be, including its particles, forces, stars, and galaxies, as well as the ever-mysterious dark matter and dark energy.

7:00-10:00pm — Sunset Campground overflow lot

Furnace Creek Star Party
Las Vegas Astronomical Society/CalTech/NPS
Drop-in telescope event with constellation tours at 7:30, 8:30, and 9:30.

8:30-9:30pm — Harmony Borax Works

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Ubehebe Crater: An Explosive Analog for Planetary Volcanism
Marie Henderson (Goddard)
Learn about the explosive eruptions that created Ubehebe Crater and about the volcanic history of the Moon and Mars on this short walk.

11:30-12:30pm — Furnace Creek Auditorium (Visitor Center)

Astrophysicist Q&A
Nivedita Mahesh, Emily Silich, Cameron Hummels, Parke Loyd
A panel of CalTech astronomers and astrophysicists will field questions from the audience on all topics related to astronomy, physics, and space science.

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Family Programs

Build a Mars Lander!

Sat.— 10:00 -10:45am & 2:00 -2:45pm

Sun.—10:00-10:45am

Furnace Creek Visitor's Center Courtyard (White Tent)

NASA's Goddard Space Flight Center/NPS

Learn how NASA has landed spacecraft on Mars. Design, build, and test a lander of your own. Arrive at the start of the program to enjoy the full experience!

Children under 12 must be accompanied by a caretaker.

Exploration Fair

Talk with scientists and participate in activities!

Sat.—10:00-4:00pm & Sun.— 10:00-2:00pm

Furnace Creek Visitor Center Courtyard

- ✧ NASA
- ✧ SETI
- ✧ CalTech
- ✧ National Parks Service
- ✧ Las Vegas Astronomical Society
- ✧ Desert Studies Center