

# Dakota Nights

## ASTRONOMY FESTIVAL

SEPTEMBER 11-13, 2015

PRESENTED BY:  
THEODORE ROOSEVELT NATIONAL PARK  
AND HISTORIC MEDORA

SPONSORED BY: MEDORA AREA CONVENTION AND VISITORS BUREAU, MEDORA CHAMBER OF COMMERCE, FRIENDS OF THEODORE ROOSEVELT NATIONAL PARK, THEODORE ROOSEVELT MEDORA FOUNDATION, THEODORE ROOSEVELT NATURE AND HISTORY ASSOCIATION, BADLANDS MINISTRIES, DICKINSON STATE UNIVERSITY, CHATEAU DE MORES STATE HISTORIC SITE, AND THE NORTH DAKOTA COWBOY HALL OF FAME.

SPECIAL THANKS TO OUR MANY VOLUNTEERS!

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# Dakota Nights

## Friday, September 11, 2015

- 7:00 PM *Lakota Star Knowledge*, film & discussion by Dr. Craig Howe  
Cottonwood Campground Amphitheater
- 8:00 PM **Telescopes and Constellation Tours**  
Peaceful Valley Ranch

## Saturday, September 12, 2015

- ALL DAY!** Discovery Dome Theater  
South Unit Visitor Center Theater
- 10:00 AM - 1:00 PM **Build Your Own Rocket & Rocket Launching (Fee)**  
Chimney Park
- 11:30 AM **"Astronomy in Living Color" Family Activities**  
De Mores Park
- 1:00 PM **Solar System Hike**  
De Mores Park
- 1:00 - 4:00 PM **Celebrate Our Closest Star - the Sun!**  
De Mores Park
- 2:00 PM **"Lakota Stars and Winter Counts" with Dr. Craig Howe**  
North Dakota Cowboy Hall of Fame, Medora
- 3:30 PM **"Darkness Illuminates Our Lives" with Jeff Zylland**  
North Dakota Cowboy Hall of Fame, Medora
- 7:00 PM **"You Are Connected to the Universe!" with Dave Weinrich**  
Cottonwood Campground Amphitheater
- 8:00 PM **Telescopes and Constellation Tours**  
Peaceful Valley Ranch

## Sunday, September 13, 2015

- ALL DAY!** Discovery Dome Theater  
South Unit Visitor Center Theater
- 10:00 AM - 1:00 PM **Build Your Own Rocket & Rocket Launching (Fee)**  
Chimney Park
- 11:30 AM **"Astronomy in Living Color" Family Activities**  
De Mores Park
- 1:00 - 3:00 PM **Build a Real Telescope! (Fee)**  
Medora Community Center
- 2:00 PM **"Star Stories: Tales of the Night Sky" with Michael Irving**  
North Dakota Cowboy Hall of Fame, Medora
- 3:30 PM **"Astronomy Fact and Fiction" with Kate Zylland**  
North Dakota Cowboy Hall of Fame, Medora
- 7:00 PM **"Explorations in Space" with Erik Jensen**  
Cottonwood Campground Amphitheater
- 8:00 PM **Telescopes and Constellation Tours**  
Peaceful Valley Ranch

## Discovery Dome Theater

(Saturday and Sunday)

- 9:00 AM Secrets of the  
Cardboard Rocket
- 10:00 AM Birth of the Solar  
System
- 11:00 AM Two Small Pieces of  
Glass: The Amazing  
Telescope
- 12:00 PM Extrasolar Planets:  
Discovering New  
Worlds
- 1:00 PM One World, One Sky:  
Big Bird's Adventure
- 2:00 PM Secrets of the Dead Sea
- 3:00 PM Black Holes
- 4:00 PM Impact!

## Presentations and Workshops

**Lakota Star Knowledge, film & talk with Dr. Craig Howe**  
Dr. Howe, director of the Center for American Indian Research and Native Studies, directed this 27-minute film that explores the Lakota cultural and astronomical universe. Join Dr. Howe for a viewing and discussion of the film and the Lakota culture's relationship with the sky.  
Cottonwood Campground Amphitheater, TRNP

**Telescopes and Constellation Tours**  
World-class astronomers reveal the mysteries of the heavens through the use of telescopes and lasers.  
Peaceful Valley Ranch, TRNP

**Build Your Own Rocket & Rocket Launching**  
A rocket building workshop will be held at Chimney Park in Medora. Rocket kits, including the engine, are priced at \$15. (Cash Only)  
Chimney Park, Medora

**Astronomy in Living Color Family Activities**  
The fantastic colors of outer space are not always what they seem! Join Ranger Joe Bruce to learn how astronomers use color to help them study space. We will explore the vastness of space and learn how aliens might view our own world!  
De Mores Park, Medora

**Solar System Hike**  
How far apart would the planets be if we shrunk the solar system down to a mile? Join a ranger for a short walk through town and find out!  
De Mores Park, Medora

**Celebrate Our Closest Star - the Sun!**  
View the sun through solar scopes, build play-doh solar systems, and make your own UV bracelet. Learn about the solar winds which create the amazing Northern Lights!  
De Mores Park, Medora

**Lakota Stars and Winter Counts with Dr. Craig Howe**  
Cultures around the world have methods of recording and remembering their pasts. Discover how Lakota people of the Great Plains developed "winter counts" for this purpose with Dr. Howe, a Lakota scholar and enrolled member of the Oglala Sioux Tribe. This presentation will focus on narratives linking these winter counts with Lakota history, and also with stars and star knowledge.  
North Dakota Cowboy Hall of Fame, Medora

**Darkness Illuminates Our Lives**  
Explore how starry nights have helped us find our way on Earth and understand our place in the universe with Ranger

Astronomer Jeff Zyland. How will we choose to protect the darkness of night that has guided us for centuries?  
North Dakota Cowboy Hall of Fame, Medora

**You Are Connected to the Universe! by Dave Weinrich**  
It's easy to take the night sky for granted, but it is as much a part of the park environment as the scenic vistas and the plants and animals. Join Dave Weinrich, retired planetarium coordinator at Minnesota State University Moorhead, to discuss some of the celestial wonders visible in September. Learn how, in a very real sense, we are connected to the universe every time we look up on a clear, dark night.  
Cottonwood Campground Amphitheater, TRNP

**Build a Real Telescope!**  
With this easy-to-assemble telescope, you can see what Galileo Galilei first glimpsed 400 years ago including lunar craters, four moons circling Jupiter, and Saturn's rings. Telescope kits are priced at \$30. (Cash Only)  
Medora Community Center, Medora

**Star Stories: Tales of the Night Sky**  
Ancient people had a deep connection to the night sky. It held important stories about their past and present, and some believe even helped them predict the future. Times have changed and for many that connection is gone. Begin connecting again with the night sky with Ranger Astronomer Michael Irving.  
North Dakota Cowboy Hall of Fame, Medora

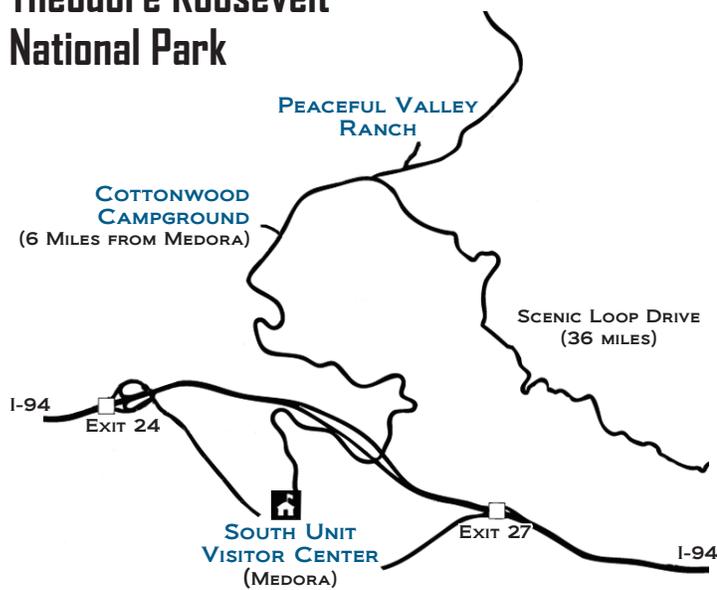
**Astronomy Fact and Fiction**  
The night sky is beautiful, but can be very confusing. Join Ranger Astronomer Kate Zyland to clear the air, and discover just how amazing the real universe is!  
North Dakota Cowboy Hall of Fame, Medora

**Explorations in Space**  
While you look at the sky tonight, take a moment to think of the astronauts who are looking back at you. Join Ranger Astronomer Erik Jensen to find out how we explore the stars and beyond today.  
Cottonwood Campground Amphitheater, TRNP

## Discovery Dome Theater

The Discovery Dome is a portable full-dome theater that surrounds viewers with immersive, engaging, and realistic sounds and visual images. Shows last 20 to 40 minutes. Descriptions of shows are on the next page.  
South Unit Visitor Center Theater, TRNP

# Theodore Roosevelt National Park



## Discovery Dome Theater Shows

### Impact!

Learn about the asteroids, meteorites, and comets that strike the Earth all the time, and how we might prevent future deadly impacts.

### Two Small Pieces of Glass: The Amazing Telescope

Follow two students as they learn how telescopes work, the history of telescopes, and major discoveries.

### Extrasolar Planets: Discovering New Worlds

Learn how astronomers study the motions of the stars to search for extrasolar planets, and discover what those planets might look like.

### Secrets of the Dead Sea

The stories preserved in the cliffs and caves of the Dead Sea region, as well as the Dead Sea scrolls, chronicle the scientific understanding of an ancient culture.

### Birth of the Solar System

Watch our solar system form, and see how collisions played a large role in the worlds we see today.

### Black Holes

Explore the latest scientific knowledge about black holes in a show that is visually immersive and exciting.

### One Earth, One Sky: Big Bird's Adventure

Our youngest audience members visit Sesame Street on an exciting journey to learn about the Sun, stars, and the Big Dipper.

### Secrets of the Cardboard Rocket

Take a cardboard rocket ride and experience the wonders of our solar system!

## Historic Medora

