

# Keizertimes

SECTION A

AUGUST 18, 2017

\$1.00

## ECLIPSE 101

### ONCE IN A LIFETIME

It can take up to 375 years for a total solar eclipse to occur again in a specific location.

### 1. What is an eclipse?

#### TOTAL SOLAR ECLIPSES

are the effect of the moon passing between the sun and Earth. It's believed that the dazzling results are unique to our planet because of the distance between Earth and the sun and the size of our moon. Keizer and the surrounding areas will be in the umbra, the darkest part of the shadow. Others will experience only a partial eclipse, called the penumbra.

#### TIMES

**9:05 A.M.**  
Partial eclipse begins

**10:17:24 A.M.**  
Totality begins

**10:18:19 A.M.**  
Full totality

**10:19:14 A.M.**  
Totality ends

**10:37 A.M.**  
Partial eclipse ends

### 2. Phases of the eclipse

AN ECLIPSE HAS FIVE PHASES, BUT ONLY ONE HAS A COOL NAME.



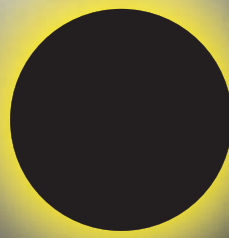
#### FIRST CONTACT

When the edge of the moon first begins to overlap the sun.



#### SECOND CONTACT

The sun begins to disappear behind the moon.



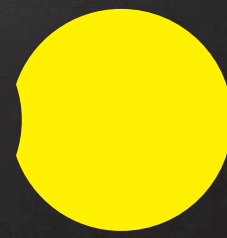
#### TOTALITY

The sun is completely covered by the moon. This will last for about 2 minutes in the Keizer area.



#### THIRD CONTACT

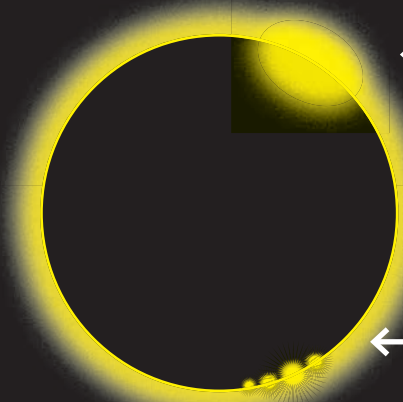
The outer edge of the sun begins to reappear.



#### FOURTH CONTACT

The last moments before overlap disappears.

### 3. What to look for



#### DIAMOND RING EFFECT

About 10 to 15 seconds before and after totality

#### CORONA

The lighted edge of the sun during totality. Keep an eye out for changing colors. Those might be plasma eruptions on the surface of the sun, shooting hundreds of thousands of miles into space.

#### BAILY'S BEADS

About 5 seconds before and after totality. This is the effect of the sun's light passing through the moon's peaks and valleys

### Others things to watch for

#### SHADOW BANDS

About 1 minute before totality, moving wavy lines of alternating light and dark can be seen on the ground and along walls. These are the result of Earth's turbulent atmosphere refracting the last rays of sunlight.

#### UMBRA EDGES

Spare a few seconds during totality to look away to the outer edges of the umbra (darkest shadow). You will probably be able to see the edges in the sky.

#### STARS

Depending on how dark it gets where you are, stars could appear.

#### APPROACHING SHADOWS

If you are going to a place with good elevation, watch the shadow approach.

Reporting by KEIZERTIMES/Eric A. Howald  
Design by KEIZERTIMES/Andrew Jackson

### 4. Safety First

Do not look directly at the sun without eclipse-viewing glasses or proper protective eyewear. Paper shades should be CE certified with an ISO 12312-2:2015

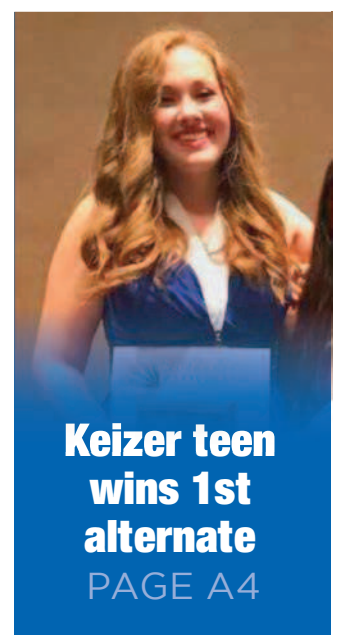


If case of an emergency call 911 first. If you cannot get through (cellular coverage could be very spotty and/or overloaded), text 911 with your location and the nature of the emergency.

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