

### The Moon



#### July 20, 1969

- On 10:56pm July 20, 1969 Neil Armstrong stepped onto the Moon.
- On December 19, 1972 Eugene Cernan stepped off the Moon.
- Since then no human has gone to the Moon or even left low earth orbit.
- In the history of mankind, only 12 men ever walked on another world.









#### PHASES



### WAXING CRESCENT

## FIRST QUARTER

# MAXING WANG BBOUS



## MANING GIBBOUS

# THIRD OUMRIER

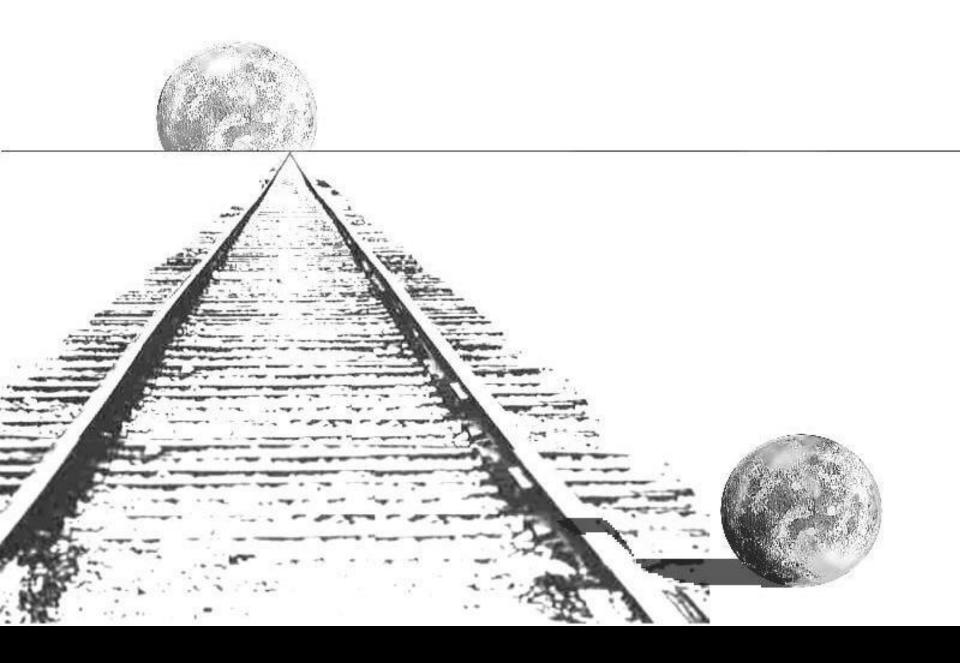
## WANNG CRESCENT

#### Earthshine

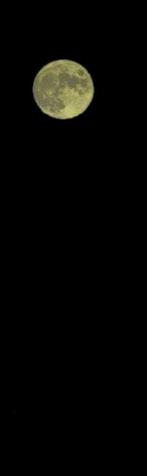












#### Moon Phase Timing

- The Moon orbits the Earth every 27.3 days.
- The full phase Cycle takes 29.5 days.

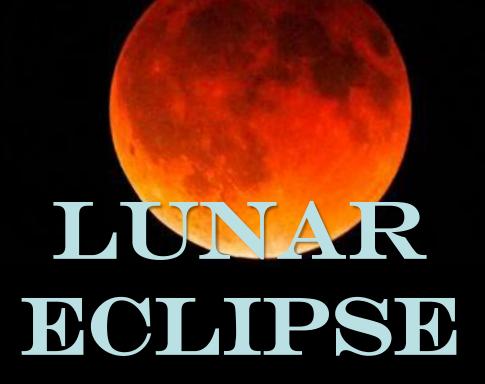
#### Full Moon Names

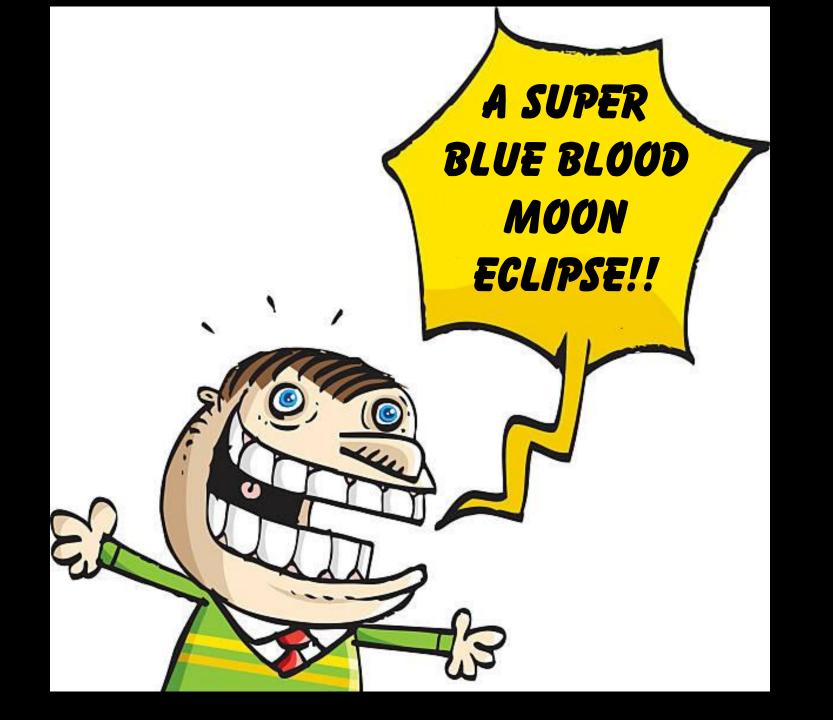
- January Wolf Moon
- February Snow Moon
- March Worm Moon
- April Pink Moon
- May Flower Moon
- June Strawberry Moon

- July Buck Moon
- August Sturgeon Moon
- September Corn Moon
- October Harvest Moon
- November Beaver Moon
  - December Cold Moon

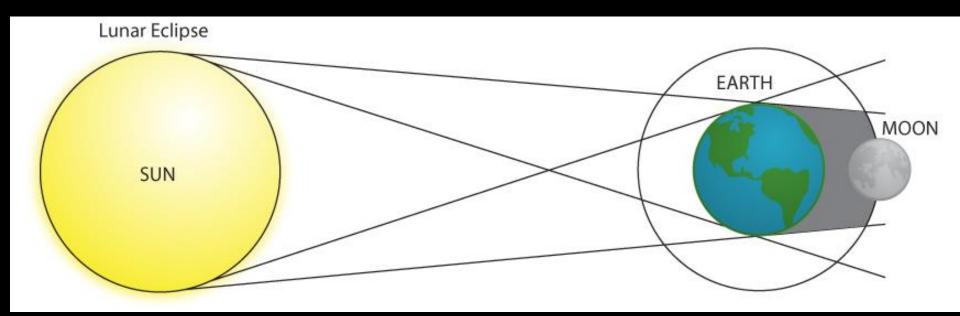
If there is a second Full Moon in a month it is called a Blue Moon







#### Lunar Eclipse







#### Total Lunar Eclipses

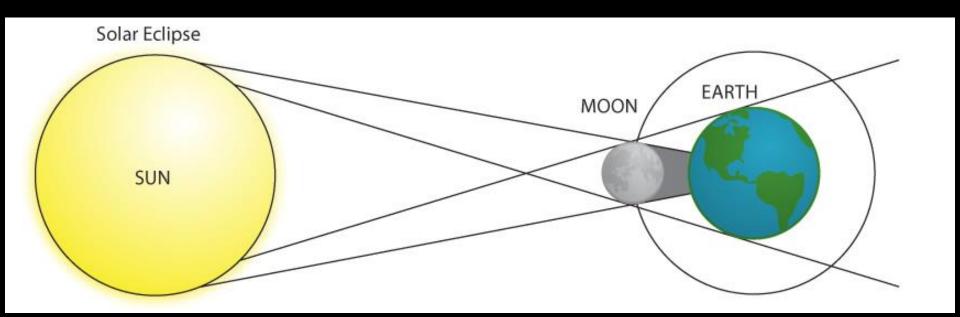
January 31, 2018 Early Morning (4:51 TO 6:07AM)

January 20, 2019 Evening (8:41 TO 9:43PM)



## SOLAR ECLIPSE

#### Solar Eclipse





@2001 F. Espenak

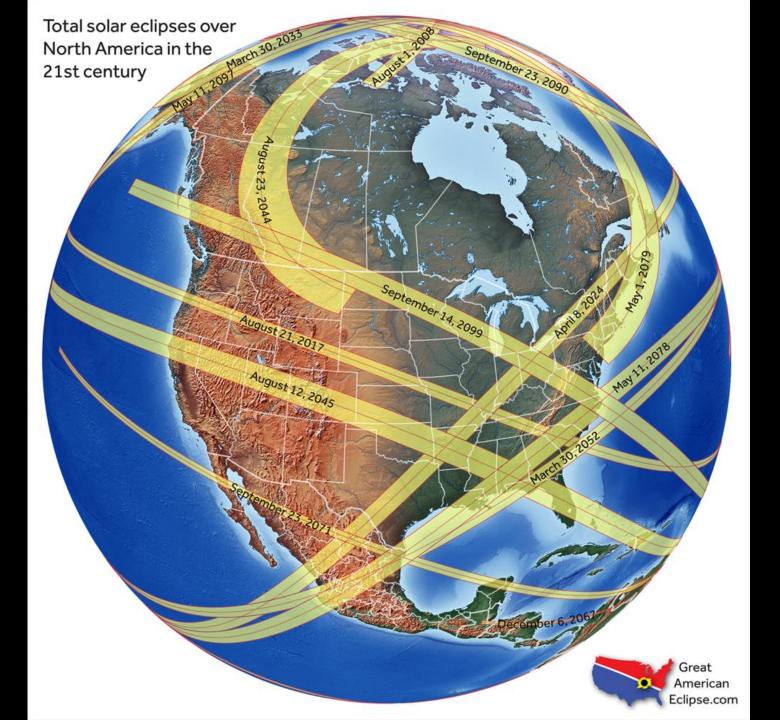
www.MrEclipse.com











## Why are Eclipses Rare?

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