



1  
00:00:00,499 --> 00:00:03,770



2  
00:00:03,803 --> 00:00:05,038  
What's Up for March?

3  
00:00:05,071 --> 00:00:07,440  
The moon hides red  
star Aldebaran

4  
00:00:07,473 --> 00:00:10,109  
and crescents dazzle after dusk.

5  
00:00:11,210 --> 00:00:12,845  
Hello and welcome. I'm  
Jane Houston Jones from

6  
00:00:12,878 --> 00:00:16,616  
NASA's Jet Propulsion Laboratory  
in Pasadena, California.

7  
00:00:16,649 --> 00:00:19,085  
On March 4 the  
first quarter moon

8  
00:00:19,118 --> 00:00:22,188  
passes between Earth  
and the star Aldebaran,

9  
00:00:22,221 --> 00:00:25,391  
temporarily blocking  
our view of the star.

10  
00:00:25,424 --> 00:00:28,094  
This is called an occultation.

11  
00:00:28,127 --> 00:00:31,230  
The occultation begins and  
concludes at different times,

12

00:00:31,263 --> 00:00:35,068  
depending on where you  
are when you view it.

13

00:00:35,101 --> 00:00:37,804  
The event should be easy to  
see from most of the U.S.,

14

00:00:37,837 --> 00:00:42,075  
Mexico, most of Central  
America, the Western Caribbean

15

00:00:42,108 --> 00:00:43,443  
and Bermuda.

16

00:00:43,476 --> 00:00:45,411  
Observers along a  
narrow path from

17

00:00:45,444 --> 00:00:48,714  
Vancouver, British Columbia, to  
Hartford, Connecticut,

18

00:00:48,747 --> 00:00:51,350  
will see the moon  
“graze” the star.

19

00:00:51,383 --> 00:00:54,720  
The star will disappear  
and reappear repeatedly

20

00:00:54,753 --> 00:00:56,489  
as hills and valleys on the moon

21

00:00:56,522 --> 00:00:59,258  
alternately obscure  
and reveal it.

22

00:00:59,291 --> 00:01:00,626  
[Whoosh]

23

00:01:00,659 --> 00:01:03,129  
As seen from Earth, both  
Mercury and Venus

24

00:01:03,162 --> 00:01:05,131  
have phases like our moon.

25

00:01:05,164 --> 00:01:08,935  
That's because they circle the  
sun inside Earth's orbit.

26

00:01:08,968 --> 00:01:11,904  
Planets that orbit between Earth  
and the sun are known as

27

00:01:11,937 --> 00:01:14,340  
inner or inferior planets.

28

00:01:14,373 --> 00:01:17,577  
Inferior planets can never  
be at "opposition,"

29

00:01:17,610 --> 00:01:19,745  
which is when the  
planet and the sun are on

30

00:01:19,778 --> 00:01:21,681  
opposite sides of Earth.

31

00:01:21,714 --> 00:01:25,051  
But inferior planets can  
be at "conjunction,"

32

00:01:25,084 --> 00:01:27,386  
which is when a planet,  
the sun and Earth

33

00:01:27,419 --> 00:01:29,388

are all in a straight line.

34

00:01:29,421 --> 00:01:32,091

Conjunction can happen once  
when the planet is on

35

00:01:32,124 --> 00:01:34,861

the opposite side of  
the sun from Earth

36

00:01:34,894 --> 00:01:38,464

and again when it's on the same  
side of the sun as Earth.

37

00:01:38,497 --> 00:01:41,767

When a planet is on the opposite  
side of the sun from Earth,

38

00:01:41,800 --> 00:01:45,171

we say it is at  
"superior conjunction."

39

00:01:45,204 --> 00:01:47,206

As the planet moves  
out from behind the sun

40

00:01:47,239 --> 00:01:48,975

and gets closer to Earth,

41

00:01:49,008 --> 00:01:51,577

we see less and less  
of the lit side.

42

00:01:51,610 --> 00:01:55,081

We see phases, similar to  
our moon's phases.

43

00:01:55,114 --> 00:01:58,317

Mercury is at superior conjunction on March 6.

44

00:01:58,350 --> 00:02:02,355

A few weeks later, the planet emerges from behind the sun

45

00:02:02,388 --> 00:02:04,957

and we can once again observe it.

46

00:02:04,990 --> 00:02:08,761

By the end of March we'll see a last-quarter Mercury.

47

00:02:08,794 --> 00:02:13,432

On April 20 Mercury reaches "inferior conjunction."

48

00:02:13,465 --> 00:02:15,968

Brilliant Venus is also racing toward

49

00:02:16,001 --> 00:02:19,639

its own inferior conjunction on March 25.

50

00:02:19,672 --> 00:02:21,941

Watch its crescent get thinner and thinner

51

00:02:21,974 --> 00:02:25,011

as the planet's size appears larger and larger,

52

00:02:25,044 --> 00:02:26,946

because it is getting closer to Earth.

53

00:02:26,979 --> 00:02:27,980

[Whoosh]

54

00:02:28,014 --> 00:02:31,317

Finally, look for Jupiter  
to rise in the East.

55

00:02:31,350 --> 00:02:33,152

It will be visible  
all month long

56

00:02:33,185 --> 00:02:35,254

from late evening until dawn.

57

00:02:36,255 --> 00:02:37,924

You can catch up on  
solar system missions

58

00:02:37,957 --> 00:02:42,895

and all of NASA's missions  
at [www.nasa.gov](http://www.nasa.gov)