1
00:00:00,499 --> 00:00:03,803
[■]

2
00:00:03,836 --> 00:00:05,638
What's Up for July?

3
00:00:05,671 --> 00:00:07,507
Prep for the August
solar eclipse

4
00:00:07,540 --> 00:00:09,776
by observing the moon's phases.

5
00:00:09,809 --> 00:00:12,078
Plus, catch 2 meteor showers.

6
00:00:13,112 --> 00:00:14,847
Hello and welcome. I'm
Jane Houston Jones from

7
00:00:14,880 --> 00:00:18,251
NASA's Jet Propulsion Laboratory
in Pasadena, California.

8
00:00:19,418 --> 00:00:21,954
Solar eclipses occur
when the new moon passes

9
00:00:21,987 --> 00:00:23,756
between Earth and the sun

10
00:00:23,789 --> 00:00:27,293
and the moon casts a
traveling shadow on Earth.

11
00:00:28,861 --> 00:00:31,664
A total solar eclipse occurs
when the new moon is

12
00:00:31,697 --> 00:00:35,435
in the right position to
exactly cover the sun's disk.

13
00:00:35,468 --> 00:00:37,770
This will happen next month
when the new moon will

14
00:00:37,803 --> 00:00:39,906
completely block
our view of the sun

15
00:00:39,939 --> 00:00:44,377
along a narrow path from
Oregon to South Carolina.

16
00:00:44,410 --> 00:00:48,681
During August's total solar
eclipse it may be dark enough

17
00:00:48,714 --> 00:00:52,218
to see some of the brighter
stars and a few planets!

18
00:00:53,352 --> 00:00:56,122
Two weeks before or after
a solar eclipse

19
00:00:56,155 --> 00:00:59,358
there's often, but not always,
a lunar eclipse.

20
00:00:59,391 --> 00:01:02,862
But it's not necessarily
a total lunar eclipse.

21
00:01:02,895 --> 00:01:06,199
This will happen because the
moon will be at opposition.

22
00:01:06,232 --> 00:01:09,869
The full moon and Earth and the
sun will be lined up

23
00:01:09,902 --> 00:01:11,304
with Earth in the middle.

24
00:01:11,337 --> 00:01:12,305
[whoosh]

25
00:01:13,473 --> 00:01:16,309
We can see all the moon's phases
beginning on July 1st,

26
00:01:16,342 --> 00:01:18,578
when the first quarter moon
rises at noon

27
00:01:18,611 --> 00:01:20,179
and sets at midnight.

28
00:01:20,212 --> 00:01:22,515
Even through binoculars
you'll see craters

29
00:01:22,548 --> 00:01:26,152
and some of the prominent
mare or "seas."

30
00:01:26,185 --> 00:01:28,921
Many of the Apollo landing
sites are located on

31
00:01:28,954 --> 00:01:31,390
the lit side of the
first quarter moon.

32
00:01:31,423 --> 00:01:34,427
To see the landing sites,

though, you'll have to rely on

33
00:01:34,460 --> 00:01:37,597
photographs taken by lunar
orbiting spacecraft.

34
00:01:38,865 --> 00:01:42,668
On July 9th the full moon rises
at sunset and sets at dawn.

35
00:01:43,369 --> 00:01:46,105
July 16 is the last quarter.

36
00:01:46,138 --> 00:01:49,308
It rises at midnight and
doesn't set until noon

37
00:01:49,341 --> 00:01:52,912
allowing you to enjoy a nice
moon view in the morning sky.

38
00:01:53,613 --> 00:01:56,115
The new moon occurs July 23.

39
00:01:56,148 --> 00:01:59,152
The new moon is the phase we'll
look forward to in August

40
00:01:59,185 --> 00:02:02,054
when it'll give us that
total solar eclipse.

41
00:02:03,355 --> 00:02:06,092
July will end with another first
quarter moon phase on the 30th.

42
00:02:06,125 --> 00:02:07,260
[whoosh]

43

00:02:07,293 --> 00:02:10,396
Finally, we have two good
meteor showers this month,

44
00:02:10,429 --> 00:02:13,933
both peaking on the
morning of July 30.

45
00:02:13,966 --> 00:02:17,303
The southern Delta Aquarids
have a maximum rate of

46
00:02:17,336 --> 00:02:21,174
25 meteors per hour
between midnight and dawn.

47
00:02:21,207 --> 00:02:24,644
The nearby slow and bright
Alpha Capricornids

48
00:02:24,677 --> 00:02:28,514
peak at 5 per hour and
often produce fireballs.

49
00:02:29,548 --> 00:02:31,584
You can catch up on all of
NASA's missions at

50
00:02:31,617 --> 00:02:34,453
www.nasa.gov

51
00:02:34,486 --> 00:02:36,589
And learn all about
the eclipse at

52
00:02:36,622 --> 00:02:39,759
eclipse2017.nasa.gov

53
00:02:40,860 --> 00:02:42,595
That's all for this month.

I'm Jane Houston Jones.

54
00:02:43,329 --> 00:02:44,430
NASA Jet Propulsion Laboratory