1
00:00:00,499 --> 00:00:03,770
■

2
00:00:03,803 --> 00:00:05,671
What's Up for December?

3
00:00:05,704 --> 00:00:08,041
Mars and Neptune above
the crescent moon

4
00:00:08,074 --> 00:00:09,876
and a New Year's Eve comet!

5
00:00:10,709 --> 00:00:11,544
Hello and welcome.

6
00:00:11,577 --> 00:00:12,845
I'm Jane Houston Jones

7
00:00:12,878 --> 00:00:14,781
from NASA's Jet
Propulsion Laboratory

8
00:00:14,814 --> 00:00:16,349
in Pasadena, California.

9
00:00:17,249 --> 00:00:19,819
2016 ends with fireworks

10
00:00:19,852 --> 00:00:24,457
as three planets line up as
if ejected from a Roman candle.

11
00:00:24,490 --> 00:00:27,060
Mercury, Venus and Mars
are visible

12
00:00:27,093 --> 00:00:29,695

above the sunset
horizon all month long.

13
00:00:29,728 --> 00:00:32,665
As Venus climbs
higher in the sky,

14
00:00:32,698 --> 00:00:34,400
it looks brighter
and larger

15
00:00:34,433 --> 00:00:36,836
than it appeared
last month.

16
00:00:36,869 --> 00:00:39,472
On New Year's Eve, Mars
and Neptune appear

17
00:00:39,505 --> 00:00:41,707
very close to each other.

18
00:00:41,740 --> 00:00:44,110
Through telescopes,
rusty red Mars

19
00:00:44,143 --> 00:00:48,181
and blue-green Neptune's
colors contrast beautifully.

20
00:00:48,214 --> 00:00:49,382
[Whoosh]

21
00:00:49,415 --> 00:00:51,717
There are two meteor
showers this month

22
00:00:51,750 --> 00:00:54,020
the Geminds and the Ursids.

23
00:00:54,053 --> 00:00:56,656
The best time to see the
reliable Geminids will be

24
00:00:56,689 --> 00:00:58,224
next year, when the full moon

25
00:00:58,257 --> 00:01:00,793
won't be so bright
and interfering.

26
00:01:00,826 --> 00:01:03,362
This year, however, we
may luck out and see

27
00:01:03,395 --> 00:01:06,833
some of the brighter meteors
on the evening of the 13th

28
00:01:06,866 --> 00:01:08,835
and the morning of the 14th.

29
00:01:08,868 --> 00:01:10,870
The best time to
view the Ursids,

30
00:01:10,903 --> 00:01:14,340
radiating from Ursa Minor,
or the little Dipper,

31
00:01:14,373 --> 00:01:16,542
will be from
midnight on the 21st

32
00:01:16,575 --> 00:01:19,312
until about 1 a.m. on the 22nd,

33
00:01:19,345 --> 00:01:21,047
before the moon rises.

34
00:01:21,080 --> 00:01:24,884
They may be active on
the 23rd and 24th, too.

35
00:01:24,917 --> 00:01:25,852
[Whoosh]

36
00:01:25,885 --> 00:01:28,254
We haven't had a good
easy-to-see comet

37
00:01:28,287 --> 00:01:29,555
in quite a while,

38
00:01:29,588 --> 00:01:33,693
but beginning in December
and through most of 2017

39
00:01:33,726 --> 00:01:38,131
we will have several binocular
and telescopic comets to view.

40
00:01:38,164 --> 00:01:39,966
The first we'll
be able to see is

41
00:01:39,999 --> 00:01:44,170
Comet
45P/Honda-Mrkos-Pajdusáková,

42
00:01:44,203 --> 00:01:46,572
which will appear low
on the western horizon

43
00:01:46,605 --> 00:01:48,341
on December 15th.

44
00:01:48,374 --> 00:01:50,343

On that date, the
comet will pass

45
00:01:50,376 --> 00:01:54,647
the pretty globular cluster M75.

46
00:01:54,680 --> 00:01:57,650
By the 21st, it will
appear edge-on,

47
00:01:57,683 --> 00:02:01,454
sporting a bluish-green
head and a thin, sharp view

48
00:02:01,487 --> 00:02:03,589
of the fan-shaped tail.

49
00:02:03,622 --> 00:02:06,392
On New Year's Eve, the
comet and the crescent moon

50
00:02:06,425 --> 00:02:09,996
will rendezvous to
say farewell to 2016.

51
00:02:11,130 --> 00:02:14,100
A "periodic" comet is a
previously-identified comet

52
00:02:14,133 --> 00:02:16,235
that's on a return visit.

53
00:02:16,268 --> 00:02:20,173
Periodic comet 45P returns
to the inner solar system

54
00:02:20,206 --> 00:02:22,375
every 5.25 years,

55

00:02:22,408 --> 00:02:25,311
and that's the one that will
help us ring in the new year.

56
00:02:26,379 --> 00:02:28,614
You can catch up on solar
system missions and

57
00:02:28,647 --> 00:02:30,516
all of NASA's missions at

58
00:02:30,549 --> 00:02:32,752
www.nasa.gov