WHAT'S UP

January 2016

1
00:00:00,000 --> 00:00:04,000
Music.

2
00:00:04,000 --> 00:00:05,000
Jane Houston Jones: What's Up for January?

3
00:00:05,000 --> 00:00:10,000
A meteor shower, a binocular comet, and the winter circle of stars!

4
00:00:10,000 --> 00:00:17,000
Hello and welcome. I'm Jane Houston Jones from NASA's Jet Propulsion Laboratory in Pasadena, California.

5
00:00:17,000 --> 00:00:21,000
In case you missed last month's Geminid and Ursid meteor showers,

6
00:00:21,000 --> 00:00:27,000
January 4th's Quadrantids will either sizzle or fizzle for observers in the U.S.

7
00:00:27,000 --> 00:00:30,000
The shower may favor the U.S., or it could favor Europe,

8
00:00:30,000 --> 00:00:34,000
depending on which prediction turns out to be correct.

9
00:00:34,000 --> 00:00:39,000
The shower's radiant, in the obsolete constellation Quadrans Muralis,

10
00:00:39,000 --> 00:00:43,000
is in a star-poor but familiar area in the northeast sky.

11
00:00:43,000 --> 00:00:49,000
It makes a triangle with Ursa Major and Ursa Minor - the big and little dippers.

12
00:00:49,000 --> 00:00:53,000
U.S. Observers should begin looking at 08:00 Universal Time -

13
00:00:53,000 --> 00:00:56,000

that's midnight Pacific or 3 a.m. Eastern -

14
00:00:56,000 --> 00:01:01,000
and European observers should look 8 hours earlier at 00 UT.

15
00:01:01,000 --> 00:01:03,000
The peak should last about two hours,

16
00:01:03,000 --> 00:01:09,000
with rates of 120 meteors per hour predicted in areas with a dark sky.

17
00:01:09,000 --> 00:01:10,000
Sound: Whoosh.

18
00:01:10,000 --> 00:01:16,000
Jones: In the middle of the month, midnight through pre-dawn will be prime time for viewing comet Catalina.

19
00:01:16,000 --> 00:01:19,000
It's also near Ursa Major this month.

20
00:01:19,000 --> 00:01:22,000
It should be visible in binoculars if you have a dark sky,

21
00:01:22,000 --> 00:01:24,000
but a telescope would be ideal.

22
00:01:24,000 --> 00:01:30,000
Between the 14th and the 17th, the comet will pass by two stunning galaxies:

23
00:01:30,000 --> 00:01:33,000
M51, the Whirlpool galaxy,

24
00:01:33,000 --> 00:01:37,000
and M101, a fainter spiral galaxy.

25
00:01:37,000 --> 00:01:38,000
Sound: Whoosh.

26
00:01:38,000 --> 00:01:45,000
Jones: Winter is also the best time to view the constellation Orion in the southeastern sky.

27
00:01:45,000 --> 00:01:49,000
Even from the city, you'll see that its stars have different colors.

28
00:01:49,000 --> 00:01:53,000
No telescope needed. Just look up a few hours after sunset.

29
00:01:53,000 --> 00:01:56,000
Orion's shoulder star Betelgeuse is a red giant

30
00:01:56,000 --> 00:02:00,000
while its opposite knee is blue.

31
00:02:00,000 --> 00:02:03,000
And below the familiar belt stars is the Orion Nebula,

32
00:02:03,000 --> 00:02:07,000
a star-forming region, easily visible with binoculars.

33
00:02:07,000 --> 00:02:12,000
The colorful stars of Orion are part of the Winter Circle of Stars.

34
00:02:12,000 --> 00:02:15,000
Let's start with Orion's blue star Rigel,

35
00:02:15,000 --> 00:02:18,000
and work clockwise to create the circle.

36
00:02:18,000 --> 00:02:21,000
At 6 o'clock, notice the brilliant white of Sirius,

37
00:02:21,000 --> 00:02:25,000
the brightest star in our northern hemisphere skies.

38
00:02:25,000 --> 00:02:29,000

Next up is faint yellow Procyon at 8 o'clock,

39
00:02:29,000 --> 00:02:34,000
and the colorful Gemini Twins Pollux and Castor at 10 o'clock.

40
00:02:34,000 --> 00:02:37,000
Brighter Pollux is faint orange and Castor is white.

41
00:02:37,000 --> 00:02:40,000
Yellow Capella appears at 12 o'clock.

42
00:02:40,000 --> 00:02:43,000
Finally at 2 o'clock stunning orange Aldeberan

43
00:02:43,000 --> 00:02:47,000
is near the Pleiades, in the constellation Taurus the bull.

44
00:02:47,000 --> 00:02:51,000
In the middle of our circle lies red Betelgeuse.

45
00:02:53,000 --> 00:02:57,000
A star's color reveals the star's temperature and age.

46
00:02:57,000 --> 00:03:01,000
In a flame, the hottest part is blue, and the cooler parts are yellow and red.

47
00:03:01,000 --> 00:03:03,000
Stars work the same!

48
00:03:03,000 --> 00:03:07,000
The hotter a star, the more blue light it produces.

49
00:03:07,000 --> 00:03:10,000
The cooler the star, the more red light it produces.

50
00:03:10,000 --> 00:03:14,000
Medium-hot stars like our sun are yellow.

51
00:03:14,000 --> 00:03:22,000
You can learn about all of NASA's studies of the stars and much more at www.nasa.gov