



1  
00:00:00,499 --> 00:00:03,803



2  
00:00:03,836 --> 00:00:05,471  
What's Up for November.

3  
00:00:05,504 --> 00:00:08,408  
Venus at sunset,  
Jupiter at dawn,

4  
00:00:08,441 --> 00:00:11,711  
your last evening glimpse  
of Saturn until spring

5  
00:00:11,744 --> 00:00:13,479  
and more meteors!

6  
00:00:13,512 --> 00:00:14,480  
Hello and welcome.

7  
00:00:14,513 --> 00:00:15,715  
I'm Jane Houston Jones

8  
00:00:15,748 --> 00:00:17,483  
from NASA's Jet  
Propulsion Laboratory

9  
00:00:17,516 --> 00:00:19,018  
in Pasadena, California.

10  
00:00:20,686 --> 00:00:24,657  
From November 1st to 3rd  
catch gibbous Venus,

11  
00:00:24,690 --> 00:00:27,660  
the crescent moon  
and ringed Saturn

12

00:00:27,693 --> 00:00:31,197  
together in the southwest  
sky just after sunset.

13  
00:00:31,230 --> 00:00:34,700  
Wake up before sunrise all  
month to see bright Jupiter

14  
00:00:34,733 --> 00:00:37,370  
above Spica, Virgo's  
brightest star,

15  
00:00:37,403 --> 00:00:40,339  
shining in the  
east-southeast sky.

16  
00:00:41,573 --> 00:00:44,343  
Just before sunrise, you'll  
see the waning crescent moon

17  
00:00:44,376 --> 00:00:46,345  
above Jupiter.

18  
00:00:47,713 --> 00:00:51,017  
On the following predawn  
mornings, through the 26th,

19  
00:00:51,050 --> 00:00:52,985  
the moon will be below Jupiter.

20  
00:00:54,019 --> 00:00:56,522  
November is a good time  
to try to spot Ceres,

21  
00:00:56,555 --> 00:00:59,459  
as it glides past the  
stars in the constellation

22  
00:00:59,492 --> 00:01:01,127  
Cetus the whale.

23

00:01:01,160 --> 00:01:03,129

Over the course of  
an evening or two,

24

00:01:03,162 --> 00:01:05,164

you will see the  
dwarf planet move

25

00:01:05,197 --> 00:01:07,500

relative to the background stars

26

00:01:07,533 --> 00:01:09,135

(through a telescope, that is).

27

00:01:09,168 --> 00:01:10,503

[Whoosh]

28

00:01:10,536 --> 00:01:12,371

This month, just  
like last month,

29

00:01:12,404 --> 00:01:14,540

there are 3 meteor showers:

30

00:01:14,573 --> 00:01:16,709

the Northern Taurids,  
the Leonids

31

00:01:16,742 --> 00:01:18,711

and the November Orionids.

32

00:01:18,744 --> 00:01:22,148

The slow, bright Taurids  
are visible before midnight

33

00:01:22,181 --> 00:01:24,917

for a week centered on  
November 12.

34

00:01:24,950 --> 00:01:29,222

The Leonids produced meteor storms of hundreds to thousands

35

00:01:29,255 --> 00:01:35,128

of meteors per hour at the peak each year from 1998 to 2002.

36

00:01:35,161 --> 00:01:37,964

This year they'll be visible at their regular rates,

37

00:01:37,997 --> 00:01:40,066

perhaps 10 per hour.

38

00:01:40,099 --> 00:01:42,802

The November 17 Leonid peak falls

39

00:01:42,835 --> 00:01:45,138

just a few days after the full moon,

40

00:01:45,171 --> 00:01:49,108

obscuring all but the brightest of these swift meteors.

41

00:01:49,141 --> 00:01:52,078

The Orionids peak on November 28th.

42

00:01:52,111 --> 00:01:56,249

The constellation Orion is familiar to most skywatchers.

43

00:01:56,282 --> 00:01:58,751

The radiant is near Orion's head.

44

00:01:58,784 --> 00:02:00,119

[Whoosh]

45

00:02:00,152 --> 00:02:02,922

Finally, we say a temporary  
farewell to Saturn

46

00:02:02,955 --> 00:02:04,390

at the end of the month,

47

00:02:04,423 --> 00:02:07,960

as it will pass through solar  
conjunction December 10th.

48

00:02:07,993 --> 00:02:11,330

It will reappear in the pre-dawn  
sky by the end of the year.

49

00:02:12,331 --> 00:02:14,500

You can catch up on  
current missions such as

50

00:02:14,533 --> 00:02:17,436

NASA's Dawn mission  
orbiting Ceres right now,

51

00:02:17,469 --> 00:02:21,774

Cassini orbiting Saturn and  
Juno orbiting Jupiter

52

00:02:21,807 --> 00:02:24,243

at [www.nasa.gov](http://www.nasa.gov).