1
00:00:08,210 --> 00:00:05,570
what's up for October the Andromeda

2
00:00:09,860 --> 00:00:08,220
galaxy hello and welcome I'm Jane

3
00:00:13,789 --> 00:00:09,870
Houston Jones at NASA's Jet Propulsion

4
00:00:15,880 --> 00:00:13,799
Laboratory in Pasadena California 2009

5
00:00:17,900 --> 00:00:15,890
is international year of astronomy and

6
00:00:21,109 --> 00:00:17,910
every month this year we'll be

7
00:00:25,370 --> 00:00:21,119
showcasing a great celestial view this

8
00:00:27,529 --> 00:00:25,380
month it's the Andromeda galaxy when you

9
00:00:29,990 --> 00:00:27,539
look up at the october sky you'll easily

10
00:00:32,479 --> 00:00:30,000
see solar system objects like jupiter

11
00:00:35,299 --> 00:00:32,489
and the moon you can also see stars

12
00:00:37,459 --> 00:00:35,309
clumps and knots of nebulosity in our

13
00:00:39,229 --> 00:00:37,469

Milky Way galaxy but did you know you

14
00:00:41,360 --> 00:00:39,239
can actually see another galaxy with

15
00:00:44,540 --> 00:00:41,370
your own eyes even without a telescope

16
00:00:47,180 --> 00:00:44,550
the Andromeda galaxy is the most distant

17
00:00:50,299 --> 00:00:47,190
easily visible object in the sky and

18
00:00:52,569 --> 00:00:50,309
it's also the largest and closest spiral

19
00:00:55,000 --> 00:00:52,579
galaxy that we can see

20
00:00:58,450 --> 00:00:55,010
it's visible even under moderate light

21
00:01:00,669 --> 00:00:58,460
polluted skies as a misty patch through

22
00:01:02,939 --> 00:01:00,679
binoculars and telescopes more and more

23
00:01:05,320 --> 00:01:02,949
detail is revealed to the observer

24
00:01:08,080 --> 00:01:05,330
astronomers have observed the Andromeda

25
00:01:10,570 --> 00:01:08,090
galaxy for over a thousand years Persian

26
00:01:12,850 --> 00:01:10,580
astronomer al Sufi was the first to

27
00:01:16,660 --> 00:01:12,860
record and sketch his observations of

28
00:01:18,760 --> 00:01:16,670
what he called the little cloud in 964

29
00:01:21,789 --> 00:01:18,770
he published this observation and many

30
00:01:23,940 --> 00:01:21,799
others in his book of fixed stars since

31
00:01:25,830 --> 00:01:23,950
the 16th century many astronomers

32
00:01:29,080 --> 00:01:25,840
rediscovered the Andromeda galaxy

33
00:01:31,090 --> 00:01:29,090
unaware of the earlier sightings Simon

34
00:01:35,230 --> 00:01:31,100
Marius first viewed the galaxy through a

35
00:01:38,620 --> 00:01:35,240
telescope in 1612 it is also known as

36
00:01:40,270 --> 00:01:38,630
m31 on Charles Messier's list of objects

37
00:01:44,919 --> 00:01:40,280
although he was aware of some of the

38
00:01:47,169 --> 00:01:44,929

earlier sightings in 1887 the first

39
00:01:49,630 --> 00:01:47,179
photograph revealed the spiral structure

40
00:01:53,770 --> 00:01:49,640
of the Andromeda galaxy which was then

41
00:01:55,660 --> 00:01:53,780
known as a nebula and in the early 20th

42
00:01:57,999 --> 00:01:55,670
century Edwin Hubble study of the

43
00:02:00,070 --> 00:01:58,009
Andromeda nebula proved that the nebula

44
00:02:03,790 --> 00:02:00,080
was not just a star cluster in our own

45
00:02:06,580 --> 00:02:03,800
Milky Way but a separate galaxy

46
00:02:08,530 --> 00:02:06,590
NASA's Swift satellite recently acquired

47
00:02:10,870 --> 00:02:08,540
the highest resolution view of a

48
00:02:13,540 --> 00:02:10,880
neighbouring spiral galaxy ever attained

49
00:02:16,060 --> 00:02:13,550
in ultraviolet wavelengths Swift

50
00:02:17,820 --> 00:02:16,070
revealed about 20,000 ultraviolet

51
00:02:20,620 --> 00:02:17,830
sources in the Andromeda galaxy

52
00:02:25,090 --> 00:02:20,630
especially hot young stars and dense

53
00:02:28,540 --> 00:02:25,100
star clusters NASA's Spitzer Space

54
00:02:31,420 --> 00:02:28,550
Telescope Galaxy Evolution Explorer and

55
00:02:33,450 --> 00:02:31,430
Chandra x-ray Observatory also observed

56
00:02:38,110 --> 00:02:33,460
the Andromeda galaxy in infrared

57
00:02:40,540 --> 00:02:38,120
ultraviolet and x-ray wavelengths in

58
00:02:42,310 --> 00:02:40,550
addition to the Andromeda galaxy you can

59
00:02:45,010 --> 00:02:42,320
still catch a great view of our Milky

60
00:02:47,260 --> 00:02:45,020
Way galaxy this month

61
00:02:49,420 --> 00:02:47,270
both are nearly overhead but while

62
00:02:53,200 --> 00:02:49,430
distant Andromeda is seen as a fuzzy

63
00:02:55,870 --> 00:02:53,210

oval in the constellation Andromeda the

64
00:02:59,230 --> 00:02:55,880
Milky Way spans the sky from east to

65
00:03:02,730 --> 00:02:59,240
overhead to the west it's a gorgeous

66
00:03:05,770 --> 00:03:02,740
sight from a dark sky again this month

67
00:03:07,810 --> 00:03:05,780
back to our solar system Jupiter reigns

68
00:03:10,600 --> 00:03:07,820
as king of the planets in the western

69
00:03:12,790 --> 00:03:10,610
sky and Mars will rise before midnight

70
00:03:15,000 --> 00:03:12,800
by the end of the month making it a late

71
00:03:17,740 --> 00:03:15,010
night pumpkin color treat on halloween

72
00:03:22,090 --> 00:03:17,750
you can learn all about NASA's missions