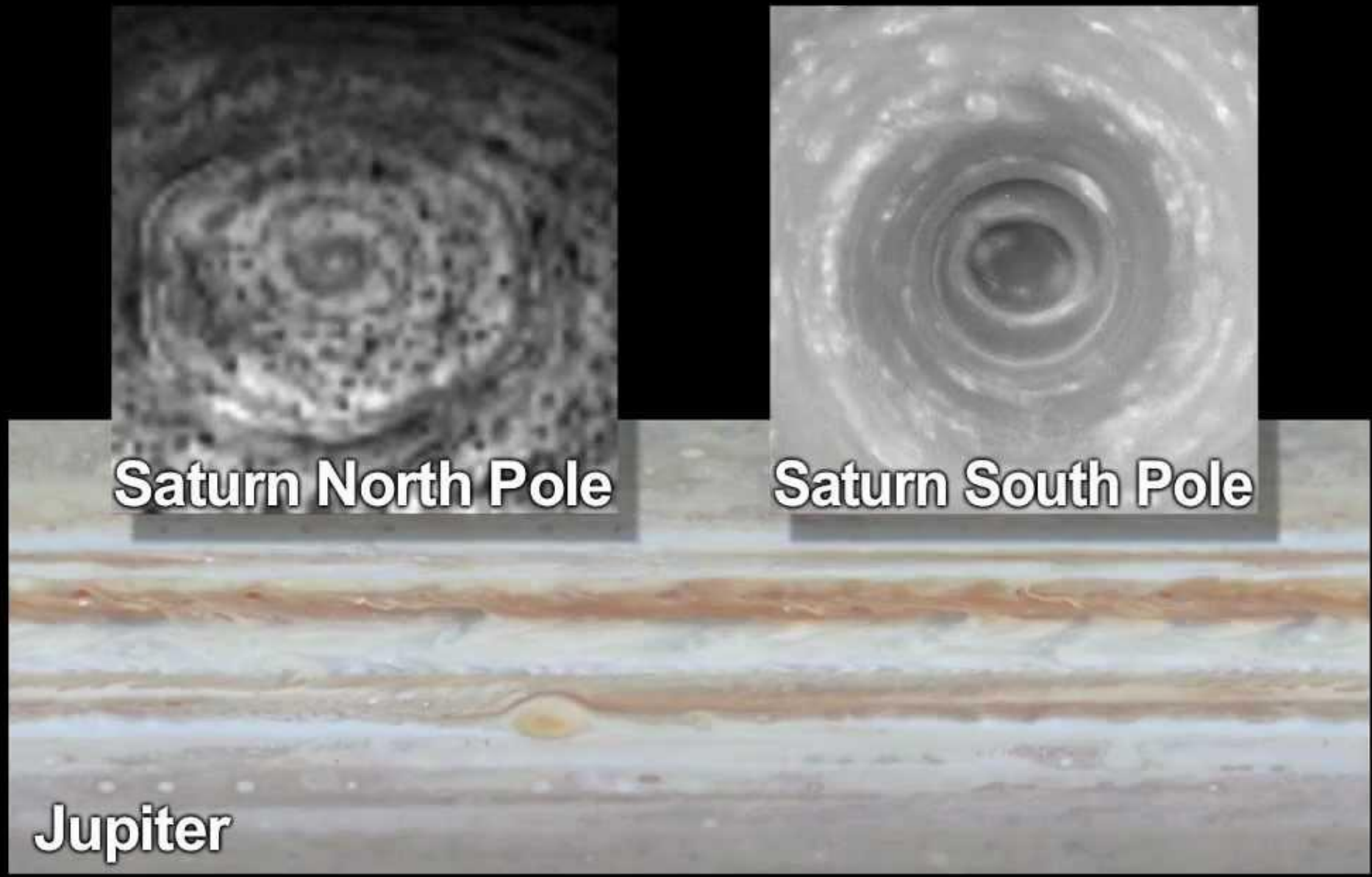
Saturn North Pole
Saturn South Pole
Jupiter

1
00:00:09,379 --> 00:00:05,480
what's up for August the solar system's

2
00:00:10,940 --> 00:00:09,389
windy world's hello and welcome I'm Jane

3
00:00:15,140 --> 00:00:10,950
Houston Jones at NASA's Jet Propulsion

4
00:00:16,580 --> 00:00:15,150
Laboratory in Pasadena California many

5
00:00:20,240 --> 00:00:16,590
of our planetary neighbors have

6
00:00:22,010 --> 00:00:20,250
significant atmospheres on Venus the

7
00:00:24,019 --> 00:00:22,020
atmosphere is much thicker than our own

8
00:00:25,970 --> 00:00:24,029
and blankets the planet with dense

9
00:00:29,540 --> 00:00:25,980
clouds which can reach tornado-like

10
00:00:31,099 --> 00:00:29,550
speeds on Mars it's much thinner though

11
00:00:35,209 --> 00:00:31,109
there are periodic global dust storms

12
00:00:38,240 --> 00:00:35,219
and even dust devils the outer planets

13
00:00:40,100 --> 00:00:38,250

atmospheres are worse than that Jupiter

14
00:00:43,069 --> 00:00:40,110
and Saturn's atmospheres are swirling

15
00:00:45,279 --> 00:00:43,079
with toxic gases like ammonia and the

16
00:00:48,200 --> 00:00:45,289
temperatures and wind speeds are extreme

17
00:00:50,569 --> 00:00:48,210
the Cassini spacecraft recently studied

18
00:00:53,209 --> 00:00:50,579
a huge storm on Saturn which has been

19
00:00:55,490 --> 00:00:53,219
raging since last December while it

20
00:00:57,709 --> 00:00:55,500
started as an isolated storm the winds

21
00:01:00,229 --> 00:00:57,719
and Saturn's atmosphere have affected

22
00:01:02,720 --> 00:01:00,239
the tops of Saturn's clouds the storm

23
00:01:04,340 --> 00:01:02,730
now completely encircles the planet and

24
00:01:07,310 --> 00:01:04,350
can even be spotted in amateur

25
00:01:09,370 --> 00:01:07,320
telescopes in this false color image the

26
00:01:11,630 --> 00:01:09,380
blue clouds are the highest and are thin

27
00:01:14,600 --> 00:01:11,640
yellow and white clouds are thick

28
00:01:17,330 --> 00:01:14,610
high-altitude clouds green are

29
00:01:19,789 --> 00:01:17,340
intermediate red and brown are lower

30
00:01:22,730 --> 00:01:19,799
altitude clouds but are not obscured by

31
00:01:25,880 --> 00:01:22,740
the other clouds the deepest blue shows

32
00:01:27,649 --> 00:01:25,890
a thin haze with no clouds below the

33
00:01:29,539 --> 00:01:27,659
storm clouds are most likely made of

34
00:01:33,039 --> 00:01:29,549
water ice covered by crystallized

35
00:01:37,450 --> 00:01:33,049
ammonia carbon and other contaminants

36
00:01:40,190 --> 00:01:37,460
but which planet is the windiest Neptune

37
00:01:43,039 --> 00:01:40,200
the winds on Neptune blow at more than

38
00:01:47,660 --> 00:01:43,049

1,200 miles per hour that's 2,000

39
00:01:49,639 --> 00:01:47,670
kilometers per hour ignition the launch

40
00:01:52,249 --> 00:01:49,649
of the Juno spacecraft this month we

41
00:01:54,780 --> 00:01:52,259
celebrate our return to Jupiter

42
00:01:56,730 --> 00:01:54,790
junuh will improve our understanding of

43
00:01:59,039 --> 00:01:56,740
our solar system's beginnings by

44
00:02:01,920 --> 00:01:59,049
revealing the origin and evolution of

45
00:02:04,020 --> 00:02:01,930
Jupiter the spinning spacecraft will use

46
00:02:06,359 --> 00:02:04,030
microwave antennas to observe how this

47
00:02:09,359 --> 00:02:06,369
windy world is moving far below its

48
00:02:11,580 --> 00:02:09,369
visible cloud tops it will also probe

49
00:02:14,040 --> 00:02:11,590
Jupiter's interior to determine how deep

50
00:02:15,590 --> 00:02:14,050
wind-driven cloud features like the

51
00:02:19,320 --> 00:02:15,600
colorful bands in the Great Red Spot

52
00:02:22,080 --> 00:02:19,330
reach into the planet throughout August

53
00:02:23,640 --> 00:02:22,090
Saturn is visible at sunset and you can

54
00:02:26,100 --> 00:02:23,650
see Jupiter after midnight

55
00:02:27,990 --> 00:02:26,110
both Neptune and asteroid Vesta are at

56
00:02:30,780 --> 00:02:28,000
opposition this month but you'll need a

57
00:02:32,490 --> 00:02:30,790
telescope to see them you can read all

58
00:02:36,960 --> 00:02:32,500
about the solar system winds at

59
00:02:39,300 --> 00:02:36,970
solarsystem.nasa.gov slash yss for year

60
00:02:41,670 --> 00:02:39,310
of the solar system you can learn all

61
00:02:44,309 --> 00:02:41,680
about the Juno mission at nasa.gov slash

62
00:02:48,600 --> 00:02:44,319
Juno and you can learn all about NASA's