

A composite image showing Saturn with its rings in the center and its moon Titan in the bottom left corner. The background is a dark field of stars.

Cassini flies by Saturn's moon Titan

1
00:00:07,430 --> 00:00:04,230

what's up for march

2
00:00:09,669 --> 00:00:07,440

saturn the jewel of the solar system

3
00:00:11,830 --> 00:00:09,679

hello and welcome i'm jane houston jones

4
00:00:14,150 --> 00:00:11,840

from nasa's jet propulsion laboratory in

5
00:00:16,230 --> 00:00:14,160

pasadena california

6
00:00:18,470 --> 00:00:16,240

during 2009 we're celebrating

7
00:00:20,230 --> 00:00:18,480

international year of astronomy by

8
00:00:22,950 --> 00:00:20,240

taking you on a tour of one of the

9
00:00:24,950 --> 00:00:22,960

month's best celestial objects and this

10
00:00:27,189 --> 00:00:24,960

month it's saturn

11
00:00:29,910 --> 00:00:27,199

when galileo aimed his telescopes at

12
00:00:31,429 --> 00:00:29,920

saturn in 1610 he wasn't sure what he

13
00:00:33,190 --> 00:00:31,439

was seeing

14

00:00:36,310 --> 00:00:33,200

he thought the rings were handles or

15

00:00:38,790 --> 00:00:36,320

large moons on either side of the planet

16

00:00:41,110 --> 00:00:38,800

a few years later in 1612 he was

17

00:00:42,950 --> 00:00:41,120

astounded that the handles he previously

18

00:00:46,709 --> 00:00:42,960

observed had disappeared

19

00:00:48,790 --> 00:00:46,719

and in 1616 the handles were back

20

00:00:50,869 --> 00:00:48,800

but they looked different

21

00:00:54,310 --> 00:00:50,879

this time he saw two half circles on

22

00:00:56,069 --> 00:00:54,320

either side of the round globe of saturn

23

00:00:59,189 --> 00:00:56,079

other observers added to the knowledge

24

00:01:01,590 --> 00:00:59,199

of the saturn system in the 1600s

25

00:01:03,830 --> 00:01:01,600

christian huygens observed that every 14

26

00:01:07,830 --> 00:01:03,840

to 15 years earth passes through the

27

00:01:12,310 --> 00:01:09,910

and they appear to disappear

28

00:01:14,390 --> 00:01:12,320

this is the same view that galileo saw

29

00:01:17,190 --> 00:01:14,400

half a century earlier

30

00:01:19,429 --> 00:01:17,200

giovanni cassini discovered new moons of

31

00:01:21,350 --> 00:01:19,439

saturn during the ring plane crossings

32

00:01:24,469 --> 00:01:21,360

of 1671

33

00:01:26,710 --> 00:01:24,479

and again in 1684 and he was the first

34

00:01:28,950 --> 00:01:26,720

to see a gap in the rings which was

35

00:01:30,310 --> 00:01:28,960

later named the cassini division in his

36

00:01:32,870 --> 00:01:30,320

honor

37

00:01:35,350 --> 00:01:32,880

300 years later our fascination with the

38

00:01:37,830 --> 00:01:35,360

saturn system grew with the flybys of

39

00:01:39,910 --> 00:01:37,840

voyager 1 and 2.

40

00:01:45,109 --> 00:01:39,920

voyager discovered a new outer ring

41

00:01:45,119 --> 00:01:49,030

spokes in the b ring

42

00:01:53,350 --> 00:01:51,590

and braiding on the f ring

43

00:01:56,870 --> 00:01:53,360

the f ring had just been discovered the

44

00:01:59,429 --> 00:01:56,880

year before by the pioneer 11 spacecraft

45

00:02:01,109 --> 00:01:59,439

new moons ringlets and gaps between

46

00:02:05,190 --> 00:02:01,119

saturn's rings were just some of the

47

00:02:08,630 --> 00:02:06,789

the cassini spacecraft has been

48

00:02:11,350 --> 00:02:08,640

returning amazing results from the

49

00:02:12,630 --> 00:02:11,360

saturn system for almost five years

50

00:02:16,390 --> 00:02:12,640

it's in the middle of a two-year

51
00:02:20,229 --> 00:02:18,070
one of the mission highlights was the

52
00:02:23,670 --> 00:02:20,239
landing of the huygens probe on saturn's

53
00:02:27,830 --> 00:02:25,589
geyser spewing water ice through vents

54
00:02:30,150 --> 00:02:27,840
on the moon enceladus remind us of the

55
00:02:31,990 --> 00:02:30,160
old faithful geyser on earth

56
00:02:34,630 --> 00:02:32,000
this summer for the first time ever

57
00:02:37,270 --> 00:02:34,640
telescopes on earth and a spacecraft at

58
00:02:39,110 --> 00:02:37,280
saturn will both view saturn's rings as

59
00:02:40,869 --> 00:02:39,120
they seem to disappear

60
00:02:42,309 --> 00:02:40,879
cassini will have a bird's eye view of

61
00:02:44,070 --> 00:02:42,319
this event

62
00:02:46,309 --> 00:02:44,080
this month don't miss venus in the

63
00:02:48,390 --> 00:02:46,319

western sky right at sunset while you

64

00:02:49,670 --> 00:02:48,400

wait a few hours for saturn to rise in

65

00:02:52,070 --> 00:02:49,680

the east

66

00:02:53,910 --> 00:02:52,080

saturn will be worth the wait it always

67

00:02:55,350 --> 00:02:53,920

looks more impressive when it's higher

68

00:02:57,030 --> 00:02:55,360

in the sky

69

00:02:58,869 --> 00:02:57,040

you can read more about saturn this

70

00:03:03,990 --> 00:02:58,879

month on nasa's international year of

71

00:03:09,589 --> 00:03:06,070

you can learn all about nasa's missions