



1  
00:00:06,019 --> 00:00:04,760  
hi I'm on our lawn wanna Cassini's

2  
00:00:08,330 --> 00:00:06,029  
navigators and NASA's Jet Propulsion

3  
00:00:10,370 --> 00:00:08,340  
Laboratory in Pasadena with your report

4  
00:00:12,320 --> 00:00:10,380  
from the ringed planet like most of you

5  
00:00:13,669 --> 00:00:12,330  
Cassini is extremely busy in December

6  
00:00:15,259 --> 00:00:13,679  
because all that the scientists and

7  
00:00:17,870 --> 00:00:15,269  
engineers want this season is more data

8  
00:00:19,970 --> 00:00:17,880  
as a result the spacecraft is completing

9  
00:00:23,779 --> 00:00:19,980  
floor revolutions around Saturn every 16

10  
00:00:25,550 --> 00:00:23,789  
days the December 5th Titan flyby was

11  
00:00:27,290 --> 00:00:25,560  
unique because Cassini was positioned to

12  
00:00:29,419 --> 00:00:27,300  
travel over tighten moving north to

13  
00:00:30,859 --> 00:00:29,429

south this allowed our scientists to

14

00:00:35,060 --> 00:00:30,869

first get pictures of the Huygens

15

00:00:36,560 --> 00:00:35,070

landing site and then high-resolution

16

00:00:38,569 --> 00:00:36,570

images of dark lakes in the southern

17

00:00:42,770 --> 00:00:38,579

hemisphere in particular one called

18

00:00:44,990 --> 00:00:42,780

Ontario locusts but Titan isn't the only

19

00:00:46,760 --> 00:00:45,000

place Cassini's exploring there been

20

00:00:48,700 --> 00:00:46,770

many great discoveries about Saturn's

21

00:00:51,139 --> 00:00:48,710

enigmatic rings and smaller moons

22

00:00:52,779 --> 00:00:51,149

scientists believe that Saturn's rings

23

00:00:54,680 --> 00:00:52,789

are much older than originally thought

24

00:00:56,090 --> 00:00:54,690

previous missions gave them the

25

00:00:58,310 --> 00:00:56,100

impression that the rings were formed

26  
00:01:00,860 --> 00:00:58,320  
perhaps a hundred million years ago by a

27  
00:01:03,560 --> 00:01:00,870  
cataclysmic impact of a comet into a

28  
00:01:05,960 --> 00:01:03,570  
large moon using a technique known as

29  
00:01:07,490 --> 00:01:05,970  
stellar occultation scientists acquired

30  
00:01:09,350 --> 00:01:07,500  
evidence that the Rings appear to be

31  
00:01:11,480 --> 00:01:09,360  
older because smaller moonlets our

32  
00:01:12,679 --> 00:01:11,490  
recycling themselves this animation

33  
00:01:15,109 --> 00:01:12,689  
shows you how a stellar occultation

34  
00:01:17,149 --> 00:01:15,119  
works by measuring the flickering of

35  
00:01:19,190 --> 00:01:17,159  
starlight as it passes through the Rings

36  
00:01:21,620 --> 00:01:19,200  
we're able to tell how thick the Rings

37  
00:01:23,660 --> 00:01:21,630  
are or if there's a more solid moola in

38  
00:01:25,249 --> 00:01:23,670

the way the moonlets appear to be

39

00:01:27,890 --> 00:01:25,259

continually colliding into each other

40

00:01:29,359 --> 00:01:27,900

shattering into ring particles and then

41

00:01:32,630 --> 00:01:29,369

their gravity brings them back together

42

00:01:34,340 --> 00:01:32,640

to recreate new moon let's as we know

43

00:01:36,800 --> 00:01:34,350

here on earth recycling makes things

44

00:01:38,539 --> 00:01:36,810

last longer scientists now believe that

45

00:01:42,340 --> 00:01:38,549

the Rings may be as old as the solar

46

00:01:44,090 --> 00:01:42,350

system itself 4.5 billion years old

47

00:01:45,950 --> 00:01:44,100

coming up on December twentieth

48

00:01:48,289 --> 00:01:45,960

Cassini's radar instrument will have

49

00:01:50,690 --> 00:01:48,299

historic opportunity to observe Titan

50

00:01:52,160 --> 00:01:50,700

South Pole the radar team will pierce

51

00:01:53,920 --> 00:01:52,170

through Titans thick smog like

52

00:01:56,179 --> 00:01:53,930

atmosphere in search of more legs

53

00:01:58,429 --> 00:01:56,189

Cassini's trip into the deep south will

54

00:02:00,289 --> 00:01:58,439

mark its fourth of seven visits in the

55

00:02:02,359 --> 00:02:00,299

southern hemisphere planned in this

56

00:02:04,039 --> 00:02:02,369

campaign to keep up to date with the

57

00:02:07,390 --> 00:02:04,049

latest news from Cassini please visit

58

00:02:09,430 --> 00:02:07,400

our website Saturn JPL NASA