
Jet Propulsion Laboratory
California Institute of Technology

1
00:00:06,619 --> 00:00:05,450
hello and welcome to NASA's Jet

2
00:00:09,770 --> 00:00:06,629
Propulsion Laboratory in Pasadena

3
00:00:11,629 --> 00:00:09,780
California I'm Jan Berkeley one of the

4
00:00:13,249 --> 00:00:11,639
sequence team lead engineers on Cassini

5
00:00:15,860 --> 00:00:13,259
here to share the latest news from

6
00:00:17,450 --> 00:00:15,870
saturn in our most exciting news

7
00:00:19,160 --> 00:00:17,460
instruments on the spacecraft that found

8
00:00:21,470 --> 00:00:19,170
evidence of seas and the high northern

9
00:00:22,820 --> 00:00:21,480
latitudes of Titan here's a movie that

10
00:00:25,009 --> 00:00:22,830
shows the area that it was seized

11
00:00:26,689 --> 00:00:25,019
hundreds of miles across and many

12
00:00:30,290 --> 00:00:26,699
smaller lakes that vary from several

13
00:00:33,290 --> 00:00:30,300

miles to tens of miles wide Cassini's

14
00:00:35,870 --> 00:00:33,300
last flyby of Titan was on March 10 2007

15
00:00:38,389 --> 00:00:35,880
at an altitude of 600 miles there were

16
00:00:40,130 --> 00:00:38,399
several objectives to this flyby higher

17
00:00:42,650 --> 00:00:40,140
resolution images of the area where the

18
00:00:44,240 --> 00:00:42,660
seas were found was successful this area

19
00:00:46,220 --> 00:00:44,250
is just north of the equator and west of

20
00:00:48,200 --> 00:00:46,230
the bright area known as Xanadu also

21
00:00:50,600 --> 00:00:48,210
seen by both radar and imaging

22
00:00:52,069 --> 00:00:50,610
instruments in previous flybys in

23
00:00:53,900 --> 00:00:52,079
addition Titan weather studies were

24
00:00:55,970 --> 00:00:53,910
conducted battling temperatures to

25
00:00:58,310 --> 00:00:55,980
determine seasonal changes Maya turn

26
00:01:00,200 --> 00:00:58,320
cloud motion and wind speeds scientists

27
00:01:02,569 --> 00:01:00,210
are still processing this data so stay

28
00:01:05,539 --> 00:01:02,579
tuned we will return to tighten on mar

29
00:01:07,730 --> 00:01:05,549
26th this time at an altitude of 620

30
00:01:09,410 --> 00:01:07,740
miles this time the flyby will include

31
00:01:11,600 --> 00:01:09,420
more temperature and global mapping and

32
00:01:14,210 --> 00:01:11,610
spectral imaging in the ultraviolet and

33
00:01:15,890 --> 00:01:14,220
infrared Regents the area of season legs

34
00:01:18,950 --> 00:01:15,900
will be mapped yet again but at a lower

35
00:01:20,810 --> 00:01:18,960
resolution the spacecraft will also pass

36
00:01:22,630 --> 00:01:20,820
behind Titan for approximately 35

37
00:01:24,770 --> 00:01:22,640
minutes this is called an occultation

38
00:01:26,390 --> 00:01:24,780

calamity data cannot be received from

39
00:01:28,429 --> 00:01:26,400
the spacecraft at that time what

40
00:01:30,440 --> 00:01:28,439
information can still be transmitted a

41
00:01:31,460 --> 00:01:30,450
unique experiment will take place where

42
00:01:33,890 --> 00:01:31,470
the spacecraft will be oriented

43
00:01:35,660 --> 00:01:33,900
precisely the send a signal to bounce

44
00:01:37,880 --> 00:01:35,670
off the atmosphere of Titan and be

45
00:01:39,469 --> 00:01:37,890
received at earth state of the signal

46
00:01:41,660 --> 00:01:39,479
tells us information about the surface

47
00:01:43,190 --> 00:01:41,670
region targeted this is the third time

48
00:01:46,550 --> 00:01:43,200
the experiment will be attempted by

49
00:01:47,810 --> 00:01:46,560
Cassini from Pasadena California this is

50
00:01:50,030 --> 00:01:47,820
Jan Berkeley with nasa's jet propulsion