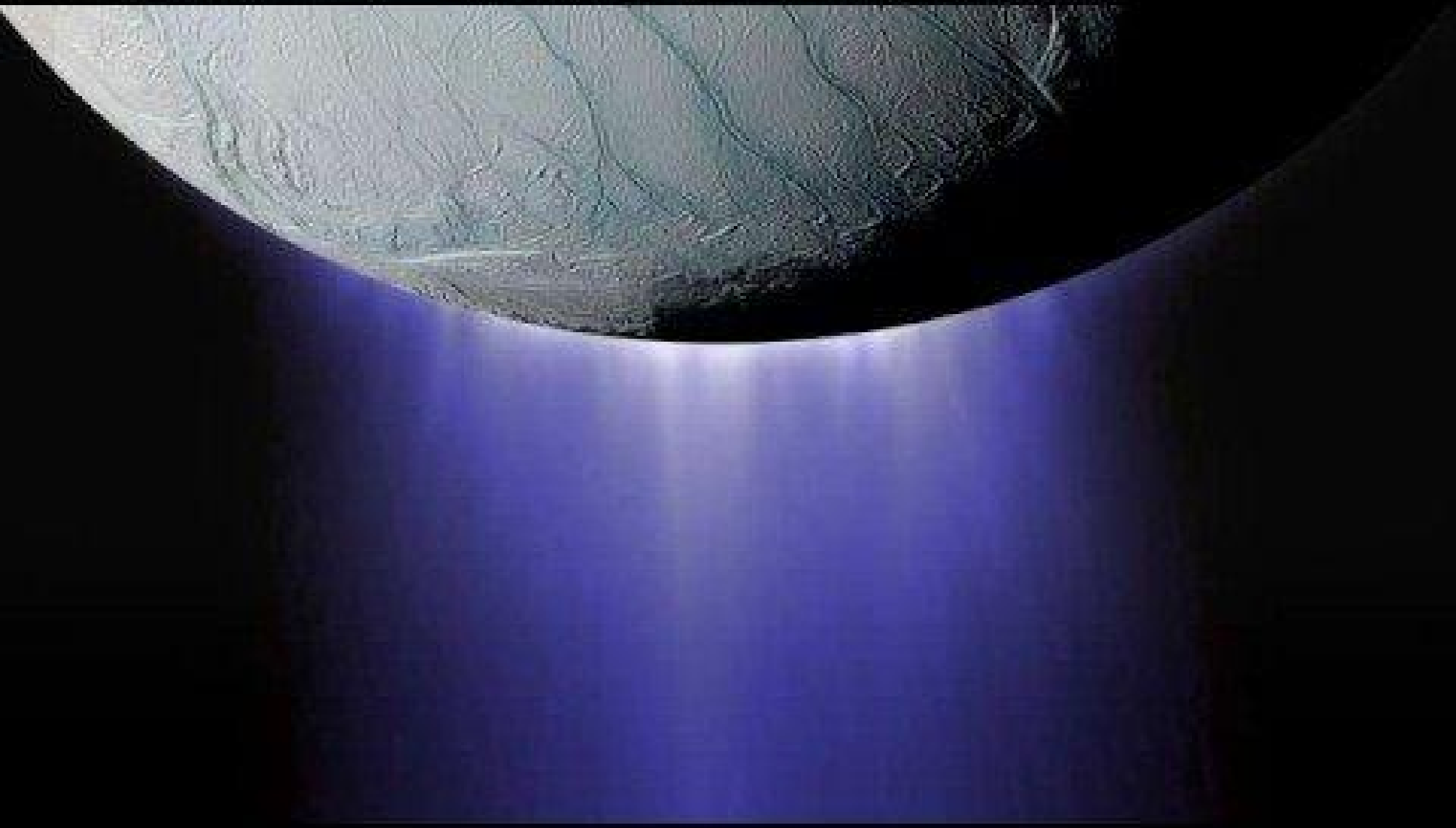

1
00:00:08,350 --> 00:00:07,030
hi my name is Katalin Herman at NASA's

2
00:00:11,799 --> 00:00:08,360
Jet Propulsion Laboratory in Pasadena

3
00:00:13,510 --> 00:00:11,809
California I'm a systems engineer on the

4
00:00:15,670 --> 00:00:13,520
spacecraft operations team for the

5
00:00:17,609 --> 00:00:15,680
Cassini mission to Saturn here with the

6
00:00:20,140 --> 00:00:17,619
latest news from the ringed planet

7
00:00:22,419 --> 00:00:20,150
Cassini will be flying by Saturn's

8
00:00:24,759 --> 00:00:22,429
geysers spewing moon Enceladus twice

9
00:00:28,900 --> 00:00:24,769
this month on October 9th and on the

10
00:00:30,939 --> 00:00:28,910
31st the first flyby on October 9th will

11
00:00:32,980 --> 00:00:30,949
be the closest flyby in the entire

12
00:00:36,069 --> 00:00:32,990
mission we will bring the spacecraft

13
00:00:38,230 --> 00:00:36,079

down to just 16 miles or 25 kilometres

14
00:00:40,330 --> 00:00:38,240
from the surface the spacecraft will be

15
00:00:42,670 --> 00:00:40,340
flying through the plumes at the South

16
00:00:45,580 --> 00:00:42,680
Pole which jet icy water vapor hundreds

17
00:00:48,220 --> 00:00:45,590
of miles into space the emphasis on this

18
00:00:49,930 --> 00:00:48,230
5i is not on taking pictures of the

19
00:00:52,510 --> 00:00:49,940
surface but on trying to figure out

20
00:00:54,640 --> 00:00:52,520
what's in the plume will be taking the

21
00:00:56,800 --> 00:00:54,650
spacecraft deeper into the plume than

22
00:00:59,950 --> 00:00:56,810
ever before and analyzing the particles

23
00:01:01,900 --> 00:00:59,960
and guesses that we find scientists are

24
00:01:04,420 --> 00:01:01,910
intrigued by the possibility that liquid

25
00:01:06,249 --> 00:01:04,430
water perhaps even an ocean may exist

26
00:01:08,680 --> 00:01:06,259
beneath the surface of Enceladus and

27
00:01:11,470 --> 00:01:08,690
trace amounts of organic molecules have

28
00:01:13,060 --> 00:01:11,480
also been detected and these are the

29
00:01:15,700 --> 00:01:13,070
building blocks for life as we know it

30
00:01:17,350 --> 00:01:15,710
so this discovery raises tantalizing

31
00:01:20,320 --> 00:01:17,360
possibilities about whether the moon is

32
00:01:23,110 --> 00:01:20,330
habitable and then three weeks later on

33
00:01:25,480 --> 00:01:23,120
October 31st the cameras and other

34
00:01:27,430 --> 00:01:25,490
optical remote sensing instruments will

35
00:01:29,500 --> 00:01:27,440
be primary they'll be front and center

36
00:01:31,270 --> 00:01:29,510
to take pictures of the fractures that

37
00:01:33,940 --> 00:01:31,280
slash across the moon south polar region

38
00:01:36,460 --> 00:01:33,950

the team calls them tiger stripes

39
00:01:38,500 --> 00:01:36,470
because of their appearance and this

40
00:01:42,219 --> 00:01:38,510
flyby will be 10 times higher than the

41
00:01:45,580 --> 00:01:42,229
previous one at about 124 miles or 200

42
00:01:47,500 --> 00:01:45,590
kilometres we learn more and more about

43
00:01:51,760 --> 00:01:47,510
this intriguing place each time we fly

44
00:01:53,469 --> 00:01:51,770
by it after the August 11th encounter we

45
00:01:55,240 --> 00:01:53,479
learned that the temperature is over one

46
00:01:56,890 --> 00:01:55,250
of the tiger-striped fractures were

47
00:01:59,950 --> 00:01:56,900
lower than those measured in earlier

48
00:02:02,230 --> 00:01:59,960
flybys and results also suggest that the

49
00:02:04,330 --> 00:02:02,240
intensity of the plume was different

50
00:02:07,270 --> 00:02:04,340
when compared to earlier encounters so

51
00:02:09,399 --> 00:02:07,280
the moon is changing over time after

52
00:02:10,749 --> 00:02:09,409
these two flybys Cassini will get back

53
00:02:13,899 --> 00:02:10,759
to looking at Saturn's biggest moon

54
00:02:16,599 --> 00:02:13,909
Titan coming up quickly on November the

55
00:02:18,050 --> 00:02:16,609
3rd and as far as Enceladus goes we

56
00:02:21,050 --> 00:02:18,060
won't visit again until

57
00:02:23,089 --> 00:02:21,060
November of next year to keep up-to-date

58
00:02:24,199 --> 00:02:23,099
with the latest news from Cassini please

59
00:02:28,130 --> 00:02:24,209
visit our website

60
00:02:30,380 --> 00:02:28,140
Saturn JPL NASA comm that's it for now