



1
00:00:12,470 --> 00:00:09,650
so traffic learn on Titan is the best

2
00:00:15,740 --> 00:00:12,480
case yet of accra volcano in the outer

3
00:00:19,640 --> 00:00:15,750
solar system in fact it appears to be

4
00:00:23,960 --> 00:00:19,650
two cryo volcanoes separated by a low

5
00:00:27,290 --> 00:00:23,970
area where we see some sand dunes here

6
00:00:30,830 --> 00:00:27,300
we see data from radar and the visible

7
00:00:33,170 --> 00:00:30,840
and infrared mapping spectrometer this

8
00:00:35,900 --> 00:00:33,180
is false column to distinguish the

9
00:00:37,880 --> 00:00:35,910
different compositions of the surface of

10
00:00:41,479 --> 00:00:37,890
the green areas are what we think of the

11
00:00:45,139 --> 00:00:41,489
volcanic areas while the blues would be

12
00:00:47,750 --> 00:00:45,149
fields of sand dunes now we change the

13
00:00:51,410 --> 00:00:47,760

color scheme the reds and yellows our

14

00:00:54,229 --> 00:00:51,420

highs the blues and lows when we got the

15

00:00:57,049 --> 00:00:54,239

topography we see this tall mountain is

16

00:00:59,389 --> 00:00:57,059

a thousand meters tall when you have a

17

00:01:01,700 --> 00:00:59,399

tall mountain and a deep crater and a

18

00:01:04,490 --> 00:01:01,710

low flat flow like feature coming out of

19

00:01:08,270 --> 00:01:04,500

it then it's very likely to be a cryo

20

00:01:11,510 --> 00:01:08,280

volcano on earth volcanoes are formed by

21

00:01:14,510 --> 00:01:11,520

molten rock or magma that magma comes

22

00:01:17,990 --> 00:01:14,520

out is called lava on Titan and the

23

00:01:20,870 --> 00:01:18,000

other icy bodies such as saturn's moon

24

00:01:25,880 --> 00:01:20,880

enceladus we have cryovolcanism that is

25

00:01:28,910 --> 00:01:25,890

very cold volcanism and the material

26

00:01:32,030 --> 00:01:28,920

inside this body is the quotes magma is

27

00:01:35,179 --> 00:01:32,040

not molten rock is actually a watery

28

00:01:37,630 --> 00:01:35,189

mixture is water with probably ammonia

29

00:01:39,710 --> 00:01:37,640

and maybe methanol and other things

30

00:01:42,590 --> 00:01:39,720

materials being brought from the

31

00:01:45,260 --> 00:01:42,600

interior of the moon or the planet are

32

00:01:47,690 --> 00:01:45,270

to the surface this important for a

33

00:01:50,240 --> 00:01:47,700

number of reasons and there one of them

34

00:01:53,740 --> 00:01:50,250

is that if you still have heat and

35

00:01:55,680 --> 00:01:53,750

enough heat to actually arm cause

36

00:01:58,770 --> 00:01:55,690

cryovolcanism

37

00:02:00,960 --> 00:01:58,780

curr and if you have water than those