

# COUNTDOWN TO MARS



DR. STEPHANIE GETTY



1  
00:00:00,450 --> 00:00:13,589

[Music]

2  
00:00:16,630 --> 00:00:15,350

i work in the solar system exploration

3  
00:00:18,550 --> 00:00:16,640

division at nasa goddard

4  
00:00:20,710 --> 00:00:18,560

and i'm also a science team member on

5  
00:00:21,670 --> 00:00:20,720

the mars organic molecule instrument the

6  
00:00:24,710 --> 00:00:21,680

moment instrument

7  
00:00:27,310 --> 00:00:24,720

that will be part of the exomars payload

8  
00:00:28,870 --> 00:00:27,320

that will land on mars at oxia planum in

9  
00:00:31,349 --> 00:00:28,880

2023

10  
00:00:32,709 --> 00:00:31,359

and so what i've discovered not only in

11  
00:00:35,350 --> 00:00:32,719

working closely with

12  
00:00:37,430 --> 00:00:35,360

the sample analysis that mars instrument

13  
00:00:40,069 --> 00:00:37,440

team on the curiosity rover

14

00:00:42,549 --> 00:00:40,079

is that really exploring the diversity

15

00:00:44,549 --> 00:00:42,559

of environments on mars requires a

16

00:00:46,790 --> 00:00:44,559

sustained long-term

17

00:00:49,190 --> 00:00:46,800

multi-pronged you know exploration

18

00:00:50,709 --> 00:00:49,200

program and so i'm really excited that

19

00:00:53,510 --> 00:00:50,719

perseverance will be

20

00:00:55,590 --> 00:00:53,520

making connections not only to the

21

00:00:56,150 --> 00:00:55,600

exciting discoveries that curiosity has

22

00:00:59,349 --> 00:00:56,160

made

23

00:01:02,470 --> 00:00:59,359

but also to the future discoveries that

24

00:01:03,270 --> 00:01:02,480

our exomars payload will make at the

25

00:01:05,670 --> 00:01:03,280

landing site

26  
00:01:06,390 --> 00:01:05,680  
that actually has uh mineralogical

27  
00:01:12,200 --> 00:01:06,400  
connections

28  
00:01:15,830 --> 00:01:12,210  
to the clay rich site of jezero crater

29  
00:01:17,270 --> 00:01:15,840  
[Music]

30  
00:01:18,950 --> 00:01:17,280  
well i am just so excited that

31  
00:01:21,429 --> 00:01:18,960  
perseverance is going to take the next

32  
00:01:23,910 --> 00:01:21,439  
step toward returning samples to earth

33  
00:01:26,390 --> 00:01:23,920  
this will allow us to undertake the most

34  
00:01:27,429 --> 00:01:26,400  
sophisticated analyses that humans know

35  
00:01:29,030 --> 00:01:27,439  
how to do

36  
00:01:31,270 --> 00:01:29,040  
and it's going to make connections and

37  
00:01:33,350 --> 00:01:31,280  
provide an interpretive framework

38  
00:01:34,870 --> 00:01:33,360

for the measurements that we make with

39

00:01:38,230 --> 00:01:34,880

instruments on the surface

40

00:01:38,870 --> 00:01:38,240

and in orbit around mars it'll also help

41

00:01:41,270 --> 00:01:38,880

us

42

00:01:43,190 --> 00:01:41,280

understand the signatures and the

43

00:01:45,789 --> 00:01:43,200

processes that have happened

44

00:01:47,190 --> 00:01:45,799

to organic species potential

45

00:01:49,910 --> 00:01:47,200

biomolecules

46

00:01:51,990 --> 00:01:49,920

over the years that the mars surface has

47

00:01:52,469 --> 00:01:52,000

been exposed to harsh harsh environment

48

00:01:55,030 --> 00:01:52,479

like

49

00:01:55,670 --> 00:01:55,040

radiation this has implications even

50

00:01:57,990 --> 00:01:55,680

beyond

51

00:02:00,630 --> 00:01:58,000

mars it has implications for our

52

00:02:02,709 --> 00:02:00,640

understanding and ability to interpret

53

00:02:04,630 --> 00:02:02,719

organic signatures throughout the solar

54

00:02:06,469 --> 00:02:04,640

system where habitable environments

55

00:02:08,630 --> 00:02:06,479

have a variety of histories of