

COUNTDOWN TO MARS



DR. MELISSA RICE



1
00:00:12,880 --> 00:00:16,460
This mission is really personally important to me because I've been

2
00:00:16,460 --> 00:00:21,320
invested in it from its start. I've worked on other missions before: the

3
00:00:21,330 --> 00:00:25,439
Opportunity rover, the Spirit rover, and the Curiosity rover, but I came into each

4
00:00:25,440 --> 00:00:29,860
of those missions after the mission was already operating on Mars.

5
00:00:30,220 --> 00:00:35,840
Perseverance is the first rover that I will have been part of its design and I work with the

6
00:00:35,840 --> 00:00:41,180
MASTCAM-Z team. MASTCAM-Z are the two twin cameras on the top of the rover.

7
00:00:41,220 --> 00:00:47,960
They look like this. And these two cameras have a set of filter wheels; each camera

8
00:00:47,969 --> 00:00:53,219
has eight different filters. That's eight different colors of light that the rover

9
00:00:53,219 --> 00:00:57,449
will be able to see on Mars and I've been part of the team that is designing

10
00:00:57,449 --> 00:01:03,480
the specific filters, so, I have been selecting the exact colors that

11
00:01:03,480 --> 00:01:08,790
Perseverance will be able to see. So when
the rover lands, and opens her eyes for

12
00:01:08,790 --> 00:01:13,979
the first time on Mars I will know that
I was a big part of the decisions behind

13
00:01:13,980 --> 00:01:18,020
how Perseverance is gonna see Mars.

14
00:01:19,900 --> 00:01:24,680
The thing that would be most exciting is
probably the thing that I can't even

15
00:01:24,689 --> 00:01:30,179
imagine at this point. Some of the most
exciting discoveries of the previous

16
00:01:30,179 --> 00:01:36,210
rover missions on Mars have been things
that we had no idea were even possible

17
00:01:36,210 --> 00:01:41,880
to be there on the surface. We didn't
realize at Gusev crater, for example,

18
00:01:41,880 --> 00:01:48,659
where the Spirit rover landed, that there
were sulfur-rich soils, silica-rich soils,

19
00:01:48,659 --> 00:01:53,340
the types of materials that form around
ancient hot springs. We would have had no

20
00:01:53,340 --> 00:01:58,040
idea at this stage before landing on
Mars that those things were there.

21

00:01:58,100 --> 00:02:04,259

So, the most exciting discovery that I can expect from perseverance is the thing by

22

00:02:04,259 --> 00:02:08,429

definition that I am NOT able to expect right now. Maybe that's not a very

23

00:02:08,429 --> 00:02:12,959

satisfying answer, but this is why we go and explore other worlds is to find