
COUNTDOWN
TO MARS
NASA
DR. MICHAEL CEBALLOS

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00:00:13,360 --> 00:00:17,540
What it means for me personally... it's
quite interesting, it's actually exactly

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00:00:17,550 --> 00:00:21,270
thirty years since I've been involved in
NASA projects. I started off at the age

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00:00:21,270 --> 00:00:25,740
of I just turned 20. I think I actually
applied when I was 19, and I started

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00:00:25,740 --> 00:00:29,609
working on what was called the Space
Station Freedom Project and during that

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00:00:29,609 --> 00:00:33,270
time I was really interested in space
exploration and there were some

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00:00:33,270 --> 00:00:37,050
proposals out there that dealt with, you
know, going to Mars and how the space

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00:00:37,050 --> 00:00:40,410
station and the moon would be a stepping
stone and here we are 30 years later and

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00:00:40,410 --> 00:00:45,750
we're doing robotic missions to the
surface of Mars and that ties in

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00:00:45,750 --> 00:00:49,260
specifically to the type of research
that I'm doing right now. In general, I

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00:00:49,260 --> 00:00:53,250
study double-stranded DNA viruses across
domains of life but within that we have

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00:00:53,250 --> 00:00:58,260
one track where we're looking at virus-host interactions and extremophile microorganisms,

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00:00:58,320 --> 00:01:00,960
and so, this mission to Mars,

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00:01:00,960 --> 00:01:05,100
Perseverance, where they're actually
looking specifically for biosignatures

14
00:01:05,100 --> 00:01:08,729
is quite exciting and I hope that we
find something that indicates there's

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00:01:08,729 --> 00:01:12,280
either, there's been life on that planet.

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00:01:14,790 --> 00:01:19,400
Well, what I'm really excited about with
this particular mission is the fact that

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00:01:19,400 --> 00:01:22,740
we're actually going to bring, you know,
samples back from the surface.

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00:01:22,840 --> 00:01:27,140
Even though it's not my field of expertise,
there's a whole subfield in microbiology

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00:01:27,150 --> 00:01:32,520
that crosses over with paleontology,
looking for micro fossils. And so, looking

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00:01:32,520 --> 00:01:37,470
for indications that some kind of
microbial life has existed so if we find

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00:01:37,470 --> 00:01:42,150
something in, you know, chert-like or any

other kind of sediment that indicates

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00:01:42,150 --> 00:01:47,430
that there may have been cellular type
of life or some kind of organized

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00:01:47,430 --> 00:01:51,420
biomolecules, then that's certainly going
to be exciting for my research

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00:01:51,420 --> 00:01:57,860
because we're very interested in extreme
microbiology and how viruses,