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00:00:01,216 --> 00:00:05,986

NARRATOR: Expedition 29 is a new experience in space for each of the members

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00:00:05,986 --> 00:00:07,956

of the International Space Station crew.

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00:00:08,536 --> 00:00:13,336

Mike Fossum is a native of Sioux Falls, South Dakota who grew up in the small town

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00:00:13,336 --> 00:00:15,636

of McAllen, Texas, in the Rio Grande Valley.

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00:00:15,636 --> 00:00:21,496

MIKE FOSSUM: We lived on the edge of town and my brothers and friends and I would just get

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00:00:21,496 --> 00:00:26,256

on our bikes and head out of town whenever we had the opportunity to, just to go explore,

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00:00:26,376 --> 00:00:29,796

to go camping, to go hunting, to do all those kinds of things and it was,

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00:00:30,266 --> 00:00:34,806

for me it was a big part of my childhood was to have the chance to get outdoors and,

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00:00:35,066 --> 00:00:39,626

and do stuff, on my own and also was hugely active

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00:00:39,626 --> 00:00:42,396

in the Boy Scouting program down in the Valley.

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00:00:42,606 --> 00:00:46,736

NARRATOR: After high school Fossum went to

Texas A&M University, and joined the Corps

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00:00:46,736 --> 00:00:48,936
of Cadets just so he could get a dorm room.

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00:00:49,396 --> 00:00:54,616
But he ended up finding his calling, and became
a leader in the corps while earning a Bachelor

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00:00:54,616 --> 00:00:56,386
of Science in Mechanical Engineering.

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00:00:56,626 --> 00:01:01,166
Fossum took his commission in the U.S.
Air Force, and after earning a Masters

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00:01:01,166 --> 00:01:05,526
in Systems Engineering at the Air Force
Institute of Technology he was detailed

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00:01:05,526 --> 00:01:09,626
to the Johnson Space Center in Houston to
support Space Shuttle Flight Operations.

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00:01:09,666 --> 00:01:15,456
After a few years he took the advice of two
fellow Air Force officers, astronauts Jerry Ross

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00:01:15,456 --> 00:01:19,206
and Ellison Onizuka, who suggested
he broaden his experience.

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00:01:19,836 --> 00:01:24,786
Fossum was selected for the Air Force Test Pilot
School where he become a flight test engineer,

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00:01:25,116 --> 00:01:28,686
and served in several assignments
before resigning from active duty

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00:01:28,766 --> 00:01:30,966
and coming back to work for NASA in Houston.

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00:01:31,566 --> 00:01:34,426
He worked as a systems engineer
on several projects,

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00:01:34,486 --> 00:01:38,796
including the prototype Space
Station Crew Escape Vehicle the X-38,

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00:01:39,146 --> 00:01:43,566
while earning a Master's in Physical Science
at the University of Houston Clear Lake,

26
00:01:43,996 --> 00:01:47,446
before being picked as an astronaut in 1998.

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00:01:48,106 --> 00:01:53,546
Fossum completed three spacewalks on the
second return-to-flight test mission in 2006,

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00:01:53,846 --> 00:01:58,846
and three more on the 2008 shuttle
flight that delivered the Kibo laboratory

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00:01:58,896 --> 00:02:00,356
to the International Space Station.

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00:02:00,356 --> 00:02:02,046
MIKE FOSSUM: Well, some things
are worth taking the risk.

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00:02:02,046 --> 00:02:04,796
There's a risk associated with it and
that's something that you have to face.

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00:02:05,386 --> 00:02:10,726
But the kind of science that we get back in

return is, is huge, and there's no other way

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00:02:10,726 --> 00:02:12,386

to do this stuff, and that's why we do it.

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00:02:12,576 --> 00:02:18,086

NARRATOR: Russian Air Force Colonel Sergei Volkov was born in the Kharkov region

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00:02:18,086 --> 00:02:23,276

of Ukraine, and was inspired to become a pilot during the time his father was a flight

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00:02:23,276 --> 00:02:24,996

instructor at a military school.

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00:02:25,246 --> 00:02:30,416

SERGEI VOLKOV: When I was three year old he took me to the airfield,

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00:02:31,236 --> 00:02:42,206

and while he flew with cadets his friends just gave me tour of the airfield and, of course,

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00:02:42,886 --> 00:02:45,216

I was able to sit in the real fighter.

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00:02:45,966 --> 00:02:54,376

And that's, so, how the dreams, dream appears, actually.

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00:02:54,666 --> 00:02:59,916

NARRATOR: The family moved to star city when Alexander Volkov became a cosmonaut.

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00:03:00,386 --> 00:03:03,546

Young Sergei grew up with famous cosmonauts as neighbors,

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00:03:03,876 --> 00:03:08,336
and when he saw how much time his father
spent studying for exams while training

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00:03:08,336 --> 00:03:11,926
for his three space flights, he
decided there were more minuses

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00:03:11,926 --> 00:03:14,416
than plusses to the cosmonaut's life.

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00:03:14,416 --> 00:03:17,966
So after high school he went to
the Tambov Air Force Pilot School

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00:03:18,006 --> 00:03:20,116
and graduated as a pilot-engineer.

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00:03:20,616 --> 00:03:25,126
He flew as an Air Force cargo pilot for two
years, but when he felt he could do more

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00:03:25,126 --> 00:03:28,306
for his country, Volkov applied
to become a cosmonaut.

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00:03:28,806 --> 00:03:31,676
He was selected as a candidate in 1997,

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00:03:31,676 --> 00:03:36,216
and became the world's first
second-generation space traveler in 2008

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00:03:36,536 --> 00:03:40,296
when he commanded the International
Space Station's Expedition 17.

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00:03:40,296 --> 00:03:44,236
SERGEI VOLKOV: We don't know what expect when
we reach Mars surface, we don't know what,

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00:03:44,436 --> 00:03:50,896
what we may expect from flying beyond the solar system, but we always wanted to know this,

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00:03:50,926 --> 00:03:55,746
and this I think is inspiring us and that's, continue to fly,

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00:03:56,416 --> 00:03:58,716
even it's really risky, risky job.

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00:03:59,366 --> 00:04:04,776
NARRATOR: Dr. Satoshi Furukawa was born and raised in Yokohama, near Tokyo,

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00:04:05,216 --> 00:04:08,356
and became interested in space flight as a very young boy.

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00:04:08,356 --> 00:04:14,566
SATOSHI FURUKAWA: When I was five years old I saw the first man's landing

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00:04:14,606 --> 00:04:18,376
on the Moon on TV and I was impressed at it.

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00:04:18,546 --> 00:04:20,256
That was one one thing.

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00:04:20,326 --> 00:04:26,266
And another thing was, I was a fan of a space hero called Ultra Seven,

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00:04:26,316 --> 00:04:31,176
which is a Japanese TV program about 40 years ago.

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00:04:32,806 --> 00:04:34,086

I was a big fan of that.

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00:04:34,496 --> 00:04:36,186

That made me interested in space.

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00:04:36,746 --> 00:04:40,826

NARRATOR: He planned to go to college to study Astronomy or Space Engineering,

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00:04:41,296 --> 00:04:44,306

but when his uncle spoke to him about how rewarding he found it

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00:04:44,306 --> 00:04:47,126

to be a physician, Furukawa changed his mind.

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00:04:47,796 --> 00:04:52,446

He earned a Doctorate of Medicine at the University of Tokyo and spent five years working

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00:04:52,446 --> 00:04:55,786

as a surgeon before shifting his focus to medical research.

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00:04:56,446 --> 00:05:00,826

One night at work he saw on television that the Japanese Space Agency was looking

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00:05:00,826 --> 00:05:05,026

for new astronauts for the International Space Station and decided to try for it;

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00:05:05,416 --> 00:05:10,986

he was picked for the program in 1999, and finished his Ph.D. in Medical Science

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00:05:10,986 --> 00:05:13,126

from the University of Tokyo the next year.

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00:05:13,756 --> 00:05:17,986

In 2001 he started advanced
space station training in Japan;

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00:05:18,496 --> 00:05:23,666

by mid-2004 he'd completed training as
a Soyuz flight engineer in Star City,

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00:05:23,966 --> 00:05:28,736

and then moved to Houston to train
with the 2004 class of NASA astronauts.

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00:05:28,736 --> 00:05:36,086

SATOSHI FURUKAWA: About a hundred years
ago flying was a very dangerous thing.

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00:05:36,996 --> 00:05:45,456

I think there was a discussion at that
point saying that we don't need to fly

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00:05:45,456 --> 00:05:53,276

with such risks, the ground
transportations are good enough.