
MF57C
MF71C
MF71E
MF43G

1
00:00:00,500 --> 00:00:20,360
\h Music

2
00:00:20,360 --> 00:00:23,460
\h SLATE: What inspired you to become an astronaut?

3
00:00:23,460 --> 00:00:27,040
\h I think that it's probably characteristic of all the people in our office is that everybody had

4
00:00:27,040 --> 00:00:32,640
\h pretty broad interests, kind of a career anxiety if you will that could only be solved in a

5
00:00:32,640 --> 00:00:37,030
\h place that puts so many incredible things together. I think at one time I wanted to be an

6
00:00:37,030 --> 00:00:43,880
\h astronomer, at another time, an oceanographer, another time a paleontologist and human

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00:00:43,880 --> 00:00:48,030
\h medicine, obviously, is what took me to medical school and guess what?

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00:00:48,030 --> 00:00:52,760
\h The space program puts that all together. As an astronaut you do Earth observation,

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00:00:52,760 --> 00:00:57,730
\h we do ocean science. I lived on an underwater habitat in my astronaut career and that’s

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00:00:57,730 --> 00:01:00,840
\h along with what happens to the human body in spaceflight,

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00:01:00,840 --> 00:01:04,390
\h obviously very near and dear to my heart. And just doing your normal mission specialist

12
00:01:04,390 --> 00:01:08,690
\h duties on the space station. So, there's nothing that puts all those things that we love

13
00:01:08,690 --> 00:01:10,890

\h together better than spaceflight.

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00:01:10,890 --> 00:01:14,030
\h SLATE: What was it like to spend 199 days in space?

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00:01:14,030 --> 00:01:17,370
\h Well, I loved it. I could sum it up that way, but I can tell you,

16
00:01:17,370 --> 00:01:22,870
\h that was my first spaceflight and flying out of Baikonur Cosmodrome was pretty special.

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00:01:22,870 --> 00:01:26,740
\h I mean, I launched off the same pad that launched Yuri Gagarin and that's pretty neat.

18
00:01:26,740 --> 00:01:31,380
\h I had a terrific crew. We got up there and the first look at the station was just

19
00:01:31,380 --> 00:01:36,110
\h unbelievable. When you open the hatch and see how big it is, that's going to be my home

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00:01:36,110 --> 00:01:39,810
\h for the next six-and-a-half months, that's pretty overwhelming and it did take me awhile

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00:01:39,810 --> 00:01:44,450
\h to get used to navigating around in zero gravity and doing my work and learning how to

22
00:01:44,450 --> 00:01:50,960
\h work the timeline, work with the ground, find things, not lose things in zero gravity. I

23
00:01:50,960 --> 00:01:55,420
\h think probably a few weeks into it, I really felt like I was hitting my stride and then I

24
00:01:55,420 --> 00:02:00,480
\h really, really enjoyed it. I can tell you that as tightly attached as I am to my family,

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00:02:00,480 --> 00:02:02,890
\h at the end of six-and-a-half months, I didn't really want to leave,

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00:02:02,890 --> 00:02:05,720
\h so it was an incredible experience.

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00:02:05,720 --> 00:02:08,800
\h SLATE: What are the differences between launching on a shuttle and a Russian Soyuz?

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00:02:08,800 --> 00:02:11,370
\h Well the differences between the Soyuz and the shuttle are huge.

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00:02:11,370 --> 00:02:15,940
\h The mission statements of each vehicle are quite different. The Soyuz, I like to think of as

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00:02:15,940 --> 00:02:19,860
\h a commuter rocket that takes three people to work. And you park it.

31
00:02:19,860 --> 00:02:23,700
\h Park it for six months. And then at the end of six months you turn the key and it goes and

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00:02:23,700 --> 00:02:29,230
\h you come home. Whereas the shuttle delivers a load, a big load, to the space station.

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00:02:29,230 --> 00:02:35,050
\h It's designed to carry those loads and up to seven people and, of course, bring back large

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00:02:35,050 --> 00:02:39,510
\h amounts of pressurized cargo as well. Both vehicles do their job very nicely,

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00:02:39,510 --> 00:02:43,480
\h but obviously you have very, very different launch profiles, very different launch

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00:02:43,480 --> 00:02:45,150
\h experience with each of them.

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00:02:45,150 --> 00:02:49,240
\h With the Soyuz, it's all-liquid boosters, it's a very gentle ascent.

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00:02:49,240 --> 00:02:54,330

\h It's hard almost to know that you've even left the pad because you have the shaking as the

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00:02:54,330 --> 00:02:58,490
\h engines spool up and you really don't feel a difference when you leave the pad.

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00:02:58,490 --> 00:03:02,430
\h You only know that from your clock that starts with your ascent indicators.

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00:03:02,430 --> 00:03:07,350
\h With the shuttle there is no doubt. The main engines start and in about five seconds those

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00:03:07,350 --> 00:03:13,050
\h things kind of spool up. You feel the orbiter shake and creak and groan and tilt a little bit

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00:03:13,050 --> 00:03:15,710
\h on the launch pad and you know it's getting ready to do something,

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00:03:15,710 --> 00:03:20,020
\h but when those solids light, there is no question, that is the moment you have left the

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00:03:20,020 --> 00:03:25,880
\h planet and you are starting to scream toward space. So, very exciting ascent on the shuttle

46
00:03:25,880 --> 00:03:27,190
\h I would say.

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00:03:27,190 --> 00:03:30,220
\h Now landing, I would say, is much more exciting on the Soyuz.

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00:03:30,220 --> 00:03:34,090
\h The shuttle of course lands like an airplane, the Soyuz hits the ground with a parachute

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00:03:34,090 --> 00:03:36,400
\h descent.

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00:03:36,400 --> 00:03:39,020
\h SLATE: What happened during STS-133?

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00:03:39,020 --> 00:03:43,440
\h Well the time went by in the blink of an eye. What I can say, as an astronaut you look for

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00:03:43,440 --> 00:03:48,090
\h certain kinds of space activities that are just really exciting, I mean, everybody loves to

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00:03:48,090 --> 00:03:52,340
\h do robotics and spacewalks, the docking and rendezvous, the dynamics of flight,

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00:03:52,340 --> 00:03:56,920
\h if you will. And 133 put a lot of those in a very short timeline, so everything that really

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00:03:56,920 --> 00:04:01,700
\h makes spaceflight wonderful for an astronaut, we had compressed into this 13-day flight

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00:04:01,700 --> 00:04:05,370
\h for us. So, of course, we had Discovery with us for this final flight,

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00:04:05,370 --> 00:04:10,630
\h we did the docking, the rendezvous. Two spacewalks and a lot of outfitting of that new

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00:04:10,630 --> 00:04:14,540
\h module that we put up there and a lot of science. We transferred cargo back and forth.

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00:04:14,540 --> 00:04:19,220
\h So you're always busy doing something dynamic, something different every day so it was

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00:04:19,220 --> 00:04:21,230
\h really magnificent.

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00:04:21,230 --> 00:04:24,310
\h SLATE: What was spacewalking like?

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00:04:24,310 --> 00:04:28,870
\h I think a spacewalk is where the rubber meets the road for an astronaut.

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00:04:28,870 --> 00:04:33,800

\h It's the closest you can be to the space environment and it's just an amazing thing.

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00:04:33,800 --> 00:04:39,590
\h I think all of us are glued to the windows whenever we can. We look at the Earth,

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00:04:39,590 --> 00:04:44,570
\h we look at our station and we look at the stars and whatnot and that view is just

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00:04:44,570 --> 00:04:50,540
\h incredible. But when you get outside the ship, when you are just out there in your

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00:04:50,540 --> 00:04:55,530
\h spacesuit and you have a big, wide-view helmet, then it's almost overwhelming.

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00:04:55,530 --> 00:04:58,830
\h Seeing the Earth below you much more panoramically,

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00:04:58,830 --> 00:05:03,120
\h seeing the station around you is just amazing.

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00:05:03,120 --> 00:05:06,340
\h SLATE: What was it like to be part of Discovery's final mission?

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00:05:06,340 --> 00:05:12,320
\h Well it was an incredible honor. I was assigned to this flight while I was still flying my

72
00:05:12,320 --> 00:05:17,370
\h long-duration flight, so that was a shock and a surprise.

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00:05:17,370 --> 00:05:21,610
\h I thought that the door to shuttle flights had slammed shut quite a bit before even I

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00:05:21,610 --> 00:05:26,680
\h launched. So out of the blue comes this opportunity to fly on one of the few shuttle

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00:05:26,680 --> 00:05:31,610
\h flights. I was incredibly honored for that. I landed and they said, OK,

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00:05:31,610 --> 00:05:35,050
\h you're behind in your training schedule already, you better get to work.

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00:05:35,050 --> 00:05:39,660
\h Fortunately the crew that I was training with, the 133 crew with Steve Lindsey as

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00:05:39,660 --> 00:05:43,150
\h commander and the rest, all my classmates from the class of 2000,

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00:05:43,150 --> 00:05:48,120
\h the crew was fantastic, and I think the training flow was just a lot of fun.

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00:05:48,120 --> 00:05:51,930
\h SLATE: What went through your mind when you landed at the end of Discovery's mission?

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00:05:51,930 --> 00:05:54,840
\h When we fly, even when we know it's the final mission of our orbiter,

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00:05:54,840 --> 00:06:00,020
\h in this case Discovery, overwhelmingly our thoughts are on our mission.

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00:06:00,020 --> 00:06:05,390
\h Our job is to execute our timeline, to do it as accurately and as on-time as possible

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00:06:05,390 --> 00:06:08,740
\h and that's pretty much where your head is. We definitely were asked a few times

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00:06:08,740 --> 00:06:12,250
\h on the flight about the legacy of Discovery and the shuttle program

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00:06:12,250 --> 00:06:15,280
\h and of course we would turn our thoughts to that for a moment,

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00:06:15,280 --> 00:06:20,960
\h but it's only when you successfully land, after wheels stop, that two things happen.

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00:06:20,960 --> 00:06:25,190

\h One, you can reflect back on your mission that was successful, safely done,

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00:06:25,190 --> 00:06:28,060
\h the vehicle was incredibly clean. But the other thing is that,

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00:06:28,060 --> 00:06:31,970
\h now you realize it's the last flight, and now you're turning the ship

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00:06:31,970 --> 00:06:35,170
\h back into the hands of the people who have cared for her for so many years

92
00:06:35,170 --> 00:06:38,400
\h and back into this facility that's taken care of her and that's when it really hits you

93
00:06:38,400 --> 00:06:41,740
\h that it's the final flight and you're taking this magnificent spaceship

94
00:06:41,740 --> 00:06:42,940
\h and she's being retired.