



A screen displaying a data table with multiple columns and rows of information, likely related to mission parameters or satellite status.



Rows of computer workstations arranged in a U-shape. Each workstation has multiple monitors, keyboards, and mice. Staff members are seated at the desks, working on the computers. The desks are dark-colored and have various items on them, including papers, pens, and small figurines.



DATA

1  
00:00:02,566 --> 00:00:03,746  
>> Kyle Herring:  
Colonel Chris Hadfield

2  
00:00:03,746 --> 00:00:06,226  
from the Canadian Space Agency,

3  
00:00:06,226 --> 00:00:10,396  
and we have an opportunity  
today also, to talk to Chris.

4  
00:00:10,486 --> 00:00:14,636  
He's also in Star  
City awaiting his turn

5  
00:00:14,636 --> 00:00:18,276  
to perform a long-duration  
stay aboard the International

6  
00:00:18,276 --> 00:00:19,026  
Space Station.

7  
00:00:19,026 --> 00:00:20,896  
Chris, thanks a lot  
for joining us today.

8  
00:00:21,596 --> 00:00:22,246  
>> Colonel Hadfield:  
My pleasure, Kyle.

9  
00:00:22,246 --> 00:00:23,096  
Nice to talk with you again.

10  
00:00:23,316 --> 00:00:25,556  
>> Mr. Herring: Yeah, it's  
great to talk to you, too.

11  
00:00:25,556 --> 00:00:29,916  
I know you're anticipating

this greatly, obviously.

12

00:00:30,306 --> 00:00:32,466

You've flown two  
shuttle flights,

13

00:00:32,466 --> 00:00:35,426

and your most recent one  
was quite a ways back.

14

00:00:36,166 --> 00:00:39,806

But I was looking through  
your resume, and you might

15

00:00:39,806 --> 00:00:42,606

as well have flown a lot of  
space missions, between now

16

00:00:42,606 --> 00:00:44,286

and then, with all  
the activities

17

00:00:44,286 --> 00:00:48,316

that you've been working  
on between STS-100 and now.

18

00:00:48,316 --> 00:00:50,106

But you've got to  
be looking forward

19

00:00:50,106 --> 00:00:51,366

to seeing what this  
station looks

20

00:00:51,366 --> 00:00:55,226

like since delivering  
Canada Arm II.

21

00:00:55,256 --> 00:00:55,966

>> Colonel Hadfield: I sure am.

22

00:00:55,966 --> 00:00:58,806

Yeah, as you say I went to  
actually help build part

23

00:00:58,806 --> 00:01:02,096

of the Russian space station  
on my first flight back in '95,

24

00:01:02,096 --> 00:01:06,416

so I've been coming to Russia  
for the better part of 17 years.

25

00:01:06,716 --> 00:01:10,796

And the last flight to have  
visited the space station

26

00:01:10,796 --> 00:01:12,816

when it was almost  
brand new, when --

27

00:01:12,816 --> 00:01:15,916

it was just Expedition  
2 was up there then,

28

00:01:15,916 --> 00:01:17,986

when we did space walks to  
build the big Canada Arm

29

00:01:17,986 --> 00:01:18,586

on the outside.

30

00:01:19,246 --> 00:01:21,796

I've been doing all sorts  
of other jobs in between,

31

00:01:21,796 --> 00:01:23,826

working here in Russia  
and the robotics

32

00:01:23,826 --> 00:01:25,336  
and space station and such.

33

00:01:25,876 --> 00:01:27,896  
But training specifically  
for this one, Kyle,

34

00:01:27,896 --> 00:01:30,786  
for about the last  
four years or so.

35

00:01:31,006 --> 00:01:33,906  
And now to be in the  
left seat of the Soyuz,

36

00:01:33,906 --> 00:01:38,276  
so helping Roman fly the Soyuz,  
and then to be asked to step

37

00:01:38,276 --> 00:01:39,206  
up as the commander

38

00:01:39,206 --> 00:01:43,086  
of the International Space  
Station come March or so,

39

00:01:43,086 --> 00:01:44,206  
for the last three  
months we're there,

40

00:01:44,836 --> 00:01:48,116  
it's just a wonderful flow, a  
wonderful thing to be part of.

41

00:01:48,116 --> 00:01:51,076  
And yeah, I -- if you ask if  
I'm looking forward to it, yes,

42

00:01:51,076 --> 00:01:53,916

I am looking forward to this.

43

00:01:54,136 --> 00:01:54,696

>> Mr. Herring: And I know

44

00:01:54,696 --> 00:01:58,386

that you've trained  
extensively for Soyuz.

45

00:01:58,386 --> 00:02:03,236

Has Roman given you and Tom  
any kind of advice on what it's

46

00:02:03,236 --> 00:02:04,806

like to actually  
launch on a Soyuz?

47

00:02:04,806 --> 00:02:07,206

I know you've probably talked  
to a bunch of other crew members

48

00:02:07,206 --> 00:02:11,176

that have flown as well,  
but what has he told you

49

00:02:11,176 --> 00:02:13,786

about it compared to -- well  
obviously he hasn't flown

50

00:02:13,786 --> 00:02:16,506

on shuttle, but you'll  
have that experience

51

00:02:16,506 --> 00:02:17,916

of comparing the two later.

52

00:02:18,346 --> 00:02:20,296

But what has he told  
you about the Soyuz?

53

00:02:21,096 --> 00:02:22,586

>> Colonel Hadfield: Well  
you know the training is

54

00:02:22,586 --> 00:02:24,516

incredibly in-depth.

55

00:02:25,016 --> 00:02:26,816

I spent one year  
basically here --

56

00:02:26,816 --> 00:02:29,686

on just going through  
the motion control laws,

57

00:02:29,686 --> 00:02:32,676

and the systems involved  
in the Soyuz.

58

00:02:33,096 --> 00:02:38,796

So you become incredibly  
familiar and competent in all

59

00:02:38,796 --> 00:02:41,846

of the systems and understanding  
exactly how that vehicle works.

60

00:02:42,286 --> 00:02:45,336

And then for the latter year  
or so of training on it,

61

00:02:45,336 --> 00:02:48,276

the last year, a large part of  
it has been in the simulator,

62

00:02:48,706 --> 00:02:50,716

putting together all  
of those technical

63

00:02:50,716 --> 00:02:52,416  
and theoretical things  
you learned

64  
00:02:52,916 --> 00:02:55,276  
and now making it all  
happen in the simulator.

65  
00:02:55,676 --> 00:02:58,456  
And we, even in our  
final sim last week

66  
00:02:58,456 --> 00:03:01,066  
where we did our last  
qualification with Tom and Roman

67  
00:03:01,066 --> 00:03:04,886  
and myself, we went through a  
whole profile from getting ready

68  
00:03:04,886 --> 00:03:07,976  
for launch, launch, all the  
[inaudible] stuff, rendezvous,

69  
00:03:07,976 --> 00:03:10,846  
docking, undocking, emergency,  
come back, land on the Earth,

70  
00:03:11,226 --> 00:03:12,506  
all put into an eight-hour day.

71  
00:03:13,006 --> 00:03:16,916  
So the level of familiarity,  
the simulation is good;

72  
00:03:16,916 --> 00:03:18,226  
the training is excellent.

73  
00:03:18,226 --> 00:03:20,596  
And the level of

familiarity gets really high.

74

00:03:21,296 --> 00:03:24,026

And as you say, I've of course talked to Roman about it,

75

00:03:24,396 --> 00:03:26,406

talked to lots of other people who've flown.

76

00:03:26,406 --> 00:03:29,806

I was talking to Kevin up on the space station asking him what it

77

00:03:29,806 --> 00:03:30,336

was like.

78

00:03:30,756 --> 00:03:32,426

I talked to all the people when they come back.

79

00:03:32,876 --> 00:03:35,616

I've actually -- as the Chief of Station Operations

80

00:03:35,996 --> 00:03:39,076

of course I represented NASA at several launches and was

81

00:03:39,076 --> 00:03:43,146

out on the plains of Kazakhstan, the steps to help a crew

82

00:03:43,146 --> 00:03:45,946

as they -- the Soyuz came back down under parachute and landed.

83

00:03:46,506 --> 00:03:50,596

So for a guy who's never flown a Soyuz, I've spent a large part

84

00:03:50,596 --> 00:03:52,686  
of my life trying to figure  
out how it's going to be.

85

00:03:52,686 --> 00:03:57,756  
And with the expertise of  
Roman and the training that Tom

86

00:03:57,756 --> 00:04:00,106  
and I have had together, I  
think we're ready to go flying.

87

00:04:01,156 --> 00:04:03,966  
>> Mr. Herring: And of course  
-- and I mentioned as a lead-in

88

00:04:03,966 --> 00:04:08,186  
that you guys are -- basically  
you just got certified --

89

00:04:08,186 --> 00:04:11,126  
at least as Tom mentioned  
to me, you got certified

90

00:04:11,126 --> 00:04:12,206  
to go into quarantine.

91

00:04:12,206 --> 00:04:14,836  
You still have a couple  
of other steps to take

92

00:04:14,836 --> 00:04:15,956  
after you get to Baikonur.

93

00:04:15,956 --> 00:04:18,906  
You guys are heading  
down there on Thursday

94

00:04:18,906 --> 00:04:20,176  
for your last couple of weeks.

95

00:04:20,176 --> 00:04:23,976  
Can you kind of lay out what's  
in store for that last couple

96

00:04:23,976 --> 00:04:25,876  
of weeks for you  
guys before launch?

97

00:04:26,646 --> 00:04:28,136  
>> Colonel Hadfield: The  
primary purpose, Kyle,

98

00:04:28,136 --> 00:04:29,726  
is medical quarantine.

99

00:04:29,726 --> 00:04:32,166  
We don't want to  
get a head cold.

100

00:04:32,316 --> 00:04:34,006  
You know, something as  
simple as a head cold

101

00:04:34,546 --> 00:04:36,396  
like J.O. Creighton  
got back in '90,

102

00:04:36,396 --> 00:04:38,356  
and it delayed a shuttle launch.

103

00:04:38,766 --> 00:04:40,676  
You know we need a quarantine.

104

00:04:40,676 --> 00:04:42,846  
It's just smart after  
investing all this time

105  
00:04:43,246 --> 00:04:45,406  
to get a crew medically  
away from folks

106  
00:04:45,406 --> 00:04:47,346  
so that you don't catch a cold.

107  
00:04:48,076 --> 00:04:51,246  
But it's also a time to  
see our vehicle up close.

108  
00:04:51,566 --> 00:04:54,986  
And we -- it's sort of  
like a dress rehearsal.

109  
00:04:54,986 --> 00:04:57,886  
But we get into our space  
suit; we get into the vehicle;

110  
00:04:57,886 --> 00:04:59,026  
we get down into our seats.

111  
00:04:59,396 --> 00:05:02,096  
And it's a chance to  
compare the real thing

112  
00:05:02,346 --> 00:05:04,096  
to what we've been training  
in in the simulator,

113  
00:05:04,096 --> 00:05:06,186  
find out the things that  
are different from the sim;

114  
00:05:06,656 --> 00:05:08,986  
make sure everything's where  
we think it's going to be,

115  
00:05:08,986 --> 00:05:11,406

reach and touch and you  
know look at things.

116  
00:05:11,706 --> 00:05:13,296  
Make sure the seat  
and everything,

117  
00:05:13,296 --> 00:05:15,916  
that it's all compatible;  
it's the right size.

118  
00:05:16,236 --> 00:05:20,616  
You know really do that last  
final check in the vehicle.

119  
00:05:20,616 --> 00:05:23,746  
And we do that a couple times  
-- once when we first get there,

120  
00:05:23,746 --> 00:05:25,946  
and then again just a  
couple days before launch --

121  
00:05:26,356 --> 00:05:29,166  
to make sure that everything's  
exactly as it ought to be.

122  
00:05:29,626 --> 00:05:33,036  
And then of course we have some  
training, last-minute training.

123  
00:05:33,036 --> 00:05:34,356  
We want to keep ourselves  
healthy.

124  
00:05:34,676 --> 00:05:36,156  
We'll be exercising every day.

125  
00:05:36,156 --> 00:05:39,356  
And for the last few

days we'll have family

126

00:05:39,356 --> 00:05:40,456  
and guests come down.

127

00:05:40,586 --> 00:05:42,476  
A few folks make  
the trek all the way

128

00:05:42,476 --> 00:05:44,186  
to Baikonur to watch the launch.

129

00:05:44,526 --> 00:05:47,576  
And so we'll have a little bit  
of time, mostly through glass

130

00:05:47,576 --> 00:05:49,556  
to keep the quarantine,  
but a little bit

131

00:05:49,556 --> 00:05:50,686  
of time to visit with them.

132

00:05:51,026 --> 00:05:54,946  
One last direct tag-up with  
family, and then we walk

133

00:05:54,946 --> 00:05:56,736  
out to our rocket ship and go.

134

00:05:57,896 --> 00:06:01,786  
>> Mr. Herring: I -- it's  
fascinating you know some

135

00:06:01,786 --> 00:06:03,966  
of the things that you  
can do on the ground

136

00:06:04,536 --> 00:06:06,666

to prepare for space flight.

137

00:06:07,246 --> 00:06:11,706

You know the -- you commanded  
a NEMO mission back in 2010

138

00:06:11,796 --> 00:06:17,196

for 13 days or so, and then  
you even had an experience

139

00:06:17,196 --> 00:06:20,176

where you went up  
a little bit north

140

00:06:20,176 --> 00:06:24,086

of Vancouver I guess  
shortly thereafter.

141

00:06:24,606 --> 00:06:28,326

There's two experiences that  
-- I guess that, you know,

142

00:06:28,326 --> 00:06:30,476

you're away from home and so --

143

00:06:30,476 --> 00:06:33,926

and of course as a military  
pilot you were probably away

144

00:06:33,926 --> 00:06:37,346

from home for periods of time,  
but seems to me that going away

145

00:06:37,346 --> 00:06:41,276

for 147 days like you  
guys will be is --

146

00:06:42,236 --> 00:06:44,596

even though it's  
probably not as long

147

00:06:44,596 --> 00:06:47,676

as you've been away other times,  
it's certainly straight up.

148

00:06:47,676 --> 00:06:49,516

So it's a different  
environment, but --

149

00:06:50,106 --> 00:06:52,676

and it seems to me it's  
a whole family decision

150

00:06:52,676 --> 00:06:54,886

when you make these  
types of moves.

151

00:06:55,286 --> 00:06:56,696

Can you describe how you

152

00:06:56,696 --> 00:06:59,046

and your family you  
know got together

153

00:06:59,046 --> 00:07:00,556

and talked through all this?

154

00:07:00,556 --> 00:07:01,826

Of course, that is your job.

155

00:07:02,046 --> 00:07:04,926

But how y'all came  
to the decision

156

00:07:04,926 --> 00:07:06,436

that this was the  
right thing to do,

157

00:07:06,986 --> 00:07:10,446

and how everybody's  
looking forward to it?

158

00:07:11,016 --> 00:07:13,126

>> Colonel Hadfield: Yes,  
it's been something that --

159

00:07:13,246 --> 00:07:15,966

you know, I decided to  
be an astronaut, Kyle,

160

00:07:15,966 --> 00:07:17,926

when I was nine years  
old, just about 10.

161

00:07:18,456 --> 00:07:22,216

So it's been somewhere  
in my mind basically

162

00:07:22,216 --> 00:07:23,296

as long as I can remember.

163

00:07:23,296 --> 00:07:26,606

And my wife and I have been  
together for 37 years I think.

164

00:07:27,056 --> 00:07:30,456

So this is no surprise to  
my wife, to Helena, either.

165

00:07:30,866 --> 00:07:35,216

And in fact it's not that  
this is some onerous task

166

00:07:35,266 --> 00:07:36,286

that is thrust upon us.

167

00:07:36,586 --> 00:07:40,236

This is -- instead it's  
kind of the pinnacle

168

00:07:40,606 --> 00:07:43,416  
of why we did all these things.

169

00:07:43,416 --> 00:07:45,806  
It is where this  
has all been headed.

170

00:07:45,876 --> 00:07:49,966  
This is the fruit of all  
of that labor, you know.

171

00:07:49,966 --> 00:07:52,046  
So for the family  
this is a treat,

172

00:07:52,206 --> 00:07:55,176  
not any sort of punishment.

173

00:07:55,636 --> 00:07:57,286  
Also my kids are grown.

174

00:07:57,286 --> 00:08:00,426  
Helena and I have three  
children, and they live all

175

00:08:00,426 --> 00:08:01,716  
around the world, one in China,

176

00:08:02,006 --> 00:08:03,776  
one in Germany, and  
one in Ireland.

177

00:08:04,196 --> 00:08:05,866  
So it's not like  
[laughter] we come home

178

00:08:05,866 --> 00:08:07,016  
and have dinner together

every night.

179

00:08:07,016 --> 00:08:07,326

>> Mr. Herring: [Laughter]

180

00:08:07,326 --> 00:08:11,236

>> Colonel Hadfield: We keep a family Skype site open 24/7.

181

00:08:11,486 --> 00:08:14,306

So when my son wakes up in China, he can make a comment,

182

00:08:14,306 --> 00:08:17,016

you know, "Hey, I poured sour milk

183

00:08:17,016 --> 00:08:18,586

on my Cheerios this morning," or something.

184

00:08:18,586 --> 00:08:20,356

And then during the day everyone can --

185

00:08:20,356 --> 00:08:23,106

it's just as if we have a running family conversation.

186

00:08:23,696 --> 00:08:26,476

And so we really only get together face

187

00:08:26,476 --> 00:08:27,766

to face once a year.

188

00:08:28,176 --> 00:08:30,256

We choose Christmas as the time to get together.

189

00:08:30,626 --> 00:08:31,556

And so it's kind of nice.

190

00:08:31,556 --> 00:08:33,016

My whole family will  
come to Baikonur;

191

00:08:33,016 --> 00:08:37,006

we'll have Christmas a few days  
early, the big celebratory part

192

00:08:37,006 --> 00:08:39,716

of me getting in the Soyuz  
and leaving vertically.

193

00:08:40,016 --> 00:08:42,526

And then the family have  
a chance to just fit

194

00:08:42,526 --> 00:08:44,876

that into what has been  
our lives to this point.

195

00:08:45,306 --> 00:08:46,846

And once I'm in orbit,

196

00:08:47,216 --> 00:08:49,226

for everybody else it's  
not that much different.

197

00:08:49,226 --> 00:08:52,406

I'll be phoning; I'll  
be sending emails,

198

00:08:52,406 --> 00:08:54,656

occasionally sort of Skyping.

199

00:08:55,016 --> 00:08:58,256

My wife will be taking care of

the family as usual [laughter],

200

00:08:58,716 --> 00:09:02,306  
and so I think everyone really  
recognizes the richness of it

201

00:09:02,306 --> 00:09:04,576  
and the opportunity  
of it, and the fact

202

00:09:04,576 --> 00:09:06,416  
that this is a natural extension

203

00:09:06,416 --> 00:09:07,866  
of everything we've  
worked towards

204

00:09:08,086 --> 00:09:11,016  
through basically our  
whole adult lives.

205

00:09:11,016 --> 00:09:15,086  
>> Mr. Herring: It's interesting  
the technology advancements even

206

00:09:15,516 --> 00:09:20,186  
probably when the station was  
fledgling back when you flew

207

00:09:20,186 --> 00:09:26,126  
on STS-100 and delivered the  
first major Canadian component,

208

00:09:26,126 --> 00:09:29,596  
obviously, the Canada Arm  
II, that robotic technology

209

00:09:29,596 --> 00:09:32,496  
that Canada supplied to  
the space shuttle program

210

00:09:32,496 --> 00:09:35,016  
and now the space  
station program.

211

00:09:35,526 --> 00:09:40,126  
It's amazing some of the things  
that that hardware can do.

212

00:09:40,126 --> 00:09:44,696  
And of course you were a big  
part of that, and you touched

213

00:09:44,696 --> 00:09:46,716  
on your family being  
spread out, and --

214

00:09:46,866 --> 00:09:49,446  
but Canada obviously is home.

215

00:09:49,936 --> 00:09:51,776  
And -- but because of your job,

216

00:09:52,086 --> 00:09:54,056  
probably the U.S.  
is, too, obviously.

217

00:09:54,056 --> 00:09:56,516  
And can you touch on  
what it actually means

218

00:09:56,516 --> 00:09:57,956  
to represent Canada?

219

00:09:57,956 --> 00:10:00,096  
Because you're going to be  
the first Canadian commander,

220

00:10:00,096 --> 00:10:02,976

when you transition to  
Expedition 35, next March.

221

00:10:04,786 --> 00:10:08,636

>> Colonel Hadfield:  
Kyle, I think maybe folks

222

00:10:08,636 --> 00:10:12,256

in the States don't see  
space flight exactly the same

223

00:10:12,256 --> 00:10:15,866

because they're so  
deeply experienced at it.

224

00:10:15,866 --> 00:10:18,516

And because it's been  
something that's been going

225

00:10:18,516 --> 00:10:22,826

on on a regular basis with  
American astronauts flying ever

226

00:10:22,826 --> 00:10:25,216

since Al Shepherd  
back 50 years ago.

227

00:10:25,696 --> 00:10:30,346

And the shuttle flew, you know,  
135 times, a big, glorious,

228

00:10:30,346 --> 00:10:34,146

vivid, powerful reaffirmation  
of what was going on.

229

00:10:34,446 --> 00:10:37,766

For Canada, even though  
we're a far bigger country

230

00:10:37,766 --> 00:10:40,456

than the U.S., our population  
is much, much smaller.

231

00:10:40,926 --> 00:10:44,796

And our space experience, it's  
just a handful of Canadians

232

00:10:44,796 --> 00:10:45,726

that have flown in space.

233

00:10:46,046 --> 00:10:48,606

And so when we fly in space,  
it's almost always a lot

234

00:10:48,606 --> 00:10:50,446

of firsts just because  
we haven't done it much.

235

00:10:50,846 --> 00:10:54,866

And for this now experience  
to happen for a Canadian

236

00:10:55,356 --> 00:10:57,696

to be trusted to command what is

237

00:10:57,696 --> 00:10:59,146

in effect the World  
Space Station,

238

00:10:59,146 --> 00:11:01,226

the International Space  
Station, you know,

239

00:11:01,616 --> 00:11:03,126

I personally recognize it.

240

00:11:03,126 --> 00:11:07,426

It's Expedition 35, you  
know, in between 34 and 36.

241

00:11:07,426 --> 00:11:10,656

And I realize -- I understand  
the perspective of that.

242

00:11:11,066 --> 00:11:14,816

But for Canada, I am their very  
first space ship commander.

243

00:11:15,176 --> 00:11:21,316

And it is an affirmation  
to my country of the trust

244

00:11:21,516 --> 00:11:24,386

and the respect and the  
capability that Canada has

245

00:11:24,616 --> 00:11:27,166

on a world stage and  
on a real cutting-edge

246

00:11:27,166 --> 00:11:28,366

technological stage.

247

00:11:28,816 --> 00:11:31,166

And something in the  
human experience that is

248

00:11:31,166 --> 00:11:33,346

in the parallel of all of  
the great explorations,

249

00:11:33,766 --> 00:11:37,396

the first explorers that  
created Canada as it is.

250

00:11:37,826 --> 00:11:41,886

So we see it in those  
perspectives

251

00:11:41,886 --> 00:11:44,896  
with that light, and so do I.

252  
00:11:45,226 --> 00:11:48,476  
And so it's a big event.

253  
00:11:48,756 --> 00:11:51,676  
It's a big event in  
Canada, and I'm very --

254  
00:11:52,306 --> 00:11:55,066  
I mean I've got my job to  
do, and I'm focusing on that

255  
00:11:55,066 --> 00:11:56,526  
and taking care of  
the health of the crew

256  
00:11:56,526 --> 00:11:57,866  
and the health of  
the space station.

257  
00:11:58,256 --> 00:12:02,586  
But at the same time, it is  
a great big event for Canada,

258  
00:12:02,586 --> 00:12:05,296  
for my country, and  
there'll be a lot of people

259  
00:12:05,416 --> 00:12:06,776  
through the entire five months,

260  
00:12:06,776 --> 00:12:08,506  
but specifically  
during the major events,

261  
00:12:08,916 --> 00:12:11,346  
really closely watching  
and feeling a lot of pride

262

00:12:11,476 --> 00:12:12,906  
in what Canada can do.

263

00:12:13,716 --> 00:12:16,316  
>> Mr. Herring: And  
obviously with the capability

264

00:12:16,316 --> 00:12:18,936  
of the station you'll  
have opportunities to talk

265

00:12:18,986 --> 00:12:22,866  
to folks back in  
Canada, media and such,

266

00:12:22,866 --> 00:12:25,096  
so they'll obviously be  
following your flight

267

00:12:26,306 --> 00:12:30,316  
extensively I'm sure  
throughout the whole expedition.

268

00:12:30,916 --> 00:12:34,566  
I was -- after I talked to  
Tom yesterday I was thinking

269

00:12:34,566 --> 00:12:36,326  
about something he said,  
because one of the --

270

00:12:36,326 --> 00:12:39,716  
obviously the reason this  
station is there is exploration

271

00:12:39,716 --> 00:12:43,156  
and experimentation -- but one  
of the things he mentioned was

272

00:12:43,156 --> 00:12:46,506  
that during y'all's increment,  
I think that he said something

273

00:12:46,506 --> 00:12:50,246  
about 130 experiments  
will be either ongoing

274

00:12:50,246 --> 00:12:51,996  
or new or finishing up.

275

00:12:51,996 --> 00:12:54,756  
And I was doing the -- you know,  
not that I'm great with math,

276

00:12:54,756 --> 00:12:56,296  
but I was doing the math.

277

00:12:56,296 --> 00:12:58,316  
I said, that's about  
an experiment a day

278

00:12:58,366 --> 00:13:01,566  
since you guys are going to  
be there for 147 or so days,

279

00:13:01,996 --> 00:13:05,366  
which is just fascinating to  
the capability of the station

280

00:13:05,366 --> 00:13:09,566  
from probably when you  
flew back in '01 to now

281

00:13:09,566 --> 00:13:12,516  
and what the station at  
least is capable of doing.

282

00:13:13,326 --> 00:13:16,106

>> Colonel Hadfield: Oh, I think it's a tremendous tool.

283

00:13:16,276 --> 00:13:18,376  
It's an investigative

284

00:13:18,376 --> 00:13:20,146  
and exploring tool that we have built.

285

00:13:20,426 --> 00:13:23,006  
Tom's right; about 130 experiments on board.

286

00:13:23,276 --> 00:13:25,766  
Everything from Tom and I doing ultrasounds

287

00:13:25,766 --> 00:13:29,496  
of each other's hearts to see what happens to heart tissue

288

00:13:29,496 --> 00:13:32,586  
and heart size when you go into weightlessness,

289

00:13:33,036 --> 00:13:35,386  
through to the radiation environments to --

290

00:13:35,386 --> 00:13:39,376  
as you were saying earlier, to looking at how the inner core

291

00:13:39,376 --> 00:13:42,596  
and mantle of the world work together through a model

292

00:13:42,596 --> 00:13:43,786  
that you can do in

weightlessness.

293

00:13:44,146 --> 00:13:45,756

Through to the alpha  
magnetic spectrometer,

294

00:13:45,756 --> 00:13:49,106

gathering antimatter, and  
dark matter from the universe.

295

00:13:49,626 --> 00:13:51,746

Looking at the Earth's  
[laughter] atmosphere.

296

00:13:51,746 --> 00:13:55,866

I mean, it's -- and also -- and  
the real purpose of it, Kyle,

297

00:13:55,936 --> 00:13:58,766

to me, in amongst all that,  
is we are learning how

298

00:13:58,766 --> 00:14:01,046

to build space ships  
that can take us further.

299

00:14:01,406 --> 00:14:04,956

You know, how do you build  
a fan or a pump or a toilet

300

00:14:04,956 --> 00:14:07,986

or a food warmer or  
a bed or whatever?

301

00:14:07,986 --> 00:14:11,426

Everything that we need, just  
like the earliest sailing ships.

302

00:14:11,426 --> 00:14:13,426

How could you build a

ship you could trust

303

00:14:13,796 --> 00:14:15,206  
to take you across the Atlantic?

304

00:14:15,416 --> 00:14:16,436  
That you could really trust?

305

00:14:17,036 --> 00:14:18,436  
And we're now learning --

306

00:14:18,516 --> 00:14:20,746  
because you just can't  
simulate it properly.

307

00:14:20,746 --> 00:14:24,346  
We're learning how to do all  
those things by being there,

308

00:14:24,406 --> 00:14:26,076  
by building the International  
Space Station.

309

00:14:26,536 --> 00:14:29,056  
And all of that stuff  
happens simultaneously,

310

00:14:29,056 --> 00:14:33,056  
the experimentation, using  
a platform, and the using it

311

00:14:33,266 --> 00:14:36,546  
as a real crucible and test  
bed to be able to go further.

312

00:14:36,986 --> 00:14:38,606  
And the crews onboard are --

313

00:14:38,996 --> 00:14:41,016

we're busy, and we're  
doing all those things.

314

00:14:41,016 --> 00:14:45,516

But at the same time, we're  
just giddily excited at the --

315

00:14:45,516 --> 00:14:47,946

you know, where it is in history  
and the fact that we can be some

316

00:14:47,946 --> 00:14:50,446

of the people directly  
making these things happen.

317

00:14:50,506 --> 00:14:52,516

It's just wonderful  
to be a part of it.

318

00:14:52,516 --> 00:14:55,656

And Tom and I and Roman  
are itching to get onboard

319

00:14:55,656 --> 00:14:58,926

and do our -- the best we can  
four our particular five months.

320

00:14:59,886 --> 00:15:00,106

>> Mr. Herring: Yeah,

321

00:15:00,106 --> 00:15:02,676

I mentioned that you know  
obviously Roman is the Soyuz

322

00:15:02,676 --> 00:15:06,236

commander, but he's also been on  
the station more recently yet.

323

00:15:06,386 --> 00:15:10,246

Did he give you any insight

into what his version

324

00:15:10,246 --> 00:15:13,646  
of long-duration space flight  
was for Expedition 20 and 21?

325

00:15:14,636 --> 00:15:15,416  
>> Colonel Hadfield:  
Oh, sure, of course.

326

00:15:15,416 --> 00:15:17,826  
You know I have spoken  
to everybody.

327

00:15:17,826 --> 00:15:20,236  
I was Chief of Station  
Operations for several years,

328

00:15:20,236 --> 00:15:24,066  
and I got to debrief  
folks at great length.

329

00:15:24,066 --> 00:15:26,866  
I haven't had the experience  
myself, so I have a lot

330

00:15:26,866 --> 00:15:30,106  
to learn, but I really  
worked hard to try and talk

331

00:15:30,106 --> 00:15:32,716  
to the people that have done  
it, understand the highs

332

00:15:32,716 --> 00:15:34,056  
and the lows, the natural cycle.

333

00:15:34,056 --> 00:15:35,266  
You know like running  
a marathon.

334

00:15:35,656 --> 00:15:38,346

You talk about the wall  
and then how the body feels

335

00:15:38,346 --> 00:15:40,896

and how the psychology and  
the physiology of it goes.

336

00:15:40,896 --> 00:15:42,176

Same sort of thing on station.

337

00:15:42,746 --> 00:15:46,536

Having the cross section  
of experience we have

338

00:15:46,536 --> 00:15:49,586

with Tom having done  
three space walks and been

339

00:15:49,586 --> 00:15:52,356

up there while Roman was up  
there spending six months,

340

00:15:52,726 --> 00:15:55,116

and myself having been to  
a couple space stations,

341

00:15:55,396 --> 00:15:58,186

and joining into Kevin and  
Oleg and Evgeny's crew.

342

00:15:59,046 --> 00:16:03,366

It's really a good, smart way  
that we've developed of how

343

00:16:03,366 --> 00:16:06,506

to train crews, how to  
select and put them together,

344

00:16:06,796 --> 00:16:08,326

and then how to get them onboard

345

00:16:08,766 --> 00:16:11,746

so that they can pass the  
experience on from crew to crew

346

00:16:11,746 --> 00:16:13,776

and have a good,  
healthy progression.

347

00:16:13,996 --> 00:16:17,196

And so yeah, I've been  
tapping Roman's skills,

348

00:16:17,196 --> 00:16:19,876

but everybody I talk to to try  
and make sure that we'll be

349

00:16:19,876 --> 00:16:20,976

as successful as we can.

350

00:16:21,286 --> 00:16:23,846

>> Mr. Herring: Yeah, it  
is a pretty unique position

351

00:16:24,096 --> 00:16:26,916

as you reminded me  
that you guys --

352

00:16:27,016 --> 00:16:30,656

you personally have been to  
two different space stations.

353

00:16:30,656 --> 00:16:33,796

And you'll have an  
opportunity to compare this one

354

00:16:33,796 --> 00:16:37,336

in its essentially finished  
state to what it was

355

00:16:37,336 --> 00:16:40,556

when you went to  
Mir on STS-74's --

356

00:16:41,336 --> 00:16:46,236

that'll be a very unique  
insight into what you think,

357

00:16:46,236 --> 00:16:47,796

in terms of, how you live.

358

00:16:47,796 --> 00:16:52,086

Because you were on there  
enough to orientate yourself to,

359

00:16:52,516 --> 00:16:54,896

you know, that environment  
rather than more

360

00:16:54,896 --> 00:16:57,996

of a closed environment  
of a shuttle or a Soyuz.

361

00:16:58,886 --> 00:17:01,026

>> Colonel Hadfield: Right,  
and you know I -- when I --

362

00:17:01,076 --> 00:17:05,016

my last two flights, Kyle,  
as we undocked and left,

363

00:17:05,016 --> 00:17:08,936

I just had a great pang  
of desire to stay at each

364

00:17:08,936 --> 00:17:09,916

of those space stations.

365

00:17:10,266 --> 00:17:11,846

On Mir we were just  
there a few days,

366

00:17:11,846 --> 00:17:16,326

and what an incredible  
early space station it was.

367

00:17:16,326 --> 00:17:18,586

You know it's like looking  
at an early sailing ship

368

00:17:18,586 --> 00:17:20,886

or an early airplane  
or an early car.

369

00:17:21,176 --> 00:17:23,506

Just you know, nothing's  
perfect,

370

00:17:23,546 --> 00:17:25,776

but it's the best we  
-- they knew of then.

371

00:17:25,776 --> 00:17:28,126

And by combining the  
shuttle's capability with it,

372

00:17:28,456 --> 00:17:31,056

really learned a lot about  
how to build space stations.

373

00:17:31,446 --> 00:17:33,596

And I felt the same  
way as we backed away

374

00:17:33,596 --> 00:17:35,026

from the International  
Station last time.

375

00:17:35,026 --> 00:17:39,576

And now luckily that pang  
hopefully will be answered,

376

00:17:39,576 --> 00:17:41,706

and I'll have a chance not  
to just come up and dock

377

00:17:41,706 --> 00:17:44,426

and spend a few days and do  
something, but to get up there,

378

00:17:44,506 --> 00:17:47,146

dock, spend a few days, and  
then spend a few months.

379

00:17:47,386 --> 00:17:50,536

And the -- and yeah, I count  
myself very lucky to be able

380

00:17:50,536 --> 00:17:51,486

to do this at this stage.

381

00:17:51,996 --> 00:17:55,186

>> Mr. Herring: Let's see, Kevin  
and Oleg and Evgeny have been

382

00:17:55,186 --> 00:18:00,186

up there now for 41 days aboard  
the station, and 43 days now

383

00:18:00,186 --> 00:18:04,346

in space, but how often do  
you guys get to talk to them?

384

00:18:04,466 --> 00:18:08,226

I assume you'll have another  
opportunity before you launch

385

00:18:08,226 --> 00:18:10,386

as well, to talk to them.

386

00:18:10,876 --> 00:18:12,656

And what do you guys  
actually talk

387

00:18:12,656 --> 00:18:14,376

about when you do get together?

388

00:18:15,456 --> 00:18:17,106

>> Colonel Hadfield: Well  
we email back and forth,

389

00:18:17,106 --> 00:18:18,946

and Kevin calls on  
a regular basis.

390

00:18:18,946 --> 00:18:22,546

[Laughter] I was actually  
standing in line in Starbucks

391

00:18:22,546 --> 00:18:26,336

in Moscow, Kyle, and  
Kevin sent me an email.

392

00:18:26,336 --> 00:18:28,806

And the question was, "Hey, what  
type of coffee do you like?"

393

00:18:29,366 --> 00:18:30,166

And I thought it was just...

394

00:18:30,166 --> 00:18:30,233

>> Mr. Herring: [Laughter]

395

00:18:30,233 --> 00:18:31,816

>> Colonel Hadfield: ...funny  
and ironic that I was standing

396

00:18:31,816 --> 00:18:33,396  
in line in Starbucks,  
and I got an email

397

00:18:33,396 --> 00:18:35,036  
from the space station ask --

398

00:18:35,036 --> 00:18:37,506  
because Kevin's going through  
the coffee inventory onboard,

399

00:18:37,816 --> 00:18:39,406  
and it has to be all premixed.

400

00:18:39,856 --> 00:18:41,956  
And so he's -- okay, we've  
got some with cream and sugar

401

00:18:41,956 --> 00:18:43,076  
and some with just  
cream and some

402

00:18:43,076 --> 00:18:44,056  
with just sugar and some black.

403

00:18:44,606 --> 00:18:46,186  
And so I just sent him a  
note back saying, "Hey,

404

00:18:46,186 --> 00:18:48,376  
I'm in Starbuck's, and I  
just prefer my coffee black."

405

00:18:48,476 --> 00:18:50,496  
And he said, "Great,  
because Tom likes it you know

406

00:18:50,496 --> 00:18:51,776

with just milk, and  
I like it with milk

407

00:18:51,776 --> 00:18:53,176  
and sugar, so perfect."

408

00:18:53,656 --> 00:18:57,266  
So that's the type of thing you  
talk about is the little stuff.

409

00:18:57,266 --> 00:18:58,976  
You know what sort of clothes?

410

00:18:59,276 --> 00:19:01,546  
Do you like to wet-shave,  
or do you want a dry shaver?

411

00:19:01,546 --> 00:19:03,006  
Can I set your stuff  
out for you?

412

00:19:03,006 --> 00:19:05,036  
We'll have your sleeping  
quarters set up,

413

00:19:05,036 --> 00:19:06,436  
and I've got your  
food divvied up.

414

00:19:06,436 --> 00:19:10,126  
And he's trying to, you know,  
make the place ready for us

415

00:19:10,126 --> 00:19:11,896  
when we arrive there  
in a couple weeks.

416

00:19:12,256 --> 00:19:16,866  
And also you know the key  
stuff of the stuff that we need

417

00:19:16,866 --> 00:19:18,276  
to know when we get  
there, and how we're going

418

00:19:18,276 --> 00:19:20,216  
to spend the first few  
days of adaptation.

419

00:19:20,596 --> 00:19:22,316  
Kevin's being a really  
good commander getting all

420

00:19:22,316 --> 00:19:23,656  
that stuff ready  
for us right now.

421

00:19:24,136 --> 00:19:27,596  
And there'll be a big learning  
curve at first, of course,

422

00:19:27,596 --> 00:19:28,506  
for the first few weeks.

423

00:19:28,916 --> 00:19:32,486  
But all of us, I think not  
just Tom and Roman and myself,

424

00:19:32,556 --> 00:19:35,486  
but all six of us are looking  
forward to when we're up there,

425

00:19:35,786 --> 00:19:37,466  
we've moved in, we're adapted,

426

00:19:37,726 --> 00:19:40,006  
and it's a real functioning  
group

427

00:19:40,006 --> 00:19:41,976  
of six people making  
the place really sing.

428  
00:19:42,426 --> 00:19:44,656  
>> Mr. Herring: That was  
actually a great setup

429  
00:19:44,656 --> 00:19:45,946  
for what I was going  
to ask you next

430  
00:19:45,946 --> 00:19:48,806  
because of the personal  
part of it.

431  
00:19:48,886 --> 00:19:51,156  
You know obviously the  
experimentation and the work

432  
00:19:51,156 --> 00:19:54,316  
that you're doing up there  
is, you know, most important,

433  
00:19:54,316 --> 00:19:56,956  
but you know there's a  
balance that you have to strike

434  
00:19:57,216 --> 00:20:00,466  
in your life whether you're  
in space or on the ground,

435  
00:20:00,466 --> 00:20:02,796  
and that includes,  
you know, your --

436  
00:20:03,146 --> 00:20:06,136  
the fun things that you  
do, the work that you do.

437

00:20:06,416 --> 00:20:09,456

And you're going to be able to do that all in one location.

438

00:20:09,606 --> 00:20:12,726

And although obviously the station is quite large,

439

00:20:13,256 --> 00:20:16,556

it is really one location, and I know one

440

00:20:16,556 --> 00:20:17,886

of your passions is music.

441

00:20:17,886 --> 00:20:20,886

And I talked to Tom because I saw in his bio

442

00:20:20,886 --> 00:20:24,576

that he plays guitar also, so I asked him, I said,

443

00:20:24,576 --> 00:20:26,116

"Are you guys going to have a little,

444

00:20:26,416 --> 00:20:27,486

you know, concert up there?

445

00:20:27,486 --> 00:20:28,196

A jam up there?"

446

00:20:28,196 --> 00:20:30,436

And he says, "I think there's only one guitar, but we're going

447

00:20:30,436 --> 00:20:31,716

to try to work something out."

448

00:20:31,716 --> 00:20:32,786

[Laughter]

449

00:20:32,786 --> 00:20:33,806

>> Colonel Hadfield: We'll  
be passing it around.

450

00:20:33,806 --> 00:20:37,136

I play in two bands right  
now; I have for years.

451

00:20:37,136 --> 00:20:39,846

I've been writing and  
playing music my whole life.

452

00:20:39,846 --> 00:20:42,256

A song that my brother wrote

453

00:20:42,256 --> 00:20:45,126

for my first space flight  
was actually arranged

454

00:20:45,126 --> 00:20:48,626

for the Houston Symphony, and  
they asked me to come and sing

455

00:20:48,626 --> 00:20:51,646

that song a few times  
with the Houston Symphony.

456

00:20:51,646 --> 00:20:56,676

So music is a big part of  
what I enjoy doing here

457

00:20:56,676 --> 00:20:57,686

on the surface of the Earth.

458

00:20:57,966 --> 00:21:00,486

And I played -- I brought a

guitar to the space station Mir

459

00:21:00,486 --> 00:21:04,336  
in fact back in '95 and spent  
a while playing and singing

460

00:21:04,336 --> 00:21:09,066  
and just having a normal,  
collective human experience

461

00:21:09,066 --> 00:21:10,906  
with the other people  
living up there on Mir.

462

00:21:11,356 --> 00:21:12,886  
And it'll be an important  
part of living

463

00:21:12,886 --> 00:21:14,836  
on the International  
Space Station, as well.

464

00:21:14,836 --> 00:21:16,806  
Writing music, playing  
the songs we know.

465

00:21:17,276 --> 00:21:19,276  
I worked with the lead singer

466

00:21:19,376 --> 00:21:22,036  
from a Canadian band  
called the Barenaked Ladies,

467

00:21:22,126 --> 00:21:23,076  
guy named Ed Robertson.

468

00:21:23,076 --> 00:21:26,596  
And we've written a song that  
we're recording onboard station

469

00:21:26,596 --> 00:21:28,776

and on the ground that  
will be in schools all

470

00:21:28,776 --> 00:21:29,946

across Canada this year.

471

00:21:30,906 --> 00:21:35,576

You know to me art is really  
what sets humanity apart,

472

00:21:35,876 --> 00:21:41,186

and our desire and necessity to  
express ourselves through all

473

00:21:41,186 --> 00:21:42,116

of the different art forms.

474

00:21:42,436 --> 00:21:47,176

You know they've found  
bone flutes in caves

475

00:21:47,176 --> 00:21:49,916

from 50,000 years ago,  
people were making music.

476

00:21:50,576 --> 00:21:53,076

So the expression of emotion

477

00:21:53,076 --> 00:21:55,836

through music is fundamentally  
important for people,

478

00:21:55,996 --> 00:21:58,966

and it doesn't matter if  
you're in a cave in Macedonia

479

00:21:58,966 --> 00:22:01,226

or if you're on the

International Space Station.

480

00:22:01,496 --> 00:22:05,796

So Roman's a guitar player,  
and he's played in a rock band.

481

00:22:05,796 --> 00:22:07,576

And Tom's a very good  
classical guitarist.

482

00:22:08,096 --> 00:22:11,866

And I play guitar and sing,  
so it's not the main focus

483

00:22:11,866 --> 00:22:14,496

of what we're doing up there,  
but it's definitely going

484

00:22:14,496 --> 00:22:16,296

to be an important  
part of what happens.

485

00:22:16,296 --> 00:22:17,986

And I'm really looking  
forward, Kyle,

486

00:22:18,056 --> 00:22:20,396

to floating weightless next

487

00:22:20,396 --> 00:22:25,136

to the cupola window  
playing that guitar up there.

488

00:22:25,136 --> 00:22:27,076

Songs that I love, songs  
that I've just written.

489

00:22:27,416 --> 00:22:30,336

And really trying to help  
understand the experience

490

00:22:31,026 --> 00:22:35,326  
through that special language,  
that I love so much of music.

491

00:22:35,976 --> 00:22:37,376  
>> Mr. Herring: Well you  
don't have to answer this,

492

00:22:37,436 --> 00:22:40,376  
but I don't know what would be  
more nervous, singing in front

493

00:22:40,376 --> 00:22:42,996  
of the Houston Symphony  
or launching on a rocket.

494

00:22:42,996 --> 00:22:45,906  
I'm not quite sure  
about that one.

495

00:22:46,436 --> 00:22:48,696  
One last question  
before I let you go,

496

00:22:49,016 --> 00:22:51,036  
I know you also before --

497

00:22:51,606 --> 00:22:54,386  
between flights you  
served as Capcom, and I --

498

00:22:54,476 --> 00:22:57,566  
of course we're here in Mission  
Control right now watching

499

00:22:57,566 --> 00:23:01,956  
over all the station  
operations, and I know serving

500  
00:23:01,956 --> 00:23:03,716  
as a Capcom gave  
you an opportunity

501  
00:23:03,716 --> 00:23:06,896  
to see what the flight control  
side of the business is like

502  
00:23:06,896 --> 00:23:11,296  
and a team -- and in the case  
of the ISS obviously teams all

503  
00:23:11,296 --> 00:23:13,446  
over the world supporting three

504  
00:23:13,446 --> 00:23:15,346  
or six people up  
on that station.

505  
00:23:15,346 --> 00:23:19,016  
And I know you probably  
had some words that --

506  
00:23:19,116 --> 00:23:22,386  
to that effect of how you  
guys are trained and supported

507  
00:23:22,386 --> 00:23:23,626  
for these long flights.

508  
00:23:25,066 --> 00:23:27,276  
>> Colonel Hadfield:  
Yeah, I was a Capcom

509  
00:23:27,276 --> 00:23:29,526  
for 25 shuttle flights  
in a row, Kyle.

510  
00:23:29,646 --> 00:23:33,466

I was NASA's Chief Capcom for four years in the late '90s,

511

00:23:33,466 --> 00:23:35,526

and just when we started building space stations.

512

00:23:35,526 --> 00:23:38,986

So I learned a tremendous amount in that job.

513

00:23:38,986 --> 00:23:41,386

And I really recognize the --

514

00:23:41,616 --> 00:23:46,926

that we count on that team with our lives 24/7.

515

00:23:47,076 --> 00:23:49,586

The space station could not be operated autonomously.

516

00:23:49,926 --> 00:23:52,646

We need all that expertise on the ground to watch over it;

517

00:23:52,646 --> 00:23:54,716

it's just too complicated a place and structure.

518

00:23:55,326 --> 00:23:58,486

I was lucky enough to, when I was a Capcom, that a couple

519

00:23:58,486 --> 00:24:01,126

of the young guys in the room were Tony Ceccacci

520

00:24:01,126 --> 00:24:04,256

and Chris Edelen who are

now my two flight directors.

521

00:24:04,256 --> 00:24:07,466

Well, Chris is the lead flight director for Kevin's increment

522

00:24:07,466 --> 00:24:08,996

as Commander, Expedition 34,

523

00:24:09,366 --> 00:24:11,256

and Tony will be the flight director --

524

00:24:11,536 --> 00:24:14,176

the lead flight director during the second half,

525

00:24:14,176 --> 00:24:14,976

during when I'm the commander

526

00:24:14,976 --> 00:24:16,636

of the station during Expedition 35.

527

00:24:16,636 --> 00:24:20,776

So the three of us have a long history together,

528

00:24:20,926 --> 00:24:24,236

and all of us understand absolutely how much we rely

529

00:24:24,596 --> 00:24:27,886

on the expertise and the originality and the ability

530

00:24:27,886 --> 00:24:30,566

to communicate of all of those people around the world

531

00:24:30,566 --> 00:24:33,636  
and in the control rooms  
all around the clock.

532

00:24:33,636 --> 00:24:36,436  
And I'm pleased that I had  
the chance to do those jobs

533

00:24:36,636 --> 00:24:38,426  
and to get to meet those people.

534

00:24:38,896 --> 00:24:44,276  
And we will do our best on orbit  
to fulfill their plan every day

535

00:24:44,276 --> 00:24:46,426  
to try and get everything done,  
to keep the experiments going,

536

00:24:46,816 --> 00:24:50,306  
and to hand over the keys to  
the station come springtime

537

00:24:50,866 --> 00:24:55,876  
with the vehicle as  
healthy and swimming away

538

00:24:55,876 --> 00:24:57,576  
and working away  
as we possibly can.

539

00:24:58,616 --> 00:25:00,956  
>> Mr. Herring: Well I know  
we're all looking forward

540

00:25:00,956 --> 00:25:04,156  
to you guys getting up there and  
hearing about your experiences,

541

00:25:04,646 --> 00:25:07,886  
and I really do appreciate  
you taking time out there

542  
00:25:07,886 --> 00:25:10,926  
in Star City on your last  
couple of days in Moscow,

543  
00:25:11,236 --> 00:25:12,716  
before you head down  
to Baikonur.

544  
00:25:12,716 --> 00:25:15,936  
So Chris, good luck, and you  
have a great flight and mission.

545  
00:25:15,936 --> 00:25:17,946  
And again thanks a  
lot for joining us.

546  
00:25:18,526 --> 00:25:18,986  
>> Colonel Hadfield:  
Thanks, Kyle.

547  
00:25:18,986 --> 00:25:21,246  
I will take all the  
good luck I can get.

548  
00:25:22,006 --> 00:25:21,436  
[Laughter]

549  
00:25:22,006 --> 00:25:23,026  
>> Colonel Hadfield: Nice  
to talk with you again.

550  
00:25:23,026 --> 00:25:23,146  
See you.

551  
00:25:23,236 --> 00:25:23,976  
>> Mr. Herring: All

right, take care.

552

00:25:24,166 --> 00:25:24,426

Bye-bye.