
OVHD
DECK

1
00:00:04,710 --> 00:00:02,470
let's start off with a couple of

2
00:00:06,550 --> 00:00:04,720
questions first about life and work on

3
00:00:08,390 --> 00:00:06,560
orbit uh jeff

4
00:00:10,150 --> 00:00:08,400
for you it's been a busy few weeks for

5
00:00:12,549 --> 00:00:10,160
you and kate and the rest of the crew

6
00:00:14,390 --> 00:00:12,559
with visiting vehicles coming and going

7
00:00:16,070 --> 00:00:14,400
a lot of research being conducted on

8
00:00:18,630 --> 00:00:16,080
board give us a sense of the

9
00:00:20,710 --> 00:00:18,640
choreography that is being undertaken to

10
00:00:22,070 --> 00:00:20,720
accomplish all of this

11
00:00:23,670 --> 00:00:22,080
well you're right the last few weeks

12
00:00:26,630 --> 00:00:23,680
have been busy of course we transitioned

13
00:00:29,349 --> 00:00:26,640

from expedition 47 to 48

14
00:00:32,229 --> 00:00:29,359
and uh kate and tock and anatoly arrived

15
00:00:35,190 --> 00:00:32,239
safely on their soyuz to be to join us

16
00:00:37,430 --> 00:00:35,200
on expedition 48 and they didn't have a

17
00:00:40,069 --> 00:00:37,440
whole lot of time to

18
00:00:41,590 --> 00:00:40,079
to get their feet wet you might say on

19
00:00:43,910 --> 00:00:41,600
board the station acclimate to the

20
00:00:45,750 --> 00:00:43,920
environment before we had supply ships

21
00:00:47,910 --> 00:00:45,760
showing up first of progress a russian

22
00:00:50,150 --> 00:00:47,920
progress supply ship arrived late one

23
00:00:52,869 --> 00:00:50,160
night and then a little over 24 hours

24
00:00:56,310 --> 00:00:52,879
later during the day the the spacex

25
00:00:57,110 --> 00:00:56,320
dragon arrived and of course its arrival

26
00:00:59,590 --> 00:00:57,120
marked

27
00:01:01,510 --> 00:00:59,600
the um the start of a bunch of new work

28
00:01:04,229 --> 00:01:01,520
uh we have rodent research that we had

29
00:01:06,550 --> 00:01:04,239
to quickly get on board and tokuya was

30
00:01:08,630 --> 00:01:06,560
was dedicated at that getting them

31
00:01:10,870 --> 00:01:08,640
safely in their habitat and uh up and

32
00:01:13,270 --> 00:01:10,880
running we've got some great research on

33
00:01:15,510 --> 00:01:13,280
board the the dragon

34
00:01:17,350 --> 00:01:15,520
you've heard of heart the heart cells

35
00:01:19,749 --> 00:01:17,360
experiment and other experiments of

36
00:01:21,190 --> 00:01:19,759
course there's supplies and equipment

37
00:01:23,910 --> 00:01:21,200
coming on board that we had to get

38
00:01:26,390 --> 00:01:23,920

offloaded and we're in the process of of

39
00:01:28,390 --> 00:01:26,400
doing that and integrating that new

40
00:01:30,630 --> 00:01:28,400
equipment onboard station and of course

41
00:01:34,230 --> 00:01:30,640
it brings many more experiments as well

42
00:01:37,590 --> 00:01:34,240
as in the external compartment of dragon

43
00:01:39,109 --> 00:01:37,600
it brought the the ida or the the new

44
00:01:41,190 --> 00:01:39,119
docking adapter

45
00:01:43,590 --> 00:01:41,200
that will accommodate the new commercial

46
00:01:46,230 --> 00:01:43,600
crew vehicles scheduled to fly here in

47
00:01:48,149 --> 00:01:46,240
the in the very short future

48
00:01:49,670 --> 00:01:48,159
and we'll talk about that ida in just a

49
00:01:51,670 --> 00:01:49,680
moment jeff

50
00:01:54,710 --> 00:01:51,680
you know they say that seniority can't

51
00:01:56,950 --> 00:01:54,720
be beat in the cosmic sense august 24th

52
00:01:58,950 --> 00:01:56,960
marks a milestone for you

53
00:02:00,789 --> 00:01:58,960
as you uh will surpass scott kelly's

54
00:02:03,510 --> 00:02:00,799
short-lived record for the most amount

55
00:02:04,550 --> 00:02:03,520
of days in space by u.s astronaut 520

56
00:02:06,469 --> 00:02:04,560
days

57
00:02:09,029 --> 00:02:06,479
uh this your fourth flight what does

58
00:02:11,670 --> 00:02:09,039
that milestone mean for you personally

59
00:02:13,589 --> 00:02:11,680
and what does it say about the longevity

60
00:02:17,190 --> 00:02:13,599
of the station and its ability to

61
00:02:19,030 --> 00:02:17,200
sustain a permanent human occupancy

62
00:02:21,589 --> 00:02:19,040
well i think we would all agree that

63
00:02:23,830 --> 00:02:21,599

it's an honor to spend any day

64
00:02:26,229 --> 00:02:23,840
in space and certainly

65
00:02:28,229 --> 00:02:26,239
to have accumulated that time is is

66
00:02:29,830 --> 00:02:28,239
truly an honor for me

67
00:02:31,990 --> 00:02:29,840
but i think you bring up the bigger

68
00:02:33,990 --> 00:02:32,000
point in that

69
00:02:36,309 --> 00:02:34,000
this program the scope of this program

70
00:02:37,750 --> 00:02:36,319
of the international space station i can

71
00:02:39,750 --> 00:02:37,760
remember when freedom was announced in

72
00:02:41,910 --> 00:02:39,760
1984

73
00:02:45,030 --> 00:02:41,920
and having the desire to be part of it

74
00:02:46,949 --> 00:02:45,040
as soon as as early as 1985

75
00:02:49,350 --> 00:02:46,959
and then of course it morphed because of

76
00:02:51,670 --> 00:02:49,360
largely because a geopolitical

77
00:02:53,270 --> 00:02:51,680
situation in the world

78
00:02:56,630 --> 00:02:53,280
to the international space station in

79
00:02:59,030 --> 00:02:56,640
the early 90s and to be part of that

80
00:03:01,030 --> 00:02:59,040
to really represent a really

81
00:03:02,710 --> 00:03:01,040
amazing team especially when you look

82
00:03:04,869 --> 00:03:02,720
back in hindsight at what the

83
00:03:07,670 --> 00:03:04,879
international team accomplished

84
00:03:09,430 --> 00:03:07,680
to integrate what used to be mir-2 and

85
00:03:11,430 --> 00:03:09,440
freedom the elements of that into the

86
00:03:13,589 --> 00:03:11,440
international space station bring russia

87
00:03:16,070 --> 00:03:13,599
on as a partner with the other partners

88
00:03:18,149 --> 00:03:16,080

that had already joined freedom to

89
00:03:19,990 --> 00:03:18,159
integrate this new station and then to

90
00:03:21,110 --> 00:03:20,000
begin building it and then to

91
00:03:22,630 --> 00:03:21,120
permanently

92
00:03:24,869 --> 00:03:22,640
man it

93
00:03:25,990 --> 00:03:24,879
15 and a half years going on 16 years

94
00:03:27,750 --> 00:03:26,000
now

95
00:03:28,949 --> 00:03:27,760
we've had permanent human presence in

96
00:03:30,149 --> 00:03:28,959
space

97
00:03:31,830 --> 00:03:30,159
and it's been

98
00:03:33,750 --> 00:03:31,840
largely very successful we've had

99
00:03:35,830 --> 00:03:33,760
setbacks we've had disappointments we've

100
00:03:38,309 --> 00:03:35,840
had uh struggles to work through we've

101
00:03:40,630 --> 00:03:38,319
had uh challenges but the team has

102
00:03:42,710 --> 00:03:40,640
stepped up to that and to

103
00:03:44,789 --> 00:03:42,720
to be a part of it at the beginning in

104
00:03:47,030 --> 00:03:44,799
the middle uh finishing out the space

105
00:03:49,270 --> 00:03:47,040
station and now

106
00:03:52,789 --> 00:03:49,280
when it's in the full utilization mode

107
00:03:55,030 --> 00:03:52,799
and really stepping up uh in terms of

108
00:03:57,830 --> 00:03:55,040
the greater scientific community on the

109
00:03:59,910 --> 00:03:57,840
world recognizing its potential and in

110
00:04:01,190 --> 00:03:59,920
getting into the doorway

111
00:04:03,429 --> 00:04:01,200
to get their

112
00:04:05,429 --> 00:04:03,439
research on board and to see it

113
00:04:07,509 --> 00:04:05,439

you know blossom in its utilization

114
00:04:09,110 --> 00:04:07,519
that's really the bigger story to me

115
00:04:11,589 --> 00:04:09,120
personally

116
00:04:14,149 --> 00:04:11,599
kate let's turn to you for a moment

117
00:04:15,990 --> 00:04:14,159
have your first weeks in orbit been

118
00:04:18,469 --> 00:04:16,000
everything you expected them to be and

119
00:04:22,230 --> 00:04:18,479
what has been the most stunning aspect

120
00:04:25,749 --> 00:04:23,510
yeah i think

121
00:04:28,950 --> 00:04:25,759
nobody can really quite prepare for your

122
00:04:31,749 --> 00:04:28,960
first few weeks in space and it's it's

123
00:04:33,909 --> 00:04:31,759
absolutely amazing it's it's incredible

124
00:04:36,710 --> 00:04:33,919
and and i say this even working at nasa

125
00:04:38,710 --> 00:04:36,720
for seven years before i flew so

126
00:04:40,790 --> 00:04:38,720
we see in mission control we see the

127
00:04:43,350 --> 00:04:40,800
space station on the big screen all the

128
00:04:45,510 --> 00:04:43,360
time it almost feels like like home like

129
00:04:47,590 --> 00:04:45,520
your living room it's that familiar uh

130
00:04:49,430 --> 00:04:47,600
even all the cables and the wiring and

131
00:04:51,670 --> 00:04:49,440
the lab that you see around us but

132
00:04:52,469 --> 00:04:51,680
that's nothing like actually being here

133
00:04:55,110 --> 00:04:52,479
and

134
00:04:57,590 --> 00:04:55,120
experiencing even these same walls that

135
00:04:58,390 --> 00:04:57,600
i saw all the time on television to see

136
00:05:00,150 --> 00:04:58,400
that

137
00:05:02,310 --> 00:05:00,160
in reality and to actually get a chance

138
00:05:04,550 --> 00:05:02,320

to work with some of this equipment

139
00:05:06,550 --> 00:05:04,560
has been absolutely incredible and i'm a

140
00:05:08,790 --> 00:05:06,560
little bit split between

141
00:05:11,270 --> 00:05:08,800
what's more fascinating to me i look out

142
00:05:14,070 --> 00:05:11,280
the window and every astronaut says this

143
00:05:15,990 --> 00:05:14,080
but truly the earth is more beautiful

144
00:05:17,590 --> 00:05:16,000
than you can ever imagine

145
00:05:19,029 --> 00:05:17,600
it's just not something that you can

146
00:05:20,390 --> 00:05:19,039
conceive of

147
00:05:22,070 --> 00:05:20,400
from from all the pictures we're

148
00:05:24,469 --> 00:05:22,080
starting to do more with high definition

149
00:05:26,230 --> 00:05:24,479
video and i think that brings that

150
00:05:28,629 --> 00:05:26,240
to people around the world to get a

151
00:05:30,870 --> 00:05:28,639
chance to see what we see but i'm pretty

152
00:05:33,510 --> 00:05:30,880
split between what's more amazing to me

153
00:05:35,189 --> 00:05:33,520
uh the planet and and actually getting

154
00:05:36,950 --> 00:05:35,199
to see the space station when you look

155
00:05:39,270 --> 00:05:36,960
out the window you see the equipment

156
00:05:41,189 --> 00:05:39,280
surrounding you and you can see the

157
00:05:43,270 --> 00:05:41,199
entire space station from the

158
00:05:45,270 --> 00:05:43,280
perspective of the inside

159
00:05:46,950 --> 00:05:45,280
kate researches the name of the game on

160
00:05:49,670 --> 00:05:46,960
the international space station there's

161
00:05:51,430 --> 00:05:49,680
worldwide interest in your upcoming dna

162
00:05:53,670 --> 00:05:51,440
research activities

163
00:05:55,830 --> 00:05:53,680

tell us a little bit about what is

164
00:05:59,510 --> 00:05:55,840
coming up for you in regard to that

165
00:06:01,270 --> 00:05:59,520
research and your goals and expectations

166
00:06:03,830 --> 00:06:01,280
yeah we've we've had some incredible

167
00:06:06,550 --> 00:06:03,840
research that's arrived uh on the on the

168
00:06:07,670 --> 00:06:06,560
dragon vehicle the spacex 9 mission has

169
00:06:09,749 --> 00:06:07,680
brought us

170
00:06:11,430 --> 00:06:09,759
both topping off all of our research

171
00:06:13,270 --> 00:06:11,440
supplies as well as incredible new

172
00:06:14,550 --> 00:06:13,280
facilities and

173
00:06:16,070 --> 00:06:14,560
one of the things that folks are very

174
00:06:17,990 --> 00:06:16,080
interested in is

175
00:06:19,189 --> 00:06:18,000
potentially doing the first dna sequence

176
00:06:21,029 --> 00:06:19,199
in space

177
00:06:22,710 --> 00:06:21,039
that's really a testament i think to the

178
00:06:24,150 --> 00:06:22,720
ground teams that have put this together

179
00:06:26,710 --> 00:06:24,160
there's folks that have worked on this

180
00:06:28,550 --> 00:06:26,720
project for years now and it's not an

181
00:06:30,790 --> 00:06:28,560
easy thing to take a piece of earth

182
00:06:32,950 --> 00:06:30,800
equipment and launch it into orbit and

183
00:06:34,550 --> 00:06:32,960
actually fly it on the space station but

184
00:06:36,870 --> 00:06:34,560
the benefits are huge

185
00:06:38,629 --> 00:06:36,880
the potential to understand the

186
00:06:41,270 --> 00:06:38,639
technology development of how this

187
00:06:42,950 --> 00:06:41,280
equipment works in microgravity fluids

188
00:06:44,629 --> 00:06:42,960

are behave differently

189
00:06:46,150 --> 00:06:44,639
bubbles move through systems differently

190
00:06:47,990 --> 00:06:46,160
so we're learning a lot just from the

191
00:06:51,110 --> 00:06:48,000
technology development but then it's

192
00:06:53,990 --> 00:06:51,120
also an application so we can understand

193
00:06:56,390 --> 00:06:54,000
a a whole number of variables that

194
00:06:58,469 --> 00:06:56,400
change in response to either

195
00:07:00,150 --> 00:06:58,479
microgravity or the radiation

196
00:07:02,070 --> 00:07:00,160
environment in low earth orbit and we

197
00:07:04,629 --> 00:07:02,080
can actually understand that at a real

198
00:07:07,110 --> 00:07:04,639
global level and start to look at not

199
00:07:09,909 --> 00:07:07,120
just one or two gene but ten thousands

200
00:07:12,870 --> 00:07:09,919
of genes thirty thousand genes and get

201
00:07:14,469 --> 00:07:12,880
all of that data all at once

202
00:07:16,150 --> 00:07:14,479
as far as worldwide interest is

203
00:07:18,230 --> 00:07:16,160
concerned no shortage of that when it

204
00:07:20,230 --> 00:07:18,240
comes to your upcoming spacewalk to

205
00:07:22,309 --> 00:07:20,240
install that first international docking

206
00:07:23,990 --> 00:07:22,319
adapter to the forward end of the us

207
00:07:26,629 --> 00:07:24,000
segment of the station

208
00:07:28,550 --> 00:07:26,639
tell us a little bit about first off the

209
00:07:31,110 --> 00:07:28,560
extraction process

210
00:07:34,950 --> 00:07:31,120
how the ida will be pre-positioned to

211
00:07:36,710 --> 00:07:34,960
set the stage for your excursion outside

212
00:07:38,390 --> 00:07:36,720
that highlights one of the capabilities

213
00:07:40,309 --> 00:07:38,400

that has been developed over the years

214
00:07:42,550 --> 00:07:40,319
and that is how we do robotic arm

215
00:07:44,230 --> 00:07:42,560
operations in the beginning the crew on

216
00:07:45,909 --> 00:07:44,240
board did virtually all of the

217
00:07:47,990 --> 00:07:45,919
operations with the exception of maybe

218
00:07:50,550 --> 00:07:48,000
just setting the up arm setting the arm

219
00:07:52,710 --> 00:07:50,560
up getting it operational and then

220
00:07:54,150 --> 00:07:52,720
putting it away so to speak

221
00:07:56,309 --> 00:07:54,160
but over the years

222
00:07:58,710 --> 00:07:56,319
the the ground has developed more and

223
00:08:02,230 --> 00:07:58,720
more capability and now they do

224
00:08:04,550 --> 00:08:02,240
90 90 some percent of the robotic armory

225
00:08:06,950 --> 00:08:04,560
operations from the ground and that

226
00:08:07,749 --> 00:08:06,960
includes the extraction of this ida from

227
00:08:16,869 --> 00:08:07,759
the

228
00:08:18,390 --> 00:08:16,879
station on

229
00:08:20,550 --> 00:08:18,400
the pressurized maintaining adapter

230
00:08:23,589 --> 00:08:20,560
where the shuttle used to dock

231
00:08:25,909 --> 00:08:23,599
and approach that pma

232
00:08:27,670 --> 00:08:25,919
and be just very close to it when we go

233
00:08:29,189 --> 00:08:27,680
out the door and and as we go out the

234
00:08:32,149 --> 00:08:29,199
door they'll bring it in to within a

235
00:08:33,589 --> 00:08:32,159
couple of inches of its mating interface

236
00:08:37,029 --> 00:08:33,599
and then we'll go out there and do the

237
00:08:38,709 --> 00:08:37,039
final attachment uh of the the uh the

238
00:08:40,389 --> 00:08:38,719

docking adapter and then of course

239
00:08:41,829 --> 00:08:40,399
they'll ungrapple and move it away so

240
00:08:44,070 --> 00:08:41,839
that'll be the big picture the

241
00:08:45,750 --> 00:08:44,080
choreography to get it out there in

242
00:08:48,949 --> 00:08:45,760
place and then of course we'll finish

243
00:08:51,829 --> 00:08:48,959
out the installation of cables power and

244
00:08:53,430 --> 00:08:51,839
data cables and whatnot uh on the the

245
00:08:54,949 --> 00:08:53,440
idea itself during the course of the

246
00:08:57,110 --> 00:08:54,959
spacewalk

247
00:08:58,550 --> 00:08:57,120
and in that regard for both of you

248
00:09:01,509 --> 00:08:58,560
if you could give me

249
00:09:03,509 --> 00:09:01,519
a bit of a detailed rundown on

250
00:09:05,590 --> 00:09:03,519
what tasks each of you will be

251
00:09:07,750 --> 00:09:05,600
responsible for how you work in tandem

252
00:09:10,630 --> 00:09:07,760
how you work apart from one another to

253
00:09:12,389 --> 00:09:10,640
get the ida actually physically mated to

254
00:09:14,230 --> 00:09:12,399
that pressurized mating adapter at the

255
00:09:16,150 --> 00:09:14,240
forward end of harmony

256
00:09:17,430 --> 00:09:16,160
yeah it's actually um we've got the

257
00:09:19,190 --> 00:09:17,440
olympics coming up here and it's

258
00:09:21,110 --> 00:09:19,200
actually a little bit like a a

259
00:09:22,949 --> 00:09:21,120
synchronized swimming operation so we're

260
00:09:25,350 --> 00:09:22,959
going to work in tandem with the ground

261
00:09:27,750 --> 00:09:25,360
teams and jeff and i will be going out

262
00:09:30,230 --> 00:09:27,760
we're going to be uh on clock positions

263
00:09:32,550 --> 00:09:30,240

at the at the ida so it's actually quite

264
00:09:34,310 --> 00:09:32,560
a huge uh piece of equipment when you

265
00:09:37,509 --> 00:09:34,320
see it up close

266
00:09:39,509 --> 00:09:37,519
it you know it's it's meters in diameter

267
00:09:42,150 --> 00:09:39,519
and so we'll be holding it uh from

268
00:09:43,750 --> 00:09:42,160
either end of the clock position and the

269
00:09:45,910 --> 00:09:43,760
robotic arm is going to bring it in

270
00:09:47,910 --> 00:09:45,920
towards us we'll continue to bring it in

271
00:09:50,070 --> 00:09:47,920
station and then ground teams are going

272
00:09:51,750 --> 00:09:50,080
to do some complicated operations to

273
00:09:53,509 --> 00:09:51,760
drive the hooks

274
00:09:55,350 --> 00:09:53,519
that's going to be controlled uh from

275
00:09:57,590 --> 00:09:55,360
our internal crew member

276
00:10:00,389 --> 00:09:57,600
takuya onishi we'll be we'll be working

277
00:10:02,870 --> 00:10:00,399
that and ground teams will then do some

278
00:10:05,750 --> 00:10:02,880
operations to bring that adapter all the

279
00:10:07,350 --> 00:10:05,760
way into station and establish that uh

280
00:10:09,269 --> 00:10:07,360
that mating compartment that docking

281
00:10:12,069 --> 00:10:09,279
adapter for future commercial crew

282
00:10:15,430 --> 00:10:13,190
kate

283
00:10:17,670 --> 00:10:15,440
if we can get the mic back to you for a

284
00:10:19,509 --> 00:10:17,680
second this will be your first spacewalk

285
00:10:20,870 --> 00:10:19,519
always a prime milestone for any

286
00:10:22,389 --> 00:10:20,880
astronaut

287
00:10:24,389 --> 00:10:22,399
what are your thoughts and expectations

288
00:10:25,829 --> 00:10:24,399

what are you looking forward to the most

289
00:10:29,030 --> 00:10:25,839
as you step outside and become a

290
00:10:32,710 --> 00:10:31,110
well quite frankly i'm not sure how the

291
00:10:34,630 --> 00:10:32,720
view can get any better than it is from

292
00:10:37,430 --> 00:10:34,640
the cupola already so i don't know that

293
00:10:39,350 --> 00:10:37,440
i have any expectations beyond i can't

294
00:10:40,310 --> 00:10:39,360
even conceive of what this is going to

295
00:10:42,389 --> 00:10:40,320
be like

296
00:10:44,790 --> 00:10:42,399
in terms of the actual work we train for

297
00:10:46,790 --> 00:10:44,800
hundreds of hours and there's a huge

298
00:10:49,030 --> 00:10:46,800
amount of effort on the ground that goes

299
00:10:50,870 --> 00:10:49,040
into this we have teams

300
00:10:51,990 --> 00:10:50,880
in our neutral buoyancy lab that help

301
00:10:54,230 --> 00:10:52,000
train us

302
00:10:56,230 --> 00:10:54,240
they weigh us out so we have all six

303
00:10:58,550 --> 00:10:56,240
degrees of freedom and we can learn how

304
00:11:00,550 --> 00:10:58,560
to use the tools and all the operations

305
00:11:02,630 --> 00:11:00,560
there's an entire eva team on the ground

306
00:11:04,949 --> 00:11:02,640
that's helped us get ready for this

307
00:11:07,350 --> 00:11:04,959
spacewalk and and has done the training

308
00:11:09,670 --> 00:11:07,360
for both of us for a number of years and

309
00:11:11,590 --> 00:11:09,680
of course jeff is experienced at this

310
00:11:13,509 --> 00:11:11,600
but i think i'm just going to rely on

311
00:11:14,949 --> 00:11:13,519
the training in the uh the experience

312
00:11:16,550 --> 00:11:14,959
that i have on the ground and the

313
00:11:18,790 --> 00:11:16,560

preparation that those ground teams have

314
00:11:20,550 --> 00:11:18,800
given me and definitely we're going to

315
00:11:22,949 --> 00:11:20,560
be working hard but i will try to take a

316
00:11:25,190 --> 00:11:22,959
few moments to enjoy it and get a few

317
00:11:26,389 --> 00:11:25,200
pictures of this beautiful new hardware

318
00:11:27,590 --> 00:11:26,399
that we're adding to the front of space

319
00:11:29,350 --> 00:11:27,600
station

320
00:11:32,150 --> 00:11:29,360
and jeff for you this will be your

321
00:11:34,790 --> 00:11:32,160
fourth spacewalk spanning 16 years in

322
00:11:36,470 --> 00:11:34,800
both u.s and russian spacesuits what

323
00:11:38,550 --> 00:11:36,480
sense of history do you have you're the

324
00:11:41,350 --> 00:11:38,560
history buff on board what sense of

325
00:11:43,350 --> 00:11:41,360
history do you have in yet another

326
00:11:46,389 --> 00:11:43,360
milestone being added to the chapter of

327
00:11:48,630 --> 00:11:46,399
the international space station

328
00:11:50,949 --> 00:11:48,640
oh my goodness well in the context of

329
00:11:53,190 --> 00:11:50,959
doing a spacewalk of course spacewalks

330
00:11:55,269 --> 00:11:53,200
uh are a big part of the history of the

331
00:11:56,710 --> 00:11:55,279
iss made it possible

332
00:11:58,949 --> 00:11:56,720
we've uh

333
00:12:02,230 --> 00:11:58,959
in the program i think it to date have

334
00:12:05,829 --> 00:12:02,240
accomplished going on 200 180 some or

335
00:12:07,509 --> 00:12:05,839
190 maybe now more spacewalks in the

336
00:12:09,430 --> 00:12:07,519
construction and maintenance of the

337
00:12:11,829 --> 00:12:09,440
space station and as you mentioned in

338
00:12:12,870 --> 00:12:11,839

both u.s and russian suits

339
00:12:14,629 --> 00:12:12,880
uh

340
00:12:18,069 --> 00:12:14,639
and participants from all of the

341
00:12:20,230 --> 00:12:18,079
partners have have been in the core of

342
00:12:22,389 --> 00:12:20,240
the cadre of astronauts and cosmonauts

343
00:12:24,230 --> 00:12:22,399
that have conducted that so that's a big

344
00:12:26,629 --> 00:12:24,240
part of the history in terms of the the

345
00:12:30,230 --> 00:12:26,639
ida the docking adapter that opens the

346
00:12:31,190 --> 00:12:30,240
door to commercial crew vehicles

347
00:12:33,509 --> 00:12:31,200
and

348
00:12:35,509 --> 00:12:33,519
that is the next

349
00:12:37,750 --> 00:12:35,519
major chapter on the horizon being

350
00:12:39,110 --> 00:12:37,760
developed in the plan

351
00:12:40,470 --> 00:12:39,120
to fly

352
00:12:42,069 --> 00:12:40,480
and of course we don't know what that's

353
00:12:44,389 --> 00:12:42,079
going to open up in the future but it is

354
00:12:45,269 --> 00:12:44,399
a significant door opening up in the

355
00:12:49,430 --> 00:12:45,279
human

356
00:12:51,110 --> 00:12:49,440
exploration that in the context of the

357
00:12:53,269 --> 00:12:51,120
iss which again

358
00:12:55,910 --> 00:12:53,279
is the the most significant

359
00:12:57,990 --> 00:12:55,920
technological achievement in my opinion

360
00:12:59,990 --> 00:12:58,000
in history when you consider the

361
00:13:01,430 --> 00:13:00,000
complexity of this thing how long it's

362
00:13:03,509 --> 00:13:01,440
been flying

363
00:13:05,750 --> 00:13:03,519

the international scope of it the

364
00:13:07,670 --> 00:13:05,760
technological scope of it

365
00:13:10,470 --> 00:13:07,680
and then the fact that we sustain it

366
00:13:13,269 --> 00:13:10,480
logistically and operationally for so

367
00:13:14,870 --> 00:13:13,279
long and the partnership itself among

368
00:13:16,790 --> 00:13:14,880
all the partners has never been better

369
00:13:18,470 --> 00:13:16,800
in my opinion and my experience in the

370
00:13:20,949 --> 00:13:18,480
across the entire program it's never

371
00:13:23,670 --> 00:13:20,959
been better than it is right now so even

372
00:13:26,949 --> 00:13:23,680
from an international relations point of

373
00:13:29,509 --> 00:13:26,959
view i trust that it serves as a very

374
00:13:31,670 --> 00:13:29,519
positive example to the world below

375
00:13:33,509 --> 00:13:31,680
a new era in human space flight about to

376
00:13:35,750 --> 00:13:33,519
dawn on the international space station

377
00:13:37,910 --> 00:13:35,760
through your spacewalk we'll be watching

378
00:13:40,069 --> 00:13:37,920
and uh looking forward to every minute

379
00:13:42,150 --> 00:13:40,079
of it for jeff and kate thank you so

380
00:13:44,389 --> 00:13:42,160
much for your time today we appreciate

381
00:13:48,150 --> 00:13:44,399
it all the best as your colleague floats

382
00:13:49,910 --> 00:13:48,160
through and uh fly safe

383
00:13:54,790 --> 00:13:49,920
thank you very much rob great talking to

384
00:14:01,990 --> 00:13:56,470
station this is houston acr that

385
00:14:06,949 --> 00:14:04,949
thank you jscpao station please stand by