



1  
00:03:07,490 --> 00:03:11,190  
[Applause]

2  
00:03:11,200 --> 00:03:16,830  
[Music]

3  
00:03:16,840 --> 00:03:21,370  
started

4  
00:03:32,500 --> 00:03:30,830  
[Music]

5  
00:03:37,270 --> 00:03:32,510  
rogers

6  
00:03:45,110 --> 00:03:38,150  
between

7  
00:03:45,120 --> 00:03:58,949  
in phases countries clears the tower

8  
00:04:18,150 --> 00:04:00,390  
the footsteps to discovery us where we

9  
00:04:21,030 --> 00:04:19,509  
welcome back live to nasa's kennedy

10  
00:04:22,150 --> 00:04:21,040  
space center i'm joshua santorum with

11  
00:04:23,749 --> 00:04:22,160  
nasa communications

12  
00:04:25,270 --> 00:04:23,759  
uh coming to you live on our preside

13  
00:04:26,950 --> 00:04:25,280

lawn here a beautiful day

14

00:04:28,629 --> 00:04:26,960

on the sunny space coast we are

15

00:04:30,070 --> 00:04:28,639

preparing in one

16

00:04:32,150 --> 00:04:30,080

day from right now we will be kicking

17

00:04:33,909 --> 00:04:32,160

off launch coverage of the demo two

18

00:04:35,990 --> 00:04:33,919

mission nasa and spacex

19

00:04:37,350 --> 00:04:36,000

launching the crew dragon with bob

20

00:04:38,550 --> 00:04:37,360

benkin and doug hurley

21

00:04:40,469 --> 00:04:38,560

flying to the international space

22

00:04:41,830 --> 00:04:40,479

station uh wanna jump right in here but

23

00:04:43,110 --> 00:04:41,840

make sure that you guys are asking your

24

00:04:45,270 --> 00:04:43,120

questions live online

25

00:04:46,150 --> 00:04:45,280

a huge thank you to our nasa social

26

00:04:48,070 --> 00:04:46,160

participants

27

00:04:49,909 --> 00:04:48,080

as well as the virtual launch experience

28

00:04:51,189 --> 00:04:49,919

guests happy to have you guys along

29

00:04:53,189 --> 00:04:51,199

um i want to jump right in here and

30

00:04:54,629 --> 00:04:53,199

introduce the folks on my right so to

31

00:04:58,390 --> 00:04:54,639

your far left beginning out here nasa

32

00:04:58,400 --> 00:05:02,469

astronaut nicole mann

33

00:05:06,469 --> 00:05:04,550

astronaut joel lindgren jill lindgren

34

00:05:09,189 --> 00:05:06,479

excuse me

35

00:05:10,390 --> 00:05:09,199

and shuttle astronaut and ksc kennedy

36

00:05:12,150 --> 00:05:10,400

space center director

37

00:05:13,909 --> 00:05:12,160

bob cabana thanks all for joining me

38

00:05:15,189 --> 00:05:13,919

today a pleasure to have you along we're

39

00:05:17,670 --> 00:05:15,199

going to jump right in here

40

00:05:19,510 --> 00:05:17,680

and kind of chat through um what's going

41

00:05:20,950 --> 00:05:19,520

on right now what happened this week

42

00:05:22,230 --> 00:05:20,960

and then get to the social questions as

43

00:05:23,029 --> 00:05:22,240

fast as we can and get through as many

44

00:05:24,870 --> 00:05:23,039

as we can

45

00:05:26,710 --> 00:05:24,880

mr breidenstein wanted to ask you give

46

00:05:27,510 --> 00:05:26,720

us the quick recap obviously we did not

47

00:05:29,830 --> 00:05:27,520

fly wednesday

48

00:05:31,510 --> 00:05:29,840

um so what happened why didn't we fly

49

00:05:32,790 --> 00:05:31,520

and where are we looking to go tomorrow

50

00:05:34,390 --> 00:05:32,800

what's going to happen tomorrow

51  
00:05:36,230 --> 00:05:34,400  
that's a great question so wednesday it

52  
00:05:37,029 --> 00:05:36,240  
looked like everything was good we had a

53  
00:05:38,629 --> 00:05:37,039  
clearing

54  
00:05:40,790 --> 00:05:38,639  
there were no thunderstorms right

55  
00:05:43,110 --> 00:05:40,800  
overhead and so we thought we were going

56  
00:05:45,830 --> 00:05:43,120  
to have a good opportunity to go

57  
00:05:47,990 --> 00:05:45,840  
we 15 minutes before launch time we have

58  
00:05:50,150 --> 00:05:48,000  
a threshold of how much electricity

59  
00:05:52,070 --> 00:05:50,160  
can be in the atmosphere and based on

60  
00:05:54,070 --> 00:05:52,080  
that threshold if we're above that

61  
00:05:55,189 --> 00:05:54,080  
we're in a no-go criteria and that's

62  
00:05:56,870 --> 00:05:55,199  
where we ended up

63  
00:05:58,309 --> 00:05:56,880

it's not that we had a thunderstorm it's

64

00:05:59,670 --> 00:05:58,319

not that we didn't have good

65

00:06:01,590 --> 00:05:59,680

it didn't look good it looked like we're

66

00:06:03,189 --> 00:06:01,600

ready to go but given the amount of

67

00:06:03,830 --> 00:06:03,199

electricity in the air what can happen

68

00:06:06,710 --> 00:06:03,840

is

69

00:06:07,110 --> 00:06:06,720

a launch can actually trigger lightning

70

00:06:10,230 --> 00:06:07,120

and

71

00:06:11,830 --> 00:06:10,240

lightning bolt

72

00:06:14,230 --> 00:06:11,840

and of course that would be very very

73

00:06:15,670 --> 00:06:14,240

bad day the probability is low but the

74

00:06:17,749 --> 00:06:15,680

impact of course would be

75

00:06:19,350 --> 00:06:17,759

would be devastating so so we made the

76  
00:06:21,029 --> 00:06:19,360  
right call and i want to be clear i'm so

77  
00:06:22,950 --> 00:06:21,039  
proud of the nasa team

78  
00:06:24,150 --> 00:06:22,960  
so proud of the spacex team they made

79  
00:06:26,150 --> 00:06:24,160  
the right decision

80  
00:06:27,510 --> 00:06:26,160  
for the right reasons yes the whole

81  
00:06:30,790 --> 00:06:27,520  
world was watching

82  
00:06:31,510 --> 00:06:30,800  
yes we had all of the vips here but we

83  
00:06:33,350 --> 00:06:31,520  
made the right

84  
00:06:35,350 --> 00:06:33,360  
decision for the right reasons and we

85  
00:06:36,790 --> 00:06:35,360  
will continue doing that if it is not

86  
00:06:39,670 --> 00:06:36,800  
safe we will not go

87  
00:06:39,909 --> 00:06:39,680  
bob and doug are our highest priority um

88  
00:06:44,550 --> 00:06:39,919

and

89

00:06:46,070 --> 00:06:44,560

that's what got us the the electricity

90

00:06:47,830 --> 00:06:46,080

in the atmosphere got us

91

00:06:49,110 --> 00:06:47,840

and so recycle and same thing again

92

00:06:54,870 --> 00:06:49,120

tomorrow

93

00:06:55,830 --> 00:06:54,880

we're going to get a weather update this

94

00:06:57,749 --> 00:06:55,840

afternoon

95

00:06:59,749 --> 00:06:57,759

the challenge of course is that we don't

96

00:07:01,909 --> 00:06:59,759

want to put the whole team

97

00:07:02,790 --> 00:07:01,919

through a wet dress rehearsal two days

98

00:07:05,110 --> 00:07:02,800

in a row sure

99

00:07:06,950 --> 00:07:05,120

so if this afternoon if we if we believe

100

00:07:08,309 --> 00:07:06,960

sunday is looking more probabilistic

101  
00:07:11,430 --> 00:07:08,319  
than saturday

102  
00:07:14,150 --> 00:07:11,440  
we might we might target sunday instead

103  
00:07:16,230 --> 00:07:14,160  
but again here's what we know we will

104  
00:07:17,909 --> 00:07:16,240  
launch american astronauts on american

105  
00:07:19,510 --> 00:07:17,919  
rockets from american soil

106  
00:07:21,830 --> 00:07:19,520  
it will happen again it will happen

107  
00:07:24,309 --> 00:07:21,840  
right here at the kennedy space center

108  
00:07:25,670 --> 00:07:24,319  
and it will be bob and doug whether that

109  
00:07:28,710 --> 00:07:25,680  
happens this weekend

110  
00:07:29,909 --> 00:07:28,720  
or a day in the future it will happen

111  
00:07:31,830 --> 00:07:29,919  
yeah one of the things that you

112  
00:07:33,270 --> 00:07:31,840  
mentioned there so important the the

113  
00:07:33,990 --> 00:07:33,280

challenge of saying we're not gonna fly

114

00:07:36,150 --> 00:07:34,000

today

115

00:07:37,430 --> 00:07:36,160

it's a really incredible thing to say

116

00:07:39,110 --> 00:07:37,440

we're gonna fly today

117

00:07:41,270 --> 00:07:39,120

but it's even more difficult to say not

118

00:07:42,629 --> 00:07:41,280

today because of how much is going on

119

00:07:44,629 --> 00:07:42,639

um so again proud of those teams just as

120

00:07:45,270 --> 00:07:44,639

you are um and when i jump over mr

121

00:07:47,749 --> 00:07:45,280

cabana

122

00:07:48,710 --> 00:07:47,759

uh four-time shuttle astronaut you have

123

00:07:50,950 --> 00:07:48,720

you've experienced

124

00:07:52,469 --> 00:07:50,960

some sitting in in the shuttle waiting

125

00:07:54,629 --> 00:07:52,479

to fly scrubs

126

00:07:55,670 --> 00:07:54,639

and so what's that like um sitting up

127

00:07:56,309 --> 00:07:55,680

there and then you kind of have to wait

128

00:07:58,710 --> 00:07:56,319

a little bit

129

00:08:00,230 --> 00:07:58,720

the crew access arm is retracted you

130

00:08:03,189 --> 00:08:00,240

were all set and now it's

131

00:08:04,550 --> 00:08:03,199

another day so actually my first three

132

00:08:06,710 --> 00:08:04,560

flights all launched

133

00:08:08,469 --> 00:08:06,720

the day that we climbed in but that last

134

00:08:10,710 --> 00:08:08,479

one out on that very same pad

135

00:08:12,150 --> 00:08:10,720

we counted down to 18 seconds and didn't

136

00:08:14,150 --> 00:08:12,160

go and uh

137

00:08:15,430 --> 00:08:14,160

man at that point you just want to

138

00:08:17,189 --> 00:08:15,440

launch into space

139

00:08:18,950 --> 00:08:17,199

but but the crew doesn't get a vote all

140

00:08:20,710 --> 00:08:18,960

right because they'd say yes to anything

141

00:08:23,189 --> 00:08:20,720

at that point

142

00:08:25,270 --> 00:08:23,199

so uh you know obviously there's

143

00:08:27,990 --> 00:08:25,280

disappointment that you're not going

144

00:08:29,830 --> 00:08:28,000

but uh you work through your uh you know

145

00:08:31,029 --> 00:08:29,840

back out procedures from launch count

146

00:08:32,149 --> 00:08:31,039

there's certain things that have to be

147

00:08:33,990 --> 00:08:32,159

accomplished the crew

148

00:08:36,070 --> 00:08:34,000

does their procedures you work through

149

00:08:37,670 --> 00:08:36,080

it all you climb out of the vehicle and

150

00:08:39,589 --> 00:08:37,680

you go back to crew quarters

151  
00:08:41,029 --> 00:08:39,599  
and the thing i told my crew when we

152  
00:08:42,630 --> 00:08:41,039  
were getting out of the astro van going

153  
00:08:43,750 --> 00:08:42,640  
back into crew quarters is everybody

154  
00:08:45,590 --> 00:08:43,760  
just wave and smile

155  
00:08:47,590 --> 00:08:45,600  
you know give them a thumbs up it's all

156  
00:08:50,150 --> 00:08:47,600  
good the right thing happened

157  
00:08:51,430 --> 00:08:50,160  
and actually the next day we went next

158  
00:08:54,470 --> 00:08:51,440  
night we went back out

159  
00:08:56,790 --> 00:08:54,480  
and it was just a flawless smooth count

160  
00:08:57,670 --> 00:08:56,800  
and we got off so you know we didn't

161  
00:08:59,030 --> 00:08:57,680  
have a lot of time

162  
00:09:00,710 --> 00:08:59,040  
because we were launching again the next

163  
00:09:03,910 --> 00:09:00,720

day we were we were tired

164

00:09:05,269 --> 00:09:03,920

we we got a good night's sleep and then

165

00:09:06,790 --> 00:09:05,279

we went through the whole

166

00:09:08,150 --> 00:09:06,800

process again of climbing into the

167

00:09:08,630 --> 00:09:08,160

vehicle bob and doug had a little more

168

00:09:09,910 --> 00:09:08,640

time

169

00:09:11,590 --> 00:09:09,920

i'm sure they're using it as an

170

00:09:13,509 --> 00:09:11,600

opportunity to catch back up with their

171

00:09:16,630 --> 00:09:13,519

families

172

00:09:17,670 --> 00:09:16,640

grab a quick recharge and get ready to

173

00:09:19,030 --> 00:09:17,680

do it again but

174

00:09:20,150 --> 00:09:19,040

you know these guys are professionals

175

00:09:21,590 --> 00:09:20,160

and they're gonna they're gonna do

176

00:09:23,030 --> 00:09:21,600

another amazing job and it doesn't

177

00:09:24,710 --> 00:09:23,040

matter whether they go or not

178

00:09:26,949 --> 00:09:24,720

they're going to do everything correctly

179

00:09:28,389 --> 00:09:26,959

and make sure that it's done right

180

00:09:29,829 --> 00:09:28,399

yeah that was one of the things i was

181

00:09:31,110 --> 00:09:29,839

really happy to see with the coverage we

182

00:09:32,630 --> 00:09:31,120

had on wednesday

183

00:09:34,630 --> 00:09:32,640

was the fact that there's a lot of work

184

00:09:36,230 --> 00:09:34,640

that happens after a scrub

185

00:09:37,670 --> 00:09:36,240

most people if you see a scrub you just

186

00:09:38,389 --> 00:09:37,680

turn off the channel you just boop we're

187

00:09:40,230 --> 00:09:38,399

done

188

00:09:41,829 --> 00:09:40,240

but the team's here hours worth of work

189

00:09:43,269 --> 00:09:41,839

to make sure that we do this safely

190

00:09:45,509 --> 00:09:43,279

every step of the way so

191

00:09:48,630 --> 00:09:45,519

again just so much pride here uh chell

192

00:09:50,150 --> 00:09:48,640

you were on expeditions 44 and 45

193

00:09:51,590 --> 00:09:50,160

waiting to ride again into space

194

00:09:52,310 --> 00:09:51,600

hopefully i'm sure you're just anxious

195

00:09:54,389 --> 00:09:52,320

to go

196

00:09:56,150 --> 00:09:54,399

uh you're getting the chance to watch

197

00:09:58,710 --> 00:09:56,160

the crew dragon the starliner

198

00:09:59,910 --> 00:09:58,720

and the orion all coming together do you

199

00:10:01,430 --> 00:09:59,920

have a favorite are you like ho

200

00:10:04,230 --> 00:10:01,440

are you kind of secretly hoping like i

201  
00:10:05,269 --> 00:10:04,240  
get this one like is there a favorite

202  
00:10:07,750 --> 00:10:05,279  
i thought i was gonna get an easy

203  
00:10:09,509 --> 00:10:07,760  
question you know um

204  
00:10:10,949 --> 00:10:09,519  
i've been training for the past year and

205  
00:10:13,910 --> 00:10:10,959  
a half uh with

206  
00:10:14,470 --> 00:10:13,920  
spacex uh as the backup for bob and doug

207  
00:10:16,389 --> 00:10:14,480  
and for

208  
00:10:19,190 --> 00:10:16,399  
for crew one that's been a phenomenal

209  
00:10:21,110 --> 00:10:19,200  
experience so excited about

210  
00:10:22,790 --> 00:10:21,120  
the boeing starliner and getting to

211  
00:10:25,509 --> 00:10:22,800  
watch nicole

212  
00:10:28,949 --> 00:10:25,519  
and and that crew make that first launch

213  
00:10:33,829 --> 00:10:32,310

but i you know i grew up in the 70s and

214

00:10:34,949 --> 00:10:33,839

80s

215

00:10:37,110 --> 00:10:34,959

of course we had the space shuttle

216

00:10:39,430 --> 00:10:37,120

flying in the 80s but

217

00:10:40,389 --> 00:10:39,440

and watching those iconic images of our

218

00:10:43,990 --> 00:10:40,399

astronauts

219

00:10:45,670 --> 00:10:44,000

working on the moon and i've been

220

00:10:47,910 --> 00:10:45,680

wanted to be an astronaut for as long as

221

00:10:50,470 --> 00:10:47,920

i can remember and it's

222

00:10:52,870 --> 00:10:50,480

it was to do that to to go to the moon

223

00:10:53,910 --> 00:10:52,880

and so i am so excited about the artemis

224

00:10:56,069 --> 00:10:53,920

program

225

00:10:58,150 --> 00:10:56,079

uh the fact that we're going to

226

00:10:59,670 --> 00:10:58,160

establish a permanent base on the moon

227

00:11:01,990 --> 00:10:59,680

we're going to see the first woman the

228

00:11:04,069 --> 00:11:02,000

next man working on the moon

229

00:11:06,310 --> 00:11:04,079

and uh and so that's why i'm so excited

230

00:11:09,030 --> 00:11:06,320

about this launch because it is really

231

00:11:10,550 --> 00:11:09,040

uh i mean we stand at the threshold of a

232

00:11:12,949 --> 00:11:10,560

new era of space flight

233

00:11:13,990 --> 00:11:12,959

and this this flight whether it's this

234

00:11:16,550 --> 00:11:14,000

weekend or later this

235

00:11:17,110 --> 00:11:16,560

week uh is really opening the door to

236

00:11:20,470 --> 00:11:17,120

that

237

00:11:22,230 --> 00:11:20,480

um opening the door to continued uh

238

00:11:24,230 --> 00:11:22,240

use of our incredible international

239

00:11:26,230 --> 00:11:24,240

space station and preparing us

240

00:11:29,430 --> 00:11:26,240

for that mission uh with this artemis

241

00:11:31,670 --> 00:11:29,440

generation to explore the moon

242

00:11:32,630 --> 00:11:31,680

awesome yeah i mean it's hard to think

243

00:11:33,430 --> 00:11:32,640

there's anything wrong about saying i

244

00:11:35,269 --> 00:11:33,440

want to go to the moon

245

00:11:37,350 --> 00:11:35,279

like that's uh that's a that's a pretty

246

00:11:38,470 --> 00:11:37,360

awesome bar to shoot for unless you're

247

00:11:42,389 --> 00:11:38,480

going to mars

248

00:11:44,310 --> 00:11:42,399

that's true absolutely

249

00:11:46,150 --> 00:11:44,320

uh we did have a question about what's a

250

00:11:47,030 --> 00:11:46,160

scrub um i used that term i don't know

251  
00:11:48,150 --> 00:11:47,040  
if anybody else did

252  
00:11:50,230 --> 00:11:48,160  
but want to make sure people are clear

253  
00:11:51,509 --> 00:11:50,240  
that basically that's and you may be

254  
00:11:51,829 --> 00:11:51,519  
able to tell me if i'm wrong technically

255  
00:11:53,350 --> 00:11:51,839  
here

256  
00:11:54,870 --> 00:11:53,360  
but it's that we were in the countdown

257  
00:11:56,389 --> 00:11:54,880  
we were working towards launch

258  
00:11:58,069 --> 00:11:56,399  
and in the middle of the countdown we

259  
00:11:59,829 --> 00:11:58,079  
had to call off launch is that

260  
00:12:01,509 --> 00:11:59,839  
are there technical things that i missed

261  
00:12:02,550 --> 00:12:01,519  
there yeah i think that's it okay you

262  
00:12:04,550 --> 00:12:02,560  
got it all right perfect

263  
00:12:06,150 --> 00:12:04,560

all right so nicole over to you i want

264

00:12:08,389 --> 00:12:06,160

to ask you you got to

265

00:12:09,350 --> 00:12:08,399

kind of be a spectator on wednesday

266

00:12:11,670 --> 00:12:09,360

getting to watch

267

00:12:13,670 --> 00:12:11,680

bob and doug climb in strap in door

268

00:12:14,949 --> 00:12:13,680

closed arm retracted countdown going

269

00:12:17,190 --> 00:12:14,959

fueling started

270

00:12:18,710 --> 00:12:17,200

and then we scrub um so what's that

271

00:12:19,350 --> 00:12:18,720

emotion like before we get to that scrub

272

00:12:20,389 --> 00:12:19,360

moment like

273

00:12:22,069 --> 00:12:20,399

you've got to be thinking about your

274

00:12:23,509 --> 00:12:22,079

flight you've got to be thinking about

275

00:12:24,710 --> 00:12:23,519

bob and doug and like just the energy

276

00:12:26,550 --> 00:12:24,720

there so what's the emotions

277

00:12:28,790 --> 00:12:26,560

that you're feeling on that moment

278

00:12:29,590 --> 00:12:28,800

absolutely i tell you the day of launch

279

00:12:32,150 --> 00:12:29,600

is something

280

00:12:32,870 --> 00:12:32,160

that i play over in my mind time and

281

00:12:34,389 --> 00:12:32,880

time again

282

00:12:36,629 --> 00:12:34,399

and it's something that that i've always

283

00:12:37,990 --> 00:12:36,639

dreamed of and so i'm right there with

284

00:12:39,829 --> 00:12:38,000

doug and bob as as they

285

00:12:41,269 --> 00:12:39,839

go through this every step right they

286

00:12:42,550 --> 00:12:41,279

wake up in the morning think about

287

00:12:44,550 --> 00:12:42,560

everything you need to do

288

00:12:47,190 --> 00:12:44,560

getting suited up i'm checking every

289

00:12:48,629 --> 00:12:47,200

zipper every pocket i'm ready to go

290

00:12:50,230 --> 00:12:48,639

you're walking out to the launch pad

291

00:12:52,150 --> 00:12:50,240

you're running through in your mind what

292

00:12:54,389 --> 00:12:52,160

are my checklists whatever thing has i

293

00:12:56,870 --> 00:12:54,399

thought of everything that i need to do

294

00:12:58,310 --> 00:12:56,880

getting that capsule strapping in now

295

00:12:59,910 --> 00:12:58,320

they're going to fuel the rocket right

296

00:13:01,269 --> 00:12:59,920

looking at the displays am i monitoring

297

00:13:02,150 --> 00:13:01,279

the right thing i'm running through my

298

00:13:05,030 --> 00:13:02,160

mind everything

299

00:13:06,069 --> 00:13:05,040

and i am with them every step of the way

300

00:13:07,750 --> 00:13:06,079

i tell you and

301

00:13:09,350 --> 00:13:07,760

and it's exciting i can feel my heart

302

00:13:10,230 --> 00:13:09,360

rate rising right now just thinking

303

00:13:11,910 --> 00:13:10,240

about it so

304

00:13:13,350 --> 00:13:11,920

what i what i tell you out there you're

305

00:13:16,629 --> 00:13:13,360

watching this launch

306

00:13:18,389 --> 00:13:16,639

join me on this journey follow the crew

307

00:13:19,990 --> 00:13:18,399

throughout the day through every step

308

00:13:22,069 --> 00:13:20,000

and think about in your mind

309

00:13:23,990 --> 00:13:22,079

dream of that what would that be like

310

00:13:26,389 --> 00:13:24,000

for you to suit up

311

00:13:28,310 --> 00:13:26,399

to walk to the rocket to get in because

312

00:13:30,069 --> 00:13:28,320

today it might be a dream

313

00:13:31,509 --> 00:13:30,079

but not too far in the future you might

314

00:13:33,110 --> 00:13:31,519

be sitting on top of that rocket

315

00:13:35,829 --> 00:13:33,120

and you might be launching to the moon

316

00:13:37,750 --> 00:13:35,839

or mars so take advantage of that

317

00:13:39,350 --> 00:13:37,760

gel you got to throw in you know i don't

318

00:13:41,590 --> 00:13:39,360

care how prepared you are

319

00:13:42,389 --> 00:13:41,600

no amount of training or simulator rides

320

00:13:44,389 --> 00:13:42,399

prepares you

321

00:13:45,829 --> 00:13:44,399

for when that rocket lights off that is

322

00:13:48,230 --> 00:13:45,839

one heck of a ride and it's better than

323

00:13:50,550 --> 00:13:48,240

a cat shot

324

00:13:51,910 --> 00:13:50,560

well said so we had a question i'm going

325

00:13:53,590 --> 00:13:51,920

to throw this one to you um you're the

326

00:13:55,670 --> 00:13:53,600

most recent to fly into space

327

00:13:57,910 --> 00:13:55,680

uh a nine nine-year-old eva from new

328

00:14:00,150 --> 00:13:57,920

hampshire asked what types of food

329

00:14:01,670 --> 00:14:00,160

do astronauts get to bring with them oh

330

00:14:03,350 --> 00:14:01,680

that's a great question you know when we

331

00:14:06,389 --> 00:14:03,360

first get to the space station

332

00:14:07,509 --> 00:14:06,399

um we get a briefing from the uh the the

333

00:14:10,069 --> 00:14:07,519

commander there

334

00:14:11,590 --> 00:14:10,079

and they show us uh the bathroom they

335

00:14:13,030 --> 00:14:11,600

show us where to get our food

336

00:14:14,310 --> 00:14:13,040

and they show us where we're gonna sleep

337

00:14:14,790 --> 00:14:14,320

and then we cover the emergencies of

338

00:14:16,949 --> 00:14:14,800

course

339

00:14:18,230 --> 00:14:16,959

uh obviously but but that's a really

340

00:14:18,870 --> 00:14:18,240

important thing you know we eat every

341

00:14:21,910 --> 00:14:18,880

day

342

00:14:23,829 --> 00:14:21,920

and the food lab we have at johnson

343

00:14:25,670 --> 00:14:23,839

space center has done an amazing job

344

00:14:27,990 --> 00:14:25,680

making sure that we've got a good

345

00:14:31,030 --> 00:14:28,000

variety and very healthful foods

346

00:14:32,629 --> 00:14:31,040

and so you know we have barbecue beef

347

00:14:34,360 --> 00:14:32,639

brisket we have

348

00:14:35,750 --> 00:14:34,370

turkey we have

349

00:14:38,230 --> 00:14:35,760

[Music]

350

00:14:39,990 --> 00:14:38,240

corn half of our food is dehydrated that

351

00:14:40,790 --> 00:14:40,000

we have to add water to the other half

352

00:14:43,990 --> 00:14:40,800

has been prepared

353

00:14:47,590 --> 00:14:44,000

and we just use a food warmer some of my

354

00:14:48,470 --> 00:14:47,600

favorites were the the maple muffin for

355

00:14:50,310 --> 00:14:48,480

breakfast

356

00:14:51,509 --> 00:14:50,320

and then the chocolate pudding cake for

357

00:14:52,710 --> 00:14:51,519

dessert um

358

00:14:54,550 --> 00:14:52,720

i have a little bit of a sweet tooth

359

00:14:55,430 --> 00:14:54,560

apparently all right but uh but the food

360

00:14:57,990 --> 00:14:55,440

is great

361

00:14:58,790 --> 00:14:58,000

fantastic uh mr breinstein question

362

00:15:00,310 --> 00:14:58,800

about

363

00:15:02,470 --> 00:15:00,320

the recycle here getting ready to do

364

00:15:04,310 --> 00:15:02,480

this again uh will all events leading to

365

00:15:06,389 --> 00:15:04,320

launch be in the exact same order

366

00:15:08,629 --> 00:15:06,399

um astronauts dressing up going to the

367

00:15:09,670 --> 00:15:08,639

teslas headed to the white room or do we

368

00:15:12,150 --> 00:15:09,680

change anything

369

00:15:14,870 --> 00:15:12,160

no it'll be the look the key is

370

00:15:17,590 --> 00:15:14,880

repetition and muscle memory so

371

00:15:19,189 --> 00:15:17,600

everything will be the same yet again um

372

00:15:20,629 --> 00:15:19,199

you know like i said one thing that we'd

373

00:15:23,189 --> 00:15:20,639

like to do this time

374

00:15:25,350 --> 00:15:23,199

is if if the probability of going is

375

00:15:27,189 --> 00:15:25,360

not high on saturday

376

00:15:28,790 --> 00:15:27,199

we might not we might not pull the

377

00:15:30,150 --> 00:15:28,800

trigger on saturday we might go on

378

00:15:32,069 --> 00:15:30,160

sunday

379

00:15:33,910 --> 00:15:32,079

and of course what we don't want to do

380

00:15:36,870 --> 00:15:33,920

is end up doing back to back

381

00:15:37,990 --> 00:15:36,880

wet dress rehearsals we might do it i'm

382

00:15:40,150 --> 00:15:38,000

not saying we won't

383

00:15:41,030 --> 00:15:40,160

if if we try it on saturday and then

384

00:15:43,350 --> 00:15:41,040

sunday

385

00:15:44,629 --> 00:15:43,360

miraculously clears up we might go again

386

00:15:46,790 --> 00:15:44,639

but um

387

00:15:47,990 --> 00:15:46,800

but the the amount of effort that it

388

00:15:49,509 --> 00:15:48,000

takes to go through that is

389

00:15:52,310 --> 00:15:49,519

is a lot so we want to make sure that

390

00:15:54,470 --> 00:15:52,320

we're not um unduly burdening people

391

00:15:55,670 --> 00:15:54,480

yeah absolutely mr cabana question for

392

00:15:59,430 --> 00:15:55,680

you um

393

00:16:00,069 --> 00:15:59,440

thinking about the will this mission be

394

00:16:02,150 --> 00:16:00,079

any

395

00:16:03,910 --> 00:16:02,160

different than future crude flights uh

396

00:16:05,910 --> 00:16:03,920

because it's a demonstration flight

397

00:16:07,189 --> 00:16:05,920

are we gonna see much change from flight

398

00:16:08,150 --> 00:16:07,199

to flight well

399

00:16:10,389 --> 00:16:08,160

you know we're going to have to see

400

00:16:11,670 --> 00:16:10,399

first off this is a test flight and we

401  
00:16:13,110 --> 00:16:11,680  
are going to learn from it and there

402  
00:16:14,710 --> 00:16:13,120  
will be changes that get made

403  
00:16:16,150 --> 00:16:14,720  
afterwards you know i'm not going to

404  
00:16:18,470 --> 00:16:16,160  
rest easy until bob and doug

405  
00:16:20,629 --> 00:16:18,480  
are home safely after a successful

406  
00:16:23,670 --> 00:16:20,639  
mission on orbit and back here on

407  
00:16:24,470 --> 00:16:23,680  
on earth but you know eventually we are

408  
00:16:27,110 --> 00:16:24,480  
going to get to

409  
00:16:27,749 --> 00:16:27,120  
where we are flying a regular cadence of

410  
00:16:30,470 --> 00:16:27,759  
both

411  
00:16:32,550 --> 00:16:30,480  
the boeing and the spacex vehicles with

412  
00:16:35,110 --> 00:16:32,560  
more than just two astronauts aboard

413  
00:16:36,629 --> 00:16:35,120

and this is the future so you know we

414

00:16:38,790 --> 00:16:36,639

want to get to where we have

415

00:16:41,110 --> 00:16:38,800

that regularity where we understand the

416

00:16:42,310 --> 00:16:41,120

vehicles and we can progress to the

417

00:16:43,829 --> 00:16:42,320

point where

418

00:16:45,030 --> 00:16:43,839

we're more comfortable doing it but

419

00:16:46,230 --> 00:16:45,040

we're going to learn from this test

420

00:16:48,150 --> 00:16:46,240

flight and that's why we're being extra

421

00:16:49,829 --> 00:16:48,160

careful on this first flight

422

00:16:51,590 --> 00:16:49,839

yeah absolutely it makes a lot of sense

423

00:16:53,110 --> 00:16:51,600

can you talk about launch windows really

424

00:16:55,110 --> 00:16:53,120

fast so there's a question about

425

00:16:56,310 --> 00:16:55,120

instantaneous launch windows why is it

426

00:16:57,670 --> 00:16:56,320

instantaneous and

427

00:16:59,350 --> 00:16:57,680

why do we move three days instead of

428

00:17:01,030 --> 00:16:59,360

just trying again on thursday so

429

00:17:02,949 --> 00:17:01,040

uh it depends on a couple of things

430

00:17:03,590 --> 00:17:02,959

first off this is orbital mechanics all

431

00:17:05,750 --> 00:17:03,600

right

432

00:17:07,270 --> 00:17:05,760

the space station is orbiting the earth

433

00:17:09,189 --> 00:17:07,280

every 90 minutes and there's only

434

00:17:10,870 --> 00:17:09,199

certain times that it comes over florida

435

00:17:11,750 --> 00:17:10,880

where we can launch and catch up to it

436

00:17:14,789 --> 00:17:11,760

all right

437

00:17:15,510 --> 00:17:14,799

so the reason for the instantaneous

438

00:17:17,350 --> 00:17:15,520

window

439

00:17:18,870 --> 00:17:17,360

is like on space shuttle we had about a

440

00:17:19,829 --> 00:17:18,880

five minute window that we could launch

441

00:17:22,549 --> 00:17:19,839

within

442

00:17:23,909 --> 00:17:22,559

spacex they still have a time frame that

443

00:17:24,150 --> 00:17:23,919

they can launch within but they choose

444

00:17:31,190 --> 00:17:24,160

an

445

00:17:32,310 --> 00:17:31,200

vehicle also

446

00:17:34,390 --> 00:17:32,320

they're going to be recovering this

447

00:17:36,470 --> 00:17:34,400

first stage on the barge out at sea

448

00:17:37,669 --> 00:17:36,480

so you know you have to take the

449

00:17:39,350 --> 00:17:37,679

propellant of the vehicle its

450

00:17:40,230 --> 00:17:39,360

performance into consideration as well

451  
00:17:42,310 --> 00:17:40,240  
as this

452  
00:17:44,150 --> 00:17:42,320  
orbital mechanics window of when you can

453  
00:17:47,270 --> 00:17:44,160  
actually render with the space station

454  
00:17:49,510 --> 00:17:47,280  
and that moves earlier every day

455  
00:17:51,590 --> 00:17:49,520  
so if you notice we're two days later

456  
00:17:54,070 --> 00:17:51,600  
we're about uh we went from uh

457  
00:17:55,909 --> 00:17:54,080  
you know a 4 30 launch to a 3 30 launch

458  
00:17:57,510 --> 00:17:55,919  
so about 30 minutes every day

459  
00:17:59,190 --> 00:17:57,520  
give or take you know it's going to move

460  
00:18:00,070 --> 00:17:59,200  
a little bit earlier so next week it's

461  
00:18:01,350 --> 00:18:00,080  
going to be even earlier

462  
00:18:03,510 --> 00:18:01,360  
in the day and that's because of the

463  
00:18:06,549 --> 00:18:03,520

orbital mechanics perfect

464

00:18:07,510 --> 00:18:06,559

of course in florida the earlier the the

465

00:18:09,430 --> 00:18:07,520

better the weather

466

00:18:10,870 --> 00:18:09,440

yeah so afternoon thunderstorms we don't

467

00:18:11,830 --> 00:18:10,880

want them get them yep

468

00:18:13,590 --> 00:18:11,840

and there's something that actually

469

00:18:15,029 --> 00:18:13,600

drives home the fact that are flying to

470

00:18:16,549 --> 00:18:15,039

the space station for those of you that

471

00:18:19,830 --> 00:18:16,559

have seen a night launch and

472

00:18:21,669 --> 00:18:19,840

and my my launch was at night the guests

473

00:18:22,870 --> 00:18:21,679

get treated to seeing the space station

474

00:18:25,909 --> 00:18:22,880

fly over

475

00:18:28,470 --> 00:18:25,919

first and then we launch and and so

476  
00:18:29,430 --> 00:18:28,480  
you really get that sense of man we are

477  
00:18:31,350 --> 00:18:29,440  
we're gonna

478  
00:18:34,070 --> 00:18:31,360  
chase after that uh that space station

479  
00:18:36,150 --> 00:18:34,080  
to dock yeah if anybody has not gone out

480  
00:18:37,669 --> 00:18:36,160  
and seen a space station pass i mean it

481  
00:18:39,669 --> 00:18:37,679  
is the brightest star in the sky

482  
00:18:41,430 --> 00:18:39,679  
it is so cool especially when it's one

483  
00:18:42,310 --> 00:18:41,440  
of these really high inclination passes

484  
00:18:44,230 --> 00:18:42,320  
that comes over

485  
00:18:46,150 --> 00:18:44,240  
from west to east and you can just track

486  
00:18:46,870 --> 00:18:46,160  
it across the sky i remember the first

487  
00:18:48,710 --> 00:18:46,880  
time i thought

488  
00:18:50,230 --> 00:18:48,720

i thought what is that an airplane

489

00:18:52,470 --> 00:18:50,240

somewhere you know with its landing

490

00:18:54,390 --> 00:18:52,480

light on it is just amazingly bright

491

00:18:56,150 --> 00:18:54,400

yeah if you're not familiar head online

492

00:18:57,270 --> 00:18:56,160

and on your search engine search nasa

493

00:18:58,630 --> 00:18:57,280

spot the station

494

00:18:59,990 --> 00:18:58,640

you can actually get text message or

495

00:19:01,430 --> 00:19:00,000

email updates as to when that's going to

496

00:19:01,909 --> 00:19:01,440

happen when you can see it from your

497

00:19:04,150 --> 00:19:01,919

city

498

00:19:05,590 --> 00:19:04,160

which is great and it's distinct it's

499

00:19:06,950 --> 00:19:05,600

distinguished by the fact that there's

500

00:19:08,710 --> 00:19:06,960

no flashing lights

501  
00:19:10,630 --> 00:19:08,720  
it's a solid constant and it moves

502  
00:19:12,390 --> 00:19:10,640  
really quickly much faster than an

503  
00:19:14,950 --> 00:19:12,400  
airliner can at this point

504  
00:19:16,230 --> 00:19:14,960  
um so uh this question was aimed at the

505  
00:19:16,870 --> 00:19:16,240  
astronauts but i'll kind of do it for

506  
00:19:18,470 --> 00:19:16,880  
everybody

507  
00:19:19,990 --> 00:19:18,480  
30 seconds how did you get to the

508  
00:19:20,870 --> 00:19:20,000  
position you are today so kind of what's

509  
00:19:22,230 --> 00:19:20,880  
your background

510  
00:19:23,990 --> 00:19:22,240  
um what brought you to this moment in

511  
00:19:25,590 --> 00:19:24,000  
time mr breinstein i'm a navy

512  
00:19:27,909 --> 00:19:25,600  
pilot by trade i've always had an

513  
00:19:29,110 --> 00:19:27,919

interest in aviation and aerospace in

514

00:19:30,870 --> 00:19:29,120

general

515

00:19:32,470 --> 00:19:30,880

i got elected to the united states house

516

00:19:34,310 --> 00:19:32,480

of representatives i was on the armed

517

00:19:36,710 --> 00:19:34,320

services committee strategic forces

518

00:19:38,549 --> 00:19:36,720

subcommittee which deals with all of

519

00:19:40,150 --> 00:19:38,559

you know the national security space

520

00:19:40,870 --> 00:19:40,160

apparatus of the united states of

521

00:19:42,390 --> 00:19:40,880

america

522

00:19:45,029 --> 00:19:42,400

i was also on the science committee

523

00:19:47,190 --> 00:19:45,039

which oversees noaa the national oceanic

524

00:19:48,630 --> 00:19:47,200

and atmospheric administration 40

525

00:19:50,390 --> 00:19:48,640

of their budget is based on

526

00:19:51,990 --> 00:19:50,400

space-related activities and of course

527

00:19:54,470 --> 00:19:52,000

it also oversees nasa

528

00:19:55,270 --> 00:19:54,480

so as a member of congress i was steeped

529

00:19:58,230 --> 00:19:55,280

into

530

00:19:59,350 --> 00:19:58,240

kind of the the the national space

531

00:20:01,750 --> 00:19:59,360

apparatus

532

00:20:03,430 --> 00:20:01,760

got very involved i drafted a bill uh

533

00:20:05,990 --> 00:20:03,440

called the american space renaissance

534

00:20:09,669 --> 00:20:06,000

act it got a lot of attention and then

535

00:20:11,750 --> 00:20:09,679

when the president got elected i went

536

00:20:13,750 --> 00:20:11,760

my name popped up somehow i'm still not

537

00:20:15,510 --> 00:20:13,760

100 sure how that happened

538

00:20:16,870 --> 00:20:15,520

um but uh but i went through an

539

00:20:18,310 --> 00:20:16,880

interview process and

540

00:20:20,549 --> 00:20:18,320

uh was asked to be the nasa

541

00:20:21,990 --> 00:20:20,559

administrator cool glad that you are

542

00:20:24,230 --> 00:20:22,000

making lots of progress really fast

543

00:20:25,990 --> 00:20:24,240

thank you nicole

544

00:20:27,669 --> 00:20:26,000

sure i grew up in a small town in

545

00:20:29,669 --> 00:20:27,679

northern california and

546

00:20:31,430 --> 00:20:29,679

when i was younger i really loved math

547

00:20:32,070 --> 00:20:31,440

and science but i also really loved

548

00:20:34,710 --> 00:20:32,080

soccer

549

00:20:35,830 --> 00:20:34,720

and that was my first you know so i'm

550

00:20:37,430 --> 00:20:35,840

trying to decide as

551  
00:20:39,110 --> 00:20:37,440  
a young kid where to go to college i was

552  
00:20:40,230 --> 00:20:39,120  
really conflicted i i knew i wanted to

553  
00:20:41,430 --> 00:20:40,240  
serve in the military

554  
00:20:43,590 --> 00:20:41,440  
so i started looking at the service

555  
00:20:45,669 --> 00:20:43,600  
academies and the naval academy

556  
00:20:48,070 --> 00:20:45,679  
had an incredible soccer team uh the

557  
00:20:51,190 --> 00:20:48,080  
coach there was my idol growing up as

558  
00:20:51,750 --> 00:20:51,200  
a young girl and so it was a engineering

559  
00:20:53,350 --> 00:20:51,760  
school

560  
00:20:54,950 --> 00:20:53,360  
i could serve my military and i could

561  
00:20:56,630 --> 00:20:54,960  
play soccer it was kind of the best of

562  
00:20:59,110 --> 00:20:56,640  
both worlds so initially i just

563  
00:21:00,870 --> 00:20:59,120

started following my passions in life um

564

00:21:02,390 --> 00:21:00,880

you know before my first my senior year

565

00:21:03,830 --> 00:21:02,400

i got a ride in f-18

566

00:21:05,430 --> 00:21:03,840

and that kind of sealed the deal i

567

00:21:07,669 --> 00:21:05,440

already knew i wanted to be a marine

568

00:21:08,549 --> 00:21:07,679

now i knew i wanted to fly flying in the

569

00:21:10,149 --> 00:21:08,559

marine corps

570

00:21:12,310 --> 00:21:10,159

loved it was awesome but i missed the

571

00:21:14,149 --> 00:21:12,320

engineering side of the house as well

572

00:21:15,510 --> 00:21:14,159

so that led me to test pilot school and

573

00:21:17,909 --> 00:21:15,520

becoming a test pilot

574

00:21:19,510 --> 00:21:17,919

and then naturally when nasa opened up

575

00:21:21,590 --> 00:21:19,520

the application process

576

00:21:23,510 --> 00:21:21,600

you know i i looked at and what i had

577

00:21:25,830 --> 00:21:23,520

done and realized oh my goodness

578

00:21:27,909 --> 00:21:25,840

i i might have an actual shot at this

579

00:21:30,789 --> 00:21:27,919

just based on the experiences that i had

580

00:21:33,510 --> 00:21:30,799

and unfortunately i was uh lucky enough

581

00:21:35,029 --> 00:21:33,520

to be selected in the class of 2013. so

582

00:21:37,029 --> 00:21:35,039

i didn't have it really all figured out

583

00:21:38,390 --> 00:21:37,039

and planned out from day one but i knew

584

00:21:41,909 --> 00:21:38,400

what i enjoyed in life

585

00:21:43,430 --> 00:21:41,919

and i just followed that dream chill

586

00:21:44,950 --> 00:21:43,440

well i wanted to be an astronaut for as

587

00:21:46,630 --> 00:21:44,960

long as i can remember and

588

00:21:48,070 --> 00:21:46,640

what a privilege to to have this

589

00:21:50,950 --> 00:21:48,080

opportunity um

590

00:21:52,470 --> 00:21:50,960

i grew up in an air force family and uh

591

00:21:55,830 --> 00:21:52,480

and was really inspired by

592

00:21:57,430 --> 00:21:55,840

science fiction uh movies and and books

593

00:21:59,590 --> 00:21:57,440

but it was that first shuttle launch in

594

00:22:00,070 --> 00:21:59,600

1981 was in second grade that really

595

00:22:02,710 --> 00:22:00,080

gave

596

00:22:04,470 --> 00:22:02,720

life to that dream so i tried to figure

597

00:22:07,110 --> 00:22:04,480

out how do you become an astronaut

598

00:22:07,590 --> 00:22:07,120

um i read a lot of uh early biographies

599

00:22:10,870 --> 00:22:07,600

of our

600

00:22:12,310 --> 00:22:10,880

like everybody

601  
00:22:13,750 --> 00:22:12,320  
you had to become a pilot and a test

602  
00:22:15,430 --> 00:22:13,760  
pilot and growing up in an air force

603  
00:22:17,750 --> 00:22:15,440  
family i had a desire to serve

604  
00:22:18,870 --> 00:22:17,760  
i decided to go to the air force academy

605  
00:22:20,230 --> 00:22:18,880  
and it was at the academy that i

606  
00:22:21,350 --> 00:22:20,240  
actually discovered a passion for

607  
00:22:24,710 --> 00:22:21,360  
biology and

608  
00:22:27,590 --> 00:22:24,720  
uh and for for medicine and so

609  
00:22:28,950 --> 00:22:27,600  
i actually took a little bit of a turn i

610  
00:22:30,470 --> 00:22:28,960  
decided to go to medical school i went

611  
00:22:32,710 --> 00:22:30,480  
to university of colorado

612  
00:22:34,149 --> 00:22:32,720  
and trained in medicine i went up to

613  
00:22:36,149 --> 00:22:34,159

minnesota at hennepin county medical

614

00:22:37,830 --> 00:22:36,159

center to train emergency medicine

615

00:22:39,669 --> 00:22:37,840

and that and just had an absolute

616

00:22:41,669 --> 00:22:39,679

passion for that

617

00:22:42,789 --> 00:22:41,679

but i still had this desire to serve in

618

00:22:45,669 --> 00:22:42,799

human space flight

619

00:22:47,190 --> 00:22:45,679

and so i came down i went down to texas

620

00:22:48,549 --> 00:22:47,200

and i trained in aerospace medicine i

621

00:22:50,789 --> 00:22:48,559

got a job as a flight surgeon

622

00:22:52,830 --> 00:22:50,799

at johnson space center and then had the

623

00:22:56,549 --> 00:22:52,840

great fortune to get selected into the

624

00:22:57,750 --> 00:22:56,559

2009 class and ultimately to get to fly

625

00:22:58,710 --> 00:22:57,760

to the international space station in

626  
00:23:01,430 --> 00:22:58,720  
2015

627  
00:23:02,950 --> 00:23:01,440  
uh it is such an amazing uh privilege to

628  
00:23:06,390 --> 00:23:02,960  
be a part of this team

629  
00:23:08,710 --> 00:23:06,400  
cool and bob mr oh man josh so

630  
00:23:10,390 --> 00:23:08,720  
uh when i was a little boy i just wanted

631  
00:23:11,669 --> 00:23:10,400  
to be a pilot i wanted to be a naval

632  
00:23:13,270 --> 00:23:11,679  
aviator and take off and land on

633  
00:23:14,710 --> 00:23:13,280  
aircraft carriers and i never dreamed i

634  
00:23:15,909 --> 00:23:14,720  
could be an astronaut i held those guys

635  
00:23:18,149 --> 00:23:15,919  
in such high esteem

636  
00:23:19,029 --> 00:23:18,159  
watching them on black and white tv and

637  
00:23:20,789 --> 00:23:19,039  
i just thought

638  
00:23:22,630 --> 00:23:20,799

man wouldn't that be awesome but i

639

00:23:24,549 --> 00:23:22,640

couldn't do that and i was fortunate

640

00:23:28,070 --> 00:23:24,559

enough to get into the naval academy

641

00:23:29,909 --> 00:23:28,080

and my senior year the physics honor

642

00:23:31,669 --> 00:23:29,919

society took a field trip down here

643

00:23:33,909 --> 00:23:31,679

to the kennedy space center and i

644

00:23:36,310 --> 00:23:33,919

remember seeing apollo 13 launch

645

00:23:37,110 --> 00:23:36,320

and jim lovell was a naval academy

646

00:23:39,029 --> 00:23:37,120

graduate

647

00:23:40,630 --> 00:23:39,039

naval aviator test pilot and i thought

648

00:23:43,190 --> 00:23:40,640

you know maybe i could do that but

649

00:23:44,950 --> 00:23:43,200

it was a long ways off and so i worked

650

00:23:46,230 --> 00:23:44,960

hard i got my wings i liked nick

651  
00:23:47,590 --> 00:23:46,240  
cole i chose the commission in the

652  
00:23:48,549 --> 00:23:47,600  
marine corps marine pilots our naval

653  
00:23:51,990 --> 00:23:48,559  
aviators

654  
00:23:52,549 --> 00:23:52,000  
and uh as soon as i got uh got to be a

655  
00:23:53,990 --> 00:23:52,559  
pilot

656  
00:23:55,430 --> 00:23:54,000  
and had a thousand hours i said i'd

657  
00:23:57,029 --> 00:23:55,440  
really like to be a test pilot and use

658  
00:23:57,750 --> 00:23:57,039  
all that math and engineering i had in

659  
00:23:59,990 --> 00:23:57,760  
school

660  
00:24:01,909 --> 00:24:00,000  
and i was able to get into test pilot

661  
00:24:04,630 --> 00:24:01,919  
school and i absolutely loved it

662  
00:24:05,110 --> 00:24:04,640  
and while i was there uh as a test pilot

663  
00:24:07,029 --> 00:24:05,120

uh

664

00:24:08,710 --> 00:24:07,039

john young and dan brandenstein a couple

665

00:24:10,149 --> 00:24:08,720

astronauts chief the astronaut office

666

00:24:12,070 --> 00:24:10,159

came up to pax recruiting

667

00:24:13,669 --> 00:24:12,080

uh nasa astronauts and they wanted us to

668

00:24:15,830 --> 00:24:13,679

apply and i said well dang i

669

00:24:16,789 --> 00:24:15,840

i actually qualify and so i applied and

670

00:24:18,710 --> 00:24:16,799

i didn't make it

671

00:24:20,950 --> 00:24:18,720

and i was really disappointed but i

672

00:24:23,590 --> 00:24:20,960

reapplied and was fortunate enough to

673

00:24:24,630 --> 00:24:23,600

make it the next year and i man i i just

674

00:24:25,990 --> 00:24:24,640

can't say

675

00:24:27,909 --> 00:24:26,000

you know how proud i am to be part of

676

00:24:29,750 --> 00:24:27,919

this team and how blessed i am to be

677

00:24:31,669 --> 00:24:29,760

able to done the things i did

678

00:24:34,070 --> 00:24:31,679

as far as getting to where i am the last

679

00:24:36,070 --> 00:24:34,080

job i applied for was to be an astronaut

680

00:24:37,909 --> 00:24:36,080

ever since then i've just done what i've

681

00:24:38,789 --> 00:24:37,919

been asked to do i've never said no to

682

00:24:40,710 --> 00:24:38,799

an assignment

683

00:24:42,789 --> 00:24:40,720

and i've always tried to do my very best

684

00:24:44,070 --> 00:24:42,799

at whatever i've been asked and

685

00:24:46,149 --> 00:24:44,080

one day i got asked if i'd be the

686

00:24:47,510 --> 00:24:46,159

director of the kennedy space center and

687

00:24:49,510 --> 00:24:47,520

i can't imagine

688

00:24:51,190 --> 00:24:49,520

not being as hard as it was to leave all

689

00:24:53,669 --> 00:24:51,200

my friends in houston

690

00:24:54,710 --> 00:24:53,679

uh i can't imagine uh not having been

691

00:24:56,470 --> 00:24:54,720

part of this

692

00:24:58,070 --> 00:24:56,480

awesome team here at ksc going through

693

00:24:58,710 --> 00:24:58,080

this transition from shuttle to our

694

00:25:01,269 --> 00:24:58,720

future

695

00:25:02,870 --> 00:25:01,279

yeah can i just add you know i think uh

696

00:25:04,630 --> 00:25:02,880

the common theme in

697

00:25:05,909 --> 00:25:04,640

in the list of accomplishments and the

698

00:25:07,669 --> 00:25:05,919

journeys that uh

699

00:25:09,029 --> 00:25:07,679

that you've heard hear her described

700

00:25:11,990 --> 00:25:09,039

here um

701  
00:25:12,710 --> 00:25:12,000  
is team and i think uh for all of us

702  
00:25:15,430 --> 00:25:12,720  
this is not

703  
00:25:17,510 --> 00:25:15,440  
an individual accomplishment that along

704  
00:25:20,710 --> 00:25:17,520  
that journey that we are partnered with

705  
00:25:23,110 --> 00:25:20,720  
friends family teachers coaches

706  
00:25:24,470 --> 00:25:23,120  
mentors that are all you know it's a

707  
00:25:26,390 --> 00:25:24,480  
group effort to

708  
00:25:28,149 --> 00:25:26,400  
to get to be here today and it's a group

709  
00:25:29,750 --> 00:25:28,159  
effort to to do something

710  
00:25:31,510 --> 00:25:29,760  
like we're going to do here this weekend

711  
00:25:33,110 --> 00:25:31,520  
man such a good word obviously

712  
00:25:34,630 --> 00:25:33,120  
be looking for your own support system

713  
00:25:36,070 --> 00:25:34,640

and be a support system for others

714

00:25:38,630 --> 00:25:36,080

i think that's that's part of team is

715

00:25:40,230 --> 00:25:38,640

both ways um mr breinstein

716

00:25:41,590 --> 00:25:40,240

what important data did we get on

717

00:25:42,149 --> 00:25:41,600

wednesday obviously earlier today you

718

00:25:43,669 --> 00:25:42,159

mentioned

719

00:25:45,510 --> 00:25:43,679

this is the first wet dress rehearsal we

720

00:25:46,630 --> 00:25:45,520

had so what good data did we get that we

721

00:25:48,549 --> 00:25:46,640

can apply for future

722

00:25:50,070 --> 00:25:48,559

flights with crew dragon i think the the

723

00:25:52,230 --> 00:25:50,080

best data we got is that

724

00:25:55,110 --> 00:25:52,240

everything seemed to work according to

725

00:25:58,549 --> 00:25:55,120

plan we we got the astronauts on board

726

00:26:01,269 --> 00:25:58,559

we fueled the rocket we got the the

727

00:26:02,630 --> 00:26:01,279

uh the launch abort system armed all of

728

00:26:04,470 --> 00:26:02,640

these things are

729

00:26:06,390 --> 00:26:04,480

our steps that we had not done yet with

730

00:26:08,070 --> 00:26:06,400

the astronauts on board

731

00:26:10,230 --> 00:26:08,080

and everything worked and we were go for

732

00:26:12,470 --> 00:26:10,240

launch from a technical perspective

733

00:26:13,990 --> 00:26:12,480

we were go for launch we just got caught

734

00:26:15,669 --> 00:26:14,000

by the weather so

735

00:26:17,029 --> 00:26:15,679

i think what we learned is that

736

00:26:19,029 --> 00:26:17,039

everything worked

737

00:26:20,470 --> 00:26:19,039

and uh and we're very happy about that

738

00:26:21,909 --> 00:26:20,480

now we're we're

739

00:26:23,510 --> 00:26:21,919

ready to take the next step and get

740

00:26:25,909 --> 00:26:23,520

these guys off the pad good

741

00:26:27,029 --> 00:26:25,919

love it um uh this is from a

742

00:26:29,590 --> 00:26:27,039

nine-year-old abby

743

00:26:31,110 --> 00:26:29,600

um asking our two flown astronauts here

744

00:26:33,510 --> 00:26:31,120

what was the favorite thing you saw

745

00:26:34,149 --> 00:26:33,520

when you were in space you wanna go

746

00:26:37,590 --> 00:26:34,159

first

747

00:26:37,990 --> 00:26:37,600

oh sure boy there that's that's a hard

748

00:26:39,990 --> 00:26:38,000

question

749

00:26:41,269 --> 00:26:40,000

because there are so many amazing sights

750

00:26:43,510 --> 00:26:41,279

for me personally

751  
00:26:44,870 --> 00:26:43,520  
it was the very first time while i was

752  
00:26:45,430 --> 00:26:44,880  
still we were still in the rocket still

753  
00:26:48,390 --> 00:26:45,440  
climbing

754  
00:26:49,750 --> 00:26:48,400  
towards low earth orbit that first view

755  
00:26:52,950 --> 00:26:49,760  
out of the window to see

756  
00:26:55,830 --> 00:26:52,960  
with your own eyes the gentle arc

757  
00:26:56,470 --> 00:26:55,840  
of earth's horizon highlighted by the

758  
00:26:58,630 --> 00:26:56,480  
sun

759  
00:27:00,789 --> 00:26:58,640  
you know you see so many pictures of

760  
00:27:02,789 --> 00:27:00,799  
that and to see that with your own eyes

761  
00:27:03,990 --> 00:27:02,799  
i mean it gives me chills right now and

762  
00:27:05,990 --> 00:27:04,000  
then on

763  
00:27:08,149 --> 00:27:06,000

the space station the opportunity to

764

00:27:10,230 --> 00:27:08,159

look back at the earth and find

765

00:27:13,350 --> 00:27:10,240

uh places where you grew up places where

766

00:27:17,350 --> 00:27:15,510

and and to feel that connection uh with

767

00:27:20,310 --> 00:27:17,360

with your family with your friends

768

00:27:22,149 --> 00:27:20,320

and uh and with the earth yeah i got a

769

00:27:23,190 --> 00:27:22,159

second that um

770

00:27:25,190 --> 00:27:23,200

you know i would have loved to have had

771

00:27:27,269 --> 00:27:25,200

a long duration flight but i think what

772

00:27:29,190 --> 00:27:27,279

i remember most is just our earth is a

773

00:27:31,029 --> 00:27:29,200

beautiful blue jewel of a planet

774

00:27:32,549 --> 00:27:31,039

and you see the horizon about like that

775

00:27:34,230 --> 00:27:32,559

from 220 nautical

776

00:27:35,830 --> 00:27:34,240

and there's this thin little hazy line

777

00:27:37,590 --> 00:27:35,840

over it and that's our atmosphere that's

778

00:27:39,190 --> 00:27:37,600

all that's protecting us from that harsh

779

00:27:41,590 --> 00:27:39,200

void of space with its extreme

780

00:27:43,990 --> 00:27:41,600

temperatures and ultraviolet radiation

781

00:27:45,350 --> 00:27:44,000

and space is the darkest black you can

782

00:27:47,110 --> 00:27:45,360

possibly imagine no

783

00:27:48,389 --> 00:27:47,120

black on earth does it just as when

784

00:27:50,389 --> 00:27:48,399

you're on the sunlit side of the earth

785

00:27:52,230 --> 00:27:50,399

it's just the absence of anything

786

00:27:54,389 --> 00:27:52,240

but i always told first-time flyers when

787

00:27:55,830 --> 00:27:54,399

i was chief of the astronaut office

788

00:27:57,269 --> 00:27:55,840

while you're up there you got to stick

789

00:27:58,230 --> 00:27:57,279

your nose up to a window and make a

790

00:28:00,549 --> 00:27:58,240

memory

791

00:28:02,389 --> 00:28:00,559

and time on orbit is very expensive

792

00:28:04,630 --> 00:28:02,399

there's very little free time

793

00:28:05,669 --> 00:28:04,640

but you don't take a picture make a

794

00:28:07,510 --> 00:28:05,679

memory because

795

00:28:09,029 --> 00:28:07,520

pictures fade and they don't do it

796

00:28:11,110 --> 00:28:09,039

justice what you see with the eyes that

797

00:28:13,430 --> 00:28:11,120

god gave you is so much better and

798

00:28:15,350 --> 00:28:13,440

my last flight we were coming up over

799

00:28:16,789 --> 00:28:15,360

baja peninsula across the united states

800

00:28:18,310 --> 00:28:16,799

and there was a big high pressure system

801

00:28:20,950 --> 00:28:18,320

it was a night over the

802

00:28:21,669 --> 00:28:20,960

united states and we flew right over my

803

00:28:23,350 --> 00:28:21,679

hometown

804

00:28:24,950 --> 00:28:23,360

minneapolis-st paul i could see where my

805

00:28:25,669 --> 00:28:24,960

grandparents farm was we went up into

806

00:28:27,269 --> 00:28:25,679

canada

807

00:28:29,029 --> 00:28:27,279

and i looked down and i could see all

808

00:28:30,710 --> 00:28:29,039

the lights of the cities

809

00:28:32,230 --> 00:28:30,720

outlining the great lakes like you were

810

00:28:34,310 --> 00:28:32,240

looking down on a map from

811

00:28:35,350 --> 00:28:34,320

you know west to chicago to long island

812

00:28:37,110 --> 00:28:35,360

and it's just

813

00:28:39,430 --> 00:28:37,120

memories like that i will cherish

814

00:28:40,549 --> 00:28:39,440

forever and they are never going to fade

815

00:28:42,149 --> 00:28:40,559

nicole i look forward to asking you the

816

00:28:43,029 --> 00:28:42,159

same question hopefully here really

817

00:28:44,950 --> 00:28:43,039

really soon

818

00:28:46,310 --> 00:28:44,960

absolutely and mr breinstein last

819

00:28:48,149 --> 00:28:46,320

question for you today i'm going to ask

820

00:28:49,590 --> 00:28:48,159

you to speak for the entire nasa family

821

00:28:51,190 --> 00:28:49,600

and the question is just simple what

822

00:28:53,909 --> 00:28:51,200

what is it what does it feel like

823

00:28:54,310 --> 00:28:53,919

to be a part of history i'll tell you um

824

00:28:57,990 --> 00:28:54,320

it's

825

00:29:00,950 --> 00:28:58,000

this season in my life

826

00:29:02,470 --> 00:29:00,960

to be at the helm of this very storied

827

00:29:06,549 --> 00:29:02,480

agency

828

00:29:09,510 --> 00:29:06,559

we stand on the shoulders of giants and

829

00:29:09,830 --> 00:29:09,520

we're not here because of me i just have

830

00:29:12,950 --> 00:29:09,840

the

831

00:29:15,110 --> 00:29:12,960

moment in time

832

00:29:16,789 --> 00:29:15,120

in this position i want to give a lot of

833

00:29:20,230 --> 00:29:16,799

credit to charlie bolden

834

00:29:22,789 --> 00:29:20,240

my predecessor as the nasa administrator

835

00:29:24,950 --> 00:29:22,799

and and the the commercial crew program

836

00:29:26,389 --> 00:29:24,960

was started under his leadership

837

00:29:28,389 --> 00:29:26,399

and back then he wasn't getting the

838

00:29:30,630 --> 00:29:28,399

support that it needed um

839

00:29:31,909 --> 00:29:30,640

and and you know congress wasn't funding

840

00:29:33,669 --> 00:29:31,919

it at the level that it needed to be

841

00:29:35,269 --> 00:29:33,679

funded and yet he persevered

842

00:29:37,510 --> 00:29:35,279

and because of his hard work his

843

00:29:40,549 --> 00:29:37,520

determination um

844

00:29:42,389 --> 00:29:40,559

you know make no mistake we now have

845

00:29:43,990 --> 00:29:42,399

great support

846

00:29:45,590 --> 00:29:44,000

but we had to go through some tough

847

00:29:46,870 --> 00:29:45,600

times before we got to where we are

848

00:29:48,789 --> 00:29:46,880

right now and the support we're getting

849

00:29:50,789 --> 00:29:48,799

now is overwhelming so

850

00:29:52,710 --> 00:29:50,799

my hat's off to charlie bolden and he

851  
00:29:53,990 --> 00:29:52,720  
told me when i took this job we sat down

852  
00:29:56,070 --> 00:29:54,000  
had a long chat

853  
00:29:57,350 --> 00:29:56,080  
he said jim everything that happens

854  
00:30:00,149 --> 00:29:57,360  
under your watch

855  
00:30:01,830 --> 00:30:00,159  
you take credit for and i said sir he's

856  
00:30:03,750 --> 00:30:01,840  
a general in the marine corps he's also

857  
00:30:07,269 --> 00:30:03,760  
a nasa astronaut

858  
00:30:09,029 --> 00:30:07,279  
navy pilot by trade a naval aviator i

859  
00:30:10,870 --> 00:30:09,039  
should say not a navy pilot but a naval

860  
00:30:12,950 --> 00:30:10,880  
aviator is a marine corps pilot

861  
00:30:13,909 --> 00:30:12,960  
um and he said jim you take credit i

862  
00:30:17,110 --> 00:30:13,919  
said sir

863  
00:30:19,590 --> 00:30:17,120

uh this is this is a team effort and and

864

00:30:21,510 --> 00:30:19,600

um what makes this available today is

865

00:30:22,310 --> 00:30:21,520

continuity of purpose over long periods

866

00:30:24,389 --> 00:30:22,320

of time

867

00:30:25,990 --> 00:30:24,399

it's why we need sustainable programs

868

00:30:26,710 --> 00:30:26,000

it's why we work every day on making

869

00:30:28,470 --> 00:30:26,720

sure

870

00:30:30,549 --> 00:30:28,480

that 30 years from now the artemis

871

00:30:32,230 --> 00:30:30,559

program which chell just talked about

872

00:30:33,510 --> 00:30:32,240

the artemis program is going to be here

873

00:30:34,470 --> 00:30:33,520

30 years from now we're going to have a

874

00:30:36,389 --> 00:30:34,480

sustainable

875

00:30:38,070 --> 00:30:36,399

presence on the surface of the moon and

876

00:30:40,149 --> 00:30:38,080

in fact we're going to be on mars

877

00:30:41,669 --> 00:30:40,159

cool man good words appreciate all that

878

00:30:43,110 --> 00:30:41,679

thank you all for being here today

879

00:30:45,029 --> 00:30:43,120

i know we're all anxious to see this

880

00:30:47,110 --> 00:30:45,039

baby fly um so that's gonna do it for us

881

00:30:48,950 --> 00:30:47,120

here today i want to remind everyone to

882

00:30:50,950 --> 00:30:48,960

tune in tomorrow morning at 11 a.m

883

00:30:54,549 --> 00:30:50,960

eastern time we will begin coverage

884

00:30:56,310 --> 00:30:54,559

leading up to a 3 22 pm eastern time

885

00:30:57,750 --> 00:30:56,320

liftoff of the crew dragon

886

00:30:59,669 --> 00:30:57,760

and i'll leave it by just saying go

887

00:31:09,430 --> 00:30:59,679

falcon go dragon