



NASA'S SPACEX CREW-1

SOCIAL Q&A STARTS AT

**11**AM EST

KENNEDY SPACE CENTER

NASA

1  
00:15:05,290 --> 00:15:10,829

[Music]

2  
00:15:10,839 --> 00:15:15,400  
started

3  
00:15:26,580 --> 00:15:24,829  
[Music]

4  
00:15:31,350 --> 00:15:26,590  
rogers

5  
00:15:52,829 --> 00:15:41,110  
between countries discovery clears the

6  
00:16:07,030 --> 00:15:54,940  
discovery

7  
00:16:08,470 --> 00:16:07,040  
[Music]

8  
00:16:10,069 --> 00:16:08,480  
welcome back to nasa's kennedy space

9  
00:16:12,389 --> 00:16:10,079  
center i'm joshua santora

10  
00:16:14,710 --> 00:16:12,399  
and so glad that you could join us a big

11  
00:16:16,550 --> 00:16:14,720  
welcome to our nasa social participants

12  
00:16:18,470 --> 00:16:16,560  
as well as our virtual guests joining us

13  
00:16:20,150 --> 00:16:18,480

online uh please make sure you

14

00:16:21,670 --> 00:16:20,160

add your questions to the conversation

15

00:16:22,949 --> 00:16:21,680

as we go through today we're going to be

16

00:16:24,310 --> 00:16:22,959

taking those in real time and look

17

00:16:26,389 --> 00:16:24,320

forward to hearing from you

18

00:16:27,990 --> 00:16:26,399

and also from our fantastic panel today

19

00:16:30,470 --> 00:16:28,000

i'm joined by three incredible

20

00:16:31,829 --> 00:16:30,480

uh leaders for our agency who are

21

00:16:34,870 --> 00:16:31,839

continuing to help us

22

00:16:37,509 --> 00:16:34,880

push american exploration nasa's

23

00:16:38,949 --> 00:16:37,519

mission and humanity at large to bigger

24

00:16:39,670 --> 00:16:38,959

and better things so thanks guys for

25

00:16:41,269 --> 00:16:39,680

joining me

26  
00:16:42,550 --> 00:16:41,279  
uh we're gonna go and open with some

27  
00:16:43,670 --> 00:16:42,560  
opening remarks and kind of some

28  
00:16:46,389 --> 00:16:43,680  
questions for you all

29  
00:16:47,590 --> 00:16:46,399  
uh nasa administrator mr jim bridenstine

30  
00:16:50,069 --> 00:16:47,600  
thanks for being here

31  
00:16:51,430 --> 00:16:50,079  
curious to hear from you on the level of

32  
00:16:54,310 --> 00:16:51,440  
human exploration

33  
00:16:55,910 --> 00:16:54,320  
what is the nasa's crew one mission

34  
00:16:57,990 --> 00:16:55,920  
about and what does it mean for us

35  
00:16:59,670 --> 00:16:58,000  
so for there's a lot of things that it

36  
00:17:00,870 --> 00:16:59,680  
means when we think about the fact that

37  
00:17:02,870 --> 00:17:00,880  
we are

38  
00:17:04,390 --> 00:17:02,880

through the test and development phase

39

00:17:06,069 --> 00:17:04,400

of the crew dragon

40

00:17:08,630 --> 00:17:06,079

and now we're into an operational phase

41

00:17:10,549 --> 00:17:08,640

i want to be clear every single flight

42

00:17:12,549 --> 00:17:10,559

when you go to space every single flight

43

00:17:14,710 --> 00:17:12,559

has to be dealt with very seriously

44

00:17:16,309 --> 00:17:14,720

we pay attention to detail on all of

45

00:17:16,949 --> 00:17:16,319

them and we learn from every single one

46

00:17:18,870 --> 00:17:16,959

of them

47

00:17:20,549 --> 00:17:18,880

but it is a big transition because now

48

00:17:21,590 --> 00:17:20,559

we're going with a crew of four

49

00:17:22,949 --> 00:17:21,600

astronauts

50

00:17:24,549 --> 00:17:22,959

which means we're going to be able to

51  
00:17:26,390 --> 00:17:24,559  
take more people to the international

52  
00:17:28,150 --> 00:17:26,400  
space station to do more work

53  
00:17:29,909 --> 00:17:28,160  
and of course the value there is the

54  
00:17:31,029 --> 00:17:29,919  
microgravity of space and this

55  
00:17:33,029 --> 00:17:31,039  
laboratory

56  
00:17:34,230 --> 00:17:33,039  
that is there to benefit all of humanity

57  
00:17:36,230 --> 00:17:34,240  
so we're going to get

58  
00:17:37,590 --> 00:17:36,240  
so much more science and so much more

59  
00:17:39,750 --> 00:17:37,600  
discovery

60  
00:17:42,390 --> 00:17:39,760  
and so much more capability to benefit

61  
00:17:43,990 --> 00:17:42,400  
humanity than we could otherwise get

62  
00:17:45,590 --> 00:17:44,000  
now that we're taking more crew to the

63  
00:17:46,310 --> 00:17:45,600

international space station and when we

64

00:17:48,470 --> 00:17:46,320

take them

65

00:17:50,150 --> 00:17:48,480

they're going to stay longer so that's a

66

00:17:50,950 --> 00:17:50,160

really big deal i would also say the

67

00:17:55,190 --> 00:17:50,960

other big thing

68

00:17:57,110 --> 00:17:55,200

is you know this is the first commercial

69

00:17:59,029 --> 00:17:57,120

contracted launch which means it was

70

00:18:01,190 --> 00:17:59,039

licensed by the faa

71

00:18:03,270 --> 00:18:01,200

which is another big change but very

72

00:18:03,909 --> 00:18:03,280

positive change we're trying to scale up

73

00:18:06,230 --> 00:18:03,919

quickly

74

00:18:07,750 --> 00:18:06,240

nasa wants to be one customer of many

75

00:18:08,870 --> 00:18:07,760

not the owner and operator of the

76

00:18:10,310 --> 00:18:08,880

vehicles

77

00:18:12,070 --> 00:18:10,320

we want to have numerous providers that

78

00:18:13,270 --> 00:18:12,080

can compete on cost and innovation to

79

00:18:15,830 --> 00:18:13,280

bring down cost

80

00:18:16,950 --> 00:18:15,840

and increase access to space the other

81

00:18:18,230 --> 00:18:16,960

big thing

82

00:18:20,470 --> 00:18:18,240

is the fact that we're going to have an

83

00:18:23,590 --> 00:18:20,480

international partner on this one

84

00:18:25,510 --> 00:18:23,600

which is fantastic japan has been an

85

00:18:28,710 --> 00:18:25,520

amazing partner for the united states in

86

00:18:30,310 --> 00:18:28,720

space exploration for so many years now

87

00:18:31,990 --> 00:18:30,320

and of course they're not just a partner

88

00:18:33,110 --> 00:18:32,000

in low earth orbit at the international

89

00:18:35,350 --> 00:18:33,120

space station

90

00:18:36,310 --> 00:18:35,360

they they have gone all in committing to

91

00:18:39,750 --> 00:18:36,320

the moon

92

00:18:41,590 --> 00:18:39,760

mars program

93

00:18:43,750 --> 00:18:41,600

japan has been an amazing partner for

94

00:18:45,430 --> 00:18:43,760

decades now and it's thrilling to see

95

00:18:46,150 --> 00:18:45,440

that here we are on the first crew

96

00:18:47,750 --> 00:18:46,160

launch

97

00:18:49,430 --> 00:18:47,760

of dragon and they're going to be with

98

00:18:51,990 --> 00:18:49,440

us yeah uh

99

00:18:52,870 --> 00:18:52,000

obviously humanity it seems like this is

100

00:18:54,870 --> 00:18:52,880

such a big deal

101  
00:18:55,990 --> 00:18:54,880  
but it is one piece of so many pieces

102  
00:18:57,350 --> 00:18:56,000  
that's right uh so we're

103  
00:18:59,190 --> 00:18:57,360  
excited for this piece to be moving

104  
00:19:00,549 --> 00:18:59,200  
forward uh mr

105  
00:19:02,230 --> 00:19:00,559  
jim morehead who's our deputy

106  
00:19:03,270 --> 00:19:02,240  
administrator thanks for being here i

107  
00:19:04,710 --> 00:19:03,280  
wanted to ask you kind of from the

108  
00:19:07,029 --> 00:19:04,720  
agency perspective

109  
00:19:08,150 --> 00:19:07,039  
you and mr breinstein get to see kind of

110  
00:19:10,549 --> 00:19:08,160  
everything we do

111  
00:19:12,470 --> 00:19:10,559  
like nobody else can and so curious to

112  
00:19:14,870 --> 00:19:12,480  
hear from you what's the feeling like

113  
00:19:17,990 --> 00:19:14,880

for the agency what is this moment like

114

00:19:19,510 --> 00:19:18,000

for us as nasa gosh first i appreciate

115

00:19:22,870 --> 00:19:19,520

the question but we have

116

00:19:23,430 --> 00:19:22,880

just an amazing workforce and you think

117

00:19:26,310 --> 00:19:23,440

about

118

00:19:29,029 --> 00:19:26,320

even during a pandemic at no time have

119

00:19:31,029 --> 00:19:29,039

we ever pushed we've always said

120

00:19:33,270 --> 00:19:31,039

help your health and safety is number

121

00:19:34,070 --> 00:19:33,280

one it's paramount for what we want to

122

00:19:35,990 --> 00:19:34,080

do

123

00:19:37,110 --> 00:19:36,000

and to me that's leadership that's jim's

124

00:19:39,350 --> 00:19:37,120

leadership

125

00:19:40,230 --> 00:19:39,360

and we continue to do that but in the

126

00:19:42,310 --> 00:19:40,240

meantime

127

00:19:43,990 --> 00:19:42,320

as jim's talked about it's low earth

128

00:19:47,190 --> 00:19:44,000

orbit it's

129

00:19:49,510 --> 00:19:47,200

it's but it's also moon it's mars it's

130

00:19:50,070 --> 00:19:49,520

earth sciences it's planetary sciences

131

00:19:53,750 --> 00:19:50,080

it's

132

00:19:57,029 --> 00:19:53,760

come together

133

00:19:59,510 --> 00:19:57,039

but we're really here to help humanity

134

00:20:01,190 --> 00:19:59,520

that's why nasa exists and that's what

135

00:20:03,029 --> 00:20:01,200

we continue to do

136

00:20:04,470 --> 00:20:03,039

and it's just been a great honor to and

137

00:20:06,870 --> 00:20:04,480

it continues to be

138

00:20:08,310 --> 00:20:06,880

to work with these folks because they

139

00:20:10,789 --> 00:20:08,320

are so committed

140

00:20:12,070 --> 00:20:10,799

and it's just a pleasure every day

141

00:20:13,909 --> 00:20:12,080

that's how i'd say it

142

00:20:15,350 --> 00:20:13,919

awesome yeah i mean well said not much

143

00:20:16,870 --> 00:20:15,360

else to say um

144

00:20:18,230 --> 00:20:16,880

and it's exciting too because this is

145

00:20:18,789 --> 00:20:18,240

the first time i think this is the first

146

00:20:20,789 --> 00:20:18,799

time

147

00:20:21,830 --> 00:20:20,799

we will have a long duration crew of

148

00:20:23,190 --> 00:20:21,840

seven uh

149

00:20:25,430 --> 00:20:23,200

even with the shuttle program we never

150

00:20:28,070 --> 00:20:25,440

ran a long duration crew of seven so

151  
00:20:29,270 --> 00:20:28,080  
the realization of bridging the gap from

152  
00:20:31,750 --> 00:20:29,280  
the shuttle program

153  
00:20:33,110 --> 00:20:31,760  
to commercial crew mr cabana you have

154  
00:20:35,510 --> 00:20:33,120  
been a bridge of leadership

155  
00:20:36,710 --> 00:20:35,520  
across that span so it's got to feel

156  
00:20:38,470 --> 00:20:36,720  
good that we're here

157  
00:20:40,549 --> 00:20:38,480  
first off but curious to kind of get

158  
00:20:41,750 --> 00:20:40,559  
your take as things just speed up for

159  
00:20:44,149 --> 00:20:41,760  
the kennedy space center

160  
00:20:44,950 --> 00:20:44,159  
uh what does that mean for for our

161  
00:20:48,149 --> 00:20:44,960  
center

162  
00:20:49,190 --> 00:20:48,159  
but also just our spaceport well first

163  
00:20:51,270 --> 00:20:49,200

off josh i mean

164

00:20:52,390 --> 00:20:51,280

it this is an amazing time for america's

165

00:20:54,070 --> 00:20:52,400

space program

166

00:20:56,149 --> 00:20:54,080

when you look at what we have done here

167

00:20:58,070 --> 00:20:56,159

at ksc but it's across the board

168

00:21:00,230 --> 00:20:58,080

our partnership with the faa with the

169

00:21:01,750 --> 00:21:00,240

45th space wing in the air force to

170

00:21:03,990 --> 00:21:01,760

establish the environment that we have

171

00:21:06,789 --> 00:21:04,000

here to enable commercial launches more

172

00:21:09,510 --> 00:21:06,799

efficiently and effectively less costly

173

00:21:11,110 --> 00:21:09,520

it's absolutely awesome and yes it's

174

00:21:12,950 --> 00:21:11,120

going to continue you know the one thing

175

00:21:13,750 --> 00:21:12,960

that's constant in our lives is change

176

00:21:15,590 --> 00:21:13,760

all right

177

00:21:17,270 --> 00:21:15,600

and we are going to continue to change

178

00:21:19,190 --> 00:21:17,280

and evolve but we're going to continue

179

00:21:21,029 --> 00:21:19,200

to change and evolve to even a better

180

00:21:22,230 --> 00:21:21,039

condition as we increase the number of

181

00:21:24,950 --> 00:21:22,240

launches that we have

182

00:21:26,870 --> 00:21:24,960

what jim bradenstein has done his effort

183

00:21:27,510 --> 00:21:26,880

to commercialize low earth orbit

184

00:21:28,789 --> 00:21:27,520

establish

185

00:21:31,190 --> 00:21:28,799

this commercial economy in low earth

186

00:21:32,470 --> 00:21:31,200

orbit to enable nasa to focus on the

187

00:21:34,149 --> 00:21:32,480

hard job of exploring

188

00:21:35,830 --> 00:21:34,159

but we're not going exploring alone

189

00:21:36,310 --> 00:21:35,840

we're taking our commercial partners

190

00:21:38,310 --> 00:21:36,320

with us

191

00:21:39,909 --> 00:21:38,320

as we establish the gateway around the

192

00:21:40,870 --> 00:21:39,919

moon as we get to the lunar surface as

193

00:21:42,549 --> 00:21:40,880

we go on to mars

194

00:21:43,909 --> 00:21:42,559

the the gateway logistics program is

195

00:21:45,270 --> 00:21:43,919

here at the kennedy space center these

196

00:21:48,310 --> 00:21:45,280

are commercial contracts

197

00:21:49,669 --> 00:21:48,320

just as we serve commercially cargo to

198

00:21:51,430 --> 00:21:49,679

the international space station

199

00:21:52,710 --> 00:21:51,440

we're going to do that from ksc with

200

00:21:54,470 --> 00:21:52,720

commercial contracts

201  
00:21:56,230 --> 00:21:54,480  
to service the gateway to service

202  
00:21:57,669 --> 00:21:56,240  
operations on the moon and mars

203  
00:21:59,750 --> 00:21:57,679  
this is not something that we're doing

204  
00:22:01,430 --> 00:21:59,760  
alone uh you know i always talk

205  
00:22:02,870 --> 00:22:01,440  
there's only one space above us people

206  
00:22:03,909 --> 00:22:02,880  
talk about commercial space government

207  
00:22:05,909 --> 00:22:03,919  
space bologna

208  
00:22:07,270 --> 00:22:05,919  
new space old space there's one space up

209  
00:22:08,870 --> 00:22:07,280  
there and we need to be

210  
00:22:10,549 --> 00:22:08,880  
integrated with our commercial partners

211  
00:22:12,070 --> 00:22:10,559  
government and commercial integrated

212  
00:22:13,270 --> 00:22:12,080  
together for all our launches if we're

213  
00:22:15,510 --> 00:22:13,280

going to be successful

214

00:22:17,029 --> 00:22:15,520

and i i just i have to compliment both

215

00:22:18,310 --> 00:22:17,039

jim's jim bridenstine for his

216

00:22:19,909 --> 00:22:18,320

exceptional leadership

217

00:22:22,230 --> 00:22:19,919

jim moreheart for the work that you have

218

00:22:23,990 --> 00:22:22,240

done to get us help get us the budgets

219

00:22:25,350 --> 00:22:24,000

that we need to be successful you guys

220

00:22:26,710 --> 00:22:25,360

have been absolutely awesome and it's

221

00:22:28,390 --> 00:22:26,720

been a real pleasure being part of the

222

00:22:30,789 --> 00:22:28,400

team with you

223

00:22:32,630 --> 00:22:30,799

yeah awesome so a quick couple of notes

224

00:22:33,669 --> 00:22:32,640

um remember to be asking your questions

225

00:22:34,950 --> 00:22:33,679

on youtube as we go

226

00:22:37,110 --> 00:22:34,960

i want to make sure that you guys know

227

00:22:39,510 --> 00:22:37,120

the crew one mission is launching a

228

00:22:40,710 --> 00:22:39,520

schedule for tomorrow lift off at 7 49

229

00:22:42,950 --> 00:22:40,720

pm eastern time

230

00:22:43,990 --> 00:22:42,960

we have three nasa astronauts and as mr

231

00:22:46,710 --> 00:22:44,000

bridenstine mentioned

232

00:22:48,549 --> 00:22:46,720

an international partner in suicinaguchi

233

00:22:50,070 --> 00:22:48,559

who's flying from jaxa with us

234

00:22:51,830 --> 00:22:50,080

um so a huge accomplishment there the

235

00:22:54,070 --> 00:22:51,840

nasa astronauts mike hopkins

236

00:22:55,669 --> 00:22:54,080

victor glover and shannon walker so

237

00:22:56,789 --> 00:22:55,679

let's jump into questions here mr cabana

238

00:22:58,390 --> 00:22:56,799

we'll come to you first because you have

239

00:23:01,430 --> 00:22:58,400

personal experience with this

240

00:23:01,909 --> 00:23:01,440

uh when the astronauts are in space do

241

00:23:03,750 --> 00:23:01,919

they have an

242

00:23:05,750 --> 00:23:03,760

opportunity to talk to their family and

243

00:23:07,350 --> 00:23:05,760

you would know this because you spent

244

00:23:08,789 --> 00:23:07,360

a number of days in space on four

245

00:23:10,070 --> 00:23:08,799

shuttle missions well it's so much

246

00:23:11,669 --> 00:23:10,080

better now than when i was up there they

247

00:23:13,669 --> 00:23:11,679

had arranged everything special for us

248

00:23:15,029 --> 00:23:13,679

to have a video telecon with our

249

00:23:16,390 --> 00:23:15,039

families and it only happened on the

250

00:23:17,590 --> 00:23:16,400

long duration flights that you got a

251

00:23:19,669 --> 00:23:17,600

video telecon

252

00:23:21,350 --> 00:23:19,679

otherwise it was emailed back and forth

253

00:23:22,710 --> 00:23:21,360

now they've got a voiceover i ip tell

254

00:23:24,149 --> 00:23:22,720

them they can call home anytime they

255

00:23:25,590 --> 00:23:24,159

want and talk to folks i was sitting in

256

00:23:27,029 --> 00:23:25,600

my office one day i got a call from the

257

00:23:28,549 --> 00:23:27,039

international space station it's like

258

00:23:30,549 --> 00:23:28,559

well hey how you doing

259

00:23:31,830 --> 00:23:30,559

you know so now communications today are

260

00:23:33,590 --> 00:23:31,840

so much better and

261

00:23:35,590 --> 00:23:33,600

and that's really important to be able

262

00:23:36,310 --> 00:23:35,600

to stay connected you know with friends

263

00:23:38,310 --> 00:23:36,320

and family

264

00:23:39,830 --> 00:23:38,320

when you are on a six-month mission i

265

00:23:40,630 --> 00:23:39,840

look back to when i was deployed in the

266

00:23:43,990 --> 00:23:40,640

marine corps

267

00:23:46,390 --> 00:23:44,000

overseas you know and we used to call on

268

00:23:47,990 --> 00:23:46,400

you know ham radio calling home you know

269

00:23:51,590 --> 00:23:48,000

i love you honey over

270

00:23:53,350 --> 00:23:51,600

and uh you know today communication

271

00:23:54,710 --> 00:23:53,360

satellites nasa what we have done the

272

00:23:57,750 --> 00:23:54,720

space industry has

273

00:23:59,269 --> 00:23:57,760

changed communications uh for for

274

00:24:00,549 --> 00:23:59,279

everyone connecting us all

275

00:24:03,029 --> 00:24:00,559

and i think it's really great that

276

00:24:05,510 --> 00:24:03,039

they're so interconnected awesome good

277

00:24:06,710 --> 00:24:05,520

uh so mr brian coming to you um you were

278

00:24:08,549 --> 00:24:06,720

involved in

279

00:24:09,990 --> 00:24:08,559

the announcement of these commercial

280

00:24:11,510 --> 00:24:10,000

crew astronaut crews

281

00:24:13,110 --> 00:24:11,520

i think it's been a couple years now it

282

00:24:14,870 --> 00:24:13,120

seems like yesterday right uh

283

00:24:16,630 --> 00:24:14,880

so can you are you involved in the

284

00:24:18,149 --> 00:24:16,640

selection process and kind of what goes

285

00:24:19,750 --> 00:24:18,159

into that i think we're in the middle of

286

00:24:21,590 --> 00:24:19,760

another round of selection right now

287

00:24:23,190 --> 00:24:21,600

what's that process like yeah so i'll

288

00:24:23,510 --> 00:24:23,200

tell you there are professionals that

289

00:24:25,190 --> 00:24:23,520

are

290

00:24:26,549 --> 00:24:25,200

you know working in the astronaut office

291

00:24:28,630 --> 00:24:26,559

day in and day out um

292

00:24:29,990 --> 00:24:28,640

and i am very happy to leave it to them

293

00:24:32,149 --> 00:24:30,000

to pick who uh

294

00:24:33,190 --> 00:24:32,159

who should be on these different crews

295

00:24:34,710 --> 00:24:33,200

but i'll tell you

296

00:24:36,310 --> 00:24:34,720

when you look at the astronaut core you

297

00:24:39,190 --> 00:24:36,320

really can't go wrong there

298

00:24:39,830 --> 00:24:39,200

are every single one of them has like

299

00:24:42,470 --> 00:24:39,840

you know seven

300

00:24:43,909 --> 00:24:42,480

phds and they're medical doctors and

301  
00:24:45,669 --> 00:24:43,919  
navy seals and

302  
00:24:47,909 --> 00:24:45,679  
and some of them are medical doctors and

303  
00:24:49,510 --> 00:24:47,919  
navy seals at the same time it's a

304  
00:24:51,590 --> 00:24:49,520  
it is really an amazing group of

305  
00:24:53,029 --> 00:24:51,600  
individuals um and so

306  
00:24:55,190 --> 00:24:53,039  
you really can't go wrong but i will

307  
00:24:57,269 --> 00:24:55,200  
tell you um yeah the the

308  
00:24:59,110 --> 00:24:57,279  
the selections are done by by the

309  
00:25:01,269 --> 00:24:59,120  
astronaut office down at the johnson

310  
00:25:03,909 --> 00:25:01,279  
space center in texas

311  
00:25:04,390 --> 00:25:03,919  
i also want to say about bob look uh you

312  
00:25:06,870 --> 00:25:04,400  
know

313  
00:25:08,870 --> 00:25:06,880

we just recently we celebrated 20 years

314

00:25:10,470 --> 00:25:08,880

of continuous human presence on the

315

00:25:11,750 --> 00:25:10,480

international space station

316

00:25:14,630 --> 00:25:11,760

a lot of people don't know but you know

317

00:25:16,630 --> 00:25:14,640

bob was there when the unity node

318

00:25:17,830 --> 00:25:16,640

was was flown to the internet literally

319

00:25:20,549 --> 00:25:17,840

there he was literally

320

00:25:21,029 --> 00:25:20,559

there he was in fact you were the first

321

00:25:23,269 --> 00:25:21,039

person

322

00:25:24,149 --> 00:25:23,279

on the unity node uh when it was when it

323

00:25:26,390 --> 00:25:24,159

was assembled

324

00:25:28,230 --> 00:25:26,400

um and here we are and you talk about

325

00:25:28,710 --> 00:25:28,240

the transformation and how we've evolved

326

00:25:31,830 --> 00:25:28,720

in our

327

00:25:34,789 --> 00:25:31,840

the way we do contracting um and and

328

00:25:35,110 --> 00:25:34,799

and what's amazing is uh uh it's still

329

00:25:36,950 --> 00:25:35,120

there

330

00:25:39,029 --> 00:25:36,960

it's still doing a it's doing more and

331

00:25:41,750 --> 00:25:39,039

better work than ever before

332

00:25:43,269 --> 00:25:41,760

um and and uh it couldn't have been it

333

00:25:46,070 --> 00:25:43,279

couldn't have been done without bob

334

00:25:47,590 --> 00:25:46,080

uh starting it way back in the day so uh

335

00:25:48,789 --> 00:25:47,600

i'll tell you bob you're uh you're an

336

00:25:50,470 --> 00:25:48,799

amazing leader

337

00:25:51,350 --> 00:25:50,480

um and your commitment to this program

338

00:25:53,269 --> 00:25:51,360

throughout the years has been

339

00:25:54,230 --> 00:25:53,279

astonishing oh thanks jim i appreciate

340

00:25:56,230 --> 00:25:54,240

it

341

00:25:57,750 --> 00:25:56,240

uh mr moorhart will come to you next uh

342

00:25:58,789 --> 00:25:57,760

where will you be launched watching

343

00:26:00,390 --> 00:25:58,799

launch from

344

00:26:02,230 --> 00:26:00,400

and what's the one thing you're most

345

00:26:03,269 --> 00:26:02,240

excited about boy

346

00:26:05,590 --> 00:26:03,279

you know i'm going to be watching it

347

00:26:07,190 --> 00:26:05,600

with the administrator and uh

348

00:26:10,310 --> 00:26:07,200

we certainly are going to be watching

349

00:26:13,590 --> 00:26:10,320

closely uh you know i'm excited

350

00:26:15,110 --> 00:26:13,600

really because this is when those

351  
00:26:17,909 --> 00:26:15,120  
astronauts

352  
00:26:19,190 --> 00:26:17,919  
open that portal at the international

353  
00:26:21,350 --> 00:26:19,200  
space station

354  
00:26:22,789 --> 00:26:21,360  
we're going to be increasing the

355  
00:26:26,630 --> 00:26:22,799  
research we're doing

356  
00:26:29,830 --> 00:26:26,640  
by 300 percent there is such a demand

357  
00:26:31,110 --> 00:26:29,840  
for research with microgravity in low

358  
00:26:33,750 --> 00:26:31,120  
earth orbit

359  
00:26:34,310 --> 00:26:33,760  
and the hope is ultimately that we'll

360  
00:26:37,110 --> 00:26:34,320  
have

361  
00:26:38,230 --> 00:26:37,120  
commercial space stations which is going

362  
00:26:41,350 --> 00:26:38,240  
to drive the demand

363  
00:26:42,470 --> 00:26:41,360

even further this is why we've worked so

364

00:26:45,029 --> 00:26:42,480

hard to have

365

00:26:47,110 --> 00:26:45,039

a commercial crew program we're really

366

00:26:48,710 --> 00:26:47,120

at the beginning we're at the dawn of a

367

00:26:51,110 --> 00:26:48,720

new space age

368

00:26:51,990 --> 00:26:51,120

of really human space flight that's what

369

00:26:55,110 --> 00:26:52,000

we're trying to do

370

00:26:57,269 --> 00:26:55,120

again to help humankind

371

00:26:59,110 --> 00:26:57,279

yeah so it's interesting to hear you say

372

00:27:00,710 --> 00:26:59,120

that as this is a beginning moment

373

00:27:02,310 --> 00:27:00,720

and then to hear comments from mr brian

374

00:27:05,510 --> 00:27:02,320

and mr cabana of

375

00:27:07,350 --> 00:27:05,520

the i hope people can feel

376

00:27:10,070 --> 00:27:07,360

kind of just the excitement of

377

00:27:11,909 --> 00:27:10,080

celebrating what's been done so far

378

00:27:13,110 --> 00:27:11,919

that it's incredible how far we've come

379

00:27:14,549 --> 00:27:13,120

and yet this is still kind of a

380

00:27:15,830 --> 00:27:14,559

beginning moment for us

381

00:27:17,510 --> 00:27:15,840

that there's so much more to go so i

382

00:27:18,710 --> 00:27:17,520

hope people kind of can feel that energy

383

00:27:21,029 --> 00:27:18,720

as we move into

384

00:27:22,470 --> 00:27:21,039

a new era for us um on the note of

385

00:27:23,510 --> 00:27:22,480

research somebody asked the question

386

00:27:25,350 --> 00:27:23,520

online of

387

00:27:27,029 --> 00:27:25,360

do we know what kind of experiments this

388

00:27:28,870 --> 00:27:27,039

crew will actually be conducting

389

00:27:30,070 --> 00:27:28,880

and if we're not sure on the specifics i

390

00:27:30,549 --> 00:27:30,080

know there are some resources out there

391

00:27:34,310 --> 00:27:30,559

for

392

00:27:36,789 --> 00:27:34,320

take that one i

393

00:27:37,430 --> 00:27:36,799

i would refer that one to my space

394

00:27:40,149 --> 00:27:37,440

station

395

00:27:42,070 --> 00:27:40,159

app on my phone perfect and it's got all

396

00:27:45,430 --> 00:27:42,080

the science everything that's going on

397

00:27:47,590 --> 00:27:45,440

real time what's being done on iss and

398

00:27:49,990 --> 00:27:47,600

that that's a truthful way to get the

399

00:27:51,590 --> 00:27:50,000

answer rather than me guessing

400

00:27:53,590 --> 00:27:51,600

yeah obviously we know there is research

401  
00:27:55,669 --> 00:27:53,600  
going up that's not the highlight here

402  
00:27:56,789 --> 00:27:55,679  
that the people are the people cargo

403  
00:27:58,149 --> 00:27:56,799  
that's our real highlight here but

404  
00:27:58,470 --> 00:27:58,159  
certainly really good research going on

405  
00:28:00,789 --> 00:27:58,480  
and

406  
00:28:02,070 --> 00:28:00,799  
we have a a slew of nasa apps that are

407  
00:28:05,510 --> 00:28:02,080  
out there amazing everything

408  
00:28:07,430 --> 00:28:05,520  
from art to science to earth to

409  
00:28:09,510 --> 00:28:07,440  
other planets mars you name it and we've

410  
00:28:10,870 --> 00:28:09,520  
got resources available for it i'll tell

411  
00:28:13,909 --> 00:28:10,880  
you one experiment

412  
00:28:16,789 --> 00:28:13,919  
that that really gets me excited um

413  
00:28:17,590 --> 00:28:16,799

josh and that is this um they're they're

414

00:28:21,029 --> 00:28:17,600

doing

415

00:28:23,110 --> 00:28:21,039

regenerative medicine

416

00:28:25,190 --> 00:28:23,120

on the international space station so

417

00:28:27,590 --> 00:28:25,200

josh we could take your own skin

418

00:28:28,630 --> 00:28:27,600

cells your own skin cells and use your

419

00:28:31,430 --> 00:28:28,640

own dna

420

00:28:31,909 --> 00:28:31,440

to actually create your own human tissue

421

00:28:34,230 --> 00:28:31,919

um

422

00:28:36,789 --> 00:28:34,240

and use that are you going to clone me

423

00:28:38,230 --> 00:28:36,799

am i getting a clone one day

424

00:28:40,070 --> 00:28:38,240

that might be very dangerous i don't

425

00:28:41,190 --> 00:28:40,080

know about that uh yeah that's not what

426  
00:28:43,750 --> 00:28:41,200  
we're doing

427  
00:28:44,870 --> 00:28:43,760  
one josh might be all nasa can handle

428  
00:28:45,990 --> 00:28:44,880  
but i know a lot of people who would

429  
00:28:47,909 --> 00:28:46,000  
second that comment

430  
00:28:49,990 --> 00:28:47,919  
all right but uh i'll tell you yeah and

431  
00:28:51,990 --> 00:28:50,000  
mr cabana is one of them there we go

432  
00:28:53,909 --> 00:28:52,000  
but uh but no the the idea though is

433  
00:28:56,149 --> 00:28:53,919  
that we there's life-saving capabilities

434  
00:28:57,909 --> 00:28:56,159  
that microgravity can be used for

435  
00:28:59,750 --> 00:28:57,919  
and having more astronauts there to do

436  
00:29:00,870 --> 00:28:59,760  
those experiments to to develop those

437  
00:29:03,190 --> 00:29:00,880  
capabilities

438  
00:29:04,389 --> 00:29:03,200

will be transformational for humanity i

439

00:29:05,750 --> 00:29:04,399

i think that's one of the

440

00:29:07,430 --> 00:29:05,760

really important things about this

441

00:29:08,950 --> 00:29:07,440

mission and it was said earlier

442

00:29:10,630 --> 00:29:08,960

and it's getting more crew up there to

443

00:29:12,149 --> 00:29:10,640

be able to do the science and not just

444

00:29:14,149 --> 00:29:12,159

maintain the space station

445

00:29:15,909 --> 00:29:14,159

you know being up on iss it's a

446

00:29:17,590 --> 00:29:15,919

full-time job just to clean all the

447

00:29:18,870 --> 00:29:17,600

filters and keep everything operating

448

00:29:20,389 --> 00:29:18,880

and running and then you throw in

449

00:29:22,230 --> 00:29:20,399

everybody's got two and a half hours of

450

00:29:23,830 --> 00:29:22,240

mandatory exercise every day and you're

451  
00:29:25,269 --> 00:29:23,840  
constantly eating into the time that's

452  
00:29:27,110 --> 00:29:25,279  
available to do science

453  
00:29:29,190 --> 00:29:27,120  
and this is such a phenomenal

454  
00:29:31,110 --> 00:29:29,200  
microgravity research facility

455  
00:29:32,870 --> 00:29:31,120  
i mean we've it's done so many amazing

456  
00:29:33,669 --> 00:29:32,880  
things already but we don't know what

457  
00:29:35,830 --> 00:29:33,679  
else can come

458  
00:29:37,110 --> 00:29:35,840  
now that we are getting into a real

459  
00:29:39,750 --> 00:29:37,120  
ability to use it

460  
00:29:40,470 --> 00:29:39,760  
that's right i'd also add that we're

461  
00:29:43,590 --> 00:29:40,480  
looking

462  
00:29:43,990 --> 00:29:43,600  
back at earth of how do we help folks on

463  
00:29:46,630 --> 00:29:44,000

earth

464

00:29:47,830 --> 00:29:46,640

but we're also looking at preparing to

465

00:29:51,510 --> 00:29:47,840

go to mars

466

00:29:53,669 --> 00:29:51,520

so we're looking backwards and forwards

467

00:29:54,549 --> 00:29:53,679

and there's so much on in both

468

00:29:57,430 --> 00:29:54,559

directions

469

00:29:58,870 --> 00:29:57,440

that can be done up there yeah awesome

470

00:29:59,269 --> 00:29:58,880

so let's talk for a minute a question

471

00:30:02,389 --> 00:29:59,279

came in

472

00:30:05,350 --> 00:30:02,399

about um training

473

00:30:06,310 --> 00:30:05,360

crews as well as kind of man rating or

474

00:30:09,029 --> 00:30:06,320

human rating

475

00:30:10,710 --> 00:30:09,039

uh capsules spacecraft so we'll kind of

476

00:30:12,470 --> 00:30:10,720

take those as two separate topics of

477

00:30:14,310 --> 00:30:12,480

how do are we training our crews the

478

00:30:15,750 --> 00:30:14,320

same way and are we

479

00:30:17,510 --> 00:30:15,760

developing our spacecraft the same way

480

00:30:18,470 --> 00:30:17,520

we always have and i don't know who

481

00:30:20,389 --> 00:30:18,480

wants to take that one or

482

00:30:22,149 --> 00:30:20,399

i'm sure there's lots to say there well

483

00:30:24,630 --> 00:30:22,159

so when you think about how we

484

00:30:25,909 --> 00:30:24,640

create an an astronaut um you know they

485

00:30:27,430 --> 00:30:25,919

they have a two-year period where

486

00:30:29,190 --> 00:30:27,440

they're astronaut candidates

487

00:30:30,789 --> 00:30:29,200

and then um that you know they go

488

00:30:32,549 --> 00:30:30,799

through you know a whole host of

489

00:30:33,190 --> 00:30:32,559

different types of training everything

490

00:30:35,350 --> 00:30:33,200

from

491

00:30:37,590 --> 00:30:35,360

you know how to do a spacewalk using the

492

00:30:39,190 --> 00:30:37,600

the the neutral buoyancy lab a huge

493

00:30:42,630 --> 00:30:39,200

swimming pool down in houston

494

00:30:45,590 --> 00:30:42,640

uh to to to flight simulators to

495

00:30:46,470 --> 00:30:45,600

um you know uh yeah i don't know

496

00:30:48,630 --> 00:30:46,480

spacewalking

497

00:30:49,590 --> 00:30:48,640

etc they do all kinds they learn russian

498

00:30:51,029 --> 00:30:49,600

for goodness sake

499

00:30:52,950 --> 00:30:51,039

you got two years and when you're done

500

00:30:55,669 --> 00:30:52,960

you got to come out speaking russian i

501  
00:30:56,470 --> 00:30:55,679  
i couldn't yeah i couldn't do it but but

502  
00:30:58,789 --> 00:30:56,480  
others can

503  
00:31:00,149 --> 00:30:58,799  
and so so they go through that training

504  
00:31:02,070 --> 00:31:00,159  
then after two years you are

505  
00:31:03,990 --> 00:31:02,080  
you are a qualified astronaut and then

506  
00:31:05,750 --> 00:31:04,000  
of course you get selected for

507  
00:31:07,269 --> 00:31:05,760  
a mission one of the things that's

508  
00:31:08,549 --> 00:31:07,279  
unique today is we have so many things

509  
00:31:11,269 --> 00:31:08,559  
under development

510  
00:31:12,230 --> 00:31:11,279  
and now obviously in operation with the

511  
00:31:15,830 --> 00:31:12,240  
the spacex

512  
00:31:19,750 --> 00:31:15,840  
crew dragon the boeing starliner capsule

513  
00:31:22,389 --> 00:31:19,760

um the the the orion crew capsule

514

00:31:23,430 --> 00:31:22,399

uh each each one of these is different

515

00:31:25,990 --> 00:31:23,440

uh very different

516

00:31:27,269 --> 00:31:26,000

and so once once you become an astronaut

517

00:31:29,190 --> 00:31:27,279

you have to you have to get trained for

518

00:31:30,549 --> 00:31:29,200

the specific vehicle that you're in

519

00:31:32,950 --> 00:31:30,559

and then you have to be trained for the

520

00:31:34,870 --> 00:31:32,960

specific mission that you're doing so

521

00:31:36,870 --> 00:31:34,880

every time an astronaut gets trained

522

00:31:38,470 --> 00:31:36,880

they get trained in very different ways

523

00:31:40,470 --> 00:31:38,480

and different different astronauts are

524

00:31:41,750 --> 00:31:40,480

doing different things some are pilots

525

00:31:43,669 --> 00:31:41,760

um that are going to be you know

526

00:31:46,630 --> 00:31:43,679

obviously at the controls and others are

527

00:31:48,310 --> 00:31:46,640

are are mission specialists so um but

528

00:31:49,750 --> 00:31:48,320

i'll tell you today every astronaut is

529

00:31:50,950 --> 00:31:49,760

an astronaut and they're all going to be

530

00:31:52,389 --> 00:31:50,960

doing science and they're all going to

531

00:31:54,710 --> 00:31:52,399

be capable of flying

532

00:31:55,669 --> 00:31:54,720

so it's good awesome did you have

533

00:31:57,990 --> 00:31:55,679

something you wanted to add

534

00:31:59,350 --> 00:31:58,000

no i think that's good perfect um so

535

00:32:00,149 --> 00:31:59,360

yeah i want to highlight a couple things

536

00:32:02,149 --> 00:32:00,159

victor glover

537

00:32:03,190 --> 00:32:02,159

flying this is his rookie mission so he

538

00:32:04,549 --> 00:32:03,200

doesn't have this experience i'm sure

539

00:32:06,789 --> 00:32:04,559

we'd all love to kind of

540

00:32:09,269 --> 00:32:06,799

be with him to experience whatever that

541

00:32:11,590 --> 00:32:09,279

feeling is of being in space

542

00:32:12,870 --> 00:32:11,600

it sounds amazing to me and then we have

543

00:32:13,750 --> 00:32:12,880

suici who's flown on two other

544

00:32:17,190 --> 00:32:13,760

spacecraft

545

00:32:19,590 --> 00:32:17,200

then shannon and mike

546

00:32:20,870 --> 00:32:19,600

um well this will be not their first

547

00:32:22,389 --> 00:32:20,880

flight but i think they've only flown on

548

00:32:24,310 --> 00:32:22,399

one crafts previously so

549

00:32:25,909 --> 00:32:24,320

a really diverse crew a really neat

550

00:32:28,630 --> 00:32:25,919

group from what i understand

551  
00:32:29,750 --> 00:32:28,640  
i'm excited to see them fly uh i want to

552  
00:32:32,870 --> 00:32:29,760  
ask

553  
00:32:34,870 --> 00:32:32,880  
um mr cabana so

554  
00:32:36,630 --> 00:32:34,880  
there's a question about traditions for

555  
00:32:38,789 --> 00:32:36,640  
astronauts and i know that there's

556  
00:32:40,310 --> 00:32:38,799  
probably things deeper into training and

557  
00:32:42,870 --> 00:32:40,320  
otherwise but thinking about

558  
00:32:43,750 --> 00:32:42,880  
the lead-up to launch i know there are

559  
00:32:45,590 --> 00:32:43,760  
some traditions

560  
00:32:47,190 --> 00:32:45,600  
that it used to be and some new ones

561  
00:32:47,990 --> 00:32:47,200  
that are being started um can you tell

562  
00:32:49,909 --> 00:32:48,000  
us more about

563  
00:32:51,269 --> 00:32:49,919

traditions that you went through as well

564

00:32:52,630 --> 00:32:51,279

as do you know of the new ones that are

565

00:32:53,669 --> 00:32:52,640

happening so there's one tradition i'll

566

00:32:55,029 --> 00:32:53,679

throw out there

567

00:32:57,029 --> 00:32:55,039

and i don't know if they're still doing

568

00:32:59,269 --> 00:32:57,039

it or not but uh

569

00:33:00,470 --> 00:32:59,279

prior to uh when the crew got suited up

570

00:33:02,470 --> 00:33:00,480

in the suit room

571

00:33:03,669 --> 00:33:02,480

there was a specific time you walked out

572

00:33:05,350 --> 00:33:03,679

to make the timeline

573

00:33:07,029 --> 00:33:05,360

to drive out to the pad and if you were

574

00:33:07,990 --> 00:33:07,039

suited up early you still couldn't leave

575

00:33:10,230 --> 00:33:08,000

the suit room

576

00:33:11,990 --> 00:33:10,240

so they had to do something to occupy

577

00:33:13,830 --> 00:33:12,000

the the crew and one of the

578

00:33:15,509 --> 00:33:13,840

things that they did it was played

579

00:33:18,389 --> 00:33:15,519

low-handed poker

580

00:33:20,710 --> 00:33:18,399

possum fargo and uh it was the director

581

00:33:22,149 --> 00:33:20,720

of flight crew ops and a few other folks

582

00:33:24,230 --> 00:33:22,159

chief of the astronaut office

583

00:33:26,070 --> 00:33:24,240

and the rule was you couldn't walk out

584

00:33:28,070 --> 00:33:26,080

until the commander won

585

00:33:30,070 --> 00:33:28,080

so yeah that i don't know if they're

586

00:33:32,470 --> 00:33:30,080

carrying that tradition out or not

587

00:33:33,750 --> 00:33:32,480

yeah i think they are uh i think we i

588

00:33:35,269 --> 00:33:33,760

don't think we get to see it

589

00:33:36,870 --> 00:33:35,279

i think they keep it a private event but

590

00:33:38,230 --> 00:33:36,880

i think we'll discuss it some tomorrow

591

00:33:39,830 --> 00:33:38,240

on our broadcast all right

592

00:33:41,029 --> 00:33:39,840

um so looking forward to that um and

593

00:33:42,310 --> 00:33:41,039

maybe catch some other traditions along

594

00:33:43,190 --> 00:33:42,320

the way anybody you don't know of any

595

00:33:45,269 --> 00:33:43,200

other traditions

596

00:33:46,630 --> 00:33:45,279

i i know i'm anxious to kind of discover

597

00:33:48,070 --> 00:33:46,640

this together because they don't really

598

00:33:48,870 --> 00:33:48,080

publicize it we just kind of pick up on

599

00:33:51,029 --> 00:33:48,880

it with time

600

00:33:53,029 --> 00:33:51,039

yeah i mean we we see um you know as the

601  
00:33:54,310 --> 00:33:53,039  
astronauts walk out of those famous

602  
00:33:57,350 --> 00:33:54,320  
doors that um

603  
00:33:59,190 --> 00:33:57,360  
our apollo astronauts walked out of um

604  
00:34:00,470 --> 00:33:59,200  
you know the when you see them for the

605  
00:34:02,630 --> 00:34:00,480  
first time as they get into their

606  
00:34:05,909 --> 00:34:02,640  
vehicles and go out to the launch pad

607  
00:34:07,509 --> 00:34:05,919  
uh they they take a sticker maybe not

608  
00:34:09,030 --> 00:34:07,519  
that day but previous to that they'll

609  
00:34:10,629 --> 00:34:09,040  
take a sticker and they'll put it on

610  
00:34:12,629 --> 00:34:10,639  
you know overhead the door there i think

611  
00:34:14,069 --> 00:34:12,639  
that's a special moment

612  
00:34:15,589 --> 00:34:14,079  
and you can see all of the previous

613  
00:34:17,349 --> 00:34:15,599

missions that have come before the one

614

00:34:20,310 --> 00:34:17,359

that's currently going and it's a

615

00:34:20,710 --> 00:34:20,320

it's a pretty unique unique experience

616

00:34:23,669 --> 00:34:20,720

cool

617

00:34:25,829 --> 00:34:23,679

mr cabana um i know uh speaking of crew

618

00:34:27,109 --> 00:34:25,839

mr cabana has to take off now he's on a

619

00:34:28,710 --> 00:34:27,119

tight timeline because

620

00:34:30,790 --> 00:34:28,720

he is actually headed to see the crew to

621

00:34:31,669 --> 00:34:30,800

wish them well um so we're gonna thank

622

00:34:32,790 --> 00:34:31,679

you for joining us

623

00:34:33,909 --> 00:34:32,800

um we're gonna keep going for a few more

624

00:34:35,669 --> 00:34:33,919

minutes with questions all right well

625

00:34:36,069 --> 00:34:35,679

thanks josh jim and jim thank you so

626  
00:34:37,349 --> 00:34:36,079  
much

627  
00:34:39,510 --> 00:34:37,359  
it's great having you guys at the

628  
00:34:42,230 --> 00:34:39,520  
kennedy space center and all i can say

629  
00:34:43,430 --> 00:34:42,240  
is uh go falcon go dragon go resilience

630  
00:34:45,349 --> 00:34:43,440  
there you go there you go give my

631  
00:34:47,190 --> 00:34:45,359  
regards to the crew you bet awesome

632  
00:34:48,389 --> 00:34:47,200  
yeah resilience there as mr commander

633  
00:34:50,710 --> 00:34:48,399  
just mentioned that's the actual name

634  
00:34:52,069 --> 00:34:50,720  
given by the crew of their capsule

635  
00:34:54,069 --> 00:34:52,079  
so it'll be resilience that they're

636  
00:34:55,510 --> 00:34:54,079  
flying on board so excited for that

637  
00:34:57,670 --> 00:34:55,520  
um kind of another tradition there of

638  
00:35:00,069 --> 00:34:57,680

naming naming capsules

639

00:35:01,190 --> 00:35:00,079

and fun things like that let's another

640

00:35:02,470 --> 00:35:01,200

question from online what's the

641

00:35:04,310 --> 00:35:02,480

historical impact

642

00:35:05,910 --> 00:35:04,320

that this mission has i know we've

643

00:35:08,230 --> 00:35:05,920

spoken to that a little bit already

644

00:35:09,030 --> 00:35:08,240

uh but just in the in the scope of

645

00:35:10,950 --> 00:35:09,040

history

646

00:35:12,550 --> 00:35:10,960

uh we've we've talked about kind of the

647

00:35:14,390 --> 00:35:12,560

past and what has led to this

648

00:35:15,510 --> 00:35:14,400

some of the future we've talked about

649

00:35:17,510 --> 00:35:15,520

the fact that this has been a year with

650

00:35:18,870 --> 00:35:17,520

a global pandemic

651  
00:35:20,550 --> 00:35:18,880  
which is shocking because i think the

652  
00:35:22,470 --> 00:35:20,560  
history books won't read that way

653  
00:35:24,069 --> 00:35:22,480  
with with what we've done this year so

654  
00:35:25,270 --> 00:35:24,079  
what other history is there in this

655  
00:35:27,510 --> 00:35:25,280  
moment

656  
00:35:29,990 --> 00:35:27,520  
so i i would say and i'll turn it to jim

657  
00:35:32,310 --> 00:35:30,000  
here but i i would say the big thing is

658  
00:35:33,829 --> 00:35:32,320  
historically human space flight has been

659  
00:35:35,270 --> 00:35:33,839  
a zero-sum game

660  
00:35:36,630 --> 00:35:35,280  
it was something that was done by

661  
00:35:36,950 --> 00:35:36,640  
governments and it was something done

662  
00:35:39,430 --> 00:35:36,960  
for

663  
00:35:41,270 --> 00:35:39,440

governments and and and now with all of

664

00:35:42,470 --> 00:35:41,280

the commercial space industry that exist

665

00:35:45,750 --> 00:35:42,480

today

666

00:35:47,750 --> 00:35:45,760

nasa is one of many customers and that's

667

00:35:48,870 --> 00:35:47,760

really what this commercial crew program

668

00:35:50,710 --> 00:35:48,880

represents

669

00:35:52,150 --> 00:35:50,720

um and when there's commercial customers

670

00:35:53,510 --> 00:35:52,160

what that means is we can do public

671

00:35:55,910 --> 00:35:53,520

private partnerships

672

00:35:56,630 --> 00:35:55,920

we can be a customer we can help develop

673

00:35:59,670 --> 00:35:56,640

the market

674

00:36:00,870 --> 00:35:59,680

and then other other companies private

675

00:36:03,349 --> 00:36:00,880

individuals

676

00:36:04,950 --> 00:36:03,359

uh even other countries can step in and

677

00:36:07,030 --> 00:36:04,960

and move the ball forward

678

00:36:08,710 --> 00:36:07,040

uh and and so this really is it's a

679

00:36:11,750 --> 00:36:08,720

transformational moment

680

00:36:12,550 --> 00:36:11,760

uh where it's not just a zero-sum game

681

00:36:14,069 --> 00:36:12,560

where

682

00:36:15,670 --> 00:36:14,079

all of the money comes from government

683

00:36:17,030 --> 00:36:15,680

and the only money that comes in is from

684

00:36:18,630 --> 00:36:17,040

government in fact

685

00:36:20,150 --> 00:36:18,640

it's it's a it's a very robust

686

00:36:21,910 --> 00:36:20,160

commercial marketplace and we want to

687

00:36:25,190 --> 00:36:21,920

see it grow

688

00:36:26,950 --> 00:36:25,200

you know josh going on with what jim's

689

00:36:30,950 --> 00:36:26,960

saying you think of nasa

690

00:36:34,390 --> 00:36:30,960

and we design built and operated

691

00:36:37,829 --> 00:36:34,400

all the spacecraft apollo

692

00:36:40,550 --> 00:36:37,839

gemini all of them and

693

00:36:42,230 --> 00:36:40,560

today we're really looking as jim said

694

00:36:45,270 --> 00:36:42,240

to be one of many customers

695

00:36:47,109 --> 00:36:45,280

but it's really so that nasa can focus

696

00:36:49,589 --> 00:36:47,119

on deep space

697

00:36:51,270 --> 00:36:49,599

we want to have the commercial we want

698

00:36:52,870 --> 00:36:51,280

these partners both commercial and

699

00:36:54,710 --> 00:36:52,880

international partners

700

00:36:57,270 --> 00:36:54,720

so that we can continue in low-earth

701  
00:37:00,390 --> 00:36:57,280  
orbit build that economy

702  
00:37:03,270 --> 00:37:00,400  
much larger than it is today and in the

703  
00:37:05,510 --> 00:37:03,280  
trillions is where we're heading

704  
00:37:07,510 --> 00:37:05,520  
but you look at historically i can tell

705  
00:37:09,109 --> 00:37:07,520  
you in my own personal experience i was

706  
00:37:11,270 --> 00:37:09,119  
about six years old

707  
00:37:12,870 --> 00:37:11,280  
i found myself being pushed out of my

708  
00:37:16,630 --> 00:37:12,880  
parents ford

709  
00:37:18,710 --> 00:37:16,640  
station wagon with my brother jay

710  
00:37:21,109 --> 00:37:18,720  
and was walking up to somebody's house

711  
00:37:24,950 --> 00:37:21,119  
in arlington virginia knocked on his

712  
00:37:26,390 --> 00:37:24,960  
door and john glenn answered the door

713  
00:37:27,750 --> 00:37:26,400

and my parents i don't know what my

714

00:37:29,030 --> 00:37:27,760

parents were thinking that they just

715

00:37:31,430 --> 00:37:29,040

threw us up there

716

00:37:33,829 --> 00:37:31,440

and he let us in i pet his cat he gave

717

00:37:36,390 --> 00:37:33,839

us a glass of water we got his autograph

718

00:37:37,589 --> 00:37:36,400

that was my first historically that is

719

00:37:41,030 --> 00:37:37,599

the first time

720

00:37:43,990 --> 00:37:41,040

i was ever touched

721

00:37:44,870 --> 00:37:44,000

space anything to do with space it's the

722

00:37:47,270 --> 00:37:44,880

way to do it that's

723

00:37:49,349 --> 00:37:47,280

that's a good start it was a good start

724

00:37:51,430 --> 00:37:49,359

and i ended up working with them

725

00:37:53,750 --> 00:37:51,440

in the senate and he was the same

726

00:37:56,310 --> 00:37:53,760

gentleman that he was as

727

00:37:58,230 --> 00:37:56,320

you know all these astronauts are but

728

00:38:00,310 --> 00:37:58,240

you know to me that's the history

729

00:38:02,230 --> 00:38:00,320

and we're going to continue that history

730

00:38:04,230 --> 00:38:02,240

tomorrow and into the future

731

00:38:06,310 --> 00:38:04,240

cool there's a lot of questions coming

732

00:38:08,470 --> 00:38:06,320

in about the weather i know today is a

733

00:38:10,310 --> 00:38:08,480

beautiful weather day here in florida

734

00:38:12,069 --> 00:38:10,320

um i don't know that it's a great day

735

00:38:13,349 --> 00:38:12,079

for a launch there's a lot of clouds or

736

00:38:14,710 --> 00:38:13,359

some breeze here do you all know that

737

00:38:16,950 --> 00:38:14,720

have you all seen the weather report yet

738

00:38:18,069 --> 00:38:16,960

um for tomorrow i know it's okay yeah i

739

00:38:21,109 --> 00:38:18,079

mean it looks fairly

740

00:38:23,670 --> 00:38:21,119

good but as you know it's it's florida

741

00:38:24,630 --> 00:38:23,680

and so uh so there are some there are

742

00:38:26,550 --> 00:38:24,640

some issues

743

00:38:28,470 --> 00:38:26,560

you know the the concern of course would

744

00:38:29,990 --> 00:38:28,480

be the winds that are coming from the

745

00:38:30,950 --> 00:38:30,000

ocean over the land rather than the

746

00:38:33,990 --> 00:38:30,960

other way

747

00:38:36,470 --> 00:38:34,000

so if there's like a if if for some

748

00:38:37,589 --> 00:38:36,480

uh reason we had to do a launch abort or

749

00:38:39,109 --> 00:38:37,599

a pad abort

750

00:38:41,030 --> 00:38:39,119

uh you know we need them to land in the

751

00:38:43,750 --> 00:38:41,040

ocean not on the land and so

752

00:38:44,950 --> 00:38:43,760

um there's there's a small chance that

753

00:38:46,150 --> 00:38:44,960

the winds could be heading the wrong

754

00:38:46,870 --> 00:38:46,160

direction tomorrow we don't we don't

755

00:38:49,510 --> 00:38:46,880

know

756

00:38:51,190 --> 00:38:49,520

um there's there's there's room there

757

00:38:52,950 --> 00:38:51,200

there's margin so we'll see what what

758

00:38:55,349 --> 00:38:52,960

direction it goes but um

759

00:38:56,870 --> 00:38:55,359

but i think i think look it's uh when we

760

00:38:58,870 --> 00:38:56,880

launched demo two

761

00:39:00,230 --> 00:38:58,880

uh we had we we actually had to scrub a

762

00:39:01,750 --> 00:39:00,240

flight and we came back

763

00:39:03,430 --> 00:39:01,760

you know a couple days later i was like

764

00:39:05,030 --> 00:39:03,440

there's no way we're going i got up in

765

00:39:06,630 --> 00:39:05,040

the morning i was like this thing is

766

00:39:08,230 --> 00:39:06,640

we should cancel it now i think we all

767

00:39:09,990 --> 00:39:08,240

said the same thing that day yeah and by

768

00:39:11,910 --> 00:39:10,000

the afternoon we were launching and it

769

00:39:15,190 --> 00:39:11,920

was a beautiful flight so

770

00:39:17,109 --> 00:39:15,200

uh look we're we're in florida so uh

771

00:39:18,950 --> 00:39:17,119

we're gonna we're gonna go as far as we

772

00:39:19,750 --> 00:39:18,960

can go and if things stay the same we're

773

00:39:21,990 --> 00:39:19,760

gonna be good

774

00:39:23,990 --> 00:39:22,000

great and this afternoon we're gonna be

775

00:39:26,069 --> 00:39:24,000

doing the launch readiness review

776

00:39:28,150 --> 00:39:26,079

yes and i'll be attending that jim's got

777

00:39:29,829 --> 00:39:28,160

some other things he's working on

778

00:39:31,349 --> 00:39:29,839

but we're going to be going through all

779

00:39:34,550 --> 00:39:31,359

those all those

780

00:39:35,109 --> 00:39:34,560

questions and we'll certainly have

781

00:39:37,750 --> 00:39:35,119

answers

782

00:39:39,589 --> 00:39:37,760

by the end of today great yes we do have

783

00:39:40,790 --> 00:39:39,599

a launch readiness review

784

00:39:42,870 --> 00:39:40,800

i think it's kicking off here in just a

785

00:39:44,390 --> 00:39:42,880

few minutes it'll go until it's done

786

00:39:45,430 --> 00:39:44,400

that's how the reviews work and then

787

00:39:46,870 --> 00:39:45,440

there'll be a briefing later this

788

00:39:48,390 --> 00:39:46,880

evening on nasa tv

789

00:39:49,589 --> 00:39:48,400

um and so we will get things like

790

00:39:50,230 --> 00:39:49,599

weather reports and those kinds of

791

00:39:52,630 --> 00:39:50,240

details

792

00:39:53,270 --> 00:39:52,640

hopefully uh all things go for tomorrow

793

00:39:56,150 --> 00:39:53,280

um

794

00:39:57,510 --> 00:39:56,160

last question for today uh is uh

795

00:39:59,270 --> 00:39:57,520

duration of this mission

796

00:40:01,270 --> 00:39:59,280

um we've talked about this being a long

797

00:40:04,069 --> 00:40:01,280

duration mission but what does that mean

798

00:40:04,950 --> 00:40:04,079

um we've seen everything from a few days

799

00:40:06,150 --> 00:40:04,960

up to a year

800

00:40:08,069 --> 00:40:06,160

with our astronauts so what's this

801  
00:40:09,349 --> 00:40:08,079  
mission for this crew yeah so these uh

802  
00:40:09,990 --> 00:40:09,359  
these astronauts are going to be up

803  
00:40:11,589 --> 00:40:10,000  
there for a period

804  
00:40:13,270 --> 00:40:11,599  
of six months the vehicle will be there

805  
00:40:14,710 --> 00:40:13,280  
for a period of six months

806  
00:40:16,950 --> 00:40:14,720  
uh so we've had to make some

807  
00:40:19,670 --> 00:40:16,960  
modifications to the vehicle the

808  
00:40:21,349 --> 00:40:19,680  
the limit limiting factor was the solar

809  
00:40:26,630 --> 00:40:21,359  
panels

810  
00:40:28,309 --> 00:40:26,640  
and uh and it you know we're in we're in

811  
00:40:30,309 --> 00:40:28,319  
good shape for uh for a six-month

812  
00:40:33,109 --> 00:40:30,319  
mission it is a long mission

813  
00:40:34,950 --> 00:40:33,119

um the shuttle uh never i don't think

814

00:40:36,870 --> 00:40:34,960

ever did a six-month mission

815

00:40:39,190 --> 00:40:36,880

so this will be the the longest uh

816

00:40:40,069 --> 00:40:39,200

longest one for a for a vehicle a crewed

817

00:40:42,230 --> 00:40:40,079

vehicle

818

00:40:43,750 --> 00:40:42,240

uh which is um which is going to be

819

00:40:44,069 --> 00:40:43,760

remarkable so we're very excited about

820

00:40:47,430 --> 00:40:44,079

it

821

00:40:48,230 --> 00:40:47,440

you guys last comments or thoughts for

822

00:40:50,950 --> 00:40:48,240

our audience

823

00:40:52,309 --> 00:40:50,960

um just the excitement of it's crew one

824

00:40:55,510 --> 00:40:52,319

we're there go ahead jim

825

00:40:56,470 --> 00:40:55,520

gosh you know first i'm just honored to

826  
00:40:59,030 --> 00:40:56,480  
be here

827  
00:41:00,710 --> 00:40:59,040  
and be a part of this be part of what

828  
00:41:03,589 --> 00:41:00,720  
jim has put together

829  
00:41:04,870 --> 00:41:03,599  
and we're looking for looking for

830  
00:41:08,069 --> 00:41:04,880  
forward

831  
00:41:08,710 --> 00:41:08,079  
to a successful launch tomorrow and

832  
00:41:11,349 --> 00:41:08,720  
again

833  
00:41:14,069 --> 00:41:11,359  
as i said before this is the beginning

834  
00:41:17,109 --> 00:41:14,079  
really the dawn of a new space age

835  
00:41:17,670 --> 00:41:17,119  
that is what we're doing here yeah and i

836  
00:41:20,790 --> 00:41:17,680  
want to

837  
00:41:23,270 --> 00:41:20,800  
say to to jim and to josh that

838  
00:41:25,430 --> 00:41:23,280

we've had some really great successes uh

839

00:41:26,950 --> 00:41:25,440

as when we look at 2020 which has been a

840

00:41:28,710 --> 00:41:26,960

very difficult year

841

00:41:30,550 --> 00:41:28,720

i will tell you one thing that's great

842

00:41:31,750 --> 00:41:30,560

is that the nasa budget is as high as

843

00:41:33,910 --> 00:41:31,760

it's ever been

844

00:41:35,670 --> 00:41:33,920

that we've got bipartisan a political

845

00:41:37,750 --> 00:41:35,680

support for missions like commercial

846

00:41:39,829 --> 00:41:37,760

crew like the artemis program

847

00:41:41,950 --> 00:41:39,839

like building a human landing system for

848

00:41:44,069 --> 00:41:41,960

the moon which hasn't happened since

849

00:41:47,190 --> 00:41:44,079

1972

850

00:41:49,430 --> 00:41:47,200

so as tough as 2020 has been with covid

851  
00:41:51,270 --> 00:41:49,440  
some challenges with the economy here's

852  
00:41:52,230 --> 00:41:51,280  
the thing we're doing big things in

853  
00:41:54,230 --> 00:41:52,240  
space

854  
00:41:56,309 --> 00:41:54,240  
this is just the beginning there's so

855  
00:41:57,109 --> 00:41:56,319  
much more to do 2021 is going to be a

856  
00:41:59,910 --> 00:41:57,119  
great year

857  
00:42:00,870 --> 00:41:59,920  
with the artemis program underway and

858  
00:42:03,349 --> 00:42:00,880  
going to the moon

859  
00:42:04,150 --> 00:42:03,359  
not just with you know the next man but

860  
00:42:06,069 --> 00:42:04,160  
the first woman

861  
00:42:08,069 --> 00:42:06,079  
not not in 2021 but we're going to start

862  
00:42:10,630 --> 00:42:08,079  
launching rockets in 2021

863  
00:42:12,309 --> 00:42:10,640

uh by 2024 landing the first woman and

864

00:42:14,950 --> 00:42:12,319

the next man on the moon so

865

00:42:15,589 --> 00:42:14,960

uh look nasa is in a great position and

866

00:42:18,230 --> 00:42:15,599

uh the

867

00:42:19,109 --> 00:42:18,240

the the great work of my deputy jim jim

868

00:42:21,030 --> 00:42:19,119

moorhard

869

00:42:22,790 --> 00:42:21,040

who has done so many uh so many great

870

00:42:24,710 --> 00:42:22,800

things on behalf of the agency

871

00:42:26,230 --> 00:42:24,720

uh it's been a real pleasure and and and

872

00:42:27,670 --> 00:42:26,240

uh this is just the beginning there's a

873

00:42:30,230 --> 00:42:27,680

lot more to come

874

00:42:31,109 --> 00:42:30,240

awesome i i ditto right back to jim

875

00:42:33,589 --> 00:42:31,119

breidenstein

876

00:42:35,030 --> 00:42:33,599

and by the way keep in mind we have the

877

00:42:37,430 --> 00:42:35,040

largest budget

878

00:42:39,829 --> 00:42:37,440

that nasa has ever had we call it in

879

00:42:42,470 --> 00:42:39,839

nominal dollars but it's real money

880

00:42:43,990 --> 00:42:42,480

and we need that to keep going forward

881

00:42:46,390 --> 00:42:44,000

yeah we're excited for that

882

00:42:47,910 --> 00:42:46,400

um mr breinstein mr mohart always a

883

00:42:49,910 --> 00:42:47,920

pleasure to share the stage with you

884

00:42:51,750 --> 00:42:49,920

i appreciate you both um thank you for

885

00:42:54,710 --> 00:42:51,760

joining us online i want to remind you

886

00:42:56,150 --> 00:42:54,720

uh check nasa kennedy facebook for more

887

00:42:58,790 --> 00:42:56,160

nasa social events today

888

00:43:00,550 --> 00:42:58,800

um stay tuned to more streaming on nasa

889

00:43:02,150 --> 00:43:00,560

kennedy's youtube page

890

00:43:03,670 --> 00:43:02,160

and then tune in tomorrow beginning at 3

891

00:43:05,829 --> 00:43:03,680

30 pm eastern time

892

00:43:08,470 --> 00:43:05,839

we will open coverage for that launch

893

00:43:10,470 --> 00:43:08,480

scheduled for 7 49 pm eastern time

894

00:43:11,910 --> 00:43:10,480

um that coverage begins just prior to

895

00:43:12,470 --> 00:43:11,920

crew suit up that's why we picked that

896

00:43:13,589 --> 00:43:12,480

time

897

00:43:15,910 --> 00:43:13,599

we get a lot we get to see a lot of

898

00:43:17,430 --> 00:43:15,920

really neat things um all the all of the

899

00:43:18,309 --> 00:43:17,440

suit up or most of the suit up the drive

900

00:43:20,390 --> 00:43:18,319

out to the pad

901

00:43:22,150 --> 00:43:20,400

and then uh fingers crossed weather good

902

00:43:24,470 --> 00:43:22,160

technology permitting we're gonna fly

903

00:43:25,430 --> 00:43:24,480

um all things moving forward offer one

904

00:43:27,829 --> 00:43:25,440

one for all

905

00:43:28,710 --> 00:43:27,839

go falcon go dragon go resilience go