



1
00:01:47,400 --> 00:02:06,830
[Music]

2
00:02:06,840 --> 00:02:12,390
um

3
00:02:12,400 --> 00:02:14,930
between

4
00:02:14,940 --> 00:02:21,030
[Music]

5
00:02:21,040 --> 00:02:46,380
discovery countries the tower discovery

6
00:02:51,589 --> 00:02:49,430
[Music]

7
00:02:53,190 --> 00:02:51,599
hello and welcome to nasa's kennedy

8
00:02:55,190 --> 00:02:53,200
space center in florida

9
00:02:57,990 --> 00:02:55,200
for the pre-launch news conference for

10
00:03:00,149 --> 00:02:58,000
nasa's spacex crew 2 mission

11
00:03:02,630 --> 00:03:00,159
this will be spacex's third flight with

12
00:03:04,630 --> 00:03:02,640
crew to the international space station

13
00:03:05,670 --> 00:03:04,640

as part of the agency's commercial crew

14

00:03:08,070 --> 00:03:05,680

program

15

00:03:08,869 --> 00:03:08,080

i'm marie lewis with nasa public affairs

16

00:03:11,430 --> 00:03:08,879

and we have

17

00:03:12,550 --> 00:03:11,440

several experts here to break down this

18

00:03:15,030 --> 00:03:12,560

mission for us

19

00:03:17,430 --> 00:03:15,040

to my left is steve stitch manager of

20

00:03:19,589 --> 00:03:17,440

nasa's commercial crew program

21

00:03:22,149 --> 00:03:19,599

joel montelbano manager of nasa's

22

00:03:24,470 --> 00:03:22,159

international space station program

23

00:03:27,270 --> 00:03:24,480

benji reed senior director of human

24

00:03:29,589 --> 00:03:27,280

space flight programs at spacex

25

00:03:31,270 --> 00:03:29,599

norm knight deputy director of nasa's

26

00:03:33,910 --> 00:03:31,280

flight operations

27

00:03:36,229 --> 00:03:33,920

junichi sakai manager of jaxa's

28

00:03:38,470 --> 00:03:36,239

international space station program

29

00:03:40,869 --> 00:03:38,480

frank davina manager of esa's

30

00:03:43,509 --> 00:03:40,879

international space station program

31

00:03:45,750 --> 00:03:43,519

kurt costello chief scientist for nasa's

32

00:03:48,229 --> 00:03:45,760

international space station program

33

00:03:50,470 --> 00:03:48,239

and brian sizzik launch weather officer

34

00:03:51,670 --> 00:03:50,480

with the u.s air force's 45th weather

35

00:03:53,750 --> 00:03:51,680

squadron

36

00:03:54,949 --> 00:03:53,760

now you may also have noticed a pair of

37

00:03:57,190 --> 00:03:54,959

spacesuits behind

38

00:03:59,670 --> 00:03:57,200

our speakers in the room these are the

39

00:04:01,350 --> 00:03:59,680

actual spacesuits worn by astronauts bob

40

00:04:03,429 --> 00:04:01,360

benkin and doug hurley

41

00:04:04,470 --> 00:04:03,439

during the historic demo 2 test flight

42

00:04:06,309 --> 00:04:04,480

last year

43

00:04:08,149 --> 00:04:06,319

and we have them here as a nod to all

44

00:04:10,229 --> 00:04:08,159

that the nasa and spacex teams

45

00:04:11,910 --> 00:04:10,239

have accomplished we will take your

46

00:04:12,550 --> 00:04:11,920

questions after opening remarks from our

47

00:04:15,509 --> 00:04:12,560

guests

48

00:04:16,229 --> 00:04:15,519

and we'll start with steve stitch thanks

49

00:04:19,270 --> 00:04:16,239

marie it's

50

00:04:20,949 --> 00:04:19,280

great to be here today we had our launch

51

00:04:23,270 --> 00:04:20,959

readiness review this morning

52

00:04:24,230 --> 00:04:23,280

jointly between nasa and spacex we

53

00:04:26,710 --> 00:04:24,240

reviewed all the

54

00:04:28,310 --> 00:04:26,720

open work uh coming out of the agency

55

00:04:30,390 --> 00:04:28,320

flight readiness review

56

00:04:32,469 --> 00:04:30,400

and the the systems on the vehicles and

57

00:04:35,189 --> 00:04:32,479

we concluded that we're go for launch

58

00:04:36,469 --> 00:04:35,199

so we're still on track for a 6 11

59

00:04:39,189 --> 00:04:36,479

eastern launch

60

00:04:41,590 --> 00:04:39,199

on thursday april the 22nd that would

61

00:04:45,030 --> 00:04:41,600

put docking on friday april 23rd

62

00:04:48,469 --> 00:04:45,040

at around 4 30 a.m if we

63

00:04:50,710 --> 00:04:48,479

launch on on thursday as planned

64

00:04:51,990 --> 00:04:50,720

uh over the last 48 hours it's been a

65

00:04:54,710 --> 00:04:52,000

very busy time frame

66

00:04:56,390 --> 00:04:54,720

uh here of course on saturday we had the

67

00:04:59,670 --> 00:04:56,400

static fire of the

68

00:05:03,510 --> 00:04:59,680

first stage of the crew ii vehicle

69

00:05:05,189 --> 00:05:03,520

fired all of the nine merlin engines

70

00:05:07,189 --> 00:05:05,199

and reviewed all the data from that

71

00:05:08,150 --> 00:05:07,199

those looked really good compared really

72

00:05:10,710 --> 00:05:08,160

well to the

73

00:05:12,070 --> 00:05:10,720

the crew one flight and so no issues

74

00:05:14,950 --> 00:05:12,080

coming out of that static fire

75

00:05:16,629 --> 00:05:14,960

um on sunday the crew got in the vehicle

76

00:05:17,830 --> 00:05:16,639

they suited up in the in the suit room

77

00:05:19,110 --> 00:05:17,840

and onc

78

00:05:20,790 --> 00:05:19,120

and they walk through that whole

79

00:05:21,830 --> 00:05:20,800

timeline of how they'll go out to the

80

00:05:24,390 --> 00:05:21,840

launch pad

81

00:05:25,350 --> 00:05:24,400

and get in the vehicle and get in their

82

00:05:27,110 --> 00:05:25,360

suits and

83

00:05:29,189 --> 00:05:27,120

hook the suits up to the vehicle close

84

00:05:30,870 --> 00:05:29,199

the hatch and the systems on the vehicle

85

00:05:31,430 --> 00:05:30,880

performed well the suits all performed

86

00:05:35,110 --> 00:05:31,440

great

87

00:05:37,189 --> 00:05:35,120

launch

88

00:05:38,950 --> 00:05:37,199

as we talked about after the flight

89

00:05:41,029 --> 00:05:38,960

readiness review we did have one

90

00:05:42,310 --> 00:05:41,039

issue that we needed to resolve that was

91

00:05:44,629 --> 00:05:42,320

the additional

92

00:05:45,990 --> 00:05:44,639

locks that we liquid oxygen that we

93

00:05:49,110 --> 00:05:46,000

thought was on the vehicle

94

00:05:50,550 --> 00:05:49,120

from several other spacex flights

95

00:05:52,629 --> 00:05:50,560

we looked at that relative to this

96

00:05:54,310 --> 00:05:52,639

flight and we concluded that

97

00:05:56,550 --> 00:05:54,320

that amount of liquid oxygen in the

98

00:05:58,469 --> 00:05:56,560

first stage was well within

99

00:05:59,830 --> 00:05:58,479

family of the guidance navigation

100

00:06:01,029 --> 00:05:59,840

control analysis and performance

101
00:06:02,629 --> 00:06:01,039
analysis

102
00:06:04,150 --> 00:06:02,639
uh well within the loads and structural

103
00:06:05,430 --> 00:06:04,160
capability of the vehicle

104
00:06:07,189 --> 00:06:05,440
and that we could handle any uh

105
00:06:08,870 --> 00:06:07,199
contingencies without locks on board so

106
00:06:10,950 --> 00:06:08,880
we were go to proceed

107
00:06:14,070 --> 00:06:10,960
uh with that uh amount of locks on the

108
00:06:15,670 --> 00:06:14,080
vehicle and uh we closed the we haven't

109
00:06:17,670 --> 00:06:15,680
had an exception at the flight readiness

110
00:06:19,350 --> 00:06:17,680
review we closed that i signed that

111
00:06:20,950 --> 00:06:19,360
exception and kathy leaders signed that

112
00:06:22,150 --> 00:06:20,960
as well

113
00:06:24,070 --> 00:06:22,160

the main thing we're watching over the

114

00:06:25,590 --> 00:06:24,080

next few days is the weather uh

115

00:06:27,510 --> 00:06:25,600

you know we have to have the launch

116

00:06:28,710 --> 00:06:27,520

weather be go and also abort weather all

117

00:06:30,150 --> 00:06:28,720

along the abort

118

00:06:32,550 --> 00:06:30,160

ground track to protect the crew in the

119

00:06:34,230 --> 00:06:32,560

vehicle so we're looking at both

120

00:06:36,790 --> 00:06:34,240

thursday and friday and looking at the

121

00:06:38,230 --> 00:06:36,800

weather over the next few days

122

00:06:39,990 --> 00:06:38,240

it's just an exciting time to be here

123

00:06:41,430 --> 00:06:40,000

you know before coming over here uh

124

00:06:42,150 --> 00:06:41,440

benji reed and i were out at the launch

125

00:06:43,670 --> 00:06:42,160

pad and

126

00:06:45,430 --> 00:06:43,680

was thinking about all three crewed

127

00:06:47,590 --> 00:06:45,440

missions this is our third

128

00:06:49,909 --> 00:06:47,600

uh the capsule that we're gonna fly as a

129

00:06:52,550 --> 00:06:49,919

reused capsule that bob and doug flew on

130

00:06:54,230 --> 00:06:52,560

demo 2 and then the first stage was used

131

00:06:56,150 --> 00:06:54,240

by crew one so it's kind of exciting to

132

00:06:58,790 --> 00:06:56,160

see all those three missions

133

00:07:00,790 --> 00:06:58,800

in that one vehicle to pad thanks maria

134

00:07:03,749 --> 00:07:00,800

i'll turn it over to joel

135

00:07:04,469 --> 00:07:03,759

thank you steve and welcome again to

136

00:07:07,029 --> 00:07:04,479

today's

137

00:07:08,550 --> 00:07:07,039

post launch readiness review press brief

138

00:07:10,629 --> 00:07:08,560

you know the month of april

139

00:07:12,629 --> 00:07:10,639

has been and will continue to be a

140

00:07:14,230 --> 00:07:12,639

banner month for the international space

141

00:07:17,189 --> 00:07:14,240

station

142

00:07:18,550 --> 00:07:17,199

every week in the month of april we have

143

00:07:21,350 --> 00:07:18,560

or we'll do

144

00:07:23,189 --> 00:07:21,360

a major human spaceflight dynamic

145

00:07:24,950 --> 00:07:23,199

activity we started the month with a

146

00:07:27,350 --> 00:07:24,960

dragon relocation

147

00:07:28,390 --> 00:07:27,360

from the node two forward port to the

148

00:07:30,710 --> 00:07:28,400

zenith port

149

00:07:32,550 --> 00:07:30,720

we followed just a few days later by a

150

00:07:33,189 --> 00:07:32,560

soyuz launch and brought the crew

151
00:07:36,629 --> 00:07:33,199
compliment

152
00:07:38,550 --> 00:07:36,639
on board to 10 people just last friday

153
00:07:41,350 --> 00:07:38,560
we had a soyuz landing so

154
00:07:42,230 --> 00:07:41,360
three people came home and allowed us to

155
00:07:44,230 --> 00:07:42,240
have 10 people

156
00:07:45,270 --> 00:07:44,240
on orbit for about a week preparing us

157
00:07:47,830 --> 00:07:45,280
for the crew

158
00:07:49,189 --> 00:07:47,840
1 crew 2 handover mission we'll have 11

159
00:07:51,189 --> 00:07:49,199
people on board

160
00:07:53,589 --> 00:07:51,199
our life support systems work to

161
00:07:56,230 --> 00:07:53,599
fabulously no no issues at all

162
00:07:57,990 --> 00:07:56,240
and while we're prepared and planning

163
00:08:00,469 --> 00:07:58,000

for just a short five-ish day

164

00:08:01,990 --> 00:08:00,479

mission we're prepared to have both crew

165

00:08:03,589 --> 00:08:02,000

one and crew two up there from a

166

00:08:06,390 --> 00:08:03,599

consumable standpoint

167

00:08:08,150 --> 00:08:06,400

for up to 20 days this week we're here

168

00:08:09,749 --> 00:08:08,160

talking about the crew 2 launch and then

169

00:08:10,629 --> 00:08:09,759

the last week of the month we'll have

170

00:08:13,510 --> 00:08:10,639

the crew one

171

00:08:15,189 --> 00:08:13,520

undock and landing so like i said just

172

00:08:16,230 --> 00:08:15,199

an awesome time to be in human space

173

00:08:18,070 --> 00:08:16,240

flight and

174

00:08:20,150 --> 00:08:18,080

and just a great place to be working on

175

00:08:21,909 --> 00:08:20,160

the international space station

176
00:08:23,990 --> 00:08:21,919
with the crew 2 launch we welcome the

177
00:08:25,670 --> 00:08:24,000
european space agencies

178
00:08:27,830 --> 00:08:25,680
flying an astronaut for the first time

179
00:08:29,749 --> 00:08:27,840
on dragon we also

180
00:08:31,990 --> 00:08:29,759
welcome back the japanese aerospace

181
00:08:33,110 --> 00:08:32,000
exploration agency flying on dragon for

182
00:08:35,350 --> 00:08:33,120
a second time

183
00:08:37,269 --> 00:08:35,360
so truly an international program and

184
00:08:39,909 --> 00:08:37,279
this is our future we'll have

185
00:08:40,949 --> 00:08:39,919
international partners on our vehicles

186
00:08:42,630 --> 00:08:40,959
for the future

187
00:08:44,310 --> 00:08:42,640
that's a goal and that's where we're

188
00:08:46,230 --> 00:08:44,320

planning to be

189

00:08:47,750 --> 00:08:46,240

this crew will stay up a full duration

190

00:08:50,470 --> 00:08:47,760

you know approximately six months

191

00:08:51,269 --> 00:08:50,480

they'll perform over 260 experiments on

192

00:08:53,190 --> 00:08:51,279

board

193

00:08:54,790 --> 00:08:53,200

and one of the major benefits of the

194

00:08:56,790 --> 00:08:54,800

commercial crew program

195

00:08:58,230 --> 00:08:56,800

is where with the fourth crew member

196

00:09:00,470 --> 00:08:58,240

we're allowed to increase the amount of

197

00:09:02,230 --> 00:09:00,480

utilization and research we do on board

198

00:09:04,150 --> 00:09:02,240

the amount of technology development we

199

00:09:05,670 --> 00:09:04,160

do for the artemis program

200

00:09:07,590 --> 00:09:05,680

as well as the low earth orbit

201
00:09:09,910 --> 00:09:07,600
commercialization efforts we do

202
00:09:11,509 --> 00:09:09,920
so just an awesome awesome time again to

203
00:09:12,550 --> 00:09:11,519
be working on the international space

204
00:09:14,710 --> 00:09:12,560
station

205
00:09:16,310 --> 00:09:14,720
as i talked after the flight readiness

206
00:09:18,230 --> 00:09:16,320
review april 22nd

207
00:09:19,910 --> 00:09:18,240
is earth day and just a reminder we have

208
00:09:21,509 --> 00:09:19,920
a number of experiments

209
00:09:23,190 --> 00:09:21,519
on board that are earth-facing

210
00:09:25,190 --> 00:09:23,200
collecting data every day for our

211
00:09:27,829 --> 00:09:25,200
scientists to study the earth

212
00:09:29,590 --> 00:09:27,839
we also have activities on board for

213
00:09:31,590 --> 00:09:29,600

example water recovery

214

00:09:32,870 --> 00:09:31,600

that we can repurpose that technology

215

00:09:35,750 --> 00:09:32,880

and use it to benefit

216

00:09:37,590 --> 00:09:35,760

people here on earth so we're excited

217

00:09:39,190 --> 00:09:37,600

for this mission we want to congratulate

218

00:09:41,350 --> 00:09:39,200

the commercial crew program

219

00:09:44,150 --> 00:09:41,360

congratulate the spacex team and with

220

00:09:47,269 --> 00:09:44,160

that i'll hand it over to benji

221

00:09:49,269 --> 00:09:47,279

great thank you joel thank you steve as

222

00:09:51,990 --> 00:09:49,279

always it's an honor to be here

223

00:09:53,269 --> 00:09:52,000

we're excited to be able to fly crew

224

00:09:55,829 --> 00:09:53,279

again

225

00:09:57,190 --> 00:09:55,839

it's super cool to have the opportunity

226

00:10:01,350 --> 00:09:57,200

to do this so quickly

227

00:10:04,230 --> 00:10:01,360

in fact and it was a great note

228

00:10:05,829 --> 00:10:04,240

i think if i do my math right we'll in

229

00:10:06,470 --> 00:10:05,839

less than a year have flown as many

230

00:10:09,350 --> 00:10:06,480

people

231

00:10:11,829 --> 00:10:09,360

in this partnership with nasa as we're

232

00:10:15,350 --> 00:10:11,839

flowing to the mercury program

233

00:10:17,750 --> 00:10:15,360

and that's that's pretty cool number one

234

00:10:18,470 --> 00:10:17,760

always we want to thank the agencies and

235

00:10:21,509 --> 00:10:18,480

our partners

236

00:10:23,269 --> 00:10:21,519

nasa the japanese space agency and the

237

00:10:24,949 --> 00:10:23,279

european space agency

238

00:10:26,470 --> 00:10:24,959

and of course the families of all of the

239

00:10:29,509 --> 00:10:26,480

astronauts

240

00:10:31,590 --> 00:10:29,519

for their trust in allowing us to fly

241

00:10:33,110 --> 00:10:31,600

their astronauts their family members to

242

00:10:34,949 --> 00:10:33,120

space and to bring them home safely

243

00:10:37,430 --> 00:10:34,959

again

244

00:10:37,990 --> 00:10:37,440

not only in this last year have we flown

245

00:10:39,430 --> 00:10:38,000

so many

246

00:10:41,990 --> 00:10:39,440

uh and we'll have the opportunity to fly

247

00:10:43,350 --> 00:10:42,000

so many more uh humans to space

248

00:10:45,030 --> 00:10:43,360

but we also had a couple of other

249

00:10:47,269 --> 00:10:45,040

records it was our first

250

00:10:48,550 --> 00:10:47,279

commercial orbital space launch of

251
00:10:51,829 --> 00:10:48,560
humans

252
00:10:53,670 --> 00:10:51,839
in history and also our longest

253
00:10:55,750 --> 00:10:53,680
mission the longest mission for an

254
00:10:58,069 --> 00:10:55,760
american crew vehicle

255
00:10:59,829 --> 00:10:58,079
in history so a lot of firsts and a lot

256
00:11:01,670 --> 00:10:59,839
of good stuff happening

257
00:11:04,230 --> 00:11:01,680
another thing that i think is really

258
00:11:07,110 --> 00:11:04,240
great is that in less than 11 months

259
00:11:08,630 --> 00:11:07,120
the joint nasa and spacex team were able

260
00:11:11,190 --> 00:11:08,640
to certify

261
00:11:11,750 --> 00:11:11,200
reuse so we are flying as steve

262
00:11:15,269 --> 00:11:11,760
mentioned

263
00:11:15,829 --> 00:11:15,279

we're flying nasa astronauts on a flight

264

00:11:19,269 --> 00:11:15,839

proven

265

00:11:20,949 --> 00:11:19,279

that'll be

266

00:11:22,870 --> 00:11:20,959

another first and a very important thing

267

00:11:25,350 --> 00:11:22,880

as we all have talked before

268

00:11:26,790 --> 00:11:25,360

flying on reused vehicles on flight

269

00:11:28,949 --> 00:11:26,800

proven vehicles

270

00:11:30,150 --> 00:11:28,959

is key towards greater flight

271

00:11:32,150 --> 00:11:30,160

reliability and

272

00:11:33,750 --> 00:11:32,160

lowering the cost of access to space

273

00:11:35,829 --> 00:11:33,760

which is ultimately what helps us make

274

00:11:37,590 --> 00:11:35,839

life multi-planetary

275

00:11:39,590 --> 00:11:37,600

so this is a great accomplishment and

276

00:11:40,630 --> 00:11:39,600

again a huge thank you to the nasa teams

277

00:11:42,069 --> 00:11:40,640

that worked with us and the

278

00:11:43,430 --> 00:11:42,079

international partner teams that have

279

00:11:45,990 --> 00:11:43,440

all worked with us to make that a

280

00:11:47,990 --> 00:11:46,000

reality coming up this week

281

00:11:50,710 --> 00:11:48,000

we'd also like to thank nasa for the

282

00:11:54,389 --> 00:11:50,720

award for the human lander system

283

00:11:55,910 --> 00:11:54,399

this is a huge honor um and and it's

284

00:11:57,670 --> 00:11:55,920

truly a great thing for us to be able to

285

00:11:58,790 --> 00:11:57,680

be a part of the artemis team and

286

00:12:01,269 --> 00:11:58,800

and we look forward to making that

287

00:12:02,949 --> 00:12:01,279

happen that program itself

288

00:12:04,150 --> 00:12:02,959

just like the commercial crew program

289

00:12:06,230 --> 00:12:04,160

just like the international space

290

00:12:08,629 --> 00:12:06,240

station and the programs before it

291

00:12:10,310 --> 00:12:08,639

are pushing human exploration further

292

00:12:12,230 --> 00:12:10,320

than ever before

293

00:12:14,550 --> 00:12:12,240

and particularly will push human

294

00:12:16,470 --> 00:12:14,560

exploration in a more diverse way

295

00:12:17,829 --> 00:12:16,480

than ever before and this is a great

296

00:12:19,269 --> 00:12:17,839

thing

297

00:12:21,350 --> 00:12:19,279

right now i'd like to talk a little bit

298

00:12:22,870 --> 00:12:21,360

about the crew 2 vehicles and

299

00:12:29,750 --> 00:12:22,880

where we stand right now on our launch

300

00:12:33,990 --> 00:12:32,069

all right this is a great drone video

301

00:12:35,670 --> 00:12:34,000

this is what uh the pad looks like right

302

00:12:36,949 --> 00:12:35,680

now this was taken a couple of days ago

303

00:12:39,110 --> 00:12:36,959

but i was just out there as steve

304

00:12:42,310 --> 00:12:39,120

mentioned and you can see it

305

00:12:44,069 --> 00:12:42,320

great views here of falcon

306

00:12:45,990 --> 00:12:44,079

you can see the the nasa logos on the

307

00:12:48,629 --> 00:12:46,000

side you can see

308

00:12:49,670 --> 00:12:48,639

the dragon on top the crew arm is

309

00:12:51,670 --> 00:12:49,680

extended

310

00:12:53,030 --> 00:12:51,680

exactly where the crew will walk across

311

00:12:55,990 --> 00:12:53,040

and get into their

312

00:12:57,509 --> 00:12:56,000

their vehicle to go to space as many of

313

00:12:59,829 --> 00:12:57,519

you will remember that is the

314

00:13:01,509 --> 00:12:59,839

the same tower that has been used by

315

00:13:03,670 --> 00:13:01,519

the shuttle teams and also

316

00:13:05,509 --> 00:13:03,680

by the apollo crews when they flew to

317

00:13:07,190 --> 00:13:05,519

the moon so it's always an honor to be

318

00:13:10,389 --> 00:13:07,200

here at this historic launch pad

319

00:13:12,069 --> 00:13:10,399

here at kennedy space center this

320

00:13:14,550 --> 00:13:12,079

our vehicles and the launch pad all of

321

00:13:17,030 --> 00:13:14,560

our teams are ready we continue to do

322

00:13:18,389 --> 00:13:17,040

a number of tests preparing i should say

323

00:13:19,750 --> 00:13:18,399

a number of analyses of our data

324

00:13:21,750 --> 00:13:19,760

assessments of our data

325

00:13:23,350 --> 00:13:21,760

we've completed thousands and thousands

326

00:13:24,470 --> 00:13:23,360

of tests to get to this day just like we

327

00:13:26,230 --> 00:13:24,480

always have in the past and we'll

328

00:13:28,310 --> 00:13:26,240

continue to do

329

00:13:30,150 --> 00:13:28,320

we talk a lot about these kinds of

330

00:13:30,870 --> 00:13:30,160

reviews that we do we call them paranoia

331

00:13:33,350 --> 00:13:30,880

reviews

332

00:13:33,990 --> 00:13:33,360

um they're we we want to be paranoid

333

00:13:35,110 --> 00:13:34,000

right

334

00:13:37,269 --> 00:13:35,120

we want to make sure that we're going to

335

00:13:38,550 --> 00:13:37,279

fly these people safely and

336

00:13:40,629 --> 00:13:38,560

and be able to bring them home safely

337

00:13:41,910 --> 00:13:40,639

when it's time so we check we check

338

00:13:43,350 --> 00:13:41,920

under every rock and we double check and

339

00:13:44,550 --> 00:13:43,360

we triple check and we ask each other we

340

00:13:46,230 --> 00:13:44,560

challenge each other all the time we're

341

00:13:48,150 --> 00:13:46,240

continuing that process

342

00:13:49,829 --> 00:13:48,160

another thing that we do is we practice

343

00:13:51,509 --> 00:13:49,839

a lot um

344

00:13:53,509 --> 00:13:51,519

and one of the practices that we did was

345

00:13:54,790 --> 00:13:53,519

the dry dress rehearsal

346

00:13:57,030 --> 00:13:54,800

and that's where the crew actually gets

347

00:13:58,629 --> 00:13:57,040

suited up they get into

348

00:14:01,269 --> 00:13:58,639

their vehicles the model x's that come

349

00:14:02,710 --> 00:14:01,279

across and bring them out to the pad

350

00:14:03,990 --> 00:14:02,720

they go up in that tower that you saw

351
00:14:05,509 --> 00:14:04,000
there and across the crew arm they get

352
00:14:07,189 --> 00:14:05,519
into the seats and the dragon

353
00:14:09,990 --> 00:14:07,199
and basically walk through everything on

354
00:14:11,750 --> 00:14:10,000
the timeline as if it were launch day

355
00:14:14,069 --> 00:14:11,760
while the crew is doing that the ground

356
00:14:16,150 --> 00:14:14,079
teams are all doing their jobs

357
00:14:17,189 --> 00:14:16,160
and all of our flight operators are in

358
00:14:19,110 --> 00:14:17,199
their seats

359
00:14:20,629 --> 00:14:19,120
back in hawthorne here at the cape and

360
00:14:22,310 --> 00:14:20,639
elsewhere um

361
00:14:24,470 --> 00:14:22,320
doing walking through the steps walking

362
00:14:25,829 --> 00:14:24,480
through the procedures um and ensuring

363
00:14:27,509 --> 00:14:25,839

that we're ready to go and we take that

364

00:14:28,550 --> 00:14:27,519

that dry dress up through basically the

365

00:14:31,189 --> 00:14:28,560

moment of launch

366

00:14:31,750 --> 00:14:31,199

um and ensure that that we're going to

367

00:14:33,750 --> 00:14:31,760

be ready

368

00:14:35,030 --> 00:14:33,760

and practice that and in fact our teams

369

00:14:37,269 --> 00:14:35,040

are actually doing um

370

00:14:38,629 --> 00:14:37,279

even additional practices like i

371

00:14:40,389 --> 00:14:38,639

mentioned we continue to

372

00:14:41,750 --> 00:14:40,399

want to ensure that everything is great

373

00:14:44,870 --> 00:14:41,760

and so we're continuing down that path

374

00:14:46,629 --> 00:14:44,880

as we get ready for thursday

375

00:14:48,629 --> 00:14:46,639

speaking of that dry dress i think we've

376

00:14:51,030 --> 00:14:48,639

got some photos

377

00:14:52,150 --> 00:14:51,040

ah there it is great shot again you can

378

00:14:54,310 --> 00:14:52,160

see

379

00:14:56,310 --> 00:14:54,320

the the vehicle but in front of the

380

00:14:58,470 --> 00:14:56,320

vehicle down there is the crew

381

00:14:59,829 --> 00:14:58,480

and we should always talk about who they

382

00:15:01,350 --> 00:14:59,839

are and who they are as people we've got

383

00:15:04,550 --> 00:15:01,360

megan and shane and

384

00:15:05,750 --> 00:15:04,560

aki and tomah um you know there's uh

385

00:15:07,590 --> 00:15:05,760

there's a lot of families there there's

386

00:15:08,230 --> 00:15:07,600

a lot of hard work and time that they

387

00:15:09,750 --> 00:15:08,240

put in

388

00:15:11,430 --> 00:15:09,760

the astronauts and also their families

389

00:15:12,790 --> 00:15:11,440

and all the people who supported them

390

00:15:14,150 --> 00:15:12,800

over the years it's important that they

391

00:15:15,269 --> 00:15:14,160

are able to get up and do their job on

392

00:15:17,509 --> 00:15:15,279

the space station do all the great

393

00:15:20,069 --> 00:15:17,519

science that the station does

394

00:15:21,189 --> 00:15:20,079

and um and it in particular in my heart

395

00:15:22,389 --> 00:15:21,199

i know there's a there's a little boy

396

00:15:24,389 --> 00:15:22,399

out there whose mom is

397

00:15:25,750 --> 00:15:24,399

flying and this is something that we pay

398

00:15:27,269 --> 00:15:25,760

a lot of attention to

399

00:15:29,590 --> 00:15:27,279

we ask ourselves all the time would we

400

00:15:31,509 --> 00:15:29,600

be willing to fly our families

401
00:15:32,790 --> 00:15:31,519
on these vehicles and that's kind of a

402
00:15:34,870 --> 00:15:32,800
test for us

403
00:15:36,069 --> 00:15:34,880
and this is a great shot of them and and

404
00:15:37,030 --> 00:15:36,079
if you get to know them

405
00:15:39,749 --> 00:15:37,040
and watch them and they go through

406
00:15:42,150 --> 00:15:39,759
training you they're just a fun team

407
00:15:44,310 --> 00:15:42,160
an excellent team i think they designed

408
00:15:45,749 --> 00:15:44,320
a great patch

409
00:15:48,310 --> 00:15:45,759
and you can see them there in the crew

410
00:15:49,590 --> 00:15:48,320
arm right now

411
00:15:51,509 --> 00:15:49,600
all right let me just talk a moment

412
00:15:53,590 --> 00:15:51,519
about weather

413
00:15:54,790 --> 00:15:53,600

and and we'll hear more uh from our

414

00:15:56,230 --> 00:15:54,800

weather officer about

415

00:15:58,069 --> 00:15:56,240

the local weather and the launch weather

416

00:15:59,910 --> 00:15:58,079

but it's always a good reminder that

417

00:16:01,350 --> 00:15:59,920

it's not just about launch day when

418

00:16:03,269 --> 00:16:01,360

we're launching crew

419

00:16:05,189 --> 00:16:03,279

we have to worry about the entire ascent

420

00:16:06,069 --> 00:16:05,199

trajectory because if something goes

421

00:16:07,670 --> 00:16:06,079

wrong

422

00:16:10,069 --> 00:16:07,680

we want dragon to be able to launch

423

00:16:11,189 --> 00:16:10,079

escape off of the rocket

424

00:16:13,509 --> 00:16:11,199

and that means they have to be able to

425

00:16:15,829 --> 00:16:13,519

come down in the ocean at all points

426
00:16:17,910 --> 00:16:15,839
along that potential escape path

427
00:16:20,470 --> 00:16:17,920
so we're watching weather not just here

428
00:16:23,350 --> 00:16:20,480
the cape but all along that path of the

429
00:16:24,949 --> 00:16:23,360
northern seaboard across the atlantic

430
00:16:26,150 --> 00:16:24,959
and so and we're not just looking at say

431
00:16:27,910 --> 00:16:26,160
you know rain or something like that

432
00:16:29,350 --> 00:16:27,920
we're looking at winds and wave height

433
00:16:30,790 --> 00:16:29,360
and lightning

434
00:16:32,470 --> 00:16:30,800
all kinds of things to make sure it's

435
00:16:33,030 --> 00:16:32,480
right so many many points along that

436
00:16:35,430 --> 00:16:33,040
track

437
00:16:36,949 --> 00:16:35,440
we're watching it so fundamentally there

438
00:16:37,430 --> 00:16:36,959

are a number of places where we can say

439

00:16:39,590 --> 00:16:37,440

uh

440

00:16:40,790 --> 00:16:39,600

we don't feel good enough about flying

441

00:16:42,870 --> 00:16:40,800

the crew today

442

00:16:45,189 --> 00:16:42,880

um and so while we're aiming for

443

00:16:46,230 --> 00:16:45,199

thursday as steve talked about at 6 11

444

00:16:48,069 --> 00:16:46,240

eastern

445

00:16:49,189 --> 00:16:48,079

we uh you know we'll watch the weather

446

00:16:51,910 --> 00:16:49,199

and we'll make a decision if we need to

447

00:16:53,430 --> 00:16:51,920

we'll move to that next day on friday

448

00:16:55,110 --> 00:16:53,440

and just in terms of the launch

449

00:16:57,509 --> 00:16:55,120

opportunities uh

450

00:16:59,430 --> 00:16:57,519

based on orbits of the space station uh

451
00:17:00,790 --> 00:16:59,440
we'll have two days on and two days off

452
00:17:02,949 --> 00:17:00,800
so our first two launch opportunities

453
00:17:04,549 --> 00:17:02,959
are here thursday and friday

454
00:17:06,470 --> 00:17:04,559
as steve mentioned a little bit less

455
00:17:07,510 --> 00:17:06,480
than 24 hours we'll be talking to the

456
00:17:10,630 --> 00:17:07,520
space station

457
00:17:12,630 --> 00:17:10,640
based on this first opportunity um

458
00:17:14,150 --> 00:17:12,640
and um and you know they'll be up there

459
00:17:16,549 --> 00:17:14,160
for about six months

460
00:17:17,590 --> 00:17:16,559
um and it's important always to be

461
00:17:20,069 --> 00:17:17,600
thinking about the crew that we'll be

462
00:17:21,590 --> 00:17:20,079
bringing home just a few days after that

463
00:17:23,270 --> 00:17:21,600

and of course bringing that crew home is

464

00:17:25,510 --> 00:17:23,280

very important our

465

00:17:26,549 --> 00:17:25,520

all of our recovery crews are ready they

466

00:17:28,309 --> 00:17:26,559

also have been

467

00:17:30,950 --> 00:17:28,319

training and reviewing and practicing

468

00:17:32,310 --> 00:17:30,960

and checking all of their hardware

469

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

and they're ready for those those crews

470

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

to come home and come and get them

471

00:17:37,590 --> 00:17:36,480

uh and uh finally you know i think it's

472

00:17:38,710 --> 00:17:37,600

always important to thank all the

473

00:17:40,390 --> 00:17:38,720

different groups there's a lot of the

474

00:17:42,310 --> 00:17:40,400

nasa centers that are involved

475

00:17:44,150 --> 00:17:42,320

of course we've got kennedy and johnson

476

00:17:45,990 --> 00:17:44,160

and marshall who all

477

00:17:47,510 --> 00:17:46,000

play a key role on the commercial crew

478

00:17:48,950 --> 00:17:47,520

program and supporting us

479

00:17:50,950 --> 00:17:48,960

and of course we have the 45th space

480

00:17:54,070 --> 00:17:50,960

wing um here at the

481

00:17:55,590 --> 00:17:54,080

canaveral space force station and debt 3

482

00:17:57,830 --> 00:17:55,600

who also is there to support us in case

483

00:17:58,950 --> 00:17:57,840

of an emergency thank you to all of them

484

00:18:00,470 --> 00:17:58,960

and again just thank you to the

485

00:18:04,390 --> 00:18:00,480

astronauts and their families we look

486

00:18:09,990 --> 00:18:08,230

norm let's see uh well good morning

487

00:18:11,270 --> 00:18:10,000

it's uh it's a pleasure to be here with

488

00:18:13,190 --> 00:18:11,280

my colleagues

489

00:18:14,470 --> 00:18:13,200

it's an exciting time we're 48 hours

490

00:18:15,750 --> 00:18:14,480

from launch and

491

00:18:18,070 --> 00:18:15,760

you know this is where all the eyes are

492

00:18:20,310 --> 00:18:18,080

dotted and teaser crossed as we

493

00:18:21,190 --> 00:18:20,320

as we all count down to uh to launch

494

00:18:24,070 --> 00:18:21,200

time

495

00:18:25,909 --> 00:18:24,080

i had an opportunity to talk with shane

496

00:18:26,950 --> 00:18:25,919

the crew is doing great they're really

497

00:18:30,710 --> 00:18:26,960

excited

498

00:18:34,470 --> 00:18:30,720

as benji said dry dress went very well

499

00:18:36,950 --> 00:18:34,480

and again just on our way to launch

500

00:18:38,950 --> 00:18:36,960

the crew is getting an opportunity today

501
00:18:40,390 --> 00:18:38,960
to get more briefings

502
00:18:41,750 --> 00:18:40,400
get prepped for launch spend some time

503
00:18:42,630 --> 00:18:41,760
with their family they get a little bit

504
00:18:46,070 --> 00:18:42,640
of downtime

505
00:18:49,430 --> 00:18:46,080
tomorrow waking up very

506
00:18:51,909 --> 00:18:49,440
early on thursday morning

507
00:18:54,230 --> 00:18:51,919
for the launch you know the reviews that

508
00:18:55,510 --> 00:18:54,240
have been talked a lot about

509
00:18:57,750 --> 00:18:55,520
culminated today with the launch

510
00:18:59,430 --> 00:18:57,760
readiness review and and those reviews

511
00:19:01,590 --> 00:18:59,440
have been extremely thorough

512
00:19:03,750 --> 00:19:01,600
and especially with the refurbished

513
00:19:05,190 --> 00:19:03,760

falcon and dragon

514

00:19:06,870 --> 00:19:05,200

we're very convinced that it's safe to

515

00:19:09,350 --> 00:19:06,880

fly safety has been number one

516

00:19:11,190 --> 00:19:09,360

in all these reviews and that's the way

517

00:19:13,270 --> 00:19:11,200

it should be

518

00:19:15,669 --> 00:19:13,280

this business of human space flight is

519

00:19:17,750 --> 00:19:15,679

unforgiving it's the vigilance

520

00:19:19,909 --> 00:19:17,760

from the teams that guarantee that

521

00:19:20,870 --> 00:19:19,919

continued safety and it was definitely

522

00:19:23,990 --> 00:19:20,880

present

523

00:19:25,350 --> 00:19:24,000

in these reviews this week and you know

524

00:19:27,190 --> 00:19:25,360

you step back and you look

525

00:19:28,710 --> 00:19:27,200

it's it's it's hard enough in a regular

526

00:19:31,350 --> 00:19:28,720

environment but you put covid

527

00:19:32,070 --> 00:19:31,360

on top of that it's been exceptionally

528

00:19:34,710 --> 00:19:32,080

impressive

529

00:19:37,029 --> 00:19:34,720

what these teams have been able to uh to

530

00:19:39,510 --> 00:19:37,039

pull together

531

00:19:41,990 --> 00:19:39,520

uh the cadence is very good for the

532

00:19:43,669 --> 00:19:42,000

teams uh between spacex and nasa

533

00:19:45,830 --> 00:19:43,679

uh people are working well with each

534

00:19:47,590 --> 00:19:45,840

other uh we're looking forward to a

535

00:19:49,990 --> 00:19:47,600

successful mission

536

00:19:53,990 --> 00:19:50,000

and again it's just a very exciting time

537

00:19:54,000 --> 00:19:57,590

thank you very much um

538

00:20:03,510 --> 00:20:01,029

yeah um on behalf of

539

00:20:04,310 --> 00:20:03,520

jackson first of all on behalf of

540

00:20:07,590 --> 00:20:04,320

jackson

541

00:20:10,870 --> 00:20:07,600

i would like to sincerely

542

00:20:13,590 --> 00:20:10,880

thanks nasa leadership and spacex

543

00:20:14,149 --> 00:20:13,600

to all the colleagues who work so hard

544

00:20:16,310 --> 00:20:14,159

for

545

00:20:18,630 --> 00:20:16,320

crew to launch a preparation and

546

00:20:21,669 --> 00:20:18,640

continuing iss operation under such

547

00:20:25,110 --> 00:20:21,679

tough situations

548

00:20:28,070 --> 00:20:25,120

come come down to the crew 2 ranch

549

00:20:29,110 --> 00:20:28,080

is cross 2 beginning it is a great

550

00:20:33,029 --> 00:20:29,120

pleasure for me

551
00:20:36,789 --> 00:20:33,039
to hear to be here with you

552
00:20:39,909 --> 00:20:36,799
i welcomed a crew to crew at the lcc

553
00:20:43,430 --> 00:20:39,919
last friday they looked uh

554
00:20:50,950 --> 00:20:43,440
so cheerful and confident

555
00:20:57,590 --> 00:20:54,310
i have confidence here's

556
00:21:00,230 --> 00:20:57,600
a ready for the launch the japanese

557
00:21:00,710 --> 00:21:00,240
experimental module kibo is also ready

558
00:21:08,789 --> 00:21:00,720
for

559
00:21:17,909 --> 00:21:13,909
i am very excited at the two japanese

560
00:21:24,390 --> 00:21:21,510
noguchi soichi and aki will get

561
00:21:26,390 --> 00:21:24,400
will will meet will meet together in

562
00:21:29,350 --> 00:21:26,400
orbit

563
00:21:29,830 --> 00:21:29,360

i'm looking forward to the coming launch

564

00:21:37,590 --> 00:21:29,840

and

565

00:21:40,870 --> 00:21:40,549

thank you good morning here in the us

566

00:21:43,590 --> 00:21:40,880

and

567

00:21:43,990 --> 00:21:43,600

good afternoon all in europe that are

568

00:21:46,870 --> 00:21:44,000

following

569

00:21:47,430 --> 00:21:46,880

this i would also like to start to thank

570

00:21:54,390 --> 00:21:47,440

the

571

00:21:56,789 --> 00:21:54,400

we are very excited of course that for

572

00:21:59,430 --> 00:21:56,799

the first time a european astronaut

573

00:22:01,669 --> 00:21:59,440

thomas can also fly on the crew dragon

574

00:22:04,310 --> 00:22:01,679

to the international space station

575

00:22:05,190 --> 00:22:04,320

the isa teams here in in the cape but

576
00:22:07,669 --> 00:22:05,200
also in europe

577
00:22:08,630 --> 00:22:07,679
already to support the launch and to

578
00:22:11,430 --> 00:22:08,640
support of course

579
00:22:11,990 --> 00:22:11,440
the alpha mission in its entirety in the

580
00:22:14,870 --> 00:22:12,000
international

581
00:22:16,070 --> 00:22:14,880
space station uh as joel mentioned it's

582
00:22:19,270 --> 00:22:16,080
an exciting time

583
00:22:21,590 --> 00:22:19,280
we have four usos crew members on orbit

584
00:22:22,549 --> 00:22:21,600
uh and so we have plenty of crew time

585
00:22:24,549 --> 00:22:22,559
available

586
00:22:25,669 --> 00:22:24,559
to do the science that we need to do on

587
00:22:27,510 --> 00:22:25,679
behalf of

588
00:22:29,830 --> 00:22:27,520

the european space agency european

589

00:22:33,110 --> 00:22:29,840

scientists but also scientists

590

00:22:35,190 --> 00:22:33,120

around the world some highlights we have

591

00:22:36,710 --> 00:22:35,200

the grip grasp experiment for example

592

00:22:39,590 --> 00:22:36,720

that tomah commissioned

593

00:22:41,430 --> 00:22:39,600

during his first flight and installed

594

00:22:43,909 --> 00:22:41,440

and he's now going to do

595

00:22:46,230 --> 00:22:43,919

uh the final subject for this uh for

596

00:22:49,029 --> 00:22:46,240

this experiment uh as well

597

00:22:50,470 --> 00:22:49,039

we will do some uh experiments around uh

598

00:22:52,789 --> 00:22:50,480

immunology

599

00:22:54,070 --> 00:22:52,799

uh and we can all uh understand i think

600

00:22:56,789 --> 00:22:54,080

in times of covet

601
00:22:57,590 --> 00:22:56,799
how important the understanding of our

602
00:23:00,149 --> 00:22:57,600
human

603
00:23:00,950 --> 00:23:00,159
immune system is is for the the future

604
00:23:04,230 --> 00:23:00,960
of uh

605
00:23:05,909 --> 00:23:04,240
of all of us here on earth we have also

606
00:23:09,510 --> 00:23:05,919
a big compliment

607
00:23:12,310 --> 00:23:09,520
of experiments from kness our french

608
00:23:14,230 --> 00:23:12,320
partner agency that is of course also

609
00:23:16,310 --> 00:23:14,240
supporting thomas during this

610
00:23:17,909 --> 00:23:16,320
this flight we don't only have

611
00:23:19,350 --> 00:23:17,919
experiments we also have a

612
00:23:21,990 --> 00:23:19,360
number of other highlights in this

613
00:23:25,350 --> 00:23:22,000

mission on the 15th of july

614

00:23:28,149 --> 00:23:25,360

the mlm module will launch from

615

00:23:30,789 --> 00:23:28,159

baikonur and attached to that module

616

00:23:33,029 --> 00:23:30,799

will be the european robotic arm

617

00:23:35,190 --> 00:23:33,039

it's a program that we had launched long

618

00:23:36,789 --> 00:23:35,200

time ago and we are waiting since long

619

00:23:39,669 --> 00:23:36,799

time to commission

620

00:23:41,430 --> 00:23:39,679

the the european robotic arm as a part

621

00:23:42,310 --> 00:23:41,440

of the infrastructure of the the space

622

00:23:44,950 --> 00:23:42,320

station

623

00:23:47,590 --> 00:23:44,960

and to mobile also play a role in the

624

00:23:49,990 --> 00:23:47,600

initial commissioning of the the era

625

00:23:51,830 --> 00:23:50,000

and finally this is just the start for

626

00:23:53,830 --> 00:23:51,840

us of a series of mission

627

00:23:56,070 --> 00:23:53,840

uh we will have tomma now but we will

628

00:23:59,029 --> 00:23:56,080

have matthias more

629

00:23:59,990 --> 00:23:59,039

from germany flying uh by the the end of

630

00:24:02,230 --> 00:24:00,000

the year

631

00:24:04,070 --> 00:24:02,240

also on the spacex vehicle to the to the

632

00:24:06,470 --> 00:24:04,080

international space station and then

633

00:24:08,310 --> 00:24:06,480

next year we will have samantha

634

00:24:09,110 --> 00:24:08,320

christopher ratti flying so for one and

635

00:24:11,430 --> 00:24:09,120

a half years

636

00:24:13,269 --> 00:24:11,440

permanently we will have european

637

00:24:13,909 --> 00:24:13,279

astronauts on board of the space station

638

00:24:17,350 --> 00:24:13,919

so

639

00:24:19,269 --> 00:24:17,360

exciting times for europe to be there

640

00:24:21,190 --> 00:24:19,279

and during the last part of his mission

641

00:24:22,630 --> 00:24:21,200

uh thomas will be the commander and will

642

00:24:25,430 --> 00:24:22,640

be able to welcome

643

00:24:27,510 --> 00:24:25,440

matthias uh on orbit uh while he is the

644

00:24:29,830 --> 00:24:27,520

commander of the iss so

645

00:24:31,269 --> 00:24:29,840

thank you again uh very much to the nasa

646

00:24:33,350 --> 00:24:31,279

and spacex teams

647

00:24:38,230 --> 00:24:33,360

to getting us here and we are very

648

00:24:42,310 --> 00:24:41,830

thank you frank we're very excited about

649

00:24:46,149 --> 00:24:42,320

the

650

00:24:47,909 --> 00:24:46,159

space station

651
00:24:49,430 --> 00:24:47,919
they bring with them the capability to

652
00:24:52,870 --> 00:24:49,440
participate in

653
00:24:56,070 --> 00:24:52,880
many of the investigations going on

654
00:24:57,830 --> 00:24:56,080
over 260 during this incremental loan

655
00:25:00,149 --> 00:24:57,840
a lot of the focus for the

656
00:25:01,350 --> 00:25:00,159
investigations flying on the crew 2

657
00:25:05,669 --> 00:25:01,360
dragon

658
00:25:07,750 --> 00:25:05,679
will be in the human immune function

659
00:25:09,350 --> 00:25:07,760
first we have celestial immunity an

660
00:25:11,029 --> 00:25:09,360
investigation

661
00:25:12,630 --> 00:25:11,039
flown by the pharmaceutical company

662
00:25:15,830 --> 00:25:12,640
sanofi pasteur

663
00:25:16,630 --> 00:25:15,840

who will be looking at the capability to

664

00:25:19,990 --> 00:25:16,640

fly

665

00:25:22,549 --> 00:25:20,000

donor peripheral blood mononuclear cells

666

00:25:24,230 --> 00:25:22,559

and elicit in them new potential

667

00:25:28,549 --> 00:25:24,240

pathways for immun

668

00:25:31,269 --> 00:25:28,559

for immunity up next will be the

669

00:25:33,029 --> 00:25:31,279

chime experiment uh for characterizing

670

00:25:35,590 --> 00:25:33,039

human immunodeficiency

671

00:25:37,350 --> 00:25:35,600

in the microgravity environment in this

672

00:25:40,470 --> 00:25:37,360

investigation we'll be flying

673

00:25:43,269 --> 00:25:40,480

tissue chips with thp

674

00:25:45,190 --> 00:25:43,279

one cell line it's a leukemia cell line

675

00:25:48,789 --> 00:25:45,200

and we'll be looking for

676
00:25:49,350 --> 00:25:48,799
changes in in the immune response based

677
00:25:53,190 --> 00:25:49,360
on

678
00:25:55,830 --> 00:25:53,200
microgravity as the stimulating factor

679
00:25:57,909 --> 00:25:55,840
we also have some stem education flying

680
00:26:01,510 --> 00:25:57,919
on the crew dragon 2.

681
00:26:04,149 --> 00:26:01,520
that will be the story time in space

682
00:26:04,710 --> 00:26:04,159
8 demonstration package which is a heat

683
00:26:07,669 --> 00:26:04,720
transfer

684
00:26:07,990 --> 00:26:07,679
demo experiment that's going to go along

685
00:26:11,669 --> 00:26:08,000
with

686
00:26:12,470 --> 00:26:11,679
our our demonstration of reading in

687
00:26:15,190 --> 00:26:12,480
space

688
00:26:16,630 --> 00:26:15,200

and that story will be part of our

689

00:26:19,750 --> 00:26:16,640

celebration of the

690

00:26:21,269 --> 00:26:19,760

australian literacy day on may 19th you

691

00:26:23,830 --> 00:26:21,279

can read along with another

692

00:26:26,070 --> 00:26:23,840

million plus young readers and we

693

00:26:28,710 --> 00:26:26,080

encourage you to participate

694

00:26:29,990 --> 00:26:28,720

last but not least i i would be amiss if

695

00:26:31,110 --> 00:26:30,000

i didn't mention we're launching on

696

00:26:33,110 --> 00:26:31,120

earth day

697

00:26:34,789 --> 00:26:33,120

as joel said we've got many

698

00:26:37,110 --> 00:26:34,799

investigations on board the

699

00:26:38,070 --> 00:26:37,120

the spacecraft looking down at the earth

700

00:26:40,549 --> 00:26:38,080

sponsored by

701
00:26:42,310 --> 00:26:40,559
our science mission directorate and we

702
00:26:43,909 --> 00:26:42,320
also have the crew who have the best

703
00:26:46,310 --> 00:26:43,919
seat in the house for this event

704
00:26:47,669 --> 00:26:46,320
and i'm sure it will look great thank

705
00:26:49,430 --> 00:26:47,679
you

706
00:26:53,430 --> 00:26:49,440
and now for a weather update from our

707
00:26:55,350 --> 00:26:53,440
launch weather officer brian sizek

708
00:26:56,630 --> 00:26:55,360
and good morning my name is brian sizzik

709
00:26:58,470 --> 00:26:56,640
i'm a launch weather officer with the

710
00:26:59,830 --> 00:26:58,480
45th weather squadron and as benji

711
00:27:00,789 --> 00:26:59,840
mentioned i do want to emphasize that

712
00:27:02,710 --> 00:27:00,799
i'll be speaking

713
00:27:05,350 --> 00:27:02,720

primarily to the weather here in the

714

00:27:07,669 --> 00:27:05,360

launch area so the launch conditions

715

00:27:09,190 --> 00:27:07,679

so unlike the weather we've been seeing

716

00:27:09,909 --> 00:27:09,200

over the last few days here in central

717

00:27:11,510 --> 00:27:09,919

florida

718

00:27:13,190 --> 00:27:11,520

the weather here in the area is looking

719

00:27:13,909 --> 00:27:13,200

pretty good for thursday and friday so

720

00:27:15,590 --> 00:27:13,919

if we could

721

00:27:17,269 --> 00:27:15,600

take a live look at the satellite

722

00:27:19,029 --> 00:27:17,279

imagery so this is the infrared

723

00:27:20,070 --> 00:27:19,039

satellite imagery you can see a lot of

724

00:27:22,149 --> 00:27:20,080

cloud cover

725

00:27:23,909 --> 00:27:22,159

over florida right now and that's due to

726

00:27:24,549 --> 00:27:23,919

a front that's kind of just been stalled

727

00:27:26,389 --> 00:27:24,559

out

728

00:27:28,070 --> 00:27:26,399

over our area we've just had some waves

729

00:27:30,149 --> 00:27:28,080

of low pressure riding along

730

00:27:32,149 --> 00:27:30,159

along it bringing some wet and stormy

731

00:27:34,549 --> 00:27:32,159

weather over the last few days but

732

00:27:35,590 --> 00:27:34,559

there is some high a strong area of high

733

00:27:37,350 --> 00:27:35,600

pressure

734

00:27:38,789 --> 00:27:37,360

up in the montana area and that's going

735

00:27:39,830 --> 00:27:38,799

to be coming to the rescue that's going

736

00:27:41,430 --> 00:27:39,840

to be pushing

737

00:27:43,190 --> 00:27:41,440

to the south and to the east over the

738

00:27:44,470 --> 00:27:43,200

next few days and that's going to be

739

00:27:46,070 --> 00:27:44,480

help clearing out

740

00:27:48,070 --> 00:27:46,080

all of that moisture and pushing that

741

00:27:50,389 --> 00:27:48,080

front farther to the south

742

00:27:52,470 --> 00:27:50,399

by thursday and friday so if we could go

743

00:27:54,310 --> 00:27:52,480

to the launch forecast

744

00:27:56,470 --> 00:27:54,320

and you can see we have a 20 percent

745

00:27:59,190 --> 00:27:56,480

probability of violation

746

00:28:01,510 --> 00:27:59,200

so 80 percent favorable uh the winds are

747

00:28:03,590 --> 00:28:01,520

going to be a bit brisk 17 to 22 miles

748

00:28:04,950 --> 00:28:03,600

per hour coming from the north northeast

749

00:28:07,190 --> 00:28:04,960

as that high pressure

750

00:28:09,269 --> 00:28:07,200

is still centered fairly far away to the

751
00:28:10,630 --> 00:28:09,279
north and west still in control but

752
00:28:12,950 --> 00:28:10,640
it is going to create a bit of a

753
00:28:15,350 --> 00:28:12,960
pressure gradient so the primary concern

754
00:28:15,990 --> 00:28:15,360
will be the liftoff winds but just a 20

755
00:28:18,389 --> 00:28:16,000
chance

756
00:28:20,549 --> 00:28:18,399
of that pov and as we go to the back up

757
00:28:22,549 --> 00:28:20,559
day looking even better winds die down a

758
00:28:23,510 --> 00:28:22,559
little bit 12 to 17 miles per hour and

759
00:28:25,110 --> 00:28:23,520
as that high

760
00:28:26,950 --> 00:28:25,120
slides farther to the east we are going

761
00:28:28,789 --> 00:28:26,960
to see the winds shift to more of an

762
00:28:31,029 --> 00:28:28,799
easterly direction temperature at 70

763
00:28:32,630 --> 00:28:31,039

degrees and just a small chance of

764

00:28:33,190 --> 00:28:32,640

flight through precipitation but just a

765

00:28:36,230 --> 00:28:33,200

10

766

00:28:37,269 --> 00:28:36,240

pov so we'll be 90 favorable for that

767

00:28:41,750 --> 00:28:37,279

backup day

768

00:28:45,590 --> 00:28:43,110

and that concludes my portion of the

769

00:28:46,950 --> 00:28:45,600

brace thank you so much brian and now we

770

00:28:49,269 --> 00:28:46,960

will open it up to uh

771

00:28:50,950 --> 00:28:49,279

questions on our phone line uh i do want

772

00:28:52,710 --> 00:28:50,960

to remind folks in order to get to as

773

00:28:54,549 --> 00:28:52,720

many of you as possible we ask that you

774

00:28:56,950 --> 00:28:54,559

limit yourself to one question

775

00:28:59,350 --> 00:28:56,960

and also let us know who you are asking

776

00:29:02,549 --> 00:28:59,360

it to um so we will start with gina

777

00:29:05,269 --> 00:29:02,559

sanseri from abc news gina

778

00:29:07,190 --> 00:29:05,279

uh good morning this one's for joel 11

779

00:29:08,310 --> 00:29:07,200

people on the space station presents a

780

00:29:11,510 --> 00:29:08,320

certain challenge

781

00:29:15,110 --> 00:29:11,520

sleeping etc what adjustments did you

782

00:29:19,669 --> 00:29:18,230

i didn't quite i think you said can you

783

00:29:21,430 --> 00:29:19,679

repeat that question

784

00:29:23,110 --> 00:29:21,440

what kind of adjustments do you need to

785

00:29:23,510 --> 00:29:23,120

make on the space station for this many

786

00:29:27,190 --> 00:29:23,520

crew

787

00:29:28,630 --> 00:29:27,200

was that the question yeah

788

00:29:30,710 --> 00:29:28,640

and so you know there's a number of

789

00:29:32,230 --> 00:29:30,720

things you have to do uh we have to fly

790

00:29:34,870 --> 00:29:32,240

some additional consumables

791

00:29:36,950 --> 00:29:34,880

for the extra crew members of course you

792

00:29:38,710 --> 00:29:36,960

have to look at sleeping arrangements

793

00:29:40,470 --> 00:29:38,720

we'll have some temporary sleeping

794

00:29:42,389 --> 00:29:40,480

arrangements for the the crew members

795

00:29:46,149 --> 00:29:42,399

because we have so many people

796

00:29:47,909 --> 00:29:46,159

we have to increase the capacity of our

797

00:29:51,269 --> 00:29:47,919

life support systems our oxygen

798

00:29:53,430 --> 00:29:51,279

generation our carbon dioxide removal

799

00:29:56,070 --> 00:29:53,440

we also once we get the crew members on

800

00:29:57,029 --> 00:29:56,080

board they'll first do an emergency kind

801
00:29:58,549 --> 00:29:57,039
of drill

802
00:30:00,149 --> 00:29:58,559
to make sure that the crews are ready

803
00:30:01,350 --> 00:30:00,159
for emergencies but these are standard

804
00:30:03,909 --> 00:30:01,360
things that we've done

805
00:30:04,630 --> 00:30:03,919
for handovers in the past so for this

806
00:30:06,789 --> 00:30:04,640
one the

807
00:30:08,070 --> 00:30:06,799
the cool thing again is that the added

808
00:30:10,870 --> 00:30:08,080
crew member allows

809
00:30:12,710 --> 00:30:10,880
another set of hands on board to help us

810
00:30:14,630 --> 00:30:12,720
with research and utilization

811
00:30:17,909 --> 00:30:14,640
our technology development as well as

812
00:30:19,750 --> 00:30:17,919
our low-earth orbit commercialization

813
00:30:21,510 --> 00:30:19,760

all right thank you joel uh next

814

00:30:22,789 --> 00:30:21,520

question is from marcia dunn with the

815

00:30:25,990 --> 00:30:22,799

associated press

816

00:30:27,669 --> 00:30:26,000

marcia yes good morning um my questions

817

00:30:29,750 --> 00:30:27,679

for benji please

818

00:30:31,590 --> 00:30:29,760

i'm interested in the reuse when you're

819

00:30:33,590 --> 00:30:31,600

flying crews

820

00:30:34,870 --> 00:30:33,600

do you have any maximum number of

821

00:30:36,950 --> 00:30:34,880

flights

822

00:30:39,830 --> 00:30:36,960

that you would use the capsule and

823

00:30:42,470 --> 00:30:39,840

falcon for and would you anticipate like

824

00:30:44,149 --> 00:30:42,480

using the a reusing a dragon capsule

825

00:30:45,269 --> 00:30:44,159

every year like you seem to be starting

826

00:30:47,590 --> 00:30:45,279

out to do

827

00:30:48,389 --> 00:30:47,600

and spacesuits can can they be altered

828

00:30:50,950 --> 00:30:48,399

for reuse

829

00:30:51,669 --> 00:30:50,960

and or do you plan to donate the two

830

00:30:55,510 --> 00:30:51,679

behind you

831

00:30:56,230 --> 00:30:55,520

thank you thank you marcia great

832

00:30:57,830 --> 00:30:56,240

questions

833

00:30:59,190 --> 00:30:57,840

um so first of all i'm hoping that

834

00:31:00,470 --> 00:30:59,200

nobody notices when i take one of the

835

00:31:03,269 --> 00:31:00,480

spacesuits home

836

00:31:04,470 --> 00:31:03,279

with me after this briefing no actually

837

00:31:05,190 --> 00:31:04,480

everybody here has asked if they can try

838

00:31:06,870 --> 00:31:05,200

one on but

839

00:31:08,389 --> 00:31:06,880

i think there's a do not touch sign um

840

00:31:08,789 --> 00:31:08,399

so in terms of the suits i'll start

841

00:31:11,029 --> 00:31:08,799

there

842

00:31:11,990 --> 00:31:11,039

um since i'm making terrible jokes about

843

00:31:14,149 --> 00:31:12,000

them but uh

844

00:31:15,990 --> 00:31:14,159

the the reality is is that uh the suits

845

00:31:19,029 --> 00:31:16,000

are are are somewhat custom

846

00:31:22,310 --> 00:31:19,039

tailored um for each astronaut and

847

00:31:23,830 --> 00:31:22,320

so they are those astronauts suits um

848

00:31:25,990 --> 00:31:23,840

we don't really plan to reuse those

849

00:31:28,950 --> 00:31:26,000

there's a lot of crew equipment though

850

00:31:30,389 --> 00:31:28,960

that we do reuse and as part of the

851
00:31:31,590 --> 00:31:30,399
overall system

852
00:31:33,269 --> 00:31:31,600
and so again we go through the

853
00:31:35,029 --> 00:31:33,279
certification and qualification process

854
00:31:35,830 --> 00:31:35,039
with nasa to be able to reuse those as

855
00:31:37,029 --> 00:31:35,840
well

856
00:31:39,350 --> 00:31:37,039
in terms of your questions about the

857
00:31:42,470 --> 00:31:39,360
vehicles um the

858
00:31:44,149 --> 00:31:42,480
dragon from the beginning the dragon 2

859
00:31:46,549 --> 00:31:44,159
vehicle which is of course as the crew

860
00:31:48,230 --> 00:31:46,559
and the cargo variant designed for five

861
00:31:51,190 --> 00:31:48,240
reuses at least

862
00:31:52,389 --> 00:31:51,200
we've been qualifying to that and we've

863
00:31:53,830 --> 00:31:52,399

been working with nasa

864

00:31:56,549 --> 00:31:53,840

on a number of the components so look at

865

00:31:59,350 --> 00:31:56,559

five there are some components that

866

00:32:00,789 --> 00:31:59,360

we will put new on you know we'll

867

00:32:01,909 --> 00:32:00,799

replace

868

00:32:03,909 --> 00:32:01,919

some will work through other

869

00:32:06,710 --> 00:32:03,919

qualifications and certifications to see

870

00:32:08,070 --> 00:32:06,720

how far we can go with reuse for those

871

00:32:09,909 --> 00:32:08,080

falcon of course we used to talk that

872

00:32:11,669 --> 00:32:09,919

was qualified for up to 10 flights but

873

00:32:13,990 --> 00:32:11,679

we're continuing to push that

874

00:32:16,070 --> 00:32:14,000

for uh you know non-human missions right

875

00:32:17,990 --> 00:32:16,080

we want to see how far we can go and

876
00:32:19,269 --> 00:32:18,000
and and really again again the sort of

877
00:32:21,269 --> 00:32:19,279
the holy grail of

878
00:32:22,549 --> 00:32:21,279
of space flight is reusability so it's

879
00:32:25,110 --> 00:32:22,559
important that we do that

880
00:32:25,990 --> 00:32:25,120
but in terms of human space flight for

881
00:32:27,750 --> 00:32:26,000
falcon

882
00:32:29,430 --> 00:32:27,760
um right now we're we're working with

883
00:32:31,750 --> 00:32:29,440
nasa we're certified for this

884
00:32:32,710 --> 00:32:31,760
upcoming reuse um and we're continuing

885
00:32:35,110 --> 00:32:32,720
our work together

886
00:32:36,789 --> 00:32:35,120
um as a team to assess how many more

887
00:32:39,110 --> 00:32:36,799
flights we'd be able to reuse falcons

888
00:32:42,230 --> 00:32:40,710

all right thank you benji uh the next

889

00:32:46,710 --> 00:32:42,240

question is from stephen clark

890

00:32:49,750 --> 00:32:48,549

thank you steven clark space flight now

891

00:32:52,789 --> 00:32:49,760

i was wondering if

892

00:32:53,350 --> 00:32:52,799

maybe the lwo or steve stitch can talk

893

00:32:57,590 --> 00:32:53,360

about

894

00:32:59,990 --> 00:32:57,600

the downrange weather

895

00:33:01,430 --> 00:33:00,000

how are things looking right now is it

896

00:33:04,389 --> 00:33:01,440

looking good is it marginal

897

00:33:05,350 --> 00:33:04,399

and when would you tag up to have a

898

00:33:07,190 --> 00:33:05,360

brief

899

00:33:08,789 --> 00:33:07,200

on the abort and recovery whether to

900

00:33:09,750 --> 00:33:08,799

make that decision whether to load the

901
00:33:13,029 --> 00:33:09,760
crew on

902
00:33:16,149 --> 00:33:13,039
thursday morning thanks yeah yeah

903
00:33:17,430 --> 00:33:16,159
i'll i'll take that question um so so we

904
00:33:19,830 --> 00:33:17,440
have weather briefings

905
00:33:21,110 --> 00:33:19,840
starting about 48 hours out from launch

906
00:33:21,990 --> 00:33:21,120
in fact we had our first one this

907
00:33:24,470 --> 00:33:22,000
morning

908
00:33:26,470 --> 00:33:24,480
looking at both days primarily thursday

909
00:33:28,070 --> 00:33:26,480
and friday

910
00:33:29,990 --> 00:33:28,080
the launch weather looks really good for

911
00:33:31,990 --> 00:33:30,000
both days as as

912
00:33:34,149 --> 00:33:32,000
brian talked about the only concern was

913
00:33:36,310 --> 00:33:34,159

really winds around the pad

914

00:33:37,350 --> 00:33:36,320

for that very first opportunity on

915

00:33:39,110 --> 00:33:37,360

thursday

916

00:33:40,630 --> 00:33:39,120

downrange weather is a little bit

917

00:33:42,710 --> 00:33:40,640

trickier as the

918

00:33:44,470 --> 00:33:42,720

as this high pressure system moves over

919

00:33:46,549 --> 00:33:44,480

the the

920

00:33:48,549 --> 00:33:46,559

arkansas area that combined with this

921

00:33:50,710 --> 00:33:48,559

front is causing some pretty high winds

922

00:33:52,149 --> 00:33:50,720

in some of the areas downrange

923

00:33:54,149 --> 00:33:52,159

and some pretty high waves and so we'll

924

00:33:56,310 --> 00:33:54,159

have to watch those you know the two

925

00:33:57,430 --> 00:33:56,320

days right now i would say

926
00:33:59,110 --> 00:33:57,440
you know friday looks a little bit

927
00:34:00,310 --> 00:33:59,120
better than thursday we'll continue to

928
00:34:02,310 --> 00:34:00,320
watch that weather

929
00:34:03,350 --> 00:34:02,320
i have another briefing 24 hours out

930
00:34:04,950 --> 00:34:03,360
tomorrow and

931
00:34:06,389 --> 00:34:04,960
and take a look at those two days and

932
00:34:07,909 --> 00:34:06,399
then we'll figure out what the right

933
00:34:09,270 --> 00:34:07,919
time to make the decision is whether

934
00:34:10,629 --> 00:34:09,280
it's tomorrow or

935
00:34:12,470 --> 00:34:10,639
taking it down a little closer into

936
00:34:14,790 --> 00:34:12,480
launch

937
00:34:16,230 --> 00:34:14,800
thank you steve the next question is

938
00:34:19,430 --> 00:34:16,240

from irene klotz with

939

00:34:21,030 --> 00:34:19,440

aviation week irene good morning uh my

940

00:34:24,069 --> 00:34:21,040

question is for benji reid

941

00:34:26,790 --> 00:34:24,079

um with the hls award

942

00:34:28,550 --> 00:34:26,800

how will that impact the development and

943

00:34:30,790 --> 00:34:28,560

testing of starship

944

00:34:32,149 --> 00:34:30,800

and are there any lessons learned

945

00:34:35,589 --> 00:34:32,159

already from the commercial

946

00:34:37,990 --> 00:34:35,599

crew program that spacex plans on

947

00:34:39,190 --> 00:34:38,000

folding into the human reading of the

948

00:34:42,389 --> 00:34:39,200

hls system

949

00:34:43,109 --> 00:34:42,399

thank you thank you irene that's a good

950

00:34:46,310 --> 00:34:43,119

question

951
00:34:47,750 --> 00:34:46,320
obviously i'll mostly focus on on crew

952
00:34:49,510 --> 00:34:47,760
and commercial crew since that's the

953
00:34:50,950 --> 00:34:49,520
topic of today in our crew 2 launch and

954
00:34:53,750 --> 00:34:50,960
crew on return coming up

955
00:34:55,030 --> 00:34:53,760
but i will certainly say that as we we

956
00:34:55,510 --> 00:34:55,040
work with nasa just like we do with

957
00:34:56,869 --> 00:34:55,520
everything

958
00:34:58,550 --> 00:34:56,879
as we go through development and

959
00:34:59,670 --> 00:34:58,560
development for our use for other

960
00:35:01,349 --> 00:34:59,680
customers use

961
00:35:03,510 --> 00:35:01,359
we always work closely with nasa and a

962
00:35:05,349 --> 00:35:03,520
very transparent and tight partnership

963
00:35:06,630 --> 00:35:05,359

um you know we like to say that we fly

964

00:35:09,589 --> 00:35:06,640

because of technical

965

00:35:10,550 --> 00:35:09,599

excellence and also transparency and uh

966

00:35:12,150 --> 00:35:10,560

it's a key

967

00:35:14,790 --> 00:35:12,160

cornerstone of how we work together with

968

00:35:16,950 --> 00:35:14,800

nasa so we'll always continue that path

969

00:35:17,910 --> 00:35:16,960

um and and do good things in that

970

00:35:19,910 --> 00:35:17,920

direction

971

00:35:21,430 --> 00:35:19,920

um in terms of lessons learned from

972

00:35:23,030 --> 00:35:21,440

commercial crew that's a great question

973

00:35:24,150 --> 00:35:23,040

generally and and applied even here to

974

00:35:27,270 --> 00:35:24,160

crew 2.

975

00:35:29,030 --> 00:35:27,280

every flight we fly with people on board

976
00:35:31,670 --> 00:35:29,040
and every test that we do towards those

977
00:35:32,230 --> 00:35:31,680
flights is lessons and data that we use

978
00:35:35,430 --> 00:35:32,240
to make

979
00:35:36,790 --> 00:35:35,440
flights safer and more reliable for

980
00:35:38,710 --> 00:35:36,800
other crews in the future

981
00:35:40,710 --> 00:35:38,720
on whatever vehicle they may be on so

982
00:35:42,230 --> 00:35:40,720
absolutely we will leverage all

983
00:35:43,589 --> 00:35:42,240
information we have every time for

984
00:35:44,630 --> 00:35:43,599
future dragon flights and for other

985
00:35:45,990 --> 00:35:44,640
flights

986
00:35:47,589 --> 00:35:46,000
and even for all of our other customers

987
00:35:48,150 --> 00:35:47,599
whether we're flying cargo or satellites

988
00:35:50,470 --> 00:35:48,160

or

989

00:35:53,270 --> 00:35:50,480

anything else we'll always be applying

990

00:35:55,109 --> 00:35:53,280

those lessons to look for reliability

991

00:35:57,109 --> 00:35:55,119

thank you benji the next question is

992

00:35:57,589 --> 00:35:57,119

from david curley with the discovery

993

00:36:00,790 --> 00:35:57,599

channel

994

00:36:02,310 --> 00:36:00,800

david thanks very much uh benjamin

995

00:36:04,390 --> 00:36:02,320

i think we're hoping you could tell us a

996

00:36:06,950 --> 00:36:04,400

little more about starship uh

997

00:36:07,430 --> 00:36:06,960

than that and c stitch uh on the locks

998

00:36:09,750 --> 00:36:07,440

issue

999

00:36:11,190 --> 00:36:09,760

is it uh can you give us a volume we

1000

00:36:13,190 --> 00:36:11,200

only heard inches is it

1001
00:36:15,430 --> 00:36:13,200
less than a percent one or two percent

1002
00:36:19,349 --> 00:36:15,440
what what was the acceptable number of

1003
00:36:23,109 --> 00:36:21,109
yeah i'll address the locks question

1004
00:36:24,230 --> 00:36:23,119
first so um i don't have the exact

1005
00:36:26,150 --> 00:36:24,240
percentage of volume

1006
00:36:27,430 --> 00:36:26,160
you know when when bill gerstenmaier was

1007
00:36:28,870 --> 00:36:27,440
here uh

1008
00:36:30,390 --> 00:36:28,880
last thursday he talks about a few

1009
00:36:32,069 --> 00:36:30,400
inches you know you know i would say

1010
00:36:34,550 --> 00:36:32,079
it's on the order of uh

1011
00:36:35,910 --> 00:36:34,560
2500 or 3 000 pounds of extra locks and

1012
00:36:36,870 --> 00:36:35,920
so if you look at the mass of that

1013
00:36:39,589 --> 00:36:36,880

vehicle

1014

00:36:41,990 --> 00:36:39,599

you know it's a very small percentage of

1015

00:36:43,510 --> 00:36:42,000

the total weight of the vehicle

1016

00:36:45,030 --> 00:36:43,520

the system can handle that from a

1017

00:36:46,950 --> 00:36:45,040

performance perspective

1018

00:36:48,230 --> 00:36:46,960

we can handle that extra weight on the

1019

00:36:50,150 --> 00:36:48,240

vehicle the

1020

00:36:51,270 --> 00:36:50,160

tank can handle the loading from that

1021

00:36:52,710 --> 00:36:51,280

extra locks

1022

00:36:54,470 --> 00:36:52,720

and then there's a vent system in a

1023

00:36:56,069 --> 00:36:54,480

contingency that would

1024

00:36:58,150 --> 00:36:56,079

relieve pressure on the tank if it needs

1025

00:36:59,190 --> 00:36:58,160

to it can certainly accommodate that

1026
00:37:01,589 --> 00:36:59,200
lock so

1027
00:37:03,190 --> 00:37:01,599
uh we've had that you know spacex went

1028
00:37:03,589 --> 00:37:03,200
back and looked at their flight history

1029
00:37:05,270 --> 00:37:03,599
and

1030
00:37:06,950 --> 00:37:05,280
it's been there potentially for some

1031
00:37:08,870 --> 00:37:06,960
time and lots of different flights with

1032
00:37:10,390 --> 00:37:08,880
lots of different loadings so when we

1033
00:37:11,829 --> 00:37:10,400
looked at our specific flight and our

1034
00:37:12,710 --> 00:37:11,839
the analysis for this trajectory we're

1035
00:37:14,390 --> 00:37:12,720
going to fly

1036
00:37:15,510 --> 00:37:14,400
we felt very comfortable with uh with

1037
00:37:16,390 --> 00:37:15,520
going ahead and proceeding with the

1038
00:37:19,829 --> 00:37:16,400

flight so

1039

00:37:21,829 --> 00:37:19,839

thank you all right thank you stitch

1040

00:37:24,150 --> 00:37:21,839

next question is from ken cramer from

1041

00:37:25,670 --> 00:37:24,160

space up close

1042

00:37:27,510 --> 00:37:25,680

uh thank you thanks for taking my

1043

00:37:29,829 --> 00:37:27,520

question and good luck on

1044

00:37:32,230 --> 00:37:29,839

thursday or friday when it happens um i

1045

00:37:34,710 --> 00:37:32,240

guess my question is for frank davina

1046

00:37:37,270 --> 00:37:34,720

um i'd like to you to talk a little bit

1047

00:37:38,630 --> 00:37:37,280

more about the european robotic arm what

1048

00:37:40,390 --> 00:37:38,640

uh what are you gonna

1049

00:37:42,150 --> 00:37:40,400

use it for what will it what what

1050

00:37:44,069 --> 00:37:42,160

missions will it carry out and

1051
00:37:46,069 --> 00:37:44,079
can you also talk about the cadence of

1052
00:37:49,190 --> 00:37:46,079
esa astronauts do you expect them to be

1053
00:37:51,670 --> 00:37:49,200
there continuously thank you

1054
00:37:52,230 --> 00:37:51,680
and thank you very much ken yes great

1055
00:37:55,510 --> 00:37:52,240
questions

1056
00:37:57,670 --> 00:37:55,520
uh for the european robotic arm this is

1057
00:38:01,910 --> 00:37:57,680
a cooperative program that we have with

1058
00:38:04,710 --> 00:38:01,920
our russian colleagues from roscosmos

1059
00:38:07,270 --> 00:38:04,720
the army is built in in europe but

1060
00:38:09,510 --> 00:38:07,280
eventually will be operated by

1061
00:38:11,670 --> 00:38:09,520
the colleagues from roscosmos for the

1062
00:38:13,270 --> 00:38:11,680
benefit of the russian segment

1063
00:38:15,030 --> 00:38:13,280

i know that they have some airlock

1064

00:38:15,829 --> 00:38:15,040

relocations for example that they want

1065

00:38:17,990 --> 00:38:15,839

to do with it

1066

00:38:18,870 --> 00:38:18,000

there are a number of science payloads

1067

00:38:22,230 --> 00:38:18,880

that they want to

1068

00:38:24,230 --> 00:38:22,240

install at the outside of the

1069

00:38:27,030 --> 00:38:24,240

russian segment so that or the initial

1070

00:38:28,790 --> 00:38:27,040

operations that are planned for the next

1071

00:38:30,310 --> 00:38:28,800

year year and a half and then we

1072

00:38:33,349 --> 00:38:30,320

will have to see how the

1073

00:38:34,310 --> 00:38:33,359

era will be used to further enhance the

1074

00:38:37,829 --> 00:38:34,320

russian

1075

00:38:39,829 --> 00:38:37,839

international space station

1076

00:38:41,190 --> 00:38:39,839

and we are actually in support of our

1077

00:38:43,750 --> 00:38:41,200

russian colleagues

1078

00:38:46,069 --> 00:38:43,760

for the operations and and for the

1079

00:38:47,030 --> 00:38:46,079

execution of all the tasks that they

1080

00:38:50,870 --> 00:38:47,040

will plan for

1081

00:38:52,630 --> 00:38:50,880

for the european robotic arm in terms of

1082

00:38:53,910 --> 00:38:52,640

the cadence of the astronauts yes you

1083

00:38:56,790 --> 00:38:53,920

will now have

1084

00:38:58,230 --> 00:38:56,800

three astronauts in a row on board of

1085

00:39:00,550 --> 00:38:58,240

the iss

1086

00:39:02,950 --> 00:39:00,560

our plan is to have at least one

1087

00:39:04,790 --> 00:39:02,960

european astronaut mission per year

1088

00:39:07,190 --> 00:39:04,800

like we had in the past to the

1089

00:39:09,270 --> 00:39:07,200

international space station

1090

00:39:10,950 --> 00:39:09,280

and that is for us very important of

1091

00:39:12,710 --> 00:39:10,960

course to continue our scientific

1092

00:39:15,670 --> 00:39:12,720

program but also to continue to

1093

00:39:18,390 --> 00:39:15,680

leverage the support of our european

1094

00:39:21,829 --> 00:39:18,400

member states for for the iss

1095

00:39:24,870 --> 00:39:21,839

as you might know we are starting a new

1096

00:39:25,910 --> 00:39:24,880

astronaut selection this year we will

1097

00:39:28,790 --> 00:39:25,920

have

1098

00:39:31,589 --> 00:39:28,800

the the new selectees recruited probably

1099

00:39:33,589 --> 00:39:31,599

by the end of 22 beginning of 23

1100

00:39:34,950 --> 00:39:33,599

and then it's our hope that those new

1101

00:39:38,710 --> 00:39:34,960

people can all fly

1102

00:39:41,190 --> 00:39:38,720

to the iss beginning in in 25 so

1103

00:39:42,630 --> 00:39:41,200

therefore for us the extension of the

1104

00:39:45,910 --> 00:39:42,640

international space station

1105

00:39:47,829 --> 00:39:45,920

uh beyond 2024 is of course

1106

00:39:49,910 --> 00:39:47,839

key and we are working with all our

1107

00:39:52,230 --> 00:39:49,920

international partners and nasa

1108

00:39:54,470 --> 00:39:52,240

on uh moving forward to the extension of

1109

00:39:56,870 --> 00:39:54,480

the iss

1110

00:39:58,470 --> 00:39:56,880

all right thank you frank that will do

1111

00:39:59,910 --> 00:39:58,480

it for our questions i know

1112

00:40:01,589 --> 00:39:59,920

our guests here today have already had a

1113

00:40:02,710 --> 00:40:01,599

long day and it's only 8 30 in the

1114

00:40:05,510 --> 00:40:02,720

morning so

1115

00:40:07,589 --> 00:40:05,520

we will wrap it up now as a reminder our

1116

00:40:09,750 --> 00:40:07,599

next media event for this mission is a

1117

00:40:11,829 --> 00:40:09,760

briefing with the nasa administrator

1118

00:40:13,829 --> 00:40:11,839

and others uh that is happening at the

1119

00:40:14,470 --> 00:40:13,839

countdown clock at kennedy space center

1120

00:40:18,150 --> 00:40:14,480

tomorrow

1121

00:40:19,589 --> 00:40:18,160

april 21st at 8 30 a.m eastern time

1122

00:40:21,670 --> 00:40:19,599

and you can of course watch it here on

1123

00:40:24,470 --> 00:40:21,680

nasa tv following that

1124

00:40:25,430 --> 00:40:24,480

is a nasa social event at 9 15 a.m

1125

00:40:27,670 --> 00:40:25,440

eastern time

1126
00:40:29,430 --> 00:40:27,680
and you can watch that live on nasa's

1127
00:40:31,190 --> 00:40:29,440
kennedy space center facebook and

1128
00:40:32,950 --> 00:40:31,200
youtube channels

1129
00:40:35,030 --> 00:40:32,960
launch once again is scheduled for earth

1130
00:40:38,069 --> 00:40:35,040
day thursday april 22nd

1131
00:40:40,470 --> 00:40:38,079
at 6 11 a.m eastern daylight time launch

1132
00:40:41,670 --> 00:40:40,480
coverage here on nasa tv starts at 2 a.m

1133
00:40:43,430 --> 00:40:41,680
thursday morning

1134
00:40:44,870 --> 00:40:43,440
just before crews suit up and live

1135
00:40:46,069 --> 00:40:44,880
coverage will continue

1136
00:40:48,069 --> 00:40:46,079
all the way through docking at the

1137
00:40:50,230 --> 00:40:48,079
international space station scheduled

1138
00:40:52,790 --> 00:40:50,240

for approximately 5 30 a.m

1139

00:40:54,630 --> 00:40:52,800

eastern time friday morning for more

1140

00:40:56,390 --> 00:40:54,640

about this mission go to nasa.gov