
1
NASA
JAXA

1
00:00:31,029 --> 00:00:05,349
discovery clears the tower

2
00:00:35,430 --> 00:00:33,430
hello and welcome to the nasa's johnson

3
00:00:37,350 --> 00:00:35,440
space center it's been an exciting night

4
00:00:39,270 --> 00:00:37,360
after 20 years of continuous human

5
00:00:41,510 --> 00:00:39,280
presence the international space station

6
00:00:43,750 --> 00:00:41,520
is still marking new milestones and as

7
00:00:45,750 --> 00:00:43,760
of tonight has its first long-term crew

8
00:00:47,350 --> 00:00:45,760
of seven members so we have a lot to

9
00:00:49,270 --> 00:00:47,360
celebrate tonight and here to talk it

10
00:00:51,350 --> 00:00:49,280
over with us we have associate

11
00:00:53,910 --> 00:00:51,360
administrator of human exploration and

12
00:00:55,830 --> 00:00:53,920
operations kathy leaders

13
00:00:59,110 --> 00:00:55,840

johnson space center johnson space

14
00:01:00,630 --> 00:00:59,120
center director mark guyer and socially

15
00:01:03,430 --> 00:01:00,640
distanced down the hall deputy

16
00:01:05,270 --> 00:01:03,440
commercial crew program manager vin feng

17
00:01:06,789 --> 00:01:05,280
and international space station manager

18
00:01:09,190 --> 00:01:06,799
joel montelbano

19
00:01:11,830 --> 00:01:09,200
will let them each give a few mo opening

20
00:01:13,750 --> 00:01:11,840
remarks and then open it up to questions

21
00:01:15,270 --> 00:01:13,760
for media on the line press star one to

22
00:01:16,789 --> 00:01:15,280
let us know you have a question or star

23
00:01:18,710 --> 00:01:16,799
two if your question gets answered

24
00:01:19,990 --> 00:01:18,720
before you ask it let's kick it off with

25
00:01:23,749 --> 00:01:20,000
kathy

26
00:01:25,670 --> 00:01:23,759
yeah what a what an amazing

27
00:01:27,510 --> 00:01:25,680
last couple of days i just can't tell

28
00:01:29,670 --> 00:01:27,520
you how

29
00:01:31,830 --> 00:01:29,680
wonderful it was to see

30
00:01:33,910 --> 00:01:31,840
the crew come through the hatch

31
00:01:36,950 --> 00:01:33,920
and we've been talking a lot about all

32
00:01:40,310 --> 00:01:36,960
the firsts right this this mission was a

33
00:01:43,030 --> 00:01:40,320
dream it was a dream of us to be able to

34
00:01:45,670 --> 00:01:43,040
one day be able to have

35
00:01:47,590 --> 00:01:45,680
crew transportation services to the

36
00:01:49,270 --> 00:01:47,600
international space station

37
00:01:52,149 --> 00:01:49,280
and today

38
00:01:55,190 --> 00:01:52,159

that dream became a reality

39
00:01:57,190 --> 00:01:55,200
huge step for us right and it took a

40
00:01:58,310 --> 00:01:57,200
huge team of folks

41
00:02:01,590 --> 00:01:58,320
not only

42
00:02:04,550 --> 00:02:01,600
spacex folks but nasa folks and

43
00:02:08,389 --> 00:02:04,560
our federal agency friends

44
00:02:12,550 --> 00:02:08,399
and and a whole the dod

45
00:02:14,630 --> 00:02:12,560
a ton of people made this happen today

46
00:02:15,510 --> 00:02:14,640
just an amazing

47
00:02:18,150 --> 00:02:15,520
feat

48
00:02:20,150 --> 00:02:18,160
was not easy this was hard

49
00:02:23,030 --> 00:02:20,160
and then on top of it one of the other

50
00:02:25,910 --> 00:02:23,040
firsts we had was we all had to do this

51
00:02:27,990 --> 00:02:25,920
in the time of a pandemic

52
00:02:29,990 --> 00:02:28,000
i think there were some of us six or

53
00:02:31,910 --> 00:02:30,000
seven months ago that if you would have

54
00:02:34,630 --> 00:02:31,920
thought about all the things that this

55
00:02:36,390 --> 00:02:34,640
teams had to go through

56
00:02:38,550 --> 00:02:36,400
they would have just said oh this is too

57
00:02:41,830 --> 00:02:38,560
much but it wasn't

58
00:02:43,910 --> 00:02:41,840
this team has done a phenomenal job

59
00:02:45,910 --> 00:02:43,920
the crew on orbit is going to do

60
00:02:47,190 --> 00:02:45,920
phenomenal things over this next six

61
00:02:48,830 --> 00:02:47,200
months

62
00:02:52,390 --> 00:02:48,840
and we're going to keep doing crew

63
00:02:56,869 --> 00:02:52,400

missions and it's the start of a new era

64
00:02:58,869 --> 00:02:56,879
i'm very very proud of the nasa spacex

65
00:03:00,949 --> 00:02:58,879
the agency teams

66
00:03:02,149 --> 00:03:00,959
and our nation for stepping out and

67
00:03:05,990 --> 00:03:02,159
doing this

68
00:03:09,190 --> 00:03:07,589
thank you kathy we'll go next to mark

69
00:03:10,470 --> 00:03:09,200
guyer

70
00:03:12,229 --> 00:03:10,480
great thank you kathy and i want to

71
00:03:13,990 --> 00:03:12,239
thank you for your leadership especially

72
00:03:16,790 --> 00:03:14,000
in making this happen

73
00:03:17,670 --> 00:03:16,800
it is a terrific day for nasa

74
00:03:19,670 --> 00:03:17,680
um

75
00:03:21,910 --> 00:03:19,680
and for the country in general it's

76
00:03:23,830 --> 00:03:21,920
really exciting to see the the seven

77
00:03:25,910 --> 00:03:23,840
crew members on iss

78
00:03:28,949 --> 00:03:25,920
uh four americans two russians in our

79
00:03:30,550 --> 00:03:28,959
japanese uh partners

80
00:03:32,789 --> 00:03:30,560
it's great to be starting this crew

81
00:03:35,350 --> 00:03:32,799
rotation plan and now being able to

82
00:03:38,309 --> 00:03:35,360
utilize iss as we envisioned

83
00:03:40,630 --> 00:03:38,319
and i'm honored to wear the increment 64

84
00:03:43,270 --> 00:03:40,640
pin today so it's a great start to that

85
00:03:44,630 --> 00:03:43,280
mission the astronauts are doing great

86
00:03:46,149 --> 00:03:44,640
you saw them as they came through the

87
00:03:48,949 --> 00:03:46,159
hatch they're excited to start their

88
00:03:50,710 --> 00:03:48,959

mission they're well very well trained

89
00:03:53,509 --> 00:03:50,720
and they're ready to get started you

90
00:03:55,750 --> 00:03:53,519
know so we think we believe that nasa

91
00:03:57,110 --> 00:03:55,760
um unites with our partners we evaluate

92
00:03:58,869 --> 00:03:57,120
the design sometimes we are the

93
00:04:00,470 --> 00:03:58,879
operators sometimes we integrate the

94
00:04:02,949 --> 00:04:00,480
operations

95
00:04:05,190 --> 00:04:02,959
all of these are ways where we are

96
00:04:07,190 --> 00:04:05,200
melding our skills

97
00:04:08,390 --> 00:04:07,200
achieving nasa's missions but also

98
00:04:10,869 --> 00:04:08,400
creating

99
00:04:12,470 --> 00:04:10,879
commercial capabilities in this country

100
00:04:14,470 --> 00:04:12,480
that is a big part of our job and of

101
00:04:16,390 --> 00:04:14,480
course we're taking those skills

102
00:04:18,229 --> 00:04:16,400
and actually pushing out in the lunar

103
00:04:20,629 --> 00:04:18,239
region with gateway and and supporting

104
00:04:21,590 --> 00:04:20,639
lube or lander systems as well so a

105
00:04:26,950 --> 00:04:21,600
great

106
00:04:28,550 --> 00:04:26,960
to see the crews on iss

107
00:04:32,150 --> 00:04:28,560
and so we look forward to all the work

108
00:04:36,070 --> 00:04:34,230
thank you mark let's go next to joel

109
00:04:38,710 --> 00:04:36,080
montalbano

110
00:04:40,469 --> 00:04:38,720
well welcome again to the post docking

111
00:04:42,710 --> 00:04:40,479
press brief what an incredible

112
00:04:45,110 --> 00:04:42,720
achievement and to have it happen in the

113
00:04:47,670 --> 00:04:45,120

month where we're celebrating 20 years

114
00:04:49,270 --> 00:04:47,680
of continuous human presence on board

115
00:04:51,189 --> 00:04:49,280
the international space station just

116
00:04:53,270 --> 00:04:51,199
puts a smile on my face

117
00:04:55,430 --> 00:04:53,280
you know today yesterday we saw a

118
00:04:57,990 --> 00:04:55,440
picture-perfect launch and today a very

119
00:05:00,629 --> 00:04:58,000
smooth docking and with that we welcome

120
00:05:02,550 --> 00:05:00,639
the dragon vehicle and her crew to the

121
00:05:05,110 --> 00:05:02,560
international space station

122
00:05:07,510 --> 00:05:05,120
we look forward to a significant amount

123
00:05:09,670 --> 00:05:07,520
of time on orbit a significant number of

124
00:05:11,830 --> 00:05:09,680
months will be able to increase the

125
00:05:13,590 --> 00:05:11,840
amount of science the amount of research

126
00:05:16,070 --> 00:05:13,600
the amount of technology development we

127
00:05:17,830 --> 00:05:16,080
can do with the additional crew members

128
00:05:19,510 --> 00:05:17,840
a huge thanks to the commercial crew

129
00:05:22,230 --> 00:05:19,520
program a huge thanks and

130
00:05:23,830 --> 00:05:22,240
congratulations to the spacex team you

131
00:05:25,510 --> 00:05:23,840
know i promise the international space

132
00:05:27,909 --> 00:05:25,520
station program will take good care of

133
00:05:31,510 --> 00:05:27,919
the dragon vehicle and our crew

134
00:05:36,230 --> 00:05:33,189
thank you so much joel and finally we'll

135
00:05:37,590 --> 00:05:36,240
go to within to vinfang

136
00:05:39,270 --> 00:05:37,600
thank you very much it's an extremely

137
00:05:40,950 --> 00:05:39,280
exciting time to be in the space

138
00:05:43,270 --> 00:05:40,960

business right now you know as the

139
00:05:45,110 --> 00:05:43,280
resilience crew just said uh right after

140
00:05:48,230 --> 00:05:45,120
hatch opening they can't wait to get

141
00:05:50,950 --> 00:05:48,240
started well we've had teams of nasa and

142
00:05:53,990 --> 00:05:50,960
spacex and other agencies

143
00:05:55,350 --> 00:05:54,000
involved to in many ways through as

144
00:05:56,950 --> 00:05:55,360
kathy mentioned their blood sweat and

145
00:05:58,790 --> 00:05:56,960
tears over the years this sort of

146
00:06:00,629 --> 00:05:58,800
culminates in the hatch opening and the

147
00:06:02,870 --> 00:06:00,639
crew joining the iss for a six-month

148
00:06:05,029 --> 00:06:02,880
stay on board at the space station so

149
00:06:07,189 --> 00:06:05,039
we're so proud of the teams

150
00:06:09,110 --> 00:06:07,199
the arrival of resilience uh marks the

151
00:06:11,510 --> 00:06:09,120
beginning as is as was mentioned before

152
00:06:15,670 --> 00:06:11,520
of of another first time event this time

153
00:06:20,469 --> 00:06:18,309
crew rotation mission to the iss and

154
00:06:23,029 --> 00:06:20,479
looking back at another first that

155
00:06:25,350 --> 00:06:23,039
happened almost exactly ten years ago uh

156
00:06:27,029 --> 00:06:25,360
with the same team members involved nasa

157
00:06:29,350 --> 00:06:27,039
and spacex uh shared a similar

158
00:06:31,350 --> 00:06:29,360
accomplishment with the launch to a low

159
00:06:33,670 --> 00:06:31,360
earth orbit of the cots demo flight

160
00:06:34,790 --> 00:06:33,680
number one mission in early december of

161
00:06:35,830 --> 00:06:34,800
2010

162
00:06:38,150 --> 00:06:35,840
that flight demonstrated the

163
00:06:40,870 --> 00:06:38,160

capabilities of falcon and dragon and

164
00:06:43,670 --> 00:06:40,880
the partnership and since then have had

165
00:06:46,550 --> 00:06:43,680
20 successful uh cargo flights to the

166
00:06:49,270 --> 00:06:46,560
iss which have now led in just the last

167
00:06:51,749 --> 00:06:49,280
six months these two crew missions dm2

168
00:06:53,430 --> 00:06:51,759
in may and then the crew one

169
00:06:55,350 --> 00:06:53,440
arrival just today

170
00:06:58,230 --> 00:06:55,360
and as joel mentioned we're proud to be

171
00:07:00,309 --> 00:06:58,240
part of the isis 20-year anniversary

172
00:07:02,710 --> 00:07:00,319
which is this month with that expedition

173
00:07:05,510 --> 00:07:02,720
one crew arrival we're proud to follow

174
00:07:07,110 --> 00:07:05,520
in the footsteps of all the other 63

175
00:07:10,070 --> 00:07:07,120
expeditions that came before this one

176
00:07:12,469 --> 00:07:10,080
glad to join for expedition 64.

177
00:07:14,230 --> 00:07:12,479
so a huge shout out to the nasa and

178
00:07:16,710 --> 00:07:14,240
spacex teams

179
00:07:18,309 --> 00:07:16,720
excellent job many hard years of work

180
00:07:20,230 --> 00:07:18,319
and we're looking to forward to making

181
00:07:22,469 --> 00:07:20,240
this a very successful first operational

182
00:07:24,790 --> 00:07:22,479
mission and many more to follow thank

183
00:07:29,749 --> 00:07:26,710
great words to start us out there we do

184
00:07:31,350 --> 00:07:29,759
just have a few reporters on the line so

185
00:07:33,350 --> 00:07:31,360
if you have a question you can press

186
00:07:35,110 --> 00:07:33,360
star 1 star 2 if your question gets

187
00:07:36,550 --> 00:07:35,120
answered before you ask it

188
00:07:38,070 --> 00:07:36,560

and as we call on you if you could

189
00:07:40,150 --> 00:07:38,080
direct your question to who you would

190
00:07:44,469 --> 00:07:40,160
like to answer it let's start with

191
00:07:49,510 --> 00:07:46,790
doing this and congrats on a successful

192
00:07:50,869 --> 00:07:49,520
um flight i i guess this question could

193
00:07:52,869 --> 00:07:50,879
be for

194
00:07:54,790 --> 00:07:52,879
uh anybody who wants to answer i was

195
00:07:56,950 --> 00:07:54,800
wondering if there's any kind of um like

196
00:07:59,270 --> 00:07:56,960
bidding or quarrels over who gets the

197
00:08:00,950 --> 00:07:59,280
sleeping crew dragon and i was wondering

198
00:08:02,950 --> 00:08:00,960
what kind of value

199
00:08:05,270 --> 00:08:02,960
will having someone sleep in crew dragon

200
00:08:07,350 --> 00:08:05,280
provide to spacex and nasa are you guys

201
00:08:09,270 --> 00:08:07,360
getting any data out of that or what

202
00:08:12,070 --> 00:08:09,280
kind of tests are you going to perform

203
00:08:14,230 --> 00:08:12,080
with that thanks

204
00:08:16,629 --> 00:08:14,240
i think our plan is to have um

205
00:08:18,790 --> 00:08:16,639
half hopper uh sleep in the dragon uh

206
00:08:21,670 --> 00:08:18,800
it's been checked out uh operationally

207
00:08:22,710 --> 00:08:21,680
uh ventilation uh caution warning and so

208
00:08:24,629 --> 00:08:22,720
forth so i think it's gonna be an

209
00:08:27,990 --> 00:08:24,639
excellent opportunity to use that and

210
00:08:29,670 --> 00:08:28,000
test it out as a as a habitable module

211
00:08:30,950 --> 00:08:29,680
and uh so that's that's our current plan

212
00:08:32,070 --> 00:08:30,960
and we look forward to learning a lot

213
00:08:34,070 --> 00:08:32,080

and we think it's going to be very

214
00:08:37,269 --> 00:08:34,080
comfortable modern accommodations for

215
00:08:40,310 --> 00:08:38,630
i think several of us would like to be

216
00:08:45,190 --> 00:08:40,320
sleeping in there tonight next we'll go

217
00:08:48,389 --> 00:08:47,110
hi thanks for doing this and congrats

218
00:08:50,949 --> 00:08:48,399
everybody

219
00:08:52,389 --> 00:08:50,959
this question is for kathy you've got a

220
00:08:53,990 --> 00:08:52,399
long mission ahead what are you most

221
00:08:55,829 --> 00:08:54,000
looking forward to and what's going to

222
00:08:59,590 --> 00:08:55,839
keep you up at night if anything over

223
00:09:00,470 --> 00:08:59,600
the next six months thanks

224
00:09:03,670 --> 00:09:00,480
well

225
00:09:05,910 --> 00:09:03,680
you know joel's got a whole list of of

226
00:09:08,389 --> 00:09:05,920
items that he wants these crew members

227
00:09:10,470 --> 00:09:08,399
start working on i mean he's been a

228
00:09:13,350 --> 00:09:10,480
little bit starved of crew members and

229
00:09:14,150 --> 00:09:13,360
he's got a backlog of of

230
00:09:16,470 --> 00:09:14,160
work

231
00:09:17,910 --> 00:09:16,480
and science that he needs them to go get

232
00:09:20,470 --> 00:09:17,920
done

233
00:09:23,269 --> 00:09:20,480
you know when you have people on board

234
00:09:25,509 --> 00:09:23,279
you always are maintaining vigilance and

235
00:09:27,750 --> 00:09:25,519
making sure just like we do

236
00:09:29,590 --> 00:09:27,760
with station this this

237
00:09:31,910 --> 00:09:29,600
having dragon up there just means we

238
00:09:33,269 --> 00:09:31,920

have more people on orbit that we always

239
00:09:35,590 --> 00:09:33,279
are thinking of and making sure that

240
00:09:38,870 --> 00:09:35,600
we're taking care of them

241
00:09:42,470 --> 00:09:38,880
it's what makes human space flights so

242
00:09:44,550 --> 00:09:42,480
fun is and challenging is that that you

243
00:09:45,910 --> 00:09:44,560
always have to realize that you're

244
00:09:49,190 --> 00:09:45,920
maintaining

245
00:09:51,990 --> 00:09:49,200
human safety in a tough environment so

246
00:09:53,829 --> 00:09:52,000
but we have a great station program like

247
00:09:56,470 --> 00:09:53,839
joel said they will take care of the

248
00:09:57,750 --> 00:09:56,480
crew members and um they make they make

249
00:09:59,829 --> 00:09:57,760
my

250
00:10:05,990 --> 00:09:59,839
ability to sleep a little bit better at

251
00:10:11,350 --> 00:10:07,590
okay our next question is going to come

252
00:10:15,829 --> 00:10:13,670
my question is for kathy as you

253
00:10:17,430 --> 00:10:15,839
described at the beginning of this press

254
00:10:19,829 --> 00:10:17,440
conference you know it was tough to get

255
00:10:21,990 --> 00:10:19,839
to this point uh what do you feel is the

256
00:10:25,430 --> 00:10:22,000
biggest risk when docking to the

257
00:10:26,949 --> 00:10:25,440
international space station thank you

258
00:10:28,310 --> 00:10:26,959
well what makes it really nice is the

259
00:10:30,870 --> 00:10:28,320
spacecraft

260
00:10:33,269 --> 00:10:30,880
makes it look easy right

261
00:10:36,310 --> 00:10:33,279
but but to get there isn't easy it took

262
00:10:37,910 --> 00:10:36,320
a lot of joint work between the spacex

263
00:10:40,630 --> 00:10:37,920

and nasa teams

264
00:10:43,670 --> 00:10:40,640
to share their learning and

265
00:10:45,590 --> 00:10:43,680
to go through a lot of interchange

266
00:10:48,550 --> 00:10:45,600
technical interchange and a ton of

267
00:10:50,470 --> 00:10:48,560
testing to make it look like that and

268
00:10:52,550 --> 00:10:50,480
it was a real testament today that we

269
00:10:54,470 --> 00:10:52,560
could all sit there and kind of be

270
00:10:57,430 --> 00:10:54,480
talking while it was going on and not

271
00:10:59,430 --> 00:10:57,440
biting our nails and so um

272
00:11:02,550 --> 00:10:59,440
i think it's actually

273
00:11:07,829 --> 00:11:02,560
that the dragon's a beautiful vehicle

274
00:11:07,839 --> 00:11:15,030
definitely next up we've got space.com

275
00:11:19,350 --> 00:11:17,269
thank you all for doing this um and yeah

276
00:11:21,030 --> 00:11:19,360
congratulations um

277
00:11:22,389 --> 00:11:21,040
this is probably for joel could you just

278
00:11:24,150 --> 00:11:22,399
talk a little bit about what it means to

279
00:11:26,310 --> 00:11:24,160
have that like extra crew member on

280
00:11:27,829 --> 00:11:26,320
board that like seventh astronaut what

281
00:11:30,230 --> 00:11:27,839
does that mean for the research

282
00:11:32,790 --> 00:11:30,240
potential of this next six month spent

283
00:11:34,630 --> 00:11:32,800
coming up and and like maybe beyond as

284
00:11:36,550 --> 00:11:34,640
we see this happen more often

285
00:11:38,550 --> 00:11:36,560
thank you

286
00:11:41,269 --> 00:11:38,560
so one of the cool things about having

287
00:11:44,230 --> 00:11:41,279
the commercial crew program is we're

288
00:11:46,150 --> 00:11:44,240

able to double the amount of crew tended

289
00:11:47,590 --> 00:11:46,160
science and research and technology

290
00:11:49,750 --> 00:11:47,600
development we do onboard the

291
00:11:51,509 --> 00:11:49,760
international space station so with

292
00:11:54,069 --> 00:11:51,519
three crew members we were averaging

293
00:11:56,230 --> 00:11:54,079
about 35 hours a week of crew tended

294
00:11:58,949 --> 00:11:56,240
science and research with the fourth

295
00:12:01,269 --> 00:11:58,959
crew member that person's time the

296
00:12:04,310 --> 00:12:01,279
equivalent time is dedicated to science

297
00:12:06,949 --> 00:12:04,320
and utilization and research so 70 hours

298
00:12:09,190 --> 00:12:06,959
so we'll have 70 be able to do 70 hours

299
00:12:11,110 --> 00:12:09,200
with the four crew members so with that

300
00:12:13,829 --> 00:12:11,120
kind of sets the standard for us for

301
00:12:15,509 --> 00:12:13,839
these next you know years as we continue

302
00:12:18,069 --> 00:12:15,519
to develop the international space

303
00:12:19,910 --> 00:12:18,079
station continue to use it and allow us

304
00:12:22,150 --> 00:12:19,920
to do not only the science and research

305
00:12:23,509 --> 00:12:22,160
we have but technology demonstration

306
00:12:27,910 --> 00:12:23,519
that will help us with the artemis

307
00:12:32,629 --> 00:12:29,750
okay and i think we have a follow-up

308
00:12:34,870 --> 00:12:32,639
next from business insider uh we do have

309
00:12:36,389 --> 00:12:34,880
a time for just a couple of follow-ups

310
00:12:38,710 --> 00:12:36,399
so if you do have another question you

311
00:12:39,910 --> 00:12:38,720
can press star one again but we'll try

312
00:12:41,750 --> 00:12:39,920
and keep it short because i know these

313
00:12:44,629 --> 00:12:41,760

guys have been up for a while

314
00:12:46,310 --> 00:12:44,639
business insider next

315
00:12:48,389 --> 00:12:46,320
hi yeah thanks for taking another

316
00:12:50,550 --> 00:12:48,399
question from me um i guess this

317
00:12:53,190 --> 00:12:50,560
question is also for kathy or for

318
00:12:54,949 --> 00:12:53,200
anybody else who feels they can answer

319
00:12:56,470 --> 00:12:54,959
it

320
00:12:58,310 --> 00:12:56,480
just wanted to follow up on something

321
00:12:59,829 --> 00:12:58,320
that did come up in the last 27 hours

322
00:13:01,990 --> 00:12:59,839
that propellant line

323
00:13:03,829 --> 00:13:02,000
heater and the thermal control system

324
00:13:07,750 --> 00:13:03,839
issues

325
00:13:09,269 --> 00:13:07,760
you could talk about what happened there

326
00:13:11,350 --> 00:13:09,279
is there any reason this popped up in

327
00:13:13,110 --> 00:13:11,360
orbit but not on the ground i'm also

328
00:13:14,710 --> 00:13:13,120
curious about any other issues you're

329
00:13:16,629 --> 00:13:14,720
tracking or if there's anything so far

330
00:13:18,949 --> 00:13:16,639
from this flight that needs further

331
00:13:20,710 --> 00:13:18,959
investigation thank you

332
00:13:23,030 --> 00:13:20,720
so then why don't you take this one

333
00:13:24,470 --> 00:13:23,040
because you've been in the

334
00:13:26,629 --> 00:13:24,480
in our

335
00:13:28,949 --> 00:13:26,639
launch complex area in the mission

336
00:13:30,870 --> 00:13:28,959
control area following along

337
00:13:33,430 --> 00:13:30,880
pretty diligently so

338
00:13:34,550 --> 00:13:33,440

these are your team's issues sure i'd be

339
00:13:36,629 --> 00:13:34,560
happy to

340
00:13:38,949 --> 00:13:36,639
yeah so the vehicle is is actually

341
00:13:40,790 --> 00:13:38,959
remarkably clean so um

342
00:13:43,750 --> 00:13:40,800
after clearing a couple of alarms a

343
00:13:46,150 --> 00:13:43,760
little bit after launch yesterday

344
00:13:47,829 --> 00:13:46,160
the the vehicle arrived

345
00:13:50,069 --> 00:13:47,839
at the station today with full

346
00:13:51,829 --> 00:13:50,079
redundancy full functionality

347
00:13:53,509 --> 00:13:51,839
no issues whatsoever

348
00:13:57,030 --> 00:13:53,519
earlier on yes there was a discussion

349
00:13:59,590 --> 00:13:57,040
about the the prop line heaters they did

350
00:14:01,910 --> 00:13:59,600
they did trip off

351
00:14:03,670 --> 00:14:01,920
basically it was based on fitter or

352
00:14:04,790 --> 00:14:03,680
fault detection limits were set very

353
00:14:07,350 --> 00:14:04,800
tightly

354
00:14:10,550 --> 00:14:07,360
on the ground so so spacex was very

355
00:14:13,030 --> 00:14:10,560
quick to identify the the cause of it

356
00:14:15,509 --> 00:14:13,040
meaning it was as a barely out of spec

357
00:14:18,069 --> 00:14:15,519
barely at a fitter limit that tripped it

358
00:14:20,550 --> 00:14:18,079
off for safety reasons they identified

359
00:14:23,030 --> 00:14:20,560
it i'd say within an hour they had a

360
00:14:25,030 --> 00:14:23,040
fixed proposed within two hours they had

361
00:14:26,790 --> 00:14:25,040
a solution that was ready to be checked

362
00:14:28,790 --> 00:14:26,800
by the joint nasa and spacex team and

363
00:14:31,670 --> 00:14:28,800

just shortly after that they uplinked it

364
00:14:33,670 --> 00:14:31,680
and everything was fine afterwards

365
00:14:35,350 --> 00:14:33,680
the route that the problem that they

366
00:14:37,030 --> 00:14:35,360
were protecting against was to make sure

367
00:14:39,189 --> 00:14:37,040
the propellant lines stayed within their

368
00:14:41,350 --> 00:14:39,199
thermal limits uh just to make sure that

369
00:14:43,670 --> 00:14:41,360
there's full functionality of the prop

370
00:14:45,670 --> 00:14:43,680
in the end it turned out that that limit

371
00:14:47,910 --> 00:14:45,680
was uh tighter than it needed to be

372
00:14:52,710 --> 00:14:47,920
so it was quickly fixed and um

373
00:14:56,790 --> 00:14:53,910
okay it looks like we also have a

374
00:14:59,189 --> 00:14:56,800
follow-up question from reuters

375
00:15:01,910 --> 00:14:59,199
hey thank you um just to follow up on

376
00:15:03,829 --> 00:15:01,920
that for uh then um other than the prop

377
00:15:05,509 --> 00:15:03,839
line heaters uh

378
00:15:07,189 --> 00:15:05,519
other than that issue was there anything

379
00:15:08,710 --> 00:15:07,199
else that you guys detected during

380
00:15:11,750 --> 00:15:08,720
flight or during the docking sequence

381
00:15:13,350 --> 00:15:11,760
that kind of looked um off or that you

382
00:15:17,350 --> 00:15:13,360
know something that was unexpected that

383
00:15:20,790 --> 00:15:19,430
there was only one other thing of note

384
00:15:22,310 --> 00:15:20,800
that we tracked and again it was also

385
00:15:23,509 --> 00:15:22,320
shortly after launch

386
00:15:25,990 --> 00:15:23,519
had to do with the thermal control

387
00:15:27,829 --> 00:15:26,000
system there's a loop a and a loop b and

388
00:15:29,110 --> 00:15:27,839

uh on each of those loops

389
00:15:31,269 --> 00:15:29,120
there are

390
00:15:33,829 --> 00:15:31,279
segments of the thermal loop that are

391
00:15:37,110 --> 00:15:33,839
isolated from other segments and so

392
00:15:38,949 --> 00:15:37,120
based on differentials um with

393
00:15:42,310 --> 00:15:38,959
the temperature essentially when you've

394
00:15:43,749 --> 00:15:42,320
got certain parts of the loop that

395
00:15:45,030 --> 00:15:43,759
are exposed to different temperatures

396
00:15:46,710 --> 00:15:45,040
and they're equalized when they're on

397
00:15:48,389 --> 00:15:46,720
the ground at the same temperature and

398
00:15:50,389 --> 00:15:48,399
they may be they were exposed to some

399
00:15:52,870 --> 00:15:50,399
different temperatures and loads during

400
00:15:55,030 --> 00:15:52,880
this early phase of flight so once the

401
00:15:56,790 --> 00:15:55,040
isolation between those two parts of the

402
00:15:59,110 --> 00:15:56,800
loops were

403
00:16:01,509 --> 00:15:59,120
was opened and no longer isolated it

404
00:16:03,189 --> 00:16:01,519
caused a pressure transient which ended

405
00:16:04,550 --> 00:16:03,199
up also causing a fitter a fault

406
00:16:06,069 --> 00:16:04,560
detection

407
00:16:07,110 --> 00:16:06,079
to trip

408
00:16:09,829 --> 00:16:07,120
and

409
00:16:11,350 --> 00:16:09,839
cause one loop to go offline temporarily

410
00:16:13,110 --> 00:16:11,360
again there was no issue again it was

411
00:16:15,189 --> 00:16:13,120
also one of these cases where the the

412
00:16:17,829 --> 00:16:15,199
problem was identified very quickly uh

413
00:16:20,310 --> 00:16:17,839

looking back at previous tests uh and

414
00:16:22,710 --> 00:16:20,320
and dm2 the previous mission it was

415
00:16:24,710 --> 00:16:22,720
something that was seen before uh but

416
00:16:26,550 --> 00:16:24,720
not enough such that it tripped off any

417
00:16:28,550 --> 00:16:26,560
sort of limit so so again it was

418
00:16:30,069 --> 00:16:28,560
identified very quickly uh the team was

419
00:16:32,150 --> 00:16:30,079
all over it and i was able to fix it

420
00:16:35,590 --> 00:16:32,160
very quickly so no issues whatsoever

421
00:16:39,030 --> 00:16:36,949
but control think both of those are

422
00:16:40,470 --> 00:16:39,040
examples of how you learn

423
00:16:42,389 --> 00:16:40,480
you know that there

424
00:16:44,629 --> 00:16:42,399
you learn how your system operates while

425
00:16:46,069 --> 00:16:44,639
you're flying and kind of how to operate

426
00:16:47,990 --> 00:16:46,079
it in a way and how it's going to

427
00:16:49,910 --> 00:16:48,000
operate on orbit so

428
00:16:52,310 --> 00:16:49,920
like we had mentioned in the question

429
00:16:54,710 --> 00:16:52,320
was it something that you learned while

430
00:16:57,110 --> 00:16:54,720
you're flying yes those were both things

431
00:16:58,949 --> 00:16:57,120
that from a system perspective

432
00:17:00,870 --> 00:16:58,959
are pretty normal things that you learn

433
00:17:03,110 --> 00:17:00,880
while you're you're starting to bring on

434
00:17:04,789 --> 00:17:03,120
a new system

435
00:17:06,549 --> 00:17:04,799
i think it's prudent uh folks have been

436
00:17:08,470 --> 00:17:06,559
very cautious setting those limits and

437
00:17:09,829 --> 00:17:08,480
um so yeah absolutely you learn with

438
00:17:11,110 --> 00:17:09,839

thermal you have convection on the

439
00:17:13,429 --> 00:17:11,120
ground and you have other effects and

440
00:17:16,150 --> 00:17:13,439
you can't assimilate all of those so we

441
00:17:19,110 --> 00:17:16,160
do put in um limits uh which are tight

442
00:17:20,630 --> 00:17:19,120
so that we can see those uh far before

443
00:17:25,590 --> 00:17:20,640
they end up becoming problematic and

444
00:17:29,590 --> 00:17:27,909
okay that looks like our last question

445
00:17:31,270 --> 00:17:29,600
thank you so much to our briefers and

446
00:17:33,510 --> 00:17:31,280
also to the reporters who stuck with us

447
00:17:35,029 --> 00:17:33,520
through the long operations tonight i

448
00:17:36,950 --> 00:17:35,039
think it was well worth the wait it's

449
00:17:38,470 --> 00:17:36,960
great to have crew dragon

450
00:17:40,950 --> 00:17:38,480
at the international space station

451
00:17:43,830 --> 00:17:40,960
tonight and just a reminder that you can

452
00:17:46,230 --> 00:17:43,840
um tune back into nasdv on wednesday

453
00:17:48,870 --> 00:17:46,240
morning to see the two uh russian

454
00:17:51,110 --> 00:17:48,880
members of the space station crew

455
00:17:53,669 --> 00:17:51,120
take a space walk they uh sergey

456
00:17:56,390 --> 00:17:53,679
rizhikov and sergey kuzkov will be going

457
00:17:58,870 --> 00:17:56,400
outside the poisk module to do some work

458
00:18:00,470 --> 00:17:58,880
uh preparing for the arrival of a new

459
00:18:03,430 --> 00:18:00,480
russian research module

460
00:18:05,430 --> 00:18:03,440
coverage will begin at 7 30 a.m central

461
00:18:07,830 --> 00:18:05,440
time and the space walk is expected to

462
00:18:09,990 --> 00:18:07,840
start at 8 30 a.m so you want to be back

463
00:18:29,620 --> 00:18:10,000

on wednesday for that and again thank

464
00:18:29,630 --> 00:18:46,549
[Music]