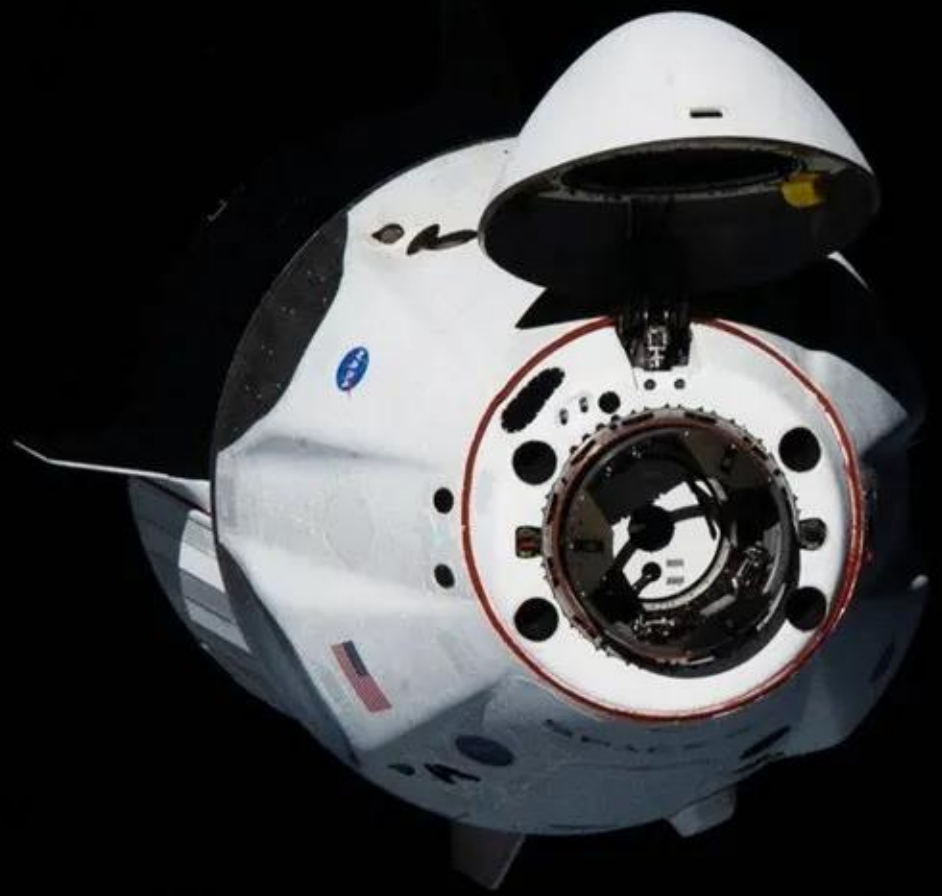
NASA LIVE



NASA'S SPACEX CREW-1 DOCKING

1
00:00:06,950 --> 00:00:03,669
and this view that you're seeing here

2
00:00:09,830 --> 00:00:06,960
is from the station from the node 2

3
00:00:11,110 --> 00:00:09,840
docking port that dragon is currently

4
00:00:13,509 --> 00:00:11,120
approaching

5
00:00:15,190 --> 00:00:13,519
this is really our first view of both of

6
00:00:16,710 --> 00:00:15,200
them in the same picture so

7
00:00:19,029 --> 00:00:16,720
it gives you a good perspective on how

8
00:00:20,630 --> 00:00:19,039
close they're getting to each other

9
00:00:23,349 --> 00:00:20,640
yeah you can see in that left hand

10
00:00:26,790 --> 00:00:23,359
bottom corner that is the station

11
00:00:28,470 --> 00:00:26,800
and that white dot on your right

12
00:00:31,349 --> 00:00:28,480
on the right side of your screen is

13
00:00:33,750 --> 00:00:31,359

dragging slowly approaching

14
00:00:34,950 --> 00:00:33,760
we're just under five minutes away from

15
00:00:38,150 --> 00:00:34,960
waypoint one

16
00:00:43,750 --> 00:00:38,160
we're under 280 meters away

17
00:00:47,510 --> 00:00:45,990
a little more of what we can look for

18
00:00:49,670 --> 00:00:47,520
once we do get that go

19
00:00:50,709 --> 00:00:49,680
to move past way point to the 20 meter

20
00:00:53,750 --> 00:00:50,719
point

21
00:00:54,950 --> 00:00:53,760
first so we have a couple of steps

22
00:00:56,950 --> 00:00:54,960
before this but

23
00:00:57,990 --> 00:00:56,960
uh we will take about five minutes to

24
00:01:02,310 --> 00:00:58,000
get in

25
00:01:04,149 --> 00:01:02,320
toward the station from waypoint two

26
00:01:05,429 --> 00:01:04,159
and after that five minutes we hear the

27
00:01:07,910 --> 00:01:05,439
chop call

28
00:01:08,950 --> 00:01:07,920
and we will be looking for soft capture

29
00:01:10,789 --> 00:01:08,960
first

30
00:01:12,870 --> 00:01:10,799
there are also rotary spring dampers

31
00:01:15,590 --> 00:01:12,880
that will soften the contact

32
00:01:18,070 --> 00:01:15,600
from crew dragon to the international

33
00:01:20,789 --> 00:01:18,080
space station and that soft capture ring

34
00:01:21,190 --> 00:01:20,799
will then begin retracting it'll retract

35
00:01:23,109 --> 00:01:21,200
until

36
00:01:24,390 --> 00:01:23,119
sensors indicate it's time for these

37
00:01:26,469 --> 00:01:24,400
hooks to drive

38
00:01:27,670 --> 00:01:26,479

and create a hard capture and that will

39
00:01:31,030 --> 00:01:27,680
firmly secure

40
00:01:33,270 --> 00:01:31,040
dragon to station the hook driving can

41
00:01:35,429 --> 00:01:33,280
take about five minutes and the hard

42
00:01:36,310 --> 00:01:35,439
mate of dragon to station can take about

43
00:01:38,550 --> 00:01:36,320
three minutes

44
00:01:39,749 --> 00:01:38,560
that means a full seal will be achieved

45
00:01:46,069 --> 00:01:39,759
with 12

46
00:01:52,830 --> 00:01:48,230
association on to us you could pop data

47
00:01:52,840 --> 00:02:06,069
copy

48
00:02:13,110 --> 00:02:09,589
we are just about 30 minutes or so from

49
00:02:18,470 --> 00:02:15,270
with currently dragon approaching

50
00:02:25,750 --> 00:02:21,589
waypoint one is approximately 220 meters

51
00:02:28,949 --> 00:02:27,589
and you heard kate rubins who is

52
00:02:31,110 --> 00:02:28,959
monitoring

53
00:02:32,309 --> 00:02:31,120
this uh this mission and the arrival of

54
00:02:34,710 --> 00:02:32,319
crew dragon

55
00:02:35,589 --> 00:02:34,720
she discussed she used the term rpop

56
00:02:39,830 --> 00:02:35,599
that stands for

57
00:02:43,589 --> 00:02:42,229
program and so that is giving her

58
00:02:45,990 --> 00:02:43,599
insight into

59
00:02:49,509 --> 00:02:46,000
dragon's position and how it's moving in

60
00:02:51,430 --> 00:02:49,519
toward the international space station

61
00:02:52,630 --> 00:02:51,440
she'll have some work to do once dragon

62
00:02:55,589 --> 00:02:52,640
arrives but

63
00:02:57,670 --> 00:02:55,599

not until it gets there but once dragon

64
00:02:58,149 --> 00:02:57,680
arrives the node 2 hatch where they are

65
00:03:01,509 --> 00:02:58,159
docking

66
00:03:04,149 --> 00:03:01,519
is currently closed on the station side

67
00:03:04,790 --> 00:03:04,159
dragon spacex on the big loop approach

68
00:03:06,949 --> 00:03:04,800
one and

69
00:03:09,270 --> 00:03:06,959
soft capture ring extension will begin

70
00:03:15,830 --> 00:03:09,280
shortly dragon will continue approach to

71
00:03:19,270 --> 00:03:18,229
okay dragon cross uh soft capturing

72
00:03:28,869 --> 00:03:19,280
starts here

73
00:03:33,030 --> 00:03:31,910
crystal clear view of dragon as they get

74
00:03:34,309 --> 00:03:33,040
the words

75
00:03:36,309 --> 00:03:34,319
that everything is still looking good

76
00:03:39,910 --> 00:03:36,319
with the systems and they will be moving

77
00:03:41,509 --> 00:03:39,920
through waypoint one to waypoint two

78
00:03:43,430 --> 00:03:41,519
and that they can expect that saw

79
00:04:01,750 --> 00:03:43,440
capture ring we were discussing to

80
00:04:05,030 --> 00:04:01,760
extend begin preparing them for docking

81
00:04:06,949 --> 00:04:05,040
we're about 240 meters away so we're

82
00:04:10,309 --> 00:04:06,959
just about a minute away from passing

83
00:04:12,309 --> 00:04:10,319
through waypoint one

84
00:04:15,190 --> 00:04:12,319
and we're so close that you could see

85
00:04:19,110 --> 00:04:15,200
the forward bulkhead thrusters

86
00:04:26,950 --> 00:04:22,629
it's basically those four uh

87
00:04:30,390 --> 00:04:26,960
kind of circles that you see in the ring

88
00:04:48,629 --> 00:04:30,400

where the nose cone is opened

89
00:04:53,030 --> 00:04:51,270
dragon continuing its slow and steady

90
00:04:53,990 --> 00:04:53,040
approach to the international space

91
00:04:56,230 --> 00:04:54,000
station

92
00:04:58,310 --> 00:04:56,240
every single maneuver very deliberate

93
00:05:01,510 --> 00:04:58,320
when we have two vehicles this close

94
00:05:09,029 --> 00:05:01,520
in space about 226

95
00:05:12,150 --> 00:05:10,710
again what you're seeing on your screen

96
00:05:15,510 --> 00:05:12,160
on your left hand screen

97
00:05:16,150 --> 00:05:15,520
is the view from the international space

98
00:05:18,550 --> 00:05:16,160
station

99
00:05:19,909 --> 00:05:18,560
looking at dragon on your right hand

100
00:05:23,029 --> 00:05:19,919
screen that is

101
00:05:23,510 --> 00:05:23,039
a camera view spacex on the big loop

102
00:05:25,749 --> 00:05:23,520
expect

103
00:05:36,310 --> 00:05:25,759
reconfiguration of the c2v2 return

104
00:05:42,430 --> 00:05:39,189
and we have passed waypoint one dragon

105
00:05:56,150 --> 00:05:44,629
213 meters away

106
00:06:01,590 --> 00:05:59,110
we also just heard the core speaking

107
00:06:04,230 --> 00:06:01,600
with crew dragon to expect

108
00:06:06,230 --> 00:06:04,240
a reconfiguration of c2v2 that stands

109
00:06:07,270 --> 00:06:06,240
for common communications for visiting

110
00:06:08,950 --> 00:06:07,280
vehicles

111
00:06:11,270 --> 00:06:08,960
it establishes bi-directional

112
00:06:33,110 --> 00:06:11,280
communications between crew dragon and

113
00:06:36,790 --> 00:06:35,270

now we pass through way point one so

114
00:06:40,230 --> 00:06:36,800
we're about ten minutes away from

115
00:06:43,430 --> 00:06:42,230
once we approach waypoint two then we

116
00:06:46,629 --> 00:06:43,440
will do a go

117
00:06:50,230 --> 00:06:46,639
no go pull for docking

118
00:06:50,629 --> 00:06:50,240
so we're again around uh 30 minutes away

119
00:06:53,510 --> 00:06:50,639
from

120
00:06:54,070 --> 00:06:53,520
docking here depending on the timeline

121
00:06:59,830 --> 00:06:54,080
uh

122
00:07:01,510 --> 00:06:59,840
these points

123
00:07:03,670 --> 00:07:01,520
we're on our way to waypoint 2 which

124
00:07:07,990 --> 00:07:03,680
will bring us about 20 meters

125
00:07:12,550 --> 00:07:10,629
we moved right through waypoint 1 right

126
00:07:13,990 --> 00:07:12,560
through the keep out sphere that 200

127
00:07:16,230 --> 00:07:14,000
meter

128
00:07:17,830 --> 00:07:16,240
invisible line around the international

129
00:07:20,790 --> 00:07:17,840
space station

130
00:07:23,589 --> 00:07:20,800
that helps flight controllers monitor

131
00:07:25,830 --> 00:07:23,599
visiting spacecraft

132
00:07:28,150 --> 00:07:25,840
but we will have to hold at way point to

133
00:07:30,070 --> 00:07:28,160
that 20 meter mark

134
00:07:32,230 --> 00:07:30,080
they'll conduct their final checks

135
00:07:34,070 --> 00:07:32,240
repair

136
00:07:36,710 --> 00:07:34,080
for arrival at the international space

137
00:07:37,990 --> 00:07:36,720
station a very clear view from crew

138
00:07:58,550 --> 00:07:38,000

dragon

139
00:08:01,909 --> 00:07:58,560
from station from

140
00:08:02,230 --> 00:08:01,919
the node 2 forward port that dragon will

141
00:08:06,309 --> 00:08:02,240
be

142
00:08:17,270 --> 00:08:09,270
histogram two in step two of one decimal

143
00:08:20,230 --> 00:08:18,710
on our pop reference frame to

144
00:08:25,350 --> 00:08:20,240
destination docking port and i see

145
00:08:25,360 --> 00:08:36,870
copy okay we're checking

146
00:08:41,190 --> 00:08:38,630
flight teams in mission control houston

147
00:08:43,509 --> 00:08:41,200
continuing to check that our pop

148
00:08:45,190 --> 00:08:43,519
rendezvous proximity operations program

149
00:08:46,389 --> 00:08:45,200
station 2 we're going to reset

150
00:08:49,670 --> 00:08:46,399
our pop one more time for you see if

151
00:08:49,680 --> 00:08:53,110
thank you

152
00:08:56,870 --> 00:08:54,710
they're resetting some of that data for

153
00:08:59,670 --> 00:08:56,880
kate rubins a reminder she

154
00:09:00,230 --> 00:08:59,680
is not commanding any part of dragon's

155
00:09:02,790 --> 00:09:00,240
arrival

156
00:09:06,829 --> 00:09:02,800
she is monitoring it though and so

157
00:09:06,839 --> 00:09:18,389
program

158
00:09:22,470 --> 00:09:20,870
again we are on our way to waypoint 2

159
00:09:25,990 --> 00:09:22,480
which will be 20 meters

160
00:09:28,710 --> 00:09:26,000
away from the station once we reach

161
00:09:30,949 --> 00:09:28,720
waypoint 2 the vehicle will focus

162
00:09:32,470 --> 00:09:30,959
on aligning its docking system with the

163
00:09:36,150 --> 00:09:32,480

docking adapter so

164
00:09:37,990 --> 00:09:36,160
preparing for docking and there will be

165
00:09:40,790 --> 00:09:38,000
a go no go pull

166
00:09:43,590 --> 00:09:40,800
prior to initiating that soft capture

167
00:09:46,790 --> 00:09:45,190
here's that same view we were looking at

168
00:09:49,430 --> 00:09:46,800
earlier and you can see even how

169
00:09:51,190 --> 00:09:49,440
much closer crew dragon has gotten in

170
00:09:54,870 --> 00:09:51,200
just the short time since we

171
00:10:07,509 --> 00:09:54,880
last received it having moved through

172
00:10:10,550 --> 00:10:09,509
a little bit more about what kate rubens

173
00:10:13,269 --> 00:10:10,560
will be doing

174
00:10:15,269 --> 00:10:13,279
once crew dragon docks as we mentioned

175
00:10:18,389 --> 00:10:15,279
the no two hatch is closed during the

176
00:10:20,470 --> 00:10:18,399
docking the station side no two hatch

177
00:10:22,150 --> 00:10:20,480
kate rubens will check for a leak and

178
00:10:25,829 --> 00:10:22,160
then open it for access to the

179
00:10:27,670 --> 00:10:25,839
pressurized mating adapter too

180
00:10:29,829 --> 00:10:27,680
she'll also manually pressurize the

181
00:10:32,310 --> 00:10:29,839
vestibule that's the area between the a

182
00:10:34,790 --> 00:10:32,320
pass hatch which is on the station side

183
00:10:35,670 --> 00:10:34,800
and the crew dragon hatch the a pass

184
00:10:37,750 --> 00:10:35,680
hatch is

185
00:10:39,430 --> 00:10:37,760
what is currently exposed to the vacuum

186
00:10:41,750 --> 00:10:39,440
of space

187
00:10:43,350 --> 00:10:41,760
it also has a docking target on it that

188
00:10:49,829 --> 00:10:43,360

allows dragon to

189
00:10:49,839 --> 00:10:53,990
once that pressurization is complete

190
00:10:57,990 --> 00:10:56,230
okay rubens will be able to open the a

191
00:10:59,750 --> 00:10:58,000
pass hatch to let some air in it's a

192
00:11:01,590 --> 00:10:59,760
slow process

193
00:11:03,509 --> 00:11:01,600
she'll be opening a valve specifically

194
00:11:06,110 --> 00:11:03,519
on the apas hatch to let that air

195
00:11:07,269 --> 00:11:06,120
in and we'll hold for thermal

196
00:11:09,350 --> 00:11:07,279
stabilization

197
00:11:10,470 --> 00:11:09,360
before we do some leak checks in the

198
00:11:12,470 --> 00:11:10,480
vestibule

199
00:11:14,870 --> 00:11:12,480
we want to make sure that there aren't

200
00:11:18,150 --> 00:11:14,880
any fluctuating temperatures

201
00:11:22,550 --> 00:11:18,160
that are giving us misleading signals on

202
00:11:26,630 --> 00:11:24,550
we'll conduct the leak check for that

203
00:11:28,630 --> 00:11:26,640
space between those two hatches

204
00:11:30,710 --> 00:11:28,640
in the meantime the crew is doffing and

205
00:11:32,790 --> 00:11:30,720
drying and stowing their suits during

206
00:11:33,350 --> 00:11:32,800
that thermal stabilization and leak

207
00:11:35,990 --> 00:11:33,360
check

208
00:11:37,030 --> 00:11:36,000
they're stowing their equipment kate

209
00:11:40,389 --> 00:11:37,040
will open the a

210
00:11:42,710 --> 00:11:40,399
pass hatch and remove the docking target

211
00:11:44,230 --> 00:11:42,720
almost two hours post docking these

212
00:11:45,350 --> 00:11:44,240
these checks are taking place during

213
00:11:47,350 --> 00:11:45,360

that time

214
00:11:50,470 --> 00:11:47,360
we will look for dragon's hatch to be

215
00:11:56,069 --> 00:11:53,829
dragon spacex on the big loop c2v2 link

216
00:11:57,509 --> 00:11:56,079
reconfiguration is complete the soft

217
00:12:00,790 --> 00:11:57,519
capture ring extension is

218
00:12:04,389 --> 00:12:00,800
also complete we are planning to hold

219
00:12:06,710 --> 00:12:04,399
momentarily at waypoint 2 at that point

220
00:12:08,230 --> 00:12:06,720
we will be asking for your input on

221
00:12:12,470 --> 00:12:08,240
lighting conditions

222
00:12:14,710 --> 00:12:12,480
and your goal to proceed

223
00:12:16,150 --> 00:12:14,720
do remember that your advisors are not

224
00:12:22,230 --> 00:12:16,160
required to be down

225
00:12:27,110 --> 00:12:25,269
okay dragon copy it's all and we'll be

226
00:12:27,670 --> 00:12:27,120
holding voluntarily at waypoint 2 and we

227
00:12:36,829 --> 00:12:27,680
will

228
00:12:36,839 --> 00:12:40,550
point

229
00:12:43,910 --> 00:12:42,629
so as you heard we are on our way to

230
00:12:45,509 --> 00:12:43,920
waypoint 2

231
00:12:47,910 --> 00:12:45,519
which will be 20 meters away from

232
00:12:50,949 --> 00:12:47,920
station and we will hold

233
00:12:53,990 --> 00:12:50,959
and do some checks do a go no go

234
00:12:57,430 --> 00:12:54,000
hole to ensure that we are okay

235
00:12:59,190 --> 00:12:57,440
to approach for docking and we did hear

236
00:13:01,750 --> 00:12:59,200
confirmation that the soft

237
00:13:07,190 --> 00:13:01,760
capture ring is extended and ready for

238
00:13:08,629 --> 00:13:07,200

that docking

239
00:13:10,790 --> 00:13:08,639
a few minutes ago we heard them

240
00:13:12,389 --> 00:13:10,800
discussing c2v2

241
00:13:13,590 --> 00:13:12,399
common communications from visiting

242
00:13:15,750 --> 00:13:13,600
vehicles they said they would

243
00:13:17,509 --> 00:13:15,760
reconfigure that system and just got

244
00:13:19,670 --> 00:13:17,519
good confirmation that

245
00:13:21,509 --> 00:13:19,680
it has been reconfigured that's those

246
00:13:23,910 --> 00:13:21,519
bi-directional communications between

247
00:13:25,990 --> 00:13:23,920
station and crew dragon

248
00:13:27,670 --> 00:13:26,000
station houston on two for kate we're

249
00:13:29,430 --> 00:13:27,680
still troubleshooting uh the

250
00:13:32,829 --> 00:13:29,440
rpop issue you're having so we're coming

251
00:13:34,790 --> 00:13:32,839
on board on ssc 17 and we'll try to fix

252
00:13:37,670 --> 00:13:34,800
that

253
00:13:38,069 --> 00:13:37,680
all right you are welcome to ssc 17 and

254
00:13:43,110 --> 00:13:38,079
also

255
00:13:43,120 --> 00:13:51,910
copy all we'll get it working

256
00:13:55,750 --> 00:13:54,069
mission control houston checking back in

257
00:13:58,150 --> 00:13:55,760
with

258
00:14:00,470 --> 00:13:58,160
kate rubins aboard the station who is

259
00:14:03,350 --> 00:14:00,480
working to monitor crew dragon's arrival

260
00:14:05,189 --> 00:14:03,360
as we mentioned she is not commanding

261
00:14:06,870 --> 00:14:05,199
anything that crew dragon is doing and

262
00:14:09,829 --> 00:14:06,880
neither are the crew themselves

263
00:14:11,750 --> 00:14:09,839

this is completely autonomous but she is

264
00:14:12,790 --> 00:14:11,760
trying to monitor some of that data and

265
00:14:14,629 --> 00:14:12,800
so

266
00:14:15,990 --> 00:14:14,639
team members in mission control houston

267
00:14:18,710 --> 00:14:16,000
are going to try

268
00:14:20,949 --> 00:14:18,720
and reconfigure the rpop system

269
00:14:21,670 --> 00:14:20,959
rendezvous and proximity operations

270
00:14:47,509 --> 00:14:21,680
program

271
00:14:50,550 --> 00:14:49,430
you can see on your screen again this is

272
00:14:53,670 --> 00:14:50,560
a view from

273
00:14:56,310 --> 00:14:53,680
station from the node 2 port

274
00:14:58,629 --> 00:14:56,320
that dragon will be docking to you can

275
00:15:01,910 --> 00:14:58,639
see the sunlight

276
00:15:09,269 --> 00:15:01,920
hitting dragon as it gets

277
00:15:12,949 --> 00:15:11,189
it's starting to get a little bit darker

278
00:15:14,790 --> 00:15:12,959
outside

279
00:15:17,030 --> 00:15:14,800
as well that's because the international

280
00:15:19,509 --> 00:15:17,040
space station and crew dragon are

281
00:15:21,350 --> 00:15:19,519
approaching an orbital night time they

282
00:15:23,509 --> 00:15:21,360
are in daylight for 45 minutes and

283
00:15:25,509 --> 00:15:23,519
nighttime for 45 minutes

284
00:15:27,509 --> 00:15:25,519
circling the globe every 90 minutes

285
00:16:05,509 --> 00:15:27,519
they're currently flying 260

286
00:16:09,269 --> 00:16:07,030
you're looking at a live view of mission

287
00:16:11,110 --> 00:16:09,279
control hawthorne here at spacex

288
00:16:13,829 --> 00:16:11,120

headquarters in california

289
00:16:15,910 --> 00:16:13,839
and if you notice we have lost video

290
00:16:17,350 --> 00:16:15,920
temporarily of crew dragon as it's

291
00:16:18,230 --> 00:16:17,360
approaching the international space

292
00:16:20,069 --> 00:16:18,240
station but

293
00:16:22,150 --> 00:16:20,079
that's really no surprise to us it's

294
00:16:25,189 --> 00:16:22,160
something called a tdrs handover

295
00:16:26,949 --> 00:16:25,199
tracking data and relay satellite system

296
00:16:28,949 --> 00:16:26,959
teams on the ground are able to track

297
00:16:30,710 --> 00:16:28,959
when the space station and crew dragon

298
00:16:33,110 --> 00:16:30,720
will be moving in and out

299
00:16:34,870 --> 00:16:33,120
of these handover periods and we expect

300
00:16:38,069 --> 00:16:34,880
to regain video communications

301
00:16:40,150 --> 00:16:38,079
with the space station very shortly

302
00:16:41,590 --> 00:16:40,160
in the meantime it continues uh crew

303
00:16:43,269 --> 00:16:41,600
dragon continues its approach to

304
00:16:46,389 --> 00:16:43,279
waypoint two

305
00:16:47,910 --> 00:16:46,399
we have those views back already as you

306
00:16:50,550 --> 00:16:47,920
mentioned jesse you can really see

307
00:16:52,629 --> 00:16:50,560
those four forward bulkhead thrusters

308
00:16:54,710 --> 00:16:52,639
the closer we get

309
00:16:56,470 --> 00:16:54,720
wow you can really see the detail on the

310
00:16:59,509 --> 00:16:56,480
international space station

311
00:17:01,509 --> 00:16:59,519
with how close we are

312
00:17:02,949 --> 00:17:01,519
we're approaching waypoint 2 which will

313
00:17:05,270 --> 00:17:02,959

be 20 meters

314
00:17:07,350 --> 00:17:05,280
in front of the station that's why you

315
00:17:11,590 --> 00:17:07,360
could see it so close up in that last

316
00:17:11,600 --> 00:17:16,829
hazard station houston on space ground

317
00:17:16,839 --> 00:17:21,750
2.

318
00:17:25,510 --> 00:17:23,909
ssc 17 is back up and running for you

319
00:17:27,110 --> 00:17:25,520
we're working on four now

320
00:17:30,830 --> 00:17:27,120
in addition let us know when your review

321
00:17:34,230 --> 00:17:31,990
docking

322
00:17:35,750 --> 00:17:34,240
copy and i saw ssc working has given me

323
00:17:36,390 --> 00:17:35,760
a good range of marine trade uh now i've

324
00:17:37,990 --> 00:17:36,400
got another

325
00:17:39,830 --> 00:17:38,000
pop that's not receiving dragon 2 data

326
00:17:43,590 --> 00:17:39,840
from pcs message on

327
00:17:55,830 --> 00:17:46,150
okay copy okay we'll take a look thanks

328
00:18:00,470 --> 00:17:58,150
we've now reached waypoint two so we are

329
00:18:03,750 --> 00:18:00,480
holding this position

330
00:18:07,029 --> 00:18:03,760
going to do something so you have a good

331
00:18:09,510 --> 00:18:07,039
uh dragon docking system view

332
00:18:11,350 --> 00:18:09,520
on ssc 17 for the dragon docking

333
00:18:13,190 --> 00:18:11,360
streaming monitor and i have a good out

334
00:18:16,630 --> 00:18:13,200
of the window view so i am comfortable

335
00:18:16,640 --> 00:18:21,190
copy all thank you

336
00:18:24,310 --> 00:18:22,870
great news from kate rubins she has the

337
00:18:26,549 --> 00:18:24,320
data she's looking for

338
00:18:29,270 --> 00:18:26,559

and a great view of crew dragon out the

339
00:18:31,669 --> 00:18:29,280
window as well so she's given her go for

340
00:18:34,230 --> 00:18:31,679
them to depart waypoint two and move

341
00:18:36,150 --> 00:18:34,240
into the international space station

342
00:18:37,590 --> 00:18:36,160
as a reminder we moved directly through

343
00:18:39,510 --> 00:18:37,600
waypoint one

344
00:18:41,510 --> 00:18:39,520
which put us directly in front of the

345
00:18:43,830 --> 00:18:41,520
docking port you can see it right here

346
00:18:46,470 --> 00:18:43,840
that's the node two forward port where

347
00:18:56,070 --> 00:18:46,480
dragon docked during demo one and

348
00:18:58,710 --> 00:18:56,080
demo two

349
00:18:59,110 --> 00:18:58,720
dragon spacex on the big loop the ground

350
00:19:05,270 --> 00:18:59,120
is

351
00:19:06,549 --> 00:19:05,280
confirm that the lighting conditions are

352
00:19:08,710 --> 00:19:06,559
acceptable to proceed

353
00:19:16,230 --> 00:19:08,720
and let us know if you are go for

354
00:19:19,590 --> 00:19:18,789
okay spacex this is dragon on the big

355
00:19:21,590 --> 00:19:19,600
loop

356
00:19:23,909 --> 00:19:21,600
so the lighting is actually getting

357
00:19:25,669 --> 00:19:23,919
worse we do have a view of the idea but

358
00:19:33,350 --> 00:19:25,679
we do not have a view of the docking

359
00:19:38,390 --> 00:19:35,990
and dragon spacex we copy we are six

360
00:19:40,150 --> 00:19:38,400
minutes from sunset would you like to

361
00:19:55,510 --> 00:19:40,160
hold for those six minutes or do you

362
00:20:00,789 --> 00:19:57,669
and spacex from dragon uh we'll go ahead

363
00:20:06,470 --> 00:20:00,799

and hold for those six minutes if we can

364
00:20:09,029 --> 00:20:06,480
we copy hold

365
00:20:11,270 --> 00:20:09,039
crew dragon crew has opted to hold at

366
00:20:14,789 --> 00:20:11,280
waypoint 2 for the time being

367
00:20:18,549 --> 00:20:14,799
so they can get some better views of the

368
00:20:20,549 --> 00:20:18,559
the docking port the docking target

369
00:20:21,909 --> 00:20:20,559
on that a pass hatch we were discussing

370
00:20:23,190 --> 00:20:21,919
that's on the international space

371
00:20:25,029 --> 00:20:23,200
station

372
00:20:26,549 --> 00:20:25,039
so they can hold here and that will give

373
00:20:28,710 --> 00:20:26,559
them the opportunity for

374
00:20:30,470 --> 00:20:28,720
sunset to come over both the

375
00:20:32,470 --> 00:20:30,480
international space station and crew

376
00:20:34,230 --> 00:20:32,480
dragon

377
00:20:35,909 --> 00:20:34,240
there won't be any odd shadows and they

378
00:20:39,430 --> 00:20:35,919
should have better visibility

379
00:20:41,190 --> 00:20:39,440
of course the crew themselves are not

380
00:20:43,029 --> 00:20:41,200
making this maneuver in toward the

381
00:20:45,510 --> 00:20:43,039
international space station it is

382
00:20:46,390 --> 00:20:45,520
autonomous crew dragon will be doing it

383
00:20:49,750 --> 00:20:46,400
by itself

384
00:20:51,430 --> 00:20:49,760
but we want the crew to be able to see

385
00:20:53,190 --> 00:20:51,440
the docking target so that they can

386
00:20:54,950 --> 00:20:53,200
properly monitor

387
00:20:59,590 --> 00:20:54,960
as the vehicle continues to make its

388
00:21:03,750 --> 00:21:02,470

and the ground is go for docking but we

389
00:21:06,549 --> 00:21:03,760
are just waiting

390
00:21:07,190 --> 00:21:06,559
for us to get a little bit more light so

391
00:21:09,350 --> 00:21:07,200
that

392
00:21:11,669 --> 00:21:09,360
dragon can actually see where it is

393
00:21:14,789 --> 00:21:11,679
going to autonomously dock

394
00:21:15,990 --> 00:21:14,799
see the target on node 2 as it

395
00:21:18,710 --> 00:21:16,000
approaches so it can make that

396
00:21:20,390 --> 00:21:18,720
soft capture accurately we're in another

397
00:21:22,470 --> 00:21:20,400
one of those satellite handovers we just

398
00:21:24,070 --> 00:21:22,480
discussed as well we should get video

399
00:21:27,590 --> 00:21:24,080
communications oh

400
00:21:29,029 --> 00:21:27,600
right there coming back and uh

401
00:21:31,590 --> 00:21:29,039
as we mentioned dragon is holding at

402
00:21:33,590 --> 00:21:31,600
waypoint 2 that's 20 meters away from

403
00:21:36,070 --> 00:21:33,600
the international space station

404
00:21:37,430 --> 00:21:36,080
they are holding until we reach sunset

405
00:21:40,549 --> 00:21:37,440
an orbital night time

406
00:21:47,590 --> 00:21:44,870
once that happens they will uh proceed

407
00:22:01,510 --> 00:21:47,600
in toward node two it should take about

408
00:22:06,630 --> 00:22:04,070
and as a reminder waypoint 2 is about 20

409
00:22:09,990 --> 00:22:06,640
meters away from station

410
00:22:12,070 --> 00:22:10,000
we are on the docking access and

411
00:22:13,669 --> 00:22:12,080
dragon will be aligning itself with that

412
00:22:45,830 --> 00:22:13,679
docking port

413
00:22:50,310 --> 00:22:49,510

this whole continuing for another few

414
00:22:52,070 --> 00:22:50,320
minutes

415
00:22:53,990 --> 00:22:52,080
uh the space station has crossed the

416
00:22:57,110 --> 00:22:54,000
terminator line the difference in

417
00:22:59,590 --> 00:22:57,120
day and night time on earth they are

418
00:23:00,630 --> 00:22:59,600
east of hawaii right now in the pacific

419
00:23:02,630 --> 00:23:00,640
ocean

420
00:23:04,710 --> 00:23:02,640
and they are waiting for the sun to set

421
00:23:06,070 --> 00:23:04,720
on orbit

422
00:23:07,990 --> 00:23:06,080
crew dragon will be able to use its

423
00:23:10,310 --> 00:23:08,000
infrared camera to spot

424
00:23:12,230 --> 00:23:10,320
that docking target on the a pass hatch

425
00:23:15,590 --> 00:23:12,240
on node two

426
00:23:17,510 --> 00:23:15,600
and then they'll be able to proceed

427
00:23:20,310 --> 00:23:17,520
leaving waypoint two making their five

428
00:23:23,830 --> 00:23:20,320
minute journey approximately

429
00:23:25,750 --> 00:23:23,840
to docking

430
00:23:27,590 --> 00:23:25,760
and i should correct what i mentioned

431
00:23:28,070 --> 00:23:27,600
earlier uh they're waiting for the sun

432
00:23:30,710 --> 00:23:28,080
to go

433
00:23:31,430 --> 00:23:30,720
down so that they don't have any shadows

434
00:23:35,029 --> 00:23:31,440
so that

435
00:23:37,750 --> 00:23:35,039
dragon can actually see clearly

436
00:23:44,470 --> 00:23:37,760
and locate align itself with that

437
00:23:50,149 --> 00:23:47,430
as a reminder we had a confirmation that

438
00:23:53,669 --> 00:23:50,159

the soft capture ring extended that'll

439
00:23:55,909 --> 00:23:53,679
be the first part of capture

440
00:23:57,909 --> 00:23:55,919
the soft capture ring there are also

441
00:23:59,110 --> 00:23:57,919
rotary spring dampers that will soften

442
00:24:01,510 --> 00:23:59,120
the contact

443
00:24:02,710 --> 00:24:01,520
once dragon's soft capture ring comes in

444
00:24:04,710 --> 00:24:02,720
contact

445
00:24:06,549 --> 00:24:04,720
with the international space station and

446
00:24:08,870 --> 00:24:06,559
then the ring will retract

447
00:24:10,470 --> 00:24:08,880
until sensors indicate it'll be time for

448
00:24:12,870 --> 00:24:10,480
hooks to drive

449
00:24:14,310 --> 00:24:12,880
we're looking for 12 hooks two different

450
00:24:16,230 --> 00:24:14,320
gangs of six

451
00:24:18,470 --> 00:24:16,240
to firmly secure dragon to the

452
00:24:21,590 --> 00:24:18,480
international space station

453
00:24:22,070 --> 00:24:21,600
that entire process from contact to hard

454
00:24:24,710 --> 00:24:22,080
capture

455
00:24:25,750 --> 00:24:24,720
can take about 13 minutes we'll be

456
00:24:29,029 --> 00:24:25,760
standing by

457
00:24:30,470 --> 00:24:29,039
the entire time to make sure all of that

458
00:24:31,909 --> 00:24:30,480
goes smoothly but

459
00:24:33,750 --> 00:24:31,919
everything looking good right now for

460
00:24:44,830 --> 00:24:33,760
crew dragons still holding about 20

461
00:24:48,070 --> 00:24:46,470
station

462
00:24:52,310 --> 00:24:48,080
and it looks like we might be about a

463
00:24:56,230 --> 00:24:54,149

so we should be hearing that call that

464
00:25:00,950 --> 00:24:56,240
they're ready to proceed

465
00:25:03,430 --> 00:25:00,960
again there's no rush and there's also

466
00:25:12,830 --> 00:25:03,440
no need for the crew to fly dragon this

467
00:25:12,840 --> 00:25:43,350
autonomously

468
00:25:49,029 --> 00:25:47,269
just a few more seconds until sunset

469
00:25:51,830 --> 00:25:49,039
and you can see it did get quite a bit

470
00:25:53,269 --> 00:25:51,840
darker and that flash on the note 2

471
00:26:01,669 --> 00:25:53,279
docking port coming from

472
00:26:04,630 --> 00:26:03,190
would you like the crew to be able to

473
00:26:06,470 --> 00:26:04,640
see this docking even though it's

474
00:26:10,310 --> 00:26:06,480
autonomous that helps them

475
00:26:13,510 --> 00:26:10,320
monitor where they're at

476
00:26:16,310 --> 00:26:13,520
and take control if need be however

477
00:26:17,830 --> 00:26:16,320
olive dragon systems looking good and

478
00:26:19,430 --> 00:26:17,840
we're just standing by for that

479
00:26:21,110 --> 00:26:19,440
departure from waypoint 2

480
00:26:37,750 --> 00:26:21,120
20 meters away from the international

481
00:26:41,430 --> 00:26:40,070
we are currently go on the ground for

482
00:26:43,909 --> 00:26:41,440
docking but we are

483
00:26:49,669 --> 00:26:43,919
waiting for the crew to confirm if they

484
00:26:56,870 --> 00:26:53,750
we are waiting for the crew to confirm

485
00:26:57,269 --> 00:26:56,880
the big group looks just like we've gone

486
00:27:00,710 --> 00:26:57,279
through

487
00:27:01,510 --> 00:27:00,720
sunset and we have we'll get the lights

488
00:27:03,590 --> 00:27:01,520

strobing we

489
00:27:08,070 --> 00:27:03,600
can see the target and so we are going

490
00:27:12,390 --> 00:27:10,630
copy you are go to proceed and visors

491
00:27:15,029 --> 00:27:12,400
are down that's great to hear

492
00:27:17,190 --> 00:27:15,039
we will be committing the resume shortly

493
00:27:18,470 --> 00:27:17,200
and as a reminder once dragon is inside

494
00:27:31,510 --> 00:27:18,480
the crew hands off point

495
00:27:35,669 --> 00:27:33,430
we've got confirmation that we have go

496
00:27:37,669 --> 00:27:35,679
from the crew

497
00:27:38,789 --> 00:27:37,679
so they will be starting this procedure

498
00:27:42,389 --> 00:27:38,799
shortly

499
00:27:46,630 --> 00:27:42,399
we'll start approaching that docking

500
00:27:48,470 --> 00:27:46,640
adapter that you see on your screen

501
00:27:51,669 --> 00:27:48,480
once we get close enough we will do a

502
00:28:01,110 --> 00:27:54,950
followed by the insertion of the

503
00:28:04,470 --> 00:28:04,070
we also heard the core mentioned uh once

504
00:28:06,070 --> 00:28:04,480
that

505
00:28:07,830 --> 00:28:06,080
we reached the crew hands-off point

506
00:28:10,549 --> 00:28:07,840
that's the chop call we'll hear

507
00:28:14,549 --> 00:28:10,559
retreat and breakout are not permitted

508
00:28:19,510 --> 00:28:17,190
the vehicle can still abort if necessary

509
00:28:22,389 --> 00:28:19,520
but as we said everything continuing

510
00:28:23,510 --> 00:28:22,399
to look good for crew dragon ready to

511
00:28:26,789 --> 00:28:23,520
depart way point

512
00:28:30,710 --> 00:28:29,909
the final approach has begun crew dragon

513
00:28:33,029 --> 00:28:30,720

moving in

514
00:28:34,630 --> 00:28:33,039
toward the international docking adapter

515
00:28:36,149 --> 00:28:34,640
on node 2.

516
00:28:37,669 --> 00:28:36,159
kate rubin standing by on the

517
00:28:41,350 --> 00:28:37,679
international space station

518
00:28:45,909 --> 00:28:43,430
this should only take approximately five

519
00:28:45,919 --> 00:28:55,350
not too long

520
00:28:59,430 --> 00:28:57,110
their arrival at the international space

521
00:29:01,830 --> 00:28:59,440
station day will be coming about 27

522
00:29:02,870 --> 00:29:01,840
and a half hours since their liftoff

523
00:29:05,909 --> 00:29:02,880
last night at 7

524
00:29:10,830 --> 00:29:05,919
27 pm eastern time from kennedy space

525
00:29:10,840 --> 00:29:23,909
rocket

526
00:29:35,990 --> 00:29:28,149
we are now about 15 meters away

527
00:29:40,070 --> 00:29:38,470
very slow deliberate steady movements

528
00:29:46,389 --> 00:29:40,080
for crew dragon making its way

529
00:29:52,830 --> 00:29:48,470
we'll be looking for soft capture first

530
00:29:52,840 --> 00:29:57,430
extended

531
00:30:01,029 --> 00:29:59,990
once we have soft capture the ring will

532
00:30:03,430 --> 00:30:01,039
retract

533
00:30:05,190 --> 00:30:03,440
and bring us into a hard capture that

534
00:30:06,549 --> 00:30:05,200
should take about 13 minutes for that

535
00:30:08,630 --> 00:30:06,559
entire process

536
00:30:10,070 --> 00:30:08,640
firmly securing us to the international

537
00:30:12,950 --> 00:30:10,080
space station

538
00:30:14,950 --> 00:30:12,960

and then we'll move into leak checks and

539
00:30:16,789 --> 00:30:14,960
spacex from dragon on the big loop we

540
00:30:20,310 --> 00:30:16,799
show 10 meters we've got good lighting

541
00:30:20,320 --> 00:30:39,110
great to hear we see 10 meters as well

542
00:30:45,110 --> 00:30:43,350
even though it looks very slow right now

543
00:30:47,269 --> 00:30:45,120
both dragon and the international space

544
00:30:50,149 --> 00:30:47,279
station are traveling about 17

545
00:30:53,430 --> 00:30:50,159
500 miles an hour over earth right now

546
00:31:03,269 --> 00:30:53,440
both about 262 statute miles

547
00:31:07,110 --> 00:31:05,110
here just a few moments ago too that the

548
00:31:08,950 --> 00:31:07,120
crew had reached 10 meters away from the

549
00:31:18,389 --> 00:31:08,960
international space station so

550
00:31:20,549 --> 00:31:18,399
already halfway there from waypoint two

551
00:31:26,389 --> 00:31:20,559
but only about a little over a minute

552
00:31:32,789 --> 00:31:29,590
you see on those display panels the crew

553
00:31:35,909 --> 00:31:32,799
watching as they approach that node

554
00:31:39,190 --> 00:31:37,669
and what you could see directly in the

555
00:31:42,870 --> 00:31:39,200
center of the

556
00:31:46,950 --> 00:31:42,880
docking adapter that is the a pass hatch

557
00:31:48,549 --> 00:31:46,960
once we do do a hard capture

558
00:31:50,710 --> 00:31:48,559
and do leak checks that will be the

559
00:31:54,470 --> 00:31:50,720
first hatch that will open

560
00:31:56,149 --> 00:31:54,480
followed by the dragon hatch

561
00:31:58,789 --> 00:31:56,159
if you look closely in the center at the

562
00:31:58,799 --> 00:32:03,110
there was chop crew hands off point

563
00:32:03,120 --> 00:32:29,509

standing by for contact

564
00:32:29,519 --> 00:32:37,430
dragon spacex soft capture confirmed

565
00:32:37,440 --> 00:32:48,149
dragon copies and we see the same

566
00:32:53,190 --> 00:32:50,710
as you heard that call out soft capture

567
00:32:56,549 --> 00:32:53,200
is now complete

568
00:32:59,509 --> 00:32:56,559
next will be hard capture this is where

569
00:33:01,269 --> 00:32:59,519
the pins will insert themselves into

570
00:33:04,549 --> 00:33:01,279
that docking adapter

571
00:33:08,149 --> 00:33:04,559
and create a hard lock and we have that

572
00:33:11,430 --> 00:33:08,159
soft capture at 801 pm pacific time

573
00:33:14,230 --> 00:33:11,440
1101 pm eastern time crew dragon and the

574
00:33:15,430 --> 00:33:14,240
international space station flying 262

575
00:33:18,630 --> 00:33:15,440
statute miles

576
00:33:32,789 --> 00:33:18,640
over idaho dragon spacex

577
00:33:37,029 --> 00:33:34,950
that call confirming just what we're

578
00:33:40,149 --> 00:33:37,039
looking to hear the soft capture ring

579
00:33:42,149 --> 00:33:40,159
is retracting we're looking for sensors

580
00:33:45,350 --> 00:33:42,159
to indicate it'll be time for

581
00:33:47,190 --> 00:33:45,360
hooks to drive create that firm hold on

582
00:33:50,070 --> 00:33:47,200
crew dragon so this can take several

583
00:33:51,909 --> 00:33:50,080
minutes maybe about 10 to 13 minutes

584
00:34:04,830 --> 00:33:51,919
but slow and steady wins the race crew

585
00:34:04,840 --> 00:34:15,669
station

586
00:34:18,790 --> 00:34:17,430
this view over the shoulder of our

587
00:34:20,629 --> 00:34:18,800
commander

588
00:34:22,629 --> 00:34:20,639

and our pilot mike hopkins and victor

589
00:34:24,629 --> 00:34:22,639
glover

590
00:34:49,750 --> 00:34:24,639
they are watching this all unfold via

591
00:34:49,760 --> 00:34:56,720
we've got so much

592
00:35:02,230 --> 00:34:59,270
[Music]

593
00:35:03,829 --> 00:35:02,240
so once again we had contact soft

594
00:35:05,589 --> 00:35:03,839
capture confirmed

595
00:35:08,390 --> 00:35:05,599
at the international space station for

596
00:35:11,990 --> 00:35:08,400
crew dragon at 801 pm pacific time

597
00:35:14,829 --> 00:35:12,000
11 01 pm eastern time both vehicles were

598
00:35:18,069 --> 00:35:14,839
flying 262 statute miles over

599
00:35:21,910 --> 00:35:18,079
idaho we're now

600
00:35:23,910 --> 00:35:21,920
in the soft capture ring retract period

601
00:35:24,950 --> 00:35:23,920
we'll be looking for that ring to

602
00:35:27,349 --> 00:35:24,960
retract fully

603
00:35:28,069 --> 00:35:27,359
these sensors will indicate that we are

604
00:35:29,910 --> 00:35:28,079
ready to

605
00:35:31,510 --> 00:35:29,920
firmly connect with the international

606
00:35:33,030 --> 00:35:31,520
space station that's called the hard

607
00:35:36,230 --> 00:35:33,040
capture

608
00:35:39,109 --> 00:35:36,240
and that means it'll be time after that

609
00:35:41,349 --> 00:35:39,119
to begin lead checks suit doffing or

610
00:35:43,109 --> 00:35:41,359
taking off their suits for the crew

611
00:35:45,750 --> 00:35:43,119
eventually hatch openings so all those

612
00:35:48,470 --> 00:35:45,760
steps might take a couple of hours

613
00:35:50,150 --> 00:35:48,480

but we will be here for their first i

614
00:35:56,829 --> 00:35:50,160
can't say steps inside the space station

615
00:35:56,839 --> 00:36:13,910
station

616
00:36:18,950 --> 00:36:16,390
we heard the soft capture ring retract

617
00:36:21,589 --> 00:36:18,960
is complete

618
00:36:23,589 --> 00:36:21,599
and mcs stands for motion control system

619
00:36:29,030 --> 00:36:23,599
we are handing off from the

620
00:36:32,550 --> 00:36:30,550
the other voice you heard was that of

621
00:36:34,870 --> 00:36:32,560
nasa astronaut kate rubins

622
00:36:38,310 --> 00:36:34,880
monitoring the arrival of her four new

623
00:36:44,310 --> 00:36:38,320
crewmates inside crew dragon

624
00:36:47,910 --> 00:36:46,230
we're currently awaiting that hard

625
00:36:52,829 --> 00:36:47,920
capture to be complete

626
00:36:52,839 --> 00:37:03,910
minutes

627
00:37:07,589 --> 00:37:06,710
confirmation we are now on gyroscopes on

628
00:37:18,230 --> 00:37:07,599
the

629
00:37:25,430 --> 00:37:22,950
yeah dragon copies good news two

630
00:37:27,589 --> 00:37:25,440
good news indeed mcs the motion control

631
00:37:29,510 --> 00:37:27,599
system configuration is complete

632
00:37:31,670 --> 00:37:29,520
we have now moved to those gyroscopes

633
00:37:32,550 --> 00:37:31,680
instead of russian thrusters meaning the

634
00:37:57,829 --> 00:37:32,560
hard

635
00:38:03,670 --> 00:38:00,230
and the hooks are currently driving into

636
00:38:06,069 --> 00:38:03,680
place to give us that hard capture

637
00:38:08,310 --> 00:38:06,079
once we do have that hard capture though

638
00:38:11,349 --> 00:38:08,320

it will take some time

639
00:38:12,470 --> 00:38:11,359
before we can open the hatches they will

640
00:38:14,870 --> 00:38:12,480
perform some leak

641
00:38:15,670 --> 00:38:14,880
checks to make sure that it is safe to

642
00:38:18,310 --> 00:38:15,680
open

643
00:38:24,950 --> 00:38:18,320
both the a pass hatch and the dragon

644
00:38:28,550 --> 00:38:27,270
that could take up to about an hour

645
00:39:04,790 --> 00:38:28,560
after hard capture

646
00:39:07,990 --> 00:39:06,870
we were initially discussing uh looked

647
00:39:10,310 --> 00:39:08,000
like we might have an

648
00:39:11,430 --> 00:39:10,320
eight o'clock pm pacific time docking

649
00:39:13,829 --> 00:39:11,440
and we did

650
00:39:16,630 --> 00:39:13,839
have that contact and capture coming at

651
00:39:19,030 --> 00:39:16,640
801 pm pacific time so

652
00:39:20,390 --> 00:39:19,040
very close and that was even with us

653
00:39:21,270 --> 00:39:20,400
holding for a little bit to allow the

654
00:39:26,550 --> 00:39:21,280
crew some

655
00:39:36,630 --> 00:39:29,670
hard capture sequence now underway and

656
00:39:41,109 --> 00:39:38,710
i know the astronauts have to be loving

657
00:39:42,470 --> 00:39:41,119
looking at all this data

658
00:39:44,150 --> 00:39:42,480
tons of excitement i know they've

659
00:39:45,430 --> 00:39:44,160
enjoyed their ride in crew dragon they

660
00:39:46,069 --> 00:39:45,440
were having so much fun during the

661
00:39:48,710 --> 00:39:46,079
broadcast

662
00:39:50,550 --> 00:39:48,720
but can't only imagine their excitement

663
00:39:53,030 --> 00:39:50,560

to be at the international space station

664
00:39:56,230 --> 00:39:55,349
now they're right there hard capture

665
00:39:58,710 --> 00:39:56,240
coming

666
00:40:00,230 --> 00:39:58,720
to a closure in a few minutes then

667
00:40:02,390 --> 00:40:00,240
they'll be able to start getting out of

668
00:40:05,810 --> 00:40:02,400
their suits again

669
00:40:08,829 --> 00:40:05,820
that they put on just for this approach

670
00:40:13,270 --> 00:40:08,839
[Music]

671
00:40:16,710 --> 00:40:15,109
we've got confirmation that the first

672
00:40:20,390 --> 00:40:16,720
six hooks

673
00:40:22,309 --> 00:40:20,400
are complete and closed

674
00:40:24,069 --> 00:40:22,319
let me know if you're go for one decimal

675
00:40:37,190 --> 00:40:24,079
four zero three monitoring tools tear

676
00:40:49,270 --> 00:40:38,470
you think how this cape will be ready

677
00:40:52,390 --> 00:40:51,270
as i was mentioning those first six

678
00:40:55,510 --> 00:40:52,400
hooks

679
00:41:04,829 --> 00:40:55,520
are now complete and closed the next six

680
00:41:09,430 --> 00:41:06,550
capture

681
00:41:11,030 --> 00:41:09,440
crew patiently waiting and watching and

682
00:41:14,950 --> 00:41:11,040
monitoring on their

683
00:41:18,790 --> 00:41:16,870
we also heard from kate rubins on the

684
00:41:21,750 --> 00:41:18,800
station side

685
00:41:23,990 --> 00:41:21,760
asking if it was time for her to

686
00:41:25,430 --> 00:41:24,000
deconstruct her monitoring system where

687
00:41:29,829 --> 00:41:25,440
she's been watching

688
00:41:43,910 --> 00:41:31,910

ground teams will let the let her know

689
00:41:47,750 --> 00:41:47,109
again hard capture is underway once hard

690
00:41:51,030 --> 00:41:47,760
capture

691
00:41:52,630 --> 00:41:51,040
is complete they will perform some leak

692
00:41:56,309 --> 00:41:52,640
checks

693
00:41:59,109 --> 00:41:56,319
prior to opening up the a pass hatch

694
00:41:59,829 --> 00:41:59,119
once the a pass hatch is open they'll

695
00:42:01,670 --> 00:41:59,839
perform

696
00:42:04,550 --> 00:42:01,680
uh some more checks to make sure that it

697
00:42:06,870 --> 00:42:04,560
is okay to open the dragon hatch

698
00:42:17,430 --> 00:42:06,880
and in the meantime dragon spacex hard

699
00:42:19,910 --> 00:42:17,440
capture completely

700
00:42:22,309 --> 00:42:19,920
and there we heard the confirmation that

701
00:42:24,309 --> 00:42:22,319
hard capture is complete

702
00:42:26,390 --> 00:42:24,319
dragon is officially attached to the

703
00:42:30,470 --> 00:42:26,400
international space station

704
00:42:33,990 --> 00:42:30,480
after arriving at 801 pm pacific time

705
00:42:37,589 --> 00:42:34,000
1101 p.m eastern time

706
00:42:40,710 --> 00:42:37,599
27 and a half journey to station

707
00:42:43,589 --> 00:42:40,720
since launch yesterday at 7 27 pm

708
00:42:45,270 --> 00:42:43,599
eastern time how exciting the crew must

709
00:42:47,430 --> 00:42:45,280
be so excited

710
00:42:49,190 --> 00:42:47,440
now that they're going to start doing uh

711
00:42:51,430 --> 00:42:49,200
the process of doing league checks

712
00:42:52,309 --> 00:42:51,440
uh before they open those the those

713
00:42:54,390 --> 00:42:52,319

hatches

714
00:42:56,470 --> 00:42:54,400
but they'll start uh taking off their

715
00:43:11,510 --> 00:42:56,480
suits and getting ready to enter

716
00:43:16,550 --> 00:43:13,910
tear down her station she was monitoring

717
00:43:18,230 --> 00:43:16,560
the arrival of crew dragon

718
00:43:19,670 --> 00:43:18,240
and things will be picking up inside the

719
00:43:21,270 --> 00:43:19,680
space station for her

720
00:43:22,870 --> 00:43:21,280
she's getting the hatch on the station

721
00:43:24,950 --> 00:43:22,880
side ready to be opened

722
00:43:27,430 --> 00:43:24,960
she'll also start pressurizing that area

723
00:44:08,870 --> 00:43:27,440
known as the vestibule between dragon

724
00:44:12,309 --> 00:44:11,589
and we are waiting for the umbilicals to

725
00:44:14,470 --> 00:44:12,319
connect

726
00:44:15,829 --> 00:44:14,480
crew dragon to the international space

727
00:44:18,230 --> 00:44:15,839
station this will

728
00:44:20,309 --> 00:44:18,240
allow crew dragon to use the space

729
00:44:36,980 --> 00:44:20,319
station's power

730
00:44:46,550 --> 00:44:36,990
audio and data connections

731
00:44:50,550 --> 00:44:49,510
resilience spacex docking sequence is

732
00:44:57,750 --> 00:44:50,560
complete

733
00:45:03,510 --> 00:45:00,790
and spacex this is resilience

734
00:45:06,150 --> 00:45:03,520
excellent job right down the center

735
00:45:08,150 --> 00:45:06,160
spacex and nasa congratulations this is

736
00:45:09,990 --> 00:45:08,160
the new era of operational flights to

737
00:45:11,510 --> 00:45:10,000
the international space station from the

738
00:45:14,550 --> 00:45:11,520

florida coast

739
00:45:30,829 --> 00:45:14,560
and isf sergey sergey and kate we'll see

740
00:45:49,150 --> 00:45:44,829
foreign

741
00:45:49,160 --> 00:45:58,829
[Music]

742
00:45:58,839 --> 00:46:05,670
all

743
00:46:12,069 --> 00:46:08,309
brazilian station welcome to the iss we

744
00:46:15,589 --> 00:46:14,390
spectacular job resilience on behalf of

745
00:46:15,990 --> 00:46:15,599
all the flight controllers around the

746
00:46:17,430 --> 00:46:16,000
world

747
00:46:19,190 --> 00:46:17,440
welcome aboard as we embark on

748
00:46:24,870 --> 00:46:19,200
seven-person crew operations and more

749
00:46:28,630 --> 00:46:26,630
and with that ground we'll be enabling

750
00:46:30,870 --> 00:46:28,640
hardline power and calm connection

751
00:46:32,150 --> 00:46:30,880
shortly you are go to doff your suits

752
00:46:34,870 --> 00:46:32,160
per procedure for

753
00:46:36,870 --> 00:46:34,880
decimal zero one two we will configure

754
00:46:37,430 --> 00:46:36,880
video to go external momentarily and

755
00:46:43,270 --> 00:46:37,440
we'll

756
00:46:46,990 --> 00:46:43,280
let you know when it's ready

757
00:46:49,750 --> 00:46:47,000
okay spacex uh from dragon week copy

758
00:46:58,550 --> 00:46:49,760
4.012 and standing by for

759
00:47:05,910 --> 00:47:00,309
and dragon spacex on the big loop

760
00:47:05,920 --> 00:47:13,589
and dragon copies 4.012

761
00:47:18,150 --> 00:47:16,309
heard some clapping here in hawthorne at

762
00:47:20,069 --> 00:47:18,160
spacex headquarters and even saw a

763
00:47:21,030 --> 00:47:20,079

little bit of celebration aboard crew

764
00:47:23,109 --> 00:47:21,040
dragon

765
00:47:25,030 --> 00:47:23,119
once it was confirmed hard capture was

766
00:47:26,870 --> 00:47:25,040
complete dragon was attached to the

767
00:47:29,349 --> 00:47:26,880
international space station

768
00:47:30,710 --> 00:47:29,359
and then an amazing reminder just how

769
00:47:32,230 --> 00:47:30,720
important it is and how

770
00:47:33,829 --> 00:47:32,240
international the international space

771
00:47:35,750 --> 00:47:33,839
station is

772
00:47:37,910 --> 00:47:35,760
words from suicinaguchi the first

773
00:47:39,589 --> 00:47:37,920
international partner to fly aboard a

774
00:47:41,030 --> 00:47:39,599
commercial crew vehicle from the

775
00:47:44,309 --> 00:47:41,040
japanese aerospace

776
00:47:47,670 --> 00:47:44,319
exploration agency

777
00:47:50,470 --> 00:47:47,680
what an amazing amazing

778
00:47:51,589 --> 00:47:50,480
journey this has been i can't believe

779
00:47:54,790 --> 00:47:51,599
that they are there now

780
00:47:57,750 --> 00:47:54,800
officially docked to the space station

781
00:48:00,150 --> 00:47:57,760
so excited to see them get out of their

782
00:48:02,230 --> 00:48:00,160
suits and eventually get on station

783
00:48:04,470 --> 00:48:02,240
but now that dragon has completed the

784
00:48:06,630 --> 00:48:04,480
docking sequence the spacecraft must

785
00:48:08,470 --> 00:48:06,640
undergo a handful of checks before we

786
00:48:10,630 --> 00:48:08,480
will be able to open the hatch

787
00:48:12,390 --> 00:48:10,640
the crew on board dragon will now get a

788
00:48:14,470 --> 00:48:12,400

chance to get out of their suits before

789
00:48:15,030 --> 00:48:14,480
moving into the hatch operations which

790
00:48:17,430 --> 00:48:15,040
is

791
00:48:18,390 --> 00:48:17,440
why they're getting some privacy on uh

792
00:48:20,069 --> 00:48:18,400
dragon right now

793
00:48:21,510 --> 00:48:20,079
yeah that's right we heard that call for

794
00:48:23,349 --> 00:48:21,520
external cameras

795
00:48:25,510 --> 00:48:23,359
and as we also heard kate rubin's got

796
00:48:28,790 --> 00:48:25,520
the go to take down the station she was

797
00:48:30,790 --> 00:48:28,800
monitoring the crew dragon arrival from

798
00:48:32,549 --> 00:48:30,800
and she is also getting things ready on

799
00:48:33,990 --> 00:48:32,559
the station side to welcome her new

800
00:48:36,630 --> 00:48:34,000
crewmates aboard

801
00:48:38,390 --> 00:48:36,640
she's going to be getting the hatch

802
00:48:40,150 --> 00:48:38,400
ready to be open on the station side

803
00:48:44,790 --> 00:48:40,160
that's the no 2 hatch

804
00:48:47,030 --> 00:48:44,800
and then pressurizing that area known as

805
00:48:49,349 --> 00:48:47,040
the vestibule between dragon

806
00:48:51,270 --> 00:48:49,359
and the station hatches and the station

807
00:48:53,750 --> 00:48:51,280
hatch that we're looking at

808
00:48:54,309 --> 00:48:53,760
for that vestibule area is the a pass

809
00:48:56,309 --> 00:48:54,319
hatch

810
00:48:58,309 --> 00:48:56,319
we had a great view of that as crew

811
00:49:00,309 --> 00:48:58,319
dragon was flying in we also saw that

812
00:49:03,270 --> 00:49:00,319
little docking target

813
00:49:03,750 --> 00:49:03,280

for which crew dragon was able to align

814
00:49:05,829 --> 00:49:03,760
and

815
00:49:07,589 --> 00:49:05,839
kate rubens will pressurize that hatch

816
00:49:09,109 --> 00:49:07,599
we'll have a thermal stabilization

817
00:49:12,710 --> 00:49:09,119
period as well

818
00:49:14,630 --> 00:49:12,720
and this means we will pause for a while

819
00:49:16,470 --> 00:49:14,640
as we begin

820
00:49:17,910 --> 00:49:16,480
to do leak checks we want to make sure

821
00:49:20,470 --> 00:49:17,920
that there's no fluctuation

822
00:49:22,230 --> 00:49:20,480
in temperature that can make it look

823
00:49:24,470 --> 00:49:22,240
like there's a fluctuation in

824
00:49:26,150 --> 00:49:24,480
pressure so we'll be pausing for about

825
00:49:28,790 --> 00:49:26,160
30 minutes for that

826
00:49:30,790 --> 00:49:28,800
and once it evens out k rubens will open

827
00:49:31,990 --> 00:49:30,800
up that hat she'll remove the docking

828
00:49:34,549 --> 00:49:32,000
target

829
00:49:35,510 --> 00:49:34,559
and then it'll be a short matter of time

830
00:49:38,150 --> 00:49:35,520
before we see

831
00:49:39,670 --> 00:49:38,160
our crew dragon crew enter their new

832
00:49:42,309 --> 00:49:39,680
home aboard the international space

833
00:49:47,430 --> 00:49:45,190
very exciting so let's go to brandy dean

834
00:49:52,150 --> 00:49:47,440
for a refresher on what's ahead now that

835
00:49:55,510 --> 00:49:53,910
yeah it's so great to see a dragon

836
00:49:55,990 --> 00:49:55,520
they're docked on the end of the harmony

837
00:49:59,430 --> 00:49:56,000
node

838
00:50:02,470 --> 00:49:59,440

and uh ready for the new

839
00:50:04,470 --> 00:50:02,480
new joint expedition to begin

840
00:50:06,150 --> 00:50:04,480
what better way to celebrate 20 years of

841
00:50:07,109 --> 00:50:06,160
continuous human presence in space than

842
00:50:09,750 --> 00:50:07,119
by adding a

843
00:50:11,349 --> 00:50:09,760
seventh crew member to the long duration

844
00:50:13,030 --> 00:50:11,359
crew on board the space station

845
00:50:14,710 --> 00:50:13,040
allowing them to do more work and more

846
00:50:16,870 --> 00:50:14,720
science

847
00:50:18,470 --> 00:50:16,880
before we do get to that we do have to

848
00:50:19,270 --> 00:50:18,480
get them on the other side of the hatch

849
00:50:21,670 --> 00:50:19,280
and that is what

850
00:50:22,630 --> 00:50:21,680
is ahead of us for tonight now at this

851
00:50:24,230 --> 00:50:22,640
point

852
00:50:25,430 --> 00:50:24,240
uh that is still a little ways off

853
00:50:25,990 --> 00:50:25,440
because it does take a little bit of

854
00:50:27,750 --> 00:50:26,000
time to

855
00:50:29,190 --> 00:50:27,760
get all these patches open there's more

856
00:50:31,190 --> 00:50:29,200
than one in fact

857
00:50:32,549 --> 00:50:31,200
when kate rubens gets the go from the

858
00:50:34,470 --> 00:50:32,559
team here on the ground

859
00:50:36,069 --> 00:50:34,480
she will be doing a short check of the

860
00:50:38,069 --> 00:50:36,079
pressurization inside

861
00:50:39,990 --> 00:50:38,079
the pressurized mating adapter that is

862
00:50:42,790 --> 00:50:40,000
the tunnel that basically

863
00:50:43,910 --> 00:50:42,800

connects now the harmony node to the

864
00:50:45,670 --> 00:50:43,920
dragon

865
00:50:48,069 --> 00:50:45,680
um assuming that looks good and it

866
00:50:50,390 --> 00:50:48,079
should only take a minute or so

867
00:50:51,430 --> 00:50:50,400
that will be opened and then she can

868
00:50:53,510 --> 00:50:51,440
start

869
00:50:56,069 --> 00:50:53,520
the next step which will take a little

870
00:50:57,190 --> 00:50:56,079
longer the small area between the hatch

871
00:50:59,349 --> 00:50:57,200
on the space station

872
00:51:01,430 --> 00:50:59,359
and the dragon has been exposed to the

873
00:51:03,349 --> 00:51:01,440
vacuum of space until now

874
00:51:05,349 --> 00:51:03,359
so it needs to be filled with air and

875
00:51:08,309 --> 00:51:05,359
that takes a little while

876
00:51:09,030 --> 00:51:08,319
kate rubens will be working on that for

877
00:51:12,309 --> 00:51:09,040
for the next

878
00:51:14,069 --> 00:51:12,319
hour and a half or so but after that we

879
00:51:15,430 --> 00:51:14,079
will be able to see all the crew members

880
00:51:17,430 --> 00:51:15,440
together for the first time which we

881
00:51:18,790 --> 00:51:17,440
were really looking forward to

882
00:51:20,470 --> 00:51:18,800
but we'll keep following along in the

883
00:51:24,069 --> 00:51:20,480
meantime and for now i'll pass it back

884
00:51:28,630 --> 00:51:27,109
thanks brandy so exciting we're getting

885
00:51:31,670 --> 00:51:28,640
very very close

886
00:51:34,630 --> 00:51:31,680
it's been such an amazing journey

887
00:51:36,470 --> 00:51:34,640
since it launched yesterday at 7 27 pm

888
00:51:39,430 --> 00:51:36,480

eastern time we watched them

889
00:51:41,580 --> 00:51:39,440
from the beginning from them suiting up

890
00:51:43,190 --> 00:51:41,590
making their way to the pad

891
00:51:46,309 --> 00:51:43,200
[Music]

892
00:51:49,510 --> 00:51:46,319
riding these fixed service structure

893
00:51:52,710 --> 00:51:49,520
ingressing on dragon getting

894
00:51:56,790 --> 00:51:52,720
into their seats getting strapped in

895
00:52:00,390 --> 00:51:56,800
liftoff at 7 27 pm eastern time

896
00:52:03,670 --> 00:52:00,400
with a safe ride from falcon

897
00:52:06,069 --> 00:52:03,680
separating dragon into orbit it's an

898
00:52:08,069 --> 00:52:06,079
absolutely amazing journey

899
00:52:09,589 --> 00:52:08,079
it's it's that's the only word i can

900
00:52:12,470 --> 00:52:09,599
think of right now right

901
00:52:14,150 --> 00:52:12,480
27 and a half hours later it almost

902
00:52:16,069 --> 00:52:14,160
doesn't even feel like that long

903
00:52:17,190 --> 00:52:16,079
so i hope that they've had a good ride

904
00:52:19,430 --> 00:52:17,200
in dragon

905
00:52:21,030 --> 00:52:19,440
it was amazing to see crew dragon

906
00:52:23,750 --> 00:52:21,040
earlier that they were able to take us

907
00:52:26,710 --> 00:52:23,760
inside give us a little bit of a tour

908
00:52:28,150 --> 00:52:26,720
and then had those five major burns you

909
00:52:31,190 --> 00:52:28,160
know we had one last night

910
00:52:31,990 --> 00:52:31,200
the crew got some sleep and we had the

911
00:52:34,150 --> 00:52:32,000
rest today

912
00:52:35,430 --> 00:52:34,160
we also added in a few additional

913
00:52:37,270 --> 00:52:35,440

maneuvers in there

914
00:52:39,030 --> 00:52:37,280
or i should say the dragon computer

915
00:52:39,829 --> 00:52:39,040
added those maneuvers in there just to

916
00:52:41,589 --> 00:52:39,839
keep us

917
00:52:42,950 --> 00:52:41,599
on the right trajectory and obviously it

918
00:52:44,710 --> 00:52:42,960
did a great job

919
00:52:46,549 --> 00:52:44,720
crew dragon arrived at the international

920
00:52:50,549 --> 00:52:46,559
space station at 8 01

921
00:52:53,430 --> 00:52:50,559
pm pacific time 11 01 pm

922
00:52:55,430 --> 00:52:53,440
eastern time and this view coming from

923
00:52:56,790 --> 00:52:55,440
inside the international space station

924
00:52:59,910 --> 00:52:56,800
looking at the node 2

925
00:53:01,030 --> 00:52:59,920
hatch this is why kate rubens will open

926
00:53:03,190 --> 00:53:01,040
shortly and then

927
00:53:05,030 --> 00:53:03,200
begin pressurizing the vestibule that

928
00:53:10,470 --> 00:53:05,040
area between those two hatches

929
00:53:15,270 --> 00:53:14,390
this is so exciting it's been a long

930
00:53:18,230 --> 00:53:15,280
journey but

931
00:53:19,990 --> 00:53:18,240
so worth it they made it to the station

932
00:53:21,829 --> 00:53:20,000
safely

933
00:53:23,430 --> 00:53:21,839
can't wait for them to get through these

934
00:53:24,870 --> 00:53:23,440
next few processes

935
00:53:27,349 --> 00:53:24,880
do the leak checks and make sure

936
00:53:30,150 --> 00:53:27,359
everything is safe to open those hatches

937
00:53:30,630 --> 00:53:30,160
and then watch as the crew members the

938
00:53:35,349 --> 00:53:30,640

crew

939
00:53:37,910 --> 00:53:35,359
space station

940
00:53:38,950 --> 00:53:37,920
and it looks quiet in there right now

941
00:53:41,589 --> 00:53:38,960
and empty

942
00:53:43,190 --> 00:53:41,599
but in just over an hour and a half

943
00:53:45,589 --> 00:53:43,200
maybe we will see

944
00:53:46,630 --> 00:53:45,599
probably seven people crammed into this

945
00:53:48,710 --> 00:53:46,640
small space

946
00:54:07,030 --> 00:53:48,720
hugging and welcoming each other to the

947
00:54:12,150 --> 00:54:09,990
we're keeping an eye on crew dragon and

948
00:54:15,349 --> 00:54:12,160
on the international space station

949
00:54:17,109 --> 00:54:15,359
as they continue this uh these checks

950
00:54:19,589 --> 00:54:17,119
crew dragon crew members will begin

951
00:54:21,030 --> 00:54:19,599
doffing their suits here soon

952
00:54:23,109 --> 00:54:21,040
kate rubens will get to work on the

953
00:54:26,230 --> 00:54:23,119
station side opening this hatch

954
00:54:28,309 --> 00:54:26,240
conducting leak checks pressurizing the

955
00:54:32,069 --> 00:54:28,319
vestibule and eventually

956
00:54:34,870 --> 00:54:32,079
welcoming our crew members on board

957
00:54:37,990 --> 00:54:34,880
we will have a welcome ceremony so stay

958
00:54:39,910 --> 00:54:38,000
tuned with us we will stay live

959
00:54:41,910 --> 00:54:39,920
yes and we will definitely stay live as

960
00:54:44,549 --> 00:54:41,920
we move through all of these checks

961
00:54:45,030 --> 00:54:44,559
we'll keep you updated as they progress

962
00:54:46,870 --> 00:54:45,040
and

963
00:54:48,870 --> 00:54:46,880

you'll get to watch the crew members

964
00:54:50,710 --> 00:54:48,880
float through

965
00:55:55,510 --> 00:54:50,720
making their home on the international

966
00:56:04,150 --> 00:55:57,990
dragon spacex on the big loop iss power

967
00:56:04,160 --> 00:57:01,670
dragon copy is good news

968
00:57:08,710 --> 00:57:03,589
station houston on space to ground two

969
00:57:18,549 --> 00:57:11,829
happy i'm just waiting on your go

970
00:57:18,559 --> 01:03:41,270
we go in 1.1 and 2.2 in work

971
01:03:45,589 --> 01:03:43,430
that is kate rubins aboard the

972
01:03:46,150 --> 01:03:45,599
international space station stepping

973
01:03:48,789 --> 01:03:46,160
through

974
01:03:49,670 --> 01:03:48,799
the procedures to bring crew dragon on

975
01:03:51,670 --> 01:03:49,680
board

976
01:03:54,069 --> 01:03:51,680
and the hatch she just opened obviously

977
01:03:57,109 --> 01:03:54,079
is on the station side of node 2.

978
01:04:01,349 --> 01:03:57,119
that is the pressurized mating adapter

979
01:04:05,829 --> 01:04:03,910
she's got several several more steps on

980
01:04:07,990 --> 01:04:05,839
her side to go

981
01:04:09,029 --> 01:04:08,000
meanwhile the crew aboard crew dragon

982
01:04:11,190 --> 01:04:09,039
will be doffing

983
01:04:13,510 --> 01:04:11,200
their suits or taking them off drying

984
01:04:14,950 --> 01:04:13,520
and stowing them

985
01:04:26,470 --> 01:04:14,960
they'll also be stowing any of the

986
01:04:28,630 --> 01:04:26,480
equipment that they used

987
01:04:30,470 --> 01:04:28,640
sensation space to ground two the node

988
01:04:33,829 --> 01:04:30,480

two forward hatch is

989
01:04:36,710 --> 01:04:33,839
open and the m is untapped

990
01:04:47,829 --> 01:04:36,720
in step one decimal two and one decimal

991
01:04:52,549 --> 01:04:50,710
and that was cake just confirming that

992
01:04:56,630 --> 01:04:52,559
that hatch

993
01:04:57,829 --> 01:04:56,640
is now open and she is speaking with the

994
01:05:02,309 --> 01:04:57,839
capcom

995
01:05:07,670 --> 01:05:02,319
stands for capsule communicator

996
01:05:11,349 --> 01:05:09,349
back in the days when we were just

997
01:05:11,829 --> 01:05:11,359
flying capsules and of course we moved

998
01:05:13,270 --> 01:05:11,839
to

999
01:05:14,950 --> 01:05:13,280
the space shuttle program not

1000
01:05:18,309 --> 01:05:14,960
necessarily a capsule and

1001
01:05:20,230 --> 01:05:18,319
here we are in a capsule again

1002
01:05:21,670 --> 01:05:20,240
however capcom is the person that speaks

1003
01:05:23,829 --> 01:05:21,680
with the astronauts aboard the

1004
01:05:25,750 --> 01:05:23,839
international space station they relay

1005
01:05:29,270 --> 01:05:25,760
everything that's happening on the

1006
01:05:32,950 --> 01:05:31,430
this keeps them from getting too much

1007
01:05:36,870 --> 01:05:32,960
information coming from too many

1008
01:05:39,029 --> 01:05:36,880
different directions

1009
01:05:46,549 --> 01:05:39,039
you see kate rubens ingressing the

1010
01:05:51,990 --> 01:05:50,069
she'll also need to conduct

1011
01:05:53,109 --> 01:05:52,000
she'll need to pressurize the vestibule

1012
01:05:56,870 --> 01:05:53,119
that's the

1013
01:05:58,870 --> 01:05:56,880

dragon

1014
01:06:00,789 --> 01:05:58,880
and the international space station that

1015
01:06:03,029 --> 01:06:00,799
vestibule area

1016
01:06:05,270 --> 01:06:03,039
and the a pass hatch was what was

1017
01:06:07,589 --> 01:06:05,280
exposed to the vacuum of space

1018
01:06:09,910 --> 01:06:07,599
prior to crew dragon's arrival so we

1019
01:06:16,829 --> 01:06:09,920
want to make that the same pressure as

1020
01:06:16,839 --> 01:06:21,670
station

1021
01:06:25,270 --> 01:06:23,670
looks pretty easy to get around in the

1022
01:06:28,630 --> 01:06:25,280
space station

1023
01:06:38,789 --> 01:06:28,640
see her gliding around as she's grabbing

1024
01:06:43,029 --> 01:06:41,510
kate will begin opening a valve on the

1025
01:06:47,270 --> 01:06:43,039
apex hatch to

1026
01:06:48,789 --> 01:06:47,280
slowly let air in pausing along the way

1027
01:06:51,029 --> 01:06:48,799
and we'll also do a thermal

1028
01:06:51,670 --> 01:06:51,039
stabilization making sure that the

1029
01:06:54,069 --> 01:06:51,680
temperature

1030
01:06:54,789 --> 01:06:54,079
isn't changing in that vestibule area

1031
01:06:59,270 --> 01:06:54,799
giving us

1032
01:07:01,430 --> 01:06:59,280
signals that are that are changing

1033
01:07:02,630 --> 01:07:01,440
when it comes to the pressure we want to

1034
01:07:05,029 --> 01:07:02,640
see inside so

1035
01:07:08,069 --> 01:07:05,039
we'll end up pausing for about 30

1036
01:07:10,069 --> 01:07:08,079
minutes to make sure that is leveled out

1037
01:07:12,470 --> 01:07:10,079
eventually kate rubens will open up the

1038
01:07:14,950 --> 01:07:12,480

a pass hatch

1039
01:07:17,270 --> 01:07:14,960
remove the docking target that we saw as

1040
01:07:20,309 --> 01:07:17,280
crew dragon was flying in that's what

1041
01:07:23,829 --> 01:07:20,319
the vehicle uses to align

1042
01:07:27,190 --> 01:07:23,839
with the international space station

1043
01:07:29,510 --> 01:07:27,200
she will stow that docking target

1044
01:07:31,750 --> 01:07:29,520
and then it'll be time for our crew

1045
01:07:35,270 --> 01:07:31,760
aboard crew dragon

1046
01:07:38,309 --> 01:07:35,280
to ingress the space station

1047
01:07:41,109 --> 01:07:38,319
what a cool view we are getting here

1048
01:07:41,829 --> 01:07:41,119
from the space station looking out at

1049
01:07:54,150 --> 01:07:41,839
dragon

1050
01:07:55,589 --> 01:07:54,160
and you can see those solar arrays are

1051
01:07:57,270 --> 01:07:55,599
they're not really arrays they're solar

1052
01:07:58,230 --> 01:07:57,280
cells and they're wrapped around the

1053
01:08:01,270 --> 01:07:58,240
body

1054
01:08:04,309 --> 01:08:01,280
of dragon that's the safety ground two

1055
01:08:07,109 --> 01:08:04,319
instead of two decimal four at zero

1056
01:08:17,030 --> 01:08:07,119
four thirty eight a pass equalization

1057
01:08:23,269 --> 01:08:18,870
copy okay we see good festival

1058
01:08:27,829 --> 01:08:25,990
and i would put a warning there uh or at

1059
01:08:31,749 --> 01:08:27,839
least a note for the crew about

1060
01:08:46,709 --> 01:08:39,590
we copycat

1061
01:08:46,719 --> 01:09:01,510
we'll have to beef up our simulators

1062
01:09:05,030 --> 01:09:03,669
okay rubens is talking with our capcom

1063
01:09:07,829 --> 01:09:05,040

megan levins who

1064
01:09:09,669 --> 01:09:07,839
is a trainer she was saying that letting

1065
01:09:14,229 --> 01:09:09,679
that air into the vestibule was a little

1066
01:09:19,110 --> 01:09:17,349
but she did let in 75 seconds of air

1067
01:09:21,590 --> 01:09:19,120
beginning to pressurize the vest to view

1068
01:09:22,550 --> 01:09:21,600
all that space between the apas hatch on

1069
01:09:25,669 --> 01:09:22,560
the station

1070
01:09:27,269 --> 01:09:25,679
and the crew dragon hatch

1071
01:09:29,030 --> 01:09:27,279
as we were discussing though you can see

1072
01:09:31,189 --> 01:09:29,040
those solar cells

1073
01:09:32,149 --> 01:09:31,199
um the top half of dragon on the trunk

1074
01:09:35,349 --> 01:09:32,159
that's the black

1075
01:09:36,709 --> 01:09:35,359
section it's allowed dragon to gather

1076
01:09:38,390 --> 01:09:36,719
energy from the sun

1077
01:09:40,390 --> 01:09:38,400
on its journey to the international

1078
01:09:42,309 --> 01:09:40,400
space station meanwhile

1079
01:09:44,789 --> 01:09:42,319
on the bottom half of the trunk the the

1080
01:09:47,430 --> 01:09:44,799
white side is a thermal radiator

1081
01:09:49,749 --> 01:09:47,440
it can help keep dragon cool however

1082
01:09:51,510 --> 01:09:49,759
crew dragon now being attached to the

1083
01:09:54,709 --> 01:09:51,520
international space station

1084
01:10:03,189 --> 01:09:54,719
is running on space station power rather

1085
01:10:06,870 --> 01:10:03,199
than any power of its own

1086
01:10:10,390 --> 01:10:06,880
and as we're getting ready for these

1087
01:10:11,830 --> 01:10:10,400
hatches uh to be open a dragon will

1088
01:10:15,110 --> 01:10:11,840

actually use sensors

1089
01:10:16,790 --> 01:10:15,120
uh on board dragon to check

1090
01:10:30,630 --> 01:10:16,800
the pressure inside of the vestibule

1091
01:10:34,229 --> 01:10:30,640
before we open up that dragon hatch

1092
01:10:35,830 --> 01:10:34,239
this all comes again after crew dragons

1093
01:10:38,149 --> 01:10:35,840
contact with the international space

1094
01:10:41,669 --> 01:10:38,159
station happening tonight at 801

1095
01:10:43,430 --> 01:10:41,679
pm pacific time dragon houston on space

1096
01:10:44,790 --> 01:10:43,440
to ground two we will be transitioning

1097
01:11:01,510 --> 01:10:44,800
audio so you will be

1098
01:11:04,709 --> 01:11:03,669
the houston team letting crew dragon

1099
01:11:07,990 --> 01:11:04,719
crew know they're

1100
01:11:09,110 --> 01:11:08,000
reconfiguring uh two different audio

1101
01:11:12,709 --> 01:11:09,120
configurations

1102
01:11:14,390 --> 01:11:12,719
and they'll regain communications with

1103
01:11:16,390 --> 01:11:14,400
them shortly

1104
01:11:17,430 --> 01:11:16,400
as we saw earlier the crew asked that

1105
01:11:20,149 --> 01:11:17,440
the

1106
01:11:21,030 --> 01:11:20,159
cameras inside be made external so we

1107
01:11:23,110 --> 01:11:21,040
wouldn't get any

1108
01:11:24,550 --> 01:11:23,120
interior views of crew dragon that's

1109
01:11:27,430 --> 01:11:24,560
because they will be

1110
01:11:29,270 --> 01:11:27,440
doffing their suits getting back into

1111
01:11:32,070 --> 01:11:29,280
those comfortable clothes

1112
01:11:33,910 --> 01:11:32,080
preparing to ingress or enter the

1113
01:11:36,630 --> 01:11:33,920

international space station

1114
01:11:37,830 --> 01:11:36,640
once all of this pressurization of the

1115
01:11:40,149 --> 01:11:37,840
vestibule

1116
01:11:41,590 --> 01:11:40,159
and leak checks are complete spacex is a

1117
01:11:49,750 --> 01:11:41,600
dragon on dragging the ground we're

1118
01:11:53,510 --> 01:11:51,110
hey just want to give you a heads up

1119
01:11:53,990 --> 01:11:53,520
five alpha decimal five suit giant is

1120
01:12:09,110 --> 01:11:54,000
started

1121
01:12:12,550 --> 01:12:09,120
for all four suits

1122
01:12:18,790 --> 01:12:12,560
okay copy that uh for decimal uh

1123
01:12:22,149 --> 01:12:20,950
so it sounds like the crew is out of

1124
01:13:02,830 --> 01:12:22,159
their suits now

1125
01:13:02,840 --> 01:13:09,350
so

1126
01:13:12,709 --> 01:13:12,070
and if you are just now joining us

1127
01:13:16,470 --> 01:13:12,719
dragon

1128
01:13:20,390 --> 01:13:16,480
is now hard captured

1129
01:13:23,669 --> 01:13:20,400
to the international space station

1130
01:13:26,709 --> 01:13:23,679
kate rubins is helping to

1131
01:13:30,790 --> 01:13:26,719
get the vestibule ready and

1132
01:13:37,590 --> 01:13:30,800
to the um and and prepared for

1133
01:13:42,470 --> 01:13:40,709
we also saw kate rubins getting that

1134
01:13:44,390 --> 01:13:42,480
ready on the station side she's already

1135
01:13:45,430 --> 01:13:44,400
opened the pressurized mating adapter

1136
01:13:51,669 --> 01:13:45,440
hatch

1137
01:13:58,830 --> 01:13:54,229
and what you can see on your screen is

1138
01:14:02,229 --> 01:14:00,390

california

1139
01:14:03,669 --> 01:14:02,239
they are getting to get they just got

1140
01:14:06,870 --> 01:14:03,679
together for a group

1141
01:14:10,310 --> 01:14:06,880
photo in celebration of this amazing

1142
01:14:17,110 --> 01:14:15,590
a lot of hard work put into this mission

1143
01:14:20,149 --> 01:14:17,120
so definitely want to capture that

1144
01:14:22,470 --> 01:14:20,159
moment absolutely

1145
01:14:24,790 --> 01:14:22,480
and right back to their stations they go

1146
01:14:27,350 --> 01:14:24,800
still monitoring the vehicle

1147
01:14:29,110 --> 01:14:27,360
it has been 27 and a half hours maybe

1148
01:14:31,590 --> 01:14:29,120
actually a little bit longer now

1149
01:14:34,229 --> 01:14:31,600
of course uh the teams rotate out every

1150
01:14:37,430 --> 01:14:34,239
eight or nine hours to keep them fresh

1151
01:14:40,070 --> 01:14:37,440
but a lot of work put in on both the

1152
01:14:43,030 --> 01:14:40,080
nasa and spacex sides to make this

1153
01:14:45,030 --> 01:14:43,040
happen today bringing the first

1154
01:14:46,470 --> 01:14:45,040
long-duration crew to the international

1155
01:14:49,590 --> 01:14:46,480
space station

1156
01:14:52,550 --> 01:14:49,600
and so exciting um

1157
01:14:54,870 --> 01:14:52,560
very close for the crew to enter station

1158
01:14:58,790 --> 01:14:54,880
we're just getting prepared making sure

1159
01:15:00,630 --> 01:14:58,800
that the hatch the leak checks are

1160
01:15:01,510 --> 01:15:00,640
complete before we open up the hatches

1161
01:15:03,590 --> 01:15:01,520
and let the crew

1162
01:15:06,149 --> 01:15:03,600
on board crews already out of their

1163
01:15:08,470 --> 01:15:06,159

suits they're getting comfortable

1164
01:15:09,750 --> 01:15:08,480
and getting ready to board the

1165
01:15:13,830 --> 01:15:09,760
international state

1166
01:15:16,229 --> 01:15:13,840
space station we'll also be

1167
01:15:17,990 --> 01:15:16,239
uh anticipating a welcome ceremony later

1168
01:15:20,709 --> 01:15:18,000
tonight for the crew once they

1169
01:15:22,070 --> 01:15:20,719
ingress the international space station

1170
01:15:24,229 --> 01:15:22,080
we'll get to watch them

1171
01:15:25,189 --> 01:15:24,239
greet all of their colleagues currently

1172
01:15:27,350 --> 01:15:25,199
aboard

1173
01:15:30,390 --> 01:15:27,360
and then we will see them speak with the

1174
01:15:32,229 --> 01:15:30,400
ground for a little while as well

1175
01:15:33,510 --> 01:15:32,239
we've talked about a lot of firsts on

1176
01:15:35,270 --> 01:15:33,520
this mission

1177
01:15:36,550 --> 01:15:35,280
as we mentioned this is the first

1178
01:15:39,189 --> 01:15:36,560
four-person

1179
01:15:41,350 --> 01:15:39,199
capsule space flight ever and it will

1180
01:15:41,910 --> 01:15:41,360
also become the longest flight of a

1181
01:15:44,790 --> 01:15:41,920
crude

1182
01:15:45,189 --> 01:15:44,800
u.s capsule my previous record was sky

1183
01:15:48,630 --> 01:15:45,199
lab

1184
01:15:50,229 --> 01:15:48,640
4 and that was in 1973 it lasted for 84

1185
01:16:01,990 --> 01:15:50,239
days

1186
01:16:05,669 --> 01:16:04,070
right now on your screen if you're just

1187
01:16:08,390 --> 01:16:05,679
now joining us

1188
01:16:08,950 --> 01:16:08,400

you are looking at a live view of dragon

1189
01:16:12,149 --> 01:16:08,960
docked

1190
01:16:15,590 --> 01:16:12,159
to the international space station

1191
01:16:19,189 --> 01:16:15,600
the crew still inside dragon

1192
01:16:21,189 --> 01:16:19,199
preparing for hatch opening

1193
01:16:22,790 --> 01:16:21,199
uh they're out of their suits now

1194
01:16:24,229 --> 01:16:22,800
getting into some more comfortable

1195
01:16:27,669 --> 01:16:24,239
clothes

1196
01:16:30,709 --> 01:16:27,679
their suits are currently drying

1197
01:16:31,750 --> 01:16:30,719
and depending on how long these

1198
01:16:34,310 --> 01:16:31,760
processes take

1199
01:16:37,990 --> 01:16:34,320
for uh the leak checks and

1200
01:16:41,270 --> 01:16:38,000
pressurization of the vestibule

1201
01:16:44,229 --> 01:16:41,280
the crew will be boarding shortly

1202
01:16:46,070 --> 01:16:44,239
and will be having a welcome ceremony

1203
01:16:49,350 --> 01:16:46,080
and this all comes after

1204
01:16:51,030 --> 01:16:49,360
soft capture of the crew dragon vehicle

1205
01:16:54,070 --> 01:16:51,040
happened at 801

1206
01:16:56,950 --> 01:16:54,080
pm pacific time tonight 11 01

1207
01:16:59,510 --> 01:16:56,960
pm eastern time crew dragon and the

1208
01:17:00,790 --> 01:16:59,520
international space station flying 262

1209
01:18:05,189 --> 01:17:00,800
statute miles

1210
01:18:10,830 --> 01:18:06,790
three different folders of dragon

1211
01:18:16,149 --> 01:18:12,550
ssc8

1212
01:18:21,510 --> 01:18:16,159
forward to looking

1213
01:18:29,750 --> 01:18:23,189

i think there's some pretty nice ones

1214
01:18:38,790 --> 01:18:31,510
it is known objectively to be a very

1215
01:18:38,800 --> 01:19:18,630
absolutely concur

1216
01:19:23,110 --> 01:19:20,790
are you okay with the node 2 hi-def or

1217
01:19:25,110 --> 01:19:23,120
standard desk cameras for the setup for

1218
01:19:26,310 --> 01:19:25,120
isis experience record i'll do it in

1219
01:19:27,590 --> 01:19:26,320
front of the camera that way we don't

1220
01:19:36,390 --> 01:19:27,600
have to change the view that we've

1221
01:19:44,950 --> 01:19:36,400
gotten prepped for pio setup

1222
01:19:51,270 --> 01:19:48,790
back in at 4.400 already if you report

1223
01:20:03,430 --> 01:19:51,280
states of charge when ready

1224
01:20:07,030 --> 01:20:06,229
okay spacex uh tablet states of charge

1225
01:20:11,270 --> 01:20:07,040
commander

1226
01:20:14,870 --> 01:20:11,280
four two ms-145

1227
01:20:34,790 --> 01:20:14,880
ms2 tree niner and plt six

1228
01:20:34,800 --> 01:20:58,229
and ms2 is 339.39

1229
01:21:14,070 --> 01:21:00,390
station huntsville on space to ground 2

1230
01:21:16,149 --> 01:21:14,080
for kate and video

1231
01:21:17,750 --> 01:21:16,159
morning kate we think that's a good view

1232
01:21:19,270 --> 01:21:17,760
for now we may need you to make some

1233
01:21:24,709 --> 01:21:19,280
adjustments once you get into the

1234
01:21:24,719 --> 01:23:40,870
okay thanks

1235
01:24:14,550 --> 01:23:42,629
dragon houston on space ground two for

1236
01:24:14,560 --> 01:24:28,830
dragon houston on the big loop for

1237
01:24:28,840 --> 01:24:32,870
comcheck

1238
01:24:38,790 --> 01:24:34,870

and houston this is dragon on the big

1239
01:24:38,800 --> 01:24:47,910
we have you loud and clear

1240
01:24:47,920 --> 01:24:54,070
[Music]

1241
01:24:59,510 --> 01:24:55,510
houston we were just giving you a comm

1242
01:25:57,350 --> 01:24:59,520
check we have you loud and clear

1243
01:25:57,360 --> 01:26:06,830
dragon spacex on space ground 2

1244
01:26:10,870 --> 01:26:08,790
comcheck

1245
01:26:15,030 --> 01:26:10,880
and spacex this is dragon on space to

1246
01:26:18,550 --> 01:26:17,910
excellent excellent i have you the same

1247
01:26:19,910 --> 01:26:18,560
and

1248
01:26:24,870 --> 01:26:19,920
do we have your permission to come back

1249
01:26:31,510 --> 01:26:27,030
negative at this time we are still doing

1250
01:26:39,270 --> 01:26:36,709
totally fine sounds good thanks

1251
01:26:40,070 --> 01:26:39,280
yeah no problem and just let you know as

1252
01:26:41,830 --> 01:26:40,080
well

1253
01:26:50,149 --> 01:26:41,840
we are not hearing any echoes on board

1254
01:30:05,030 --> 01:26:50,159
at this time

1255
01:30:08,629 --> 01:30:06,790
facing around two if you guys need a

1256
01:30:11,510 --> 01:30:08,639
view of the

1257
01:30:11,990 --> 01:30:11,520
iss experience setup i can move the node

1258
01:30:14,390 --> 01:30:12,000
to

1259
01:30:15,189 --> 01:30:14,400
sd cam a little bit i just would rather

1260
01:30:17,189 --> 01:30:15,199
not move the

1261
01:30:25,189 --> 01:30:17,199
hd cam we got that all set up and did

1262
01:46:15,189 --> 01:30:27,990
and we copy kate standby i think we're

1263
01:46:19,030 --> 01:46:17,109

this is a live look inside the

1264
01:46:21,189 --> 01:46:19,040
international space station

1265
01:46:22,470 --> 01:46:21,199
and we have been covering the arrival of

1266
01:46:25,270 --> 01:46:22,480
the crew dragon

1267
01:46:27,109 --> 01:46:25,280
crew one mission now having arrived at

1268
01:46:29,990 --> 01:46:27,119
the international space station docking

1269
01:46:33,189 --> 01:46:30,000
coming at 801 pm pacific time

1270
01:46:34,870 --> 01:46:33,199
11 01 pm eastern time as the

1271
01:46:37,109 --> 01:46:34,880
international space station was flying

1272
01:46:40,070 --> 01:46:37,119
262 statute miles over

1273
01:46:41,510 --> 01:46:40,080
idaho and since that time there have

1274
01:46:44,070 --> 01:46:41,520
been several steps

1275
01:46:45,669 --> 01:46:44,080
through which the crew dragon crew and

1276
01:46:48,390 --> 01:46:45,679
the crew aboard the international space

1277
01:46:50,070 --> 01:46:48,400
station kate rubens as you see here

1278
01:46:55,990 --> 01:46:50,080
they need to step through those before

1279
01:47:00,149 --> 01:46:59,109
kate rubens first opened that impasse

1280
01:47:02,310 --> 01:47:00,159
hatch

1281
01:47:05,030 --> 01:47:02,320
on the international space station in

1282
01:47:07,669 --> 01:47:05,040
node two or sorry the pma hatch

1283
01:47:09,750 --> 01:47:07,679
the pressurized mating adapter and she

1284
01:47:14,629 --> 01:47:09,760
is inside that right now

1285
01:47:16,950 --> 01:47:14,639
and right behind her is the a pass hatch

1286
01:47:18,870 --> 01:47:16,960
she worked to pressurize the vestibule

1287
01:47:21,350 --> 01:47:18,880
the vestibule is a space between the a

1288
01:47:22,470 --> 01:47:21,360

pass hatch on the station side and

1289
01:47:25,430 --> 01:47:22,480
dragons hatch

1290
01:47:28,550 --> 01:47:25,440
previously before dragon docked the apas

1291
01:47:30,550 --> 01:47:28,560
hatch was exposed to the vacuum of space

1292
01:47:32,229 --> 01:47:30,560
and so we wanted to pressurize that area

1293
01:47:35,590 --> 01:47:32,239
make it the same pressure as the space

1294
01:47:37,590 --> 01:47:35,600
station and crew dragon

1295
01:47:39,510 --> 01:47:37,600
so we can open that and and begin

1296
01:47:41,669 --> 01:47:39,520
welcoming our crew members aboard so

1297
01:47:43,350 --> 01:47:41,679
the vestibule has been pressurized we'll

1298
01:47:45,590 --> 01:47:43,360
see her do some work on the space

1299
01:47:47,510 --> 01:47:45,600
station a pass hatch

1300
01:47:49,189 --> 01:47:47,520
once it's open she'll remove the docking

1301
01:47:52,470 --> 01:47:49,199
target that the

1302
01:47:56,229 --> 01:47:52,480
crew dragon vehicle used to locate

1303
01:47:59,510 --> 01:47:56,239
and align itself with node 2.

1304
01:48:01,590 --> 01:47:59,520
eventually we will see the crew members

1305
01:48:03,109 --> 01:48:01,600
come through the crew dragon hatch after

1306
01:48:05,350 --> 01:48:03,119
that is opened

1307
01:48:07,669 --> 01:48:05,360
in the meantime they've been doffing or

1308
01:48:11,109 --> 01:48:07,679
taking off their spacesuits

1309
01:48:12,629 --> 01:48:11,119
getting into their comfortable clothes

1310
01:48:25,109 --> 01:48:12,639
stowing some things that they've been

1311
01:48:29,030 --> 01:48:27,350
with the pressure pressurization of the

1312
01:48:32,149 --> 01:48:29,040
vestibule

1313
01:48:34,149 --> 01:48:32,159

we do a thermal stabilization check

1314
01:48:34,950 --> 01:48:34,159
meaning we hold for about 30 minutes to

1315
01:48:36,790 --> 01:48:34,960
make sure

1316
01:48:38,629 --> 01:48:36,800
temperatures aren't fluctuating in the

1317
01:48:42,470 --> 01:48:38,639
vestibule area which could give

1318
01:48:43,990 --> 01:48:42,480
us misleading data leading us to believe

1319
01:48:45,510 --> 01:48:44,000
that the pressure itself is

1320
01:48:49,030 --> 01:48:45,520
changing but it sounds like everything

1321
01:48:52,950 --> 01:48:51,270
we're one step closer to being able to

1322
01:49:02,149 --> 01:48:52,960
welcome the crew members aboard the

1323
01:49:05,750 --> 01:49:03,750
also coming up later tonight we will

1324
01:49:08,310 --> 01:49:05,760
have a welcome ceremony

1325
01:49:13,990 --> 01:49:08,320
with the crew they'll be speaking with

1326
01:49:16,149 --> 01:49:14,000
teams on the ground

1327
01:49:18,310 --> 01:49:16,159
and this arrival kicks off a six-month

1328
01:49:21,109 --> 01:49:18,320
mission for the crew members

1329
01:49:23,510 --> 01:49:21,119
our crew of four commander mike hopkins

1330
01:49:25,910 --> 01:49:23,520
pilot victor glover mission specialist

1331
01:49:27,109 --> 01:49:25,920
shannon walker and our international

1332
01:49:29,629 --> 01:49:27,119
partner japanese

1333
01:49:32,149 --> 01:49:29,639
aerospace exploration agency astronaut

1334
01:49:50,390 --> 01:49:32,159
suicinaguchi

1335
01:49:50,400 --> 01:49:53,830
hey we can too

1336
01:49:58,070 --> 01:49:56,790
okay well we are troubleshooting the iss

1337
01:50:05,510 --> 01:49:58,080
experience here on the ground

1338
01:50:05,520 --> 01:50:19,830

that's excellent i just opened it

1339
01:50:24,310 --> 01:50:22,149
all right copy go for the ingress part

1340
01:50:26,629 --> 01:50:24,320
two and i am stepping in

1341
01:50:27,589 --> 01:50:26,639
on step three decimal one so i have to

1342
01:50:38,550 --> 01:50:27,599
go for the a pass

1343
01:50:42,790 --> 01:50:38,560
equalization valve open that's kurt kate

1344
01:50:49,669 --> 01:50:46,950
thanks heard kate rubin speaking with

1345
01:50:51,830 --> 01:50:49,679
the capcom in mission control houston

1346
01:50:53,750 --> 01:50:51,840
discussing troubleshooting the iss

1347
01:50:56,790 --> 01:50:53,760
experience

1348
01:50:58,709 --> 01:50:56,800
that is a payload allowing them to

1349
01:51:01,430 --> 01:50:58,719
record what's happening aboard the

1350
01:51:03,430 --> 01:51:01,440
international space station obviously

1351
01:51:06,070 --> 01:51:03,440
we have these views here but that is a

1352
01:51:07,430 --> 01:51:06,080
special payload

1353
01:51:18,070 --> 01:51:07,440
so they were just working on getting

1354
01:51:18,080 --> 01:51:46,830
is open use copies

1355
01:51:51,910 --> 01:51:49,510
this so kate just opened up

1356
01:51:53,030 --> 01:51:51,920
the equalization valve and this will let

1357
01:51:55,750 --> 01:51:53,040
air in

1358
01:51:57,430 --> 01:51:55,760
to the vestibule from the space station

1359
01:51:59,030 --> 01:51:57,440
um we'll be monitoring for your

1360
01:52:03,589 --> 01:51:59,040
instep three decimal two since you've

1361
01:52:14,830 --> 01:52:03,599
got better insights

1362
01:52:14,840 --> 01:52:26,709
go

1363
01:52:32,709 --> 01:52:30,390

and that was confirmation that

1364
01:52:35,109 --> 01:52:32,719
the pressure is now equal between the

1365
01:52:37,030 --> 01:52:35,119
vestibule and the space station

1366
01:52:38,709 --> 01:52:37,040
so we're getting very very close to this

1367
01:52:45,030 --> 01:52:38,719
hatch opening

1368
01:52:46,470 --> 01:52:45,040
step by step but almost there

1369
01:52:49,510 --> 01:52:46,480
sounds like we're running about 15

1370
01:53:06,229 --> 01:52:49,520
minutes ahead in the process as well so

1371
01:53:06,239 --> 01:53:10,390
coming up on about

1372
01:53:14,550 --> 01:53:12,870
since our crew launched at 7 27 pm

1373
01:53:18,950 --> 01:53:14,560
eastern time

1374
01:53:22,310 --> 01:53:18,960
yesterday coming up on about 28

1375
01:53:23,910 --> 01:53:22,320
hours 29 hours since their launch

1376
01:53:26,390 --> 01:53:23,920
and their journey began in the crew

1377
01:53:28,310 --> 01:53:26,400
dragon vehicle

1378
01:53:33,669 --> 01:53:28,320
association that's right in two steps

1379
01:53:33,679 --> 01:55:17,030
copy 524

1380
01:55:21,990 --> 01:55:20,149
okay rubens is in the pressurized mating

1381
01:55:25,750 --> 01:55:22,000
adapter now working on the a

1382
01:55:29,750 --> 01:55:28,470
she is installing a tool on the hatch

1383
01:55:33,430 --> 01:55:29,760
that's used to

1384
01:55:36,470 --> 01:55:33,440
open it as we heard earlier the

1385
01:55:37,109 --> 01:55:36,480
pressure is equal where the space

1386
01:55:39,270 --> 01:55:37,119
between

1387
01:55:58,830 --> 01:55:39,280
the a pass hatch and the crew dragon

1388
01:55:58,840 --> 01:56:59,109

so

1389
01:57:03,910 --> 01:57:01,910
once kate rubens opens the a pass hatch

1390
01:57:07,510 --> 01:57:03,920
she may get a look at the crew

1391
01:57:14,550 --> 01:57:07,520
there is a small window on the forward

1392
01:57:18,790 --> 01:57:16,390
during dm2 i believe we got a peek at

1393
01:57:21,750 --> 01:57:18,800
bob behnken and doug hurley inside

1394
01:57:24,950 --> 01:57:21,760
crew dragon after it had docked through

1395
01:57:26,629 --> 01:57:24,960
that very window meanwhile kate rubin's

1396
01:57:27,109 --> 01:57:26,639
taking some pictures to share with the

1397
01:57:29,750 --> 01:57:27,119
ground

1398
01:57:31,589 --> 01:57:29,760
later these are still very new

1399
01:57:32,790 --> 01:57:31,599
operations for the international space

1400
01:57:35,750 --> 01:57:32,800
station and so

1401
01:57:38,709 --> 01:57:35,760
gathering this data and relaying it to

1402
01:58:23,669 --> 01:57:38,719
the ground helps inform

1403
01:58:32,830 --> 01:58:25,510
season station two stepping into three

1404
01:58:32,840 --> 01:58:37,750
kabul

1405
01:58:42,310 --> 01:58:40,149
kate rubins is following some standard

1406
01:58:44,870 --> 01:58:42,320
procedures

1407
01:58:48,070 --> 01:58:44,880
and that is what she is that is what she

1408
01:58:52,709 --> 01:58:48,080
is confirming

1409
02:00:03,270 --> 01:58:54,870
and even those photos are part of the

1410
02:00:14,629 --> 02:00:05,189
confirm this is a pull straight out for

1411
02:00:20,950 --> 02:00:16,470
you are correct and it usually does take

1412
02:00:23,350 --> 02:00:22,070
all right i didn't want to put force

1413
02:00:25,189 --> 02:00:23,360

into the system unless you guys were

1414
02:00:26,709 --> 02:00:25,199
expecting it but it has definitely

1415
02:00:28,470 --> 02:00:26,719
got some good self-sealing there from

1416
02:00:37,189 --> 02:00:28,480
the vacuum

1417
02:00:41,430 --> 02:00:39,270
kate rubin's now preparing to open that

1418
02:00:43,430 --> 02:00:41,440
a pass hatch

1419
02:00:44,550 --> 02:00:43,440
making sure what she's experiencing is

1420
02:00:47,910 --> 02:00:44,560
nominal

1421
02:00:50,070 --> 02:00:47,920
the ground confirms it may be a little

1422
02:00:50,950 --> 02:00:50,080
tough to open up that hatch this is the

1423
02:00:55,830 --> 02:00:50,960
whole

1424
02:00:59,990 --> 02:00:55,840
houston check before you dead lift it up

1425
02:01:11,830 --> 02:01:09,669
copy all

1426
02:01:27,510 --> 02:01:11,840
reuben's confirming the a pass hatch is

1427
02:01:33,030 --> 02:01:30,629
taking a look inside with the flashlight

1428
02:01:35,589 --> 02:01:33,040
she will also remove that docking target

1429
02:01:38,390 --> 02:01:35,599
that crew dragon used to align itself

1430
02:01:43,830 --> 02:01:38,400
with node 2 when making its approach

1431
02:02:07,589 --> 02:01:47,910
and a really cool shot from dragon

1432
02:02:12,390 --> 02:02:10,950
kate's saying hi to the world

1433
02:02:15,030 --> 02:02:12,400
just getting in there getting a good

1434
02:02:30,830 --> 02:02:15,040
look at the hatch seals

1435
02:02:30,840 --> 02:02:42,310
proceed

1436
02:02:47,189 --> 02:02:44,390
do some station on space for round two

1437
02:02:51,270 --> 02:02:47,199
in step four decimal one the apex hatch

1438
02:02:53,669 --> 02:02:51,280

is open and the pressure

1439
02:02:54,870 --> 02:02:53,679
the ice the idea vestibule does not have

1440
02:02:57,750 --> 02:02:54,880
any condensation

1441
02:02:59,830 --> 02:02:57,760
upon inspection looks pretty nice the

1442
02:03:01,830 --> 02:02:59,840
last time i saw it was the outside of

1443
02:03:04,550 --> 02:03:01,840
the ida vestibule and there

1444
02:03:08,629 --> 02:03:04,560
appeared to be four smiling crew members

1445
02:03:17,430 --> 02:03:15,270
copy all configuration as expected

1446
02:03:20,070 --> 02:03:17,440
and as liam mentioned she was able to

1447
02:03:23,750 --> 02:03:20,080
get a glimpse inside of dragon

1448
02:03:34,870 --> 02:03:23,760
at the four crew members waiting to

1449
02:03:38,550 --> 02:03:36,870
ruben's reporting everything looks good

1450
02:03:40,709 --> 02:03:38,560
and the next step is to remove that

1451
02:03:43,910 --> 02:03:40,719
docking target that you see

1452
02:03:44,790 --> 02:03:43,920
hanging down right there it'll get that

1453
02:03:48,310 --> 02:03:44,800
out of the way

1454
02:04:09,830 --> 02:03:48,320
and prevent anybody from maybe bumping

1455
02:04:14,310 --> 02:04:12,790
once she's stowed that docking target

1456
02:04:15,990 --> 02:04:14,320
we'll get ready for dragon hatch

1457
02:04:16,790 --> 02:04:16,000
equalization that'll equalize the

1458
02:04:19,589 --> 02:04:16,800
pressure

1459
02:04:21,589 --> 02:04:19,599
between dragon and the station and then

1460
02:04:24,310 --> 02:04:21,599
the moment we've been waiting for

1461
02:04:26,149 --> 02:04:24,320
we will open the crew dragon hatch

1462
02:06:23,990 --> 02:04:26,159
welcome those four crew members to their

1463
02:06:30,709 --> 02:06:27,510

as rubens works to open that hatch

1464
02:06:33,030 --> 02:06:30,719
we are transitioning over from tdrs

1465
02:06:36,149 --> 02:06:33,040
satellites that's tracking data

1466
02:06:37,990 --> 02:06:36,159
and relay satellite system the

1467
02:06:39,189 --> 02:06:38,000
international space station

1468
02:06:40,950 --> 02:06:39,199
goes through these handovers

1469
02:06:41,910 --> 02:06:40,960
periodically they are tracked by the

1470
02:06:43,350 --> 02:06:41,920
ground

1471
02:06:45,189 --> 02:06:43,360
and we should regain video

1472
02:06:49,030 --> 02:06:45,199
communications with them

1473
02:06:50,709 --> 02:06:49,040
shortly just a reminder of everything

1474
02:06:52,390 --> 02:06:50,719
that crew dragon has

1475
02:06:53,990 --> 02:06:52,400
experienced on its journey to the

1476
02:06:55,109 --> 02:06:54,000
international space station after

1477
02:06:57,350 --> 02:06:55,119
lifting off

1478
02:06:58,550 --> 02:06:57,360
from the kennedy space center yesterday

1479
02:07:02,149 --> 02:06:58,560
at 7 27

1480
02:07:02,629 --> 02:07:02,159
pm eastern time the crew conducted their

1481
02:07:04,709 --> 02:07:02,639
first

1482
02:07:05,910 --> 02:07:04,719
burn well i can't say the crew conducted

1483
02:07:09,430 --> 02:07:05,920
it but crew dragon

1484
02:07:11,589 --> 02:07:09,440
conducted the first burn last night and

1485
02:07:12,790 --> 02:07:11,599
then moved on to get a little bit of

1486
02:07:16,069 --> 02:07:12,800
sleep

1487
02:07:18,629 --> 02:07:16,079
this morning

1488
02:07:20,550 --> 02:07:18,639

we had some burns in between that the

1489
02:07:21,109 --> 02:07:20,560
crew dragon computer determined that

1490
02:07:23,669 --> 02:07:21,119
were

1491
02:07:24,550 --> 02:07:23,679
needed to keep us on course completed

1492
02:07:27,589 --> 02:07:24,560
the other four

1493
02:07:29,189 --> 02:07:27,599
major burns today that took us out of

1494
02:07:30,950 --> 02:07:29,199
the rendezvous phase

1495
02:07:32,310 --> 02:07:30,960
of the mission and then into the

1496
02:07:33,350 --> 02:07:32,320
approach phase which is where we've been

1497
02:07:35,910 --> 02:07:33,360
for the last few

1498
02:07:37,270 --> 02:07:35,920
hours we completed the approach

1499
02:07:39,830 --> 02:07:37,280
initiation burn

1500
02:07:41,109 --> 02:07:39,840
approach out of plane burn and they

1501
02:07:42,870 --> 02:07:41,119
approach initiation

1502
02:07:44,709 --> 02:07:42,880
mid course maneuver and all of these

1503
02:07:46,550 --> 02:07:44,719
lined us up exactly where we needed to

1504
02:07:49,910 --> 02:07:46,560
be

1505
02:07:51,030 --> 02:07:49,920
and that led us into finally approaching

1506
02:07:53,750 --> 02:07:51,040
for docking

1507
02:07:57,589 --> 02:07:53,760
doing a soft capture followed by a hard

1508
02:08:01,669 --> 02:08:00,229
hooks attaching to the international

1509
02:08:05,109 --> 02:08:01,679
space station

1510
02:08:07,030 --> 02:08:05,119
and then finally arriving

1511
02:08:09,030 --> 02:08:07,040
at the space station and completing

1512
02:08:12,069 --> 02:08:09,040
docking and right now

1513
02:08:15,750 --> 02:08:12,079

kate uh is helping with

1514
02:08:18,310 --> 02:08:15,760
getting the hatch ready

1515
02:08:19,109 --> 02:08:18,320
almost ready for her hatch open for

1516
02:08:20,790 --> 02:08:19,119
dragon

1517
02:08:22,550 --> 02:08:20,800
she was able to get a peek inside

1518
02:08:26,390 --> 02:08:22,560
through the window

1519
02:08:30,310 --> 02:08:26,400
at the on the hatch of the crew members

1520
02:08:33,589 --> 02:08:30,320
on board and shortly we'll see them

1521
02:08:35,750 --> 02:08:33,599
ingress the space station absolutely and

1522
02:08:38,950 --> 02:08:35,760
it's been about

1523
02:08:40,950 --> 02:08:38,960
half hours of free flight time uh well i

1524
02:08:43,189 --> 02:08:40,960
should say since liftoff

1525
02:08:45,189 --> 02:08:43,199
so it has been quite a journey for our

1526
02:08:47,350 --> 02:08:45,199
crew members i know they must be excited

1527
02:08:49,830 --> 02:08:47,360
to have arrived to the space station

1528
02:08:52,149 --> 02:08:49,840
and the entire journey was autonomous

1529
02:08:54,550 --> 02:08:52,159
for the

1530
02:08:55,189 --> 02:08:54,560
snack bags there are the decent snack

1531
02:08:57,270 --> 02:08:55,199
bags

1532
02:09:00,149 --> 02:08:57,280
still remaining for detail we only

1533
02:09:02,550 --> 02:09:00,159
consume the ascent snack bags

1534
02:09:15,990 --> 02:09:02,560
papi that is a great confirmation thanks

1535
02:09:19,589 --> 02:09:18,149
that was just the crew dragon crew doing

1536
02:09:22,229 --> 02:09:19,599
inventory

1537
02:09:24,390 --> 02:09:22,239
aboard uh aboard their spacecraft we've

1538
02:09:26,709 --> 02:09:24,400

mentioned a couple of times it's

1539
02:09:27,669 --> 02:09:26,719
everything is meticulously tracked when

1540
02:09:29,350 --> 02:09:27,679
you're in space

1541
02:09:32,229 --> 02:09:29,360
and so that includes any meals that are

1542
02:09:33,990 --> 02:09:32,239
eaten any items that are used

1543
02:09:37,510 --> 02:09:34,000
and any hardware that's being stowed we

1544
02:09:42,229 --> 02:09:39,910
this is what the crew was doing as they

1545
02:09:44,310 --> 02:09:42,239
are waiting for kate to finish up her

1546
02:09:47,430 --> 02:09:44,320
procedures on the space station

1547
02:09:49,270 --> 02:09:47,440
side the crew after they docked

1548
02:09:50,790 --> 02:09:49,280
they were able to get out of their suits

1549
02:09:53,830 --> 02:09:50,800
get their suits drying

1550
02:09:54,470 --> 02:09:53,840
and complete their inventory check as

1551
02:09:58,470 --> 02:09:54,480
they wait

1552
02:10:02,550 --> 02:10:00,550
and the most recent thing we saw kate

1553
02:10:03,910 --> 02:10:02,560
rubens uh like i mentioned this was an

1554
02:10:07,109 --> 02:10:03,920
autonomous mission

1555
02:10:09,270 --> 02:10:07,119
the crew did not have to fly crew dragon

1556
02:10:11,510 --> 02:10:09,280
it flew itself completely all the way to

1557
02:10:15,189 --> 02:10:11,520
the international space station

1558
02:10:18,390 --> 02:10:15,199
there's kate rubens a view from

1559
02:10:21,669 --> 02:10:18,400
the dragon spacecraft itself

1560
02:10:23,589 --> 02:10:21,679
she is configuring the a pass hatch

1561
02:10:25,589 --> 02:10:23,599
putting the cover on top of the apas

1562
02:10:28,629 --> 02:10:25,599
hatch and you can see she's removed

1563
02:10:30,790 --> 02:10:28,639

that docking target that spacecraft used

1564
02:10:34,790 --> 02:10:30,800
to align and dock with the international

1565
02:10:40,229 --> 02:10:38,149
dragon it's spacex on dragon to ground

1566
02:10:42,229 --> 02:10:40,239
for your awareness we are about to take

1567
02:10:44,709 --> 02:10:42,239
down the s-band path so

1568
02:10:45,589 --> 02:10:44,719
from this point forward please use the

1569
02:10:54,830 --> 02:10:45,599
iss

1570
02:10:54,840 --> 02:11:28,390
communication

1571
02:11:31,910 --> 02:11:30,390
again if you're just now joining us

1572
02:11:33,990 --> 02:11:31,920
right now what you're seeing on your

1573
02:11:37,189 --> 02:11:34,000
screen is a view from

1574
02:11:39,669 --> 02:11:37,199
dragon looking into

1575
02:11:40,629 --> 02:11:39,679
the space station with kate rubins

1576
02:11:43,830 --> 02:11:40,639
preparing

1577
02:11:46,550 --> 02:11:43,840
for the crew to

1578
02:11:47,750 --> 02:11:46,560
come on board she's getting everything

1579
02:11:51,589 --> 02:11:47,760
set up

1580
02:11:51,599 --> 02:11:55,990
prior to opening up the dragon hatch

1581
02:11:56,000 --> 02:12:04,830
dragon spacex on dragon to ground for a

1582
02:12:04,840 --> 02:12:10,229
contract

1583
02:12:14,229 --> 02:12:12,310
and we have the loud and clear on dragon

1584
02:12:15,990 --> 02:12:14,239
to grow

1585
02:12:17,830 --> 02:12:16,000
awesome we just wanted to let you know

1586
02:12:20,069 --> 02:12:17,840
that we are about to take down the

1587
02:12:21,350 --> 02:12:20,079
s-band path which will take down our

1588
02:12:23,430 --> 02:12:21,360

dragon to ground

1589
02:12:25,189 --> 02:12:23,440
voice communication so from this point

1590
02:12:33,589 --> 02:12:25,199
forward please use the

1591
02:12:39,030 --> 02:12:35,750
i we you called that up a second ago

1592
02:12:54,229 --> 02:12:40,790
yes i think your call must have just

1593
02:12:58,069 --> 02:12:56,470
now with some communication from the

1594
02:12:59,990 --> 02:12:58,079
team here in hawthorne speaking with the

1595
02:13:04,790 --> 02:13:00,000
crew aboard crew dragon

1596
02:13:07,270 --> 02:13:04,800
letting them know they are switching

1597
02:13:08,950 --> 02:13:07,280
their telemetry or their sound

1598
02:13:11,189 --> 02:13:08,960
communications lines with them

1599
02:13:12,310 --> 02:13:11,199
they'll now be communicating via the

1600
02:13:39,109 --> 02:13:12,320
loops on

1601
02:13:47,189 --> 02:13:42,629
kate rubens finishing up

1602
02:13:52,629 --> 02:13:50,310
coming up next we'll be looking for

1603
02:13:54,709 --> 02:13:52,639
dragon hatch equalization equalizing the

1604
02:13:56,870 --> 02:13:54,719
pressure between crew dragon

1605
02:13:58,149 --> 02:13:56,880
and the international space station and

1606
02:14:00,229 --> 02:13:58,159
then it will be time

1607
02:15:11,189 --> 02:14:00,239
to welcome our new our four new crew

1608
02:15:14,149 --> 02:15:12,709
thanks dragon on the big loop but we

1609
02:15:16,229 --> 02:15:14,159
forgot to tell you you can come back on

1610
02:16:36,230 --> 02:15:16,239
board

1611
02:16:39,830 --> 02:16:38,709
you just saw kate rubens installing the

1612
02:16:42,790 --> 02:16:39,840
imv

1613
02:16:43,750 --> 02:16:42,800

duct that's inner module ventilation

1614
02:16:47,830 --> 02:16:43,760
that'll make sure

1615
02:16:49,669 --> 02:16:47,840
the crew dragon is sharing the same

1616
02:16:51,030 --> 02:16:49,679
air with the international space station

1617
02:16:52,309 --> 02:16:51,040
making sure that that's all being

1618
02:17:44,309 --> 02:16:52,319
circulated

1619
02:17:48,469 --> 02:17:46,070
some calls we'll be listening for is

1620
02:17:49,990 --> 02:17:48,479
that station is ready for dragon hatch

1621
02:17:51,910 --> 02:17:50,000
equalization

1622
02:17:58,150 --> 02:17:51,920
meaning we want to equalize the pressure

1623
02:17:58,160 --> 02:18:04,709
once we get the go for that

1624
02:18:07,750 --> 02:18:06,469
we will uh stand by for that

1625
02:19:34,790 --> 02:18:07,760
equalization

1626
02:19:40,469 --> 02:19:37,750
houston in moscow station is ready for

1627
02:19:58,309 --> 02:19:40,479
dragon hatch equalization

1628
02:20:03,830 --> 02:20:01,349
and spacex this is dragon six decimal

1629
02:20:09,590 --> 02:20:03,840
one at 4.400

1630
02:20:13,830 --> 02:20:12,070
iss and dragon stand by for equalization

1631
02:20:15,590 --> 02:20:13,840
expected to take five minutes

1632
02:20:18,070 --> 02:20:15,600
additionally please note that we will be

1633
02:20:19,429 --> 02:20:18,080
hot miked for the duration of ingress

1634
02:20:21,270 --> 02:20:19,439
finally for you kate if you could please

1635
02:20:22,469 --> 02:20:21,280
meet pacom on space to ground three we

1636
02:20:25,990 --> 02:20:22,479
have additional troubleshooting stuff

1637
02:20:31,190 --> 02:20:29,270
okay copy and my apologies to spacex i

1638
02:20:33,429 --> 02:20:31,200

came up in a different vehicle

1639
02:20:34,790 --> 02:20:33,439
but i'm really excited to see this one

1640
02:20:49,750 --> 02:20:34,800
and i'm switching over to

1641
02:20:53,429 --> 02:20:51,590
and the call we were looking for that

1642
02:20:54,070 --> 02:20:53,439
the international space station is ready

1643
02:20:56,389 --> 02:20:54,080
for

1644
02:20:57,590 --> 02:20:56,399
dragon hatch equalization we want to

1645
02:20:59,190 --> 02:20:57,600
equalize the pressure

1646
02:21:02,469 --> 02:20:59,200
between crew dragon and the

1647
02:21:06,070 --> 02:21:02,479
international space station

1648
02:21:09,830 --> 02:21:06,080
it should take about five minutes

1649
02:21:12,950 --> 02:21:09,840
and then what we'll be looking for next

1650
02:21:16,309 --> 02:21:12,960
is for dragon hatch to open

1651
02:21:17,670 --> 02:21:16,319
and the sensors on dragon will actually

1652
02:21:20,309 --> 02:21:17,680
be what we'll check

1653
02:21:34,870 --> 02:21:20,319
to make sure that that pressure is good

1654
02:21:46,150 --> 02:21:36,950
but if all goes well sounds like we're

1655
02:21:51,270 --> 02:21:49,270
this also aligns us pretty well with our

1656
02:21:53,510 --> 02:21:51,280
projection that it should take about two

1657
02:21:55,429 --> 02:21:53,520
hours to move through these steps

1658
02:22:29,830 --> 02:21:55,439
anything from hatch openings to leak

1659
02:22:33,270 --> 02:22:32,870
and as a reminder once the dragon hatch

1660
02:22:36,070 --> 02:22:33,280
does

1661
02:22:36,950 --> 02:22:36,080
open and the four crew members do

1662
02:22:38,550 --> 02:22:36,960
ingress

1663
02:22:40,630 --> 02:22:38,560

on the space station there will be a

1664
02:22:44,150 --> 02:22:40,640
welcome ceremony

1665
02:22:44,790 --> 02:22:44,160
where the folks on board station will

1666
02:22:46,950 --> 02:22:44,800
join

1667
02:22:47,910 --> 02:22:46,960
those four crew members welcome

1668
02:23:11,190 --> 02:22:47,920
welcoming them

1669
02:23:15,030 --> 02:23:13,429
we heard kate rubins discussing yes she

1670
02:23:18,710 --> 02:23:15,040
came up on a different vehicle she

1671
02:23:20,550 --> 02:23:18,720
arrived on a russian soyuz

1672
02:23:22,630 --> 02:23:20,560
her russian counterparts on the

1673
02:23:27,429 --> 02:23:22,640
international space station are sergey

1674
02:23:31,990 --> 02:23:30,790
they may join for the the welcome as

1675
02:23:49,190 --> 02:23:32,000
well i'm sure they'll be very

1676
02:23:55,349 --> 02:23:52,550
we are just a few minutes away from that

1677
02:26:52,550 --> 02:23:55,359
pressure equalization between dragon and

1678
02:26:56,230 --> 02:26:54,389
this is mission control houston the team

1679
02:26:57,750 --> 02:26:56,240
here in the international space station

1680
02:26:58,230 --> 02:26:57,760
flight control room has been following

1681
02:27:00,070 --> 02:26:58,240
along

1682
02:27:01,349 --> 02:27:00,080
all night they're coming to the end of

1683
02:27:03,349 --> 02:27:01,359
their shift as we

1684
02:27:05,349 --> 02:27:03,359
near the opening of the hatch on the

1685
02:27:06,950 --> 02:27:05,359
spacex dragon

1686
02:27:08,950 --> 02:27:06,960
kate rubens has been working steadily

1687
02:27:10,790 --> 02:27:08,960
through the procedure on her side of the

1688
02:27:13,590 --> 02:27:10,800

hatch while the

1689
02:27:15,590 --> 02:27:13,600
crew dragon crew members do their part

1690
02:27:16,550 --> 02:27:15,600
on the other side so we are expecting to

1691
02:27:18,469 --> 02:27:16,560
see that

1692
02:27:19,590 --> 02:27:18,479
just in the next few minutes scheduled

1693
02:27:22,070 --> 02:27:19,600
to take place at 12

1694
02:27:23,110 --> 02:27:22,080
10 a.m central time but could be a

1695
02:27:25,429 --> 02:27:23,120
little early

1696
02:27:27,349 --> 02:27:25,439
and once we do see all of the crew

1697
02:27:28,230 --> 02:27:27,359
members on board together will be ready

1698
02:27:36,550 --> 02:27:28,240
to

1699
02:27:40,309 --> 02:27:39,030
taking part in that welcoming ceremony

1700
02:27:42,230 --> 02:27:40,319
we are going to have the

1701
02:27:43,750 --> 02:27:42,240
nasa associate administrator for human

1702
02:27:46,469 --> 02:27:43,760
exploration and operations mission

1703
02:27:49,429 --> 02:27:46,479
directorate kathy leaders and the jaxa

1704
02:27:50,389 --> 02:27:49,439
a japanese aerospace exploration agency

1705
02:27:53,510 --> 02:27:50,399
president

1706
02:27:55,110 --> 02:27:53,520
dr yamakawa hiroshi

1707
02:27:57,670 --> 02:27:55,120
and they will be talking with the crew

1708
02:28:00,070 --> 02:27:57,680
as part of the welcoming ceremony as the

1709
02:28:02,309 --> 02:28:00,080
crew dragon members that's mike hopkins

1710
02:28:03,510 --> 02:28:02,319
victor glover shannon walker and suici

1711
02:28:05,830 --> 02:28:03,520
niguchi

1712
02:28:16,309 --> 02:28:05,840
join the expedition 64 crew for the

1713
02:28:19,830 --> 02:28:18,150

expecting that hatch opening to come

1714
02:28:22,389 --> 02:28:19,840
anytime now and since uh

1715
02:28:23,670 --> 02:28:22,399
kate has kate rubins has been working

1716
02:28:26,070 --> 02:28:23,680
speedily through her

1717
02:28:27,750 --> 02:28:26,080
side of the procedures this is only the

1718
02:28:29,030 --> 02:28:27,760
second time we've opened a hatch on a

1719
02:28:30,550 --> 02:28:29,040
crew dragon

1720
02:28:32,790 --> 02:28:30,560
with uh people inside from the

1721
02:28:34,790 --> 02:28:32,800
international space station so still

1722
02:28:35,990 --> 02:28:34,800
nailing down exactly how long it takes

1723
02:28:36,950 --> 02:28:36,000
for the crew to complete these

1724
02:28:38,389 --> 02:28:36,960
procedures

1725
02:28:45,270 --> 02:28:38,399
and like we said getting through it a

1726
02:28:49,349 --> 02:28:48,550
shortly after the welcoming ceremony

1727
02:28:51,830 --> 02:28:49,359
begins

1728
02:28:53,990 --> 02:28:51,840
the team here on in mission control

1729
02:28:56,469 --> 02:28:54,000
houston will be handing over to their

1730
02:28:58,950 --> 02:28:56,479
orbit 1 counterparts wrapping up their

1731
02:29:01,670 --> 02:28:58,960
part in the arrival of the dragon

1732
02:29:03,270 --> 02:29:01,680
at the international space station and

1733
02:29:04,950 --> 02:29:03,280
of course

1734
02:29:06,309 --> 02:29:04,960
following the festivities we'll have one

1735
02:29:08,710 --> 02:29:06,319
final crew

1736
02:29:09,349 --> 02:29:08,720
one final news conference to wrap about

1737
02:30:16,870 --> 02:29:09,359
wrap up

1738
02:30:22,469 --> 02:30:20,070

dragon spacex on the big loop you are go

1739
02:30:24,150 --> 02:30:22,479
for hatch opening per your decal

1740
02:30:25,910 --> 02:30:24,160
followed by the remaining actions in

1741
02:30:33,990 --> 02:30:25,920
procedure four decimal four

1742
02:30:37,030 --> 02:30:34,000
zero zero section six dragging copies

1743
02:30:38,710 --> 02:30:37,040
and match open for the decal and

1744
02:30:44,830 --> 02:30:38,720
remaining steps in

1745
02:30:44,840 --> 02:30:56,070
zero

1746
02:31:00,070 --> 02:30:57,349
here they have the team on the ground

1747
02:31:01,910 --> 02:31:00,080
giving the crew on board the crew dragon

1748
02:31:03,349 --> 02:31:01,920
go to open their side of the hatch which

1749
02:31:03,830 --> 02:31:03,359
is what we've been waiting for so we

1750
02:31:06,469 --> 02:31:03,840
should be

1751
02:31:07,990 --> 02:31:06,479
seeing them floating through across the

1752
02:31:25,030 --> 02:31:08,000
threshold to the international space

1753
02:31:29,110 --> 02:31:27,270
for mike hopkins shannon walker and

1754
02:31:31,110 --> 02:31:29,120
naguchi this will be a return visit to

1755
02:31:31,510 --> 02:31:31,120
the international space station mike was

1756
02:31:35,110 --> 02:31:31,520
there

1757
02:32:16,389 --> 02:31:35,120
in 2014 for expedition 3738 when he

1758
02:32:20,389 --> 02:32:19,590
spacex this is dragon on the big loop 6

1759
02:32:24,720 --> 02:32:20,399
decimal 6

1760
02:32:30,630 --> 02:32:24,730
4 400 hatch is open

1761
02:32:34,550 --> 02:32:32,389
and as you can see they do have that

1762
02:32:38,790 --> 02:32:34,560
hatch open now they called down that

1763
02:32:40,389 --> 02:32:38,800

came right at 1202 am central time

1764
02:32:42,309 --> 02:32:40,399
hatch is between the two vehicle open

1765
02:32:44,550 --> 02:32:42,319
now we're just waiting for the crew to

1766
02:32:45,670 --> 02:32:44,560
head to the international space station

1767
02:33:16,389 --> 02:32:45,680
looks like they are

1768
02:33:20,150 --> 02:33:18,710
also seeing here for the first time

1769
02:33:24,070 --> 02:33:20,160
tonight the

1770
02:34:37,510 --> 02:33:25,830
sergey rizhikov who is the commander of

1771
02:34:42,070 --> 02:34:39,510
and houston this is dragon on the big

1772
02:34:43,270 --> 02:34:42,080
gloop imv duck installation is complete

1773
02:34:55,910 --> 02:34:43,280
you are go for imv

1774
02:34:59,270 --> 02:34:58,389
crew finishing up some intra vehicle

1775
02:35:03,349 --> 02:34:59,280
intramodule

1776
02:35:05,190 --> 02:35:03,359
ventilation work there getting

1777
02:35:07,670 --> 02:35:05,200
air flowing between the space station

1778
02:35:10,710 --> 02:35:07,680
and the crew dragon before they

1779
02:35:12,469 --> 02:35:10,720
do make their way across the hatch but

1780
02:36:10,389 --> 02:35:12,479
again that hatch is open now

1781
02:36:13,910 --> 02:36:11,910
as i was saying a moment ago this will

1782
02:36:15,429 --> 02:36:13,920
be mike hopkins second visit to the

1783
02:36:17,590 --> 02:36:15,439
international space station he was left

1784
02:36:19,510 --> 02:36:17,600
there in 2014.

1785
02:36:20,870 --> 02:36:19,520
same for shannon walker she was there in

1786
02:36:24,630 --> 02:36:20,880
2010 for expedition

1787
02:36:25,830 --> 02:36:24,640
24 and 25 and spent 163 days onboard the

1788
02:36:28,870 --> 02:36:25,840

space station

1789
02:36:32,150 --> 02:36:28,880
twice before

1790
02:36:35,510 --> 02:36:32,160
for sts-114 in 2005 and

1791
02:36:38,469 --> 02:36:35,520
in 2009 for expedition 22 and 23. he's

1792
02:36:40,550 --> 02:36:38,479
got 177 days already in space

1793
02:36:42,710 --> 02:36:40,560
but this will be the first time for

1794
02:36:45,190 --> 02:36:42,720
victor glover

1795
02:36:47,110 --> 02:36:45,200
to pass across the hatch and visit the

1796
02:36:48,309 --> 02:36:47,120
international space station kicking off

1797
02:36:50,550 --> 02:36:48,319
their month-long stay

1798
02:36:51,670 --> 02:36:50,560
in space when the space station will for

1799
02:36:55,190 --> 02:36:51,680
the first time have

1800
02:37:20,309 --> 02:36:55,200
seven crew members on board

1801
02:37:34,550 --> 02:37:22,230
station houston on space around two you

1802
02:37:39,590 --> 02:37:36,630
and houston farm dragon was that a goal

1803
02:37:47,510 --> 02:37:41,110
you are correct hopper that's your go in

1804
02:38:39,990 --> 02:37:47,520
step 6 decimal 3.

1805
02:38:43,270 --> 02:38:41,990
crew one crew members are working on a

1806
02:38:45,510 --> 02:38:43,280
few

1807
02:38:46,790 --> 02:38:45,520
final activities inside the crew dragon

1808
02:38:50,230 --> 02:38:46,800
before they do make their way to the

1809
02:38:54,790 --> 02:38:53,190
making sure any loose items are stowed

1810
02:38:59,590 --> 02:38:54,800
securely and then also

1811
02:39:04,550 --> 02:39:02,550
lyo cartridges that they use to scrub

1812
02:39:08,830 --> 02:39:04,560
carbon dioxide out of the air

1813
02:39:12,950 --> 02:39:11,510

station

1814
02:39:14,710 --> 02:39:12,960
now that they now that they are at the

1815
02:39:17,030 --> 02:39:14,720
space station they don't need those any

1816
02:39:18,710 --> 02:39:17,040
longer

1817
02:39:20,309 --> 02:39:18,720
because they'll use the space station

1818
02:39:22,469 --> 02:39:20,319
system for that

1819
02:39:24,469 --> 02:39:22,479
again these are just the last few items

1820
02:40:56,780 --> 02:39:24,479
before they'll be able to

1821
02:41:02,790 --> 02:40:59,750
[Music]

1822
02:41:14,950 --> 02:41:02,800
on the big loop for royal

1823
02:41:19,030 --> 02:41:16,790
just a question i just want to confirm

1824
02:41:21,670 --> 02:41:19,040
that you are supposed to put

1825
02:41:24,870 --> 02:41:21,680
mario cartridge 1 our original cartridge

1826
02:41:26,389 --> 02:41:24,880
into the active slot

1827
02:41:33,590 --> 02:41:26,399
that is a firm that is what we want you

1828
02:41:42,830 --> 02:41:35,349
okay thanks and just so you know we've

1829
02:41:42,840 --> 02:41:52,710
copy

1830
02:41:56,309 --> 02:41:54,309
shannon walker they're reporting down to

1831
02:41:58,550 --> 02:41:56,319
the ground on the crew members progress

1832
02:42:00,070 --> 02:41:58,560
again walking through just a few final

1833
02:42:01,590 --> 02:42:00,080
items before they come on board the

1834
02:42:04,309 --> 02:42:01,600
international space station for the

1835
02:42:05,750 --> 02:42:04,319
first time on this mission

1836
02:42:08,150 --> 02:42:05,760
again they're putting away some lithium

1837
02:42:11,510 --> 02:42:08,160
hydroxide canisters that

1838
02:42:14,630 --> 02:42:11,520

were used to scrub carbon dioxide

1839
02:42:17,269 --> 02:42:14,640
out of the crew members air

1840
02:43:01,750 --> 02:42:17,279
no longer need now that the dragon is at

1841
02:43:05,110 --> 02:43:03,830
seeing two-thirds of the current

1842
02:43:07,349 --> 02:43:05,120
expedition 64

1843
02:43:08,550 --> 02:43:07,359
crew here kate rubins of course with

1844
02:43:11,670 --> 02:43:08,560
nasa and then the

1845
02:43:14,230 --> 02:43:11,680
expedition commander sergey rizhikov

1846
02:43:16,710 --> 02:43:14,240
they're on the right side of the screen

1847
02:43:20,830 --> 02:43:16,720
they along with sergey kuzkov have all

1848
02:43:20,840 --> 02:43:25,429
14th

1849
02:43:29,830 --> 02:43:27,269
now waiting to greet the four new

1850
02:43:50,790 --> 02:43:29,840
members of the expedition that

1851
02:43:54,550 --> 02:43:52,790
and there they are first across the

1852
02:43:57,590 --> 02:43:54,560
hatch and mike hopkins

1853
02:43:59,670 --> 02:43:57,600
and here's victor glover

1854
02:44:00,950 --> 02:43:59,680
we heard the crew here at the team here

1855
02:44:02,790 --> 02:44:00,960
on in mission control

1856
02:44:04,630 --> 02:44:02,800
cheering to see them come and come

1857
02:44:14,469 --> 02:44:04,640
across the hatch

1858
02:44:18,389 --> 02:44:16,870
and finally suicina gucci bringing up

1859
02:44:20,070 --> 02:44:18,399
the rear four

1860
02:44:21,590 --> 02:44:20,080
new members bringing the total

1861
02:44:25,910 --> 02:44:21,600
expedition 64

1862
02:44:29,670 --> 02:44:28,630
ready to increase the space station

1863
02:48:56,070 --> 02:44:29,680

science and

1864
02:48:56,080 --> 02:49:01,990
and we're ready

1865
02:50:08,150 --> 02:49:03,510
let me know about scene and i'll give

1866
02:50:12,550 --> 02:50:10,950
and we are here at spacex headquarters

1867
02:50:14,630 --> 02:50:12,560
in hawthorne uh you've got a view of

1868
02:50:16,150 --> 02:50:14,640
mission control houston mission control

1869
02:50:19,269 --> 02:50:16,160
hawthorne right there

1870
02:50:19,830 --> 02:50:19,279
on your screen and we just saw the major

1871
02:50:22,870 --> 02:50:19,840
event

1872
02:50:25,910 --> 02:50:22,880
of the night hey the crew has

1873
02:50:28,950 --> 02:50:25,920
finally come on board the international

1874
02:50:30,070 --> 02:50:28,960
space station a lot of smiles a lot of

1875
02:50:32,870 --> 02:50:30,080
hugs

1876
02:50:46,150 --> 02:50:32,880
um the welcome ceremony and did you top

1877
02:50:49,349 --> 02:50:47,670
station houston that's a good scene

1878
02:50:55,910 --> 02:50:49,359
check we're checking something here on

1879
02:50:59,269 --> 02:50:57,670
okay sounds good and let me know about

1880
02:51:09,990 --> 02:50:59,279
lighting i've got a work light so i can

1881
02:51:13,590 --> 02:51:11,590
and lighting looks good and if you could

1882
02:51:21,030 --> 02:51:13,600
just do a quick five count

1883
02:51:21,040 --> 02:51:25,030
copy and work

1884
02:51:29,510 --> 02:51:26,790
these voice checks you're hearing coming

1885
02:51:31,590 --> 02:51:29,520
from nasa astronaut kate rubins

1886
02:51:33,429 --> 02:51:31,600
now joined by four new crew members

1887
02:51:34,550 --> 02:51:33,439
aboard the international space station

1888
02:51:36,950 --> 02:51:34,560

along with her

1889
02:51:38,150 --> 02:51:36,960
two crewmates from roscosmos the russian

1890
02:51:40,070 --> 02:51:38,160
space agency

1891
02:51:46,790 --> 02:51:40,080
and they are setting up for the welcome

1892
02:51:49,190 --> 02:51:46,800
ceremony countdown thanks

1893
02:51:51,030 --> 02:51:49,200
so we are standing by for that welcome

1894
02:51:52,870 --> 02:51:51,040
ceremony coming up just a few minutes

1895
02:51:55,110 --> 02:51:52,880
from now

1896
02:51:56,150 --> 02:51:55,120
and you can hear them getting ready

1897
02:51:59,190 --> 02:51:56,160
they're doing all their

1898
02:52:01,990 --> 02:51:59,200
formal checks mic checks uh to

1899
02:52:03,590 --> 02:52:02,000
get ready to bring the crew and welcome

1900
02:52:06,230 --> 02:52:03,600
them on board

1901
02:52:07,110 --> 02:52:06,240
very excited to see this uh we already

1902
02:52:10,389 --> 02:52:07,120
saw how

1903
02:52:11,670 --> 02:52:10,399
excited the crew members were to get on

1904
02:52:13,910 --> 02:52:11,680
board station

1905
02:52:15,110 --> 02:52:13,920
i can't wait to to hear them talk in a

1906
02:52:17,990 --> 02:52:15,120
few minutes here

1907
02:52:19,830 --> 02:52:18,000
yeah absolutely after their 27 and a

1908
02:52:20,950 --> 02:52:19,840
half hour journey to the international

1909
02:52:23,510 --> 02:52:20,960
space station

1910
02:52:26,070 --> 02:52:23,520
finally making it to that destination

1911
02:52:29,910 --> 02:52:26,080
and they docked tonight at 801

1912
02:52:32,870 --> 02:52:29,920
pm pacific time 1101 pm eastern time

1913
02:52:33,590 --> 02:52:32,880

right on time essentially at the node 2

1914
02:52:35,670 --> 02:52:33,600
port

1915
02:52:37,269 --> 02:52:35,680
aboard the international space station

1916
02:56:06,550 --> 02:52:37,279
and now they will be there for

1917
02:56:16,309 --> 02:56:09,349
station houston space round two for kate

1918
02:56:16,319 --> 02:56:38,389
anyone can do a five count

1919
02:56:45,750 --> 02:56:41,670
on the wireless mic one two

1920
02:56:47,670 --> 02:56:45,760
three four five

1921
02:56:53,510 --> 02:56:47,680
and that was the best five that was the

1922
02:56:53,520 --> 03:04:37,750
hey hey

1923
03:04:42,469 --> 03:04:39,590
for those who've still been hanging with

1924
03:04:44,630 --> 03:04:42,479
us we are now uh coming up on the time

1925
03:04:45,590 --> 03:04:44,640
for our hatch opening or welcome

1926
03:04:48,070 --> 03:04:45,600
ceremony

1927
03:04:50,230 --> 03:04:48,080
uh that is scheduled for 12 40 about

1928
03:04:53,670 --> 03:04:50,240
five minutes from now and at that time

1929
03:04:57,030 --> 03:04:53,680
the entire crew will be joining

1930
03:04:58,070 --> 03:04:57,040
on the uh from with a couple of special

1931
03:04:59,830 --> 03:04:58,080
guests from the ground

1932
03:05:02,150 --> 03:04:59,840
that's going to be nasa associate

1933
03:05:02,870 --> 03:05:02,160
administrator for human exploration and

1934
03:05:05,990 --> 03:05:02,880
operations

1935
03:05:09,349 --> 03:05:06,000
mission directorate kathy leaders

1936
03:05:11,190 --> 03:05:09,359
joining here from houston and then from

1937
03:05:13,510 --> 03:05:11,200
scuba japan we're going to have the

1938
03:05:14,710 --> 03:05:13,520

japanese aerospace exploration agency

1939
03:05:18,389 --> 03:05:14,720
president

1940
03:05:20,070 --> 03:05:18,399
dr yamakawa hiroshi joining as well

1941
03:05:22,150 --> 03:05:20,080
they'll be taking part in the welcoming

1942
03:05:22,870 --> 03:05:22,160
ceremony which is coming up in just five

1943
03:05:25,750 --> 03:05:22,880
minutes now

1944
03:05:26,870 --> 03:05:25,760
crews done the uh necessary checkouts on

1945
03:05:28,630 --> 03:05:26,880
board so we'll just

1946
03:08:49,990 --> 03:05:28,640
wait for everybody to gather before we

1947
03:08:53,990 --> 03:08:52,150
crew members gathering as promised for

1948
03:09:24,150 --> 03:08:54,000
the welcome ceremony which is now just

1949
03:09:42,830 --> 03:09:25,429
station this is houston are you

1950
03:09:42,840 --> 03:09:52,229
check

1951
03:09:55,910 --> 03:09:54,229
hi this is cathy wiedersch hi this is

1952
03:09:57,670 --> 03:09:55,920
kathy leither johnson

1953
03:09:59,110 --> 03:09:57,680
here at the johnson space center and

1954
03:10:02,710 --> 03:09:59,120
he's how did you hear me

1955
03:10:08,309 --> 03:10:06,070
hello kathy we hear you loud and clear

1956
03:10:10,150 --> 03:10:08,319
wow i can't tell you how i chance to

1957
03:10:12,550 --> 03:10:10,160
tell you how great it was to see you all

1958
03:10:15,110 --> 03:10:12,560
come across the hat it means a lot to me

1959
03:10:15,910 --> 03:10:15,120
me and deluxe me on behalf and um on

1960
03:10:19,269 --> 03:10:15,920
behalf of

1961
03:10:22,630 --> 03:10:19,279
that joint spacex the national team

1962
03:10:23,990 --> 03:10:22,640
who you know a lot of extended a lot of

1963
03:10:25,750 --> 03:10:24,000

blood frontiers

1964
03:10:37,190 --> 03:10:25,760
and our nation

1965
03:10:37,200 --> 03:10:44,229
it's been really cool to watch you

1966
03:10:47,670 --> 03:10:46,389
well thank you kathy you know we just

1967
03:10:51,349 --> 03:10:47,680
want to say

1968
03:10:54,790 --> 03:10:51,359
thank you to everybody spacex nasa

1969
03:10:57,349 --> 03:10:54,800
the dod just all across the nation um

1970
03:10:59,349 --> 03:10:57,359
it's been an incredible journey and it's

1971
03:11:02,309 --> 03:10:59,359
it's really amazing that this is march

1972
03:11:03,510 --> 03:11:02,319
uh marking the start of of operational

1973
03:11:05,030 --> 03:11:03,520
uh

1974
03:11:06,550 --> 03:11:05,040
crew rotation missions to the

1975
03:11:07,670 --> 03:11:06,560
international space station from the

1976
03:11:10,389 --> 03:11:07,680
florida coast

1977
03:11:11,590 --> 03:11:10,399
and so it was uh it was an amazing ride

1978
03:11:14,070 --> 03:11:11,600
i i can't tell you

1979
03:11:15,190 --> 03:11:14,080
uh how excited we were when that rocket

1980
03:11:18,309 --> 03:11:15,200
lifted off the pad

1981
03:11:20,710 --> 03:11:18,319
and and then the last 27 and 27 hours

1982
03:11:21,990 --> 03:11:20,720
has gone really smooth actually and so

1983
03:11:24,870 --> 03:11:22,000
we are so excited to be

1984
03:11:26,229 --> 03:11:24,880
here um we are humbled and we are

1985
03:11:28,870 --> 03:11:26,239
excited to be a part of

1986
03:11:31,030 --> 03:11:28,880
this great expedition and so we are

1987
03:11:34,309 --> 03:11:31,040
looking forward to the next six months

1988
03:11:37,030 --> 03:11:34,319

and can't wait to get started

1989
03:11:38,229 --> 03:11:37,040
yeah thank you for uh letting me get to

1990
03:11:40,870 --> 03:11:38,239
say hello to you all

1991
03:11:41,990 --> 03:11:40,880
and being there a little bit on station

1992
03:11:44,309 --> 03:11:42,000
with you all

1993
03:11:45,590 --> 03:11:44,319
and um i just want to tell you how proud

1994
03:11:48,389 --> 03:11:45,600
we are of you

1995
03:11:50,550 --> 03:11:48,399
we're expecting a lot from you a lot of

1996
03:11:52,870 --> 03:11:50,560
good work up there

1997
03:11:53,990 --> 03:11:52,880
not only are we proud in this nation of

1998
03:11:55,990 --> 03:11:54,000
you but

1999
03:11:57,030 --> 03:11:56,000
our international partners are extremely

2000
03:11:59,670 --> 03:11:57,040
proud of you

2001
03:12:01,349 --> 03:11:59,680
and i know i have some folks in japan

2002
03:12:03,590 --> 03:12:01,359
that also want to give you

2003
03:12:04,710 --> 03:12:03,600
some greetings so with that i'm going to

2004
03:12:10,790 --> 03:12:04,720
turn it back to

2005
03:12:15,590 --> 03:12:12,630
thank you miss leaders we now welcome

2006
03:12:17,990 --> 03:12:15,600
jackson president dr yamakawa hiroshi

2007
03:12:21,990 --> 03:12:18,000
to provide remarks dr yamako please call

2008
03:12:28,710 --> 03:12:24,309
station this is yamakawa how do you hear

2009
03:12:40,070 --> 03:12:32,150
yes we hear you loud and clear

2010
03:12:44,309 --> 03:12:42,469
thank you novitsan we were very much

2011
03:12:46,950 --> 03:12:44,319
excited about your launch

2012
03:12:48,070 --> 03:12:46,960
this morning it inspired courage and

2013
03:12:50,309 --> 03:12:48,080

delight

2014
03:12:52,630 --> 03:12:50,319
of all japanese citizens for bear up

2015
03:12:55,030 --> 03:12:52,640
covet 19 pandemic

2016
03:12:58,710 --> 03:12:55,040
anyway i really feel relieved by your

2017
03:13:01,670 --> 03:12:58,720
safe arrival to the station now

2018
03:13:03,990 --> 03:13:01,680
nobody's novitsan it is very significant

2019
03:13:06,790 --> 03:13:04,000
for jaxa that you are on board the first

2020
03:13:09,590 --> 03:13:06,800
operational spacecraft of crew dragon

2021
03:13:10,229 --> 03:13:09,600
and was launched from the american soil

2022
03:13:12,389 --> 03:13:10,239
i believe

2023
03:13:14,309 --> 03:13:12,399
that this is the outcome of the

2024
03:13:16,309 --> 03:13:14,319
long-standing partnership with nasa

2025
03:13:17,990 --> 03:13:16,319
and all the all the other international

2026
03:13:20,790 --> 03:13:18,000
partners

2027
03:13:23,750 --> 03:13:20,800
i also believe that your efforts at iss

2028
03:13:26,070 --> 03:13:23,760
from today will take on more importances

2029
03:13:27,269 --> 03:13:26,080
importance on the iss utilization and

2030
03:13:29,110 --> 03:13:27,279
operations

2031
03:13:31,110 --> 03:13:29,120
and for future international space

2032
03:13:34,469 --> 03:13:31,120
exploration beyond the old

2033
03:13:37,590 --> 03:13:34,479
low earth orbit to the moon and mars

2034
03:13:49,510 --> 03:13:37,600
we are always behind you good luck and

2035
03:13:52,630 --> 03:13:51,429
uh thank you dr yamakawa thank you for

2036
03:13:55,349 --> 03:13:52,640
the kind words

2037
03:13:55,990 --> 03:13:55,359
and we are very humble and happy to be

2038
03:13:58,070 --> 03:13:56,000

here this

2039
03:13:59,269 --> 03:13:58,080
is the first operation of light of the

2040
03:14:03,110 --> 03:13:59,279
crew dragon

2041
03:14:06,229 --> 03:14:03,120
and i take 27 hours but we enjoy

2042
03:14:06,950 --> 03:14:06,239
every moment and from now on we are part

2043
03:14:09,429 --> 03:14:06,960
of this

2044
03:14:10,150 --> 03:14:09,439
great expedition crew member expression

2045
03:14:12,950 --> 03:14:10,160
64.

2046
03:14:13,590 --> 03:14:12,960
we have a lot of utilization ahead of us

2047
03:14:50,830 --> 03:14:13,600
and

2048
03:14:50,840 --> 03:14:59,110
foreign

2049
03:15:02,710 --> 03:15:01,190
thank you miss leaders and dr yamako for

2050
03:15:03,670 --> 03:15:02,720
your participation in the crew one

2051
03:15:05,429 --> 03:15:03,680
welcome ceremony

2052
03:16:16,389 --> 03:15:05,439
station we are now resuming operational

2053
03:16:19,670 --> 03:16:18,950
wow thank you so much everyone for

2054
03:16:22,550 --> 03:16:19,680
joining us

2055
03:16:23,349 --> 03:16:22,560
for this coverage of our commercial crew

2056
03:16:29,030 --> 03:16:23,359
mission

2057
03:16:32,309 --> 03:16:29,040
to the international space station

2058
03:16:33,269 --> 03:16:32,319
we watched them all the way from suit up

2059
03:16:36,710 --> 03:16:33,279
yesterday

2060
03:16:39,990 --> 03:16:36,720
to ingress on the vehicle liftoff

2061
03:16:42,870 --> 03:16:40,000
at 7 27 pm eastern time

2062
03:16:43,349 --> 03:16:42,880
first stage giving them a ride into

2063
03:16:45,750 --> 03:16:43,359

orbit

2064
03:16:47,750 --> 03:16:45,760
as it returned back to earth and landed

2065
03:16:49,750 --> 03:16:47,760
on just read the instructions

2066
03:16:51,110 --> 03:16:49,760
to dragon separation yesterday in nose

2067
03:16:53,750 --> 03:16:51,120
cone deploy

2068
03:16:55,590 --> 03:16:53,760
today through all the dragon burns five

2069
03:16:58,630 --> 03:16:55,600
major burns on dragon

2070
03:17:00,070 --> 03:16:58,640
and docking as well as ingress onto the

2071
03:17:02,630 --> 03:17:00,080
station

2072
03:17:04,550 --> 03:17:02,640
on behalf of spacex and nasa thank you

2073
03:17:05,269 --> 03:17:04,560
for watching today's webcast and for

2074
03:17:08,070 --> 03:17:05,279
your interest

2075
03:17:09,349 --> 03:17:08,080
in this exciting historic mission now

2076
03:17:10,790 --> 03:17:09,359
that dragon has reached the

2077
03:17:13,030 --> 03:17:10,800
international space station it will

2078
03:17:14,950 --> 03:17:13,040
spend approximately six months stop

2079
03:17:16,950 --> 03:17:14,960
there until it's time for crew one to

2080
03:17:20,389 --> 03:17:16,960
return home via splashdown

2081
03:17:22,790 --> 03:17:20,399
in the atlantic ocean when it's time for

2082
03:17:24,550 --> 03:17:22,800
dragon to make its way home we will be

2083
03:17:27,670 --> 03:17:24,560
broadcasting its return

2084
03:17:31,030 --> 03:17:27,680
from departure through to recovery live

2085
03:17:32,950 --> 03:17:31,040
on spacex.com and nasa tv

2086
03:17:35,030 --> 03:17:32,960
coming up next we are going to have a

2087
03:17:37,110 --> 03:17:35,040
post docking news conference

2088
03:17:38,950 --> 03:17:37,120

live from the johnson space center so

2089
03:17:40,790 --> 03:17:38,960
stick around and hear from some of the

2090
03:17:44,070 --> 03:17:40,800
key members of the nasa

2091
03:17:44,710 --> 03:17:44,080
spacex and jaxa teams on this historic

2092
03:17:47,429 --> 03:17:44,720
mission

2093
03:17:49,830 --> 03:17:47,439
be sure to follow spacex and nasa on

2094
03:17:51,910 --> 03:17:49,840
social media for real-time updates

2095
03:17:53,670 --> 03:17:51,920
we can't say enough what an honor it was

2096
03:17:56,870 --> 03:17:53,680
to be part of this mission

2097
03:29:45,590 --> 03:17:56,880
how excited we are for crew one for nasa

2098
03:29:45,600 --> 03:30:09,990
i feel clock has started

2099
03:30:10,000 --> 03:30:18,469
between countries

2100
03:30:18,479 --> 03:30:37,160
discovery clears the tower discovery

2101
03:30:37,170 --> 03:30:47,190
[Music]

2102
03:30:51,670 --> 03:30:49,670
hello and welcome to the nasa's johnson

2103
03:30:53,590 --> 03:30:51,680
space center it's been an exciting night

2104
03:30:55,510 --> 03:30:53,600
after 20 years of continuous human

2105
03:30:57,349 --> 03:30:55,520
presence the international space station

2106
03:30:58,950 --> 03:30:57,359
is still marking new milestones

2107
03:31:01,349 --> 03:30:58,960
and as of tonight has its first

2108
03:31:02,790 --> 03:31:01,359
long-term crew of seven members

2109
03:31:05,030 --> 03:31:02,800
so we have a lot to celebrate tonight

2110
03:31:06,790 --> 03:31:05,040
and here to talk it over with us we have

2111
03:31:08,550 --> 03:31:06,800
associate administrator of human