1
00:00:06,430 --> 00:00:16,870
[Music]

2
00:00:21,510 --> 00:00:19,029
good morning and good afternoon one

3
00:00:23,830 --> 00:00:21,520
final time from mission control houston

4
00:00:26,070 --> 00:00:23,840
and welcome to our live coverage of the

5
00:00:27,830 --> 00:00:26,080
hatch opening of the soyuz ms-16

6
00:00:29,669 --> 00:00:27,840
spacecraft currently docked to the

7
00:00:31,429 --> 00:00:29,679
international space station as we get

8
00:00:33,590 --> 00:00:31,439
ready to welcome three new crew members

9
00:00:35,190 --> 00:00:33,600
aboard the orbiting laboratory

10
00:00:37,030 --> 00:00:35,200
once more we're coming to you live from

11
00:00:39,110 --> 00:00:37,040
the flight control room number one

12
00:00:40,549 --> 00:00:39,120
ficker one the usual space station

13
00:00:43,190 --> 00:00:40,559

flight control room here at the johnson

14
00:00:44,709 --> 00:00:43,200
space center in houston texas

15
00:00:47,590 --> 00:00:44,719
inside the room right now still the

16
00:00:50,630 --> 00:00:47,600
orbit 2 team and they are being led

17
00:00:52,229 --> 00:00:50,640
today by flight director puja jesrani

18
00:00:54,709 --> 00:00:52,239
she's right there in the middle of your

19
00:00:56,869 --> 00:00:54,719
screen she's going by the call sign of

20
00:00:59,110 --> 00:00:56,879
unity flight she's coordinating all of

21
00:01:01,110 --> 00:00:59,120
the teams here in houston responsible

22
00:01:03,270 --> 00:01:01,120
for overseeing the systems on board the

23
00:01:05,509 --> 00:01:03,280
international space station just above

24
00:01:07,590 --> 00:01:05,519
her is nasa astronaut jessica watkins

25
00:01:09,590 --> 00:01:07,600
she's serving as the capcom for this

26
00:01:11,830 --> 00:01:09,600
shift she'll be the voice communication

27
00:01:15,910 --> 00:01:11,840
link between our teams here in houston

28
00:01:19,670 --> 00:01:17,670
and just a quick update the crew is

29
00:01:20,630 --> 00:01:19,680
stepping through all of their final leak

30
00:01:22,710 --> 00:01:20,640
checks

31
00:01:24,630 --> 00:01:22,720
following a successful docking they kick

32
00:01:27,030 --> 00:01:24,640
off essentially

33
00:01:29,590 --> 00:01:27,040
about two hours of leak checks and

34
00:01:31,270 --> 00:01:29,600
vestibule pressurization so

35
00:01:33,190 --> 00:01:31,280
they actually fill that space between

36
00:01:35,109 --> 00:01:33,200
the soyuz spacecraft and the station

37
00:01:38,149 --> 00:01:35,119
hatch which is normally exposed to the

38
00:01:39,510 --> 00:01:38,159

vacuum of space with atmosphere and once

39
00:01:41,190 --> 00:01:39,520
that gets pressurized they have to

40
00:01:43,590 --> 00:01:41,200
equalize that so you have to have equal

41
00:01:45,670 --> 00:01:43,600
pressure in that vestibule onboard the

42
00:01:47,350 --> 00:01:45,680
soyuz spacecraft and on the station

43
00:01:48,950 --> 00:01:47,360
before you can get those hatches open

44
00:01:50,950 --> 00:01:48,960
and obviously making sure there are no

45
00:01:53,030 --> 00:01:50,960
leaks in any of the seals between the

46
00:01:54,469 --> 00:01:53,040
vehicle and the spacecraft so we're

47
00:01:56,709 --> 00:01:54,479
still going through those leak checks we

48
00:01:58,630 --> 00:01:56,719
have a couple more minutes to go until

49
00:02:00,789 --> 00:01:58,640
they get some final pressure readings

50
00:02:02,069 --> 00:02:00,799
and then we'll begin that equalization

51
00:02:04,550 --> 00:02:02,079
process and then there's a couple of

52
00:02:07,030 --> 00:02:04,560
minutes on the end of that as well

53
00:02:10,070 --> 00:02:07,040
we were initially targeting a

54
00:02:13,110 --> 00:02:10,080
hatch open time of right around

55
00:02:15,270 --> 00:02:13,120
11 15 a.m central time

56
00:02:16,470 --> 00:02:15,280
we'll slide around with that

57
00:02:19,110 --> 00:02:16,480
as the

58
00:02:21,589 --> 00:02:19,120
pressure checks continue on

59
00:02:23,510 --> 00:02:21,599
the crew on board the soyuz spacecraft

60
00:02:25,670 --> 00:02:23,520
though are on the other side of this

61
00:02:28,150 --> 00:02:25,680
hatch that we're looking at right now

62
00:02:30,869 --> 00:02:28,160
they are nasa astronaut chris cassidy

63
00:02:32,790 --> 00:02:30,879

and russian cosmonauts anatoly ivanishin

64
00:02:34,869 --> 00:02:32,800
and yvonne wagner he's there on the

65
00:02:37,030 --> 00:02:34,879
right ivanishin in the center the soyuz

66
00:02:39,910 --> 00:02:37,040
commander and on the right or on the

67
00:02:41,830 --> 00:02:39,920
left nasa astronaut chris cassidy

68
00:02:43,910 --> 00:02:41,840
and in just a couple of minutes they're

69
00:02:46,390 --> 00:02:43,920
going to be joining the expedition 62

70
00:02:48,949 --> 00:02:46,400
crew on board the station with two nasa

71
00:02:51,750 --> 00:02:48,959
astronauts jess kamir and andrew morgan

72
00:02:52,949 --> 00:02:51,760
and alex grapochka they've all been on

73
00:02:55,190 --> 00:02:52,959
board

74
00:02:57,509 --> 00:02:55,200
for different times drew morgan's

75
00:02:58,390 --> 00:02:57,519
actually been on board for about 263

76
00:03:01,270 --> 00:02:58,400
days

77
00:03:02,790 --> 00:03:01,280
and then christina and oleg have been on

78
00:03:03,710 --> 00:03:02,800
board for just

79
00:03:05,670 --> 00:03:03,720
over

80
00:03:07,270 --> 00:03:05,680
197 days

81
00:03:09,270 --> 00:03:07,280
they're scheduled to remain onboard the

82
00:03:11,589 --> 00:03:09,280
station for about another week and then

83
00:03:13,750 --> 00:03:11,599
they'll be coming home and then the crew

84
00:03:15,830 --> 00:03:13,760
that just arrived today will be the only

85
00:03:18,869 --> 00:03:15,840
ones on board until we get another human

86
00:03:21,430 --> 00:03:18,879
space flight launch the next one

87
00:03:23,110 --> 00:03:21,440
on our schedule is going to be that demo

88
00:03:28,149 --> 00:03:23,120

two flights

89
00:03:32,550 --> 00:03:30,070
and that'll be bringing uh bob banking

90
00:03:34,949 --> 00:03:32,560
and doug hurley up to the station

91
00:03:36,869 --> 00:03:34,959
but for now we are standing by

92
00:03:39,910 --> 00:03:36,879
for this hatch opening you're getting a

93
00:03:42,070 --> 00:03:39,920
look inside of the poisk module and

94
00:03:43,990 --> 00:03:42,080
you're going to see alex grapochka the

95
00:03:45,430 --> 00:03:44,000
current station commander floating into

96
00:03:46,949 --> 00:03:45,440
view

97
00:03:48,229 --> 00:03:46,959
he's just there at the bottom he's been

98
00:03:50,869 --> 00:03:48,239
setting up the camera and getting the

99
00:03:52,309 --> 00:03:50,879
hatch ready on the station side

100
00:03:53,910 --> 00:03:52,319
there are two hatches that we'll see

101
00:03:55,589 --> 00:03:53,920
open first we'll see him open the

102
00:03:56,710 --> 00:03:55,599
station hatch and that'll actually

103
00:03:58,949 --> 00:03:56,720
reveal

104
00:04:01,030 --> 00:03:58,959
the very top of the soyuz spacecraft

105
00:04:03,750 --> 00:04:01,040
where we were looking at it in the

106
00:04:06,309 --> 00:04:03,760
vacuum of space just a few hours ago the

107
00:04:08,710 --> 00:04:06,319
docking probe and the other antennas

108
00:04:10,309 --> 00:04:08,720
located around it it's currently

109
00:04:11,750 --> 00:04:10,319
attached the docking probe has been

110
00:04:13,110 --> 00:04:11,760
retracted

111
00:04:14,309 --> 00:04:13,120
and then once these leak checks are

112
00:04:16,789 --> 00:04:14,319
complete we'll be able to get these

113
00:04:21,990 --> 00:04:16,799

hatches open and the crew on board

114
00:04:27,749 --> 00:04:24,390
all right step ten point nine point

115
00:04:29,990 --> 00:04:27,759
three air power one airflow regulator

116
00:04:45,990 --> 00:04:30,000
one is closed

117
00:04:53,590 --> 00:04:49,270
yes please send f5 command and

118
00:04:57,510 --> 00:04:53,600
then in one minute send s6 command f5

119
00:05:31,590 --> 00:04:57,520
issued at 1904

120
00:05:35,510 --> 00:05:33,590
our visiting vehicle officer here in

121
00:05:37,749 --> 00:05:35,520
mission control houston tom arkanswick

122
00:05:39,830 --> 00:05:37,759
today is leading the team of flight

123
00:05:42,070 --> 00:05:39,840
controllers both

124
00:05:44,230 --> 00:05:42,080
a support team here in houston and over

125
00:05:46,390 --> 00:05:44,240
in moscow

126
00:05:47,990 --> 00:05:46,400
getting data and feedback from the

127
00:05:49,670 --> 00:05:48,000
russian flight control team and feeding

128
00:05:51,749 --> 00:05:49,680
that to the

129
00:05:53,590 --> 00:05:51,759
flight controllers here in houston

130
00:05:55,510 --> 00:05:53,600
infecter one

131
00:05:57,110 --> 00:05:55,520
just hearing that the leak checks have

132
00:05:59,830 --> 00:05:57,120
been completed now they're beginning the

133
00:06:01,029 --> 00:05:59,840
pressure equalization step so you need

134
00:06:02,070 --> 00:06:01,039
to make sure that you have equal

135
00:06:04,550 --> 00:06:02,080
pressure

136
00:06:06,390 --> 00:06:04,560
on both the station

137
00:06:08,469 --> 00:06:06,400
and the soyuz half sides and then also

138
00:06:10,469 --> 00:06:08,479

in that vestibule that space in between

139
00:06:14,550 --> 00:06:10,479
and then at that once those pressures

140
00:06:16,790 --> 00:06:14,560
are equal or within a tolerable range of

141
00:06:19,110 --> 00:06:16,800
being equal they'll be able to actually

142
00:06:22,309 --> 00:06:19,120
get these hatches open so leak checks in

143
00:06:24,550 --> 00:06:22,319
the rear view equalization on board now

144
00:06:26,230 --> 00:06:24,560
and following that will be hatch opening

145
00:06:29,029 --> 00:06:26,240
okay

146
00:06:30,390 --> 00:06:29,039
there's no no no stop

147
00:06:37,749 --> 00:06:30,400
standby

148
00:06:42,870 --> 00:06:38,950
all right so

149
00:06:56,070 --> 00:06:42,880
stand by for isis h opening

150
00:06:59,270 --> 00:06:57,589
and again the first hatch we expect to

151
00:07:00,950 --> 00:06:59,280
be open will be on the station side

152
00:07:03,510 --> 00:07:00,960
there are two hatches one on the station

153
00:07:05,990 --> 00:07:03,520
one on the soyuz alex corporate there

154
00:07:08,309 --> 00:07:06,000
and the poisk module will first open up

155
00:07:09,670 --> 00:07:08,319
the station side hatch looks like he's

156
00:07:10,870 --> 00:07:09,680
getting into position to start that

157
00:07:12,230 --> 00:07:10,880
maneuver now

158
00:07:14,950 --> 00:07:12,240
and then after

159
00:07:17,430 --> 00:07:14,960
they finalized the pressurization

160
00:07:19,670 --> 00:07:17,440
equalization between the soyuz and the

161
00:07:21,110 --> 00:07:19,680
station they'll be able to open up the

162
00:07:22,469 --> 00:07:21,120
soyuz hatch

163
00:07:24,390 --> 00:07:22,479

in the time since they've docked in

164
00:07:26,390 --> 00:07:24,400
addition to doing all of these leak

165
00:07:27,909 --> 00:07:26,400
checks uh the crew able to get out of

166
00:07:29,670 --> 00:07:27,919
their circle launch and entry suits that

167
00:07:34,469 --> 00:07:29,680
they've been wearing since suiting up

168
00:07:38,390 --> 00:07:36,309
and there we see the station side hatch

169
00:07:40,469 --> 00:07:38,400
is open

170
00:07:51,070 --> 00:07:40,479
and looking at the very top of the

171
00:07:51,080 --> 00:07:57,510
[Music]

172
00:08:02,150 --> 00:07:59,830
the actions that are in the box okay

173
00:08:03,830 --> 00:08:02,160
copy all opening cacate and cover their

174
00:08:06,950 --> 00:08:03,840
valves

175
00:08:23,350 --> 00:08:06,960
just go ahead and open kakate valve and

176
00:08:28,070 --> 00:08:25,110
okay so we're going to

177
00:09:04,070 --> 00:08:28,080
repress the iss with

178
00:09:04,080 --> 00:09:21,030
foreign

179
00:09:26,870 --> 00:09:23,509
and having a quick handover so quick

180
00:09:29,030 --> 00:09:26,880
transition in our

181
00:09:31,030 --> 00:09:29,040
audio video and telemetry reception with

182
00:09:33,110 --> 00:09:31,040
the station as we hand over between uh

183
00:09:35,910 --> 00:09:33,120
the tracking and data relay satellites

184
00:09:38,710 --> 00:09:35,920
that deliver all of that data from the

185
00:09:41,110 --> 00:09:38,720
station back down to us in the ground

186
00:09:42,870 --> 00:09:41,120
you're getting split box views of the

187
00:09:44,470 --> 00:09:42,880
russian mission control center in kariov

188
00:09:46,550 --> 00:09:44,480

just outside of moscow they've been

189
00:09:47,750 --> 00:09:46,560
overseeing all of the operations from

190
00:09:50,150 --> 00:09:47,760
the soyuz

191
00:09:51,910 --> 00:09:50,160
ms-16 vehicle today from launch all the

192
00:09:52,870 --> 00:09:51,920
way through this docking and now hatch

193
00:09:54,550 --> 00:09:52,880
opening

194
00:09:57,509 --> 00:09:54,560
on the right a look inside of thicker

195
00:09:59,430 --> 00:09:57,519
one orbit two teams still on console

196
00:10:01,350 --> 00:09:59,440
they've been on board

197
00:10:04,310 --> 00:10:01,360
uh since a couple of hours before the

198
00:10:06,550 --> 00:10:04,320
actual docking overseeing all the final

199
00:10:09,190 --> 00:10:06,560
preparations of the station again flight

200
00:10:10,389 --> 00:10:09,200
director puja jazvarani leading the team

201
00:10:13,829 --> 00:10:10,399
this morning

202
00:10:18,069 --> 00:10:13,839
please be ready to uh note it down and i

203
00:10:25,509 --> 00:10:21,269
tell you what the recommendation is

204
00:10:25,519 --> 00:10:30,150
over there ready to copy

205
00:10:30,160 --> 00:10:33,350
yes

206
00:10:37,829 --> 00:10:34,949
so first of all you will have to

207
00:10:41,269 --> 00:10:37,839
deactivate the soyuz this is orbital

208
00:10:53,269 --> 00:10:41,279
flight ojs page 25-38

209
00:10:57,269 --> 00:10:54,870
that's affirmative

210
00:10:58,550 --> 00:10:57,279
second item do not deactivate the gas

211
00:11:02,550 --> 00:10:58,560
analyzer

212
00:11:03,829 --> 00:11:02,560
orbital flight or jf page 36

213
00:11:26,829 --> 00:11:03,839

stats

214
00:11:34,630 --> 00:11:32,630
36. step 4.5 is not to be executed

215
00:11:37,110 --> 00:11:34,640
and because analyzer is not to be

216
00:11:40,630 --> 00:11:37,120
activated that's correct next item you

217
00:11:42,470 --> 00:11:40,640
have to change out the cartridge in the

218
00:11:45,190 --> 00:11:42,480
sub page 35

219
00:11:46,150 --> 00:11:45,200
4.3 so you're supposed to switch pair

220
00:11:48,230 --> 00:11:46,160
one

221
00:11:50,069 --> 00:11:48,240
with past three

222
00:11:51,150 --> 00:11:50,079
page 35

223
00:11:54,949 --> 00:11:51,160
step

224
00:11:56,470 --> 00:11:54,959
4.3 and what's next

225
00:11:59,190 --> 00:11:56,480
replace

226
00:12:02,230 --> 00:11:59,200
the one with ps3 is that correct yes

227
00:12:05,910 --> 00:12:03,670
so while the crew inside the soyuz

228
00:12:08,150 --> 00:12:05,920
continues to step through these final

229
00:12:09,829 --> 00:12:08,160
equalization procedures let's take a

230
00:12:11,910 --> 00:12:09,839
couple of moments you guys have been

231
00:12:14,069 --> 00:12:11,920
sending in questions on twitter using

232
00:12:15,670 --> 00:12:14,079
that hashtag ask nasa ever since our

233
00:12:18,230 --> 00:12:15,680
launch this morning we'll try and burn

234
00:12:20,829 --> 00:12:18,240
through a couple here real quick

235
00:12:22,949 --> 00:12:20,839
uh our first one comes from

236
00:12:24,949 --> 00:12:22,959
mymyriamyvet we wanted to know what

237
00:12:27,430 --> 00:12:24,959
would be the first task upon boarding

238
00:12:28,310 --> 00:12:27,440

the international space station

239
00:12:31,030 --> 00:12:28,320
well

240
00:12:32,470 --> 00:12:31,040
first task on board will be to just

241
00:12:34,550 --> 00:12:32,480
greet their crew members and they'll

242
00:12:36,389 --> 00:12:34,560
gather in the russian service module and

243
00:12:39,350 --> 00:12:36,399
exchange a couple of words with the

244
00:12:40,310 --> 00:12:39,360
teams on the ground both in moscow and

245
00:12:41,829 --> 00:12:40,320
houston

246
00:12:43,750 --> 00:12:41,839
then actually the first scheduled task

247
00:12:45,030 --> 00:12:43,760
for all of these crew members will be a

248
00:12:45,990 --> 00:12:45,040
midday meal

249
00:12:47,910 --> 00:12:46,000
it's been

250
00:12:50,470 --> 00:12:47,920
several hours since the crew

251
00:12:53,350 --> 00:12:50,480
on the soyuz 8 prior to getting suited

252
00:12:55,990 --> 00:12:53,360
up and leaving on their trip into space

253
00:12:58,150 --> 00:12:56,000
and then for the crew already on board

254
00:12:59,430 --> 00:12:58,160
the station it's right at midday meal

255
00:13:01,110 --> 00:12:59,440
time for

256
00:13:03,269 --> 00:13:01,120
their normal sleep schedule so they'll

257
00:13:04,949 --> 00:13:03,279
all share that together and then i'll

258
00:13:08,069 --> 00:13:04,959
actually move into what's known as a

259
00:13:09,590 --> 00:13:08,079
safety briefing so it's customary that

260
00:13:12,069 --> 00:13:09,600
the international space station

261
00:13:13,910 --> 00:13:12,079
commander gives all newly arrived crews

262
00:13:16,470 --> 00:13:13,920
a safety briefing that typically lasts

263
00:13:18,870 --> 00:13:16,480

about 45 minutes where they just do a

264
00:13:22,550 --> 00:13:18,880
refresher on all the particulars of

265
00:13:24,069 --> 00:13:22,560
reacting to an emergency onboard station

266
00:13:25,509 --> 00:13:24,079
where your routes are to your soyuz

267
00:13:27,750 --> 00:13:25,519
spacecraft where all the emergency

268
00:13:31,190 --> 00:13:27,760
equipment is and just walking through it

269
00:13:34,150 --> 00:13:32,870
next question comes from sid who wanted

270
00:13:36,069 --> 00:13:34,160
to know is this going to be the last

271
00:13:37,750 --> 00:13:36,079
usage of the soyuz for space station

272
00:13:39,350 --> 00:13:37,760
travel a number of you sending in

273
00:13:41,030 --> 00:13:39,360
questions asking

274
00:13:43,590 --> 00:13:41,040
if this is the last time we'll have

275
00:13:45,590 --> 00:13:43,600
american astronauts on a soyuz or

276
00:13:47,430 --> 00:13:45,600
will we only be flying on the new

277
00:13:48,550 --> 00:13:47,440
commercial spacecraft from spacex and

278
00:13:50,310 --> 00:13:48,560
boeing

279
00:13:52,710 --> 00:13:50,320
and the answer is no this will not be

280
00:13:56,310 --> 00:13:52,720
the last usage the intention is to

281
00:13:59,269 --> 00:13:56,320
continue to fly americans on the soyuz

282
00:14:01,590 --> 00:13:59,279
and then also to fly russians on the

283
00:14:03,990 --> 00:14:01,600
commercial crew vehicles coming online

284
00:14:06,949 --> 00:14:04,000
as part of our commercial crew program

285
00:14:09,110 --> 00:14:06,959
we always want to maintain a

286
00:14:12,629 --> 00:14:09,120
u.s and a russian presence on board the

287
00:14:14,310 --> 00:14:12,639
station as those nations are the ones

288
00:14:15,350 --> 00:14:14,320

most

289
00:14:17,509 --> 00:14:15,360
the next

290
00:14:19,189 --> 00:14:17,519
most well trained and most in tune with

291
00:14:20,629 --> 00:14:19,199
the various systems on the different

292
00:14:22,550 --> 00:14:20,639
segments

293
00:14:24,470 --> 00:14:22,560
and so in order to keep that mixed crew

294
00:14:26,389 --> 00:14:24,480
we're going to have to fly mixed crews

295
00:14:28,150 --> 00:14:26,399
on these different vehicles

296
00:14:30,710 --> 00:14:28,160
so we fully intend

297
00:14:33,590 --> 00:14:30,720
to continue flying americans on soyuz

298
00:14:37,030 --> 00:14:33,600
and to eventually fly russians on the

299
00:14:39,350 --> 00:14:37,040
u.s commercial crew vehicles

300
00:14:40,710 --> 00:14:39,360
and then a lot of people uh sending in

301
00:14:43,430 --> 00:14:40,720
the uh

302
00:14:46,389 --> 00:14:43,440
very pertinent questions about any risks

303
00:14:48,550 --> 00:14:46,399
of the crew spreading covid19 to the

304
00:14:50,310 --> 00:14:48,560
international space station or what

305
00:14:53,269 --> 00:14:50,320
we've done to protect them and the

306
00:14:55,269 --> 00:14:53,279
answer is we really have a very robust

307
00:14:57,430 --> 00:14:55,279
health stabilization program is what

308
00:14:59,350 --> 00:14:57,440
it's referred to so it's essentially a

309
00:15:02,069 --> 00:14:59,360
very strict quarantine for these crew

310
00:15:04,629 --> 00:15:02,079
members in the weeks leading up to their

311
00:15:07,269 --> 00:15:04,639
international space station flights a

312
00:15:09,750 --> 00:15:07,279
couple of typical pre-launch activities

313
00:15:12,150 --> 00:15:09,760

were either scaled back or changed

314
00:15:15,670 --> 00:15:12,160
largely ceremonial in nature things like

315
00:15:17,350 --> 00:15:15,680
media briefings or visits to red square

316
00:15:19,430 --> 00:15:17,360
but their quarantine procedures didn't

317
00:15:21,590 --> 00:15:19,440
really get that much of a change

318
00:15:24,230 --> 00:15:21,600
the amount of individuals in the general

319
00:15:25,430 --> 00:15:24,240
area around the crew was scaled back we

320
00:15:27,750 --> 00:15:25,440
saw with

321
00:15:29,990 --> 00:15:27,760
all of the roll out video of the crew

322
00:15:32,550 --> 00:15:30,000
leaving the hotel there was a much

323
00:15:35,030 --> 00:15:32,560
smaller footprint of individuals down

324
00:15:37,110 --> 00:15:35,040
there in baikonur just due to all of the

325
00:15:37,910 --> 00:15:37,120
current travel restrictions

326
00:15:40,310 --> 00:15:37,920
but

327
00:15:42,150 --> 00:15:40,320
we do have this stabilization plan

328
00:15:44,949 --> 00:15:42,160
already in place that requires a

329
00:15:47,509 --> 00:15:44,959
quarantine for these crew members just

330
00:15:49,430 --> 00:15:47,519
even in normal times to prevent them

331
00:15:51,269 --> 00:15:49,440
from bringing any

332
00:15:52,949 --> 00:15:51,279
bugs viruses things like that up to the

333
00:15:54,230 --> 00:15:52,959
space station with them

334
00:15:55,189 --> 00:15:54,240
and potentially getting their other

335
00:15:56,629 --> 00:15:55,199
crewmates sick because they're

336
00:15:57,990 --> 00:15:56,639
essentially living in this closed

337
00:15:59,749 --> 00:15:58,000
environment

338
00:16:01,670 --> 00:15:59,759

and so thanks to already having a lot of

339
00:16:03,590 --> 00:16:01,680
those robust procedures in place we're

340
00:16:06,150 --> 00:16:03,600
very confident that we're able to launch

341
00:16:08,470 --> 00:16:06,160
these crew members safe and healthy and

342
00:16:11,829 --> 00:16:08,480
ready for their months days on for the

343
00:16:13,990 --> 00:16:11,839
international space station

344
00:16:15,670 --> 00:16:14,000
there are certain actions that are

345
00:16:17,910 --> 00:16:15,680
altered miscellany wanted to know how

346
00:16:19,670 --> 00:16:17,920
often they get to talk to their families

347
00:16:20,949 --> 00:16:19,680
uh pretty regularly

348
00:16:23,509 --> 00:16:20,959
and then they'll have regularly

349
00:16:25,829 --> 00:16:23,519
scheduled video conferences with friends

350
00:16:27,910 --> 00:16:25,839
and family down here on the ground

351
00:16:30,150 --> 00:16:27,920
using a lot of different communication

352
00:16:32,550 --> 00:16:30,160
tools that would be very familiar to you

353
00:16:34,870 --> 00:16:32,560
or i down here on planet earth

354
00:16:37,430 --> 00:16:34,880
essentially using

355
00:16:40,389 --> 00:16:37,440
video calling and even voice over ip

356
00:16:41,990 --> 00:16:40,399
very similar to uh what we get and it

357
00:16:44,230 --> 00:16:42,000
ends up functioning just like calling

358
00:16:45,990 --> 00:16:44,240
somebody on a cell phone

359
00:16:47,350 --> 00:16:46,000
so they're able to get that on board the

360
00:16:49,189 --> 00:16:47,360
international space station and also

361
00:16:50,949 --> 00:16:49,199
have access to email

362
00:16:52,870 --> 00:16:50,959
so they're able to regularly send and

363
00:16:55,829 --> 00:16:52,880

receive messages from family on the

364
00:16:58,389 --> 00:16:55,839
ground and they can do that every single

365
00:17:02,230 --> 00:17:00,069
our next one comes from alex you want to

366
00:17:05,110 --> 00:17:02,240
know how good is the internet on the

367
00:17:08,630 --> 00:17:05,120
international space station

368
00:17:10,390 --> 00:17:08,640
the internet is serviced like all of the

369
00:17:12,630 --> 00:17:10,400
data transfer from the station by our

370
00:17:14,710 --> 00:17:12,640
tracking and data relay satellites it's

371
00:17:15,990 --> 00:17:14,720
a constellation in orbit around the

372
00:17:18,630 --> 00:17:16,000
earth

373
00:17:20,630 --> 00:17:18,640
that they're able to use to

374
00:17:22,470 --> 00:17:20,640
send data send video

375
00:17:24,150 --> 00:17:22,480
like we're getting right now

376
00:17:25,669 --> 00:17:24,160
also send voice communications but also

377
00:17:27,429 --> 00:17:25,679
use the internet the

378
00:17:29,350 --> 00:17:27,439
internet the astronauts able to browse

379
00:17:31,270 --> 00:17:29,360
the web on board

380
00:17:33,750 --> 00:17:31,280
and the station right now

381
00:17:35,750 --> 00:17:33,760
thanks to upgrades in 2019

382
00:17:37,270 --> 00:17:35,760
supports a 600 megabit per second

383
00:17:38,950 --> 00:17:37,280
connection so

384
00:17:40,630 --> 00:17:38,960
it's getting more common to have gigabit

385
00:17:43,029 --> 00:17:40,640
connections down here on planet earth so

386
00:17:45,430 --> 00:17:43,039
not quite that fast but considering

387
00:17:47,909 --> 00:17:45,440
they're orbiting about 250 statute miles

388
00:17:49,990 --> 00:17:47,919

over planet earth it's definitely fast

389
00:17:51,669 --> 00:17:50,000
enough and that's handling all of the

390
00:17:53,350 --> 00:17:51,679
video coming down from station all of

391
00:17:55,750 --> 00:17:53,360
the science data

392
00:17:57,590 --> 00:17:55,760
all of the files being uplinked to the

393
00:17:59,750 --> 00:17:57,600
crew um so

394
00:18:02,470 --> 00:17:59,760
for now and we'll figure it out later

395
00:18:04,390 --> 00:18:02,480
600 megabits

396
00:18:05,830 --> 00:18:04,400
uh our next question comes from claire c

397
00:18:09,190 --> 00:18:05,840
wanted to know why the backup crew are

398
00:18:10,470 --> 00:18:09,200
being used that is because

399
00:18:12,630 --> 00:18:10,480
one of the crew members that was

400
00:18:13,990 --> 00:18:12,640
originally slated to fly encountered a

401
00:18:17,190 --> 00:18:14,000
medical issue in some of the final

402
00:18:18,710 --> 00:18:17,200
stages of training and since these crew

403
00:18:20,789 --> 00:18:18,720
members were getting some special

404
00:18:22,630 --> 00:18:20,799
training um as

405
00:18:24,710 --> 00:18:22,640
uh when

406
00:18:26,630 --> 00:18:24,720
andrew morgan and jessica meer leave

407
00:18:29,669 --> 00:18:26,640
along with alex korpochka

408
00:18:32,150 --> 00:18:29,679
we'll only have one usos crew member

409
00:18:34,390 --> 00:18:32,160
that's chris cassidy on us stands for

410
00:18:36,230 --> 00:18:34,400
the u.s operating segment

411
00:18:37,830 --> 00:18:36,240
it's really the

412
00:18:40,070 --> 00:18:37,840
behalf of the international space

413
00:18:41,669 --> 00:18:40,080

station that has the the u.s sponsored

414
00:18:44,150 --> 00:18:41,679
modules along with some from our

415
00:18:46,390 --> 00:18:44,160
international partners

416
00:18:47,270 --> 00:18:46,400
and for certain things like spacewalks

417
00:18:49,430 --> 00:18:47,280
which

418
00:18:51,510 --> 00:18:49,440
we have different systems different

419
00:18:53,190 --> 00:18:51,520
suits different procedures on the u.s

420
00:18:54,630 --> 00:18:53,200
side and the russian side

421
00:18:57,510 --> 00:18:54,640
so the russian crew member is getting

422
00:18:59,270 --> 00:18:57,520
some special training

423
00:19:01,990 --> 00:18:59,280
in those procedures

424
00:19:03,909 --> 00:19:02,000
in particular one of the crew members

425
00:19:06,230 --> 00:19:03,919
in each the prime and the backup crew

426
00:19:07,750 --> 00:19:06,240
getting that training and since

427
00:19:08,789 --> 00:19:07,760
these backup crews are essentially a

428
00:19:10,630 --> 00:19:08,799
pair

429
00:19:12,870 --> 00:19:10,640
when one crew member had a medical issue

430
00:19:15,110 --> 00:19:12,880
they had to swap out both and so that's

431
00:19:17,430 --> 00:19:15,120
why the backup crew was used on this

432
00:19:20,150 --> 00:19:17,440
flight but as we heard pre-launch

433
00:19:21,270 --> 00:19:20,160
anatoly venetian and ivonne wagner

434
00:19:23,190 --> 00:19:21,280
training

435
00:19:24,630 --> 00:19:23,200
just alongside with the prime crew for

436
00:19:26,710 --> 00:19:24,640
this over the last two years so they

437
00:19:30,870 --> 00:19:26,720
were very well prepared and ready to

438
00:19:30,880 --> 00:19:37,990

thank you 736

439
00:19:40,630 --> 00:19:39,430
we haven't forgot about hatch opening

440
00:19:41,750 --> 00:19:40,640
again they're still

441
00:19:43,430 --> 00:19:41,760
working through this pressure

442
00:19:45,350 --> 00:19:43,440
equalization it can take a couple of

443
00:19:47,270 --> 00:19:45,360
minutes uh so we're just going to

444
00:19:49,669 --> 00:19:47,280
continue to stand by we should be seeing

445
00:19:51,590 --> 00:19:49,679
that soyuz hatch open in just a little

446
00:19:54,070 --> 00:19:51,600
bit and then we'll see chris cassidy

447
00:19:55,830 --> 00:19:54,080
anatoly ivanishin and von wagner make

448
00:19:58,549 --> 00:19:55,840
their way into the international space

449
00:20:03,029 --> 00:20:00,470
but for now back to twitter

450
00:20:05,350 --> 00:20:03,039
got some more ask nasa questions tom

451
00:20:07,510 --> 00:20:05,360
dang wanted to know what the grid fin on

452
00:20:08,630 --> 00:20:07,520
the fairing of the soyuz launch vehicle

453
00:20:10,870 --> 00:20:08,640
does

454
00:20:13,430 --> 00:20:10,880
good eye and good question

455
00:20:15,990 --> 00:20:13,440
if you do remember that soyuz there are

456
00:20:19,590 --> 00:20:16,000
grid fins they're basically large

457
00:20:21,110 --> 00:20:19,600
structures on the launch shroud area

458
00:20:23,190 --> 00:20:21,120
so the very top of the rocket has a

459
00:20:25,110 --> 00:20:23,200
large white area with the launch escape

460
00:20:26,710 --> 00:20:25,120
tower on top and then a shroud that

461
00:20:29,270 --> 00:20:26,720
protects the soyuz during that ride

462
00:20:32,070 --> 00:20:29,280
uphill and there are four grid fins

463
00:20:34,950 --> 00:20:32,080

that are attached to the side those are

464
00:20:37,750 --> 00:20:34,960
stabilizers so in the event of what's

465
00:20:39,110 --> 00:20:37,760
known as a phase one abort so using that

466
00:20:41,110 --> 00:20:39,120
prime

467
00:20:43,029 --> 00:20:41,120
board tower on top

468
00:20:45,270 --> 00:20:43,039
and the solid rocket motors on the

469
00:20:47,110 --> 00:20:45,280
fairing itself those stabilizers are

470
00:20:49,430 --> 00:20:47,120
deployed in order to basically be

471
00:20:51,430 --> 00:20:49,440
attitude control a stabilizer to ensure

472
00:20:56,070 --> 00:20:51,440
the vehicle doesn't go into a roll and

473
00:20:59,909 --> 00:20:58,870
okay copy that's great

474
00:21:05,669 --> 00:20:59,919
and

475
00:21:07,270 --> 00:21:05,679
to stop at the two-minute interval this

476
00:21:08,710 --> 00:21:07,280
is page

477
00:21:11,990 --> 00:21:08,720
80.

478
00:21:13,909 --> 00:21:12,000
well it's not really dropping it's just

479
00:21:15,590 --> 00:21:13,919
decreasing well

480
00:21:18,230 --> 00:21:15,600
okay coffee

481
00:21:20,070 --> 00:21:18,240
less than bye for it to stop decreasing

482
00:21:22,070 --> 00:21:20,080
then

483
00:21:26,610 --> 00:21:22,080
because when you say the pressure is

484
00:21:31,029 --> 00:21:28,710
[Music]

485
00:21:46,870 --> 00:21:31,039
we'll take that into the account for

486
00:21:52,390 --> 00:21:49,669
and if i understand it correctly

487
00:21:56,390 --> 00:21:52,400
uh we're supposed to exit we're going to

488
00:21:58,549 --> 00:21:56,400

have a po event and then uh after the

489
00:22:02,230 --> 00:21:58,559
video conference we will do the

490
00:22:04,549 --> 00:22:02,240
deactivation stuff is that correct

491
00:22:06,310 --> 00:22:04,559
that's affirmative

492
00:22:08,230 --> 00:22:06,320
but

493
00:22:10,870 --> 00:22:08,240
after the event you will have to get

494
00:22:14,310 --> 00:22:10,880
back to the soyuz and deactivate com

495
00:22:16,230 --> 00:22:14,320
assets per page 82 and install the

496
00:22:20,470 --> 00:22:16,240
cap etc we have already discussed it

497
00:22:21,270 --> 00:22:20,480
with you this is page 82 in your odf

498
00:22:24,870 --> 00:22:21,280
first

499
00:22:27,590 --> 00:22:24,880
okay so we will exit how everyone and

500
00:22:30,630 --> 00:22:27,600
then we're getting back to the vehicle

501
00:22:33,830 --> 00:22:30,640
to the soyuz complete all the actions

502
00:22:37,990 --> 00:22:33,840
for page 82 and then switch to assemb

503
00:22:38,000 --> 00:23:27,990
all right

504
00:23:32,710 --> 00:23:29,909
and we're standing by for another

505
00:23:32,720 --> 00:23:40,630
all right

506
00:23:43,510 --> 00:23:41,590
okay

507
00:23:45,110 --> 00:23:43,520
seven three five

508
00:23:48,549 --> 00:23:45,120
is the current pressure reading seven

509
00:24:39,190 --> 00:23:52,630
and it looks like okay seven three five

510
00:25:00,950 --> 00:24:42,230
okay so we're going to exit now and hug

511
00:25:05,750 --> 00:25:02,950
and then i will uh

512
00:25:08,310 --> 00:25:05,760
come back here or deactivate everything

513
00:25:11,269 --> 00:25:08,320

and uh we're going to have some kind of

514
00:25:13,430 --> 00:25:11,279
a video conference from the sm

515
00:25:14,630 --> 00:25:13,440
please smile

516
00:25:16,789 --> 00:25:14,640
okay

517
00:25:40,950 --> 00:25:16,799
deactivate everything do not worry about

518
00:25:46,789 --> 00:25:44,149
we are standing by for another pressure

519
00:25:53,990 --> 00:25:52,149
well it is still sort of decreasing 734

520
00:27:19,590 --> 00:25:54,000
is the reading

521
00:27:27,990 --> 00:27:21,269
it is stable

522
00:27:32,470 --> 00:27:30,230
poppy and

523
00:27:36,630 --> 00:27:32,480
you're going to close calcutta and cover

524
00:27:39,350 --> 00:27:36,640
the valve and you can open below esu

525
00:27:40,230 --> 00:27:39,360
hatch cover

526
00:28:53,909 --> 00:27:40,240
okay

527
00:28:53,919 --> 00:29:02,549
let's see

528
00:29:07,350 --> 00:29:05,269
okay and just uh go ahead and move over

529
00:29:09,190 --> 00:29:07,360
there

530
00:29:22,710 --> 00:29:09,200
that's where the hatch is and please

531
00:29:27,350 --> 00:29:25,909
all right and as you can see the hatch

532
00:29:29,750 --> 00:29:27,360
is open

533
00:29:31,990 --> 00:29:29,760
von wagner first threw chris cassidy

534
00:29:35,190 --> 00:29:32,000
just behind him making his way his third

535
00:29:38,149 --> 00:29:35,200
trip to the international space station

536
00:29:41,350 --> 00:29:38,159
that hatch open coming at 11 28 a.m

537
00:29:46,230 --> 00:29:41,360
central time 12 20 8

538
00:29:46,240 --> 00:29:49,750

16 28 gmt

539
00:29:53,990 --> 00:29:51,909
and last but not least anatoly ivanishin

540
00:29:56,149 --> 00:29:54,000
also a third time space flier making his

541
00:29:59,350 --> 00:29:56,159
way on board the station

542
00:30:01,190 --> 00:29:59,360
again that hatch was opened at 11 28 a.m

543
00:30:04,470 --> 00:30:01,200
central while the station was flying

544
00:30:06,950 --> 00:30:04,480
just about just under 270 statute miles

545
00:30:20,149 --> 00:30:06,960
over the indian ocean just off the west

546
00:30:20,159 --> 00:30:23,430
go ahead

547
00:30:26,070 --> 00:30:24,630
yeah

548
00:30:26,789 --> 00:30:26,080
so i'm

549
00:30:34,310 --> 00:30:26,799
in

550
00:30:36,710 --> 00:30:34,320
page 82.

551
00:30:38,549 --> 00:30:36,720
okay copy

552
00:30:40,870 --> 00:30:38,559
so guys we're going to say goodbye at

553
00:31:29,750 --> 00:30:40,880
this point thank you very much for all

554
00:31:34,389 --> 00:31:32,070
i just wanted to thank you for all the

555
00:31:36,710 --> 00:31:34,399
work you did today and i'd like to wish

556
00:31:38,070 --> 00:31:36,720
you a successful flight

557
00:31:42,070 --> 00:31:38,080
thank you

558
00:31:44,070 --> 00:31:42,080
your support have a great day all the

559
00:31:55,509 --> 00:31:44,080
best to you thank you and my best

560
00:31:59,909 --> 00:31:57,430
yes moscow i'm

561
00:32:02,070 --> 00:31:59,919
signing off and they're activating soyuz

562
00:33:00,230 --> 00:32:02,080
com assets goodbye now

563
00:33:03,830 --> 00:33:02,310

this is mission control houston another

564
00:33:05,750 --> 00:33:03,840
quick handover should be getting that

565
00:33:07,350 --> 00:33:05,760
video signal back with the station

566
00:33:09,430 --> 00:33:07,360
momentarily

567
00:33:11,590 --> 00:33:09,440
we are going to stand by for just a few

568
00:33:12,789 --> 00:33:11,600
more minutes we are

569
00:33:14,070 --> 00:33:12,799
still looking to see if we're going to

570
00:33:16,389 --> 00:33:14,080
get some words

571
00:33:18,470 --> 00:33:16,399
from the newly arrived crew

572
00:33:20,950 --> 00:33:18,480
and hopefully some congratulations from

573
00:33:22,070 --> 00:33:20,960
here in houston so continue to hang with

574
00:33:24,470 --> 00:33:22,080
us

575
00:33:25,750 --> 00:33:24,480
big event though hatch open and we're

576
00:33:29,430 --> 00:33:25,760
starting to see

577
00:33:31,750 --> 00:33:29,440
our crew members inside of the zvezda

578
00:33:33,350 --> 00:33:31,760
service module right

579
00:34:32,069 --> 00:33:33,360
there in the front of the left

580
00:34:32,079 --> 00:34:37,430
okay super muscular

581
00:34:37,440 --> 00:35:12,790
how do you read us

582
00:36:37,670 --> 00:35:15,190
he was sent he was sent to the

583
00:36:42,069 --> 00:36:39,990
and right there our first view of all

584
00:36:44,150 --> 00:36:42,079
three of the newest crew members of

585
00:37:05,670 --> 00:36:44,160
expedition 62 on board the international

586
00:37:27,910 --> 00:37:07,750
we are

587
00:37:27,920 --> 00:37:37,910
good day to you

588
00:37:41,349 --> 00:37:39,109

what can we say

589
00:37:42,589 --> 00:37:41,359
we are very happy

590
00:37:56,470 --> 00:37:42,599
that

591
00:37:59,349 --> 00:37:56,480
self isolated here

592
00:38:02,069 --> 00:37:59,359
on the station we are ready for

593
00:38:05,670 --> 00:38:02,079
handing over and after that we are going

594
00:38:08,390 --> 00:38:05,680
to leave the station in the good hands

595
00:38:12,630 --> 00:38:08,400
we are very happy that we have arrived

596
00:38:17,589 --> 00:38:15,589
just a month ago it was uh unexpected

597
00:38:19,589 --> 00:38:17,599
for us we didn't know we are going to be

598
00:38:21,430 --> 00:38:19,599
here we started preparing we were

599
00:38:23,670 --> 00:38:21,440
training

600
00:38:25,190 --> 00:38:23,680
and everything worked out

601
00:38:27,030 --> 00:38:25,200
well

602
00:38:28,550 --> 00:38:27,040
uh we are here

603
00:38:33,190 --> 00:38:28,560
uh the

604
00:38:36,150 --> 00:38:33,200
vehicle uh performed there excellently

605
00:38:37,349 --> 00:38:36,160
the station is great we can only confirm

606
00:38:40,790 --> 00:38:37,359
again that

607
00:38:43,750 --> 00:38:40,800
the technology is operating well

608
00:38:45,589 --> 00:38:43,760
we are happy to be here on the station

609
00:38:47,030 --> 00:38:45,599
we are not going to spend much time with

610
00:38:49,940 --> 00:38:47,040
them but this is going to be a great

611
00:38:55,829 --> 00:38:51,349
[Music]

612
00:39:03,589 --> 00:38:58,230
we wish you

613
00:39:03,599 --> 00:39:31,290

perform well thank you thank you

614
00:39:31,300 --> 00:39:35,670
[Music]

615
00:39:40,069 --> 00:39:38,470
mission control houston

616
00:39:43,430 --> 00:39:40,079
houston this is station hello how are

617
00:39:48,550 --> 00:39:45,829
station houston we just wanted to say

618
00:39:50,310 --> 00:39:48,560
congratulations to the entire crew and

619
00:39:51,750 --> 00:39:50,320
the teams on the ground that made this

620
00:39:54,630 --> 00:39:51,760
all possible

621
00:39:56,790 --> 00:39:54,640
chris and anatoly congrats on your third

622
00:39:59,270 --> 00:39:56,800
successful arrival at the international

623
00:40:02,230 --> 00:39:59,280
space station and a special special

624
00:40:04,550 --> 00:40:02,240
congrats to yvonne on his first

625
00:40:07,109 --> 00:40:04,560
for chris it was a stunning launch and

626
00:40:09,510 --> 00:40:07,119
docking and while we wish we had

627
00:40:11,030 --> 00:40:09,520
everyone to see you off from baikonur we

628
00:40:13,430 --> 00:40:11,040
know your family and friends and your

629
00:40:15,349 --> 00:40:13,440
nasa family were watching the whole way

630
00:40:18,309 --> 00:40:15,359
and couldn't be more proud

631
00:40:19,990 --> 00:40:18,319
you were the 500th human in space former

632
00:40:22,470 --> 00:40:20,000
chief astronaut

633
00:40:24,150 --> 00:40:22,480
upcoming space station commander

634
00:40:27,430 --> 00:40:24,160
and when drew and jessica leave in a

635
00:40:29,270 --> 00:40:27,440
week our lone man on the u.s segment

636
00:40:31,109 --> 00:40:29,280
there's nobody better for the job and

637
00:40:35,589 --> 00:40:31,119
the flight control team can't wait to

638
00:40:40,069 --> 00:40:37,910

hey jessica thanks a lot it really means

639
00:40:41,510 --> 00:40:40,079
a lot to be back here and uh

640
00:40:43,510 --> 00:40:41,520
representing all of the johnson space

641
00:40:44,790 --> 00:40:43,520
center and all of nasa really to get

642
00:40:46,470 --> 00:40:44,800
this mission going it's going to be a

643
00:40:49,589 --> 00:40:46,480
really exciting year

644
00:40:51,750 --> 00:40:49,599
um in our manned space history

645
00:40:53,990 --> 00:40:51,760
for all the obvious reasons and we hope

646
00:40:55,910 --> 00:40:54,000
to start that off at some point by

647
00:40:58,790 --> 00:40:55,920
welcoming bob and doug but for today's

648
00:41:00,790 --> 00:40:58,800
purposes the launch was great we as

649
00:41:01,910 --> 00:41:00,800
there's always said the spaceship worked

650
00:41:04,309 --> 00:41:01,920
beautifully

651
00:41:12,230 --> 00:41:04,319
and uh we're just really happy to get

652
00:41:12,240 --> 00:41:29,860
ezra good words chris thanks so much

653
00:41:29,870 --> 00:41:33,510
[Music]

654
00:41:42,150 --> 00:41:36,309
how do you read me congratulations to

655
00:41:49,349 --> 00:41:45,109
finally the crew is together

656
00:41:53,670 --> 00:41:49,359
alex the crew here they waited for you

657
00:41:57,990 --> 00:41:54,550
and

658
00:42:01,349 --> 00:41:58,000
you are from our department we are very

659
00:42:03,990 --> 00:42:01,359
happy to have you there we wish you have

660
00:42:06,790 --> 00:42:04,000
great time there and perform the program

661
00:42:08,470 --> 00:42:06,800
as scheduled for you wish you all the

662
00:42:12,309 --> 00:42:08,480
best and all the luck

663
00:42:13,990 --> 00:42:12,319

and congratulations one more time

664
00:42:20,070 --> 00:42:14,000
thank you very much

665
00:42:23,990 --> 00:42:22,230
[Music]

666
00:42:37,430 --> 00:42:24,000
congratulate you from the bottom of my

667
00:42:42,470 --> 00:42:40,710
it would be great if you say a few words

668
00:42:45,270 --> 00:42:42,480
on your birthday

669
00:42:49,589 --> 00:42:45,280
and we're gonna let them know okay for

670
00:42:49,599 --> 00:42:56,829
yes of course

671
00:43:02,309 --> 00:42:59,829
62 and the new

672
00:43:04,470 --> 00:43:02,319
crew from 63

673
00:43:07,990 --> 00:43:04,480
from the bottom of our hearts uh happy

674
00:43:15,829 --> 00:43:12,230
natalie is a great scientist and a great

675
00:43:19,349 --> 00:43:15,839
physician has done a lot for

676
00:43:20,550 --> 00:43:19,359
uh cosmonautics for reaching out

677
00:43:23,990 --> 00:43:20,560
and

678
00:43:28,390 --> 00:43:24,000
we wish you uh natalia

679
00:43:30,470 --> 00:43:28,400
long years success and everything from

680
00:43:32,470 --> 00:43:30,480
the whole crew of us happy birthday to

681
00:43:51,990 --> 00:43:32,480
you

682
00:43:55,510 --> 00:43:53,140
is

683
00:43:57,349 --> 00:43:55,520
[Music]

684
00:44:00,870 --> 00:43:57,359
so we will wrap up

685
00:44:01,670 --> 00:44:00,880
this beautiful event

686
00:44:03,829 --> 00:44:01,680
and

687
00:44:05,109 --> 00:44:03,839
make yourself comfortable

688
00:44:11,270 --> 00:44:05,119

have

689
00:44:11,280 --> 00:46:21,349
thank you

690
00:46:26,790 --> 00:46:24,630
all right well with that event completed

691
00:46:28,230 --> 00:46:26,800
we are now back at six human beings

692
00:46:30,470 --> 00:46:28,240
living and working on board the

693
00:46:32,790 --> 00:46:30,480
international space station they'll be

694
00:46:34,630 --> 00:46:32,800
at full strength for about a week before

695
00:46:37,670 --> 00:46:34,640
it's time for three of those crew

696
00:46:39,430 --> 00:46:37,680
members to return home uh just recapping

697
00:46:41,670 --> 00:46:39,440
a couple of our major milestones with

698
00:46:44,550 --> 00:46:41,680
today the crew launched successfully

699
00:46:47,670 --> 00:46:44,560
from the baikonur cosmodrome at 305 pm

700
00:46:49,670 --> 00:46:47,680
central am central time 405 a.m eastern

701
00:46:51,670 --> 00:46:49,680
805 gmt

702
00:46:55,190 --> 00:46:51,680
they were able to dock just a little

703
00:46:59,589 --> 00:46:55,200
over six hours later at 9 13 a.m central

704
00:47:02,630 --> 00:46:59,599
10 13 a.m eastern 1413 gmt and those

705
00:47:05,589 --> 00:47:02,640
hatches were just thrown open a little

706
00:47:10,309 --> 00:47:05,599
under 20 minutes ago at 11 28 a.m

707
00:47:12,150 --> 00:47:10,319
central 12 28 p.m eastern 1628 gmt

708
00:47:13,670 --> 00:47:12,160
bringing a start to

709
00:47:14,790 --> 00:47:13,680
chris cassidy

710
00:47:17,190 --> 00:47:14,800
uh

711
00:47:19,589 --> 00:47:17,200
anatoly ivanishin and ivonne wagner's

712
00:47:21,030 --> 00:47:19,599
time on board the international space

713
00:47:22,710 --> 00:47:21,040

station

714
00:47:25,030 --> 00:47:22,720
but again they're only going to be on

715
00:47:27,270 --> 00:47:25,040
board with their other three crewmates

716
00:47:30,309 --> 00:47:27,280
for about a week and then it's going to

717
00:47:31,829 --> 00:47:30,319
be time for drew morgan jess kamir and

718
00:47:34,230 --> 00:47:31,839
alexi of

719
00:47:35,510 --> 00:47:34,240
alex korpocha to come home and we're

720
00:47:38,390 --> 00:47:35,520
going to be bringing you live coverage

721
00:47:41,109 --> 00:47:38,400
of all of that activity as it unfolds on

722
00:47:43,190 --> 00:47:41,119
thursday april 16th we'll actually start

723
00:47:46,309 --> 00:47:43,200
off that day with farewell and hatch

724
00:47:48,630 --> 00:47:46,319
closure coverage that'll be at uh 5 p.m

725
00:47:50,790 --> 00:47:48,640
central 6 p.m eastern time and then

726
00:47:52,549 --> 00:47:50,800
eventually moving into that undocking

727
00:47:53,510 --> 00:47:52,559
coverage where we'll see them undock

728
00:47:55,109 --> 00:47:53,520
from the

729
00:47:57,190 --> 00:47:55,119
international space station to begin

730
00:47:58,870 --> 00:47:57,200
their journey home and that'll conclude

731
00:48:01,829 --> 00:47:58,880
with our deorbit burn and landing

732
00:48:03,990 --> 00:48:01,839
coverage in the late night 11 pm central

733
00:48:07,270 --> 00:48:04,000
midnight eastern so be sure to tune in

734
00:48:09,510 --> 00:48:07,280
to nasa tv and at nasa.gov live and

735
00:48:11,750 --> 00:48:09,520
follow us on all of our social media

736
00:48:14,710 --> 00:48:11,760
accounts to get updates on the mission

737
00:48:16,710 --> 00:48:14,720
as they come through

738
00:48:18,950 --> 00:48:16,720

one final time

739
00:48:20,309 --> 00:48:18,960
some of our upcoming coverage

740
00:48:22,630 --> 00:48:20,319
for the rest of the day we'll have a

741
00:48:24,549 --> 00:48:22,640
video file recapping all of the docking

742
00:48:27,190 --> 00:48:24,559
and hatch opening events that you just

743
00:48:30,390 --> 00:48:27,200
watched unfold live come on up later at

744
00:48:32,710 --> 00:48:30,400
2 p.m central time 3 p.m eastern on nasa

745
00:48:34,710 --> 00:48:32,720
tv

746
00:48:36,549 --> 00:48:34,720
and as we close we would just like to

747
00:48:38,790 --> 00:48:36,559
thank everyone that tuned in today to

748
00:48:40,790 --> 00:48:38,800
watch three humans launch from planet

749
00:48:42,230 --> 00:48:40,800
earth to their new home for the next six

750
00:48:44,069 --> 00:48:42,240
months in space

751
00:48:46,230 --> 00:48:44,079
human space flight is a venture that's

752
00:48:48,630 --> 00:48:46,240
only possible when a lot of people work

753
00:48:50,710 --> 00:48:48,640
together to do the things that are hard

754
00:48:52,950 --> 00:48:50,720
and what we just watched today was the

755
00:48:55,349 --> 00:48:52,960
culmination of countless hours of labor

756
00:48:57,430 --> 00:48:55,359
dedication from human beings working in

757
00:48:59,750 --> 00:48:57,440
concert around the globe

758
00:49:01,910 --> 00:48:59,760
in this time of distress hope today was

759
00:49:03,910 --> 00:49:01,920
heartening inspiring or even just a

760
00:49:06,150 --> 00:49:03,920
welcome distraction for all of you

761
00:49:08,870 --> 00:49:06,160
staying at home doing your part to help

762
00:49:10,309 --> 00:49:08,880
those working tirelessly to combat this

763
00:49:13,109 --> 00:49:10,319

pandemic

764
00:49:15,270 --> 00:49:13,119
and so one final time signing off stay