1
00:00:17,670 --> 00:00:15,990
[Music]

2
00:00:19,029 --> 00:00:17,680
and you are looking live at a falcon 9

3
00:00:21,029 --> 00:00:19,039
rocket on the launch pad at the cape

4
00:00:23,189 --> 00:00:21,039
canaveral air force station in florida

5
00:00:24,870 --> 00:00:23,199
at 6 24 this evening the aerospace

6
00:00:27,029 --> 00:00:24,880
company spacex will launch a dragon

7
00:00:29,990 --> 00:00:27,039
cargo spacecraft on a nasa mission to

8
00:00:31,429 --> 00:00:30,000
resupply the international space station

9
00:00:33,190 --> 00:00:31,439
good evening and welcome everyone to

10
00:00:34,790 --> 00:00:33,200
nasa's kennedy space center for our live

11
00:00:37,110 --> 00:00:34,800
coverage of the launch of the 18th

12
00:00:39,830 --> 00:00:37,120
resupply mission for spacex i'm your

13
00:00:41,590 --> 00:00:39,840

host jennifer wolfinger we are about 23

14
00:00:43,190 --> 00:00:41,600
minutes away from the planned liftoff of

15
00:00:45,990 --> 00:00:43,200
a falcon 9 rocket from the coast of

16
00:00:47,430 --> 00:00:46,000
florida the mission to fly much needed

17
00:00:48,950 --> 00:00:47,440
astronaut supplies and research

18
00:00:50,709 --> 00:00:48,960
experiments up to the international

19
00:00:52,229 --> 00:00:50,719
space station

20
00:00:54,069 --> 00:00:52,239
and we have a team of correspondents

21
00:00:56,150 --> 00:00:54,079
across the country helping us cover all

22
00:00:57,590 --> 00:00:56,160
the angles of this launch we will head

23
00:00:59,029 --> 00:00:57,600
to the mission director center here on

24
00:01:00,790 --> 00:00:59,039
the space coast to get updates on the

25
00:01:02,150 --> 00:01:00,800
weather and the countdown

26
00:01:04,390 --> 00:01:02,160
and we'll head west to spacex

27
00:01:06,149 --> 00:01:04,400
headquarters in hawthorne california

28
00:01:08,070 --> 00:01:06,159
and check in at mission control houston

29
00:01:09,990 --> 00:01:08,080
at johnson space center

30
00:01:11,750 --> 00:01:10,000
we also have a correspondent standing by

31
00:01:13,270 --> 00:01:11,760
with some of the agencies top science

32
00:01:15,270 --> 00:01:13,280
experts

33
00:01:17,830 --> 00:01:15,280
but first here are some quick facts

34
00:01:19,990 --> 00:01:17,840
about today's launch

35
00:01:21,510 --> 00:01:20,000
spacex transported the falcon 9 rocket

36
00:01:23,590 --> 00:01:21,520
out to the launch pad and lifted it to

37
00:01:25,190 --> 00:01:23,600
vertical launch position for the 18th

38
00:01:27,030 --> 00:01:25,200

cargo resupply mission to the

39
00:01:28,310 --> 00:01:27,040
international space station

40
00:01:30,069 --> 00:01:28,320
the plan is to keep the dragon

41
00:01:31,749 --> 00:01:30,079
spacecraft docked to station for about

42
00:01:32,710 --> 00:01:31,759
four weeks before bringing it back to

43
00:01:34,550 --> 00:01:32,720
earth

44
00:01:36,149 --> 00:01:34,560
this is the third flight for this dragon

45
00:01:38,550 --> 00:01:36,159
spacecraft and the second time this

46
00:01:40,550 --> 00:01:38,560
falcon booster has been flown

47
00:01:42,149 --> 00:01:40,560
dragon will deliver more than 5 000

48
00:01:44,069 --> 00:01:42,159
pounds of astronaut supplies and

49
00:01:46,230 --> 00:01:44,079
payloads for science research to the

50
00:01:47,990 --> 00:01:46,240
orbiting laboratory

51
00:01:49,670 --> 00:01:48,000
now let's bring in nasa's daryl nail who

52
00:01:52,469 --> 00:01:49,680
is in the mission director center just a

53
00:01:54,469 --> 00:01:52,479
few miles away from the launch pad daryl

54
00:01:56,389 --> 00:01:54,479
hey jennifer the big story right now is

55
00:01:58,950 --> 00:01:56,399
the weather and concern that it could

56
00:02:00,789 --> 00:01:58,960
violate the launch criteria this has

57
00:02:03,030 --> 00:02:00,799
been an ongoing concern since the

58
00:02:05,190 --> 00:02:03,040
forecast was first put out but now

59
00:02:07,749 --> 00:02:05,200
there's a storm cell approaching the pad

60
00:02:09,830 --> 00:02:07,759
that they are concerned could cause a

61
00:02:12,869 --> 00:02:09,840
problem with launch as you look at this

62
00:02:15,270 --> 00:02:12,879
view of the pad you can see uh pieces of

63
00:02:16,070 --> 00:02:15,280

blue sky little patches that have opened

64
00:02:17,589 --> 00:02:16,080
up

65
00:02:19,670 --> 00:02:17,599
we have a low pressure system that's

66
00:02:22,150 --> 00:02:19,680
stalled out over central florida but

67
00:02:24,229 --> 00:02:22,160
just recently some of those clouds

68
00:02:26,790 --> 00:02:24,239
parted allowing some the sun to come

69
00:02:28,869 --> 00:02:26,800
through in a certain portion of

70
00:02:30,869 --> 00:02:28,879
the spaceport here but there are dark

71
00:02:32,309 --> 00:02:30,879
areas around it and we have as you can

72
00:02:34,550 --> 00:02:32,319
see on this radar

73
00:02:36,949 --> 00:02:34,560
a clump of storms heading our way out

74
00:02:38,630 --> 00:02:36,959
from the south southwest

75
00:02:40,309 --> 00:02:38,640
they are headed into the area and

76
00:02:41,430 --> 00:02:40,319
according to the air force weather

77
00:02:43,750 --> 00:02:41,440
officer

78
00:02:47,750 --> 00:02:43,760
they will possibly create no-go

79
00:02:50,309 --> 00:02:47,760
conditions for launch at the t-zero mark

80
00:02:53,350 --> 00:02:50,319
now despite this spacex is discussing

81
00:02:55,509 --> 00:02:53,360
continuing on with the countdown and so

82
00:02:57,270 --> 00:02:55,519
that's where we're at at t minus 21

83
00:02:59,910 --> 00:02:57,280
minutes and counting as you can see

84
00:03:01,750 --> 00:02:59,920
that's the crs 18 current forecast which

85
00:03:04,309 --> 00:03:01,760
has just been updated

86
00:03:06,070 --> 00:03:04,319
winds 15 to 20 miles per hour out of the

87
00:03:09,030 --> 00:03:06,080
southwest they're not a factor

88
00:03:11,350 --> 00:03:09,040

temperature 83 degrees also not a factor

89
00:03:14,070 --> 00:03:11,360
but the concerns are the attached anvil

90
00:03:15,910 --> 00:03:14,080
rule the cumulus cloud rule and the

91
00:03:18,790 --> 00:03:15,920
lightning rule so

92
00:03:21,670 --> 00:03:18,800
probability of violation stands at 90

93
00:03:23,430 --> 00:03:21,680
percent only 10 percent go for launch

94
00:03:26,309 --> 00:03:23,440
because of that storm cell and its

95
00:03:27,670 --> 00:03:26,319
approach here to the spaceport so of

96
00:03:29,509 --> 00:03:27,680
course we are

97
00:03:31,830 --> 00:03:29,519
monitoring that situation which they are

98
00:03:34,390 --> 00:03:31,840
discussing at this very moment but we

99
00:03:37,509 --> 00:03:34,400
want to pause for just a minute to pay

100
00:03:39,509 --> 00:03:37,519
tribute to a nasa legend here at the

101
00:03:41,589 --> 00:03:39,519
space center who passed away on monday

102
00:03:44,390 --> 00:03:41,599
we are remembering a pioneer and a

103
00:03:47,910 --> 00:03:44,400
legend christopher kraft he passed away

104
00:03:50,789 --> 00:03:47,920
on monday at the age of 95 kraft created

105
00:03:52,869 --> 00:03:50,799
the concept of nasa's mission control

106
00:03:55,670 --> 00:03:52,879
kraft was flight director during some of

107
00:03:58,149 --> 00:03:55,680
the most iconic moments of space history

108
00:04:00,630 --> 00:03:58,159
during mercury gemini

109
00:04:02,630 --> 00:04:00,640
and apollo and his work continued all

110
00:04:04,390 --> 00:04:02,640
the way into the shuttle program

111
00:04:06,550 --> 00:04:04,400
kraft received numerous awards and

112
00:04:09,030 --> 00:04:06,560
honors for his accomplishments and they

113
00:04:12,470 --> 00:04:09,040

include nasa's outstanding leadership

114
00:04:15,350 --> 00:04:12,480
medal and four nasa distinguished

115
00:04:17,430 --> 00:04:15,360
service medals

116
00:04:20,789 --> 00:04:17,440
all right we're going to stay tuned and

117
00:04:22,629 --> 00:04:20,799
keep in touch with launch teams here at

118
00:04:24,870 --> 00:04:22,639
hangar ae at the cape canaveral air

119
00:04:27,990 --> 00:04:24,880
force station as you look you can see

120
00:04:29,990 --> 00:04:28,000
the falcon 9 rocket is being fueled up

121
00:04:31,110 --> 00:04:30,000
and they are proceeding with the count

122
00:04:33,590 --> 00:04:31,120
however

123
00:04:35,670 --> 00:04:33,600
weather is not looking good at this very

124
00:04:37,909 --> 00:04:35,680
moment so for now we'll toss it back to

125
00:04:39,110 --> 00:04:37,919
you jennifer have another update in just

126
00:04:40,629 --> 00:04:39,120
a few minutes

127
00:04:43,350 --> 00:04:40,639
thanks daryl we'll check back with you a

128
00:04:45,350 --> 00:04:43,360
little later right now we are at t minus

129
00:04:46,950 --> 00:04:45,360
19 minutes and counting let's check in

130
00:04:49,189 --> 00:04:46,960
with spacex head headquarters in

131
00:04:50,790 --> 00:04:49,199
hawthorne california where the falcon 9

132
00:04:53,189 --> 00:04:50,800
rocket and crew dragon were designed and

133
00:04:54,870 --> 00:04:53,199
built virgil kellehessen is joining us

134
00:04:56,950 --> 00:04:54,880
live from spacex's mission control

135
00:04:58,230 --> 00:04:56,960
center virgil will you tell us a little

136
00:05:00,950 --> 00:04:58,240
bit about dragon's history and

137
00:05:02,790 --> 00:05:00,960
reusability

138
00:05:04,950 --> 00:05:02,800

sure thing jennifer thank you this

139
00:05:07,110 --> 00:05:04,960
mission marks spacex's ninth launch of

140
00:05:09,350 --> 00:05:07,120
2019 and today we'll be launching a

141
00:05:11,430 --> 00:05:09,360
flight proven dragon spacecraft this

142
00:05:12,950 --> 00:05:11,440
launch is also particularly exciting as

143
00:05:15,430 --> 00:05:12,960
it will be the first time we've flown

144
00:05:17,189 --> 00:05:15,440
dragon for a third mission this vehicle

145
00:05:19,510 --> 00:05:17,199
visited the international space station

146
00:05:22,830 --> 00:05:19,520
previously for our crs-6 mission back in

147
00:05:25,430 --> 00:05:22,840
april 2015 and for crs 13 in december

148
00:05:27,189 --> 00:05:25,440
2017. both falcon 9 and dragon were

149
00:05:28,870 --> 00:05:27,199
designed with the reflight in mind so

150
00:05:30,230 --> 00:05:28,880
the vehicle hardware is built to support

151
00:05:33,270 --> 00:05:30,240
multiple missions with minimal

152
00:05:35,029 --> 00:05:33,280
refurbishment in between as noted dragon

153
00:05:36,629 --> 00:05:35,039
that you see on screen has flown twice

154
00:05:38,469 --> 00:05:36,639
before while the booster will be

155
00:05:40,310 --> 00:05:38,479
launching today has flown once

156
00:05:42,070 --> 00:05:40,320
after stage separation we'll be bringing

157
00:05:44,150 --> 00:05:42,080
it back to land at landing zone one at

158
00:05:45,990 --> 00:05:44,160
cape canaveral so that it can be reused

159
00:05:47,670 --> 00:05:46,000
on future missions of course this is if

160
00:05:49,909 --> 00:05:47,680
you launched today to provide a little

161
00:05:51,909 --> 00:05:49,919
historical background in 2010 spacex

162
00:05:53,749 --> 00:05:51,919
became the first private company to send

163
00:05:55,590 --> 00:05:53,759

a spacecraft to orbit and return it to

164
00:05:57,110 --> 00:05:55,600
earth and only two years later dragon

165
00:05:59,350 --> 00:05:57,120
became the first privately developed

166
00:06:00,870 --> 00:05:59,360
spacecraft to visit the space station

167
00:06:02,710 --> 00:06:00,880
our dragon spacecraft has been flying

168
00:06:04,469 --> 00:06:02,720
for nearly seven years now and today

169
00:06:07,189 --> 00:06:04,479
it's one of the few vehicles that can

170
00:06:08,870 --> 00:06:07,199
deliver significant cargo to the iss and

171
00:06:11,510 --> 00:06:08,880
the only one that can deliver cargo from

172
00:06:13,430 --> 00:06:11,520
it to date spacex has made 19 trips to

173
00:06:15,909 --> 00:06:13,440
the iss and we're under contract with

174
00:06:18,830 --> 00:06:15,919
nasa for a total of 26 of these cargo

175
00:06:21,189 --> 00:06:18,840
resupply missions with that back to you

176
00:06:22,870 --> 00:06:21,199
jennifer thanks virgil

177
00:06:24,870 --> 00:06:22,880
liftoff to today's rocket from launch

178
00:06:27,510 --> 00:06:24,880
complex 40 is timed down right to the

179
00:06:29,110 --> 00:06:27,520
very second the reason for this spacex

180
00:06:30,309 --> 00:06:29,120
needs to get their cargo spacecraft

181
00:06:32,150 --> 00:06:30,319
lined up to rendezvous with the

182
00:06:33,670 --> 00:06:32,160
international space station

183
00:06:35,350 --> 00:06:33,680
for more on this let's check in with

184
00:06:39,189 --> 00:06:35,360
nasa's leah cheshire who is live at

185
00:06:40,710 --> 00:06:39,199
johnson space center in houston leah

186
00:06:42,309 --> 00:06:40,720
thanks jennifer and welcome to the

187
00:06:44,469 --> 00:06:42,319
international space station flight

188
00:06:45,909 --> 00:06:44,479

control room here in houston and it's

189
00:06:48,550 --> 00:06:45,919
actually housed within the christopher

190
00:06:50,070 --> 00:06:48,560
craft mission control center so a sweet

191
00:06:52,469 --> 00:06:50,080
tribute earlier and we're still thinking

192
00:06:54,629 --> 00:06:52,479
of his life and legacy here as well

193
00:06:56,790 --> 00:06:54,639
now teams here each flight director is

194
00:06:58,950 --> 00:06:56,800
an expert on a specific system aboard

195
00:07:00,230 --> 00:06:58,960
the international space station and

196
00:07:02,309 --> 00:07:00,240
those flight controllers here are going

197
00:07:05,110 --> 00:07:02,319
to be led by flight director royce

198
00:07:06,790 --> 00:07:05,120
renfrew today

199
00:07:08,870 --> 00:07:06,800
we have six astronauts aboard the

200
00:07:11,270 --> 00:07:08,880
international space station right now

201
00:07:13,909 --> 00:07:11,280
that's christina cook alexia chinnin and

202
00:07:16,309 --> 00:07:13,919
nick hague who all arrived in march

203
00:07:18,309 --> 00:07:16,319
luca parmitano alexander schwarzov and

204
00:07:20,950 --> 00:07:18,319
andrew morgan actually just arrived this

205
00:07:23,749 --> 00:07:20,960
past saturday july 20th which was also

206
00:07:25,830 --> 00:07:23,759
the 50th anniversary of the apollo 11

207
00:07:27,589 --> 00:07:25,840
moon landing

208
00:07:29,189 --> 00:07:27,599
in the 10 o'clock hour aboard the

209
00:07:31,350 --> 00:07:29,199
international space station they use

210
00:07:33,270 --> 00:07:31,360
greenwich meantime so the astronauts are

211
00:07:35,589 --> 00:07:33,280
currently off duty and have the

212
00:07:37,670 --> 00:07:35,599
opportunity to sleep but they may be up

213
00:07:39,510 --> 00:07:37,680

watching the launch as well

214
00:07:41,029 --> 00:07:39,520
once dragon launches and arrives at the

215
00:07:44,790 --> 00:07:41,039
international space station which is

216
00:07:46,790 --> 00:07:44,800
currently scheduled for friday july 26th

217
00:07:48,629 --> 00:07:46,800
nasa astronaut nick hague will take his

218
00:07:51,270 --> 00:07:48,639
place at the cupola and use the

219
00:07:53,189 --> 00:07:51,280
station's canada arm 2 to reach out and

220
00:07:55,430 --> 00:07:53,199
grapple the spacecraft he'll be backed

221
00:07:57,189 --> 00:07:55,440
up by nasa's christina cook

222
00:07:59,350 --> 00:07:57,199
now once that's complete they will turn

223
00:08:01,510 --> 00:07:59,360
controls over to the robotics controller

224
00:08:03,430 --> 00:08:01,520
here on the ground who will also use the

225
00:08:05,270 --> 00:08:03,440
cannon arm to to reposition the

226
00:08:07,189 --> 00:08:05,280
spacecraft and bring it up to the

227
00:08:11,110 --> 00:08:07,199
station's harmony module where it will

228
00:08:13,270 --> 00:08:11,120
be birthed after a series of 16 bolts

229
00:08:16,070 --> 00:08:13,280
dragon will remain attached for about a

230
00:08:17,510 --> 00:08:16,080
month and those are our upcoming

231
00:08:20,390 --> 00:08:17,520
upcoming things we're looking forward to

232
00:08:22,710 --> 00:08:20,400
so we hope you will join us 7 30 a.m

233
00:08:24,950 --> 00:08:22,720
central time on friday morning

234
00:08:26,950 --> 00:08:24,960
until then hoping for a launch today and

235
00:08:28,150 --> 00:08:26,960
back to you jennifer

236
00:08:29,830 --> 00:08:28,160
thanks leah

237
00:08:31,510 --> 00:08:29,840
a wide variety of research has been

238
00:08:34,149 --> 00:08:31,520

taking place on low earth orbit for the

239
00:08:36,070 --> 00:08:34,159
past 18 years the international space

240
00:08:38,709 --> 00:08:36,080
station is also a test bed for space

241
00:08:41,029 --> 00:08:38,719
technology to tell us more about this is

242
00:08:42,469 --> 00:08:41,039
nasa's laura aguiar who is awaiting

243
00:08:44,470 --> 00:08:42,479
launch with one of the agency's top

244
00:08:46,630 --> 00:08:44,480
science officials laura

245
00:08:49,509 --> 00:08:46,640
thank you jennifer yes science is

246
00:08:52,070 --> 00:08:49,519
soaring into space and with me now is

247
00:08:54,070 --> 00:08:52,080
pete hasbro he is the manager of the

248
00:08:56,389 --> 00:08:54,080
international space station program

249
00:08:58,870 --> 00:08:56,399
science office pete give us an overview

250
00:09:00,389 --> 00:08:58,880
of what's on crs 18.

251
00:09:02,630 --> 00:09:00,399
there's some great things on this flight

252
00:09:04,230 --> 00:09:02,640
we have over 40 experiments that are

253
00:09:06,550 --> 00:09:04,240
either launching today or being

254
00:09:07,990 --> 00:09:06,560
supported by this launch on iss

255
00:09:09,829 --> 00:09:08,000
our next speaker we'll talk more about

256
00:09:11,430 --> 00:09:09,839
those one of the other key things is the

257
00:09:13,350 --> 00:09:11,440
international docking adapter in the

258
00:09:15,430 --> 00:09:13,360
trunk of the dragon it will give us a

259
00:09:17,110 --> 00:09:15,440
second docking port on the iss for our

260
00:09:18,310 --> 00:09:17,120
future commercial crew vehicles and

261
00:09:19,590 --> 00:09:18,320
other missions that we'll have to the

262
00:09:22,070 --> 00:09:19,600
iss

263
00:09:24,150 --> 00:09:22,080

okay so what role does the international

264
00:09:25,990 --> 00:09:24,160
space station play in the artemis

265
00:09:28,310 --> 00:09:26,000
program and nasa's moon to mars

266
00:09:30,470 --> 00:09:28,320
exploration plans we have a very big

267
00:09:32,230 --> 00:09:30,480
role we've been supporting exploration

268
00:09:34,710 --> 00:09:32,240
development for many years in the in the

269
00:09:36,389 --> 00:09:34,720
space station primarily in two areas one

270
00:09:38,389 --> 00:09:36,399
of them is in human research and

271
00:09:40,230 --> 00:09:38,399
understanding the risks to people who

272
00:09:42,070 --> 00:09:40,240
travel long distances and confined

273
00:09:44,230 --> 00:09:42,080
environments we want to understand what

274
00:09:46,070 --> 00:09:44,240
those risks are how we can our

275
00:09:47,590 --> 00:09:46,080
strategies for how we can control the

276
00:09:49,110 --> 00:09:47,600
risks and mitigate them and keep the

277
00:09:51,030 --> 00:09:49,120
crew safe and healthy

278
00:09:53,030 --> 00:09:51,040
we also have technology demonstration

279
00:09:55,509 --> 00:09:53,040
and development where we offer a test

280
00:09:57,670 --> 00:09:55,519
bed for you to fly your space

281
00:09:59,350 --> 00:09:57,680
equipment before it's really fully ready

282
00:10:00,949 --> 00:09:59,360
come test it out on the space station in

283
00:10:02,470 --> 00:10:00,959
the low gravity environment we've got a

284
00:10:04,069 --> 00:10:02,480
crew who can fix it you can run through

285
00:10:06,069 --> 00:10:04,079
all the contingency modes that you never

286
00:10:08,310 --> 00:10:06,079
want to use at worst you bring it home

287
00:10:09,750 --> 00:10:08,320
so life support systems communication

288
00:10:11,670 --> 00:10:09,760

power lots of areas that we're

289
00:10:13,350 --> 00:10:11,680
supporting okay so there was some recent

290
00:10:15,350 --> 00:10:13,360
news about new opportunities for

291
00:10:16,949 --> 00:10:15,360
commercial business and maybe even some

292
00:10:18,870 --> 00:10:16,959
people traveling to space

293
00:10:20,310 --> 00:10:18,880
very exciting for us

294
00:10:22,470 --> 00:10:20,320
nasa has

295
00:10:24,069 --> 00:10:22,480
we know that there's a commercial desire

296
00:10:27,110 --> 00:10:24,079
for a commercial market out there for

297
00:10:29,590 --> 00:10:27,120
space nasa being the initial space

298
00:10:31,910 --> 00:10:29,600
station platform we can help set the

299
00:10:34,150 --> 00:10:31,920
foothold for people who want to go do

300
00:10:35,990 --> 00:10:34,160
business in space and so we are making

301
00:10:37,910 --> 00:10:36,000
some of our resources available for

302
00:10:40,550 --> 00:10:37,920
people who want to fly things for purely

303
00:10:42,310 --> 00:10:40,560
commercial purposes we now have policies

304
00:10:44,710 --> 00:10:42,320
for reimbursing the government which is

305
00:10:46,550 --> 00:10:44,720
a really new thing for the government

306
00:10:48,150 --> 00:10:46,560
private astronaut missions where some of

307
00:10:50,150 --> 00:10:48,160
these commercial vehicles will be able

308
00:10:51,910 --> 00:10:50,160
to bring private citizens private

309
00:10:54,150 --> 00:10:51,920
astronauts to the station to do research

310
00:10:55,350 --> 00:10:54,160
or just do what they've wanted to pay to

311
00:11:00,470 --> 00:10:55,360
do

312
00:11:02,310 --> 00:11:00,480
commercial module a free flyer

313
00:11:04,230 --> 00:11:02,320

we're always looking for ideas to

314
00:11:05,910 --> 00:11:04,240
promote the low earth orbit economy

315
00:11:07,590 --> 00:11:05,920
things that maybe could be manufactured

316
00:11:09,430 --> 00:11:07,600
in space that are very high value but

317
00:11:11,030 --> 00:11:09,440
low mass i think there's a lot of people

318
00:11:13,190 --> 00:11:11,040
are going to be excited about that yep

319
00:11:15,509 --> 00:11:13,200
we are really well we're excited to get

320
00:11:18,069 --> 00:11:15,519
an update on launch jen let's go back to

321
00:11:19,590 --> 00:11:18,079
you thanks laura now let's head back to

322
00:11:22,310 --> 00:11:19,600
the mission director center to get an

323
00:11:24,630 --> 00:11:22,320
update from nasa's daryl now darryl hi

324
00:11:27,910 --> 00:11:24,640
jen so an update from the launch team

325
00:11:29,750 --> 00:11:27,920
and that is that currently we are no go

326
00:11:31,430 --> 00:11:29,760
weather-wise if the launch were to

327
00:11:34,069 --> 00:11:31,440
happen right now but of course we're

328
00:11:36,150 --> 00:11:34,079
t-minus in 12 and a half minutes at the

329
00:11:37,670 --> 00:11:36,160
moment there are two rules

330
00:11:39,430 --> 00:11:37,680
weather rules that they establish here

331
00:11:41,430 --> 00:11:39,440
that are in violation at the moment and

332
00:11:44,150 --> 00:11:41,440
they are the detached anvil cloud rule

333
00:11:46,389 --> 00:11:44,160
and the surface electric field rule

334
00:11:48,470 --> 00:11:46,399
as you look from this view at the rocket

335
00:11:51,030 --> 00:11:48,480
up into the sky you can see that we've

336
00:11:53,110 --> 00:11:51,040
got some dark clouds in the area the

337
00:11:56,310 --> 00:11:53,120
concern is that there's a storm cell

338
00:11:59,670 --> 00:11:56,320

approaching us that may cause the launch

339
00:12:02,550 --> 00:11:59,680
to go into no go at the t0 which it is

340
00:12:04,389 --> 00:12:02,560
also forecast to go but spacex has

341
00:12:07,269 --> 00:12:04,399
decided as you can see that storm cell

342
00:12:08,790 --> 00:12:07,279
kind of weakens as it's going over land

343
00:12:11,110 --> 00:12:08,800
they've decided they want to take this

344
00:12:13,590 --> 00:12:11,120
count down to 30 seconds

345
00:12:15,190 --> 00:12:13,600
and make the call then on whether or not

346
00:12:17,110 --> 00:12:15,200
to vote for

347
00:12:19,829 --> 00:12:17,120
poor weather conditions so as you can

348
00:12:20,710 --> 00:12:19,839
see the rocket is being fueled at this

349
00:12:22,949 --> 00:12:20,720
moment

350
00:12:27,430 --> 00:12:22,959
and they are continuing with their count

351
00:12:30,150 --> 00:12:27,440
at t minus 11 minutes and 37 seconds now

352
00:12:32,629 --> 00:12:30,160
this booster that you see here is

353
00:12:35,509 --> 00:12:32,639
familiar to this launch pad because it

354
00:12:37,670 --> 00:12:35,519
has launched on previous missions along

355
00:12:39,750 --> 00:12:37,680
with the capsule the spacecraft on the

356
00:12:42,790 --> 00:12:39,760
top there you see it the booster coming

357
00:12:46,230 --> 00:12:42,800
back to land after it launched on crs

358
00:12:48,710 --> 00:12:46,240
17. it was a beautiful shot right there

359
00:12:52,790 --> 00:12:48,720
looking over the atlantic ocean onto

360
00:12:54,870 --> 00:12:52,800
landing pad one where it came down to a

361
00:12:58,069 --> 00:12:54,880
nearly perfect landing

362
00:12:59,509 --> 00:12:58,079
that booster was then taken refurbished

363
00:13:02,629 --> 00:12:59,519

and now they've got it sitting on the

364
00:13:03,509 --> 00:13:02,639
pad again to launch up on another crs

365
00:13:05,829 --> 00:13:03,519
mission

366
00:13:08,230 --> 00:13:05,839
the spacecraft at the top the dragon

367
00:13:10,230 --> 00:13:08,240
spacecraft well it's flown two prior

368
00:13:11,750 --> 00:13:10,240
missions as you can see there from that

369
00:13:14,470 --> 00:13:11,760
close-up shot

370
00:13:16,790 --> 00:13:14,480
that particular spacecraft is making a

371
00:13:18,710 --> 00:13:16,800
record now it actually is flying on its

372
00:13:21,269 --> 00:13:18,720
third mission and it's got badging to

373
00:13:22,870 --> 00:13:21,279
prove it you see the spacex logo there

374
00:13:24,470 --> 00:13:22,880
but underneath the p

375
00:13:26,710 --> 00:13:24,480
they have a couple of badges that

376
00:13:29,030 --> 00:13:26,720
indicate it has flown twice before to

377
00:13:30,150 --> 00:13:29,040
the international space station on crs

378
00:13:33,030 --> 00:13:30,160
13

379
00:13:35,750 --> 00:13:33,040
and crs-6 and as you look over to the

380
00:13:39,750 --> 00:13:35,760
right of the spacex logo underneath the

381
00:13:41,509 --> 00:13:39,760
x you can see the apollo 50th badging

382
00:13:44,230 --> 00:13:41,519
and that's a nice touch there as they

383
00:13:47,829 --> 00:13:44,240
honor and help us honor the

384
00:13:51,509 --> 00:13:47,839
50th anniversary of apollo 11 and today

385
00:13:54,550 --> 00:13:51,519
in fact would be the 50 years to the day

386
00:13:57,110 --> 00:13:54,560
mark that apollo 11 astronauts returned

387
00:13:58,790 --> 00:13:57,120
to earth and splashed down in the

388
00:14:01,509 --> 00:13:58,800

pacific ocean

389
00:14:03,030 --> 00:14:01,519
now we are sitting at t minus 10 minutes

390
00:14:04,870 --> 00:14:03,040
in county we're going to toss it back to

391
00:14:06,949 --> 00:14:04,880
jen but we are keeping our eyes to the

392
00:14:08,310 --> 00:14:06,959
skies and listening to the launch team

393
00:14:10,790 --> 00:14:08,320
which is currently

394
00:14:12,389 --> 00:14:10,800
keeping the count going jen we'll toss

395
00:14:14,790 --> 00:14:12,399
it back to you

396
00:14:16,389 --> 00:14:14,800
thanks daryl the dragon spacecraft will

397
00:14:18,230 --> 00:14:16,399
be filled with critical materials to

398
00:14:19,269 --> 00:14:18,240
directly support science and research

399
00:14:21,350 --> 00:14:19,279
that will take place on the

400
00:14:23,269 --> 00:14:21,360
international space station

401
00:14:26,310 --> 00:14:23,279
a new international docking adapter

402
00:14:28,870 --> 00:14:26,320
called ida 3 is one of crs18's primary

403
00:14:30,230 --> 00:14:28,880
payloads when installed the adapter will

404
00:14:32,069 --> 00:14:30,240
provide a connecting point for

405
00:14:34,069 --> 00:14:32,079
spacecraft design to carry astronauts

406
00:14:35,990 --> 00:14:34,079
for nasa's commercial crew program as

407
00:14:37,350 --> 00:14:36,000
well as non-nasa missions

408
00:14:39,350 --> 00:14:37,360
the adapters are built to the

409
00:14:41,189 --> 00:14:39,360
international docking system standard

410
00:14:42,790 --> 00:14:41,199
which means any spacecraft designed

411
00:14:44,629 --> 00:14:42,800
using these measurements can use the

412
00:14:47,509 --> 00:14:44,639
adapter

413
00:14:49,509 --> 00:14:47,519

the bio fabrication facility or bff is

414
00:14:51,750 --> 00:14:49,519
designed to print organ-like tissues in

415
00:14:53,590 --> 00:14:51,760
microgravity printing the complex

416
00:14:55,430 --> 00:14:53,600
structures found inside human organs has

417
00:14:57,269 --> 00:14:55,440
proven difficult to accomplish in

418
00:14:59,990 --> 00:14:57,279
earth's gravity environment

419
00:15:02,389 --> 00:15:00,000
bff is an early step in a long-term plan

420
00:15:04,710 --> 00:15:02,399
to eventually manufacture whole human

421
00:15:06,710 --> 00:15:04,720
organs in space

422
00:15:08,069 --> 00:15:06,720
another exciting payload is the bio rock

423
00:15:10,069 --> 00:15:08,079
investigation

424
00:15:11,910 --> 00:15:10,079
with bio rock we hope to gain insights

425
00:15:14,150 --> 00:15:11,920
into how microbes grow in space and how

426
00:15:16,389 --> 00:15:14,160
we might use them in human exploration

427
00:15:18,310 --> 00:15:16,399
and settlement of space from mining to

428
00:15:20,949 --> 00:15:18,320
turning rocks into soil on the moon and

429
00:15:24,949 --> 00:15:22,310
and now to give us a look at another

430
00:15:27,189 --> 00:15:24,959
mission investigation is nor is nasa's

431
00:15:29,910 --> 00:15:27,199
laura aguiar laura

432
00:15:32,550 --> 00:15:29,920
thank you jennifer so yes nasa has a lot

433
00:15:34,790 --> 00:15:32,560
of science going on board but commercial

434
00:15:37,749 --> 00:15:34,800
business has the opportunity for space r

435
00:15:40,150 --> 00:15:37,759
d as well joining me now is ken shields

436
00:15:42,550 --> 00:15:40,160
he is the vice president and chief of

437
00:15:45,269 --> 00:15:42,560
chief operating officer of the us

438
00:15:46,949 --> 00:15:45,279

national laboratory on station so i hear

439
00:15:48,389 --> 00:15:46,959
we're going to set some records

440
00:15:49,990 --> 00:15:48,399
we are laura we're looking forward to

441
00:15:52,550 --> 00:15:50,000
setting some records tonight when we

442
00:15:55,670 --> 00:15:52,560
launch spacex 18 we're going to launch

443
00:15:58,150 --> 00:15:55,680
25 iss national laboratory sponsored

444
00:16:00,069 --> 00:15:58,160
payloads that's a single launch record

445
00:16:01,590 --> 00:16:00,079
for the u.s national laboratory in

446
00:16:03,670 --> 00:16:01,600
addition to that with the arrival of

447
00:16:05,670 --> 00:16:03,680
these payloads it's going to be 90 for

448
00:16:07,749 --> 00:16:05,680
the year which is another record a year

449
00:16:09,590 --> 00:16:07,759
high for the national laboratory and

450
00:16:11,430 --> 00:16:09,600
last we're going to set a crew time

451
00:16:13,350 --> 00:16:11,440
usage record for the year also

452
00:16:14,790 --> 00:16:13,360
approaching a thousand hours is what

453
00:16:16,230 --> 00:16:14,800
we're baseline to do right now so we're

454
00:16:18,710 --> 00:16:16,240
very proud of that looking forward to it

455
00:16:21,110 --> 00:16:18,720
oh absolutely so why is it important to

456
00:16:24,069 --> 00:16:21,120
have a u.s national laboratory on

457
00:16:26,230 --> 00:16:24,079
station the u.s national laboratory

458
00:16:28,470 --> 00:16:26,240
we focus on microgravity research and

459
00:16:30,550 --> 00:16:28,480
development initiatives to benefit life

460
00:16:32,710 --> 00:16:30,560
on earth so it's a way to open up the

461
00:16:35,189 --> 00:16:32,720
use of the iss

462
00:16:37,990 --> 00:16:35,199
access to space and microgravity for a

463
00:16:40,150 --> 00:16:38,000

whole new user community that's not nasa

464
00:16:42,069 --> 00:16:40,160
looking to utilize the iss to further

465
00:16:44,550 --> 00:16:42,079
their expedition goals

466
00:16:46,629 --> 00:16:44,560
okay ken we know how important it is to

467
00:16:48,310 --> 00:16:46,639
keep the environment pristine for our

468
00:16:50,870 --> 00:16:48,320
astronauts welfare

469
00:16:53,430 --> 00:16:50,880
but what's this we hear about slime on

470
00:16:54,470 --> 00:16:53,440
board what is this slime you speak of

471
00:16:56,470 --> 00:16:54,480
laura

472
00:16:57,670 --> 00:16:56,480
that's right we're gonna fly slime in

473
00:16:59,749 --> 00:16:57,680
space

474
00:17:01,910 --> 00:16:59,759
so an important part of the national lab

475
00:17:03,749 --> 00:17:01,920
mission is also to excite and engage the

476
00:17:05,990 --> 00:17:03,759
next generation the future generation of

477
00:17:08,549 --> 00:17:06,000
engineers and explorers and we do that

478
00:17:10,309 --> 00:17:08,559
by learning while we have some fun so we

479
00:17:12,870 --> 00:17:10,319
are going to launch slime in space and

480
00:17:15,110 --> 00:17:12,880
see how this non-newtonian fluid behaves

481
00:17:16,789 --> 00:17:15,120
in microgravity

482
00:17:18,230 --> 00:17:16,799
all right jen we're going to hand this

483
00:17:21,270 --> 00:17:18,240
back to you really quick before somebody

484
00:17:22,470 --> 00:17:21,280
gets the idea to dump slime on our heads

485
00:17:24,069 --> 00:17:22,480
thanks laura

486
00:17:25,590 --> 00:17:24,079
we are now just seven minutes from

487
00:17:27,270 --> 00:17:25,600
launch let's head back over to the

488
00:17:29,430 --> 00:17:27,280

mission director center where nasa's

489
00:17:31,510 --> 00:17:29,440
daryl nail is monitoring communications

490
00:17:33,830 --> 00:17:31,520
hey daryl how are things looking

491
00:17:36,310 --> 00:17:33,840
well jen they're looking not so good at

492
00:17:39,430 --> 00:17:36,320
this very moment we are currently no go

493
00:17:42,470 --> 00:17:39,440
for weather at the t-0 mark which is 6

494
00:17:45,590 --> 00:17:42,480
24 in 30 seconds this evening

495
00:17:48,150 --> 00:17:45,600
but spacex is continuing with the count

496
00:17:49,750 --> 00:17:48,160
because they are hoping that there will

497
00:17:51,669 --> 00:17:49,760
be a break in the weather which as you

498
00:17:53,830 --> 00:17:51,679
can currently see

499
00:17:55,430 --> 00:17:53,840
we have some clearing in and around the

500
00:17:56,470 --> 00:17:55,440
pad but then you look in another

501
00:17:58,390 --> 00:17:56,480
direction

502
00:18:01,669 --> 00:17:58,400
as you see there you see some dark

503
00:18:03,750 --> 00:18:01,679
clouds off in the distance so this is

504
00:18:07,270 --> 00:18:03,760
going to come down to the wire and just

505
00:18:09,590 --> 00:18:07,280
to recap for you spacex teams discuss

506
00:18:12,230 --> 00:18:09,600
this uh this situation as you're

507
00:18:14,470 --> 00:18:12,240
watching uh the gaseous oxygen venting

508
00:18:16,630 --> 00:18:14,480
off from the top of the rocket there

509
00:18:19,029 --> 00:18:16,640
they discussed the possibility that they

510
00:18:20,870 --> 00:18:19,039
might catch a break and they want to see

511
00:18:23,270 --> 00:18:20,880
if they can just do that so they're

512
00:18:24,390 --> 00:18:23,280
going to let this count get down to 30

513
00:18:26,789 --> 00:18:24,400

seconds

514
00:18:28,789 --> 00:18:26,799
and then at that moment if we are still

515
00:18:30,870 --> 00:18:28,799
no go weather-wise

516
00:18:33,270 --> 00:18:30,880
then they will abort the launch attempt

517
00:18:35,430 --> 00:18:33,280
but if not and it clears the next few

518
00:18:36,950 --> 00:18:35,440
minutes or right up to 30 then they're

519
00:18:39,669 --> 00:18:36,960
going to go ahead and fire this thing

520
00:18:41,350 --> 00:18:39,679
off and so what we're looking at now in

521
00:18:43,510 --> 00:18:41,360
terms of the

522
00:18:46,870 --> 00:18:43,520
the countdown and where we're at we're

523
00:18:49,590 --> 00:18:46,880
at five minutes and 47 seconds and

524
00:18:52,390 --> 00:18:49,600
counting they have been

525
00:18:54,789 --> 00:18:52,400
put the dragon to internal power they

526
00:18:57,669 --> 00:18:54,799
began chilling the engines

527
00:19:00,549 --> 00:18:57,679
which helps prepare them for the

528
00:19:02,470 --> 00:19:00,559
super cold oxygen which

529
00:19:05,190 --> 00:19:02,480
is part of the fueling system they get

530
00:19:07,909 --> 00:19:05,200
it as cold and as dense as possible so

531
00:19:09,270 --> 00:19:07,919
can have more lifting capability

532
00:19:10,710 --> 00:19:09,280
they also

533
00:19:13,029 --> 00:19:10,720
some of the things to look for in the

534
00:19:15,590 --> 00:19:13,039
last few seconds of launch they will

535
00:19:18,630 --> 00:19:15,600
flood that pad with water

536
00:19:21,029 --> 00:19:18,640
and that helps suppress the sound

537
00:19:22,470 --> 00:19:21,039
which is an incredible roar

538
00:19:25,350 --> 00:19:22,480

if you're here

539
00:19:28,390 --> 00:19:25,360
watching the launch but it also it could

540
00:19:31,750 --> 00:19:28,400
be too much in fact damaging if they

541
00:19:34,950 --> 00:19:31,760
don't flood the pad with water

542
00:19:38,470 --> 00:19:34,960
we're getting down to five minutes

543
00:19:40,150 --> 00:19:38,480
and we are still no go for two weather

544
00:19:43,110 --> 00:19:40,160
factors

545
00:19:45,909 --> 00:19:43,120
for launch as we get down

546
00:19:48,390 --> 00:19:45,919
in underneath five minutes

547
00:19:51,990 --> 00:19:48,400
the rp1 fueling

548
00:19:56,870 --> 00:19:54,150
and as they continue to work this

549
00:19:58,870 --> 00:19:56,880
we'll give you a heads up that uh

550
00:20:01,029 --> 00:19:58,880
just about in about a few seconds they

551
00:20:03,270 --> 00:20:01,039
would start retracting

552
00:20:06,630 --> 00:20:03,280
the strong back which is that structure

553
00:20:08,310 --> 00:20:06,640
that is holding the rocket

554
00:20:10,710 --> 00:20:08,320
upside

555
00:20:13,190 --> 00:20:10,720
vertical

556
00:21:31,430 --> 00:20:13,200
let's listen in now to the count to see

557
00:21:35,029 --> 00:21:32,789
all right i've been listening into the

558
00:21:36,390 --> 00:21:35,039
teams as they discuss the situation they

559
00:21:37,750 --> 00:21:36,400
are continuing

560
00:21:39,990 --> 00:21:37,760
with the count

561
00:21:47,510 --> 00:21:40,000
underneath three minutes

562
00:21:51,510 --> 00:21:50,310
we are close to completing the fueling

563
00:21:53,190 --> 00:21:51,520

of the

564
00:21:54,789 --> 00:21:53,200
liquid oxygen

565
00:21:55,990 --> 00:21:54,799
and they are close to

566
00:21:58,230 --> 00:21:56,000
closing out

567
00:22:03,270 --> 00:21:58,240
the stage one 1

568
00:22:07,029 --> 00:22:05,590
let's take a look at the radar just to

569
00:22:08,230 --> 00:22:07,039
get a sense since this is going to be a

570
00:22:10,310 --> 00:22:08,240
close call

571
00:22:12,710 --> 00:22:10,320
as you can see that clump of clouds that

572
00:22:15,110 --> 00:22:12,720
starts off very strong green plenty of

573
00:22:18,310 --> 00:22:15,120
rain but starts to dry out there is

574
00:22:21,430 --> 00:22:18,320
space launch complex 40 and as that

575
00:22:25,270 --> 00:22:21,440
storm system approaches you can see how

576
00:22:27,830 --> 00:22:25,280
it is weakening and that is apparently

577
00:22:28,710 --> 00:22:27,840
what the hope is is that

578
00:22:29,590 --> 00:22:28,720
those

579
00:22:30,950 --> 00:22:29,600
launch

580
00:22:35,830 --> 00:22:30,960
criteria

581
00:22:36,630 --> 00:22:35,840
those violations will be lifted

582
00:22:38,470 --> 00:22:36,640
as

583
00:22:40,230 --> 00:22:38,480
that system weakens

584
00:22:41,909 --> 00:22:40,240
but from our views that we can see it

585
00:22:44,710 --> 00:22:41,919
just seems like a mixed bag we have

586
00:22:47,510 --> 00:22:44,720
areas of the sky that appear

587
00:22:49,909 --> 00:22:47,520
clear we also have areas like that one

588
00:22:51,990 --> 00:22:49,919

right there if you were looking at that

589
00:22:53,029 --> 00:22:52,000
and that way that direction alone you'd

590
00:22:55,029 --> 00:22:53,039
think well

591
00:22:56,549 --> 00:22:55,039
let's launch the schwaken but

592
00:22:58,070 --> 00:22:56,559
you look at this view

593
00:23:00,230 --> 00:22:58,080
and it tells you a different story in

594
00:23:03,510 --> 00:23:00,240
fact you can see some rain droplets

595
00:23:05,270 --> 00:23:03,520
that's looking back to the west

596
00:23:07,270 --> 00:23:05,280
that cloud that you see coming out there

597
00:23:10,470 --> 00:23:07,280
venting off the oxygen

598
00:23:12,870 --> 00:23:10,480
one minute and 25 seconds to launch just

599
00:23:14,710 --> 00:23:12,880
60 seconds until they make a decision on

600
00:23:15,669 --> 00:23:14,720
whether or not to launch this rocket

601
00:23:18,870 --> 00:23:15,679
today

602
00:23:24,950 --> 00:23:18,880
the back update is tomorrow

603
00:23:30,710 --> 00:23:27,990
we're approaching the uh the minute mark

604
00:23:32,310 --> 00:23:30,720
and then about 15 seconds later

605
00:23:35,510 --> 00:23:32,320
listen for the launch director to see if

606
00:23:35,520 --> 00:23:56,470
dragon is in startup

607
00:24:02,789 --> 00:23:58,789
and here we approach decision time five

608
00:24:07,669 --> 00:24:05,430
hold hold hold on count down one large

609
00:24:09,830 --> 00:24:07,679
force running

610
00:24:11,669 --> 00:24:09,840
and there you have it the launch is a

611
00:24:14,789 --> 00:24:11,679
no-go for today

612
00:24:17,669 --> 00:24:14,799
they abort and scrubbed the launch

613
00:24:20,230 --> 00:24:17,679

they were trying in uh hoping that the

614
00:24:21,029 --> 00:24:20,240
weather would clear at the last second

615
00:24:22,390 --> 00:24:21,039
but

616
00:24:25,750 --> 00:24:22,400
it did not

617
00:24:27,190 --> 00:24:25,760
the conditions early on were 70 percent

618
00:24:28,149 --> 00:24:27,200
no go

619
00:24:31,430 --> 00:24:28,159
but

620
00:24:32,630 --> 00:24:31,440
as the this one storm cell which started

621
00:24:35,430 --> 00:24:32,640
off

622
00:24:36,630 --> 00:24:35,440
around lakeland a couple hours ago

623
00:24:38,310 --> 00:24:36,640
and

624
00:24:39,830 --> 00:24:38,320
proceeded quickly

625
00:24:42,310 --> 00:24:39,840
to the launch pad

626
00:24:45,590 --> 00:24:42,320
it was forecast that could be a factor

627
00:24:47,590 --> 00:24:45,600
but it was a close call and spacex now

628
00:24:50,310 --> 00:24:47,600
going to push this launch to tomorrow

629
00:24:52,789 --> 00:24:50,320
just around six o'clock they're gonna go

630
00:24:54,950 --> 00:24:52,799
ahead and scrub it 24 hours

631
00:24:58,230 --> 00:24:54,960
and see if they can revisit this

632
00:25:00,310 --> 00:24:58,240
tomorrow which is unfortunate but

633
00:25:02,390 --> 00:25:00,320
early on today there were storms rolling

634
00:25:04,549 --> 00:25:02,400
all over the space center and you would

635
00:25:06,310 --> 00:25:04,559
have thought they had no chance and then

636
00:25:08,630 --> 00:25:06,320
we got this break that you're looking at

637
00:25:11,350 --> 00:25:08,640
right here this little opening in the

638
00:25:12,390 --> 00:25:11,360

clouds and it seemed like it might just

639
00:25:13,590 --> 00:25:12,400
happen

640
00:25:16,390 --> 00:25:13,600
but in the end

641
00:25:18,230 --> 00:25:16,400
uh they they held uh held out hope for

642
00:25:19,269 --> 00:25:18,240
as long as they could right down to 30

643
00:25:23,190 --> 00:25:19,279
seconds

644
00:25:25,750 --> 00:25:23,200
before uh going into a 24 hour

645
00:25:27,830 --> 00:25:25,760
hold so we scrubbed the launch from now

646
00:25:30,230 --> 00:25:27,840
and that's gonna do it for us out here

647
00:25:32,950 --> 00:25:30,240
at hanger ae in cape canaveral jennifer

648
00:25:34,470 --> 00:25:32,960
will toss it back to you in the studio

649
00:25:36,070 --> 00:25:34,480
as you've just heard today's launch has

650
00:25:38,149 --> 00:25:36,080
been scrubbed this concludes our

651
00:25:40,230 --> 00:25:38,159
coverage of today's crs 18 launch

652
00:25:43,029 --> 00:25:40,240
attempt for updates on the next attempt