1
00:00:42,000 --> 00:01:02,510
foreign

2
00:01:07,130 --> 00:01:04,729
a big thanks to all of you tuning in now

3
00:01:10,010 --> 00:01:07,140
as we welcome NASA and their coverage of

4
00:01:11,810 --> 00:01:10,020
the second Axiom Mission ax2 you're

5
00:01:14,270 --> 00:01:11,820
joining us here with live views from

6
00:01:17,090 --> 00:01:14,280
NASA's Kennedy Space Center specifically

7
00:01:19,190 --> 00:01:17,100
this is the iconic launch complex 39a

8
00:01:21,050 --> 00:01:19,200
with a Falcon 9 rocket and dragon

9
00:01:23,570 --> 00:01:21,060
spacecraft that are in the final stages

10
00:01:25,249 --> 00:01:23,580
of preparation leading to launch in just

11
00:01:27,469 --> 00:01:25,259
over an hour from now

12
00:01:29,929 --> 00:01:27,479
as the name suggests this is the second

13
00:01:32,210 --> 00:01:29,939

flight for Axiom space with a handful of

14
00:01:34,010 --> 00:01:32,220
noteworthy firsts

15
00:01:35,810 --> 00:01:34,020
this 10-day Mission will see the first

16
00:01:38,630 --> 00:01:35,820
female commander of a private space

17
00:01:40,609 --> 00:01:38,640
mission Legend and former NASA astronaut

18
00:01:42,469 --> 00:01:40,619
Peggy Whitson

19
00:01:45,109 --> 00:01:42,479
our pilot John schoffner will soon

20
00:01:46,789 --> 00:01:45,119
become the first Alaskan astronaut and

21
00:01:48,649 --> 00:01:46,799
two national astronauts will be the

22
00:01:50,149 --> 00:01:48,659
first from the Kingdom of Saudi Arabia

23
00:01:53,690 --> 00:01:50,159
to fly to the International Space

24
00:01:55,910 --> 00:01:53,700
Station Ali al-karni and Rihanna barnawi

25
00:01:57,530 --> 00:01:55,920
taken together as a crew this is the

26
00:01:59,929 --> 00:01:57,540
first private Mission with private

27
00:02:02,389 --> 00:01:59,939
astronauts and astronauts representing

28
00:02:05,090 --> 00:02:02,399
non-us Nations through Direct commercial

29
00:02:07,370 --> 00:02:05,100
arrangements and that's just to name a

30
00:02:11,930 --> 00:02:09,710
my name is my name is Duke Brady and I'm

31
00:02:14,390 --> 00:02:11,940
a multimedia specialist at Axiom space

32
00:02:16,910 --> 00:02:14,400
based out of Houston Texas and I'm Kate

33
00:02:19,309 --> 00:02:16,920
Tice quality systems engineering manager

34
00:02:21,770 --> 00:02:19,319
here at SpaceX headquarters in Hawthorne

35
00:02:24,110 --> 00:02:21,780
California and as duke just mentioned

36
00:02:25,729 --> 00:02:24,120
our coverage has now expanded to NASA

37
00:02:28,309 --> 00:02:25,739
Television and we would like to welcome

38
00:02:32,390 --> 00:02:28,319

NASA's Leah Cheshire from Johnson Space

39
00:02:34,610 --> 00:02:32,400
Center in Houston Texas hey Leah

40
00:02:36,530 --> 00:02:34,620
hey Kate great to see you and Duke and

41
00:02:38,089 --> 00:02:36,540
I'm excited to join as we get closer to

42
00:02:40,430 --> 00:02:38,099
launch so thank you so much for having

43
00:02:43,130 --> 00:02:40,440
me I am here in Mission Control Houston

44
00:02:45,710 --> 00:02:43,140
where the orbit 3 team is coming on and

45
00:02:47,449 --> 00:02:45,720
taking over from the orbit 2 Shift these

46
00:02:50,330 --> 00:02:47,459
teams are monitoring the station and its

47
00:02:52,309 --> 00:02:50,340
crew 24 7. and of course in here today

48
00:02:54,830 --> 00:02:52,319
we'll be watching the launch with the

49
00:02:56,750 --> 00:02:54,840
International Space Station flying 260

50
00:02:59,270 --> 00:02:56,760
miles over the Southwest coast of

51
00:03:00,589 --> 00:02:59,280
Ireland at the time of liftoff but we've

52
00:03:02,330 --> 00:03:00,599
still got some counting down to do

53
00:03:04,250 --> 00:03:02,340
before then so back to you guys at

54
00:03:07,009 --> 00:03:04,260
SpaceX

55
00:03:10,309 --> 00:03:07,019
thanks Leah now liftoff time is still

56
00:03:12,229 --> 00:03:10,319
holding for 5 37 p.m eastern time and

57
00:03:14,990 --> 00:03:12,239
we're tracking no issues with Falcon 9

58
00:03:17,089 --> 00:03:15,000
or Dragon the range is green and the

59
00:03:19,490 --> 00:03:17,099
weather is cooperating as we saw earlier

60
00:03:21,710 --> 00:03:19,500
uh really Picture Perfect views coming

61
00:03:22,850 --> 00:03:21,720
to us from Kennedy Space Center as you

62
00:03:25,130 --> 00:03:22,860
can see there

63
00:03:27,470 --> 00:03:25,140

now over the last three hours Axiom

64
00:03:30,589 --> 00:03:27,480
astronauts Peggy Whitson John schoffner

65
00:03:32,570 --> 00:03:30,599
Ali alcarney and Rihanna Barney Don

66
00:03:34,729 --> 00:03:32,580
their SpaceX suits in our suit up room

67
00:03:37,309 --> 00:03:34,739
and were then transported to the pad

68
00:03:39,890 --> 00:03:37,319
where our crew entered the SpaceX Dragon

69
00:03:42,410 --> 00:03:39,900
spacecraft that you see there live on

70
00:03:44,449 --> 00:03:42,420
your screen and since arriving at that

71
00:03:46,250 --> 00:03:44,459
spacecraft our crew were helped by the

72
00:03:48,410 --> 00:03:46,260
closeout Engineers to get into their

73
00:03:50,210 --> 00:03:48,420
seats attach their suits to special

74
00:03:51,830 --> 00:03:50,220
umbilicals that provide breathing air

75
00:03:54,530 --> 00:03:51,840
and communication links to Dragon

76
00:03:56,390 --> 00:03:54,540
systems they conducted successful leak

77
00:03:58,610 --> 00:03:56,400
checks and Communications checks with

78
00:04:00,890 --> 00:03:58,620
the corps here in Hawthorne which is the

79
00:04:03,589 --> 00:04:00,900
person dedicated to speaking directly to

80
00:04:05,809 --> 00:04:03,599
the crew throughout the mission

81
00:04:08,210 --> 00:04:05,819
the closeout team sealed the hatch which

82
00:04:10,729 --> 00:04:08,220
also got its own leak check and they

83
00:04:12,830 --> 00:04:10,739
have Departed the pad coming up whether

84
00:04:15,350 --> 00:04:12,840
operators kick off their final check on

85
00:04:18,409 --> 00:04:15,360
wind speeds at the pad before the final

86
00:04:20,870 --> 00:04:18,419
go no-go for launch now before we get to

87
00:04:22,850 --> 00:04:20,880
that final go no go the SpaceX team will

88
00:04:24,950 --> 00:04:22,860

do an internal poll making sure

89
00:04:29,090 --> 00:04:24,960
conditions are steady with Falcon 9

90
00:04:30,590 --> 00:04:29,100
Dragon the crew the range and weather a

91
00:04:33,230 --> 00:04:30,600
lot of things needed to line up there

92
00:04:35,570 --> 00:04:33,240
absolutely now as the countdown

93
00:04:37,370 --> 00:04:35,580
continues we are now approaching T minus

94
00:04:39,830 --> 00:04:37,380
one hour three minutes and 15 seconds

95
00:04:41,990 --> 00:04:39,840
let's take a moment to get reacquainted

96
00:04:44,810 --> 00:04:42,000
with our crew today

97
00:04:46,670 --> 00:04:44,820
the ax2 mission Commander is Axiom

98
00:04:49,070 --> 00:04:46,680
space's director of human space flight

99
00:04:51,770 --> 00:04:49,080
and retired NASA astronaut Peggy Whitson

100
00:04:53,870 --> 00:04:51,780
during her career with NASA Peggy flew

101
00:04:56,830 --> 00:04:53,880
three long-duration missions to the ISS

102
00:05:00,830 --> 00:04:56,840
and has more cumulative time and space

103
00:05:02,930 --> 00:05:00,840
665 days than any U.S astronaut and more

104
00:05:05,150 --> 00:05:02,940
than any woman in the world she has

105
00:05:06,909 --> 00:05:05,160
conducted 10 spacewalks with over 60

106
00:05:09,770 --> 00:05:06,919
hours to her credit

107
00:05:18,770 --> 00:05:09,780
cycling orbit tank isolation valves to

108
00:05:23,390 --> 00:05:20,870
and that was the voice of Peggy Whitson

109
00:05:24,770 --> 00:05:23,400
who also performed hundreds of hours of

110
00:05:28,490 --> 00:05:24,780
research hundreds of research

111
00:05:31,129 --> 00:05:28,500
experiments on board the ISS

112
00:05:33,409 --> 00:05:31,139
for ax2 is private Astronaut John

113
00:05:35,990 --> 00:05:33,419

schoffner a steam Advocate business

114
00:05:38,450 --> 00:05:36,000
Pioneer and lifelong space Enthusiast

115
00:05:41,150 --> 00:05:38,460
he's been a pilot since the age of 17

116
00:05:43,430 --> 00:05:41,160
and participates in extreme sports from

117
00:05:45,529 --> 00:05:43,440
hang gliding to base jumping to High

118
00:05:49,010 --> 00:05:45,539
Performance Racing sounds like a busy

119
00:05:50,990 --> 00:05:49,020
guy John trained as the ax1 backup pilot

120
00:05:52,850 --> 00:05:51,000
and during this Mission plans to invest

121
00:05:56,629 --> 00:05:52,860
a lot of his time in Steam education

122
00:05:58,610 --> 00:05:56,639
activities aimed at empowering educators

123
00:06:00,110 --> 00:05:58,620
and representing the Saudi space

124
00:06:02,570 --> 00:06:00,120
commission and serving as Mission

125
00:06:05,330 --> 00:06:02,580
specialist Ali al-karni is an Air Force

126
00:06:07,249 --> 00:06:05,340
captain in the Royal Saudi Air Force Ali

127
00:06:10,070 --> 00:06:07,259
graduated with a bachelor of Aerospace

128
00:06:12,290 --> 00:06:10,080
science degree in 2013 from King Faisal

129
00:06:14,330 --> 00:06:12,300
Air Academy in Riyadh Saudi Arabia

130
00:06:16,730 --> 00:06:14,340
having flown as a fighter pilot for 12

131
00:06:18,469 --> 00:06:16,740
years Ali was selected as an astronaut

132
00:06:20,689 --> 00:06:18,479
in 2020.

133
00:06:22,730 --> 00:06:20,699
also representing the Saudi space

134
00:06:25,430 --> 00:06:22,740
commission and serving as a mission

135
00:06:27,469 --> 00:06:25,440
specialist Rihanna barnawi has a

136
00:06:30,650 --> 00:06:27,479
master's degree in biomedical Sciences

137
00:06:33,050 --> 00:06:30,660
from alphaisal University in Riyadh

138
00:06:35,270 --> 00:06:33,060

Saudi Arabia and a bachelor's degree in

139
00:06:38,090 --> 00:06:35,280
biomedical Sciences from otago

140
00:06:40,249 --> 00:06:38,100
University in Dunedin New Zealand she

141
00:06:42,830 --> 00:06:40,259
has been a research lab technician since

142
00:06:45,290 --> 00:06:42,840
2013 in the stem cell and tissue

143
00:06:49,070 --> 00:06:45,300
re-engineering program at King Faisal

144
00:06:51,110 --> 00:06:49,080
Specialist Hospital and Research Center

145
00:06:53,390 --> 00:06:51,120
you've seen the vehicle you've met the

146
00:06:55,249 --> 00:06:53,400
crew let's send you over now to NASA's

147
00:06:56,870 --> 00:06:55,259
Johnson Space Center where Leah Cheshire

148
00:07:00,650 --> 00:06:56,880
is following the launch preparations

149
00:07:03,230 --> 00:07:00,660
from Mission Control in Houston Leah

150
00:07:04,610 --> 00:07:03,240
thanks Duke you're right I'm here in the

151
00:07:06,710 --> 00:07:04,620
International Space Station flight

152
00:07:08,510 --> 00:07:06,720
control room at Johnson where teams

153
00:07:10,370 --> 00:07:08,520
staff this room around the clock to

154
00:07:12,529 --> 00:07:10,380
monitor the crew and the systems aboard

155
00:07:14,210 --> 00:07:12,539
the orbiting laboratory today they're

156
00:07:17,390 --> 00:07:14,220
ensuring that the station is ready to

157
00:07:19,189 --> 00:07:17,400
receive dragon and the ax2 crew since

158
00:07:21,770 --> 00:07:19,199
NASA opened up the space station for

159
00:07:23,570 --> 00:07:21,780
commercial activity in 2019. the agency

160
00:07:25,490 --> 00:07:23,580
has continued to work with Private

161
00:07:28,430 --> 00:07:25,500
Industry to prepare for the future of

162
00:07:30,589 --> 00:07:28,440
low earth orbit NASA's long-term goal is

163
00:07:32,749 --> 00:07:30,599

to no longer be the provider of a low

164
00:07:34,610 --> 00:07:32,759
earth orbit destination but to be a

165
00:07:36,290 --> 00:07:34,620
customer one of many purchasing

166
00:07:38,990 --> 00:07:36,300
commercially owned and operated services

167
00:07:41,510 --> 00:07:39,000
to ensure the path of tomorrow we have

168
00:07:43,010 --> 00:07:41,520
to work together today enabling private

169
00:07:45,050 --> 00:07:43,020
astronaut missions on board the space

170
00:07:47,089 --> 00:07:45,060
station helps us to refine and mature

171
00:07:48,950 --> 00:07:47,099
the processes needed for the future with

172
00:07:51,230 --> 00:07:48,960
NASA astronauts working side by side

173
00:07:53,930 --> 00:07:51,240
with private and National astronauts in

174
00:07:55,670 --> 00:07:53,940
a new age of Science and Discovery and

175
00:07:58,249 --> 00:07:55,680
we take this next step together as we

176
00:07:59,689 --> 00:07:58,259
continue counting down to the ax2 crew

177
00:08:01,909 --> 00:07:59,699
launch to the International Space

178
00:08:03,950 --> 00:08:01,919
Station as you can see it's an

179
00:08:05,930 --> 00:08:03,960
incredibly busy time in low earth orbit

180
00:08:07,969 --> 00:08:05,940
and Beyond and with that let's connect

181
00:08:11,450 --> 00:08:07,979
with NASA public affairs officer Megan

182
00:08:15,170 --> 00:08:13,249
you know Leo we love our launch days

183
00:08:16,850 --> 00:08:15,180
here at Kennedy Space Center and we love

184
00:08:18,830 --> 00:08:16,860
it when we can witness them with NASA

185
00:08:21,350 --> 00:08:18,840
administrator Bill Nelson administrator

186
00:08:23,570 --> 00:08:21,360
great to have you here it's always a

187
00:08:25,249 --> 00:08:23,580
pleasure so as Leah said it's been a

188
00:08:27,770 --> 00:08:25,259

busy exciting three years here at

189
00:08:30,770 --> 00:08:27,780
Kennedy uh since 2020 we've launched

190
00:08:32,570 --> 00:08:30,780
seven uh crude missions to the ISS but

191
00:08:35,050 --> 00:08:32,580
we've also paved the way for private

192
00:08:38,269 --> 00:08:35,060
missions like axiom1 last year and today

193
00:08:40,250 --> 00:08:38,279
ax2 so I want to ask you how are NASA

194
00:08:42,769 --> 00:08:40,260
and the general public benefiting from

195
00:08:46,370 --> 00:08:42,779
these private missions well we go in a

196
00:08:49,009 --> 00:08:46,380
public private partnership and we go

197
00:08:50,949 --> 00:08:49,019
with a fixed price contract

198
00:08:53,810 --> 00:08:50,959
and

199
00:08:57,410 --> 00:08:53,820
because it's a public-private

200
00:08:59,449 --> 00:08:57,420
partnership the the private partner is

201
00:09:03,050 --> 00:08:59,459
putting skin in the game or in other

202
00:09:05,329 --> 00:09:03,060
words investing so that at the end of

203
00:09:07,550 --> 00:09:05,339
the day the cost to the federal

204
00:09:10,250 --> 00:09:07,560
government is less

205
00:09:12,590 --> 00:09:10,260
and that's the way we're going back to

206
00:09:15,530 --> 00:09:12,600
the moon and then on to Mars and we do

207
00:09:17,530 --> 00:09:15,540
it also differently is we're going on an

208
00:09:20,690 --> 00:09:17,540
international mission

209
00:09:23,630 --> 00:09:20,700
and so as we have announced the first

210
00:09:27,350 --> 00:09:23,640
crew to go to back to the Moon in a half

211
00:09:29,750 --> 00:09:27,360
century uh it has a Canadian astronaut

212
00:09:31,430 --> 00:09:29,760
that's part of the crew and I think also

213
00:09:33,470 --> 00:09:31,440

what's great is that we're opening a low

214
00:09:36,290 --> 00:09:33,480
earth orbit to new partners as you are

215
00:09:37,550 --> 00:09:36,300
saying so you know we uh hope to or we

216
00:09:40,009 --> 00:09:37,560
will continue to use the space station

217
00:09:41,630 --> 00:09:40,019
through 2030 and then after that the

218
00:09:44,150 --> 00:09:41,640
agency will transition to as you know

219
00:09:45,410 --> 00:09:44,160
commercially owned uh stations so how is

220
00:09:48,769 --> 00:09:45,420
that transition going what's the latest

221
00:09:52,670 --> 00:09:48,779
on that well the goal is we want to

222
00:09:57,410 --> 00:09:52,680
bring space business off of the earth up

223
00:10:00,170 --> 00:09:57,420
into low earth orbit and to do that we

224
00:10:04,790 --> 00:10:00,180
NASA want to concentrate our efforts

225
00:10:07,910 --> 00:10:04,800
going on further into the cosmos and so

226
00:10:11,329 --> 00:10:07,920
we want to bring in our public-private

227
00:10:14,870 --> 00:10:11,339
partnership to encourage them to do low

228
00:10:18,350 --> 00:10:14,880
earth orbit and therefore when we're

229
00:10:21,250 --> 00:10:18,360
through with the space station in 2030

230
00:10:25,370 --> 00:10:21,260
and it will be pretty old by that time

231
00:10:28,790 --> 00:10:25,380
it's time to move on to commercial space

232
00:10:31,790 --> 00:10:28,800
stations we can still what we NASA need

233
00:10:34,610 --> 00:10:31,800
to do in low earth orbit by utilizing

234
00:10:37,970 --> 00:10:34,620
the commercial stations and we've given

235
00:10:40,850 --> 00:10:37,980
seed money to four companies to build

236
00:10:43,910 --> 00:10:40,860
commercial space stations in low earth

237
00:10:47,449 --> 00:10:43,920
orbit and one of those is Axiom space

238
00:10:49,670 --> 00:10:47,459

and Axiom is going to start their

239
00:10:52,490 --> 00:10:49,680
Venture by the way not only of getting

240
00:10:56,569 --> 00:10:52,500
accustomed to taking private astronauts

241
00:10:58,210 --> 00:10:56,579
into space as this mission is it also is

242
00:11:01,430 --> 00:10:58,220
helping us with our International

243
00:11:02,870 --> 00:11:01,440
Partnerships because we have two Saudis

244
00:11:07,310 --> 00:11:02,880
on this trip

245
00:11:09,949 --> 00:11:07,320
but it also will have its first

246
00:11:12,110 --> 00:11:09,959
component of its space station and it's

247
00:11:14,329 --> 00:11:12,120
going to dock to the International Space

248
00:11:16,550 --> 00:11:14,339
Station so a lot of exciting things as

249
00:11:17,990 --> 00:11:16,560
we keep saying in in the years ahead so

250
00:11:19,550 --> 00:11:18,000
I do want to talk to you about you know

251
00:11:22,009 --> 00:11:19,560
you've been alluding to the Artemis

252
00:11:24,470 --> 00:11:22,019
program the fact that working with these

253
00:11:26,389 --> 00:11:24,480
commercial companies to continue access

254
00:11:28,550 --> 00:11:26,399
to low earth orbit it allows us to think

255
00:11:30,889 --> 00:11:28,560
farther so yeah talk to us about some of

256
00:11:33,769 --> 00:11:30,899
the international Partnerships that uh

257
00:11:37,970 --> 00:11:33,779
that are helping the Artemis program

258
00:11:41,449 --> 00:11:37,980
well we have some 15 partners that have

259
00:11:44,150 --> 00:11:41,459
uh if not built or certainly

260
00:11:47,389 --> 00:11:44,160
participating in the International Space

261
00:11:51,350 --> 00:11:47,399
Station and this of course is a huge

262
00:11:53,690 --> 00:11:51,360
structure 120 yards long you think from

263
00:11:57,190 --> 00:11:53,700

one goal post to the other goal posts in

264
00:12:01,389 --> 00:11:57,200
a football stadium that's how big it is

265
00:12:03,829 --> 00:12:01,399
and they are very much

266
00:12:06,590 --> 00:12:03,839
you're seeing the results of that public

267
00:12:09,230 --> 00:12:06,600
private partnership here another example

268
00:12:10,490 --> 00:12:09,240
is look at the phenomenal success of

269
00:12:14,750 --> 00:12:10,500
SpaceX

270
00:12:17,329 --> 00:12:14,760
as a means of getting to and from the

271
00:12:20,930 --> 00:12:17,339
space station so when we shut down the

272
00:12:25,730 --> 00:12:20,940
space shuttle a dozen years ago now we

273
00:12:28,130 --> 00:12:25,740
rely on a private company to go to the

274
00:12:29,829 --> 00:12:28,140
International Space Station in this case

275
00:12:34,069 --> 00:12:29,839
it's SpaceX

276
00:12:36,650 --> 00:12:34,079
in July it will be Boeing as well any

277
00:12:39,050 --> 00:12:36,660
words to the ax2 crew today

278
00:12:42,790 --> 00:12:39,060
well

279
00:12:45,949 --> 00:12:42,800
first of all I wish I were with you and

280
00:12:47,449 --> 00:12:45,959
secondly godspeed to all of you awesome

281
00:12:49,210 --> 00:12:47,459
thank you so much administrator and I

282
00:12:51,470 --> 00:12:49,220
hope you enjoyed today's lunch thanks

283
00:12:53,210 --> 00:12:51,480
and so again we were talking a little

284
00:12:55,670 --> 00:12:53,220
bit about the Artemis program did you

285
00:12:58,190 --> 00:12:55,680
know that NASA and Axiom space are also

286
00:12:59,870 --> 00:12:58,200
working together to design the suits our

287
00:13:02,090 --> 00:12:59,880
astronauts will wear when they land on

288
00:13:03,710 --> 00:13:02,100

the moon in the next few years here's a

289
00:13:06,900 --> 00:13:03,720
sneak peek at what those suits will look

290
00:13:11,030 --> 00:13:08,509
[Music]

291
00:13:13,250 --> 00:13:11,040
this is a prototype of what astronauts

292
00:13:16,250 --> 00:13:13,260
will wear when they land on the moon for

293
00:13:19,550 --> 00:13:16,260
Artemis 3. while this prototype is black

294
00:13:22,190 --> 00:13:19,560
with blue and orange detailing the real

295
00:13:24,829 --> 00:13:22,200
moon walking suits will be white to

296
00:13:27,590 --> 00:13:24,839
reflect heat and keep astronauts safe

297
00:13:30,290 --> 00:13:27,600
from extreme temperatures NASA selected

298
00:13:32,870 --> 00:13:30,300
Axiom space to design develop and

299
00:13:35,710 --> 00:13:32,880
certify the suits they will fit a broad

300
00:13:39,230 --> 00:13:35,720
range of crew members men and women

301
00:13:41,710 --> 00:13:39,240
accommodating at least 90 percent of the

302
00:13:48,050 --> 00:13:41,720
U.S population

303
00:13:54,530 --> 00:13:50,269
the moon suits worn by Apollo 11

304
00:13:57,230 --> 00:13:54,540
astronauts in 1969 had a bulky life

305
00:14:00,590 --> 00:13:57,240
support system the new Axiom extra

306
00:14:02,750 --> 00:14:00,600
vehicular Mobility units or ax emu's

307
00:14:05,690 --> 00:14:02,760
will have range of motion and

308
00:14:08,269 --> 00:14:05,700
flexibility needed to explore the lunar

309
00:14:11,449 --> 00:14:08,279
South Pole they will give astronauts the

310
00:14:12,530 --> 00:14:11,459
capability to access live and work on

311
00:14:15,190 --> 00:14:12,540
the moon

312
00:14:17,329 --> 00:14:15,200
future versions could even have avionics

313
00:14:20,030 --> 00:14:17,339

astronauts will start training with the

314
00:14:21,949 --> 00:14:20,040
spacesuits later this year

315
00:14:27,110 --> 00:14:21,959
that's a look at your Artemis Moon

316
00:14:30,889 --> 00:14:28,850
while the International Space Station

317
00:14:33,230 --> 00:14:30,899
has been a valuable asset for space

318
00:14:34,850 --> 00:14:33,240
research and exploration the rise of

319
00:14:36,949 --> 00:14:34,860
commercial space flight is opening new

320
00:14:38,329 --> 00:14:36,959
doors those benefiting from the new

321
00:14:40,009 --> 00:14:38,339
opportunities range from small

322
00:14:41,930 --> 00:14:40,019
commercial entities all the way to

323
00:14:44,269 --> 00:14:41,940
National Space agencies

324
00:14:46,790 --> 00:14:44,279
this expansion of participation in space

325
00:14:49,009 --> 00:14:46,800
is enabling a more diverse and inclusive

326
00:14:51,670 --> 00:14:49,019
space industry with a much wider range

327
00:14:54,110 --> 00:14:51,680
of perspectives ideas and expertise

328
00:14:55,970 --> 00:14:54,120
additionally the competitive nature of

329
00:14:58,009 --> 00:14:55,980
commercial activities means the cost of

330
00:14:59,930 --> 00:14:58,019
participating is falling and there are

331
00:15:02,629 --> 00:14:59,940
more participants to share those costs

332
00:15:04,910 --> 00:15:02,639
and the risks expanding access to space

333
00:15:07,189 --> 00:15:04,920
Also promotes Innovation and scientific

334
00:15:08,930 --> 00:15:07,199
and technological progress benefiting

335
00:15:10,730 --> 00:15:08,940
Humanity as a whole

336
00:15:12,949 --> 00:15:10,740
for a long time the conversation has

337
00:15:14,629 --> 00:15:12,959
been about someday having private space

338
00:15:16,550 --> 00:15:14,639

flights and someday we'll have private

339
00:15:18,769 --> 00:15:16,560
astronauts well there's a lot a lot of

340
00:15:21,050 --> 00:15:18,779
room to grow from that that someday is

341
00:15:23,150 --> 00:15:21,060
now low earth orbit is more accessible

342
00:15:26,090 --> 00:15:23,160
than ever before as space research and

343
00:15:28,069 --> 00:15:26,100
Technology enter a new era companies

344
00:15:30,290 --> 00:15:28,079
like Axiom space are expanding this

345
00:15:32,329 --> 00:15:30,300
access and young space agencies like the

346
00:15:33,889 --> 00:15:32,339
Saudi space Commission Now have a path

347
00:15:36,949 --> 00:15:33,899
to achieve their goals in low earth

348
00:15:38,750 --> 00:15:36,959
orbit at Kennedy Space Center is Axiom

349
00:15:41,150 --> 00:15:38,760
space's director of digital strategy

350
00:15:42,889 --> 00:15:41,160
Sonia gavonkar McKay and with her is a

351
00:15:44,689 --> 00:15:42,899
member of the Saudi space commission to

352
00:15:46,850 --> 00:15:44,699
talk about their goals for this Mission

353
00:15:48,829 --> 00:15:46,860
Sonia

354
00:15:51,650 --> 00:15:48,839
thanks so much Duke as you mentioned I'm

355
00:15:53,750 --> 00:15:51,660
joined by Ahmed al-gafali of the Saudi

356
00:15:56,030 --> 00:15:53,760
space commission but also Axiom space's

357
00:15:57,650 --> 00:15:56,040
Chief Revenue officer tejpal Bhatia and

358
00:16:00,530 --> 00:15:57,660
I'm going to jump right in here because

359
00:16:02,389 --> 00:16:00,540
we're so close to launch time this is

360
00:16:04,730 --> 00:16:02,399
the Kingdom of Saudi Arabia's second

361
00:16:07,610 --> 00:16:04,740
flight into space the first was in 1985

362
00:16:10,069 --> 00:16:07,620
on the sts-51g what does this mission

363
00:16:11,389 --> 00:16:10,079

mean for the nation and the Kingdom of

364
00:16:13,550 --> 00:16:11,399
Saudi Arabia

365
00:16:16,310 --> 00:16:13,560
I believe that the kingdom has gone a

366
00:16:18,470 --> 00:16:16,320
long way since 1985. so many satellites

367
00:16:20,509 --> 00:16:18,480
have been launched ever since so many

368
00:16:23,329 --> 00:16:20,519
payloads have been developed ever since

369
00:16:26,389 --> 00:16:23,339
lots of research were conducted related

370
00:16:28,250 --> 00:16:26,399
to space payloads conducts a lot of

371
00:16:31,550 --> 00:16:28,260
components that we've done that could be

372
00:16:33,769 --> 00:16:31,560
used for space and other Sixers so uh

373
00:16:36,290 --> 00:16:33,779
that's a long way since since that time

374
00:16:38,870 --> 00:16:36,300
and here we are today just an hour away

375
00:16:40,850 --> 00:16:38,880
from this historical mission that will

376
00:16:42,670 --> 00:16:40,860
carry two Saudi astronauts for the first

377
00:16:45,290 --> 00:16:42,680
time to the International Space Station

378
00:16:48,710 --> 00:16:45,300
however I do believe that it's not only

379
00:16:50,449 --> 00:16:48,720
Saudi that has gone a long way I looked

380
00:16:52,670 --> 00:16:50,459
at so many research and so many

381
00:16:55,910 --> 00:16:52,680
Financial forecasts that suggest that

382
00:16:58,430 --> 00:16:55,920
within the past 20 years 60 of the

383
00:17:00,410 --> 00:16:58,440
investment in space only happened within

384
00:17:02,389 --> 00:17:00,420
the past two or three years so there is

385
00:17:04,090 --> 00:17:02,399
a momentum and we want to be a part of

386
00:17:06,949 --> 00:17:04,100
it that's wonderful

387
00:17:08,630 --> 00:17:06,959
your efforts with KSA and the efforts

388
00:17:11,510 --> 00:17:08,640

that Axiom space puts into this Mission

389
00:17:13,130 --> 00:17:11,520
allow for a vision for so much in low

390
00:17:15,230 --> 00:17:13,140
earth aerobic what can Axiom space

391
00:17:16,909 --> 00:17:15,240
really do to help Nations like the

392
00:17:19,250 --> 00:17:16,919
Kingdom of Saudi Arabia and so many

393
00:17:21,350 --> 00:17:19,260
others achieve their goals thanks Sonia

394
00:17:23,329 --> 00:17:21,360
when I think about what we're doing with

395
00:17:26,569 --> 00:17:23,339
the Kingdom from the first time I met

396
00:17:30,350 --> 00:17:26,579
Ahmed my definition of the word partner

397
00:17:33,590 --> 00:17:30,360
has fundamentally changed and evolved

398
00:17:36,230 --> 00:17:33,600
from when this was an idea and started

399
00:17:38,810 --> 00:17:36,240
formulating as a mission to execution we

400
00:17:40,549 --> 00:17:38,820
had to overcome a lot of challenges and

401
00:17:43,130 --> 00:17:40,559
these are things that are being done for

402
00:17:46,130 --> 00:17:43,140
the first time in human history and what

403
00:17:47,870 --> 00:17:46,140
I've seen in our relationship is that

404
00:17:49,250 --> 00:17:47,880
definition of partnership to overcome

405
00:17:52,549 --> 00:17:49,260
those problems and make these things a

406
00:17:55,370 --> 00:17:52,559
reality are enormous and what is

407
00:17:57,650 --> 00:17:55,380
happening in this situation is while we

408
00:17:59,810 --> 00:17:57,660
are enabling the kingdom to get to the

409
00:18:02,930 --> 00:17:59,820
International Space Station the kingdom

410
00:18:05,090 --> 00:18:02,940
is enabling us to see our vision of

411
00:18:08,510 --> 00:18:05,100
providing access to all nations in the

412
00:18:10,490 --> 00:18:08,520
world and increasing the Cadence of

413
00:18:12,049 --> 00:18:10,500

astronauts from every nation to go up

414
00:18:14,330 --> 00:18:12,059
into low earth orbit that's wonderful

415
00:18:17,330 --> 00:18:14,340
this astronaut program is new for the

416
00:18:19,250 --> 00:18:17,340
kingdom how has this process evolved

417
00:18:21,169 --> 00:18:19,260
through this year are you seeing that

418
00:18:23,450 --> 00:18:21,179
it's exponentially growing like the

419
00:18:24,890 --> 00:18:23,460
infrastructure is course of course I

420
00:18:26,750 --> 00:18:24,900
mean when we started this program about

421
00:18:28,909 --> 00:18:26,760
a year ago with this collaboration with

422
00:18:30,950 --> 00:18:28,919
Axiom the first thing that we started is

423
00:18:34,070 --> 00:18:30,960
for the process of the selection which

424
00:18:36,110 --> 00:18:34,080
is one of the main and major Milestones

425
00:18:39,289 --> 00:18:36,120
to achieve any successful program like

426
00:18:40,909 --> 00:18:39,299
that so we built our program for a

427
00:18:43,850 --> 00:18:40,919
selection based on the best practices

428
00:18:46,390 --> 00:18:43,860
that we developed together based on the

429
00:18:49,130 --> 00:18:46,400
benchmarks from from NASA for instance

430
00:18:50,810 --> 00:18:49,140
however that's only a part of it then

431
00:18:52,430 --> 00:18:50,820
comes to if you want to build a program

432
00:18:55,010 --> 00:18:52,440
you want to make sure that all the

433
00:18:57,590 --> 00:18:55,020
enablers are in place especially when it

434
00:18:58,789 --> 00:18:57,600
comes to the infrastructure and also for

435
00:19:00,890 --> 00:18:58,799
the right people with the right

436
00:19:03,350 --> 00:19:00,900
competencies to be able to run such a

437
00:19:06,110 --> 00:19:03,360
complex program so we've been building

438
00:19:10,250 --> 00:19:06,120

for the past year utilizing this project

439
00:19:12,470 --> 00:19:10,260
as as a vehicle to train to get those

440
00:19:13,970 --> 00:19:12,480
people with the right competencies not

441
00:19:16,430 --> 00:19:13,980
only to do the training for the

442
00:19:18,590 --> 00:19:16,440
astronaut core but also you want to even

443
00:19:20,870 --> 00:19:18,600
for the media for the finance for the

444
00:19:23,570 --> 00:19:20,880
legal for the r d for the integration

445
00:19:26,770 --> 00:19:23,580
all of it is a part of this secret

446
00:19:29,330 --> 00:19:26,780
recipe to uh to get a successful program

447
00:19:31,190 --> 00:19:29,340
and this is only the start so we're

448
00:19:33,590 --> 00:19:31,200
gonna keep building and enhancing this

449
00:19:36,710 --> 00:19:33,600
program till we get to the to the point

450
00:19:38,630 --> 00:19:36,720
that is optimal excellent we have only

451
00:19:41,570 --> 00:19:38,640
about one minute left what's it like

452
00:19:42,890 --> 00:19:41,580
working with individuals versus Nations

453
00:19:44,870 --> 00:19:42,900
what's the difference in that

454
00:19:47,090 --> 00:19:44,880
relationship like for Axiom space yeah

455
00:19:48,830 --> 00:19:47,100
so you know trying to compare a private

456
00:19:51,529 --> 00:19:48,840
astronaut with a national astronaut is

457
00:19:53,510 --> 00:19:51,539
like asking me to compare my children

458
00:19:55,669 --> 00:19:53,520
luckily I only have one child so I'm

459
00:19:57,890 --> 00:19:55,679
prepared to do this uh let's start with

460
00:19:59,330 --> 00:19:57,900
what's the same uh each of these

461
00:20:01,549 --> 00:19:59,340
individuals on this mission right now

462
00:20:03,110 --> 00:20:01,559
are pioneers very few people in human

463
00:20:05,090 --> 00:20:03,120

history have been to the International

464
00:20:07,789 --> 00:20:05,100
Space Station today we're going to see

465
00:20:10,789 --> 00:20:07,799
three more join and each individual

466
00:20:13,310 --> 00:20:10,799
represents their country uh and humanity

467
00:20:15,289 --> 00:20:13,320
and they're going to inspire girls and

468
00:20:18,409 --> 00:20:15,299
boys all over the world today and moving

469
00:20:20,330 --> 00:20:18,419
forward the big difference is with the

470
00:20:22,909 --> 00:20:20,340
kingdom seeing this more as a program

471
00:20:24,710 --> 00:20:22,919
right you know when we were inspired as

472
00:20:26,270 --> 00:20:24,720
kids I'll speak about myself coming here

473
00:20:30,049 --> 00:20:26,280
with my parents or seeing the shuttle

474
00:20:31,610 --> 00:20:30,059
program it was a long time before it

475
00:20:33,110 --> 00:20:31,620
became a reality and what we're going to

476
00:20:35,630 --> 00:20:33,120
see with the kingdom is is happening

477
00:20:37,850 --> 00:20:35,640
more and more as we go forward and as

478
00:20:39,890 --> 00:20:37,860
they say the sky is the limit for this

479
00:20:41,570 --> 00:20:39,900
Partnerships the opportunities for

480
00:20:43,789 --> 00:20:41,580
Nations individuals to grow together

481
00:20:45,650 --> 00:20:43,799
thank you to both of you for joining me

482
00:20:47,510 --> 00:20:45,660
and we're getting so close to lunch so

483
00:20:49,850 --> 00:20:47,520
I'll let you get back to it as we toss

484
00:20:51,529 --> 00:20:49,860
it back to Hawthorne where I'm sure

485
00:20:53,750 --> 00:20:51,539
you're feeling the anticipation it's

486
00:20:55,909 --> 00:20:53,760
getting so exciting out there what does

487
00:20:57,350 --> 00:20:55,919
it feel like to you and I know John I is

488
00:21:00,230 --> 00:20:57,360

out there as well

489
00:21:01,789 --> 00:21:00,240
thank you Sonya and yes it's a time

490
00:21:04,789 --> 00:21:01,799
where the energy is increasing

491
00:21:07,250 --> 00:21:04,799
especially we're inside of 47 minutes to

492
00:21:08,870 --> 00:21:07,260
launch currently the SpaceX launch

493
00:21:10,909 --> 00:21:08,880
director is checking with the dragon

494
00:21:13,250 --> 00:21:10,919
mission director make sure that the

495
00:21:15,529 --> 00:21:13,260
dragon ground team is ready to begin

496
00:21:17,029 --> 00:21:15,539
propellant loading in just over 10

497
00:21:18,890 --> 00:21:17,039
minutes from now

498
00:21:20,810 --> 00:21:18,900
SpaceX launch director is also

499
00:21:23,390 --> 00:21:20,820
electronically pulling the seven members

500
00:21:25,850 --> 00:21:23,400
of the SpaceX launch Team for their go

501
00:21:28,669 --> 00:21:25,860
to load propellant and launch

502
00:21:30,230 --> 00:21:28,679
and once we get that go when we get

503
00:21:31,430 --> 00:21:30,240
green lights across the board here on

504
00:21:33,649 --> 00:21:31,440
the procedure

505
00:21:36,590 --> 00:21:33,659
the launch director will then come back

506
00:21:38,930 --> 00:21:36,600
and make a series of announcements

507
00:21:41,149 --> 00:21:38,940
they'll talk about the control room what

508
00:21:45,590 --> 00:21:41,159
to do during the countdown as well as

509
00:21:50,570 --> 00:21:48,470
coming up on 46 minutes they're

510
00:21:51,830 --> 00:21:50,580
continuing to get the goes from the team

511
00:21:53,149 --> 00:21:51,840
electronically

512
00:21:54,950 --> 00:21:53,159
we're waiting to hear the launch

513
00:21:57,049 --> 00:21:54,960

director give those instructions that

514
00:21:59,890 --> 00:21:57,059
ought to come within the next minute

515
00:22:03,649 --> 00:21:59,900
now once we get through the instructions

516
00:22:05,630 --> 00:22:03,659
that will give the clearance to retract

517
00:22:08,870 --> 00:22:05,640
the crew access arm

518
00:22:10,610 --> 00:22:08,880
that will then set up for arming of the

519
00:22:12,529 --> 00:22:10,620
launch Escape system

520
00:22:14,390 --> 00:22:12,539
and that will take us into propellant

521
00:22:17,330 --> 00:22:14,400
load itself that will begin at T minus

522
00:22:19,669 --> 00:22:17,340
35 minutes you can see on the monitor

523
00:22:21,289 --> 00:22:19,679
the crew on the right hand side they're

524
00:22:24,409 --> 00:22:21,299
getting ready for their final directions

525
00:22:26,570 --> 00:22:24,419
here on the left side we've got the

526
00:22:28,310 --> 00:22:26,580
Dragon capsule the crew access poles

527
00:22:31,370 --> 00:22:28,320
complete and the team that's ready for

528
00:22:33,710 --> 00:22:31,380
crew access Armory track propellant load

529
00:22:35,870 --> 00:22:33,720
and launch reminder for control room

530
00:22:38,570 --> 00:22:35,880
lockdown for all operators and Mission

531
00:22:40,430 --> 00:22:38,580
Control and firing room four

532
00:22:42,470 --> 00:22:40,440
both control rooms we're going to lock

533
00:22:44,390 --> 00:22:42,480
down at T-minus 45 minutes which is now

534
00:22:46,730 --> 00:22:44,400
and remain in that state until the

535
00:22:48,529 --> 00:22:46,740
launch Escape system is disarmed

536
00:22:50,990 --> 00:22:48,539
all operators remain at their console to

537
00:22:52,669 --> 00:22:51,000
maintain a sterile cockpit until MD

538
00:22:54,649 --> 00:22:52,679

confirms successful disarming launch

539
00:22:57,230 --> 00:22:54,659
Escape system following orbital

540
00:22:58,490 --> 00:22:57,240
insertion or propellant offloads in the

541
00:23:00,230 --> 00:22:58,500
event of a scrub

542
00:23:02,990 --> 00:23:00,240
reminder on hold and launch Escape

543
00:23:05,690 --> 00:23:03,000
protocol for non-urgent no-go conditions

544
00:23:07,850 --> 00:23:05,700
brief CE or LD they will approve a

545
00:23:09,230 --> 00:23:07,860
boarding to countdown

546
00:23:11,690 --> 00:23:09,240
urgent issues affecting the safety of

547
00:23:14,210 --> 00:23:11,700
the operation operators shall call hold

548
00:23:15,770 --> 00:23:14,220
hold hold hold on a countdown net

549
00:23:17,510 --> 00:23:15,780
launch control will abort launch

550
00:23:19,610 --> 00:23:17,520
immediately and proceed into the

551
00:23:21,590 --> 00:23:19,620
launchable auto sequence

552
00:23:23,390 --> 00:23:21,600
a team has 10 seconds launch control be

553
00:23:25,789 --> 00:23:23,400
hands off and relying on automated abort

554
00:23:27,710 --> 00:23:25,799
criteria for the remainder of the count

555
00:23:29,630 --> 00:23:27,720
finally operators shall advise launch

556
00:23:32,870 --> 00:23:29,640
director whether structural breakup or

557
00:23:35,930 --> 00:23:32,880
fire is imminent or occurring for Dragon

558
00:23:38,870 --> 00:23:35,940
manual Escape flight rules

559
00:23:41,810 --> 00:23:38,880
finally regarding leak through on the

560
00:23:43,789 --> 00:23:41,820
first stage ACS isolation valve we will

561
00:23:47,330 --> 00:23:43,799
manually monitor

562
00:23:49,970 --> 00:23:47,340
pressure in the manifold stage one will

563
00:23:51,789 --> 00:23:49,980

assess and a T-minus 35 seconds indicate

564
00:23:54,049 --> 00:23:51,799
whether the

565
00:23:57,409 --> 00:23:54,059
pressurized is within the predicted

566
00:23:59,570 --> 00:23:57,419
range if it is not stage one will call a

567
00:24:03,649 --> 00:23:59,580
hold on the countdown net are there any

568
00:24:07,610 --> 00:24:05,690
hearing no questions launch control you

569
00:24:15,409 --> 00:24:07,620
may proceed with arming the crew arm for

570
00:24:19,789 --> 00:24:17,570
uh we're going to proceed with pretty

571
00:24:21,590 --> 00:24:19,799
excited retraction the two access arm

572
00:24:23,450 --> 00:24:21,600
Kate it's going to begin retracting

573
00:24:24,830 --> 00:24:23,460
we're getting into that next Dynamic

574
00:24:33,470 --> 00:24:24,840
phase where a lot of events start

575
00:24:37,789 --> 00:24:35,330
now while we wait for the arm to begin

576
00:24:39,649 --> 00:24:37,799
moving currently Falcon 9 Dragon

577
00:24:41,930 --> 00:24:39,659
continue to be go obviously we've

578
00:24:43,490 --> 00:24:41,940
completed the poll the range continues

579
00:24:45,289 --> 00:24:43,500
to be go for launch they're monitoring

580
00:24:47,090 --> 00:24:45,299
clearance area around the pad

581
00:24:48,590 --> 00:24:47,100
and there goes the arm beginning to move

582
00:24:49,970 --> 00:24:48,600
the view from on top of the fixed

583
00:24:51,470 --> 00:24:49,980
service structure

584
00:24:53,090 --> 00:24:51,480
and the weather continues to be

585
00:25:01,909 --> 00:24:53,100
acceptable for launch as we get ever

586
00:25:05,870 --> 00:25:04,010
nice view from the camera inside the

587
00:25:42,590 --> 00:25:05,880
Lightroom

588
00:25:48,049 --> 00:25:45,289

the clock continues to the clock

589
00:25:52,070 --> 00:25:48,059
continues to tick down we're now at T

590
00:25:53,930 --> 00:25:52,080
minus 42 minutes uh mark on the dot the

591
00:25:56,090 --> 00:25:53,940
axis arm retraction is complete as you

592
00:25:58,190 --> 00:25:56,100
just heard there that crew access arm is

593
00:26:00,890 --> 00:25:58,200
now completely stowed it is now in the

594
00:26:03,830 --> 00:26:00,900
launch position of course necessary in

595
00:26:05,810 --> 00:26:03,840
order to clear the way uh for Falcon 9

596
00:26:08,390 --> 00:26:05,820
to lift off

597
00:26:09,710 --> 00:26:08,400
now next up we will hear that we'll hear

598
00:26:12,590 --> 00:26:09,720
the call out that they launch Escape

599
00:26:13,909 --> 00:26:12,600
system is going to be armed and from

600
00:26:15,830 --> 00:26:13,919
there we'll hear that Falcon 9

601
00:26:19,310 --> 00:26:15,840
propellant load will also begin Dragon

602
00:26:25,149 --> 00:26:19,320
SpaceX you are go for Section six close

603
00:26:25,159 --> 00:26:30,169
copy go for Section six

604
00:26:34,490 --> 00:26:32,750
we saw our ax2 crew members exit the

605
00:26:36,230 --> 00:26:34,500
brand new suit up room located in the

606
00:26:37,669 --> 00:26:36,240
Falcon support building just about three

607
00:26:40,149 --> 00:26:37,679
hours ago

608
00:26:42,649 --> 00:26:40,159
they also got their tablets Dragon

609
00:26:50,269 --> 00:26:42,659
visors are closed and we're arming the

610
00:26:53,390 --> 00:26:52,190
those tablets provide them with all the

611
00:26:56,149 --> 00:26:53,400
information they'll need for the mission

612
00:26:57,890 --> 00:26:56,159
you see them attached to their left legs

613
00:26:59,810 --> 00:26:57,900

shortly after that point the crew took

614
00:27:02,330 --> 00:26:59,820
one last ride in the Teslas to launch

615
00:27:04,070 --> 00:27:02,340
pad 39a ascended the fixed service

616
00:27:06,289 --> 00:27:04,080
structure signed the white wall and

617
00:27:07,909 --> 00:27:06,299
ingressed into Dragon after getting

618
00:27:10,130 --> 00:27:07,919
buckled in the spacecraft hatch was

619
00:27:12,049 --> 00:27:10,140
closed the closeout technicians cleared

620
00:27:14,630 --> 00:27:12,059
the pad leaving just the crew members

621
00:27:16,610 --> 00:27:14,640
inside the dragon vehicle

622
00:27:18,430 --> 00:27:16,620
all right so as we heard the call out we

623
00:27:21,649 --> 00:27:18,440
are arming the launch Escape system

624
00:27:24,649 --> 00:27:21,659
which is a system that basically gives

625
00:27:27,950 --> 00:27:24,659
the crew options a pathway to safety

626
00:27:35,090 --> 00:27:27,960
through All Phases to orbit uh you know

627
00:27:39,470 --> 00:27:37,370
we take every measure possible to ensure

628
00:27:41,149 --> 00:27:39,480
that the crew has options safety is

629
00:27:42,590 --> 00:27:41,159
Paramount so there we just got that

630
00:27:46,490 --> 00:27:42,600
confirmation that that launch Escape

631
00:27:48,830 --> 00:27:46,500
system is now armed so let's take a look

632
00:27:51,590 --> 00:27:48,840
at the teams that are actually working

633
00:27:54,230 --> 00:27:51,600
together to make sure this mission is a

634
00:27:56,450 --> 00:27:54,240
success SpaceX is operating out of two

635
00:27:59,269 --> 00:27:56,460
control Rooms Today there on your screen

636
00:28:02,029 --> 00:27:59,279
a live view of our launch control in

637
00:28:03,649 --> 00:28:02,039
firing room 4 at Cape Canaveral this

638
00:28:05,870 --> 00:28:03,659

team is responsible for monitoring

639
00:28:08,210 --> 00:28:05,880
Falcon 9 throughout the countdown and

640
00:28:11,149 --> 00:28:08,220
launch second we have Mission Control

641
00:28:12,289 --> 00:28:11,159
here at SpaceX headquarters in Hawthorne

642
00:28:13,850 --> 00:28:12,299
California

643
00:28:16,010 --> 00:28:13,860
this team in Mission Control is

644
00:28:18,890 --> 00:28:16,020
responsible for close monitoring of the

645
00:28:21,409 --> 00:28:18,900
crew and dragon every step of the way as

646
00:28:23,870 --> 00:28:21,419
the spacecraft orbits the planet along

647
00:28:26,570 --> 00:28:23,880
its customized flight path

648
00:28:28,430 --> 00:28:26,580
on Console or headset there are a number

649
00:28:30,529 --> 00:28:28,440
of key positions who are monitoring the

650
00:28:32,690 --> 00:28:30,539
health of the vehicle and crew the

651
00:28:35,330 --> 00:28:32,700
mission director that person is

652
00:28:37,730 --> 00:28:35,340
responsible for Mission success and they

653
00:28:40,669 --> 00:28:37,740
are in charge of the room today's

654
00:28:43,190 --> 00:28:40,679
Mission director is Ken gamerek

655
00:28:45,549 --> 00:28:43,200
other positions are focused on things

656
00:28:48,049 --> 00:28:45,559
like software propulsion navigation

657
00:28:49,789 --> 00:28:48,059
avionics life support systems and

658
00:28:51,169 --> 00:28:49,799
Communications with ground segments as

659
00:28:53,750 --> 00:28:51,179
we've heard those kind of called out

660
00:28:55,610 --> 00:28:53,760
throughout the day so far you'll also

661
00:28:58,370 --> 00:28:55,620
hear a specific person dedicated to

662
00:29:00,890 --> 00:28:58,380
communicating with the ax2 crew they are

663
00:29:02,590 --> 00:29:00,900

the crew operations responsible engineer

664
00:29:06,049 --> 00:29:02,600
or core

665
00:29:08,390 --> 00:29:06,059
c-o-r-e today's SpaceX core

666
00:29:09,649 --> 00:29:08,400
is Arthur barriolt we've heard him a

667
00:29:12,049 --> 00:29:09,659
number of times through the launch

668
00:29:15,470 --> 00:29:12,059
countdown the SpaceX team members will

669
00:29:18,169 --> 00:29:15,480
also rotate and hand off coverage to

670
00:29:21,950 --> 00:29:18,179
ensure that we have people on Console 24

671
00:29:24,350 --> 00:29:21,960
7 for the crew and uh and dragon for the

672
00:29:26,149 --> 00:29:24,360
entire duration of the mission including

673
00:29:28,730 --> 00:29:26,159
all the way through Splashdown

674
00:29:30,830 --> 00:29:28,740
and for Axiom space the teams in Houston

675
00:29:32,389 --> 00:29:30,840
are utilizing Axiom Mission Control

676
00:29:34,430 --> 00:29:32,399
Center an officially certified

677
00:29:36,590 --> 00:29:34,440
controlled center from the secure

678
00:29:39,289 --> 00:29:36,600
facility teams have live access to voice

679
00:29:41,389 --> 00:29:39,299
video and data from the ISS and can work

680
00:29:43,850 --> 00:29:41,399
alongside their NASA counterparts to run

681
00:29:46,430 --> 00:29:43,860
on-orbit operations and monitor every

682
00:29:48,769 --> 00:29:46,440
aspect of the mission in real time this

683
00:29:51,049 --> 00:29:48,779
room is led by what we call the axle or

684
00:29:52,669 --> 00:29:51,059
the Axiom operations lead and around the

685
00:29:54,769 --> 00:29:52,679
room are positions for officers

686
00:29:57,590 --> 00:29:54,779
responsible for research Communications

687
00:29:59,990 --> 00:29:57,600
medical integration and stowage and

688
00:30:01,789 --> 00:30:00,000

timeline operations this is a

689
00:30:04,070 --> 00:30:01,799
significant step in our journey to

690
00:30:06,230 --> 00:30:04,080
expand access to low earth orbit as it

691
00:30:08,630 --> 00:30:06,240
is only the 12th ground segment partner

692
00:30:10,549 --> 00:30:08,640
for the ISS program and through this

693
00:30:12,590 --> 00:30:10,559
facility we are enabling our customers

694
00:30:17,090 --> 00:30:12,600
and the global Community a front row

695
00:30:23,029 --> 00:30:21,230
we are now T minus 37 minutes and 31

696
00:30:24,830 --> 00:30:23,039
seconds

697
00:30:25,970 --> 00:30:24,840
from the second all private astronaut

698
00:30:27,590 --> 00:30:25,980
mission to the International Space

699
00:30:29,269 --> 00:30:27,600
Station and the first for any

700
00:30:32,029 --> 00:30:29,279
representatives from the Kingdom of

701
00:30:35,930 --> 00:30:32,039
Saudi Arabia Falcon 9 propellant loading

702
00:30:44,510 --> 00:30:35,940
begin at T minus 35 minutes rp1 fuel

703
00:30:48,470 --> 00:30:46,730
and lox loading is underway on Xbox

704
00:30:54,590 --> 00:30:48,480
we'll be venting for prep Talent loud

705
00:30:59,149 --> 00:30:56,149
with propelled low let's go check in

706
00:31:03,110 --> 00:31:01,310
John esberger here from the webcast desk

707
00:31:06,350 --> 00:31:03,120
in Hawthorne California SpaceX

708
00:31:09,289 --> 00:31:06,360
headquarters inside 37 minutes counting

709
00:31:12,350 --> 00:31:09,299
down we have completed the go no go Poll

710
00:31:13,789 --> 00:31:12,360
for propellant load and for launch we've

711
00:31:15,409 --> 00:31:13,799
just heard a call out they are now

712
00:31:17,690 --> 00:31:15,419
venting down the tanks that's one of the

713
00:31:20,210 --> 00:31:17,700

steps in propellant load the next major

714
00:31:22,549 --> 00:31:20,220
activity will occur at T minus 35

715
00:31:25,430 --> 00:31:22,559
minutes one propellant loading will

716
00:31:28,669 --> 00:31:25,440
physically begin onto the vehicle

717
00:31:31,010 --> 00:31:28,679
now we'll start with rp1 kerosene fuel

718
00:31:33,289 --> 00:31:31,020
loading onto both the first and second

719
00:31:37,250 --> 00:31:33,299
stages and we'll be loading liquid

720
00:31:39,289 --> 00:31:37,260
oxygen onto the first stage of Falcon 9.

721
00:31:42,169 --> 00:31:39,299
now in order to fly

722
00:31:44,990 --> 00:31:42,179
just like Falcon 9 Dragon needs its feel

723
00:31:47,649 --> 00:31:45,000
and oxidizer the Dragon capsule you can

724
00:31:50,389 --> 00:31:47,659
see here on the screen it uses a

725
00:31:53,029 --> 00:31:50,399
monomethylhydrazine called mmh that's

726
00:31:55,970 --> 00:31:53,039
the fuel that's on board the dragon and

727
00:31:58,789 --> 00:31:55,980
nitrogen tetraxide or nto is the

728
00:32:00,769 --> 00:31:58,799
oxidizer together these propellants feed

729
00:32:03,649 --> 00:32:00,779
the Draco engines that maneuver dragon

730
00:32:05,630 --> 00:32:03,659
on orbit as well as the H super Draco

731
00:32:08,090 --> 00:32:05,640
engines that would power the launch

732
00:32:10,070 --> 00:32:08,100
Escape system in the case of an abort

733
00:32:12,889 --> 00:32:10,080
scenario

734
00:32:16,370 --> 00:32:12,899
now again coming up in about 40 seconds

735
00:32:18,889 --> 00:32:16,380
we will begin feeling on the Falcon 9.

736
00:32:21,409 --> 00:32:18,899
that means right now that those eight

737
00:32:23,930 --> 00:32:21,419
super Draco engines inside crew Dragon

738
00:32:26,090 --> 00:32:23,940

are ready if needed to launch the

739
00:32:28,190 --> 00:32:26,100
capsule away from the Falcon 9 rocket in

740
00:32:30,409 --> 00:32:28,200
an instant should there be any kind of

741
00:32:31,730 --> 00:32:30,419
an emergency associated with the rocket

742
00:32:34,789 --> 00:32:31,740
or the pad

743
00:32:36,769 --> 00:32:34,799
but currently 35 minutes 18 seconds and

744
00:32:40,250 --> 00:32:36,779
counting everything continues to look

745
00:32:43,250 --> 00:32:40,260
good on Falcon 9 and dragon

746
00:32:45,049 --> 00:32:43,260
thank you John on the ax1 flight and

747
00:32:47,090 --> 00:32:45,059
during our launch broadcast for that

748
00:32:49,250 --> 00:32:47,100
mission there was a special emphasis on

749
00:32:51,110 --> 00:32:49,260
the Trish research effort or the

750
00:32:53,570 --> 00:32:51,120
translational Research Institute for

751
00:32:58,370 --> 00:32:53,580
space Health as the name suggests has

752
00:33:01,730 --> 00:33:00,289
hey it sounds like a propellant load has

753
00:33:04,190 --> 00:33:01,740
started

754
00:33:06,169 --> 00:33:04,200
as for Trish as the name suggests this

755
00:33:08,090 --> 00:33:06,179
is a broad effort aimed at ensuring we

756
00:33:10,850 --> 00:33:08,100
understand and are preparing for human

757
00:33:12,769 --> 00:33:10,860
health beyond our home planet this is an

758
00:33:14,590 --> 00:33:12,779
effort that NASA astronauts and private

759
00:33:17,210 --> 00:33:14,600
astronauts can both participate in

760
00:33:19,009 --> 00:33:17,220
naturally naturally life just a few

761
00:33:20,570 --> 00:33:19,019
hundred miles above Earth poses some

762
00:33:22,730 --> 00:33:20,580
unique challenges that we're still

763
00:33:25,850 --> 00:33:22,740

unlocking the secrets to even after 60

764
00:33:28,250 --> 00:33:25,860
plus years of humans in space here is a

765
00:33:30,289 --> 00:33:28,260
bit more on the progress made during ax1

766
00:33:33,110 --> 00:33:30,299
and what's ahead for our participation

767
00:33:34,490 --> 00:33:33,120
in this critical research effort

768
00:33:36,590 --> 00:33:34,500
questions

769
00:33:39,789 --> 00:33:36,600
thank you for joining us Dr Fogerty and

770
00:33:42,110 --> 00:33:39,799
Dr yurcata from Trish the translational

771
00:33:44,210 --> 00:33:42,120
Research Institute for space Health

772
00:33:46,190 --> 00:33:44,220
let's start with an easy question what

773
00:33:48,590 --> 00:33:46,200
exactly is Trish

774
00:33:51,350 --> 00:33:48,600
yes Trish Trish is a Consortium between

775
00:33:54,830 --> 00:33:51,360
Baylor College of Medicine MIT and

776
00:33:57,470 --> 00:33:54,840
Caltech we are funded by NASA to

777
00:33:59,450 --> 00:33:57,480
relentlessly and innovatively solve the

778
00:34:01,070 --> 00:33:59,460
risks for human space exploration and

779
00:34:03,409 --> 00:34:01,080
use a variety of tools to get there

780
00:34:04,669 --> 00:34:03,419
including commercial space flight what

781
00:34:08,089 --> 00:34:04,679
are the goals of the research being

782
00:34:09,829 --> 00:34:08,099
conducted for ax2 through Trish that is

783
00:34:11,869 --> 00:34:09,839
a great question uh the researcher we

784
00:34:13,849 --> 00:34:11,879
conducted on ax2 has been highly

785
00:34:15,950 --> 00:34:13,859
prioritized to solve the most important

786
00:34:17,510 --> 00:34:15,960
risks for human space flight as we are

787
00:34:19,669 --> 00:34:17,520
planning to go back to the moon and

788
00:34:22,750 --> 00:34:19,679

going to other planets so all of these

789
00:34:25,849 --> 00:34:22,760
projects have been custom made and

790
00:34:28,070 --> 00:34:25,859
designed to be easy to collect to take

791
00:34:30,169 --> 00:34:28,080
the least crew time and to take the

792
00:34:32,030 --> 00:34:30,179
least Mass power and volume an example

793
00:34:33,889 --> 00:34:32,040
is this kit that I have here we provide

794
00:34:35,750 --> 00:34:33,899
one of these to each of the of the crew

795
00:34:36,889 --> 00:34:35,760
members and it includes most of the

796
00:34:39,829 --> 00:34:36,899
hardware they need to collect

797
00:34:41,270 --> 00:34:39,839
physiologic data sensory motor that is

798
00:34:43,790 --> 00:34:41,280
your balance how it changes in space

799
00:34:46,790 --> 00:34:43,800
some surveys and also how the physiology

800
00:34:48,109 --> 00:34:46,800
changes in space so all of these um are

801
00:34:49,849 --> 00:34:48,119
have been again customized for

802
00:34:52,730 --> 00:34:49,859
commercial space flights talk to me

803
00:34:52,740 --> 00:34:58,010
enable new

804
00:35:02,450 --> 00:35:00,470
Trish has two main elements to its

805
00:35:04,310 --> 00:35:02,460
framework to accomplish the goals that

806
00:35:06,829 --> 00:35:04,320
were just set out by Dr yaketa so we

807
00:35:08,990 --> 00:35:06,839
have essential measures which have been

808
00:35:10,910 --> 00:35:09,000
harmonized with NASA's standard measures

809
00:35:12,829 --> 00:35:10,920
to make sure that we're collecting the

810
00:35:14,810 --> 00:35:12,839
same type of data on every crew member

811
00:35:16,370 --> 00:35:14,820
so we can compare across people across

812
00:35:18,950 --> 00:35:16,380
different missions to really maximize

813
00:35:20,510 --> 00:35:18,960

the value and then we have exploratory

814
00:35:23,030 --> 00:35:20,520
studies as the second part of the

815
00:35:24,770 --> 00:35:23,040
framework and this is where the known

816
00:35:27,050 --> 00:35:24,780
unknowns the questions we have about

817
00:35:29,210 --> 00:35:27,060
space flight are the risks have

818
00:35:31,370 --> 00:35:29,220
hypotheses generated and we get to test

819
00:35:33,470 --> 00:35:31,380
them how does the research apply to

820
00:35:35,630 --> 00:35:33,480
those of us on Earth I mean some of us

821
00:35:38,390 --> 00:35:35,640
are maybe never going to be leaving this

822
00:35:41,210 --> 00:35:38,400
planet why do we care about this kind of

823
00:35:42,950 --> 00:35:41,220
work Dr Fogerty Dr yucata

824
00:35:45,170 --> 00:35:42,960
yeah this is where things get really

825
00:35:47,210 --> 00:35:45,180
exciting so due to the constraints of

826
00:35:49,490 --> 00:35:47,220
space flight and the complexity we have

827
00:35:52,490 --> 00:35:49,500
to be really focused on creating

828
00:35:54,230 --> 00:35:52,500
integrated and Holistic Solutions we

829
00:35:56,750 --> 00:35:54,240
can't have individual solutions for

830
00:35:58,490 --> 00:35:56,760
every problem those constraints create a

831
00:36:01,010 --> 00:35:58,500
really ideal environment to bring things

832
00:36:03,230 --> 00:36:01,020
back to Earth to put Healthcare in

833
00:36:05,510 --> 00:36:03,240
people's hands we believe that these are

834
00:36:07,069 --> 00:36:05,520
going to increase Healthcare Equity the

835
00:36:09,230 --> 00:36:07,079
access to health care and the quality of

836
00:36:10,970 --> 00:36:09,240
health care which then results in

837
00:36:14,030 --> 00:36:10,980
improved Health outcomes

838
00:36:15,770 --> 00:36:14,040

how does this Mission ax2 add to the

839
00:36:18,589 --> 00:36:15,780
range of data

840
00:36:21,050 --> 00:36:18,599
that's a great question in the last 61

841
00:36:23,390 --> 00:36:21,060
plus years of human space flight roughly

842
00:36:25,790 --> 00:36:23,400
only 650 people have flown into space

843
00:36:29,750 --> 00:36:25,800
and if we look at the diversity of these

844
00:36:31,010 --> 00:36:29,760
mostly our male white Bales and what we

845
00:36:33,349 --> 00:36:31,020
were seeing with commercial space flight

846
00:36:35,690 --> 00:36:33,359
is a more diverse population we're

847
00:36:38,510 --> 00:36:35,700
seeing people from all ages younger and

848
00:36:40,670 --> 00:36:38,520
older as compared to your government

849
00:36:43,190 --> 00:36:40,680
astronauts we're also seeing people from

850
00:36:46,069 --> 00:36:43,200
multiple demographics backgrounds

851
00:36:49,310 --> 00:36:46,079
training education and also people with

852
00:36:51,950 --> 00:36:49,320
medical conditions so as we keep growing

853
00:36:54,770 --> 00:36:51,960
these database of civilians flying into

854
00:36:57,710 --> 00:36:54,780
space we will have all of the tools that

855
00:37:00,650 --> 00:36:57,720
we need to make most humans being able

856
00:37:04,310 --> 00:37:00,660
to to fly into space Stay further longer

857
00:37:07,910 --> 00:37:05,810
I look forward to watching the launch

858
00:37:10,130 --> 00:37:07,920
with you and seeing the astronauts

859
00:37:12,650 --> 00:37:10,140
return and looking at their data thank

860
00:37:15,410 --> 00:37:12,660
you thank you

861
00:37:18,589 --> 00:37:15,420
we are now just under 30 minutes from

862
00:37:20,450 --> 00:37:18,599
the launch of ax2 mission it has taken

863
00:37:22,970 --> 00:37:20,460

an enormous effort from an incredibly

864
00:37:24,109 --> 00:37:22,980
dedicated and hardworking team to get to

865
00:37:26,150 --> 00:37:24,119
this moment

866
00:37:27,890 --> 00:37:26,160
knowing that that not everyone can be

867
00:37:30,410 --> 00:37:27,900
here to witness it and even fewer get to

868
00:37:32,390 --> 00:37:30,420
share a message with the crew we asked

869
00:37:34,490 --> 00:37:32,400
teams to record some words for this

870
00:37:36,710 --> 00:37:34,500
moment as the countdown to launch

871
00:37:39,109 --> 00:37:36,720
continues here are a few messages from

872
00:37:42,109 --> 00:37:39,119
those across the Axiom family

873
00:37:44,750 --> 00:37:42,119
Peggy you are an inspiration to so many

874
00:37:46,370 --> 00:37:44,760
people around the world to me it's been

875
00:37:48,950 --> 00:37:46,380
so impactful to see a woman like

876
00:37:50,930 --> 00:37:48,960
yourself make such great strides and

877
00:37:53,329 --> 00:37:50,940
exploration and Achieve so many

878
00:37:55,190 --> 00:37:53,339
different types of Firsts my family and

879
00:37:58,089 --> 00:37:55,200
I will be watching you launch and

880
00:38:01,370 --> 00:37:58,099
cheering you on all the way to the ISS

881
00:38:02,630 --> 00:38:01,380
hi Peggy Kelly and Delta here we just

882
00:38:04,670 --> 00:38:02,640
wanted to let you know that we're

883
00:38:06,230 --> 00:38:04,680
cheering you on we're so excited to

884
00:38:08,450 --> 00:38:06,240
watch you launch you're an inspiration

885
00:38:10,250 --> 00:38:08,460
to women and girls around the world and

886
00:38:12,530 --> 00:38:10,260
you've been a personal inspiration to me

887
00:38:14,569 --> 00:38:12,540
in my own journey to space we're so

888
00:38:20,690 --> 00:38:14,579

excited to watch you launch and we'll be

889
00:38:26,569 --> 00:38:23,990
to Peggy our notorious space ninja John

890
00:38:28,730 --> 00:38:26,579
AKA Loki to Ali who is also known as

891
00:38:31,250 --> 00:38:28,740
Slayer and then to Rihanna our very own

892
00:38:33,530 --> 00:38:31,260
ray of sunshine wishing you an amazing

893
00:38:36,470 --> 00:38:33,540
launch today as well as a smooth Journey

894
00:38:39,349 --> 00:38:36,480
to the ISS at Astra ax2 crew thank you

895
00:38:41,510 --> 00:38:39,359
Peggy John Ali and Rihanna for inspiring

896
00:38:43,310 --> 00:38:41,520
the next generation of astronauts from

897
00:38:45,050 --> 00:38:43,320
our crew experience team to our axt

898
00:38:46,790 --> 00:38:45,060
group we are so proud of everything

899
00:38:49,370 --> 00:38:46,800
you've accomplished and we're excited

900
00:38:51,829 --> 00:38:49,380
for your successful journey home send us

901
00:38:53,810 --> 00:38:51,839
a postcard just wanted to say that we're

902
00:38:55,609 --> 00:38:53,820
super excited for all the groundbreaking

903
00:38:58,190 --> 00:38:55,619
resources you guys are going to do we're

904
00:38:59,770 --> 00:38:58,200
rooting for you and good luck the

905
00:39:02,890 --> 00:38:59,780
marketing team has been proud to support

906
00:39:05,210 --> 00:39:02,900
ax2 Mission

907
00:39:07,430 --> 00:39:05,220
this is the portable life support system

908
00:39:09,050 --> 00:39:07,440
team we are very excited about the ax2

909
00:39:10,550 --> 00:39:09,060
mission coming up and wish you all the

910
00:39:12,530 --> 00:39:10,560
best we're very excited for you guys

911
00:39:14,210 --> 00:39:12,540
y'all are such an inspiration and we're

912
00:39:16,190 --> 00:39:14,220
rooting for you all the way through

913
00:39:19,310 --> 00:39:16,200

we wish you a safe and successful

914
00:39:22,390 --> 00:39:19,320
Mission we want to congratulate the ax2

915
00:39:24,829 --> 00:39:22,400
crew thank you so much for all the

916
00:39:27,770 --> 00:39:24,839
inspiration and and we wish you the best

917
00:39:30,589 --> 00:39:27,780
on your journey 2 crew we're proud of

918
00:39:32,870 --> 00:39:30,599
you and good luck hey ax2 all of us in

919
00:39:35,030 --> 00:39:32,880
avionics wish you safe travels and lots

920
00:39:36,470 --> 00:39:35,040
of fun godspeed this is the

921
00:39:39,109 --> 00:39:36,480
Environmental controls and life support

922
00:39:41,089 --> 00:39:39,119
systems team at Axiom space we're super

923
00:39:43,490 --> 00:39:41,099
excited about the axu mission and one of

924
00:39:45,290 --> 00:39:43,500
which the best in the crew ax2 crew we

925
00:39:47,150 --> 00:39:45,300
are so proud of you here at Axiom space

926
00:39:49,670 --> 00:39:47,160
this is the systems engineering team on

927
00:39:51,710 --> 00:39:49,680
the station program godspeed and add

928
00:39:55,270 --> 00:39:51,720
Astra on this groundbreaking Mission

929
00:39:57,710 --> 00:39:55,280
from Human Resources to you

930
00:39:59,569 --> 00:39:57,720
we're sending all of our support to you

931
00:40:00,770 --> 00:39:59,579
guys through here in Axiom headquarters

932
00:40:03,290 --> 00:40:00,780
and we just wanted to say

933
00:40:04,550 --> 00:40:03,300
congratulations on the ax2 mission hey

934
00:40:06,470 --> 00:40:04,560
this is Ryan Lee from the pressure

935
00:40:09,470 --> 00:40:06,480
garment team wishing you on the ah2

936
00:40:11,329 --> 00:40:09,480
flight all the best godspeed guys go

937
00:40:23,349 --> 00:40:11,339
team

938
00:40:28,250 --> 00:40:26,210

I look forward to seeing you flying in

939
00:40:30,530 --> 00:40:28,260
space and working aboard the

940
00:40:33,050 --> 00:40:30,540
International Space Station I also wish

941
00:40:35,870 --> 00:40:33,060
you to enjoy your staying aboard for

942
00:40:38,329 --> 00:40:35,880
this another making history Mission we

943
00:40:44,050 --> 00:40:38,339
are all proud of you and we wait for you

944
00:40:47,990 --> 00:40:46,430
a big thanks to all those who

945
00:40:49,970 --> 00:40:48,000
contributed to those videos and everyone

946
00:40:52,190 --> 00:40:49,980
behind the crew today a lot of really

947
00:40:53,990 --> 00:40:52,200
excited teams out there and a special

948
00:40:56,270 --> 00:40:54,000
thanks to Kelly Girardi and the space

949
00:40:58,430 --> 00:40:56,280
gal Emily calandrelli both big steam

950
00:40:59,390 --> 00:40:58,440
education Advocates who you just saw as

951
00:41:01,069 --> 00:40:59,400
well

952
00:41:03,050 --> 00:41:01,079
they dedicate their influence to

953
00:41:04,849 --> 00:41:03,060
increasing literacy and interest in

954
00:41:07,730 --> 00:41:04,859
science especially for young girls which

955
00:41:09,890 --> 00:41:07,740
is awesome you know Emily and Kelly are

956
00:41:12,290 --> 00:41:09,900
both moms to young girls so it's safe to

957
00:41:15,589 --> 00:41:12,300
say that they have front row seats to

958
00:41:17,810 --> 00:41:15,599
knowing what is cool and inspiring now

959
00:41:19,849 --> 00:41:17,820
speaking of front row seats it's been

960
00:41:22,310 --> 00:41:19,859
feeling like we have one of our very own

961
00:41:24,230 --> 00:41:22,320
looking at pad 39a with these camera

962
00:41:26,270 --> 00:41:24,240
views that we've been getting all

963
00:41:28,250 --> 00:41:26,280

morning and afternoon now let's take a

964
00:41:29,990 --> 00:41:28,260
moment to get acquainted with the

965
00:41:30,950 --> 00:41:30,000
vehicles that you see there on your

966
00:41:33,050 --> 00:41:30,960
screen

967
00:41:35,870 --> 00:41:33,060
the Falcon 9 rocket with a dragon

968
00:41:39,230 --> 00:41:35,880
spacecraft on top together stand at

969
00:41:41,630 --> 00:41:39,240
about 215 feet which is almost 30 feet

970
00:41:44,930 --> 00:41:41,640
taller than the Leaning Tower of Pisa in

971
00:41:46,910 --> 00:41:44,940
Italy Falcon 9 is a reusable two-stage

972
00:41:49,310 --> 00:41:46,920
rocket which means it's kind of like two

973
00:41:51,710 --> 00:41:49,320
rockets in one the first stage and the

974
00:41:54,530 --> 00:41:51,720
second stage the first stage is the

975
00:41:57,349 --> 00:41:54,540
bottom two-thirds of the vehicle today's

976
00:41:59,810 --> 00:41:57,359
booster is flying for the first time you

977
00:42:01,849 --> 00:41:59,820
can think of it as the large bottom

978
00:42:04,010 --> 00:42:01,859
white portion and the middle black

979
00:42:06,290 --> 00:42:04,020
portion so that's what we mean when we

980
00:42:07,670 --> 00:42:06,300
say the booster the first stages were

981
00:42:09,829 --> 00:42:07,680
responsible for accelerating

982
00:42:12,650 --> 00:42:09,839
accelerating Falcon and dragon through

983
00:42:14,390 --> 00:42:12,660
the Earth's atmosphere and into space in

984
00:42:16,910 --> 00:42:14,400
order to do that it has nine Merlin

985
00:42:19,190 --> 00:42:16,920
engines at the bottom of the stage

986
00:42:21,230 --> 00:42:19,200
prior to liftoff the Falcon 9 first

987
00:42:23,569 --> 00:42:21,240
stages stage two cryo helium load has

988
00:42:26,270 --> 00:42:23,579

started actually and currently underway

989
00:42:29,030 --> 00:42:26,280
is being loaded up with nearly 1 million

990
00:42:30,770 --> 00:42:29,040
pounds of fuel and liquid oxygen the

991
00:42:34,130 --> 00:42:30,780
Merlin engines on the first stage are

992
00:42:36,410 --> 00:42:34,140
optimized for sea level they achieve 190

993
00:42:38,750 --> 00:42:36,420
000 pounds of thrust during ascent and

994
00:42:40,130 --> 00:42:38,760
descent the first stage accelerates the

995
00:42:42,230 --> 00:42:40,140
vehicle through the Earth's atmosphere

996
00:42:44,030 --> 00:42:42,240
into space and then separates from the

997
00:42:45,589 --> 00:42:44,040
rest of the rocket about two and a half

998
00:42:48,349 --> 00:42:45,599
minutes into flight

999
00:42:51,770 --> 00:42:48,359
from there the first stage will head

1000
00:42:53,210 --> 00:42:51,780
over to lz1 it will do what no other

1001
00:42:55,010 --> 00:42:53,220
rocket or excuse me what no other

1002
00:42:57,170 --> 00:42:55,020
orbital class rocket in the world can do

1003
00:43:00,290 --> 00:42:57,180
it'll go right there make its way back

1004
00:43:03,170 --> 00:43:00,300
to Earth today marks the first time we

1005
00:43:05,329 --> 00:43:03,180
are landing Falcon 9 on land for a crew

1006
00:43:07,250 --> 00:43:05,339
mission previous crew missions landed on

1007
00:43:09,470 --> 00:43:07,260
a drone ship stationed in the Atlantic

1008
00:43:11,990 --> 00:43:09,480
Ocean so pretty exciting first for us

1009
00:43:14,030 --> 00:43:12,000
today Landing back on land has a lot of

1010
00:43:15,770 --> 00:43:14,040
benefits for example it eliminates the

1011
00:43:18,890 --> 00:43:15,780
need for our recovery team to be

1012
00:43:20,510 --> 00:43:18,900
stationed out at sea for days and it

1013
00:43:22,970 --> 00:43:20,520

improves our turnaround time to get

1014
00:43:25,550 --> 00:43:22,980
Falcon 9 ready to fly again

1015
00:43:27,829 --> 00:43:25,560
now above these the first stage is the

1016
00:43:30,170 --> 00:43:27,839
second stage the second stage has a

1017
00:43:31,970 --> 00:43:30,180
single Merlin vacuum or mvac engine and

1018
00:43:33,950 --> 00:43:31,980
that ignites after the first stage

1019
00:43:35,569 --> 00:43:33,960
separates the second stage is

1020
00:43:37,790 --> 00:43:35,579
essentially a smaller version of the

1021
00:43:40,309 --> 00:43:37,800
first stage whereas the first stage is

1022
00:43:42,170 --> 00:43:40,319
designed to power the vehicle out of the

1023
00:43:44,690 --> 00:43:42,180
Earth's atmosphere and through the

1024
00:43:46,490 --> 00:43:44,700
forces of gravity the second stage is

1025
00:43:48,890 --> 00:43:46,500
specifically designed to operate in the

1026
00:43:51,290 --> 00:43:48,900
vacuum of space the second stage Powers

1027
00:43:53,150 --> 00:43:51,300
the dragon spacecraft to its targeted

1028
00:43:56,030 --> 00:43:53,160
drop-off orbit

1029
00:43:58,490 --> 00:43:56,040
the dragon spacecraft itself is capable

1030
00:44:01,069 --> 00:43:58,500
of carrying up to seven passengers to

1031
00:44:02,450 --> 00:44:01,079
and from Earth orbit and Beyond but as

1032
00:44:04,730 --> 00:44:02,460
we've been seeing with those views

1033
00:44:07,130 --> 00:44:04,740
inside the capsule today we're carrying

1034
00:44:10,130 --> 00:44:07,140
four people we have the four members of

1035
00:44:12,410 --> 00:44:10,140
the Axiom 2 crew it's the first private

1036
00:44:14,270 --> 00:44:12,420
spacecraft to take humans to the space

1037
00:44:16,130 --> 00:44:14,280
station and the only spacecraft

1038
00:44:18,290 --> 00:44:16,140

currently flying that is capable of

1039
00:44:19,309 --> 00:44:18,300
returning significant amounts of cargo

1040
00:44:21,530 --> 00:44:19,319
to Earth

1041
00:44:24,349 --> 00:44:21,540
like the Falcon 9 rocket the dragon

1042
00:44:25,970 --> 00:44:24,359
spacecraft is also reusable this will be

1043
00:44:28,270 --> 00:44:25,980
the second flight for this particular

1044
00:44:31,609 --> 00:44:28,280
Dragon spacecraft

1045
00:44:34,309 --> 00:44:31,619
the this is Dragon Freedom that the ax2

1046
00:44:36,410 --> 00:44:34,319
are cry are flying in today it

1047
00:44:39,950 --> 00:44:36,420
previously supported NASA's crew 4

1048
00:44:43,490 --> 00:44:39,960
Mission in April 2022.

1049
00:44:45,890 --> 00:44:43,500
now we are awaiting our t0 coming up in

1050
00:44:47,870 --> 00:44:45,900
just over 23 minutes from now the ground

1051
00:44:49,490 --> 00:44:47,880
operations teams are doing a series of

1052
00:44:52,430 --> 00:44:49,500
system checks to make sure both dragon

1053
00:44:54,050 --> 00:44:52,440
and Falcon 9 are ready for launch let's

1054
00:44:56,270 --> 00:44:54,060
take a look at what the ascent portion

1055
00:44:58,970 --> 00:44:56,280
of the mission will look like

1056
00:45:00,829 --> 00:44:58,980
and once we hit t0 we're going to watch

1057
00:45:05,510 --> 00:45:00,839
Falcon 9 and dragon lift off from

1058
00:45:08,270 --> 00:45:05,520
historic pad 39a and make their ascent

1059
00:45:09,950 --> 00:45:08,280
now about 43 seconds into flight Falcon

1060
00:45:11,390 --> 00:45:09,960
9's engines will throttle down to help

1061
00:45:13,490 --> 00:45:11,400
pass through the period of Maximum

1062
00:45:16,010 --> 00:45:13,500
Dynamic pressure on the rocket what we

1063
00:45:17,930 --> 00:45:16,020

typically refer to as Max Q it's worth

1064
00:45:20,270 --> 00:45:17,940
noting once we hit Max Q we'll be going

1065
00:45:22,790 --> 00:45:20,280
supersonic faster than the speed of

1066
00:45:27,589 --> 00:45:25,069
Dynamic pressure we can throttle up our

1067
00:45:29,150 --> 00:45:27,599
Merlin engines once again from there at

1068
00:45:31,010 --> 00:45:29,160
about two and a half minutes into flight

1069
00:45:33,650 --> 00:45:31,020
we have a series of three events that

1070
00:45:36,170 --> 00:45:33,660
happen in Rapid succession first is

1071
00:45:37,849 --> 00:45:36,180
Mikko or main engine cutoff this is

1072
00:45:40,270 --> 00:45:37,859
where all nine Merlin engines will shut

1073
00:45:42,710 --> 00:45:40,280
off in preparation for stage separation

1074
00:45:44,990 --> 00:45:42,720
whereas the name suggests that's where

1075
00:45:47,150 --> 00:45:45,000
the first stage detaches from the second

1076
00:45:49,130 --> 00:45:47,160
stage with the first stage making its

1077
00:45:50,930 --> 00:45:49,140
way back to Earth for landing as the

1078
00:45:52,670 --> 00:45:50,940
second stage continues on its Journey

1079
00:45:56,630 --> 00:45:52,680
with the third event

1080
00:45:58,730 --> 00:45:56,640
an event is ses1 the second stage engine

1081
00:46:00,650 --> 00:45:58,740
start number one that's where the Merlin

1082
00:46:03,770 --> 00:46:00,660
vacuum engine lights up and propels the

1083
00:46:05,750 --> 00:46:03,780
second stage along with our ax ax2 crew

1084
00:46:07,910 --> 00:46:05,760
in Dragon into orbit

1085
00:46:10,190 --> 00:46:07,920
as stage 2 heads towards its targeted

1086
00:46:11,930 --> 00:46:10,200
drop-off orbit stage one will execute

1087
00:46:14,150 --> 00:46:11,940
three Burns in order to make its way

1088
00:46:16,670 --> 00:46:14,160

back to Earth the first is the Boost

1089
00:46:19,550 --> 00:46:16,680
back burn where three of the Merlin 1D

1090
00:46:22,609 --> 00:46:19,560
engines will reignite and then shut down

1091
00:46:25,370 --> 00:46:22,619
this helps to head the booster back to

1092
00:46:27,290 --> 00:46:25,380
Cape Canaveral the second burn or the

1093
00:46:29,569 --> 00:46:27,300
entry burn helps to slow the stage down

1094
00:46:31,370 --> 00:46:29,579
in preparation for entry back through

1095
00:46:33,770 --> 00:46:31,380
the Earth's atmosphere

1096
00:46:36,170 --> 00:46:33,780
at about 90 seconds after Dragon gets

1097
00:46:39,170 --> 00:46:36,180
into orbit Falcon 9 will then land back

1098
00:46:42,170 --> 00:46:39,180
on Earth The Landing burn will bring the

1099
00:46:44,450 --> 00:46:42,180
vehicle speed down rapidly in order to

1100
00:46:46,550 --> 00:46:44,460
land back on land near the launch site

1101
00:46:48,290 --> 00:46:46,560
today around eight minutes into Mission

1102
00:46:50,690 --> 00:46:48,300
I should say that actually happens about

1103
00:46:53,089 --> 00:46:50,700
a minute prior to that second engine

1104
00:46:55,190 --> 00:46:53,099
cutoff yep you're right Kate so as the

1105
00:46:56,990 --> 00:46:55,200
first stage is back on Earth the second

1106
00:46:58,490 --> 00:46:57,000
stage will cut off its single Merlin

1107
00:47:01,069 --> 00:46:58,500
engine that was ignited right after

1108
00:47:02,870 --> 00:47:01,079
stage separation once this happened we

1109
00:47:06,170 --> 00:47:02,880
wait for that all important confirmation

1110
00:47:08,569 --> 00:47:06,180
of a good orbital insertion

1111
00:47:11,150 --> 00:47:08,579
then Dragon will begin its preparations

1112
00:47:12,770 --> 00:47:11,160
and separate from the second stage about

1113
00:47:14,329 --> 00:47:12,780

three minutes after the section stage

1114
00:47:16,430 --> 00:47:14,339
gets into orbit we ought to get that

1115
00:47:17,930 --> 00:47:16,440
great view from the Ford camera showing

1116
00:47:20,750 --> 00:47:17,940
dragon with its four-person crew

1117
00:47:22,730 --> 00:47:20,760
drifting away from the second stage once

1118
00:47:24,230 --> 00:47:22,740
dragon is a short distance away it will

1119
00:47:26,390 --> 00:47:24,240
begin checking out those Draco

1120
00:47:28,130 --> 00:47:26,400
maneuvering thrusters to make sure that

1121
00:47:30,109 --> 00:47:28,140
Dragon continues to increase the

1122
00:47:31,250 --> 00:47:30,119
separation distance from the second

1123
00:47:33,290 --> 00:47:31,260
stage

1124
00:47:35,690 --> 00:47:33,300
the nose cone deploy sequence will

1125
00:47:38,329 --> 00:47:35,700
initiate just before t plus 12 minutes

1126
00:47:40,550 --> 00:47:38,339
and finish around t plus 15 minutes

1127
00:47:44,270 --> 00:47:40,560
which will expose dragon's docking

1128
00:47:49,910 --> 00:47:45,950
all right that call out there telling us

1129
00:47:52,430 --> 00:47:49,920
that rp1 loading is now complete

1130
00:47:55,430 --> 00:47:52,440
on uh stage one

1131
00:47:58,190 --> 00:47:55,440
now in advance or excuse me on I think

1132
00:48:00,170 --> 00:47:58,200
we heard actually stage two there

1133
00:48:02,150 --> 00:48:00,180
um about that talking mechanism exposure

1134
00:48:04,670 --> 00:48:02,160
will be in advance of arrival to the

1135
00:48:07,190 --> 00:48:04,680
International Space Station now with

1136
00:48:08,930 --> 00:48:07,200
that let's head over to Leah at Johnson

1137
00:48:10,849 --> 00:48:08,940
Space Center in Houston for another

1138
00:48:14,329 --> 00:48:10,859

update on how things are going there

1139
00:48:16,790 --> 00:48:14,339
with station preparation hey Leah

1140
00:48:18,290 --> 00:48:16,800
hey Kate the space station team here in

1141
00:48:20,329 --> 00:48:18,300
Houston is focused on the critical

1142
00:48:22,490 --> 00:48:20,339
systems on the station and everything

1143
00:48:24,530 --> 00:48:22,500
continues to function as expected ahead

1144
00:48:26,450 --> 00:48:24,540
of launch so the teams have verified the

1145
00:48:27,829 --> 00:48:26,460
command path the ground up through our

1146
00:48:30,170 --> 00:48:27,839
constellation of communication

1147
00:48:31,970 --> 00:48:30,180
satellites to the station everything is

1148
00:48:33,589 --> 00:48:31,980
nominal we love that word and the

1149
00:48:35,089 --> 00:48:33,599
station will be ready to receive Dragon

1150
00:48:37,790 --> 00:48:35,099
tomorrow should they launch tonight

1151
00:48:39,829 --> 00:48:37,800
Mission Control Houston is go for launch

1152
00:48:42,109 --> 00:48:39,839
once the crew arrives at station the

1153
00:48:45,050 --> 00:48:42,119
Expedition 69 crew will be there to

1154
00:48:46,550 --> 00:48:45,060
welcome the ax2 crew on board right now

1155
00:48:48,589 --> 00:48:46,560
living in the station we have seven

1156
00:48:51,230 --> 00:48:48,599
people that includes NASA astronauts

1157
00:48:53,450 --> 00:48:51,240
Frank Rubio Woody hoberg and Steve Bowen

1158
00:48:55,670 --> 00:48:53,460
United Arab Emirates astronaut Sultan

1159
00:48:57,829 --> 00:48:55,680
al-nayari and was Cosmos cosmonauts

1160
00:49:00,470 --> 00:48:57,839
Andre fedaya Sergey prokopiev and

1161
00:49:02,390 --> 00:49:00,480
Dimitri patellen flight director Greg

1162
00:49:04,550 --> 00:49:02,400
Whitney is on Console now leading flight

1163
00:49:06,589 --> 00:49:04,560

controllers on the orbit 3 team in

1164
00:49:08,329 --> 00:49:06,599
Houston for launch and flight director

1165
00:49:10,730 --> 00:49:08,339
Marcus Flores will lead teams for

1166
00:49:12,950 --> 00:49:10,740
docking tomorrow a reminder that launch

1167
00:49:14,870 --> 00:49:12,960
today will take about 16 hours to get to

1168
00:49:17,450 --> 00:49:14,880
the station with a docking to the node 2

1169
00:49:20,089 --> 00:49:17,460
Zenith or space-facing Port scheduled

1170
00:49:22,670 --> 00:49:20,099
just before 9 30 a.m eastern time

1171
00:49:24,530 --> 00:49:22,680
tomorrow once dragon is fully docked to

1172
00:49:26,750 --> 00:49:24,540
the statements here in Houston will

1173
00:49:28,790 --> 00:49:26,760
assist the Axiom space and space station

1174
00:49:31,250 --> 00:49:28,800
astronauts with leak checks as they work

1175
00:49:33,170 --> 00:49:31,260
to open hatches on both dragon and

1176
00:49:35,569 --> 00:49:33,180
inside the station's pressurized meeting

1177
00:49:37,670 --> 00:49:35,579
adapter we expect hatch open to take

1178
00:49:39,710 --> 00:49:37,680
place about two hours after docking

1179
00:49:41,690 --> 00:49:39,720
that's it for us here in Mission Control

1180
00:49:43,970 --> 00:49:41,700
Houston and I will send it back over to

1181
00:49:46,849 --> 00:49:43,980
the team in Hawthorne Duke

1182
00:49:50,030 --> 00:49:46,859
thanks Leah and all of that is set to

1183
00:49:51,470 --> 00:49:50,040
begin in just over 18 minutes from right

1184
00:49:54,170 --> 00:49:51,480
now and I gotta say the energy around

1185
00:49:55,849 --> 00:49:54,180
here is certainly Rising as Leah just

1186
00:49:57,589 --> 00:49:55,859
mentioned once the crew launches they

1187
00:49:59,390 --> 00:49:57,599
will spend the next 16 hours in Dragon

1188
00:50:02,210 --> 00:49:59,400

catching up to the International Space

1189
00:50:04,069 --> 00:50:02,220
Station that time on orbit and in Dragon

1190
00:50:06,349 --> 00:50:04,079
will feature a variety of tasks

1191
00:50:07,970 --> 00:50:06,359
including some planned photography but

1192
00:50:09,770 --> 00:50:07,980
about half of that time is scheduled for

1193
00:50:11,690 --> 00:50:09,780
Sleep which the crew will absolutely

1194
00:50:13,609 --> 00:50:11,700
need because once they reach the ISS

1195
00:50:15,829 --> 00:50:13,619
they have quite the schedule ahead of

1196
00:50:17,750 --> 00:50:15,839
them they will spend eight days on

1197
00:50:19,309 --> 00:50:17,760
station conducting a variety of science

1198
00:50:21,349 --> 00:50:19,319
investigations and Technology

1199
00:50:23,809 --> 00:50:21,359
demonstrations including radiation

1200
00:50:25,370 --> 00:50:23,819
protection research studies on how to

1201
00:50:27,170 --> 00:50:25,380
create rain and how to enhance our

1202
00:50:28,849 --> 00:50:27,180
understanding of dangerous thunderstorms

1203
00:50:31,069 --> 00:50:28,859
as well as DNA research with

1204
00:50:33,050 --> 00:50:31,079
nanomaterials and reprogramming skin

1205
00:50:34,609 --> 00:50:33,060
cells to help create regenerative

1206
00:50:36,470 --> 00:50:34,619
medicines wow

1207
00:50:38,450 --> 00:50:36,480
when they are not Hands-On with research

1208
00:50:40,130 --> 00:50:38,460
they will be participating in numerous

1209
00:50:42,410 --> 00:50:40,140
Outreach events connecting with groups

1210
00:50:44,809 --> 00:50:42,420
around the world John for instance will

1211
00:50:46,430 --> 00:50:44,819
use the station's ham radio to share a

1212
00:50:48,470 --> 00:50:46,440
message with students

1213
00:50:50,210 --> 00:50:48,480

beyond all that Commander Peggy Whitson

1214
00:50:52,309 --> 00:50:50,220
has assured us that each of them will

1215
00:50:54,349 --> 00:50:52,319
carve out some time to Simply pause and

1216
00:50:57,290 --> 00:50:54,359
look down at the planet below as it

1217
00:51:05,569 --> 00:50:57,300
speeds by at a cool 17 500 miles per

1218
00:51:09,730 --> 00:51:07,970
on station just in the cupola the whole

1219
00:51:12,410 --> 00:51:09,740
time yes exactly

1220
00:51:14,990 --> 00:51:12,420
now as we've said before we have an

1221
00:51:17,750 --> 00:51:15,000
instantaneous launch window that means

1222
00:51:22,430 --> 00:51:17,760
that we have one second we're targeting

1223
00:51:25,490 --> 00:51:22,440
uh 5 37 PM Eastern Time 2 37 PM Pacific

1224
00:51:26,630 --> 00:51:25,500
time so just 16 and a half minutes load

1225
00:51:28,609 --> 00:51:26,640
has begun

1226
00:51:31,069 --> 00:51:28,619
that call they're telling us that the

1227
00:51:33,950 --> 00:51:31,079
liquid oxygen on stage two is now

1228
00:51:36,410 --> 00:51:33,960
beginning or the liquid oxygen on is

1229
00:51:38,930 --> 00:51:36,420
beginning to be loaded onto stage two uh

1230
00:51:40,130 --> 00:51:38,940
that will wrap up around T minus two

1231
00:51:41,329 --> 00:51:40,140
minutes

1232
00:51:43,430 --> 00:51:41,339
now I was talking about the

1233
00:51:46,010 --> 00:51:43,440
instantaneous launch window because we

1234
00:51:47,809 --> 00:51:46,020
are essentially chasing the space

1235
00:51:50,630 --> 00:51:47,819
station we're trying to catch up to it

1236
00:51:53,390 --> 00:51:50,640
it means that in order for everything to

1237
00:51:55,010 --> 00:51:53,400
be precisely lined up in terms of how

1238
00:51:56,870 --> 00:51:55,020

much propellant we're taking on board

1239
00:51:58,849 --> 00:51:56,880
and obviously we don't want to take too

1240
00:52:01,370 --> 00:51:58,859
much because everything about space is

1241
00:52:03,410 --> 00:52:01,380
weight how much weight are you taking

1242
00:52:06,049 --> 00:52:03,420
um and so we want to optimize our path

1243
00:52:07,730 --> 00:52:06,059
to the International Space Station and

1244
00:52:10,430 --> 00:52:07,740
uh yeah so we basically have that

1245
00:52:12,770 --> 00:52:10,440
instantaneous moment to take off all

1246
00:52:14,569 --> 00:52:12,780
right and that moment is coming soon and

1247
00:52:17,569 --> 00:52:14,579
as we approach the final moments of our

1248
00:52:19,549 --> 00:52:17,579
countdown to launch Axiom space CEO Mike

1249
00:52:21,829 --> 00:52:19,559
suffradini wanted to take a moment to

1250
00:52:23,530 --> 00:52:21,839
reflect on this the second Axiom space

1251
00:52:26,510 --> 00:52:23,540
mission

1252
00:52:29,390 --> 00:52:26,520
this Mission today is very meaningful

1253
00:52:32,089 --> 00:52:29,400
for Axiom space it's a watershed moment

1254
00:52:34,069 --> 00:52:32,099
because it's our opportunity to really

1255
00:52:36,470 --> 00:52:34,079
start bringing the rest of the world to

1256
00:52:37,970 --> 00:52:36,480
the International Space Station we're

1257
00:52:40,250 --> 00:52:37,980
honored that the kingdoms of Saudi

1258
00:52:42,230 --> 00:52:40,260
Arabia is flying with us here today the

1259
00:52:46,130 --> 00:52:42,240
two crew members flying are fantastic

1260
00:52:50,510 --> 00:52:48,109
of course John schoffner's been with us

1261
00:52:53,089 --> 00:52:50,520
for a while he's a backup on ax1 we're

1262
00:52:55,190 --> 00:52:53,099
excited for him to fly of course the

1263
00:52:57,349 --> 00:52:55,200

commanders Peggy Whitson and while she's

1264
00:52:58,849 --> 00:52:57,359
the first woman Commander for a

1265
00:53:00,770 --> 00:52:58,859
commercial Mission that's a big deal to

1266
00:53:02,870 --> 00:53:00,780
us I really don't think it's a huge deal

1267
00:53:05,030 --> 00:53:02,880
to Peggy she's flown so many times this

1268
00:53:06,530 --> 00:53:05,040
is uh you know like riding a bike but

1269
00:53:09,349 --> 00:53:06,540
we're very excited for this crew and

1270
00:53:10,910 --> 00:53:09,359
we're looking forward to their mission

1271
00:53:12,890 --> 00:53:10,920
so you know we don't do this by

1272
00:53:15,049 --> 00:53:12,900
ourselves Axiom is a wonderful company

1273
00:53:17,089 --> 00:53:15,059
with the Fantastic employees they've

1274
00:53:19,730 --> 00:53:17,099
done quite a bit of work to get to this

1275
00:53:22,130 --> 00:53:19,740
point the commander is one of our very

1276
00:53:24,589 --> 00:53:22,140
own as well but our thanks go out to the

1277
00:53:26,930 --> 00:53:24,599
entire team to support us the vaccine

1278
00:53:28,670 --> 00:53:26,940
done a fantastic job in preparing for

1279
00:53:30,650 --> 00:53:28,680
the mission and the medical and all the

1280
00:53:33,530 --> 00:53:30,660
work that's gone into getting the crews

1281
00:53:36,589 --> 00:53:33,540
ready to go fly uh SpaceX which is a

1282
00:53:39,049 --> 00:53:36,599
fantastic reliable Dragon spacecraft and

1283
00:53:41,089 --> 00:53:39,059
Falcon launch vehicle have prepped the

1284
00:53:43,069 --> 00:53:41,099
crew and the vehicle and it's out on the

1285
00:53:45,589 --> 00:53:43,079
launch pad ready to go and of course

1286
00:53:48,109 --> 00:53:45,599
NASA we can't do any of this without

1287
00:53:49,790 --> 00:53:48,119
NASA who who has worked with us along

1288
00:53:51,290 --> 00:53:49,800

the way allowed us to have this

1289
00:53:54,109 --> 00:53:51,300
opportunity and will work with us on

1290
00:53:55,730 --> 00:53:54,119
orbit and of course the investors the

1291
00:53:57,890 --> 00:53:55,740
reason why we get to do what we're doing

1292
00:53:59,750 --> 00:53:57,900
is accompany and build this space

1293
00:54:01,370 --> 00:53:59,760
station and do these missions because

1294
00:54:03,710 --> 00:54:01,380
the investors that are with us along the

1295
00:54:05,390 --> 00:54:03,720
way so it's the entire team that has

1296
00:54:07,490 --> 00:54:05,400
supported us and worked with us

1297
00:54:09,049 --> 00:54:07,500
throughout this last several months as

1298
00:54:13,190 --> 00:54:09,059
we prepared for this Mission and we're

1299
00:54:17,569 --> 00:54:15,829
right guys uh you're gonna have a great

1300
00:54:20,210 --> 00:54:17,579
time on orbit and we're looking forward

1301
00:54:22,430 --> 00:54:20,220
to seeing you there on orbit from all of

1302
00:54:27,170 --> 00:54:22,440
us here at Axiom we wish you good luck

1303
00:54:31,730 --> 00:54:29,990
just under 13 and a half minutes and

1304
00:54:34,849 --> 00:54:31,740
everything continues to look good for

1305
00:54:34,859 --> 00:54:38,829
now currently Falcon 9 began

1306
00:54:43,250 --> 00:54:41,150
for today's lunch

1307
00:54:45,170 --> 00:54:43,260
we have continued weather evaluations

1308
00:54:47,990 --> 00:54:45,180
and four-year awareness we are

1309
00:54:51,650 --> 00:54:48,000
monitoring an anvil cloud that is moving

1310
00:54:53,990 --> 00:54:51,660
towards lc39a it's currently five miles

1311
00:54:56,150 --> 00:54:54,000
away and it just needs to remain outside

1312
00:54:58,490 --> 00:54:56,160
of three miles for launch to continue

1313
00:55:00,170 --> 00:54:58,500

the weather officer is going to continue

1314
00:55:02,510 --> 00:55:00,180
monitoring this cloud and will continue

1315
00:55:06,890 --> 00:55:02,520
to provide updates to the launch teams

1316
00:55:11,690 --> 00:55:09,170
checking copies no issues on the vehicle

1317
00:55:13,670 --> 00:55:11,700
watching the cloud thinking very dry

1318
00:55:17,589 --> 00:55:13,680
spots

1319
00:55:21,650 --> 00:55:17,599
good read back and just a reminder that

1320
00:55:23,210 --> 00:55:21,660
the city Falcon 9 valves the Falcon team

1321
00:55:25,069 --> 00:55:23,220
is going to be performing that manual

1322
00:55:29,210 --> 00:55:25,079
evaluation of the manifold pressure

1323
00:55:31,370 --> 00:55:29,220
until T minus 35 seconds and if we do

1324
00:55:32,870 --> 00:55:31,380
not pass those checks the Falcon team

1325
00:55:35,450 --> 00:55:32,880
will call a hold

1326
00:55:37,430 --> 00:55:35,460
if the evaluation passes there will be

1327
00:55:39,770 --> 00:55:37,440
no call made and we will continue with

1328
00:55:42,650 --> 00:55:39,780
the countdown so again at T minus 35

1329
00:55:44,630 --> 00:55:42,660
seconds following the manual evaluation

1330
00:55:46,849 --> 00:55:44,640
if we do not pass those checks the

1331
00:55:49,069 --> 00:55:46,859
Falcon team will call a hold but if

1332
00:55:50,210 --> 00:55:49,079
there is no call we have passed the

1333
00:55:53,750 --> 00:55:50,220
checks and we will continue with

1334
00:55:58,670 --> 00:55:55,730
yeah I think Kathy's manual Invasion

1335
00:56:02,089 --> 00:55:58,680
evaluation will call a hold if it's not

1336
00:56:08,569 --> 00:56:02,099
passing the check expect no call if uh

1337
00:56:12,650 --> 00:56:10,970
I like that comment thinking dry

1338
00:56:14,210 --> 00:56:12,660

thoughts

1339
00:56:15,410 --> 00:56:14,220
now we're talking about propellant

1340
00:56:18,230 --> 00:56:15,420
loading

1341
00:56:19,430 --> 00:56:18,240
rp1 fuel is completely loaded on the

1342
00:56:21,589 --> 00:56:19,440
second stage

1343
00:56:24,290 --> 00:56:21,599
field loading is continuing on the first

1344
00:56:26,630 --> 00:56:24,300
stage we just about full it'll finish up

1345
00:56:28,790 --> 00:56:26,640
at the T minus six minute mark

1346
00:56:30,829 --> 00:56:28,800
densified liquid oxygen loading is

1347
00:56:33,650 --> 00:56:30,839
continuing on the first stage and the

1348
00:56:35,809 --> 00:56:33,660
second stage both stages well underway

1349
00:56:37,910 --> 00:56:35,819
first stage is nearing a completion but

1350
00:56:40,490 --> 00:56:37,920
it won't wrap up until T minus three

1351
00:56:42,230 --> 00:56:40,500
minutes the second stage just began a

1352
00:56:43,670 --> 00:56:42,240
few minutes ago that'll wrap up a T

1353
00:56:46,609 --> 00:56:43,680
minus two minutes

1354
00:56:48,890 --> 00:56:46,619
as we get closer to launch we will do

1355
00:56:50,990 --> 00:56:48,900
various checkouts one is the thrust

1356
00:56:52,849 --> 00:56:51,000
Vector controllers these are what move

1357
00:56:54,710 --> 00:56:52,859
the engine nozzles around on the first

1358
00:56:57,230 --> 00:56:54,720
and second stage engine and when we move

1359
00:56:59,450 --> 00:56:57,240
those nozzles we call it TVC Wiggles

1360
00:57:01,549 --> 00:56:59,460
those will be done inside 10 minutes

1361
00:57:03,710 --> 00:57:01,559
we'll also be doing checkouts of

1362
00:57:06,349 --> 00:57:03,720
throttle valves on the engine

1363
00:57:09,349 --> 00:57:06,359

now the range currently is go air and c

1364
00:57:11,210 --> 00:57:09,359
space are clear the weather uh you heard

1365
00:57:14,450 --> 00:57:11,220
the briefing from the core up to the

1366
00:57:16,790 --> 00:57:14,460
crew we're watching One anvil cloud it's

1367
00:57:19,010 --> 00:57:16,800
within five miles but it's Gotta just

1368
00:57:20,569 --> 00:57:19,020
stay more than three miles away and we

1369
00:57:23,270 --> 00:57:20,579
will be go to fly

1370
00:57:25,010 --> 00:57:23,280
and meanwhile the dragon team also had

1371
00:57:27,170 --> 00:57:25,020
reported they're working no issues

1372
00:57:29,270 --> 00:57:27,180
everything is complete through the

1373
00:57:32,030 --> 00:57:29,280
countdown the comp checkouts are

1374
00:57:33,890 --> 00:57:32,040
finished the access arm is retracted the

1375
00:57:35,870 --> 00:57:33,900
launch Escape system is armed the crew

1376
00:57:38,150 --> 00:57:35,880
is strapped in and ready to go

1377
00:57:39,950 --> 00:57:38,160
we're coming up on Final instructions of

1378
00:57:41,930 --> 00:57:39,960
the crew we'll hear that at T minus 10

1379
00:57:44,150 --> 00:57:41,940
minutes they'll configure their displays

1380
00:57:46,430 --> 00:57:44,160
for launch they'll get the last messages

1381
00:57:48,770 --> 00:57:46,440
and then we'll go into the terminal

1382
00:57:54,049 --> 00:57:48,780
countdown sequence let's listen into the

1383
00:58:01,450 --> 00:57:56,750
Dragon SpaceX confirmed crew displays

1384
00:58:08,870 --> 00:58:04,849
and SpaceX Dragon we can confirm clear

1385
00:58:12,650 --> 00:58:10,549
SpaceX copies

1386
00:58:14,630 --> 00:58:12,660
and on behalf of the entire SpaceX team

1387
00:58:16,849 --> 00:58:14,640
we are honored to have you aboard Dragon

1388
00:58:19,010 --> 00:58:16,859

capsule Freedom today on its next trip

1389
00:58:21,049 --> 00:58:19,020
to the International Space Station and

1390
00:58:23,089 --> 00:58:21,059
the second Axiom creation

1391
00:58:29,030 --> 00:58:23,099
we wish you a great Mission good luck

1392
00:58:29,040 --> 00:58:34,490
Let Freedom fly

1393
00:58:38,510 --> 00:58:36,109
you're the crew calling back to the

1394
00:58:41,089 --> 00:58:38,520
ground to Let Freedom fly we see them

1395
00:58:43,250 --> 00:58:41,099
applauding everything continuing to look

1396
00:58:44,870 --> 00:58:43,260
good we're coming up on nine minutes to

1397
00:58:47,270 --> 00:58:44,880
Launch

1398
00:59:00,829 --> 00:58:47,280
next major event is going to be engine

1399
00:59:04,730 --> 00:59:03,470
as John just said at T minus seven

1400
00:59:08,030 --> 00:59:04,740
minutes

1401
00:59:11,089 --> 00:59:08,040
we will begin to flow a little bit of

1402
00:59:12,670 --> 00:59:11,099
the super chilled liquid oxygen through

1403
00:59:15,589 --> 00:59:12,680
the turbo pumps

1404
00:59:17,390 --> 00:59:15,599
which that is basically chilling the

1405
00:59:20,150 --> 00:59:17,400
hardware performing an engine chill

1406
00:59:23,270 --> 00:59:20,160
prior to the full flow we do that in

1407
00:59:25,609 --> 00:59:23,280
order to help minimize the chances of

1408
00:59:27,829 --> 00:59:25,619
the hardware experiencing any thermal

1409
00:59:33,710 --> 00:59:27,839
shock when that full flow of super

1410
00:59:39,289 --> 00:59:37,069
now we can see some venting from the

1411
00:59:41,329 --> 00:59:39,299
vehicle now totally normal it is that

1412
00:59:46,549 --> 00:59:41,339
liquid oxygen just vaporizing as it

1413
00:59:50,750 --> 00:59:48,710

can't take maybe this is an opportunity

1414
00:59:52,609 --> 00:59:50,760
you know we always use the word abort

1415
00:59:55,430 --> 00:59:52,619
this might be a chance to let everybody

1416
00:59:57,289 --> 00:59:55,440
know that there are abort call outs in

1417
00:59:59,569 --> 00:59:57,299
Flight that we're going to hear those

1418
01:00:01,730 --> 00:59:59,579
are just heads up to the crew that says

1419
01:00:03,710 --> 01:00:01,740
should a contingency occur there's

1420
01:00:05,210 --> 01:00:03,720
different actions that'll happen at each

1421
01:00:06,770 --> 01:00:05,220
various stage of the flight when you're

1422
01:00:07,970 --> 01:00:06,780
on first stage or when you're on second

1423
01:00:09,470 --> 01:00:07,980
stage

1424
01:00:12,230 --> 01:00:09,480
that's right we should actually hear

1425
01:00:15,710 --> 01:00:12,240
Commander Peggy Whitson calling those

1426
01:00:18,410 --> 01:00:15,720
abort modes out as they are ascending

1427
01:00:20,450 --> 01:00:18,420
and really getting to orbit she is

1428
01:00:22,789 --> 01:00:20,460
tracking everything on her both her

1429
01:00:25,849 --> 01:00:22,799
tablet as well on her leg as well as the

1430
01:00:28,849 --> 01:00:25,859
crew display above her head so she is

1431
01:00:31,030 --> 01:00:28,859
able to identify at which mode they are

1432
01:00:34,130 --> 01:00:31,040
entering and those modes identify

1433
01:00:36,770 --> 01:00:34,140
basically where and what sequence Dragon

1434
01:00:39,349 --> 01:00:36,780
would take at that point in time during

1435
01:00:41,450 --> 01:00:39,359
the flight

1436
01:00:43,730 --> 01:00:41,460
now we're about 10 seconds away from

1437
01:00:52,490 --> 01:00:43,740
that engine chill

1438
01:00:57,829 --> 01:00:55,609

engine chill has started

1439
01:01:00,770 --> 01:00:57,839
all right right on time

1440
01:01:03,230 --> 01:01:00,780
we've opened the valves that are letting

1441
01:01:05,270 --> 01:01:03,240
liquid oxygen and kerosene fuel down to

1442
01:01:07,910 --> 01:01:05,280
the Merlin 1D engines on the first stage

1443
01:01:10,250 --> 01:01:07,920
our next major activity coming up at T

1444
01:01:12,049 --> 01:01:10,260
minus six minutes approximately we'll

1445
01:01:14,930 --> 01:01:12,059
hear the announcement that field loading

1446
01:01:16,970 --> 01:01:14,940
is complete on the first stage

1447
01:01:19,849 --> 01:01:16,980
and one other comment while we were

1448
01:01:22,430 --> 01:01:19,859
hearing the briefing to the crew uh at

1449
01:01:24,829 --> 01:01:22,440
the T-minus 10 minute Mark we also heard

1450
01:01:27,650 --> 01:01:24,839
reference to a call out that may or may

1451
01:01:29,510 --> 01:01:27,660
not be made at T minus 35 seconds many

1452
01:01:31,970 --> 01:01:29,520
of the checkouts of the Falcon 9 are

1453
01:01:35,289 --> 01:01:31,980
done by computer in the last minute

1454
01:01:38,750 --> 01:01:35,299
there is one today that requires an edge

1455
01:01:40,609 --> 01:01:38,760
look at some data if for example that

1456
01:01:43,309 --> 01:01:40,619
system had an issue that would be called

1457
01:01:44,990 --> 01:01:43,319
out at T minus 35 seconds right now

1458
01:01:49,370 --> 01:01:45,000
everything continues to look good though

1459
01:01:49,380 --> 01:01:53,510
I would

1460
01:01:53,520 --> 01:01:56,569
foreign

1461
01:02:00,589 --> 01:01:58,430
we also heard in the briefing that they

1462
01:02:02,329 --> 01:02:00,599
are tracking an anvil cloud that at the

1463
01:02:05,270 --> 01:02:02,339

time of the briefing was about five

1464
01:02:06,770 --> 01:02:05,280
miles away from the pad they are

1465
01:02:09,230 --> 01:02:06,780
tracking it it just needs to stay

1466
01:02:11,450 --> 01:02:09,240
outside of three miles so everything

1467
01:02:13,670 --> 01:02:11,460
still continues to look okay on that

1468
01:02:17,750 --> 01:02:15,530
the next call out that we'll hear in

1469
01:02:20,870 --> 01:02:17,760
about 30 seconds is that dragon has

1470
01:02:22,910 --> 01:02:20,880
transitioned to the terminal count

1471
01:02:25,190 --> 01:02:22,920
configuration

1472
01:02:26,990 --> 01:02:25,200
that's basically an indication that the

1473
01:02:29,690 --> 01:02:27,000
dragon spacecraft has taken over the

1474
01:02:37,549 --> 01:02:29,700
space the spacecraft's countdown and is

1475
01:02:42,049 --> 01:02:40,190
at this point in time rp1 is now

1476
01:02:43,430 --> 01:02:42,059
completely loaded both on the first and

1477
01:02:46,970 --> 01:02:43,440
second stages

1478
01:02:48,890 --> 01:02:46,980
locks load continues on both stages

1479
01:02:50,690 --> 01:02:48,900
it'll wrap up at T minus three minutes

1480
01:02:56,410 --> 01:02:50,700
for first stage and T minus two minutes

1481
01:02:56,420 --> 01:03:06,069
are pressurizing for strong record

1482
01:03:11,210 --> 01:03:08,569
pressurization call out we are putting

1483
01:03:13,309 --> 01:03:11,220
uh pressurized gas helium onto the stage

1484
01:03:14,990 --> 01:03:13,319
in preparation for opening up the clamp

1485
01:03:18,589 --> 01:03:15,000
arm that's around the top of the second

1486
01:03:20,809 --> 01:03:18,599
stage that'll happen just at about the T

1487
01:03:23,150 --> 01:03:20,819
minus four minute Mark the clamp arm

1488
01:03:26,089 --> 01:03:23,160

will open and about 10 seconds after

1489
01:03:29,089 --> 01:03:26,099
that the strong back the structure

1490
01:03:31,609 --> 01:03:29,099
alongside the Falcon 9 will recline just

1491
01:03:35,089 --> 01:03:31,619
about two degrees away we've heard the

1492
01:03:36,650 --> 01:03:35,099
call out strong back is retracting that

1493
01:03:39,049 --> 01:03:36,660
starts the sequence now in the ground

1494
01:03:40,730 --> 01:03:39,059
computer to open the arms and recline

1495
01:03:43,730 --> 01:03:40,740
that strong back about two degrees away

1496
01:03:46,609 --> 01:03:43,740
at liftoff Hydraulics will then pull the

1497
01:03:48,770 --> 01:03:46,619
strong back to a position about 45

1498
01:03:54,289 --> 01:03:48,780
degrees away from the rocket as it flies

1499
01:04:01,069 --> 01:03:56,690
see the arms opening up now

1500
01:04:04,549 --> 01:04:02,930
we should now be able to see that strong

1501
01:04:07,430 --> 01:04:04,559
backward track just a couple degrees

1502
01:04:09,589 --> 01:04:07,440
away from the launch vehicle

1503
01:04:12,109 --> 01:04:09,599
upon liftoff it will move back even

1504
01:04:13,789 --> 01:04:12,119
further in order to clear the way for

1505
01:04:15,770 --> 01:04:13,799
falcon 9.

1506
01:04:18,710 --> 01:04:15,780
looks like we can start to see that

1507
01:04:23,630 --> 01:04:21,289
this structure is what is utilized to

1508
01:04:25,970 --> 01:04:23,640
horizontally integrate the vehicles

1509
01:04:27,829 --> 01:04:25,980
while still in the hangar as well as

1510
01:04:29,510 --> 01:04:27,839
transport them horizontally to the

1511
01:04:38,390 --> 01:04:29,520
launch pad and then raise them to their

1512
01:04:43,250 --> 01:04:41,450
and we've got the strong back is now you

1513
01:04:45,829 --> 01:04:43,260

see a little bounce there as it stops

1514
01:04:48,170 --> 01:04:45,839
stage one lock float is complete

1515
01:04:50,569 --> 01:04:48,180
and right on time stage one locks load

1516
01:04:52,309 --> 01:04:50,579
is complete we're down to just loading a

1517
01:04:55,250 --> 01:04:52,319
liquid oxygen on the second stage

1518
01:04:57,109 --> 01:04:55,260
that'll wrap up just after T minus two

1519
01:04:59,450 --> 01:04:57,119
minutes the witch point will have the

1520
01:05:02,270 --> 01:04:59,460
million pounds propellant onboard Falcon

1521
01:05:04,490 --> 01:05:02,280
9 Ready To Fly

1522
01:05:07,549 --> 01:05:04,500
we can see the vehicle continuing to

1523
01:05:09,289 --> 01:05:07,559
vent some of that gaseous uh or the

1524
01:05:11,030 --> 01:05:09,299
liquid oxygen that has now vaporized

1525
01:05:17,569 --> 01:05:11,040
Franken is in terminal count and is on

1526
01:05:22,730 --> 01:05:20,690
we have a live view there of the SpaceX

1527
01:05:25,490 --> 01:05:22,740
team here at headquarters in mission

1528
01:05:27,470 --> 01:05:25,500
control on the left hand side as well as

1529
01:05:35,809 --> 01:05:27,480
the Axiom team from their own mission

1530
01:05:40,549 --> 01:05:38,150
driving SpaceX for weather looks like

1531
01:05:43,130 --> 01:05:40,559
the system has cleared and we're looking

1532
01:05:45,349 --> 01:05:43,140
like we're go for launch for weather

1533
01:05:48,349 --> 01:05:45,359
all right we've heard a good news

1534
01:05:53,569 --> 01:05:50,089
we're letting them know that appears the

1535
01:05:53,579 --> 01:05:59,750
that is great news indeed

1536
01:06:07,010 --> 01:06:01,730
just waiting now for the call out liquid

1537
01:06:07,020 --> 01:06:10,609
two locks load is complete

1538
01:06:10,619 --> 01:06:15,770

dragon is an auto idle

1539
01:06:15,780 --> 01:06:24,890
Brown gas Closeouts expect loud venting

1540
01:06:29,450 --> 01:06:26,750
at venting we're now

1541
01:06:31,370 --> 01:06:29,460
bleeding off excess pressure in the

1542
01:06:34,730 --> 01:06:31,380
strong back that's what's giving that

1543
01:06:37,069 --> 01:06:34,740
large white plume as cold gas meets the

1544
01:06:39,289 --> 01:06:37,079
warm Florida air and condenses the

1545
01:06:41,089 --> 01:06:39,299
moisture

1546
01:06:42,890 --> 01:06:41,099
coming up on one minute where the flight

1547
01:06:45,170 --> 01:06:42,900
computers will take over the sequence

1548
01:06:53,210 --> 01:06:45,180
let's listen in to the launch of Falcon

1549
01:06:58,970 --> 01:06:55,670
FTS is armed Falcon 9 is in startup and

1550
01:06:58,980 --> 01:07:08,750
these in countdown

1551
01:07:08,760 --> 01:07:16,569
Dragon SpaceX go for lunch

1552
01:07:16,579 --> 01:07:20,870
go Vermont

1553
01:07:20,880 --> 01:07:36,829
T minus 30 seconds

1554
01:07:36,839 --> 01:07:40,849
is 15.

1555
01:07:52,690 --> 01:07:46,910
2 minus 10. nine eight seven six five

1556
01:07:59,109 --> 01:07:52,700
four three two one engines full power

1557
01:08:04,970 --> 01:08:02,329
copy one of them together we expand what

1558
01:08:21,530 --> 01:08:04,980
is possible in low earth orbit add Astra

1559
01:08:21,540 --> 01:08:27,349
plus 30 seconds into this historic

1560
01:08:34,370 --> 01:08:31,729
p plus 36 second 36 seconds into fight

1561
01:08:39,050 --> 01:08:34,380
a great view of Falcon 9 heading to

1562
01:08:43,130 --> 01:08:41,209
power Telemetry nominal we're into the

1563
01:08:44,870 --> 01:08:43,140

throttle bucket is the first stage is

1564
01:08:56,390 --> 01:08:44,880
Throttle Down power on the Merlin

1565
01:08:59,870 --> 01:08:58,370
faster than the speed of sound as we're

1566
01:09:02,150 --> 01:08:59,880
getting great views from the first stage

1567
01:09:04,550 --> 01:09:02,160
camera looking back at Kennedy Space

1568
01:09:08,689 --> 01:09:04,560
Center complex 39a

1569
01:09:10,849 --> 01:09:08,699
stage one throttle up Max Q

1570
01:09:12,729 --> 01:09:10,859
I'm out of the throttle bucket there's

1571
01:09:16,849 --> 01:09:12,739
one Bravo

1572
01:09:18,890 --> 01:09:16,859
that call on one Brahma that's another

1573
01:09:21,169 --> 01:09:18,900
one of those abort modes as we get

1574
01:09:24,169 --> 01:09:21,179
higher and faster the logic for Dragon

1575
01:09:27,410 --> 01:09:24,179
should a contingency occur changes from

1576
01:09:31,130 --> 01:09:29,390
chill announcement says we're getting

1577
01:09:33,590 --> 01:09:31,140
the turbo pump on the second stage

1578
01:09:35,749 --> 01:09:33,600
engine cooled down in preparation for

1579
01:09:45,050 --> 01:09:35,759
its light up coming up in just another

1580
01:09:50,930 --> 01:09:47,689
again great views looking back and you

1581
01:09:53,510 --> 01:09:50,940
can see the contrail as we left 39a and

1582
01:09:56,750 --> 01:09:53,520
the uh the shadow of the contrail

1583
01:09:59,510 --> 01:09:56,760
against the cloud deck around Florida

1584
01:10:02,330 --> 01:09:59,520
now we're coming up three big sequences

1585
01:10:04,130 --> 01:10:02,340
and a view live of the crew inside

1586
01:10:05,689 --> 01:10:04,140
dragon

1587
01:10:09,890 --> 01:10:05,699
they're getting ready we're gonna get

1588
01:10:12,830 --> 01:10:11,330

and then we're gonna light the second

1589
01:10:24,830 --> 01:10:12,840
stage engine we've heard the throttle

1590
01:10:31,430 --> 01:10:27,050
State separation confirmed

1591
01:10:38,270 --> 01:10:33,590
and back ignition

1592
01:10:42,709 --> 01:10:40,550
all right stage separation we've lit the

1593
01:10:45,169 --> 01:10:42,719
second stage engine the first stage is

1594
01:10:51,709 --> 01:10:45,179
into the Boost back burn working its way

1595
01:10:55,790 --> 01:10:53,689
views on the left side that's the first

1596
01:10:57,530 --> 01:10:55,800
stage engines running as we come back to

1597
01:11:00,770 --> 01:10:57,540
the launch site or the landing site

1598
01:11:03,229 --> 01:11:00,780
second stage engine nozzle is visible on

1599
01:11:06,229 --> 01:11:03,239
the right side is we're powering the

1600
01:11:16,130 --> 01:11:06,239
Axiom 2 crew into low earth orbit on the

1601
01:11:22,850 --> 01:11:18,110
waiting for call out that the Boost back

1602
01:11:28,550 --> 01:11:26,030
stage one boost back shut down

1603
01:11:30,290 --> 01:11:28,560
right on time first stage completed the

1604
01:11:31,490 --> 01:11:30,300
first of three Burns heading back to the

1605
01:11:34,910 --> 01:11:31,500
landing site

1606
01:11:36,770 --> 01:11:34,920
second stage continuing on Power and on

1607
01:11:41,149 --> 01:11:36,780
trajectory

1608
01:11:44,229 --> 01:11:43,370
we head Northeast the Bermuda ground

1609
01:11:46,729 --> 01:11:44,239
station

1610
01:11:49,130 --> 01:11:46,739
trajectory nominal

1611
01:11:51,470 --> 01:11:49,140
Bermuda is listening into the vehicle

1612
01:11:53,270 --> 01:11:51,480
nominal trajectory

1613
01:11:55,130 --> 01:11:53,280

and the crew here's the call out of a

1614
01:11:57,290 --> 01:11:55,140
nominal trajectory

1615
01:11:59,330 --> 01:11:57,300
so four minutes into flight everything

1616
01:12:01,310 --> 01:11:59,340
continuing to go well first days heading

1617
01:12:03,770 --> 01:12:01,320
back and there's the crew on the second

1618
01:12:38,270 --> 01:12:03,780
stage getting the right into orbit to

1619
01:12:41,750 --> 01:12:40,070
coming up we're waiting for the next

1620
01:12:44,450 --> 01:12:41,760
trajectory call out from the guidance

1621
01:12:46,910 --> 01:12:44,460
officer Dragon SpaceX trajectory nominal

1622
01:12:49,070 --> 01:12:46,920
ah love to hear those words a nominal

1623
01:12:50,990 --> 01:12:49,080
trajectory for Dragons nominal

1624
01:12:52,490 --> 01:12:51,000
trajectory

1625
01:12:54,530 --> 01:12:52,500
and maybe even a little bit of

1626
01:12:56,330 --> 01:12:54,540
excitement in the crew's voice

1627
01:12:58,550 --> 01:12:56,340
Commander Peggy Whitson calling back

1628
01:13:01,550 --> 01:12:58,560
down hearing that call out from GNC of a

1629
01:13:04,490 --> 01:13:03,229
left side of the screen you can see the

1630
01:13:06,649 --> 01:13:04,500
first stage

1631
01:13:08,390 --> 01:13:06,659
it's now beginning to orient itself so

1632
01:13:10,130 --> 01:13:08,400
that the engines are pointed down

1633
01:13:11,990 --> 01:13:10,140
towards the land as we will be

1634
01:13:14,630 --> 01:13:12,000
descending towards Landing Zone one in

1635
01:13:17,270 --> 01:13:14,640
Cape Canaveral the four titanium grid

1636
01:13:20,330 --> 01:13:17,280
fins have all deployed they'll help

1637
01:13:22,310 --> 01:13:20,340
guide usually they'll guide the first

1638
01:13:24,950 --> 01:13:22,320

stage through the once we get into the

1639
01:13:27,410 --> 01:13:24,960
atmosphere following the

1640
01:13:29,570 --> 01:13:27,420
entry burn which will be coming up here

1641
01:13:31,790 --> 01:13:29,580
in another couple of minutes

1642
01:13:34,310 --> 01:13:31,800
on the right hand side the second stage

1643
01:13:36,709 --> 01:13:34,320
with the Dragon capsule on top heading

1644
01:13:39,110 --> 01:13:36,719
up the Eastern Seaboard of the U.S we've

1645
01:13:41,330 --> 01:13:39,120
just heard the call out of Boston that's

1646
01:13:43,130 --> 01:13:41,340
the New Hampshire tracking station has

1647
01:13:47,030 --> 01:13:43,140
picked up the signal

1648
01:13:49,189 --> 01:13:47,040
Dragon SpaceX trajectory nominal

1649
01:13:53,330 --> 01:13:49,199
Nancy continuing to make those callouts

1650
01:13:59,030 --> 01:13:55,430
and the crew echoing them right back

1651
01:14:02,870 --> 01:14:00,890
good comes with the crew we've been able

1652
01:14:04,970 --> 01:14:02,880
to bring some live video shots from

1653
01:14:07,910 --> 01:14:04,980
inside the capsule as they're headed to

1654
01:14:07,920 --> 01:14:13,850
and there's another view of the crew

1655
01:14:19,310 --> 01:14:16,790
stage one entry burn startup

1656
01:14:21,830 --> 01:14:19,320
and there we heard that the startup burn

1657
01:14:23,270 --> 01:14:21,840
for that stage one booster you can see

1658
01:14:26,450 --> 01:14:23,280
it there on the left hand side of your

1659
01:14:28,910 --> 01:14:26,460
screen has now begun

1660
01:14:31,010 --> 01:14:28,920
stage one entry Birds shutdown

1661
01:14:34,610 --> 01:14:31,020
in conclusion of that entry burned that

1662
01:14:37,550 --> 01:14:34,620
burn helps to slow the vehicle down as

1663
01:14:39,530 --> 01:14:37,560

it re-enters the Earth's atmosphere the

1664
01:14:41,870 --> 01:14:39,540
first day the first stage sees High drag

1665
01:14:43,750 --> 01:14:41,880
which scrubs roughly 70 percent of the

1666
01:14:45,950 --> 01:14:43,760
Velocity by the time

1667
01:14:48,229 --> 01:14:45,960
trajectory nominal

1668
01:14:51,229 --> 01:14:48,239
love to hear that call out everything

1669
01:14:53,570 --> 01:14:51,239
criminal trajectory

1670
01:14:55,310 --> 01:14:53,580
beautiful view of planet Earth coming to

1671
01:14:57,950 --> 01:14:55,320
us from the second stage views on the

1672
01:15:01,010 --> 01:14:57,960
right hand side left hand side our first

1673
01:15:03,169 --> 01:15:01,020
view of the space coast once again

1674
01:15:07,070 --> 01:15:03,179
this booster is attempting a landing at

1675
01:15:09,110 --> 01:15:07,080
lz1 stage one transonic

1676
01:15:12,410 --> 01:15:09,120
booster is now traveling near the speed

1677
01:15:17,209 --> 01:15:14,270
live view coming to you from one of our

1678
01:15:19,370 --> 01:15:17,219
tracking cameras

1679
01:15:22,010 --> 01:15:19,380
we can see the grid fins actuating to

1680
01:15:25,250 --> 01:15:22,020
help steer the booster down

1681
01:15:28,729 --> 01:15:25,260
stage one Atlantic birth stage 2 FTS has

1682
01:15:40,010 --> 01:15:31,010
standing by to page one Landing Lake

1683
01:15:46,250 --> 01:15:42,830
Ed

1684
01:15:49,610 --> 01:15:46,260
you can see that first stage has landed

1685
01:15:52,790 --> 01:15:49,620
back at lz1 this is the first time that

1686
01:15:56,810 --> 01:15:52,800
we have performed a land landing on a

1687
01:16:02,689 --> 01:16:00,050
coming up coming up next will be second

1688
01:16:05,330 --> 01:16:02,699

engine cutoff or Seco and that's where

1689
01:16:07,070 --> 01:16:05,340
after after that engine cuts off second

1690
01:16:10,550 --> 01:16:07,080
stage will cost for a few minutes until

1691
01:16:15,350 --> 01:16:10,560
dragon is commanded to separate

1692
01:16:25,250 --> 01:16:17,570
we're expecting Seco to occur in about

1693
01:16:27,890 --> 01:16:26,740
Shannon

1694
01:16:30,590 --> 01:16:27,900
[Applause]

1695
01:16:32,689 --> 01:16:30,600
copy Shannon

1696
01:16:43,010 --> 01:16:32,699
Commander Peggy Woodson continuing to

1697
01:16:43,020 --> 01:16:46,490
Pico

1698
01:16:51,530 --> 01:16:49,189
all right on time shutdown of that

1699
01:16:53,390 --> 01:16:51,540
second engine

1700
01:16:56,270 --> 01:16:53,400
also confirming that the launch Escape

1701
01:16:59,270 --> 01:16:56,280
system is now disarmed dragons B6

1702
01:17:01,550 --> 01:16:59,280
nominal orbit insertion all right and

1703
01:17:03,890 --> 01:17:01,560
there's that call out we can confirm

1704
01:17:05,450 --> 01:17:03,900
good orbital insertion copy nominal

1705
01:17:07,250 --> 01:17:05,460
insertion

1706
01:17:10,070 --> 01:17:07,260
Dragon SpaceX launch Escape system

1707
01:17:13,550 --> 01:17:11,930
we can see the crew playing with their

1708
01:17:15,830 --> 01:17:13,560
harnesses

1709
01:17:26,870 --> 01:17:15,840
now that they are in 0g which I think we

1710
01:17:33,350 --> 01:17:30,050
clearly the crew is having fun

1711
01:17:35,390 --> 01:17:33,360
already right after liftoff I think we

1712
01:17:39,410 --> 01:17:35,400
heard a laugh coming from Commander

1713
01:17:41,510 --> 01:17:39,420

Peggy Whitson which being a NASA Legend

1714
01:17:44,570 --> 01:17:41,520
and one of the most decorated astronauts

1715
01:17:48,290 --> 01:17:44,580
of all time uh it's amazing to hear that

1716
01:17:49,850 --> 01:17:48,300
even a space veteran as she said okay

1717
01:17:59,570 --> 01:17:49,860
still has fun

1718
01:18:04,610 --> 01:18:02,149
the next event that we have coming up at

1719
01:18:05,990 --> 01:18:04,620
just around t plus 12 minutes is Dragon

1720
01:18:08,750 --> 01:18:06,000
separation

1721
01:18:11,209 --> 01:18:08,760
that's where the dragon spacecraft and

1722
01:18:13,310 --> 01:18:11,219
trunk so collectively referred to as the

1723
01:18:18,169 --> 01:18:13,320
dragon spacecraft will separate from the

1724
01:18:23,810 --> 01:18:20,450
acquisitions

1725
01:18:25,669 --> 01:18:23,820
after that separation we will begin to

1726
01:18:28,850 --> 01:18:25,679
deploy the nose cone

1727
01:18:34,010 --> 01:18:28,860
which exposes the forward bulkhead

1728
01:18:39,410 --> 01:18:36,770
that forward hatch is what the capsule

1729
01:18:48,350 --> 01:18:39,420
utilizes to autonomously dock to the

1730
01:18:54,770 --> 01:18:51,470
going from left to right

1731
01:18:57,950 --> 01:18:54,780
everyone's having fun clearly we have

1732
01:19:01,669 --> 01:18:57,960
Mission specialist Rihanna barnawi

1733
01:19:03,169 --> 01:19:01,679
to the right of her is pilot John

1734
01:19:05,930 --> 01:19:03,179
schoffner

1735
01:19:08,390 --> 01:19:05,940
then we have Commander Peggy Whitson and

1736
01:19:13,010 --> 01:19:08,400
on the far right Mission specialist Ali

1737
01:19:20,270 --> 01:19:16,910
we can see that the excess strap on some

1738
01:19:22,570 --> 01:19:20,280

of the harnesses as well as the writing

1739
01:19:25,250 --> 01:19:22,580
utensil for their tablets

1740
01:19:29,090 --> 01:19:25,260
they continue to play around with as

1741
01:19:30,950 --> 01:19:29,100
they are experiencing zero g for the

1742
01:19:33,350 --> 01:19:30,960
first time at least we can say that for

1743
01:19:40,970 --> 01:19:33,360
three of the four astronauts on board

1744
01:19:46,010 --> 01:19:43,070
and we are standing by for Dragon

1745
01:19:58,540 --> 01:19:48,169
which is expected to occur in the next

1746
01:20:03,770 --> 01:20:00,430
[Music]

1747
01:20:07,250 --> 01:20:03,780
live on your screen that Dragon function

1748
01:20:07,260 --> 01:20:10,610
that's a really cool View

1749
01:20:13,970 --> 01:20:13,070
a very great plate uh wishing safe

1750
01:20:15,470 --> 01:20:13,980
travels

1751
01:20:17,390 --> 01:20:15,480
a few words from our chief engineer as

1752
01:20:18,890 --> 01:20:17,400
well

1753
01:20:20,930 --> 01:20:18,900
thanks for putting your trust in the

1754
01:20:22,970 --> 01:20:20,940
Falcon 9 team hope you enjoyed the ride

1755
01:20:28,790 --> 01:20:22,980
to space have a great trip on Dragon

1756
01:20:33,229 --> 01:20:30,649
that was SpaceX chief engineer Bill

1757
01:20:40,250 --> 01:20:33,239
Gerson here this is it was a phenomenal

1758
01:20:47,990 --> 01:20:42,410
make sure you share the joy of zero g

1759
01:20:48,000 --> 01:20:55,490
we will do that

1760
01:21:13,010 --> 01:20:58,070
already you can see dragon's Draco

1761
01:21:17,149 --> 01:21:15,470
Dragon SpaceX nominal dehumidifier

1762
01:21:19,669 --> 01:21:17,159
activation and service section Draco

1763
01:21:23,350 --> 01:21:19,679

checkouts nose cone deploys in progress

1764
01:21:28,370 --> 01:21:26,570
Dragon copies

1765
01:21:32,630 --> 01:21:28,380
all right great news there to let us

1766
01:21:34,729 --> 01:21:32,640
know that the hooks there are two sets

1767
01:21:36,229 --> 01:21:34,739
two sets of hooks that are now

1768
01:21:38,330 --> 01:21:36,239
disengaging

1769
01:21:45,770 --> 01:21:38,340
and once that is complete we are able to

1770
01:21:53,570 --> 01:21:48,290
we should see that nose cone deploy

1771
01:21:58,790 --> 01:21:55,490
it's a great view on the right hand side

1772
01:22:01,010 --> 01:21:58,800
of your screen from the Falcon 9 second

1773
01:22:05,870 --> 01:22:01,020
stage looking at

1774
01:22:11,450 --> 01:22:08,290
of course the crew on the left hand side

1775
01:22:16,850 --> 01:22:11,460
playfully uh acclimating to their new

1776
01:22:21,770 --> 01:22:19,790
you can see the 0g indicator

1777
01:22:24,950 --> 01:22:21,780
in the background

1778
01:22:27,290 --> 01:22:24,960
and I love this view this view is over

1779
01:22:29,689 --> 01:22:27,300
the shoulders of Commander Peggy Whitson

1780
01:22:32,750 --> 01:22:29,699
who here is on the left hand side or the

1781
01:22:35,030 --> 01:22:32,760
left seat and pilot John trafner is on

1782
01:22:36,530 --> 01:22:35,040
the right seat here looking at what

1783
01:22:38,270 --> 01:22:36,540
they're looking at this these are the

1784
01:22:41,870 --> 01:22:38,280
the crew display panels that they

1785
01:22:44,750 --> 01:22:41,880
utilize in flight to track which

1786
01:22:47,090 --> 01:22:44,760
thrusters are firing what phase of the

1787
01:23:13,310 --> 01:22:47,100
mission that they are in as you can see

1788
01:23:20,090 --> 01:23:15,709

all right as we can see crew getting

1789
01:23:22,430 --> 01:23:20,100
acclimated the nose cone hooks are in

1790
01:23:24,290 --> 01:23:22,440
the process of being disengaged so they

1791
01:23:26,810 --> 01:23:24,300
are starting to open

1792
01:23:28,310 --> 01:23:26,820
um and once those uh that is complete we

1793
01:23:30,470 --> 01:23:28,320
are able to open the nose cone and

1794
01:23:32,510 --> 01:23:30,480
expose the forward hatch

1795
01:23:34,250 --> 01:23:32,520
so incredible

1796
01:23:36,229 --> 01:23:34,260
well today's launch is certainly one

1797
01:23:39,050 --> 01:23:36,239
more for the history books and yet the

1798
01:23:40,729 --> 01:23:39,060
story is just getting underway Leah with

1799
01:23:42,350 --> 01:23:40,739
the crew officially on their way to the

1800
01:23:43,910 --> 01:23:42,360
International Space Station how are

1801
01:23:47,630 --> 01:23:43,920
things tracking their emission control

1802
01:23:52,250 --> 01:23:49,970
hey Duke well the chase has officially

1803
01:23:54,290 --> 01:23:52,260
begun with dragon uh heading toward the

1804
01:23:56,630 --> 01:23:54,300
International Space Station so with

1805
01:24:00,110 --> 01:23:56,640
successful launch at Axia mission 2 at

1806
01:24:01,490 --> 01:24:00,120
37 p.m Eastern the teams here at nasus

1807
01:24:03,410 --> 01:24:01,500
Johnson Space Center are going to be

1808
01:24:04,970 --> 01:24:03,420
monitoring dragon's flight to the

1809
01:24:07,550 --> 01:24:04,980
International Space Station over the

1810
01:24:09,110 --> 01:24:07,560
next 16 hours our role in this journey

1811
01:24:11,090 --> 01:24:09,120
really kicks in at a period called

1812
01:24:13,669 --> 01:24:11,100
integrated operations this is where

1813
01:24:15,830 --> 01:24:13,679

Dragon is much closer to the station and

1814
01:24:17,930 --> 01:24:15,840
at this point NASA SpaceX and Axiom

1815
01:24:20,270 --> 01:24:17,940
space teams are all in lockstep to get

1816
01:24:22,550 --> 01:24:20,280
the crew safely docked the teams here

1817
01:24:25,130 --> 01:24:22,560
are preparing for a docking of ax2 to

1818
01:24:27,410 --> 01:24:25,140
the station at about 9 30 a.m eastern

1819
01:24:30,830 --> 01:24:27,420
time tomorrow we're going to be begin

1820
01:24:33,290 --> 01:24:30,840
joint coverage of that phase at 7 30 a.m

1821
01:24:34,610 --> 01:24:33,300
eastern time but for now that'll be it

1822
01:24:36,169 --> 01:24:34,620
for us in Mission Control Houston

1823
01:24:38,090 --> 01:24:36,179
tonight and I'll be back with you

1824
01:24:39,350 --> 01:24:38,100
tomorrow for docking back to you Kate

1825
01:24:42,350 --> 01:24:39,360
and Duke

1826
01:24:44,570 --> 01:24:42,360
yeah now over the next 16 hours Dragon

1827
01:24:47,810 --> 01:24:44,580
will execute a series of burns to

1828
01:24:49,430 --> 01:24:47,820
gradually raise and line up the ax2 crew

1829
01:24:51,709 --> 01:24:49,440
for docking with the International Space

1830
01:24:54,410 --> 01:24:51,719
Station and what we refer to as

1831
01:24:56,510 --> 01:24:54,420
activation and Rendezvous phase of the

1832
01:24:58,610 --> 01:24:56,520
mission now in just a few minutes the

1833
01:25:00,110 --> 01:24:58,620
crew will get the get to change out of

1834
01:25:02,090 --> 01:25:00,120
their spacesuits and get a little bit

1835
01:25:03,830 --> 01:25:02,100
more comfortable for flight and will

1836
01:25:05,570 --> 01:25:03,840
enjoy their first meal aboard the

1837
01:25:07,310 --> 01:25:05,580
spacecraft I'm sure that'll be a lot of

1838
01:25:10,330 --> 01:25:07,320

fun the first time for three of them

1839
01:25:13,130 --> 01:25:10,340
eating in microgravity

1840
01:25:15,050 --> 01:25:13,140
at 2 p.m Pacific they will get ready for

1841
01:25:17,630 --> 01:25:15,060
a rest period that will last about 10

1842
01:25:19,430 --> 01:25:17,640
hours 8 hours for actual sleeping and a

1843
01:25:21,890 --> 01:25:19,440
couple hours for pre and post-leep

1844
01:25:23,630 --> 01:25:21,900
activities and then before they arrive

1845
01:25:25,729 --> 01:25:23,640
at the station we'll have two potential

1846
01:25:28,010 --> 01:25:25,739
opportunities to chat briefly with the

1847
01:25:32,030 --> 01:25:28,020
crew on orbit one later this morning

1848
01:25:35,450 --> 01:25:32,040
around 11 10 a.m Pacific and one early

1849
01:25:37,070 --> 01:25:35,460
tomorrow about 10 12 10 a.m Pacific

1850
01:25:38,810 --> 01:25:37,080
while we're hopeful that one of these

1851
01:25:40,729 --> 01:25:38,820
will work out neither opportunity is

1852
01:25:42,290 --> 01:25:40,739
guaranteed as they are dependent on both

1853
01:25:44,330 --> 01:25:42,300
crew schedule and ground station

1854
01:25:46,130 --> 01:25:44,340
coverage but if we're able to support

1855
01:25:48,290 --> 01:25:46,140
we'll make an announcement on our social

1856
01:25:50,810 --> 01:25:48,300
media channels no later than 15 minutes

1857
01:25:52,669 --> 01:25:50,820
before the event start time but in the

1858
01:25:55,130 --> 01:25:52,679
meantime be sure to keep tabs on the

1859
01:25:57,050 --> 01:25:55,140
mission at axiomspace.com and you can

1860
01:26:00,110 --> 01:25:57,060
also keep track of dragon's flight on

1861
01:26:01,790 --> 01:26:00,120
spacex.com launches and even if we

1862
01:26:03,830 --> 01:26:01,800
aren't able to talk live with the crew

1863
01:26:05,570 --> 01:26:03,840

we will continue to provide updates on

1864
01:26:07,910 --> 01:26:05,580
the mission across our social media

1865
01:26:10,669 --> 01:26:07,920
channels and starting at 7 30 a.m

1866
01:26:12,950 --> 01:26:10,679
Eastern 4 30 a.m Pacific on Monday May

1867
01:26:15,470 --> 01:26:12,960
22nd we will pick back up with our live

1868
01:26:17,930 --> 01:26:15,480
joint coverage of the ax2 crews approach

1869
01:26:19,970 --> 01:26:17,940
and docking to station with NASA please

1870
01:26:21,950 --> 01:26:19,980
keep an eye on Axiom and SpaceX social

1871
01:26:23,510 --> 01:26:21,960
channels for updates as there will be

1872
01:26:25,910 --> 01:26:23,520
plenty of incredible moments to share

1873
01:26:28,610 --> 01:26:25,920
with you over the next 10 days and so

1874
01:26:31,250 --> 01:26:28,620
from all of us at Axiom space thank you

1875
01:26:33,830 --> 01:26:31,260
SpaceX thank you NASA this is just the

1876
01:26:41,229 --> 01:26:33,840
beginning and thank you for tuning in we

1877
01:26:41,239 --> 01:27:06,290
thank you