1
00:03:26,060 --> 00:02:46,190
[Music]

2
00:03:30,510 --> 00:03:28,800
hello I'm Bettina Inclan with NASA's

3
00:03:32,910 --> 00:03:30,520
office communications and thank you for

4
00:03:36,180 --> 00:03:32,920
joining us today as we have one day to

5
00:03:38,610 --> 00:03:36,190
launch of the historic NASA SpaceX demo2

6
00:03:40,500 --> 00:03:38,620
mission we move this into this press

7
00:03:41,760 --> 00:03:40,510
conference indoors originally planned

8
00:03:43,500 --> 00:03:41,770
for the countdown clock

9
00:03:45,360 --> 00:03:43,510
due to weather but we have good news the

10
00:03:47,370 --> 00:03:45,370
weather has improved and right now we

11
00:03:50,070 --> 00:03:47,380
have 60 percent chance of favorable

12
00:03:53,190 --> 00:03:50,080
weather for launch but today we'll have

13
00:03:56,040 --> 00:03:53,200

lots about the launch by our great guest

14
00:03:57,780 --> 00:03:56,050
today we have Bob Cabana Center Director

15
00:04:00,120 --> 00:03:57,790
for Kennedy Space Center Jim Brennan

16
00:04:02,100 --> 00:04:00,130
signed the NASA Administrator we have

17
00:04:04,800 --> 00:04:02,110
Commercial Crew astronauts Nicole Mann

18
00:04:07,260 --> 00:04:04,810
and Chell Lundgren and NASA deputy

19
00:04:09,690 --> 00:04:07,270
administrator Jim Moore Hart will be

20
00:04:12,210 --> 00:04:09,700
hearing more from them in a minute but

21
00:04:13,980 --> 00:04:12,220
first let's talk to Bob Cabana thanks

22
00:04:15,960 --> 00:04:13,990
for Tina well good morning and welcome

23
00:04:17,729 --> 00:04:15,970
to the Kennedy Space Center I don't have

24
00:04:19,680 --> 00:04:17,739
to tell you all how exciting it is to

25
00:04:21,810 --> 00:04:19,690
have the first flight of humans to space

26
00:04:25,080 --> 00:04:21,820
from the Kennedy Space Center in nine

27
00:04:27,330 --> 00:04:25,090
years in what an historic pad to be

28
00:04:30,210 --> 00:04:27,340
doing it from we went to the moon from

29
00:04:31,710 --> 00:04:30,220
pad 39a and 82 of our hundred and

30
00:04:33,540 --> 00:04:31,720
thirty-five Shuttle missions launched

31
00:04:36,030 --> 00:04:33,550
off that pad including three of my

32
00:04:37,710 --> 00:04:36,040
flights and now rather than rusting away

33
00:04:40,680 --> 00:04:37,720
in the salt air through our partnership

34
00:04:42,840 --> 00:04:40,690
with SpaceX that pad is being used once

35
00:04:44,580 --> 00:04:42,850
again and it's now for our Commercial

36
00:04:46,530 --> 00:04:44,590
Crew program as well as other missions

37
00:04:50,490 --> 00:04:46,540
for space I think that's absolutely

38
00:04:53,040 --> 00:04:50,500

outstanding truly an historic time from

39
00:04:54,840 --> 00:04:53,050
an historic pad we're really pleased to

40
00:04:57,780 --> 00:04:54,850
have our NASA Administrator Jim Bryden

41
00:05:01,080 --> 00:04:57,790
sign with us this morning as a member of

42
00:05:04,110 --> 00:05:01,090
Congress Jim was a huge advocate and

43
00:05:05,610 --> 00:05:04,120
proponent for aviation in spaceflight as

44
00:05:07,409 --> 00:05:05,620
a member of the Armed Services Committee

45
00:05:09,540 --> 00:05:07,419
and also the Science Space and

46
00:05:11,730 --> 00:05:09,550
Technology Committee and now he's

47
00:05:14,280 --> 00:05:11,740
sharing that passion with all of us as

48
00:05:18,210 --> 00:05:14,290
he leads NASA into a new era of space

49
00:05:19,470 --> 00:05:18,220
exploration Jim thank you Bob it's it's

50
00:05:23,730 --> 00:05:19,480
great to be here at the Kennedy Space

51
00:05:26,310 --> 00:05:23,740
Center we are once again launching

52
00:05:28,920 --> 00:05:26,320
American astronauts on American Rockets

53
00:05:30,210 --> 00:05:28,930
from American soil and this is a big

54
00:05:31,429 --> 00:05:30,220
moment in time it's been nine years

55
00:05:34,549 --> 00:05:31,439
since we

56
00:05:35,809 --> 00:05:34,559
this opportunity and Bob Cabana we want

57
00:05:37,699 --> 00:05:35,819
to thank you for all the great work

58
00:05:39,729 --> 00:05:37,709
you've done getting us up to this point

59
00:05:43,249 --> 00:05:39,739
getting the Kennedy Space Center ready

60
00:05:45,949 --> 00:05:43,259
everything is is looking good we are as

61
00:05:49,040 --> 00:05:45,959
of right now we are go for launch

62
00:05:51,409 --> 00:05:49,050
as Bettina said the weather is about 60%

63
00:05:52,969 --> 00:05:51,419

favorable for launch tomorrow which is

64
00:05:56,059 --> 00:05:52,979
good news compared to where we were

65
00:05:58,579 --> 00:05:56,069
yesterday we were at 40% so the trend is

66
00:06:01,999 --> 00:05:58,589
in the right direction and we are very

67
00:06:05,889 --> 00:06:02,009
very excited so I think I'd like to

68
00:06:08,929 --> 00:06:05,899
start by saying again this room is empty

69
00:06:09,979 --> 00:06:08,939
we would love to have this room full we

70
00:06:12,439 --> 00:06:09,989
would love to have it filled with

71
00:06:15,319 --> 00:06:12,449
reporters we'd love to have it filled

72
00:06:16,909 --> 00:06:15,329
with space enthusiasts and unfortunately

73
00:06:19,459 --> 00:06:16,919
we're in the middle of the corona virus

74
00:06:21,739 --> 00:06:19,469
pandemic our country has been through a

75
00:06:25,009 --> 00:06:21,749
lot but this is this is a unique moment

76
00:06:28,309 --> 00:06:25,019
where all of America can take a moment

77
00:06:30,949 --> 00:06:28,319
and look at our country do something

78
00:06:33,079 --> 00:06:30,959
stunning again and that is launch

79
00:06:35,149 --> 00:06:33,089
American astronauts on American Rockets

80
00:06:36,829 --> 00:06:35,159
from American soil and we're going to go

81
00:06:39,259 --> 00:06:36,839
to the International Space Station and

82
00:06:41,269 --> 00:06:39,269
what we do there of course is we're

83
00:06:43,639 --> 00:06:41,279
transforming how we do spaceflight in

84
00:06:45,859 --> 00:06:43,649
general the Commercial Crew program is

85
00:06:46,369 --> 00:06:45,869
in fact about commercializing low-earth

86
00:06:48,409 --> 00:06:46,379
orbit

87
00:06:50,329 --> 00:06:48,419
we've got resupply now we're gonna have

88
00:06:52,369 --> 00:06:50,339

crew soon we're gonna have commercial

89
00:06:55,040 --> 00:06:52,379
space stations and this is a unique

90
00:06:58,129 --> 00:06:55,050
opportunity to bring all of America

91
00:07:01,369 --> 00:06:58,139
together in one moment in time and say

92
00:07:03,589 --> 00:07:01,379
look at how bright the future is that's

93
00:07:05,029 --> 00:07:03,599
what this launch is all about and yes in

94
00:07:07,669 --> 00:07:05,039
the midst of the corona virus pandemic

95
00:07:10,069 --> 00:07:07,679
we've taken extraordinary measures to

96
00:07:12,109 --> 00:07:10,079
keep our people safe and we are one day

97
00:07:15,169 --> 00:07:12,119
away from launch so this is an exciting

98
00:07:20,809 --> 00:07:15,179
day Thank You Bettina and I'll turn it

99
00:07:22,699 --> 00:07:20,819
back to you straighter more hard Jim and

100
00:07:25,339 --> 00:07:22,709
Bob have said you know this is a

101
00:07:29,839 --> 00:07:25,349
historic milestone and the reality is

102
00:07:33,399 --> 00:07:29,849
that we in the past NASA developed

103
00:07:36,469 --> 00:07:33,409
designed and built and then operated

104
00:07:39,399 --> 00:07:36,479
spacecraft and rockets this is the first

105
00:07:44,059 --> 00:07:39,409
time that a commercial company is

106
00:07:45,260 --> 00:07:44,069
building and going to operate as

107
00:07:47,990 --> 00:07:45,270
spacecraft and

108
00:07:52,550 --> 00:07:48,000
capsule and we're really looking to be a

109
00:07:54,830 --> 00:07:52,560
customer to SpaceX and to other

110
00:07:56,600 --> 00:07:54,840
companies in the future and that's what

111
00:07:59,300 --> 00:07:56,610
we're trying to do is to create and

112
00:08:01,910 --> 00:07:59,310
expand really expand the economy in

113
00:08:05,960 --> 00:08:01,920

low-earth orbit that's really what this

114
00:08:07,220 --> 00:08:05,970
is about tomorrow thank you and our

115
00:08:09,380 --> 00:08:07,230
Commercial Crew restaurants will start

116
00:08:12,230 --> 00:08:09,390
with Nicole thank you so much

117
00:08:13,640 --> 00:08:12,240
it is incredibly exciting to be here you

118
00:08:15,830 --> 00:08:13,650
know people always ask what's it like to

119
00:08:17,840 --> 00:08:15,840
be in the astronaut office and train

120
00:08:20,120 --> 00:08:17,850
with folks that are flying on so many

121
00:08:23,330 --> 00:08:20,130
different spacecraft we have a Soyuz

122
00:08:24,890 --> 00:08:23,340
space X star liner and then we're

123
00:08:26,900 --> 00:08:24,900
already starting to lay the foundation

124
00:08:29,270 --> 00:08:26,910
for Orion so it's just an incredible

125
00:08:30,680 --> 00:08:29,280
time to be training with all these

126
00:08:33,410 --> 00:08:30,690
different opportunities in front of us

127
00:08:34,910 --> 00:08:33,420
and we are so proud and happy for Doug

128
00:08:36,980 --> 00:08:34,920
and Bob you know it feels kind of like

129
00:08:38,900 --> 00:08:36,990
one of your close family members having

130
00:08:40,700 --> 00:08:38,910
a great lifetime achievement and and

131
00:08:42,680 --> 00:08:40,710
really that's that's what it is so on a

132
00:08:44,210 --> 00:08:42,690
personal level that's that's definitely

133
00:08:46,130 --> 00:08:44,220
I think I could speak for the astronaut

134
00:08:47,480 --> 00:08:46,140
office and that's how we all feel so

135
00:08:49,610 --> 00:08:47,490
proud for everything that they've

136
00:08:51,560 --> 00:08:49,620
accomplished with the NASA and SpaceX

137
00:08:53,660 --> 00:08:51,570
team to get ready for this launch you

138
00:08:56,000 --> 00:08:53,670

know and it's it's so important because

139
00:08:57,290 --> 00:08:56,010
this is not just it's not just about one

140
00:08:59,750 --> 00:08:57,300
launch right I mean this is this is

141
00:09:02,570 --> 00:08:59,760
launch America it's not launch NASA it

142
00:09:05,420 --> 00:09:02,580
is launch America and it's huge

143
00:09:08,420 --> 00:09:05,430
my son is eight years old and so he's

144
00:09:10,250 --> 00:09:08,430
never seen Americans launched from the

145
00:09:11,810 --> 00:09:10,260
United States ever it's kind of foreign

146
00:09:14,750 --> 00:09:11,820
to him and as I was getting ready to

147
00:09:16,520 --> 00:09:14,760
come on this trip today or yesterday you

148
00:09:18,050 --> 00:09:16,530
know he asked me hey mom are we are we

149
00:09:19,910 --> 00:09:18,060
going to the moon is this our is this

150
00:09:22,010 --> 00:09:19,920
our first flight to the moon and I said

151
00:09:25,430 --> 00:09:22,020
well son I mean not technically but it

152
00:09:26,780 --> 00:09:25,440
is the first big step on our roadmap to

153
00:09:30,050 --> 00:09:26,790
the moon for the artists mission and

154
00:09:31,730 --> 00:09:30,060
eventually to Mars and he as a young boy

155
00:09:33,470 --> 00:09:31,740
sees that so I know there's a lot of

156
00:09:35,390 --> 00:09:33,480
kids out there that will be launching

157
00:09:37,760 --> 00:09:35,400
the watching the launch tomorrow

158
00:09:40,820 --> 00:09:37,770
and it's just an exciting team for all

159
00:09:46,280 --> 00:09:40,830
of NASA SpaceX and a proud moment for

160
00:09:49,550 --> 00:09:46,290
all of America great Jill yeah I echo

161
00:09:51,590 --> 00:09:49,560
Nicole sentiments exactly what a

162
00:09:54,890 --> 00:09:51,600
privileged to be here today to be a part

163
00:09:56,660 --> 00:09:54,900

of this team commercial and government

164
00:09:59,780 --> 00:09:56,670
entities working together SpaceX and

165
00:10:03,040 --> 00:09:59,790
NASA to pull something off like that

166
00:10:06,320 --> 00:10:03,050
and what a privileged to be here just

167
00:10:08,960 --> 00:10:06,330
just a day away from launch we are so

168
00:10:11,210 --> 00:10:08,970
incredibly excited to be a part of this

169
00:10:13,190 --> 00:10:11,220
you know I had the opportunity to launch

170
00:10:15,140 --> 00:10:13,200
with our international partners the

171
00:10:17,300 --> 00:10:15,150
International Space Station back in 2015

172
00:10:20,060 --> 00:10:17,310
and and that's at the core of what we're

173
00:10:21,650 --> 00:10:20,070
doing here today is to continue that

174
00:10:23,330 --> 00:10:21,660
incredible legacy of work that we've

175
00:10:25,700 --> 00:10:23,340
done on the International Space Station

176
00:10:28,340 --> 00:10:25,710
we have had humans living and working on

177
00:10:30,200 --> 00:10:28,350
that orbital outpost for almost 20 years

178
00:10:31,820 --> 00:10:30,210
conducting science and research to

179
00:10:34,250 --> 00:10:31,830
extend our presence in the solar system

180
00:10:37,580 --> 00:10:34,260
and to improve life back here on earth

181
00:10:40,070 --> 00:10:37,590
and and this launch represents an

182
00:10:41,960 --> 00:10:40,080
extension of that capability and in

183
00:10:44,450 --> 00:10:41,970
having the ability to launch Americans

184
00:10:47,510 --> 00:10:44,460
from American soil on a u.s. spacecraft

185
00:10:51,110 --> 00:10:47,520
is absolutely amazing you know I think

186
00:10:52,970 --> 00:10:51,120
about my launch and the family and

187
00:10:54,620 --> 00:10:52,980
guests that I the the few family and

188
00:10:57,740 --> 00:10:54,630

guests that I was able to have out there

189
00:11:00,350 --> 00:10:57,750
to watch that and I think about now you

190
00:11:02,300 --> 00:11:00,360
know so many Americans in the future

191
00:11:04,750 --> 00:11:02,310
being able to congregate down here and

192
00:11:07,100 --> 00:11:04,760
watch this incredible vehicle take off

193
00:11:08,930 --> 00:11:07,110
for people that you live here in Florida

194
00:11:11,930 --> 00:11:08,940
just to go out on their porches or to

195
00:11:14,510 --> 00:11:11,940
look up from our parking lot and and to

196
00:11:18,050 --> 00:11:14,520
see this this vehicle claw its way into

197
00:11:19,670 --> 00:11:18,060
space to watch Americans flying into

198
00:11:20,900 --> 00:11:19,680
low-earth orbit and into the

199
00:11:23,810 --> 00:11:20,910
International Space Station and the

200
00:11:26,540 --> 00:11:23,820
power the absolute power of that to

201
00:11:28,820 --> 00:11:26,550
inspire our future generation explorers

202
00:11:30,560 --> 00:11:28,830
and leaders it is truly a privilege to

203
00:11:33,020 --> 00:11:30,570
be a part of this to be able to witness

204
00:11:35,920 --> 00:11:33,030
this historic moment and to see where

205
00:11:38,000 --> 00:11:35,930
this journey ultimately takes us

206
00:11:39,800 --> 00:11:38,010
fantastic with that we'll take our first

207
00:11:41,840 --> 00:11:39,810
we'll take our first question but before

208
00:11:43,580 --> 00:11:41,850
I that just a reminder if you're

209
00:11:45,020 --> 00:11:43,590
interested in what we're doing today

210
00:11:47,390 --> 00:11:45,030
we're watching the launch you go to

211
00:11:48,940 --> 00:11:47,400
nasa.gov slash be our guest and get more

212
00:11:51,110 --> 00:11:48,950
information on the virtual experience

213
00:11:57,770 --> 00:11:51,120

but we'll take our first question from

214
00:12:00,350 --> 00:11:57,780
AFP Ivan administrator will shall Ingram

215
00:12:02,300 --> 00:12:00,360
be flying the second operational mission

216
00:12:05,180 --> 00:12:02,310
of crew dragon and can you confirm

217
00:12:08,360 --> 00:12:05,190
whether you'll have your European or

218
00:12:11,550 --> 00:12:08,370
Russian with him on that mission the

219
00:12:14,310 --> 00:12:11,560
crew for the crew Dragon

220
00:12:16,170 --> 00:12:14,320
four crew one has been selected I don't

221
00:12:18,030 --> 00:12:16,180
I don't think you were on that crew were

222
00:12:20,220 --> 00:12:18,040
you sure I'm not on crew one I've been

223
00:12:23,700 --> 00:12:20,230
had the opportunity to back up both

224
00:12:26,430 --> 00:12:23,710
really Bob and Doug and crew one and I

225
00:12:27,570 --> 00:12:26,440
think our the the following crew those

226
00:12:30,180 --> 00:12:27,580
assignments are still being processed

227
00:12:32,970 --> 00:12:30,190
right what was the second part of that

228
00:12:35,820 --> 00:12:32,980
question yes when will your appearance

229
00:12:38,820 --> 00:12:35,830
or a Canadian or Russian fly and crew

230
00:12:40,980 --> 00:12:38,830
Dragon for the first time of you expect

231
00:12:43,740 --> 00:12:40,990
that's undetermined at this point I can

232
00:12:45,840 --> 00:12:43,750
tell you a crew one we will have Japan

233
00:12:50,370 --> 00:12:45,850
with us our first international partner

234
00:12:52,290 --> 00:12:50,380
on on on launching on a falcon rocket

235
00:12:54,060 --> 00:12:52,300
with a crew dragon so we're excited

236
00:12:55,320 --> 00:12:54,070
about that but as far as other

237
00:12:58,050 --> 00:12:55,330
international partners in the future

238
00:13:00,330 --> 00:12:58,060

that has not yet been determined thank

239
00:13:09,890 --> 00:13:00,340
you our next question is from Gina

240
00:13:17,520 --> 00:13:12,600
tomorrow he'll be making those calls and

241
00:13:19,890 --> 00:13:17,530
who over here making those calls so we

242
00:13:23,370 --> 00:13:19,900
have a we have a mission management team

243
00:13:26,550 --> 00:13:23,380
that is is working though all the checks

244
00:13:29,280 --> 00:13:26,560
as we go through the process and all

245
00:13:30,780 --> 00:13:29,290
along the way people can say no go if

246
00:13:35,070 --> 00:13:30,790
they need to but there will be a final

247
00:13:37,650 --> 00:13:35,080
countdown to to the launch we're about

248
00:13:40,050 --> 00:13:37,660
40 45 seconds out they'll they'll make a

249
00:13:42,480 --> 00:13:40,060
they'll make a determination go or no go

250
00:13:43,800 --> 00:13:42,490
and and and then we will go Bob did you

251
00:13:46,950 --> 00:13:43,810
want to add to that yeah I would just

252
00:13:49,110 --> 00:13:46,960
say that it is a SpaceX launch SpaceX is

253
00:13:51,210 --> 00:13:49,120
in the firing room for in the launch

254
00:13:54,480 --> 00:13:51,220
control center through a partnership we

255
00:13:58,230 --> 00:13:54,490
have with them and it will be a SpaceX

256
00:14:00,660 --> 00:13:58,240
launch director that gives the final go

257
00:14:02,250 --> 00:14:00,670
after everybody is pulled and then a

258
00:14:05,790 --> 00:14:02,260
NASA management team is going to be

259
00:14:07,770 --> 00:14:05,800
involved in watching closely thank you

260
00:14:11,130 --> 00:14:07,780
our next question comes from marina

261
00:14:12,990 --> 00:14:11,140
Curran of the Atlantic hi everyone

262
00:14:15,420 --> 00:14:13,000
thanks for your time and best of luck

263
00:14:18,390 --> 00:14:15,430

tomorrow if I walk to the question that

264
00:14:20,820 --> 00:14:18,400
was just asked now I'm wondering if NASA

265
00:14:22,800 --> 00:14:20,830
personnel are allowed to intervene and

266
00:14:25,020 --> 00:14:22,810
take over from SpaceX at any point

267
00:14:25,350 --> 00:14:25,030
during the mission if NASA feels that it

268
00:14:34,009 --> 00:14:25,360
is

269
00:14:38,879 --> 00:14:34,019
yes we of course are the customer here

270
00:14:42,210 --> 00:14:38,889
and so we do but look our goal is to

271
00:14:44,340 --> 00:14:42,220
have SpaceX be able to do missions one

272
00:14:47,369 --> 00:14:44,350
day without NASA we want them to go get

273
00:14:48,329 --> 00:14:47,379
customers that are not us and so we want

274
00:14:50,400 --> 00:14:48,339
to make sure that they're making

275
00:14:53,970 --> 00:14:50,410
decisions but if we if we see something

276
00:14:56,910 --> 00:14:53,980
that we disagree with certainly we have

277
00:14:59,879 --> 00:14:56,920
the right to intervene I don't see that

278
00:15:03,629 --> 00:14:59,889
being I don't see that being necessary

279
00:15:08,340 --> 00:15:03,639
but at this point but but yes we can we

280
00:15:10,350 --> 00:15:08,350
can intervene if necessary thank you

281
00:15:15,150 --> 00:15:10,360
our next question comes from Paul

282
00:15:18,179 --> 00:15:15,160
Brickman from UPI yes hello

283
00:15:22,949 --> 00:15:18,189
I would like one of you to comment on

284
00:15:25,739 --> 00:15:22,959
the sort of built-in uncertainty of this

285
00:15:29,189 --> 00:15:25,749
mission in terms of the length of the

286
00:15:33,569 --> 00:15:29,199
mission um anywhere from 6 to 16 weeks I

287
00:15:36,889 --> 00:15:33,579
believe I know any man Space Flight or a

288
00:15:39,389 --> 00:15:36,899

crewed space like has a uncertainty but

289
00:15:42,780 --> 00:15:39,399
I'm wondering how much of the readiness

290
00:15:46,829 --> 00:15:42,790
reviews went over the astronauts

291
00:15:51,059 --> 00:15:46,839
training and uncertainty of that time

292
00:15:54,419 --> 00:15:51,069
period yeah so there's there's a lot of

293
00:15:55,590 --> 00:15:54,429
things that go into this number one we

294
00:15:57,449 --> 00:15:55,600
got to get our astronauts to the

295
00:15:59,609 --> 00:15:57,459
International Space Station once they're

296
00:16:01,859 --> 00:15:59,619
there there's a lot of different

297
00:16:04,769 --> 00:16:01,869
elements that come into play as to when

298
00:16:07,049 --> 00:16:04,779
they come home remember this is a test

299
00:16:10,169 --> 00:16:07,059
flight the highest priority is to test

300
00:16:13,079 --> 00:16:10,179
the vehicle and get it home safely and

301
00:16:14,729 --> 00:16:13,089
then be prepared to launch crew 1 so

302
00:16:16,669 --> 00:16:14,739
some of the things that go into the mix

303
00:16:20,819 --> 00:16:16,679
as to when they're going to come home

304
00:16:22,229 --> 00:16:20,829
include the the solar arrays for example

305
00:16:26,429 --> 00:16:22,239
there is a limitation on the solar

306
00:16:29,039 --> 00:16:26,439
arrays of about 114 days period we can't

307
00:16:31,409 --> 00:16:29,049
go beyond that of course some engineers

308
00:16:33,210 --> 00:16:31,419
might argue that we can as we're on the

309
00:16:35,999 --> 00:16:33,220
space station we will understand how the

310
00:16:37,240 --> 00:16:36,009
solar arrays are performing but right

311
00:16:40,150 --> 00:16:37,250
now we're look

312
00:16:42,510 --> 00:16:40,160
a limitation of 114 days for the solar

313
00:16:44,980 --> 00:16:42,520

arrays then we have to consider whether

314
00:16:46,390 --> 00:16:44,990
when when we come back to earth we have

315
00:16:48,790 --> 00:16:46,400
to make sure that the winds and the sea

316
00:16:51,850 --> 00:16:48,800
States and the precipitation and

317
00:16:55,570 --> 00:16:51,860
lightning all of those things create a

318
00:16:58,450 --> 00:16:55,580
metric if you will of two as to how safe

319
00:16:59,730 --> 00:16:58,460
it is to come home and so we need to

320
00:17:02,500 --> 00:16:59,740
make sure that we have the right weather

321
00:17:04,840 --> 00:17:02,510
and if we have a good window to come

322
00:17:07,600 --> 00:17:04,850
home remember this is a test flight and

323
00:17:09,640 --> 00:17:07,610
as such if we have a good window to come

324
00:17:12,189 --> 00:17:09,650
home and they're not necessary on the

325
00:17:15,069 --> 00:17:12,199
International Space Station we will we

326
00:17:16,840 --> 00:17:15,079
will be taking it and then you know when

327
00:17:18,850 --> 00:17:16,850
we think about the the other big

328
00:17:20,220 --> 00:17:18,860
parameter is when is crew one going to

329
00:17:23,340 --> 00:17:20,230
be ready right now we're targeting

330
00:17:26,620 --> 00:17:23,350
August 30th for a launch of crew 1

331
00:17:28,860 --> 00:17:26,630
that's what we're working toward what

332
00:17:31,000 --> 00:17:28,870
that means is that we can keep our

333
00:17:33,430 --> 00:17:31,010
astronauts onboard the International

334
00:17:35,650 --> 00:17:33,440
Space Station doing the maintenance of

335
00:17:39,220 --> 00:17:35,660
the ISS as well as doing experiments on

336
00:17:41,710 --> 00:17:39,230
the ISS for a period of time knowing

337
00:17:44,500 --> 00:17:41,720
that that they can be there probably

338
00:17:46,510 --> 00:17:44,510

until you know early August we need to

339
00:17:49,300 --> 00:17:46,520
get the spacecraft home then we need to

340
00:17:52,660 --> 00:17:49,310
evaluate the spacecraft collect all the

341
00:17:54,490 --> 00:17:52,670
data make sure that it performed the way

342
00:17:56,920 --> 00:17:54,500
we wanted it to perform and then and

343
00:17:58,900 --> 00:17:56,930
then get ready to launch crew 1 so the

344
00:18:02,380 --> 00:17:58,910
big parameters of course are the weather

345
00:18:04,960 --> 00:18:02,390
the solar arrays when crew 1 is going to

346
00:18:06,850 --> 00:18:04,970
be ready so there is a lot of

347
00:18:08,820 --> 00:18:06,860
flexibility built into the backend of

348
00:18:11,170 --> 00:18:08,830
this mission but that's intentional I

349
00:18:12,550 --> 00:18:11,180
want to reiterate it is a test flight

350
00:18:14,080 --> 00:18:12,560
the goal is to get them to the

351
00:18:16,540 --> 00:18:14,090
International Space Station test the

352
00:18:17,830 --> 00:18:16,550
systems and get them home if they can do

353
00:18:21,130 --> 00:18:17,840
more work than that while they're on the

354
00:18:25,270 --> 00:18:21,140
ISS certainly that's okay but this is a

355
00:18:29,110 --> 00:18:25,280
test flight thank you our next question

356
00:18:31,120 --> 00:18:29,120
comes from Keith Cowen I have a question

357
00:18:32,770 --> 00:18:31,130
as a member of the Apollo generation and

358
00:18:35,020 --> 00:18:32,780
again more Hartl remember that when we

359
00:18:37,000 --> 00:18:35,030
were kids we wanted to know everything

360
00:18:38,470 --> 00:18:37,010
that astronauts did and NASA would other

361
00:18:41,230 --> 00:18:38,480
ways to tell us everything including

362
00:18:43,270 --> 00:18:41,240
what they ate yesterday Marina asked a

363
00:18:44,500 --> 00:18:43,280

pretty straightforward honest question

364
00:18:45,820 --> 00:18:44,510
what do they have for breakfast and the

365
00:18:48,160 --> 00:18:45,830
answer was I don't know but we'll get

366
00:18:49,750 --> 00:18:48,170
back to you and enjoy that did some

367
00:18:50,860 --> 00:18:49,760
checking and found out that the

368
00:18:53,650 --> 00:18:50,870
astronaut breakfast

369
00:18:55,600 --> 00:18:53,660
you's are not subject to disclosure is

370
00:18:57,340 --> 00:18:55,610
that really the answer I mean how do you

371
00:18:58,810 --> 00:18:57,350
explain to a sixth grader in the Artemus

372
00:19:00,100 --> 00:18:58,820
generation that we can't tell you what

373
00:19:02,710 --> 00:19:00,110
the astronauts eating I mean shouldn't

374
00:19:05,650 --> 00:19:02,720
it be a little more transparency in some

375
00:19:09,160 --> 00:19:05,660
of this can I take that one Bettina

376
00:19:10,720 --> 00:19:09,170
well I don't think you know as far as

377
00:19:13,030 --> 00:19:10,730
transparency goes I can tell you what

378
00:19:15,040 --> 00:19:13,040
it's like in the past and astronauts get

379
00:19:16,960 --> 00:19:15,050
anything they want for breakfast you

380
00:19:18,610 --> 00:19:16,970
know you can you get you got your choice

381
00:19:22,840 --> 00:19:18,620
whether it's breakfast lunch or dinner

382
00:19:24,880 --> 00:19:22,850
you can it's made to order and I can go

383
00:19:27,820 --> 00:19:24,890
from my personal experience on my first

384
00:19:29,860 --> 00:19:27,830
flight I I'd heard that some folks gets

385
00:19:31,570 --> 00:19:29,870
face it and I certainly didn't want to

386
00:19:33,610 --> 00:19:31,580
get sick I don't get airsick

387
00:19:36,040 --> 00:19:33,620
and so I had like a toasted English

388
00:19:37,630 --> 00:19:36,050

muffin and a cup of coffee because I'm

389
00:19:40,600 --> 00:19:37,640
addicted to caffeine I was going easy

390
00:19:42,580 --> 00:19:40,610
but one of my crewmates had steak and

391
00:19:44,680 --> 00:19:42,590
eggs and hash browns and he's pouring

392
00:19:48,040 --> 00:19:44,690
the hot sauce on and he didn't get sick

393
00:19:49,570 --> 00:19:48,050
but no it's a so I they may not have

394
00:19:51,850 --> 00:19:49,580
even decided what they want for

395
00:19:53,440 --> 00:19:51,860
breakfast yet tomorrow so it's kind of

396
00:19:54,910 --> 00:19:53,450
hard to release what you don't know but

397
00:19:59,669 --> 00:19:54,920
I'm sure they'll make a decision and

398
00:20:02,200 --> 00:19:59,679
they'll get anything they want thank you

399
00:20:03,880 --> 00:20:02,210
maybe some of the current astronauts

400
00:20:05,560 --> 00:20:03,890
would like to answer I know shell you've

401
00:20:08,440 --> 00:20:05,570
you've done a mission what did you eat I

402
00:20:09,970 --> 00:20:08,450
did so we got anything we wanted as long

403
00:20:15,430 --> 00:20:09,980
as it's what was being served for that

404
00:20:17,770 --> 00:20:15,440
morning I I was kind of like you

405
00:20:19,450 --> 00:20:17,780
director Cabana that I wanted to take a

406
00:20:21,990 --> 00:20:19,460
little easy I didn't know exactly how I

407
00:20:25,510 --> 00:20:22,000
was going to react to being on orbit and

408
00:20:27,430 --> 00:20:25,520
so I went easy on the solids I also got

409
00:20:30,130 --> 00:20:27,440
my fair share of coffee

410
00:20:33,640 --> 00:20:30,140
we ate really well while we were in

411
00:20:34,810 --> 00:20:33,650
quarantine but we didn't have the we

412
00:20:36,730 --> 00:20:34,820
didn't have the choice of what we were

413
00:20:38,950 --> 00:20:36,740

going to eat and I honestly I can't I

414
00:20:41,020 --> 00:20:38,960
was so excited that that day I can't

415
00:20:43,810 --> 00:20:41,030
remember what it is that we ate but it

416
00:20:46,180 --> 00:20:43,820
was it was plenty and it was great for

417
00:20:48,190 --> 00:20:46,190
what we needed to do that day and of

418
00:20:50,790 --> 00:20:48,200
course that was at Baikonur that's right

419
00:20:52,870 --> 00:20:50,800
yeah that was at Baikonur yep absolutely

420
00:20:54,580 --> 00:20:52,880
okay all right well go to our next

421
00:20:58,090 --> 00:20:54,590
question it's Jackie Goddard with the

422
00:20:59,950 --> 00:20:58,100
Times of London hello yes thank you my

423
00:21:02,200 --> 00:20:59,960
questions for mr. Weinstein and those

424
00:21:03,830 --> 00:21:02,210
astronauts are dads and I wondered what

425
00:21:06,769 --> 00:21:03,840
you you would say

426
00:21:08,570 --> 00:21:06,779
what you have said that you can share to

427
00:21:10,580 --> 00:21:08,580
their two little boys about what their

428
00:21:13,700 --> 00:21:10,590
dads are doing and the significance of

429
00:21:17,890 --> 00:21:13,710
it thank you so that I had a hard time

430
00:21:22,490 --> 00:21:20,630
father so I wondered what you would say

431
00:21:24,769 --> 00:21:22,500
or what you have said that you can share

432
00:21:26,390 --> 00:21:24,779
with us to their two little boys about

433
00:21:28,760 --> 00:21:26,400
what their dads are doing and the

434
00:21:31,130 --> 00:21:28,770
significance of it absolutely so I would

435
00:21:34,130 --> 00:21:31,140
start by saying and they know this their

436
00:21:36,830 --> 00:21:34,140
dads are heroes American heroes they're

437
00:21:39,500 --> 00:21:36,840
laying the foundation for a new era in

438
00:21:41,570 --> 00:21:39,510

human spaceflight it's an era in human

439
00:21:43,220 --> 00:21:41,580
spaceflight where more space is going to

440
00:21:48,200 --> 00:21:43,230
be available to more people than ever

441
00:21:50,180 --> 00:21:48,210
before we envision a future where low

442
00:21:52,580 --> 00:21:50,190
Earth orbit is entirely commercialized

443
00:21:54,889 --> 00:21:52,590
where NASA is one customer of many

444
00:21:57,230 --> 00:21:54,899
customers where we have numerous

445
00:21:59,450 --> 00:21:57,240
providers that are competing on cost and

446
00:22:00,950 --> 00:21:59,460
innovation and safety that they're

447
00:22:04,070 --> 00:22:00,960
they're driving down cost they're

448
00:22:06,200 --> 00:22:04,080
increasing access and we are proving out

449
00:22:07,580 --> 00:22:06,210
a business model a public-private

450
00:22:09,560 --> 00:22:07,590
partnership business model that

451
00:22:12,680 --> 00:22:09,570
ultimately will enable us to go to the

452
00:22:14,810 --> 00:22:12,690
moon this time sustainably in other

453
00:22:17,330 --> 00:22:14,820
words we're gonna go to the moon to stay

454
00:22:19,669 --> 00:22:17,340
we love Apollo the Apollo era was

455
00:22:22,159 --> 00:22:19,679
fantastic the problem is that it ended

456
00:22:24,470 --> 00:22:22,169
and now we've got the Artemis program

457
00:22:27,080 --> 00:22:24,480
which is our sustainable return to the

458
00:22:29,570 --> 00:22:27,090
moon named after Artemis is the twin

459
00:22:32,029 --> 00:22:29,580
sister of Apollo in Greek mythology and

460
00:22:34,250 --> 00:22:32,039
she was the goddess of the moon and this

461
00:22:35,750 --> 00:22:34,260
time when we go to the go to the moon we

462
00:22:38,240 --> 00:22:35,760
get to go with all of America a very

463
00:22:41,269 --> 00:22:38,250

diverse highly qualified astronaut corps

464
00:22:44,149 --> 00:22:41,279
that includes women and what what Bob

465
00:22:46,519 --> 00:22:44,159
and Doug are doing is they are the final

466
00:22:48,350 --> 00:22:46,529
step in proving the success of a

467
00:22:51,380 --> 00:22:48,360
public/private partnership business

468
00:22:53,600 --> 00:22:51,390
model that drives down costs and is

469
00:22:56,930 --> 00:22:53,610
going to enable us to go not just to the

470
00:22:59,180 --> 00:22:56,940
moon but to go sustainably with reusable

471
00:23:01,340 --> 00:22:59,190
Landers to the surface of the moon and

472
00:23:03,980 --> 00:23:01,350
all of this ultimately is for a purpose

473
00:23:08,360 --> 00:23:03,990
and that is to get to Mars so when those

474
00:23:11,180 --> 00:23:08,370
little boys are you know 40 years old

475
00:23:14,620 --> 00:23:11,190
and we have a permanent presence on the

476
00:23:16,890 --> 00:23:14,630
moon and we have astronauts on Mars

477
00:23:19,860 --> 00:23:16,900
they're going to know that there

478
00:23:22,170 --> 00:23:19,870
their dads played a critical role in

479
00:23:24,920 --> 00:23:22,180
enabling not just this country but the

480
00:23:28,380 --> 00:23:24,930
world as we lead international partners

481
00:23:31,620 --> 00:23:28,390
to to humanity going further into the

482
00:23:33,960 --> 00:23:31,630
solar system than ever before beyond

483
00:23:36,900 --> 00:23:33,970
that I would remind the children that

484
00:23:38,840 --> 00:23:36,910
their dads are both military aviators

485
00:23:41,340 --> 00:23:38,850
that have served their country boldly

486
00:23:43,170 --> 00:23:41,350
yesterday was Memorial Day we had an

487
00:23:45,210 --> 00:23:43,180
opportunity to reflect on the people who

488
00:23:47,370 --> 00:23:45,220

served this country and of course these

489
00:23:49,610 --> 00:23:47,380
two gentlemen have done that as well so

490
00:23:52,200 --> 00:23:49,620
they're heroes in so many different ways

491
00:23:56,280 --> 00:23:52,210
but as I said when they arrived here at

492
00:23:58,980 --> 00:23:56,290
Kennedy you know I'm I'm 44 years old

493
00:24:05,400 --> 00:23:58,990
I'm about to turn 45 and when I grow up

494
00:24:06,990 --> 00:24:05,410
I want to be like Bob and Doug okay our

495
00:24:11,130 --> 00:24:07,000
next question comes from Joey roulette

496
00:24:13,440 --> 00:24:11,140
from Reuters hey thanks for doing this

497
00:24:16,230 --> 00:24:13,450
question for Jim Bryden Stein it's

498
00:24:18,510 --> 00:24:16,240
certainly been a long run to get to this

499
00:24:20,040 --> 00:24:18,520
point and I'm wondering how I guess had

500
00:24:21,330 --> 00:24:20,050
this you know Commercial Crew

501
00:24:23,040 --> 00:24:21,340
development and the word it's like to

502
00:24:24,600 --> 00:24:23,050
get crew dragging to this point shape

503
00:24:28,410 --> 00:24:24,610
your view of the commercial space

504
00:24:30,150 --> 00:24:28,420
marketplace and Jim more hard feel free

505
00:24:31,080 --> 00:24:30,160
to answer to because since you mentioned

506
00:24:35,390 --> 00:24:31,090
something advocating what they call

507
00:24:37,680 --> 00:24:35,400
thing so this is an important milestone

508
00:24:39,600 --> 00:24:37,690
you know we have been very successful

509
00:24:41,250 --> 00:24:39,610
with commercial resupply of the

510
00:24:44,160 --> 00:24:41,260
International Space Station now we've

511
00:24:46,470 --> 00:24:44,170
got Commercial Crew tomorrow knock on

512
00:24:49,200 --> 00:24:46,480
wood that will be a successful mission

513
00:24:50,940 --> 00:24:49,210

and then we need to build we need to

514
00:24:53,280 --> 00:24:50,950
build commercial space stations in

515
00:24:55,200 --> 00:24:53,290
low-earth orbit and in order to create

516
00:24:57,540 --> 00:24:55,210
the market where these kind of programs

517
00:24:59,730 --> 00:24:57,550
can be capitalized with public-private

518
00:25:01,980 --> 00:24:59,740
partnerships we need to prove that there

519
00:25:03,840 --> 00:25:01,990
is an economy for human activity in

520
00:25:05,310 --> 00:25:03,850
low-earth orbit and that's what we're

521
00:25:08,100 --> 00:25:05,320
using the International Space Station

522
00:25:10,470 --> 00:25:08,110
for right now and of course some of the

523
00:25:13,020 --> 00:25:10,480
most salient projects happening there

524
00:25:14,600 --> 00:25:13,030
that have been going on really for a

525
00:25:17,910 --> 00:25:14,610
long time now would include

526
00:25:19,230 --> 00:25:17,920
immunizations being developed on the

527
00:25:22,170 --> 00:25:19,240
international space station for

528
00:25:24,270 --> 00:25:22,180
Salmonella pneumonia the ability to

529
00:25:27,110 --> 00:25:24,280
compound pharmaceuticals that we can't

530
00:25:29,550 --> 00:25:27,120
do in the gravity well of Earth

531
00:25:30,749 --> 00:25:29,560
microgravity is a resource that is very

532
00:25:33,659 --> 00:25:30,759
valuable it is a

533
00:25:35,909 --> 00:25:33,669
the ability to print human organs in 3d

534
00:25:38,509 --> 00:25:35,919
we're proving that we can create human

535
00:25:41,519 --> 00:25:38,519
tissue using adults adult stem cells

536
00:25:44,849 --> 00:25:41,529
adult skin cells creating the stem cells

537
00:25:46,440 --> 00:25:44,859
that can create human organs in 3d now

538
00:25:47,580 --> 00:25:46,450

we're not at the human organ level but

539
00:25:50,070 --> 00:25:47,590
we're at the tissue level right now

540
00:25:51,960 --> 00:25:50,080
that's a capability that will transform

541
00:25:53,879 --> 00:25:51,970
lives here on earth the ability to

542
00:25:55,200 --> 00:25:53,889
create artificial retinas for the human

543
00:25:57,299 --> 00:25:55,210
eye so people who have macular

544
00:26:00,299 --> 00:25:57,309
degeneration don't have to lose their

545
00:26:02,249 --> 00:26:00,309
eyesight the ability to create fiber

546
00:26:03,950 --> 00:26:02,259
optics in a more pristine way so we

547
00:26:06,749 --> 00:26:03,960
don't have to have cable repeaters so

548
00:26:09,810 --> 00:26:06,759
and that drives down costs and and it

549
00:26:12,239 --> 00:26:09,820
increases fiber optic networks for

550
00:26:14,789 --> 00:26:12,249
humanity across the globe so all of

551
00:26:17,190 --> 00:26:14,799
these things are market drivers that

552
00:26:19,799 --> 00:26:17,200
enable a future human spaceflight

553
00:26:22,259 --> 00:26:19,809
capability that would be capitalized by

554
00:26:24,869 --> 00:26:22,269
the private sector NASA will be a

555
00:26:26,549 --> 00:26:24,879
customer we will always always always be

556
00:26:29,729 --> 00:26:26,559
a customer we've got a lot of science

557
00:26:32,700 --> 00:26:29,739
and and and and exploration that we need

558
00:26:35,669 --> 00:26:32,710
to do but those are the kind of

559
00:26:40,099 --> 00:26:35,679
activities that we need to see for the

560
00:26:42,570 --> 00:26:40,109
future that we believe exists right now

561
00:26:45,840 --> 00:26:42,580
space is about a four hundred billion

562
00:26:47,399 --> 00:26:45,850
dollar market and we believe that with

563
00:26:49,379 --> 00:26:47,409

human spaceflight that and of course

564
00:26:50,999 --> 00:26:49,389
that's communications remote sensing

565
00:26:53,129 --> 00:26:51,009
those kind of capabilities but with

566
00:26:56,099 --> 00:26:53,139
human spaceflight it opens up kind of a

567
00:26:58,769 --> 00:26:56,109
much broader marketplace and we think

568
00:27:00,899 --> 00:26:58,779
it's rapidly getting to be you know you

569
00:27:03,359 --> 00:27:00,909
know not just a four hundred billion but

570
00:27:05,399 --> 00:27:03,369
a one trillion dollar market so I'm a

571
00:27:07,739 --> 00:27:05,409
big believer in the commercialization of

572
00:27:08,999 --> 00:27:07,749
space we need it to be successful it's

573
00:27:13,049 --> 00:27:09,009
how we're going to get to the moon and

574
00:27:15,389 --> 00:27:13,059
on to Mars if we if we keep if we keep

575
00:27:17,070 --> 00:27:15,399
developing using American taxpayer

576
00:27:18,419 --> 00:27:17,080
dollars to develop capabilities in

577
00:27:20,580 --> 00:27:18,429
low-earth orbit we'll never get to the

578
00:27:21,960 --> 00:27:20,590
moon and on to Mars that's what this

579
00:27:24,389 --> 00:27:21,970
program is all about it's about

580
00:27:26,279 --> 00:27:24,399
commercialization where we are ready to

581
00:27:27,899 --> 00:27:26,289
commercialize and then using NASA money

582
00:27:29,820 --> 00:27:27,909
to do the things that commercial

583
00:27:31,649 --> 00:27:29,830
industry is not yet ready for with a

584
00:27:33,950 --> 00:27:31,659
purpose and that is to eventually

585
00:27:36,710 --> 00:27:33,960
commercialize those capabilities as well

586
00:27:40,200 --> 00:27:36,720
you know Jim if I could add to that the

587
00:27:41,879 --> 00:27:40,210
you know why are we here we're here to

588
00:27:42,750 --> 00:27:41,889

expand the human condition for all

589
00:27:45,240 --> 00:27:42,760
mankind

590
00:27:47,940 --> 00:27:45,250
and that's exactly what Jim's talking

591
00:27:50,730 --> 00:27:47,950
about right now we've got one astronaut

592
00:27:53,520 --> 00:27:50,740
on the space station and when we get the

593
00:27:55,670 --> 00:27:53,530
full complement back of astronauts we're

594
00:27:59,130 --> 00:27:55,680
gonna increase our research up there by

595
00:28:02,250 --> 00:27:59,140
300% and that's about helping others

596
00:28:04,920 --> 00:28:02,260
that's why we exist and that's what

597
00:28:08,010 --> 00:28:04,930
we're going to do on the other side of a

598
00:28:11,490 --> 00:28:08,020
commercial launch you know years ago we

599
00:28:13,770 --> 00:28:11,500
had after shuttle there was no you know

600
00:28:16,710 --> 00:28:13,780
there was no market share we now have

601
00:28:19,290 --> 00:28:16,720
70% of the market share and that's going

602
00:28:21,750 --> 00:28:19,300
to expand starting tomorrow

603
00:28:33,630 --> 00:28:21,760
so that's what this is about that's

604
00:28:37,190 --> 00:28:33,640
right next question as many as possible

605
00:28:39,990 --> 00:28:37,200
Marshall Smith from space policy online

606
00:28:42,540 --> 00:28:40,000
thanks so much this is for Jim Bryden

607
00:28:44,000 --> 00:28:42,550
Stein could you expand a little bit more

608
00:28:46,650 --> 00:28:44,010
on the discussions with the Russians

609
00:28:49,200 --> 00:28:46,660
about flying on the commercial cruise

610
00:28:51,720 --> 00:28:49,210
ships I can make you Robeson had a bunch

611
00:28:54,450 --> 00:28:51,730
of comments yesterday and he talked

612
00:28:56,310 --> 00:28:54,460
about being enthusiastic about having an

613
00:28:58,770 --> 00:28:56,320

alternative destroyers but then he said

614
00:29:02,370 --> 00:28:58,780
he was confused about NASA's plans for

615
00:29:05,640 --> 00:29:02,380
Gateway could you just fill us in on

616
00:29:07,950 --> 00:29:05,650
where the negotiations stand about us

617
00:29:10,530 --> 00:29:07,960
flying on sanyas and Russians flying on

618
00:29:12,390 --> 00:29:10,540
Commercial Crew and is that at all tied

619
00:29:14,880 --> 00:29:12,400
in with the discussions on gateway earth

620
00:29:17,490 --> 00:29:14,890
and parallel paths or are you trying to

621
00:29:20,790 --> 00:29:17,500
get a whole big package of future u.s.

622
00:29:23,190 --> 00:29:20,800
Russian space cooperation yeah

623
00:29:26,280 --> 00:29:23,200
absolutely so when we think about the

624
00:29:29,700 --> 00:29:26,290
Commercial Crew program remember the

625
00:29:31,860 --> 00:29:29,710
goal here is to have the International

626
00:29:33,960 --> 00:29:31,870
Space Station half of it is Russia and

627
00:29:35,670 --> 00:29:33,970
the other half is American and of course

628
00:29:37,830 --> 00:29:35,680
on the American segment we've got a lot

629
00:29:38,880 --> 00:29:37,840
of international partners and when we

630
00:29:41,190 --> 00:29:38,890
think about the International Space

631
00:29:42,810 --> 00:29:41,200
Station if we are going to maintain a

632
00:29:45,570 --> 00:29:42,820
complement of both Russian and American

633
00:29:48,300 --> 00:29:45,580
astronauts on board then we need to be

634
00:29:50,190 --> 00:29:48,310
willing to launch Russian cosmonauts on

635
00:29:52,800 --> 00:29:50,200
commercial crew and they need to be

636
00:29:55,980 --> 00:29:52,810
willing to launch American astronauts on

637
00:29:57,510 --> 00:29:55,990
on the Soyuz and my last conversations

638
00:29:59,760 --> 00:29:57,520

with the nature

639
00:30:02,190 --> 00:29:59,770
I think we were both in strong agreement

640
00:30:06,060 --> 00:30:02,200
that that was necessary for both nations

641
00:30:07,620 --> 00:30:06,070
as we move forward as far and so that's

642
00:30:09,720 --> 00:30:07,630
that's kind of the low Earth orbit

643
00:30:12,690 --> 00:30:09,730
International Space Station Commercial

644
00:30:14,010 --> 00:30:12,700
Crew and the Soyuz program I think we're

645
00:30:18,690 --> 00:30:14,020
in agreement and how we need to go

646
00:30:20,549 --> 00:30:18,700
forward there now it is it is true that

647
00:30:22,260 --> 00:30:20,559
when we talk about the Gateway that's

648
00:30:24,360 --> 00:30:22,270
that's it that's a separate kind of

649
00:30:27,299 --> 00:30:24,370
level of discussion for what the future

650
00:30:30,540 --> 00:30:27,309
looks like and yes we have we have made

651
00:30:31,919 --> 00:30:30,550
proposals to Russia as far as we've

652
00:30:34,230 --> 00:30:31,929
asked them you know how would they like

653
00:30:36,900 --> 00:30:34,240
to participate in the Gateway we've

654
00:30:38,070 --> 00:30:36,910
offered suggestions and we are and right

655
00:30:41,040 --> 00:30:38,080
now we're in a holding pattern waiting

656
00:30:43,380 --> 00:30:41,050
waiting to hear back but the partnership

657
00:30:48,210 --> 00:30:43,390
has been strong this partnership goes

658
00:30:50,160 --> 00:30:48,220
back to 1975 the year of my birth you

659
00:30:52,710 --> 00:30:50,170
know with the with the Apollo Soyuz

660
00:30:55,020 --> 00:30:52,720
program and then of course the

661
00:30:57,200 --> 00:30:55,030
shuttle-mir program and now of course

662
00:31:00,150 --> 00:30:57,210
the International Space Station program

663
00:31:03,210 --> 00:31:00,160

this has been I think a bright shiny

664
00:31:06,510 --> 00:31:03,220
object that demonstrates that space can

665
00:31:10,370 --> 00:31:06,520
unite people and it's it's it's it's

666
00:31:13,049 --> 00:31:10,380
really above terrestrial geopolitics

667
00:31:15,450 --> 00:31:13,059
literally above terrestrial geopolitics

668
00:31:17,370 --> 00:31:15,460
so it's uh I think I think it's a

669
00:31:19,049 --> 00:31:17,380
relationship that where we are

670
00:31:22,710 --> 00:31:19,059
interested in maintaining and of course

671
00:31:24,330 --> 00:31:22,720
will continue to work with them Bob did

672
00:31:27,240 --> 00:31:24,340
you have any thoughts on that you know I

673
00:31:28,830 --> 00:31:27,250
I think you know it's something that we

674
00:31:31,310 --> 00:31:28,840
need to work on is we continue down the

675
00:31:34,710 --> 00:31:31,320
road we do have a strong partnership and

676
00:31:36,299 --> 00:31:34,720
it's necessary to have multiple vehicles

677
00:31:37,470 --> 00:31:36,309
to get us to the International Space

678
00:31:39,690 --> 00:31:37,480
Station we need that dissimilar

679
00:31:41,700 --> 00:31:39,700
redundancy not just between Boeing and

680
00:31:43,650 --> 00:31:41,710
SpaceX but with our Russian partners as

681
00:31:46,290 --> 00:31:43,660
well we've we proved it during the

682
00:31:50,549 --> 00:31:46,300
shuttle era and I'm sure in the future

683
00:31:52,680 --> 00:31:50,559
we'll prove it again our next question

684
00:32:00,900 --> 00:31:52,690
comes from Robert Pearlman from collect

685
00:32:05,340 --> 00:32:00,910
space behind you the worm has made a

686
00:32:07,740 --> 00:32:05,350
return on this flight as has become more

687
00:32:09,450 --> 00:32:07,750
and more prevalent I wonder if you could

688
00:32:10,490 --> 00:32:09,460

talk about how that came to be was it

689
00:32:13,880 --> 00:32:10,500
SpaceX is

690
00:32:16,730 --> 00:32:13,890
was your idea and what will be the role

691
00:32:20,930 --> 00:32:16,740
of logotype going forward beyond this

692
00:32:22,550 --> 00:32:20,940
mission I missed it your question I

693
00:32:26,720 --> 00:32:22,560
think it's about the NASA worm but can

694
00:32:29,090 --> 00:32:26,730
you repeat the question please sure if

695
00:32:31,970 --> 00:32:29,100
you can hear me now it's about the is

696
00:32:35,150 --> 00:32:31,980
indeed about the worm though NASA

697
00:32:36,950 --> 00:32:35,160
logotype how did it come to be that it

698
00:32:41,810 --> 00:32:36,960
was resurrected for this mission was it

699
00:32:43,820 --> 00:32:41,820
SpaceX's idea was it your idea or how

700
00:32:46,540 --> 00:32:43,830
does that come to be and what is its

701
00:32:49,550 --> 00:32:46,550
role with the agency going forward

702
00:32:50,960 --> 00:32:49,560
beyond this mission that's no that's

703
00:32:55,250 --> 00:32:50,970
that's a good question

704
00:32:57,080 --> 00:32:55,260
I love to say it was my idea I will tell

705
00:32:58,910 --> 00:32:57,090
you as the NASA Administrator I've heard

706
00:33:01,970 --> 00:32:58,920
from a lot of people that you ought to

707
00:33:03,440 --> 00:33:01,980
bring back the worms I've heard it over

708
00:33:05,930 --> 00:33:03,450
and over again

709
00:33:09,650 --> 00:33:05,940
there's look again I'm the first NASA

710
00:33:11,930 --> 00:33:09,660
Administrator in history that wasn't

711
00:33:15,110 --> 00:33:11,940
alive when we had people walking on the

712
00:33:21,020 --> 00:33:15,120
surface of the Moon not in not in 1969

713
00:33:23,720 --> 00:33:21,030

and not in 1972 so so my generation grew

714
00:33:25,250 --> 00:33:23,730
up with the worm that when I say the

715
00:33:27,170 --> 00:33:25,260
worm for the people out there that might

716
00:33:29,900 --> 00:33:27,180
not be familiar it's it's the NASA logo

717
00:33:32,360 --> 00:33:29,910
that's red and it's it's written it's

718
00:33:34,760 --> 00:33:32,370
written out and then the logo that's

719
00:33:38,060 --> 00:33:34,770
blue we call that the the meatball but

720
00:33:41,060 --> 00:33:38,070
look I grew up with the worm as the logo

721
00:33:43,220 --> 00:33:41,070
of NASA it's kind of personal to me just

722
00:33:46,100 --> 00:33:43,230
because that's how I grew up I will tell

723
00:33:50,420 --> 00:33:46,110
you that the meatball the blue logo the

724
00:33:52,970 --> 00:33:50,430
circle blue logo that's a that's a logo

725
00:33:54,590 --> 00:33:52,980
that's very near and dear to a lot of

726
00:33:59,540 --> 00:33:54,600
other people the people of the Apollo

727
00:34:02,060 --> 00:33:59,550
generation for example so the NASA style

728
00:34:05,300 --> 00:34:02,070
guide is very clear the worm no longer

729
00:34:07,670 --> 00:34:05,310
exists but I write the style guide so I

730
00:34:09,860 --> 00:34:07,680
made a determination that for this

731
00:34:11,800 --> 00:34:09,870
particular mission on this particular

732
00:34:15,860 --> 00:34:11,810
day we were going to bring back the worm

733
00:34:16,760 --> 00:34:15,870
and and and we did this this launched

734
00:34:18,020 --> 00:34:16,770
and the reason I thought it was

735
00:34:21,530 --> 00:34:18,030
important to do it on this launch

736
00:34:23,750 --> 00:34:21,540
because it got so much attention and I

737
00:34:24,470 --> 00:34:23,760
wanted all of America to know that this

738
00:34:26,869 --> 00:34:24,480

is a three

739
00:34:30,050 --> 00:34:26,879
a half billion dollar investment by the

740
00:34:32,480 --> 00:34:30,060
American taxpayer and this is an

741
00:34:36,950 --> 00:34:32,490
American launch and yes it's Commercial

742
00:34:38,810 --> 00:34:36,960
Crew but but this is um this is this is

743
00:34:40,849 --> 00:34:38,820
NASA it's a little bit nostalgic for me

744
00:34:43,520 --> 00:34:40,859
you know I grew up I'm a Navy pilot by

745
00:34:47,210 --> 00:34:43,530
trade I grew up with my favorite

746
00:34:48,859 --> 00:34:47,220
airplane being the x-29 and you know

747
00:34:53,030 --> 00:34:48,869
that's a forward-swept wing aircraft

748
00:34:55,669 --> 00:34:53,040
that looks really awesome if I may say

749
00:34:58,040 --> 00:34:55,679
so myself I had a big poster of it on my

750
00:35:01,490 --> 00:34:58,050
wall and on the side of it was the NASA

751
00:35:03,830 --> 00:35:01,500
worm so I'll be honest I love the worm

752
00:35:06,349 --> 00:35:03,840
we brought it back but it's also

753
00:35:08,090 --> 00:35:06,359
important to note on this rocket we have

754
00:35:10,670 --> 00:35:08,100
both and we're bringing people together

755
00:35:13,160 --> 00:35:10,680
on this mission we've got the meatball

756
00:35:17,270 --> 00:35:13,170
and we've got the worm and and I like

757
00:35:18,770 --> 00:35:17,280
both so we're going with both with the

758
00:35:20,720 --> 00:35:18,780
worm being out there and and the

759
00:35:22,010 --> 00:35:20,730
meatball you see a ton of kids these

760
00:35:25,130 --> 00:35:22,020
days walk around right now

761
00:35:26,300 --> 00:35:25,140
Nasus t-shirts the worm on their jacket

762
00:35:28,550 --> 00:35:26,310
and everything I think it's just really

763
00:35:30,770 --> 00:35:28,560

helped to energize some of the younger

764
00:35:32,810 --> 00:35:30,780
generation folks that haven't seen the

765
00:35:34,340 --> 00:35:32,820
launches maybe in their an entire life

766
00:35:36,349 --> 00:35:34,350
or maybe they were very young when that

767
00:35:37,970 --> 00:35:36,359
happened and so you get a lot more

768
00:35:40,130 --> 00:35:37,980
questions when we get the opportunity to

769
00:35:42,260 --> 00:35:40,140
go out to schools the peas speak with

770
00:35:44,000 --> 00:35:42,270
children and it's different I think then

771
00:35:46,130 --> 00:35:44,010
maybe when we were growing up least when

772
00:35:48,920 --> 00:35:46,140
I I remember growing up thinking an

773
00:35:50,780 --> 00:35:48,930
astronaut that's some far-fetched idea

774
00:35:52,250 --> 00:35:50,790
somebody does that I don't know who they

775
00:35:54,109 --> 00:35:52,260
are though or something you see in the

776
00:35:55,490 --> 00:35:54,119
movies but that's not going to be our

777
00:35:57,440 --> 00:35:55,500
future our future with the

778
00:35:59,780 --> 00:35:57,450
commercialization of space is that it's

779
00:36:01,220 --> 00:35:59,790
going to be very accessible to too many

780
00:36:03,560 --> 00:36:01,230
young people whether it be as an

781
00:36:05,750 --> 00:36:03,570
astronaut or a scientist or or as an

782
00:36:07,040 --> 00:36:05,760
artist or as an engineer that's working

783
00:36:08,930 --> 00:36:07,050
on this program and so I think the

784
00:36:10,940 --> 00:36:08,940
younger generation are starting to

785
00:36:15,310 --> 00:36:10,950
realize that and understand that's not

786
00:36:17,930 --> 00:36:15,320
the movies it's not sci-fi it's reality

787
00:36:19,520 --> 00:36:17,940
I'm kind of glad the worm is making a

788
00:36:23,000 --> 00:36:19,530

comeback in the 70s it was that

789
00:36:24,950 --> 00:36:23,010
futuristic look it was you know it was

790
00:36:26,540 --> 00:36:24,960
the future and my first NASA flight

791
00:36:28,160 --> 00:36:26,550
check it I still got it at home and I

792
00:36:30,680 --> 00:36:28,170
got a I got a worm on my shoulder and a

793
00:36:33,200 --> 00:36:30,690
meatball on that front so I think

794
00:36:35,510 --> 00:36:33,210
they're both awesome yeah so when Doug

795
00:36:38,230 --> 00:36:35,520
and Bob lunched tomorrow and you watch

796
00:36:43,190 --> 00:36:38,240
that rocket ascend look for the worm

797
00:36:45,740 --> 00:36:43,200
yeah fantastic going your next question

798
00:36:47,630 --> 00:36:45,750
is we try to get in as many people

799
00:36:52,970 --> 00:36:47,640
hustle we're trying to wrap it up Lauren

800
00:36:54,470 --> 00:36:52,980
grush hi thanks for taking my call so

801
00:36:58,040 --> 00:36:54,480
about the toilet

802
00:37:00,470 --> 00:36:58,050
no I'm kidding I was actually curious if

803
00:37:03,140 --> 00:37:00,480
you guys could walk us through what the

804
00:37:06,440 --> 00:37:03,150
scrub scenario looks like after the

805
00:37:07,970 --> 00:37:06,450
astronauts get on board when do they get

806
00:37:09,260 --> 00:37:07,980
off you know what do you have to do to

807
00:37:11,900 --> 00:37:09,270
make sure that they're safe and then

808
00:37:15,980 --> 00:37:11,910
where do they go what does that recent

809
00:37:18,910 --> 00:37:15,990
look like and I'm having a hard time

810
00:37:21,110 --> 00:37:18,920
hearing that what was that the scrub

811
00:37:24,290 --> 00:37:21,120
Lauren I'm just trying to make sure that

812
00:37:26,570 --> 00:37:24,300
we understand your question yeah so if

813
00:37:28,190 --> 00:37:26,580

you scrub in the astronauts are already

814
00:37:29,900 --> 00:37:28,200
on board what does that procedure look

815
00:37:31,310 --> 00:37:29,910
like when they how do they come off what

816
00:37:36,500 --> 00:37:31,320
do you have to do to make sure that

817
00:37:40,970 --> 00:37:36,510
they're staged what point the the scrub

818
00:37:42,800 --> 00:37:40,980
occurs but they will they'll have the

819
00:37:45,320 --> 00:37:42,810
crew access arm will come back to the

820
00:37:47,090 --> 00:37:45,330
vehicle and essentially we're going to

821
00:37:50,270 --> 00:37:47,100
make sure that that the vehicle is safe

822
00:37:52,760 --> 00:37:50,280
to approach we'll have the the folks

823
00:37:54,590 --> 00:37:52,770
from SpaceX will come in unbuckle Bob

824
00:37:57,590 --> 00:37:54,600
and Doug and and then just escort them

825
00:38:01,670 --> 00:37:57,600
out down to the ground and and bill

826
00:38:04,850 --> 00:38:01,680
prepare to to give give the next launch

827
00:38:07,430 --> 00:38:04,860
opportunity a shot but it's all of

828
00:38:09,500 --> 00:38:07,440
course done in a manner that makes sure

829
00:38:14,240 --> 00:38:09,510
that everybody that's involved is is

830
00:38:21,530 --> 00:38:14,250
safe great our next questions Leo and

831
00:38:25,190 --> 00:38:21,540
right from Irish TV very unlikely

832
00:38:28,250 --> 00:38:25,200
scenario of a transatlantic abort and as

833
00:38:31,250 --> 00:38:28,260
I understand it there are not one but

834
00:38:33,650 --> 00:38:31,260
two abort modes which would involve

835
00:38:35,690 --> 00:38:33,660
splashing down in the Atlantic Ocean off

836
00:38:38,240 --> 00:38:35,700
the coast of Ireland

837
00:38:40,370 --> 00:38:38,250
and so I'm wondering what is the plan

838
00:38:43,310 --> 00:38:40,380

there there don't appear to be assets

839
00:38:45,320 --> 00:38:43,320
stationed say at Shannon how are the

840
00:38:48,500 --> 00:38:45,330
crew going to be retrieved in this very

841
00:38:50,500 --> 00:38:48,510
unlikely scenario or will you be waiting

842
00:38:53,200 --> 00:38:50,510
for a boat from thenat in

843
00:38:56,710 --> 00:38:53,210
every to come and collect them shall I

844
00:39:00,040 --> 00:38:56,720
let you so there are a number of abort

845
00:39:02,620 --> 00:39:00,050
modes we can as the the vehicle crosses

846
00:39:04,600 --> 00:39:02,630
across the Atlantic we have various

847
00:39:06,220 --> 00:39:04,610
sites that were kind of aiming for and

848
00:39:09,040 --> 00:39:06,230
will either abort forward so some of

849
00:39:11,740 --> 00:39:09,050
those sites Ireland is an example or do

850
00:39:15,430 --> 00:39:11,750
a retro abort to come back to these

851
00:39:18,130 --> 00:39:15,440
areas and we have assets of course

852
00:39:20,590 --> 00:39:18,140
stationed off of the coast prepared to

853
00:39:22,750 --> 00:39:20,600
assist the astronauts but if as we get

854
00:39:25,810 --> 00:39:22,760
into these longer transatlantic abort

855
00:39:30,760 --> 00:39:25,820
modes we have will be partnering with

856
00:39:32,950 --> 00:39:30,770
our military assets to deploy divers and

857
00:39:37,420 --> 00:39:32,960
folks to get into the water to help the

858
00:39:40,330 --> 00:39:37,430
astronauts and then bring helicopters or

859
00:39:42,550 --> 00:39:40,340
boats alongside at whatever assets are

860
00:39:43,780 --> 00:39:42,560
available in that particular area but

861
00:39:45,700 --> 00:39:43,790
it's it's our partnership with the

862
00:39:47,580 --> 00:39:45,710
military that really helps us the Air

863
00:39:50,860 --> 00:39:47,590

Force specifically that helps us deal

864
00:39:54,880 --> 00:39:50,870
with any of those more down range of

865
00:39:58,690 --> 00:39:54,890
boards thank you

866
00:40:00,970 --> 00:39:58,700
next question Martian done yes hi I'm

867
00:40:03,370 --> 00:40:00,980
wondering how many astronauts will be on

868
00:40:04,990 --> 00:40:03,380
site for launch tomorrow I can imagine

869
00:40:08,470 --> 00:40:05,000
the entire astronaut corps emptying out

870
00:40:11,110 --> 00:40:08,480
of Houston and how you prevent launch a

871
00:40:13,690 --> 00:40:11,120
fever from taking over on such a big

872
00:40:15,370 --> 00:40:13,700
mission with such high expectations with

873
00:40:18,820 --> 00:40:15,380
the President of the United States and

874
00:40:20,980 --> 00:40:18,830
attendance thank you as far as the

875
00:40:23,350 --> 00:40:20,990
number of astronauts that are here we've

876
00:40:25,930 --> 00:40:23,360
we've taken a lot of precaution to limit

877
00:40:27,640 --> 00:40:25,940
the number of people coming in general I

878
00:40:30,070 --> 00:40:27,650
don't know what the total number of

879
00:40:32,560 --> 00:40:30,080
astronauts that will be here is do you

880
00:40:34,390 --> 00:40:32,570
guys know offhand it's like under 10

881
00:40:36,580 --> 00:40:34,400
that's definitely under 10 it's a girl

882
00:40:38,770 --> 00:40:36,590
number yes so well it won't we won't

883
00:40:41,350 --> 00:40:38,780
have a large contingent of astronauts

884
00:40:45,640 --> 00:40:41,360
here what was the second part of the

885
00:40:49,810 --> 00:40:45,650
question a launch fever absolutely look

886
00:40:51,430 --> 00:40:49,820
this is a this is a serious issue and as

887
00:40:52,030 --> 00:40:51,440
a naval aviator there's what we called

888
00:40:54,910 --> 00:40:52,040

get home

889
00:40:56,740 --> 00:40:54,920
itis we have to make sure that we give

890
00:40:59,770 --> 00:40:56,750
permission permission for people to say

891
00:41:01,660 --> 00:40:59,780
no and I've been doing that all along in

892
00:41:04,150 --> 00:41:01,670
fact we've been so diligent about making

893
00:41:07,029 --> 00:41:04,160
sure people have the authority to say no

894
00:41:12,099 --> 00:41:07,039
we went ahead and and purchased a seat

895
00:41:14,049 --> 00:41:12,109
on a Soyuz rocket for for October and we

896
00:41:17,049 --> 00:41:14,059
did that intentionally because we want

897
00:41:20,470 --> 00:41:17,059
people to feel free to say no and not

898
00:41:22,870 --> 00:41:20,480
feel any pressure to go on this launch I

899
00:41:25,059 --> 00:41:22,880
texted Bob and Doug yesterday and I said

900
00:41:28,569 --> 00:41:25,069
to them very clearly if you want me to

901
00:41:30,880 --> 00:41:28,579
stop this thing for any reason say so I

902
00:41:33,339 --> 00:41:30,890
will stop it in a heartbeat if you want

903
00:41:37,270 --> 00:41:33,349
me to they both came back and they said

904
00:41:40,599 --> 00:41:37,280
we're go for launch so they're they're

905
00:41:42,609 --> 00:41:40,609
ready to go but but look part part of my

906
00:41:44,170 --> 00:41:42,619
job as the NASA Administrator is to make

907
00:41:46,420 --> 00:41:44,180
sure people understand that their safety

908
00:41:48,789 --> 00:41:46,430
is our highest priority and give

909
00:41:53,880 --> 00:41:48,799
everybody in the loop permission to say

910
00:41:57,760 --> 00:41:56,170
you know March adjust your to your point

911
00:41:59,980 --> 00:41:57,770
we do have a small number of astronauts

912
00:42:02,079 --> 00:41:59,990
out here obviously just for the co vid

913
00:42:04,420 --> 00:42:02,089

concerns but we're also able to

914
00:42:06,339 --> 00:42:04,430
virtually kind of deploy folks in

915
00:42:08,890 --> 00:42:06,349
different areas so I know there's a lot

916
00:42:12,430 --> 00:42:08,900
of the astronaut corps is is prepared to

917
00:42:13,779 --> 00:42:12,440
support media outlets social media you

918
00:42:16,210 --> 00:42:13,789
know things that are online where they

919
00:42:18,670 --> 00:42:16,220
be live or just a virtual and so I think

920
00:42:20,559 --> 00:42:18,680
there's hope that there'll be a lot of

921
00:42:23,019 --> 00:42:20,569
opportunity for us to reach out to maybe

922
00:42:24,490 --> 00:42:23,029
a larger audience than we normally would

923
00:42:27,160 --> 00:42:24,500
of course we're not going to have the

924
00:42:28,569 --> 00:42:27,170
crowds here at KSC but it is important

925
00:42:30,789 --> 00:42:28,579
that folks know that they can still

926
00:42:32,710 --> 00:42:30,799
experience the launch live with all of

927
00:42:36,640 --> 00:42:32,720
us just through the communications

928
00:42:38,559 --> 00:42:36,650
assets that we have available I'll just

929
00:42:40,000 --> 00:42:38,569
throw it I know the launch team I know

930
00:42:42,400 --> 00:42:40,010
the Commercial Crew program I know the

931
00:42:44,170 --> 00:42:42,410
folks that are on console and this is a

932
00:42:46,359 --> 00:42:44,180
test flight and they are going to make

933
00:42:48,339 --> 00:42:46,369
sure that it's right before we they

934
00:42:49,690 --> 00:42:48,349
launch and they're not they don't

935
00:42:51,430 --> 00:42:49,700
they're not concerned about who's here

936
00:42:52,900 --> 00:42:51,440
to see it they're concerned about doing

937
00:42:55,120 --> 00:42:52,910
their job and doing it correctly and

938
00:42:58,420 --> 00:42:55,130

they've practiced this and they'll do

939
00:43:00,339 --> 00:42:58,430
the right thing thank you our last

940
00:43:03,760 --> 00:43:00,349
question will come from Ken Chang from

941
00:43:05,890 --> 00:43:03,770
the New York Times hi thank you very

942
00:43:08,710 --> 00:43:05,900
much for taking my question hi this is

943
00:43:12,010 --> 00:43:08,720
for mr. Weinstein a few days ago you

944
00:43:14,160 --> 00:43:12,020
tweeted noting president Trump's

945
00:43:17,590 --> 00:43:14,170
leadership for getting to this moment

946
00:43:19,930 --> 00:43:17,600
and there abusement a former

947
00:43:22,900 --> 00:43:19,940
not pointed out that Commercial Crew

948
00:43:24,460 --> 00:43:22,910
started in 2010 when under President

949
00:43:27,880 --> 00:43:24,470
Obama and of course commercial cargo

950
00:43:29,370 --> 00:43:27,890
goes back to george w bush let's wonder

951
00:43:33,070 --> 00:43:29,380
if you could just talk about credit

952
00:43:36,300 --> 00:43:33,080
we're getting too small stone for your

953
00:43:39,460 --> 00:43:36,310
predecessors and for previous presidents

954
00:43:41,320 --> 00:43:39,470
absolutely so this is a program that

955
00:43:43,090 --> 00:43:41,330
demonstrates the success when you have

956
00:43:45,730 --> 00:43:43,100
continuity of purpose going from one

957
00:43:48,010 --> 00:43:45,740
administration to the next if we go back

958
00:43:50,760 --> 00:43:48,020
all the way to Commercial Crew that

959
00:43:53,140 --> 00:43:50,770
started under President George W Bush

960
00:43:56,620 --> 00:43:53,150
commercial resupply and then Commercial

961
00:43:59,160 --> 00:43:56,630
Crew under under President Obama and and

962
00:44:01,300 --> 00:43:59,170
Charlie Bolden did absolutely

963
00:44:03,910 --> 00:44:01,310

magnificent work as the NASA

964
00:44:05,950 --> 00:44:03,920
Administrator at a time when this

965
00:44:07,750 --> 00:44:05,960
particular program and Bob you remember

966
00:44:10,150 --> 00:44:07,760
this it didn't have a lot of support in

967
00:44:13,090 --> 00:44:10,160
Congress and Charlie Bolden who is a

968
00:44:16,060 --> 00:44:13,100
NASA astronaut and an American Hero he's

969
00:44:19,930 --> 00:44:16,070
an f-18 pilot I got to put the f-18

970
00:44:23,380 --> 00:44:19,940
pilot plug in there but but Charlie

971
00:44:25,300 --> 00:44:23,390
Bolden did just yeoman's work in order

972
00:44:28,240 --> 00:44:25,310
to get this program off the ground to

973
00:44:31,330 --> 00:44:28,250
get it going and and here we are all

974
00:44:35,410 --> 00:44:31,340
these years later having this success I

975
00:44:37,690 --> 00:44:35,420
will I will reiterate that the the human

976
00:44:41,230 --> 00:44:37,700
spaceflight program under President

977
00:44:43,210 --> 00:44:41,240
Trump has really blossomed our budgets

978
00:44:44,980 --> 00:44:43,220
now are as high as they've ever been in

979
00:44:47,140 --> 00:44:44,990
nominal dollars they're they're the

980
00:44:49,090 --> 00:44:47,150
highest ever in real dollars they're

981
00:44:51,940 --> 00:44:49,100
still very high not maybe as high as

982
00:44:55,030 --> 00:44:51,950
Apollo but that's that was a little bit

983
00:44:58,690 --> 00:44:55,040
of a an anomaly in the history of NASA's

984
00:45:00,730 --> 00:44:58,700
budget but it's also true that that that

985
00:45:02,200 --> 00:45:00,740
it's it's it's it's being backed up the

986
00:45:03,700 --> 00:45:02,210
rhetoric isn't just there it's being

987
00:45:06,480 --> 00:45:03,710
backed up with the budgets and it's

988
00:45:09,100 --> 00:45:06,490

bipartisan you know I did an event with

989
00:45:11,860 --> 00:45:09,110
speaker Pelosi out at the Ames Research

990
00:45:16,600 --> 00:45:11,870
Center goodness that would have been

991
00:45:18,340 --> 00:45:16,610
August last August and and and it was

992
00:45:20,140 --> 00:45:18,350
women's equality day and I thought it

993
00:45:21,730 --> 00:45:20,150
was important and and we reached out to

994
00:45:24,040 --> 00:45:21,740
her and asked her if we could do women's

995
00:45:25,690 --> 00:45:24,050
equality day she was going to do it in

996
00:45:28,810 --> 00:45:25,700
San Francisco we asked her to do it at

997
00:45:30,630 --> 00:45:28,820
Ames and and in a press conference after

998
00:45:32,099 --> 00:45:30,640
the event we talked about Artemis the

999
00:45:34,049 --> 00:45:32,109
importance of going to the moon with all

1000
00:45:36,299 --> 00:45:34,059
of America now going with women and we

1001
00:45:37,789 --> 00:45:36,309
did it on women's equality day and in

1002
00:45:40,559 --> 00:45:37,799
the in the press conference afterwards

1003
00:45:42,660 --> 00:45:40,569
she said you know we're all counting on

1004
00:45:45,359 --> 00:45:42,670
you to get not just the the next man but

1005
00:45:47,099 --> 00:45:45,369
the first woman to the moon and she said

1006
00:45:47,849 --> 00:45:47,109
I'm so glad that you called the program

1007
00:45:50,250 --> 00:45:47,859
Artemis

1008
00:45:52,289 --> 00:45:50,260
look that this space program that we

1009
00:45:53,400 --> 00:45:52,299
have in this country unites people

1010
00:45:55,680 --> 00:45:53,410
period

1011
00:45:58,109 --> 00:45:55,690
it always has we look at the most

1012
00:46:00,779 --> 00:45:58,119
divisive times in American history we

1013
00:46:03,420 --> 00:46:00,789

think about the Vietnam War the 1960s

1014
00:46:05,670 --> 00:46:03,430
the not just the war but the protests we

1015
00:46:08,609 --> 00:46:05,680
think about the civil rights abuses in

1016
00:46:11,039 --> 00:46:08,619
the civil rights protests the very

1017
00:46:12,599 --> 00:46:11,049
divisive challenging times and here we

1018
00:46:14,490 --> 00:46:12,609
are all these years later in the midst

1019
00:46:16,109 --> 00:46:14,500
of the corona virus pandemic and we have

1020
00:46:18,900 --> 00:46:16,119
this moment in time where we can unite

1021
00:46:20,339 --> 00:46:18,910
people again and that's really what this

1022
00:46:22,650 --> 00:46:20,349
launch is going to do it's not just

1023
00:46:24,660 --> 00:46:22,660
going to unite you know Republicans and

1024
00:46:26,460 --> 00:46:24,670
Democrats it's going to unite the world

1025
00:46:28,440 --> 00:46:26,470
the whole world is going to be watching

1026
00:46:29,730 --> 00:46:28,450
this this particular launch and all of

1027
00:46:32,279 --> 00:46:29,740
our international partners are very

1028
00:46:34,500 --> 00:46:32,289
interested in fact they part they

1029
00:46:36,599 --> 00:46:34,510
participated in the in the flight net

1030
00:46:38,370 --> 00:46:36,609
readiness review because because they're

1031
00:46:41,029 --> 00:46:38,380
astronauts are one day going to fly on

1032
00:46:43,680 --> 00:46:41,039
this on this rocket and they're already

1033
00:46:45,329 --> 00:46:43,690
you know big big operators of the

1034
00:46:49,620 --> 00:46:45,339
International Space Station where this

1035
00:46:52,440 --> 00:46:49,630
crew dragon will dock so this this

1036
00:46:55,200 --> 00:46:52,450
mission is I think a very uniting

1037
00:46:57,599 --> 00:46:55,210
mission space exploration in general

1038
00:46:59,970 --> 00:46:57,609

unites Republicans and Democrats it

1039
00:47:02,640 --> 00:46:59,980
unites people across geopolitical

1040
00:47:04,289 --> 00:47:02,650
boundaries and and that's really what's

1041
00:47:07,380 --> 00:47:04,299
unique about NASA and what's unique

1042
00:47:09,150 --> 00:47:07,390
about space but I look I will not

1043
00:47:12,059 --> 00:47:09,160
hesitate to tell you that President

1044
00:47:15,900 --> 00:47:12,069
Trump has been a massive space advocate

1045
00:47:17,579 --> 00:47:15,910
he promised to launch American

1046
00:47:20,249 --> 00:47:17,589
astronauts on American Rockets he

1047
00:47:21,870 --> 00:47:20,259
promised to create a moon program and

1048
00:47:24,180 --> 00:47:21,880
he's done both of those and he's backed

1049
00:47:29,190 --> 00:47:24,190
it up with his budget requests not just

1050
00:47:30,630 --> 00:47:29,200
with the words okay well with that we're

1051
00:47:32,730 --> 00:47:30,640
gonna close today's press conference

1052
00:47:35,069 --> 00:47:32,740
thank you so much for joining us for

1053
00:47:36,930 --> 00:47:35,079
more information go to nasa.gov and for

1054
00:47:38,670 --> 00:47:36,940
more information of how to enjoy all