
NASA LIVE
ARTEMIS I
POST-SPLASHDOWN NEWS CONFERENCE

1
00:00:07,130 --> 00:00:04,090
a successful Mission so much so that

2
00:00:09,350 --> 00:00:07,140
these folks will tell you about all the

3
00:00:10,669 --> 00:00:09,360
additional tests that they were able to

4
00:00:13,970 --> 00:00:10,679
run

5
00:00:16,189 --> 00:00:13,980
what is the significance of this after a

6
00:00:17,109 --> 00:00:16,199
half century that we were last on the

7
00:00:23,330 --> 00:00:17,119
moon

8
00:00:25,009 --> 00:00:23,340
there we did The Impossible making it

9
00:00:29,089 --> 00:00:25,019
possible

10
00:00:30,950 --> 00:00:29,099
now we are doing that again but for a

11
00:00:34,069 --> 00:00:30,960
different purpose

12
00:00:37,250 --> 00:00:34,079
because this time we go back to the Moon

13
00:00:39,889 --> 00:00:37,260

to learn to live to work

14
00:00:45,170 --> 00:00:39,899
to invent to create

15
00:00:47,630 --> 00:00:45,180
in order to go on out into the cosmos to

16
00:00:50,270 --> 00:00:47,640
further explore

17
00:00:53,209 --> 00:00:50,280
the plan is to get ready to go with

18
00:00:55,189 --> 00:00:53,219
humans to Mars late in the decade of the

19
00:00:56,569 --> 00:00:55,199
2030s

20
00:00:59,689 --> 00:00:56,579
and then

21
00:01:02,209 --> 00:00:59,699
even further Beyond and we know from

22
00:01:03,830 --> 00:01:02,219
what we are finding from the James Webb

23
00:01:07,850 --> 00:01:03,840
Space Telescope

24
00:01:13,490 --> 00:01:07,860
that it is a very very large Universe

25
00:01:16,969 --> 00:01:13,500
out there to be understood and explored

26
00:01:18,590 --> 00:01:16,979
and so this is a great day not only for

27
00:01:20,630 --> 00:01:18,600
America

28
00:01:22,730 --> 00:01:20,640
but it's a great day for all of our

29
00:01:26,630 --> 00:01:22,740
International Partners that's a

30
00:01:30,770 --> 00:01:26,640
difference from 50 years ago

31
00:01:31,910 --> 00:01:30,780
50 years ago we went as a country as a

32
00:01:35,210 --> 00:01:31,920
government

33
00:01:39,710 --> 00:01:35,220
today we go with not only International

34
00:01:45,410 --> 00:01:39,720
Partners but also commercial partners

35
00:01:46,910 --> 00:01:45,420
and so uh it is the beginning of the new

36
00:01:51,530 --> 00:01:46,920
beginning

37
00:01:54,289 --> 00:01:51,540
and that is to explore the heavens

38
00:01:55,550 --> 00:01:54,299

thanks Jackie thank you and now Vanessa

39
00:01:57,950 --> 00:01:55,560
weish

40
00:01:59,690 --> 00:01:57,960
well thank you you know administrator

41
00:02:02,170 --> 00:01:59,700
Nelson and I completely agree with you

42
00:02:06,230 --> 00:02:02,180
this mission was just you know flawless

43
00:02:08,210 --> 00:02:06,240
I just cannot thank our teams enough in

44
00:02:11,210 --> 00:02:08,220
our teams here at Johnson Space Center

45
00:02:14,210 --> 00:02:11,220
along with our other sister centers

46
00:02:15,650 --> 00:02:14,220
across NASA and NASA headquarters it

47
00:02:18,470 --> 00:02:15,660
took all of us to make this Mission

48
00:02:20,210 --> 00:02:18,480
possible here at NASA's Johnson Space

49
00:02:23,150 --> 00:02:20,220
Center I'm just so very proud and

50
00:02:26,330 --> 00:02:23,160
thankful of our flight control team that

51
00:02:29,150 --> 00:02:26,340
did a wonderful job making sure that

52
00:02:32,390 --> 00:02:29,160
this vehicle was able to do all of the

53
00:02:35,809 --> 00:02:32,400
Maneuvers to go outbound to do its flyby

54
00:02:39,250 --> 00:02:35,819
to go further away than any other human

55
00:02:42,770 --> 00:02:39,260
rated spacecraft and then to come back

56
00:02:45,470 --> 00:02:42,780
that takes a lot of different people to

57
00:02:49,009 --> 00:02:45,480
make that happen so I also want to

58
00:02:51,830 --> 00:02:49,019
congratulate our Orion program led by

59
00:02:53,150 --> 00:02:51,840
Howard Hugh and all of the people that

60
00:02:56,050 --> 00:02:53,160
are part of that as you mentioned

61
00:02:59,570 --> 00:02:56,060
Lockheed Martin as well as East

62
00:03:01,910 --> 00:02:59,580
and Glenn Research Center and then

63
00:03:04,369 --> 00:03:01,920

supporting them right here at Johnson

64
00:03:06,830 --> 00:03:04,379
our great engineering team our human

65
00:03:09,589 --> 00:03:06,840
health and performance team our safety

66
00:03:11,690 --> 00:03:09,599
business and Assurance teams as well as

67
00:03:13,190 --> 00:03:11,700
our teams that support our systems

68
00:03:16,089 --> 00:03:13,200
engineering and integration that help

69
00:03:18,470 --> 00:03:16,099
with the beginning plans architectures

70
00:03:19,490 --> 00:03:18,480
that were part of making all of this

71
00:03:21,530 --> 00:03:19,500
possible

72
00:03:23,630 --> 00:03:21,540
and then the testing that's being done

73
00:03:25,550 --> 00:03:23,640
and has been done and I also want to

74
00:03:27,670 --> 00:03:25,560
thank our teams out at White Sands who

75
00:03:30,770 --> 00:03:27,680
are continuing to do testing for Orion

76
00:03:33,290 --> 00:03:30,780
this mission is a great success for us

77
00:03:35,149 --> 00:03:33,300
right now this tells us that this

78
00:03:37,430 --> 00:03:35,159
spacecraft has the outer bones and

79
00:03:40,430 --> 00:03:37,440
everything that it needs so now we are

80
00:03:42,229 --> 00:03:40,440
going to go and finish outfitting it so

81
00:03:45,530 --> 00:03:42,239
that we can put humans on board on

82
00:03:47,570 --> 00:03:45,540
Artemis 2 and that's uh for us a big big

83
00:03:50,030 --> 00:03:47,580
deal because we'll put our astronauts on

84
00:03:52,789 --> 00:03:50,040
board and so we're very much looking

85
00:03:56,390 --> 00:03:52,799
forward to that and I just want to say

86
00:03:59,089 --> 00:03:56,400
again congratulations to the entire team

87
00:04:01,009 --> 00:03:59,099
thank you Jackie thanks Vanessa next up

88
00:04:02,990 --> 00:04:01,019

we have Janet Petro joining us from

89
00:04:04,970 --> 00:04:03,000
Kennedy

90
00:04:07,430 --> 00:04:04,980
hey good afternoon

91
00:04:10,190 --> 00:04:07,440
it really is great to be here with you

92
00:04:12,770 --> 00:04:10,200
all today you know Kennedy Space Center

93
00:04:14,149 --> 00:04:12,780
was there at the very beginning of this

94
00:04:16,789 --> 00:04:14,159
journey

95
00:04:19,430 --> 00:04:16,799
um with uh Charlie Blackwell Thompson as

96
00:04:20,509 --> 00:04:19,440
the launch director and here we are at

97
00:04:22,550 --> 00:04:20,519
the end of the mission I think you're

98
00:04:25,610 --> 00:04:22,560
going to hear from Melissa Jones who is

99
00:04:27,830 --> 00:04:25,620
the recovery team uh lead from the

100
00:04:29,510 --> 00:04:27,840
exploration ground systems uh here at

101
00:04:31,249 --> 00:04:29,520
KSC as well

102
00:04:33,350 --> 00:04:31,259
um you know and and that launch campaign

103
00:04:35,930 --> 00:04:33,360
was not easy uh there were a lot of

104
00:04:38,810 --> 00:04:35,940
setbacks but the collective team really

105
00:04:41,629 --> 00:04:38,820
Relentless relentlessly uh uh pursued

106
00:04:46,490 --> 00:04:41,639
getting that launch off and the entire

107
00:04:49,550 --> 00:04:46,500
Space Coast was lit up up as SLS and

108
00:04:51,590 --> 00:04:49,560
Orion took off and we watched we watched

109
00:04:53,749 --> 00:04:51,600
in all and then we followed the vehicle

110
00:04:55,909 --> 00:04:53,759
as it made its Journey around the moon

111
00:04:58,850 --> 00:04:55,919
and we held our breath all morning long

112
00:05:00,710 --> 00:04:58,860
as Orion did went through its deorbit

113
00:05:03,409 --> 00:05:00,720

and splashed down

114
00:05:06,050 --> 00:05:03,419
um Paces it really was uh surreal we all

115
00:05:08,629 --> 00:05:06,060
talked about it being a test mission but

116
00:05:12,830 --> 00:05:08,639
I think this vehicle in the performance

117
00:05:14,330 --> 00:05:12,840
really exceeded all our expectations I'm

118
00:05:16,490 --> 00:05:14,340
really looking forward to getting Orion

119
00:05:19,189 --> 00:05:16,500
back at Kennedy at the end of this month

120
00:05:20,930 --> 00:05:19,199
in a few short weeks where we'll bring

121
00:05:23,810 --> 00:05:20,940
it back into the processing facility

122
00:05:25,810 --> 00:05:23,820
take out the remaining payloads and and

123
00:05:28,550 --> 00:05:25,820
and services

124
00:05:30,590 --> 00:05:28,560
and then take a really good look at the

125
00:05:34,070 --> 00:05:30,600
heat shield and and see how that system

126
00:05:36,529 --> 00:05:34,080
performs but um you know I gotta say it

127
00:05:38,330 --> 00:05:36,539
is a Kennedy Space Center's 60th

128
00:05:40,909 --> 00:05:38,340
anniversary and the administrator kind

129
00:05:44,090 --> 00:05:40,919
of talked about the the previous 50 60

130
00:05:47,150 --> 00:05:44,100
years all about Apollo and shuttle and

131
00:05:50,029 --> 00:05:47,160
this is really capping off our diamond

132
00:05:52,129 --> 00:05:50,039
anniversary at uh at Kennedy as we look

133
00:05:54,010 --> 00:05:52,139
forward to the next 60 years and

134
00:05:57,469 --> 00:05:54,020
everything that Artemis is going to be

135
00:06:00,290 --> 00:05:57,479
doing for our future here at the agency

136
00:06:03,249 --> 00:06:00,300
so thank you very much

137
00:06:06,650 --> 00:06:03,259
what a way to cap off an excellent year

138
00:06:08,870 --> 00:06:06,660

next up we have gym free thanks Jackie

139
00:06:10,430 --> 00:06:08,880
good afternoon and what what a great day

140
00:06:12,170 --> 00:06:10,440
you know two pictures from this week

141
00:06:14,270 --> 00:06:12,180
that sum it up for me an empty mobile

142
00:06:16,670 --> 00:06:14,280
launcher rolling back and that

143
00:06:18,230 --> 00:06:16,680
spacecraft uh in the water there in the

144
00:06:20,629 --> 00:06:18,240
Pacific so

145
00:06:22,790 --> 00:06:20,639
um a remarkable Mission by every single

146
00:06:24,950 --> 00:06:22,800
one involved congratulations to folks

147
00:06:26,150 --> 00:06:24,960
that worked on this for years some

148
00:06:28,730 --> 00:06:26,160
people their whole career some people

149
00:06:32,150 --> 00:06:28,740
half of their career it's great to see

150
00:06:35,210 --> 00:06:32,160
this first flight come to a close so we

151
00:06:37,249 --> 00:06:35,220
can move on down our path of our

152
00:06:38,870 --> 00:06:37,259
sustainable Presence at the Moon you'll

153
00:06:41,330 --> 00:06:38,880
hear a lot about Artemis one and things

154
00:06:43,129 --> 00:06:41,340
we did on the vehicle in this flight and

155
00:06:45,230 --> 00:06:43,139
still have data to review but we

156
00:06:47,809 --> 00:06:45,240
definitely pushed this vehicle far so

157
00:06:51,230 --> 00:06:47,819
that we can be now on to Artemis 2 which

158
00:06:53,629 --> 00:06:51,240
is happening today at Kennedy uh the the

159
00:06:55,909 --> 00:06:53,639
crew modules there the service modules

160
00:06:56,830 --> 00:06:55,919
there the engine section arrived

161
00:07:00,790 --> 00:06:56,840
yesterday

162
00:07:03,650 --> 00:07:00,800
that vehicle is a reality and uh

163
00:07:05,090 --> 00:07:03,660

ironically so are the next missions all

164
00:07:07,550 --> 00:07:05,100
the way out through Artemis five we have

165
00:07:11,029 --> 00:07:07,560
Hardware today in work around the world

166
00:07:13,370 --> 00:07:11,039
through Artemis five this isn't just a

167
00:07:16,249 --> 00:07:13,380
one flight and we're done we are on our

168
00:07:18,469 --> 00:07:16,259
path to getting that base on the moon to

169
00:07:20,450 --> 00:07:18,479
getting the understanding we need to go

170
00:07:23,170 --> 00:07:20,460
on to Mars and doing the science that's

171
00:07:25,969 --> 00:07:23,180
front and center here in our program

172
00:07:27,589 --> 00:07:25,979
these missions are complex we talked a

173
00:07:30,290 --> 00:07:27,599
lot about that at the beginning they

174
00:07:32,150 --> 00:07:30,300
will become increasingly complex for us

175
00:07:34,370 --> 00:07:32,160
but I think the confidence that we

176
00:07:36,830 --> 00:07:34,380
learned in the vehicle the things that

177
00:07:38,809 --> 00:07:36,840
we tested the vehicle to the way that

178
00:07:41,150 --> 00:07:38,819
the teams responded to all that I think

179
00:07:43,129 --> 00:07:41,160
give me great confidence in our path in

180
00:07:45,529 --> 00:07:43,139
the future so it's great to be a part of

181
00:07:47,210 --> 00:07:45,539
it congratulations to everyone and I

182
00:07:48,770 --> 00:07:47,220
look forward to answering the

183
00:07:51,909 --> 00:07:48,780
administrators questions of when we're

184
00:07:55,370 --> 00:07:51,919
going to launch Artemis 2.

185
00:07:57,950 --> 00:07:55,380
thanks Jim over to you Mike oh well good

186
00:08:01,370 --> 00:07:57,960
afternoon and uh thank you to each and

187
00:08:04,070 --> 00:08:01,380
every one of you that have um have come

188
00:08:05,870 --> 00:08:04,080

to follow us today on a successful

189
00:08:07,850 --> 00:08:05,880
completion of the Artemis One mission

190
00:08:10,010 --> 00:08:07,860
but especially to those that you

191
00:08:12,170 --> 00:08:10,020
followed us from our very first launch

192
00:08:14,029 --> 00:08:12,180
attempt and stayed with us through

193
00:08:16,730 --> 00:08:14,039
hurricanes and hydrogen leaks and

194
00:08:18,469 --> 00:08:16,740
technical issues throughout this team

195
00:08:21,290 --> 00:08:18,479
has really persevered through many

196
00:08:23,330 --> 00:08:21,300
challenges and from the outset we spoke

197
00:08:25,010 --> 00:08:23,340
about how this was a deliberate stress

198
00:08:28,150 --> 00:08:25,020
test of our deep space human

199
00:08:31,249 --> 00:08:28,160
transportation system and

200
00:08:34,130 --> 00:08:31,259
we've been up front with a view about

201
00:08:37,190 --> 00:08:34,140
how this was going to be a challenging

202
00:08:39,230 --> 00:08:37,200
Mission we set some bold priorities

203
00:08:41,750 --> 00:08:39,240
Priority One demonstrate the vehicle

204
00:08:43,909 --> 00:08:41,760
lunar reentry conditions we successfully

205
00:08:45,350 --> 00:08:43,919
demonstrated that today priority two

206
00:08:46,850 --> 00:08:45,360
demonstrate the vehicle in the flight

207
00:08:48,410 --> 00:08:46,860
environment we've successfully

208
00:08:50,329 --> 00:08:48,420
demonstrated that over the course of a

209
00:08:52,730 --> 00:08:50,339
2016 test flight

210
00:08:54,350 --> 00:08:52,740
priority three is currently in progress

211
00:08:56,870 --> 00:08:54,360
that the vehicle is powered down and

212
00:08:58,790 --> 00:08:56,880
it's in the Pacific Ocean and as most

213
00:09:00,889 --> 00:08:58,800

Melissa Jones will elaborate the vehicle

214
00:09:02,930 --> 00:09:00,899
recovery and retrieval is in progress

215
00:09:04,190 --> 00:09:02,940
and we expect to complete that here in

216
00:09:06,470 --> 00:09:04,200
the next couple of hours and then

217
00:09:08,030 --> 00:09:06,480
priority four our bonus objectives

218
00:09:10,370 --> 00:09:08,040
sharing the mission with each and every

219
00:09:13,070 --> 00:09:10,380
one of you public Outreach sharing

220
00:09:15,170 --> 00:09:13,080
remarkable images completing Science and

221
00:09:16,550 --> 00:09:15,180
Technology demonstrations we've

222
00:09:18,470 --> 00:09:16,560
completed that plus some bonus

223
00:09:20,930 --> 00:09:18,480
objectives so this is what mission

224
00:09:23,509 --> 00:09:20,940
success looks like folks this was a

225
00:09:26,210 --> 00:09:23,519
challenging Mission and this uh is is

226
00:09:28,790 --> 00:09:26,220
what mission success looks like

227
00:09:32,090 --> 00:09:28,800
um one of our our forefathers in the

228
00:09:33,470 --> 00:09:32,100
Apollo program Hugh Dryden

229
00:09:36,470 --> 00:09:33,480
um spoke about the purpose of flight

230
00:09:39,050 --> 00:09:36,480
testing and he said it was to separate

231
00:09:41,090 --> 00:09:39,060
the real from the imagined and the known

232
00:09:42,590 --> 00:09:41,100
from the unknown and I don't think any

233
00:09:45,470 --> 00:09:42,600
one of us could have imagined the

234
00:09:47,810 --> 00:09:45,480
mission this successful but we had a

235
00:09:50,210 --> 00:09:47,820
very successful flight test we now have

236
00:09:52,190 --> 00:09:50,220
a foundational deep space transportation

237
00:09:54,530 --> 00:09:52,200
system and while we haven't

238
00:09:56,329 --> 00:09:54,540

looked at all the data that we've

239
00:09:58,730 --> 00:09:56,339
acquired we will do that over the coming

240
00:10:01,610 --> 00:09:58,740
days and weeks and fully understand and

241
00:10:04,790 --> 00:10:01,620
appreciate the margins that are there

242
00:10:06,590 --> 00:10:04,800
um so um I'll just say enclosure

243
00:10:09,949 --> 00:10:06,600
um you know we're sharing a historic day

244
00:10:12,710 --> 00:10:09,959
with the Apollo 17 Mission and uh Gene

245
00:10:16,490 --> 00:10:12,720
cernan left a plaque on the surface of

246
00:10:18,949 --> 00:10:16,500
the Moon and and I'll paraphrase it here

247
00:10:20,930 --> 00:10:18,959
May the spirit and the peace in which we

248
00:10:24,350 --> 00:10:20,940
executed this Mission continue forward

249
00:10:25,670 --> 00:10:24,360
For All Mankind this mission was a

250
00:10:28,670 --> 00:10:25,680
peaceful mission

251
00:10:30,530 --> 00:10:28,680
using Partnerships from across industry

252
00:10:32,750 --> 00:10:30,540
with our International partners with our

253
00:10:34,310 --> 00:10:32,760
science partners and uh and we're going

254
00:10:36,650 --> 00:10:34,320
to grow out from here there are more

255
00:10:37,910 --> 00:10:36,660
complex and more challenging missions

256
00:10:39,530 --> 00:10:37,920
ahead but we've got a foundational

257
00:10:42,410 --> 00:10:39,540
capability here so with that I'll pass

258
00:10:44,750 --> 00:10:42,420
it back to you Jackie thanks Mike now

259
00:10:47,210 --> 00:10:44,760
over to you Howard thank you Jackie good

260
00:10:50,030 --> 00:10:47,220
afternoon everybody what a fantastic day

261
00:10:53,389 --> 00:10:50,040
for Orion and Artemis

262
00:10:54,889 --> 00:10:53,399
um you know Center Director wife said we

263
00:10:57,470 --> 00:10:54,899

have a fantastic team the Orion team

264
00:10:59,870 --> 00:10:57,480
would not have been uh would have been

265
00:11:02,329 --> 00:10:59,880
uh tremendously happy just getting the

266
00:11:04,430 --> 00:11:02,339
data but this accomplishment that we've

267
00:11:06,590 --> 00:11:04,440
been able to do all through this 25 and

268
00:11:08,990 --> 00:11:06,600
a half day Mission uh has been so

269
00:11:10,670 --> 00:11:09,000
rewarding uh and we've been able to get

270
00:11:12,769 --> 00:11:10,680
a lot of data and I want to thank the

271
00:11:15,230 --> 00:11:12,779
teams today they've worked really hard

272
00:11:16,490 --> 00:11:15,240
you know flight operations team has done

273
00:11:18,769 --> 00:11:16,500
a tremendous job operating our

274
00:11:20,750 --> 00:11:18,779
spacecraft our engineering team our

275
00:11:23,329 --> 00:11:20,760
safety team and our our lead integration

276
00:11:26,389 --> 00:11:23,339
team has been tremendous in trying to

277
00:11:27,889 --> 00:11:26,399
not only just get the data down but also

278
00:11:29,810 --> 00:11:27,899
looking at the data and adding

279
00:11:31,730 --> 00:11:29,820
additional objectives you know I'll give

280
00:11:33,949 --> 00:11:31,740
you some highlights you know we we were

281
00:11:36,110 --> 00:11:33,959
able to uh be very successful in terms

282
00:11:39,110 --> 00:11:36,120
of our operating our systems in space

283
00:11:40,990 --> 00:11:39,120
and our return has just been the same in

284
00:11:44,449 --> 00:11:41,000
terms of our success we were able to hit

285
00:11:46,610 --> 00:11:44,459
.02 degrees uh within what we want to do

286
00:11:50,269 --> 00:11:46,620
for our flight path angle and we landed

287
00:11:52,250 --> 00:11:50,279
uh within 2.1 uh nautical miles of our

288
00:11:54,949 --> 00:11:52,260

Target Landing site our requirement was

289
00:11:56,930 --> 00:11:54,959
uh 5.4 nautical miles so tremendous

290
00:11:59,810 --> 00:11:56,940
success in terms of Return of course we

291
00:12:03,110 --> 00:11:59,820
demonstrate six skip entry uh capability

292
00:12:04,430 --> 00:12:03,120
that went flawlessly as well and we'll

293
00:12:07,190 --> 00:12:04,440
be looking forward to our heat shield

294
00:12:09,050 --> 00:12:07,200
data As We Gather that and learn more

295
00:12:11,630 --> 00:12:09,060
about the heat shield performance when

296
00:12:13,190 --> 00:12:11,640
we get the capsule back but overall the

297
00:12:14,990 --> 00:12:13,200
mission has been uh tremendously

298
00:12:18,829 --> 00:12:15,000
successful we've been able to accomplish

299
00:12:21,230 --> 00:12:18,839
uh over 122 of our flight test

300
00:12:23,569 --> 00:12:21,240
objectives that we had planned and we

301
00:12:26,030 --> 00:12:23,579
added a bonus of 20 real-time flight

302
00:12:28,610 --> 00:12:26,040
test objectives as well so great job by

303
00:12:30,889 --> 00:12:28,620
the team happy to look through the data

304
00:12:34,370 --> 00:12:30,899
even more and are ready to accomplish

305
00:12:36,949 --> 00:12:34,380
Artemis 2 going forward so thank you

306
00:12:38,509 --> 00:12:36,959
thanks Howard and now we have Emily

307
00:12:40,430 --> 00:12:38,519
Nelson

308
00:12:42,710 --> 00:12:40,440
you know this Mission this spacecraft

309
00:12:45,590 --> 00:12:42,720
and this team exceeded all expectations

310
00:12:46,190 --> 00:12:45,600
I think we're all in unison on that

311
00:12:49,430 --> 00:12:46,200
um

312
00:12:52,250 --> 00:12:49,440
the spacecraft performed so well that we

313
00:12:55,310 --> 00:12:52,260

were able to start looking ahead at

314
00:12:57,949 --> 00:12:55,320
Artemis 2 and thinking through

315
00:13:00,350 --> 00:12:57,959
how else can we push the boundaries on

316
00:13:01,850 --> 00:13:00,360
this flight what else can we learn where

317
00:13:03,949 --> 00:13:01,860
are there constraints that we can push

318
00:13:06,769 --> 00:13:03,959
on where are there opportunities for us

319
00:13:09,530 --> 00:13:06,779
to to improve on our products for the

320
00:13:11,810 --> 00:13:09,540
next flight and so for the last 25 and a

321
00:13:14,750 --> 00:13:11,820
half days we've been every day looking

322
00:13:16,370 --> 00:13:14,760
ahead to the next flight to see how we

323
00:13:19,430 --> 00:13:16,380
can improve on

324
00:13:20,930 --> 00:13:19,440
where we are today so that we can fly a

325
00:13:23,210 --> 00:13:20,940
safe and successful Mission with our

326
00:13:26,509 --> 00:13:23,220
astronauts next time around

327
00:13:29,090 --> 00:13:26,519
um the the team in Mission Control will

328
00:13:30,829 --> 00:13:29,100
spend a number of months combing back

329
00:13:33,829 --> 00:13:30,839
through every experience that we've had

330
00:13:36,290 --> 00:13:33,839
in the last month and uh improving our

331
00:13:37,850 --> 00:13:36,300
products figuring out what we could do

332
00:13:41,090 --> 00:13:37,860
better figuring out what went well and

333
00:13:42,949 --> 00:13:41,100
we want to repeat and meanwhile in low

334
00:13:44,690 --> 00:13:42,959
earth orbit we will continue to develop

335
00:13:47,930 --> 00:13:44,700
the technologies that are going to make

336
00:13:50,090 --> 00:13:47,940
Artemis 2 3 4 and sub successful we'll

337
00:13:51,590 --> 00:13:50,100
be installing another rollout solar

338
00:13:54,110 --> 00:13:51,600

array which is the technology that we'll

339
00:13:56,269 --> 00:13:54,120
be using on Gateway we'll be continuing

340
00:13:58,310 --> 00:13:56,279
to develop some of our more human

341
00:14:01,370 --> 00:13:58,320
systems inside of the space station so

342
00:14:02,870 --> 00:14:01,380
our work is has really just begun and

343
00:14:04,670 --> 00:14:02,880
we're really looking forward to

344
00:14:06,470 --> 00:14:04,680
unpacking everything that we had to

345
00:14:09,530 --> 00:14:06,480
learn from this space from this Mission

346
00:14:11,569 --> 00:14:09,540
as we prepare for the next one

347
00:14:13,790 --> 00:14:11,579
thanks Emily and now we'll head out to

348
00:14:20,690 --> 00:14:13,800
the recovery ship and hear from Melissa

349
00:14:26,629 --> 00:14:24,050
on a ship the Orion continues to perform

350
00:14:28,129 --> 00:14:26,639
anomaly even post Splashdown we just

351
00:14:30,650 --> 00:14:28,139
completed our open water hazard

352
00:14:33,829 --> 00:14:30,660
assessment of thrusters and RF radiation

353
00:14:35,870 --> 00:14:33,839
and all ropes and limits currently we're

354
00:14:37,310 --> 00:14:35,880
doing some underwater imagery to get

355
00:14:40,310 --> 00:14:37,320
some good pictures of the heat shield

356
00:14:41,750 --> 00:14:40,320
before we bring it into the ship and see

357
00:14:43,370 --> 00:14:41,760
seats are looking good for well-deck

358
00:14:46,370 --> 00:14:43,380
operations at this time

359
00:14:48,410 --> 00:14:46,380
so we'll progress with continue with our

360
00:14:50,389 --> 00:14:48,420
our Open Water operations we're going to

361
00:14:52,310 --> 00:14:50,399
put a collar around the capsule and the

362
00:14:54,829 --> 00:14:52,320
shuffle approach and we'll attach lines

363
00:14:58,329 --> 00:14:54,839

and bring Orion into the ship and at

364
00:15:04,370 --> 00:15:01,790
thanks Melissa now we'll move into the

365
00:15:07,610 --> 00:15:04,380
question and answer portion of our event

366
00:15:09,889 --> 00:15:07,620
today we'll open it up again to focus on

367
00:15:12,230 --> 00:15:09,899
the phone and here in the room again

368
00:15:14,150 --> 00:15:12,240
press star one to get into the queue our

369
00:15:17,210 --> 00:15:14,160
first question is from Marcia Dunn with

370
00:15:20,090 --> 00:15:17,220
the Associated Press

371
00:15:22,009 --> 00:15:20,100
uh hi uh Marcia Dunn at the AP here at

372
00:15:25,610 --> 00:15:22,019
the Kennedy Space Center

373
00:15:29,030 --> 00:15:25,620
um two timing questions so Artemis 2 we

374
00:15:30,889 --> 00:15:29,040
keep hearing 2024 when in the year 2024

375
00:15:33,710 --> 00:15:30,899
might that happen can you roll in that

376
00:15:37,850 --> 00:15:33,720
date at all to make it quicker and when

377
00:15:40,009 --> 00:15:37,860
will the crew of Artemis 2 be announced

378
00:15:42,410 --> 00:15:40,019
yeah I guess I'll go ahead and take the

379
00:15:45,470 --> 00:15:42,420
the first question uh we've talked

380
00:15:48,949 --> 00:15:45,480
always about around two years between

381
00:15:51,470 --> 00:15:48,959
Artemis 1 and Artemis 2. there's still a

382
00:15:53,150 --> 00:15:51,480
great deal of work to do on the uh the

383
00:15:55,370 --> 00:15:53,160
crew module in terms of the hardware

384
00:15:56,990 --> 00:15:55,380
installation I think everybody knows

385
00:15:58,329 --> 00:15:57,000
we're taking some of the boxes out of

386
00:16:01,009 --> 00:15:58,339
Artemis one

387
00:16:03,769 --> 00:16:01,019
sending them back for retest and then

388
00:16:05,870 --> 00:16:03,779

putting them into the Artemis 2 vehicle

389
00:16:07,490 --> 00:16:05,880
then the crew module and service module

390
00:16:09,650 --> 00:16:07,500
go together and go through a series of

391
00:16:11,930 --> 00:16:09,660
tests so right now you know we're still

392
00:16:14,870 --> 00:16:11,940
looking at that two-year time frame from

393
00:16:16,610 --> 00:16:14,880
Artemis one to two I think one thing

394
00:16:18,949 --> 00:16:16,620
we've always been concerned about is

395
00:16:20,750 --> 00:16:18,959
what do we learn from one and are there

396
00:16:23,569 --> 00:16:20,760
changes we have to make I think we've

397
00:16:26,569 --> 00:16:23,579
learned a lot from one uh TBD if there's

398
00:16:28,069 --> 00:16:26,579
changes so is that some of the work

399
00:16:30,110 --> 00:16:28,079
we'll be going through and then kind of

400
00:16:31,610 --> 00:16:30,120
get that final assessment on a on a date

401
00:16:33,889 --> 00:16:31,620
for two but it's we've always talked

402
00:16:35,689 --> 00:16:33,899
about two years between missions I joked

403
00:16:37,730 --> 00:16:35,699
earlier about the administrator asking

404
00:16:39,530 --> 00:16:37,740
me about it we obviously want to try and

405
00:16:43,550 --> 00:16:39,540
and do it quicker to your to your point

406
00:16:45,829 --> 00:16:43,560
Marcia and Howard and his team on the

407
00:16:47,930 --> 00:16:45,839
Orion side are always looking to ways to

408
00:16:50,090 --> 00:16:47,940
do things quicker we're trying to roll

409
00:16:52,069 --> 00:16:50,100
in Lessons Learned From the processing

410
00:16:53,990 --> 00:16:52,079
of the Artemis one vehicle at Kennedy

411
00:16:56,749 --> 00:16:54,000
are there things we can shorten there or

412
00:16:58,790 --> 00:16:56,759
optimize so that's all of our lessons

413
00:17:00,170 --> 00:16:58,800

learned path going forward in the near

414
00:17:02,449 --> 00:17:00,180
term I'll turn the second question

415
00:17:05,090 --> 00:17:02,459
Vanessa awesome

416
00:17:07,370 --> 00:17:05,100
also Marcia one of the things that we've

417
00:17:09,770 --> 00:17:07,380
been talking about is when to assign the

418
00:17:13,490 --> 00:17:09,780
crew right and so we knew that we wanted

419
00:17:15,890 --> 00:17:13,500
to wait for this mission to go make sure

420
00:17:17,510 --> 00:17:15,900
that it was a success as Jim said

421
00:17:19,909 --> 00:17:17,520
there's still some things that need to

422
00:17:22,250 --> 00:17:19,919
be learned as we get the spacecraft back

423
00:17:25,130 --> 00:17:22,260
to Florida make sure that we have

424
00:17:27,230 --> 00:17:25,140
everything that we need to know but our

425
00:17:29,390 --> 00:17:27,240
intent is if all is still go and

426
00:17:32,450 --> 00:17:29,400
everything looks good then our plan is

427
00:17:34,430 --> 00:17:32,460
to name the crew in early 2023. so we're

428
00:17:37,669 --> 00:17:34,440
looking very much forward to that we're

429
00:17:41,510 --> 00:17:37,679
our crews people are anxious we know

430
00:17:43,310 --> 00:17:41,520
that and so that is our game plan

431
00:17:44,390 --> 00:17:43,320
thank you very much that'll certainly be

432
00:17:47,510 --> 00:17:44,400
exciting

433
00:17:52,360 --> 00:17:47,520
next up we have a question from Gina

434
00:17:56,690 --> 00:17:55,130
[Music]

435
00:17:59,810 --> 00:17:56,700
what was it like to be in mission

436
00:18:02,270 --> 00:17:59,820
control for Orion splashing down this

437
00:18:02,930 --> 00:18:02,280
morning oh gracious

438
00:18:05,150 --> 00:18:02,940

um

439
00:18:06,890 --> 00:18:05,160
personally it

440
00:18:08,450 --> 00:18:06,900
you know I was talking with Rick labrode

441
00:18:11,270 --> 00:18:08,460
our lead flight director a few times

442
00:18:12,590 --> 00:18:11,280
during the day and and he commented

443
00:18:14,090 --> 00:18:12,600
several times that it just hadn't sunk

444
00:18:15,830 --> 00:18:14,100
in yet it just really hadn't sunk in so

445
00:18:19,130 --> 00:18:15,840
I'm going to Echo that it for sure has

446
00:18:21,350 --> 00:18:19,140
not sunk in yet I would also say that

447
00:18:23,630 --> 00:18:21,360
coming to work every day for the last 26

448
00:18:25,130 --> 00:18:23,640
days you've oh I feel like any minute

449
00:18:27,049 --> 00:18:25,140
now I'm going to get used to walking in

450
00:18:29,330 --> 00:18:27,059
and seeing these amazing pictures on the

451
00:18:31,490 --> 00:18:29,340
front boards and at the at the front of

452
00:18:33,950 --> 00:18:31,500
Mission Control this morning we were

453
00:18:35,330 --> 00:18:33,960
finishing up some data downloads and so

454
00:18:36,409 --> 00:18:35,340
that was using up all of our bandwidth

455
00:18:38,630 --> 00:18:36,419
so we didn't get pictures for a little

456
00:18:40,310 --> 00:18:38,640
while and then suddenly the picture pops

457
00:18:42,110 --> 00:18:40,320
up and it's the most beautiful picture

458
00:18:44,210 --> 00:18:42,120
I've seen of Earth as we're coming back

459
00:18:47,930 --> 00:18:44,220
to it and

460
00:18:50,029 --> 00:18:47,940
I mean just awe-inspiring like stunning

461
00:18:51,230 --> 00:18:50,039
you know one of us notices it and points

462
00:18:53,570 --> 00:18:51,240
at the screen and everybody else just

463
00:18:56,029 --> 00:18:53,580

pauses for a second to just soak in

464
00:18:57,890 --> 00:18:56,039
there's a ship that has just been at the

465
00:18:59,330 --> 00:18:57,900
Moon been farther away than any

466
00:19:01,490 --> 00:18:59,340
spacecraft built for humans has ever

467
00:19:03,110 --> 00:19:01,500
been and now it's about to splash down

468
00:19:05,690 --> 00:19:03,120
in the Pacific and we get to be here for

469
00:19:08,150 --> 00:19:05,700
this and so it it was it's certainly a

470
00:19:10,010 --> 00:19:08,160
momentous occasion

471
00:19:15,830 --> 00:19:10,020
thanks very much next we have a question

472
00:19:18,830 --> 00:19:17,270
yeah thanks a lot

473
00:19:21,110 --> 00:19:18,840
um a quick one for Mike Serafin if I

474
00:19:23,930 --> 00:19:21,120
could Mike what was the biggest surprise

475
00:19:25,490 --> 00:19:23,940
for you during this Mission uh something

476
00:19:27,830 --> 00:19:25,500
that might have caught you off guard or

477
00:19:29,029 --> 00:19:27,840
either happily or unhappily and you

478
00:19:31,490 --> 00:19:29,039
mentioned the Artemis 2 engine

479
00:19:32,690 --> 00:19:31,500
compartment uh getting here to KSC can

480
00:19:34,909 --> 00:19:32,700
you talk about the challenge of

481
00:19:37,250 --> 00:19:34,919
assembling the core stage in Florida

482
00:19:38,990 --> 00:19:37,260
versus michoud what that what that buys

483
00:19:41,510 --> 00:19:39,000
you thanks

484
00:19:45,169 --> 00:19:41,520
yeah Bill uh thank you for the question

485
00:19:49,490 --> 00:19:45,179
um the biggest surprise for me was a

486
00:19:51,590 --> 00:19:49,500
positive one and it was simply that the

487
00:19:53,330 --> 00:19:51,600
first time flight of a brand new rocket

488
00:19:56,270 --> 00:19:53,340

a brand new spacecraft first time

489
00:19:59,029 --> 00:19:56,280
operations went as smoothly as it did

490
00:20:01,909 --> 00:19:59,039
and I think that's a testament to the

491
00:20:04,970 --> 00:20:01,919
level of preparation and the quality of

492
00:20:07,970 --> 00:20:04,980
workmanship the just the overall level

493
00:20:10,789 --> 00:20:07,980
of test and integration and and just

494
00:20:12,070 --> 00:20:10,799
effort put into getting this Mission

495
00:20:16,610 --> 00:20:12,080
ready to fly

496
00:20:20,390 --> 00:20:16,620
in terms of uh bringing the core stage

497
00:20:21,710 --> 00:20:20,400
engine section to the Kennedy Space

498
00:20:24,110 --> 00:20:21,720
Center

499
00:20:25,730 --> 00:20:24,120
um you know that is that's an efficiency

500
00:20:28,250 --> 00:20:25,740
that we're looking at

501
00:20:31,250 --> 00:20:28,260
um and and shipping it and then

502
00:20:33,789 --> 00:20:31,260
assembling it vertically is something

503
00:20:36,289 --> 00:20:33,799
that that we've been prepared to do

504
00:20:38,210 --> 00:20:36,299
and the the infrastructure at the

505
00:20:39,830 --> 00:20:38,220
Kennedy Space Center affords us an

506
00:20:41,450 --> 00:20:39,840
opportunity to do that that as opposed

507
00:20:45,230 --> 00:20:41,460
to a horizontal integration at Mishu

508
00:20:47,930 --> 00:20:45,240
assembly facility near New Orleans the

509
00:20:50,090 --> 00:20:47,940
work at Mishu is still going to keep

510
00:20:52,669 --> 00:20:50,100
going on we still need to build tanks we

511
00:20:55,370 --> 00:20:52,679
still need to build the the large

512
00:20:57,350 --> 00:20:55,380
components and we'll ship the the bulk

513
00:21:00,610 --> 00:20:57,360

of the core stage minus the engine

514
00:21:03,289 --> 00:21:00,620
section to the cape and then made it

515
00:21:05,450 --> 00:21:03,299
at the at the cape once it gets there it

516
00:21:07,190 --> 00:21:05,460
actually affords us some efficiency by

517
00:21:09,830 --> 00:21:07,200
by splitting the workforce rather than

518
00:21:13,669 --> 00:21:09,840
than having competing Workforce on the

519
00:21:16,549 --> 00:21:13,679
on the uh our competing work instruction

520
00:21:19,490 --> 00:21:16,559
priorities on the shop floor at at Mishu

521
00:21:22,130 --> 00:21:19,500
so I think I think it's a good thing and

522
00:21:24,950 --> 00:21:22,140
uh it's it again is something that that

523
00:21:26,810 --> 00:21:24,960
we've learned how to integrate one of

524
00:21:28,250 --> 00:21:26,820
the more complex systems on the on the

525
00:21:30,289 --> 00:21:28,260
core stage I don't know Jim you've been

526
00:21:32,690 --> 00:21:30,299
in some of those conversations as well

527
00:21:34,510 --> 00:21:32,700
if you have anything to add on yeah at

528
00:21:37,190 --> 00:21:34,520
michoud we have to

529
00:21:38,570 --> 00:21:37,200
construct a clean tent around the engine

530
00:21:40,610 --> 00:21:38,580
section when we do a lot of the

531
00:21:42,950 --> 00:21:40,620
installation ends or take things off to

532
00:21:44,510 --> 00:21:42,960
test so at Kennedy we actually and so

533
00:21:46,070 --> 00:21:44,520
you take that up and down it adds time

534
00:21:48,470 --> 00:21:46,080
at Kennedy we don't have to do that

535
00:21:50,930 --> 00:21:48,480
we'll process in the space station

536
00:21:52,490 --> 00:21:50,940
processing facility so we're hopeful

537
00:21:56,330 --> 00:21:52,500
that the engine section which is

538
00:21:59,450 --> 00:21:56,340

incredibly complex uh will uh improve in

539
00:22:01,909 --> 00:21:59,460
its uh schedule time and then the work

540
00:22:03,169 --> 00:22:01,919
that Mike mentioned about Workforce you

541
00:22:05,450 --> 00:22:03,179
know we're starting to ramp up the

542
00:22:08,149 --> 00:22:05,460
exploration upper stage work at michoud

543
00:22:10,010 --> 00:22:08,159
also so we we have a lot of work for

544
00:22:12,470 --> 00:22:10,020
those folks to do on stuff out through

545
00:22:14,330 --> 00:22:12,480
Artemis 4 and we're already starting a

546
00:22:16,669 --> 00:22:14,340
weld confidence articles and structural

547
00:22:19,970 --> 00:22:16,679
articles on the exploration upper stage

548
00:22:21,770 --> 00:22:19,980
so it helps us with efficiency and

549
00:22:24,470 --> 00:22:21,780
hopefully getting to that one year

550
00:22:27,230 --> 00:22:24,480
Cadence as fast as we can

551
00:22:29,029 --> 00:22:27,240
thank you both next up in the room we

552
00:22:32,930 --> 00:22:29,039
have a question from Eric Berger with

553
00:22:36,590 --> 00:22:34,730
hi thanks very much and congratulations

554
00:22:38,570 --> 00:22:36,600
on such an impressive flight I mean it

555
00:22:39,529 --> 00:22:38,580
really was pretty awesome to watch I

556
00:22:41,149 --> 00:22:39,539
think

557
00:22:43,789 --> 00:22:41,159
um the first question is for maybe

558
00:22:46,010 --> 00:22:43,799
Howard or Mike on the coming back today

559
00:22:48,529 --> 00:22:46,020
it looked like the capsule was kind of

560
00:22:51,409 --> 00:22:48,539
swinging back and forth maybe doing some

561
00:22:52,669 --> 00:22:51,419
roll Maneuvers and is that was that as

562
00:22:54,110 --> 00:22:52,679
planned

563
00:22:55,789 --> 00:22:54,120

um and then second I guess for the

564
00:22:56,990 --> 00:22:55,799
administrator

565
00:22:59,270 --> 00:22:57,000
um I think one of the most remarkable

566
00:23:01,610 --> 00:22:59,280
things about this moment is that

567
00:23:04,370 --> 00:23:01,620
everyone is behind Artemis you got the

568
00:23:06,590 --> 00:23:04,380
White House Congress International

569
00:23:09,169 --> 00:23:06,600
allies traditional space commercial

570
00:23:11,510 --> 00:23:09,179
space and most of the space advocacy

571
00:23:13,070 --> 00:23:11,520
Community I think that's pretty unique

572
00:23:13,909 --> 00:23:13,080
at least since Apollo and so I'm

573
00:23:16,370 --> 00:23:13,919
wondering

574
00:23:18,830 --> 00:23:16,380
sort of what you attribute to that

575
00:23:23,649 --> 00:23:18,840
Universal almost Universal support for

576
00:23:28,549 --> 00:23:26,450
hey Eric thanks for the question yeah we

577
00:23:31,010 --> 00:23:28,559
do do roll Maneuvers especially up front

578
00:23:33,529 --> 00:23:31,020
on re-entry give us that lift Vector so

579
00:23:35,690 --> 00:23:33,539
it'll give us a positive factor out when

580
00:23:37,310 --> 00:23:35,700
we do the skip entry and so it's really

581
00:23:39,230 --> 00:23:37,320
important of course we will do some role

582
00:23:41,930 --> 00:23:39,240
orientation under the shoot so we will

583
00:23:44,690 --> 00:23:41,940
make sure we land appropriately uh when

584
00:23:46,490 --> 00:23:44,700
we splash down the water as well I don't

585
00:23:48,529 --> 00:23:46,500
know specific times you're referring to

586
00:23:51,529 --> 00:23:48,539
but we certainly would do some roles

587
00:23:54,350 --> 00:23:51,539
yeah yeah so I'll elaborate here a

588
00:23:56,270 --> 00:23:54,360

little bit Eric the center of gravity

589
00:23:58,370 --> 00:23:56,280
and the center lift are slightly offset

590
00:24:00,169 --> 00:23:58,380
and the way that you control the lift

591
00:24:02,270 --> 00:24:00,179
Vector is you rotate one about the other

592
00:24:03,830 --> 00:24:02,280
and you can control which direction the

593
00:24:06,110 --> 00:24:03,840
vehicle is lifting lifting up lifting

594
00:24:08,390 --> 00:24:06,120
down so those were purposeful roles I'm

595
00:24:11,630 --> 00:24:08,400
familiar and recall seeing some of the

596
00:24:13,850 --> 00:24:11,640
roles when we had a signal between the

597
00:24:15,169 --> 00:24:13,860
two blackouts and and that that was part

598
00:24:16,310 --> 00:24:15,179
of the plan and the blackouts were

599
00:24:18,950 --> 00:24:16,320
planned we knew that those were coming

600
00:24:20,330 --> 00:24:18,960
as well anyway and you had the uh the

601
00:24:22,870 --> 00:24:20,340
support question sir

602
00:24:25,549 --> 00:24:22,880
Eric the answer to your question is

603
00:24:27,350 --> 00:24:25,559
space is the place

604
00:24:30,529 --> 00:24:27,360
and and

605
00:24:32,990 --> 00:24:30,539
um you you see that you see it in the

606
00:24:36,890 --> 00:24:33,000
eyes of children

607
00:24:38,870 --> 00:24:36,900
you see it in the interaction of our

608
00:24:41,570 --> 00:24:38,880
guys in the blue suits

609
00:24:46,630 --> 00:24:41,580
our astronauts when they walk into any

610
00:24:50,470 --> 00:24:46,640
room whether it's young or old

611
00:24:53,169 --> 00:24:50,480
you see it in the

612
00:24:57,289 --> 00:24:53,179
technological prowess

613
00:25:00,830 --> 00:24:57,299

of the free nations of the world

614
00:25:04,610 --> 00:25:00,840
suddenly displaying transparently

615
00:25:07,789 --> 00:25:04,620
everything that we are doing

616
00:25:12,110 --> 00:25:07,799
uh you see that in a in a nation that

617
00:25:16,130 --> 00:25:12,120
has been Riven with partisanship

618
00:25:20,090 --> 00:25:16,140
uh that doesn't exist here NASA is

619
00:25:23,890 --> 00:25:20,100
basically nonpartisan ours and D's alike

620
00:25:27,169 --> 00:25:23,900
come together to join us

621
00:25:29,269 --> 00:25:27,179
uh and you see that reflected not only

622
00:25:32,450 --> 00:25:29,279
in the leadership here

623
00:25:34,250 --> 00:25:32,460
but you see that uh reflected in the

624
00:25:36,590 --> 00:25:34,260
people and the leadership around the

625
00:25:40,210 --> 00:25:39,110
in the little bit that I've been to

626
00:25:43,789 --> 00:25:40,220
Europe

627
00:25:47,330 --> 00:25:43,799
uh I mean people are just

628
00:25:49,190 --> 00:25:47,340
to use a phrase over the moon about our

629
00:25:51,950 --> 00:25:49,200
space program

630
00:25:56,029 --> 00:25:51,960
uh when I was at the astronomical

631
00:25:58,549 --> 00:25:56,039
conference in in Paris I got a message

632
00:25:59,529 --> 00:25:58,559
that the French President wanted to see

633
00:26:04,549 --> 00:25:59,539
me

634
00:26:07,370 --> 00:26:04,559
and uh he's a space Aficionado so he

635
00:26:09,710 --> 00:26:07,380
just comes last week for a state visit

636
00:26:13,370 --> 00:26:09,720
with our president and where does he

637
00:26:19,190 --> 00:26:13,380
want to go he comes to NASA

638
00:26:21,010 --> 00:26:19,200

uh and you see this in also the sense of

639
00:26:23,930 --> 00:26:21,020
America

640
00:26:28,610 --> 00:26:23,940
accomplishing something

641
00:26:31,669 --> 00:26:28,620
that people get excited about

642
00:26:34,070 --> 00:26:31,679
you roll all of that together

643
00:26:37,010 --> 00:26:34,080
and a lot more

644
00:26:40,010 --> 00:26:37,020
and that's why you see the excitement in

645
00:26:43,909 --> 00:26:40,020
this room today and all across the

646
00:26:45,789 --> 00:26:43,919
country and that's why you saw 60 years

647
00:26:49,370 --> 00:26:45,799
ago

648
00:26:51,070 --> 00:26:49,380
one half billion people

649
00:26:54,649 --> 00:26:51,080
of the Earth

650
00:26:58,730 --> 00:26:54,659
watching Apollo 11.

651
00:27:03,470 --> 00:27:01,370
thank you very much our next question

652
00:27:05,990 --> 00:27:03,480
comes from Chris Davenport with the

653
00:27:08,570 --> 00:27:06,000
Washington Post

654
00:27:10,970 --> 00:27:08,580
hi good afternoon and uh thank you very

655
00:27:13,250 --> 00:27:10,980
much actually my question is a follow on

656
00:27:14,990 --> 00:27:13,260
that because obviously this is a very

657
00:27:17,330 --> 00:27:15,000
big day for NASA and you have a lot of

658
00:27:20,210 --> 00:27:17,340
uh enthusiasm and momentum for the

659
00:27:22,010 --> 00:27:20,220
Artemis program uh but as we know these

660
00:27:24,649 --> 00:27:22,020
successes can sometimes have a very

661
00:27:26,690 --> 00:27:24,659
short shelf life I mean we saw that with

662
00:27:28,850 --> 00:27:26,700
the Apollo program so I'm wondering if

663
00:27:31,669 --> 00:27:28,860

you're concerned about that and how you

664
00:27:32,990 --> 00:27:31,679
keep the momentum going uh with the

665
00:27:35,930 --> 00:27:33,000
public and more importantly with

666
00:27:37,730 --> 00:27:35,940
Congress especially with the the fact

667
00:27:39,470 --> 00:27:37,740
that the Artemis 2 mission is not going

668
00:27:41,630 --> 00:27:39,480
to come for another two years from now

669
00:27:44,330 --> 00:27:41,640
thanks very much

670
00:27:47,149 --> 00:27:44,340
well Chris I'm not worried about the

671
00:27:49,730 --> 00:27:47,159
support from the Congress we will have

672
00:27:54,350 --> 00:27:49,740
that we in fact have that

673
00:28:00,230 --> 00:27:54,360
and as I described in my answer to Eric

674
00:28:05,210 --> 00:28:03,470
I believe that you're going to see a

675
00:28:08,930 --> 00:28:05,220
continued talk

676
00:28:12,289 --> 00:28:08,940
about what's going on when Vanessa

677
00:28:15,350 --> 00:28:12,299
announces who's going to be on the crew

678
00:28:17,390 --> 00:28:15,360
I I think that's going to be an

679
00:28:20,750 --> 00:28:17,400
immediate story and the American people

680
00:28:23,810 --> 00:28:20,760
just like the original Seven astronauts

681
00:28:27,409 --> 00:28:23,820
in the Mercury days are going to want to

682
00:28:30,230 --> 00:28:27,419
know about these astronauts and how they

683
00:28:33,470 --> 00:28:30,240
got to where they are and what is their

684
00:28:36,470 --> 00:28:33,480
life like and what it's going to be like

685
00:28:39,830 --> 00:28:36,480
as they prepare for this mission

686
00:28:41,510 --> 00:28:39,840
uh and I think as we continue to do

687
00:28:45,049 --> 00:28:41,520
other things

688
00:28:48,710 --> 00:28:45,059

remember uh President Kennedy uh

689
00:28:51,830 --> 00:28:48,720
uh in his speech almost literally 60

690
00:28:55,549 --> 00:28:51,840
years ago at not far from here at the

691
00:29:00,409 --> 00:28:55,559
Rice University Stadium said we go to

692
00:29:04,130 --> 00:29:00,419
the moon and do other things not because

693
00:29:07,850 --> 00:29:04,140
it is easy but because it is hard

694
00:29:09,169 --> 00:29:07,860
and that Taps into something in our

695
00:29:12,830 --> 00:29:09,179
spirit

696
00:29:16,850 --> 00:29:12,840
uh that we as a people as a people of

697
00:29:19,430 --> 00:29:16,860
free nations want to see accomplished

698
00:29:22,490 --> 00:29:19,440
and I think that's going to engender the

699
00:29:27,950 --> 00:29:22,500
interests that naturally we could be

700
00:29:27,960 --> 00:29:33,350
thank you our next question

701
00:29:38,450 --> 00:29:35,810
thank you Mark carrot with the aviation

702
00:29:39,769 --> 00:29:38,460
week in space technology if I heard

703
00:29:40,430 --> 00:29:39,779
correctly

704
00:29:44,090 --> 00:29:40,440
um

705
00:29:47,029 --> 00:29:44,100
it sounds like the capsule will go over

706
00:29:50,029 --> 00:29:47,039
land to Kennedy I just wondered

707
00:29:52,070 --> 00:29:50,039
um if there's a a reason for that like

708
00:29:53,750 --> 00:29:52,080
if it's going to stop in between or it's

709
00:29:55,669 --> 00:29:53,760
just don't want to take a chance of

710
00:29:59,389 --> 00:29:55,679
putting it on the super guppy or

711
00:30:01,549 --> 00:29:59,399
something I I don't know thanks

712
00:30:03,590 --> 00:30:01,559
yeah and I um you know from our

713
00:30:06,230 --> 00:30:03,600

perspective I think we looked at both uh

714
00:30:08,570 --> 00:30:06,240
going on a guppy flying or going on the

715
00:30:10,610 --> 00:30:08,580
ground I think or maybe a few days but

716
00:30:11,930 --> 00:30:10,620
certainly there was no stops along the

717
00:30:14,149 --> 00:30:11,940
way we're going to try to get the

718
00:30:16,990 --> 00:30:14,159
spacecraft back as soon as as possible

719
00:30:20,029 --> 00:30:17,000
you know certainly dot has some

720
00:30:22,250 --> 00:30:20,039
rules relative to

721
00:30:24,110 --> 00:30:22,260
um you know the transport transporting

722
00:30:26,570 --> 00:30:24,120
something like this across the country

723
00:30:27,950 --> 00:30:26,580
but I know that the ground team has

724
00:30:31,190 --> 00:30:27,960
worked through that already and they've

725
00:30:34,070 --> 00:30:31,200
got a great plan and we expect uh like

726
00:30:36,950 --> 00:30:34,080
Janet said the spacecraft back at KSC

727
00:30:42,769 --> 00:30:38,630
thank you very much our next question

728
00:30:47,510 --> 00:30:43,970
thanks Jackie I

729
00:30:49,310 --> 00:30:47,520
get a question for Mike Serafin based on

730
00:30:51,590 --> 00:30:49,320
that early data you guys have already

731
00:30:53,510 --> 00:30:51,600
and what I guess you saw this morning is

732
00:30:54,889 --> 00:30:53,520
there anything that happened from you

733
00:30:56,389 --> 00:30:54,899
know service modules Edison all the way

734
00:30:58,190 --> 00:30:56,399
to Splashdown that might have looked

735
00:31:01,730 --> 00:30:58,200
funny or unexpected that would maybe

736
00:31:05,149 --> 00:31:01,740
warrant a closer look um and also what

737
00:31:07,850 --> 00:31:05,159
was the uh Splashdown speed of around

738
00:31:10,250 --> 00:31:07,860

just before it hit water and then I also

739
00:31:13,130 --> 00:31:10,260
just had one other question for Bill

740
00:31:15,649 --> 00:31:13,140
Nelson you mentioned that the plans take

741
00:31:18,649 --> 00:31:15,659
humans to Mars by the end of the 2030s

742
00:31:22,250 --> 00:31:18,659
um has NASA done any actual planning or

743
00:31:25,190 --> 00:31:22,260
assessments recently on that date uh for

744
00:31:28,130 --> 00:31:25,200
for going to Mars thanks

745
00:31:31,070 --> 00:31:28,140
okay uh Joey thank you for the questions

746
00:31:34,430 --> 00:31:31,080
um in terms of uh unexpected items

747
00:31:37,130 --> 00:31:34,440
during uh re-entry I am not tracking any

748
00:31:39,250 --> 00:31:37,140
issues associated with the crew and

749
00:31:41,990 --> 00:31:39,260
service module separation the

750
00:31:44,149 --> 00:31:42,000
reorientation of the spacecraft into the

751
00:31:45,250 --> 00:31:44,159
entry interface at

752
00:31:48,710 --> 00:31:45,260
um

753
00:31:51,710 --> 00:31:48,720
attitude to get aerodynamic capture the

754
00:31:54,169 --> 00:31:51,720
entire skip profile you know we did have

755
00:31:55,870 --> 00:31:54,179
two long blackouts as I recall they

756
00:31:58,610 --> 00:31:55,880
reach about six minutes in duration

757
00:32:01,370 --> 00:31:58,620
we're going to have to look at the post

758
00:32:03,830 --> 00:32:01,380
Mission data recorders after we get the

759
00:32:05,269 --> 00:32:03,840
the capsule back to shore to see if

760
00:32:08,630 --> 00:32:05,279
there was anything associated with it

761
00:32:10,909 --> 00:32:08,640
but clearly the vehicle flew the the

762
00:32:13,610 --> 00:32:10,919
skip re-entry just fine the entry

763
00:32:15,889 --> 00:32:13,620

guidance system was spot on as Howard

764
00:32:17,690 --> 00:32:15,899
indicated earlier relative to the

765
00:32:21,529 --> 00:32:17,700
targeted Landing site we came down with

766
00:32:24,769 --> 00:32:21,539
an eyesight of the recovery ship and the

767
00:32:29,590 --> 00:32:24,779
the vehicle was clean post-splash down

768
00:32:31,789 --> 00:32:29,600
the all of the operating bags that

769
00:32:34,430 --> 00:32:31,799
protect in the event that the capsule

770
00:32:36,950 --> 00:32:34,440
flips over and needs to be automatically

771
00:32:39,710 --> 00:32:36,960
operated all five of the uh the bags

772
00:32:42,730 --> 00:32:39,720
inflated and the the vehicle was powered

773
00:32:45,769 --> 00:32:42,740
down successfully without any any

774
00:32:48,409 --> 00:32:45,779
Thruster leaks or hazards or anything

775
00:32:49,549 --> 00:32:48,419
along those lines the team did leave as

776
00:32:51,950 --> 00:32:49,559
part of one of our flight test

777
00:32:54,590 --> 00:32:51,960
objectives leave the vehicle powered for

778
00:32:56,690 --> 00:32:54,600
two hours post splash down to gather a

779
00:32:58,190 --> 00:32:56,700
thermal soap back data as we as we came

780
00:33:00,830 --> 00:32:58,200
through the Earth's atmosphere of the

781
00:33:03,049 --> 00:33:00,840
vehicle saw temperatures outside of it

782
00:33:06,110 --> 00:33:03,059
at nearing 5000 degrees Fahrenheit that

783
00:33:08,810 --> 00:33:06,120
soaks back into the vehicle structure we

784
00:33:11,450 --> 00:33:08,820
did collect data by having an extended

785
00:33:12,250 --> 00:33:11,460
power up on the on the surface of the

786
00:33:14,570 --> 00:33:12,260
ocean

787
00:33:16,789 --> 00:33:14,580
all that was fine all the parachute

788
00:33:19,730 --> 00:33:16,799

deployments were fine

789
00:33:22,909 --> 00:33:19,740
um the uh probably the only thing that

790
00:33:24,769 --> 00:33:22,919
that happened that we we expected may

791
00:33:26,810 --> 00:33:24,779
happen and and was likely was the

792
00:33:29,090 --> 00:33:26,820
forward Bay cover sank in the ocean

793
00:33:30,889 --> 00:33:29,100
before we could recover it and the

794
00:33:32,570 --> 00:33:30,899
parachutes sank before we could recover

795
00:33:34,029 --> 00:33:32,580
those but we knew that that was a

796
00:33:37,430 --> 00:33:34,039
possibility

797
00:33:39,649 --> 00:33:37,440
prior to flight the fact that the the

798
00:33:43,430 --> 00:33:39,659
parachute deployment sequence was was

799
00:33:45,350 --> 00:33:43,440
all nominal really makes the uh the

800
00:33:46,669 --> 00:33:45,360
retrieval of the parachutes come point

801
00:33:48,470 --> 00:33:46,679
so

802
00:33:51,409 --> 00:33:48,480
um you know in terms of anything

803
00:33:53,090 --> 00:33:51,419
unexpected I would say no in terms of

804
00:33:54,950 --> 00:33:53,100
the Splashdown speed I didn't get an

805
00:33:56,810 --> 00:33:54,960
exact speed but we were targeting around

806
00:33:59,029 --> 00:33:56,820
20 miles an hour and that that appeared

807
00:34:00,470 --> 00:33:59,039
to be about what the uh the Splashdown

808
00:34:04,310 --> 00:34:00,480
speed was but we could follow up with

809
00:34:10,070 --> 00:34:07,009
uh the goal of going to Mars was first

810
00:34:12,770 --> 00:34:10,080
announced by President Obama and it was

811
00:34:16,310 --> 00:34:12,780
thought at the time that it would be

812
00:34:24,589 --> 00:34:19,810
but that was a dozen years ago

813
00:34:27,710 --> 00:34:24,599

and now a more realistic goal is the end

814
00:34:31,430 --> 00:34:27,720
of the decade of the 2030s

815
00:34:33,829 --> 00:34:31,440
but a lot of this will depend on the

816
00:34:36,409 --> 00:34:33,839
development of new technologies the

817
00:34:38,629 --> 00:34:36,419
ability to sustain humans for a long

818
00:34:43,010 --> 00:34:38,639
period of time all the way

819
00:34:46,550 --> 00:34:43,020
uh part of that is going to be how fast

820
00:34:49,329 --> 00:34:46,560
we can get to humans how fast we can get

821
00:34:53,450 --> 00:34:49,339
to Mars with the crew

822
00:34:56,510 --> 00:34:53,460
and uh so we finally broke through with

823
00:35:00,589 --> 00:34:56,520
the Office of Management and budget on

824
00:35:04,970 --> 00:35:00,599
on nuclear thermal propulsion and

825
00:35:08,150 --> 00:35:04,980
nuclear electric propulsion uh research

826
00:35:09,490 --> 00:35:08,160
I think that will be supportive by the

827
00:35:12,589 --> 00:35:09,500
Congress

828
00:35:14,230 --> 00:35:12,599
new technologies to propel us there

829
00:35:19,310 --> 00:35:14,240
faster

830
00:35:21,890 --> 00:35:19,320
and and so uh that is why we set a

831
00:35:26,630 --> 00:35:21,900
Target at the end of the decade

832
00:35:30,589 --> 00:35:26,640
of the 2030s to go to Mars and then

833
00:35:30,599 --> 00:35:33,589
thank you our next

834
00:35:33,599 --> 00:35:36,950
week Journal

835
00:35:42,890 --> 00:35:40,970
hi there uh administrator Nelson you

836
00:35:46,190 --> 00:35:42,900
were of course a major supporter of the

837
00:35:49,069 --> 00:35:46,200
2010 legislation uh that was key to

838
00:35:51,410 --> 00:35:49,079

getting Artemis one completed

839
00:35:53,990 --> 00:35:51,420
um do you feel any sense of personal

840
00:35:56,150 --> 00:35:54,000
Vindication today by the completion of

841
00:35:57,829 --> 00:35:56,160
the the mission you know give it

842
00:36:00,410 --> 00:35:57,839
especially given the performance of SLS

843
00:36:02,210 --> 00:36:00,420
and Orion after some of the technical

844
00:36:04,670 --> 00:36:02,220
challenges with the hardware over the

845
00:36:06,589 --> 00:36:04,680
years and criticism of that bill

846
00:36:09,710 --> 00:36:06,599
thanks

847
00:36:13,370 --> 00:36:09,720
uh the success of the mission today is

848
00:36:16,810 --> 00:36:13,380
because of a team like this

849
00:36:20,569 --> 00:36:16,820
and all the people that they represent

850
00:36:22,329 --> 00:36:20,579
including our International and

851
00:36:25,010 --> 00:36:22,339
Commercial Partners

852
00:36:27,589 --> 00:36:25,020
that's why we have come to this

853
00:36:30,290 --> 00:36:27,599
extraordinary day today

854
00:36:32,450 --> 00:36:30,300
and I got to go get on a plane and go

855
00:36:37,010 --> 00:36:32,460
back to D.C these guys are going to

856
00:36:42,109 --> 00:36:38,870
thank you our next question comes from

857
00:36:44,270 --> 00:36:42,119
Jackie Waddles with CNN

858
00:36:45,829 --> 00:36:44,280
hey everyone thanks so much and

859
00:36:47,210 --> 00:36:45,839
congratulations

860
00:36:48,950 --> 00:36:47,220
um so I thought I remembered last week

861
00:36:50,510 --> 00:36:48,960
and correct me if I'm wrong that Orion

862
00:36:52,130 --> 00:36:50,520
was going to spend like two to three

863
00:36:54,650 --> 00:36:52,140

hours in the water and it sounds like

864
00:36:56,930 --> 00:36:54,660
now it's gonna spin a bit longer maybe

865
00:36:59,630 --> 00:36:56,940
up to like five or so hours

866
00:37:02,030 --> 00:36:59,640
um is that is that true and why will it

867
00:37:03,290 --> 00:37:02,040
be in the water a little bit longer

868
00:37:04,670 --> 00:37:03,300
um and then I was also wondering based

869
00:37:06,589 --> 00:37:04,680
on the data you've collected after

870
00:37:08,410 --> 00:37:06,599
Splashdown if you could tell us like

871
00:37:13,550 --> 00:37:08,420
what exactly the cabin temperature

872
00:37:25,190 --> 00:37:15,950
is Melissa still with us otherwise I'll

873
00:37:29,210 --> 00:37:27,530
her first question was about or sorry

874
00:37:31,370 --> 00:37:29,220
her second question was about the cabin

875
00:37:33,589 --> 00:37:31,380
temperature and the first question was

876
00:37:36,109 --> 00:37:33,599
about how long Orion was going to be in

877
00:37:37,670 --> 00:37:36,119
the water she thought she had her two to

878
00:37:39,349 --> 00:37:37,680
three hours and now it seems maybe more

879
00:37:43,030 --> 00:37:39,359
like five or six so she was looking for

880
00:37:45,470 --> 00:37:43,040
confirmation and an explanation on why

881
00:37:46,609 --> 00:37:45,480
yeah I can um I can answer the first

882
00:37:49,069 --> 00:37:46,619
question and we'll have to let somebody

883
00:37:50,510 --> 00:37:49,079
else answer the thermal question so this

884
00:37:52,370 --> 00:37:50,520
recovery is about five and a half and

885
00:37:54,470 --> 00:37:52,380
half six hours and the reason for that

886
00:37:56,870 --> 00:37:54,480
is because the first two hours we had a

887
00:37:58,670 --> 00:37:56,880
power to flight test objective we have

888
00:38:00,530 --> 00:37:58,680

about an hour and a half of imagery this

889
00:38:01,670 --> 00:38:00,540
is all about Gathering data because it's

890
00:38:03,290 --> 00:38:01,680
a test flight

891
00:38:06,589 --> 00:38:03,300
um and then the last hour and a half to

892
00:38:08,510 --> 00:38:06,599
two hours will be um installing a collar

893
00:38:10,730 --> 00:38:08,520
on it attaching lines and getting it in

894
00:38:12,890 --> 00:38:10,740
the well deck so typically a recovery

895
00:38:14,690 --> 00:38:12,900
with crew on board that wasn't required

896
00:38:15,770 --> 00:38:14,700
for all the slightest objective data

897
00:38:18,589 --> 00:38:15,780
that we're trying to get in the flight

898
00:38:20,630 --> 00:38:18,599
test subjective would be significantly

899
00:38:22,310 --> 00:38:20,640
less than this in under two hours but in

900
00:38:23,870 --> 00:38:22,320
this case we're being very careful

901
00:38:25,069 --> 00:38:23,880
trying to get all the data we can and

902
00:38:26,510 --> 00:38:25,079
trying to be very careful with the

903
00:38:28,670 --> 00:38:26,520
capsule and we bring it in and we've set

904
00:38:30,530 --> 00:38:28,680
it down on the Cradle

905
00:38:33,230 --> 00:38:30,540
thanks Melissa

906
00:38:35,870 --> 00:38:33,240
I I I'll answer the second part

907
00:38:37,490 --> 00:38:35,880
um so when we landed Mike mentioned you

908
00:38:39,170 --> 00:38:37,500
know understand thermal my thermal

909
00:38:41,930 --> 00:38:39,180
environment in the cabin itself so it

910
00:38:44,210 --> 00:38:41,940
was 60 degrees Fahrenheit and when I

911
00:38:46,190 --> 00:38:44,220
left uh you know after about an hour it

912
00:38:49,130 --> 00:38:46,200
got to about 71 degrees so really great

913
00:38:51,470 --> 00:38:49,140

data very much in what we expected and a

914
00:38:53,210 --> 00:38:51,480
great way to collect the data for this

915
00:38:54,829 --> 00:38:53,220
flight and to understand how the cabin

916
00:38:57,950 --> 00:38:54,839
environment will be for the crew on

917
00:39:01,730 --> 00:38:59,569
thank you very much our next question is

918
00:39:02,750 --> 00:39:01,740
from Ken Chang with the New York Times

919
00:39:06,230 --> 00:39:02,760
thank you

920
00:39:08,150 --> 00:39:06,240
administrator

921
00:39:10,069 --> 00:39:08,160
um for congratulations on today

922
00:39:12,609 --> 00:39:10,079
looking forward to ordinance to the

923
00:39:15,109 --> 00:39:12,619
NASA's working with a company

924
00:39:17,510 --> 00:39:15,119
who today suggested that Anthony

925
00:39:20,810 --> 00:39:17,520
association should be prosecuted for

926
00:39:22,849 --> 00:39:20,820
crime and ordering is there anything

927
00:39:25,490 --> 00:39:22,859
that you know I could say that give me

928
00:39:28,730 --> 00:39:25,500
that's a pause on spacex's ability to

929
00:39:30,349 --> 00:39:28,740
execute this conduct thank you hey Ken

930
00:39:32,030 --> 00:39:30,359
I'm really sorry your your connection

931
00:39:35,630 --> 00:39:32,040
was cutting out in the room do you mind

932
00:39:40,190 --> 00:39:37,130
um can you hear me

933
00:39:41,690 --> 00:39:40,200
it's it's garbled yeah it's a little in

934
00:39:52,060 --> 00:39:41,700
and out

935
00:39:56,569 --> 00:39:54,170
[Music]

936
00:39:57,829 --> 00:39:56,579
okay we lost him so we're gonna move on

937
00:40:00,710 --> 00:39:57,839
to the next question which comes from

938
00:40:02,750 --> 00:40:00,720

Jeff Faust with space news

939
00:40:05,329 --> 00:40:02,760
a good afternoon question for uh Mike

940
00:40:06,829 --> 00:40:05,339
Serafin or Howard Hugh um I know you're

941
00:40:08,750 --> 00:40:06,839
still looking at the data but from the

942
00:40:10,430 --> 00:40:08,760
first look at the data

943
00:40:13,190 --> 00:40:10,440
um how well did the thermal protection

944
00:40:17,050 --> 00:40:13,200
system on Orion perform compared to the

945
00:40:20,030 --> 00:40:19,370
you can start Howard if you want or I

946
00:40:22,910 --> 00:40:20,040
can

947
00:40:25,310 --> 00:40:22,920
well I mean I I would say that uh it

948
00:40:27,470 --> 00:40:25,320
accomplishes a job uh returning

949
00:40:29,930 --> 00:40:27,480
spacecraft uh to the water you know

950
00:40:31,790 --> 00:40:29,940
again I think uh this is very important

951
00:40:33,950 --> 00:40:31,800
for us to collect the data divers are in

952
00:40:35,690 --> 00:40:33,960
right now getting some visuals of the

953
00:40:38,030 --> 00:40:35,700
heat shield and looked like the back

954
00:40:40,490 --> 00:40:38,040
shells were doing pretty well as well uh

955
00:40:42,470 --> 00:40:40,500
for the TPS system or thermal protection

956
00:40:44,990 --> 00:40:42,480
system so I think overall we're happy

957
00:40:46,250 --> 00:40:45,000
with the global performance but uh we're

958
00:40:48,170 --> 00:40:46,260
going to look at the data very carefully

959
00:40:51,170 --> 00:40:48,180
we've collected a lot of imagery and

960
00:40:52,910 --> 00:40:51,180
other data on its way down and when we

961
00:40:54,349 --> 00:40:52,920
get the capsule back it'll be a really

962
00:40:56,450 --> 00:40:54,359
important from an inspection perspective

963
00:40:58,550 --> 00:40:56,460

in terms of its overall detailed

964
00:41:01,069 --> 00:40:58,560
performance but I would say very happy

965
00:41:04,910 --> 00:41:01,079
with what we've seen so far on the heat

966
00:41:06,589 --> 00:41:04,920
shield yeah and Jeff I would agree with

967
00:41:09,650 --> 00:41:06,599
that you know it's it's a little early

968
00:41:11,510 --> 00:41:09,660
to say because again the uh the peak

969
00:41:13,609 --> 00:41:11,520
heating period was coincident with the

970
00:41:16,370 --> 00:41:13,619
blackout and we need to go look at the

971
00:41:18,710 --> 00:41:16,380
flight data recorders and see uh what

972
00:41:22,910 --> 00:41:18,720
what the uh the flight recorders told us

973
00:41:25,430 --> 00:41:22,920
or will tell us after after we get that

974
00:41:26,950 --> 00:41:25,440
off the vehicle but you know just the

975
00:41:31,130 --> 00:41:26,960
first blush look at the vehicle

976
00:41:33,770 --> 00:41:31,140
obviously it survived the skip reentry

977
00:41:35,870 --> 00:41:33,780
and there was some churning on the

978
00:41:37,849 --> 00:41:35,880
outside of the vehicle on the Silicon

979
00:41:39,589 --> 00:41:37,859
oxide tape we expected all that we saw

980
00:41:42,470 --> 00:41:39,599
some hazing on the windows we expected

981
00:41:44,210 --> 00:41:42,480
all that so initial indications are very

982
00:41:46,329 --> 00:41:44,220
favorable but there's there's more ahead

983
00:41:49,130 --> 00:41:46,339
of us in terms of exactly understanding

984
00:41:50,810 --> 00:41:49,140
what the the re-entry flight test told

985
00:41:52,490 --> 00:41:50,820
us

986
00:41:55,849 --> 00:41:52,500
thank you our next question is from

987
00:41:58,010 --> 00:41:55,859
David Curley with the Discovery Channel

988
00:42:02,750 --> 00:41:58,020

thank you Jackie I think this is either

989
00:42:04,790 --> 00:42:02,760
for um free or for seraphin is I know

990
00:42:07,190 --> 00:42:04,800
there's a lot of data to digest at this

991
00:42:09,530 --> 00:42:07,200
point but are there one or two or three

992
00:42:12,109 --> 00:42:09,540
things that you can tell us that you'd

993
00:42:14,210 --> 00:42:12,119
like to change from one Artemis one to

994
00:42:16,190 --> 00:42:14,220
Artemis two

995
00:42:18,290 --> 00:42:16,200
I might just talk about the one one part

996
00:42:20,569 --> 00:42:18,300
Mike and are you happy to add whatever

997
00:42:22,970 --> 00:42:20,579
you like I I think I mentioned one

998
00:42:24,829 --> 00:42:22,980
earlier about our processing flow I

999
00:42:27,589 --> 00:42:24,839
think there's things we can continue to

1000
00:42:29,510 --> 00:42:27,599
work on of uh everything we're doing on

1001
00:42:31,970 --> 00:42:29,520
the front end to improve our timeline of

1002
00:42:34,430 --> 00:42:31,980
getting the vehicles uh stacked out to

1003
00:42:37,069 --> 00:42:34,440
the pad do some of the unique Artemis 2

1004
00:42:39,589 --> 00:42:37,079
tests we're going to have to do that I'd

1005
00:42:41,690 --> 00:42:39,599
point that out from uh that stuff we

1006
00:42:43,370 --> 00:42:41,700
have under our control right now right

1007
00:42:45,650 --> 00:42:43,380
we don't need the data back from the

1008
00:42:47,569 --> 00:42:45,660
vehicle to change that we do have a

1009
00:42:49,010 --> 00:42:47,579
structured Lessons Learned process that

1010
00:42:50,990 --> 00:42:49,020
we'll go through that'll gather all this

1011
00:42:53,390 --> 00:42:51,000
information and factor into the Artemis

1012
00:42:54,950 --> 00:42:53,400
2 schedule but definitely the processing

1013
00:42:56,390 --> 00:42:54,960

for me is the Highlight Mike I don't

1014
00:42:58,250 --> 00:42:56,400
know if you have anything else um but

1015
00:42:59,390 --> 00:42:58,260
this is it's really up the gym but the

1016
00:43:01,010 --> 00:42:59,400
one change that I would like to

1017
00:43:02,750 --> 00:43:01,020
implement for Artemis too is to put

1018
00:43:05,710 --> 00:43:02,760
astronauts on board and send them to the

1019
00:43:09,770 --> 00:43:08,150
you know in all seriousness the the

1020
00:43:12,589 --> 00:43:09,780
vehicle performed

1021
00:43:14,150 --> 00:43:12,599
um better than expected and um yeah

1022
00:43:17,569 --> 00:43:14,160
that's

1023
00:43:19,250 --> 00:43:17,579
see

1024
00:43:26,089 --> 00:43:19,260
next up we have a question from Mike

1025
00:43:31,250 --> 00:43:28,490
congratulations on on suggesting flight

1026
00:43:33,230 --> 00:43:31,260
test just a quick question about the

1027
00:43:34,430 --> 00:43:33,240
sort of road to artemis2 we know it's

1028
00:43:36,589 --> 00:43:34,440
going to be a couple years it's going to

1029
00:43:39,050 --> 00:43:36,599
be a long road what do you see as like

1030
00:43:41,329 --> 00:43:39,060
the biggest challenges facing you to to

1031
00:43:43,069 --> 00:43:41,339
meet that 2024 launch date are there a

1032
00:43:44,630 --> 00:43:43,079
couple items in particular like the life

1033
00:43:46,790 --> 00:43:44,640
support system development is it more

1034
00:43:48,470 --> 00:43:46,800
like rocket production what do you guys

1035
00:43:50,569 --> 00:43:48,480
see as like the biggest hurdles facing

1036
00:43:52,910 --> 00:43:50,579
you as you look forward to Artemis 2.

1037
00:43:54,950 --> 00:43:52,920
and I think Howard uh Howard probably

1038
00:43:57,950 --> 00:43:54,960

has the the biggest perspective I'll

1039
00:44:00,650 --> 00:43:57,960
talk about the space launch system

1040
00:44:03,230 --> 00:44:00,660
um and the ground system also uh

1041
00:44:04,730 --> 00:44:03,240
together probably not challenges but you

1042
00:44:06,109 --> 00:44:04,740
know getting the the rocket down there

1043
00:44:07,790 --> 00:44:06,119
and together obviously the engine

1044
00:44:10,370 --> 00:44:07,800
section is down there the core stage

1045
00:44:12,589 --> 00:44:10,380
will ship next year and uh we'll put

1046
00:44:15,470 --> 00:44:12,599
that together the ground system folks

1047
00:44:17,690 --> 00:44:15,480
have to put the crew egress system up uh

1048
00:44:19,370 --> 00:44:17,700
that will uh that will be a big part of

1049
00:44:22,130 --> 00:44:19,380
their schedule in the in the coming year

1050
00:44:23,870 --> 00:44:22,140
so those I'd say for me on those two but

1051
00:44:26,210 --> 00:44:23,880
Howard from an Orion perspective your

1052
00:44:28,309 --> 00:44:26,220
thoughts yeah thanks Jim um you know

1053
00:44:29,750 --> 00:44:28,319
we're making great progress on the crew

1054
00:44:32,270 --> 00:44:29,760
module and the service module for

1055
00:44:34,370 --> 00:44:32,280
Artemis 2. um the teams have been

1056
00:44:35,510 --> 00:44:34,380
putting all the hardware in and we're in

1057
00:44:36,950 --> 00:44:35,520
the process of doing the testing

1058
00:44:39,230 --> 00:44:36,960
actually at the integrated system level

1059
00:44:41,089 --> 00:44:39,240
and I think uh you know to me the

1060
00:44:43,309 --> 00:44:41,099
challenges will always be you know we're

1061
00:44:45,589 --> 00:44:43,319
installing some first time Hardware that

1062
00:44:47,329 --> 00:44:45,599
uh after Jim agrees to put the crew on

1063
00:44:49,730 --> 00:44:47,339

board you know we'll we'll have uh

1064
00:44:51,410 --> 00:44:49,740
displays for the crew to monitor systems

1065
00:44:53,630 --> 00:44:51,420
and operate the spacecraft craft along

1066
00:44:55,370 --> 00:44:53,640
with hand controllers and also the life

1067
00:44:57,770 --> 00:44:55,380
support system and all those will be

1068
00:44:59,569 --> 00:44:57,780
very important elements for Artemis 2.

1069
00:45:02,210 --> 00:44:59,579
those are still ahead of us in terms of

1070
00:45:03,589 --> 00:45:02,220
overall integrated system testing and of

1071
00:45:05,990 --> 00:45:03,599
course we have stacking of the crew

1072
00:45:08,030 --> 00:45:06,000
module service module and and in the

1073
00:45:09,410 --> 00:45:08,040
fueling of the of the spacecraft so all

1074
00:45:11,870 --> 00:45:09,420
those will be ahead of us they're things

1075
00:45:13,910 --> 00:45:11,880
that we've done previously and I'm sure

1076
00:45:15,770 --> 00:45:13,920
the team will execute them as we have on

1077
00:45:17,270 --> 00:45:15,780
Artemis one and of course we'll also

1078
00:45:18,890 --> 00:45:17,280
look for Lessons Learned Jim said

1079
00:45:22,069 --> 00:45:18,900
earlier about looking for opportunities

1080
00:45:24,589 --> 00:45:22,079
uh to go faster from our Artemis one

1081
00:45:27,710 --> 00:45:24,599
flow seeing where we can improve upon

1082
00:45:31,010 --> 00:45:27,720
and take those improvements and get the

1083
00:45:32,870 --> 00:45:31,020
next mission off as soon as we can

1084
00:45:41,630 --> 00:45:32,880
thank you very much our next question is

1085
00:45:46,069 --> 00:45:43,730
do you have a tally of the total number

1086
00:45:49,490 --> 00:45:46,079
of sorry do you have a tally of the

1087
00:45:51,530 --> 00:45:49,500
total number of uh components from

1088
00:45:54,530 --> 00:45:51,540

Artemis one that'll be reused what's the

1089
00:45:57,890 --> 00:45:54,540
exact figure and what types of avionics

1090
00:46:00,109 --> 00:45:57,900
boxes are they and then what happens if

1091
00:46:01,609 --> 00:46:00,119
some of these components don't pass the

1092
00:46:03,470 --> 00:46:01,619
re-test if you have to build something

1093
00:46:05,569 --> 00:46:03,480
before Artemis 2 what does that do to

1094
00:46:07,309 --> 00:46:05,579
the schedule and if I may for Mike

1095
00:46:09,230 --> 00:46:07,319
Serafin um are you going to be the

1096
00:46:11,210 --> 00:46:09,240
mission manager for RMS 2 or will that

1097
00:46:13,069 --> 00:46:11,220
be a new person thanks

1098
00:46:14,930 --> 00:46:13,079
yeah I'll start

1099
00:46:17,150 --> 00:46:14,940
um there's uh eight types of components

1100
00:46:19,550 --> 00:46:17,160
that we're bringing home in from Artemis

1101
00:46:22,250 --> 00:46:19,560
one to Artemis two uh I'll just give you

1102
00:46:24,770 --> 00:46:22,260
a flavor uh the imu's inertial

1103
00:46:27,530 --> 00:46:24,780
measurement units are one of those a GPS

1104
00:46:29,150 --> 00:46:27,540
receivers are another the phase that ran

1105
00:46:30,770 --> 00:46:29,160
antennas that's on the crew module will

1106
00:46:32,870 --> 00:46:30,780
also be reused

1107
00:46:33,890 --> 00:46:32,880
um in relative to the retest

1108
00:46:35,690 --> 00:46:33,900
um you know we'll see what the

1109
00:46:38,329 --> 00:46:35,700
conditions are but we do have Artemis 3

1110
00:46:40,430 --> 00:46:38,339
Hardware uh that are available to

1111
00:46:41,990 --> 00:46:40,440
utilize for Artemis 2 when they're

1112
00:46:44,630 --> 00:46:42,000
available and so we'll look at those

1113
00:46:46,849 --> 00:46:44,640

very carefully uh going forward and of

1114
00:46:48,470 --> 00:46:46,859
course we'll do the testing and make

1115
00:46:50,510 --> 00:46:48,480
sure they're ready for flight for

1116
00:46:52,190 --> 00:46:50,520
Artemis 2. and I'll turn over to them

1117
00:46:53,930 --> 00:46:52,200
okay somebody else for the next question

1118
00:46:56,270 --> 00:46:53,940
yeah and Stephen thank you for the

1119
00:46:59,030 --> 00:46:56,280
question in terms of uh who the Artemis

1120
00:47:02,270 --> 00:46:59,040
2 person is that is that is Jim's call

1121
00:47:04,130 --> 00:47:02,280
and uh and uh we'll we'll uh we'll see

1122
00:47:06,770 --> 00:47:04,140
what he decides I'm I'm ready for a rest

1123
00:47:09,890 --> 00:47:06,780
after this one I look forward to uh to

1124
00:47:12,109 --> 00:47:09,900
uh to going home and uh and just

1125
00:47:14,329 --> 00:47:12,119
and and take it taking a little bit of a

1126
00:47:15,530 --> 00:47:14,339
break here but um we do have flight by

1127
00:47:17,329 --> 00:47:15,540
flight assignments and we'll see what

1128
00:47:21,589 --> 00:47:17,339
Jim decides

1129
00:47:21,599 --> 00:47:24,410
debate

1130
00:47:29,089 --> 00:47:27,050
hi thank you congratulations to all of

1131
00:47:31,730 --> 00:47:29,099
an incredible Mission uh to NASA and his

1132
00:47:33,710 --> 00:47:31,740
partner I I hope Melissa is still there

1133
00:47:36,290 --> 00:47:33,720
more important than I I want to follow

1134
00:47:38,270 --> 00:47:36,300
up on a previous question I understood

1135
00:47:41,150 --> 00:47:38,280
that the recovery timing of the average

1136
00:47:44,809 --> 00:47:41,160
recovery time in uh it's two hours for

1137
00:47:46,730 --> 00:47:44,819
uh crude Mission it stops from the from

1138
00:47:50,329 --> 00:47:46,740

the moment of Splashdown to hatch

1139
00:47:52,370 --> 00:47:50,339
opening uh if if that so is there any

1140
00:47:53,750 --> 00:47:52,380
objective on trying to minimize that

1141
00:47:56,650 --> 00:47:53,760
time

1142
00:47:59,809 --> 00:47:58,790
Melissa do you are you still on do you

1143
00:48:02,089 --> 00:47:59,819
want to try try to take that one

1144
00:48:05,030 --> 00:48:02,099
otherwise I'll take it

1145
00:48:09,890 --> 00:48:07,130
thought crude missions the requirement

1146
00:48:11,630 --> 00:48:09,900
is from Splashdown to astronauts to

1147
00:48:14,390 --> 00:48:11,640
medve two hours

1148
00:48:16,550 --> 00:48:14,400
we absolutely plan and expect to see

1149
00:48:17,569 --> 00:48:16,560
that with um our training and our

1150
00:48:21,170 --> 00:48:17,579
testing that we're going to be doing

1151
00:48:25,010 --> 00:48:23,030
yeah the only thing I'll elaborate on

1152
00:48:27,650 --> 00:48:25,020
that one is and Melissa can correct me

1153
00:48:30,170 --> 00:48:27,660
on this is we have parallel recovery

1154
00:48:32,990 --> 00:48:30,180
methods starting with a crew on Artemis

1155
00:48:34,490 --> 00:48:33,000
2. so we're preserving the option to do

1156
00:48:36,650 --> 00:48:34,500
what they call open water extraction

1157
00:48:39,849 --> 00:48:36,660
which is is literally open the hatch out

1158
00:48:44,150 --> 00:48:39,859
on the water and and get the crew out

1159
00:48:46,370 --> 00:48:44,160
to a a small boat and then transfer them

1160
00:48:48,950 --> 00:48:46,380
to the recovery ship while the capsule

1161
00:48:50,690 --> 00:48:48,960
is still in the water the the other

1162
00:48:52,010 --> 00:48:50,700
method is is literally just toe the

1163
00:48:53,990 --> 00:48:52,020

capsule with the crew in it into the

1164
00:48:55,849 --> 00:48:54,000
well deck so that we're preserving both

1165
00:48:57,770 --> 00:48:55,859
options to do that and the recovery

1166
00:49:00,130 --> 00:48:57,780
operations teams are prepared to do

1167
00:49:02,690 --> 00:49:00,140
either of those

1168
00:49:08,090 --> 00:49:02,700
thank you our next question is from Ken

1169
00:49:13,130 --> 00:49:10,730
[Music]

1170
00:49:16,010 --> 00:49:13,140
fantastic job many of us have waited 50

1171
00:49:17,870 --> 00:49:16,020
years in the Apollo generation and so

1172
00:49:20,750 --> 00:49:17,880
you've done that for both Apollo and

1173
00:49:23,450 --> 00:49:20,760
Artemis so thank you uh my question for

1174
00:49:25,309 --> 00:49:23,460
Bill Nelson is um it may be what what

1175
00:49:28,550 --> 00:49:25,319
Kenneth Chang was asking too can you

1176
00:49:30,650 --> 00:49:28,560
give us an update on uh Starship

1177
00:49:32,750 --> 00:49:30,660
production research development

1178
00:49:35,109 --> 00:49:32,760
technology are they are they building

1179
00:49:38,270 --> 00:49:35,119
Hardware are they still designing it

1180
00:49:40,990 --> 00:49:38,280
can you talk us and tell us some detail

1181
00:49:45,170 --> 00:49:41,000
about that please for the lunar lander

1182
00:49:46,870 --> 00:49:45,180
I asked the question all the time of Jim

1183
00:49:50,030 --> 00:49:46,880
free

1184
00:49:54,290 --> 00:49:50,040
is the starship

1185
00:49:56,210 --> 00:49:54,300
meeting each of the benchmarks the the

1186
00:49:59,450 --> 00:49:56,220
time schedules

1187
00:50:02,510 --> 00:49:59,460
and the answer comes back to me yes and

1188
00:50:06,609 --> 00:50:02,520

in some cases exceeding

1189
00:50:12,470 --> 00:50:06,619
I have been down to Boca Chica

1190
00:50:15,290 --> 00:50:12,480
uh it is uh a sight to behold how they

1191
00:50:17,210 --> 00:50:15,300
are putting those Starships together and

1192
00:50:20,450 --> 00:50:17,220
then the big booster

1193
00:50:23,510 --> 00:50:20,460
and their plan is that they're going to

1194
00:50:27,770 --> 00:50:23,520
do a few test flights there

1195
00:50:32,809 --> 00:50:27,780
and once they have the confidence they

1196
00:50:36,170 --> 00:50:32,819
will bring the missions to the cape

1197
00:50:38,170 --> 00:50:36,180
and until they get their permanent pad

1198
00:50:42,170 --> 00:50:38,180
on the cape

1199
00:50:44,510 --> 00:50:42,180
they will launch from the one that they

1200
00:50:48,530 --> 00:50:44,520
are constructing right now

1201
00:50:50,630 --> 00:50:48,540
that is in the Outer Perimeter of pad

1202
00:50:52,910 --> 00:50:50,640
39a

1203
00:50:55,630 --> 00:50:52,920
and um

1204
00:50:58,730 --> 00:50:55,640
you know you're developing a new vehicle

1205
00:51:03,710 --> 00:50:58,740
a new rocket

1206
00:51:05,990 --> 00:51:03,720
and uh you can expect some delays but uh

1207
00:51:07,010 --> 00:51:06,000
thus far I'm told that they are on

1208
00:51:12,309 --> 00:51:07,020
schedule

1209
00:51:17,390 --> 00:51:12,319
their plan is to do an uncrewed Landing

1210
00:51:20,030 --> 00:51:17,400
uh in 23 late 23

1211
00:51:23,450 --> 00:51:20,040
that's a year from now

1212
00:51:25,309 --> 00:51:23,460
and then to do the crude Landing in late

1213
00:51:29,210 --> 00:51:25,319

1214
00:51:31,309 --> 00:51:29,220
uh so slips are always possible because

1215
00:51:33,470 --> 00:51:31,319
it's a brand new system

1216
00:51:35,990 --> 00:51:33,480
but uh

1217
00:51:39,829 --> 00:51:36,000
they have been quite impressive in what

1218
00:51:52,609 --> 00:51:41,870
thank you our next question comes from

1219
00:51:56,630 --> 00:51:54,470
and thank you for the great live tracker

1220
00:51:58,130 --> 00:51:56,640
and cameras it really felt like we all

1221
00:51:59,569 --> 00:51:58,140
went back to the Moon together which is

1222
00:52:02,569 --> 00:51:59,579
awesome because space is better together

1223
00:52:04,430 --> 00:52:02,579
and the views were expiring is there any

1224
00:52:06,109 --> 00:52:04,440
time sensitive instruments or equipment

1225
00:52:08,450 --> 00:52:06,119
that are on Orion that need to be

1226
00:52:10,910 --> 00:52:08,460
offloaded quickly we know there's a more

1227
00:52:12,890 --> 00:52:10,920
set timeline for Crews but anything for

1228
00:52:15,470 --> 00:52:12,900
the cargo or science as we see during

1229
00:52:17,450 --> 00:52:15,480
missions coming back from the ISS and

1230
00:52:18,829 --> 00:52:17,460
for administrator Nelson over the last

1231
00:52:20,390 --> 00:52:18,839
three weeks for the first time in 50

1232
00:52:22,549 --> 00:52:20,400
years we could look to the noon and say

1233
00:52:24,290 --> 00:52:22,559
we can go there there's a new Artemis

1234
00:52:25,930 --> 00:52:24,300
generation that's making a decision on

1235
00:52:27,829 --> 00:52:25,940
what their future would look like

1236
00:52:29,329 --> 00:52:27,839
administrator what encouragement or

1237
00:52:31,309 --> 00:52:29,339
inspiration did you say to this new

1238
00:52:32,870 --> 00:52:31,319

generation on why they should consider

1239
00:52:37,270 --> 00:52:32,880
the space industry as part of their

1240
00:52:41,809 --> 00:52:40,309
yeah Zach thank you for the time uh the

1241
00:52:44,809 --> 00:52:41,819
question on time sensitive uh

1242
00:52:47,150 --> 00:52:44,819
instruments and payloads we do have a

1243
00:52:49,849 --> 00:52:47,160
number of dosimeters on board the the

1244
00:52:53,690 --> 00:52:49,859
spacecraft both active and passive

1245
00:52:56,210 --> 00:52:53,700
um there are uh there's also one um bio

1246
00:52:59,569 --> 00:52:56,220
experiment payload that is on board that

1247
00:53:01,809 --> 00:52:59,579
it contains a number of organisms yeast

1248
00:53:04,190 --> 00:53:01,819
and fungus and and some other other

1249
00:53:06,829 --> 00:53:04,200
organisms that

1250
00:53:08,470 --> 00:53:06,839
um serve as basically an analog to help

1251
00:53:11,569 --> 00:53:08,480
us understand

1252
00:53:13,730 --> 00:53:11,579
radiation exposure so we've got the bio

1253
00:53:17,589 --> 00:53:13,740
experiment samples in the in the cockpit

1254
00:53:20,930 --> 00:53:17,599
of Orion we've got the uh the mare uh

1255
00:53:23,210 --> 00:53:20,940
mannequin torsos that one had a

1256
00:53:25,250 --> 00:53:23,220
radiation vest on one did not uh and

1257
00:53:27,230 --> 00:53:25,260
we'll get Baseline data from that and

1258
00:53:31,190 --> 00:53:27,240
then there are other dosimeters in the

1259
00:53:33,290 --> 00:53:31,200
cabin so those will be removed as soon

1260
00:53:35,270 --> 00:53:33,300
as we as we can once we get the vehicle

1261
00:53:37,250 --> 00:53:35,280
back to San Diego

1262
00:53:39,589 --> 00:53:37,260
um simply to basically stop the clock on

1263
00:53:41,870 --> 00:53:39,599

those and it makes it more difficult in

1264
00:53:44,150 --> 00:53:41,880
terms of understanding

1265
00:53:45,349 --> 00:53:44,160
um what the results are the longer that

1266
00:53:47,450 --> 00:53:45,359
they're sitting here on Earth and there

1267
00:53:48,950 --> 00:53:47,460
is some background radiation there is

1268
00:53:51,950 --> 00:53:48,960
some background

1269
00:53:55,490 --> 00:53:51,960
um uh decay in the in the in the

1270
00:53:58,490 --> 00:53:55,500
experiments themselves uh so that that

1271
00:54:01,609 --> 00:53:58,500
will be done to stop the clock but none

1272
00:54:05,270 --> 00:54:01,619
of those I would say are are kind of

1273
00:54:07,430 --> 00:54:05,280
um high priority in terms of the uh the

1274
00:54:09,410 --> 00:54:07,440
uh

1275
00:54:10,430 --> 00:54:09,420
overall processing of the vehicle we

1276
00:54:11,750 --> 00:54:10,440
just we just know we're going to get

1277
00:54:14,750 --> 00:54:11,760
those off the vehicle and there's a plan

1278
00:54:21,710 --> 00:54:17,630
the essence of your question was how do

1279
00:54:24,349 --> 00:54:21,720
we get the younger generation to buy in

1280
00:54:28,609 --> 00:54:24,359
to the Artemis program

1281
00:54:32,990 --> 00:54:28,619
and I would invite you

1282
00:54:36,349 --> 00:54:33,000
to come with me to any NASA Center

1283
00:54:40,130 --> 00:54:36,359
and talk to our interns

1284
00:54:42,290 --> 00:54:40,140
we hire a bunch of college interns we're

1285
00:54:44,690 --> 00:54:42,300
going to hire more by the way we're

1286
00:54:47,150 --> 00:54:44,700
getting that in the budget

1287
00:54:49,990 --> 00:54:47,160
you will come away from that

1288
00:54:54,829 --> 00:54:50,000

conversation so pumped

1289
00:54:58,130 --> 00:54:54,839
because those students will pump you up

1290
00:55:01,309 --> 00:54:58,140
with their excitement about what they're

1291
00:55:04,250 --> 00:55:01,319
doing and how they're contributing

1292
00:55:07,250 --> 00:55:04,260
I can't help but remember in the old

1293
00:55:10,490 --> 00:55:07,260
days in the Apollo program

1294
00:55:12,950 --> 00:55:10,500
uh the story was told about a ditch

1295
00:55:14,770 --> 00:55:12,960
digger at the Kennedy Space Center and a

1296
00:55:18,770 --> 00:55:14,780
reporter went over to him and said

1297
00:55:21,049 --> 00:55:18,780
describe your job he says I am helping

1298
00:55:25,309 --> 00:55:21,059
to put a man on the moon

1299
00:55:27,609 --> 00:55:25,319
I think you will see that same kind of

1300
00:55:31,970 --> 00:55:27,619
excitement and dedication

1301
00:55:33,230 --> 00:55:31,980
in the eyes and the speech of our Young

1302
00:55:34,490 --> 00:55:33,240
Generation

1303
00:55:39,349 --> 00:55:34,500
now

1304
00:55:41,109 --> 00:55:39,359
certainly with the success of this first

1305
00:55:44,690 --> 00:55:41,119
Artemis mission

1306
00:55:46,010 --> 00:55:44,700
that is the telling of a story that has

1307
00:55:49,730 --> 00:55:46,020
a plan

1308
00:55:54,589 --> 00:55:49,740
uh to going further out into the

1309
00:55:57,410 --> 00:55:54,599
universe and that in and of itself is an

1310
00:55:59,150 --> 00:55:57,420
exciting story

1311
00:56:01,490 --> 00:55:59,160
thank you unfortunately we are running

1312
00:56:03,349 --> 00:56:01,500
up on the end of our time together we

1313
00:56:05,510 --> 00:56:03,359

have time for one more question

1314
00:56:07,609 --> 00:56:05,520
the last

1315
00:56:10,069 --> 00:56:07,619
Lobby from Leo Enright with Irish

1316
00:56:15,650 --> 00:56:12,890
thanks very much and I rather like the

1317
00:56:18,170 --> 00:56:15,660
anecdote about the ditch digger I

1318
00:56:20,569 --> 00:56:18,180
suspect Jay Barbary might have been

1319
00:56:22,970 --> 00:56:20,579
involved in in telling that anecdote

1320
00:56:27,890 --> 00:56:22,980
originally my question though is for

1321
00:56:30,170 --> 00:56:27,900
Emily Nelson uh presumably no relation

1322
00:56:34,250 --> 00:56:30,180
um and I wondered about the live shots

1323
00:56:37,370 --> 00:56:34,260
we had of the other Mission Control poll

1324
00:56:40,970 --> 00:56:37,380
which was of course on the beach at

1325
00:56:44,630 --> 00:56:40,980
nordvite in Holland and I wondered how

1326
00:56:46,549 --> 00:56:44,640
that worked uh did you did you find that

1327
00:56:49,430 --> 00:56:46,559
this is something that you would be

1328
00:56:52,190 --> 00:56:49,440
comfortable with if you had women and

1329
00:56:53,809 --> 00:56:52,200
men aboard the spacecraft and you had to

1330
00:56:55,670 --> 00:56:53,819
make sudden decisions

1331
00:56:57,230 --> 00:56:55,680
and I think I missed the very first part

1332
00:57:00,950 --> 00:56:57,240
of your question could you repeat just

1333
00:57:03,410 --> 00:57:00,960
the the first part please

1334
00:57:06,349 --> 00:57:03,420
I was wondering about the service module

1335
00:57:10,250 --> 00:57:06,359
control center in nordvike

1336
00:57:12,710 --> 00:57:10,260
and uh is that uh somewhere that you

1337
00:57:14,510 --> 00:57:12,720
would be comfortable this is for Emily

1338
00:57:17,930 --> 00:57:14,520

Nelson is this somewhere that would be

1339
00:57:19,910 --> 00:57:17,940
comfortable for you if you had women and

1340
00:57:23,270 --> 00:57:19,920
men aboard the spacecraft and you had to

1341
00:57:26,150 --> 00:57:24,109
um

1342
00:57:28,309 --> 00:57:26,160
I think he's asking of our integration

1343
00:57:29,930 --> 00:57:28,319
with our remote control centers oh yeah

1344
00:57:30,770 --> 00:57:29,940
we have we have

1345
00:57:32,750 --> 00:57:30,780
um

1346
00:57:35,510 --> 00:57:32,760
more than 20 years of experience working

1347
00:57:37,490 --> 00:57:35,520
with globally distributed teams as we've

1348
00:57:40,609 --> 00:57:37,500
been controlling the International Space

1349
00:57:41,690 --> 00:57:40,619
Station and so

1350
00:57:45,290 --> 00:57:41,700
um

1351
00:57:49,130 --> 00:57:45,300
really we have

1352
00:57:50,990 --> 00:57:49,140
a number of years of experience in

1353
00:57:53,870 --> 00:57:51,000
in building those kinds of relationships

1354
00:57:55,730 --> 00:57:53,880
and making sure that all of our Global

1355
00:57:57,290 --> 00:57:55,740
teams are working in synchrony so I

1356
00:57:59,569 --> 00:57:57,300
would have no concerns over a

1357
00:58:01,430 --> 00:57:59,579
distributed team executing these

1358
00:58:02,930 --> 00:58:01,440
missions in the future and especially as

1359
00:58:04,609 --> 00:58:02,940
we bring in more International Partners

1360
00:58:07,010 --> 00:58:04,619
as we bring in more commercial partners

1361
00:58:08,890 --> 00:58:07,020
and partners across industry I think

1362
00:58:12,349 --> 00:58:08,900
you're going to see an even more

1363
00:58:14,390 --> 00:58:12,359

increasing diversity in our in our team

1364
00:58:16,910 --> 00:58:14,400
globally and and we're really going to

1365
00:58:18,530 --> 00:58:16,920
leverage all of those opportunities to

1366
00:58:20,510 --> 00:58:18,540
make these missions successful going

1367
00:58:22,790 --> 00:58:20,520
into the future

1368
00:58:24,950 --> 00:58:22,800
thanks Emily and thank you all for

1369
00:58:26,569 --> 00:58:24,960
joining us today our coverage of the

1370
00:58:28,549 --> 00:58:26,579
Artemis One mission continues on the

1371
00:58:31,130 --> 00:58:28,559
Artemis blog where you can follow along

1372
00:58:33,410 --> 00:58:31,140
for updates about Orion's Journey Back

1373
00:58:38,610 --> 00:58:33,420
to the Kennedy Space Center have a great

1374
00:59:03,109 --> 00:58:44,850
[Music]

1375
00:59:11,210 --> 00:59:06,470
the range is clear for lunch

1376
00:59:13,549 --> 00:59:11,220
firing system aren't it is May 9 1990.

1377
00:59:16,549 --> 00:59:13,559
the place's Vandenberg Air Force Base in

1378
00:59:19,430 --> 00:59:16,559
California operations manager Larry tant

1379
00:59:21,349 --> 00:59:19,440
is counting down to liftoff of the 113th

1380
00:59:24,740 --> 00:59:21,359
flight of one of the United States most