
SPACE LAUNCH SYSTEM
YOUTUBE LIVE
Q&A with Sharon Cobb
SLS Associate
Program Manager
AUGUST 26
ARTEMIS

1
00:00:15,749 --> 00:00:13,509
we're live here at the observation

2
00:00:16,950 --> 00:00:15,759
gantry at nasa's kennedy space center in

3
00:00:18,790 --> 00:00:16,960
florida

4
00:00:20,310 --> 00:00:18,800
teams are preparing for the launch of

5
00:00:22,710 --> 00:00:20,320
artemis one

6
00:00:25,189 --> 00:00:22,720
i'm alyssa lee sls social media

7
00:00:28,150 --> 00:00:25,199
specialist and i will be joined today by

8
00:00:29,349 --> 00:00:28,160
dr sharon cobb sls associate program

9
00:00:31,349 --> 00:00:29,359
manager

10
00:00:33,510 --> 00:00:31,359
today we're going to be answering your

11
00:00:35,430 --> 00:00:33,520
questions about the space launch system

12
00:00:37,350 --> 00:00:35,440
rocket that is launching the first

13
00:00:38,950 --> 00:00:37,360

artemis mission

14
00:00:41,750 --> 00:00:38,960
you can ask us your questions by

15
00:00:43,510 --> 00:00:41,760
dropping them in the comments

16
00:00:45,830 --> 00:00:43,520
if now i want to take them second to

17
00:00:48,869 --> 00:00:45,840
look at this view that we have behind us

18
00:00:51,189 --> 00:00:48,879
you can see launch complex 39b where the

19
00:00:53,029 --> 00:00:51,199
integrated sls rocket and orion

20
00:00:55,150 --> 00:00:53,039
spacecraft stand

21
00:00:58,750 --> 00:00:55,160
that rocket behind me is

22
00:01:01,670 --> 00:00:58,760
322 feet tall that's equivalent to a

23
00:01:03,990 --> 00:01:01,680
23-story building

24
00:01:06,230 --> 00:01:04,000
artemis one is currently targeting a

25
00:01:08,390 --> 00:01:06,240
launch on august 29th

26
00:01:11,030 --> 00:01:08,400
and the two-hour launch window starts at

27
00:01:13,270 --> 00:01:11,040
8 33 a.m eastern

28
00:01:16,469 --> 00:01:13,280
sls is the most powerful rocket that

29
00:01:17,910 --> 00:01:16,479
nasa has ever built with a thrust of 8.8

30
00:01:20,390 --> 00:01:17,920
million pounds

31
00:01:23,190 --> 00:01:20,400
it'll lift off this launch pad and send

32
00:01:25,990 --> 00:01:23,200
orion on its journey to the moon

33
00:01:27,670 --> 00:01:26,000
artemis one is going to test sls and

34
00:01:31,749 --> 00:01:27,680
orion systems

35
00:01:34,149 --> 00:01:31,759
before flying astronauts on artemis 2.

36
00:01:37,749 --> 00:01:34,159
this uncrew test flight is just a peak

37
00:01:40,230 --> 00:01:37,759
at nasa's next generation moon missions

38
00:01:42,389 --> 00:01:40,240

under artemis nasa is sending the first

39
00:01:43,590 --> 00:01:42,399
woman and the first person of color to

40
00:01:45,990 --> 00:01:43,600
the moon

41
00:01:54,310 --> 00:01:46,000
ushering in a new era of space

42
00:01:59,030 --> 00:01:55,910
and it's just like i wish you could just

43
00:02:01,350 --> 00:01:59,040
feel the energy here at nasa kennedy it

44
00:02:03,270 --> 00:02:01,360
is buzzing with activity and excitement

45
00:02:07,030 --> 00:02:03,280
and we're all so

46
00:02:08,630 --> 00:02:07,040
into in anticipation for this launch

47
00:02:11,990 --> 00:02:08,640
the artemis one countdown actually

48
00:02:13,990 --> 00:02:12,000
begins saturday with a call to stations

49
00:02:15,670 --> 00:02:14,000
and during call to stations engineers

50
00:02:17,589 --> 00:02:15,680
and technicians are going to head to

51
00:02:20,070 --> 00:02:17,599
their consoles and begin working

52
00:02:22,390 --> 00:02:20,080
operations across the country

53
00:02:25,430 --> 00:02:22,400
launch control center at kennedy mission

54
00:02:27,670 --> 00:02:25,440
control center at johnson sls engine

55
00:02:29,270 --> 00:02:27,680
engineering support center at marshall

56
00:02:31,270 --> 00:02:29,280
just to name a few

57
00:02:33,110 --> 00:02:31,280
and the exploration ground systems teams

58
00:02:35,350 --> 00:02:33,120
will be doing final checkouts of the

59
00:02:36,550 --> 00:02:35,360
rocket the spacecraft and ground

60
00:02:38,949 --> 00:02:36,560
equipment

61
00:02:41,190 --> 00:02:38,959
and you can watch the artemis 1 mission

62
00:02:45,190 --> 00:02:41,200
live launch coverage is going to start

63
00:02:46,630 --> 00:02:45,200

at 6 30 a.m eastern on monday august

64
00:02:48,630 --> 00:02:46,640
29th

65
00:02:50,550 --> 00:02:48,640
but before we get into that i would like

66
00:02:53,589 --> 00:02:50,560
to introduce you to my special guest

67
00:02:56,150 --> 00:02:53,599
with me here today dr sharon cobb now if

68
00:02:59,030 --> 00:02:56,160
you're just joining us dr sharon cobb is

69
00:03:01,430 --> 00:02:59,040
the sls associate program manager and we

70
00:03:04,390 --> 00:03:01,440
are live at the observation gantry at

71
00:03:05,910 --> 00:03:04,400
nasa's kennedy space center in florida

72
00:03:07,270 --> 00:03:05,920
as teams prepare for the launch of

73
00:03:11,110 --> 00:03:07,280
artemis one

74
00:03:13,910 --> 00:03:11,120
sharon oversees the design manufacturing

75
00:03:15,750 --> 00:03:13,920
assembly and testing of sls

76
00:03:18,550 --> 00:03:15,760
and if you have any questions for her

77
00:03:20,949 --> 00:03:18,560
you can drop those in the comments below

78
00:03:22,630 --> 00:03:20,959
and we will get to those here shortly

79
00:03:24,309 --> 00:03:22,640
so sharon it is an honor to have you

80
00:03:26,550 --> 00:03:24,319
here with us today

81
00:03:29,190 --> 00:03:26,560
i want to start with i mean we have this

82
00:03:30,630 --> 00:03:29,200
amazing view of the sls rocket it did

83
00:03:32,789 --> 00:03:30,640
just get done raining so it might be a

84
00:03:35,030 --> 00:03:32,799
little bit overcast but we have to take

85
00:03:36,789 --> 00:03:35,040
advantage of this site so can you tell

86
00:03:38,070 --> 00:03:36,799
me a little bit more about the space

87
00:03:43,190 --> 00:03:38,080
launch system

88
00:03:45,110 --> 00:03:43,200

world's most powerful rocket that's ever

89
00:03:47,670 --> 00:03:45,120
been built and it was specifically

90
00:03:50,949 --> 00:03:47,680
designed to be the only rocket that can

91
00:03:53,030 --> 00:03:50,959
take orion into a lunar mission so we've

92
00:03:55,750 --> 00:03:53,040
got a tremendous capability that will

93
00:03:57,670 --> 00:03:55,760
allow us to do complex missions and

94
00:03:59,990 --> 00:03:57,680
learn how to send humans back to the

95
00:04:02,309 --> 00:04:00,000
moon to learn how to live and work there

96
00:04:04,309 --> 00:04:02,319
for long duration flights

97
00:04:05,990 --> 00:04:04,319
yeah and we're excited to see it launch

98
00:04:08,550 --> 00:04:06,000
this first artemis mission this is going

99
00:04:10,710 --> 00:04:08,560
to be an extraordinary sight to see

100
00:04:13,270 --> 00:04:10,720
so i guess i want to talk more about you

101
00:04:16,710 --> 00:04:13,280
and your role next so what does an sls

102
00:04:19,430 --> 00:04:16,720
associate program manager do exactly

103
00:04:21,189 --> 00:04:19,440
well i assist alyssa with just any kind

104
00:04:23,590 --> 00:04:21,199
of activities associated with the

105
00:04:25,430 --> 00:04:23,600
programmatic and the technical

106
00:04:27,110 --> 00:04:25,440
development of this rocket

107
00:04:28,950 --> 00:04:27,120
i've been working on it for a while and

108
00:04:30,870 --> 00:04:28,960
i just love the opportunity to work with

109
00:04:32,469 --> 00:04:30,880
the team of scientists and engineers

110
00:04:34,230 --> 00:04:32,479
that have built this rocket and that

111
00:04:35,909 --> 00:04:34,240
have tested it and have it ready to

112
00:04:37,510 --> 00:04:35,919
launch monday

113
00:04:39,110 --> 00:04:37,520

that sounds like an exciting job and

114
00:04:42,070 --> 00:04:39,120
what an amazing point in your career to

115
00:04:43,430 --> 00:04:42,080
be here to witness this unbelievable it

116
00:04:45,510 --> 00:04:43,440
is unbelievable

117
00:04:47,110 --> 00:04:45,520
so what can we expect to see during

118
00:04:50,150 --> 00:04:47,120
launch day

119
00:04:52,469 --> 00:04:50,160
well there'll be a very choreographed um

120
00:04:53,830 --> 00:04:52,479
countdown timeline and then the first

121
00:04:56,790 --> 00:04:53,840
thing that you're going to see on the

122
00:05:00,710 --> 00:04:56,800
pad is at t minus six seconds when the

123
00:05:02,870 --> 00:05:00,720
rs-25 engines start to um have the vapor

124
00:05:05,670 --> 00:05:02,880
come out from the bottom and then at t

125
00:05:07,110 --> 00:05:05,680
minus zero the solid rocket boosters are

126
00:05:09,590 --> 00:05:07,120
going to ignite

127
00:05:12,710 --> 00:05:09,600
and we are going to have liftoff of the

128
00:05:13,670 --> 00:05:12,720
space launch system on its orbit to

129
00:05:15,670 --> 00:05:13,680
lunar

130
00:05:17,430 --> 00:05:15,680
exploration yeah that's going to be a

131
00:05:19,270 --> 00:05:17,440
great site i mean

132
00:05:21,029 --> 00:05:19,280
you know we've seen videos and i've

133
00:05:23,430 --> 00:05:21,039
actually witnessed a few booster firings

134
00:05:25,510 --> 00:05:23,440
we've witnessed some rs25 testing and to

135
00:05:27,990 --> 00:05:25,520
see that all come together now it's

136
00:05:29,430 --> 00:05:28,000
going to be really amazing so can you

137
00:05:32,070 --> 00:05:29,440
give us a little bit of a timeline of

138
00:05:34,070 --> 00:05:32,080

the artemis 1 mission after liftoff sure

139
00:05:36,629 --> 00:05:34,080
after we get through liftoff the first

140
00:05:39,350 --> 00:05:36,639
two minutes of flight will be powered by

141
00:05:42,150 --> 00:05:39,360
those solid rocket boosters and then at

142
00:05:44,870 --> 00:05:42,160
eight minutes into the flight the core

143
00:05:47,350 --> 00:05:44,880
stage and the rs-25 engines will drop

144
00:05:50,950 --> 00:05:47,360
off and the interim cryogenic propulsion

145
00:05:52,310 --> 00:05:50,960
stage will have a

146
00:05:55,990 --> 00:05:52,320
um transl

147
00:05:58,790 --> 00:05:56,000
on into lunar orbit and then at an hour

148
00:06:00,870 --> 00:05:58,800
and 36 minutes in um there'll be a

149
00:06:03,909 --> 00:06:00,880
translunar injection of the orion

150
00:06:06,390 --> 00:06:03,919
spacecraft and then about two hours in

151
00:06:08,710 --> 00:06:06,400
orion and the service module will go

152
00:06:11,830 --> 00:06:08,720
into their lunar orbit and and we'll

153
00:06:15,189 --> 00:06:11,840
have an incredible mission going over 40

154
00:06:17,670 --> 00:06:15,199
000 miles beyond the lunar surface

155
00:06:19,110 --> 00:06:17,680
further than we've ever been before wow

156
00:06:21,749 --> 00:06:19,120
that sounds like an amazing mission

157
00:06:24,150 --> 00:06:21,759
we're all very excited to see it launch

158
00:06:25,270 --> 00:06:24,160
and to get that data back you know so

159
00:06:26,950 --> 00:06:25,280
now we're going to take a look at some

160
00:06:29,350 --> 00:06:26,960
of the questions that our viewers are

161
00:06:31,189 --> 00:06:29,360
sending in just a reminder you can drop

162
00:06:32,710 --> 00:06:31,199
those questions in the comments below we

163
00:06:35,270 --> 00:06:32,720

are still taking them so there is still

164
00:06:37,830 --> 00:06:35,280
time for that so let's look at the first

165
00:06:40,070 --> 00:06:37,840
question we have here what can we

166
00:06:41,430 --> 00:06:40,080
ex what can we expect to feel on launch

167
00:06:42,469 --> 00:06:41,440
day so what is that feeling gonna be

168
00:06:45,670 --> 00:06:42,479
like

169
00:06:47,590 --> 00:06:45,680
nothing any of us have ever felt before

170
00:06:49,749 --> 00:06:47,600
this is the largest rocket that we've

171
00:06:51,909 --> 00:06:49,759
ever launched and so the ground will

172
00:06:53,189 --> 00:06:51,919
rumble you'll hear the sound waves come

173
00:06:53,909 --> 00:06:53,199
through the air

174
00:06:56,309 --> 00:06:53,919
and

175
00:06:58,309 --> 00:06:56,319
people for miles away will be able to

176
00:07:00,629 --> 00:06:58,319
hear the roar and feel the launch of

177
00:07:02,950 --> 00:07:00,639
this special rocket yeah i imagine the

178
00:07:04,150 --> 00:07:02,960
vibrations here are going to be really

179
00:07:05,670 --> 00:07:04,160
fun to see

180
00:07:07,589 --> 00:07:05,680
absolutely yeah and it's i think it's

181
00:07:10,230 --> 00:07:07,599
going to be really bright to see too

182
00:07:12,150 --> 00:07:10,240
absolutely the

183
00:07:13,830 --> 00:07:12,160
the engines themselves when they fire

184
00:07:15,350 --> 00:07:13,840
it'll be bright and just a beautiful

185
00:07:18,070 --> 00:07:15,360
sight yeah

186
00:07:20,870 --> 00:07:18,080
and how powerful is the sls rocket

187
00:07:24,390 --> 00:07:20,880
well at liftoff the sls rocket will be

188
00:07:28,309 --> 00:07:24,400

have a thrust capability of 8.8 million

189
00:07:30,870 --> 00:07:28,319
pounds and it'll be able to lift 59 000

190
00:07:34,469 --> 00:07:30,880
pounds to low earth to low uh lunar

191
00:07:36,230 --> 00:07:34,479
orbit so really powerful rocket yeah and

192
00:07:39,029 --> 00:07:36,240
it needs that power to send it right

193
00:07:41,270 --> 00:07:39,039
into the moon absolutely not only that

194
00:07:43,430 --> 00:07:41,280
with this kind of lift capability we can

195
00:07:45,990 --> 00:07:43,440
send large payloads at the same time we

196
00:07:48,150 --> 00:07:46,000
send crew on some of our future missions

197
00:07:50,950 --> 00:07:48,160
so it's a great capability that'll be

198
00:07:52,710 --> 00:07:50,960
the foundation for the future

199
00:07:54,070 --> 00:07:52,720
and what does the weather look like for

200
00:07:55,830 --> 00:07:54,080
launch day i know you guys have been

201
00:07:58,309 --> 00:07:55,840
looking into that a little bit so well

202
00:07:59,990 --> 00:07:58,319
as with any day in florida there's an

203
00:08:01,990 --> 00:08:00,000
opportunity there's a chance for some

204
00:08:04,869 --> 00:08:02,000
showers but right now we're looking good

205
00:08:06,469 --> 00:08:04,879
we have um a pretty good percent chance

206
00:08:08,469 --> 00:08:06,479
that we'll be able to launch but we've

207
00:08:10,309 --> 00:08:08,479
got a two hour window so we're feeling

208
00:08:12,550 --> 00:08:10,319
really good about our ability to be able

209
00:08:14,070 --> 00:08:12,560
to launch on monday that's great we we

210
00:08:15,350 --> 00:08:14,080
are all crossing our fingers in terms of

211
00:08:17,749 --> 00:08:15,360
lately

212
00:08:19,909 --> 00:08:17,759
all right and and can you just remind us

213
00:08:23,189 --> 00:08:19,919

one more time when is launch

214
00:08:25,670 --> 00:08:23,199
launch is monday august the 29th and our

215
00:08:27,909 --> 00:08:25,680
our window opens at 8 33 a.m and

216
00:08:29,350 --> 00:08:27,919
there'll be a two-hour window perfect

217
00:08:31,350 --> 00:08:29,360
yeah we definitely want everyone to tune

218
00:08:33,430 --> 00:08:31,360
in for them absolutely really that'll be

219
00:08:34,550 --> 00:08:33,440
a sight you don't want to miss uh-huh

220
00:08:36,630 --> 00:08:34,560
for sure

221
00:08:37,670 --> 00:08:36,640
now why is there not a crew on artemis

222
00:08:39,670 --> 00:08:37,680
one

223
00:08:41,750 --> 00:08:39,680
well for this first mission we want to

224
00:08:44,470 --> 00:08:41,760
test out all the ground and all the

225
00:08:46,230 --> 00:08:44,480
flight systems that we need to ensure

226
00:08:48,470 --> 00:08:46,240
that we are safe when we're ready to put

227
00:08:50,550 --> 00:08:48,480
crew on this we'll be taking lots of

228
00:08:52,550 --> 00:08:50,560
measurements we have lots of sensors on

229
00:08:54,470 --> 00:08:52,560
the rocket and so we'll be looking at

230
00:08:56,310 --> 00:08:54,480
that data when we get it back and make

231
00:08:58,389 --> 00:08:56,320
sure that we understand all the

232
00:09:00,070 --> 00:08:58,399
environments that the rocket will see so

233
00:09:01,350 --> 00:09:00,080
that when we put crew on the next flight

234
00:09:03,430 --> 00:09:01,360
it'll be safe

235
00:09:05,269 --> 00:09:03,440
and part of making it safe i think is

236
00:09:06,310 --> 00:09:05,279
we're we have some secondary payloads

237
00:09:08,310 --> 00:09:06,320
that are going to be telling us a little

238
00:09:10,790 --> 00:09:08,320

bit about the astronaut safety is that

239
00:09:13,990 --> 00:09:10,800
correct that is correct inside the orion

240
00:09:16,310 --> 00:09:14,000
capsule we have commander moonkin who is

241
00:09:18,310 --> 00:09:16,320
going to be

242
00:09:20,230 --> 00:09:18,320
outfitted with lots of sensors we also

243
00:09:21,750 --> 00:09:20,240
have radiation sensors and so we'll be

244
00:09:24,150 --> 00:09:21,760
taking a lot of measurements about

245
00:09:25,750 --> 00:09:24,160
what's going on inside that capsule so

246
00:09:27,509 --> 00:09:25,760
that when we come back we'll know

247
00:09:29,590 --> 00:09:27,519
exactly what those astronauts will

248
00:09:31,269 --> 00:09:29,600
experience yeah i'm sure moonikin's

249
00:09:33,190 --> 00:09:31,279
going to have the right of his life

250
00:09:35,990 --> 00:09:33,200
absolutely he is

251
00:09:38,470 --> 00:09:36,000
and when will crew fly on sls uh

252
00:09:40,790 --> 00:09:38,480
criminal final sls on the artemis ii

253
00:09:42,630 --> 00:09:40,800
mission and so we'll get everything back

254
00:09:44,630 --> 00:09:42,640
from this and we'll set a launch date

255
00:09:46,790 --> 00:09:44,640
once we um once we're a little bit

256
00:09:49,110 --> 00:09:46,800
closer to understanding what happened on

257
00:09:50,710 --> 00:09:49,120
this flight and we're very excited for

258
00:09:53,750 --> 00:09:50,720
the first woman and the first person of

259
00:09:55,350 --> 00:09:53,760
color to land on the moon

260
00:09:56,630 --> 00:09:55,360
it's gonna be really exciting mission

261
00:09:58,790 --> 00:09:56,640
for that

262
00:10:01,910 --> 00:09:58,800
all right and just a reminder real quick

263
00:10:03,990 --> 00:10:01,920

we are still taking questions so so drop

264
00:10:05,990 --> 00:10:04,000
those in the comments you know dr sharon

265
00:10:07,829 --> 00:10:06,000
cobb just a reminder she's the sls

266
00:10:10,389 --> 00:10:07,839
associate program manager so she can

267
00:10:13,030 --> 00:10:10,399
answer all of our sls questions right

268
00:10:14,069 --> 00:10:13,040
here right now that's what we're doing q

269
00:10:22,310 --> 00:10:14,079
a

270
00:10:24,389 --> 00:10:22,320
there for everyone

271
00:10:26,470 --> 00:10:24,399
and i'm going to look at some other uh

272
00:10:29,030 --> 00:10:26,480
while you do that alyssa let me remind

273
00:10:31,110 --> 00:10:29,040
people that this is just the beginning

274
00:10:33,829 --> 00:10:31,120
we will be upgrading the capabilities of

275
00:10:36,230 --> 00:10:33,839
this rocket and so with artemis iv we'll

276
00:10:38,630 --> 00:10:36,240
have an even more powerful upper stage

277
00:10:40,550 --> 00:10:38,640
and so we'll be able to take crew and

278
00:10:41,990 --> 00:10:40,560
even larger payloads once we get to

279
00:10:43,670 --> 00:10:42,000
those missions

280
00:10:44,949 --> 00:10:43,680
and that reminds me for that upgraded

281
00:10:46,790 --> 00:10:44,959
upper stage what is the difference

282
00:10:48,550 --> 00:10:46,800
between this upper stage for artemis one

283
00:10:50,310 --> 00:10:48,560
and what will be on artemis iv

284
00:10:52,230 --> 00:10:50,320
what we'll be on artemis is called the

285
00:10:54,630 --> 00:10:52,240
exploration upper stage and it'll have

286
00:10:57,190 --> 00:10:54,640
40 percent more lift capability so we'll

287
00:10:59,350 --> 00:10:57,200
be able to carry much larger payloads

288
00:11:01,269 --> 00:10:59,360

than we can with this mission wow that's

289
00:11:03,269 --> 00:11:01,279
really awesome for future missions and

290
00:11:04,470 --> 00:11:03,279
what sort of experiments are on the

291
00:11:06,470 --> 00:11:04,480
rockets

292
00:11:07,990 --> 00:11:06,480
so in addition to just the data that

293
00:11:09,350 --> 00:11:08,000
we're going to get from this test flight

294
00:11:12,470 --> 00:11:09,360
there are 10

295
00:11:15,509 --> 00:11:12,480
secondary payloads cubesats that will be

296
00:11:17,750 --> 00:11:15,519
deployed as we get as the orion capsule

297
00:11:19,910 --> 00:11:17,760
separates and goes on to the moon

298
00:11:21,750 --> 00:11:19,920
they'll be deploying these

299
00:11:24,550 --> 00:11:21,760
really unique experiments that'll be

300
00:11:26,710 --> 00:11:24,560
looking at everything from radiation to

301
00:11:28,310 --> 00:11:26,720
the moon back looking back on the earth

302
00:11:30,870 --> 00:11:28,320
and even an experiment looking at the

303
00:11:32,230 --> 00:11:30,880
sun so a great opportunity to get some

304
00:11:34,230 --> 00:11:32,240
really exciting science out of this

305
00:11:35,590 --> 00:11:34,240
mission too yeah and i imagine that that

306
00:11:37,350 --> 00:11:35,600
science is going to help not only with

307
00:11:39,269 --> 00:11:37,360
artemis but probably other future

308
00:11:41,190 --> 00:11:39,279
missions as well maybe to mars

309
00:11:42,790 --> 00:11:41,200
absolutely and that's ultimately what

310
00:11:45,030 --> 00:11:42,800
we're doing we're trying to learn to

311
00:11:47,430 --> 00:11:45,040
live and work on the moon so that

312
00:11:49,350 --> 00:11:47,440
eventually we can send humans to mars

313
00:11:52,150 --> 00:11:49,360

and we'll have all the technology and

314
00:11:53,750 --> 00:11:52,160
infrastructure that we need to do that

315
00:11:55,190 --> 00:11:53,760
all right let's take another question

316
00:11:58,710 --> 00:11:55,200
here

317
00:12:00,790 --> 00:11:58,720
why are we doing a test flight of sls

318
00:12:03,190 --> 00:12:00,800
well the test flight is really important

319
00:12:05,269 --> 00:12:03,200
to make sure that we understand all of

320
00:12:07,110 --> 00:12:05,279
the data that we get off of the mission

321
00:12:09,750 --> 00:12:07,120
we'll be comparing that to models that

322
00:12:11,910 --> 00:12:09,760
we did before the mission and so that's

323
00:12:13,509 --> 00:12:11,920
a great way to verify that the design

324
00:12:15,350 --> 00:12:13,519
and all the requirements have been met

325
00:12:17,350 --> 00:12:15,360
and that we're safely ready to fly crew

326
00:12:19,110 --> 00:12:17,360
on the next mission

327
00:12:21,590 --> 00:12:19,120
yeah it's really important that we put

328
00:12:23,750 --> 00:12:21,600
the safety of astronauts at the front

329
00:12:26,550 --> 00:12:23,760
for sure and we've done tremendous tests

330
00:12:28,550 --> 00:12:26,560
on the ground during this process but we

331
00:12:30,949 --> 00:12:28,560
will get so much more data when we fly

332
00:12:33,110 --> 00:12:30,959
this this rocket through the atmosphere

333
00:12:34,710 --> 00:12:33,120
so i'm sure you and your team are very

334
00:12:37,430 --> 00:12:34,720
excited to look at that data we are

335
00:12:40,230 --> 00:12:37,440
absolutely that's almost as exciting as

336
00:12:41,590 --> 00:12:40,240
is the launch not quite yeah so for

337
00:12:44,150 --> 00:12:41,600
everyone watching at home are there

338
00:12:46,150 --> 00:12:44,160

cameras on us and orion there are a ton

339
00:12:48,150 --> 00:12:46,160
of cameras we'll be watching from all

340
00:12:49,910 --> 00:12:48,160
possible angles and there are little

341
00:12:51,509 --> 00:12:49,920
black squares on the side of the

342
00:12:52,470 --> 00:12:51,519
boosters you probably can't see them

343
00:12:54,110 --> 00:12:52,480
from here

344
00:12:56,230 --> 00:12:54,120
but those are

345
00:12:58,069 --> 00:12:56,240
photogramic um

346
00:12:59,910 --> 00:12:58,079
targets that we'll be able to take those

347
00:13:01,350 --> 00:12:59,920
cameras and be able to track exactly

348
00:13:03,430 --> 00:13:01,360
where the rocket is and so we'll

349
00:13:05,030 --> 00:13:03,440
understand its flight pattern a lot of

350
00:13:06,790 --> 00:13:05,040
really interesting information so it's

351
00:13:08,310 --> 00:13:06,800
not just about watching it launch but

352
00:13:09,910 --> 00:13:08,320
it's about getting some data off of it

353
00:13:11,190 --> 00:13:09,920
too so it's not just a big old chess

354
00:13:13,269 --> 00:13:11,200
game

355
00:13:15,190 --> 00:13:13,279
there's a meaning to the black us

356
00:13:16,470 --> 00:13:15,200
absolutely

357
00:13:18,550 --> 00:13:16,480
gotcha

358
00:13:20,310 --> 00:13:18,560
and how can we watch the mission for

359
00:13:21,990 --> 00:13:20,320
people at home you can watch it from a

360
00:13:24,870 --> 00:13:22,000
number of channels but you can go to

361
00:13:27,030 --> 00:13:24,880
nasa.gov and uh we will have live stream

362
00:13:29,509 --> 00:13:27,040
there it will be on facebook just on a

363
00:13:31,910 --> 00:13:29,519

number of different social media sites

364
00:13:32,710 --> 00:13:31,920
absolutely yeah i think nasa tv the nasa

365
00:13:34,790 --> 00:13:32,720
app

366
00:13:37,269 --> 00:13:34,800
the nasa is a great one there's a lot of

367
00:13:39,350 --> 00:13:37,279
cool things on there including our sls

368
00:13:41,269 --> 00:13:39,360
3d model it's on the nasa app you can

369
00:13:42,949 --> 00:13:41,279
actually put sls in your own living room

370
00:13:44,790 --> 00:13:42,959
if you want to

371
00:13:46,710 --> 00:13:44,800
it's a very cool one

372
00:13:48,629 --> 00:13:46,720
all right and here's another little

373
00:13:50,790 --> 00:13:48,639
technical question

374
00:13:52,310 --> 00:13:50,800
why do we use solid and liquid

375
00:13:53,350 --> 00:13:52,320
propellant

376
00:13:55,990 --> 00:13:53,360
well

377
00:13:57,750 --> 00:13:56,000
it's a very proven history that we carry

378
00:14:00,230 --> 00:13:57,760
over some of these technologies from the

379
00:14:02,790 --> 00:14:00,240
space shuttle program the solids are the

380
00:14:05,269 --> 00:14:02,800
most extremely powerful way that you can

381
00:14:07,110 --> 00:14:05,279
get that initial lift off the ground and

382
00:14:09,430 --> 00:14:07,120
then the liquids are a way that you can

383
00:14:11,910 --> 00:14:09,440
get even longer distances once we get up

384
00:14:13,430 --> 00:14:11,920
past the atmosphere so very different

385
00:14:15,590 --> 00:14:13,440
purposes for each one of those

386
00:14:18,389 --> 00:14:15,600
technologies but both critical to us

387
00:14:19,509 --> 00:14:18,399
getting into lunar orbit i bet yeah for

388
00:14:21,509 --> 00:14:19,519

sure

389
00:14:23,590 --> 00:14:21,519
so so here's kind of an exciting one

390
00:14:27,189 --> 00:14:23,600
that someone's asked how does it feel to

391
00:14:30,470 --> 00:14:28,710
it's really hard to describe what it

392
00:14:32,230 --> 00:14:30,480
feels like to have been a part of this

393
00:14:34,550 --> 00:14:32,240
i've been with it almost since the

394
00:14:35,910 --> 00:14:34,560
inception and to see the team come

395
00:14:38,550 --> 00:14:35,920
together and to see the many

396
00:14:40,389 --> 00:14:38,560
accomplishments and to see all this

397
00:14:42,470 --> 00:14:40,399
incredible hardware sitting on the pad

398
00:14:44,629 --> 00:14:42,480
today ready to launch has just been a

399
00:14:46,870 --> 00:14:44,639
dream come true it's it's just an

400
00:14:48,790 --> 00:14:46,880
incredible opportunity all that hard

401
00:14:51,189 --> 00:14:48,800
work is coming to fruition it really is

402
00:14:53,430 --> 00:14:51,199
and how cool that our artemis generation

403
00:14:55,990 --> 00:14:53,440
is going to see a new era of space

404
00:14:59,269 --> 00:14:56,000
travel to the moon and into mars

405
00:15:01,829 --> 00:14:59,279
wow it's just incredible to witness

406
00:15:04,550 --> 00:15:01,839
um so i know that you

407
00:15:07,350 --> 00:15:04,560
mentioned or we we could see on the

408
00:15:09,430 --> 00:15:07,360
rocket that it's orange yes now we've

409
00:15:12,389 --> 00:15:09,440
seen in photos that this was a yellowy

410
00:15:14,870 --> 00:15:12,399
creamy color before correct so

411
00:15:15,750 --> 00:15:14,880
why does it get so tan in this florida

412
00:15:17,910 --> 00:15:15,760
sun

413
00:15:19,990 --> 00:15:17,920

well the color that you see on there is

414
00:15:22,550 --> 00:15:20,000
from the thermal protection system it's

415
00:15:24,310 --> 00:15:22,560
actually a foam and the longer it sits

416
00:15:27,430 --> 00:15:24,320
out under the sun

417
00:15:29,189 --> 00:15:27,440
the oxygen from the atmosphere turns at

418
00:15:30,710 --> 00:15:29,199
that color it's almost like getting a

419
00:15:33,110 --> 00:15:30,720
suntan and so

420
00:15:35,269 --> 00:15:33,120
um doesn't impact the performance at all

421
00:15:39,350 --> 00:15:35,279
but it does make it a really pretty

422
00:15:42,470 --> 00:15:39,360
color so it is a film insulation it is

423
00:15:44,310 --> 00:15:42,480
absolutely that's a really cool fun fact

424
00:15:46,470 --> 00:15:44,320
all right and how did you get started at

425
00:15:49,430 --> 00:15:46,480
nasa

426
00:15:51,749 --> 00:15:49,440
um i had a great opportunity when i was

427
00:15:54,870 --> 00:15:51,759
in college to come spend the summer with

428
00:15:56,870 --> 00:15:54,880
my faculty advisor in graduate school

429
00:15:59,430 --> 00:15:56,880
and i got to do experiments in the labs

430
00:16:01,350 --> 00:15:59,440
at nasa and what turned into be a

431
00:16:03,350 --> 00:16:01,360
three-month rotation

432
00:16:05,670 --> 00:16:03,360
has been an incredible career i have

433
00:16:07,990 --> 00:16:05,680
just i can't do what incredible exciting

434
00:16:09,350 --> 00:16:08,000
things i've gotten to do wow that's

435
00:16:10,710 --> 00:16:09,360
amazing

436
00:16:12,550 --> 00:16:10,720
going off of that can you tell me a

437
00:16:14,870 --> 00:16:12,560
little bit more of your path with

438
00:16:17,110 --> 00:16:14,880

artemis how did that start

439
00:16:19,910 --> 00:16:17,120
well um at marshall space flight center

440
00:16:22,629 --> 00:16:19,920
we had the responsibility for the design

441
00:16:25,350 --> 00:16:22,639
and development and of this space launch

442
00:16:27,670 --> 00:16:25,360
system the rocket and so from early on

443
00:16:29,670 --> 00:16:27,680
in the program i was able to be a part

444
00:16:31,749 --> 00:16:29,680
of it and help lead the team and help

445
00:16:33,590 --> 00:16:31,759
provide the resources the team needed to

446
00:16:35,269 --> 00:16:33,600
make this possible

447
00:16:37,269 --> 00:16:35,279
well that sounds like a very exciting

448
00:16:40,870 --> 00:16:37,279
career that you've had so we're excited

449
00:16:44,949 --> 00:16:40,880
to have you in the sls program for sure

450
00:16:47,749 --> 00:16:44,959
all right and why is this called artemis

451
00:16:50,949 --> 00:16:47,759
why is it called artemis well artemis in

452
00:16:53,910 --> 00:16:50,959
greek mythology is the sister of apollo

453
00:16:56,470 --> 00:16:53,920
so it's a great connection to our past

454
00:16:58,550 --> 00:16:56,480
but being the connection to our future

455
00:17:00,790 --> 00:16:58,560
is even more important we'll be placing

456
00:17:01,749 --> 00:17:00,800
the first female and the first person of

457
00:17:03,749 --> 00:17:01,759
color

458
00:17:06,230 --> 00:17:03,759
on the lunar surface with this mission

459
00:17:08,230 --> 00:17:06,240
so a great nod to our past but i look

460
00:17:10,549 --> 00:17:08,240
forward to an incredible

461
00:17:13,110 --> 00:17:10,559
future in space exploration and what an

462
00:17:14,789 --> 00:17:13,120
exciting future it is oh it is so

463
00:17:16,949 --> 00:17:14,799

exciting

464
00:17:20,630 --> 00:17:16,959
all right and the last question is there

465
00:17:22,549 --> 00:17:20,640
anything that you want to add

466
00:17:24,470 --> 00:17:22,559
um

467
00:17:26,069 --> 00:17:24,480
there's so much that's gone into this

468
00:17:29,909 --> 00:17:26,079
when you look at the rocket out on the

469
00:17:32,390 --> 00:17:29,919
pad it represents american ingenuity it

470
00:17:34,710 --> 00:17:32,400
represents manufacturing capabilities

471
00:17:36,789 --> 00:17:34,720
and people from across the country

472
00:17:38,549 --> 00:17:36,799
that have been able to make this

473
00:17:41,029 --> 00:17:38,559
possible and so when you look at that

474
00:17:43,669 --> 00:17:41,039
rocket think about the team that spent

475
00:17:45,510 --> 00:17:43,679
hours and days and or time away from

476
00:17:47,510 --> 00:17:45,520
their family to make this all possible

477
00:17:49,190 --> 00:17:47,520
and it's truly going to be america's

478
00:17:51,430 --> 00:17:49,200
rocket and we just can't wait to see it

479
00:17:53,510 --> 00:17:51,440
lift off the launch pad i know we can't

480
00:17:56,390 --> 00:17:53,520
wait here i mean the whole sls program

481
00:17:57,830 --> 00:17:56,400
everyone at nasa is so excited for this

482
00:17:58,830 --> 00:17:57,840
this launch

483
00:18:00,710 --> 00:17:58,840
it just gives

484
00:18:02,230 --> 00:18:00,720
me

485
00:18:04,150 --> 00:18:02,240
well thank you for answering those

486
00:18:05,830 --> 00:18:04,160
questions for us today sharon

487
00:18:08,070 --> 00:18:05,840
honored to have you thank you for having

488
00:18:10,870 --> 00:18:08,080

me it's so exciting yeah

489
00:18:12,789 --> 00:18:10,880
so um if you did miss any part of this

490
00:18:15,270 --> 00:18:12,799
live video there will be a replay

491
00:18:17,510 --> 00:18:15,280
available of it on nasa's space launch

492
00:18:20,150 --> 00:18:17,520
system facebook page and nasa's marshall

493
00:18:21,029 --> 00:18:20,160
space flight center youtube channel

494
00:18:22,870 --> 00:18:21,039
so

495
00:18:25,350 --> 00:18:22,880
i just want to remind you that artemis

496
00:18:27,750 --> 00:18:25,360
one launch is coming up on monday august

497
00:18:30,549 --> 00:18:27,760
29th we have a two-hour launch window

498
00:18:32,630 --> 00:18:30,559
that starts at 8 33 a.m eastern and

499
00:18:35,510 --> 00:18:32,640
nasa's official launch broadcast will

500
00:18:38,950 --> 00:18:35,520
begin at 6 30 a.m eastern so be sure to

501
00:18:41,270 --> 00:18:38,960
tune into that on nasa tv the nasa app

502
00:18:43,110 --> 00:18:41,280
various social media accounts and on the

503
00:18:44,950 --> 00:18:43,120
agency's website

504
00:18:46,549 --> 00:18:44,960
the sls team is so excited for this

505
00:18:48,710 --> 00:18:46,559
launch and we hope that you will witness