



*Antares*

1  
00:00:05,190 --> 00:00:03,830  
good evening and welcome to nasa's

2  
00:00:06,950 --> 00:00:05,200  
wallops flight facility in wallops

3  
00:00:08,710 --> 00:00:06,960  
island virginia i'm nasa public affairs

4  
00:00:10,709 --> 00:00:08,720  
officer trent parado we're here to

5  
00:00:13,190 --> 00:00:10,719  
discuss the orbital sciences corporation

6  
00:00:14,629 --> 00:00:13,200  
test launch of its antares rocket which

7  
00:00:17,029 --> 00:00:14,639  
lifted off from the mid-atlantic

8  
00:00:19,029 --> 00:00:17,039  
regional spaceport pad a some 90 minutes

9  
00:00:21,189 --> 00:00:19,039  
ago we have two speakers joining us

10  
00:00:22,470 --> 00:00:21,199  
today well they'll each give a brief

11  
00:00:24,310 --> 00:00:22,480  
opening statement then we'll take

12  
00:00:25,830 --> 00:00:24,320  
questions here in the room and

13  
00:00:27,429 --> 00:00:25,840

on the phone line so reminder you can

14

00:00:31,349 --> 00:00:27,439

find out more information about today's

15

00:00:35,590 --> 00:00:32,870

orbital you can find all the ways to

16

00:00:38,630 --> 00:00:35,600

connect with nasa on social media at

17

00:00:42,470 --> 00:00:40,549

connect we briefly introduce our

18

00:00:45,350 --> 00:00:42,480

speakers and then we'll get started to

19

00:00:47,830 --> 00:00:45,360

my left we have alan lindenmoyer

20

00:00:50,310 --> 00:00:47,840

manager of nasa's commercial crew and

21

00:00:52,150 --> 00:00:50,320

cargo program from nasa's johnson space

22

00:00:54,150 --> 00:00:52,160

center in houston

23

00:00:55,910 --> 00:00:54,160

and we have frank culbertson

24

00:00:57,990 --> 00:00:55,920

executive vice president and general

25

00:01:00,310 --> 00:00:58,000

manager of orbital's advanced programs

26

00:01:03,910 --> 00:01:00,320

group and a former astronaut

27

00:01:07,109 --> 00:01:03,920

and with that we'll open with allen

28

00:01:09,750 --> 00:01:07,119

thank you trent well it certainly

29

00:01:11,990 --> 00:01:09,760

was an amazing achievement for orbital

30

00:01:14,310 --> 00:01:12,000

today

31

00:01:16,550 --> 00:01:14,320

a great day for nasa

32

00:01:20,710 --> 00:01:16,560

and another historic day for commercial

33

00:01:28,310 --> 00:01:25,429

the flight today was just beautiful and

34

00:01:30,550 --> 00:01:28,320

it looks like

35

00:01:32,069 --> 00:01:30,560

the preliminary data says that all the

36

00:01:37,030 --> 00:01:32,079

objectives that we established for the

37

00:01:41,190 --> 00:01:39,270

uh all the expectations we had today for

38

00:01:42,710 --> 00:01:41,200

today's flight was uh

39

00:01:44,789 --> 00:01:42,720

beautifully met

40

00:01:47,670 --> 00:01:44,799

and that cannot be done without the

41

00:01:50,069 --> 00:01:47,680

extraordinary teamwork between

42

00:01:53,190 --> 00:01:50,079

government and industry nasa and orbital

43

00:01:54,789 --> 00:01:53,200

and all our other partners with the faa

44

00:01:57,350 --> 00:01:54,799

and the

45

00:02:00,310 --> 00:01:57,360

mid-atlantic spaceport

46

00:02:02,389 --> 00:02:00,320

and the wallops range and everybody who

47

00:02:05,109 --> 00:02:02,399

works so seamlessly together to make

48

00:02:07,190 --> 00:02:05,119

this happen so smoothly today

49

00:02:08,790 --> 00:02:07,200

i want to give a special thanks to my

50

00:02:10,869 --> 00:02:08,800

team that has been working with the

51  
00:02:13,990 --> 00:02:10,879  
project since the beginning in

52  
00:02:16,550 --> 00:02:14,000  
2008 with our partnership with orbital

53  
00:02:18,550 --> 00:02:16,560  
bruce manners our project executive and

54  
00:02:20,869 --> 00:02:18,560  
kevin meehan

55  
00:02:22,949 --> 00:02:20,879  
worked very closely with orbital to help

56  
00:02:24,949 --> 00:02:22,959  
help make this happen today and i

57  
00:02:26,070 --> 00:02:24,959  
they really do deserve some special

58  
00:02:28,630 --> 00:02:26,080  
thanks so

59  
00:02:31,110 --> 00:02:28,640  
congratulations frank to you

60  
00:02:33,589 --> 00:02:31,120  
it was a beautiful flight thank you so

61  
00:02:35,430 --> 00:02:33,599  
much for making this happen today and

62  
00:02:37,589 --> 00:02:35,440  
and we're looking forward to the next

63  
00:02:39,670 --> 00:02:37,599

one the iss the flight to the space

64

00:02:41,430 --> 00:02:39,680

station coming up later this summer

65

00:02:42,550 --> 00:02:41,440

congratulations thank you thank you very

66

00:02:43,990 --> 00:02:42,560

much

67

00:02:46,550 --> 00:02:44,000

my turn yes sir

68

00:02:49,110 --> 00:02:46,560

all right um it's great to be here today

69

00:02:50,550 --> 00:02:49,120

especially in under these circumstances

70

00:02:52,550 --> 00:02:50,560

on behalf of david thompson and the

71

00:02:53,910 --> 00:02:52,560

entire orbital team i want to thank all

72

00:02:55,270 --> 00:02:53,920

of you for being here and particularly

73

00:02:57,270 --> 00:02:55,280

for the to the media i want to thank you

74

00:02:59,830 --> 00:02:57,280

for telling our story because it is one

75

00:03:01,830 --> 00:02:59,840

heck of a story and as alan said that

76  
00:03:03,990 --> 00:03:01,840  
took a lot of people some great teamwork

77  
00:03:06,869 --> 00:03:04,000  
and and some some really tough

78  
00:03:09,670 --> 00:03:06,879  
challenges to get to this point um

79  
00:03:11,589 --> 00:03:09,680  
today did go extremely smoothly and it's

80  
00:03:12,630 --> 00:03:11,599  
a it's a real testament to the team that

81  
00:03:14,790 --> 00:03:12,640  
it did

82  
00:03:16,070 --> 00:03:14,800  
but uh if you've watched our progress

83  
00:03:19,030 --> 00:03:16,080  
over the last few years you know that

84  
00:03:21,350 --> 00:03:19,040  
this is not easy and uh and and making

85  
00:03:23,509 --> 00:03:21,360  
it look easy takes a lot of hard work

86  
00:03:25,110 --> 00:03:23,519  
and overcoming a lot of challenges and a

87  
00:03:27,670 --> 00:03:25,120  
number of people did that

88  
00:03:28,630 --> 00:03:27,680

to alan and his team bruce and kevin

89

00:03:30,309 --> 00:03:28,640

that

90

00:03:32,229 --> 00:03:30,319

worked through all of this with us uh

91

00:03:33,670 --> 00:03:32,239

thank you very much for supporting us

92

00:03:35,910 --> 00:03:33,680

through thick and thin

93

00:03:38,550 --> 00:03:35,920

and helping keep things going uh for

94

00:03:40,229 --> 00:03:38,560

today's operation we had an amazing team

95

00:03:42,070 --> 00:03:40,239

that worked well together we did a lot

96

00:03:43,430 --> 00:03:42,080

of rehearsals getting to here you know

97

00:03:45,509 --> 00:03:43,440

we you thought we were just delaying

98

00:03:46,710 --> 00:03:45,519

launches but we really just wanted a few

99

00:03:48,710 --> 00:03:46,720

more practice

100

00:03:51,430 --> 00:03:48,720

at it but

101  
00:03:53,030 --> 00:03:51,440  
the the mars team has taken us

102  
00:03:56,229 --> 00:03:53,040  
to the point where we have an amazing

103  
00:03:58,789 --> 00:03:56,239  
pad that will support what we need

104  
00:04:01,030 --> 00:03:58,799  
we had our liquid oxygen we had our rp

105  
00:04:03,910 --> 00:04:01,040  
on board and we had systems that

106  
00:04:05,990 --> 00:04:03,920  
supported our launch processing

107  
00:04:07,670 --> 00:04:06,000  
and that's extremely important to being

108  
00:04:09,110 --> 00:04:07,680  
able to to be successful here and to

109  
00:04:09,910 --> 00:04:09,120  
dale nationalist team thank you very

110  
00:04:12,070 --> 00:04:09,920  
much

111  
00:04:13,750 --> 00:04:12,080  
to the wallops team led by bill robel

112  
00:04:16,469 --> 00:04:13,760  
jay pittman and

113  
00:04:18,789 --> 00:04:16,479

and the entire team in the uh mission

114

00:04:20,550 --> 00:04:18,799

control center range control center and

115

00:04:23,110 --> 00:04:20,560

uh and out at the pad all the safety

116

00:04:25,830 --> 00:04:23,120

people who helped us get to here we also

117

00:04:28,629 --> 00:04:25,840

uh want to to thank you for that because

118

00:04:30,230 --> 00:04:28,639

they worked as many long hours as we did

119

00:04:31,510 --> 00:04:30,240

trying to stay with us keep up with us

120

00:04:33,350 --> 00:04:31,520

and make sure that we really were

121

00:04:34,950 --> 00:04:33,360

complying with with all the local

122

00:04:36,070 --> 00:04:34,960

regulations and

123

00:04:39,189 --> 00:04:36,080

helping us

124

00:04:39,909 --> 00:04:39,199

get to a successful conclusion

125

00:04:45,990 --> 00:04:39,919

the

126

00:04:48,150 --> 00:04:46,000

that led by bill gerstenmaier have been

127

00:04:51,030 --> 00:04:48,160

amazingly supportive mike suffredini and

128

00:04:53,350 --> 00:04:51,040

his team kathy leaders who has gone on

129

00:04:56,469 --> 00:04:53,360

to other things and now dan hartman have

130

00:04:57,909 --> 00:04:56,479

been very anxiously awaiting this uh

131

00:04:59,670 --> 00:04:57,919

test flight and the upcoming

132

00:05:01,670 --> 00:04:59,680

demonstration to so that we can get

133

00:05:03,990 --> 00:05:01,680

going with the contract so they've been

134

00:05:05,350 --> 00:05:04,000

helpful also in getting to this point

135

00:05:07,990 --> 00:05:05,360

but i have to tell you i'm really proud

136

00:05:08,790 --> 00:05:08,000

of the orbital team

137

00:05:12,390 --> 00:05:08,800

the

138

00:05:14,230 --> 00:05:12,400

process and who went

139

00:05:16,870 --> 00:05:14,240

through the countdown training the

140

00:05:18,790 --> 00:05:16,880

simulations the wet dress rehearsal the

141

00:05:19,830 --> 00:05:18,800

uh the practice countdowns to get to

142

00:05:24,870 --> 00:05:19,840

today

143

00:05:27,270 --> 00:05:24,880

if if you will uh just just stay focused

144

00:05:29,110 --> 00:05:27,280

stayed on task and and kept things

145

00:05:29,909 --> 00:05:29,120

moving forward in a very professional

146

00:05:31,510 --> 00:05:29,919

way

147

00:05:33,350 --> 00:05:31,520

i was very impressed with what i saw in

148

00:05:35,189 --> 00:05:33,360

the mission control center no matter

149

00:05:37,909 --> 00:05:35,199

whether it was a minor problem or a

150

00:05:41,430 --> 00:05:37,919

major problem they all pulled together

151  
00:05:42,790 --> 00:05:41,440  
led by people like our program manager

152  
00:05:44,790 --> 00:05:42,800  
mike pinkston

153  
00:05:47,189 --> 00:05:44,800  
the launch director and deputy program

154  
00:05:48,870 --> 00:05:47,199  
manager kurt eberle they have kept

155  
00:05:50,629 --> 00:05:48,880  
people moving in the right direction and

156  
00:05:51,670 --> 00:05:50,639  
have dealt with a lot of very difficult

157  
00:05:53,270 --> 00:05:51,680  
things

158  
00:05:55,350 --> 00:05:53,280  
they work for ron graby the launch

159  
00:05:57,350 --> 00:05:55,360  
systems group general manager who of

160  
00:05:59,029 --> 00:05:57,360  
course has been the overall leader of

161  
00:06:00,390 --> 00:05:59,039  
this effort and

162  
00:06:01,749 --> 00:06:00,400  
without his leadership they wouldn't be

163  
00:06:03,110 --> 00:06:01,759

here today either

164

00:06:04,550 --> 00:06:03,120

but there's one person i really want to

165

00:06:06,469 --> 00:06:04,560

single out and that's mike doris the

166

00:06:07,830 --> 00:06:06,479

chief engineer who

167

00:06:09,430 --> 00:06:07,840

was not only

168

00:06:11,189 --> 00:06:09,440

the the chief engineer of the program

169

00:06:12,870 --> 00:06:11,199

but the chief troubleshooter of

170

00:06:14,469 --> 00:06:12,880

everything that happened pretty much

171

00:06:15,510 --> 00:06:14,479

through the whole program especially

172

00:06:16,870 --> 00:06:15,520

real time

173

00:06:18,390 --> 00:06:16,880

over the last few

174

00:06:20,629 --> 00:06:18,400

few days and

175

00:06:23,110 --> 00:06:20,639

mike has exhibited tremendous leadership

176

00:06:24,870 --> 00:06:23,120

great decision making capability and in

177

00:06:27,670 --> 00:06:24,880

the end he proved he could be a color

178

00:06:30,070 --> 00:06:27,680

narrator uh giving us the blow by blow

179

00:06:31,830 --> 00:06:30,080

on the launch and giving us the

180

00:06:33,510 --> 00:06:31,840

details of where we were and he did a

181

00:06:37,430 --> 00:06:33,520

great job with that and he says that's

182

00:06:40,390 --> 00:06:38,550

no actually he just wants to be an

183

00:06:42,870 --> 00:06:40,400

engineer but but he stepped right up to

184

00:06:44,070 --> 00:06:42,880

the task and he's he's really good

185

00:06:46,309 --> 00:06:44,080

there's a couple of other people that

186

00:06:49,670 --> 00:06:46,319

i'd like to to point out one is jr

187

00:06:51,029 --> 00:06:49,680

thompson who was our president and chief

188

00:06:52,870 --> 00:06:51,039

operating officer

189

00:06:55,029 --> 00:06:52,880

until uh last couple of years and then

190

00:06:56,790 --> 00:06:55,039

he is really focused on this as his

191

00:06:59,749 --> 00:06:56,800

major project to get it off the ground

192

00:07:02,790 --> 00:06:59,759

and and to to do the work necessary to

193

00:07:05,589 --> 00:07:02,800

to do the coordination between nasa

194

00:07:06,790 --> 00:07:05,599

orbital mars and keep things moving

195

00:07:09,830 --> 00:07:06,800

um

196

00:07:11,270 --> 00:07:09,840

in addition uh we have a couple of prior

197

00:07:13,110 --> 00:07:11,280

program managers who've gone on to other

198

00:07:15,350 --> 00:07:13,120

things but who major made major

199

00:07:17,029 --> 00:07:15,360

contributions in in getting us going and

200

00:07:19,270 --> 00:07:17,039

that's dave steffy who's in the room

201  
00:07:20,790 --> 00:07:19,280  
today and brent collins who i know is is

202  
00:07:22,150 --> 00:07:20,800  
uh following all of this closely and

203  
00:07:23,589 --> 00:07:22,160  
brent has retired

204  
00:07:25,350 --> 00:07:23,599  
dave's now my chief engineer in the

205  
00:07:26,390 --> 00:07:25,360  
advanced programs group but these folks

206  
00:07:27,990 --> 00:07:26,400  
helped

207  
00:07:30,629 --> 00:07:28,000  
set the tone get things moving in the

208  
00:07:32,150 --> 00:07:30,639  
right direction and helped enable this

209  
00:07:33,350 --> 00:07:32,160  
success today

210  
00:07:35,670 --> 00:07:33,360  
a couple of other people i'd like to

211  
00:07:39,589 --> 00:07:35,680  
mention are antonio elias who is here

212  
00:07:41,270 --> 00:07:39,599  
and bob richards who had a major role in

213  
00:07:43,110 --> 00:07:41,280

helping decide that yeah we really are

214

00:07:45,270 --> 00:07:43,120

going to build a medium class rocket and

215

00:07:46,869 --> 00:07:45,280

we're gonna launch it out of wallops and

216

00:07:48,629 --> 00:07:46,879

uh all of that has come to fruition and

217

00:07:50,869 --> 00:07:48,639

that all happened like five or six years

218

00:07:53,830 --> 00:07:50,879

ago i think uh maybe even longer in

219

00:07:55,589 --> 00:07:53,840

terms of envisioning it but it has come

220

00:07:56,950 --> 00:07:55,599

together and we've proven we can do it

221

00:07:58,790 --> 00:07:56,960

and we're going to do it many times

222

00:08:01,270 --> 00:07:58,800

coming up in the future

223

00:08:02,550 --> 00:08:01,280

so my message here today is this is all

224

00:08:04,469 --> 00:08:02,560

about people

225

00:08:06,309 --> 00:08:04,479

what we do in space

226

00:08:07,990 --> 00:08:06,319

is all about people on earth

227

00:08:09,909 --> 00:08:08,000

and that's the most important thing that

228

00:08:10,869 --> 00:08:09,919

comes out of this

229

00:08:13,110 --> 00:08:10,879

whether you're doing it for the

230

00:08:14,950 --> 00:08:13,120

government or a commercial company or

231

00:08:17,350 --> 00:08:14,960

jointly it's all about the people who

232

00:08:19,749 --> 00:08:17,360

make it happen and it's the expertise

233

00:08:21,350 --> 00:08:19,759

that america produces the educated

234

00:08:23,430 --> 00:08:21,360

workforce that we have

235

00:08:24,869 --> 00:08:23,440

the the leadership that we exhibit in in

236

00:08:27,110 --> 00:08:24,879

maintaining a presence in low earth

237

00:08:30,629 --> 00:08:27,120

orbit and beyond it's all about the

238

00:08:32,790 --> 00:08:30,639

people and so i encourage you to to get

239

00:08:34,870 --> 00:08:32,800

your kids out there studying math and

240

00:08:36,870 --> 00:08:34,880

science and engineering and talk to your

241

00:08:38,790 --> 00:08:36,880

congressmen and congresswomen about the

242

00:08:40,630 --> 00:08:38,800

importance of human space flight and

243

00:08:43,430 --> 00:08:40,640

space flight in general and keep things

244

00:08:46,070 --> 00:08:43,440

moving outward we need to keep moving

245

00:08:47,990 --> 00:08:46,080

beyond low earth orbit and we're going

246

00:08:50,230 --> 00:08:48,000

to help nasa do that by taking over

247

00:08:52,230 --> 00:08:50,240

lower low earth orbit providing with the

248

00:08:54,150 --> 00:08:52,240

carbo providing them with the cargo they

249

00:08:55,670 --> 00:08:54,160

need over the next few years so that

250

00:08:58,070 --> 00:08:55,680

nasa can then go on and do the other

251

00:09:01,110 --> 00:08:58,080

missions that are important to uh to

252

00:09:03,030 --> 00:09:01,120

project humanity beyond the uh

253

00:09:05,670 --> 00:09:03,040

the earth and and into the rest of the

254

00:09:06,870 --> 00:09:05,680

solar system so that our kids can can

255

00:09:10,550 --> 00:09:06,880

actually have that as a part of their

256

00:09:12,230 --> 00:09:10,560

future but back to this this event today

257

00:09:14,470 --> 00:09:12,240

the launch went off

258

00:09:16,470 --> 00:09:14,480

on the time we had planned it went very

259

00:09:17,750 --> 00:09:16,480

well the sequence of events went

260

00:09:18,790 --> 00:09:17,760

extremely well and you'll see in the

261

00:09:21,030 --> 00:09:18,800

replays

262

00:09:22,550 --> 00:09:21,040

uh the various events that had to happen

263

00:09:23,990 --> 00:09:22,560

such as the

264

00:09:25,910 --> 00:09:24,000

first of all getting that first stage

265

00:09:28,150 --> 00:09:25,920

all the way to mikko and helping mike

266

00:09:29,590 --> 00:09:28,160

doris get the right time

267

00:09:31,030 --> 00:09:29,600

when it was going to occur but then

268

00:09:33,910 --> 00:09:31,040

separation of the second stage

269

00:09:37,670 --> 00:09:36,150

the fairing the interstage and then the

270

00:09:39,910 --> 00:09:37,680

payload itself and all of that

271

00:09:41,590 --> 00:09:39,920

demonstrated that when we do this again

272

00:09:44,070 --> 00:09:41,600

we know how to make this happen and

273

00:09:45,430 --> 00:09:44,080

we'll get that payload cygnus into orbit

274

00:09:47,590 --> 00:09:45,440

and on its way to the international

275

00:09:49,190 --> 00:09:47,600

space station so that it can continue

276

00:09:51,509 --> 00:09:49,200

its mission and we can provide them the

277

00:09:54,150 --> 00:09:51,519

cargo the experiments the clothing the

278

00:09:56,150 --> 00:09:54,160

food that they need to sustain and

279

00:09:58,310 --> 00:09:56,160

extend their mission so that we can keep

280

00:09:59,990 --> 00:09:58,320

six people up there for an indefinite

281

00:10:01,670 --> 00:10:00,000

period of time and we're really looking

282

00:10:04,230 --> 00:10:01,680

forward to being a part of that

283

00:10:06,389 --> 00:10:04,240

so i look forward to your questions

284

00:10:08,470 --> 00:10:06,399

we have a lot of very proud people over

285

00:10:10,470 --> 00:10:08,480

on the base and at the launch control

286

00:10:11,670 --> 00:10:10,480

center we're sorry about the fire out

287

00:10:13,829 --> 00:10:11,680

there but you know that wasn't

288

00:10:16,870 --> 00:10:13,839

anticipated and when i think they needed

289

00:10:17,910 --> 00:10:16,880

to clear that brush anyway so

290

00:10:20,389 --> 00:10:17,920

it'll all work out in the end

291

00:10:22,949 --> 00:10:20,399

environmentalism right but uh it's a

292

00:10:25,590 --> 00:10:22,959

it's a proud day for orbital um this is

293

00:10:27,190 --> 00:10:25,600

the first of many many successes to come

294

00:10:29,269 --> 00:10:27,200

and uh thank you all for being here and

295

00:10:32,230 --> 00:10:29,279

help us send the message that we're on

296

00:10:33,590 --> 00:10:32,240

our way to low earth orbit thank you

297

00:10:34,949 --> 00:10:33,600

thanks very much frank let's go ahead

298

00:10:36,790 --> 00:10:34,959

and take some questions uh we'll start

299

00:10:38,630 --> 00:10:36,800

here in the room and let's uh let's

300

00:10:40,710 --> 00:10:38,640

start here with stephen clark

301

00:10:42,870 --> 00:10:40,720

just good microfrontier

302

00:10:44,949 --> 00:10:42,880

thanks trent um a couple of questions

303

00:10:47,269 --> 00:10:44,959

stephen clark with spaceflight now

304

00:10:49,509 --> 00:10:47,279

first of all can you go over

305

00:10:52,150 --> 00:10:49,519

what orbit you achieved that you have

306

00:10:53,110 --> 00:10:52,160

data on was it close to the target and

307

00:10:54,790 --> 00:10:53,120

also

308

00:10:57,030 --> 00:10:54,800

looking ahead toward the

309

00:10:59,030 --> 00:10:57,040

space station flight this summer

310

00:11:00,710 --> 00:10:59,040

i know the hardware is is coming along

311

00:11:02,069 --> 00:11:00,720

nicely but what about the

312

00:11:03,990 --> 00:11:02,079

the software and the integration with

313

00:11:05,509 --> 00:11:04,000

the space station and some of the

314

00:11:06,949 --> 00:11:05,519

big steps coming up in the next two

315

00:11:09,350 --> 00:11:06,959

months to actually get the go ahead from

316

00:11:11,590 --> 00:11:09,360

nasa to take that flight thanks okay

317

00:11:12,829 --> 00:11:11,600

as far as today's flight uh we wanted a

318

00:11:15,670 --> 00:11:12,839

minimum of

319

00:11:17,750 --> 00:11:15,680

250 kilometers we're there approximately

320

00:11:19,750 --> 00:11:17,760

at 250. we will have to do some

321

00:11:21,269 --> 00:11:19,760

additional evaluation to see if if we're

322

00:11:23,430 --> 00:11:21,279

exactly on target or if we need to make

323

00:11:25,829 --> 00:11:23,440

some adjustments but uh but we think

324

00:11:27,269 --> 00:11:25,839

we're very close to that and uh

325

00:11:29,269 --> 00:11:27,279

you know the sequence of events as i

326

00:11:30,630 --> 00:11:29,279

said went pretty much as planned if we

327

00:11:32,230 --> 00:11:30,640

need to make adjustments for future

328

00:11:33,110 --> 00:11:32,240

flights we will we will do so but we

329

00:11:35,110 --> 00:11:33,120

certainly

330

00:11:38,230 --> 00:11:35,120

achieved orbit and that's that was the

331

00:11:39,750 --> 00:11:38,240

main goal for cygnus itself the

332

00:11:41,350 --> 00:11:39,760

cygnus spacecraft that will fly to the

333

00:11:43,350 --> 00:11:41,360

space station this summer

334

00:11:44,710 --> 00:11:43,360

has actually been fueled it's ready to

335

00:11:46,949 --> 00:11:44,720

be transferred into the horizontal

336

00:11:48,790 --> 00:11:46,959

integration facility and as soon as that

337

00:11:50,710 --> 00:11:48,800

rocket is ready to receive it we'll

338

00:11:52,230 --> 00:11:50,720

integrate the two together and it'll be

339

00:11:54,150 --> 00:11:52,240

ready to roll out to the pads sometime

340

00:11:55,750 --> 00:11:54,160

this summer probably late june or early

341

00:11:58,310 --> 00:11:55,760

july and

342

00:12:00,230 --> 00:11:58,320

so we will be on track for delivery uh

343

00:12:02,310 --> 00:12:00,240

assuming the space station schedule can

344

00:12:04,550 --> 00:12:02,320

accommodate us and and that we don't run

345

00:12:06,389 --> 00:12:04,560

into any unforeseen problems but as far

346

00:12:07,910 --> 00:12:06,399

as cygnus goes we've achieved all of our

347

00:12:09,269 --> 00:12:07,920

safety approvals

348

00:12:11,110 --> 00:12:09,279

we've been through all the simulations

349

00:12:13,110 --> 00:12:11,120

necessary to

350

00:12:14,790 --> 00:12:13,120

achieve approval for our software we

351

00:12:16,949 --> 00:12:14,800

continue to look at it and to continue

352

00:12:19,190 --> 00:12:16,959

to do simulations but but so far it's

353

00:12:21,590 --> 00:12:19,200

gone very well with the nasa uh

354

00:12:23,430 --> 00:12:21,600

participation in our sims the ops team

355

00:12:25,350 --> 00:12:23,440

is ready we do sims every couple of

356

00:12:28,230 --> 00:12:25,360

weeks with the nasa team to make sure

357

00:12:29,670 --> 00:12:28,240

we're all on the same page and uh

358

00:12:31,350 --> 00:12:29,680

and we're really anxious to get going

359

00:12:33,269 --> 00:12:31,360

with that so the spacecraft will not be

360

00:12:35,190 --> 00:12:33,279

the long pole in getting to the pad it

361

00:12:37,350 --> 00:12:35,200

really will be just

362

00:12:39,110 --> 00:12:37,360

evaluating the pad condition to see what

363

00:12:41,509 --> 00:12:39,120

we have to do to refurbish it if

364

00:12:43,269 --> 00:12:41,519

anything and then getting the next core

365

00:12:45,430 --> 00:12:43,279

completely assembled with this engine

366

00:12:47,990 --> 00:12:45,440

second stage and get the fairing in here

367

00:12:50,790 --> 00:12:48,000

so we can assemble it and uh and attach

368

00:12:53,190 --> 00:12:50,800

the spacecraft to the to the front end

369

00:12:55,350 --> 00:12:53,200

and then roll it out and on the nasa

370

00:12:57,750 --> 00:12:55,360

side there's already been a great deal

371

00:12:59,190 --> 00:12:57,760

of joint testing done with the software

372

00:13:01,110 --> 00:12:59,200

and the simulating the mission and

373

00:13:03,910 --> 00:13:01,120

that's all gone very well

374

00:13:06,550 --> 00:13:03,920

so what's left is to finish up the

375

00:13:08,230 --> 00:13:06,560

verification of the final safety review

376

00:13:09,509 --> 00:13:08,240

packages making sure everything is

377

00:13:10,389 --> 00:13:09,519

compliant

378

00:13:11,990 --> 00:13:10,399

with

379

00:13:14,150 --> 00:13:12,000

the visiting vehicle requirements that

380

00:13:15,750 --> 00:13:14,160

we establish once those verifications

381

00:13:18,550 --> 00:13:15,760

are complete we'll go into a final

382

00:13:19,670 --> 00:13:18,560

review of the readiness flight readiness

383

00:13:22,389 --> 00:13:19,680

status

384

00:13:23,590 --> 00:13:22,399

and uh we should be good to go

385

00:13:25,269 --> 00:13:23,600

let's take two more here in the room and

386

00:13:27,110 --> 00:13:25,279

then we'll go to the phone line so one

387

00:13:29,430 --> 00:13:27,120

two and then

388

00:13:31,190 --> 00:13:29,440

keep it moving

389

00:13:33,350 --> 00:13:31,200

jim mclaughlin talking space first nope

390

00:13:35,350 --> 00:13:33,360

alan frank congratulations

391

00:13:37,910 --> 00:13:35,360

has there any information on the status

392

00:13:39,110 --> 00:13:37,920

of the cubesat payload that antares took

393

00:13:41,030 --> 00:13:39,120

up today

394

00:13:42,470 --> 00:13:41,040

they did deploy but it'll probably take

395

00:13:44,150 --> 00:13:42,480

a couple of orbits before they can

396

00:13:45,910 --> 00:13:44,160

achieve contact with them for the ones

397

00:13:47,590 --> 00:13:45,920

that are looking for that

398

00:13:48,870 --> 00:13:47,600

because they don't have very many ground

399

00:13:50,230 --> 00:13:48,880

stations that monitor what they're doing

400

00:13:51,430 --> 00:13:50,240

but we know that they did get deployed

401  
00:13:54,150 --> 00:13:51,440  
singles

402  
00:13:56,870 --> 00:13:54,160  
and just a really brief follow-up there

403  
00:13:59,030 --> 00:13:56,880  
did um the the launch delays actually

404  
00:14:00,870 --> 00:13:59,040  
help you know the the folks in the

405  
00:14:02,550 --> 00:14:00,880  
mission control center sort of iron out

406  
00:14:04,310 --> 00:14:02,560  
the bugs with you know communication

407  
00:14:06,069 --> 00:14:04,320  
among themselves and so on that

408  
00:14:08,470 --> 00:14:06,079  
essentially did those delays actually

409  
00:14:09,990 --> 00:14:08,480  
contribute to today's success thanks i

410  
00:14:11,670 --> 00:14:10,000  
would say that every time you go through

411  
00:14:13,670 --> 00:14:11,680  
an operation like this it contributes to

412  
00:14:14,870 --> 00:14:13,680  
future success whether you get off the

413  
00:14:17,990 --> 00:14:14,880

pad or not you're going to go through

414

00:14:19,750 --> 00:14:18,000

the same exercises same communication

415

00:14:21,829 --> 00:14:19,760

same problem solving which is a big part

416

00:14:24,870 --> 00:14:21,839

of it and get the people

417

00:14:27,110 --> 00:14:24,880

on the same page and keep them sharp so

418

00:14:28,710 --> 00:14:27,120

i never see a scrubbed launch attempt as

419

00:14:30,710 --> 00:14:28,720

a as a problem i see it as an

420

00:14:32,069 --> 00:14:30,720

opportunity to get better and better

421

00:14:33,509 --> 00:14:32,079

and i can tell you from shuttle

422

00:14:34,870 --> 00:14:33,519

experience sometimes it takes a lot of

423

00:14:36,790 --> 00:14:34,880

attempts to get off the pad but you get

424

00:14:38,310 --> 00:14:36,800

better every time

425

00:14:39,590 --> 00:14:38,320

one of my missions we said we finally

426

00:14:42,389 --> 00:14:39,600

trained after two months of launch

427

00:14:46,870 --> 00:14:45,030

but uh no this this was a uh good and

428

00:14:48,310 --> 00:14:46,880

you know every couple of days we were we

429

00:14:50,310 --> 00:14:48,320

were running through it and and the team

430

00:14:52,710 --> 00:14:50,320

was really sharp and the sooner we do

431

00:14:58,710 --> 00:14:52,720

the next one the better

432

00:15:03,269 --> 00:15:00,949

uh jeff thousand space review uh quickly

433

00:15:05,430 --> 00:15:03,279

uh any more details about that uh brush

434

00:15:07,030 --> 00:15:05,440

fire around the pad after the launch

435

00:15:09,110 --> 00:15:07,040

there any damage to any of the pad

436

00:15:11,350 --> 00:15:09,120

facilities that you know of at this time

437

00:15:13,509 --> 00:15:11,360

uh according to to the ranged folks that

438

00:15:15,269 --> 00:15:13,519

i talk to there's there's really nothing

439

00:15:17,110 --> 00:15:15,279

in that area that that could be damaged

440

00:15:18,870 --> 00:15:17,120

that's outside the fence and so it's

441

00:15:20,710 --> 00:15:18,880

really just brush burning and i'm sure

442

00:15:22,710 --> 00:15:20,720

they got the the firefighters down there

443

00:15:24,150 --> 00:15:22,720

pretty quickly to put it out uh it

444

00:15:26,949 --> 00:15:24,160

doesn't appear that anything around the

445

00:15:28,230 --> 00:15:26,959

pad itself was burning or any any

446

00:15:30,389 --> 00:15:28,240

hardware or equipment that we would

447

00:15:32,870 --> 00:15:30,399

worry about it was well outside the uh

448

00:15:34,550 --> 00:15:32,880

the perimeter of our valuable

449

00:15:36,550 --> 00:15:34,560

and mars is valuable hardware best we

450

00:15:38,790 --> 00:15:36,560

could tell we'll we'll get more

451  
00:15:40,550 --> 00:15:38,800  
information later

452  
00:15:42,550 --> 00:15:40,560  
okay let's go to the phone lines uh and

453  
00:15:46,069 --> 00:15:42,560  
we'll start with uh tarek malik of

454  
00:15:49,350 --> 00:15:47,430  
thank you

455  
00:15:52,310 --> 00:15:49,360  
i think uh this question is primarily

456  
00:15:54,629 --> 00:15:52,320  
for uh frank uh but alan if there's an

457  
00:15:57,189 --> 00:15:54,639  
app assigned please feel free i think

458  
00:15:59,910 --> 00:15:57,199  
i'm wondering what the process is now

459  
00:16:01,590 --> 00:15:59,920  
for the team in terms of just going over

460  
00:16:05,030 --> 00:16:01,600  
the data you got back from the sensors

461  
00:16:06,310 --> 00:16:05,040  
on on board the dummy payload uh and uh

462  
00:16:08,629 --> 00:16:06,320  
you know what the

463  
00:16:10,230 --> 00:16:08,639

the flow is going to be

464

00:16:14,069 --> 00:16:10,240

in and making sure that everything is

465

00:16:15,509 --> 00:16:14,079

set for the summer flight thanks

466

00:16:17,350 --> 00:16:15,519

i couldn't understand that very well but

467

00:16:19,990 --> 00:16:17,360

let me answer what i think i heard

468

00:16:22,310 --> 00:16:20,000

uh the payload simulator itself once

469

00:16:23,990 --> 00:16:22,320

it's separated from the second stage we

470

00:16:25,590 --> 00:16:24,000

didn't receive any more data from it we

471

00:16:27,590 --> 00:16:25,600

received all the data we're going to get

472

00:16:28,870 --> 00:16:27,600

prior to separation and we will evaluate

473

00:16:30,790 --> 00:16:28,880

that

474

00:16:34,310 --> 00:16:30,800

as we do a review of the of the launch

475

00:16:36,310 --> 00:16:34,320

data acoustics accelerations

476  
00:16:37,350 --> 00:16:36,320  
vibrations etc and that'll give us a

477  
00:16:39,430 --> 00:16:37,360  
good feel for what the launch

478  
00:16:40,470 --> 00:16:39,440  
environments are we did get very good

479  
00:16:41,829 --> 00:16:40,480  
video

480  
00:16:44,069 --> 00:16:41,839  
uh from the

481  
00:16:45,829 --> 00:16:44,079  
rocket cam of the pairing separation the

482  
00:16:48,389 --> 00:16:45,839  
separation of the components and that's

483  
00:16:50,230 --> 00:16:48,399  
all valuable information to us also but

484  
00:16:51,990 --> 00:16:50,240  
but as far as the payload itself the

485  
00:16:55,430 --> 00:16:52,000  
payload simulator we don't have any

486  
00:16:57,030 --> 00:16:55,440  
further data coming coming from it so

487  
00:16:59,509 --> 00:16:57,040  
we felt pretty good about what we saw

488  
00:17:01,829 --> 00:16:59,519

and and what we have so far but

489

00:17:04,470 --> 00:17:01,839

but that's all we're going to get

490

00:17:06,390 --> 00:17:04,480

did i miss anything tariq

491

00:17:09,350 --> 00:17:06,400

i think i was just curious what what you

492

00:17:11,350 --> 00:17:09,360

saw as like the the the schedule of

493

00:17:13,270 --> 00:17:11,360

analyzing it i mean do you do you think

494

00:17:15,270 --> 00:17:13,280

maybe just weeks or would you would you

495

00:17:17,270 --> 00:17:15,280

want to spend a whole month going over

496

00:17:18,949 --> 00:17:17,280

what you did receive

497

00:17:20,230 --> 00:17:18,959

it'll probably just take a few days to

498

00:17:21,909 --> 00:17:20,240

get the preliminary data but we'll

499

00:17:23,189 --> 00:17:21,919

continue to analyze it until we launch

500

00:17:25,990 --> 00:17:23,199

the next one

501  
00:17:28,390 --> 00:17:26,000  
you know how this system works

502  
00:17:30,070 --> 00:17:28,400  
and i and i could say for the purpose of

503  
00:17:32,789 --> 00:17:30,080  
the objectives that we established for

504  
00:17:34,630 --> 00:17:32,799  
the flight um

505  
00:17:37,110 --> 00:17:34,640  
as soon as we saw separation of the

506  
00:17:38,549 --> 00:17:37,120  
payload that was really

507  
00:17:39,669 --> 00:17:38,559  
the end of the primary mission

508  
00:17:41,750 --> 00:17:39,679  
objectives

509  
00:17:43,590 --> 00:17:41,760  
that we established today and then to be

510  
00:17:45,430 --> 00:17:43,600  
sure that there was some telemetry and

511  
00:17:47,430 --> 00:17:45,440  
downlinking occurring after the

512  
00:17:49,110 --> 00:17:47,440  
separation which we have verification of

513  
00:17:50,310 --> 00:17:49,120

so i don't think it's going to take very

514

00:17:52,630 --> 00:17:50,320

long it's certainly not going to take

515

00:17:54,870 --> 00:17:52,640

days for us to conclude uh primary

516

00:17:56,150 --> 00:17:54,880

objectives uh certainly two sets of

517

00:17:57,590 --> 00:17:56,160

objectives one of the space act

518

00:18:00,549 --> 00:17:57,600

agreement objectives that alan talked

519

00:18:02,470 --> 00:18:00,559

about and we of course uh consider those

520

00:18:03,830 --> 00:18:02,480

very important we had to meet those for

521

00:18:06,070 --> 00:18:03,840

a variety of reasons but we also had

522

00:18:07,510 --> 00:18:06,080

test objectives that will lead into the

523

00:18:09,510 --> 00:18:07,520

success of the next mission and we

524

00:18:10,870 --> 00:18:09,520

always are looking at the data we can

525

00:18:12,950 --> 00:18:10,880

achieve that will help us do a better

526

00:18:14,630 --> 00:18:12,960

job next time around

527

00:18:15,590 --> 00:18:14,640

okay let's take two more from the phone

528

00:18:17,830 --> 00:18:15,600

and then we'll come back here to the

529

00:18:19,669 --> 00:18:17,840

room next is james dean florida today go

530

00:18:22,310 --> 00:18:19,679

ahead james

531

00:18:25,270 --> 00:18:22,320

well thanks very much um mr culbertson

532

00:18:26,630 --> 00:18:25,280

how much tougher is the next mission

533

00:18:28,070 --> 00:18:26,640

uh after

534

00:18:29,909 --> 00:18:28,080

getting through this first launch phase

535

00:18:31,350 --> 00:18:29,919

now you gotta get a complete an orbital

536

00:18:32,950 --> 00:18:31,360

mission with a new spacecraft how much

537

00:18:34,470 --> 00:18:32,960

tougher is that going to be and

538

00:18:37,270 --> 00:18:34,480

and also i wondered if you just might

539

00:18:39,350 --> 00:18:37,280

have any early feedback on

540

00:18:41,190 --> 00:18:39,360

things like the turnout there how far

541

00:18:43,350 --> 00:18:41,200

away people could see this launch and

542

00:18:45,590 --> 00:18:43,360

sort of reaction from from the community

543

00:18:47,909 --> 00:18:45,600

up there thanks

544

00:18:49,510 --> 00:18:47,919

okay i'm pretty sure i'm not going to

545

00:18:52,230 --> 00:18:49,520

hold my breath any less on the next one

546

00:18:56,070 --> 00:18:52,240

than i did on this one

547

00:18:57,430 --> 00:18:56,080

every launch is is uh is a challenge and

548

00:18:58,870 --> 00:18:57,440

you want to make sure that it's all done

549

00:19:00,870 --> 00:18:58,880

right so we'll pay as much attention to

550

00:19:03,029 --> 00:19:00,880

the next one as we will this one and and

551  
00:19:04,870 --> 00:19:03,039  
we will uh

552  
00:19:05,830 --> 00:19:04,880  
be at a certain level of nervousness all

553  
00:19:08,310 --> 00:19:05,840  
the way to

554  
00:19:10,789 --> 00:19:08,320  
to uh main engine cut off and then to uh

555  
00:19:12,070 --> 00:19:10,799  
to orbit insertion but on that one of

556  
00:19:13,990 --> 00:19:12,080  
course we will have the additional

557  
00:19:16,470 --> 00:19:14,000  
challenge of making sure that the cygnus

558  
00:19:18,789 --> 00:19:16,480  
is actually in orbit and that it deploys

559  
00:19:21,750 --> 00:19:18,799  
its solar arrays it has its own power

560  
00:19:23,430 --> 00:19:21,760  
and then it can start its uh rendezvous

561  
00:19:25,430 --> 00:19:23,440  
maneuvers to get to the station which

562  
00:19:27,190 --> 00:19:25,440  
will take about three to five days

563  
00:19:28,789 --> 00:19:27,200

so we won't relax for quite a while on

564

00:19:30,549 --> 00:19:28,799

that one until we're actually grappled

565

00:19:31,669 --> 00:19:30,559

and birthed to the station and the hatch

566

00:19:33,830 --> 00:19:31,679

is open

567

00:19:35,190 --> 00:19:33,840

uh even then we'll still want to make

568

00:19:37,270 --> 00:19:35,200

sure everything goes right but that will

569

00:19:39,029 --> 00:19:37,280

be a major major achievement

570

00:19:40,789 --> 00:19:39,039

so uh the next one's going to bring its

571

00:19:41,669 --> 00:19:40,799

own challenges

572

00:19:46,710 --> 00:19:41,679

um

573

00:19:49,669 --> 00:19:46,720

was what i just wondered if you had any

574

00:19:50,950 --> 00:19:49,679

uh early reports of um things like turn

575

00:19:52,870 --> 00:19:50,960

out or

576  
00:19:56,230 --> 00:19:52,880  
just kind of reaction from from people

577  
00:19:58,310 --> 00:19:56,240  
up there to this uh biggest rocket

578  
00:20:00,470 --> 00:19:58,320  
well in in the control center of course

579  
00:20:02,470 --> 00:20:00,480  
we couldn't see it live but we were

580  
00:20:05,750 --> 00:20:02,480  
watching it and we started feeling the

581  
00:20:07,510 --> 00:20:05,760  
rumble after about 30 seconds or so

582  
00:20:08,470 --> 00:20:07,520  
in the control center it was rattling

583  
00:20:11,350 --> 00:20:08,480  
the roof

584  
00:20:13,270 --> 00:20:11,360  
rattling

585  
00:20:15,669 --> 00:20:13,280  
and we could we could hear it and and

586  
00:20:17,110 --> 00:20:15,679  
feel it in there which was an amazing

587  
00:20:18,470 --> 00:20:17,120  
experience

588  
00:20:19,350 --> 00:20:18,480

but the people who were out at the

589

00:20:21,590 --> 00:20:19,360

launch

590

00:20:23,830 --> 00:20:21,600

site itself and the viewing site who

591

00:20:25,590 --> 00:20:23,840

came in later and talked to us and i'm

592

00:20:27,270 --> 00:20:25,600

sure there were a few in here that could

593

00:20:29,430 --> 00:20:27,280

address that

594

00:20:31,029 --> 00:20:29,440

said they were incredibly close compared

595

00:20:33,830 --> 00:20:31,039

to where you are for a shuttle flight

596

00:20:34,950 --> 00:20:33,840

and that it was an amazing experience

597

00:20:37,110 --> 00:20:34,960

and

598

00:20:40,470 --> 00:20:37,120

the words that dave thompson used were

599

00:20:42,070 --> 00:20:40,480

this was a majestic liftoff an ascent

600

00:20:43,430 --> 00:20:42,080

and i think it was

601  
00:20:44,870 --> 00:20:43,440  
that's one way of saying it was really

602  
00:20:47,510 --> 00:20:44,880  
slow coming off the pad and we never

603  
00:20:50,310 --> 00:20:47,520  
thought it would clear the tower but but

604  
00:20:54,870 --> 00:20:50,320  
it is slow accelerating and majestic is

605  
00:20:58,710 --> 00:20:56,549  
after a while it was going like a

606  
00:21:00,870 --> 00:20:58,720  
scalded ape so um

607  
00:21:02,950 --> 00:21:00,880  
it was it was accelerating quickly and

608  
00:21:04,789 --> 00:21:02,960  
and everything was looking great as it

609  
00:21:07,909 --> 00:21:04,799  
as it climbed into the sky and it was a

610  
00:21:09,430 --> 00:21:07,919  
beautiful blue sky today

611  
00:21:11,669 --> 00:21:09,440  
okay uh one more from the phone line

612  
00:21:16,070 --> 00:21:11,679  
let's go to jason parr with wired go

613  
00:21:19,350 --> 00:21:17,669

i was just trying to get a little bit

614

00:21:22,549 --> 00:21:19,360  
more information

615

00:21:23,830 --> 00:21:22,559  
uh about the timing and uh

616

00:21:26,310 --> 00:21:23,840  
things during the launch because

617

00:21:28,950 --> 00:21:26,320  
everybody progressed as predicted

618

00:21:32,390 --> 00:21:28,960  
uh whether any hiccups at any point

619

00:21:33,909 --> 00:21:32,400  
between uh liftoffs and uh shutdown over

620

00:21:36,470 --> 00:21:33,919  
the second stage

621

00:21:38,390 --> 00:21:36,480  
no everything all the events occurred uh

622

00:21:40,630 --> 00:21:38,400  
within a second or so when we expected

623

00:21:42,470 --> 00:21:40,640  
them we didn't really see any major

624

00:21:44,630 --> 00:21:42,480  
anomalies at all and and so we're very

625

00:21:46,390 --> 00:21:44,640  
happy with the sequence of events and

626

00:21:48,149 --> 00:21:46,400

and how it all occurred so we will

627

00:21:50,870 --> 00:21:48,159

obviously go in and analyze it much more

628

00:21:53,430 --> 00:21:50,880

carefully uh in the coming days and and

629

00:21:55,110 --> 00:21:53,440

uh and replay everything uh to make sure

630

00:21:57,990 --> 00:21:55,120

we can get maximum information from the

631

00:21:59,669 --> 00:21:58,000

data but uh but first glance it all

632

00:22:01,270 --> 00:21:59,679

looked really good

633

00:22:04,870 --> 00:22:01,280

and looking at the look on mike dorsey's

634

00:22:11,990 --> 00:22:07,190

okay back to the room let's take a quick

635

00:22:15,510 --> 00:22:14,390

what's up chrissaver crusader.com

636

00:22:17,669 --> 00:22:15,520

um

637

00:22:20,630 --> 00:22:17,679

a couple things uh first i was hoping

638

00:22:25,110 --> 00:22:20,640

you could give a a a bit of a timeline

639

00:22:27,190 --> 00:22:25,120  
of uh your your delays beginning in 2011

640

00:22:31,669 --> 00:22:27,200  
up to launch today

641

00:22:31,679 --> 00:22:37,190  
a bit on

642

00:22:41,350 --> 00:22:39,190  
the thought process to

643

00:22:43,510 --> 00:22:41,360  
not transmit

644

00:22:45,909 --> 00:22:43,520  
any data after

645

00:22:46,789 --> 00:22:45,919  
the simulator separation

646

00:22:48,710 --> 00:22:46,799  
okay

647

00:22:50,390 --> 00:22:48,720  
as far as not transmitting data after

648

00:22:51,590 --> 00:22:50,400  
the simulator separation

649

00:22:52,710 --> 00:22:51,600  
that's completely due to the fact

650

00:22:54,789 --> 00:22:52,720  
there's no battery on board the

651  
00:22:56,230 --> 00:22:54,799  
simulator and no transmitter to send we

652  
00:22:57,430 --> 00:22:56,240  
all the data came through the second

653  
00:22:59,029 --> 00:22:57,440  
stage

654  
00:23:01,830 --> 00:22:59,039  
which is as it normally is this was a

655  
00:23:03,830 --> 00:23:01,840  
very simple simulator allowing us to to

656  
00:23:06,470 --> 00:23:03,840  
actually demonstrate the capability to

657  
00:23:10,070 --> 00:23:06,480  
get to orbit on a test flight so the

658  
00:23:11,350 --> 00:23:10,080  
simulator was was more of a nice to have

659  
00:23:13,750 --> 00:23:11,360  
we really wanted to demonstrate the

660  
00:23:15,110 --> 00:23:13,760  
first and second stage

661  
00:23:16,870 --> 00:23:15,120  
and the separation of the fairing and

662  
00:23:18,789 --> 00:23:16,880  
the other components

663  
00:23:21,270 --> 00:23:18,799

as far as delays

664

00:23:23,110 --> 00:23:21,280

going back as far as 2011

665

00:23:25,270 --> 00:23:23,120

i really am not prepared to go through

666

00:23:29,350 --> 00:23:25,280

all of those

667

00:23:33,110 --> 00:23:30,789

rockets are hard

668

00:23:35,029 --> 00:23:33,120

space flight is difficult and and

669

00:23:36,950 --> 00:23:35,039

getting off the ground is a real

670

00:23:39,029 --> 00:23:36,960

challenge for whatever team is trying to

671

00:23:42,230 --> 00:23:39,039

do it and you can see that in almost any

672

00:23:44,310 --> 00:23:42,240

organization that's tried to do it so um

673

00:23:46,630 --> 00:23:44,320

the way i look at it is we're on a new

674

00:23:48,710 --> 00:23:46,640

schedule now and uh and we're on

675

00:23:50,549 --> 00:23:48,720

schedule we launched today and the next

676  
00:23:52,789 --> 00:23:50,559  
launch will occur on the schedule that

677  
00:23:54,870 --> 00:23:52,799  
we set starting from today and we will

678  
00:23:56,310 --> 00:23:54,880  
start delivering cargo this summer and

679  
00:23:58,230 --> 00:23:56,320  
then we'll set up another schedule that

680  
00:24:00,149 --> 00:23:58,240  
we will operate on in conjunction with

681  
00:24:01,830 --> 00:24:00,159  
nasa for delivering cargo on a on a

682  
00:24:02,710 --> 00:24:01,840  
fairly regular basis

683  
00:24:04,630 --> 00:24:02,720  
um

684  
00:24:06,549 --> 00:24:04,640  
i think if you look back the amount of

685  
00:24:09,350 --> 00:24:06,559  
total amount of time it took from the

686  
00:24:12,230 --> 00:24:09,360  
point where we were put on contract for

687  
00:24:13,350 --> 00:24:12,240  
this and and the time it took to get to

688  
00:24:15,669 --> 00:24:13,360

this launch

689

00:24:17,909 --> 00:24:15,679

has probably never been achieved before

690

00:24:20,149 --> 00:24:17,919

uh it's a pretty amazingly short

691

00:24:22,310 --> 00:24:20,159

schedule in the bigger scheme of rocket

692

00:24:23,750 --> 00:24:22,320

development and uh

693

00:24:25,110 --> 00:24:23,760

and by the time we get to the station i

694

00:24:26,630 --> 00:24:25,120

think that will even puncture be

695

00:24:29,430 --> 00:24:26,640

punctuated by that

696

00:24:31,669 --> 00:24:29,440

that achievement so

697

00:24:33,830 --> 00:24:31,679

the company in conjunction with nasa

698

00:24:37,830 --> 00:24:33,840

nasa wallops mars

699

00:24:38,950 --> 00:24:37,840

our subcontractors aerojet atk

700

00:24:41,110 --> 00:24:38,960

and others

701  
00:24:43,590 --> 00:24:41,120  
we've achieved a major accomplishment

702  
00:24:45,430 --> 00:24:43,600  
today in getting this rocket off the pad

703  
00:24:47,830 --> 00:24:45,440  
and actually first in getting this pad

704  
00:24:48,950 --> 00:24:47,840  
built and all that went into that and

705  
00:24:50,630 --> 00:24:48,960  
and

706  
00:24:53,110 --> 00:24:50,640  
what seemed like forever but really was

707  
00:24:55,350 --> 00:24:53,120  
a relatively short period of time

708  
00:24:57,830 --> 00:24:55,360  
supported by nasa supported by senator

709  
00:24:59,750 --> 00:24:57,840  
mikulski and others in congress and

710  
00:25:01,590 --> 00:24:59,760  
supported by the state of virginia we

711  
00:25:02,789 --> 00:25:01,600  
were able to achieve that it was a great

712  
00:25:04,950 --> 00:25:02,799  
public

713  
00:25:06,789 --> 00:25:04,960

private partnership and then development

714

00:25:08,549 --> 00:25:06,799

of the rocket itself which was done by

715

00:25:09,990 --> 00:25:08,559

orbital and the development of the

716

00:25:11,669 --> 00:25:10,000

spacecraft that's coming soon which is

717

00:25:12,630 --> 00:25:11,679

done jointly with nasa

718

00:25:14,470 --> 00:25:12,640

has been

719

00:25:16,470 --> 00:25:14,480

even though we set really aggressive

720

00:25:18,549 --> 00:25:16,480

goals for ourselves and when we don't

721

00:25:19,669 --> 00:25:18,559

make them it feels like we're being

722

00:25:21,269 --> 00:25:19,679

delayed

723

00:25:23,190 --> 00:25:21,279

when this history is written and you

724

00:25:24,950 --> 00:25:23,200

look back it will be an amazing

725

00:25:27,269 --> 00:25:24,960

accomplishment in terms of time and

726

00:25:28,789 --> 00:25:27,279

money and i think that that most folks

727

00:25:30,070 --> 00:25:28,799

will agree with that and i've gotten

728

00:25:31,590 --> 00:25:30,080

that feedback from

729

00:25:33,350 --> 00:25:31,600

a number of people much smarter than me

730

00:25:35,110 --> 00:25:33,360

that that

731

00:25:36,630 --> 00:25:35,120

this is the way it ought to be done so

732

00:25:38,230 --> 00:25:36,640

we're going to keep doing it we're going

733

00:25:40,710 --> 00:25:38,240

to be a great commercial partner for

734

00:25:42,230 --> 00:25:40,720

nasa i believe and we're looking forward

735

00:25:44,470 --> 00:25:42,240

to being an integral part of the

736

00:25:45,990 --> 00:25:44,480

international space station program and

737

00:25:48,470 --> 00:25:46,000

keeping the cargo coming and keeping the

738

00:25:50,870 --> 00:25:48,480

crew on orbit and again giving a

739

00:25:52,390 --> 00:25:50,880

destination for future generations so

740

00:25:55,110 --> 00:25:52,400

they can step off from there to the rest

741

00:25:56,310 --> 00:25:55,120

of the solar system

742

00:25:57,510 --> 00:25:56,320

okay it's like a few more here in the

743

00:25:58,950 --> 00:25:57,520

room there's a microphone in the middle

744

00:26:00,789 --> 00:25:58,960

and then we'll go to the back go ahead

745

00:26:05,669 --> 00:26:00,799

doug money

746

00:26:07,750 --> 00:26:05,679

frank um just for the record and for my

747

00:26:09,110 --> 00:26:07,760

refreshment um can you go through some

748

00:26:11,190 --> 00:26:09,120

of the firsts on this flight obviously

749

00:26:14,310 --> 00:26:11,200

the first flight of the rocket but this

750

00:26:16,070 --> 00:26:14,320

is also orbital's first liquid-fueled

751

00:26:18,149 --> 00:26:16,080

rocket correct and i believe that this

752

00:26:20,630 --> 00:26:18,159

is also like the first flight of both of

753

00:26:23,750 --> 00:26:20,640

the aerojet 8j

754

00:26:25,990 --> 00:26:23,760

26 engines and maybe even the you know

755

00:26:27,269 --> 00:26:26,000

russian heritage parts in there um are

756

00:26:28,549 --> 00:26:27,279

there more firsts in there that i'm

757

00:26:30,390 --> 00:26:28,559

missing or

758

00:26:31,909 --> 00:26:30,400

does that about cover it

759

00:26:33,750 --> 00:26:31,919

you're correct uh

760

00:26:36,230 --> 00:26:33,760

those are some of the first on this uh

761

00:26:38,630 --> 00:26:36,240

it is orbital's first liquid rocket that

762

00:26:39,909 --> 00:26:38,640

i'm aware of dave thompson as a kid may

763

00:26:41,269 --> 00:26:39,919

have launched a couple of liquid rockets

764

00:26:42,470 --> 00:26:41,279

that i don't know about but

765

00:26:44,710 --> 00:26:42,480

but um

766

00:26:47,350 --> 00:26:44,720

because he started early

767

00:26:49,029 --> 00:26:47,360

but it is the first one we've done uh on

768

00:26:54,149 --> 00:26:49,039

a commercial basis that i'm aware of

769

00:26:57,269 --> 00:26:55,750

oh no i'm getting to that but

770

00:26:58,870 --> 00:26:57,279

but

771

00:27:00,870 --> 00:26:58,880

antonio's always about two steps ahead

772

00:27:02,710 --> 00:27:00,880

of me but uh

773

00:27:04,950 --> 00:27:02,720

but yes the it is the first flight of

774

00:27:06,870 --> 00:27:04,960

the aj26 it's a dual engine

775

00:27:08,070 --> 00:27:06,880

configuration and

776

00:27:09,830 --> 00:27:08,080

it's the first time we've fired those

777

00:27:11,990 --> 00:27:09,840

two engines together in a dual

778

00:27:14,950 --> 00:27:12,000

configuration for that long we've done a

779

00:27:16,549 --> 00:27:14,960

30 second firing earlier this year and

780

00:27:19,110 --> 00:27:16,559

all the other firings we did were single

781

00:27:21,510 --> 00:27:19,120

engine tests at stennis

782

00:27:24,070 --> 00:27:21,520

um it was the first flight of the atk

783

00:27:25,350 --> 00:27:24,080

atk caster 30 engine which is a new

784

00:27:27,590 --> 00:27:25,360

solid

785

00:27:28,870 --> 00:27:27,600

and great job to atk

786

00:27:31,190 --> 00:27:28,880

and um

787

00:27:32,789 --> 00:27:31,200

and it worked as as designed and they've

788

00:27:34,310 --> 00:27:32,799

got an even better version of it coming

789

00:27:36,950 --> 00:27:34,320

along

790

00:27:38,870 --> 00:27:36,960

as we proceed through the program

791

00:27:40,389 --> 00:27:38,880

up to a 30 xl that will give us quite a

792

00:27:42,789 --> 00:27:40,399

bit more thrust and help us carry more

793

00:27:43,830 --> 00:27:42,799

cargo

794

00:27:45,669 --> 00:27:43,840

it was the first flight of this

795

00:27:47,830 --> 00:27:45,679

particular fairing

796

00:27:50,230 --> 00:27:47,840

larger than any fairing we had flown

797

00:27:52,710 --> 00:27:50,240

before a similar design to previous

798

00:27:56,310 --> 00:27:52,720

fairings but improved and and it all

799

00:28:00,950 --> 00:27:58,389

it was the first flight that i know of

800

00:28:03,269 --> 00:28:00,960

other than little joe that was a liquid

801  
00:28:04,549 --> 00:28:03,279  
launch from here at wallops

802  
00:28:07,029 --> 00:28:04,559  
and maybe some of the wallace people can

803  
00:28:08,789 --> 00:28:07,039  
correct me on that but

804  
00:28:09,510 --> 00:28:08,799  
littlejoe was a test of the abort system

805  
00:28:12,710 --> 00:28:09,520  
for

806  
00:28:14,789 --> 00:28:12,720  
apollo but this is the first commercial

807  
00:28:16,950 --> 00:28:14,799  
liquid rocket from wallops

808  
00:28:19,110 --> 00:28:16,960  
that i'm aware of and and the first

809  
00:28:20,230 --> 00:28:19,120  
liquid off of pad 0a

810  
00:28:22,710 --> 00:28:20,240  
i don't know if it's the first brush

811  
00:28:27,269 --> 00:28:25,669  
as a result of a rocket launch or not

812  
00:28:28,710 --> 00:28:27,279  
we put as much water as we could on that

813  
00:28:31,350 --> 00:28:28,720

pad but i guess we didn't spray it in

814

00:28:33,830 --> 00:28:31,360

the right place uh any other first that

815

00:28:36,389 --> 00:28:33,840

i'm missing dave or antonio

816

00:28:37,909 --> 00:28:36,399

okay that's good i'm gonna back is this

817

00:28:39,590 --> 00:28:37,919

the largest crowd wallops has ever had

818

00:28:41,029 --> 00:28:39,600

for a rocket

819

00:28:42,230 --> 00:28:41,039

that would be my question

820

00:28:43,909 --> 00:28:42,240

we'll find that out that's a good that's

821

00:28:45,909 --> 00:28:43,919

a good data point hi there well i'm

822

00:28:47,750 --> 00:28:45,919

margaret howell i'm from rttv america

823

00:28:49,750 --> 00:28:47,760

i'm the correspondent i have two rather

824

00:28:51,190 --> 00:28:49,760

less technical questions for you the

825

00:28:52,710 --> 00:28:51,200

first one would be can you give us an

826

00:28:54,230 --> 00:28:52,720

idea of how much this little venture of

827

00:28:56,070 --> 00:28:54,240

yours actually cost

828

00:28:57,990 --> 00:28:56,080

and then the second question would be do

829

00:29:00,950 --> 00:28:58,000

you see a cross-country competition

830

00:29:02,310 --> 00:29:00,960

being sparked from this possibly

831

00:29:05,269 --> 00:29:02,320

where other people are trying to get

832

00:29:06,230 --> 00:29:05,279

this up just as we've done here

833

00:29:08,230 --> 00:29:06,240

well there's already plenty of

834

00:29:09,990 --> 00:29:08,240

competition going on to to launch

835

00:29:12,389 --> 00:29:10,000

commercial uh

836

00:29:13,909 --> 00:29:12,399

cargo and commercial crew and and as

837

00:29:15,430 --> 00:29:13,919

well as tourists and others and i think

838

00:29:17,990 --> 00:29:15,440

you'll continue to see that for quite a

839

00:29:21,029 --> 00:29:18,000

while in in a wide variety of of

840

00:29:22,389 --> 00:29:21,039

capabilities and and concepts uh our

841

00:29:23,590 --> 00:29:22,399

intent of course is to keep going with

842

00:29:25,430 --> 00:29:23,600

this and

843

00:29:27,350 --> 00:29:25,440

along with others who are providing

844

00:29:30,630 --> 00:29:27,360

cargo services to keep the space station

845

00:29:34,630 --> 00:29:33,110

as far as

846

00:29:39,750 --> 00:29:34,640

the cost

847

00:29:41,110 --> 00:29:39,760

was funded by multiple sources

848

00:29:44,230 --> 00:29:41,120

including the state of virginia and

849

00:29:46,070 --> 00:29:44,240

orbital was uh approximately 140 million

850

00:29:48,310 --> 00:29:46,080

dollars and that's a pretty good

851  
00:29:49,909 --> 00:29:48,320  
investment in the eastern shore here and

852  
00:29:52,470 --> 00:29:49,919  
i think it has paid off

853  
00:29:54,389 --> 00:29:52,480  
and uh and we believe that the

854  
00:29:56,389 --> 00:29:54,399  
local community has been a major part of

855  
00:29:57,830 --> 00:29:56,399  
us being here a major part of our

856  
00:29:59,029 --> 00:29:57,840  
success and we certainly appreciate

857  
00:30:00,789 --> 00:29:59,039  
their support

858  
00:30:02,149 --> 00:30:00,799  
and and sometimes their tolerance of

859  
00:30:04,549 --> 00:30:02,159  
large payloads being hauled down the

860  
00:30:06,710 --> 00:30:04,559  
road at midnight out to uh out to the

861  
00:30:08,389 --> 00:30:06,720  
island but

862  
00:30:10,549 --> 00:30:08,399  
but just locally that's been the

863  
00:30:12,630 --> 00:30:10,559

investment here orbital itself in

864

00:30:16,149 --> 00:30:12,640

conjunction with our partners in nasa

865

00:30:19,430 --> 00:30:16,159

has has uh uh invested probably about uh

866

00:30:21,430 --> 00:30:19,440

3 million or so 300 million in in the

867

00:30:23,029 --> 00:30:21,440

spacecraft and

868

00:30:24,230 --> 00:30:23,039

slightly larger amount in the rocket

869

00:30:26,789 --> 00:30:24,240

itself so

870

00:30:29,510 --> 00:30:26,799

it's a pretty big investment and

871

00:30:31,190 --> 00:30:29,520

but it's going to i think demonstrate a

872

00:30:33,110 --> 00:30:31,200

commercial capability that will pay off

873

00:30:36,230 --> 00:30:33,120

in the long run we obviously are hoping

874

00:30:38,470 --> 00:30:36,240

for more customers to to use this system

875

00:30:40,070 --> 00:30:38,480

uh we're going to have uh quite a good

876

00:30:41,590 --> 00:30:40,080

business going initially with the cargo

877

00:30:44,070 --> 00:30:41,600

delivery but we're going to have more

878

00:30:46,630 --> 00:30:44,080

capability in that we we look forward to

879

00:30:50,070 --> 00:30:46,640

to using this this system for for

880

00:30:54,710 --> 00:30:50,080

many many years to come

881

00:30:54,720 --> 00:30:57,430

my left

882

00:31:02,789 --> 00:30:59,990

cody leewards wmdt47

883

00:31:04,549 --> 00:31:02,799

alan frank can you go into it a little

884

00:31:06,230 --> 00:31:04,559

bit about what this actually means for

885

00:31:09,830 --> 00:31:06,240

the community for the eastern shore for

886

00:31:14,470 --> 00:31:12,070

well i can tell you from our perspective

887

00:31:17,110 --> 00:31:14,480

we've had a number of people move here

888

00:31:19,190 --> 00:31:17,120

and who are living in the community now

889

00:31:20,950 --> 00:31:19,200

many on a permanent basis some on a

890

00:31:22,870 --> 00:31:20,960

temporary basis from wherever they were

891

00:31:24,470 --> 00:31:22,880

working before but who

892

00:31:26,310 --> 00:31:24,480

they were told if you can go to wallops

893

00:31:27,509 --> 00:31:26,320

for about six months you know we'll get

894

00:31:29,830 --> 00:31:27,519

this thing off the pad well that was

895

00:31:31,830 --> 00:31:29,840

about two years ago and uh for a lot of

896

00:31:33,590 --> 00:31:31,840

them so they they have really invested

897

00:31:35,990 --> 00:31:33,600

in this and made a lot of personal

898

00:31:37,750 --> 00:31:36,000

sacrifices to help get this rocket off

899

00:31:39,350 --> 00:31:37,760

the ground and we certainly appreciate

900

00:31:40,950 --> 00:31:39,360

what they have done

901  
00:31:43,029 --> 00:31:40,960  
mike laylee and a number of other people

902  
00:31:45,350 --> 00:31:43,039  
are great examples of that

903  
00:31:46,950 --> 00:31:45,360  
but i do think in in

904  
00:31:48,789 --> 00:31:46,960  
circulating around the community meeting

905  
00:31:50,149 --> 00:31:48,799  
some of the leaders here they seem

906  
00:31:51,669 --> 00:31:50,159  
really happy about the fact that we're

907  
00:31:53,430 --> 00:31:51,679  
here and we're bringing more business to

908  
00:31:55,269 --> 00:31:53,440  
the eastern shore it's certainly

909  
00:31:57,990 --> 00:31:55,279  
changing the complexion of the launch

910  
00:32:00,389 --> 00:31:58,000  
operations here and uh the fact that we

911  
00:32:03,750 --> 00:32:00,399  
are bringing in more high-tech

912  
00:32:05,350 --> 00:32:03,760  
and larger rockets i think will help

913  
00:32:06,630 --> 00:32:05,360

encourage more industry to come into

914

00:32:09,590 --> 00:32:06,640

this area and we're hoping it will

915

00:32:11,830 --> 00:32:09,600

encourage the the the

916

00:32:13,509 --> 00:32:11,840

students of this area to pay a lot more

917

00:32:15,590 --> 00:32:13,519

attention to science technology

918

00:32:18,230 --> 00:32:15,600

engineering and math and to see that as

919

00:32:20,310 --> 00:32:18,240

a way to to better themselves and to and

920

00:32:22,389 --> 00:32:20,320

to further their educations and get into

921

00:32:23,830 --> 00:32:22,399

something really exciting that's always

922

00:32:26,310 --> 00:32:23,840

been something wildlife has done a very

923

00:32:28,389 --> 00:32:26,320

good job at for in a variety of areas

924

00:32:29,669 --> 00:32:28,399

but this gets a lot more attention than

925

00:32:31,909 --> 00:32:29,679

some of the other things that are going

926

00:32:33,190 --> 00:32:31,919

on and and we hope that it'll spread

927

00:32:35,190 --> 00:32:33,200

throughout the schools and and

928

00:32:37,190 --> 00:32:35,200

throughout the communities and we hope

929

00:32:39,029 --> 00:32:37,200

also people uh see us as a positive

930

00:32:40,630 --> 00:32:39,039

addition to the to the community we're

931

00:32:42,630 --> 00:32:40,640

sorry about having to move all the

932

00:32:45,269 --> 00:32:42,640

overhead lines and the traffic lights

933

00:32:48,470 --> 00:32:45,279

and stuff so we can move our payload but

934

00:32:51,110 --> 00:32:48,480

you got new traffic lights out of it so

935

00:32:54,950 --> 00:32:51,120

i think you're going to see

936

00:32:59,269 --> 00:32:56,870

orbital has a number of flights already

937

00:33:00,870 --> 00:32:59,279

on the books uh eight eight flights to

938

00:33:02,549 --> 00:33:00,880

the space station over the coming years

939

00:33:04,470 --> 00:33:02,559

there's going to be a lot of activity

940

00:33:07,750 --> 00:33:04,480

with the space station cargo coming here

941

00:33:10,950 --> 00:33:09,669

so this was not a one-shot deal they're

942

00:33:14,149 --> 00:33:10,960

going to be here a while yeah every

943

00:33:19,509 --> 00:33:16,310

okay let's take one here and then we'll

944

00:33:23,750 --> 00:33:21,509

hi i'm denise ryan and i'm here today

945

00:33:25,830 --> 00:33:23,760

through the nasa social program i'm

946

00:33:27,830 --> 00:33:25,840

going back to the brush fire i was

947

00:33:29,990 --> 00:33:27,840

surprised to see that the the liquid or

948

00:33:31,909 --> 00:33:30,000

the water in the in the tank by the

949

00:33:34,470 --> 00:33:31,919

launch pad wasn't used today could you

950

00:33:38,149 --> 00:33:34,480

go into that decision or would it have

951  
00:33:39,190 --> 00:33:38,159  
even worked oh it used it was used

952  
00:33:41,110 --> 00:33:39,200  
yeah

953  
00:33:42,870 --> 00:33:41,120  
it we don't spray into the brush we

954  
00:33:44,950 --> 00:33:42,880  
spray on the pad to protect the pad and

955  
00:33:46,870 --> 00:33:44,960  
protect the rocket

956  
00:33:49,269 --> 00:33:46,880  
for a variety of reasons partly to

957  
00:33:51,269 --> 00:33:49,279  
dampen out the the shock waves that come

958  
00:33:52,870 --> 00:33:51,279  
off reflected off the pad but also to

959  
00:33:54,789 --> 00:33:52,880  
cool the pad surface and to cool the

960  
00:33:56,950 --> 00:33:54,799  
trench that the flame goes through

961  
00:33:59,029 --> 00:33:56,960  
before it goes out over the ocean and

962  
00:34:00,470 --> 00:33:59,039  
that's the main purpose of the 200 000

963  
00:34:03,430 --> 00:34:00,480

gallons of water that came out of the

964

00:34:05,269 --> 00:34:03,440

tank and it did work

965

00:34:06,549 --> 00:34:05,279

we're sorry again that that we didn't

966

00:34:07,990 --> 00:34:06,559

spray any in that direction but we were

967

00:34:09,829 --> 00:34:08,000

out of water by then

968

00:34:11,510 --> 00:34:09,839

and uh and they have a great fire

969

00:34:13,030 --> 00:34:11,520

department here so i know they they took

970

00:34:14,550 --> 00:34:13,040

care of it

971

00:34:16,149 --> 00:34:14,560

and a couple follow-ups in the front

972

00:34:18,629 --> 00:34:16,159

were there anybody asked and didn't have

973

00:34:20,629 --> 00:34:18,639

a chance to ask a question yet okay

974

00:34:21,990 --> 00:34:20,639

so let's go here one two and then we'll

975

00:34:27,829 --> 00:34:22,000

we'll bring it to a close if we can get

976

00:34:31,510 --> 00:34:29,669

jean mcconkley with talking space um

977

00:34:32,470 --> 00:34:31,520

alan i guess this question's for you

978

00:34:34,470 --> 00:34:32,480

um

979

00:34:37,030 --> 00:34:34,480

i know around the kennedy space center

980

00:34:38,629 --> 00:34:37,040

they go out and they take a very serious

981

00:34:41,030 --> 00:34:38,639

look at you know the wildlife in the

982

00:34:44,069 --> 00:34:41,040

area and so on did nasa have a similar

983

00:34:45,190 --> 00:34:44,079

program for any of the uh the wildlife

984

00:34:47,909 --> 00:34:45,200

around here

985

00:34:50,470 --> 00:34:47,919

uh just just curious yeah absolutely

986

00:34:53,430 --> 00:34:50,480

going into any operation like this there

987

00:34:55,829 --> 00:34:53,440

is always a environmental impact study

988

00:34:58,390 --> 00:34:55,839

that's done and it's a very thorough

989

00:35:01,829 --> 00:34:58,400

assessment of the

990

00:35:02,870 --> 00:35:01,839

impacts from the environment and

991

00:35:06,230 --> 00:35:02,880

there were

992

00:35:07,990 --> 00:35:06,240

no adverse findings from those

993

00:35:09,910 --> 00:35:08,000

studies and and

994

00:35:11,430 --> 00:35:09,920

but it certainly was looked at

995

00:35:12,950 --> 00:35:11,440

that was one of the early milestones we

996

00:35:14,630 --> 00:35:12,960

had to achieve was making sure that we

997

00:35:16,630 --> 00:35:14,640

and nasa work together

998

00:35:19,030 --> 00:35:16,640

as well as mars on eis and make sure

999

00:35:21,910 --> 00:35:19,040

that everything was as it should be in

1000

00:35:23,510 --> 00:35:21,920

that regard and that all came out good

1001  
00:35:25,270 --> 00:35:23,520  
okay take our last question from stephen

1002  
00:35:27,829 --> 00:35:25,280  
clark go ahead thanks stephen clark

1003  
00:35:30,470 --> 00:35:27,839  
space flight now again for alan um

1004  
00:35:33,270 --> 00:35:30,480  
just a question uh based on your

1005  
00:35:35,829 --> 00:35:33,280  
experience with spacex and their cots

1006  
00:35:38,230 --> 00:35:35,839  
test flights do you feel like that

1007  
00:35:40,710 --> 00:35:38,240  
sort of smoothed the road with orbital

1008  
00:35:42,230 --> 00:35:40,720  
um going into to this launch and then

1009  
00:35:43,430 --> 00:35:42,240  
the next launch

1010  
00:35:45,430 --> 00:35:43,440  
you know there was a

1011  
00:35:47,270 --> 00:35:45,440  
pretty lengthy delay between

1012  
00:35:48,950 --> 00:35:47,280  
spacex's test launches

1013  
00:35:50,150 --> 00:35:48,960

and uh sounds like you're going to be

1014

00:35:51,670 --> 00:35:50,160

ready to go in a couple of months i'm

1015

00:35:52,950 --> 00:35:51,680

just curious if

1016

00:35:56,829 --> 00:35:52,960

does that reflect on orbital or does it

1017

00:36:00,230 --> 00:35:56,839

reflect on on the process being improved

1018

00:36:02,950 --> 00:36:00,240

thanks well i i i think it's hard to

1019

00:36:05,750 --> 00:36:02,960

draw a comparison because what happened

1020

00:36:08,069 --> 00:36:05,760

with spacex was was different here in in

1021

00:36:10,230 --> 00:36:08,079

spacex's case

1022

00:36:12,230 --> 00:36:10,240

they made

1023

00:36:13,990 --> 00:36:12,240

a conscious decision to upgrade the

1024

00:36:16,390 --> 00:36:14,000

engines and do some upgrades to the

1025

00:36:18,710 --> 00:36:16,400

vehicle from the initial flight of their

1026  
00:36:20,470 --> 00:36:18,720  
launch vehicle to actually flying the

1027  
00:36:23,550 --> 00:36:20,480  
cots demonstration

1028  
00:36:28,310 --> 00:36:26,310  
accelerating the third what was to be

1029  
00:36:30,069 --> 00:36:28,320  
the third mission to the station down

1030  
00:36:32,470 --> 00:36:30,079  
into the second flight took some extra

1031  
00:36:35,430 --> 00:36:32,480  
time so there was a different different

1032  
00:36:37,270 --> 00:36:35,440  
evolution of their vehicles from the

1033  
00:36:38,950 --> 00:36:37,280  
maiden flight all the way to the space

1034  
00:36:42,470 --> 00:36:38,960  
station

1035  
00:36:47,670 --> 00:36:45,589  
the length of time in that period and in

1036  
00:36:49,030 --> 00:36:47,680  
orbital's case

1037  
00:36:50,630 --> 00:36:49,040  
they don't

1038  
00:36:52,230 --> 00:36:50,640

have that evolution

1039

00:36:54,150 --> 00:36:52,240

it was

1040

00:36:56,710 --> 00:36:54,160

originally planned just to have one demo

1041

00:36:58,230 --> 00:36:56,720

flight immediately to the space station

1042

00:37:00,630 --> 00:36:58,240

and we were able to insert this

1043

00:37:02,390 --> 00:37:00,640

inaugural flight today

1044

00:37:04,470 --> 00:37:02,400

there should be very minor changes

1045

00:37:06,390 --> 00:37:04,480

between what was flown today

1046

00:37:08,950 --> 00:37:06,400

in the vehicle that will fly the next

1047

00:37:10,630 --> 00:37:08,960

demo flight so it's just it was it's

1048

00:37:13,349 --> 00:37:10,640

just a different history a different

1049

00:37:18,230 --> 00:37:15,190

okay gentlemen anything you want to add

1050

00:37:20,069 --> 00:37:18,240

before we draw to a close

1051  
00:37:22,150 --> 00:37:20,079  
sure

1052  
00:37:24,470 --> 00:37:22,160  
again i want to point out the fact that

1053  
00:37:26,150 --> 00:37:24,480  
uh this is all about people

1054  
00:37:28,150 --> 00:37:26,160  
people working hard people being

1055  
00:37:29,670 --> 00:37:28,160  
innovative uh people being willing to

1056  
00:37:31,829 --> 00:37:29,680  
work together and people communicating

1057  
00:37:34,310 --> 00:37:31,839  
about very difficult problems

1058  
00:37:35,589 --> 00:37:34,320  
that's how we get to space

1059  
00:37:37,190 --> 00:37:35,599  
you work hard

1060  
00:37:38,870 --> 00:37:37,200  
and you you bring the right talent

1061  
00:37:41,829 --> 00:37:38,880  
together and then the hardware comes out

1062  
00:37:43,270 --> 00:37:41,839  
of that and the operations and uh this

1063  
00:37:44,630 --> 00:37:43,280

was a good example of that there'll be

1064

00:37:46,069 --> 00:37:44,640

more to come

1065

00:37:47,910 --> 00:37:46,079

but that's been the history of our space

1066

00:37:50,310 --> 00:37:47,920

program as is

1067

00:37:51,990 --> 00:37:50,320

smart people committed to some very

1068

00:37:53,349 --> 00:37:52,000

difficult goals and being willing to

1069

00:37:55,430 --> 00:37:53,359

take chances

1070

00:37:57,910 --> 00:37:55,440

and risk failure

1071

00:37:59,349 --> 00:37:57,920

achieving great things and we feel like

1072

00:38:01,670 --> 00:37:59,359

today

1073

00:38:03,349 --> 00:38:01,680

we did take some risk getting here

1074

00:38:04,870 --> 00:38:03,359

because as a company it was a huge risk

1075

00:38:07,270 --> 00:38:04,880

to invest in this

1076

00:38:09,829 --> 00:38:07,280

but the right people pulling together

1077

00:38:11,190 --> 00:38:09,839

and with great teammates were able to uh

1078

00:38:14,310 --> 00:38:11,200

to achieve this

1079

00:38:16,790 --> 00:38:14,320

and uh we're real happy we're real proud

1080

00:38:19,750 --> 00:38:16,800

thank you all for your support

1081

00:38:22,630 --> 00:38:19,760

and i would just add that this is um

1082

00:38:24,150 --> 00:38:22,640

um this this is an investment for nasa

1083

00:38:26,230 --> 00:38:24,160

this this is

1084

00:38:27,510 --> 00:38:26,240

a new way of doing business and with any

1085

00:38:28,390 --> 00:38:27,520

investment there's a certain amount of

1086

00:38:30,790 --> 00:38:28,400

risk

1087

00:38:33,510 --> 00:38:30,800

but it sure is nice to see a return on

1088

00:38:36,710 --> 00:38:33,520

investment and things

1089

00:38:39,670 --> 00:38:36,720

go your way so i think this was a a

1090

00:38:41,510 --> 00:38:39,680

great day for everybody

1091

00:38:43,030 --> 00:38:41,520

okay well that's going to do it here

1092

00:38:44,470 --> 00:38:43,040

from nasa's wallops flight facility in

1093

00:38:45,829 --> 00:38:44,480

wallops island virginia as a reminder

1094

00:38:50,150 --> 00:38:45,839

you can find out more information about

1095

00:38:52,870 --> 00:38:51,589

orbital you can find out more

1096

00:38:54,230 --> 00:38:52,880

information about how to connect with

1097

00:38:58,150 --> 00:38:54,240

nasa on social media continue the

1098

00:39:00,230 --> 00:38:58,160

conversation there at [www.nasa.gov](http://www.nasa.gov)

1099

00:39:01,990 --> 00:39:00,240

connect we thank our speakers once again

1100

00:39:03,589 --> 00:39:02,000

thank you for joining us from nasa's

