1
00:00:06,230 --> 00:00:04,309
good afternoon from nasa's johnson space

2
00:00:07,829 --> 00:00:06,240
center in houston texas i am josh

3
00:00:09,669 --> 00:00:07,839
spirely it has been quite the day for

4
00:00:10,790 --> 00:00:09,679
both nasa and orbital sciences we're

5
00:00:12,870 --> 00:00:10,800
going to be taking a look at all this

6
00:00:14,470 --> 00:00:12,880
morning's activities as cygnus was

7
00:00:16,070 --> 00:00:14,480
successfully

8
00:00:17,910 --> 00:00:16,080
installed on the international space

9
00:00:19,990 --> 00:00:17,920
station joining me here in houston is

10
00:00:21,349 --> 00:00:20,000
nasa flight director holly writing she

11
00:00:22,950 --> 00:00:21,359
was there in mission control as the

12
00:00:25,109 --> 00:00:22,960
activities took place

13
00:00:27,750 --> 00:00:25,119

we were also joined from nasa

14
00:00:29,830 --> 00:00:27,760
headquarters in washington d.c by alan

15
00:00:32,310 --> 00:00:29,840
lindemoyer nasa's commercial crew and

16
00:00:34,389 --> 00:00:32,320
cargo program manager as well as frank

17
00:00:35,990 --> 00:00:34,399
culbertson executive vice president of

18
00:00:37,350 --> 00:00:36,000
orbital sciences we're going to start

19
00:00:40,150 --> 00:00:37,360
here in houston with holly then we'll

20
00:00:41,510 --> 00:00:40,160
take some uh we'll go to uh dc and talk

21
00:00:43,510 --> 00:00:41,520
with alan and frank and then we'll take

22
00:00:46,229 --> 00:00:43,520
some questions and we'll see it started

23
00:00:48,310 --> 00:00:46,239
with holly all right well thank you josh

24
00:00:49,270 --> 00:00:48,320
it's certainly a great day to fly in

25
00:00:50,389 --> 00:00:49,280
space

26
00:00:53,110 --> 00:00:50,399
today

27
00:00:55,590 --> 00:00:53,120
the cygnus vehicle successfully

28
00:00:57,750 --> 00:00:55,600
rendezvoused and was captured and

29
00:00:59,270 --> 00:00:57,760
birthed to the international space

30
00:01:01,029 --> 00:00:59,280
station

31
00:01:04,869 --> 00:01:01,039
so starting about

32
00:01:07,750 --> 00:01:04,879
2 am local time here in houston

33
00:01:09,910 --> 00:01:07,760
joint operations which is the activity

34
00:01:12,469 --> 00:01:09,920
where the mission control team here in

35
00:01:13,990 --> 00:01:12,479
houston the mission control team in

36
00:01:16,310 --> 00:01:14,000
dulles virginia

37
00:01:18,310 --> 00:01:16,320
at orbital responsible for this cygnus

38
00:01:21,350 --> 00:01:18,320

and also our colleagues

39
00:01:22,789 --> 00:01:21,360
at jaxa who participate in the cygnus

40
00:01:25,350 --> 00:01:22,799
rendezvous with part of the

41
00:01:28,230 --> 00:01:25,360
communications system begin to work

42
00:01:29,270 --> 00:01:28,240
together as a team in order to get

43
00:01:31,749 --> 00:01:29,280
cygnus

44
00:01:34,950 --> 00:01:31,759
to the space station so that activity

45
00:01:37,270 --> 00:01:34,960
started about 2 am local houston time

46
00:01:39,429 --> 00:01:37,280
and then a series of maneuvers were

47
00:01:42,469 --> 00:01:39,439
completed as cygnus

48
00:01:44,950 --> 00:01:42,479
moved from below the space station

49
00:01:47,030 --> 00:01:44,960
up to a point where the robotic arm

50
00:01:48,950 --> 00:01:47,040
could reach out and

51
00:01:51,429 --> 00:01:48,960
capture cygnus

52
00:01:53,990 --> 00:01:51,439
at the node 2 nader so just underneath

53
00:01:56,950 --> 00:01:54,000
the node 2 module and that activity

54
00:01:59,350 --> 00:01:56,960
occurred at 6 a.m local time just a few

55
00:02:00,550 --> 00:01:59,360
minutes earlier than the team had

56
00:02:02,469 --> 00:02:00,560
planned it

57
00:02:05,030 --> 00:02:02,479
so we're certainly excited really

58
00:02:08,389 --> 00:02:05,040
thrilled for our colleagues at the

59
00:02:10,710 --> 00:02:08,399
orbital sciences corporation and and um

60
00:02:12,550 --> 00:02:10,720
all of the folks in mission control d

61
00:02:14,550 --> 00:02:12,560
mission control dulles

62
00:02:17,350 --> 00:02:14,560
that we were able to work

63
00:02:18,470 --> 00:02:17,360

with today very successfully

64
00:02:21,750 --> 00:02:18,480
our crew

65
00:02:24,949 --> 00:02:21,760
luca parmitano karen nyberg acted as our

66
00:02:27,670 --> 00:02:24,959
robotic arm operators with luca

67
00:02:30,070 --> 00:02:27,680
driving the arm to reach out and

68
00:02:31,750 --> 00:02:30,080
capture the cygnus a near flawless

69
00:02:32,869 --> 00:02:31,760
activity

70
00:02:35,030 --> 00:02:32,879
after that

71
00:02:36,550 --> 00:02:35,040
the cygnus was maneuvered again by the

72
00:02:39,589 --> 00:02:36,560
robotic arm

73
00:02:42,470 --> 00:02:39,599
to the common berthing mechanism and

74
00:02:45,509 --> 00:02:42,480
attached to the space station as we

75
00:02:48,710 --> 00:02:45,519
speak the crew has completed the leak

76
00:02:51,910 --> 00:02:48,720
checks between the cygnus vehicle and

77
00:02:53,270 --> 00:02:51,920
the space station with plans to ingress

78
00:02:57,270 --> 00:02:53,280
go into

79
00:03:00,390 --> 00:02:57,280
the cygnus tomorrow morning about 4 55

80
00:03:03,589 --> 00:03:00,400
almost 5 a.m local houston time

81
00:03:06,470 --> 00:03:03,599
so a wonderful day to fly in space first

82
00:03:08,149 --> 00:03:06,480
time we've done that jointly with our

83
00:03:11,110 --> 00:03:08,159
colleagues at the orbital sciences

84
00:03:13,509 --> 00:03:11,120
corporation and so congratulations to

85
00:03:16,070 --> 00:03:13,519
the entire cygnus team

86
00:03:18,070 --> 00:03:16,080
back to you josh okay let's go to nasa

87
00:03:19,509 --> 00:03:18,080
headquarters in washington dc where alan

88
00:03:20,869 --> 00:03:19,519

and frank are standing by and let's hear

89
00:03:26,309 --> 00:03:20,879
from each one of them

90
00:03:27,910 --> 00:03:26,319
well thank you josh

91
00:03:29,670 --> 00:03:27,920
couldn't be happier

92
00:03:31,030 --> 00:03:29,680
to be here today for the day we've

93
00:03:34,390 --> 00:03:31,040
waited for

94
00:03:36,470 --> 00:03:34,400
and i just want to say congratulations

95
00:03:37,670 --> 00:03:36,480
frank thank you for the absolutely

96
00:03:39,350 --> 00:03:37,680
flawless

97
00:03:40,789 --> 00:03:39,360
uh mission that was executed this

98
00:03:42,869 --> 00:03:40,799
morning with the rendezvous and the

99
00:03:44,390 --> 00:03:42,879
birthing of the new cygnus to the space

100
00:03:46,789 --> 00:03:44,400
station it was

101
00:03:48,309 --> 00:03:46,799
just beautiful great teamwork thanks

102
00:03:51,830 --> 00:03:48,319
thank you uh

103
00:03:53,430 --> 00:03:51,840
uh to the entire orbital team i

104
00:03:54,869 --> 00:03:53,440
i had the privilege to be working with

105
00:03:57,429 --> 00:03:54,879
orbital since the beginning of our

106
00:03:59,589 --> 00:03:57,439
partnership and i have seen this team in

107
00:04:01,509 --> 00:03:59,599
action from the beginning

108
00:04:03,670 --> 00:04:01,519
through all our design reviews the

109
00:04:05,429 --> 00:04:03,680
requirements reviews the preliminary

110
00:04:06,550 --> 00:04:05,439
design

111
00:04:14,550 --> 00:04:06,560
the

112
00:04:16,870 --> 00:04:14,560
years and i can tell you that orville

113
00:04:18,390 --> 00:04:16,880

has addressed these challenges in such a

114
00:04:20,229 --> 00:04:18,400
professional

115
00:04:22,710 --> 00:04:20,239
skilled and

116
00:04:24,390 --> 00:04:22,720
ex with such expertise

117
00:04:27,189 --> 00:04:24,400
over the years and

118
00:04:29,990 --> 00:04:27,199
culminating today with this mission is

119
00:04:32,310 --> 00:04:30,000
is just a real testament to

120
00:04:34,550 --> 00:04:32,320
to the capabilities of your team

121
00:04:35,510 --> 00:04:34,560
especially with the events over the last

122
00:04:37,909 --> 00:04:35,520
week

123
00:04:41,350 --> 00:04:37,919
it was just a very

124
00:04:43,189 --> 00:04:41,360
very impressive job by the entire

125
00:04:44,790 --> 00:04:43,199
orbital team

126
00:04:47,830 --> 00:04:44,800
and then working so closely with the

127
00:04:50,550 --> 00:04:47,840
nasa team i i just couldn't be happier

128
00:04:52,629 --> 00:04:50,560
and more proud of how that worked we

129
00:04:54,390 --> 00:04:52,639
started the program

130
00:04:57,590 --> 00:04:54,400
with three goals

131
00:04:59,590 --> 00:04:57,600
one was to place strategic investments

132
00:05:03,990 --> 00:04:59,600
to kick-start

133
00:05:07,990 --> 00:05:06,230
not knowing if anything would actually

134
00:05:10,469 --> 00:05:08,000
emerge from that but we knew that we

135
00:05:14,469 --> 00:05:10,479
needed to place

136
00:05:15,990 --> 00:05:14,479
these investments to to to remove the

137
00:05:18,950 --> 00:05:16,000
significant

138
00:05:20,469 --> 00:05:18,960

barriers to entry in such such a tough

139
00:05:23,189 --> 00:05:20,479
industry

140
00:05:25,590 --> 00:05:23,199
our second goal was to

141
00:05:27,430 --> 00:05:25,600
see the development of

142
00:05:30,390 --> 00:05:27,440
new commercial space transportations

143
00:05:32,550 --> 00:05:30,400
that lower cost

144
00:05:35,670 --> 00:05:32,560
that could provide safe

145
00:05:37,749 --> 00:05:35,680
reliable and and and cost-effective

146
00:05:39,749 --> 00:05:37,759
access to low-earth orbit and the

147
00:05:42,070 --> 00:05:39,759
international space station and the

148
00:05:44,950 --> 00:05:42,080
third was to become a customer for these

149
00:05:48,550 --> 00:05:44,960
services once once they emerged

150
00:05:51,189 --> 00:05:48,560
i think we can say today conclusively

151
00:05:54,469 --> 00:05:51,199
that we've added another partner to the

152
00:05:56,469 --> 00:05:54,479
list that helped us achieve these goals

153
00:05:59,990 --> 00:05:56,479
a hundred percent

154
00:06:04,830 --> 00:06:00,000
we now have two new launch vehicles

155
00:06:09,670 --> 00:06:04,840
two new state of the art autonomous

156
00:06:11,749 --> 00:06:09,680
spacecraft capable of carrying cargo to

157
00:06:14,870 --> 00:06:11,759
manned destinations

158
00:06:17,189 --> 00:06:14,880
human destinations in space

159
00:06:19,110 --> 00:06:17,199
and returning

160
00:06:21,909 --> 00:06:19,120
with such critical science and

161
00:06:23,189 --> 00:06:21,919
experiments that we need to continue our

162
00:06:25,350 --> 00:06:23,199
exploration

163
00:06:27,270 --> 00:06:25,360

two new launch pads two new mission

164
00:06:31,670 --> 00:06:27,280
controls and the entire infrastructure

165
00:06:35,510 --> 00:06:31,680
to support uh these new systems uh so i

166
00:06:36,469 --> 00:06:35,520
i think it it it was a a great

167
00:06:39,430 --> 00:06:36,479
day

168
00:06:42,390 --> 00:06:39,440
uh culminating with the successes of of

169
00:06:45,189 --> 00:06:42,400
the program and meeting those goals

170
00:06:46,629 --> 00:06:45,199
so let me give thanks to my team who

171
00:06:49,590 --> 00:06:46,639
worked so hard

172
00:06:51,029 --> 00:06:49,600
back in houston um the the international

173
00:06:54,070 --> 00:06:51,039
space station

174
00:06:55,990 --> 00:06:54,080
uh all the people at nasa across all the

175
00:06:57,270 --> 00:06:56,000
centers we've reached back over the

176
00:06:59,189 --> 00:06:57,280
years to

177
00:07:01,029 --> 00:06:59,199
to the folks at

178
00:07:03,110 --> 00:07:01,039
most all the centers

179
00:07:05,749 --> 00:07:03,120
to provide help when orbital

180
00:07:07,510 --> 00:07:05,759
one orbital asked for it or when our our

181
00:07:09,749 --> 00:07:07,520
team

182
00:07:11,270 --> 00:07:09,759
needed a little expertise to to do some

183
00:07:13,430 --> 00:07:11,280
of our reviews

184
00:07:15,589 --> 00:07:13,440
thank you to mod and courtney who did

185
00:07:17,909 --> 00:07:15,599
such a great job this morning uh of

186
00:07:19,029 --> 00:07:17,919
course karen and luca

187
00:07:22,790 --> 00:07:19,039
uh

188
00:07:24,550 --> 00:07:22,800

just picture perfect today

189
00:07:27,110 --> 00:07:24,560
thank you to charlie and all the nasa

190
00:07:30,629 --> 00:07:27,120
leadership who who and

191
00:07:32,629 --> 00:07:30,639
were so patient and and uh uh believed

192
00:07:33,909 --> 00:07:32,639
and provided the support needed and and

193
00:07:36,230 --> 00:07:33,919
of course the administration in the

194
00:07:37,270 --> 00:07:36,240
congress who who stood with us all these

195
00:07:42,790 --> 00:07:37,280
years

196
00:07:48,629 --> 00:07:44,790
frank brought us out uh this morning

197
00:07:50,629 --> 00:07:48,639
when we were waiting for the birthing to

198
00:07:53,990 --> 00:07:50,639
the top of the orbital building

199
00:07:57,510 --> 00:07:54,000
and it was a beautiful crystal clear

200
00:07:59,350 --> 00:07:57,520
uh dawn this morning and we saw the most

201
00:08:01,029 --> 00:07:59,360
beautiful pass of the space station

202
00:08:03,510 --> 00:08:01,039
flying overhead

203
00:08:05,830 --> 00:08:03,520
uh along with cygnus

204
00:08:07,670 --> 00:08:05,840
and it became brighter and brighter and

205
00:08:09,589 --> 00:08:07,680
it was the brightest

206
00:08:12,390 --> 00:08:09,599
object in the star this morning and when

207
00:08:14,309 --> 00:08:12,400
it came right overhead it flashed even

208
00:08:15,350 --> 00:08:14,319
brighter as sort of a signal to us

209
00:08:17,350 --> 00:08:15,360
saying

210
00:08:21,270 --> 00:08:17,360
we're ready to do this

211
00:08:23,350 --> 00:08:21,280
uh it it really impressed on me how

212
00:08:25,110 --> 00:08:23,360
important it is

213
00:08:27,589 --> 00:08:25,120

to provide this capability so that we

214
00:08:29,110 --> 00:08:27,599
can continue doing that research that's

215
00:08:32,949 --> 00:08:29,120
so important

216
00:08:36,550 --> 00:08:32,959
uh to keep to keep us exploring in space

217
00:08:42,310 --> 00:08:36,560
uh it is critically important frank the

218
00:08:53,990 --> 00:08:43,909
i

219
00:08:56,790 --> 00:08:54,000
space so thank you very much and

220
00:08:59,269 --> 00:08:56,800
congratulations to the entire team

221
00:09:02,070 --> 00:08:59,279
thanks a lot alan and um

222
00:09:04,550 --> 00:09:02,080
just to continue on on what you're

223
00:09:06,550 --> 00:09:04,560
saying um

224
00:09:09,990 --> 00:09:06,560
you mentioned that the space station is

225
00:09:14,150 --> 00:09:12,150
continue the experiments up there and i

226
00:09:17,509 --> 00:09:14,160
want to just point out that this would

227
00:09:18,949 --> 00:09:17,519
not have been done without the students

228
00:09:21,750 --> 00:09:18,959
and professionals in this country that

229
00:09:23,829 --> 00:09:21,760
weren't inspired to go into science

230
00:09:25,829 --> 00:09:23,839
technology engineering and math

231
00:09:29,110 --> 00:09:25,839
uh what you see saw today was the

232
00:09:31,509 --> 00:09:29,120
product of american education system

233
00:09:33,509 --> 00:09:31,519
and and the the students the men and

234
00:09:35,350 --> 00:09:33,519
women that are willing to keep going

235
00:09:37,990 --> 00:09:35,360
with math with with math when it gets

236
00:09:39,430 --> 00:09:38,000
hard and uh who are willing to to do

237
00:09:42,310 --> 00:09:39,440
these kind of jobs that take a lot of

238
00:09:44,710 --> 00:09:42,320

patience and and a lot of expertise

239
00:09:46,470 --> 00:09:44,720
and uh and and some hair pulling and

240
00:09:47,590 --> 00:09:46,480
some heartache sometime like the the

241
00:09:50,150 --> 00:09:47,600
last week

242
00:09:51,750 --> 00:09:50,160
but um but these are the these are the

243
00:09:53,990 --> 00:09:51,760
people that will continue to lead this

244
00:09:57,030 --> 00:09:54,000
country in technology and continue to

245
00:09:58,230 --> 00:09:57,040
lead the world we hope in exploration uh

246
00:10:00,230 --> 00:09:58,240
as we continue to support the

247
00:10:01,670 --> 00:10:00,240
international space station

248
00:10:03,750 --> 00:10:01,680
i could speak for a long time this

249
00:10:05,509 --> 00:10:03,760
morning uh to talk about what's been

250
00:10:08,389 --> 00:10:05,519
accomplished and to thank all the people

251
00:10:09,990 --> 00:10:08,399
that are involved it's very difficult to

252
00:10:11,190 --> 00:10:10,000
mention everybody i certainly want to

253
00:10:13,750 --> 00:10:11,200
thank alan

254
00:10:15,990 --> 00:10:13,760
um and his team especially bruce manners

255
00:10:18,230 --> 00:10:16,000
and and kevin meehan for all the support

256
00:10:19,829 --> 00:10:18,240
they've given us in the long hours this

257
00:10:21,990 --> 00:10:19,839
has been a great public-private

258
00:10:24,389 --> 00:10:22,000
partnership and nasa's investment and

259
00:10:26,069 --> 00:10:24,399
interest in this has kept us going

260
00:10:27,910 --> 00:10:26,079
we have a big incentive ahead of us and

261
00:10:30,150 --> 00:10:27,920
that's to execute the cargo resupply

262
00:10:32,710 --> 00:10:30,160
service contract which will be coming

263
00:10:34,069 --> 00:10:32,720

but today we delivered more cargo on a

264
00:10:35,910 --> 00:10:34,079
commercial basis than has ever been

265
00:10:38,550 --> 00:10:35,920
delivered to the space station 700

266
00:10:39,829 --> 00:10:38,560
kilograms and uh and i know the crew is

267
00:10:41,910 --> 00:10:39,839
going to be very happy when they get the

268
00:10:43,509 --> 00:10:41,920
hatch open and get a chance to see all

269
00:10:45,110 --> 00:10:43,519
the things that are in there and

270
00:10:47,509 --> 00:10:45,120
obviously the things that will keep

271
00:10:48,949 --> 00:10:47,519
their mission going

272
00:10:51,590 --> 00:10:48,959
we have a lot of people at orbital that

273
00:10:53,350 --> 00:10:51,600
work very hard for five years or more

274
00:10:55,509 --> 00:10:53,360
and worked even harder in the last week

275
00:10:57,269 --> 00:10:55,519
to to resolve all the issues that needed

276
00:10:58,870 --> 00:10:57,279
to be resolved before we completed this

277
00:11:00,790 --> 00:10:58,880
activity

278
00:11:03,750 --> 00:11:00,800
it has been a great team effort from the

279
00:11:05,590 --> 00:11:03,760
day the antares launched until

280
00:11:07,430 --> 00:11:05,600
and certainly that team did a fantastic

281
00:11:09,910 --> 00:11:07,440
job of getting us into orbit

282
00:11:12,069 --> 00:11:09,920
uh until today when when uh the people

283
00:11:15,030 --> 00:11:12,079
who were really important in finishing

284
00:11:16,790 --> 00:11:15,040
this job the crew got a hold of it and

285
00:11:18,710 --> 00:11:16,800
brought it on board the space station i

286
00:11:20,949 --> 00:11:18,720
want to thank luca and karen and the

287
00:11:23,030 --> 00:11:20,959
rest of the crew for for the great job

288
00:11:24,630 --> 00:11:23,040

they did you can see in the picture here

289
00:11:27,670 --> 00:11:24,640
the the

290
00:11:30,069 --> 00:11:27,680
uh cygnus the spaceship g david lowe is

291
00:11:31,590 --> 00:11:30,079
attached to the to the space station

292
00:11:33,190 --> 00:11:31,600
uh the crew will continue all the

293
00:11:35,269 --> 00:11:33,200
operations to make sure it's securely

294
00:11:36,949 --> 00:11:35,279
attached uh through the remainder of

295
00:11:38,310 --> 00:11:36,959
their work day and then my understanding

296
00:11:40,389 --> 00:11:38,320
is that tomorrow

297
00:11:42,310 --> 00:11:40,399
they will open the hatch and and uh and

298
00:11:43,670 --> 00:11:42,320
do the activities required to begin

299
00:11:45,269 --> 00:11:43,680
unloading it

300
00:11:47,509 --> 00:11:45,279
um

301
00:11:49,269 --> 00:11:47,519
also like alan i want to thank all of

302
00:11:51,750 --> 00:11:49,279
the nasa team the international space

303
00:11:54,230 --> 00:11:51,760
station program at johnson space center

304
00:11:56,710 --> 00:11:54,240
and the people who came to to work with

305
00:11:58,310 --> 00:11:56,720
us as we work through the issues our

306
00:11:59,829 --> 00:11:58,320
international partners who had to

307
00:12:02,069 --> 00:11:59,839
evaluate what we were doing and make

308
00:12:03,190 --> 00:12:02,079
sure that they were comfortable that the

309
00:12:05,509 --> 00:12:03,200
uh

310
00:12:06,710 --> 00:12:05,519
the approach the grapple the birthing

311
00:12:08,629 --> 00:12:06,720
were all going to be safe for the

312
00:12:10,790 --> 00:12:08,639
station and for their crew members

313
00:12:12,550 --> 00:12:10,800

and of course jaxa who provided a great

314
00:12:13,750 --> 00:12:12,560
deal of cooperation and coordination in

315
00:12:16,389 --> 00:12:13,760
the uh

316
00:12:17,990 --> 00:12:16,399
proximity system uh that allowed us to

317
00:12:19,509 --> 00:12:18,000
continue the uh

318
00:12:21,670 --> 00:12:19,519
the approach

319
00:12:23,590 --> 00:12:21,680
our subcontractors who provided great

320
00:12:25,910 --> 00:12:23,600
hardware for us

321
00:12:27,430 --> 00:12:25,920
everything worked as advertised

322
00:12:30,150 --> 00:12:27,440
and then of course

323
00:12:32,470 --> 00:12:30,160
our team that that did a fantastic job

324
00:12:35,350 --> 00:12:32,480
in in mission control and in the back

325
00:12:37,509 --> 00:12:35,360
rooms to uh to control this mission to

326
00:12:38,389 --> 00:12:37,519
operate it and to and to get through the

327
00:12:40,069 --> 00:12:38,399
day

328
00:12:41,910 --> 00:12:40,079
um but we're not done we're going to

329
00:12:43,990 --> 00:12:41,920
have to continue monitoring the systems

330
00:12:45,590 --> 00:12:44,000
and stay on orbit uh at least through

331
00:12:46,470 --> 00:12:45,600
october 22nd

332
00:12:48,310 --> 00:12:46,480
and then

333
00:12:50,470 --> 00:12:48,320
detach from the station and do our

334
00:12:51,990 --> 00:12:50,480
de-orbit and then in about six weeks

335
00:12:53,030 --> 00:12:52,000
we'll be launching again and we're

336
00:12:55,670 --> 00:12:53,040
really looking forward to that

337
00:12:57,829 --> 00:12:55,680
opportunity to carry even more cargo to

338
00:12:59,590 --> 00:12:57,839

the station um

339
00:13:01,350 --> 00:12:59,600
we'll be able to carry approximately one

340
00:13:02,230 --> 00:13:01,360
and a half to two tons of cargo each

341
00:13:06,790 --> 00:13:02,240
mission

342
00:13:08,710 --> 00:13:06,800
we'll go up to over two and a half tons

343
00:13:10,310 --> 00:13:08,720
on each mission uh beginning with number

344
00:13:12,310 --> 00:13:10,320
four all the way through the end of the

345
00:13:14,710 --> 00:13:12,320
contract and

346
00:13:17,030 --> 00:13:14,720
we we know and understand and accept the

347
00:13:18,389 --> 00:13:17,040
responsibility this is critical to the

348
00:13:20,550 --> 00:13:18,399
continuation of the station and the

349
00:13:22,949 --> 00:13:20,560
continuation of u.s leadership in in

350
00:13:25,190 --> 00:13:22,959
space as well as an international

351
00:13:27,030 --> 00:13:25,200
partnership that i think is uh

352
00:13:28,790 --> 00:13:27,040
a shining example of how nations can

353
00:13:31,430 --> 00:13:28,800
work together when they have the ability

354
00:13:33,430 --> 00:13:31,440
to to uh to let their engineers their

355
00:13:35,430 --> 00:13:33,440
scientists their operators

356
00:13:39,509 --> 00:13:35,440
and their professionals work together

357
00:13:44,629 --> 00:13:42,230
this has been an example of patience an

358
00:13:45,829 --> 00:13:44,639
example of excellent troubleshooting

359
00:13:47,350 --> 00:13:45,839
especially in the last week but

360
00:13:48,710 --> 00:13:47,360
throughout the program and you have to

361
00:13:50,150 --> 00:13:48,720
be patient if you want to see good

362
00:13:52,470 --> 00:13:50,160
things happen

363
00:13:54,949 --> 00:13:52,480

we started this program at orbital over

364
00:13:57,110 --> 00:13:54,959
five years ago antares was begun before

365
00:13:58,790 --> 00:13:57,120
that and it's been hard for many people

366
00:14:00,949 --> 00:13:58,800
particularly in the management chain and

367
00:14:03,189 --> 00:14:00,959
in our investors and everywhere else to

368
00:14:05,829 --> 00:14:03,199
be patient that this would work out but

369
00:14:07,030 --> 00:14:05,839
uh sometimes uh it just takes that

370
00:14:08,550 --> 00:14:07,040
amount to

371
00:14:10,069 --> 00:14:08,560
to get that happen it took us a long

372
00:14:12,069 --> 00:14:10,079
time to get space station built it took

373
00:14:13,509 --> 00:14:12,079
a long time for shuttle to be developed

374
00:14:15,990 --> 00:14:13,519
it's taking a long time for the next

375
00:14:18,389 --> 00:14:16,000
steps but in the end it is worth it

376
00:14:20,150 --> 00:14:18,399
because this is how we continue to

377
00:14:23,189 --> 00:14:20,160
explore our universe to explore the

378
00:14:24,629 --> 00:14:23,199
solar system and how we also inspire the

379
00:14:26,470 --> 00:14:24,639
next generations if they don't have

380
00:14:27,829 --> 00:14:26,480
something like this to look forward to

381
00:14:29,509 --> 00:14:27,839
they're going to drift off into other

382
00:14:30,550 --> 00:14:29,519
areas and if we don't keep them involved

383
00:14:32,470 --> 00:14:30,560
in stem

384
00:14:35,430 --> 00:14:32,480
and engineering challenges in the

385
00:14:39,030 --> 00:14:35,440
technology that's available out here

386
00:14:41,509 --> 00:14:39,040
we're going to lose again our leadership

387
00:14:44,230 --> 00:14:41,519
the future is bright i think for this

388
00:14:45,990 --> 00:14:44,240

partnership and for this relationship

389
00:14:47,189 --> 00:14:46,000
we're looking forward to many more

390
00:14:49,430 --> 00:14:47,199
opportunities

391
00:14:54,069 --> 00:14:49,440
and i have to relate to you what i heard

392
00:14:54,079 --> 00:14:56,790
from a team

393
00:15:02,949 --> 00:15:01,110
that was uh very excited very tired

394
00:15:05,110 --> 00:15:02,959
and uh and just thrilled to be where

395
00:15:07,910 --> 00:15:05,120
they were but uh many of them who had

396
00:15:09,670 --> 00:15:07,920
worked on other systems other spacecraft

397
00:15:12,790 --> 00:15:09,680
other launch vehicles and at other

398
00:15:14,069 --> 00:15:12,800
places came up to me and said this is

399
00:15:17,110 --> 00:15:14,079
different

400
00:15:19,910 --> 00:15:17,120
this is really amazing and i'm so happy

401
00:15:21,189 --> 00:15:19,920
to be a part of this and it uh

402
00:15:22,389 --> 00:15:21,199
those of us who've been in human space

403
00:15:23,990 --> 00:15:22,399
flight a while know what they're talking

404
00:15:26,470 --> 00:15:24,000
about and now we have a whole other

405
00:15:28,629 --> 00:15:26,480
group of people that that understand

406
00:15:31,269 --> 00:15:28,639
how exciting it is to be a part of this

407
00:15:33,430 --> 00:15:31,279
and to to take one spacecraft and attach

408
00:15:36,230 --> 00:15:33,440
it to another that's got human beings

409
00:15:38,470 --> 00:15:36,240
inside it and to continue to build on it

410
00:15:40,470 --> 00:15:38,480
and continue to to show

411
00:15:42,310 --> 00:15:40,480
that that these things can be done when

412
00:15:43,430 --> 00:15:42,320
everybody works together and we put our

413
00:15:45,430 --> 00:15:43,440

mind to it

414
00:15:47,750 --> 00:15:45,440
uh we got a whole new set of people that

415
00:15:48,949 --> 00:15:47,760
are committed to supporting this

416
00:15:51,350 --> 00:15:48,959
and we had a bunch of kids in the

417
00:15:53,269 --> 00:15:51,360
auditorium this morning at orbital uh

418
00:15:55,990 --> 00:15:53,279
family members and friends to watch what

419
00:15:57,670 --> 00:15:56,000
was going on and a lot of smiling faces

420
00:15:59,670 --> 00:15:57,680
even at that early hour

421
00:16:01,910 --> 00:15:59,680
who i think were very proud of proud to

422
00:16:03,990 --> 00:16:01,920
be a part of this historical moment

423
00:16:05,910 --> 00:16:04,000
so on behalf of david thompson our ceo

424
00:16:08,069 --> 00:16:05,920
and our entire leadership team i want to

425
00:16:09,590 --> 00:16:08,079
thank nasa for the opportunity i want to

426
00:16:11,509 --> 00:16:09,600
thank you for the great

427
00:16:13,430 --> 00:16:11,519
cooperation and collaboration and i

428
00:16:15,110 --> 00:16:13,440
especially want to thank my team back at

429
00:16:16,470 --> 00:16:15,120
orbital

430
00:16:18,389 --> 00:16:16,480
i just happened to be the guy lucky

431
00:16:19,749 --> 00:16:18,399
enough to be sitting here and talking

432
00:16:21,670 --> 00:16:19,759
about it but they are the ones who

433
00:16:24,710 --> 00:16:21,680
really made it happen and i am so proud

434
00:16:30,069 --> 00:16:26,550
thank you

435
00:16:32,069 --> 00:16:30,079
take some questions now here in houston

436
00:16:35,110 --> 00:16:32,079
first uh robert

437
00:16:37,030 --> 00:16:35,120
hi robert perella with collectspace.com

438
00:16:38,389 --> 00:16:37,040

the question for alan given your

439
00:16:41,590 --> 00:16:38,399
description that this morning's events

440
00:16:42,310 --> 00:16:41,600
were flawless uh where

441
00:16:45,910 --> 00:16:42,320
do

442
00:16:48,389 --> 00:16:45,920
the official go to

443
00:16:50,629 --> 00:16:48,399
orbital to proceed preparing for the the

444
00:16:52,629 --> 00:16:50,639
first crs flight do you need to wait for

445
00:16:57,509 --> 00:16:52,639
the end of this mission or

446
00:17:03,430 --> 00:16:59,509
no they're good to go

447
00:17:04,870 --> 00:17:03,440
stations got a spot ready for them

448
00:17:06,789 --> 00:17:04,880
in december

449
00:17:08,710 --> 00:17:06,799
and orbital's working hard to get ready

450
00:17:10,630 --> 00:17:08,720
for that we've got the cargo

451
00:17:12,949 --> 00:17:10,640
uh getting the cargo together getting

452
00:17:14,230 --> 00:17:12,959
ready to to uh ship it out to wallops

453
00:17:15,590 --> 00:17:14,240
and uh

454
00:17:18,390 --> 00:17:15,600
uh

455
00:17:20,230 --> 00:17:18,400
they're they're good to go they've got a

456
00:17:21,669 --> 00:17:20,240
demonstrated system that certainly can

457
00:17:22,630 --> 00:17:21,679
deliver

458
00:17:24,309 --> 00:17:22,640
and

459
00:17:26,230 --> 00:17:24,319
there's there's a bit more to go to make

460
00:17:30,230 --> 00:17:26,240
sure we have a

461
00:17:32,870 --> 00:17:30,240
safe departure and reentry but

462
00:17:35,909 --> 00:17:32,880
there will be no delays uh proceeding

463
00:17:38,470 --> 00:17:35,919

toward that next next mission

464
00:17:41,909 --> 00:17:38,480
great and um

465
00:17:43,590 --> 00:17:41,919
or frank uh given the the delay the week

466
00:17:46,230 --> 00:17:43,600
delay to getting to station are you

467
00:17:48,070 --> 00:17:46,240
still planning an october 22nd departure

468
00:17:49,750 --> 00:17:48,080
if you are

469
00:17:51,270 --> 00:17:49,760
how does that affect the crew time in

470
00:17:53,190 --> 00:17:51,280
terms of

471
00:18:00,549 --> 00:17:53,200
unpacking is are they under any

472
00:18:02,950 --> 00:18:01,830
well you're pointed at me so maybe i

473
00:18:04,150 --> 00:18:02,960
should answer

474
00:18:06,070 --> 00:18:04,160
um

475
00:18:07,990 --> 00:18:06,080
holly will probably elaborate but my

476
00:18:09,990 --> 00:18:08,000
understanding is that uh the crew has

477
00:18:11,909 --> 00:18:10,000
plenty of time to unload it's a fairly

478
00:18:13,830 --> 00:18:11,919
small load compared to our maximum load

479
00:18:15,750 --> 00:18:13,840
about half or less

480
00:18:17,990 --> 00:18:15,760
so they should be able to to make that

481
00:18:20,470 --> 00:18:18,000
happen and and then load the disposal

482
00:18:22,310 --> 00:18:20,480
cargo uh prior to that date

483
00:18:24,470 --> 00:18:22,320
we'll leave whenever nasa says they'd

484
00:18:25,830 --> 00:18:24,480
like for us to vacate the port but my

485
00:18:28,630 --> 00:18:25,840
understanding is that the three weeks

486
00:18:30,549 --> 00:18:28,640
should be sufficient

487
00:18:32,230 --> 00:18:30,559
and i'll follow along with what frank

488
00:18:34,230 --> 00:18:32,240

said three weeks we believe is

489
00:18:36,630 --> 00:18:34,240
sufficient

490
00:18:38,310 --> 00:18:36,640
the cargo is not completely full as it

491
00:18:40,150 --> 00:18:38,320
will be in future flights and so right

492
00:18:43,750 --> 00:18:40,160
now we are still officially planning the

493
00:18:45,909 --> 00:18:43,760
october 22nd release as was planned

494
00:18:48,230 --> 00:18:45,919
pre-launch

495
00:18:49,830 --> 00:18:48,240
okay is that it robert okay let's go to

496
00:18:53,190 --> 00:18:49,840
the phone lines james dean with florida

497
00:18:57,909 --> 00:18:55,830
yes thank you josh

498
00:19:04,230 --> 00:18:57,919
alan how much of a relief is it for nasa

499
00:19:09,430 --> 00:19:06,950
well it's it's a tremendous uh relief

500
00:19:10,950 --> 00:19:09,440
it's such a it's such a feeling of pride

501
00:19:12,870 --> 00:19:10,960
and accomplishment

502
00:19:14,070 --> 00:19:12,880
to see how well the partnership worked

503
00:19:18,710 --> 00:19:14,080
together

504
00:19:20,070 --> 00:19:18,720
that resulted in in two very successful

505
00:19:23,830 --> 00:19:20,080
uh

506
00:19:27,190 --> 00:19:23,840
very complicated spacecraft systems

507
00:19:28,310 --> 00:19:27,200
it's certainly a relief and

508
00:19:29,750 --> 00:19:28,320
something

509
00:19:32,230 --> 00:19:29,760
we're

510
00:19:35,510 --> 00:19:32,240
ready to celebrate and be proud of for

511
00:19:39,590 --> 00:19:37,590
thanks i was curious what

512
00:19:41,510 --> 00:19:39,600
we might expect to see differently on

513
00:19:45,510 --> 00:19:41,520

the on the first contracted flight in

514
00:19:48,310 --> 00:19:45,520
terms of um like the the nominal uh

515
00:19:50,230 --> 00:19:48,320
uh duration of the flight until uh

516
00:19:52,390 --> 00:19:50,240
rendezvous for example would that be

517
00:19:54,789 --> 00:19:52,400
shorter or about the same

518
00:19:56,870 --> 00:19:54,799
and i was also just curious for if

519
00:19:58,630 --> 00:19:56,880
anyone

520
00:20:00,070 --> 00:19:58,640
would like to respond i was curious just

521
00:20:03,270 --> 00:20:00,080
seeing seeing the vehicle come up that

522
00:20:05,750 --> 00:20:03,280
looks so much like an mplm if you

523
00:20:08,470 --> 00:20:05,760
felt any sort of link to the the shuttle

524
00:20:12,789 --> 00:20:08,480
program that you know had a capability

525
00:20:17,510 --> 00:20:14,150
well to answer the first part of your

526
00:20:19,669 --> 00:20:17,520
question our intent is to rendezvous and

527
00:20:21,590 --> 00:20:19,679
and be birthed in about half the time

528
00:20:23,430 --> 00:20:21,600
that it took for this one two to three

529
00:20:26,950 --> 00:20:23,440
days we'll work the schedule out with

530
00:20:28,230 --> 00:20:26,960
nasa but we learned a lot on this one

531
00:20:31,350 --> 00:20:28,240
part of what we had to do this time was

532
00:20:33,750 --> 00:20:31,360
some demonstration maneuvers that

533
00:20:35,909 --> 00:20:33,760
ensured that we really could abort we

534
00:20:38,070 --> 00:20:35,919
could hold we could we could

535
00:20:39,990 --> 00:20:38,080
control the vehicle really to nasa's

536
00:20:41,350 --> 00:20:40,000
satisfaction and that took some time

537
00:20:43,830 --> 00:20:41,360
during the uh

538
00:20:44,789 --> 00:20:43,840

during the entire uh a few days of

539
00:20:46,710 --> 00:20:44,799
approach

540
00:20:48,549 --> 00:20:46,720
and in rendezvous but so we won't have

541
00:20:49,590 --> 00:20:48,559
to do that again and

542
00:20:51,909 --> 00:20:49,600
and hopefully we won't have to do

543
00:20:53,750 --> 00:20:51,919
another race track around the station

544
00:20:55,430 --> 00:20:53,760
so we should be able to get there in two

545
00:20:56,950 --> 00:20:55,440
to three days

546
00:20:59,909 --> 00:20:56,960
um and

547
00:21:00,830 --> 00:20:59,919
the other part of the question was um

548
00:21:02,390 --> 00:21:00,840
uh

549
00:21:04,549 --> 00:21:02,400
again

550
00:21:06,070 --> 00:21:04,559
you know watching the vehicle approach

551
00:21:09,270 --> 00:21:06,080
and and

552
00:21:11,830 --> 00:21:09,280
knowing the heritage to the the mtlm

553
00:21:13,830 --> 00:21:11,840
just wondered if if uh

554
00:21:17,430 --> 00:21:13,840
you mr culbertson or or anyone on the

555
00:21:20,630 --> 00:21:17,440
nasa side was was kind of appreciating a

556
00:21:22,230 --> 00:21:20,640
link to the shuttle program pass that um

557
00:21:23,750 --> 00:21:22,240
that you're helping to

558
00:21:26,390 --> 00:21:23,760
uh now replace with this cargo

559
00:21:30,630 --> 00:21:28,310
well having watched a lot of those from

560
00:21:32,950 --> 00:21:30,640
uh from both sides really but from a lot

561
00:21:34,710 --> 00:21:32,960
of different perspectives and uh

562
00:21:36,230 --> 00:21:34,720
and and watching the shuttle come aboard

563
00:21:38,310 --> 00:21:36,240

during assembly of the station in the

564
00:21:40,310 --> 00:21:38,320
early days and rendezvousing and docking

565
00:21:42,549 --> 00:21:40,320
with the mirror there certainly was a

566
00:21:44,149 --> 00:21:42,559
feeling of deja vu

567
00:21:45,909 --> 00:21:44,159
but i have to tell you it was a little

568
00:21:48,149 --> 00:21:45,919
bit like looking at some of the pictures

569
00:21:50,710 --> 00:21:48,159
i used to see in the hallways of both

570
00:21:52,549 --> 00:21:50,720
jaxa and esa when they were developing

571
00:21:55,190 --> 00:21:52,559
their modules and they tended to show

572
00:21:57,590 --> 00:21:55,200
pictures of them flying in space in

573
00:21:59,190 --> 00:21:57,600
orbit without the shuttle around them

574
00:22:01,110 --> 00:21:59,200
and i thought that's really interesting

575
00:22:03,190 --> 00:22:01,120
how are they going to do that

576
00:22:05,350 --> 00:22:03,200
and now we've got a module that looks a

577
00:22:06,950 --> 00:22:05,360
lot like both of those

578
00:22:09,350 --> 00:22:06,960
rendezvousing and being attached to the

579
00:22:11,270 --> 00:22:09,360
station so there is a little bit of of

580
00:22:14,149 --> 00:22:11,280
deja vu on that

581
00:22:15,350 --> 00:22:14,159
i have to say also that that um

582
00:22:17,190 --> 00:22:15,360
one of the things that we were really

583
00:22:19,029 --> 00:22:17,200
happy about was the fact that we had a

584
00:22:20,630 --> 00:22:19,039
number of scientific experiments

585
00:22:23,270 --> 00:22:20,640
including some student experiments on

586
00:22:25,990 --> 00:22:23,280
this mission and that's a big part of

587
00:22:28,230 --> 00:22:26,000
the the mission of the space station and

588
00:22:29,669 --> 00:22:28,240

so we're happy to take food and clothing

589
00:22:31,510 --> 00:22:29,679
and all but but we want to make sure

590
00:22:33,669 --> 00:22:31,520
that we're also able to provide the

591
00:22:34,630 --> 00:22:33,679
science and the and the research that

592
00:22:42,950 --> 00:22:34,640
can be

593
00:22:47,590 --> 00:22:45,590
okay james is that it

594
00:22:49,350 --> 00:22:47,600
yep thanks congratulations

595
00:22:51,830 --> 00:22:49,360
let's go to doug is it doug moaning with

596
00:22:54,870 --> 00:22:51,840
tmc net did i get that right

597
00:22:57,190 --> 00:22:54,880
doug money with tmc not correct

598
00:22:59,750 --> 00:22:57,200
one question for each alan

599
00:23:02,950 --> 00:22:59,760
my question to you is

600
00:23:06,230 --> 00:23:02,960
what's your level of confidence

601
00:23:08,390 --> 00:23:06,240
for lessons learned on

602
00:23:09,350 --> 00:23:08,400
this program as applied to commercial

603
00:23:11,669 --> 00:23:09,360
crew

604
00:23:13,990 --> 00:23:11,679
um and my question to frank would be

605
00:23:15,669 --> 00:23:14,000
um you indicated next flight rendezvous

606
00:23:18,230 --> 00:23:15,679
will be two to three days do you

607
00:23:20,470 --> 00:23:18,240
ultimately hope to get uh a ground to

608
00:23:24,390 --> 00:23:20,480
station um rendezvous within like six

609
00:23:31,590 --> 00:23:24,400
hours as we have with uh progress and

610
00:23:31,600 --> 00:23:36,149
you're on right well um

611
00:23:41,110 --> 00:23:37,830
certainly learned

612
00:23:43,110 --> 00:23:41,120
a lot of lessons this was uh this was an

613
00:23:44,149 --> 00:23:43,120

experiment of a new way of doing

614
00:23:47,270 --> 00:23:44,159
business

615
00:23:51,510 --> 00:23:47,280
uh for nasa in this type of partnership

616
00:23:54,230 --> 00:23:51,520
uh i i think one of the keys was to

617
00:23:56,149 --> 00:23:54,240
provide maximum flexibility to the

618
00:24:00,310 --> 00:23:56,159
partners so that they could optimize

619
00:24:01,510 --> 00:24:00,320
their design optimize their approach

620
00:24:02,470 --> 00:24:01,520
with with

621
00:24:05,110 --> 00:24:02,480
with

622
00:24:06,310 --> 00:24:05,120
minimum requirements so

623
00:24:09,990 --> 00:24:06,320
uh i

624
00:24:11,110 --> 00:24:10,000
it was important for us to talk about

625
00:24:26,789 --> 00:24:11,120
the

626
00:24:28,870 --> 00:24:26,799
innovations

627
00:24:30,830 --> 00:24:28,880
and resulting in lower costs and

628
00:24:32,710 --> 00:24:30,840
increased reliability

629
00:24:35,110 --> 00:24:32,720
um

630
00:24:37,510 --> 00:24:35,120
that was fairly easy to do with the

631
00:24:40,470 --> 00:24:37,520
cargo missions because the interfaces to

632
00:24:41,909 --> 00:24:40,480
the space station are so well defined

633
00:24:44,390 --> 00:24:41,919
and

634
00:24:46,070 --> 00:24:44,400
we we did have flexibility in the total

635
00:24:49,669 --> 00:24:46,080
amount of cargo to be delivered and

636
00:24:52,789 --> 00:24:49,679
returned and some flexibility in the

637
00:24:56,789 --> 00:24:52,799
in the uh flight rate and the

638
00:25:00,470 --> 00:24:59,190

visits to the space station so

639
00:25:11,110 --> 00:25:00,480
uh

640
00:25:15,190 --> 00:25:11,120
of the

641
00:25:16,549 --> 00:25:15,200
station i mean we were firm

642
00:25:18,230 --> 00:25:16,559
with those requirements for those

643
00:25:19,669 --> 00:25:18,240
interfaces but everything else we were

644
00:25:22,230 --> 00:25:19,679
able to

645
00:25:24,149 --> 00:25:22,240
to to to be uh quite flexible and i i

646
00:25:26,149 --> 00:25:24,159
think that's a really important lesson

647
00:25:28,870 --> 00:25:26,159
now moving on to the crew program

648
00:25:32,630 --> 00:25:31,110
we've shared a lot of information with

649
00:25:35,269 --> 00:25:32,640
the crew program they started the

650
00:25:36,950 --> 00:25:35,279
program uh with this type of

651
00:25:38,870 --> 00:25:36,960
public-private partnerships under the

652
00:25:41,830 --> 00:25:38,880
space act agreements

653
00:25:44,310 --> 00:25:41,840
and i think that's worked out very well

654
00:25:47,350 --> 00:25:44,320
but again this emphasis on safety is

655
00:25:50,390 --> 00:25:47,360
critical and nasa has learned many many

656
00:25:52,549 --> 00:25:50,400
hard lessons over the years where

657
00:25:53,909 --> 00:25:52,559
those requirements become

658
00:25:55,750 --> 00:25:53,919
become

659
00:25:58,789 --> 00:25:55,760
very important to

660
00:26:01,269 --> 00:25:58,799
communicate convey and to verify

661
00:26:03,669 --> 00:26:01,279
so i think it's in the same spirit

662
00:26:04,870 --> 00:26:03,679
be flexible where we can to allow for

663
00:26:07,830 --> 00:26:04,880

innovation

664
00:26:10,230 --> 00:26:07,840
but be very diligent in our

665
00:26:11,669 --> 00:26:10,240
our lessons learned in our history to

666
00:26:12,470 --> 00:26:11,679
make sure that we're

667
00:26:14,390 --> 00:26:12,480
we're

668
00:26:19,110 --> 00:26:14,400
supporting the development of systems

669
00:26:21,909 --> 00:26:21,029
and if i could add to that just a little

670
00:26:23,750 --> 00:26:21,919
bit

671
00:26:25,669 --> 00:26:23,760
and alan is referring to some very

672
00:26:28,149 --> 00:26:25,679
valuable lessons we've learned along the

673
00:26:31,350 --> 00:26:28,159
way in establishing these relationships

674
00:26:33,430 --> 00:26:31,360
i think that really became uh paramount

675
00:26:34,789 --> 00:26:33,440
this week uh the fact that we had had

676
00:26:37,190 --> 00:26:34,799
some time to work through a lot of

677
00:26:39,590 --> 00:26:37,200
issues in the past

678
00:26:41,830 --> 00:26:39,600
but that really didn't match the

679
00:26:42,789 --> 00:26:41,840
challenge of dealing with a real-time

680
00:26:44,549 --> 00:26:42,799
flight

681
00:26:47,750 --> 00:26:44,559
problem that you had to solve before you

682
00:26:50,549 --> 00:26:47,760
could actually deliver the cargo

683
00:26:52,549 --> 00:26:50,559
as you know this is a pre precursor to

684
00:26:54,310 --> 00:26:52,559
the cargo resupply services contract

685
00:26:56,390 --> 00:26:54,320
that we have with nasa

686
00:26:57,750 --> 00:26:56,400
but i have to say that

687
00:27:00,630 --> 00:26:57,760
even though

688
00:27:02,149 --> 00:27:00,640

we operated this as if it were a service

689
00:27:04,870 --> 00:27:02,159
this was still part of the space act

690
00:27:07,269 --> 00:27:04,880
agreement and was a demonstration

691
00:27:08,390 --> 00:27:07,279
but the business side never really came

692
00:27:10,630 --> 00:27:08,400
into play

693
00:27:12,549 --> 00:27:10,640
uh amongst the technical teams now

694
00:27:14,710 --> 00:27:12,559
obviously that's something we have to be

695
00:27:16,710 --> 00:27:14,720
concerned about as a company but that's

696
00:27:18,470 --> 00:27:16,720
something you'll worry about later

697
00:27:20,870 --> 00:27:18,480
uh what we did was establish a

698
00:27:21,909 --> 00:27:20,880
relationship between nasa and orbital

699
00:27:23,990 --> 00:27:21,919
teams

700
00:27:25,909 --> 00:27:24,000
that i think will allow us to challenge

701
00:27:27,510 --> 00:27:25,919
to take care of any challenging problems

702
00:27:29,430 --> 00:27:27,520
in the future

703
00:27:30,789 --> 00:27:29,440
a lot of what we learned for example

704
00:27:32,470 --> 00:27:30,799
during the shuttle mirror program was

705
00:27:34,710 --> 00:27:32,480
about relationships not just about

706
00:27:36,149 --> 00:27:34,720
technology hardware and operations

707
00:27:38,549 --> 00:27:36,159
and that's been applied on the

708
00:27:41,350 --> 00:27:38,559
international space station

709
00:27:43,909 --> 00:27:41,360
this uh this week was challenging in

710
00:27:45,269 --> 00:27:43,919
that same way where nasa gave us the

711
00:27:47,669 --> 00:27:45,279
opportunity

712
00:27:50,230 --> 00:27:47,679
for our team led by frank demaro and jim

713
00:27:53,269 --> 00:27:50,240

nicholson to work through the technical

714
00:27:56,149 --> 00:27:53,279
issues we were we were trying to solve

715
00:27:58,549 --> 00:27:56,159
do it in a way that made sense to us

716
00:28:00,789 --> 00:27:58,559
and then give us their feedback without

717
00:28:01,669 --> 00:28:00,799
dictating how it had to be done

718
00:28:03,190 --> 00:28:01,679
and

719
00:28:04,870 --> 00:28:03,200
that i think gave our team a lot of

720
00:28:06,710 --> 00:28:04,880
confidence that

721
00:28:09,750 --> 00:28:06,720
that nasa felt like we knew what we were

722
00:28:11,750 --> 00:28:09,760
doing and uh makes a huge difference

723
00:28:13,990 --> 00:28:11,760
going forward and and i really

724
00:28:16,149 --> 00:28:14,000
appreciate that level of trust and i

725
00:28:18,310 --> 00:28:16,159
know that the team led by kenny todd

726
00:28:19,909 --> 00:28:18,320
down in houston and mike safradini had

727
00:28:21,669 --> 00:28:19,919
to work carefully with the international

728
00:28:24,549 --> 00:28:21,679
partners to make sure they also

729
00:28:26,549 --> 00:28:24,559
understood that and saw that and

730
00:28:28,149 --> 00:28:26,559
having been in the station program many

731
00:28:30,549 --> 00:28:28,159
years ago i can see that this is a

732
00:28:32,710 --> 00:28:30,559
change this is different and this is

733
00:28:34,950 --> 00:28:32,720
laying the groundwork for all commercial

734
00:28:37,750 --> 00:28:34,960
endeavors going forward um

735
00:28:39,990 --> 00:28:37,760
alan and everybody else and and and i

736
00:28:42,630 --> 00:28:40,000
think that commercial crew will benefit

737
00:28:44,470 --> 00:28:42,640
from having uh seen the nasa team work

738
00:28:45,830 --> 00:28:44,480

with the company on challenges because

739
00:28:47,430 --> 00:28:45,840
they're going to have them too

740
00:28:48,789 --> 00:28:47,440
that's this is space flight and that's

741
00:28:50,870 --> 00:28:48,799
what happens

742
00:28:52,789 --> 00:28:50,880
as to the question of how quickly can we

743
00:28:54,549 --> 00:28:52,799
rendezvous i have i have in fact

744
00:28:56,630 --> 00:28:54,559
challenged the team to come up with a

745
00:28:59,029 --> 00:28:56,640
one day rendezvous plan we think that

746
00:29:00,710 --> 00:28:59,039
that's beneficial to all concerned and

747
00:29:02,230 --> 00:29:00,720
uh we really want to get the uh

748
00:29:03,669 --> 00:29:02,240
particularly the powered payloads and

749
00:29:05,269 --> 00:29:03,679
the important

750
00:29:06,630 --> 00:29:05,279
uh research that needs to get to the

751
00:29:09,350 --> 00:29:06,640
station quickly we want to get it there

752
00:29:11,990 --> 00:29:09,360
as soon as we can and so being able to

753
00:29:13,830 --> 00:29:12,000
to rendezvous in one day is a is a real

754
00:29:15,029 --> 00:29:13,840
uh important feature we would like to

755
00:29:17,669 --> 00:29:15,039
add to our

756
00:29:19,110 --> 00:29:17,679
our uh quiver and and so we're going to

757
00:29:23,750 --> 00:29:19,120
be working on that over the next few

758
00:29:27,110 --> 00:29:25,430
okay i think that's going to wrap it up

759
00:29:29,750 --> 00:29:27,120
for us

760
00:29:31,510 --> 00:29:29,760
doug did you have another question

761
00:29:32,870 --> 00:29:31,520
okay we're going to wrap up our briefing

762
00:29:34,630 --> 00:29:32,880
for today we thank you for joining us of

763
00:29:35,990 --> 00:29:34,640

course for all the latest just log on to

764
00:29:38,310 --> 00:29:36,000
nasa.gov

765
00:29:39,990 --> 00:29:38,320
station you can also watch space station

766
00:29:42,870 --> 00:29:40,000
live tomorrow morning at 10 a.m central

767
00:29:44,389 --> 00:29:42,880
time 11 a.m eastern time for coverage of

768
00:29:47,510 --> 00:29:44,399
the hatch opening which like holly said

769
00:29:50,710 --> 00:29:47,520
will take place at 4 55 a.m central time

770
00:29:52,470 --> 00:29:50,720
or 5 55 a.m eastern time again thank you

771
00:29:55,029 --> 00:29:52,480
for joining us congratulations to both